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## Falcon Marketplace Traffic Impact Analysis SP-17-001/CDR-16-007

(LSC #164350)  
October 23, 2017  
(September 5, 2018 Revision)

### 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.

A handwritten signature in blue ink, written over a horizontal line.

9/5/18  
Date

SP 17-001

# Falcon Marketplace

## Updated Traffic Impact Analysis

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LSC #164350

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# Executive Summary

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## TRAFFIC REPORT

- This updated traffic report has been prepared to address staff comments.
- This report presents analysis of the proposed right-in-only access to Woodmen Road combined with a proposed roundabout intersection with the Woodmen Frontage Road in the southwest corner of the site.
- The report also includes, for comparison purposes, analysis assuming no right-in-only access.
- This report contains short- and long-term traffic projections for Falcon Marketplace, other area properties, and study area roadways and intersections. Traffic analysis has been performed based on the projected volumes.
- Based on the analysis, detailed findings and study area roadway improvements have been presented for both “**with**” and “**without**” the proposed **right-in access** (and accompanying roundabout) scenarios.
- The overall report recommendation is to approve the proposed right-in-only access from Woodmen Road and accompanying roundabout. **Analysis results indicate significantly improved area traffic circulation and benefits to operations at the study area intersections.**

## MATERIAL CHANGE TO THE RIGHT-IN DESIGN AND BENEFITS OF NEW DESIGN

- The inclusion of a roundabout into the design of the right-in access **will provide for public access to the westbound frontage road**—a significant change to the previous design. This enhancement will not only **provide better access** for these nearby residential and non-residential developments, but will also offer **superior access for emergency response vehicles** thereby reducing their response times to all properties on the north side of Woodmen between Meridian and Golden Sage—a significant and meaningful change.
- The new design for the right-in with a roundabout **allows for direct public access to the Woodmen Frontage Road** for passenger vehicles, trucks, and buses, as well as fire and emergency response vehicles as requested by the Falcon Fire Protection District. This accommodation will significantly improve the access to the Courtyards residential development, Mountain View Electric Association (MVEA), Falcon School District 49 (and other properties), which currently have poor access.
- Due to its configuration, the previously requested right-in-only access would have essentially served only the proposed Falcon Marketplace development as there was no public access from the right-in to the Woodmen Frontage Road. Additionally, the new configuration includes changing the required internal roadway (required by the 2008 BOCC-approved rezoning of the

site), which extends from Eastonville to the Woodmen Frontage Road, from a private access easement drive to a public right-of-way.

- The previously requested right-in-only was configured to direct traffic from westbound Woodmen northward into the site only, with no "direct" access for westbound travel to the neighboring residential and non-residential properties along the Woodmen Frontage Road west of the proposed Falcon Marketplace development. In the previous design, access for westbound travel along the Woodmen Frontage Road would have required a circuitous route into Falcon Marketplace in order to reverse direction.
- With this new design of the right-in combined with a roundabout, residents, employees, and other motorists traveling to the properties along the frontage road from westbound Woodmen or northbound Meridian (many traveling from eastbound US Highway 24) would have a **new direct connection to the east end of the Woodmen Frontage Road** and will no longer need to do either of the following to access their destination:
  - travel west for over a mile along Woodmen Road to the Golden Sage/Woodmen intersection, make a 180-degree turn and travel back to the east along the Woodmen Frontage Road, or alternatively,
  - travel north to the Eastonville/Meridian intersection, turn left and travel through the proposed Falcon Marketplace development, a route of over one-half mile including a traffic signal.
- The proposed right-in-only with the roundabout would also **benefit operations at the Woodmen/Golden Sage and Woodmen Frontage Road/Golden Sage** intersection by reducing existing and future traffic turning movements from these closely spaced intersections.
- This site is within the commercial "node" of Falcon as defined in the Falcon/Peyton Small Area Master Plan and an access from Woodmen Road at the proposed location is reasonable for a regional commercial development as allowed by the Commercial Regional zoning approved for the site in 2008. Furthermore, additional access points to Woodmen were contemplated by the BOCC-approved resolution adopting the Woodmen Road Access Management Plan.

## SUMMARY OF TRAFFIC OPERATIONS ANALYSIS AND COMPARISON

- The three key intersections within this study are (a) the southwest roundabout at the proposed right-in-only access from Woodmen, (b) the meridian/Eastonville intersection, and (3) the Meridian/Woodmen intersection.
- The comparison between the two analysis scenarios (**with** and **without** the proposed right-in-only access from Woodmen) with respect to operations at the Meridian/Eastonville intersection shows significantly better operations with the proposed Woodmen access/roundabout. In addition to the intersection analysis, the right-in-only access would significantly reduce overall travel times and emergency response times for those traveling to destinations along the frontage road and Falcon Marketplace.

### **Right-In-Only Access/Roundabout**

- The continuous lane along westbound Woodmen Road between Meridian and the access is projected to operate at weaving LOS C during the morning peak hour and LOS B during the afternoon peak hour.
- Multiple methods of analysis indicate level of service A for all roundabout approaches during the peak hours **based on 2040 volumes**.
- The southwest roundabout will see **minimal queuing** for traffic exiting Woodmen Road and entering the roundabout. A maximum queue during the peak hour of about 100-120 feet is projected and even this maximum queue will clear quickly as the queue will be more of a **“rolling” queue**.
- The proposed Woodmen access will have **little effect** on the operation of Woodmen Road as the turning movements will be right-turn in-only from westbound Woodmen Road with a continuous acceleration/deceleration lane between Meridian and the point of right-turn entry into the site.
- The roundabout has been designed to accommodate large tractor-trailer trucks/semis.

### **Meridian/Eastonville Intersection**

- The northbound left turn at this intersection is projected to operate at **LOS F** during the afternoon peak hour **without the right-in-only access off Woodmen. However, it will operate at LOS D** during the afternoon peak hour with the right-in-only access off of Woodmen with the roundabout.
- The northbound left-turn queue would be **significantly longer without the Woodmen-access scenario. Without the right-in-only access off of Woodmen** the projected maximum queue will fill the dual left-turn lanes (457-foot queue within the lanes) and will **overspill** into the adjacent northbound through lane during the peak analysis interval unless the lanes are lengthened. Any significant lengthening would reduce the storage length of the southbound left turn lane for the Woodmen/Meridian intersection to the south as this northbound left turn lane is "back-to-back" with the southbound left turn lane at the Woodmen/Meridian intersection. There is a shared transition taper for both lanes and any lengthening would require either shortening the shared taper and/or shortening of that southbound left turn lane at Woodmen/Meridian (likely both).

### **Meridian/Woodmen Intersection**

- The addition of the proposed right-in-only access off of Woodmen will provide motorists approaching from the south the option to utilize the existing dual left-turn lanes to go westbound on Woodmen to enter the project site. This allows motorists to adjust to the path of least congestion and will benefit the overall intersection. Providing this option will reduce the quantity of northbound through traffic. This will be especially helpful during the afternoon peak hour. Although the overall intersection delays shown in the table are comparable, the

analysis shows failure of the northbound through movement (with two northbound through lanes) **without** the right-in-only access off of Woodmen. A comparison with **three** northbound through lanes on this intersection approach has also been included in this report as required by staff. Analysis results with an additional northbound through lane indicate improvement to LOS D for this approach. However, the implementation of three through lanes at this one intersection in advance of an overall project to convert Meridian Road from a four to six-lane arterial would involve significant cost for improvements at this intersection and to the north to create three-northbound “receiving” lanes and a merge lane back to two northbound through lanes. Moreover, from an operational standpoint, although a third through lane would add capacity at the intersection, this would introduce a potentially confusing and awkward “lane-add” followed by a lane reduction/merge just downstream to the north.

- Without the requested right-in-only from Woodmen, the northbound through movement is projected to operate at **LOS F** during the 2040 afternoon peak hour (LOS D when analyzing assuming three northbound through lanes as explained in the previous paragraph).

## Introduction

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LSC Transportation Consultants, Inc. has prepared this updated traffic impact analysis for the 36-acre Falcon Marketplace to be located west of Meridian Road and north of Woodmen Road in the Falcon area of El Paso County, Colorado. The site is planned to be developed for a mixture of commercial and medical office land uses. Figure 1 shows the site location. Access is proposed to Meridian Road and the Woodmen Road Frontage Road. The previous report date was August 7, 2017.

The report has been updated to include analysis of a right-in-only access from Woodmen Road combined with a roundabout intersection with the Woodmen Frontage Road in the southwest corner of the site. This new right-in-only access with the proposed roundabout intersection connecting to the Woodmen Frontage Road would significantly improve access not only to the site, but also to the properties to the west along the Woodmen Frontage Road. This new provision for public access from westbound Woodmen Road to the westbound Woodmen Frontage Road is a **significant change** from the previously proposed right-in-only access configuration, which essentially only served the proposed Falcon Marketplace.

The salient points of the significant change are:

- Allows direct public access to east end of the frontage road.
- Provides badly needed access for emergency response vehicles.
- Takes traffic off of the Golden Sage intersection by providing access from the east.
- Addition of roundabout keeps traffic moving at a steady flow.
- Reduces potential backup on the frontage road.



Approximate Scale  
Scale: 1" = 1,200'

Figure 1  
**Vicinity  
Map**

Falcon Marketplace (LSC #164350)

## **REPORT CONTENTS**

The report contains the following:

- The proposed site land uses and circulation plan for the site.
- The proposed plan to allow for a public street connection through the site between the current terminus of the Woodmen Frontage Road and Meridian Road.
- The existing and planned roadways in the study area including the number of lanes, classifications, posted speed limits, lane geometries, traffic controls, etc.
- Traffic volumes for the Meridian/Woodmen and Meridian/Eastonville intersections plus added traffic count data for the intersection of Woodmen Road and Golden Sage Road.
- The projected future peak-hour traffic volumes for the access points, internal intersections and the intersections adjacent to the site, the intersection of Golden Sage/Woodmen and along the Woodmen Frontage Road with and without the proposed right-in-only access from Woodmen Road.
- The resulting traffic impacts. The traffic impacts have been quantified by determining the future levels of service at the access points, internal intersections and adjacent intersections with and without the proposed right-in-only access from Woodmen Road.
- Recommended improvements.

## Site Land Use and Access/Circulation Plan

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### SITE CONTEXT

The site is located within the downtown Falcon commercial/service area. This site is part of the Falcon “commercial node.” Several shopping centers exist south and southeast of this site on the south side of Woodmen Road. The Safeway shopping center is located to the east, and the Bent Grass Commercial Center is directly north of the site and the Owl Lane area.

### LAND USE

The 36-acre site is located north of Woodmen Road and west of Meridian Road. The site is planned to contain a large grocery store anchor with associated gas station. The peripheral development lots are planned to include a pet supply store, in-line retail buildings, three free-standing fast-food restaurants, a coffee shop with drive-through, and an urgent/primary care clinic.

### ACCESS AND CIRCULATION

Full-movement site access is proposed from Meridian Road aligning with Eastonville Road and via a connection to the current terminus of the Woodmen Frontage Road. A right-in/right-out access to Meridian Road is also proposed between Eastonville and Woodmen. In addition to the connection to the current terminus of the Woodmen Frontage Road, a right-in-only access from westbound Woodmen Road is also proposed in the southwest corner of the site.

Figures 2 and 3 show the access/intersection spacing for Woodmen Road and Meridian Road, respectively.

The site plan also shows a street stub to the property to the north to allow for a planned future connection to Bent Grass Meadows Drive. The access points and the proposed public street connection through the site is also shown on the site plan.

### INTERSECTION/ACCESS SIGHT DISTANCE ANALYSIS

Figure 4 shows the sight distance analysis for the Meridian Road access points. There are currently no posted speed limit signs for southbound traffic on the approach to Eastonville Road and the speed limit to the north is 55 miles per hour (mph). This analysis assumes (following development of the site) a future posted speed limit of 45 mph (design speed of 50 mph) for southbound Meridian in the vicinity of and adjacent to the site. This is based on the *Meridian Road North Corridor Plan* dated December 2009.

Sight distance analysis for the internal intersections within the Preliminary Plan is included with the deviation request for Falcon Market Place.

## **Truck Turning Analysis**

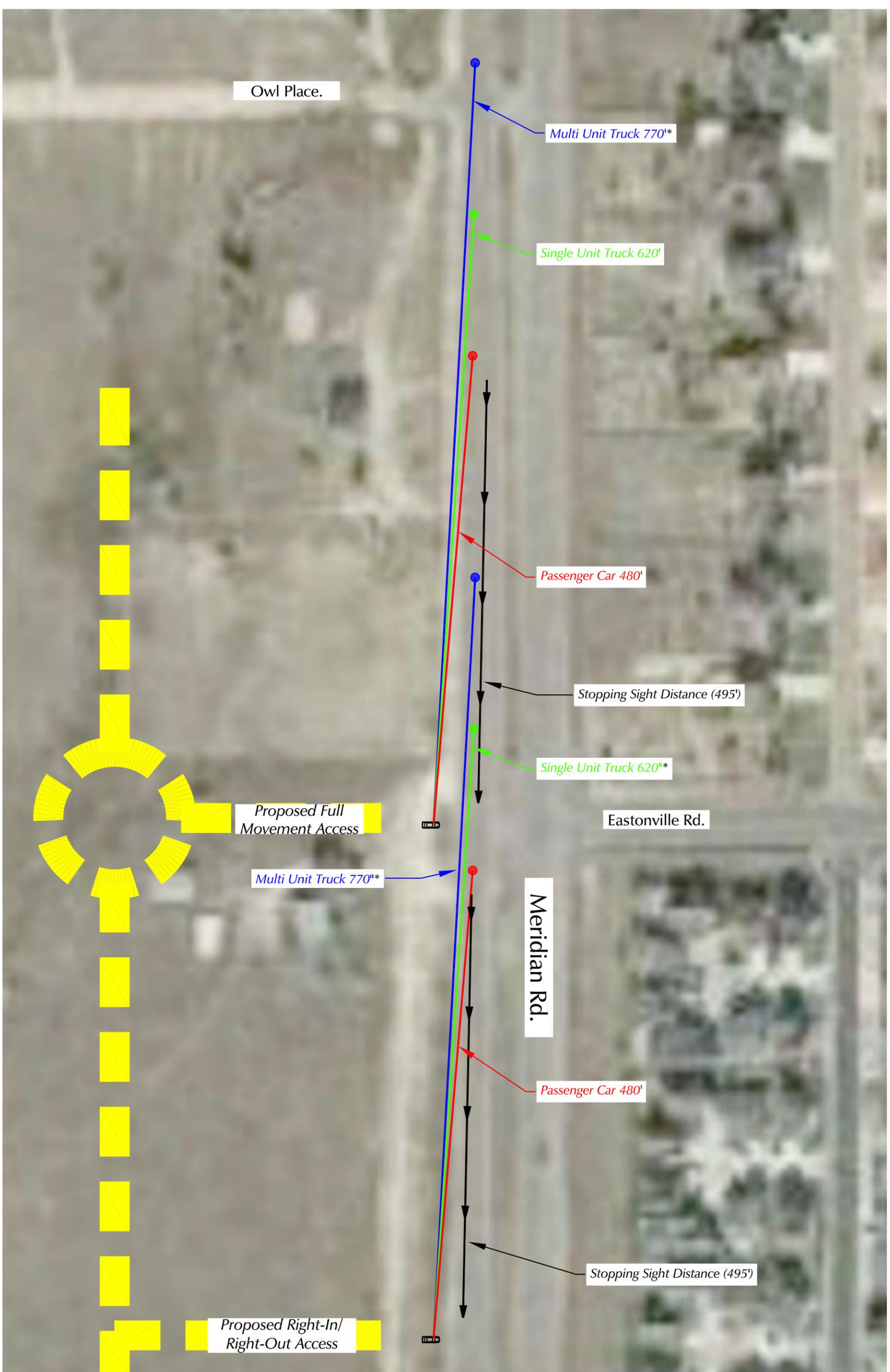
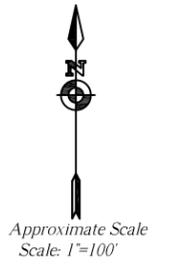
Truck turning analysis using AutoTurn for the internal intersections within the Preliminary Plan is included with the deviation request for Falcon Market Place. The truck turning analysis for the roundabout proposed for the southwest corner of the site is included in this report as it is directly associated with the driveway permit application.





  
 Approximate Scale  
 Scale: 1"=60'

Figure 3  
**Meridian Road Intersection/Access Spacing**  
 Falcon Marketplace (LSC #164350)



LEGEND:

- = Required intersection sight distance for passenger cars
- = Required intersection sight distance for single-unit trucks
- = Required intersection sight distance for multi-unit trucks
- ↕ = Required stopping sight distance

Based on an anticipated post-development speed limit of 45mph (50 mph design speed)



Figure 4  
Sight Distance for Meridian Road

Falcon Marketplace (LSC #164350)

## Existing Roadway and Traffic Conditions

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### AREA ROADWAYS

The roadways in the study area are shown on Figure 1 and are described below.

- **US Highway (US) 24** is generally a two-lane State Highway extending east/west across Colorado connecting the Buena Vista, Colorado Springs, and Limon areas. US 24 is planned to be widened to four lanes through the Falcon area. US 24 is classified as an Expressway by the Colorado Department of Transportation (CDOT) and the *El Paso County Major Transportation Corridors Plan (MTCP)*. The posted speed limit on US 24 in the vicinity of Woodmen Road is 50 mph.
- **Woodmen Road** is shown on the *El Paso County 2040 Major Transportation Corridors Plan* and the *Preserved Corridor Network Plan* as a four-lane Expressway adjacent to and in the vicinity of the site. The posted speed limit on Woodmen Road adjacent to the site is 45 mph. The posted speed limit on Woodmen Road just west of the site is 55 mph.
- **Woodmen Frontage Road** is a paved two-lane frontage road along the north side of Woodmen Road. The Woodmen Frontage Road extends west from this site to its current terminus west of Golden Sage Road. The posted speed limit on the Woodmen Frontage Road is 30 mph.
- **Meridian Road** is shown on the MTCP as a four-lane Principal Arterial adjacent to the site. Meridian Road is currently four lanes plus some auxiliary turn lanes at intersections north of Rolling Thunder. There is a center median adjacent to the site. There are no speed limit signs specifically for the section of Meridian adjacent to the site. However, the posted limit on the section to the north is 55 mph. Meridian Road south of Rolling Thunder is not currently open and the road does not connect to US Highway 24. However, Meridian Road is planned to be opened south from Rolling Thunder to a new intersection with US 24 and extended south to Falcon Highway in the near future.
- **Eastonville Road** is a two-lane roadway extending northeast from Meridian Road to past Hodgen Road. It is shown as a two-lane Minor Arterial on the MTCP. The intersection of Meridian Road and Eastonville Road is currently stop-sign controlled.

## EXISTING TRAFFIC CONDITIONS

Figure 5 shows the morning and afternoon peak-hour traffic volumes at the intersections of Woodmen Road/Meridian Road, Woodmen Road/Golden Sage Road, and Eastonville Road/Meridian Road based on counts conducted by LSC in September 2015, February 2016, March 2017, and June 2017. The traffic count reports are attached. The traffic volumes at Woodmen/Meridian have been adjusted to balance with more recent counts to the west and north.

## ACCIDENT/CRASH HISTORY

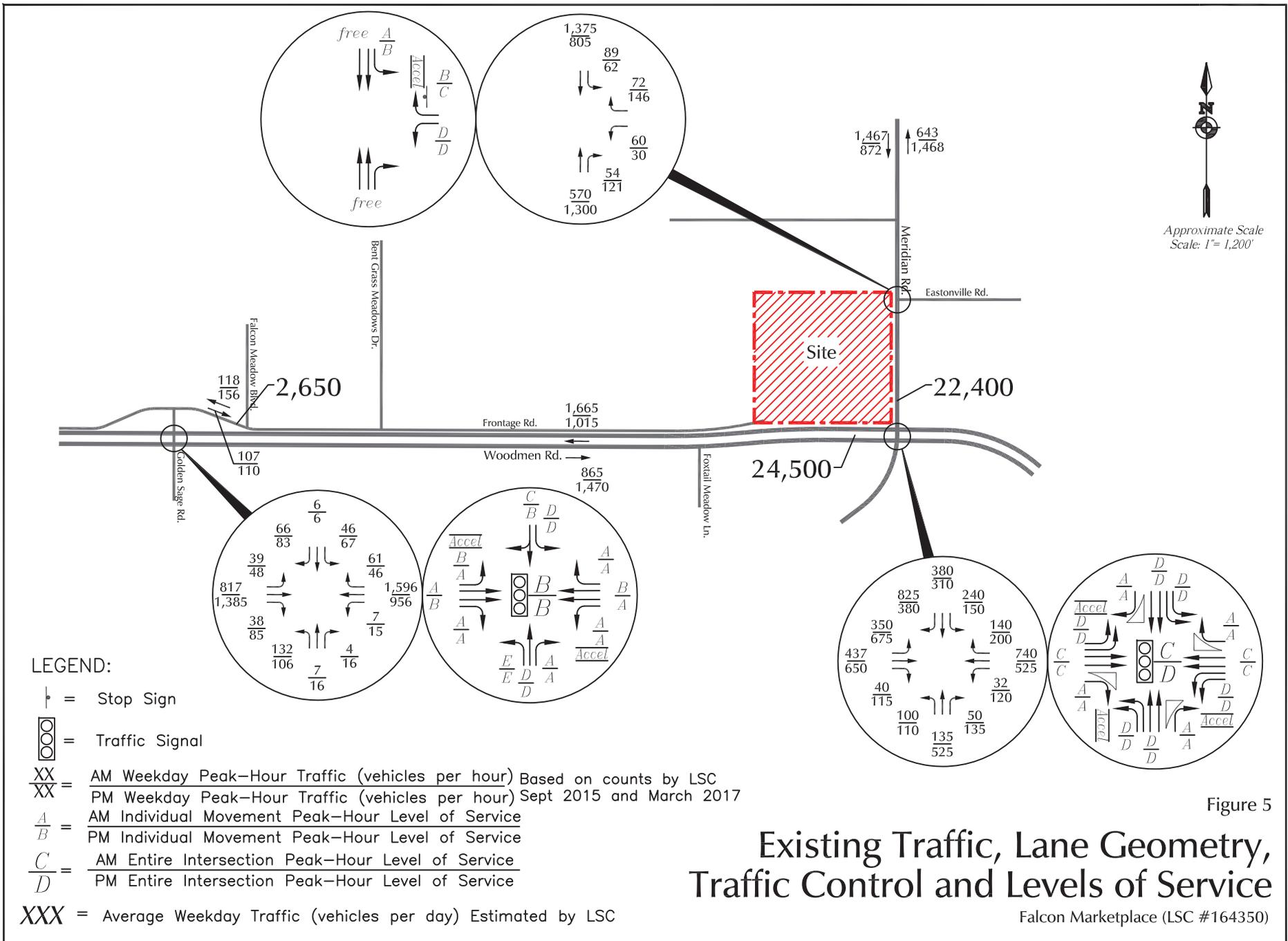
Traffic accident/crash data at study area intersections are attached. These have been provided by the Colorado State Patrol. The data show crashes by calendar year for 2014, 2015, and 2016 as well as year-to-date crashes for 2017.

There were seven reported crashes at the Woodmen/Golden Sage intersection in 2016. Five of the seven crashes in 2016 were non-intersection related. The remaining two crashes were rear-end crashes involving eastbound vehicles. The first crash resulted in property damage only and the second crash resulted in two injuries. There have also been seven crashes in 2017 (from January 1 to July 26). Of these crashes, two were non-intersection related. One involved an eastbound left-turning vehicle hitting a westbound through vehicle. This crash resulted in a fatality. The remaining four crashes were rear-end crashes (two involving westbound vehicles and two involving eastbound vehicles). These rear-end crashes all resulted in property damage only.

There were six reported crashes at the Woodmen/Meridian intersection in 2016. One of the crashes was non-intersection related. This was the only crash at this intersection in 2016 and 2017 that resulted in an injury. Three of the 2016 crashes were rear-end crashes (two involved vehicles in the westbound through lanes and one involved vehicles in the southbound to westbound acceleration lane). One 2016 crash involved a westbound vehicle that failed to stop for the red light and hit a northbound vehicle. The final 2016 crash involved a single vehicle traveling the wrong direction in the westbound acceleration lane hitting the pedestrian island in the northwest corner of the intersection. Based on the data provided, there has been one reported accident in 2017 (from January 1 to July 26). This crash was a rear-end accident involving vehicles in the eastbound left-turn lanes.

There were two reported crashes at the Eastonville/Meridian intersection in 2016. In the first crash, two vehicles were attempting to turn left from Eastonville Road onto Meridian Road. The first vehicle attempted a two-stage left turn, stopping in the median on Meridian Road, and was rear-ended by the second vehicle. This crash resulted in property damage only. The second crash involved an eastbound left-turn vehicle and a bicycle in the northbound shoulder. This crash resulted in an injury. There has been one crash at this intersection recorded in 2017 (from January 1 to July 26). This injury crash involved a southbound left-turning vehicle turning in front of a northbound through vehicle.

The estimated three-year crash/accident rate at Woodmen/Meridian is 0.46. This is based on an estimated average of 33,500 entering vehicles per day and 17 total intersection-related crashes in three years. **This is a relatively low accident rate.** For comparison, the Powers and Barnes intersection, which is one of the City of Colorado Springs' high accident locations, had a 2016 accident rate of about 2.25.



## EXISTING LEVELS OF SERVICE

Level of service (LOS) is a quantitative measure of the level of congestion or delay at an intersection. Level of service is indicated on a scale from “A” to “F.” LOS A represents control delay of less than 10 seconds for unsignalized and signalized intersections. LOS F represents control delay of more than 50 seconds for unsignalized intersections and more than 80 seconds for signalized intersections. For reference, Table 1 shows the level of service delay ranges.

| Table 1<br>Intersection Levels of Service Delay Ranges |  |                    |   |
|--|--|--------------------|---|
| Level of Service                                       | Signalized Intersections                       |                    | Unsignalized Intersections                                    |
|  | Average Control Delay<br>(seconds per vehicle) | V/C <sup>(1)</sup> | Average Control Delay<br>(seconds per vehicle) <sup>(2)</sup> |
| A  | 10.0 sec or less                               | less than 0.60     | 10.0 sec or less  |
| B  | 10.1-20.0 sec                                  | 0.60-0.69          | 10.1-15.0 sec   |
| C  | 20.1-35.0 sec                                  | 0.70-0.79          | 15.1-25.0 sec   |
| D  | 35.1-55.0 sec                                  | 0.80-0.89          | 25.1-35.0 sec   |
| E  | 55.1-80.0 sec                                  | 0.90-0.99          | 35.1-50.0 sec   |
| F  | 80.1 sec or more                               | 1.00 and greater   | 50.1 sec or more  |

(1) Source: *Transportation Research Circular 212*  
 (2) 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 intersections of Woodmen Road/Meridian Road and Woodmen Road/Golden Sage Road were analyzed to determine the existing levels of service using Synchro. The intersection of Eastonville Road/Meridian Road was analyzed based on the unsignalized method of analysis procedures found in the *Highway Capacity Manual, 6<sup>th</sup> Edition* by the Transportation Research Board. As shown on Figure 5, these intersections are operating at acceptable levels of service during peak periods. **The detailed level of service analysis reports are attached.**

## Projected Future Background Traffic Conditions

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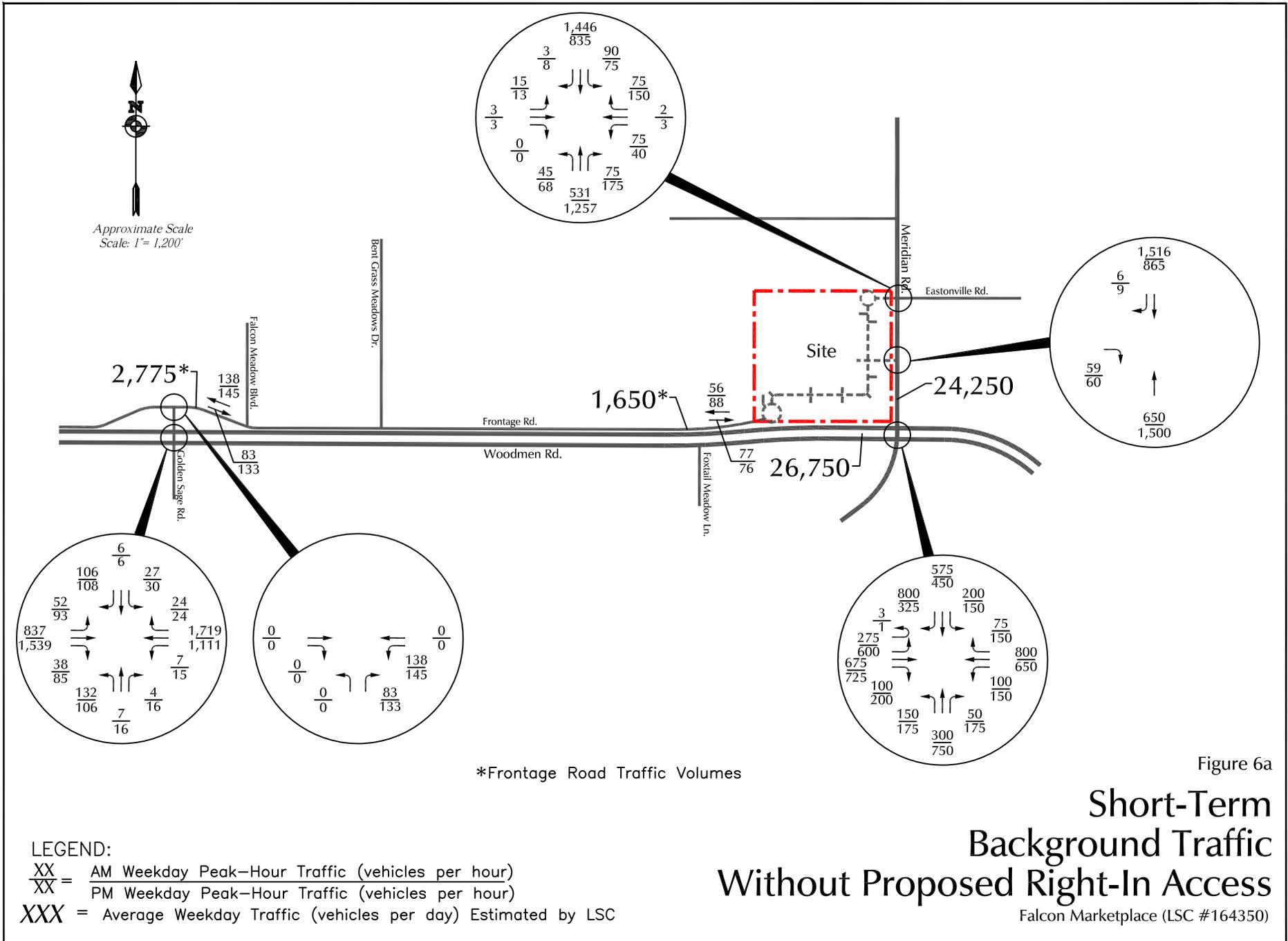
Baseline or “background” traffic is the traffic estimated to be on the adjacent roadways and at adjacent intersections without the proposed development’s trip generation and resulting added traffic volumes (site traffic is presented in the following chapter). New baseline/background traffic is the difference between future background traffic and existing traffic.

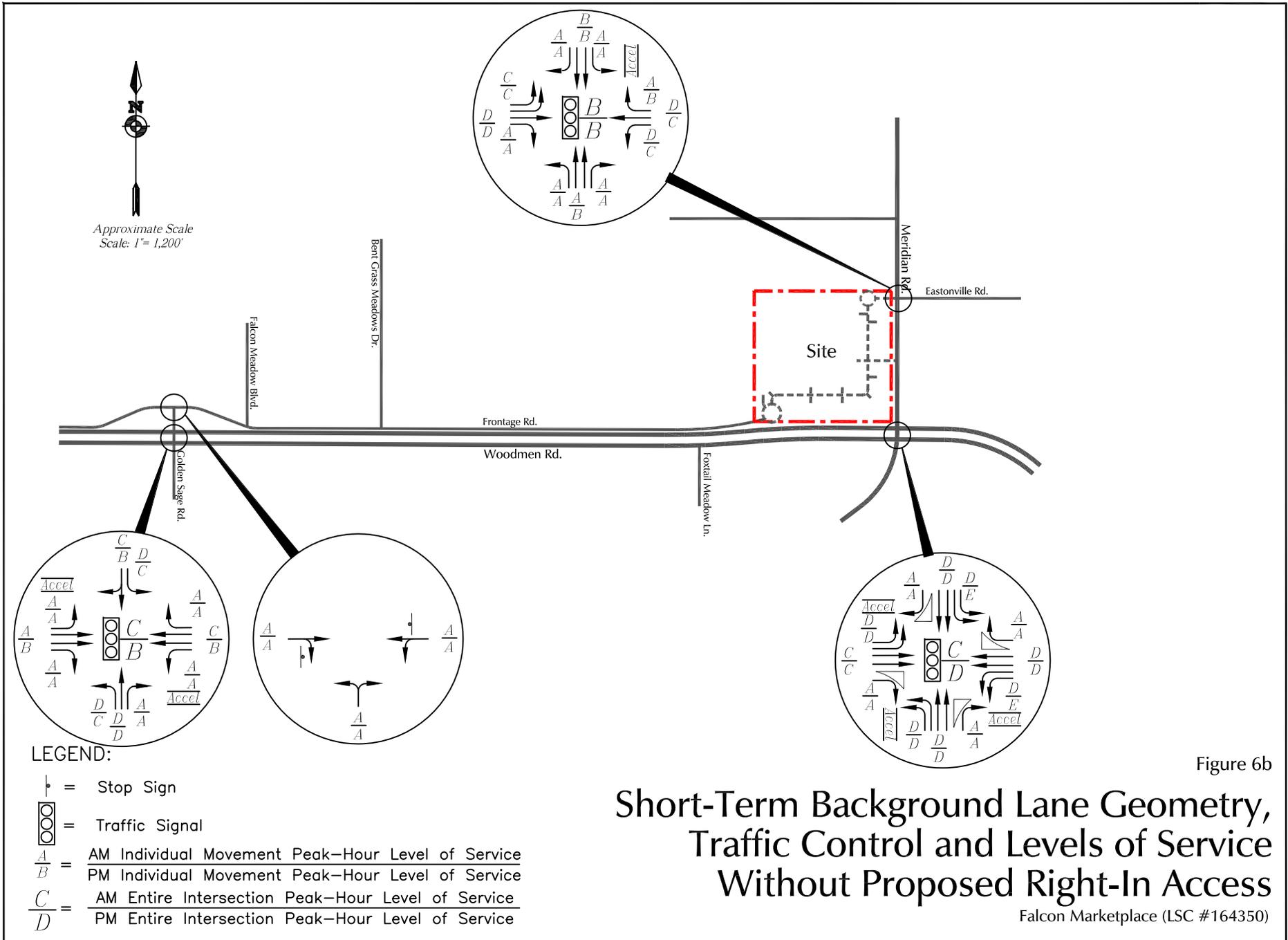
The background traffic analysis hypothetically assumes the site street connections and access points to be in place (but without site traffic). Background traffic includes the through traffic and the traffic generated by nearby developments, but hypothetically assumes zero traffic generated by the site for analysis purposes.

### SHORT-TERM BACKGROUND TRAFFIC

Background traffic is the traffic estimated to be on the adjacent roadways and at adjacent intersections without the proposed development’s trip generation and resulting site-generated traffic volumes. However, the site street connections and access points were assumed to be in place. Background traffic includes the through traffic and the traffic generated by nearby developments, but hypothetically assumes zero traffic generated by the site for analysis purposes. Figure 6a and 7a show the background traffic volumes traveling through the site and in the vicinity of the site for the short term. The short-term background traffic volumes were based on some growth in existing traffic volumes shown in Figure 5, with some adjustments to the existing traffic patterns due to the planned Meridian Road project to the south, the proposed vehicular connection through the site (between the end of the Woodmen Frontage Road and Eastonville Road) via access easement(s) and internal commercial drives, and the new west leg of the intersection of Meridian Road and Eastonville Road. The volumes shown in Figure 6a assume no access to Woodmen Road and the volumes shown in Figure 7a assume the proposed right-in-only access from Woodmen Road. The short-term background traffic volumes assume some additional traffic due to buildout of the Woodmen Courtyards development just west of the site.

Figures 6b and 7b show the lane geometry, traffic control, and level of service at the key intersections based on the short-term background volumes.





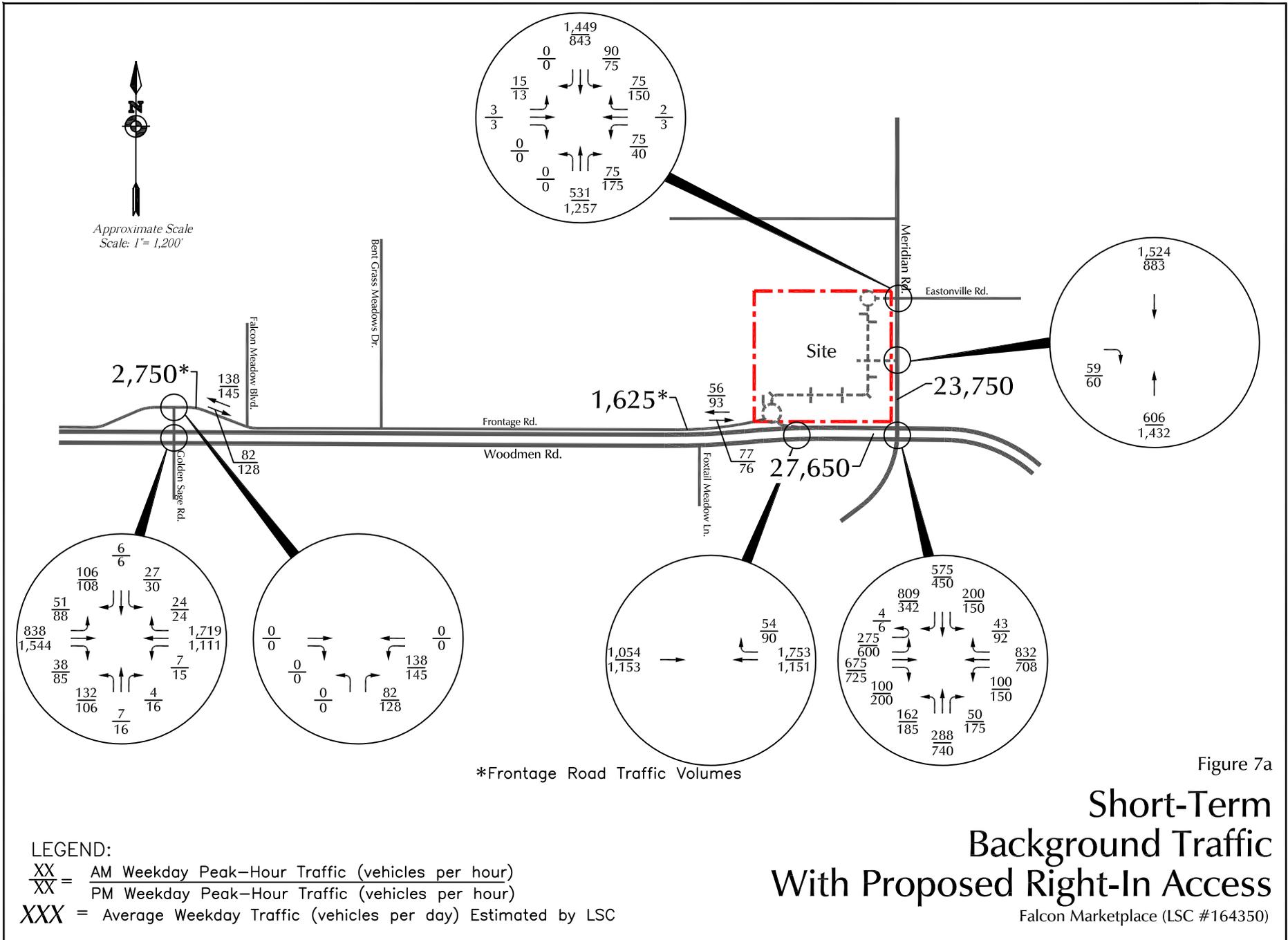
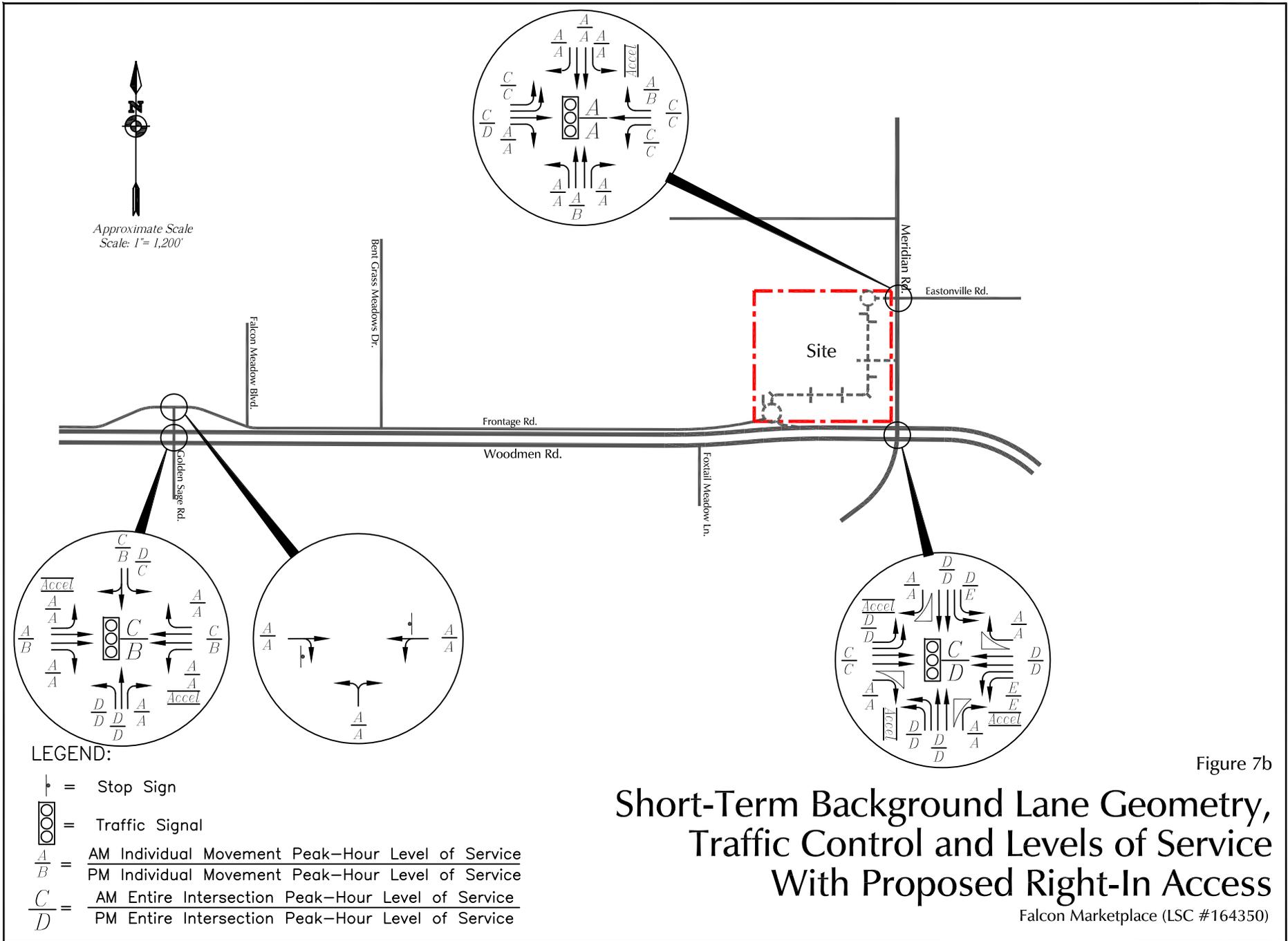


Figure 7a

# Short-Term Background Traffic With Proposed Right-In Access

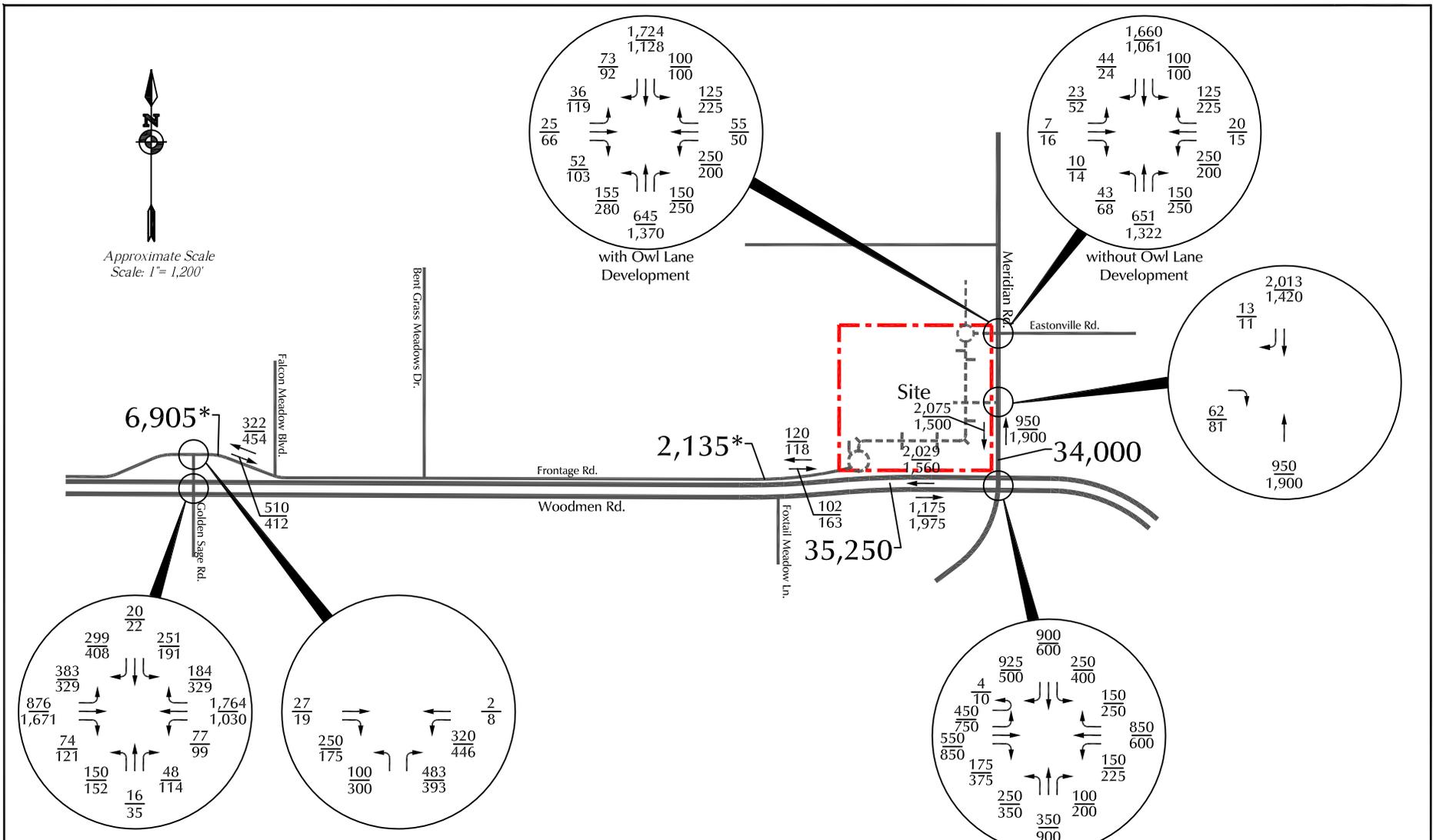
Falcon Marketplace (LSC #164350)



## **2040 BACKGROUND TRAFFIC**

Figures 8a and 9a show the background traffic volumes for the year 2040. The volumes shown in Figure 8a assume no access from Woodmen Road and the volumes shown in Figure 9a assume the proposed right-in-only access. The 2040 background traffic volume estimates were based on the *El Paso County Major Transportation Corridors Plan (MTCP) 2040* and previous work completed in the area by LSC, including the Bent Grass Subdivision PUD/Preliminary Plan Updated Traffic Impact Study and the previous studies for this site, other area traffic studies, and traffic count data. The 2040 background traffic includes buildout of the Bent Grass subdivision, the Latigo site northeast of Bent Grass Meadows Drive/Woodmen Frontage Road (assuming the current I-2 industrial zoning -- although previous reports have been prepared contemplating rezoning to commercial/shopping center land uses), and potential Owl Lane redevelopment for commercial land uses with the planned north/south street connection between Eastonville and Bent Grass Meadows Drive. Increases in through traffic are also included. The 2040 background traffic estimates also take into account the Stapleton Drive extension to the west to the Briargate Parkway/Black Forest Road intersection.

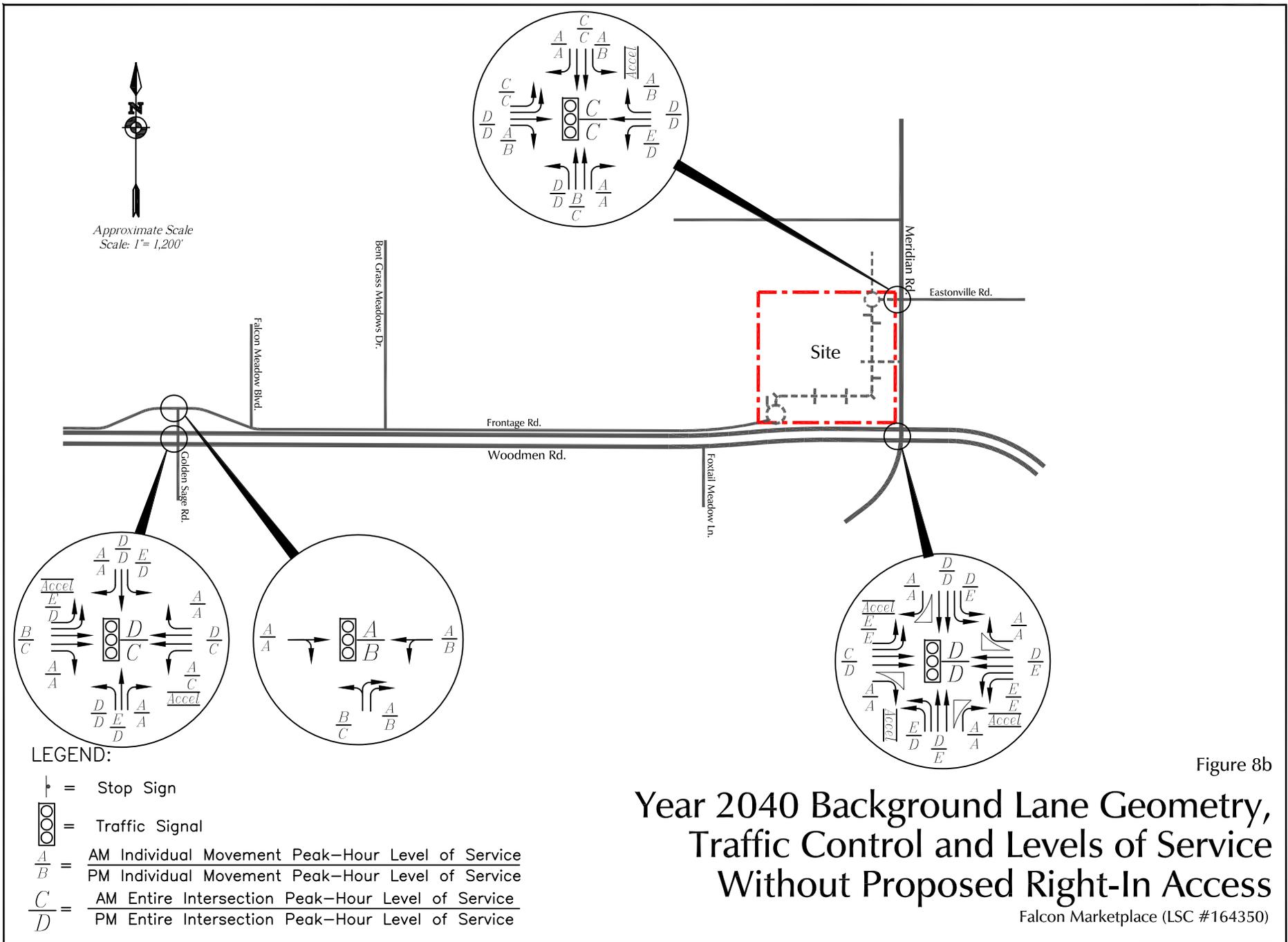
Figures 8b and 9b show the lane geometry, traffic control, and level of service at the key intersections based on the 2040 background volumes.

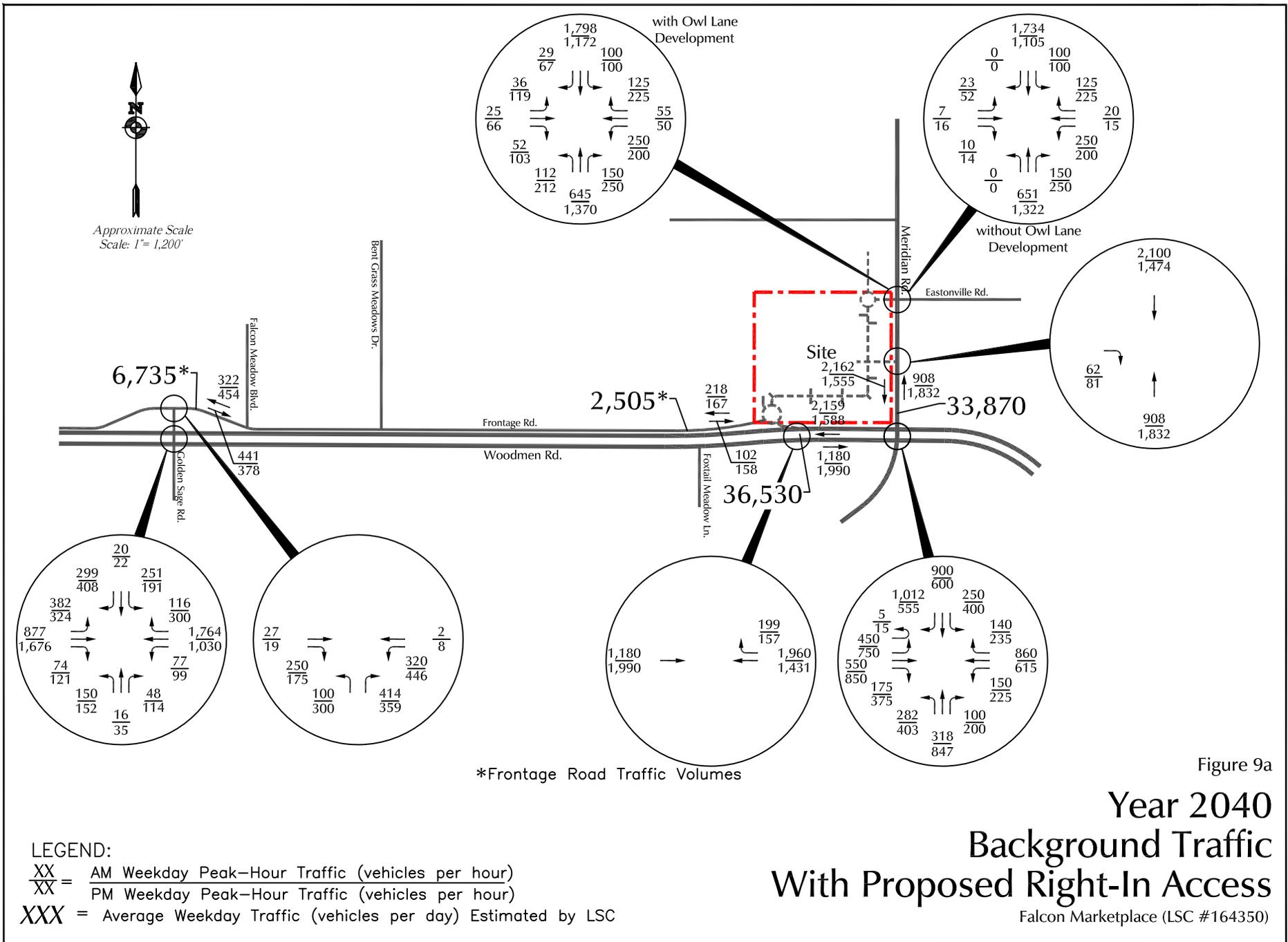


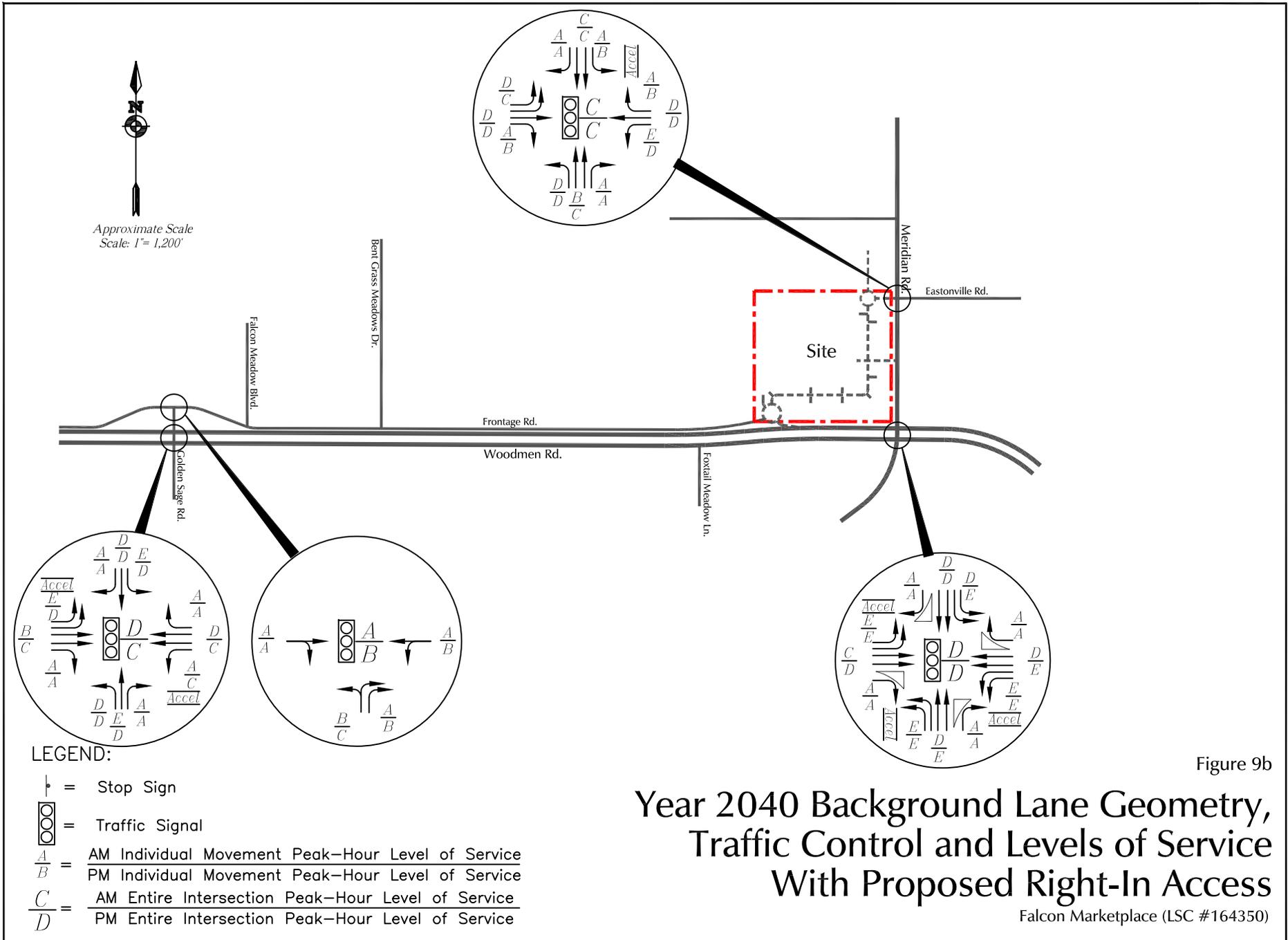
\*Frontage Road Traffic Volumes

LEGEND:  
 $\frac{XX}{XX}$  = AM Weekday Peak-Hour Traffic (vehicles per hour)  
 $\frac{XX}{XX}$  = PM Weekday Peak-Hour Traffic (vehicles per hour)  
 XXX = Average Weekday Traffic (vehicles per day) Estimated by LSC

Figure 8a  
 Year 2040  
 Background Traffic  
 Without Proposed Right-In Access  
 Falcon Marketplace (LSC #164350)







# Trip Generation, Distribution, and Traffic Volume Estimates

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## TRIP GENERATION

Estimates of the traffic volumes expected to be generated by the existing and proposed land uses within the study area were made using the nationally published trip generation rates found in *Trip Generation, 9th Edition, 2012* by the Institute of Transportation Engineers (ITE). Table 2 shows the trip generation estimates.

The total number of vehicle-trips generated by the land uses has been reduced to account for the internal vehicle-trips made within the site between land uses, without use of the external streets surrounding the site. Table 2 shows the number of internal trips assumed for each land use. The internal trip reduction is an estimate by LSC based on National Highway Cooperative Highway Research Program (NCHRP) Report 684 *Enhancing Internal Trip Capture Estimation for Mixed-Use Developments*. The results of the spreadsheet model are attached.

The total number of external new impact vehicle-trips generated by the retail land uses has been reduced to take into account the “pass-by” and “diverted link” phenomena. A pass-by trip is made by a motorist who would already be on the adjacent roadways regardless of the proposed development, but who stops in at the site while passing by. The motorist would then continue on his or her way to a final destination in the original direction. The pass-by percentages shown on Table 2 are from the *Trip Generation Handbook - An ITE Proposed Recommended Practice, 3rd Edition, 2014* by ITE. A diverted link trip is one made by a motorist who would already be traveling on a nearby (but not adjacent) roadway regardless of this development who now uses another roadway to access the site before continuing on his or her way to a final destination in the original direction. Diverted link trips are included in the distribution percentages.

The site is projected to generate about 9,558 new external vehicle-trips on the average weekday, with about half entering and half exiting the site during a 24-hour period.

Figure 8a

**Table 2  
Trip Generation Estimate  
Falcon Marketplace**

| Lot  | Land Use Code | Land Use Description  | Trip Generation Units | Trip Generation Rates <sup>(1)</sup> |                      |                         |                        | Total Trips Generated |                         |                      |                         | Internal Trips <sup>(7)</sup> |                         |                      |                         | Total External Trips Generated |                         |                      |                         | Pass-By Trips <sup>(2)</sup> | New External Trips Generated<br>Average<br>New Weekday<br>Traffic |                      |            |     |              |
|--|---------------|---|-----------------------|--------------------------------------|----------------------|-------------------------|------------------------|-----------------------|-------------------------|----------------------|-------------------------|-------------------------------|-------------------------|----------------------|-------------------------|--------------------------------|-------------------------|----------------------|-------------------------|------------------------------|---|----------------------|------------|-----|--------------|
|  |               |   |                       | Average Weekday Traffic              | Morning Peak Hour In | Afternoon Peak Hour Out | Afternoon Peak Hour In | Evening Peak Hour Out | Average Weekday Traffic | Morning Peak Hour In | Afternoon Peak Hour Out | Evening Peak Hour In          | Average Weekday Traffic | Morning Peak Hour In | Afternoon Peak Hour Out | Evening Peak Hour In           | Average Weekday Traffic | Morning Peak Hour In | Afternoon Peak Hour Out |                              |   | Evening Peak Hour In |            |     |              |
| <b>Trip Generation Estimate Based on the Currently Proposed Plan</b> |               |   |                       |                                      |                      |                         |                        |                       |                         |                      |                         |                               |                         |                      |                         |                                |                         |                      |                         |                              |   |                      |            |     |              |
| 1  | 866           | Pet Supply Superstore <sup>(3)</sup>                          | 15 KSF <sup>(4)</sup> | 38.24                                | 0.53                 | 0.33                    | 1.69                   | 1.69                  | 574                     | 8                    | 5                       | 25                            | 25                      | 54                   | 1                       | 2                              | 3                       | 2                    | 520                     | 7                            | 3   | 22                   | 23         | 10% | 468          |
| 2  | 850           | Supermarket   | 123 KSF               | 78.26                                | 2.11                 | 1.29                    | 3.76                   | 3.62                  | 9,626                   | 259                  | 159                     | 463                           | 445                     | 909                  | 17                      | 26                             | 48                      | 37                   | 8,717                   | 242                          | 133   | 415                  | 408        | 36% | 5,579        |
| 3  | 944           | Gasoline/Service Station                                      | 18 VFP <sup>(5)</sup> | 168.56                               | 6.20                 | 5.96                    | 6.94                   | 6.94                  | 3,034                   | 112                  | 107                     | 125                           | 125                     | 286                  | 5                       | 8                              | 15                      | 12                   | 2,748                   | 107                          | 99  | 110                  | 113        | 56% | 1,209        |
| 4  | 934           | Fast-Food Restaurant with Drive-Through Window <sup>(6)</sup> | 2.5 KSF               | 496.12                               | 0.42                 | 0.39                    | 16.98                  | 15.67                 | 1,240                   | 1                    | 1                       | 42                            | 39                      | 380                  | 0                       | 0                              | 12                      | 17                   | 860                     | 1                            | 1   | 30                   | 22         | 50% | 430          |
| 5  | 820           | Shopping Center   | 5 KSF                 | 55.14                                | 0.77                 | 0.47                    | 2.36                   | 2.51                  | 276                     | 4                    | 2                       | 12                            | 13                      | 26                   | 1                       | 0                              | 1                       | 1                    | 250                     | 3                            | 2   | 11                   | 12         | 34% | 165          |
| 6  | 848           | Tire Store  | 7.72 KSF              | 24.87                                | 1.82                 | 1.07                    | 1.78                   | 2.37                  | 192                     | 14                   | 8                       | 14                            | 18                      | 18                   | 0                       | 1                              | 1                       | 1                    | 174                     | 14                           | 7   | 13                   | 17         | 28% | 125          |
| 7  | 934           | Fast-Food Restaurant with Drive-Through Window                | 3.5 KSF               | 496.12                               | 23.16                | 22.26                   | 16.98                  | 15.67                 | 1,736                   | 81                   | 78                      | 59                            | 55                      | 532                  | 26                      | 12                             | 17                      | 24                   | 1,204                   | 55                           | 66  | 42                   | 31         | 50% | 602          |
| 8  | 934           | Fast-Food Restaurant with Drive-Through Window <sup>(6)</sup> | 2.5 KSF               | 496.12                               | 0.42                 | 0.39                    | 16.98                  | 15.67                 | 1,240                   | 1                    | 1                       | 42                            | 39                      | 380                  | 0                       | 0                              | 12                      | 17                   | 860                     | 1                            | 1   | 30                   | 22         | 50% | 430          |
| 9  | 610           | Clinic  | 7.8 KSF               | 31.45                                | 2.19                 | 2.19                    | 2.12                   | 3.06                  | 245                     | 17                   | 17                      | 17                            | 24                      | 40                   | 3                       | 16                             | 10                      | 5                    | 205                     | 14                           | 1   | 7                    | 19         | 0%  | 205          |
| 10   | 820           | Shopping Center   | 8 KSF                 | 55.14                                | 0.77                 | 0.47                    | 2.36                   | 2.51                  | 441                     | 6                    | 4                       | 19                            | 20                      | 42                   | 1                       | 1                              | 2                       | 2                    | 399                     | 5                            | 3   | 17                   | 18         | 34% | 263          |
| 11   | 937           | Coffee/Donut Shop With Drive-Through Window                   | 1.3 KSF               | 818.58                               | 51.30                | 49.28                   | 21.40                  | 21.40                 | 1,064                   | 67                   | 64                      | 28                            | 28                      | 326                  | 21                      | 10                             | 9                       | 12                   | 738                     | 46                           | 54  | 19                   | 16         | 89% | 81           |
|  |               |   |                       |                                      |                      |                         |                        |                       | <b>19,669</b>           | <b>570</b>           | <b>446</b>              | <b>846</b>                    | <b>831</b>              | <b>2,993</b>         | <b>75</b>               | <b>76</b>                      | <b>130</b>              | <b>130</b>           | <b>16,676</b>           | <b>495</b>                   | <b>370</b>  | <b>716</b>           | <b>701</b> |     | <b>9,558</b> |

Notes:

- (1) Source: "Trip Generation, 9th Edition, 2012" by the Institute of Transportation Engineers (ITE)
- (2) Source: "Trip Generation Handbook - An ITE Proposed Recommended Practice" 3rd Edition, 2014
- (3) Daily and morning peak-hour trip generation rates for Pet Supply Superstore are estimates by LSC
- (4) KSF = 1,000 square feet of floor space
- (5) VFP = vehicle fueling position
- (6) The AM peak-hour trip generation rates have been reduced by LSC as the proposed fast-food restaurant does not serve breakfast
- (6) See attached NCHRP 684 Internal Trip Capture Estimate Tool Sheets

Source: LSC Transportation Consultants, Inc.

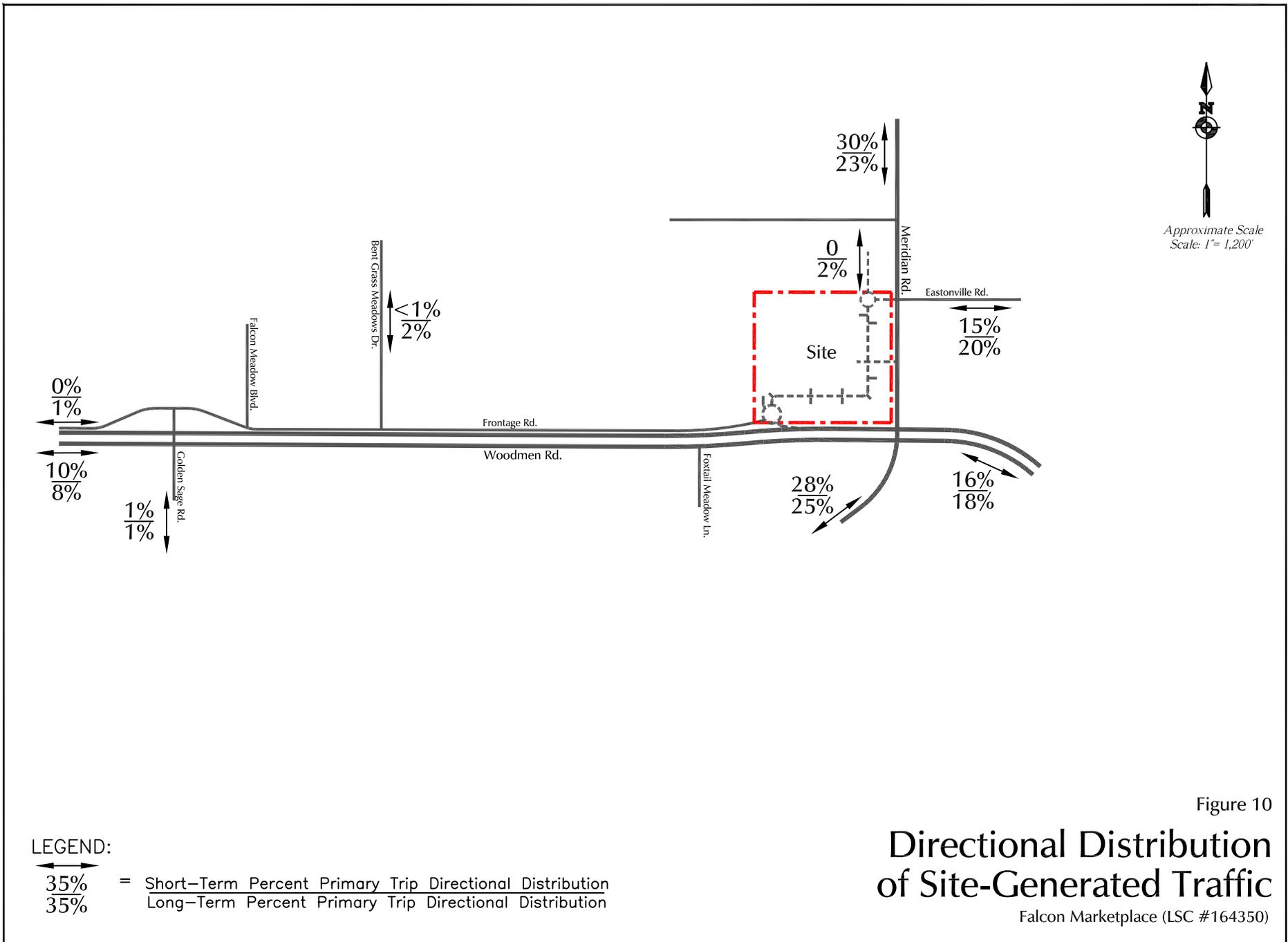
During the morning peak hour, which generally occurs for one hour between 6:30 and 8:30 a.m., about 495 vehicles would enter and 370 vehicles would exit the site.

During the afternoon peak hour, which generally occurs for one hour between 4:15 and 6:15 p.m., about 716 vehicles would enter and 701 vehicles would exit the site.

## **TRIP DISTRIBUTION AND ASSIGNMENT**

The estimated directional distribution of the site-generated traffic volumes on the adjacent roadways is an important factor in determining the site's traffic impacts. Figure 10 shows the directional distribution estimates for the primary site-generated traffic. The estimates have been based on the following factors: the site's location with respect to the Falcon area's residential, employment, and commercial areas; the balance of the northeast Colorado Springs metropolitan area and the rural areas of the county to the east; the site's proposed land uses; the site's proposed access and circulation system; and the roadway system serving the site. The short-term distribution estimate assumes the existing street network plus the Meridian Road project, and the long-term estimate assumes the future Stapleton extension to the west and additional east-west potential connections west of US 24 through Banning Lewis Ranch such as Dublin Boulevard. The pass-by trips and diverted trips were assigned based in large part on the magnitude and direction of the existing and projected background traffic volumes on the adjacent roadways.

When the distribution percentages (from Figure 10) were applied to the trip generation estimates (from Table 2), the site-generated traffic volumes on the area roadways were determined. Figures 11 and 12 show the short-term site-generated traffic volumes without and with the proposed right-in-only access from Woodmen Road, respectively. Figures 13 and 14 show the long-term site-generated traffic volumes with no access to Woodmen Road and with the proposed right-in-only access from Woodmen Road, respectively.



0%  
1%

10%  
8%

1%  
1%

Falcon Meadow Blvd.

Bent Grass Meadows Dr.

< 1%  
2%

Frontage Rd.

Woodmen Rd.

Foxtail Meadow Ln.

0  
2%

30%  
23%

Meridian Rd.

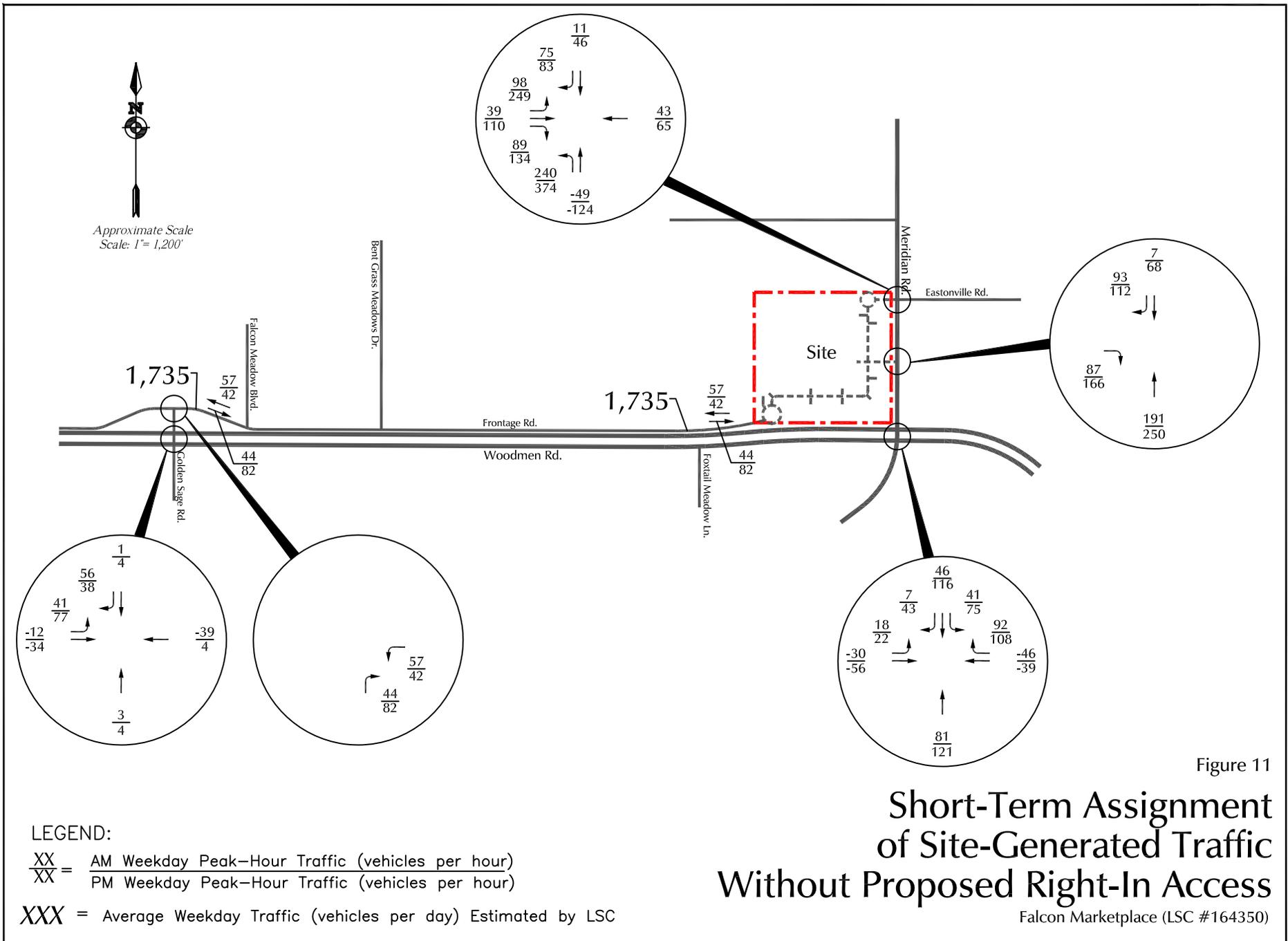
Eastonville Rd.

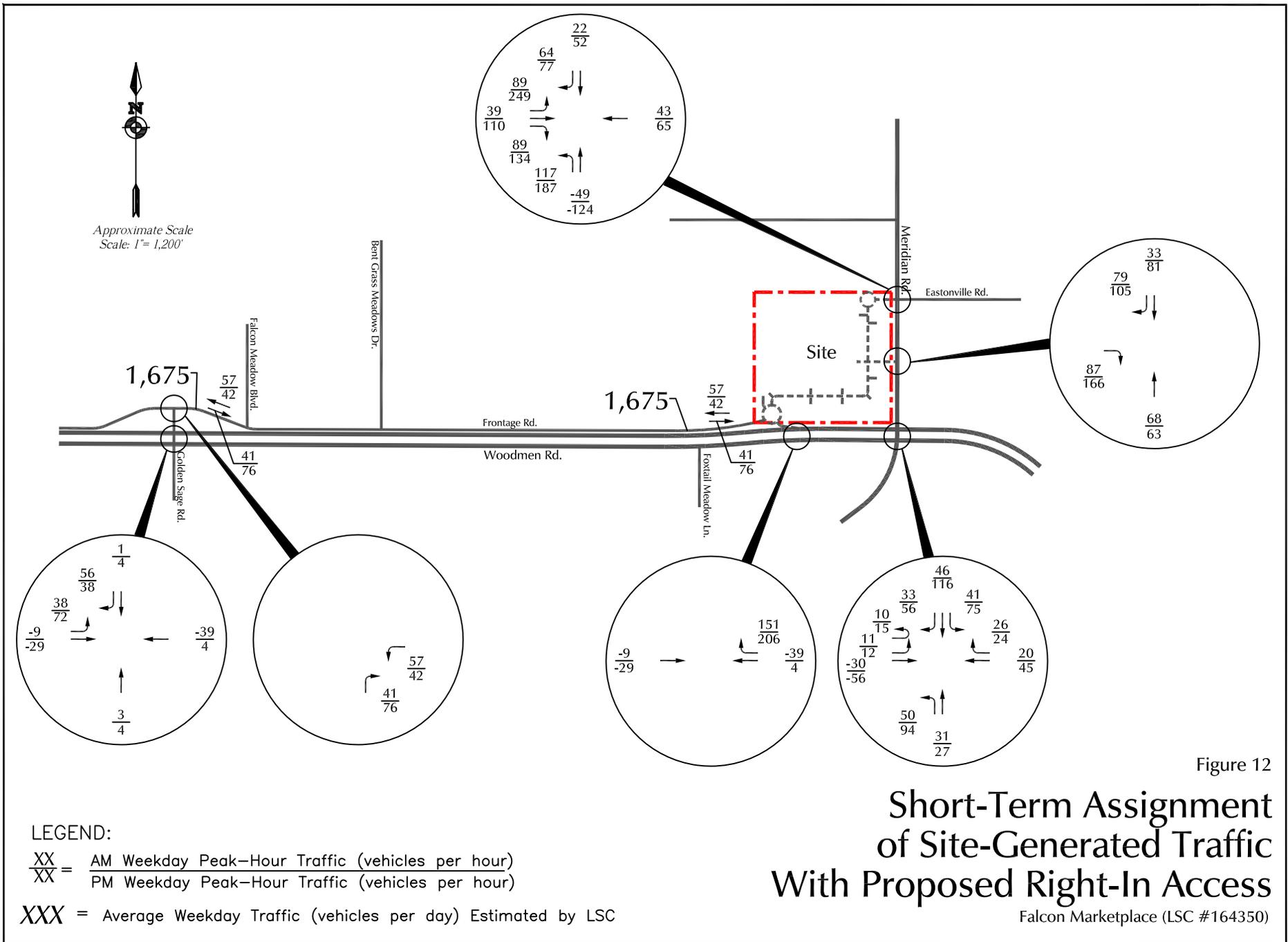
15%  
20%

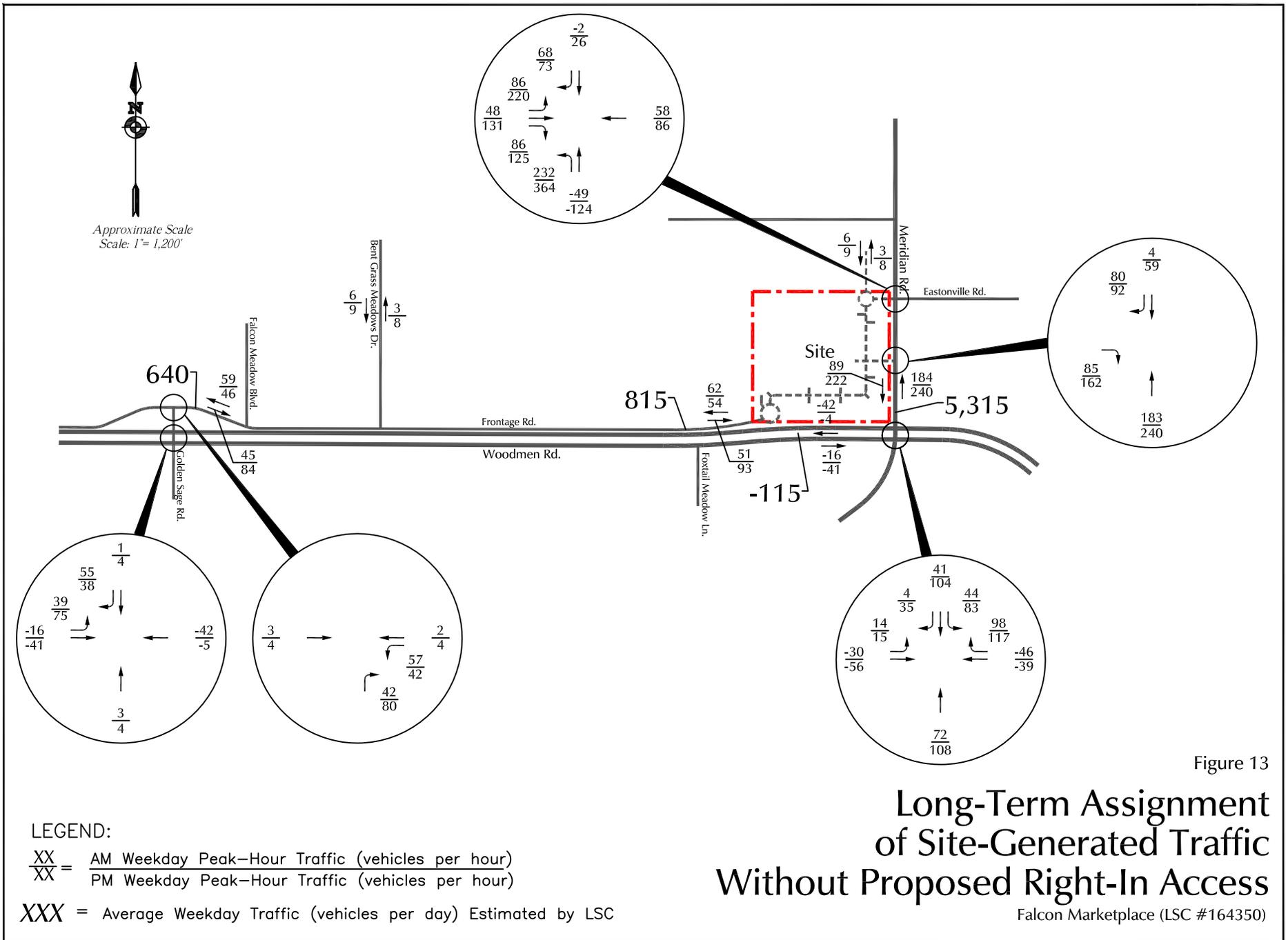
28%  
25%

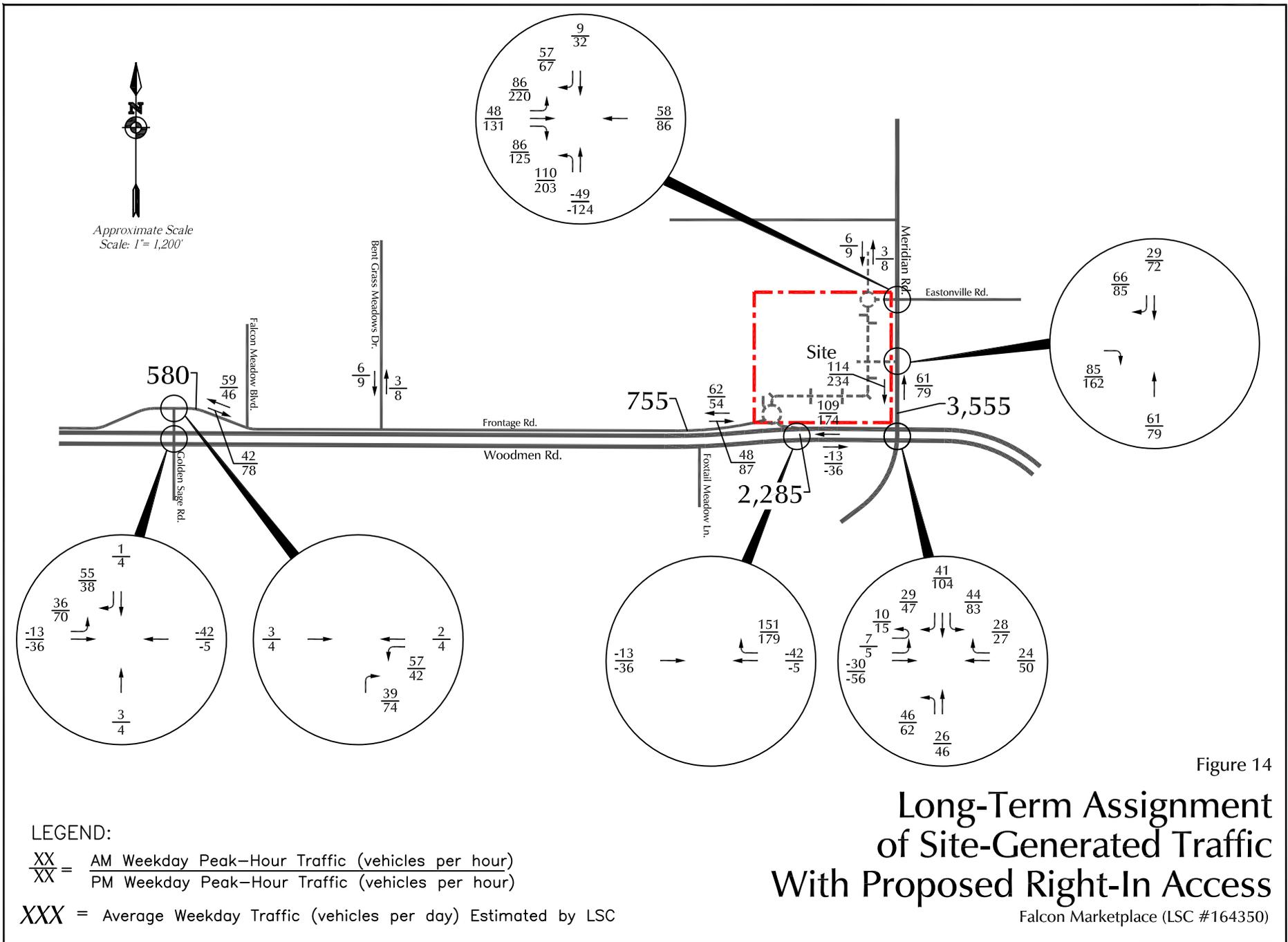
16%  
18%

Site





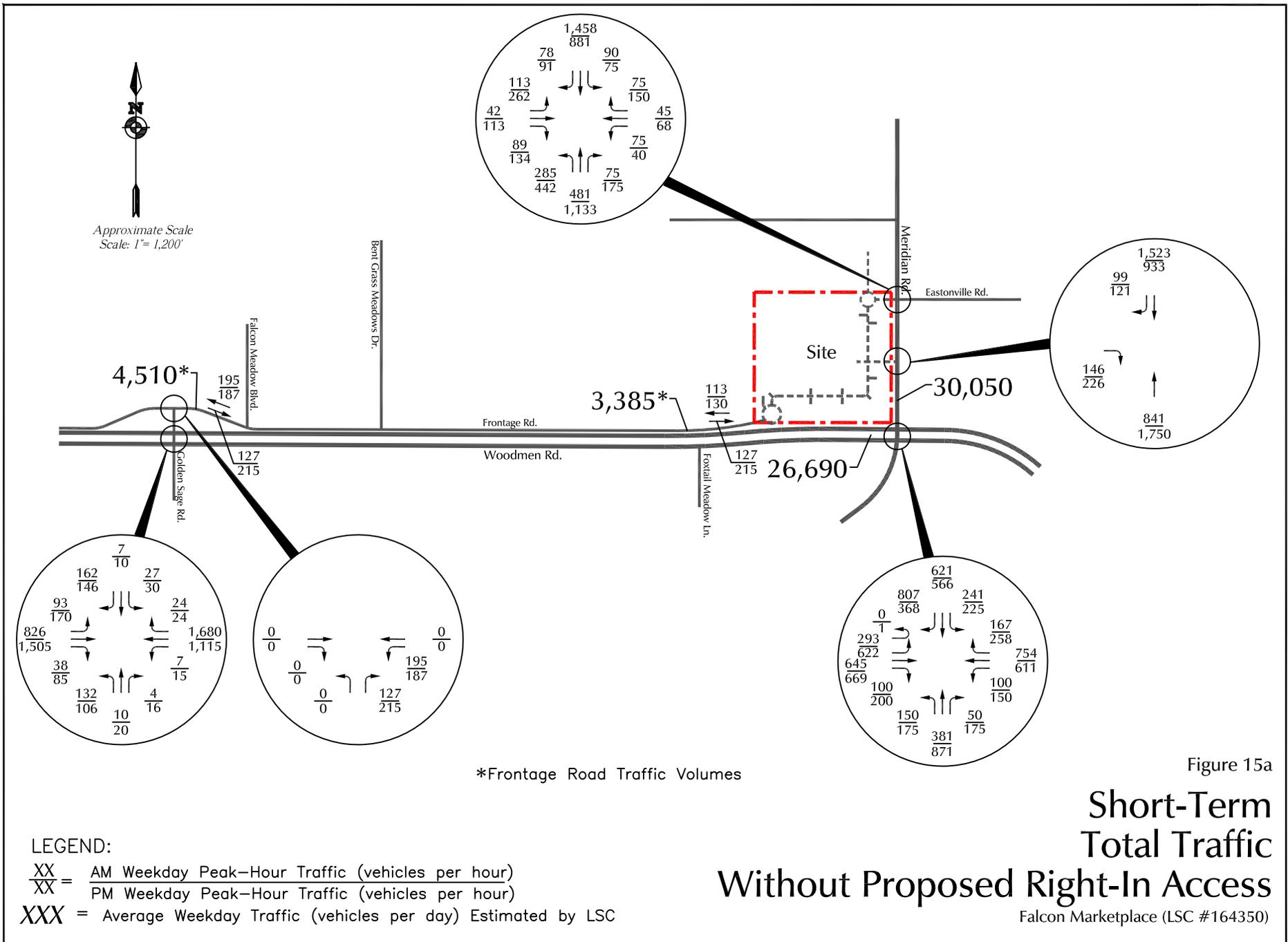




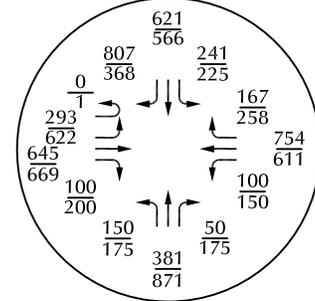
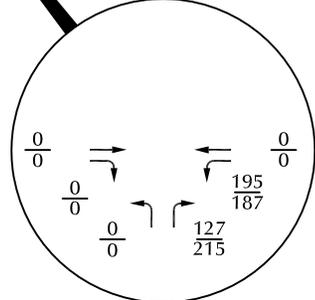
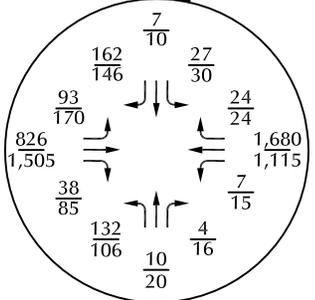
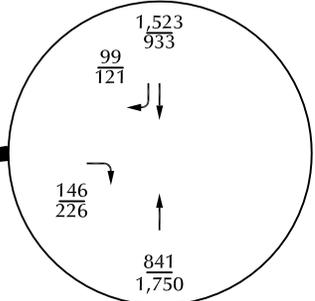
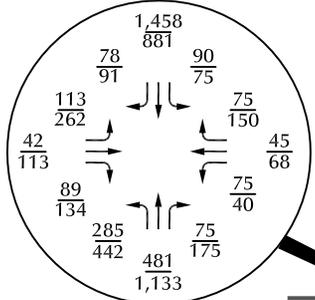
## **SHORT-TERM TOTAL TRAFFIC**

Figures 15a and 16a show the short-term total traffic volumes at the access points and key intersections adjacent to the site with no access to Woodmen Road and with the proposed right-in-only access from Woodmen Road, respectively. The volumes are the sum of the short-term background traffic volumes from Figures 6a and 7a, plus the short-term site-generated traffic volumes from Figures 11 and 12. The volumes shown in Figures 15a and 16a represent the short-term impacts of the development.

Figures 15b and 16b show the lane geometry, traffic control, and level of service at the key intersections based on the short-term total volumes.



Approximate Scale  
Scale: 1" = 1,200'



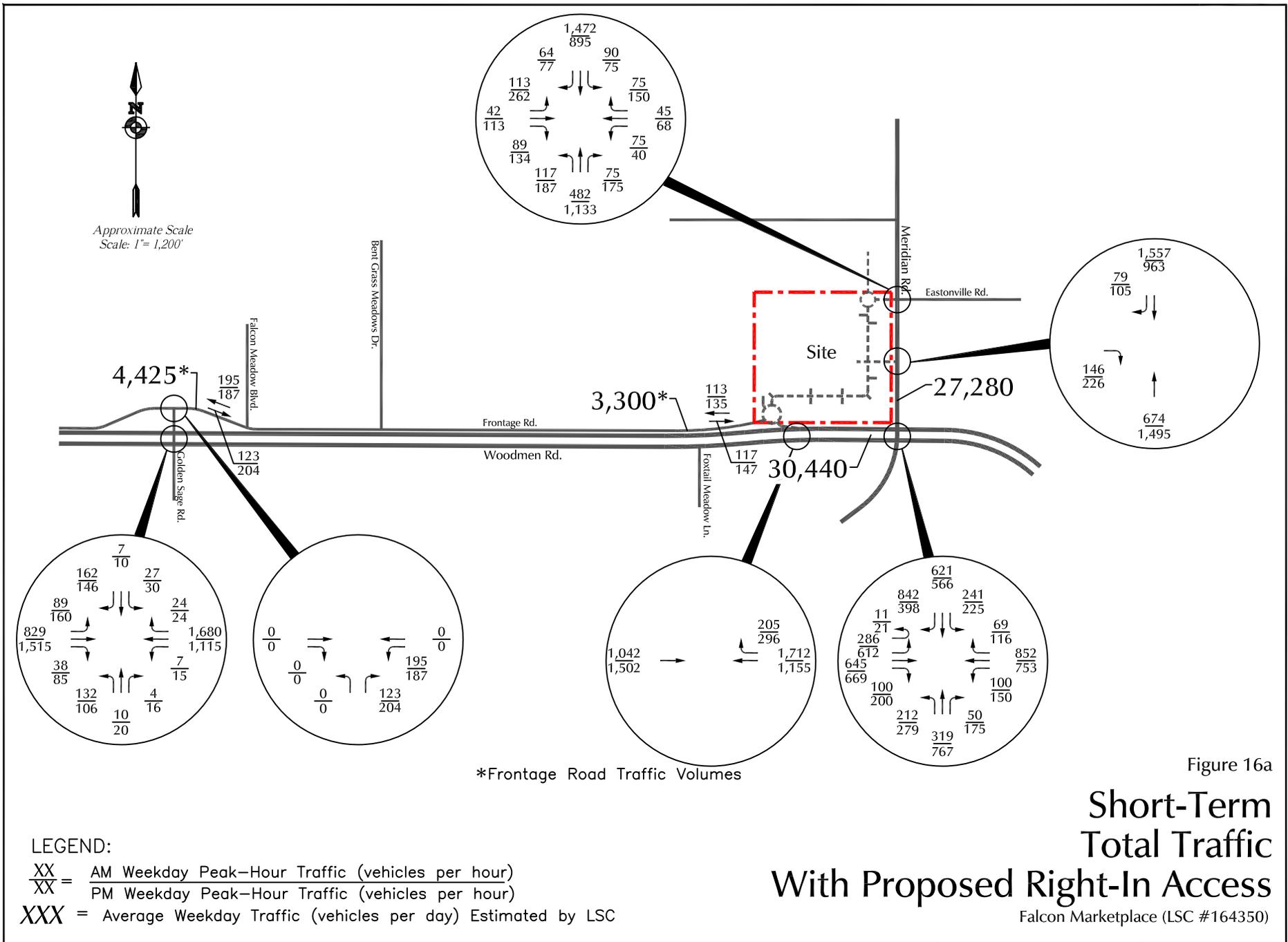
\*Frontage Road Traffic Volumes

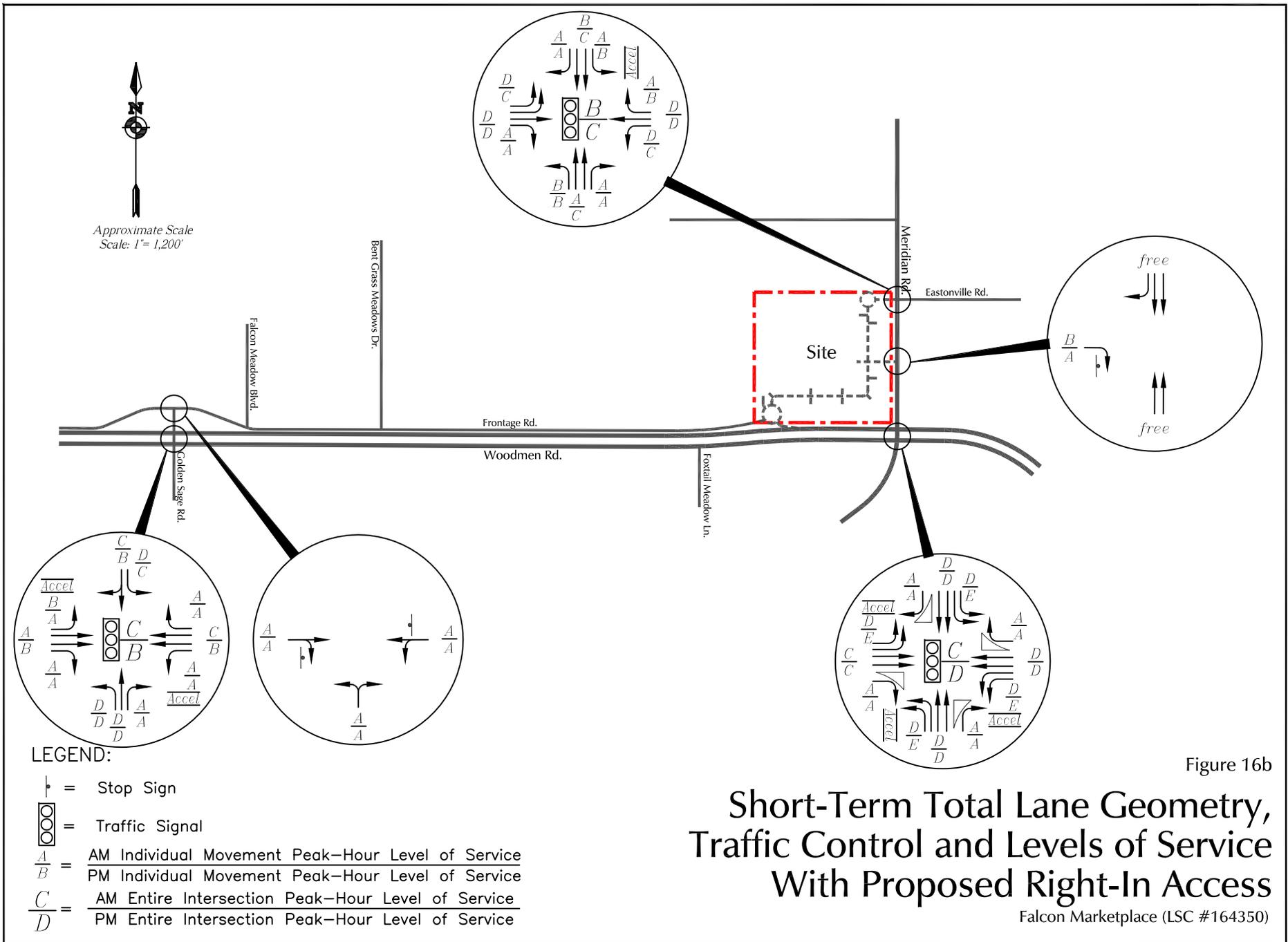
Figure 15a

**Short-Term Total Traffic**  
**Without Proposed Right-In Access**

Falcon Marketplace (LSC #164350)







## **2040 TOTAL TRAFFIC**

Figures 17a and 18a show the 2040 total traffic volumes at the site access points and key intersections adjacent to the site with no access to Woodmen Road and with the proposed right-in-only access from Woodmen Road, respectively. The volumes are the sum of the 2040 background traffic volumes from Figures 8a and 9a, plus the long-term site-generated traffic volumes from Figures 13 and 14. Figures 17b and 18b show the 2040 total traffic volumes at all of the proposed access points to the public internal road, which extends from the terminus of the Woodmen Frontage Road to Eastonville Road.

Figures 17c and 18c show the lane geometry, traffic control, and level of service at the site access points and key intersections adjacent to the site based on the 2040 total volumes. Figures 17d and 18d show the lane geometry, traffic control, and level of service at the site access points and key intersections adjacent to the site based on the 2040 total volumes. Figures 17d and 18d show the lane geometry, traffic control, and level of service at all of the proposed access points to the public internal road, which extends from the terminus of the Woodmen Frontage Road to Eastonville Road.

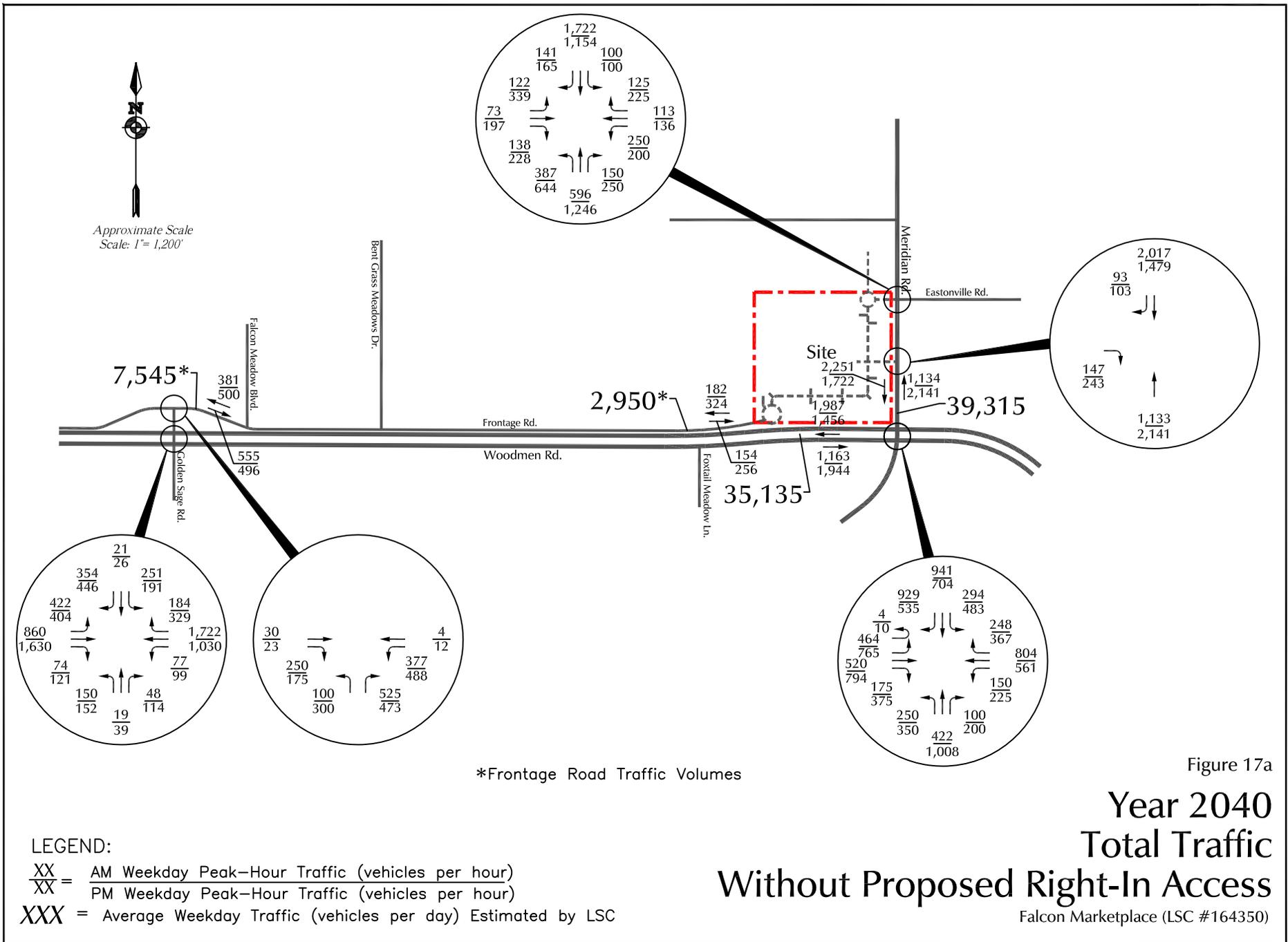


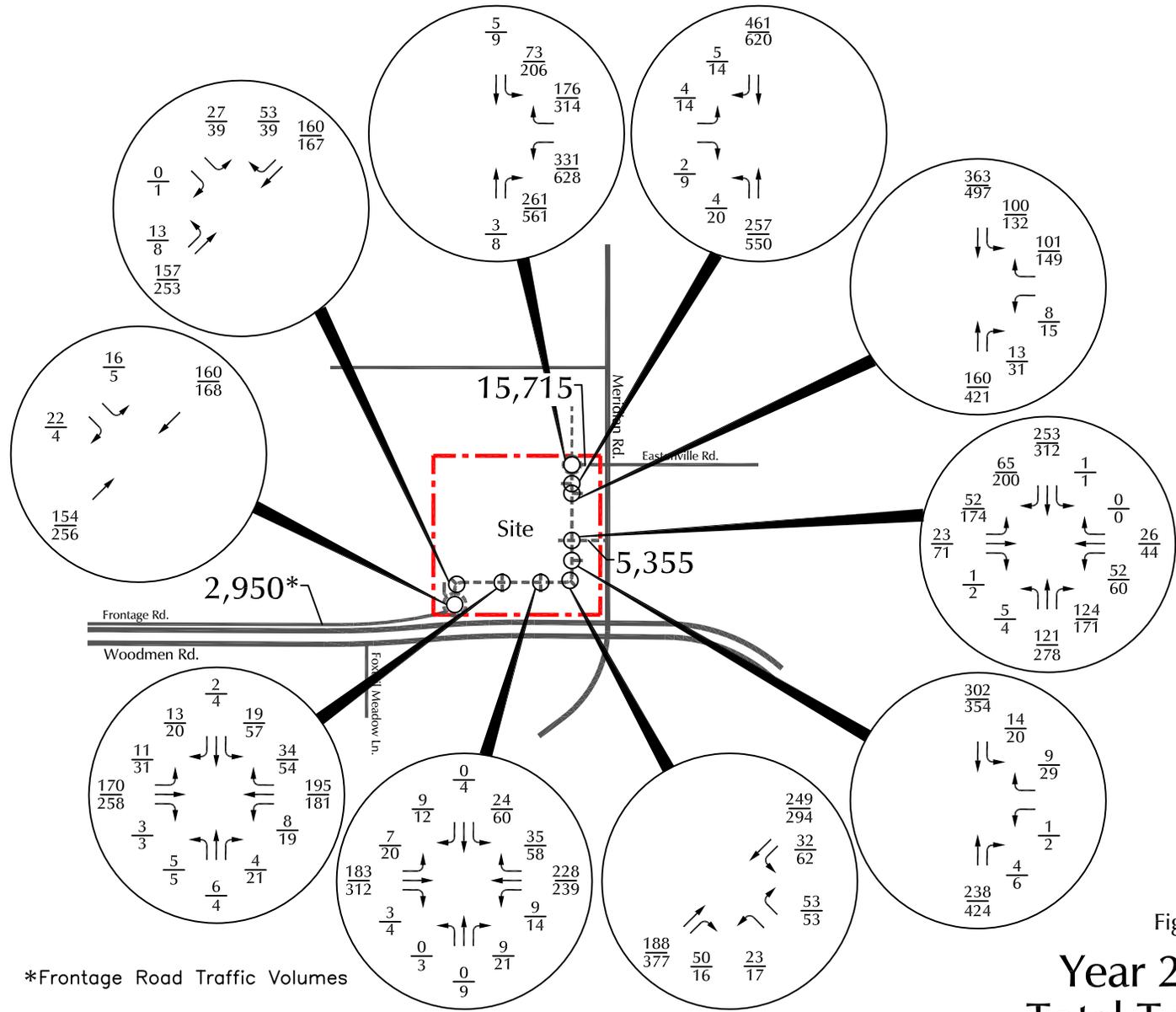
Figure 17a

# Year 2040 Total Traffic Without Proposed Right-In Access

Falcon Marketplace (LSC #164350)



Approximate Scale  
Scale: 1" = 1,200'

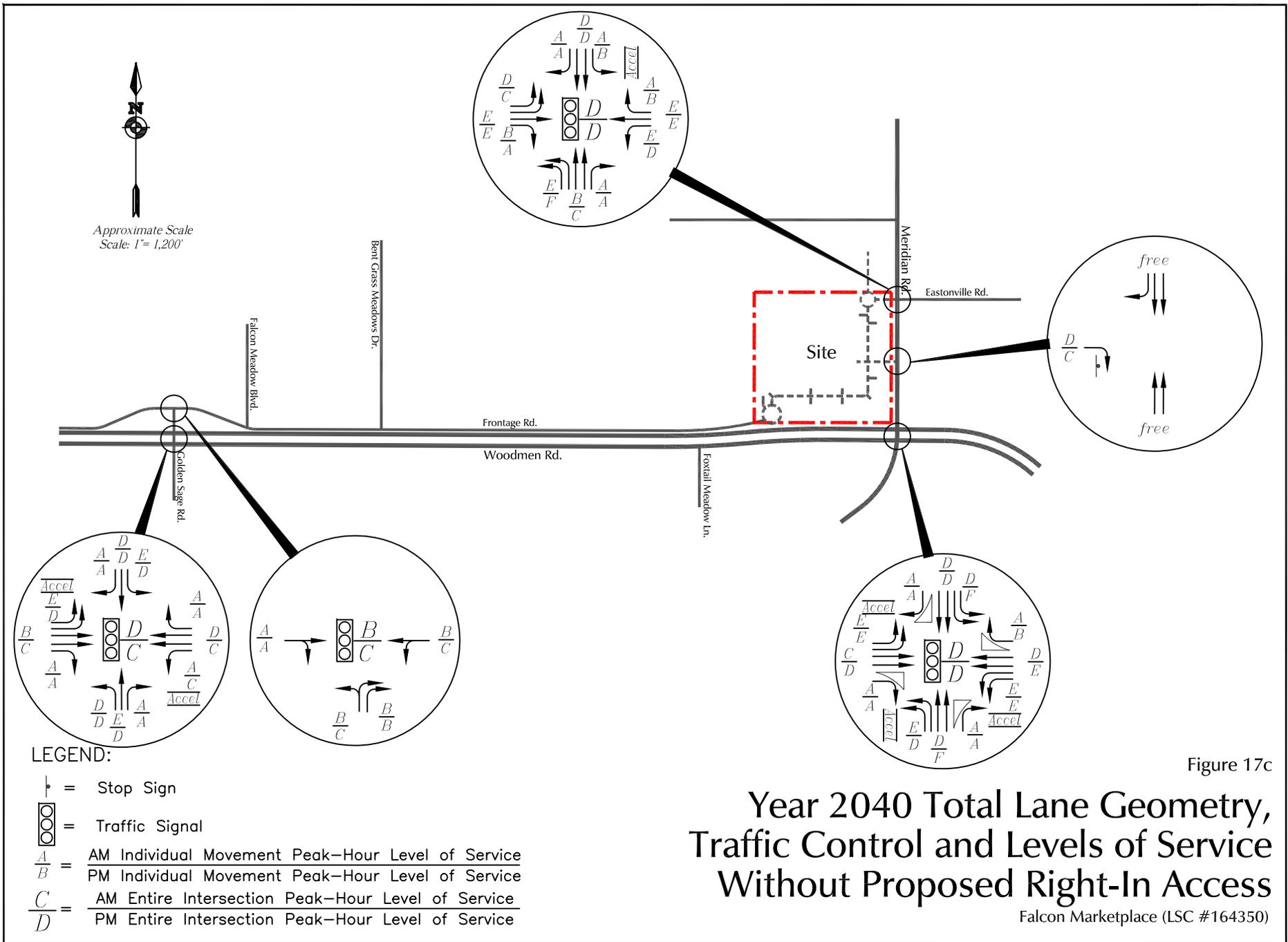


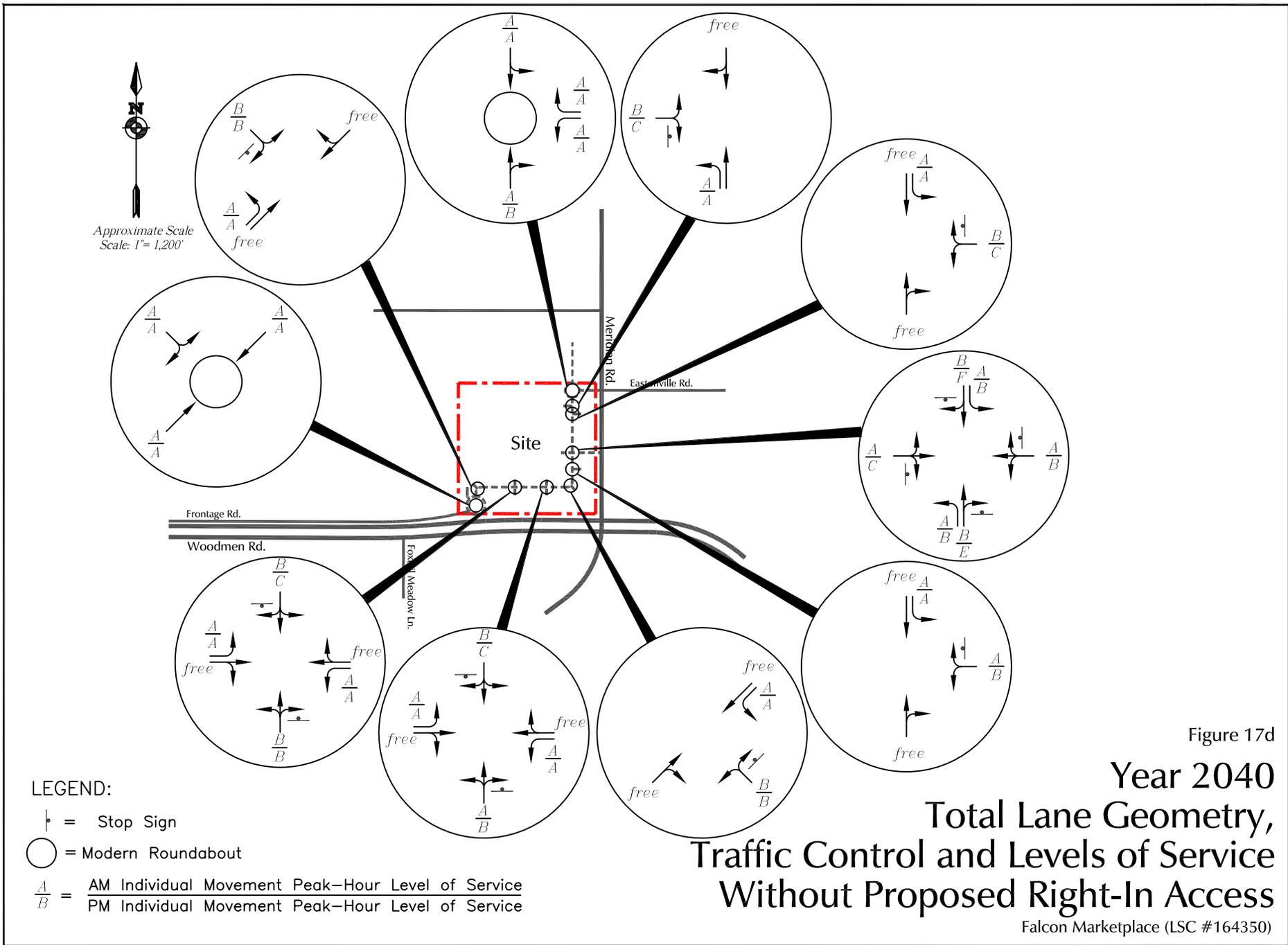
\*Frontage Road Traffic Volumes

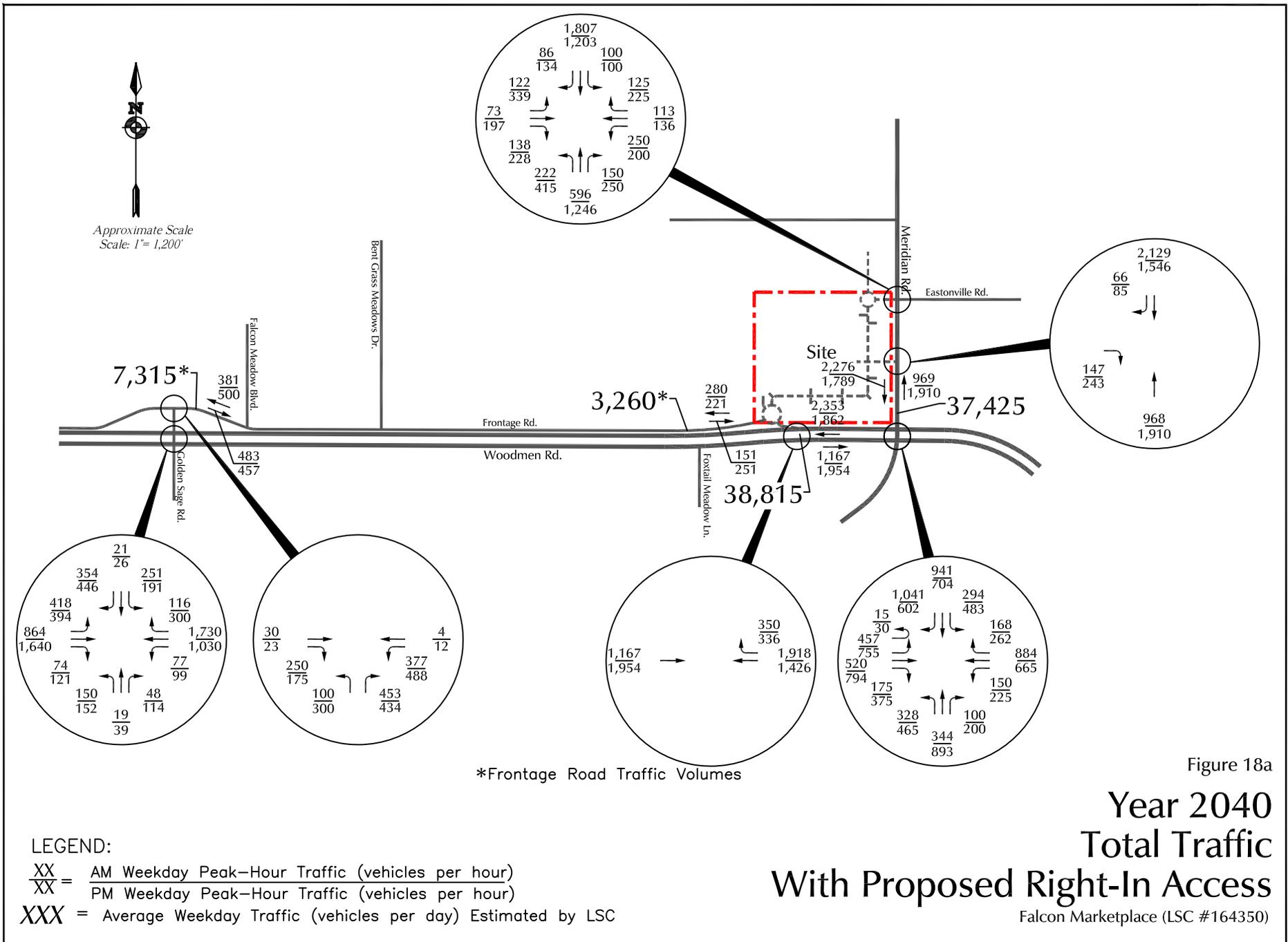
LEGEND:

- $\frac{XX}{XX}$  = AM Weekday Peak-Hour Traffic (vehicles per hour)
- $\frac{XX}{XX}$  = PM Weekday Peak-Hour Traffic (vehicles per hour)
- XXX = Average Weekday Traffic (vehicles per day) Estimated by LSC

Figure 17b  
**Year 2040  
 Total Traffic  
 Without Proposed Right-In Access**  
 Falcon MarketPlace (LSC #164350)









Approximate Scale  
Scale: 1" = 1,200'

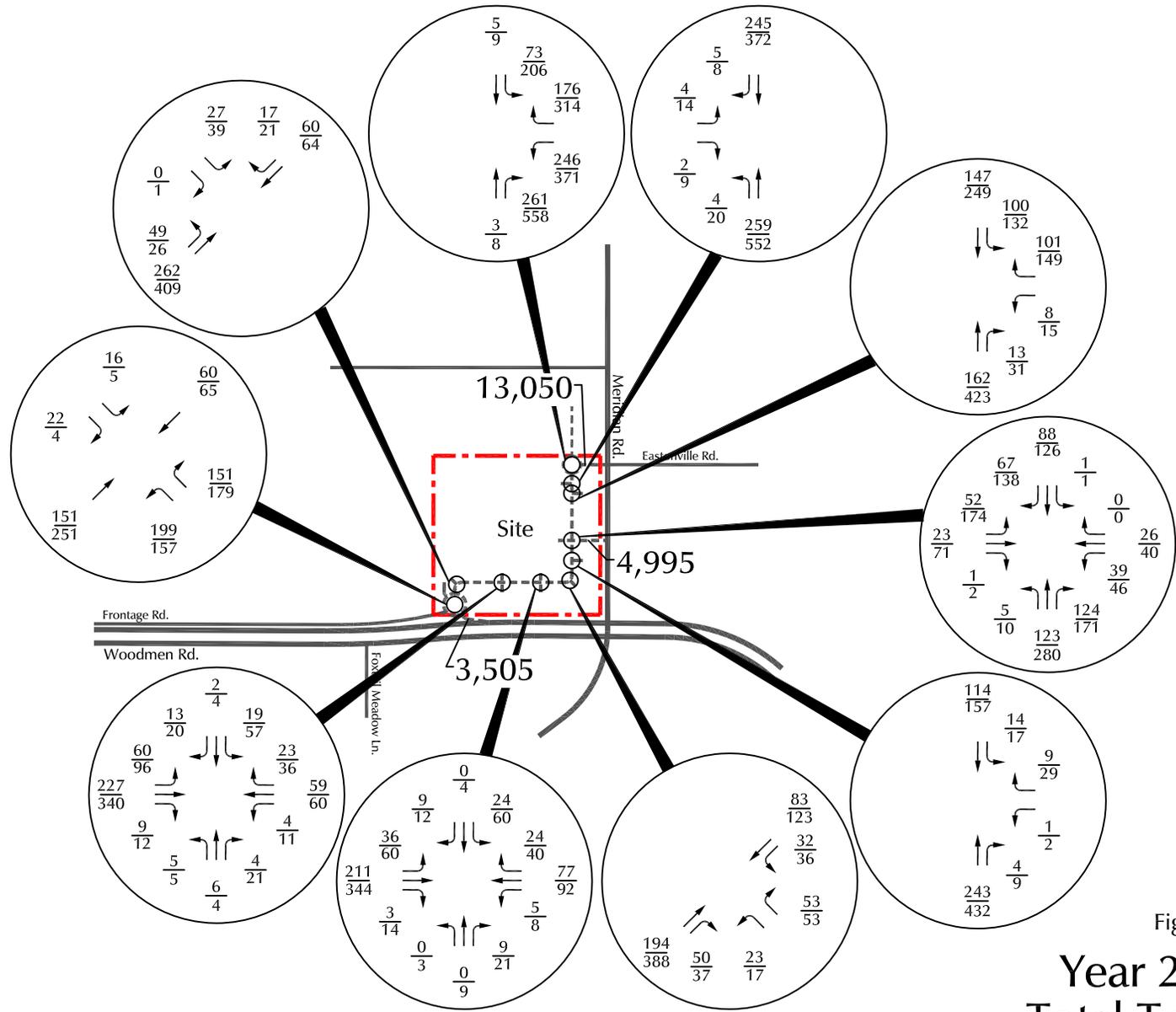


Figure 18b

# Year 2040 Total Traffic

## With Proposed Right-In Access

Falcon MarketPlace (LSC #164350)

**LEGEND:**

$\frac{XX}{XX}$  = AM Weekday Peak-Hour Traffic (vehicles per hour)

$\frac{XX}{XX}$  = PM Weekday Peak-Hour Traffic (vehicles per hour)

XXX = Average Weekday Traffic (vehicles per day) Estimated by LSC

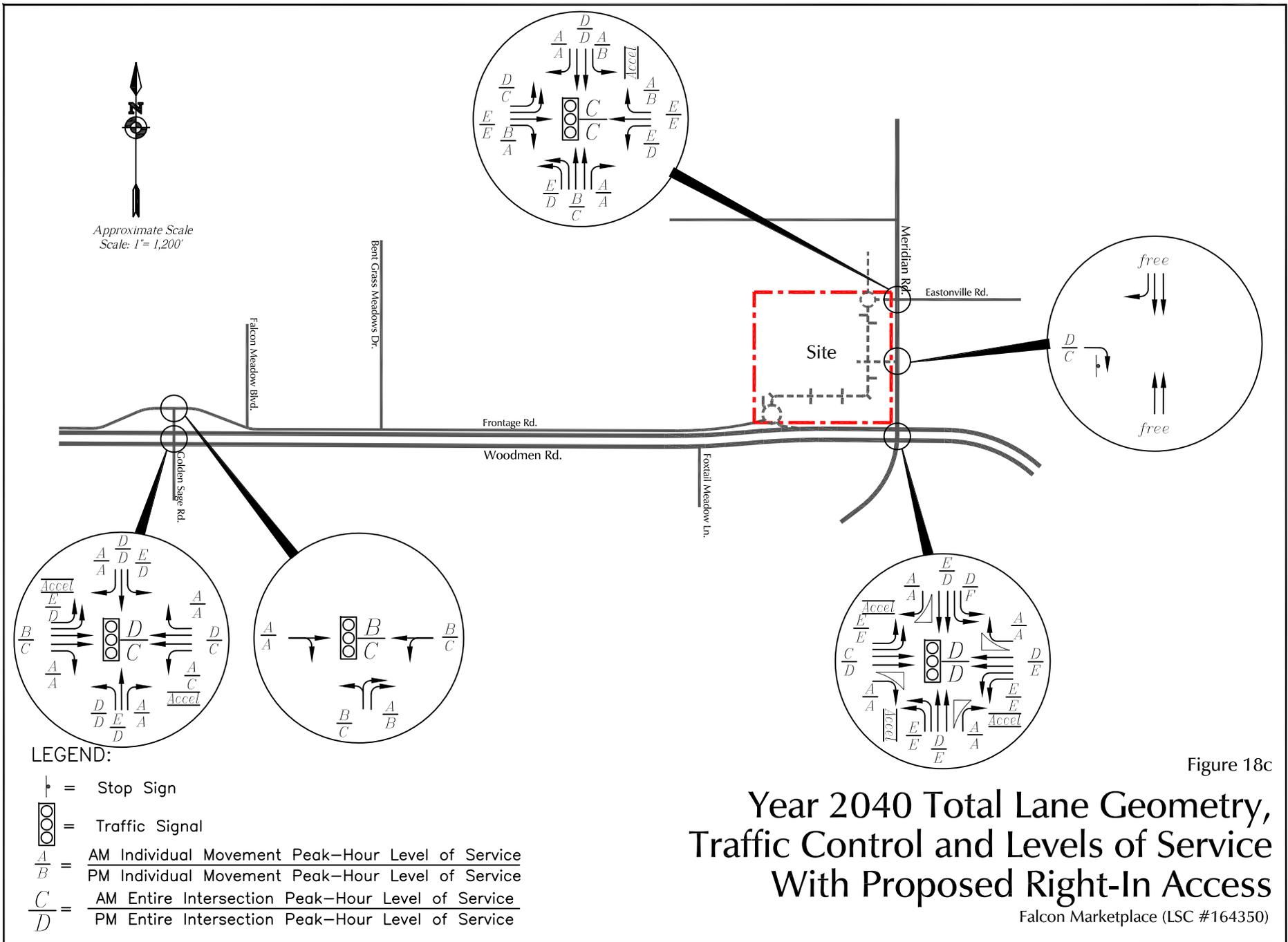


Figure 18c



# Traffic Operations Analysis

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## PROJECTED LEVELS OF SERVICE

### Intersection Levels of Service

The key area intersections were analyzed to determine the projected levels of service for the short-term and 2040 total traffic volumes with and without the proposed right-in-only access from Woodmen Road. Figures 6b, 7b, 8b, 9b, 15b, 16b, 17c, 17d, 18c, and 18d show the level of service analysis results. The signalized intersections were analyzed using Synchro. The right-in/right-out-only access point to Meridian Road was analyzed using SimTraffic simulations to better analyze the operational effects of adjacent signal-controlled intersections. The proposed access points to the internal public road were analyzed based on the unsignalized method of analysis procedures found in the *Highway Capacity Manual, 6<sup>th</sup> Edition* by the Transportation Research Board. The level of service (LOS) reports are attached. Tables 3 and 4 show the projected level of service, delay, and volume-to-capacity ratio for movements projected to operate below a LOS D based on the short-term and 2040 total traffic volumes, respectively. A comparison of the delay at the intersection of Woodmen/Meridian with three northbound through lanes (instead of the current two through lanes) has been included in Table 4 as required by staff.

**Table 3**  
**Short-Term Total Traffic Level of Service E Movements**  
**Falcon Marketplace**

| Intersection Movement                                   | AM         |          |             |            | PM         |          |             |            |
|---|------------|----------|-------------|------------|------------|----------|-------------|------------|
|   | Volume     | LOS      | Delay       | V/C        | Volume     | LOS      | Delay       | V/C        |
| <b>Without Proposed Right-in Access to Woodmen Road</b> |            |          |             |            |            |          |             |            |
| <b>Woodmen Road/Meridian Road</b>                       |            |          |             |            |            |          |             |            |
| Eastbound Left  | 293        | D        | 47.4        | 0.59       | 623        | D        | 54.3        | 0.85       |
| Westbound Left  | 100        | D        | 52.4        | 0.37       | 150        | E        | 57.1        | 0.52       |
| Northbound Left   | 150        | D        | 48.9        | 0.42       | 175        | D        | 54.0        | 0.51       |
| Southbound Left   | 241        | D        | 49.0        | 0.56       | 225        | E        | 66.9        | 0.75       |
| <b>Overall</b>  | <b>---</b> | <b>C</b> | <b>28.4</b> | <b>---</b> | <b>---</b> | <b>D</b> | <b>38.2</b> | <b>---</b> |
| <b>With Proposed Right-in Access to Woodmen Road</b>    |            |          |             |            |            |          |             |            |
| <b>Woodmen Road/Meridian Road</b>                       |            |          |             |            |            |          |             |            |
| Eastbound Left  | 297        | D        | 50.1        | 0.62       | 633        | E        | 56.8        | 0.86       |
| Westbound Left  | 100        | D        | 54.8        | 0.39       | 150        | E        | 58.6        | 0.53       |
| Northbound Left   | 212        | D        | 53.6        | 0.57       | 279        | E        | 63.2        | 0.75       |
| Southbound Left   | 241        | D        | 51.8        | 0.58       | 225        | E        | 69.2        | 0.76       |
| <b>Overall</b>  | <b>---</b> | <b>C</b> | <b>30.6</b> | <b>---</b> | <b>---</b> | <b>D</b> | <b>39.9</b> | <b>---</b> |
| <i>Source: LSC Transportation Consultants, Inc.</i>     |            |          |             |            |            |          |             |            |

**Table 4**  
**2040 Projected Total Traffic Level of Service E and F Movements**  
**Falcon Marketplace**

| Intersection Movement   | AM         |          |             |            | PM         |                  |             |            | PM Alternate Analysis <sup>(1)</sup> |             |            |
|---|------------|----------|-------------|------------|------------|------------------|-------------|------------|--------------------------------------|-------------|------------|
|   | Volume     | LOS      | Delay       | V/C        | Volume     | LOS              | Delay       | V/C        | LOS                                  | Delay       | V/C        |
| <b>Scenario: Without Proposed Right-in Access to Woodmen Road</b> |            |          |             |            |            |                  |             |            |                                      |             |            |
| <b>Woodmen Road/Meridian Road</b>                                 |            |          |             |            |            |                  |             |            |                                      |             |            |
| Eastbound Left  | 468        | E        | 70.1        | 0.90       | 775        | E                | 73.7        | 0.98       | E                                    | 69.8        | 0.97       |
| Westbound Left  | 150        | E        | 55.1        | 0.46       | 225        | E                | 60.2        | 0.64       | E                                    | 59.5        | 0.64       |
| Westbound Through   | 804        | D        | 48.1        | 0.83       | 561        | E                | 58.8        | 0.84       | E                                    | 57.8        | 0.84       |
| Northbound Left   | 250        | E        | 61.4        | 0.69       | 350        | D                | 54.9        | 0.69       | D                                    | 54.2        | 0.68       |
| Northbound Through  | 422        | D        | 38.6        | 0.46       | 1008       | F                | 103.4       | 1.10       | D                                    | 46.5        | 0.80       |
| Southbound Left   | 294        | D        | 54.1        | 0.63       | 483        | F                | 80.5        | 0.96       | E                                    | 77.0        | 0.94       |
| Southbound Through  | 941        | D        | 54.4        | 0.92       | 704        | D                | 48.1        | 0.77       | D                                    | 49.4        | 0.80       |
| <b>Overall</b>  | <b>---</b> | <b>D</b> | <b>37.4</b> | <b>---</b> | <b>---</b> | <b>D</b>         | <b>53.2</b> | <b>---</b> | <b>D</b>                             | <b>43.3</b> | <b>---</b> |
| <b>Eastonville Road/Meridian Road</b>                             |            |          |             |            |            |                  |             |            |                                      |             |            |
| Eastbound Through   | 73         | E        | 54.9        | 0.45       | 197        | E                | 56.1        | 0.68       |                                      |             |            |
| Westbound Left  | 250        | E        | 61.8        | 0.82       | 200        | D                | 47.0        | 0.72       |                                      |             |            |
| Westbound Through   | 113        | E        | 55.9        | 0.50       | 136        | E                | 55.7        | 0.57       |                                      |             |            |
| Northbound Left   | 387        | E        | 70.3        | 0.87       | 644        | F <sup>(2)</sup> | 106.7       | 1.09       |                                      |             |            |
| <b>Overall</b>  | <b>---</b> | <b>D</b> | <b>38.2</b> | <b>---</b> | <b>---</b> | <b>D</b>         | <b>40.0</b> | <b>---</b> |                                      |             |            |
| <b>Woodmen Road/Golden Sage Rd</b>                                |            |          |             |            |            |                  |             |            |                                      |             |            |
| Eastbound Left  | 422        | E        | 79.2        | 0.94       | 404        | D                | 50.3        | 0.72       |                                      |             |            |
| Northbound Through  | 19         | E        | 56.4        | 0.17       | 39         | D                | 52.8        | 0.26       |                                      |             |            |
| Southbound Left   | 251        | E        | 63.9        | 0.73       | 191        | D                | 53.2        | 0.69       |                                      |             |            |
| Southbound Through  | 21         | D        | 52.7        | 0.15       | 26         | D                | 53.1        | 0.19       |                                      |             |            |
| <b>Overall</b>  | <b>---</b> | <b>D</b> | <b>38.6</b> | <b>---</b> | <b>---</b> | <b>C</b>         | <b>24.6</b> | <b>---</b> |                                      |             |            |
| <b>Scenario: With Proposed Right-in Access to Woodmen Road</b>    |            |          |             |            |            |                  |             |            |                                      |             |            |
| <b>Woodmen Road/Meridian Road</b>                                 |            |          |             |            |            |                  |             |            |                                      |             |            |
| Eastbound Left  | 472        | E        | 74.5        | 0.92       | 785        | E                | 78.0        | 1.00       | E                                    | 74.0        | 0.99       |
| Westbound Left  | 150        | E        | 55.7        | 0.47       | 225        | E                | 60.4        | 0.64       | E                                    | 59.8        | 0.64       |
| Westbound Through   | 884        | D        | 53.5        | 0.90       | 665        | E                | 77.9        | 0.98       | E                                    | 66.3        | 0.93       |
| Northbound Left   | 328        | E        | 78.3        | 0.89       | 465        | E                | 60.4        | 0.82       | E                                    | 62.7        | 0.84       |
| Northbound Through  | 344        | D        | 37.5        | 0.37       | 893        | E <sup>(3)</sup> | 69.7        | 0.98       | D                                    | 45.2        | 0.74       |
| Southbound Left   | 294        | D        | 54.9        | 0.64       | 483        | F                | 81.7        | 0.96       | E                                    | 78.3        | 0.95       |
| Southbound Through  | 941        | E        | 55.9        | 0.93       | 704        | D                | 53.0        | 0.83       | E                                    | 58.6        | 0.88       |
| <b>Overall</b>  | <b>---</b> | <b>D</b> | <b>40.3</b> | <b>---</b> | <b>---</b> | <b>D</b>         | <b>50.8</b> | <b>---</b> | <b>D</b>                             | <b>45.8</b> | <b>---</b> |
| <b>Eastonville Road/Meridian Road</b>                             |            |          |             |            |            |                  |             |            |                                      |             |            |
| Eastbound Through   | 73         | E        | 59.3        | 0.45       | 197        | E                | 55.6        | 0.67       |                                      |             |            |
| Westbound Left  | 250        | E        | 61.4        | 0.82       | 200        | D                | 46.3        | 0.71       |                                      |             |            |
| Westbound Through   | 113        | E        | 55.8        | 0.50       | 136        | E                | 55.6        | 0.56       |                                      |             |            |
| Northbound Left   | 222        | E        | 62.5        | 0.69       | 415        | D                | 54.5        | 0.76       |                                      |             |            |
| <b>Overall</b>  | <b>---</b> | <b>C</b> | <b>33.9</b> | <b>---</b> | <b>---</b> | <b>C</b>         | <b>32.4</b> | <b>---</b> |                                      |             |            |
| <b>Woodmen Road/Golden Sage Rd</b>                                |            |          |             |            |            |                  |             |            |                                      |             |            |
| Eastbound Left  | 418        | E        | 77.7        | 0.93       | 394        | D                | 50.1        | 0.71       |                                      |             |            |
| Northbound Through  | 19         | E        | 56.4        | 0.17       | 39         | D                | 52.9        | 0.26       |                                      |             |            |
| Southbound Left   | 251        | E        | 63.9        | 0.73       | 191        | D                | 53.5        | 0.70       |                                      |             |            |
| Southbound Through  | 21         | D        | 52.7        | 0.15       | 26         | D                | 53.2        | 0.19       |                                      |             |            |
| <b>Overall</b>  | <b>---</b> | <b>D</b> | <b>39.4</b> | <b>---</b> | <b>---</b> | <b>C</b>         | <b>24.7</b> | <b>---</b> |                                      |             |            |

Notes:

- (1) Staff requested a comparison of delay at the intersection of Woodmen/Meridian with three northbound through lanes on Meridian Road
- (2) Volume exceeds capacity - queuing analysis indicates queues will overspill the left-turn lane into the adjacent through lane.

Source: LSC Transportation Consultants, Inc.

## **Woodmen/Meridian**

The intersection of Woodmen/Meridian is projected to operate at an overall level of service (LOS) D or better based on the short-term and 2040 total traffic volumes with and without the proposed right-in-only access from Woodmen Road.

The eastbound left-turn movement at the Woodmen Road/Meridian Road intersection currently operates at LOS D. Given the high existing and projected background traffic demand for this turning movement, it is projected to operate at LOS E during the afternoon peak hour by 2040. Important note: This condition has little to do with this site, rather it is primarily due to the background traffic demand. The northbound left-turn movement is projected to operate at LOS E during the morning and LOS D during the afternoon peak hour assuming no access to Woodmen. The northbound left-turn movement is projected to operate at LOS E during both the morning and afternoon peak hours assuming the right-in access. The northbound through movement is projected to operate at LOS F during the 2040 afternoon peak hour assuming no site access to Woodmen (with the current two northbound through lanes). The northbound through movement is projected to operate at LOS E during the afternoon peak hour based on the projected 2040 total traffic volumes **with** the proposed right-in-only access. A comparison with **three** northbound through lanes (instead of two) on this intersection approach has also been included in this report for the without-the-right-in-off-of-Woodmen scenario as required by staff. Analysis results with an additional northbound through lane indicate improvement from LOS F to LOS E for this approach. However, the implementation of three through lanes at this one intersection in advance of an overall project to convert Meridian Road from a four to six-lane arterial would involve significant cost for improvements at this intersection and to the north to create three-northbound “receiving” lanes and a merge lane back to two northbound through lanes. Moreover, from an operational standpoint, although a third through lane would add capacity at the intersection, this would introduce a potentially confusing and awkward “lane-add” followed by a lane reduction/merge just downstream to the north.

## **Meridian/Eastonville**

The intersection of Meridian/Eastonville was assumed to be signalized once the site is built out. As a signalized intersection, it is projected to operate at an overall LOS C or better based on the short-term volumes with or without the proposed right-in-only access from Woodmen Road. By 2040, the northbound left-turn movement is projected to operate at LOS E during the morning peak hour and LOS F during the afternoon peak hour without the proposed right-in-only access from Woodmen Road. This movement is projected to operate at LOS E during the morning peak hour and LOS D during the afternoon peak hour based on the projected 2040 total traffic volumes with the proposed right-in-only access.

## **Meridian/Right-In/Right-Out-Only Site Access**

The exiting (eastbound) right-turn movement at the proposed right-in/right-out access to Meridian Road is projected to operate at LOS D or better during the morning peak hour based on the projected short-term and 2040 total traffic volumes with and without access to Woodmen Road. The afternoon peak-hour projected LOS is C under either scenario.

## Woodmen Frontage Road Intersections

The southbound (exiting) approaches to the access point intersections for Mountain View Electric and the Courtyards at Woodmen Hills to the Woodmen Frontage Road are projected to operate at LOS A or B based on projected total 2040 traffic.

## Roundabout Level of Service

The **southwest roundabout** has been analyzed for level of service using three different methods—HCM, Rodel, and SimTraffic. All methods indicate level of service A for all approaches during the peak hours based on 2040 volumes. The southwest roundabout has been analyzed in more detail in this Woodmen Road Driveway Permit report to address the comments on the August 7, 2017 version of the report.

The **Eastonville roundabout** in the northeast part of the site has been analyzed using the HCM method of analysis and the results are shown in the figures. A second analysis using Rodel will be included with the resubmittal of the Preliminary Plan or with the Plat.

## Internal Public Road Intersections

All of the access points to the internal public road (which is planned to extend from the proposed roundabout at the existing terminus of the Woodmen Frontage Road to the proposed roundabout at Eastonville Road) are planned to be two-way stop-sign-controlled intersections. The exception is the intersection that will align with the proposed right-in/right-out intersection to Meridian Road. This intersection is shown as all-way, stop-sign-controlled. All movements at the two-way, stop-sign-controlled intersections are projected to operate at LOS C or better based on the 2040 total traffic volumes with or without the proposed right-in access to Woodmen Road. The northbound and southbound through movements at the proposed all-way, stop-sign-controlled intersection are projected to operate at LOS D or better based on the 2040 total traffic volumes **with** the proposed right-in-only access. The northbound through movement is projected to operate at LOS E and the southbound through movement is projected to operate at **LOS F** based on the 2040 afternoon peak hour **without the proposed right-in access** to Woodmen Road.

All movements at the proposed roundabouts at the terminus of the Woodmen Frontage Road and at the intersection of the internal public road and Eastonville Road are projected to operate at LOS B or better during the peak hours based on the projected 2040 total traffic volumes with and without the proposed right-in-only access to Woodmen Road.

## Weaving Section Level of Service

A weaving level of service analysis has been completed for the section of westbound Woodmen Road between the Meridian Road intersection and the proposed right-in-only site access. This section has been analyzed as a Type A weaving segment in order to determine the projected weaving area levels of service based on the freeway weaving operational method of analysis procedures from the *Highway Capacity Manual, 2010 Edition*. Table 5 shows a summary of the weaving movement volumes by zone and Figure 19 shows the path for each weaving movement. The weaving LOS reports are attached.

This weaving segment is projected to operate at LOS C during the morning peak hour and LOS B during the afternoon peak hour based on the projected future total traffic volumes. Note: This weaving segment would not operate as bona fide freeway weaving areas per the *Highway Capacity Manual, 2010 Edition* due to several operational and geometric differences between an urbanized corridor with intersections and traffic signals and a true freeway weaving section.

The following has been added since the previous version of the report to address staff comments regarding “*any potential real-world issues not anticipated by the modeling.*”

**Table 5  
Weaving Traffic Volumes  
Falcon Marketplace**

**AM Peak Hour**

**Traffic Volume (vehicles/hour)**

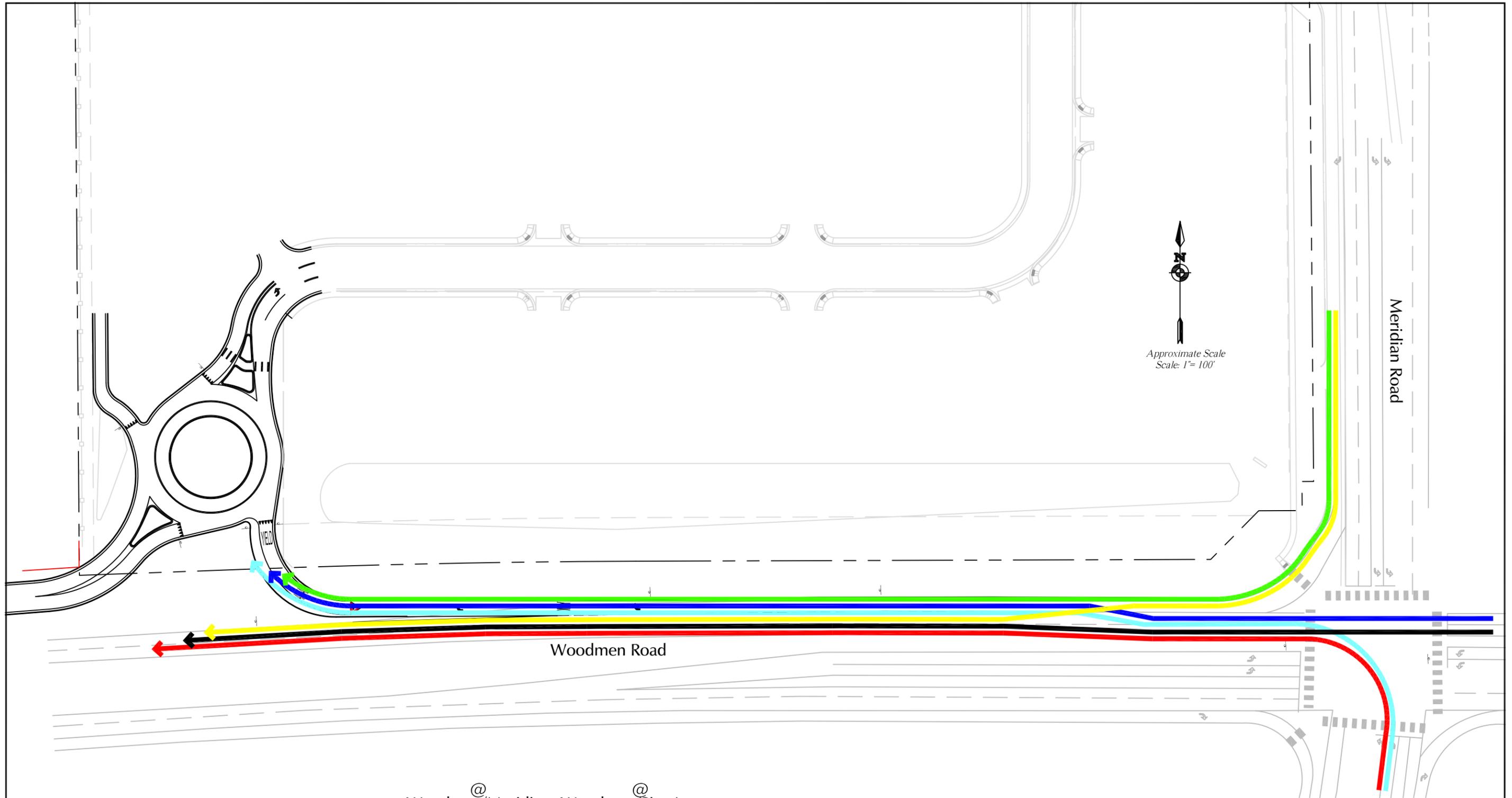
| Zone                   | R-R               | F-R               |                       |                   | R-F            | F-F            |                    |                |
|------------------------|-------------------|-------------------|-----------------------|-------------------|----------------|----------------|--------------------|----------------|
|                        | SB RT to Right-In | NB LT to Right-In | EB U-turn to Right-in | WB TH to Right-In | SB RT to WB TH | WB TH to WB TH | EB U-turn to WB TH | NB LT to WB TH |
| Mountain View Electric | 4                 | 10                | 0                     | 4                 | 0              | 0              | 0                  | 0              |
| Courtyards             | 5                 | 13                | 1                     | 4                 | 0              | 0              | 0                  | 0              |
| Latigo Industrial      | 39                | 20                | 0                     | 20                | 6              | 0              | 0                  | 0              |
| Latigo Business Center | 0                 | 10                | 0                     | 10                | 0              | 0              | 0                  | 0              |
| Future MVE             | 12                | 12                | 0                     | 35                | 0              | 0              | 0                  | 0              |
| Site                   | 25                | 46                | 10                    | 70                | 13             | 0              | 0                  | 0              |
| Other Background       | 0                 | 0                 | 0                     | 0                 | 937            | 741            | 4                  | 217            |
| <b>Total</b>           | <b>85</b>         | <b>111</b>        | <b>11</b>             | <b>143</b>        | <b>956</b>     | <b>741</b>     | <b>4</b>           | <b>217</b>     |
|                        |                   | <b>265</b>        |                       |                   |                |                | <b>958</b>         |                |
| Site Access WB RT      |                   | <b>350</b>        |                       |                   |                |                |                    |                |
| Meridian/ Woodmen      | SB RT             | 1041              |                       |                   |                |                |                    |                |
|                        | EB UT             | 15                |                       |                   |                |                |                    |                |
|                        | WB TH             | 884               |                       |                   |                |                |                    |                |
|                        | NB LT             | 328               |                       |                   |                |                |                    |                |

**PM Peak Hour**

**Traffic Volume (vehicles/hour)**

| Zone                   | R-R               | F-R               |                       |                   | R-F            | F-F            |                    |                |
|------------------------|-------------------|-------------------|-----------------------|-------------------|----------------|----------------|--------------------|----------------|
|                        | SB RT to Right-In | NB LT to Right-In | EB U-turn to Right-in | WB TH to Right-In | SB RT to WB TH | WB TH to WB TH | EB U-turn to WB TH | NB LT to WB TH |
| Mountain View Electric | 2                 | 4                 | 0                     | 1                 | 0              | 0              | 0                  | 0              |
| Courtyards             | 15                | 45                | 5                     | 14                | 0              | 0              | 0                  | 0              |
| Latigo Industrial      | 25                | 13                | 0                     | 13                | 4              | 0              | 0                  | 0              |
| Latigo Business Center | 0                 | 3                 | 0                     | 2                 | 0              | 0              | 0                  | 0              |
| Future MVE             | 9                 | 3                 | 0                     | 3                 | 0              | 0              | 0                  | 0              |
| Site                   | 13                | 62                | 15                    | 89                | 33             | 0              | 0                  | 0              |
| Other Background       | 0                 | 0                 | 0                     | 0                 | 501            | 543            | 10                 | 335            |
| <b>Total</b>           | <b>64</b>         | <b>130</b>        | <b>20</b>             | <b>122</b>        | <b>538</b>     | <b>543</b>     | <b>10</b>          | <b>335</b>     |
|                        |                   | <b>272</b>        |                       |                   |                |                | <b>878</b>         |                |
| Site Access WB RT      |                   | <b>336</b>        |                       |                   |                |                |                    |                |
| Meridian/ Woodmen      | SB RT             | 602               |                       |                   |                |                |                    |                |
|                        | EB UT             | 30                |                       |                   |                |                |                    |                |
|                        | WB TH             | 665               |                       |                   |                |                |                    |                |
|                        | NB LT             | 465               |                       |                   |                |                |                    |                |

Source: LSC Transportation Consultants, Inc.



Approximate Scale  
Scale: 1" = 100'

Woodmen@Meridian    Woodmen@Site Access

|          |   |   |       |       |
|----------|---|---|-------|-------|
| R-R      | — | = | SB RT | WB RT |
| F-R (LT) | — | = | NB LT | WB RT |
| F-R (TH) | — | = | WB TH | WB RT |
| R-F      | — | = | SB RT | WB TH |
| F-F (TH) | — | = | WB TH | WB TH |
| F-F (LT) | — | = | NB LT | WB TH |

Note: Please refer to Table 5 for peak hour volumes.



Figure 19  
**Weaving and Non-Weaving Movements**  
Falcon Marketplace (LSC #164350)

The southbound right turn at the Woodmen/Meridian intersection is currently a channelized “free” right turn. There is no signal control or Stop/Yield control for this movement as vehicles are channelized into the westbound acceleration lane on Woodmen Road. The configuration of this free-right into the acceleration/deceleration lane (with the addition of the right-in access) has been simulated using SimTraffic in addition to the weaving section on Woodmen Road, which has been modeled using the HCM weaving procedures. This is because there is no traffic control (Yield, Stop, or signal control) for this movement and the plan does propose to change this condition. There will be future pedestrian ramps from the raised island to the inside curb radius to allow pedestrians to cross. There will likely be occasional pedestrians at this location, but the pedestrian volume will likely be low. Pedestrians have the potential to momentarily stop the flow of southbound right-turning traffic. The modeling of the “free right” in SimTraffic does not allow for the modeling of crossing pedestrians. However, observations at similar free-right conditions at other intersections in the Pikes Peak region indicate that pedestrians typically must wait for a gap in the right-turning traffic stream to cross because motorists using free right turns will most often not yield to pedestrians.

The simulation does not indicate that drivers will likely stop at the corner at the entry to the acceleration lane when there is a platoon of westbound traffic entering the weaving area on Woodmen Road (once the signal releases westbound through traffic). The phenomenon of right-turning motorists stopping to wait even when there is an acceleration lane is often the case at intersections on urban arterial streets at signalized intersections. That said, field observations at this particular location indicate a low relative percentage of motorists stopping to wait in this situation. This is likely because of several factors unique to this location—the relatively large radius, a raised/curbed right-turn island, and relatively long acceleration lane. Also, unlike many locations in the Pikes Peak region, there is not another intersection a short distance downstream west on Woodmen Road. The next intersection with a westbound left turn is Golden Sage, which is 1.3 miles to the west.

Should southbound right-turning motorists pause at the entry to the acceleration/deceleration lane for either an occasional pedestrian or to allow passage of a platoon of vehicles on westbound Woodmen Road, there is the potential for a queue to form to the north in the southbound right-turn deceleration lane. Such a queue is not reflected in the SimTraffic simulation as this was appropriately modeled as a free right. Should the occasional queue form, it would most likely occur when southbound through traffic at the Meridian/Woodmen intersection is stopped at the red signal, arriving vehicles from the north will be slowing, and queues will be forming in the southbound through lanes of Meridian Road as well. Once the westbound Woodmen platoon of traffic clears the merge area, any southbound right-turn queue will begin to clear and will clear completely with the southbound through green signal at Woodmen/Meridian (if not before).

The weaving analysis was completed using the HCM weaving analysis procedures. These do not assume upstream traffic signals as is commonly the case of weaving areas on urban arterials. In this particular situation,

- No weaving will occur during the north/south green signal phase for Meridian Road as no vehicles will enter the weaving section.
- During the eastbound left-turn phase (which is a relatively long phase), there will be very minimal weaving as only the occasional U-turning vehicle from the eastbound Woodmen left-turn lanes will

enter the weaving area. These U-turning vehicles will also be entering the weaving area at a slow speed after having executed a U-turn.

- During the northbound left-turn phase, vehicles will enter the weaving area from northbound Meridian Road. These vehicles will enter the weaving area at a speed comparable to the southbound right-turning traffic rather than 45 to 50 mph. This will allow for acceptance of shorter gaps for weaving and merging.
- Shortly after the start of the westbound through green phase, a platoon of westbound Woodmen traffic will enter the weaving area. The first part of this platoon will not be traveling 45 or 50 mph as these vehicles will be accelerating from a stop condition. Once westbound traffic reaches saturation flow, the remainder of the vehicles released by the signal from the westbound approach will enter the merge area at higher-than-startup speeds.

## VEHICLE QUEUING ANALYSIS

A queuing analysis was performed using Synchro/SimTraffic for the key approach turning movements at the study area intersections to determine the projected queue lengths based on the projected total traffic volumes. The short-term and 2040 total peak-hour traffic volumes with and without the proposed right-in-only access were entered into the Synchro model. The simulation was run five times. The queuing reports are attached. These queuing results have been used to develop auxiliary turn lane recommendations. The results of the analysis are shown in Table 6.

### Roundabout Queuing Analysis

The **southwest roundabout** has been analyzed for queuing using three different methods—HCM, Rodel, and SimTraffic. The southwest roundabout has been analyzed in more detail in this report for the Woodmen Road Driveway Permit to address the comments on the May 15, 2017 version of the report. All methods indicate short queues for all approaches during the peak hours based on 2040 volumes. The most important queue length is the one on Approach 2—the right-in from Woodmen Road. The HCM analysis reports indicate 95<sup>th</sup> percentile queue length of one vehicle during the morning peak hour and two vehicles during the afternoon peak hour. The Rodel analysis reports indicate queue lengths of 1.31 vehicles during the morning peak hour and 1.34 vehicles during the afternoon peak hour. The SimTraffic analysis indicates a maximum queue of 102 feet during the morning peak hour and 119 feet during the afternoon peak hour. The simulation shows this to be more of a “rolling” queue that quickly shortens from the maximum reported length.

The **Eastonville roundabout** in the northeast part of the site has been analyzed for queuing using the HCM method of analysis and the results are shown in the HCM analysis printouts. Analysis using Rodel will be included with the resubmittal of the Preliminary Plan or with the Plat.

**Table 6  
Projected Queue Lengths  
Falcon Marketplace**

| Intersection<br>Movement              | Lane Length   | Projected Queue Lengths<br>Short-Term |     |                  |     |               |     | Lane Length   | Projected Queue Lengths<br>2040 Total Traffic |                    |               |     |  |
|---------------------------------------|---|---------------------------------------|-----|------------------|-----|---------------|-----|---|---|--------------------|---------------|-----|--|
|                                       |   | Background Traffic                    |     | Total Traffic    |     |               |     |   | Without Right-In                              |                    | With Right-In |     |  |
|                                       |   | Without Right-In                      |     | Without Right-In |     | With Right-In |     |   | Without Right-In                              |                    | With Right-In |     |  |
|                                       |   | AM                                    | PM  | AM               | PM  | AM            | PM  |   | AM  | PM                 | AM            | PM  |  |
| <b>Eastonville Road/Meridian Road</b> |   |                                       |     |                  |     |               |     |   |   |                    |               |     |  |
| Northbound Left                       | 425'  | 58                                    | 59  | 357              | 415 | 128           | 174 | 425'  | 259   | 430 <sup>(1)</sup> | 148           | 236 |  |
| <b>Woodmen Road/Meridian Road</b>     |   |                                       |     |                  |     |               |     |   |   |                    |               |     |  |
| Eastbound Left                        | 500' dual section + 215' (single)                         | 168                                   | 361 | 193              | 368 | 173           | 443 | Modeled with sufficient length to determine needed length | 382   | 865 <sup>(2)</sup> | 358           | 840 |  |
| Westbound Left                        | 435'  | 108                                   | 160 | 112              | 150 | 120           | 146 | 435'  | 129   | 177                | 217           | 318 |  |
| Northbound Left                       | Modeled with sufficient length to determine needed length | 142                                   | 140 | 139              | 163 | 162           | 220 | Modeled with sufficient length to determine needed length | 217   | 392                | 281           | 346 |  |
|                                       | 315' dual section + 145' Single                           | 161                                   | 176 | 167              | 176 | 196           | 275 | (400' dual section + 360' single)                         | 243   | 929                | 307           | 391 |  |
| Southbound Left                       | 475'  | 147                                   | 137 | 151              | 152 | 184           | 202 | 475'  | 171   | 407                | 170           | 440 |  |
| <b>Woodmen Road/Golden Sage Road</b>  |   |                                       |     |                  |     |               |     |   |   |                    |               |     |  |
| Eastbound Left                        | 465'  | 90                                    | 107 | 122              | 149 | 108           | 145 | 465'  | 421   | 297                | 437           | 238 |  |

Notes:

(1) Projected queue exceeds future available storage length/capacity. The queue is projected to extend beyond the storage length about 21% of the time.

(2) Queue length shown assumes the queue for the northbound left-turn at Eastonville/Meridian does not impede eastbound left-turning vehicles from turning onto Meridian Road from Woodmen Road.

Source: LSC Transportation Consultants, Inc.

## **ROUNDBABOUT DESIGN VEHICLE AND FASTEST PATH ANALYSIS**

This report includes a detailed analysis of the truck turning movements, fastest-path, and geometry at the proposed southwest roundabout. This roundabout has been redesigned since the previous submittal to address staff comments. The roundabout geometric and operational analysis exhibits are attached. Complete roundabout analysis of the northeast/Eastonville roundabout will be included with the resubmittal of the Preliminary Plan or with the Plat.

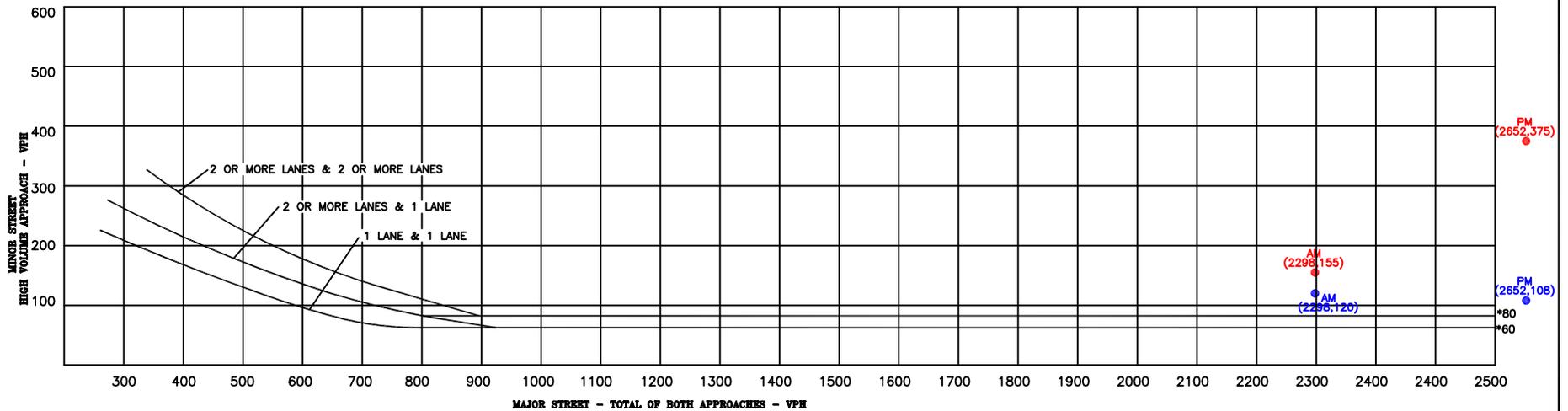
The fastest-path analysis of the southwest roundabout indicates acceptable fastest-path speed on each of the four approaches at the proposed southwest roundabout.

## **TRAFFIC SIGNAL WARRANT ANALYSIS**

**It is expected that a traffic signal would be warranted at the intersection of Eastonville Road and Meridian Road with the addition of the west leg of the intersection and traffic from this proposed development. Furthermore, the traffic signal was a condition to the 2008 BOCC rezoning of the property to Commercial Regional.**

The intersection has been analyzed to determine if a Four-Hour Vehicular Volume Traffic Signal Warrant threshold would be reached or exceeded based on the projected short-term morning and afternoon peak-hour total traffic volumes. The results of the analysis are shown in Figure 20. The traffic volumes shown are based on the short-term total traffic volumes with the proposed right-in-only access to Woodmen Road shown in Figure 16a. As shown in Figure 20, the thresholds for a Four-Hour Vehicular Volume Traffic Signal Warrant are projected to be exceeded based on the morning and afternoon peak hours. This analysis using the peak hours is intended to provide an indication that a warrant may be met or is close to being met. For a Four-Hour Traffic Signal Warrant to be satisfied, the volume threshold would need to be met for two additional hours of the day. For example, the four-hour warrant would be satisfied with the volume thresholds met for one hour in the morning, two hours (instead of the one-hour peak) during the afternoon peak period, and an hour during the mid-afternoon. Based on this analysis and our experience, it is likely that the volume thresholds would be met or exceeded for at least two additional hours of the day.

**Eastonville Rd./Meridian Rd. Short-Term Total Traffic (with proposed right-in access)**  
**Figure 4C-2. Warrant 2, Four-Hour (70% Factor)**  
 (Community Less than 10,000 population or above 40 mph on Major Street)



\* Note: 80 vph applies as the lower threshold volumes for a minor-street approach with two or more lanes and 60 vph applies as the lower threshold volume for a minor-street approach with one lane.

**LEGEND:**

- = East Leg (left-turn and through vehicles only) without proposed right-in access
- = West Leg (left-turn and through vehicles only) without proposed right-in access

## Comparison of Analysis Scenarios

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### MERIDIAN/EASTONVILLE INTERSECTION OPERATIONS

The comparison between the two analysis scenarios (with and without the proposed site access from Woodmen) with respect to operations at the Meridian/Eastonville intersection shows significantly better operations with the scenario that includes the proposed Woodmen access in combination with the proposed roundabout. This is because without the Woodmen access and the ability to enter the site from a second adjacent roadway (Woodmen Road), the northbound left-turn volume at Eastonville/Meridian would be significantly higher. **The northbound left turn at this intersection is projected to operate at LOS F during the afternoon peak hour without the right-in from Woodmen and LOS D during the afternoon peak hour with the right-in from Woodmen with the roundabout.** Another point is that the roundabout is projected to reduce the northbound left-turn delay by about five seconds per vehicle at the Meridian/Eastonville intersection during the afternoon peak hour over the previous configuration without the roundabout. This difference is significant. Without the right-in, additional northbound left-turn green signal phase time would be needed to adequately serve this left-turn demand and prevent queues from overflowing the northbound left-turn lane. This would negatively impact the intersection overall by reducing the allocation of southbound through green signal time. Creating this situation is unnecessary because with the addition of the proposed Woodmen access, motorists arriving from the east on Woodmen Road and from the south from Meridian Road (including the significant component of traffic arriving from eastbound US Highway 24 in the afternoon peak hour) would have the additional option of entering using the proposed Woodmen access instead of the single option of the access at Meridian/Eastonville via the northbound left turn at this intersection. The addition of the right-in-only with the roundabout would remove **background** traffic volumes of about 40 morning peak-hour trips and 70 afternoon peak-hour trips from the Meridian/Eastonville intersection (specifically the projected heavy northbound left-turn movement). In addition to these background traffic reductions, the site traffic component of this northbound left turn would be reduced by 112 morning peak-hour trips and 160 afternoon peak-hour trips.

The northbound left-turn queue would be significantly longer under the no-Woodmen-access scenario. The projected maximum 2040 afternoon peak-hour northbound left-turn queue is projected to be 236 feet under the with-right-in from Woodmen scenario. Without the right-in from Woodmen the projected maximum queue would fill the dual left-turn lanes (457-foot queue within the lanes) and would overspill into the adjacent northbound through lane during the peak analysis interval) unless the lanes are lengthened. Any significant lengthening would reduce the storage length of the southbound left turn lane for the Woodmen/Meridian intersection to the south as this northbound left turn lane is "back-to-back" with the southbound left turn lane at the Woodmen/Meridian intersection. There is a shared transition taper for both lanes and any lengthening would require either shortening the shared taper and/or shortening of that southbound left turn lane at Woodmen/Meridian (likely both).

The lower northbound left-turn movement volume at Meridian/Eastonville under the proposed access-to-Woodmen scenario would likely allow the option to operate the northbound left-turn movement as a protected-permissive phase single left-turn movement for a significantly longer period, if not in perpetuity. This type of left-turn movement can often operate more efficiently and with less delay than

protected-only dual left-turn lanes, especially when considering off-peak hours or most hours in a day and on weekends. The specific phasing and operation of the turn movement would be up to El Paso County, but a northbound left turn with a significantly reduced volume will likely allow for greater flexibility for better traffic operations.

## **MERIDIAN/WOODMEN INTERSECTION OPERATIONS**

The eastbound left-turn movement at this intersection is projected to operate at LOS E during the 2040 peak hours with or without this development (due to background traffic). **However, the addition of the access from westbound Woodmen Road would improve overall operations at this intersection. This is because the addition of the proposed Woodmen access would allow the option for use of the existing dual left-turn lanes and a shift in approaching traffic from the adjacent high (critical) volume northbound through lanes into the adjacent dual left-turn lanes.** This will be especially helpful during the afternoon peak hour. Although the overall intersection delays shown in the table are comparable, the analysis shows failure of the northbound through movement.

A comparison with **three** northbound through lanes (instead of the current two through lanes) on this intersection approach has also been included in this report as required by staff. Analysis results with an additional northbound through lane indicate improvement to LOS D for this approach. However, the implementation of three through lanes at this one intersection in advance of an overall project to convert Meridian Road from a four to six-lane arterial would involve significant cost for improvements at this intersection and to the north to create three-northbound “receiving” lanes and a merge lane back to two northbound through lanes. Moreover, from an operational standpoint, although a third through lane would add capacity at the intersection, this would introduce a potentially confusing and awkward “lane-add” followed by a lane reduction/merge just downstream to the north.

Although the overall intersection delays are comparable at Meridian/Woodmen, consideration also needs to be given to the significantly higher travel time for site and background motorists that would use the right-in access, if provided (see paragraph below entitled “Woodmen Frontage Road Access.” The right-in will significantly reduce travel times for motorists who would use it.

The afternoon peak-hour northbound through movement level of service would improve to LOS E (with a non-failing volume-to-capacity ratio) with the addition of the right-in-only from Woodmen and the roundabout. This is significant as a heavy afternoon northbound through volume is projected with the Meridian connection to US 24.

## **WOODMEN ROAD OPERATIONS**

The proposed Woodmen access will have little effect on the operation of Woodmen Road as the turning movements will be right-turn in-only from westbound Woodmen Road with a continuous acceleration/deceleration lane between Meridian and the point of right-turn entry into the site. This site is within the commercial “node” of Falcon and an access at the proposed location would not be unexpected.

## WOODMEN FRONTAGE ROAD ACCESS

The right-in-only access with the proposed roundabout intersection with the Woodmen Frontage Road would also significantly improve access to the properties to the west along the Woodmen Frontage Road. This represents a **significant change** from the previous right-in-only access configuration. The prior right-in-only access would have essentially served only this site due to its configuration as there was no public access from the previously proposed right-in-only to the Woodmen Frontage Road. The previously proposed right-in-only was configured to direct traffic from westbound Woodmen north into the site only with no option for access for westbound travel to residential and non-residential properties along the Woodmen Frontage Road.

The addition of the roundabout intersection in the southwest corner of the site within to-be-dedicated public right-of-way is a significant change as it now allows for public access from westbound Woodmen Road to the Woodmen Frontage Road and properties along the North Frontage Road. The proposed roundabout allows for this access to the west for passenger vehicles, trucks, buses, and fire and emergency response vehicles. This accommodation will significantly improve the access to the Courtyards, MVEA (and other properties), which currently have poor access. With this proposed right-in-only access, residents, employees and other motorists traveling to these properties from westbound Woodmen or northbound Meridian (many traveling from eastbound US Highway 24) will no longer need to travel west for more than a mile along Woodmen Road to the Golden Sage/Woodmen intersection and backtrack along the Woodmen Frontage Road (or travel north to Eastonville/Meridian to turn left at this intersection and travel through the Falcon Marketplace site) to access their destinations. **This would significantly reduce travel times and emergency response times.**

The proposed right-in-only with the roundabout would also benefit operations at the Woodmen/Golden Sage and Woodmen Frontage Road/Golden Sage intersection by removing existing and future traffic turning movements from these closely spaced intersections. The addition of the right-in-only combined with the roundabout would remove **background** traffic volumes of about 70 morning peak-hour trips and 30 afternoon peak-hour trips from **both** the Woodmen/Golden Sage and Woodmen Frontage Road/Golden Sage intersections

## Recommended Improvements

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The following highlights the anticipated study area roadway and intersection improvement due to a combination of existing deficiencies, future background traffic and projected site traffic. A list of all improvements in the vicinity and assessment of responsibility is presented in Tables 7a and 7b. Table 7a shows improvements assuming no access to Woodmen Road (improvement locations are shown in Figures 21a and 21b). Table 7b shows the improvements assuming the proposed right-in access to Woodmen Road (improvement locations are shown in Figures 22a and 22b).

**Table 7a  
Falcon Marketplace  
Roadway Improvements Without Proposed Right-In Access to Woodmen Road**

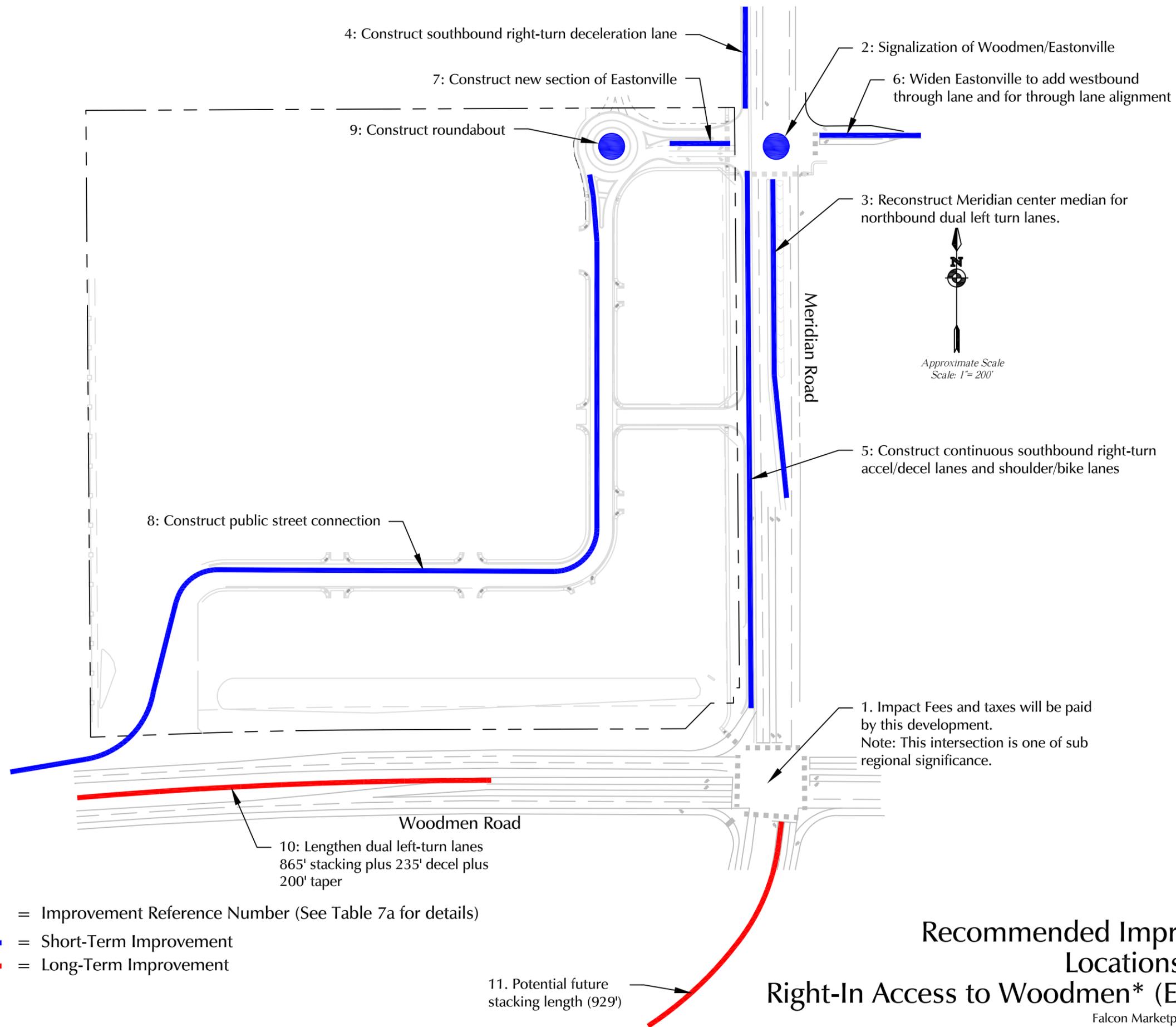
| Item #  | Improvement   | Timing   | Responsibility   |
|---|---|--|--|
| <b>Countywide Road Impact Fee Program Fees and Taxes</b>                  |   |  |  |
| 1   | Woodmen Road Metropolitan District fees and taxes to be paid in lieu of Countywide Road Impact Fee Program fees and taxes. Woodmen Road has already been completed, but this project is joining the district.   | District fees payable at platting  | Falcon Marketplace   |
| <b>Meridian/Eastonville and Merician Right-In/Right-Out Intersections</b> |   |  |  |
| 2   | Signalization of Meridian Road/Eastonville Road intersection.   | Design and installation with the development of Falcon Marketplace once allowed by El Paso County.   | Falcon Marketplace   |
| 3   | Reconstruction of the Meridian center median south of Eastonville Road to achieve major street left-turn sight distance for the option of northbound/southbound interim protected/permissive left-turn signal phasing with interim single left-turn lanes northbound and southbound and to accommodate northbound dual left-turn lanes through restriping once needed. This lane should be 425 feet long plus a 200-foot taper. The taper would be back-to-back with the southbound dual left-turn taper.   | Design and installation with the development of Falcon Marketplace.  | Falcon Marketplace   |
| 4   | Southbound right-turn deceleration lane on Meridian Road approaching Eastonville Road. This lane should be 235 feet long plus a 200-foot taper.   | Design and installation with the development of Falcon Marketplace.  | Falcon Marketplace   |
| 5   | Design and construction of continuous southbound right-turn lanes and shoulder/bike lane on Meridian Road from Eastonville Road south to the proposed right-in/right-out and from the right-in/right-out south to Woodmen Road.   | Design and installation with the development of Falcon Marketplace.  | Falcon Marketplace   |
| 6   | Widening of Eastonville Road east of Meridian Road to add a westbound through lane. Width would also be added as feasible between the westbound left-turn lane and the westbound through lane due to the proposed dual left-turn lanes on the west side of the intersection. This added width would allow for through lane alignment (with an acceptable offset across the intersection).   | Design and installation with the development of Falcon Marketplace. Extent of this off-site improvement may be limited by available right-of-way and/or other existing constraints.  | Falcon Marketplace   |
| 7   | Design and construction of the proposed extension of Eastonville Road between Meridian and the proposed roundabout.   | Design and installation with the development of Falcon Marketplace.  | Falcon Marketplace   |
| <b>On-Site Improvements</b>   |   |  |  |
| 8   | Design and construction of the public street connection through the site (Falcon Market Place).   | Design and installation with the development of Falcon Marketplace.  | Falcon Marketplace   |
| 9   | Design and construction of the proposed roundabout on-site west of the Meridian/Eastonville intersection. This would include a "stub" to the north for the anticipated future street connection north to Bent Grass Meadows Drive.  | Design and installation with the development of Falcon Marketplace.  | Falcon Marketplace   |
| <b>Woodmen/Meridian Intersection</b>                                      |   |  |  |
| 10  | <b>Woodmen eastbound dual left-turn lanes.</b> This lane should be extended to provide a total of 865 feet of storage plus 235' deceleration length and a 200' taper.   | Future extension of existing dual left-turn lanes once traffic queues regularly extend beyond the 480-foot stacking distance.  | Falcon Marketplace will consent to inclusion in a special improvement district comprising properties benefited by this improvement and will pay its pro-rata share (based on total traffic volumes) of the cost of the improvements. |
| 11  | <b>Meridian northbound dual left-turn lanes</b> LONG TERM: Potentially additional growth in the Falcon Area and east along Falcon Highway will add left turning traffic demand. Long term estimated queue would be up to about 475 feet in the inside left turn lane. Therefore the potential long term need may be 475' of stacking distance plus the 235 feet of deceleration distance and the 200-foot taper.  | Future (if necessary -- Add additional lane length to provide additional stacking if/when needed (as shown in Figure 28).  | By other future developments impacting this turn lane. Potential for fee program credit for improvements completed as this is a regional intersection.   |
| <b>Golden Sage Intersections</b>  |   |  |  |
| 12  | Directional wayfinding sign(s) on eastbound Woodmen Road upstream of Golden Sage - notifying/reminding eastbound motorists of the option to enter Falcon Marketplace via the Woodmen Frontage Road.   | Design and installation with the development of Falcon Marketplace.  | Falcon Marketplace   |
| 13  | Lengthening of the current eastbound single left-turn deceleration lane on Woodmen approaching Golden Sage Road to provide a 240-foot transition taper (20:1 taper ratio), 290 feet of deceleration distance plus sufficient vehicle stacking distance. CURRENT: 175-foot taper plus a 465-foot left-turn lane which translates to a 175-foot taper, 290-foot deceleration distance, and 175 feet of stacking distance. SHORT TERM: Adequate stacking is available in the current turn lane - calculated queue length 141'. LONG TERM: lengthen single left-turn lane and/or future implementation of dual left-turn lanes (if capacity needs dictate) to maintain 290 feet of deceleration length, a 240-foot lane taper (20:1 taper ratio) plus provide sufficient vehicle stacking length - model indicates 497 feet of dual left stacking distance based on morning peak hour projected volumes. If a dual left is implemented in the future, consideration will need to be given to the configuration on Golden Sage and at the Golden Sage/Woodmen Frontage Road intersection to receive the dual left-turn movement. | Short Term: The existing lane is adequate based on the short term analysis. Long Term: Future with additional development served by the north frontage road - extension of existing single left-turn lane and potentially widening in the median to provide dual left turn lanes to provide additional vehicle stacking distance as described in the column to the left. | Falcon Marketplace will consent to inclusion in a special improvement district comprising properties benefited by this improvement and will pay its pro-rata share (based on total traffic volumes) of the cost of the improvements. |
| 14  | Southbound exclusive right-turn lane on Golden Sage Road approaching Woodmen Road (a continuous right-turn lane within the 150 feet between the Woodmen Frontage Road and Woodmen Road).  | If/when needed to maintain acceptable level of service/traffic operations and/or to control vehicle queues.  | Falcon Marketplace will consent to inclusion in a special improvement district comprising properties benefited by this improvement and will pay its pro-rata share (based on total traffic volumes) of the cost of the improvements. |
| 15  | Signalization of Golden Sage Road/Woodmen Frontage Road or reconstruction as a modern roundabout; Future additional laneage may be necessary at this intersection to accommodate vehicle queues and for traffic operations.   | If/when needed to maintain acceptable level of service/traffic operations and/or to control vehicle queues.  | Falcon Marketplace will consent to inclusion in a special improvement district comprising properties benefited by this improvement and will pay its pro-rata share (based on total traffic volumes) of the cost of the improvements. |

Source: LSC Transportation Consultants, Inc.

**Table 7b  
Falcon Marketplace  
Roadway Improvements With Proposed Right-In Access to Woodmen Road**

| Item #  | Improvement   | Timing   | Responsibility  |
|---|---|--|---|
| <b>Countywide Road Impact Fee Program Fees and Taxes</b>                  |   |  |   |
| 1   | Woodmen Road Metropolitan District fees and taxes to be paid in lieu of Countywide Road Impact Fee Program fees and taxes. Woodmen Road has already been completed, but this project is joining the district.   | District fees payable at platting  | Falcon Marketplace  |
| <b>Meridian/Eastonville and Meridian Right-In/Right-Out Intersections</b> |   |  |   |
| 2   | Signalization of Meridian Road/Eastonville Road intersection.   | Design and installation with the development of Falcon Marketplace once allowed by El Paso County.   | Falcon Marketplace  |
| 3   | Reconstruction of the Meridian center median south of Eastonville Road to achieve major street left-turn sight distance for the option of northbound/southbound protected/permissive left-turn signal phasing with interim single left-turn lanes northbound and southbound and to accommodate future northbound dual left-turn lanes if needed in the future. This lane should be 425 feet long plus a 200-foot taper. The taper would be back-to-back with the southbound dual left-turn taper.   | Design and installation with the development of Falcon Marketplace.  | Falcon Marketplace  |
| 4   | Southbound right-turn deceleration lane on Meridian Road approaching Eastonville Road. This lane should be 235 feet long plus a 200-foot taper.   | Design and installation with the development of Falcon Marketplace.  | Falcon Marketplace  |
| 5   | Design and construction of continuous southbound right-turn lanes and shoulder/bike lane on Meridian Road from Eastonville Road south to the proposed right-in/right-out and from the right-in/right-out south to Woodmen Road. (Note: Also please refer to related item #16 below.)  | Design and installation with the development of Falcon Marketplace.  | Falcon Marketplace  |
| 6   | Widening of Eastonville Road east of Meridian Road to add a westbound through lane and add width as feasible between the westbound left-turn lane and the westbound through lane due to the proposed dual left-turn lanes on the west side of the intersection. This added width would allow for through lane alignment (with an acceptable offset across the intersection).  | Design and installation with the development of Falcon Marketplace. Extent of this off-site improvement may be limited by available right-of-way and/or other existing constraints.  | Falcon Marketplace  |
| 7   | Design and construction of the proposed extension of Eastonville Road between Meridian and the proposed roundabout.   | Design and installation with the development of Falcon Marketplace.  | Falcon Marketplace  |
| <b>On-Site Improvements</b>   |   |  |   |
| 8   | Design and construction of the public street connection through the site (Falcon Market Place).   | Design and installation with the development of Falcon Marketplace.  | Falcon Marketplace  |
| 9   | Design and construction of the proposed roundabout on-site west of the Meridian/Eastonville intersection. This would include a "stub" to the north for the anticipated future street connection north to Bent Grass Meadows Drive.  | Design and installation with the development of Falcon Marketplace.  | Falcon Marketplace  |
| 10  | Design and construction of the proposed roundabout on-site at the east terminus of the Woodmen Frontage Road.   | Design and installation with the development of Falcon Marketplace.  | Falcon Marketplace  |
| <b>Woodmen/Meridian Intersection</b>                                      |   |  |   |
| 11  | Extend existing westbound right-turn acceleration lane on Woodmen Road at Meridian Road to provide a continuous right-turn lane between Meridian Road and the proposed right-in-only access.  | Design and installation with the development of Falcon Marketplace.  | Falcon Marketplace  |
| 12  | Lengthening of <b>Woodmen eastbound dual left-turn lanes</b> . Lengthening of eastbound left-turn lanes and potential further future lengthening to provide a 240-foot lane transition taper, 290 feet of deceleration distance plus sufficient vehicle stacking distance. <b>CURRENT</b> lane length: 500 feet of dual left-turn lane and 425-foot taper. Of this taper, 215 feet is full-width "decel" distance. Remaining 20 feet of the required 235-foot decel distance occurs in the first 20 feet of the 500-foot dual left-turn lanes. The remainder of the dual left-turn lanes is stacking distance - 480 feet. <b>SHORT TERM</b> : Based on the short-term analysis, the existing lane provides sufficient stacking distance. <b>LONG TERM</b> : This lane will likely need to be extended to provide a total of 840 feet of dual left storage distance plus 235 feet of deceleration length plus a 200-foot taper.  | Future extension of existing dual left-turn lanes once traffic queues regularly extend beyond the 480-foot stacking distance.  | Falcon Marketplace will pay its pro-rata share by (based on total traffic volumes) of the cost of the improvements. <b>The payment amount will be determined on an individual-lot basis in the form of an escrow amount payable at the time of site development plan for each individual lot.</b> |
| 13  | <b>Meridian northbound dual left-turn lanes</b> : Lengthening of northbound left-turn lanes and potential further future lengthening to provide a 200-foot lane transition taper, 235 feet of deceleration distance plus sufficient vehicle stacking distance. <b>CURRENT</b> lane configuration: 315 feet of dual left-turn lane length, 145 feet of single left-turn lane length and a 150-foot lane transition taper from the through lane to the single left-turn lane. This provides a 150-foot taper, 235 feet of deceleration distance, and 225 feet of dual left stacking. <b>SHORT TERM</b> : The 315-foot dual left-turn lanes would accommodate the projected short-term queues. The deceleration distance (235 feet) plus a 200-foot taper will need to be provided south of the end of the existing 315-foot dual left stacking lanes. For the deceleration distance, 235 feet of at least single-lane width for deceleration length would flare to the north to connect to the existing dual lane width to the north. South of the deceleration portion of the lane, a standard 200-foot taper will need to be added in the median. These modifications will involve median reconstruction and restriping south of the existing dual left-turn lanes. This would result in a 200-foot taper, 235-foot deceleration distance, and 315 feet of dual left-turn stacking. | With the development of Falcon Marketplace, extend the northbound left-turn lane as described in the column to the left and as shown in Figure 25.   | Short Term - Falcon Marketplace   |
| 14  | <b>Meridian northbound dual left-turn lanes. LONG TERM</b> : Potentially, additional growth in the Falcon Area and east along Falcon Highway will add left-turning traffic demand. Long-term analysis indicates the potential future need for 400 feet of stacking distance plus the 235 feet of deceleration distance and the 200-foot taper.  | Future (if necessary -- Add additional lane length beyond #13 to provide additional stacking if/when needed (as shown in Figure 26)).  | By other future developments impacting this turn lane. Potential for fee program credit for improvements completed as this is a regional intersection.  |
| <b>Golden Sage Intersections</b>  |   |  |   |
| 15  | Directional wayfinding sign(s) on eastbound Woodmen Road upstream of Golden Sage - notifying/reminding eastbound motorists of the option to enter Falcon Marketplace via the Woodmen Frontage Road.   | Design and installation with the development of Falcon Marketplace.  | Falcon Marketplace  |
| 16  | Lengthening of the current eastbound single left-turn deceleration lane on Woodmen approaching Golden Sage Road to provide a 240-foot transition taper (20:1 taper ratio), 290 feet of deceleration distance plus sufficient vehicle stacking distance. <b>CURRENT</b> : 175-foot taper plus a 465-foot left-turn lane which translates to a 175-foot taper, 290-foot deceleration distance, and 175 feet of stacking distance. <b>SHORT TERM</b> : Adequate stacking is available in the current turn lane - calculated queue length 141 feet. <b>LONG TERM</b> : Lengthen single left-turn lane and/or future implementation of dual left-turn lanes (if capacity needs dictate) to maintain 290 feet of deceleration length, a 240-foot lane taper (20:1 taper ratio) plus provide sufficient vehicle stacking length - model indicates 471 feet of dual left stacking distance based on morning peak-hour projected volumes. If a dual left is implemented in the future, consideration will need to be given to the configuration on Golden Sage and at the Golden Sage/Woodmen Frontage Road intersection to receive the dual left-turn movement.   | Short Term: The existing lane is adequate based on the short-term analysis. Long Term: Future with additional development served by the north frontage road - extension of existing single left-turn lane and potentially widening in the median to provide dual left-turn lanes to provide additional vehicle stacking distance as described in the column to the left. | Falcon Marketplace will pay its pro-rata share by (based on total traffic volumes) of the cost of the improvements. <b>The payment amount will be determined on an individual-lot basis in the form of an escrow amount payable at the time of site development plan for each individual lot.</b> |
| 17  | Southbound exclusive right-turn lane on Golden Sage Road approaching Woodmen Road (a continuous right-turn lane within the 150 feet between the Woodmen Frontage Road and Woodmen Road).  | If/when needed to maintain acceptable level of service/traffic operations and/or to control vehicle queues.  | Falcon Marketplace will pay its pro-rata share by (based on total traffic volumes) of the cost of the improvements. <b>The payment amount will be determined on an individual-lot basis in the form of an escrow amount payable at the time of site development plan for each individual lot.</b> |
| 18  | Signalization of Golden Sage Road/Woodmen Frontage Road or reconstruction as a modern roundabout; Future additional laneage may be necessary at this intersection to accommodate vehicle queues and for traffic operations.   | If/when needed to maintain acceptable level of service/traffic operations and/or to control vehicle queues.  | Falcon Marketplace will pay its pro-rata share by (based on total traffic volumes) of the cost of the improvements. <b>The payment amount will be determined on an individual-lot basis in the form of an escrow amount payable at the time of site development plan for each individual lot.</b> |

Source: LSC Transportation Consultants, Inc.



LEGEND:  
 XX = Improvement Reference Number (See Table 7a for details)  
 ——— = Short-Term Improvement  
 ——— = Long-Term Improvement

1. Impact Fees and taxes will be paid by this development.  
 Note: This intersection is one of sub regional significance.

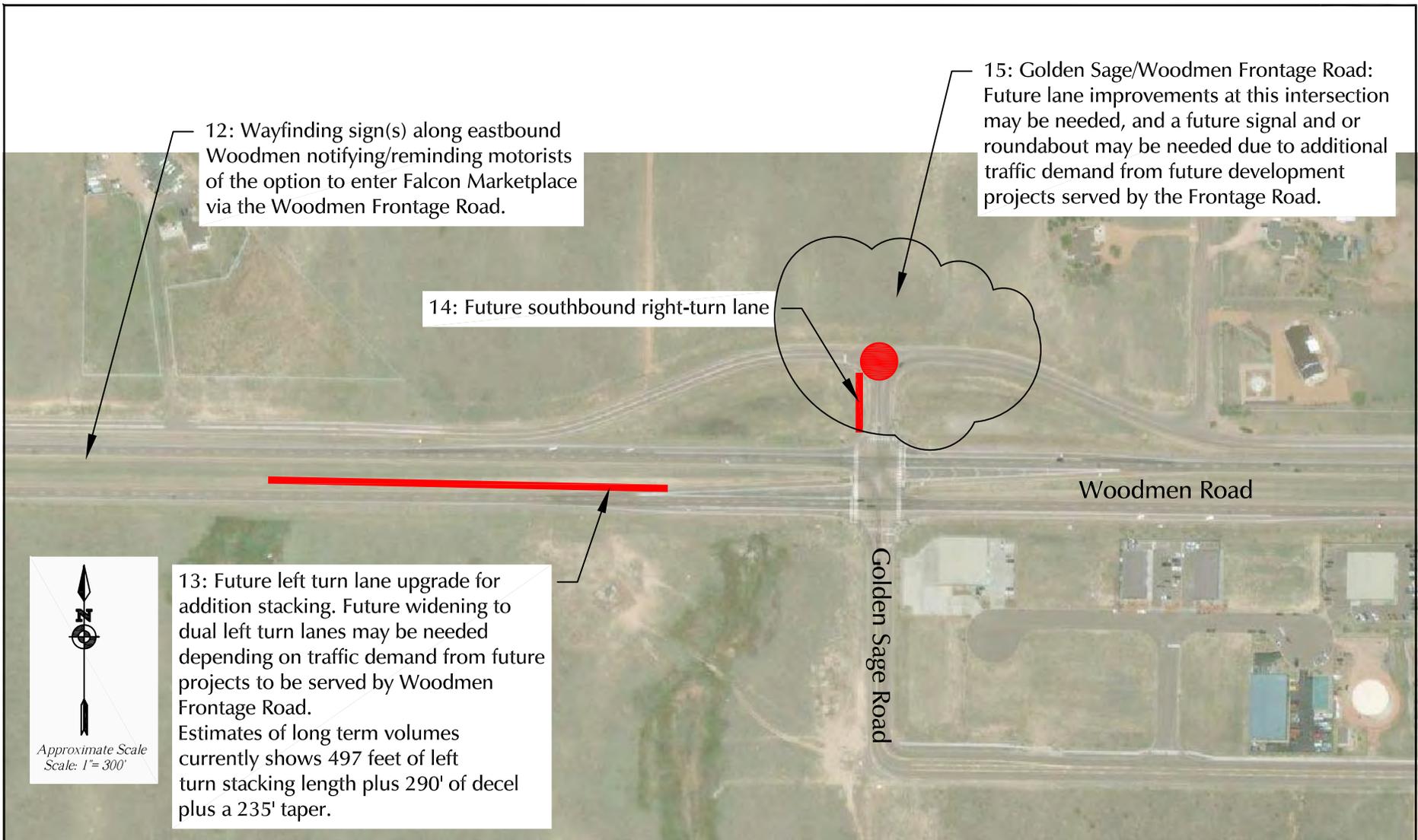
Approximate Scale  
 Scale: 1" = 200'

Figure 21a

## Recommended Improvement Locations without Right-In Access to Woodmen\* (East Area)

Falcon Marketplace (LSC #164350)





\* See Table 7a for details.

Figure 21b

## Recommended Improvement Locations without Right-In Access to Woodmen\* (West Area)

Falcon Marketplace (LSC #164350)

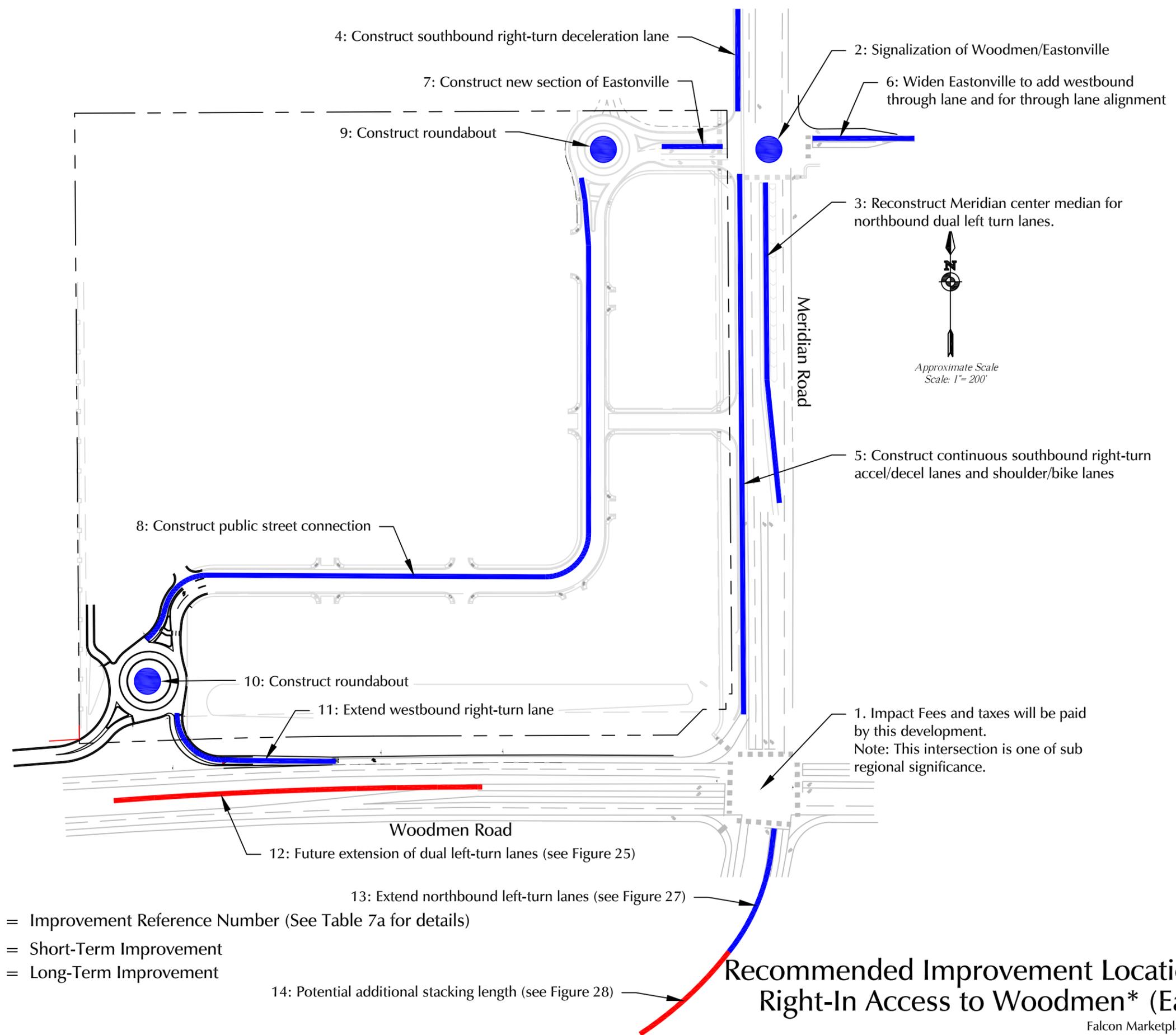
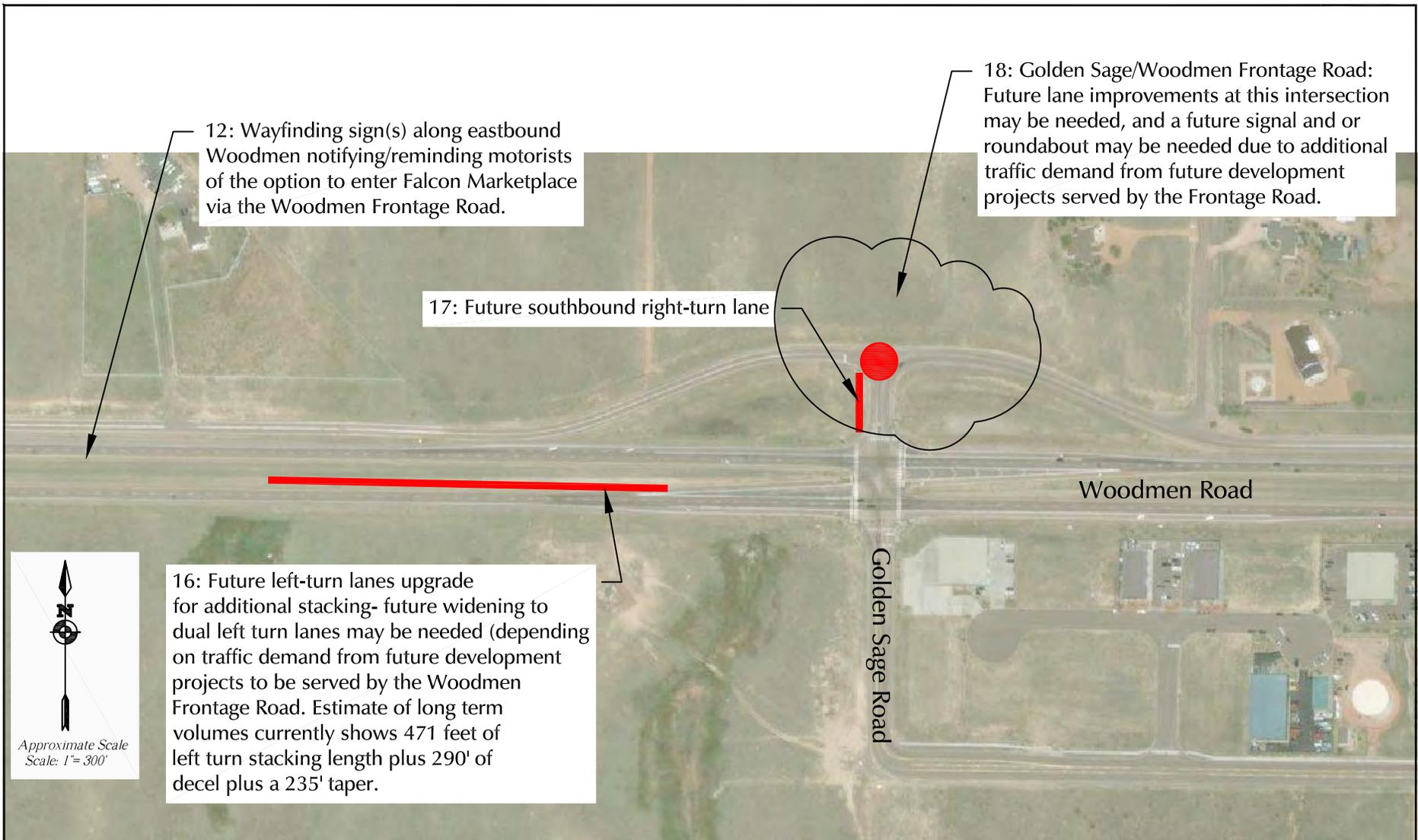


Figure 22a

**Recommended Improvement Locations with Right-In Access to Woodmen\* (East Area)**

Falcon Marketplace (LSC #164350)



\* See Table 7b for details.

Figure 22b

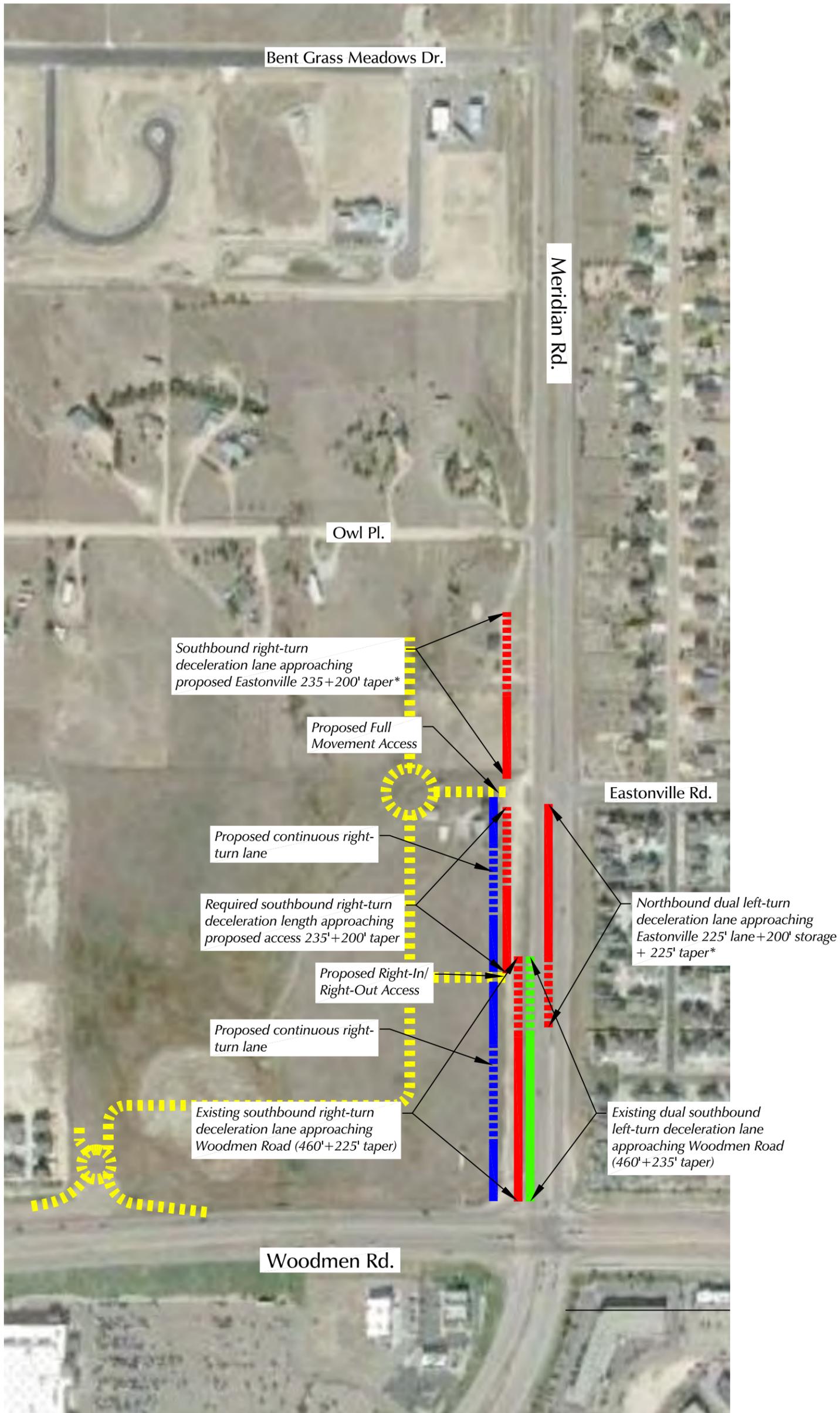
## Recommended Improvement Locations with Right-In Access to Woodmen\* (West Area)

Falcon Marketplace (LSC #164350)

- Figure 23 shows the existing, proposed, and *Engineering Criteria Manual*-prescribed acceleration and deceleration lane lengths along Meridian Road between Eastonville and Woodmen Road, respectively. Figure 24 shows the existing, proposed and *Engineering Criteria Manual*-prescribed acceleration and deceleration lane lengths along Woodmen Road west of Meridian Road. Figure 25 shows additional detail for the continuous acceleration and deceleration lane based on the roundabout queuing analysis. The figure also addresses the Woodmen Road dual eastbound left-turn lanes—stacking lengths from the queueing analysis plus deceleration and taper distances. The existing dual-width portion of eastbound left-turn lanes on Woodmen Road approaching Meridian Road is about 500 feet long. These lanes will likely need to be lengthened as shown in the figure to accommodate the projected 2040 eastbound left-turn queue.
- The existing westbound right-turn acceleration lane extending west from the intersection of Woodmen/Meridian should be extended west to the proposed right-in-only site access and restriped as a continuous acceleration/deceleration lane. Figure 26 shows the recommended signing and striping for the proposed acceleration/deceleration lane.
- Figure 27 shows the recommended short-term improvement to the northbound left-turn deceleration lane on Meridian Road approaching the Woodmen Road intersection. These are based on the short-term total traffic queuing analysis results and criteria in the ECM.
- Figure 28 shows the future stacking distances for the northbound left-turn lane at the Woodmen/Meridian intersection from the queueing analysis plus the deceleration length and taper lengths prescribed by the ECM. These are based on long-term projected volumes. These included projected traffic from future commercial developments along Meridian Road south of Woodmen as well as potential future development within areas east southeast of the Falcon area using Falcon Highway to the new Meridian Road connection. The growth patterns in this area are subject to change. Also, the future Dublin Boulevard connection to Falcon Highway may alter some of these projections.
- A southbound right-turn deceleration lane should be provided on Meridian Road approaching the Meridian Road/Eastonville Road intersection. This lane should be 235 feet long plus a 200-foot taper (based on the anticipated post-development posted speed limit of 45 mph on the southbound approach to this intersection).
- Continuous southbound right-turn acceleration/deceleration lanes should be provided on Meridian Road between Eastonville and the proposed right-in/right-out access and between this proposed access and Woodmen Road.
- A northbound left-turn lane should be constructed within the existing center median on Meridian Road approaching the Meridian Road/Eastonville Road intersection. This lane should be 425 feet long plus a 200-foot taper. The median south of Eastonville should be reconstructed with a narrow six-foot-wide raised median nose with pavement for the remainder of the space between this new median nose and the northbound Meridian through lanes. This design is recommended for two reasons. The first is because of the current position of the southbound left-turn lane (immediately adjacent to the southbound through lanes). The second is that this design of the median modification would allow for conversion to a dual left-turn lane accomplished by restriping when needed in the future. Also, modification to the southbound left-turn lane on the north side of the intersection may

be needed to maintain sight distance depending on the signal phasing and/or to avoid conflicting left-turning vehicle paths. This will be evaluated further with the Preliminary Plan.

- The site plan shows the proposed connection to the frontage road, and the internal public street connection through the site between the east end of the frontage road and Meridian Road.
- The applicant will likely be required to widen Eastonville Road east of Meridian Road to add a westbound through lane and add width as feasible between the westbound left-turn lane and the westbound through lane due to the proposed dual left-turn lanes on the west side of the intersection. This added width would allow for through lane alignment (with an acceptable offset across the intersection). The extent of this offsite improvement may be limited by available right-of-way and/or other existing constraints.
- The development will be required to install a traffic signal (or escrow funds) for a traffic signal at the Meridian/Eastonville intersection. This project is planned to be developed in one phase, therefore the signal is planned to be installed once allowed by the County.

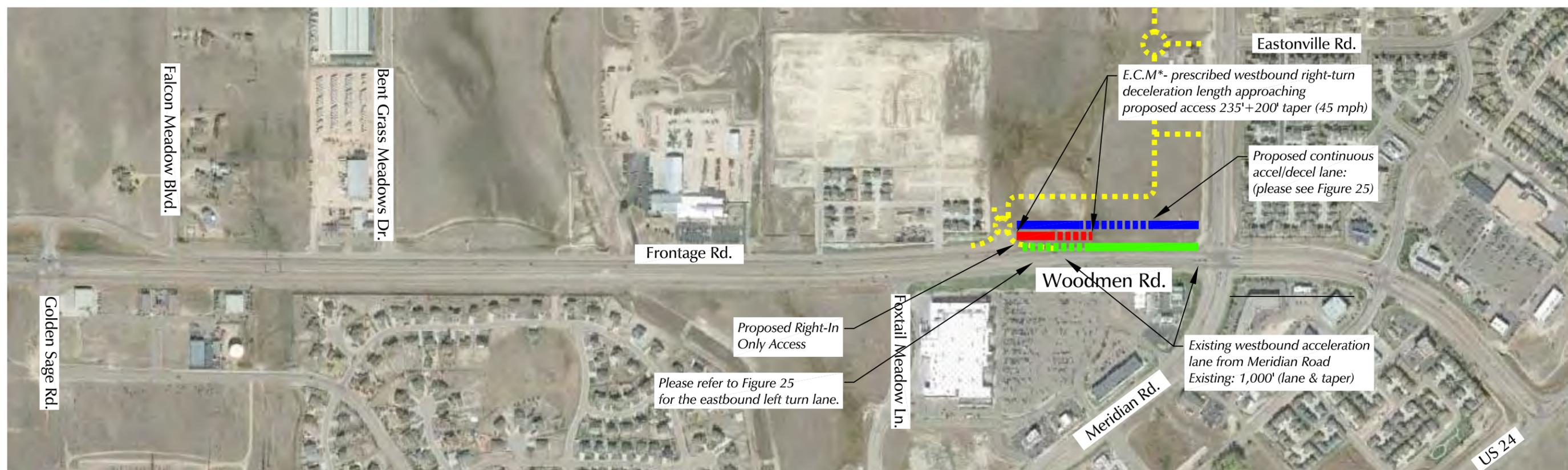


Note: Lane lengths from the Meridian Road (North) Corridor Plan (December 2009). Also assumes an anticipated post-development speed limit of 45mph (50mph design speed).

Figure 23

## Accel/Decel Distances for Meridian Road North of Woodmen Road

Falcon Marketplace (LSC #164350)



\* E.C.M.= County Engineering Criteria Manual

Figure 24  
Existing & ECM\*- Prescribed Accel/Decel Lane Lengths for Woodmen Road

Falcon Marketplace (LSC #164350)

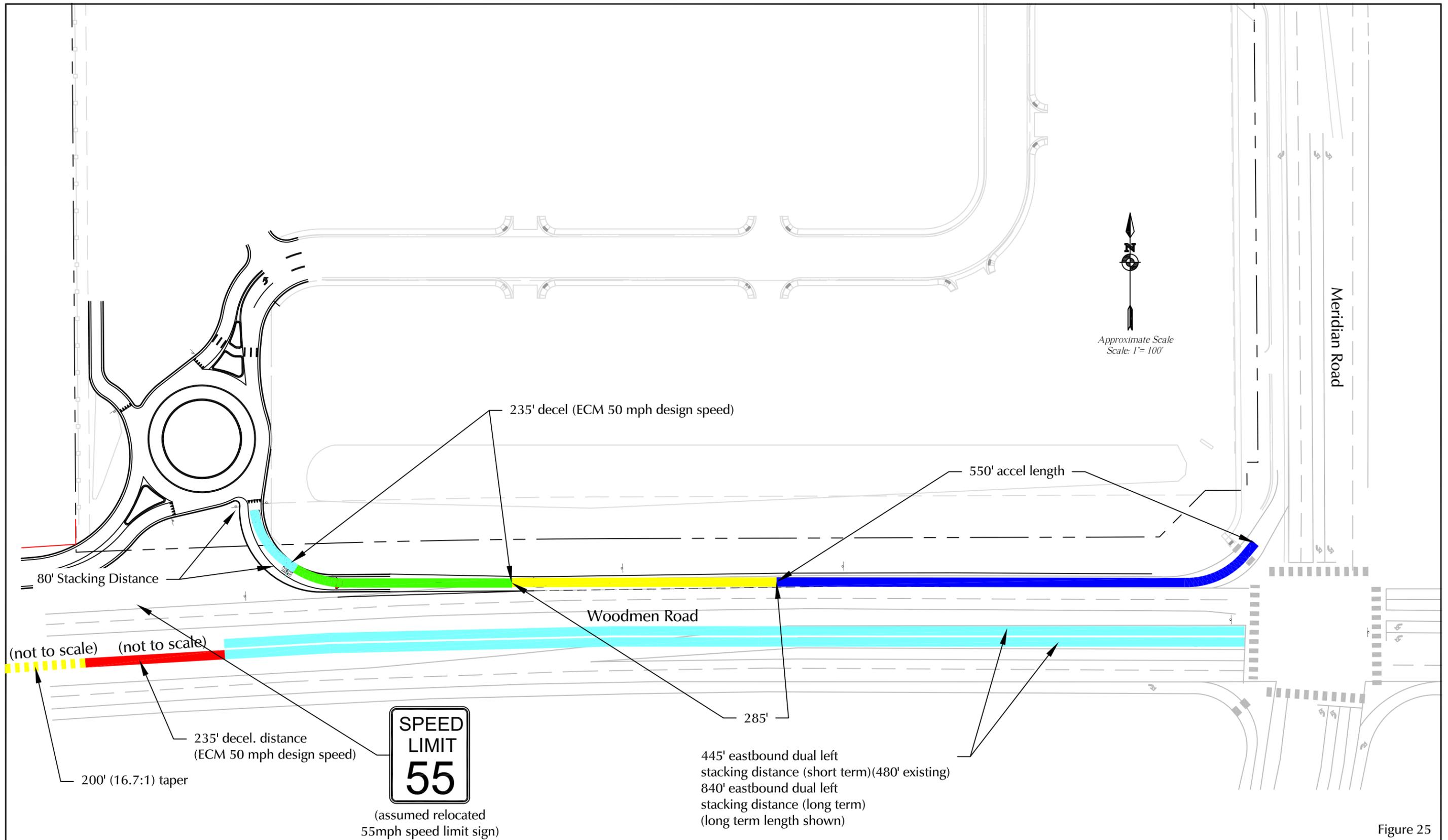


Figure 25

## Woodmen Rd. Acceleration, Deceleration and Stacking Lengths

Falcon Marketplace (LSC #164350)

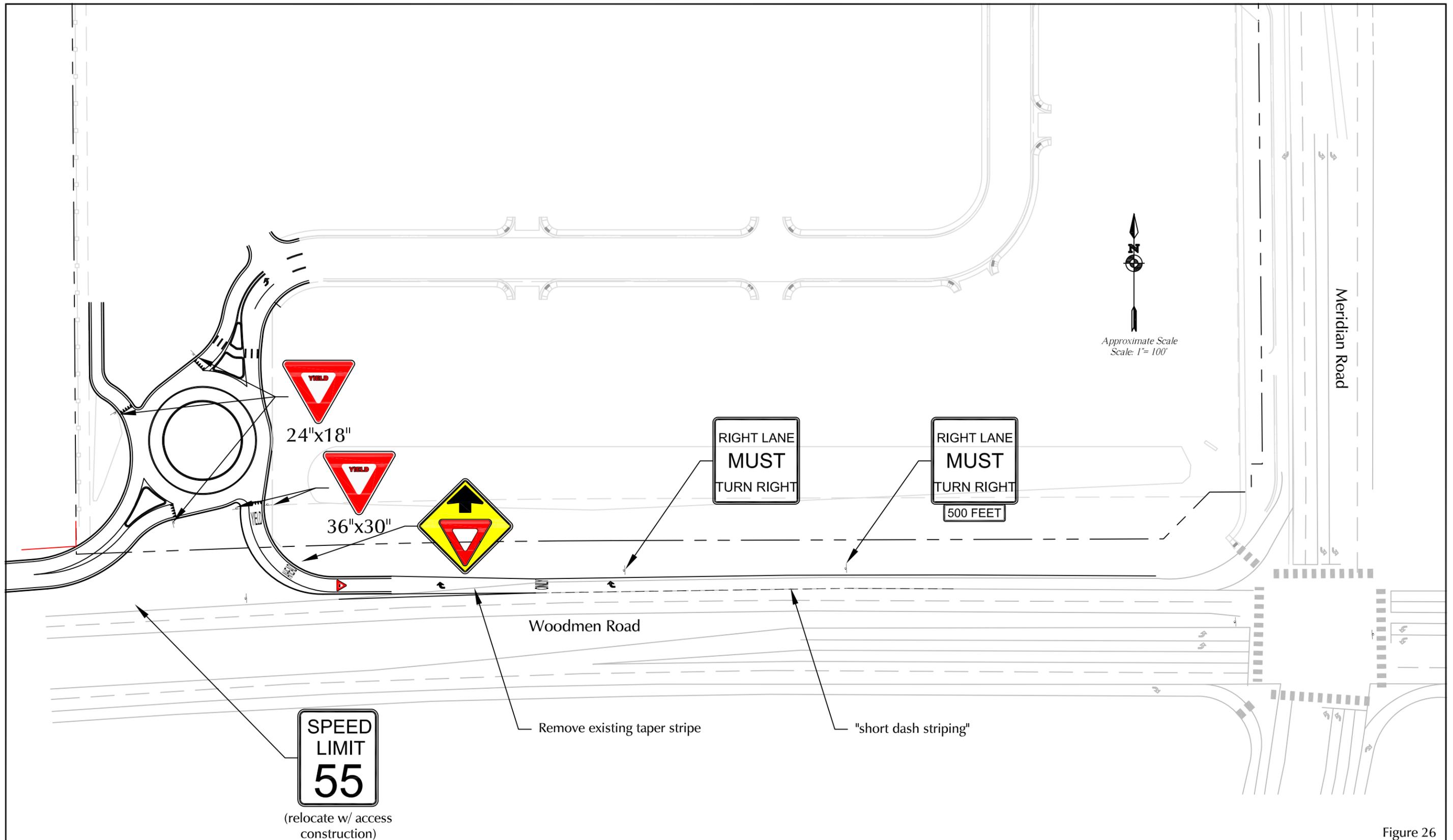


Figure 26

**Woodmen Rd.  
Acceleration/Deceleration Lane  
Signing & Striping**  
Falcon Marketplace (LSC #164350)

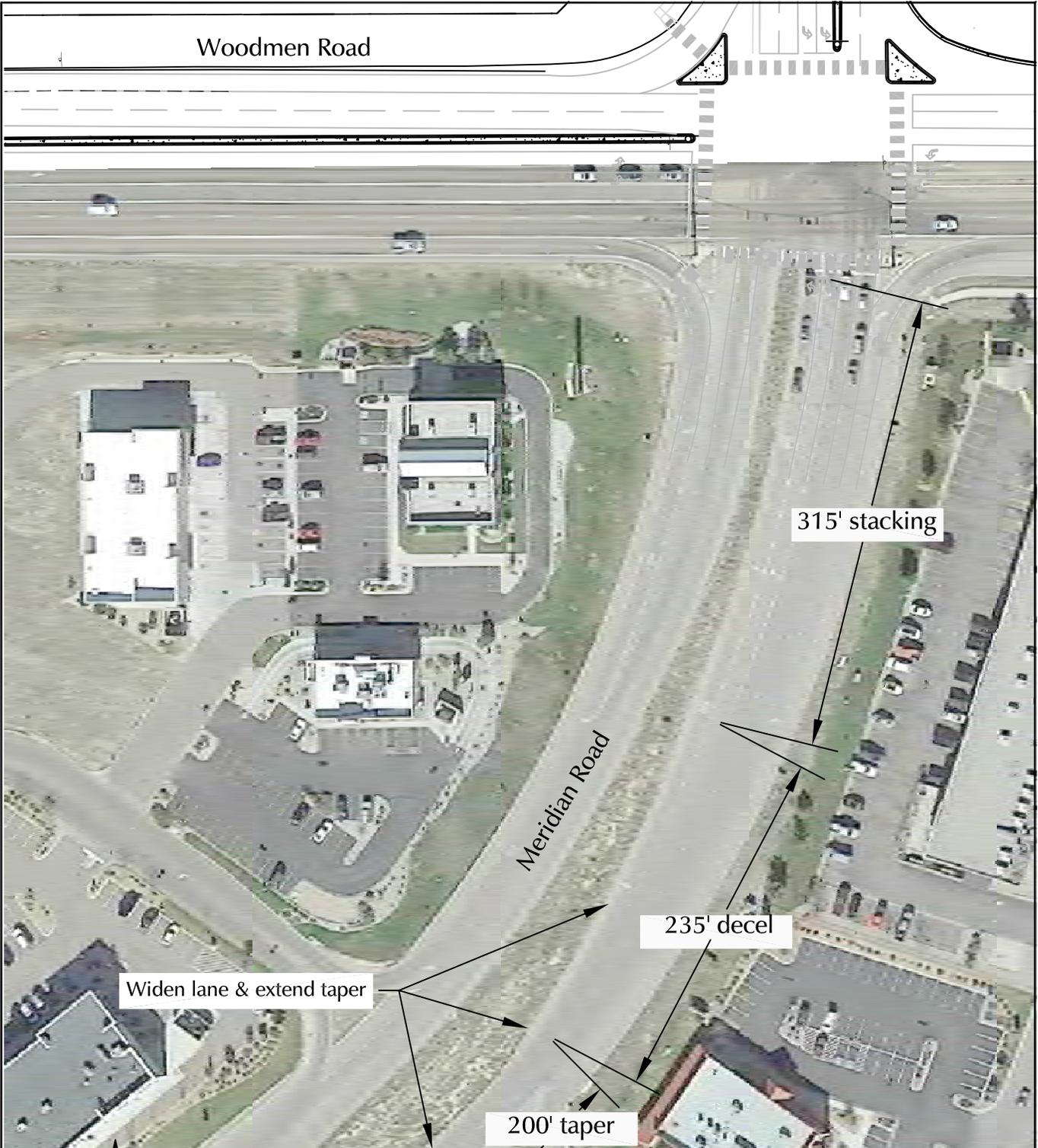
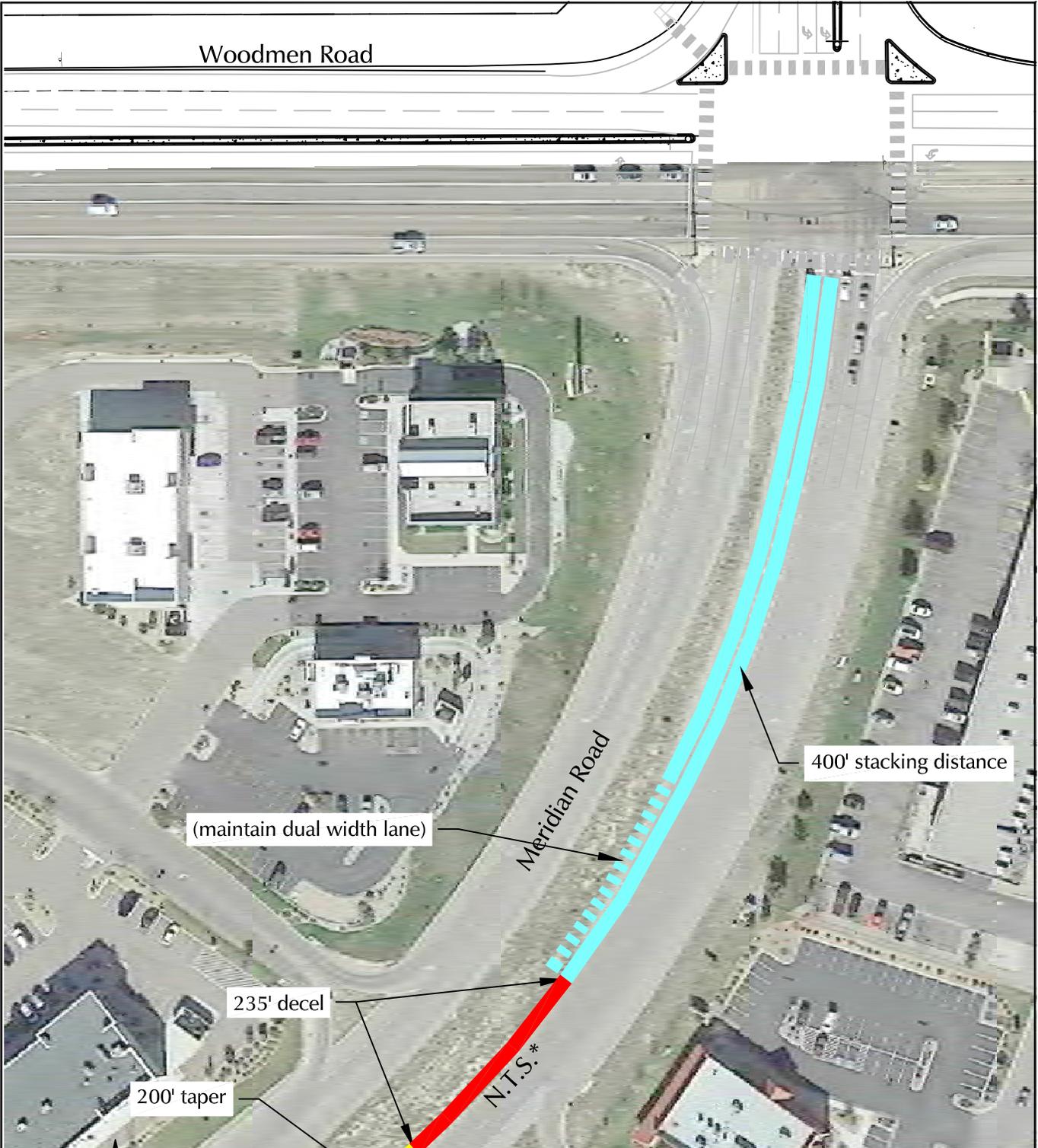


Figure 27

Short-Term Meridian Rd.  
 South of Woodmen Rd. NB Left-Turn  
 Deceleration Lane, Taper and Stacking Lengths



\* N.T.S. These are not shown to scale

Figure 28

Potential Future Long-Term Meridian Rd.  
 South of Woodmen Rd. NB Left-Turn  
 Deceleration Lane, Taper and Stacking Lengths



## Summary and Conclusions

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### WOODMEN RIGHT-IN-ONLY ACCESS WITH ROUNDABOUT

The purpose of this updated traffic report is to analyze the currently proposed right-in-only access **combined with** a proposed roundabout intersection with the Woodmen Frontage Road, which would significantly improve access not only to the site, but also to the properties to the west along the Woodmen Frontage Road. This new provision for public access from westbound Woodmen Road to the westbound Woodmen Frontage Road is a **significant change** from the previously proposed right-in-only access configuration that essentially only served the proposed Falcon Marketplace. Please refer to the report section above for details.

### TRIP GENERATION

- The site is projected to generate about 9,558 new external vehicle-trips on the average week-day, with about half entering and half exiting the site during a 24-hour period. During the morning peak hour, about 495 vehicles would enter and 370 vehicles would exit the site. During the afternoon peak hour, about 716 vehicles would enter and 701 vehicles would exit the site.

### PROJECTED LEVELS OF SERVICE

- The eastbound left-turn movement at the Woodmen Road/Meridian Road intersection currently operates at LOS D. Given the high existing and projected background traffic demand for this turning movement, the LOS is projected to operate at LOS E during the afternoon peak hour by 2040 with or without the proposed right-in access to Woodmen Road. Important note: This condition has little to do with this site, rather it is primarily due to the background traffic demand. The northbound left-turn movement is projected to operate at LOS D during the morning peak hour and LOS E during the afternoon peak hour based on the projected 2040 total traffic volumes without the proposed right-in access. The northbound left-turn movement is projected to operate at LOS E during both the morning and afternoon peak hours based on the projected 2040 total traffic volumes with the right-in access. The northbound through movement is projected to operate at LOS F during the afternoon peak hour assuming no Woodmen access and LOS E assuming the proposed right-in access. The northbound through volume is projected to be about 115 vehicles per hour higher (afternoon peak hour) with the “no-right-in” scenario.
- The intersection of Meridian/Eastonville was assumed to be signalized once the site is built out. As a signalized intersection, it is projected to operate at an overall LOS C or better based on the short-term total traffic volumes.

By 2040 the overall intersection is projected to operate at LOS D during the afternoon peak hour. The northbound left-turn movement is projected to operate at **LOS F** during the afternoon peak hour assuming no Woodmen access and **LOS D during the afternoon peak hour assuming the proposed right-in access**. The northbound left-turn volume is projected to be about 230 vehicles per hour higher (afternoon peak hour) with the “no-right-in” scenario.

- Based on the projected short-term and 2040 total traffic volumes, all movements at the proposed right-in/right-out-only access to Meridian Road are projected to operate at LOS D or better during the peak hours as a **stop-sign-controlled intersection**.
- The proposed two-way stop-sign-controlled access points to the public internal road are projected to operate at LOS C or better for all movements during the peak hours based on the 2040 total traffic volumes with or without the proposed right-in-only access to Woodmen Road.
- The northbound and southbound through movements at the proposed all-way, stop-sign-controlled intersection are projected to operate at **LOS D** or better based on the 2040 total traffic volumes **with** the proposed right-in-only access. These movements are projected to operate at **LOS E and F**, respectively based on the 2040 afternoon peak hour **without** the proposed right-in access to Woodmen Road.
- All movements at the proposed roundabouts at the terminus of the Woodmen Frontage Road and at the intersection of the internal public road and Eastonville Road are projected to operate at LOS B or better based on the projected 2040 total traffic volumes with and without the proposed right-in-only access to Woodmen Road.
- This report also includes a weaving section level of service for westbound Woodmen Road between the Meridian Road intersection and the proposed right-in to the west. Please refer to the Level of Service section of this report for details.

## **COMPARISON OF ANALYSIS SCENARIOS**

- The analysis of the scenarios with and without the proposed Woodmen Road access clearly indicates better area intersection operations for the traveling public, including the portion of the traveling public that will shop/dine, etc. at this site, if the proposed Woodmen Road access is constructed. The access with the proposed roundabout would also significantly improve emergency vehicle and public access for the properties to the west along the Woodmen North Frontage Road. Please refer to the section above for details.

## **RECOMMENDED IMPROVEMENTS**

- Please refer to Chapter 8 which presents detailed recommendations for the access scenarios.

# Summary of Crash History

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2014 – YTD 2017 Crash Data: Woodmen Rd, Meridian Rd, and Highway 67

**Woodmen Rd Crashes 2014 – YTD 2017**

| Road              | 2014      | 2015      | 2016      | 2017     | Total     |
|-------------------|-----------|-----------|-----------|----------|-----------|
| <b>Woodmen Rd</b> | <b>16</b> | <b>12</b> | <b>14</b> | <b>7</b> | <b>49</b> |
| Golden Sage Rd    | 7         | 2         | 7         | 6        | 22        |
| Meridian Rd       | 9         | 10        | 7         | 1        | 27        |
| <b>Total</b>      | <b>16</b> | <b>12</b> | <b>14</b> | <b>7</b> | <b>49</b> |

**Woodmen Rd Fatal & Injury Crashes 2014 – YTD 2017**

| Road              | 2014     | 2015     | 2016     | 2017     | Total    |
|-------------------|----------|----------|----------|----------|----------|
| <b>Woodmen Rd</b> | <b>2</b> | <b>2</b> | <b>3</b> | <b>1</b> | <b>8</b> |
| Golden Sage Rd    | 1        |          | 2        | 1        | 4        |
| Meridian Rd       | 1        | 2        | 1        |          | 4        |
| <b>Total</b>      | <b>2</b> | <b>2</b> | <b>3</b> | <b>1</b> | <b>8</b> |

**Meridian Rd Crashes 2014 – YTD 2017\***

| Road                 | 2014     | 2016     | 2017     | Total    |
|----------------------|----------|----------|----------|----------|
| <b>Meridian Road</b> | <b>4</b> | <b>2</b> | <b>1</b> | <b>7</b> |
| Eastonville Rd       | 3        | 2        | 1        | 6        |
| Owl Pl               | 1        |          |          | 1        |
| <b>Total</b>         | <b>4</b> | <b>2</b> | <b>1</b> | <b>7</b> |

\*No crashes in these areas in 2015

**Meridian Rd Fatal & Injury Crashes 2014 – YTD 2017\***

| Road                 | 2014     | 2016     | 2017     | Total    |
|----------------------|----------|----------|----------|----------|
| <b>Meridian Road</b> | <b>1</b> | <b>1</b> | <b>1</b> | <b>3</b> |
| Eastonville Rd       |          | 1        | 1        | 2        |
| Owl Pl               | 1        |          |          | 1        |
| <b>Total</b>         | <b>1</b> | <b>1</b> | <b>1</b> | <b>3</b> |

\*No crashes in these areas in 2015

**Highway 67 Crashes 2014 – YTD 2017\***

| Road         | 2016     | Total    |
|--------------|----------|----------|
| <b>H67</b>   | <b>1</b> | <b>1</b> |
| FAIRFIELD LN | 1        | 1        |
| <b>Total</b> | <b>1</b> | <b>1</b> |

\*No fatal and/or injury crashes at this area during this time period



MERIDIAN/WOODMEN

| Year | Month | Accident Time | Number Killed | Number Injured | FIP      | Road Description Code | Road Condition Code | Lighting Condition Code | Adverse Weather Condition Code | Direction Of Travel Code | Vehicle Movement Code | Roadway Speed Limit | Estimated Vehicle Speed | Ejection   | Suspected Alcohol | Suspected Drugs | Injury Severity              | Accident Narrative   |
|------|-------|---------------|---------------|----------------|----------|-----------------------|---------------------|-------------------------|--------------------------------|--------------------------|-----------------------|---------------------|-------------------------|------------|-------------------|-----------------|------------------------------|--|
| 2014 | 2     | 3:09:00 PM    | 0             | 0              | Property | At Intersection       | Dry                 | Daylight                | None                           | East                     | Going Straight        | 55                  | 5                       | No         | No                | No              | No Injury                    | Vehicle #1 was stopped at the red light of Woodmen Rd and Meridian Rd. Vehicle #2 was stopped at the red light of Woodmen Rd and Meridian Rd. Vehicle #1's began to roll forward and its front bumper impacted the rear of Vehicle #2. Both vehicles moved prior to investigation.   |
| 2014 | 4     | 5:45:00 PM    | 0             | 0              | Property | At Intersection       | Dry                 | Daylight                | None                           | East                     | Going Straight        | 45                  | 30                      | No         | No                | Yes             | No Injury                    | Vehicle #2 was stopped in the right, left turn lane on eastbound Woodmen Rd to Meridian Rd. Vehicle #1 was traveling eastbound on Woodmen Rd in the right, left turn lane approaching the intersection. Vehicle #1 failed to stop and collided its front into the rear of Vehicle #2. Both vehicle's were driven to rest.  |
| 2014 | 6     | 4:00:00 PM    | 0             | 0              | Property | At Intersection       | Dry                 | Daylight                | None                           | West                     | Going Straight        | 45                  | 45                      | No         | No                | No              | No Injury                    | Vehicle #1 was traveling westbound Woodmen Rd approaching the intersection with Meridian Rd; Vehicle #2 was northbound Meridian Rd, in the right lane, at the intersection with Woodmen Rd; Vehicle #3 was northbound Meridian Rd, in the left lane, at the intersection with Woodmen Rd. The driver of vehicle #1 failed to observe the red traffic light and collided its right front with the right rear of vehicle #2. Vehicle #1 continued southwest and collided its front with the right side of vehicle #3. Vehicle #2 rotated clockwise approximately 48' and came to final rest, on all wheels, facing southeast. Vehicles #1 and #3 came to final rest, on all wheels, facing north.  |
| 2014 | 6     | 5:10:00 PM    | 0             | 0              | Property | At Intersection       | Dry                 | Daylight                | None                           | West                     | Going Straight        | 35                  | 15                      | No         | No                | No              | No Injury                    | Vehicle #1 was westbound on Woodmen Road in the right lane. Vehicle #1 failed to stop for a red light and struck vehicle #2 with left front of vehicle #1. Vehicle #1 was driven to final rest. Vehicle #2 was eastbound on Woodmen Road turning left to northbound Meridian Road and was struck in the right front by vehicle #1. Vehicle #2 was driven to final rest.  |
| 2014 | 6     | 1:10:00 PM    | 0             | 0              | Property | At Intersection       | Wet                 | Daylight                | Fog                            | West                     | Going Straight        | 45                  | 40                      | No         | No                | No              | Complaint of Injury          | Vehicle #1 was westbound Woodmen Road, in the left lane, approaching the intersection with Meridian Road; Vehicle #2 was westbound Woodmen Road, in the left lane, and stopped at the red light at Meridian Road behind vehicle #3. Vehicle #1 failed to observe stopped traffic and collided its front with the rear of vehicle #2; vehicle #2 then collided its front with the rear of vehicle #3. All vehicles were moved from final rest prior to my arrival.  |
| 2014 | 6     | 11:25:00 AM   | 0             | 2              | Injury   | At Intersection       | Dry                 | Dawn or Dusk            | Wind                           | West                     | Going Straight        | 45                  | 45                      | No         | No                | No              | Evident - incapacitating     | Vehicle #1 was westbound Woodmen Road, in the right lane, approaching the intersection with Meridian Road; Vehicle #2 was southbound Meridian Road, in the right lane, approaching the intersection with Woodmen Road. The driver of vehicle #1 failed to observe its red traffic signal, entered the intersection, and collided its right front with the left side of vehicle #2; the right rear side of vehicle #1 then collided with the left rear side of vehicle #2. Vehicle #1 traveled southwest through the intersection for approximately 159'7" before traveling off the southwest side of the roadway. Vehicle #1 traveled approximately 18'3" off road before coming to final rest, on all wheels, facing southwest. Vehicle #2 traveled approximately 132' before coming to final rest in the westbound Woodmen Road acceleration lane, on all wheels, facing northwest.  |
| 2014 | 8     | 10:17:00 PM   | 0             | 0              | Property | At Intersection       | Dry                 | Daylight                | None                           | East                     | Going Straight        | 45                  | 10                      | No         | No                | No              | No Injury                    | Vehicle #1 was eastbound on Woodmen Rd. Vehicle #2 was eastbound on Woodmen Rd, stopped at the traffic light. Vehicle #1's front bumper impacted the rear bumper of Vehicle #2, approximately 6' from the right side of the right turn lane. Both vehicles moved prior to investigation.   |
| 2014 | 8     | 2:55:00 PM    | 0             | 0              | Property | Intersection Related  | Dry                 | Daylight                | None                           | East                     | Going Straight        | 45                  | 20                      | No         | No                | No              | No Injury                    | Vehicle 1 was eastbound on Woodmen approaching Meridian in the right side left turn lane for northbound Meridian. Vehicle 2 was eastbound on Woodmen approaching Meridian in the right side left turn lane for northbound Meridian in front of vehicle 1 and stopped for a red signal light. Vehicle 1 struck vehicle 2 on the rear with its front. Both vehicles moved from rest onto the northbound shoulder of Meridian prior to arrival on scene.  |
| 2014 | 11    | 7:00:00 PM    | 0             | 0              | Property | At Intersection       | Dry                 | Daylight                | None                           | North                    | Slowing               | 45                  | 20                      | No         | No                | No              | No Injury                    | Vehicle #1 and Vehicle #2 where in the right turn lane from E. Woodmen Rd to N. Meridian Rd. Vehicle #2 was stopped yielding to an on coming vehicle. Vehicle #1 failed to stop and collided its right front into the left rear of Vehicle #2. Both vehicle's were driven to rest.   |
| 2015 | 2     | 2:00:00 AM    | 0             | 0              | Property | At Intersection       | Dry                 | Dark - Lighted          | None                           | East                     | Going Straight        | 45                  | 10                      | No         | No                | No              | No Injury                    | Vehicle #1 was traveling eastbound on Woodmen Road and was approaching the stop light, which was red. Vehicle #2 was stopped at the westbound stop light on Woodmen Road, waiting to make a left turn. The green turn arrow changed and vehicle #2 began to make a left turn. Vehicle #1 ran the stop light and collided its front with the right side of vehicle #2. After impact, vehicle #1 and vehicle #2 came to final rest in the intersection.  |
| 2015 | 2     | 10:20:00 PM   | 0             | 0              | Property | Intersection Related  | Dry                 | Daylight                | None                           | West                     | Slowing               | 45                  | 5                       | No         | No                | No              | No Injury                    | Both vehicles were moved prior to arrival and point of impact could not be determined.   |
| 2015 | 4     | 2:20:00 AM    | 0             | 0              | Property | Intersection Related  | Dry                 | Dark - Unlighted        | None                           | East                     | Going Straight        | 45                  | 5                       | No         | No                | No              | No Injury                    | Vehicle 1 was westbound on Woodmen Road in the right turn lane. Vehicle 2 was westbound on Woodmen Road, in the right turn lane, ahead of Vehicle 1. Vehicle 2 stopped for traffic. Vehicle 1 slowed and struck Vehicle 2 in the rear with its front. Both vehicles were moved from the scene prior to officer arrival.  |
| 2015 | 7     | 10:55:00 PM   | 0             | 0              | Property | Intersection Related  | Dry                 | Daylight                | None                           | East                     | Going Straight        | 45                  | 5                       | No         | No                | No              | No Injury                    | Vehicle's 1 and 2 were eastbound on Woodmen Rd waiting to make a left turn onto northbound Meridian Rd. Vehicle 1 moved prior to vehicle 2 and collided its front with the rear of vehicle 2. Both vehicles were moved prior to investigation.   |
| 2015 | 7     | 6:45:00 PM    | 0             | 0              | Property | At Intersection       | Dry                 | Daylight                | None                           | West                     | Making Left Turn      | 45                  | 15                      | No         | No                | No              | No Injury                    | Vehicles 1 and 2 were eastbound on Woodmen Rd approaching Meridian Rd in the left lane. Both vehicles were stopped for traffic ahead. Vehicle 1 began to move before vehicle 2. Vehicle 1 collided its front with the rear of vehicle 2. Both vehicles were moved prior to investigation.  |
| 2015 | 7     | 11:50:00 PM   | 0             | 1              | Injury   | At Intersection       | Dry                 | Daylight                | None                           | South                    | Going Straight        | 55                  | 15                      | No         | No                | No              | Evident - non-incapacitating | Vehicle #1 was in the left, left turn lane on Woodmen Rd at Meridian Rd. Vehicle #2 was in the right, left turn lane on Woodmen Rd and Meridian Rd. Both vehicle's were making a left turn and Vehicle #1 failed to drive within its lane and traveled into the right lane colliding its right front with the left rear of Vehicle #2. Both vehicle's were moved prior to my investigation.  |
| 2015 | 9     | 12:55:00 PM   | 0             | 1              | Injury   | Non-Intersection      | Dry                 | Daylight                | None                           | East                     | Changing Lanes        | 55                  | 20                      | Yes - Full | No                | No              | Evident - non-incapacitating | The traffic lights at the intersection at Woodmen Rd and Meridian Rd were not working (No lights were illuminated). Vehicle #1 was southbound on Meridian Rd in the left through lane. Vehicle #2 was stopped on westbound Woodmen Rd in the left through lane. Vehicle #2 started forward in the intersection. Vehicle #1 did not stop and vehicle #2 collided its front with the driver's side of vehicle #1. Vehicle #1 rotated counter-clockwise and then clockwise, traveling up onto a raised median. Both vehicles moved prior to investigation.  |
| 2015 | 9     | 2:05:00 AM    | 0             | 0              | Property | At Intersection       | Dry                 | Dark - Lighted          | None                           | West                     | Going Straight        | 45                  | 25                      | No         | No                | No              | No Injury                    | Vehicle 1, a bicycle, was eastbound Woodmen Rd, on the right paved shoulder. Vehicle 2 was eastbound Woodmen Rd, in the right through lane, approaching Vehicle 1. As Vehicle 2 neared Vehicle 1, Vehicle 1 moved from the shoulder into the right through lane and in the path of Vehicle 2. Vehicle 2 struck its driver's side front with the bicycle and its rider. The point of impact occurred 14'3" to the left of the right road edge and 1013.84' west of Meridian Rd. The bicycle and rider fell onto the hood of Vehicle 2 and were carried. Vehicle 2 came to rest 120'7" east of the point of impact, 8'6" to the left of the road edge. The bicycle came to rest 28'9" to the left of the right road edge and 136'3" east of the point of impact. The rider came to rest 160'9" east of the point of impact and 171" to the left of the right road edge. One tire from the bicycle became lodged under Vehicle 2 at some point during the collision. The rider and bicycle were moved prior to investigation. |
| 2015 | 9     | 2:05:00 AM    | 0             | 0              | Property | At Intersection       | Dry                 | Dark - Lighted          | None                           | West                     | Going Straight        | 45                  | 25                      | No         | No                | No              | No Injury                    | Vehicle #1 was traveling westbound on Woodmen Road in the number three lane and was approaching a red light at the intersection with Meridian Road. Vehicle #2 was stopped in the number one lane on eastbound Woodmen Road at the intersection with Meridian Road. Vehicle #2 had a green turn arrow and proceeded to turn left onto Meridian Road. Vehicle #1 disregarded the red light and continued to travel through the intersection and collided its right front with the right side of vehicle #2, 44.2 feet west and 29.8 feet south of the reference point. Both vehicles then moved from final rest to a safe location.   |
| 2015 | 9     | 2:05:00 AM    | 0             | 0              | Property | At Intersection       | Dry                 | Dark - Lighted          | None                           | West                     | Going Straight        | 45                  | 25                      | No         | No                | No              | No Injury                    | The reference point was the northeast traffic control signal pole.   |
| 2015 | 10    | 7:30:00 PM    | 0             | 0              | Property | Intersection Related  | Dry                 | Daylight                | None                           | East                     | Drove Wrong Way       | 45                  | 55                      | No         | No                | No              | No Injury                    | Both vehicles were moved from final rest prior to arrival.   |
| 2015 | 10    | 7:30:00 PM    | 0             | 0              | Property | Intersection Related  | Dry                 | Daylight                | None                           | East                     | Drove Wrong Way       | 45                  | 55                      | No         | No                | No              | No Injury                    | Vehicle 1 was traveling eastbound in the westbound lanes on Woodmen approaching Meridian. Vehicle 2 was southbound on Meridian preparing to take a merge lane onto westbound Woodmen. Vehicle 1 went off the north side of the roadway and traveled for 360 feet leaving rolling tire marks on the shoulder, and then went northbound in the southbound merge lane of Meridian to westbound Woodmen. Vehicle 1 then struck vehicle 2 on the right side with its right front. Vehicle 1 continued north 25 feet and came to rest facing northeast on its wheels in the southbound merge lane of Meridian. Both occupants of vehicle 1, which later was confirmed as stolen, fled the scene. Vehicle 2 continued southwest for 15 feet and came to rest facing southwest on the left gore of southbound Meridian to westbound Woodmen lane.  |
| 2015 | 12    | 9:45:00 PM    | 0             | 0              | Property | At Intersection       | Dry                 | Daylight                | None                           | Northwest                | Going Straight        | 45                  | 5                       | No         | No                | No              | No Injury                    | Vehicle #1 was westbound E. Woodmen Road, in the right turn lane, approaching the intersection with Meridian Road; vehicle #2 was in front of vehicle #1. The driver of vehicle #1 failed to observe that vehicle #2 was stopped and collided its front with the rear of vehicle #2. Both vehicle's were moved from final rest prior to my arrival.  |
| 2016 | 4     | 4:30:00 PM    | 0             | 1              | Injury   | Non-Intersection      | Icy                 | Daylight                | now/Sleet/Hail                 | West                     | Slowing               | 50                  | 35                      | No         | No                | No              | No Injury                    | VEHICLES 1 AND 2 WERE WESTBOUND ON WOODMEN RD, IN THE RIGHT LANE. VEHICLE 2 STOPPED IN TRAFFIC. THE FRONT OF VEHICLE 1 IMPACTED THE REAR OF VEHICLE 2, APPROXIMATELY .1 MILE WEST OF MERIDIAN RD. BOTH VEHICLES WERE DRIVEN TO REST ON THE RIGHT SHOULDER PRIOR TO ARRIVAL. EXACT POINT OF IMPACT UNKNOWN.   |
| 2016 | 6     | 7:10:00 PM    | 0             | 0              | Property | At Intersection       | Dry                 | Daylight                | None                           | West                     | Slowing               | 45                  | 20                      | No         | No                | No              | No Injury                    | Vehicle 2 was westbound Woodmen Rd, in the right most through lane, stopped in traffic, at the red light, at the intersection of Meridian Rd. Vehicle 1 was westbound Woodmen Rd, in the right most through lane, approaching Meridian Rd and Vehicle 2. Vehicle 1 failed to safely stop behind Vehicle 2. Vehicle 1 struck its front with the rear of Vehicle 2. The point of impact occurred in the right most through lane of westbound Woodmen Rd, just east of Meridian Rd. After the impact, both vehicles were driven to final rest.  |
| 2016 | 6     | 12:49:00 AM   | 0             | 0              | Property | Intersection Related  | Dry                 | Dark - Lighted          | None                           | East                     | Going Straight        | 45                  | 30                      | No         | Yes               | No              | No Injury                    | Vehicle 1 was traveling east in the westbound merge lane from the intersection of Meridian road. Vehicle 1 did not turn or stop and collided with the raised curb of the pedestrian island on the northwest corner of the intersection. Vehicle 1 continued and struck the utility pole with the right front fender. Vehicle 1 continued, making a left turn and stopping in the south bound turn lane of Meridian Road to eastbound Woodmen Road. Vehicle 1 came to rest in it's wheels facing north.   |
| 2016 | 8     | 6:45:00 PM    | 0             | 0              | Property | At Intersection       | Dry                 | Daylight                | None                           | West                     | Going Straight        | 45                  | 5                       | No         | No                | No              | No Injury                    | VEHICLES 1 AND 2 WERE WESTBOUND ON WOODMEN RD. VEHICLE 2 WAS STOPPED IN TRAFFIC. THE FRONT OF VEHICLE 1 IMPACTED THE REAR OF VEHICLE 2, APPROXIMATELY 15' EAST OF MERIDIAN RD, IN THE LEFT THRU LANE. BOTH VEHICLES WERE MOVED OUT OF TRAFFIC PRIOR TO ARRIVAL. EXACT POINT OF IMPACT UNKNOWN.   |
| 2016 | 10    | 1:45:00 PM    | 0             | 0              | Property | At Intersection       | Dry                 | Daylight                | None                           | West                     | Going Straight        | 45                  | 45                      | No         | No                | No              | Complaint of Injury          | Vehicle #1 was in the right through lane westbound Woodmen Rd approaching Meridian Rd. Vehicle #2 was in the right through lane northbound Meridian Rd at Woodmen Rd. Vehicle #2 had green light and entered the intersection. Vehicle #1 failed to stop for the red light and collided its front with the right side of Vehicle #2. Both vehicles were driven to rest.  |
| 2016 | 11    | 3:35:00 PM    | 0             | 0              | Property | Intersection Related  | Dry                 | Daylight                | None                           | West                     | Going Straight        | 45                  | 10                      | No         | No                | No              | Complaint of Injury          | Vehicle 1 was southbound on Meridian Road, in the right turn lane. Vehicle 2 was southbound on Meridian Road, in the right turn lane ahead of Vehicle 1. Vehicle 2 turned right onto Woodmen Road and traveled westbound in the acceleration lane. Vehicle 1 followed Vehicle 2. Vehicle 1 stopped for traffic. Vehicle 1 struck Vehicle 2, in the rear, with its front. Both vehicles were moved from the scene prior to officer arrival.   |
| 2017 | 5     | 7:30:00 AM    | 0             | 0              | Property | Intersection Related  | Dry                 | Dark - Lighted          | None                           | East                     | Making Left Turn      | 45                  | 15                      | No         | Yes               | Unknown         | No Injury                    | Vehicle 1 and vehicle 2 were both stopped on eastbound E Woodmen Rd in the #2 left turn lane to N Meridian Rd with vehicle 1 behind vehicle 2. Vehicle 1 suddenly drove forward and struck the rear of vehicle 2 with its front. Vehicles 1 and 2 both came to final rest on their wheels facing east.   |

GOLDEN SAGE/WOODMEN

| Year | Month | Accident Time | Number Killed | Number Injured | FIP      | Road Description Code | Road Condition Code | Lighting Condition Code | Adverse Weather Condition Code | Direction Of Travel Code | Vehicle Movement Code            | Roadway Speed Limit | Estimated Vehicle Speed | Ejection   | Suspected Alcohol | Suspected Drugs | Injury Severity              | Accident Narrative   |
|------|-------|---------------|---------------|----------------|----------|-----------------------|---------------------|-------------------------|--------------------------------|--------------------------|----------------------------------|---------------------|-------------------------|------------|-------------------|-----------------|------------------------------|--|
| 2014 | 1     | 11:58:00 PM   | 0             | 1              | Injury   | Non-Intersection      | Dry                 | Dark - Unlighted        | None                           | East                     | Going Straight                   | 55                  | 75                      | No         | Yes               | No              | No Injury                    | Vehicles 1 and 2 were eastbound on Woodmen Road in the number two lane approaching the intersection of Golden Sage Road. Vehicle 2 was ahead of vehicle 1. Vehicle 1 struck the left rear of vehicle 2 with its right front. Vehicle 2 began to rotate clockwise approximately 90 degrees across the right shoulder due to the impact before exiting the right side of the roadway while in a broadside skid. Vehicle 2 continued off road roadside for approximately 18 feet before hitting a trip point. Vehicle 2 then began to roll while colliding with a barb wire fence with its top. Vehicle 2 continued southeast through a field for approximately 208 feet where it rolled an additional 2.5 times before coming to rest on its wheels facing south. Vehicle 1 was driven to a controlled stop onto the right shoulder approximately 460 feet from the initial point of impact. |
| 2014 | 1     | 7:15:00 PM    | 0             | 0              | Property | Intersection Related  | Dry                 | Dark - Lighted          | None                           | East                     | Going Straight                   | 55                  | 50                      | No         | No                | No              | No Injury                    | VEHICLE #1 WAS TRAVELING EAST ON WOODMEN ROAD, APPROACHING GOLDEN SAGE ROAD, IN THE RIGHT LANE. VEHICLE #2 WAS STOPPED ON WOODMEN ROAD AT GOLDEN SAGE, IN THE RIGHT LANE, AT A RED LIGHT. VEHICLE #1'S BRAKES FAILED IT AND COULD NOT STOP. VEHICLE #1 SWERVED TO THE RIGHT AND COLLIDED ITS DRIVER'S SIDE FRONT TO THE PASSENGER SIDE REAR OF VEHICLE #2. BOTH VEHICLE MOVED PRIOR TO MY ARRIVAL.   |
| 2014 | 1     | 2:30:00 AM    | 0             | 0              | Property | Intersection Related  | Dry                 | Dark - Lighted          | None                           | East                     | Going Straight                   | 55                  | 40                      | No         | No                | No              | Complaint of Injury          | Vehicle 1 was traveling east on Woodmen Road. Vehicle 2 was stopped behind several vehicles in the left turn lane to Golden Sage on Woodmen Road eastbound. Vehicle 1 collided with the rear of vehicle 2 with its front. Both vehicles were driven partially off road and into the median when I arrived on scene.  |
| 2014 | 8     | 9:31:00 PM    | 0             | 0              | Property | Non-Intersection      | Dry                 | Daylight                | None                           | West                     | Going Straight                   | 55                  | 55                      | No         | No                | No              | No Injury                    | Vehicle 1 was westbound on Woodmen Road. The driver of Vehicle 1 fell asleep at the wheel and drove off the right side of the road. The front end of Vehicle 1 collided with a barbed wire fence. Vehicle 1 traveled back onto the roadway and drove to a controlled stop, on its wheels, and stopped facing west.   |
| 2014 | 9     | 9:40:00 PM    | 0             | 0              | Property | Intersection Related  | Dry                 | Daylight                | None                           | East                     | Going Straight                   | 55                  | 10                      | No         | No                | No              | No Injury                    | Vehicles 1 and 2 were eastbound on Woodmen Rd stopped at Golden Sage Rd in the right lane. Vehicle 1 began to move before vehicle 2 and collided its front with the rear of vehicle 2. Both vehicles were moved prior to investigation.  |
| 2014 | 9     | 1:00:00 PM    | 0             | 0              | Property | At Intersection       | Dry                 | Daylight                | None                           | East                     | Going Straight                   | 55                  | 55                      | No         | No                | No              | Complaint of Injury          | Vehicle #1 was traveling eastbound on E Woodmen Rd approaching Golden Sage Rd. Vehicle #2 was northbound on Golden Sage Rd in the left turn lane at E Woodmen Rd. Vehicle #2 had a solid green light to left onto westbound E Woodmen Rd. Vehicle #1 failed to stop for a solid red light and entered into the intersection. Driver #1 stated that the sun was in her eyes and she did not see that the light was red. Vehicle #1 collided its front with the left side of Vehicle #2. Vehicle #2 traveled for approximately 70.5' before coming to rest in the westbound lanes of traffic facing east. Vehicle #1 traveled approximately 19.4' before coming to rest in the intersection facing north. Both driver's and passenger refused medical on scene.  |
| 2014 | 12    | 1:20:00 PM    | 0             | 0              | Property | At Intersection       | Dry                 | Dark - Lighted          | None                           | East                     | Making Left Turn                 | 55                  | 15                      | No         | No                | No              | Complaint of Injury          | Vehicle 1 was eastbound on Woodmen Road in the left turn lane. Vehicle 2 was westbound on Woodmen approaching the intersection of Golden Sage Road. The traffic light was yellow in both directions. Vehicle 1 made a left turn onto northbound Golden Sage Road in front of traffic. The front end of Vehicle 2 collided with the right side of Vehicle 1 in the intersection. Vehicle 1 was moved out of the lane of traffic and drove to final rest on the north side of the intersection. Vehicle 2 traveled west of the intersection where it came to final rest in the eastbound left turn lane facing west, on its wheels.  |
| 2015 | 1     | 12:15:00 PM   | 0             | 0              | Property | Intersection Related  | Dry                 | Dark - Lighted          | None                           | South                    | Making Right Turn                | 55                  | 25                      | No         | No                | No              | Complaint of Injury          | Vehicle #1 was stopped on Golden Sage Road southbound at Woodmen Road. Vehicle #2 was traveling westbound on Woodmen Road in the right lane approaching Golden Sage Road. Vehicle #1 turned right into the right lane and proceeded west on Woodmen Road. Driver #1 then realized how close Vehicle #2 was to the intersection. Vehicle #1 moved into the left lane to avoid a crash. Vehicle #2 also moved left to avoid a crash. Vehicle #2's front struck Vehicle #1's rear while both vehicles were traveling westbound in the left lane. Both vehicles pulled off the roadway after the crash.  |
| 2015 | 9     | 6:49:00 PM    | 0             | 0              | Property | Intersection Related  | Dry                 | Daylight                | None                           | West                     | Slowing                          | 55                  | 30                      | No         | No                | No              | Complaint of Injury          | Vehicle 1 was westbound on Woodmen Road, in the left traffic lane. Vehicle 2 was westbound on Woodmen Road, in the left traffic lane ahead of Vehicle 1. Vehicle 2 stopped for traffic. Vehicle 1 slowed and struck Vehicle 2 in the rear with its front (Driver 1 stated that he had not allowed for traffic ahead of Vehicle 2 to be stopped).   |
| 2016 | 4     | 10:35:00 PM   | 0             | 0              | Property | Non-Intersection      | Dry                 | Daylight                | None                           | East                     | Going Straight                   | 55                  | 55                      | No         | Yes               | Yes             | No Injury                    | Vehicle #1 was traveling eastbound on Woodmen Road. Vehicle #1 traveled off the right side of the roadway for 260.0 feet. Vehicle #1 rotated counterclockwise 1/2 time and traveled back on the roadway for 55.0 feet before traveling off the left side of the roadway for 29.5 feet. Vehicle #1 then started to roll clockwise 1 1/2 roll, while traveling for 65.0 feet before coming to final rest on its roof, 53.0 feet from the roadway edge.   |
| 2016 | 6     | 10:00:00 PM   | 0             | 0              | Property | Non-Intersection      | Dry                 | Daylight                | None                           | East                     | Going Straight                   | 55                  | 55                      | No         | No                | No              | No Injury                    | Vehicle #1 was traveling eastbound on Woodmen Rd in the left lane approximately .4 miles west of Golden Sage Rd. An antelope ran in front of vehicle #1; vehicle #1 struck the antelope with the front of the vehicle. Vehicle #1 merged to the left shoulder and stopped facing east.   |
| 2016 | 8     | 11:21:00 PM   | 0             | 0              | Property | Intersection Related  | Wet                 | Daylight                | Rain                           | East                     | Going Straight                   | 55                  | 45                      | No         | No                | No              | No Injury                    | Vehicle #1 and #2 were eastbound on E Woodmen Rd. The front of vehicle #1 collided with the rear of vehicle #2 approximately 200' west of Golden Sage Rd. Vehicles were moved prior to investigation.  |
| 2016 | 10    | 6:40:00 AM    | 0             | 0              | Property | Non-Intersection      | Dry                 | Dark - Unlighted        | None                           | East                     | Going Straight                   | 55                  | 55                      | No         | No                | No              | No Injury                    | Vehicle 1 was traveling east on Woodmen Road in the right lane. Driver 1 fell asleep and vehicle 1 ran off the right side of the roadway. Driver 1 attempted to correct, vehicle 1 returned to the roadway and yawed off the right side of the roadway. Vehicle 1 rotated 1/2 times and struck a fence. Vehicle 1 continued under the fence and came to rest in the field off the south side of the roadway on its wheels facing north.  |
| 2016 | 10    | 6:45:00 AM    | 0             | 1              | Injury   | Non-Intersection      | Dry                 | Dark - Unlighted        | None                           | West                     | Going Straight                   | 55                  | 50                      | Yes - Full | No                | No              | Evident - non-incapacitating | Vehicle 1 was traveling west on Woodmen Road in the left lane. The animal was crossing the roadway from right to left. Vehicle 1 struck the animal. Vehicle 1 overturned approximately 2 times and came to rest in the left lane. Vehicle 1 was moved to the left shoulder.  |
| 2016 | 12    | 10:18:00 PM   | 0             | 2              | Injury   | Intersection Related  | Dry                 | Daylight                | None                           | East                     | Going Straight                   | 55                  | 65                      | No         | No                | No              | Evident - non-incapacitating | Vehicle 2 was eastbound in the right lane on Woodman Road, Stationary at a red light at the intersection with Golden Sage Road. Vehicle 1 was eastbound in the right lane on Woodman Road approaching the intersection with Golden Sage Road. Vehicle 1 skidded for 35 feet before colliding with Vehicle 2. After impact Vehicle 2 travelled 118 feet coming to final rest within the intersection on all four wheels facing east. After impact Vehicle 1 travelled an additional 140 feet on the roadway before travelling off road to the right for 11 feet before colliding with a lamp pole. Vehicle 1 came to final rest on all four wheels against the light pole, partially on the south side of the road facing southeast.  |
| 2016 | 12    | 12:40:00 AM   | 0             | 0              | Property | Non-Intersection      | Dry                 | Dark - Unlighted        | Wind                           | East                     | Going Straight                   | 55                  | 65                      | No         | No                | No              | No Injury                    | Vehicle 2 was eastbound on Woodmen Road in the right lane of traffic. Vehicle 1 was eastbound on Woodmen road in the right lane of traffic, directly behind Vehicle 2. Driver of Vehicle 1 fell asleep and collided with the rear of Vehicle 2. After impact Vehicle 1 continued an additional 140 feet on road before leaving the road to the right. Vehicle 1 drove off road for 35 feet before colliding with a fence. Vehicle 1 came to final rest against the fence on all four wheels facing southeast. Final rest of Vehicle 2 is unknown as it was moved prior to State Patrol arrival.  |
| 2017 | 3     | 7:15:00 PM    | 0             | 0              | Property | Non-Intersection      | Dry                 | Daylight                | Wind                           | West                     | Going Straight                   | 55                  | 50                      | No         | No                | No              | No Injury                    | Vehicle 1 was westbound on Woodmen Road, in the right traffic lane. Vehicle 2 was westbound on Woodmen Road, in the left traffic lane. Vehicle 3 was westbound on Woodmen Road, in the left traffic lane behind Vehicle 2. Vehicle 1 continued westbound when a mattress and box spring spilled onto the roadway, into the left traffic lane, from its bed. Vehicle 2 swerved and slowed. Vehicle 3 slowed and struck Vehicle 2, in the rear, with its front. All three vehicles were moved from the scene prior to officer arrival.   |
| 2017 | 4     | 12:40:00 AM   | 1             | 0              | Fatal    | Intersection Related  | Dry                 | Daylight                | None                           | East                     | Making Right Turn                | 55                  | 25                      | No         | Yes               | No              | No Injury                    | Vehicle #1 was eastbound on Woodmen Road making a left turn in front of approaching traffic. Vehicle #2 was westbound on Woodmen Road. Vehicle #1 collided its front with the left side of Vehicle #2. Vehicle #1 came to rest facing north. Vehicle #2 traveled off the right side of the road and came to rest facing south.   |
| 2017 | 4     | 1:45:00 PM    | 0             | 0              | Property | Intersection Related  | Dry                 | Daylight                | None                           | West                     | Going Straight                   | 55                  | 35                      | No         | No                | No              | Complaint of Injury          | Vehicle #1 was traveling westbound on Woodmen Road in the right lane approaching Golden Sage Road. Vehicle #2 was stopped on Woodmen Road at Golden Sage Road in the right lane. Vehicle #1 attempted to stop leaving 88 feet of braking tire marks before its front left struck Vehicle #2's right rear. Both vehicles moved from final rest onto Golden Sage Road prior to my arrival on scene.  |
| 2017 | 4     | 7:35:00 PM    | 0             | 0              | Property | Intersection Related  | Dry                 | Daylight                | Wind                           | East                     | Entering/Leaving Parked Position | 55                  | 15                      | No         | No                | No              | No Injury                    | VEHICLES 1 AND 2 WERE EASTBOUND ON WOODMEN RD, IN THE LEFT LANE, STARTING FROM A GREEN LIGHT, AT GOLDEN SAGE RD. THE FRONT OF VEHICLE 1 IMPACTED THE REAR OF VEHICLE 2, APPROXIMATELY 20' EAST OF THE INTERSECTION, IN THE LEFT LANE. BOTH VEHICLES WERE DRIVEN TO REST IN THE MEDIAN, OUT OF TRAFFIC, PRIOR TO ARRIVAL. EXACT POINT OF IMPACT UNKNOWN.  |
| 2017 | 6     | 10:07:00 PM   | 0             | 0              | Property | At Intersection       | Dry                 | Daylight                | None                           | East                     | Going Straight                   | 55                  | 35                      | No         | No                | No              | No Injury                    | Vehicle #1 was eastbound on Woodmen Rd. Vehicle #2 was stopped at the intersection of Golden Sage Rd and Woodmen Rd. Vehicle #1 failed to stop for the red light. Vehicle #2 began to turn left onto Woodmen Rd. Vehicle #1's passenger front bumper impacted Vehicle #2's driver side. Both vehicles moved prior to investigation.  |
| 2017 | 6     | 11:45:00 PM   | 0             | 0              | Property | Non-Intersection      | Dry                 | Daylight                | None                           | East                     | Going Straight                   | 55                  | 60                      | No         | No                | No              | No Injury                    | Vehicle 4 was stopping in traffic on Woodmen Road just west of Golden Sage facing east. Vehicle 1, 2, and 3 were traveling east on Woodmen Road just west of Golden Sage. From west to east, vehicle 1, vehicle 2, vehicle 3 and vehicle 4. Traffic was slowing, vehicle 1 could not stop and collided front to rear with vehicle 2. Vehicle 1 continued and came to rest in the left lane facing east on the roadway. Vehicle 2 collided with the rear of vehicle 3. Vehicle 2 came to rest on its wheels facing east on the roadway. Vehicle 3 collided with the rear of vehicle 4. Vehicle 3 came to rest on its wheels facing east on the roadway. Vehicle 4 was driven to the left shoulder.  |
| 2017 | 7     | 12:25:00 AM   | 0             | 0              | Property | Intersection Related  | Dry                 | Daylight                | None                           | West                     | Going Straight                   | 55                  | 15                      | No         | No                | No              | No Injury                    | Vehicles 1 and 2 were westbound on Woodmen Rd approaching Golden Sage Rd in the left lane. Vehicle 2 stopped for traffic ahead. Vehicle 1 failed to stop and collided its front with the rear of vehicle 2. Both vehicles were moved prior to investigation.   |

MERIDIAN/EASTONVILLE

| Year | Month | Accident Time | Number Killed | Number Injured | FIP      | Road Description Code | Road Condition Code | Lighting Condition Code | Adverse Weather Condition Code | Direction Of Travel Code | Vehicle Movement Code | Roadway Speed Limit | Estimated Vehicle Speed | Ejection | Suspected Alcohol | Suspected Drugs | Injury Severity              | Accident Narrative  |
|------|-------|---------------|---------------|----------------|----------|-----------------------|---------------------|-------------------------|--------------------------------|--------------------------|-----------------------|---------------------|-------------------------|----------|-------------------|-----------------|------------------------------|---|
| 2014 | 8     | 12:20:00 AM   | 0             | 0              | Property | At Intersection       | Dry                 | Daylight                | None                           | West                     | Making Left Turn      | 25                  | 10                      | No       | No                | No              | No Injury                    | Vehicle #1 was stopped on Eastonville Rd at Meridian Rd facing west. Vehicle #2 was northbound on Meridian Rd approaching Eastonville Rd in the right lane. Vehicle #1 attempted to turn left onto southbound Meridian Rd. from Eastonville Rd in front of vehicle #2. Vehicle #1's left front was struck by the right front/side of vehicle #2.  |
| 2014 | 9     | 11:15:00 AM   | 0             | 0              | Property | At Intersection       | Dry                 | Dark - Unlighted        | None                           | South                    | Making Left Turn      | 55                  | 15                      | No       | No                | No              | No Injury                    | Both vehicles were moved out of the intersection prior to my arrival. Vehicle #1 was on Eastonville Rd at N Meridian Rd. Vehicle #2 a semi truck and trailer was traveling southbound in the left lane on N Meridian Rd approaching Eastonville Rd. Vehicle #1 was attempting to make a left turn onto N Meridian Rd and failed to yield right-of-way to Vehicle #2. Vehicle #2 attempted to avoid Vehicle #1 and swerved to the right. Vehicle #2's trailer left side collided with Vehicle #1 right front. Both vehicle's where driven to rest. |
| 2014 | 12    | 10:55:00 PM   | 0             | 0              | Property | At Intersection       | Dry                 | Daylight                | None                           | West                     | Making Left Turn      | 35                  | 20                      | No       | No                | No              | No Injury                    | Vehicle #1 was stopped at the intersection of Eastonville Rd and Meridian Rd. Vehicle #2 was northbound on Meridian Rd. Vehicle #1 failed to yield the right of way and began to make a left turn onto Meridian Rd. Vehicle #1's front bumper impacted the Vehicle #2's passenger side. Both vehicles moved prior to investigation.   |
| 2016 | 5     | 10:30:00 PM   | 0             | 0              | Property | At Intersection       | Dry                 | Daylight                | None                           | West                     | Making Left Turn      |                     | 15                      | No       | No                | No              | No Injury                    | Vehicles #1 and #2 were stopped at a stop sign on Eastonville Road westbound at Meridian Road. Vehicle #2 proceeded from the stop sign to make a left turn onto southbound Meridian Road, stopping in the center of the intersection after crossing the northbound lanes. Vehicle #1 proceeded across the northbound lanes as well, and it's front left struck Vehicle #2's right rear. Vehicle #1 fled the scene. Vehicle #2 followed Vehicle #1 to Woodmen Road and Golden Sage Road where both vehicles stopped.                               |
| 2016 | 6     | 4:45:00 PM    | 0             | 1              | Injury   | At Intersection       | Dry                 | Daylight                | None                           | East                     | Making Left Turn      | 30                  | 2                       | No       | No                | No              | No Injury                    | Vehicle 1 was stopped at the stop sign on Eastonville Road at the intersection with Meridian Road. Bicycle 1 was northbound on Meridian Road on the shoulder of the right turn lane. Bicycle 1 continued straight through the intersection. Vehicle 1 proceeded into the intersection and collided its front with the bicycle, knocking its rider to the ground at low speed. Both Vehicle 1 and Bicycle 1 were moved prior to investigation.   |
| 2017 | 5     | 3:15:00 PM    | 0             | 2              | Injury   | At Intersection       | Dry                 | Daylight                | None                           | East                     | Making Left Turn      | 55                  | 20                      | No       | No                | No              | Evident - non-incapacitating | Vehicle #1 was turning eastbound from southbound Meridian Rd. Vehicle #2 was traveling northbound on Meridian Rd. Vehicle #1 turned in front of oncoming traffic and collided with the front of vehicle #2. Vehicle #1 came to rest, facing northeast, in the northbound traffic lane of Meridian Rd. Vehicle #2 came to rest in the ditch, facing northeast, off the east side of Meridian Rd. Vehicle #1 vision obstructed by large dump truck.   |

# Internal Trip Calculations

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| NCHRP 684 Internal Trip Capture Estimation Tool |                     |                      |          |
|---|---------------------|----------------------|----------|
| <b>Project Name:</b>                            | Falcon Marketplace  | <b>Organization:</b> | LSC      |
| <b>Project Location:</b>                        | El Paso County, CO  | <b>Performed By:</b> | KDF      |
| <b>Scenario Description:</b>                    | Buildout            | <b>Date:</b>         | 6/2/2017 |
| <b>Analysis Year:</b>                           | 2040                | <b>Checked By:</b>   |          |
| <b>Analysis Period:</b>                         | AM Street Peak Hour | <b>Date:</b>         |          |

| Table 1-A: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate) |   |          |       |                                      |          |         |
|--|---|----------|-------|--------------------------------------|----------|---------|
| Land Use   | Development Data (For Information Only) |          |       | Estimated Vehicle-Trips <sup>3</sup> |          |         |
|  | ITE LUCs <sup>1</sup>                   | Quantity | Units | Total                                | Entering | Exiting |
| Office   |   |          |       | 34                                   | 17       | 17      |
| Retail   |   |          |       | 688                                  | 403      | 285     |
| Restaurant   |   |          |       | 294                                  | 150      | 144     |
| Cinema/Entertainment   |   |          |       | 0                                    |          |         |
| Residential  |   |          |       | 0                                    |          |         |
| Hotel  |   |          |       | 0                                    |          |         |
| All Other Land Uses <sup>2</sup>   |   |          |       | 0                                    |          |         |
|  |   |          |       | 1,016                                | 570      | 446     |

| Table 2-A: Mode Split and Vehicle Occupancy Estimates |                        |           |                 |                        |           |                 |
|---|------------------------|-----------|-----------------|------------------------|-----------|-----------------|
| Land Use  | Entering Trips         |           |                 | Exiting Trips          |           |                 |
|   | Veh. Occ. <sup>4</sup> | % Transit | % Non-Motorized | Veh. Occ. <sup>4</sup> | % Transit | % Non-Motorized |
| Office  |                        |           |                 |                        |           |                 |
| Retail  |                        |           |                 |                        |           |                 |
| Restaurant  |                        |           |                 |                        |           |                 |
| Cinema/Entertainment                                  |                        |           |                 |                        |           |                 |
| Residential   |                        |           |                 |                        |           |                 |
| Hotel   |                        |           |                 |                        |           |                 |
| All Other Land Uses <sup>2</sup>                      |                        |           |                 |                        |           |                 |

| Table 3-A: Average Land Use Interchange Distances (Feet Walking Distance) |                  |        |            |                      |             |       |
|---|------------------|--------|------------|----------------------|-------------|-------|
| Origin (From)   | Destination (To) |        |            |                      |             |       |
|   | Office           | Retail | Restaurant | Cinema/Entertainment | Residential | Hotel |
| Office  |                  |        |            |                      |             |       |
| Retail  |                  |        |            |                      |             |       |
| Restaurant  |                  |        |            |                      |             |       |
| Cinema/Entertainment  |                  |        |            |                      |             |       |
| Residential   |                  |        |            |                      |             |       |
| Hotel   |                  |        |            |                      |             |       |

| Table 4-A: Internal Person-Trip Origin-Destination Matrix* |                  |        |            |                      |             |       |
|--|------------------|--------|------------|----------------------|-------------|-------|
| Origin (From)  | Destination (To) |        |            |                      |             |       |
|  | Office           | Retail | Restaurant | Cinema/Entertainment | Residential | Hotel |
| Office   |                  | 5      | 11         | 0                    | 0           | 0     |
| Retail   | 1                |        | 37         | 0                    | 0           | 0     |
| Restaurant   | 2                | 20     |            | 0                    | 0           | 0     |
| Cinema/Entertainment                                       | 0                | 0      | 0          |                      | 0           | 0     |
| Residential  | 0                | 0      | 0          | 0                    |             | 0     |
| Hotel  | 0                | 0      | 0          | 0                    | 0           |       |

| Table 5-A: Computations Summary           |       |          |         |
|---|-------|----------|---------|
|   | Total | Entering | Exiting |
| All Person-Trips                          | 1,016 | 570      | 446     |
| Internal Capture Percentage               | 15%   | 13%      | 17%     |
| External Vehicle-Trips <sup>5</sup>       | 864   | 494      | 370     |
| External Transit-Trips <sup>6</sup>       | 0     | 0        | 0       |
| External Non-Motorized Trips <sup>6</sup> | 0     | 0        | 0       |

| Table 6-A: Internal Trip Capture Percentages by Land Use |                |               |
|--|----------------|---------------|
| Land Use   | Entering Trips | Exiting Trips |
| Office   | 18%            | 94%           |
| Retail   | 6%             | 13%           |
| Restaurant   | 32%            | 15%           |
| Cinema/Entertainment                                     | N/A            | N/A           |
| Residential  | N/A            | N/A           |
| Hotel  | N/A            | N/A           |

<sup>1</sup>Land Use Codes (LUCs) from *Trip Generation Manual*, published by the Institute of Transportation Engineers.

<sup>2</sup>Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.

<sup>3</sup>Enter trips assuming no transit or non-motorized trips (as assumed in *ITE Trip Generation Manual*).

<sup>4</sup>Enter vehicle occupancy assumed in Table 1-A vehicle trips. If vehicle occupancy changes for proposed mixed-use project, manual adjustments must be made to Tables 5-A, 9-A (O and D). Enter transit, non-motorized percentages that will result with proposed mixed-use project complete.

<sup>5</sup>Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A.

<sup>6</sup>Person-Trips

\*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas A&M Transportation Institute - Version 2013.1

|                         |                     |
|-------------------------|---------------------|
| <b>Project Name:</b>    | Falcon Marketplace  |
| <b>Analysis Period:</b> | AM Street Peak Hour |

| Table 7-A: Conversion of Vehicle-Trip Ends to Person-Trip Ends |                               |               |               |                              |               |               |
|--|-------------------------------|---------------|---------------|------------------------------|---------------|---------------|
| Land Use   | Table 7-A (D): Entering Trips |               |               | Table 7-A (O): Exiting Trips |               |               |
|  | Veh. Occ.                     | Vehicle-Trips | Person-Trips* | Veh. Occ.                    | Vehicle-Trips | Person-Trips* |
| Office   | 1.00                          | 17            | 17            | 1.00                         | 17            | 17            |
| Retail   | 1.00                          | 403           | 403           | 1.00                         | 285           | 285           |
| Restaurant   | 1.00                          | 150           | 150           | 1.00                         | 144           | 144           |
| Cinema/Entertainment   | 1.00                          | 0             | 0             | 1.00                         | 0             | 0             |
| Residential  | 1.00                          | 0             | 0             | 1.00                         | 0             | 0             |
| Hotel  | 1.00                          | 0             | 0             | 1.00                         | 0             | 0             |

| Table 8-A (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin) |                  |        |            |                      |             |       |
|--|------------------|--------|------------|----------------------|-------------|-------|
| Origin (From)  | Destination (To) |        |            |                      |             |       |
|  | Office           | Retail | Restaurant | Cinema/Entertainment | Residential | Hotel |
| Office   |                  | 5      | 11         | 0                    | 0           | 0     |
| Retail   | 83               |        | 37         | 0                    | 40          | 0     |
| Restaurant   | 45               | 20     |            | 0                    | 6           | 4     |
| Cinema/Entertainment   | 0                | 0      | 0          |                      | 0           | 0     |
| Residential  | 0                | 0      | 0          | 0                    |             | 0     |
| Hotel  | 0                | 0      | 0          | 0                    | 0           |       |

| Table 8-A (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination) |                  |        |            |                      |             |       |
|---|------------------|--------|------------|----------------------|-------------|-------|
| Origin (From)   | Destination (To) |        |            |                      |             |       |
|   | Office           | Retail | Restaurant | Cinema/Entertainment | Residential | Hotel |
| Office  |                  | 129    | 35         | 0                    | 0           | 0     |
| Retail  | 1                |        | 75         | 0                    | 0           | 0     |
| Restaurant  | 2                | 32     |            | 0                    | 0           | 0     |
| Cinema/Entertainment  | 0                | 0      | 0          |                      | 0           | 0     |
| Residential   | 1                | 69     | 30         | 0                    |             | 0     |
| Hotel   | 1                | 16     | 9          | 0                    | 0           |       |

| Table 9-A (D): Internal and External Trips Summary (Entering Trips) |                       |          |       |                         |                      |                            |
|---|-----------------------|----------|-------|-------------------------|----------------------|----------------------------|
| Destination Land Use  | Person-Trip Estimates |          |       | External Trips by Mode* |                      |                            |
|   | Internal              | External | Total | Vehicles <sup>1</sup>   | Transit <sup>2</sup> | Non-Motorized <sup>2</sup> |
| Office  | 3                     | 14       | 17    | 14                      | 0                    | 0                          |
| Retail  | 25                    | 378      | 403   | 378                     | 0                    | 0                          |
| Restaurant  | 48                    | 102      | 150   | 102                     | 0                    | 0                          |
| Cinema/Entertainment  | 0                     | 0        | 0     | 0                       | 0                    | 0                          |
| Residential   | 0                     | 0        | 0     | 0                       | 0                    | 0                          |
| Hotel   | 0                     | 0        | 0     | 0                       | 0                    | 0                          |
| All Other Land Uses <sup>3</sup>                                    | 0                     | 0        | 0     | 0                       | 0                    | 0                          |

| Table 9-A (O): Internal and External Trips Summary (Exiting Trips) |                       |          |       |                         |                      |                            |
|--|-----------------------|----------|-------|-------------------------|----------------------|----------------------------|
| Origin Land Use  | Person-Trip Estimates |          |       | External Trips by Mode* |                      |                            |
|  | Internal              | External | Total | Vehicles <sup>1</sup>   | Transit <sup>2</sup> | Non-Motorized <sup>2</sup> |
| Office   | 16                    | 1        | 17    | 1                       | 0                    | 0                          |
| Retail   | 38                    | 247      | 285   | 247                     | 0                    | 0                          |
| Restaurant   | 22                    | 122      | 144   | 122                     | 0                    | 0                          |
| Cinema/Entertainment   | 0                     | 0        | 0     | 0                       | 0                    | 0                          |
| Residential  | 0                     | 0        | 0     | 0                       | 0                    | 0                          |
| Hotel  | 0                     | 0        | 0     | 0                       | 0                    | 0                          |
| All Other Land Uses <sup>3</sup>                                   | 0                     | 0        | 0     | 0                       | 0                    | 0                          |

<sup>1</sup>Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A  
<sup>2</sup>Person-Trips  
<sup>3</sup>Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator  
\*Indicates computation that has been rounded to the nearest whole number.

| NCHRP 684 Internal Trip Capture Estimation Tool |                     |                      |          |
|---|---------------------|----------------------|----------|
| <b>Project Name:</b>                            | Falcon Marketplace  | <b>Organization:</b> | LSC      |
| <b>Project Location:</b>                        | El Paso County, CO  | <b>Performed By:</b> | KDF      |
| <b>Scenario Description:</b>                    | Buildout            | <b>Date:</b>         | 6/2/2017 |
| <b>Analysis Year:</b>                           | 2040                | <b>Checked By:</b>   |          |
| <b>Analysis Period:</b>                         | PM Street Peak Hour | <b>Date:</b>         |          |

| Table 1-P: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate) |   |          |       |                                      |          |         |
|--|---|----------|-------|--------------------------------------|----------|---------|
| Land Use   | Development Data (For Information Only) |          |       | Estimated Vehicle-Trips <sup>3</sup> |          |         |
|  | ITE LUCs <sup>1</sup>                   | Quantity | Units | Total                                | Entering | Exiting |
| Office   |   |          |       | 41                                   | 17       | 24      |
| Retail   |   |          |       | 1,304                                | 658      | 646     |
| Restaurant   |   |          |       | 333                                  | 172      | 161     |
| Cinema/Entertainment   |   |          |       | 0                                    |          |         |
| Residential  |   |          |       | 0                                    |          |         |
| Hotel  |   |          |       | 0                                    |          |         |
| All Other Land Uses <sup>2</sup>   |   |          |       | 0                                    |          |         |
|  |   |          |       | 1,678                                | 847      | 831     |

| Table 2-P: Mode Split and Vehicle Occupancy Estimates |                        |           |                 |                        |           |                 |
|---|------------------------|-----------|-----------------|------------------------|-----------|-----------------|
| Land Use  | Entering Trips         |           |                 | Exiting Trips          |           |                 |
|   | Veh. Occ. <sup>4</sup> | % Transit | % Non-Motorized | Veh. Occ. <sup>4</sup> | % Transit | % Non-Motorized |
| Office  |                        |           |                 |                        |           |                 |
| Retail  |                        |           |                 |                        |           |                 |
| Restaurant  |                        |           |                 |                        |           |                 |
| Cinema/Entertainment                                  |                        |           |                 |                        |           |                 |
| Residential   |                        |           |                 |                        |           |                 |
| Hotel   |                        |           |                 |                        |           |                 |
| All Other Land Uses <sup>2</sup>                      |                        |           |                 |                        |           |                 |

| Table 3-P: Average Land Use Interchange Distances (Feet Walking Distance) |                  |        |            |                      |             |       |
|---|------------------|--------|------------|----------------------|-------------|-------|
| Origin (From)   | Destination (To) |        |            |                      |             |       |
|   | Office           | Retail | Restaurant | Cinema/Entertainment | Residential | Hotel |
| Office  |                  | 600    | 200        |                      |             |       |
| Retail  |                  |        |            |                      |             |       |
| Restaurant  |                  |        |            |                      |             |       |
| Cinema/Entertainment  |                  |        |            |                      |             |       |
| Residential   |                  |        |            |                      |             |       |
| Hotel   |                  |        |            |                      |             |       |

| Table 4-P: Internal Person-Trip Origin-Destination Matrix* |                  |        |            |                      |             |       |
|--|------------------|--------|------------|----------------------|-------------|-------|
| Origin (From)  | Destination (To) |        |            |                      |             |       |
|  | Office           | Retail | Restaurant | Cinema/Entertainment | Residential | Hotel |
| Office   |                  | 4      | 1          | 0                    | 0           | 0     |
| Retail   | 5                |        | 50         | 0                    | 0           | 0     |
| Restaurant   | 5                | 66     |            | 0                    | 0           | 0     |
| Cinema/Entertainment                                       | 0                | 0      | 0          |                      | 0           | 0     |
| Residential  | 0                | 0      | 0          | 0                    |             | 0     |
| Hotel  | 0                | 0      | 0          | 0                    | 0           |       |

| Table 5-P: Computations Summary           |       |          |         |
|---|-------|----------|---------|
|   | Total | Entering | Exiting |
| All Person-Trips                          | 1,678 | 847      | 831     |
| Internal Capture Percentage               | 16%   | 15%      | 16%     |
| External Vehicle-Trips <sup>5</sup>       | 1,416 | 716      | 700     |
| External Transit-Trips <sup>6</sup>       | 0     | 0        | 0       |
| External Non-Motorized Trips <sup>6</sup> | 0     | 0        | 0       |

| Table 6-P: Internal Trip Capture Percentages by Land Use |                |               |
|--|----------------|---------------|
| Land Use   | Entering Trips | Exiting Trips |
| Office   | 59%            | 21%           |
| Retail   | 11%            | 9%            |
| Restaurant   | 30%            | 44%           |
| Cinema/Entertainment                                     | N/A            | N/A           |
| Residential  | N/A            | N/A           |
| Hotel  | N/A            | N/A           |

<sup>1</sup> Land Use Codes (LUCs) from *Trip Generation Manual*, published by the Institute of Transportation Engineers.

<sup>2</sup> Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.

<sup>3</sup> Enter trips assuming no transit or non-motorized trips (as assumed in *ITE Trip Generation Manual*).

<sup>4</sup> Enter vehicle occupancy assumed in Table 1-P vehicle trips. If vehicle occupancy changes for proposed mixed-use project, manual adjustments must be made.

<sup>5</sup> Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P.

<sup>6</sup> Person-Trips

\*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas A&M Transportation Institute - Version 2013.1

|                         |                     |
|-------------------------|---------------------|
| <b>Project Name:</b>    | Falcon Marketplace  |
| <b>Analysis Period:</b> | PM Street Peak Hour |

| Land Use             | Table 7-P (D): Entering Trips |               |               | Table 7-P (O): Exiting Trips |               |               |
|----------------------|-------------------------------|---------------|---------------|------------------------------|---------------|---------------|
|                      | Veh. Occ.                     | Vehicle-Trips | Person-Trips* | Veh. Occ.                    | Vehicle-Trips | Person-Trips* |
| Office               | 1.00                          | 17            | 17            | 1.00                         | 24            | 24            |
| Retail               | 1.00                          | 658           | 658           | 1.00                         | 646           | 646           |
| Restaurant           | 1.00                          | 172           | 172           | 1.00                         | 161           | 161           |
| Cinema/Entertainment | 1.00                          | 0             | 0             | 1.00                         | 0             | 0             |
| Residential          | 1.00                          | 0             | 0             | 1.00                         | 0             | 0             |
| Hotel                | 1.00                          | 0             | 0             | 1.00                         | 0             | 0             |

| Origin (From)        | Destination (To) |        |            |                      |             |       |
|----------------------|------------------|--------|------------|----------------------|-------------|-------|
|                      | Office           | Retail | Restaurant | Cinema/Entertainment | Residential | Hotel |
| Office               |                  | 4      | 1          | 0                    | 0           | 0     |
| Retail               | 13               |        | 187        | 26                   | 168         | 32    |
| Restaurant           | 5                | 66     |            | 13                   | 29          | 11    |
| Cinema/Entertainment | 0                | 0      | 0          |                      | 0           | 0     |
| Residential          | 0                | 0      | 0          | 0                    |             | 0     |
| Hotel                | 0                | 0      | 0          | 0                    | 0           |       |

| Origin (From)        | Destination (To) |        |            |                      |             |       |
|----------------------|------------------|--------|------------|----------------------|-------------|-------|
|                      | Office           | Retail | Restaurant | Cinema/Entertainment | Residential | Hotel |
| Office               |                  | 46     | 3          | 0                    | 0           | 0     |
| Retail               | 5                |        | 50         | 0                    | 0           | 0     |
| Restaurant           | 5                | 329    |            | 0                    | 0           | 0     |
| Cinema/Entertainment | 1                | 26     | 5          |                      | 0           | 0     |
| Residential          | 10               | 66     | 24         | 0                    |             | 0     |
| Hotel                | 0                | 13     | 9          | 0                    | 0           |       |

| Destination Land Use             | Person-Trip Estimates |          |       | External Trips by Mode* |                      |                            |
|----------------------------------|-----------------------|----------|-------|-------------------------|----------------------|----------------------------|
|                                  | Internal              | External | Total | Vehicles <sup>1</sup>   | Transit <sup>2</sup> | Non-Motorized <sup>2</sup> |
| Office                           | 10                    | 7        | 17    | 7                       | 0                    | 0                          |
| Retail                           | 70                    | 588      | 658   | 588                     | 0                    | 0                          |
| Restaurant                       | 51                    | 121      | 172   | 121                     | 0                    | 0                          |
| Cinema/Entertainment             | 0                     | 0        | 0     | 0                       | 0                    | 0                          |
| Residential                      | 0                     | 0        | 0     | 0                       | 0                    | 0                          |
| Hotel                            | 0                     | 0        | 0     | 0                       | 0                    | 0                          |
| All Other Land Uses <sup>3</sup> | 0                     | 0        | 0     | 0                       | 0                    | 0                          |

| Origin Land Use                  | Person-Trip Estimates |          |       | External Trips by Mode* |                      |                            |
|----------------------------------|-----------------------|----------|-------|-------------------------|----------------------|----------------------------|
|                                  | Internal              | External | Total | Vehicles <sup>1</sup>   | Transit <sup>2</sup> | Non-Motorized <sup>2</sup> |
| Office                           | 5                     | 19       | 24    | 19                      | 0                    | 0                          |
| Retail                           | 55                    | 591      | 646   | 591                     | 0                    | 0                          |
| Restaurant                       | 71                    | 90       | 161   | 90                      | 0                    | 0                          |
| Cinema/Entertainment             | 0                     | 0        | 0     | 0                       | 0                    | 0                          |
| Residential                      | 0                     | 0        | 0     | 0                       | 0                    | 0                          |
| Hotel                            | 0                     | 0        | 0     | 0                       | 0                    | 0                          |
| All Other Land Uses <sup>3</sup> | 0                     | 0        | 0     | 0                       | 0                    | 0                          |

<sup>1</sup>Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P  
<sup>2</sup>Person-Trips  
<sup>3</sup>Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator  
\*Indicates computation that has been rounded to the nearest whole number.

# Southwest Roundabout Exhibits

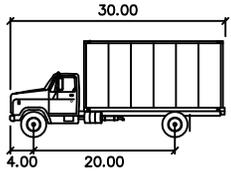
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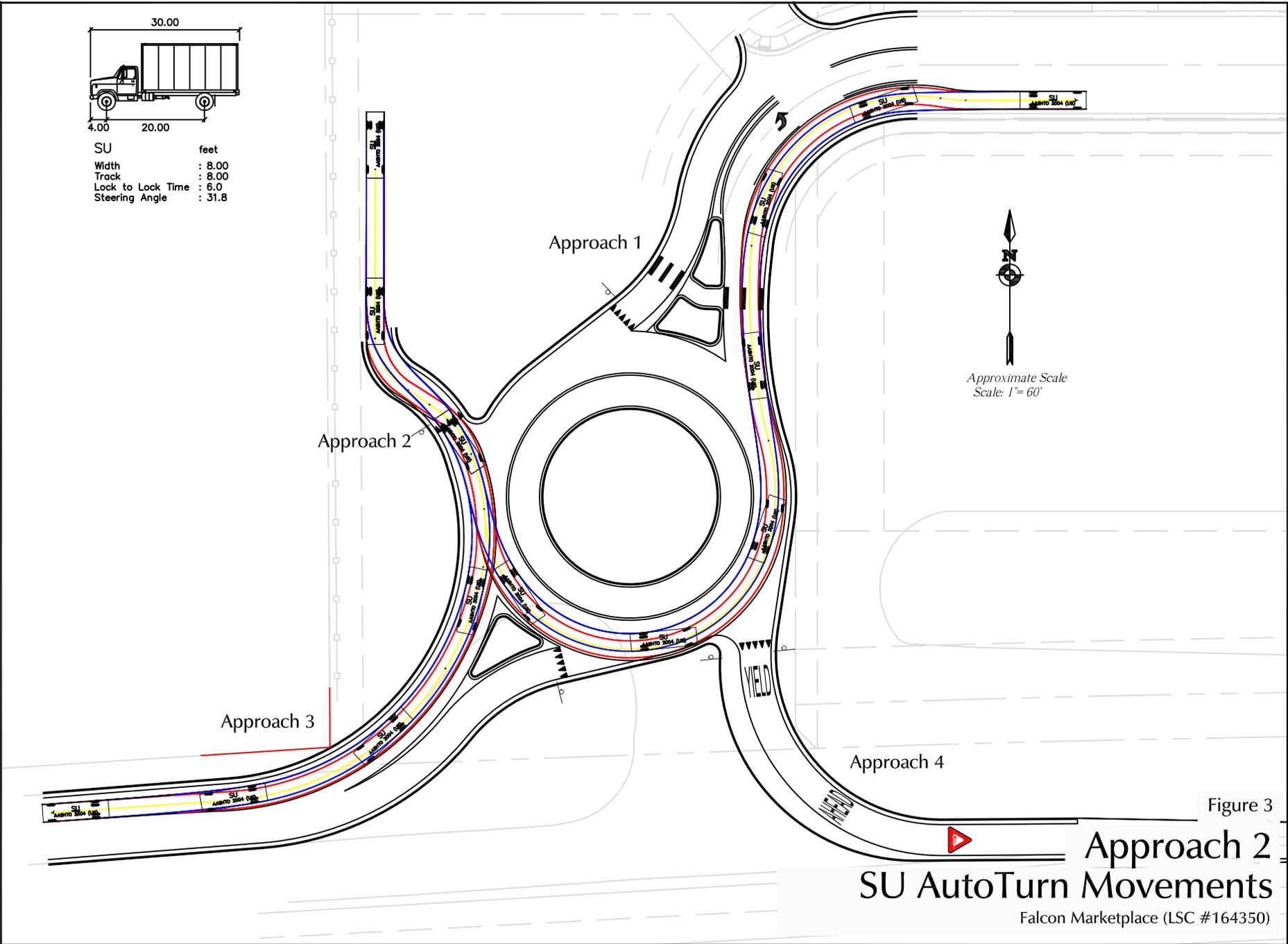








|                   |        |
|-------------------|--------|
| SU                | feet   |
| Width             | : 8.00 |
| Track             | : 8.00 |
| Lock to Lock Time | : 6.0  |
| Steering Angle    | : 31.8 |



Approximate Scale  
Scale: 1" = 60'

Figure 3

# Approach 2 SU AutoTurn Movements

Falcon Marketplace (LSC #164350)

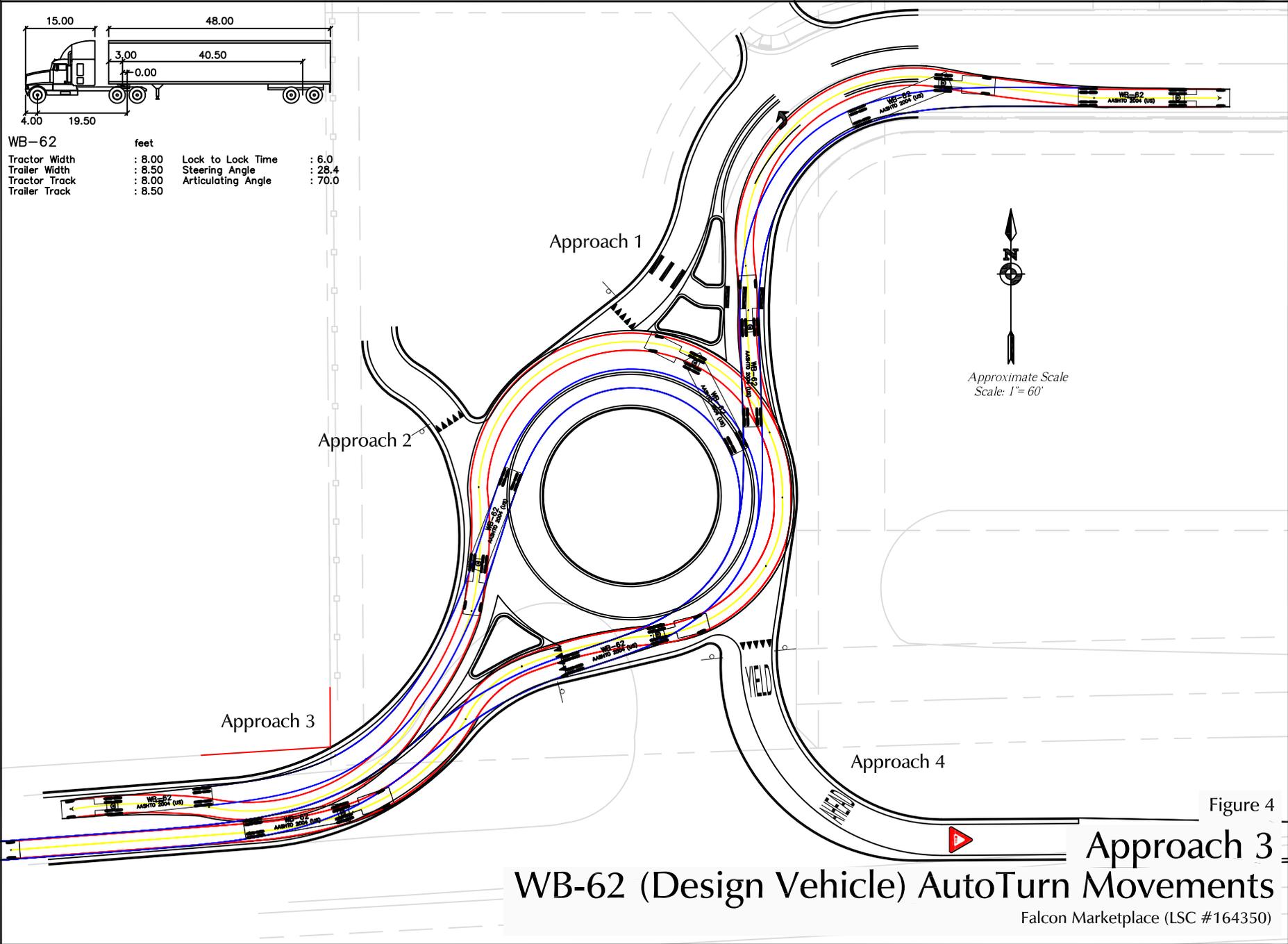
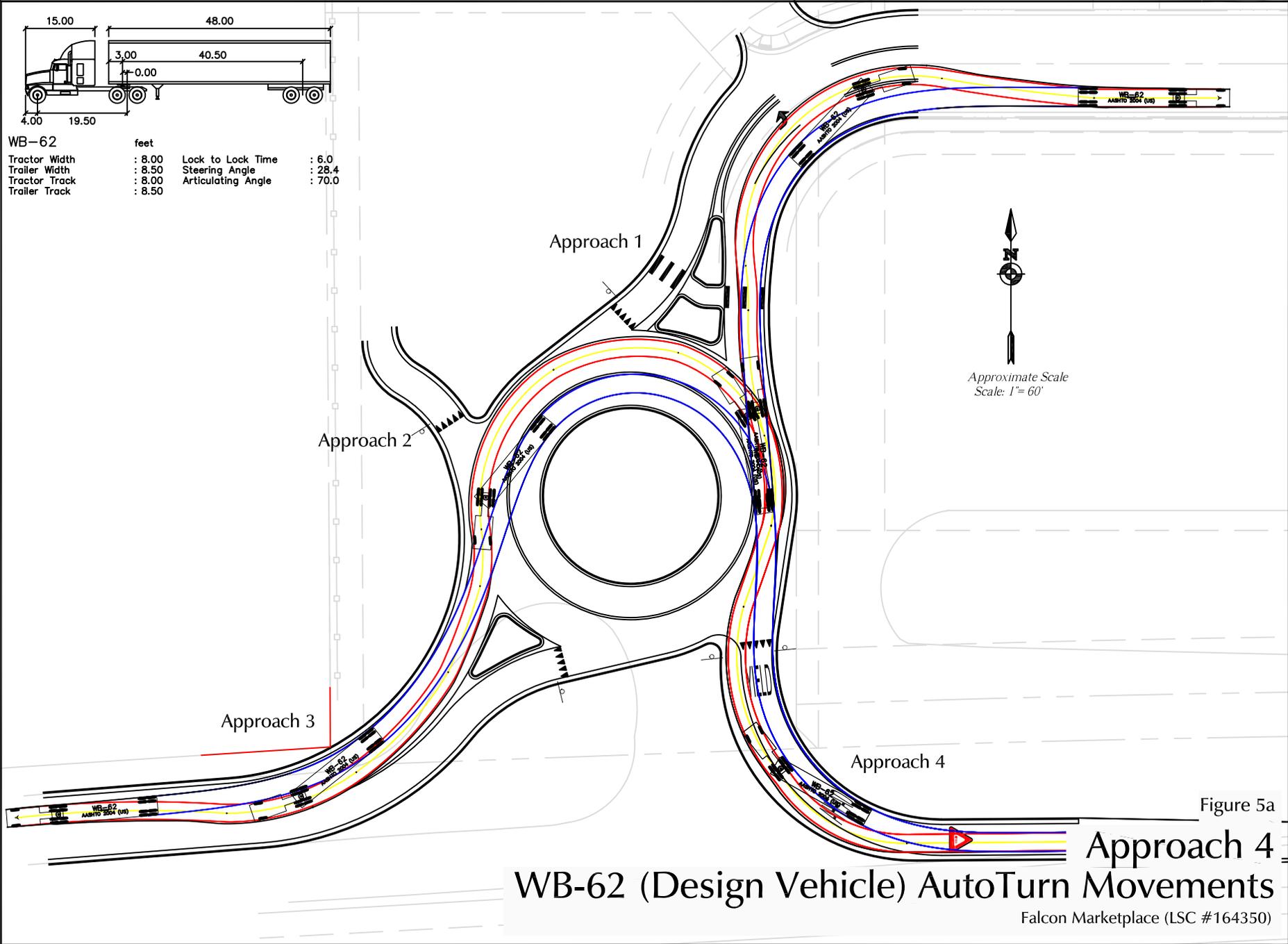


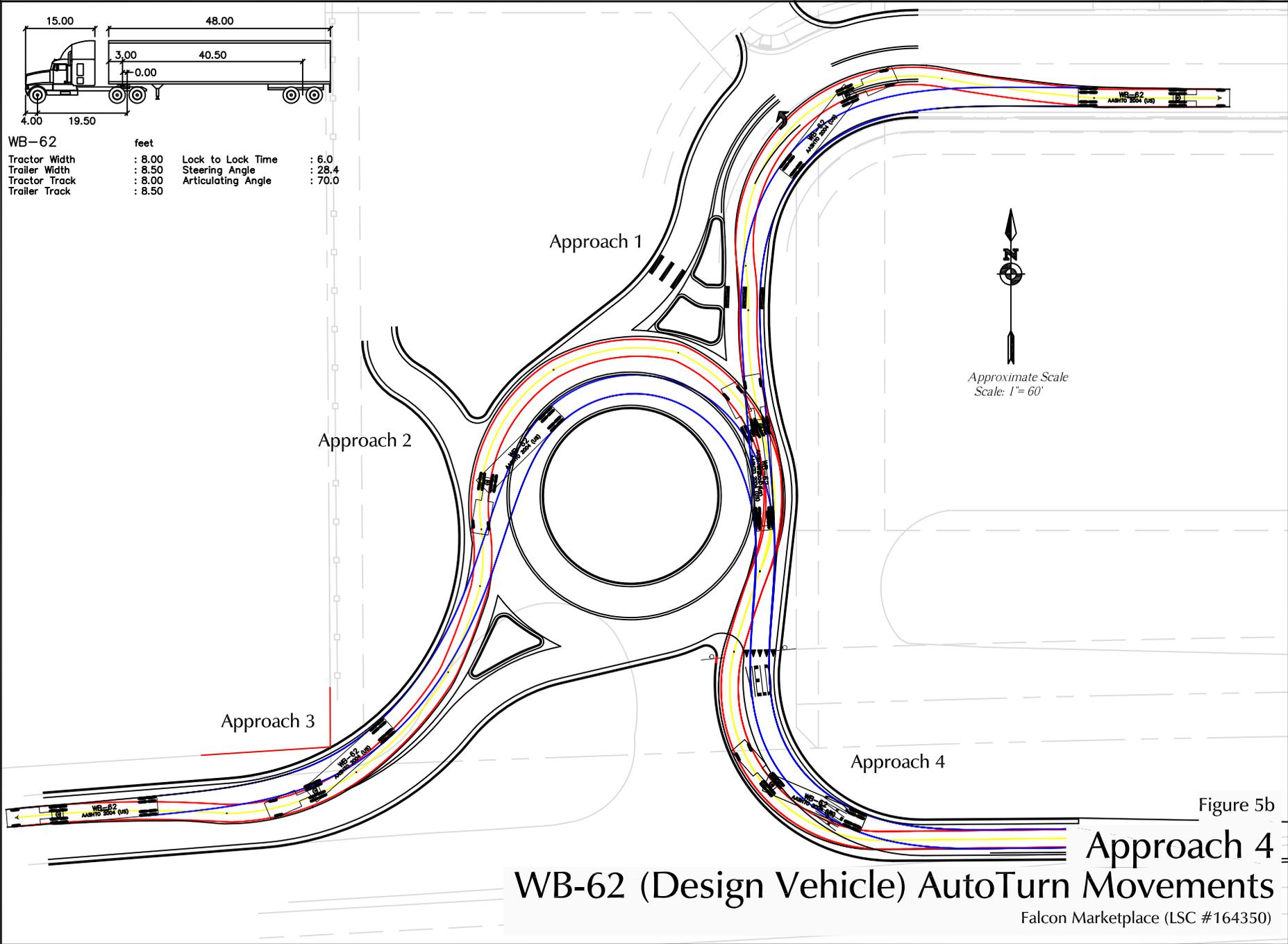
Figure 4

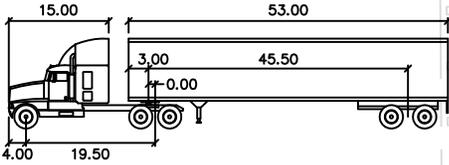
Approach 3

WB-62 (Design Vehicle) AutoTurn Movements

Falcon Marketplace (LSC #164350)







|               |        |                    |        |
|---------------|--------|--------------------|--------|
| WB-67         | feet   |                    |        |
| Tractor Width | : 8.00 | Lock to Lock Time  | : 6.0  |
| Trailer Width | : 8.50 | Steering Angle     | : 28.4 |
| Tractor Track | : 8.00 | Articulating Angle | : 75.0 |
| Trailer Track | : 8.50 |                    |        |

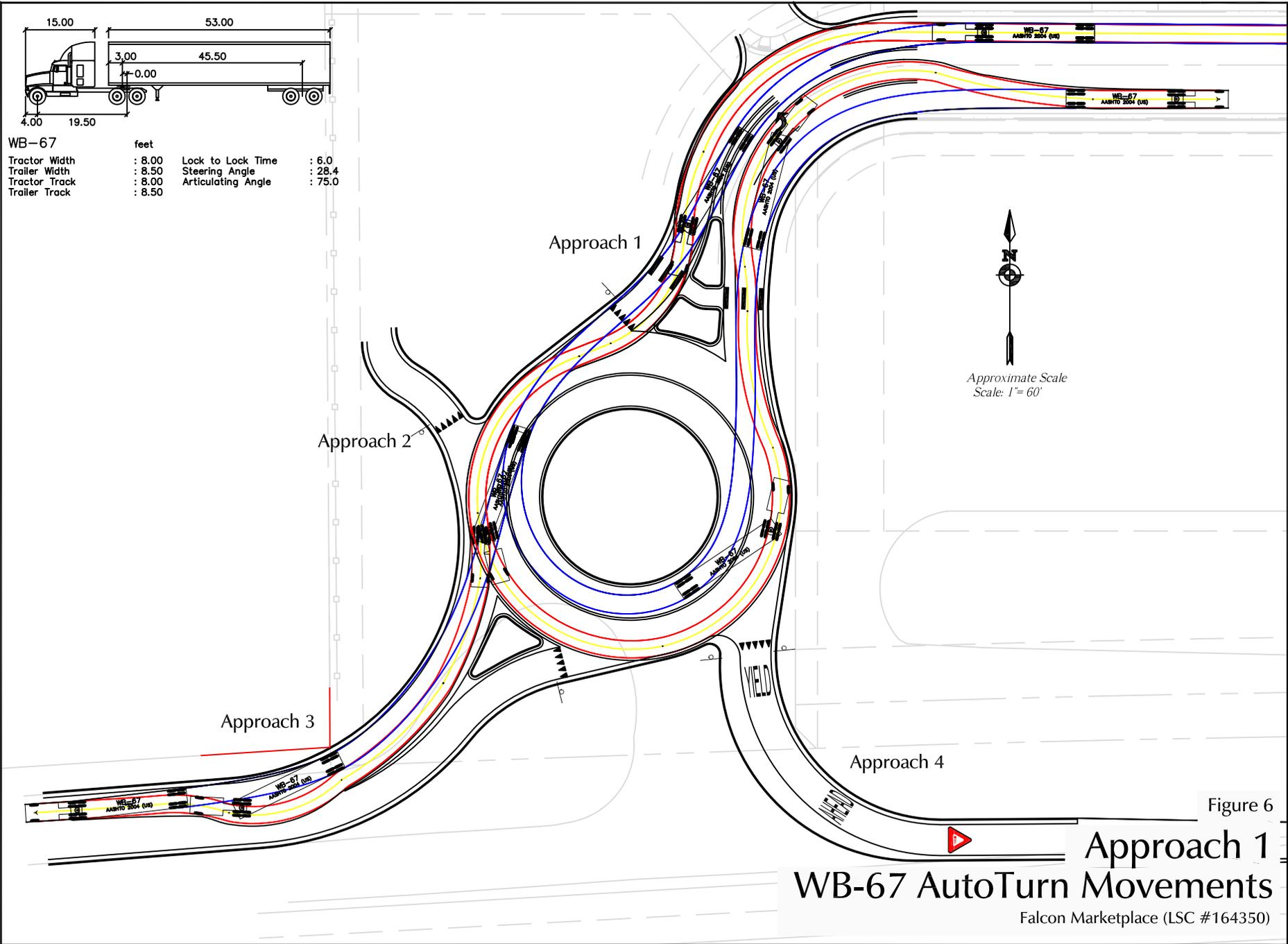


Figure 6

# Approach 1 WB-67 AutoTurn Movements

Falcon Marketplace (LSC #164350)

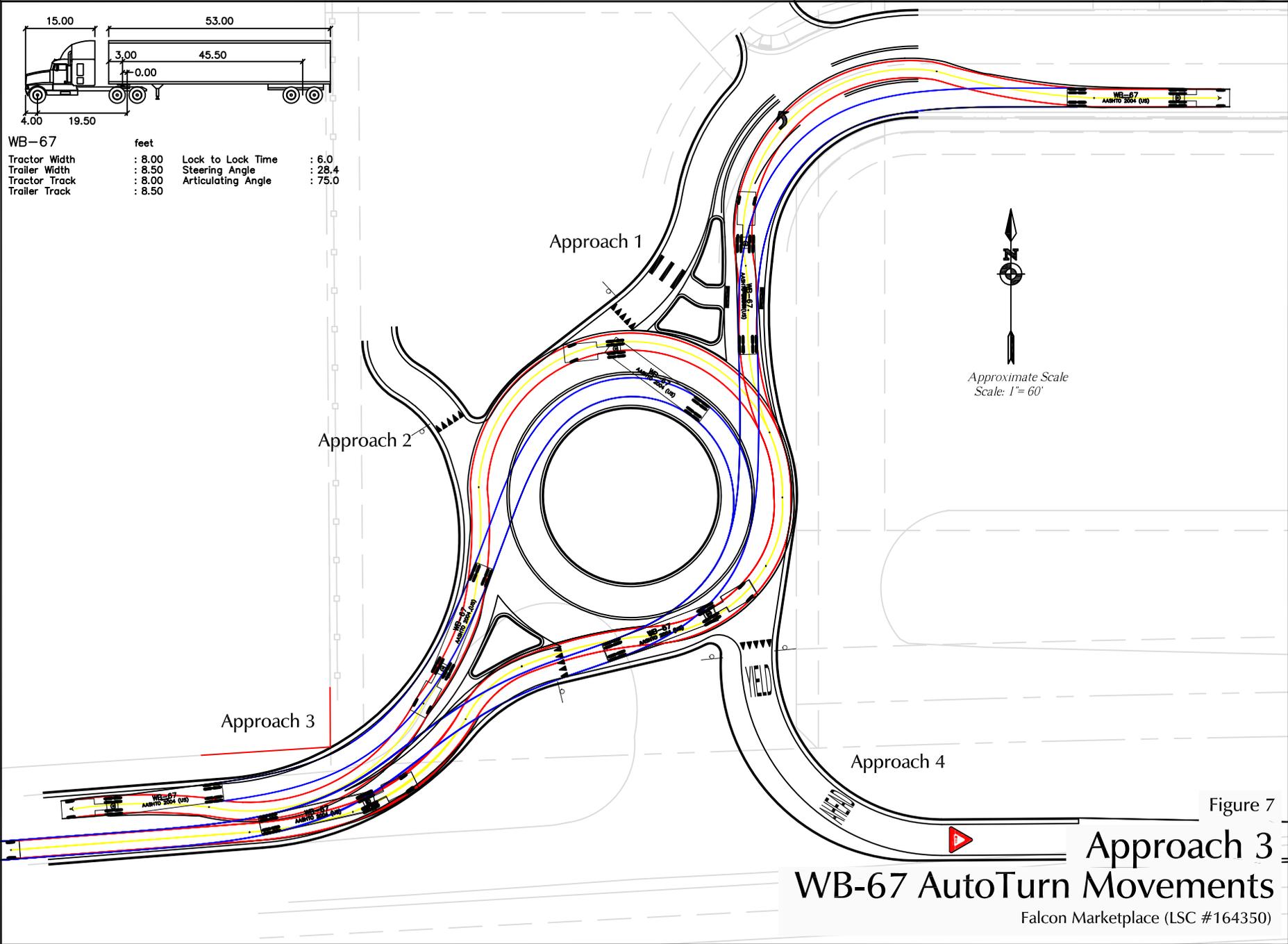
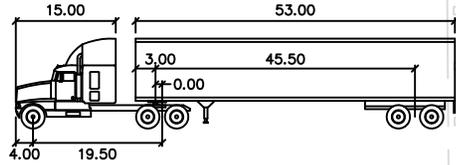


Figure 7

# Approach 3 WB-67 AutoTurn Movements

Falcon Marketplace (LSC #164350)



|               |        |                    |        |
|---------------|--------|--------------------|--------|
| WB-67         | feet   |                    |        |
| Tractor Width | : 8.00 | Lock to Lock Time  | : 6.0  |
| Trailer Width | : 8.50 | Steering Angle     | : 28.4 |
| Tractor Track | : 8.00 | Articulating Angle | : 75.0 |
| Trailer Track | : 8.50 |                    |        |

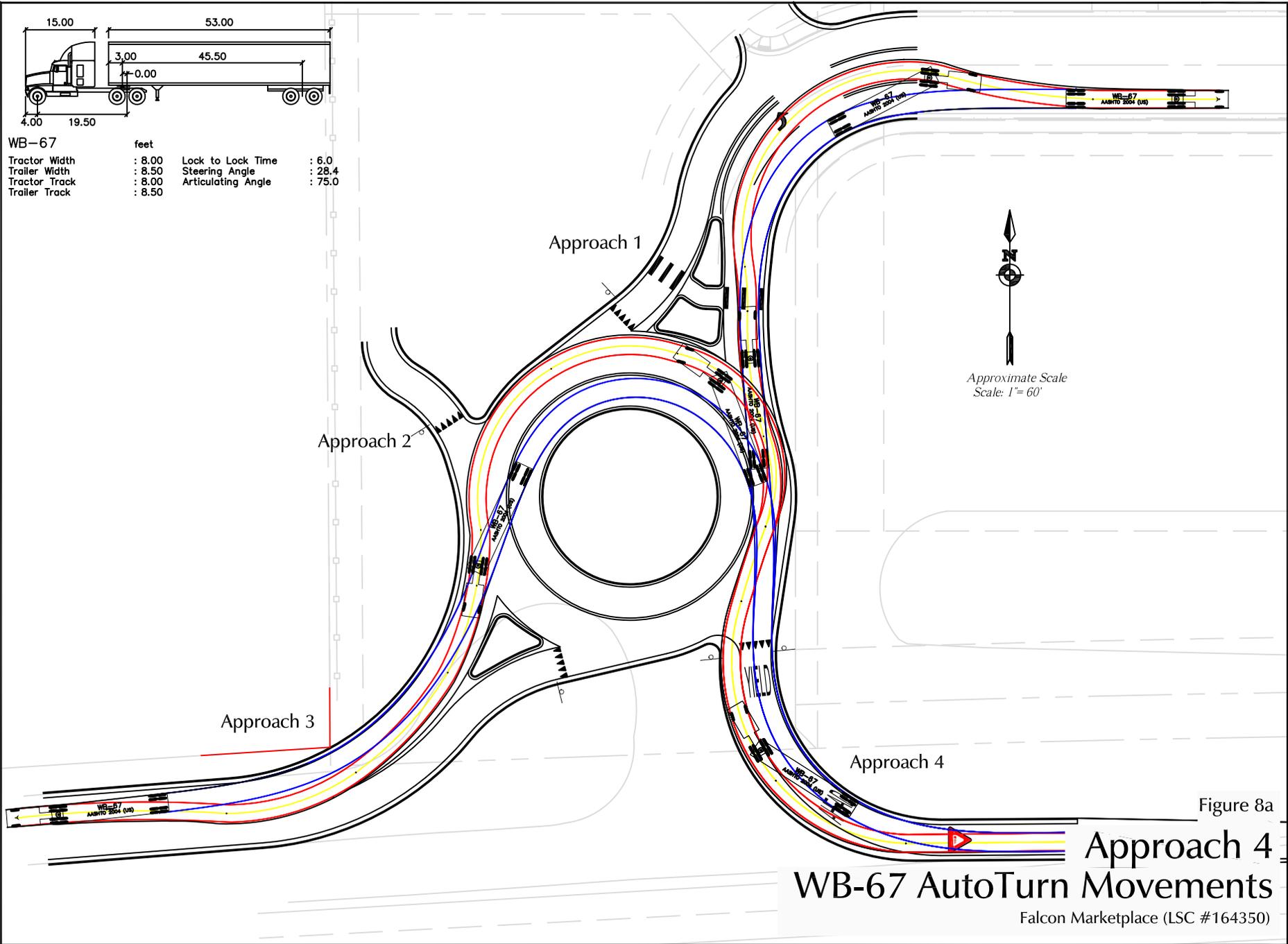
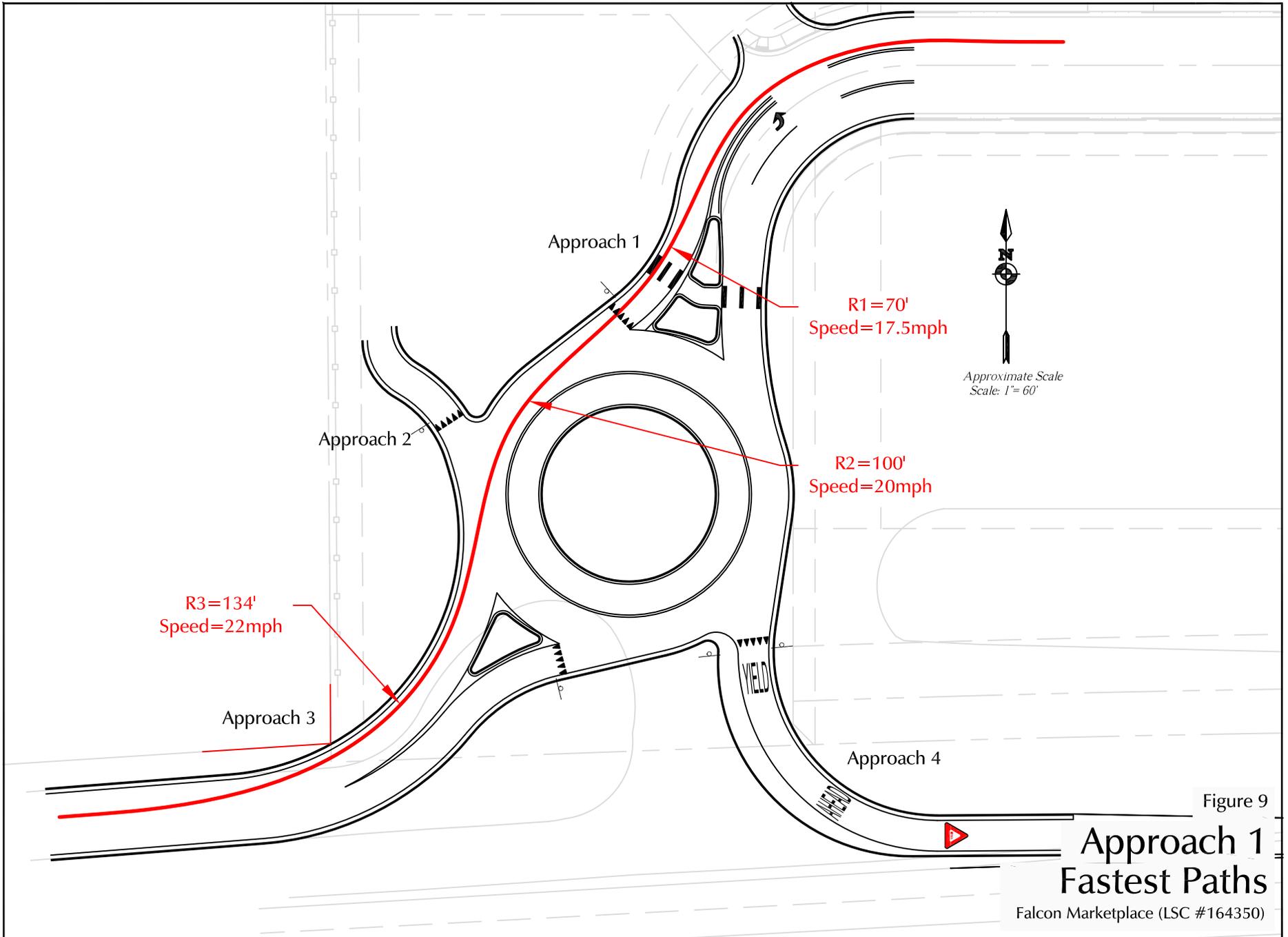
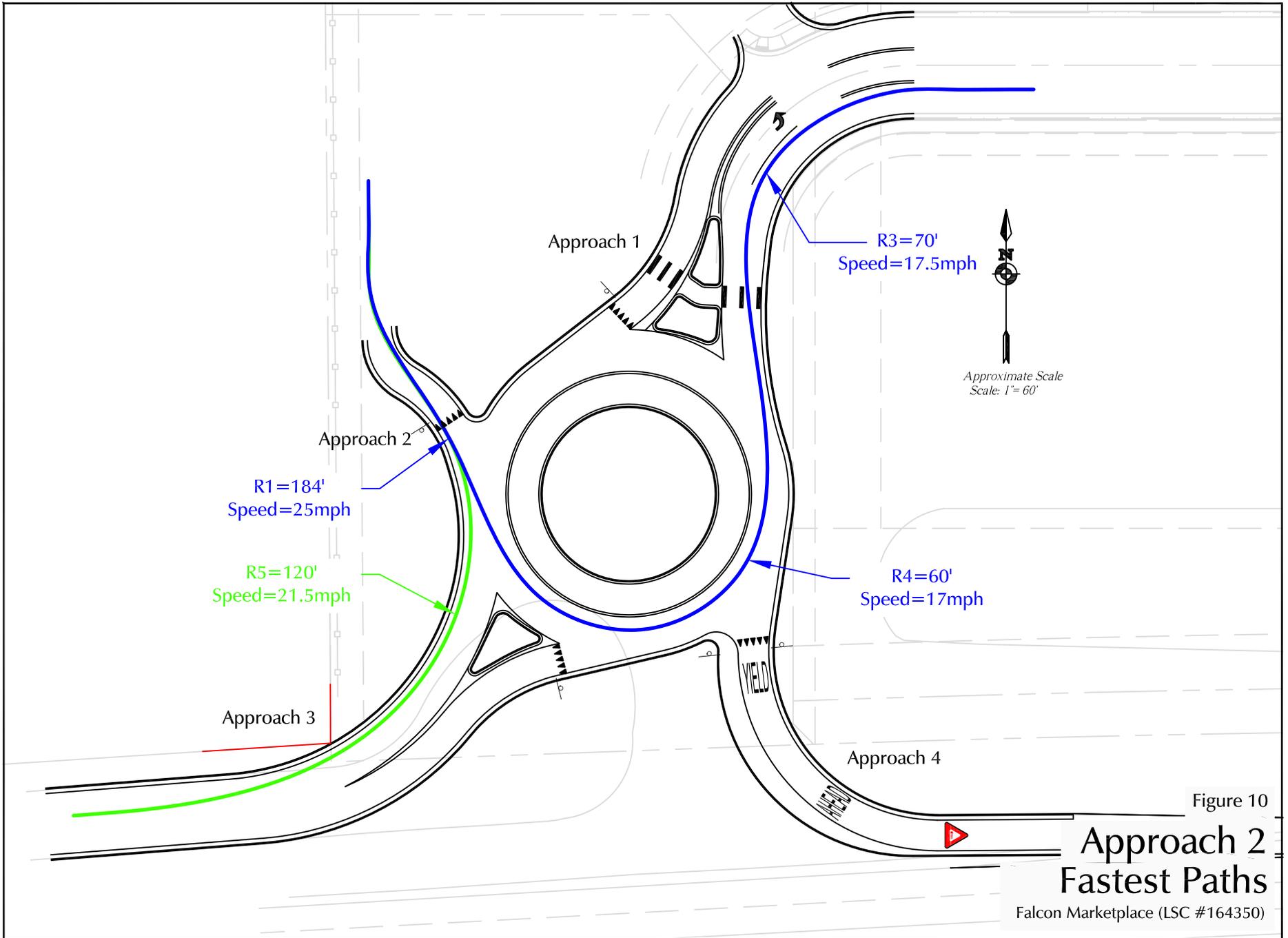
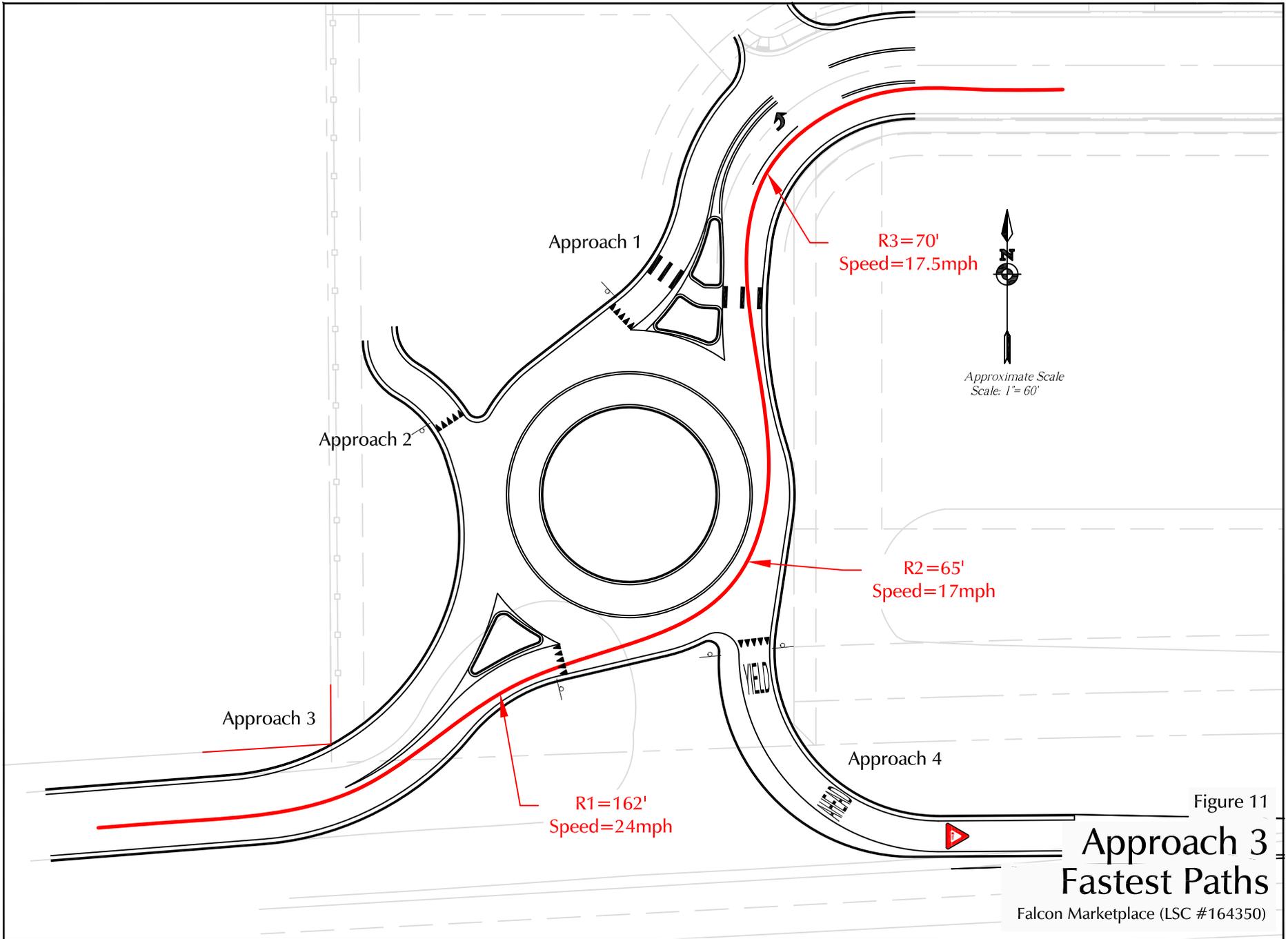


Figure 8a  
**Approach 4**  
**WB-67 AutoTurn Movements**  
 Falcon Marketplace (LSC #164350)









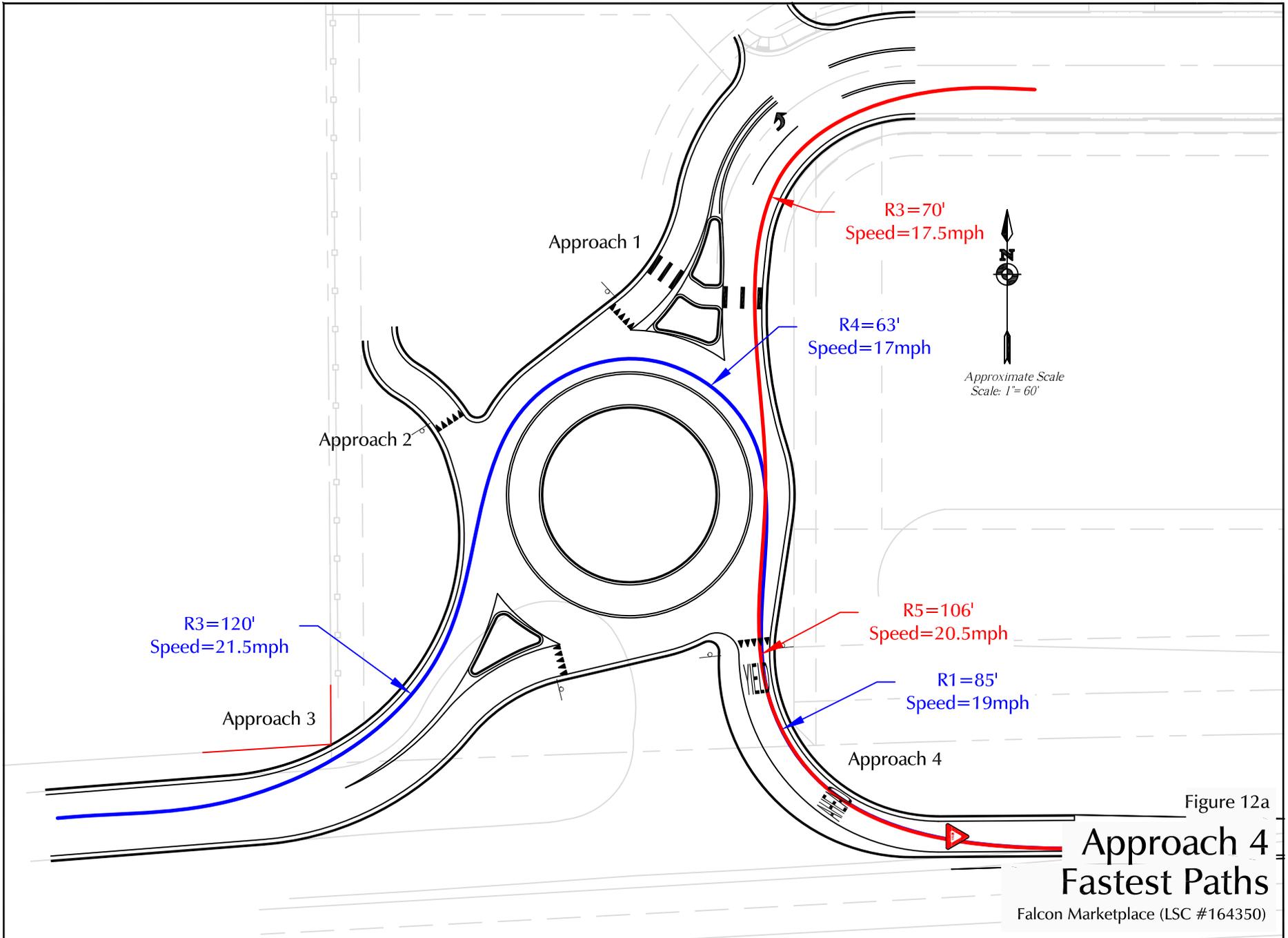


Figure 12a

# Approach 4 Fastest Paths

Falcon MarketPlace (LSC #164350)

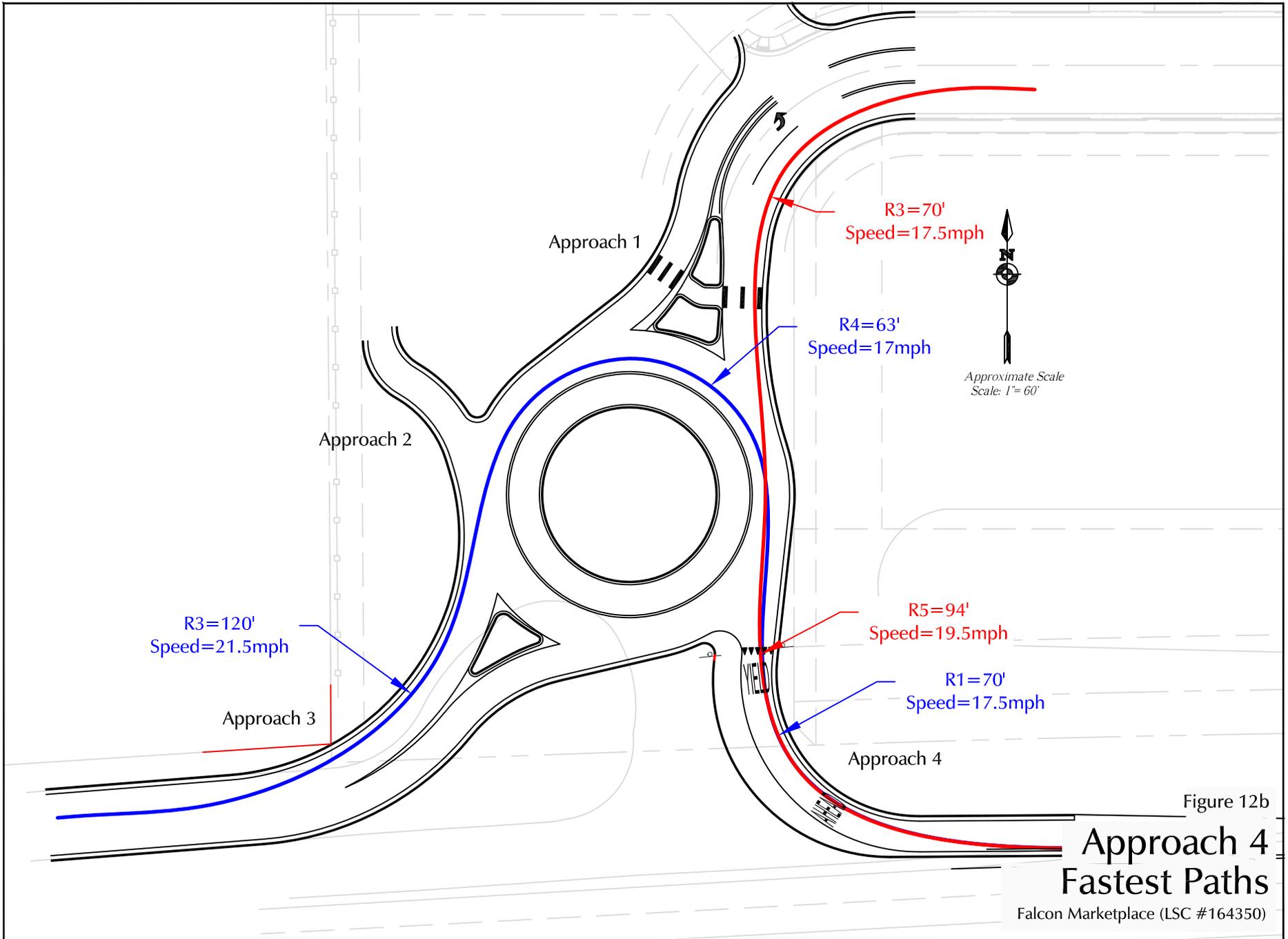


Figure 12b

# Approach 4 Fastest Paths

Falcon Marketplace (LSC #164350)

# Rodel Analysis Reports

**Note: The following Rodel Analysis Reports (dated September 2017) will be updated with the final plat/construction drawings along with the other roundabout design items to reflect the minor geometric changes to the southwest roundabout**



## Operational Results

### 2040 AM Peak - 15 minutes

#### Flows and Capacity

| Leg | Leg Names  | Bypass Type | Flows (veh/hr) |        |               |        | Capacity (veh/hr) |        |             |        |
|-----|------------|-------------|----------------|--------|---------------|--------|-------------------|--------|-------------|--------|
|     |            |             | Arrival Flow   |        | Opposing Flow |        | Capacity          |        | Average VCR |        |
|     |            |             | Entry          | Bypass | Entry         | Bypass | Entry             | Bypass | Entry       | Bypass |
| 1   | Approach 1 | None        | 65             |        | 216           |        | 346               | 1087   |             | 0.0604 |
| 2   | Approach 2 | None        | 41             |        | 281           |        | 0                 | 1281   |             | 0.0324 |
| 3   | Approach 3 | None        | 164            |        | 17            |        | 305               | 1203   |             | 0.1374 |
| 4   | Approach 4 | None        | 380            |        | 181           |        | 0                 | 1107   |             | 0.3470 |

#### Delays, Queues and Level of Service

| Leg | Leg Names  | Bypass Type | Average Delay (sec) |        |      | 95% Queue (veh) |        | Level of Service |        |     |
|-----|------------|-------------|---------------------|--------|------|-----------------|--------|------------------|--------|-----|
|     |            |             | Entry               | Bypass | Leg  | Entry           | Bypass | Entry            | Bypass | Leg |
| 1   | Approach 1 | None        | 3.63                |        | 3.63 | 0.16            |        | A                |        | A   |
| 2   | Approach 2 | None        | 2.91                |        | 2.91 | 0.09            |        | A                |        | A   |
| 3   | Approach 3 | None        | 3.95                |        | 3.95 | 0.41            |        | A                |        | A   |
| 4   | Approach 4 | None        | 5.56                |        | 5.56 | 1.31            |        | A                |        | A   |

## Global Results

### Performance and Accidents

#### 2040 AM Peak Global Performance

| Parameter       | Units   | Entries | Bypasses | Total |
|-----------------|---------|---------|----------|-------|
| Arrive Flows    | veh/hr  | 599     |          | 599   |
| Capacity        | veh/hr  | 4712    |          | 4712  |
| Average Delay   | sec/veh | 5.08    |          | 5.08  |
| L.O.S. (Signal) | A – F   | A       |          | A     |
| L.O.S. (Unsig)  | A – F   | A       |          | A     |
| Total Delay     | veh.hrs | 0.85    |          | 0.85  |

## Operational Results

### 2040 PM Peak - 15 minutes

#### Flows and Capacity

| Leg | Leg Names  | Bypass Type | Flows (veh/hr) |        |               |        | Capacity (veh/hr) |        |             |        |
|-----|------------|-------------|----------------|--------|---------------|--------|-------------------|--------|-------------|--------|
|     |            |             | Arrival Flow   |        | Opposing Flow |        | Capacity          |        | Average VCR |        |
|     |            |             | Entry          | Bypass | Entry         | Bypass | Entry             | Bypass | Entry       | Bypass |
| 1   | Approach 1 | None        | 71             |        | 171           |        | 473               | 1113   |             | 0.0639 |
| 2   | Approach 2 | None        | 10             |        | 241           |        | 0                 | 1307   |             | 0.0075 |
| 3   | Approach 3 | None        | 273            |        | 5             |        | 246               | 1210   |             | 0.2272 |
| 4   | Approach 4 | None        | 365            |        | 278           |        | 0                 | 1050   |             | 0.3513 |

#### Delays, Queues and Level of Service

| Leg | Leg Names  | Bypass Type | Average Delay (sec) |        |      | 95% Queue (veh) |        | Level of Service |        |     |
|-----|------------|-------------|---------------------|--------|------|-----------------|--------|------------------|--------|-----|
|     |            |             | Entry               | Bypass | Leg  | Entry           | Bypass | Entry            | Bypass | Leg |
| 1   | Approach 1 | None        | 3.58                |        | 3.58 | 0.17            |        | A                |        | A   |
| 2   | Approach 2 | None        | 0.04                |        | 0.04 | 0.00            |        | A                |        | A   |
| 3   | Approach 3 | None        | 4.59                |        | 4.59 | 0.74            |        | A                |        | A   |
| 4   | Approach 4 | None        | 5.82                |        | 5.82 | 1.34            |        | A                |        | A   |

## Global Results

### Performance and Accidents

#### 2040 PM Peak Global Performance

| Parameter       | Units   | Entries | Bypasses | Total |
|-----------------|---------|---------|----------|-------|
| Arrive Flows    | veh/hr  | 661     |          | 661   |
| Capacity        | veh/hr  | 4714    |          | 4714  |
| Average Delay   | sec/veh | 5.32    |          | 5.32  |
| L.O.S. (Signal) | A – F   | A       |          | A     |
| L.O.S. (Unsig)  | A – F   | A       |          | A     |
| Total Delay     | veh.hrs | 0.98    |          | 0.98  |

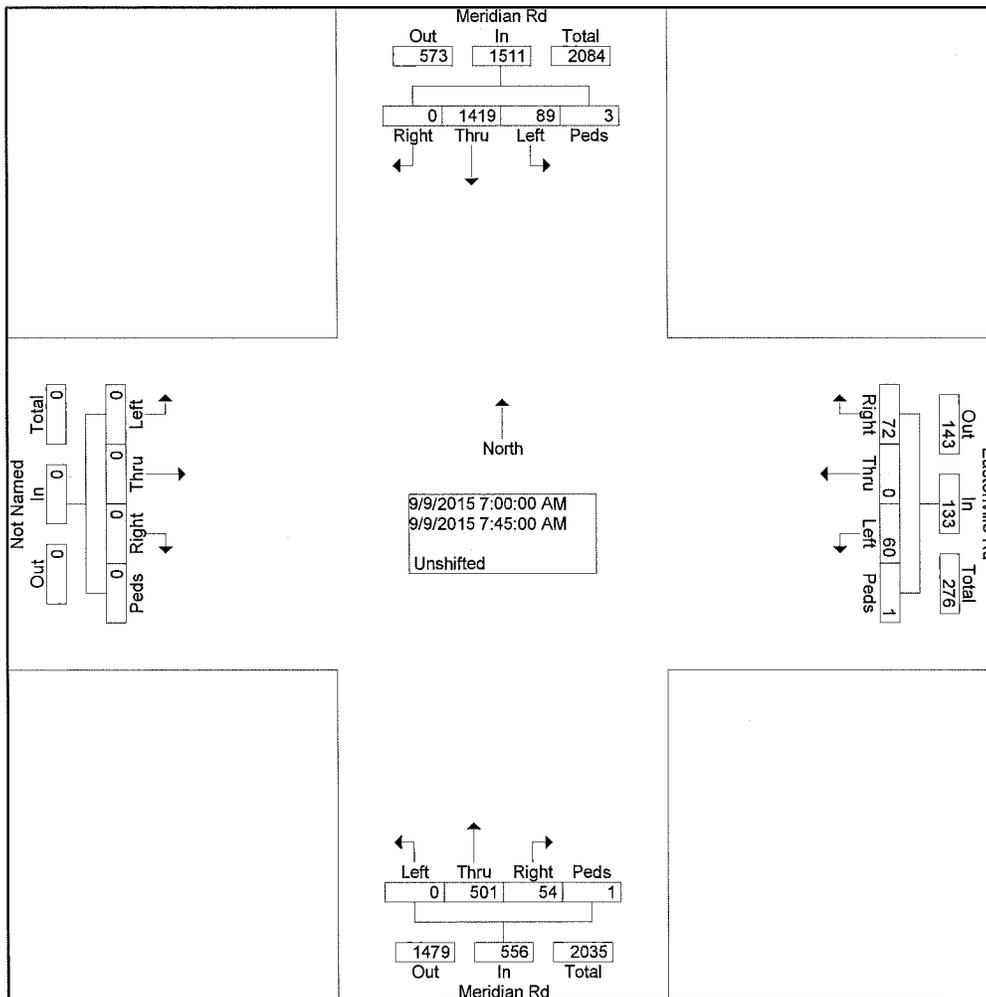
# Traffic Count Reports

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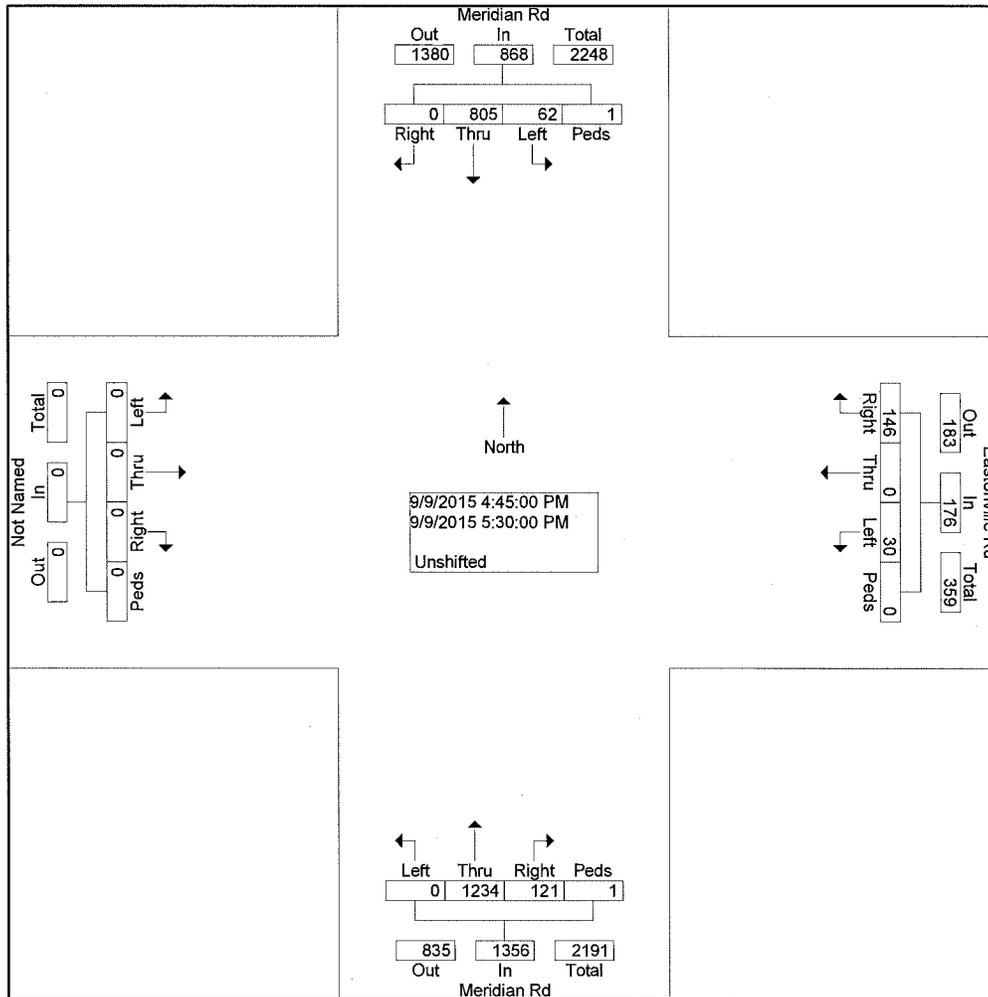
| Start Time  | Meridian Rd From North |      |      |       |            | Eastonville Rd From East |      |      |       |            | Meridian Rd From South |      |      |       |            | From West  |      |      |       |            | Int. Total |
|---|------------------------|------|------|-------|------------|--------------------------|------|------|-------|------------|------------------------|------|------|-------|------------|------------|------|------|-------|------------|------------|
|   | Rig ht                 | Thru | Left | Ped s | App. Total | Rig ht                   | Thru | Left | Ped s | App. Total | Rig ht                 | Thru | Left | Ped s | App. Total | Rig ht     | Thru | Left | Ped s | App. Total |            |
| Peak Hour From 06:30 AM to 08:15 AM - Peak 1 of 1 |                        |      |      |       |            |                          |      |      |       |            |                        |      |      |       |            |            |      |      |       |            |            |
| Intersection                                      | 07:00 AM               |      |      |       |            |                          |      |      |       |            |                        |      |      |       |            |            |      |      |       |            |            |
| Volume  | 0                      | 1419 | 89   | 3     | 1511       | 72                       | 0    | 60   | 1     | 133        | 54                     | 501  | 0    | 1     | 556        | 0          | 0    | 0    | 0     | 0          | 2200       |
| Percent   | 0.0                    | 93.9 | 5.9  | 0.2   |            | 54.1                     | 0.0  | 45.1 | 0.8   |            | 9.7                    | 90.1 | 0.0  | 0.2   |            | 0.0        | 0.0  | 0.0  | 0.0   |            |            |
| 07:30 Volume                                      | 0                      | 387  | 24   | 1     | 412        | 27                       | 0    | 18   | 1     | 46         | 13                     | 146  | 0    | 0     | 159        | 0          | 0    | 0    | 0     | 0          | 617        |
| Peak Factor                                       | 0.891                  |      |      |       |            |                          |      |      |       |            |                        |      |      |       |            |            |      |      |       |            |            |
| High Int. Volume                                  | 07:30 AM               |      |      |       |            | 07:30 AM                 |      |      |       |            | 07:30 AM               |      |      |       |            | 6:15:00 AM |      |      |       |            |            |
| Peak Factor                                       | 0                      | 387  | 24   | 1     | 412        | 27                       | 0    | 18   | 1     | 46         | 13                     | 146  | 0    | 0     | 159        |            |      |      |       |            |            |
|   |                        |      |      |       | 0.917      |                          |      |      |       | 0.723      |                        |      |      |       | 0.874      |            |      |      |       |            |            |



Groups Printed- Unshifted

| Start Time  | Meridian Rd<br>From North |      |      |      | Eastonville Rd<br>From East |      |      |      | Meridian Rd<br>From South |      |      |      | From West |      |      |      | Int.<br>Total |      |
|-------------|---------------------------|------|------|------|-----------------------------|------|------|------|---------------------------|------|------|------|-----------|------|------|------|---------------|------|
|             | Right                     | Thru | Left | Peds | Right                       | Thru | Left | Peds | Right                     | Thru | Left | Peds | Right     | Thru | Left | Peds |               |      |
| Factor      | 1.0                       | 1.0  | 1.0  | 1.0  | 1.0                         | 1.0  | 1.0  | 1.0  | 1.0                       | 1.0  | 1.0  | 1.0  | 1.0       | 1.0  | 1.0  | 1.0  | 1.0           |      |
| 04:00 PM    | 0                         | 182  | 27   | 0    | 43                          | 0    | 14   | 0    | 22                        | 238  | 0    | 0    | 0         | 0    | 0    | 0    | 0             | 526  |
| 04:15 PM    | 0                         | 161  | 29   | 1    | 45                          | 0    | 10   | 0    | 35                        | 243  | 0    | 1    | 0         | 0    | 0    | 0    | 0             | 525  |
| 04:30 PM    | 0                         | 150  | 14   | 0    | 40                          | 0    | 5    | 0    | 21                        | 270  | 0    | 0    | 0         | 0    | 0    | 0    | 0             | 500  |
| 04:45 PM    | 0                         | 198  | 19   | 0    | 38                          | 0    | 3    | 0    | 21                        | 300  | 0    | 1    | 0         | 0    | 0    | 0    | 0             | 580  |
| Total       | 0                         | 691  | 89   | 1    | 166                         | 0    | 32   | 0    | 99                        | 1051 | 0    | 2    | 0         | 0    | 0    | 0    | 0             | 2131 |
| 05:00 PM    | 0                         | 199  | 10   | 0    | 38                          | 0    | 6    | 0    | 23                        | 313  | 0    | 0    | 0         | 0    | 0    | 0    | 0             | 589  |
| 05:15 PM    | 0                         | 207  | 20   | 0    | 39                          | 0    | 10   | 0    | 35                        | 290  | 0    | 0    | 0         | 0    | 0    | 0    | 0             | 601  |
| 05:30 PM    | 0                         | 201  | 13   | 1    | 31                          | 0    | 11   | 0    | 42                        | 331  | 0    | 0    | 0         | 0    | 0    | 0    | 0             | 630  |
| 05:45 PM    | 0                         | 183  | 15   | 0    | 30                          | 0    | 10   | 0    | 39                        | 301  | 0    | 1    | 0         | 0    | 0    | 0    | 0             | 579  |
| Total       | 0                         | 790  | 58   | 1    | 138                         | 0    | 37   | 0    | 139                       | 1235 | 0    | 1    | 0         | 0    | 0    | 0    | 0             | 2399 |
| Grand Total | 0                         | 1481 | 147  | 2    | 304                         | 0    | 69   | 0    | 238                       | 2286 | 0    | 3    | 0         | 0    | 0    | 0    | 0             | 4530 |
| Apprch %    | 0.0                       | 90.9 | 9.0  | 0.1  | 81.5                        | 0.0  | 18.5 | 0.0  | 9.4                       | 90.5 | 0.0  | 0.1  | 0.0       | 0.0  | 0.0  | 0.0  | 0.0           |      |
| Total %     | 0.0                       | 32.7 | 3.2  | 0.0  | 6.7                         | 0.0  | 1.5  | 0.0  | 5.3                       | 50.5 | 0.0  | 0.1  | 0.0       | 0.0  | 0.0  | 0.0  | 0.0           |      |

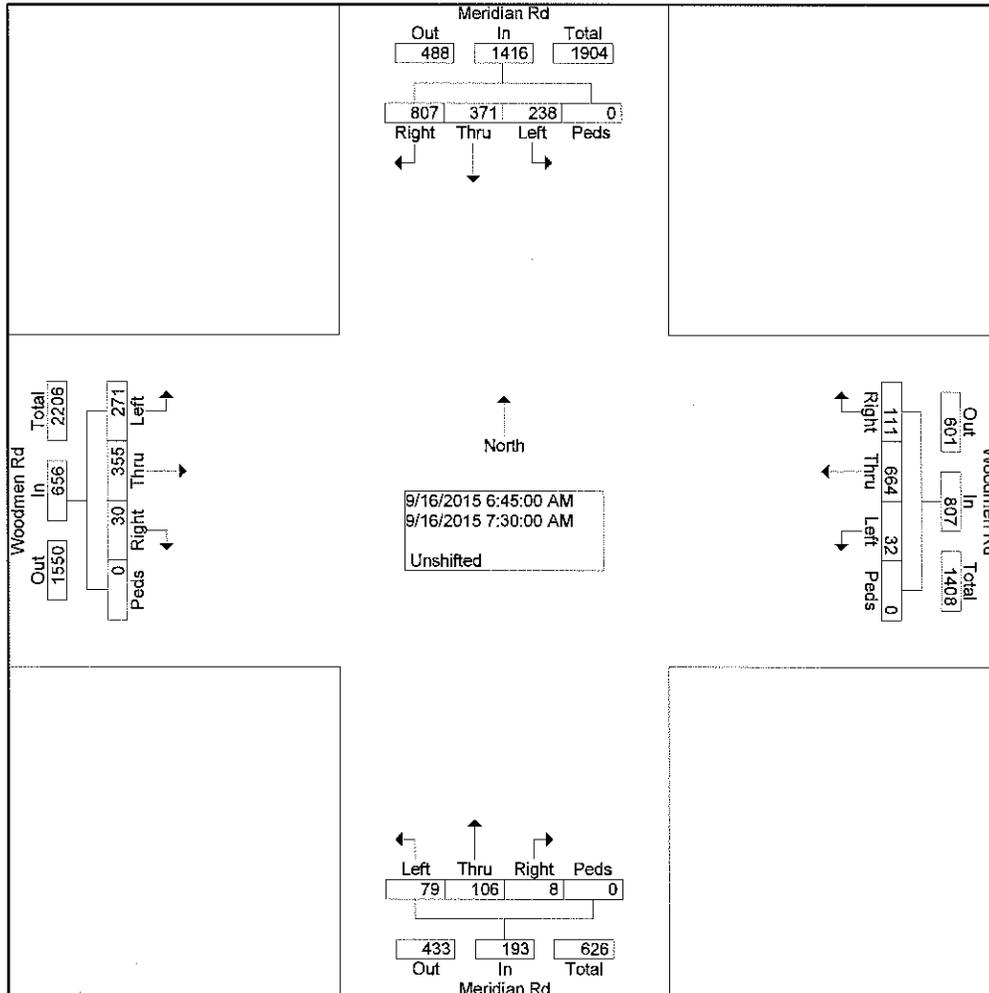
| Start Time  | Meridian Rd From North |       |      |       |            | Eastonville Rd From East |       |      |       |            | Meridian Rd From South |       |      |       |            | From West  |       |      |       |            | Int. Total |
|---|------------------------|-------|------|-------|------------|--------------------------|-------|------|-------|------------|------------------------|-------|------|-------|------------|------------|-------|------|-------|------------|------------|
|   | Rig ht                 | Thr u | Left | Ped s | App. Total | Rig ht                   | Thr u | Left | Ped s | App. Total | Rig ht                 | Thr u | Left | Ped s | App. Total | Rig ht     | Thr u | Left | Ped s | App. Total |            |
| Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1 |                        |       |      |       |            |                          |       |      |       |            |                        |       |      |       |            |            |       |      |       |            |            |
| Intersection                                      | 04:45 PM               |       |      |       |            |                          |       |      |       |            |                        |       |      |       |            |            |       |      |       |            |            |
| Volume  | 0                      | 805   | 62   | 1     | 868        | 146                      | 0     | 30   | 0     | 176        | 121                    | 1234  | 0    | 1     | 1356       | 0          | 0     | 0    | 0     | 0          | 2400       |
| Percent   | 0.0                    | 92.7  | 7.1  | 0.1   |            | 83.0                     | 0.0   | 17.0 | 0.0   |            | 8.9                    | 91.0  | 0.0  | 0.1   |            | 0.0        | 0.0   | 0.0  | 0.0   |            |            |
| 05:30 Volume                                      | 0                      | 201   | 13   | 1     | 215        | 31                       | 0     | 11   | 0     | 42         | 42                     | 331   | 0    | 0     | 373        | 0          | 0     | 0    | 0     | 0          | 630        |
| Peak Factor                                       | 0.952                  |       |      |       |            |                          |       |      |       |            |                        |       |      |       |            |            |       |      |       |            |            |
| High Int. Volume                                  | 05:15 PM               |       |      |       |            | 05:15 PM                 |       |      |       |            | 05:30 PM               |       |      |       |            | 3:45:00 PM |       |      |       |            |            |
| Peak Factor                                       | 0                      | 207   | 20   | 0     | 227        | 39                       | 0     | 10   | 0     | 49         | 42                     | 331   | 0    | 0     | 373        |            |       |      |       |            | 9          |
|   |                        |       |      |       | 0.956      |                          |       |      |       | 0.898      |                        |       |      |       | 0.909      |            |       |      |       |            |            |



## Groups Printed- Unshifted

| Start Time  | Meridian Rd<br>From North |      |      |      | Woodmen Rd<br>From East |      |      |      | Meridian Rd<br>From South |      |      |      | Woodmen Rd<br>From West |      |      |      | Int.<br>Total |
|-------------|---------------------------|------|------|------|-------------------------|------|------|------|---------------------------|------|------|------|-------------------------|------|------|------|---------------|
|             | Right                     | Thru | Left | Peds | Right                   | Thru | Left | Peds | Right                     | Thru | Left | Peds | Right                   | Thru | Left | Peds |               |
| Factor      | 1.0                       | 1.0  | 1.0  | 1.0  | 1.0                     | 1.0  | 1.0  | 1.0  | 1.0                       | 1.0  | 1.0  | 1.0  | 1.0                     | 1.0  | 1.0  | 1.0  | 1.0           |
| 06:30 AM    | 140                       | 66   | 41   | 0    | 20                      | 141  | 4    | 0    | 1                         | 22   | 14   | 0    | 4                       | 86   | 55   | 0    | 594           |
| 06:45 AM    | 145                       | 72   | 44   | 0    | 25                      | 155  | 6    | 0    | 3                         | 24   | 13   | 0    | 5                       | 88   | 56   | 0    | 636           |
| Total       | 285                       | 138  | 85   | 0    | 45                      | 296  | 10   | 0    | 4                         | 46   | 27   | 0    | 9                       | 174  | 111  | 0    | 1230          |
| 07:00 AM    | 200                       | 121  | 69   | 0    | 19                      | 168  | 14   | 0    | 4                         | 29   | 22   | 0    | 9                       | 82   | 59   | 0    | 796           |
| 07:15 AM    | 213                       | 94   | 69   | 0    | 33                      | 154  | 5    | 0    | 0                         | 29   | 22   | 0    | 7                       | 87   | 66   | 0    | 779           |
| 07:30 AM    | 249                       | 84   | 56   | 0    | 34                      | 187  | 7    | 0    | 1                         | 24   | 22   | 0    | 9                       | 98   | 90   | 0    | 861           |
| 07:45 AM    | 150                       | 80   | 40   | 0    | 36                      | 118  | 9    | 0    | 4                         | 24   | 13   | 0    | 9                       | 86   | 54   | 0    | 623           |
| Total       | 812                       | 379  | 234  | 0    | 122                     | 627  | 35   | 0    | 9                         | 106  | 79   | 0    | 34                      | 353  | 269  | 0    | 3059          |
| 08:00 AM    | 147                       | 82   | 47   | 0    | 28                      | 96   | 11   | 0    | 4                         | 35   | 26   | 0    | 14                      | 73   | 69   | 1    | 633           |
| 08:15 AM    | 139                       | 75   | 40   | 0    | 22                      | 88   | 8    | 0    | 2                         | 29   | 22   | 0    | 6                       | 69   | 63   | 0    | 563           |
| Grand Total | 1383                      | 674  | 406  | 0    | 217                     | 1107 | 64   | 0    | 19                        | 216  | 154  | 0    | 63                      | 669  | 512  | 1    | 5485          |
| Apprch %    | 56.2                      | 27.4 | 16.5 | 0.0  | 15.6                    | 79.8 | 4.6  | 0.0  | 4.9                       | 55.5 | 39.6 | 0.0  | 5.1                     | 53.7 | 41.1 | 0.1  |               |
| Total %     | 25.2                      | 12.3 | 7.4  | 0.0  | 4.0                     | 20.2 | 1.2  | 0.0  | 0.3                       | 3.9  | 2.8  | 0.0  | 1.1                     | 12.2 | 9.3  | 0.0  |               |

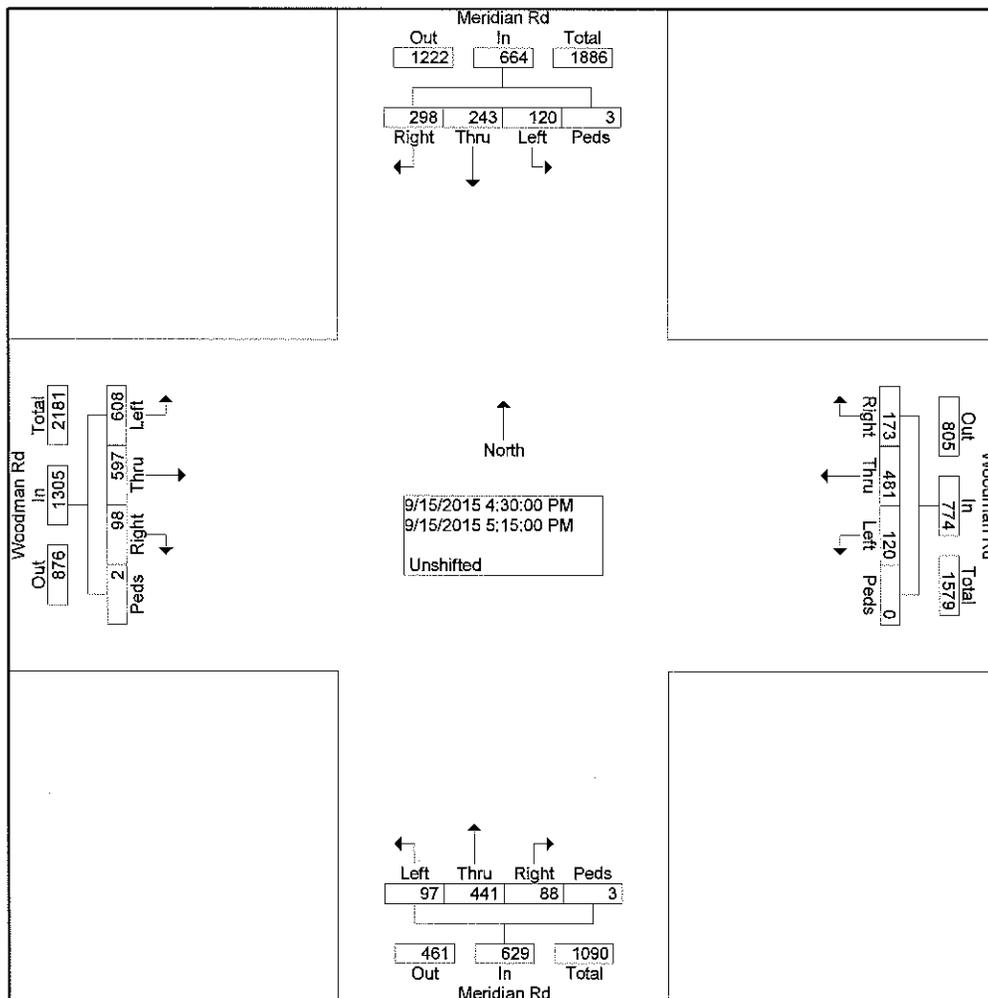
| Start Time  | Meridian Rd From North |      |      |       |            | Woodmen Rd From East |      |      |       |            | Meridian Rd From South |      |      |       |            | Woodmen Rd From West |      |      |       |            | Int. Total |
|---|------------------------|------|------|-------|------------|----------------------|------|------|-------|------------|------------------------|------|------|-------|------------|----------------------|------|------|-------|------------|------------|
|   | Rig ht                 | Thru | Left | Ped s | App. Total | Rig ht               | Thru | Left | Ped s | App. Total | Rig ht                 | Thru | Left | Ped s | App. Total | Rig ht               | Thru | Left | Ped s | App. Total |            |
| Peak Hour From 06:30 AM to 08:15 AM - Peak 1 of 1 |                        |      |      |       |            |                      |      |      |       |            |                        |      |      |       |            |                      |      |      |       |            |            |
| Intersect on                                      | 06:45 AM               |      |      |       |            |                      |      |      |       |            |                        |      |      |       |            |                      |      |      |       |            |            |
| Volume  | 807                    | 371  | 238  | 0     | 1416       | 111                  | 664  | 32   | 0     | 807        | 8                      | 106  | 79   | 0     | 193        | 30                   | 355  | 271  | 0     | 656        | 3072       |
| Percent   | 57.0                   | 26.2 | 16.8 | 0.0   |            | 13.8                 | 82.3 | 4.0  | 0.0   |            | 4.1                    | 54.9 | 40.9 | 0.0   |            | 4.6                  | 54.1 | 41.3 | 0.0   |            |            |
| 07:30 Volume                                      | 249                    | 84   | 56   | 0     | 389        | 34                   | 187  | 7    | 0     | 228        | 1                      | 24   | 22   | 0     | 47         | 9                    | 98   | 90   | 0     | 197        | 861        |
| Peak Factor                                       | 0.892                  |      |      |       |            |                      |      |      |       |            |                        |      |      |       |            |                      |      |      |       |            |            |
| High Int.   | 07:00 AM               |      |      |       |            |                      |      |      |       |            |                        |      |      |       |            |                      |      |      |       |            |            |
| Volume  | 200                    | 121  | 69   | 0     | 390        | 34                   | 187  | 7    | 0     | 228        | 4                      | 29   | 22   | 0     | 55         | 9                    | 98   | 90   | 0     | 197        | 861        |
| Peak Factor                                       | 0.908                  |      |      |       |            | 0.885                |      |      |       |            | 0.877                  |      |      |       |            | 0.832                |      |      |       |            |            |



Groups Printed- Unshifted

| Start Time  | Meridian Rd<br>From North |      |      |      | Woodman Rd<br>From East |      |      |      | Meridian Rd<br>From South |      |      |      | Woodman Rd<br>From West |      |      |      | Int.<br>Total |      |
|-------------|---------------------------|------|------|------|-------------------------|------|------|------|---------------------------|------|------|------|-------------------------|------|------|------|---------------|------|
|             | Right                     | Thru | Left | Peds | Right                   | Thru | Left | Peds | Right                     | Thru | Left | Peds | Right                   | Thru | Left | Peds |               |      |
| Factor      | 1.0                       | 1.0  | 1.0  | 1.0  | 1.0                     | 1.0  | 1.0  | 1.0  | 1.0                       | 1.0  | 1.0  | 1.0  | 1.0                     | 1.0  | 1.0  | 1.0  | 1.0           |      |
| 04:00 PM    | 74                        | 48   | 29   | 0    | 24                      | 111  | 40   | 0    | 10                        | 92   | 19   | 1    | 23                      | 130  | 149  | 0    |               | 750  |
| 04:15 PM    | 67                        | 53   | 31   | 0    | 36                      | 110  | 24   | 0    | 22                        | 96   | 19   | 2    | 17                      | 145  | 136  | 0    |               | 758  |
| 04:30 PM    | 84                        | 63   | 27   | 3    | 43                      | 141  | 29   | 0    | 20                        | 110  | 19   | 2    | 18                      | 143  | 131  | 0    |               | 833  |
| 04:45 PM    | 59                        | 56   | 42   | 0    | 57                      | 120  | 34   | 0    | 17                        | 103  | 21   | 0    | 28                      | 165  | 152  | 1    |               | 855  |
| Total       | 284                       | 220  | 129  | 3    | 160                     | 482  | 127  | 0    | 69                        | 401  | 78   | 5    | 86                      | 583  | 568  | 1    |               | 3196 |
| 05:00 PM    | 72                        | 71   | 26   | 0    | 38                      | 125  | 27   | 0    | 21                        | 113  | 25   | 0    | 23                      | 130  | 162  | 0    |               | 833  |
| 05:15 PM    | 83                        | 53   | 25   | 0    | 35                      | 95   | 30   | 0    | 30                        | 115  | 32   | 1    | 29                      | 159  | 163  | 1    |               | 851  |
| 05:30 PM    | 81                        | 69   | 26   | 0    | 44                      | 116  | 30   | 0    | 21                        | 106  | 21   | 3    | 24                      | 145  | 131  | 0    |               | 817  |
| 05:45 PM    | 63                        | 51   | 21   | 0    | 56                      | 83   | 31   | 0    | 33                        | 88   | 18   | 2    | 32                      | 133  | 162  | 1    |               | 774  |
| Total       | 299                       | 244  | 98   | 0    | 173                     | 419  | 118  | 0    | 105                       | 422  | 96   | 6    | 108                     | 567  | 618  | 2    |               | 3275 |
| Grand Total | 583                       | 464  | 227  | 3    | 333                     | 901  | 245  | 0    | 174                       | 823  | 174  | 11   | 194                     | 1150 | 1186 | 3    |               | 6471 |
| Apprch %    | 45.7                      | 36.3 | 17.8 | 0.2  | 22.5                    | 60.9 | 16.6 | 0.0  | 14.7                      | 69.6 | 14.7 | 0.9  | 7.7                     | 45.4 | 46.8 | 0.1  |               |      |
| Total %     | 9.0                       | 7.2  | 3.5  | 0.0  | 5.1                     | 13.9 | 3.8  | 0.0  | 2.7                       | 12.7 | 2.7  | 0.2  | 3.0                     | 17.8 | 18.3 | 0.0  |               |      |

| Start Time  | Meridian Rd From North |       |      |       |            | Woodman Rd From East |       |      |       |            | Meridian Rd From South |       |      |       |            | Woodman Rd From West |       |      |       |            | Int. Total |
|---|------------------------|-------|------|-------|------------|----------------------|-------|------|-------|------------|------------------------|-------|------|-------|------------|----------------------|-------|------|-------|------------|------------|
|   | Rig ht                 | Thr u | Left | Ped s | App. Total | Rig ht               | Thr u | Left | Ped s | App. Total | Rig ht                 | Thr u | Left | Ped s | App. Total | Rig ht               | Thr u | Left | Ped s | App. Total |            |
| Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1 |                        |       |      |       |            |                      |       |      |       |            |                        |       |      |       |            |                      |       |      |       |            |            |
| Intersecti on                                     | 04:30 PM               |       |      |       |            |                      |       |      |       |            |                        |       |      |       |            |                      |       |      |       |            |            |
| Volume  | 298                    | 243   | 120  | 3     | 664        | 173                  | 481   | 120  | 0     | 774        | 88                     | 441   | 97   | 3     | 629        | 98                   | 597   | 608  | 2     | 1305       | 3372       |
| Percent   | 44.9                   | 36.6  | 18.1 | 0.5   |            | 22.4                 | 62.1  | 15.5 | 0.0   |            | 14.0                   | 70.1  | 15.4 | 0.5   |            | 7.5                  | 45.7  | 46.6 | 0.2   |            |            |
| 04:45 Volume                                      | 59                     | 56    | 42   | 0     | 157        | 57                   | 120   | 34   | 0     | 211        | 17                     | 103   | 21   | 0     | 141        | 28                   | 165   | 152  | 1     | 346        | 855        |
| Peak Factor                                       | 0.986                  |       |      |       |            |                      |       |      |       |            |                        |       |      |       |            |                      |       |      |       |            |            |
| High Int. Volume                                  | 04:30 PM               |       |      |       |            | 04:30 PM             |       |      |       |            | 05:15 PM               |       |      |       |            | 05:15 PM             |       |      |       |            |            |
| Peak Factor                                       | 84                     | 63    | 27   | 3     | 177        | 43                   | 141   | 29   | 0     | 213        | 30                     | 115   | 32   | 1     | 178        | 29                   | 159   | 163  | 1     | 352        | 855        |
|   | 0.938                  |       |      |       |            | 0.908                |       |      |       |            | 0.883                  |       |      |       |            | 0.927                |       |      |       |            |            |



LSC Transportation Consultants, Inc.  
**545 E. Pikes Peak Ave., #210**

LSC Transportation Consultants, Inc. **Colorado Springs, CO 80903** : Golden Sage Rd - Woodmen Rd AM  
 (719) 633-2868 Site Code : 00164350  
 Start Date : 03/08/2017  
 Page No : 1

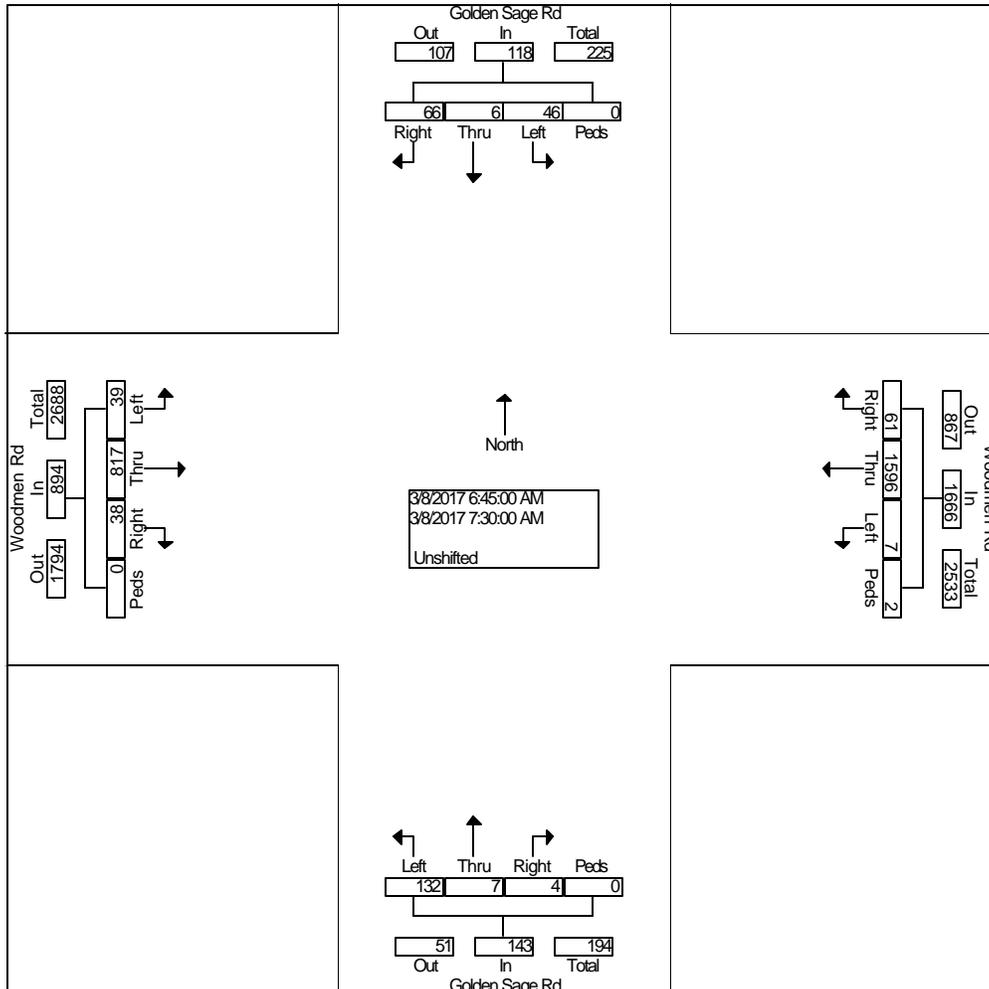
Groups Printed- Unshifted

| Start Time  | Golden Sage Rd<br>From North |      |      |      | Woodmen Rd<br>From East |      |      |      | Golden Sage Rd<br>From South |      |      |      | Woodmen Rd<br>From West |      |      |      | Int.<br>Total |
|-------------|------------------------------|------|------|------|-------------------------|------|------|------|------------------------------|------|------|------|-------------------------|------|------|------|---------------|
|             | Right                        | Thru | Left | Peds | Right                   | Thru | Left | Peds | Right                        | Thru | Left | Peds | Right                   | Thru | Left | Peds |               |
| Factor      | 1.0                          | 1.0  | 1.0  | 1.0  | 1.0                     | 1.0  | 1.0  | 1.0  | 1.0                          | 1.0  | 1.0  | 1.0  | 1.0                     | 1.0  | 1.0  | 1.0  |               |
| 06:30 AM    | 10                           | 0    | 11   | 0    | 32                      | 368  | 0    | 0    | 1                            | 4    | 18   | 0    | 3                       | 151  | 27   | 0    | 625           |
| 06:45 AM    | 15                           | 0    | 11   | 0    | 28                      | 307  | 0    | 0    | 0                            | 1    | 31   | 0    | 10                      | 186  | 16   | 0    | 605           |
| Total       | 25                           | 0    | 22   | 0    | 60                      | 675  | 0    | 0    | 1                            | 5    | 49   | 0    | 13                      | 337  | 43   | 0    | 1230          |
| 07:00 AM    | 13                           | 2    | 11   | 0    | 6                       | 459  | 1    | 0    | 2                            | 3    | 34   | 0    | 10                      | 212  | 10   | 0    | 763           |
| 07:15 AM    | 17                           | 3    | 13   | 0    | 15                      | 434  | 3    | 1    | 2                            | 2    | 38   | 0    | 10                      | 211  | 5    | 0    | 754           |
| 07:30 AM    | 21                           | 1    | 11   | 0    | 12                      | 396  | 3    | 1    | 0                            | 1    | 29   | 0    | 8                       | 208  | 8    | 0    | 699           |
| 07:45 AM    | 12                           | 2    | 3    | 0    | 4                       | 289  | 3    | 0    | 2                            | 0    | 27   | 0    | 17                      | 166  | 14   | 0    | 539           |
| Total       | 63                           | 8    | 38   | 0    | 37                      | 1578 | 10   | 2    | 6                            | 6    | 128  | 0    | 45                      | 797  | 37   | 0    | 2755          |
| 08:00 AM    | 8                            | 1    | 2    | 0    | 6                       | 256  | 1    | 0    | 1                            | 1    | 15   | 0    | 10                      | 154  | 11   | 0    | 466           |
| 08:15 AM    | 9                            | 0    | 8    | 0    | 16                      | 326  | 3    | 0    | 0                            | 0    | 17   | 0    | 2                       | 153  | 18   | 0    | 552           |
| Grand Total | 105                          | 9    | 70   | 0    | 119                     | 2835 | 14   | 2    | 8                            | 12   | 209  | 0    | 70                      | 1441 | 109  | 0    | 5003          |
| Apprch %    | 57.1                         | 4.9  | 38.0 | 0.0  | 4.0                     | 95.5 | 0.5  | 0.1  | 3.5                          | 5.2  | 91.3 | 0.0  | 4.3                     | 89.0 | 6.7  | 0.0  |               |
| Total %     | 2.1                          | 0.2  | 1.4  | 0.0  | 2.4                     | 56.7 | 0.3  | 0.0  | 0.2                          | 0.2  | 4.2  | 0.0  | 1.4                     | 28.8 | 2.2  | 0.0  |               |

LSC Transportation Consultants, Inc.  
 545 E. Pikes Peak Ave., #210  
 Colorado Springs, CO 80903  
 (719) 633-2868

File Name : Golden Sage Rd - Woodmen Rd AM  
 Site Code : 00164350  
 Start Date : 03/08/2017  
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| Start Time  | Golden Sage Rd From North |       |       |       |            | Woodmen Rd From East |       |       |       |            | Golden Sage Rd From South |       |       |       |            | Woodmen Rd From West |       |       |       |            | Int. Total |
|---|---------------------------|-------|-------|-------|------------|----------------------|-------|-------|-------|------------|---------------------------|-------|-------|-------|------------|----------------------|-------|-------|-------|------------|------------|
|   | Rig ht                    | Thr u | Lef t | Pe ds | App. Total | Rig ht               | Thr u | Lef t | Pe ds | App. Total | Rig ht                    | Thr u | Lef t | Pe ds | App. Total | Rig ht               | Thr u | Lef t | Pe ds | App. Total |            |
| Peak Hour From 06:30 AM to 08:15 AM - Peak 1 of 1 |                           |       |       |       |            |                      |       |       |       |            |                           |       |       |       |            |                      |       |       |       |            |            |
| Intersection                                      | 06:45 AM                  |       |       |       |            |                      |       |       |       |            |                           |       |       |       |            |                      |       |       |       |            |            |
| Volume  | 66                        | 6     | 46    | 0     | 118        | 61                   | 15    | 7     | 2     | 1666       | 4                         | 7     | 13    | 0     | 143        | 38                   | 81    | 39    | 0     | 894        | 2821       |
| Percent   | 55.9                      | 5.1   | 39.0  | 0.0   |            | 3.7                  | 95.8  | 0.4   | 0.1   |            | 2.8                       | 4.9   | 92.3  | 0.0   |            | 4.3                  | 91.4  | 4.4   | 0.0   |            |            |
| 07:00 Volume                                      | 13                        | 2     | 11    | 0     | 26         | 6                    | 45    | 1     | 0     | 466        | 2                         | 3     | 34    | 0     | 39         | 10                   | 21    | 10    | 0     | 232        | 763        |
| Peak Factor                                       | 0.924                     |       |       |       |            |                      |       |       |       |            |                           |       |       |       |            |                      |       |       |       |            |            |
| High Int.   | 07:15 AM                  |       |       |       |            |                      |       |       |       |            |                           |       |       |       |            |                      |       |       |       |            |            |
| Volume  | 17                        | 3     | 13    | 0     | 33         | 6                    | 45    | 1     | 0     | 466        | 2                         | 2     | 38    | 0     | 42         | 10                   | 21    | 10    | 0     | 232        |            |
| Peak Factor                                       | 0.894                     |       |       |       |            | 0.894                |       |       |       |            | 0.851                     |       |       |       |            | 0.963                |       |       |       |            |            |



LSC Transportation Consultants, Inc.

545 E. Pikes Peak Ave., #210

LSC Transportation Consultants, Inc. Colorado Springs, CO 80903 : Golden Sage Rd - Woodmen Rd PM

(719) 633-2868

Site Code : 00164350

Start Date : 03/07/2017

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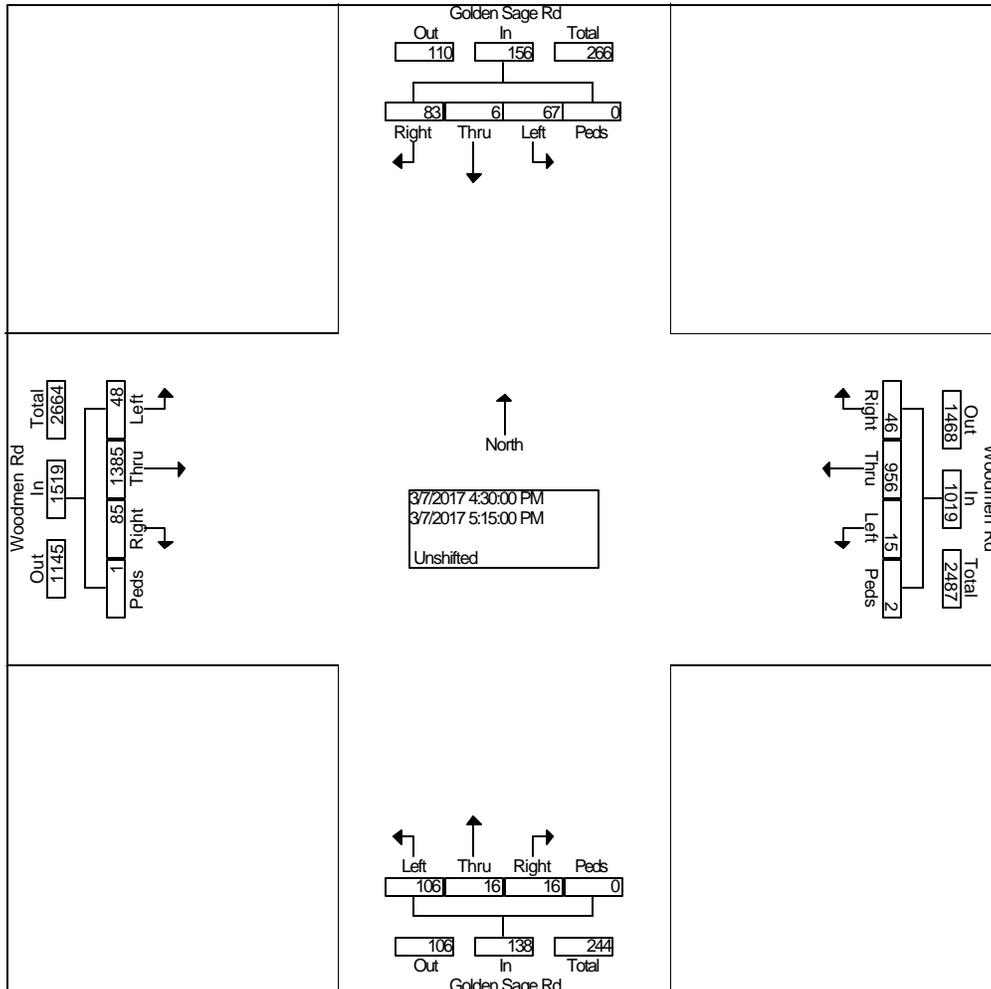
Groups Printed- Unshifted

| Start Time  | Golden Sage Rd<br>From North |      |      |      | Woodmen Rd<br>From East |      |      |      | Golden Sage Rd<br>From South |      |      |      | Woodmen Rd<br>From West |      |      |      | Int.<br>Total |
|-------------|------------------------------|------|------|------|-------------------------|------|------|------|------------------------------|------|------|------|-------------------------|------|------|------|---------------|
|             | Right                        | Thru | Left | Peds | Right                   | Thru | Left | Peds | Right                        | Thru | Left | Peds | Right                   | Thru | Left | Peds |               |
| Factor      | 1.0                          | 1.0  | 1.0  | 1.0  | 1.0                     | 1.0  | 1.0  | 1.0  | 1.0                          | 1.0  | 1.0  | 1.0  | 1.0                     | 1.0  | 1.0  | 1.0  | 1.0           |
| 04:00 PM    | 16                           | 3    | 7    | 0    | 9                       | 243  | 5    | 0    | 2                            | 2    | 21   | 0    | 14                      | 319  | 25   | 0    | 666           |
| 04:15 PM    | 19                           | 4    | 18   | 0    | 10                      | 234  | 1    | 1    | 3                            | 2    | 16   | 0    | 28                      | 324  | 15   | 0    | 675           |
| 04:30 PM    | 14                           | 0    | 16   | 0    | 10                      | 249  | 1    | 0    | 3                            | 4    | 15   | 0    | 18                      | 340  | 16   | 0    | 686           |
| 04:45 PM    | 21                           | 1    | 15   | 0    | 16                      | 233  | 2    | 1    | 3                            | 4    | 27   | 0    | 20                      | 313  | 10   | 0    | 666           |
| Total       | 70                           | 8    | 56   | 0    | 45                      | 959  | 9    | 2    | 11                           | 12   | 79   | 0    | 80                      | 1296 | 66   | 0    | 2693          |
| 05:00 PM    | 17                           | 3    | 15   | 0    | 14                      | 264  | 2    | 0    | 2                            | 3    | 24   | 0    | 20                      | 355  | 13   | 0    | 732           |
| 05:15 PM    | 31                           | 2    | 21   | 0    | 6                       | 210  | 10   | 1    | 8                            | 5    | 40   | 0    | 27                      | 377  | 9    | 1    | 748           |
| 05:30 PM    | 30                           | 2    | 40   | 0    | 7                       | 178  | 2    | 1    | 5                            | 3    | 14   | 0    | 17                      | 381  | 6    | 0    | 686           |
| 05:45 PM    | 9                            | 3    | 13   | 0    | 6                       | 172  | 1    | 0    | 1                            | 2    | 14   | 0    | 16                      | 294  | 7    | 0    | 538           |
| Total       | 87                           | 10   | 89   | 0    | 33                      | 824  | 15   | 2    | 16                           | 13   | 92   | 0    | 80                      | 1407 | 35   | 1    | 2704          |
| Grand Total | 157                          | 18   | 145  | 0    | 78                      | 1783 | 24   | 4    | 27                           | 25   | 171  | 0    | 160                     | 2703 | 101  | 1    | 5397          |
| Apprch %    | 49.1                         | 5.6  | 45.3 | 0.0  | 4.1                     | 94.4 | 1.3  | 0.2  | 12.1                         | 11.2 | 76.7 | 0.0  | 5.4                     | 91.2 | 3.4  | 0.0  |               |
| Total %     | 2.9                          | 0.3  | 2.7  | 0.0  | 1.4                     | 33.0 | 0.4  | 0.1  | 0.5                          | 0.5  | 3.2  | 0.0  | 3.0                     | 50.1 | 1.9  | 0.0  |               |

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Project Name : Golden Sage Rd - Woodmen Rd PM  
 Site Code : 00164350  
 Start Date : 03/07/2017  
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| Start Time  | Golden Sage Rd From North |       |       |       |            | Woodmen Rd From East |       |       |       |            | Golden Sage Rd From South |       |       |       |            | Woodmen Rd From West |       |       |       |            | Int. Total |
|---|---------------------------|-------|-------|-------|------------|----------------------|-------|-------|-------|------------|---------------------------|-------|-------|-------|------------|----------------------|-------|-------|-------|------------|------------|
|   | Rig ht                    | Thr u | Lef t | Pe ds | App. Total | Rig ht               | Thr u | Lef t | Pe ds | App. Total | Rig ht                    | Thr u | Lef t | Pe ds | App. Total | Rig ht               | Thr u | Lef t | Pe ds | App. Total |            |
| Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1 |                           |       |       |       |            |                      |       |       |       |            |                           |       |       |       |            |                      |       |       |       |            |            |
| Intersection                                      | 04:30 PM                  |       |       |       |            |                      |       |       |       |            |                           |       |       |       |            |                      |       |       |       |            |            |
| Volume  | 83                        | 6     | 67    | 0     | 156        | 46                   | 95    | 15    | 2     | 1019       | 16                        | 16    | 10    | 0     | 138        | 85                   | 13    | 48    | 1     | 1519       | 2832       |
| Percent   | 53.2                      | 3.8   | 42.9  | 0.0   |            | 4.5                  | 93.8  | 1.5   | 0.2   |            | 11.6                      | 11.6  | 76.8  | 0.0   |            | 5.6                  | 91.2  | 3.2   | 0.1   |            |            |
| 05:15 Volume                                      | 31                        | 2     | 21    | 0     | 54         | 6                    | 21    | 10    | 1     | 227        | 8                         | 5     | 40    | 0     | 53         | 27                   | 37    | 9     | 1     | 414        | 748        |
| Peak Factor                                       | 0.947                     |       |       |       |            |                      |       |       |       |            |                           |       |       |       |            |                      |       |       |       |            |            |
| High Int.   | 05:15 PM                  |       |       |       |            | 05:00 PM             |       |       |       |            | 05:15 PM                  |       |       |       |            | 05:15 PM             |       |       |       |            |            |
| Volume  | 31                        | 2     | 21    | 0     | 54         | 14                   | 26    | 2     | 0     | 280        | 8                         | 5     | 40    | 0     | 53         | 27                   | 37    | 9     | 1     | 414        |            |
| Peak Factor                                       | 0.72                      |       |       |       |            | 0.91                 |       |       |       |            | 0.65                      |       |       |       |            | 0.91                 |       |       |       |            |            |
|   | 2                         |       |       |       |            | 0                    |       |       |       |            | 1                         |       |       |       |            | 7                    |       |       |       |            |            |



# Intersection Level of Service Reports

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Timings  
1: Meridian & Woodmen

Existing Traffic  
AM Peak Hour

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       |       |       |       |       |       |       |       |       |       |       |       |
| Traffic Volume (vph) | 350   | 437   | 40    | 32    | 740   | 140   | 100   | 135   | 50    | 240   | 380   | 825   |
| Future Volume (vph)  | 350   | 437   | 40    | 32    | 740   | 140   | 100   | 135   | 50    | 240   | 380   | 825   |
| Turn Type            | Prot  | NA    | Free  | Prot  | NA    | Perm  | Prot  | NA    | Free  | Prot  | NA    | Free  |
| Protected Phases     | 7     | 4     |       | 3     | 8     |       | 5     | 2     |       | 1     | 6     |       |
| Permitted Phases     |       |       | Free  |       |       | 8     |       |       | Free  |       |       | Free  |
| Detector Phase       | 7     | 4     |       | 3     | 8     | 8     | 5     | 2     |       | 1     | 6     |       |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 4.0   | 4.0   |       | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |       | 4.0   | 4.0   |       |
| Minimum Split (s)    | 9.0   | 21.0  |       | 9.0   | 21.0  | 21.0  | 9.0   | 21.0  |       | 9.0   | 21.0  |       |
| Total Split (s)      | 25.0  | 60.0  |       | 15.0  | 50.0  | 50.0  | 15.0  | 23.0  |       | 22.0  | 30.0  |       |
| Total Split (%)      | 20.8% | 50.0% |       | 12.5% | 41.7% | 41.7% | 12.5% | 19.2% |       | 18.3% | 25.0% |       |
| Yellow Time (s)      | 3.0   | 5.0   |       | 3.0   | 5.0   | 5.0   | 3.0   | 5.0   |       | 3.0   | 5.0   |       |
| All-Red Time (s)     | 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  |       |
| Total Lost Time (s)  | 4.0   | 6.0   |       | 4.0   | 6.0   | 6.0   | 4.0   | 6.0   |       | 4.0   | 6.0   |       |
| Lead/Lag             | Lead  | Lag   |       | Lead  | Lag   | Lag   | Lead  | Lag   |       | Lead  | Lag   |       |
| Lead-Lag Optimize?   | Yes   | Yes   |       | Yes   | Yes   | Yes   | Yes   | Yes   |       | Yes   | Yes   |       |
| Recall Mode          | Max   | C-Max |       | Max   | C-Max | C-Max | Max   | Max   |       | Max   | Max   |       |
| Act Effct Green (s)  | 21.0  | 54.0  | 120.0 | 11.0  | 44.0  | 44.0  | 11.0  | 17.0  | 120.0 | 18.0  | 24.0  | 120.0 |
| Actuated g/C Ratio   | 0.18  | 0.45  | 1.00  | 0.09  | 0.37  | 0.37  | 0.09  | 0.14  | 1.00  | 0.15  | 0.20  | 1.00  |
| v/c Ratio            | 0.70  | 0.33  | 0.03  | 0.11  | 0.65  | 0.22  | 0.32  | 0.27  | 0.03  | 0.51  | 0.59  | 0.57  |
| Control Delay        | 50.6  | 24.8  | 0.0   | 51.1  | 34.4  | 1.6   | 54.0  | 47.6  | 0.0   | 50.9  | 47.5  | 1.5   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 50.6  | 24.8  | 0.0   | 51.1  | 34.4  | 1.6   | 54.0  | 47.6  | 0.0   | 50.9  | 47.5  | 1.5   |
| LOS                  | D     | C     | A     | D     | C     | A     | D     | D     | A     | D     | D     | A     |
| Approach Delay       |       | 34.6  |       |       | 30.0  |       |       | 41.5  |       |       | 21.8  |       |
| Approach LOS         |       | C     |       |       | C     |       |       | D     |       |       | C     |       |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 4:EBT and 8:WBT, Start of Green, Master Intersection  
 Natural Cycle: 65  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.70  
 Intersection Signal Delay: 28.7  
 Intersection Capacity Utilization 60.9%  
 Analysis Period (min) 15

Intersection LOS: C  
 ICU Level of Service B

Splits and Phases: 1: Meridian & Woodmen



| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1.9  |      |      |      |      |      |
| Movement                 | WBL  | WBR  | NBT  | NBR  | SBL  | SBT  |
| Lane Configurations      |      |      |      |      |      |      |
| Traffic Vol, veh/h       | 60   | 72   | 570  | 54   | 89   | 1375 |
| Future Vol, veh/h        | 60   | 72   | 570  | 54   | 89   | 1375 |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 100  | 0    | -    | 400  | 385  | -    |
| Veh in Median Storage, # | 2    | -    | 0    | -    | -    | 0    |
| Grade, %                 | 0    | -    | 0    | -    | -    | 0    |
| Peak Hour Factor         | 73   | 73   | 87   | 87   | 92   | 92   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 82   | 99   | 655  | 62   | 97   | 1495 |

| Major/Minor          | Minor1 | Major1 | Major2 |   |      |
|----------------------|--------|--------|--------|---|------|
| Conflicting Flow All | 1597   | 328    | 0      | 0 | 717  |
| Stage 1              | 655    | -      | -      | - | -    |
| Stage 2              | 942    | -      | -      | - | -    |
| Critical Hdwy        | 6.84   | 6.94   | -      | - | 4.14 |
| Critical Hdwy Stg 1  | 5.84   | -      | -      | - | -    |
| Critical Hdwy Stg 2  | 5.84   | -      | -      | - | -    |
| Follow-up Hdwy       | 3.52   | 3.32   | -      | - | 2.22 |
| Pot Cap-1 Maneuver   | 97     | 668    | -      | - | 880  |
| Stage 1              | 479    | -      | -      | - | -    |
| Stage 2              | 340    | -      | -      | - | -    |
| Platoon blocked, %   |        |        | -      | - | -    |
| Mov Cap-1 Maneuver   | 86     | 668    | -      | - | 880  |
| Mov Cap-2 Maneuver   | 212    | -      | -      | - | -    |
| Stage 1              | 426    | -      | -      | - | -    |
| Stage 2              | 340    | -      | -      | - | -    |

| Approach             | WB   | NB | SB  |
|----------------------|------|----|-----|
| HCM Control Delay, s | 20.8 | 0  | 0.6 |
| HCM LOS              | C    |    |     |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | WBLn2 | SBL   | SBT  |
|-----------------------|-----|----------|-------|-------|------|
| Capacity (veh/h)      | -   | -        | 212   | 668   | 880  |
| HCM Lane V/C Ratio    | -   | -        | 0.388 | 0.148 | 0.11 |
| HCM Control Delay (s) | -   | -        | 32.3  | 11.3  | 9.6  |
| HCM Lane LOS          | -   | -        | D     | B     | A    |
| HCM 95th %tile Q(veh) | -   | -        | 1.7   | 0.5   | 0.4  |

Timings  
30: 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) | 39    | 817   | 38    | 7     | 1596  | 61    | 132   | 7     | 4     | 46    | 6     |  |
| Future Volume (vph)  | 39    | 817   | 38    | 7     | 1596  | 61    | 132   | 7     | 4     | 46    | 6     |  |
| 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  | 9.5   | 9.5   | 9.5   | 9.5   | 9.5   |  |
| Total Split (s)      | 85.0  | 85.0  | 85.0  | 85.0  | 85.0  | 85.0  | 35.0  | 35.0  | 35.0  | 35.0  | 35.0  |  |
| Total Split (%)      | 70.8% | 70.8% | 70.8% | 70.8% | 70.8% | 70.8% | 29.2% | 29.2% | 29.2% | 29.2% | 29.2% |  |
| 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          | C-Max | C-Max | C-Max | C-Max | C-Max | C-Max | None  | None  | None  | None  | None  |  |
| Act Effct Green (s)  | 88.5  | 88.5  | 88.5  | 88.5  | 88.5  | 88.5  | 19.0  | 19.0  | 19.0  | 19.0  | 19.0  |  |
| Actuated g/C Ratio   | 0.74  | 0.74  | 0.74  | 0.74  | 0.74  | 0.74  | 0.16  | 0.16  | 0.16  | 0.16  | 0.16  |  |
| v/c Ratio            | 0.27  | 0.31  | 0.03  | 0.02  | 0.67  | 0.06  | 0.73  | 0.03  | 0.02  | 0.21  | 0.26  |  |
| Control Delay        | 13.4  | 6.3   | 2.0   | 4.4   | 12.7  | 0.8   | 66.7  | 38.9  | 0.0   | 43.6  | 29.2  |  |
| 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          | 13.4  | 6.3   | 2.0   | 4.4   | 12.7  | 0.8   | 66.7  | 38.9  | 0.0   | 43.6  | 29.2  |  |
| LOS                  | B     | A     | A     | A     | B     | A     | E     | D     | A     | D     | C     |  |
| Approach Delay       |       | 6.4   |       |       | 12.3  |       |       | 63.3  |       |       | 34.8  |  |
| Approach LOS         |       | A     |       |       | B     |       |       | E     |       |       | C     |  |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 103 (86%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green  
 Natural Cycle: 60  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.73  
 Intersection Signal Delay: 14.2  
 Intersection Capacity Utilization 68.5%  
 Analysis Period (min) 15  
 Intersection LOS: B  
 ICU Level of Service C

Splits and Phases: 30: Golden Sage & Woodmen



Timings  
1: Meridian & Woodmen

Existing Traffic  
PM Peak Hour

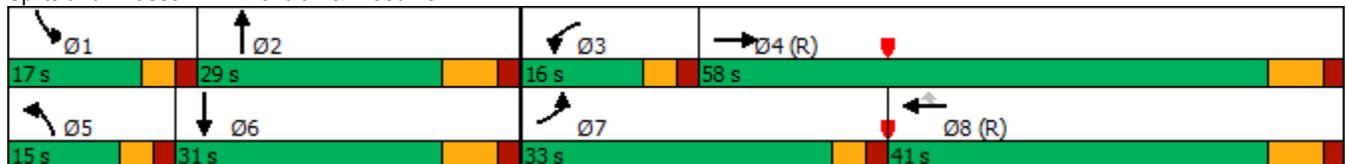
| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       |       |       |       |       |       |       |       |       |       |       |       |
| Traffic Volume (vph) | 675   | 650   | 115   | 120   | 525   | 200   | 110   | 525   | 135   | 150   | 310   | 380   |
| Future Volume (vph)  | 675   | 650   | 115   | 120   | 525   | 200   | 110   | 525   | 135   | 150   | 310   | 380   |
| Turn Type            | Prot  | NA    | Free  | Prot  | NA    | Perm  | Prot  | NA    | Free  | Prot  | NA    | Free  |
| Protected Phases     | 7     | 4     |       | 3     | 8     |       | 5     | 2     |       | 1     | 6     |       |
| Permitted Phases     |       |       | Free  |       |       | 8     |       |       | Free  |       |       | Free  |
| Detector Phase       | 7     | 4     |       | 3     | 8     | 8     | 5     | 2     |       | 1     | 6     |       |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 4.0   | 4.0   |       | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |       | 4.0   | 4.0   |       |
| Minimum Split (s)    | 9.0   | 21.0  |       | 9.0   | 21.0  | 21.0  | 9.0   | 21.0  |       | 9.0   | 21.0  |       |
| Total Split (s)      | 33.0  | 58.0  |       | 16.0  | 41.0  | 41.0  | 15.0  | 29.0  |       | 17.0  | 31.0  |       |
| Total Split (%)      | 27.5% | 48.3% |       | 13.3% | 34.2% | 34.2% | 12.5% | 24.2% |       | 14.2% | 25.8% |       |
| Yellow Time (s)      | 3.0   | 5.0   |       | 3.0   | 5.0   | 5.0   | 3.0   | 5.0   |       | 3.0   | 5.0   |       |
| All-Red Time (s)     | 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  |       |
| Total Lost Time (s)  | 4.0   | 6.0   |       | 4.0   | 6.0   | 6.0   | 4.0   | 6.0   |       | 4.0   | 6.0   |       |
| Lead/Lag             | Lead  | Lag   |       | Lead  | Lag   | Lag   | Lead  | Lag   |       | Lead  | Lag   |       |
| Lead-Lag Optimize?   | Yes   | Yes   |       | Yes   | Yes   | Yes   | Yes   | Yes   |       | Yes   | Yes   |       |
| Recall Mode          | Max   | C-Max |       | Max   | C-Max | C-Max | Max   | Max   |       | Max   | Max   |       |
| Act Effct Green (s)  | 29.0  | 52.0  | 120.0 | 12.0  | 35.0  | 35.0  | 11.0  | 23.0  | 120.0 | 13.0  | 25.0  | 120.0 |
| Actuated g/C Ratio   | 0.24  | 0.43  | 1.00  | 0.10  | 0.29  | 0.29  | 0.09  | 0.19  | 1.00  | 0.11  | 0.21  | 1.00  |
| v/c Ratio            | 0.87  | 0.45  | 0.08  | 0.38  | 0.55  | 0.35  | 0.35  | 0.77  | 0.09  | 0.40  | 0.42  | 0.24  |
| Control Delay        | 52.9  | 25.6  | 0.1   | 54.0  | 38.4  | 5.9   | 54.6  | 54.8  | 0.1   | 53.5  | 43.3  | 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          | 52.9  | 25.6  | 0.1   | 54.0  | 38.4  | 5.9   | 54.6  | 54.8  | 0.1   | 53.5  | 43.3  | 0.4   |
| LOS                  | D     | C     | A     | D     | D     | A     | D     | D     | A     | D     | D     | A     |
| Approach Delay       |       | 36.4  |       |       | 32.9  |       |       | 45.2  |       |       | 25.7  |       |
| Approach LOS         |       | D     |       |       | C     |       |       | D     |       |       | C     |       |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 4:EBT and 8:WBT, Start of Green, Master Intersection  
 Natural Cycle: 70  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.87  
 Intersection Signal Delay: 35.1  
 Intersection Capacity Utilization 69.2%  
 Analysis Period (min) 15

Intersection LOS: D  
 ICU Level of Service C

Splits and Phases: 1: Meridian & Woodmen



| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1.9  |      |      |      |      |      |
| Movement                 | WBL  | WBR  | NBT  | NBR  | SBL  | SBT  |
| Lane Configurations      | ↘    | ↗    | ↕    | ↗    | ↘    | ↕    |
| Traffic Vol, veh/h       | 30   | 146  | 1300 | 121  | 62   | 805  |
| Future Vol, veh/h        | 30   | 146  | 1300 | 121  | 62   | 805  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 100  | 0    | -    | 400  | 385  | -    |
| Veh in Median Storage, # | 2    | -    | 0    | -    | -    | 0    |
| Grade, %                 | 0    | -    | 0    | -    | -    | 0    |
| Peak Hour Factor         | 100  | 100  | 93   | 93   | 100  | 100  |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 30   | 146  | 1398 | 130  | 62   | 805  |

| Major/Minor          | Minor1 | Major1 | Major2 |   |      |
|----------------------|--------|--------|--------|---|------|
| Conflicting Flow All | 1925   | 699    | 0      | 0 | 1528 |
| Stage 1              | 1398   | -      | -      | - | -    |
| Stage 2              | 527    | -      | -      | - | -    |
| Critical Hdwy        | 6.84   | 6.94   | -      | - | 4.14 |
| Critical Hdwy Stg 1  | 5.84   | -      | -      | - | -    |
| Critical Hdwy Stg 2  | 5.84   | -      | -      | - | -    |
| Follow-up Hdwy       | 3.52   | 3.32   | -      | - | 2.22 |
| Pot Cap-1 Maneuver   | 59     | 382    | -      | - | 432  |
| Stage 1              | 194    | -      | -      | - | -    |
| Stage 2              | 557    | -      | -      | - | -    |
| Platoon blocked, %   |        |        | -      | - | -    |
| Mov Cap-1 Maneuver   | 51     | 382    | -      | - | 432  |
| Mov Cap-2 Maneuver   | 152    | -      | -      | - | -    |
| Stage 1              | 166    | -      | -      | - | -    |
| Stage 2              | 557    | -      | -      | - | -    |

| Approach             | WB   | NB | SB  |
|----------------------|------|----|-----|
| HCM Control Delay, s | 22.5 | 0  | 1.1 |
| HCM LOS              | C    |    |     |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | WBLn2 | SBL   | SBT   |
|-----------------------|-----|----------|-------|-------|-------|
| Capacity (veh/h)      | -   | -        | 152   | 382   | 432   |
| HCM Lane V/C Ratio    | -   | -        | 0.197 | 0.382 | 0.144 |
| HCM Control Delay (s) | -   | -        | 34.4  | 20.1  | 14.7  |
| HCM Lane LOS          | -   | -        | D     | C     | B     |
| HCM 95th %tile Q(veh) | -   | -        | 0.7   | 1.8   | 0.5   |

Timings  
30: Golden Sage & Woodmen

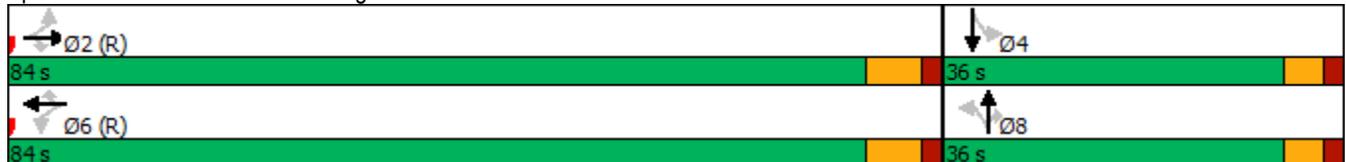
Existing Traffic  
PM Peak Hour

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       |       |       |       |       |       |       |       |       |       |       |
| Traffic Volume (vph) | 48    | 1385  | 85    | 15    | 956   | 46    | 106   | 16    | 16    | 67    | 6     |
| Future Volume (vph)  | 48    | 1385  | 85    | 15    | 956   | 46    | 106   | 16    | 16    | 67    | 6     |
| 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  | 9.5   | 9.5   | 9.5   | 9.5   | 9.5   |
| Total Split (s)      | 84.0  | 84.0  | 84.0  | 84.0  | 84.0  | 84.0  | 36.0  | 36.0  | 36.0  | 36.0  | 36.0  |
| 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          | C-Max | C-Max | C-Max | C-Max | C-Max | C-Max | None  | None  | None  | None  | None  |
| Act Effct Green (s)  | 86.3  | 86.3  | 86.3  | 86.3  | 86.3  | 86.3  | 21.2  | 21.2  | 21.2  | 21.2  | 21.2  |
| Actuated g/C Ratio   | 0.72  | 0.72  | 0.72  | 0.72  | 0.72  | 0.72  | 0.18  | 0.18  | 0.18  | 0.18  | 0.18  |
| v/c Ratio            | 0.13  | 0.59  | 0.08  | 0.08  | 0.38  | 0.04  | 0.80  | 0.08  | 0.08  | 0.38  | 0.33  |
| Control Delay        | 7.8   | 10.3  | 1.6   | 5.3   | 5.3   | 0.4   | 73.0  | 38.3  | 7.4   | 46.3  | 10.4  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 7.8   | 10.3  | 1.6   | 5.3   | 5.3   | 0.4   | 73.0  | 38.3  | 7.4   | 46.3  | 10.4  |
| LOS                  | A     | B     | A     | A     | A     | A     | E     | D     | A     | D     | B     |
| Approach Delay       |       | 9.8   |       |       | 5.1   |       |       | 61.2  |       |       | 25.8  |
| Approach LOS         |       | A     |       |       | A     |       |       | E     |       |       | C     |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 96 (80%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green  
 Natural Cycle: 55  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.80  
 Intersection Signal Delay: 12.9  
 Intersection Capacity Utilization 61.2%  
 Analysis Period (min) 15  
 Intersection LOS: B  
 ICU Level of Service B

Splits and Phases: 30: Golden Sage & Woodmen



Timings

Short-Term Background Traffic WITHOUT Right-in Access

1: Meridian Rd & Woodmen Rd

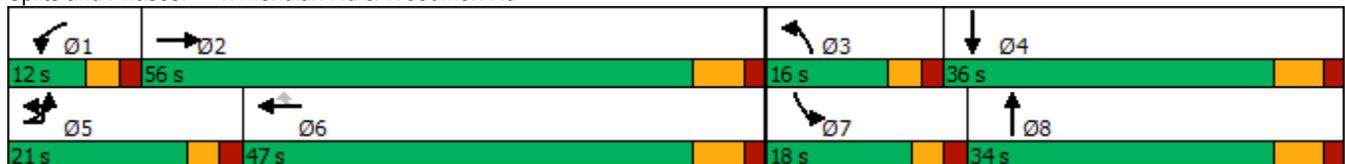
AM Peak Hour

| Lane Group           | EBL   | EBT   | EBR  | WBL   | WBT   | WBR   | NBL   | NBT   | NBR  | SBL   | SBT   | SBR  |
|----------------------|-------|-------|------|-------|-------|-------|-------|-------|------|-------|-------|------|
| Lane Configurations  |       |       |      |       |       |       |       |       |      |       |       |      |
| Traffic Volume (vph) | 275   | 675   | 100  | 100   | 800   | 75    | 150   | 300   | 50   | 200   | 575   | 800  |
| Future Volume (vph)  | 275   | 675   | 100  | 100   | 800   | 75    | 150   | 300   | 50   | 200   | 575   | 800  |
| Turn Type            | Prot  | NA    | Free | Prot  | NA    | Perm  | Prot  | NA    | Free | Prot  | NA    | Free |
| Protected Phases     | 5     | 2     |      | 1     | 6     |       | 3     | 8     |      | 7     | 4     |      |
| Permitted Phases     |       |       | Free |       |       | 6     |       |       | Free |       |       | Free |
| Detector Phase       | 5     | 2     |      | 1     | 6     | 6     | 3     | 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   |      |
| Minimum Split (s)    | 10.0  | 11.5  |      | 10.0  | 11.5  | 11.5  | 10.0  | 11.5  |      | 10.0  | 11.5  |      |
| Total Split (s)      | 21.0  | 56.0  |      | 12.0  | 47.0  | 47.0  | 16.0  | 34.0  |      | 18.0  | 36.0  |      |
| Total Split (%)      | 17.5% | 46.7% |      | 10.0% | 39.2% | 39.2% | 13.3% | 28.3% |      | 15.0% | 30.0% |      |
| Yellow Time (s)      | 3.0   | 4.5   |      | 3.0   | 4.5   | 4.5   | 3.0   | 4.5   |      | 3.0   | 4.5   |      |
| All-Red Time (s)     | 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  |      |
| Total Lost Time (s)  | 4.0   | 5.5   |      | 4.0   | 5.5   | 5.5   | 4.0   | 5.5   |      | 4.0   | 5.5   |      |
| Lead/Lag             | Lead  | Lag   |      | Lead  | Lag   | Lag   | Lead  | Lag   |      | Lead  | Lag   |      |
| Lead-Lag Optimize?   | Yes   | Yes   |      | Yes   | Yes   | Yes   | Yes   | Yes   |      | Yes   | Yes   |      |
| Recall Mode          | None  | Min   |      | None  | Min   | Min   | None  | None  |      | None  | None  |      |
| Act Effct Green (s)  | 14.3  | 40.3  | 98.7 | 8.0   | 31.0  | 31.0  | 10.6  | 21.7  | 98.7 | 12.0  | 23.2  | 98.7 |
| Actuated g/C Ratio   | 0.14  | 0.41  | 1.00 | 0.08  | 0.31  | 0.31  | 0.11  | 0.22  | 1.00 | 0.12  | 0.24  | 1.00 |
| v/c Ratio            | 0.57  | 0.48  | 0.06 | 0.37  | 0.73  | 0.13  | 0.42  | 0.39  | 0.03 | 0.49  | 0.71  | 0.52 |
| Control Delay        | 46.6  | 24.0  | 0.1  | 51.9  | 35.3  | 0.4   | 48.4  | 35.9  | 0.0  | 47.7  | 40.9  | 1.2  |
| Queue Delay          | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0  |
| Total Delay          | 46.6  | 24.0  | 0.1  | 51.9  | 35.3  | 0.4   | 48.4  | 35.9  | 0.0  | 47.7  | 40.9  | 1.2  |
| LOS                  | D     | C     | A    | D     | D     | A     | D     | D     | A    | D     | D     | A    |
| Approach Delay       |       | 27.7  |      |       | 34.3  |       |       | 36.1  |      |       | 21.6  |      |
| Approach LOS         |       | C     |      |       | C     |       |       | D     |      |       | C     |      |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 98.7  
 Natural Cycle: 60  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.73  
 Intersection Signal Delay: 27.9  
 Intersection LOS: C  
 Intersection Capacity Utilization 66.1%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 1: Meridian Rd & Woodmen Rd



Timings  
2: Meridian Rd & Eastonville Rd

Short-Term Background Traffic WITHOUT Right-in Access

AM Peak Hour

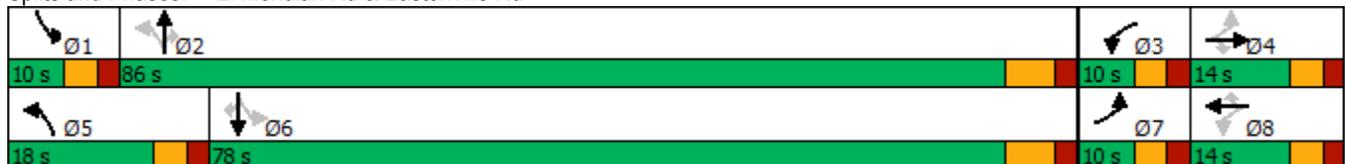


| Lane Group           | EBL   | EBT   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       |       |       |       |       |       |       |       |       |       |       |
| Traffic Volume (vph) | 15    | 3     | 75    | 2     | 75    | 45    | 531   | 75    | 90    | 1446  | 3     |
| Future Volume (vph)  | 15    | 3     | 75    | 2     | 75    | 45    | 531   | 75    | 90    | 1446  | 3     |
| Turn Type            | pm+pt | NA    | pm+pt | NA    | Perm  | pm+pt | NA    | Perm  | pm+pt | NA    | Perm  |
| Protected Phases     | 7     | 4     | 3     | 8     |       | 5     | 2     |       | 1     | 6     |       |
| Permitted Phases     | 4     |       | 8     |       | 8     | 2     |       | 2     | 6     |       | 6     |
| Detector Phase       | 7     | 4     | 3     | 8     | 8     | 5     | 2     | 2     | 1     | 6     | 6     |
| 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  | 10.0  | 10.0  | 10.0  | 10.0  | 10.0  | 11.5  | 11.5  | 10.0  | 11.5  | 11.5  |
| Total Split (s)      | 10.0  | 14.0  | 10.0  | 14.0  | 14.0  | 18.0  | 86.0  | 86.0  | 10.0  | 78.0  | 78.0  |
| Total Split (%)      | 8.3%  | 11.7% | 8.3%  | 11.7% | 11.7% | 15.0% | 71.7% | 71.7% | 8.3%  | 65.0% | 65.0% |
| Yellow Time (s)      | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.5   | 4.5   | 3.0   | 4.5   | 4.5   |
| 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) | -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   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 5.5   | 5.5   | 4.0   | 5.5   | 5.5   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?   | Yes   |
| Recall Mode          | None  | None  | None  | None  | None  | None  | Min   | Min   | None  | Min   | Min   |
| Act Effct Green (s)  | 7.9   | 7.6   | 9.7   | 7.6   | 7.6   | 50.4  | 44.2  | 44.2  | 48.3  | 45.5  | 45.5  |
| Actuated g/C Ratio   | 0.12  | 0.11  | 0.14  | 0.11  | 0.11  | 0.75  | 0.65  | 0.65  | 0.71  | 0.67  | 0.67  |
| v/c Ratio            | 0.04  | 0.01  | 0.32  | 0.01  | 0.24  | 0.13  | 0.23  | 0.07  | 0.14  | 0.62  | 0.00  |
| Control Delay        | 35.0  | 40.0  | 35.3  | 40.5  | 1.7   | 3.8   | 7.4   | 0.8   | 3.8   | 12.0  | 0.0   |
| 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          | 35.0  | 40.0  | 35.3  | 40.5  | 1.7   | 3.8   | 7.4   | 0.8   | 3.8   | 12.0  | 0.0   |
| LOS                  | C     | D     | D     | D     | A     | A     | A     | A     | A     | B     | A     |
| Approach Delay       |       | 35.8  |       | 18.8  |       |       | 6.4   |       |       | 11.4  |       |
| Approach LOS         |       | D     |       | B     |       |       | A     |       |       | B     |       |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 67.6  
 Natural Cycle: 65  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.62  
 Intersection Signal Delay: 10.7  
 Intersection LOS: B  
 Intersection Capacity Utilization 66.2%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 2: Meridian Rd & Eastonville Rd



Timings

Short-Term Background Traffic WITHOUT Right-in Access

25: Golden Sage Rd & Woodmen Rd

AM Peak Hour

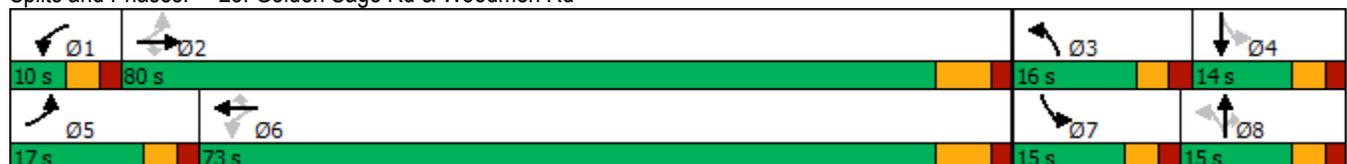


| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↘     | ↑↑    | ↗     | ↘     | ↑↑    | ↗     | ↘     | ↑     | ↗     | ↘     | ↗     |
| Traffic Volume (vph) | 52    | 837   | 38    | 7     | 1719  | 24    | 132   | 7     | 4     | 27    | 6     |
| Future Volume (vph)  | 52    | 837   | 38    | 7     | 1719  | 24    | 132   | 7     | 4     | 27    | 6     |
| Turn Type            | pm+pt | NA    | Perm  | pm+pt | NA    | Perm  | pm+pt | NA    | Perm  | pm+pt | NA    |
| Protected Phases     | 5     | 2     |       | 1     | 6     |       | 3     | 8     |       | 7     | 4     |
| Permitted Phases     | 2     |       | 2     | 6     |       | 6     | 8     |       | 8     | 4     |       |
| 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)      | 17.0  | 80.0  | 80.0  | 10.0  | 73.0  | 73.0  | 16.0  | 15.0  | 15.0  | 15.0  | 14.0  |
| Total Split (%)      | 14.2% | 66.7% | 66.7% | 8.3%  | 60.8% | 60.8% | 13.3% | 12.5% | 12.5% | 12.5% | 11.7% |
| 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   |
| Recall Mode          | None  | Min   | Min   | None  | Min   | Min   | None  | None  | None  | None  | None  |
| Act Effct Green (s)  | 73.3  | 69.5  | 69.5  | 67.5  | 60.9  | 60.9  | 20.7  | 15.5  | 15.5  | 17.5  | 7.9   |
| Actuated g/C Ratio   | 0.70  | 0.66  | 0.66  | 0.64  | 0.58  | 0.58  | 0.20  | 0.15  | 0.15  | 0.17  | 0.08  |
| v/c Ratio            | 0.25  | 0.36  | 0.04  | 0.02  | 0.85  | 0.03  | 0.55  | 0.03  | 0.01  | 0.10  | 0.53  |
| Control Delay        | 7.5   | 8.6   | 0.1   | 5.1   | 24.3  | 0.0   | 48.6  | 48.3  | 0.0   | 37.5  | 20.3  |
| 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          | 7.5   | 8.6   | 0.1   | 5.1   | 24.3  | 0.0   | 48.6  | 48.3  | 0.0   | 37.5  | 20.3  |
| LOS                  | A     | A     | A     | A     | C     | A     | D     | D     | A     | D     | C     |
| Approach Delay       |       | 8.2   |       |       | 23.9  |       |       | 47.3  |       |       | 23.6  |
| Approach LOS         |       | A     |       |       | C     |       |       | D     |       |       | C     |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 104.7  
 Natural Cycle: 75  
 Control Type: Semi Act-Uncoord  
 Maximum v/c Ratio: 0.85  
 Intersection Signal Delay: 20.1  
 Intersection Capacity Utilization 69.8%  
 Analysis Period (min) 15  
 Intersection LOS: C  
 ICU Level of Service C

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



| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 5.7  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      |      | ↔    |      |      | ↔    |      |      | ↔    | ↔    |      | ↔    |      |
| Traffic Vol, veh/h       | 0    | 0    | 0    | 138  | 0    | 0    | 0    | 0    | 83   | 0    | 0    | 0    |
| Future Vol, veh/h        | 0    | 0    | 0    | 138  | 0    | 0    | 0    | 0    | 83   | 0    | 0    | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | -    | -    | 0    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 95   | 95   | 95   | 95   | 92   | 95   | 92   | 95   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 0    | 0    | 145  | 0    | 0    | 0    | 0    | 87   | 0    | 0    | 0    |

| Major/Minor          | Minor2 |       | Minor1 |       | Major1 |   |       | Major2 |   |       |   |   |
|----------------------|--------|-------|--------|-------|--------|---|-------|--------|---|-------|---|---|
| Conflicting Flow All | -      | 88    | 1      | 1     | 1      | - | 1     | 0      | 0 | 87    | 0 | 0 |
| Stage 1              | -      | 1     | -      | 0     | 0      | - | -     | -      | - | -     | - | - |
| Stage 2              | -      | 87    | -      | 1     | 1      | - | -     | -      | - | -     | - | - |
| Critical Hdwy        | -      | 6.52  | 6.22   | 7.12  | 6.52   | - | 4.12  | -      | - | 4.12  | - | - |
| Critical Hdwy Stg 1  | -      | 5.52  | -      | 6.12  | 5.52   | - | -     | -      | - | -     | - | - |
| Critical Hdwy Stg 2  | -      | 5.52  | -      | 6.12  | 5.52   | - | -     | -      | - | -     | - | - |
| Follow-up Hdwy       | -      | 4.018 | 3.318  | 3.518 | 4.018  | - | 2.218 | -      | - | 2.218 | - | - |
| Pot Cap-1 Maneuver   | 0      | 802   | 1084   | 1022  | 895    | 0 | 1622  | -      | - | 1509  | - | - |
| Stage 1              | 0      | 895   | -      | -     | -      | 0 | -     | -      | - | -     | - | - |
| Stage 2              | 0      | 823   | -      | 1022  | 895    | 0 | -     | -      | - | -     | - | - |
| Platoon blocked, %   | -      | -     | -      | -     | -      | - | -     | -      | - | -     | - | - |
| Mov Cap-1 Maneuver   | -      | 802   | 1084   | 1022  | 895    | - | 1622  | -      | - | 1509  | - | - |
| Mov Cap-2 Maneuver   | -      | 802   | -      | 1022  | 895    | - | -     | -      | - | -     | - | - |
| Stage 1              | -      | 895   | -      | -     | -      | - | -     | -      | - | -     | - | - |
| Stage 2              | -      | 823   | -      | 1022  | 895    | - | -     | -      | - | -     | - | - |

| Approach             | EB | WB  | NB | SB |
|----------------------|----|-----|----|----|
| HCM Control Delay, s | 0  | 9.1 | 0  | 0  |
| HCM LOS              | A  | A   |    |    |

| Minor Lane/Major Mvmt | NBL  | NBT | NBR | EBLn1WBLn1 | SBL  | SBT | SBR |
|-----------------------|------|-----|-----|------------|------|-----|-----|
| Capacity (veh/h)      | 1622 | -   | -   | - 1022     | 1509 | -   | -   |
| HCM Lane V/C Ratio    | -    | -   | -   | - 0.142    | -    | -   | -   |
| HCM Control Delay (s) | 0    | -   | -   | 0 9.1      | 0    | -   | -   |
| HCM Lane LOS          | A    | -   | -   | A A        | A    | -   | -   |
| HCM 95th %tile Q(veh) | 0    | -   | -   | - 0.5      | 0    | -   | -   |

Timings

Short-Term Background Traffic WITHOUT Right-in Access

1: Meridian Rd & Woodmen Rd

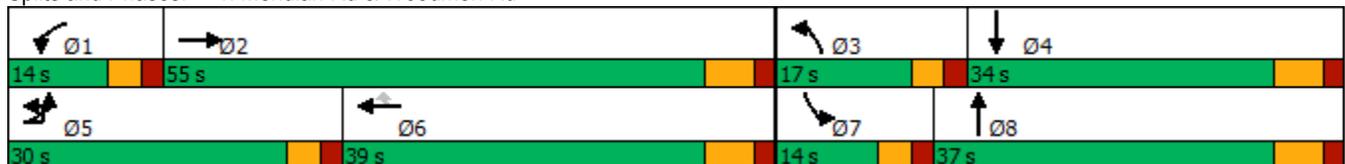
PM Peak Hour

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       |       |       |       |       |       |       |       |       |       |       |       |
| Traffic Volume (vph) | 600   | 725   | 200   | 150   | 650   | 150   | 175   | 750   | 175   | 150   | 450   | 325   |
| Future Volume (vph)  | 600   | 725   | 200   | 150   | 650   | 150   | 175   | 750   | 175   | 150   | 450   | 325   |
| Turn Type            | Prot  | NA    | Free  | Prot  | NA    | Perm  | Prot  | NA    | Free  | Prot  | NA    | Free  |
| Protected Phases     | 5     | 2     |       | 1     | 6     |       | 3     | 8     |       | 7     | 4     |       |
| Permitted Phases     |       |       | Free  |       |       | 6     |       |       | Free  |       |       | Free  |
| Detector Phase       | 5     | 2     |       | 1     | 6     | 6     | 3     | 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   |       |
| Minimum Split (s)    | 10.0  | 11.5  |       | 10.0  | 11.5  | 11.5  | 10.0  | 11.5  |       | 10.0  | 11.5  |       |
| Total Split (s)      | 30.0  | 55.0  |       | 14.0  | 39.0  | 39.0  | 17.0  | 37.0  |       | 14.0  | 34.0  |       |
| Total Split (%)      | 25.0% | 45.8% |       | 11.7% | 32.5% | 32.5% | 14.2% | 30.8% |       | 11.7% | 28.3% |       |
| Yellow Time (s)      | 3.0   | 4.5   |       | 3.0   | 4.5   | 4.5   | 3.0   | 4.5   |       | 3.0   | 4.5   |       |
| All-Red Time (s)     | 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  |       |
| Total Lost Time (s)  | 4.0   | 5.5   |       | 4.0   | 5.5   | 5.5   | 4.0   | 5.5   |       | 4.0   | 5.5   |       |
| Lead/Lag             | Lead  | Lag   |       | Lead  | Lag   | Lag   | Lead  | Lag   |       | Lead  | Lag   |       |
| Lead-Lag Optimize?   | Yes   | Yes   |       | Yes   | Yes   | Yes   | Yes   | Yes   |       | Yes   | Yes   |       |
| Recall Mode          | None  | Min   |       | None  | Min   | Min   | None  | None  |       | None  | None  |       |
| Act Effct Green (s)  | 23.9  | 41.8  | 109.2 | 9.7   | 27.6  | 27.6  | 11.5  | 28.7  | 109.2 | 9.7   | 26.9  | 109.2 |
| Actuated g/C Ratio   | 0.22  | 0.38  | 1.00  | 0.09  | 0.25  | 0.25  | 0.11  | 0.26  | 1.00  | 0.09  | 0.25  | 1.00  |
| v/c Ratio            | 0.82  | 0.55  | 0.13  | 0.50  | 0.74  | 0.29  | 0.49  | 0.82  | 0.11  | 0.50  | 0.53  | 0.21  |
| Control Delay        | 51.6  | 28.1  | 0.2   | 56.2  | 43.6  | 5.5   | 53.2  | 47.2  | 0.1   | 56.2  | 39.4  | 0.3   |
| 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          | 51.6  | 28.1  | 0.2   | 56.2  | 43.6  | 5.5   | 53.2  | 47.2  | 0.1   | 56.2  | 39.4  | 0.3   |
| LOS                  | D     | C     | A     | E     | D     | A     | D     | D     | A     | E     | D     | A     |
| Approach Delay       |       | 33.7  |       |       | 39.6  |       |       | 40.6  |       |       | 28.4  |       |
| Approach LOS         |       | C     |       |       | D     |       |       | D     |       |       | C     |       |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 109.2  
 Natural Cycle: 75  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.82  
 Intersection Signal Delay: 35.5  
 Intersection LOS: D  
 Intersection Capacity Utilization 76.0%  
 ICU Level of Service D  
 Analysis Period (min) 15

Splits and Phases: 1: Meridian Rd & Woodmen Rd



Timings  
2: Meridian Rd & Eastonville Rd

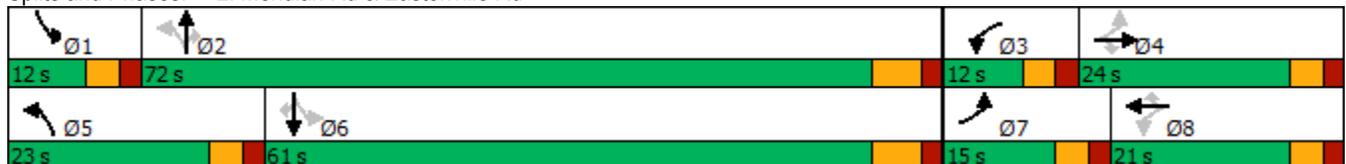
Short-Term Background Traffic WITHOUT Right-in Access  
PM Peak Hour

| Lane Group           | EBL   | EBT   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       |       |       |       |       |       |       |       |       |       |       |
| Traffic Volume (vph) | 13    | 3     | 40    | 3     | 150   | 68    | 1257  | 175   | 75    | 835   | 8     |
| Future Volume (vph)  | 13    | 3     | 40    | 3     | 150   | 68    | 1257  | 175   | 75    | 835   | 8     |
| Turn Type            | pm+pt | NA    | pm+pt | NA    | Perm  | pm+pt | NA    | Perm  | pm+pt | NA    | Perm  |
| Protected Phases     | 7     | 4     | 3     | 8     |       | 5     | 2     |       | 1     | 6     |       |
| Permitted Phases     | 4     |       | 8     |       | 8     | 2     |       | 2     | 6     |       | 6     |
| Detector Phase       | 7     | 4     | 3     | 8     | 8     | 5     | 2     | 2     | 1     | 6     | 6     |
| 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  | 10.0  | 10.0  | 10.0  | 10.0  | 10.0  | 11.5  | 11.5  | 10.0  | 11.5  | 11.5  |
| Total Split (s)      | 15.0  | 24.0  | 12.0  | 21.0  | 21.0  | 23.0  | 72.0  | 72.0  | 12.0  | 61.0  | 61.0  |
| Total Split (%)      | 12.5% | 20.0% | 10.0% | 17.5% | 17.5% | 19.2% | 60.0% | 60.0% | 10.0% | 50.8% | 50.8% |
| Yellow Time (s)      | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.5   | 4.5   | 3.0   | 4.5   | 4.5   |
| 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) | -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   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 5.5   | 5.5   | 4.0   | 5.5   | 5.5   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?   | Yes   |
| Recall Mode          | None  | None  | None  | None  | None  | None  | Min   | Min   | None  | Min   | Min   |
| Act Effct Green (s)  | 8.8   | 7.7   | 9.5   | 8.3   | 8.3   | 47.1  | 39.1  | 39.1  | 46.1  | 38.7  | 38.7  |
| Actuated g/C Ratio   | 0.13  | 0.11  | 0.14  | 0.12  | 0.12  | 0.69  | 0.57  | 0.57  | 0.68  | 0.57  | 0.57  |
| v/c Ratio            | 0.03  | 0.01  | 0.19  | 0.01  | 0.47  | 0.14  | 0.63  | 0.19  | 0.23  | 0.42  | 0.01  |
| Control Delay        | 29.3  | 35.3  | 30.6  | 34.7  | 10.8  | 4.0   | 12.5  | 2.1   | 5.2   | 10.3  | 0.0   |
| 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          | 29.3  | 35.3  | 30.6  | 34.7  | 10.8  | 4.0   | 12.5  | 2.1   | 5.2   | 10.3  | 0.0   |
| LOS                  | C     | D     | C     | C     | B     | A     | B     | A     | A     | B     | A     |
| Approach Delay       |       | 30.4  |       | 15.3  |       |       | 10.9  |       |       | 9.8   |       |
| Approach LOS         |       | C     |       | B     |       |       | B     |       |       | A     |       |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 68.1  
 Natural Cycle: 60  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.63  
 Intersection Signal Delay: 11.0  
 Intersection Capacity Utilization 59.5%  
 Analysis Period (min) 15  
 Intersection LOS: B  
 ICU Level of Service B

Splits and Phases: 2: Meridian Rd & Eastonville Rd



Timings

Short-Term Background Traffic WITHOUT Right-in Access

25: Golden Sage Rd & Woodmen Rd

PM Peak Hour

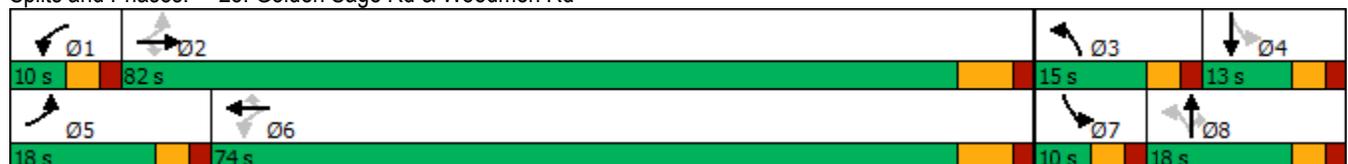


| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↙     | ↕     | ↘     | ↙     | ↕     | ↘     | ↙     | ↕     | ↘     | ↙     | ↘     |
| Traffic Volume (vph) | 93    | 1539  | 85    | 15    | 1111  | 24    | 106   | 16    | 16    | 30    | 6     |
| Future Volume (vph)  | 93    | 1539  | 85    | 15    | 1111  | 24    | 106   | 16    | 16    | 30    | 6     |
| Turn Type            | pm+pt | NA    | Perm  | pm+pt | NA    | Perm  | pm+pt | NA    | Perm  | pm+pt | NA    |
| Protected Phases     | 5     | 2     |       | 1     | 6     |       | 3     | 8     |       | 7     | 4     |
| Permitted Phases     | 2     |       | 2     | 6     |       | 6     | 8     |       | 8     | 4     |       |
| 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)      | 18.0  | 82.0  | 82.0  | 10.0  | 74.0  | 74.0  | 15.0  | 18.0  | 18.0  | 10.0  | 13.0  |
| Total Split (%)      | 15.0% | 68.3% | 68.3% | 8.3%  | 61.7% | 61.7% | 12.5% | 15.0% | 15.0% | 8.3%  | 10.8% |
| 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   |
| Recall Mode          | None  | Min   | Min   | None  | Min   | Min   | None  | None  | None  | None  | None  |
| Act Effct Green (s)  | 58.1  | 53.1  | 53.1  | 53.0  | 46.2  | 46.2  | 19.0  | 13.4  | 13.4  | 12.5  | 7.8   |
| Actuated g/C Ratio   | 0.68  | 0.62  | 0.62  | 0.62  | 0.54  | 0.54  | 0.22  | 0.16  | 0.16  | 0.15  | 0.09  |
| v/c Ratio            | 0.28  | 0.72  | 0.09  | 0.07  | 0.59  | 0.03  | 0.40  | 0.06  | 0.04  | 0.14  | 0.48  |
| Control Delay        | 7.1   | 14.7  | 1.3   | 5.7   | 16.2  | 0.0   | 36.3  | 41.7  | 0.2   | 33.8  | 18.1  |
| 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          | 7.1   | 14.7  | 1.3   | 5.7   | 16.2  | 0.0   | 36.3  | 41.7  | 0.2   | 33.8  | 18.1  |
| LOS                  | A     | B     | A     | A     | B     | A     | D     | D     | A     | C     | B     |
| Approach Delay       |       | 13.6  |       |       | 15.7  |       |       | 32.7  |       |       | 21.4  |
| Approach LOS         |       | B     |       |       | B     |       |       | C     |       |       | C     |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 85.6  
 Natural Cycle: 65  
 Control Type: Semi Act-Uncoord  
 Maximum v/c Ratio: 0.72  
 Intersection Signal Delay: 15.6  
 Intersection LOS: B  
 Intersection Capacity Utilization 70.9%  
 ICU Level of Service C  
 Analysis Period (min) 15

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



**Intersection**

Int Delay, s/veh 4.7

| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations      |      | ↔    |      |      | ↔    |      |      | ↔    | ↔    |      | ↔    |      |
| Traffic Vol, veh/h       | 0    | 0    | 0    | 145  | 0    | 0    | 0    | 0    | 133  | 0    | 0    | 0    |
| Future Vol, veh/h        | 0    | 0    | 0    | 145  | 0    | 0    | 0    | 0    | 133  | 0    | 0    | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | -    | -    | 0    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 95   | 95   | 95   | 95   | 92   | 95   | 92   | 95   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 0    | 0    | 153  | 0    | 0    | 0    | 0    | 140  | 0    | 0    | 0    |

| Major/Minor          | Minor2  | Minor1      | Major1        | Major2    |
|----------------------|---------|-------------|---------------|-----------|
| Conflicting Flow All | - 141   | 1 1         | 1 - 1         | 0 0 140   |
| Stage 1              | - 1     | - 0         | 0 - -         | - - -     |
| Stage 2              | - 140   | - 1         | 1 - -         | - - -     |
| Critical Hdwy        | - 6.52  | 6.22 7.12   | 6.52 - 4.12   | - - 4.12  |
| Critical Hdwy Stg 1  | - 5.52  | - 6.12      | 5.52 - -      | - - -     |
| Critical Hdwy Stg 2  | - 5.52  | - 6.12      | 5.52 - -      | - - -     |
| Follow-up Hdwy       | - 4.018 | 3.318 3.518 | 4.018 - 2.218 | - - 2.218 |
| Pot Cap-1 Maneuver   | 0 750   | 1084 1022   | 895 0 1622    | - - 1443  |
| Stage 1              | 0 895   | - -         | - 0 -         | - - -     |
| Stage 2              | 0 781   | - 1022      | 895 0 -       | - - -     |
| Platoon blocked, %   |         |             |               | - - -     |
| Mov Cap-1 Maneuver   | - 750   | 1084 1022   | 895 - 1622    | - - 1443  |
| Mov Cap-2 Maneuver   | - 750   | - 1022      | 895 - -       | - - -     |
| Stage 1              | - 895   | - -         | - - -         | - - -     |
| Stage 2              | - 781   | - 1022      | 895 - -       | - - -     |

| Approach             | EB | WB  | NB | SB |
|----------------------|----|-----|----|----|
| HCM Control Delay, s | 0  | 9.1 | 0  | 0  |
| HCM LOS              | A  | A   |    |    |

| Minor Lane/Major Mvmt | NBL  | NBT | NBR | EBLn1WBLn1 | SBL  | SBT | SBR |
|-----------------------|------|-----|-----|------------|------|-----|-----|
| Capacity (veh/h)      | 1622 | -   | -   | - 1022     | 1443 | -   | -   |
| HCM Lane V/C Ratio    | -    | -   | -   | - 0.149    | -    | -   | -   |
| HCM Control Delay (s) | 0    | -   | -   | 0 9.1      | 0    | -   | -   |
| HCM Lane LOS          | A    | -   | -   | A A        | A    | -   | -   |
| HCM 95th %tile Q(veh) | 0    | -   | -   | - 0.5      | 0    | -   | -   |

Timings

Short-Term Background Traffic WITH Right-in Access

1: Meridian Rd & Woodmen Rd

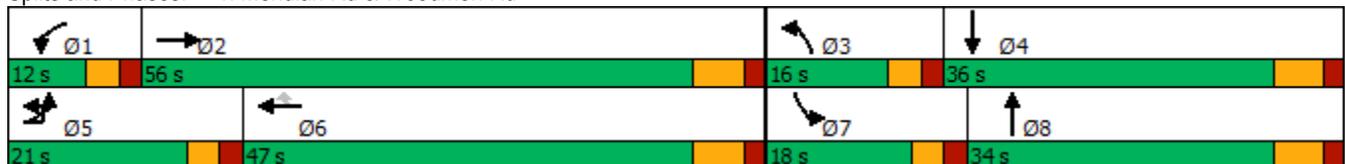
AM Peak Hour

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       |       |       |       |       |       |       |       |       |       |       |       |
| Traffic Volume (vph) | 275   | 675   | 100   | 100   | 832   | 43    | 162   | 288   | 50    | 200   | 575   | 809   |
| Future Volume (vph)  | 275   | 675   | 100   | 100   | 832   | 43    | 162   | 288   | 50    | 200   | 575   | 809   |
| Turn Type            | Prot  | NA    | Free  | Prot  | NA    | Perm  | Prot  | NA    | Free  | Prot  | NA    | Free  |
| Protected Phases     | 5     | 2     |       | 1     | 6     |       | 3     | 8     |       | 7     | 4     |       |
| Permitted Phases     |       |       | Free  |       |       | 6     |       |       | Free  |       |       | Free  |
| Detector Phase       | 5     | 2     |       | 1     | 6     | 6     | 3     | 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   |       |
| Minimum Split (s)    | 10.0  | 11.5  |       | 10.0  | 11.5  | 11.5  | 10.0  | 11.5  |       | 10.0  | 11.5  |       |
| Total Split (s)      | 21.0  | 56.0  |       | 12.0  | 47.0  | 47.0  | 16.0  | 34.0  |       | 18.0  | 36.0  |       |
| Total Split (%)      | 17.5% | 46.7% |       | 10.0% | 39.2% | 39.2% | 13.3% | 28.3% |       | 15.0% | 30.0% |       |
| Yellow Time (s)      | 3.0   | 4.5   |       | 3.0   | 4.5   | 4.5   | 3.0   | 4.5   |       | 3.0   | 4.5   |       |
| All-Red Time (s)     | 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  |       |
| Total Lost Time (s)  | 4.0   | 5.5   |       | 4.0   | 5.5   | 5.5   | 4.0   | 5.5   |       | 4.0   | 5.5   |       |
| Lead/Lag             | Lead  | Lag   |       | Lead  | Lag   | Lag   | Lead  | Lag   |       | Lead  | Lag   |       |
| Lead-Lag Optimize?   | Yes   | Yes   |       | Yes   | Yes   | Yes   | Yes   | Yes   |       | Yes   | Yes   |       |
| Recall Mode          | None  | Min   |       | None  | Min   | Min   | None  | None  |       | None  | None  |       |
| Act Effct Green (s)  | 14.9  | 41.1  | 104.8 | 8.0   | 34.2  | 34.2  | 11.0  | 23.7  | 104.8 | 12.4  | 25.1  | 104.8 |
| Actuated g/C Ratio   | 0.14  | 0.39  | 1.00  | 0.08  | 0.33  | 0.33  | 0.10  | 0.23  | 1.00  | 0.12  | 0.24  | 1.00  |
| v/c Ratio            | 0.62  | 0.53  | 0.07  | 0.42  | 0.78  | 0.07  | 0.49  | 0.39  | 0.03  | 0.53  | 0.74  | 0.56  |
| Control Delay        | 50.4  | 26.1  | 0.1   | 55.6  | 38.0  | 0.2   | 52.1  | 37.3  | 0.0   | 51.2  | 43.7  | 1.4   |
| 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          | 50.4  | 26.1  | 0.1   | 55.6  | 38.0  | 0.2   | 52.1  | 37.3  | 0.0   | 51.2  | 43.7  | 1.4   |
| LOS                  | D     | C     | A     | E     | D     | A     | D     | D     | A     | D     | D     | A     |
| Approach Delay       |       | 30.0  |       |       | 38.1  |       |       | 38.4  |       |       | 23.0  |       |
| Approach LOS         |       | C     |       |       | D     |       |       | D     |       |       | C     |       |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 104.8  
 Natural Cycle: 65  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.78  
 Intersection Signal Delay: 30.3  
 Intersection LOS: C  
 Intersection Capacity Utilization 67.3%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 1: Meridian Rd & Woodmen Rd



Timings  
2: Meridian Rd & Eastonville Rd

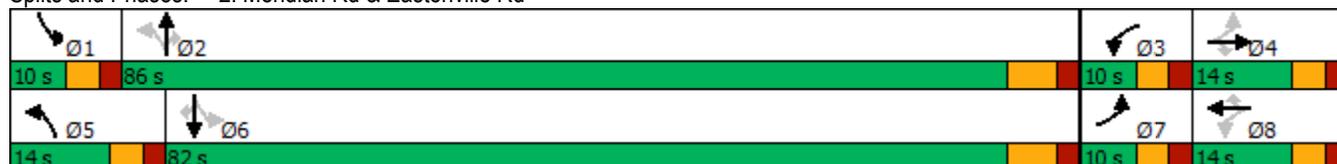
Short-Term Background Traffic WITH Right-in Access  
AM Peak Hour

|                      |       |       |       |       |       |       |       |       |       |      | Ø5 |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|----|
| Lane Group           | EBL   | EBT   | WBL   | WBT   | WBR   | NBT   | NBR   | SBL   | SBT   | Ø5   |    |
| Lane Configurations  |       |       |       |       |       |       |       |       |       |      |    |
| Traffic Volume (vph) | 15    | 3     | 75    | 2     | 75    | 531   | 75    | 90    | 1449  |      |    |
| Future Volume (vph)  | 15    | 3     | 75    | 2     | 75    | 531   | 75    | 90    | 1449  |      |    |
| Turn Type            | pm+pt | NA    | pm+pt | NA    | Perm  | NA    | Perm  | pm+pt | NA    |      |    |
| Protected Phases     | 7     | 4     | 3     | 8     |       | 2     |       | 1     | 6     | 5    |    |
| Permitted Phases     | 4     |       | 8     |       | 8     |       | 2     | 6     |       |      |    |
| Detector Phase       | 7     | 4     | 3     | 8     | 8     | 2     | 2     | 1     | 6     |      |    |
| 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  |    |
| Minimum Split (s)    | 10.0  | 10.0  | 10.0  | 10.0  | 10.0  | 11.5  | 11.5  | 10.0  | 11.5  | 10.0 |    |
| Total Split (s)      | 10.0  | 14.0  | 10.0  | 14.0  | 14.0  | 86.0  | 86.0  | 10.0  | 82.0  | 14.0 |    |
| Total Split (%)      | 8.3%  | 11.7% | 8.3%  | 11.7% | 11.7% | 71.7% | 71.7% | 8.3%  | 68.3% | 12%  |    |
| Yellow Time (s)      | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.5   | 4.5   | 3.0   | 4.5   | 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  |    |
| Lost Time Adjust (s) | -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   | 4.0   | 4.0   | 4.0   | 4.0   | 5.5   | 5.5   | 4.0   | 5.5   |      |    |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lag   | Lag   | Lag   | Lead  | Lag   | Lead |    |
| Lead-Lag Optimize?   | Yes   | Yes  |    |
| Recall Mode          | None  | None  | None  | None  | None  | Min   | Min   | None  | Min   | None |    |
| Act Effct Green (s)  | 7.5   | 7.3   | 7.9   | 7.2   | 7.2   | 31.8  | 31.8  | 39.7  | 39.7  |      |    |
| Actuated g/C Ratio   | 0.14  | 0.14  | 0.15  | 0.13  | 0.13  | 0.59  | 0.59  | 0.74  | 0.74  |      |    |
| v/c Ratio            | 0.03  | 0.01  | 0.33  | 0.01  | 0.26  | 0.28  | 0.08  | 0.15  | 0.60  |      |    |
| Control Delay        | 23.9  | 28.7  | 27.3  | 29.0  | 5.0   | 8.4   | 1.4   | 3.6   | 6.4   |      |    |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |      |    |
| Total Delay          | 23.9  | 28.7  | 27.3  | 29.0  | 5.0   | 8.4   | 1.4   | 3.6   | 6.4   |      |    |
| LOS                  | C     | C     | C     | C     | A     | A     | A     | A     | A     |      |    |
| Approach Delay       |       | 24.6  |       | 16.3  |       | 7.6   |       |       | 6.2   |      |    |
| Approach LOS         |       | C     |       | B     |       | A     |       |       | A     |      |    |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 53.9  
 Natural Cycle: 70  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.60  
 Intersection Signal Delay: 7.4  
 Intersection Capacity Utilization 66.3%  
 Analysis Period (min) 15  
 Intersection LOS: A  
 ICU Level of Service C

Splits and Phases: 2: Meridian Rd & Eastonville Rd



Timings  
25: Golden Sage Rd & Woodmen Rd

Short-Term Background Traffic WITH Right-in Access

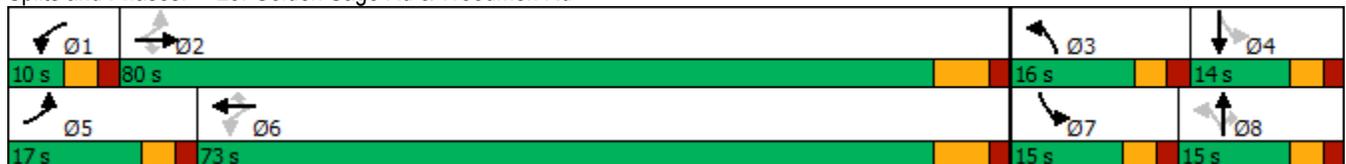
AM Peak Hour

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   |  |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--|
| Lane Configurations  |       |       |       |       |       |       |       |       |       |       |       |  |
| Traffic Volume (vph) | 51    | 838   | 38    | 7     | 1719  | 24    | 132   | 7     | 4     | 27    | 6     |  |
| Future Volume (vph)  | 51    | 838   | 38    | 7     | 1719  | 24    | 132   | 7     | 4     | 27    | 6     |  |
| Turn Type            | pm+pt | NA    | Perm  | pm+pt | NA    | Perm  | pm+pt | NA    | Perm  | pm+pt | NA    |  |
| Protected Phases     | 5     | 2     |       | 1     | 6     |       | 3     | 8     |       | 7     | 4     |  |
| Permitted Phases     | 2     |       | 2     | 6     |       | 6     | 8     |       | 8     | 4     |       |  |
| 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)      | 17.0  | 80.0  | 80.0  | 10.0  | 73.0  | 73.0  | 16.0  | 15.0  | 15.0  | 15.0  | 14.0  |  |
| Total Split (%)      | 14.2% | 66.7% | 66.7% | 8.3%  | 60.8% | 60.8% | 13.3% | 12.5% | 12.5% | 12.5% | 11.7% |  |
| 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   |  |
| Recall Mode          | None  | Min   | Min   | None  | Min   | Min   | None  | None  | None  | None  | None  |  |
| Act Effct Green (s)  | 78.3  | 74.5  | 74.5  | 72.5  | 65.9  | 65.9  | 20.5  | 15.1  | 15.1  | 17.5  | 7.9   |  |
| Actuated g/C Ratio   | 0.71  | 0.68  | 0.68  | 0.66  | 0.60  | 0.60  | 0.19  | 0.14  | 0.14  | 0.16  | 0.07  |  |
| v/c Ratio            | 0.25  | 0.36  | 0.04  | 0.02  | 0.91  | 0.03  | 0.60  | 0.03  | 0.01  | 0.11  | 0.55  |  |
| Control Delay        | 8.3   | 8.5   | 0.1   | 5.1   | 28.3  | 0.0   | 52.1  | 48.4  | 0.0   | 37.9  | 21.0  |  |
| 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          | 8.3   | 8.5   | 0.1   | 5.1   | 28.3  | 0.0   | 52.1  | 48.4  | 0.0   | 37.9  | 21.0  |  |
| LOS                  | A     | A     | A     | A     | C     | A     | D     | D     | A     | D     | C     |  |
| Approach Delay       |       | 8.1   |       |       | 27.8  |       |       | 50.5  |       |       | 24.2  |  |
| Approach LOS         |       | A     |       |       | C     |       |       | D     |       |       | C     |  |

Intersection Summary

|   |                        |
|---|------------------------|
| Cycle Length: 120                       |                        |
| Actuated Cycle Length: 109.6            |                        |
| Natural Cycle: 80                       |                        |
| Control Type: Semi Act-Uncoord          |                        |
| Maximum v/c Ratio: 0.91                 |                        |
| Intersection Signal Delay: 22.9         | Intersection LOS: C    |
| Intersection Capacity Utilization 69.8% | ICU Level of Service C |
| Analysis Period (min) 15                |                        |

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



| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 5.7  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      |      | ↻    |      |      | ↻    |      |      | ↻    | ↻    |      | ↻    |      |
| Traffic Vol, veh/h       | 0    | 0    | 0    | 138  | 0    | 0    | 0    | 0    | 82   | 0    | 0    | 0    |
| Future Vol, veh/h        | 0    | 0    | 0    | 138  | 0    | 0    | 0    | 0    | 82   | 0    | 0    | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | -    | -    | 0    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 0    | 0    | 145  | 0    | 0    | 0    | 0    | 86   | 0    | 0    | 0    |

| Major/Minor          | Minor2 |       | Minor1 |       | Major1 |   |       | Major2 |   |       |   |   |
|----------------------|--------|-------|--------|-------|--------|---|-------|--------|---|-------|---|---|
| Conflicting Flow All | -      | 87    | 1      | 1     | 1      | - | 1     | 0      | 0 | 86    | 0 | 0 |
| Stage 1              | -      | 1     | -      | 0     | 0      | - | -     | -      | - | -     | - | - |
| Stage 2              | -      | 86    | -      | 1     | 1      | - | -     | -      | - | -     | - | - |
| Critical Hdwy        | -      | 6.52  | 6.22   | 7.12  | 6.52   | - | 4.12  | -      | - | 4.12  | - | - |
| Critical Hdwy Stg 1  | -      | 5.52  | -      | 6.12  | 5.52   | - | -     | -      | - | -     | - | - |
| Critical Hdwy Stg 2  | -      | 5.52  | -      | 6.12  | 5.52   | - | -     | -      | - | -     | - | - |
| Follow-up Hdwy       | -      | 4.018 | 3.318  | 3.518 | 4.018  | - | 2.218 | -      | - | 2.218 | - | - |
| Pot Cap-1 Maneuver   | 0      | 803   | 1084   | 1022  | 895    | 0 | 1622  | -      | - | 1510  | - | - |
| Stage 1              | 0      | 895   | -      | -     | -      | 0 | -     | -      | - | -     | - | - |
| Stage 2              | 0      | 824   | -      | 1022  | 895    | 0 | -     | -      | - | -     | - | - |
| Platoon blocked, %   | -      | -     | -      | -     | -      | - | -     | -      | - | -     | - | - |
| Mov Cap-1 Maneuver   | -      | 803   | 1084   | 1022  | 895    | - | 1622  | -      | - | 1510  | - | - |
| Mov Cap-2 Maneuver   | -      | 803   | -      | 1022  | 895    | - | -     | -      | - | -     | - | - |
| Stage 1              | -      | 895   | -      | -     | -      | - | -     | -      | - | -     | - | - |
| Stage 2              | -      | 824   | -      | 1022  | 895    | - | -     | -      | - | -     | - | - |

| Approach             | EB |  | WB  |  | NB |  |  | SB |  |  |
|----------------------|----|--|-----|--|----|--|--|----|--|--|
| HCM Control Delay, s | 0  |  | 9.1 |  | 0  |  |  | 0  |  |  |
| HCM LOS              | A  |  | A   |  |    |  |  |    |  |  |

| Minor Lane/Major Mvmt | NBL  | NBT | NBR | EBLn1 | WBLn1 | SBL  | SBT | SBR |
|-----------------------|------|-----|-----|-------|-------|------|-----|-----|
| Capacity (veh/h)      | 1622 | -   | -   | -     | 1022  | 1510 | -   | -   |
| HCM Lane V/C Ratio    | -    | -   | -   | -     | 0.142 | -    | -   | -   |
| HCM Control Delay (s) | 0    | -   | -   | 0     | 9.1   | 0    | -   | -   |
| HCM Lane LOS          | A    | -   | -   | A     | A     | A    | -   | -   |
| HCM 95th %tile Q(veh) | 0    | -   | -   | -     | 0.5   | 0    | -   | -   |

Timings

Short-Term Background Traffic WITH Right-in Access

1: Meridian Rd & Woodmen Rd

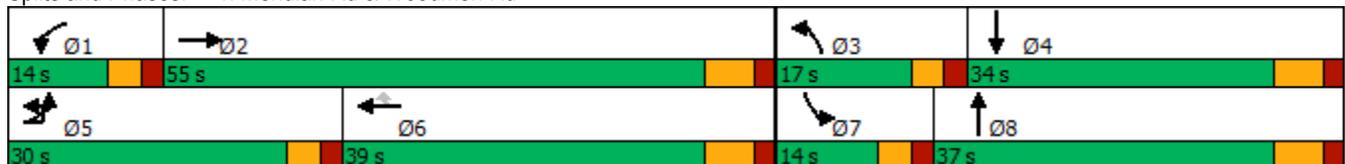
PM Peak Hour

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       |       |       |       |       |       |       |       |       |       |       |       |
| Traffic Volume (vph) | 600   | 725   | 200   | 150   | 708   | 92    | 185   | 740   | 175   | 150   | 450   | 342   |
| Future Volume (vph)  | 600   | 725   | 200   | 150   | 708   | 92    | 185   | 740   | 175   | 150   | 450   | 342   |
| Turn Type            | Prot  | NA    | Free  | Prot  | NA    | Perm  | Prot  | NA    | Free  | Prot  | NA    | Free  |
| Protected Phases     | 5     | 2     |       | 1     | 6     |       | 3     | 8     |       | 7     | 4     |       |
| Permitted Phases     |       |       | Free  |       |       | 6     |       |       | Free  |       |       | Free  |
| Detector Phase       | 5     | 2     |       | 1     | 6     | 6     | 3     | 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   |       |
| Minimum Split (s)    | 10.0  | 11.5  |       | 10.0  | 11.5  | 11.5  | 10.0  | 11.5  |       | 10.0  | 11.5  |       |
| Total Split (s)      | 30.0  | 55.0  |       | 14.0  | 39.0  | 39.0  | 17.0  | 37.0  |       | 14.0  | 34.0  |       |
| Total Split (%)      | 25.0% | 45.8% |       | 11.7% | 32.5% | 32.5% | 14.2% | 30.8% |       | 11.7% | 28.3% |       |
| Yellow Time (s)      | 3.0   | 4.5   |       | 3.0   | 4.5   | 4.5   | 3.0   | 4.5   |       | 3.0   | 4.5   |       |
| All-Red Time (s)     | 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  |       |
| Total Lost Time (s)  | 4.0   | 5.5   |       | 4.0   | 5.5   | 5.5   | 4.0   | 5.5   |       | 4.0   | 5.5   |       |
| Lead/Lag             | Lead  | Lag   |       | Lead  | Lag   | Lag   | Lead  | Lag   |       | Lead  | Lag   |       |
| Lead-Lag Optimize?   | Yes   | Yes   |       | Yes   | Yes   | Yes   | Yes   | Yes   |       | Yes   | Yes   |       |
| Recall Mode          | None  | Min   |       | None  | Min   | Min   | None  | None  |       | None  | None  |       |
| Act Effct Green (s)  | 24.1  | 43.5  | 111.0 | 9.7   | 29.1  | 29.1  | 11.7  | 28.8  | 111.0 | 9.7   | 26.8  | 111.0 |
| Actuated g/C Ratio   | 0.22  | 0.39  | 1.00  | 0.09  | 0.26  | 0.26  | 0.11  | 0.26  | 1.00  | 0.09  | 0.24  | 1.00  |
| v/c Ratio            | 0.83  | 0.53  | 0.13  | 0.51  | 0.78  | 0.17  | 0.52  | 0.82  | 0.11  | 0.51  | 0.54  | 0.22  |
| Control Delay        | 53.2  | 27.6  | 0.2   | 57.1  | 45.0  | 0.7   | 54.2  | 48.0  | 0.1   | 57.1  | 40.5  | 0.3   |
| 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          | 53.2  | 27.6  | 0.2   | 57.1  | 45.0  | 0.7   | 54.2  | 48.0  | 0.1   | 57.1  | 40.5  | 0.3   |
| LOS                  | D     | C     | A     | E     | D     | A     | D     | D     | A     | E     | D     | A     |
| Approach Delay       |       | 34.1  |       |       | 42.6  |       |       | 41.4  |       |       | 28.5  |       |
| Approach LOS         |       | C     |       |       | D     |       |       | D     |       |       | C     |       |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 111  
 Natural Cycle: 80  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.83  
 Intersection Signal Delay: 36.5  
 Intersection LOS: D  
 Intersection Capacity Utilization 77.4%  
 ICU Level of Service D  
 Analysis Period (min) 15

Splits and Phases: 1: Meridian Rd & Woodmen Rd



Timings  
2: Meridian Rd & Eastonville Rd

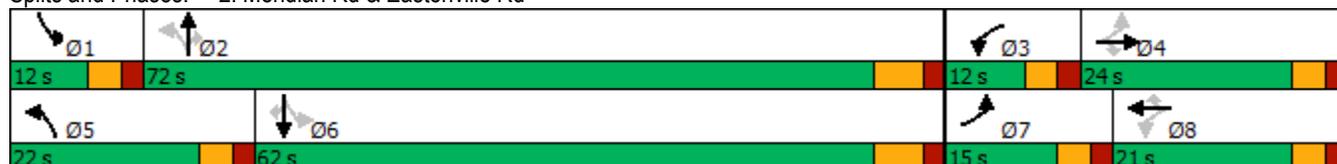
Short-Term Background Traffic WITH Right-in Access  
PM Peak Hour

|                      |       |       |       |       |       |       |       |       |       |      | Ø5 |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|----|
| Lane Group           | EBL   | EBT   | WBL   | WBT   | WBR   | NBT   | NBR   | SBL   | SBT   | Ø5   |    |
| Lane Configurations  |       |       |       |       |       |       |       |       |       |      |    |
| Traffic Volume (vph) | 13    | 3     | 40    | 3     | 150   | 1257  | 175   | 75    | 843   |      |    |
| Future Volume (vph)  | 13    | 3     | 40    | 3     | 150   | 1257  | 175   | 75    | 843   |      |    |
| Turn Type            | pm+pt | NA    | pm+pt | NA    | Perm  | NA    | Perm  | pm+pt | NA    |      |    |
| Protected Phases     | 7     | 4     | 3     | 8     |       | 2     |       | 1     | 6     | 5    |    |
| Permitted Phases     | 4     |       | 8     |       | 8     |       | 2     | 6     |       |      |    |
| Detector Phase       | 7     | 4     | 3     | 8     | 8     | 2     | 2     | 1     | 6     |      |    |
| 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  |    |
| Minimum Split (s)    | 10.0  | 10.0  | 10.0  | 10.0  | 10.0  | 11.5  | 11.5  | 10.0  | 11.5  | 10.0 |    |
| Total Split (s)      | 15.0  | 24.0  | 12.0  | 21.0  | 21.0  | 72.0  | 72.0  | 12.0  | 62.0  | 22.0 |    |
| Total Split (%)      | 12.5% | 20.0% | 10.0% | 17.5% | 17.5% | 60.0% | 60.0% | 10.0% | 51.7% | 18%  |    |
| Yellow Time (s)      | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.5   | 4.5   | 3.0   | 4.5   | 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  |    |
| Lost Time Adjust (s) | -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   | 4.0   | 4.0   | 4.0   | 4.0   | 5.5   | 5.5   | 4.0   | 5.5   |      |    |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lag   | Lag   | Lag   | Lead  | Lag   | Lead |    |
| Lead-Lag Optimize?   | Yes   | Yes  |    |
| Recall Mode          | None  | None  | None  | None  | None  | Min   | Min   | None  | Min   | None |    |
| Act Effct Green (s)  | 8.8   | 7.7   | 9.5   | 8.3   | 8.3   | 39.1  | 39.1  | 49.8  | 48.2  |      |    |
| Actuated g/C Ratio   | 0.13  | 0.11  | 0.14  | 0.12  | 0.12  | 0.57  | 0.57  | 0.73  | 0.71  |      |    |
| v/c Ratio            | 0.03  | 0.01  | 0.19  | 0.01  | 0.47  | 0.63  | 0.19  | 0.23  | 0.34  |      |    |
| Control Delay        | 29.3  | 35.3  | 30.6  | 34.7  | 10.8  | 12.5  | 2.1   | 4.9   | 4.6   |      |    |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |      |    |
| Total Delay          | 29.3  | 35.3  | 30.6  | 34.7  | 10.8  | 12.5  | 2.1   | 4.9   | 4.6   |      |    |
| LOS                  | C     | D     | C     | C     | B     | B     | A     | A     | A     |      |    |
| Approach Delay       |       | 30.4  |       | 15.3  |       | 11.2  |       |       | 4.7   |      |    |
| Approach LOS         |       | C     |       | B     |       | B     |       |       | A     |      |    |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 68.1  
 Natural Cycle: 60  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.63  
 Intersection Signal Delay: 9.3  
 Intersection Capacity Utilization 59.5%  
 Analysis Period (min) 15  
 Intersection LOS: A  
 ICU Level of Service B

Splits and Phases: 2: Meridian Rd & Eastonville Rd



Timings  
25: Golden Sage Rd & Woodmen Rd

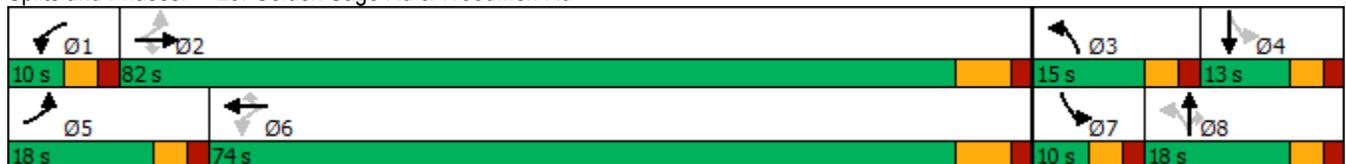
Short-Term Background Traffic WITH Right-in Access  
PM Peak Hour

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   |  |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--|
| Lane Configurations  |       |       |       |       |       |       |       |       |       |       |       |  |
| Traffic Volume (vph) | 88    | 1544  | 85    | 15    | 1111  | 24    | 106   | 16    | 16    | 30    | 6     |  |
| Future Volume (vph)  | 88    | 1544  | 85    | 15    | 1111  | 24    | 106   | 16    | 16    | 30    | 6     |  |
| Turn Type            | pm+pt | NA    | Perm  | pm+pt | NA    | Perm  | pm+pt | NA    | Perm  | pm+pt | NA    |  |
| Protected Phases     | 5     | 2     |       | 1     | 6     |       | 3     | 8     |       | 7     | 4     |  |
| Permitted Phases     | 2     |       | 2     | 6     |       | 6     | 8     |       | 8     | 4     |       |  |
| 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)      | 18.0  | 82.0  | 82.0  | 10.0  | 74.0  | 74.0  | 15.0  | 18.0  | 18.0  | 10.0  | 13.0  |  |
| Total Split (%)      | 15.0% | 68.3% | 68.3% | 8.3%  | 61.7% | 61.7% | 12.5% | 15.0% | 15.0% | 8.3%  | 10.8% |  |
| 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   |  |
| Recall Mode          | None  | Min   | Min   | None  | Min   | Min   | None  | None  | None  | None  | None  |  |
| Act Effct Green (s)  | 58.4  | 53.4  | 53.4  | 53.5  | 46.7  | 46.7  | 19.0  | 13.5  | 13.5  | 12.5  | 7.8   |  |
| Actuated g/C Ratio   | 0.68  | 0.62  | 0.62  | 0.62  | 0.54  | 0.54  | 0.22  | 0.16  | 0.16  | 0.15  | 0.09  |  |
| v/c Ratio            | 0.26  | 0.72  | 0.09  | 0.07  | 0.59  | 0.03  | 0.40  | 0.06  | 0.04  | 0.14  | 0.48  |  |
| Control Delay        | 7.0   | 14.7  | 1.3   | 5.7   | 16.0  | 0.0   | 36.6  | 42.1  | 0.2   | 34.1  | 18.3  |  |
| 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          | 7.0   | 14.7  | 1.3   | 5.7   | 16.0  | 0.0   | 36.6  | 42.1  | 0.2   | 34.1  | 18.3  |  |
| LOS                  | A     | B     | A     | A     | B     | A     | D     | D     | A     | C     | B     |  |
| Approach Delay       |       | 13.6  |       |       | 15.5  |       |       | 33.0  |       |       | 21.6  |  |
| Approach LOS         |       | B     |       |       | B     |       |       | C     |       |       | C     |  |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 86  
 Natural Cycle: 65  
 Control Type: Semi Act-Uncoord  
 Maximum v/c Ratio: 0.72  
 Intersection Signal Delay: 15.6  
 Intersection LOS: B  
 Intersection Capacity Utilization 71.1%  
 ICU Level of Service C  
 Analysis Period (min) 15

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



**Intersection**

Int Delay, s/veh 4.8

| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations      |      | ↔    |      |      | ↔    |      |      | ↔    | ↔    |      | ↔    |      |
| Traffic Vol, veh/h       | 0    | 0    | 0    | 145  | 0    | 0    | 0    | 0    | 128  | 0    | 0    | 0    |
| Future Vol, veh/h        | 0    | 0    | 0    | 145  | 0    | 0    | 0    | 0    | 128  | 0    | 0    | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | -    | -    | 0    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 95   | 95   | 95   | 95   | 92   | 95   | 92   | 95   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 0    | 0    | 153  | 0    | 0    | 0    | 0    | 135  | 0    | 0    | 0    |

| Major/Minor          | Minor2 |       | Minor1 |       | Major1 |   |       | Major2 |   |       |   |   |
|----------------------|--------|-------|--------|-------|--------|---|-------|--------|---|-------|---|---|
| Conflicting Flow All | -      | 136   | 1      | 1     | 1      | - | 1     | 0      | 0 | 135   | 0 | 0 |
| Stage 1              | -      | 1     | -      | 0     | 0      | - | -     | -      | - | -     | - | - |
| Stage 2              | -      | 135   | -      | 1     | 1      | - | -     | -      | - | -     | - | - |
| Critical Hdwy        | -      | 6.52  | 6.22   | 7.12  | 6.52   | - | 4.12  | -      | - | 4.12  | - | - |
| Critical Hdwy Stg 1  | -      | 5.52  | -      | 6.12  | 5.52   | - | -     | -      | - | -     | - | - |
| Critical Hdwy Stg 2  | -      | 5.52  | -      | 6.12  | 5.52   | - | -     | -      | - | -     | - | - |
| Follow-up Hdwy       | -      | 4.018 | 3.318  | 3.518 | 4.018  | - | 2.218 | -      | - | 2.218 | - | - |
| Pot Cap-1 Maneuver   | 0      | 755   | 1084   | 1022  | 895    | 0 | 1622  | -      | - | 1449  | - | - |
| Stage 1              | 0      | 895   | -      | -     | -      | 0 | -     | -      | - | -     | - | - |
| Stage 2              | 0      | 785   | -      | 1022  | 895    | 0 | -     | -      | - | -     | - | - |
| Platoon blocked, %   |        |       |        |       |        |   |       |        |   |       |   |   |
| Mov Cap-1 Maneuver   | -      | 755   | 1084   | 1022  | 895    | - | 1622  | -      | - | 1449  | - | - |
| Mov Cap-2 Maneuver   | -      | 755   | -      | 1022  | 895    | - | -     | -      | - | -     | - | - |
| Stage 1              | -      | 895   | -      | -     | -      | - | -     | -      | - | -     | - | - |
| Stage 2              | -      | 785   | -      | 1022  | 895    | - | -     | -      | - | -     | - | - |

| Approach             | EB |  | WB  |  | NB |  |  | SB |  |  |
|----------------------|----|--|-----|--|----|--|--|----|--|--|
| HCM Control Delay, s | 0  |  | 9.1 |  | 0  |  |  | 0  |  |  |
| HCM LOS              | A  |  | A   |  |    |  |  |    |  |  |

| Minor Lane/Major Mvmt | NBL  | NBT | NBR | EBLn1 | WBLn1 | SBL  | SBT | SBR |
|-----------------------|------|-----|-----|-------|-------|------|-----|-----|
| Capacity (veh/h)      | 1622 | -   | -   | -     | 1022  | 1449 | -   | -   |
| HCM Lane V/C Ratio    | -    | -   | -   | -     | 0.149 | -    | -   | -   |
| HCM Control Delay (s) | 0    | -   | -   | 0     | 9.1   | 0    | -   | -   |
| HCM Lane LOS          | A    | -   | -   | A     | A     | A    | -   | -   |
| HCM 95th %tile Q(veh) | 0    | -   | -   | -     | 0.5   | 0    | -   | -   |

Timings

Short-Term Total Traffic WITHOUT Right-in Access

1: Meridian Rd & Woodmen Rd

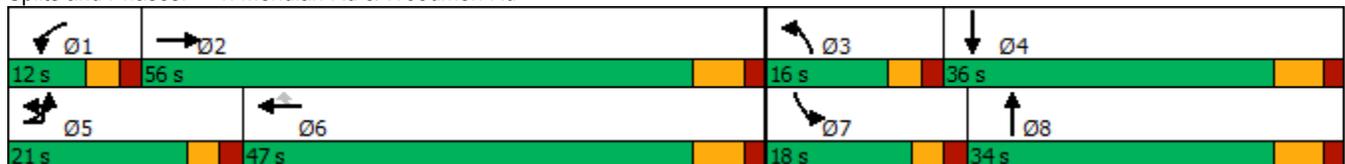
AM Peak Hour

| Lane Group           | EBL   | EBT   | EBR  | WBL   | WBT   | WBR   | NBL   | NBT   | NBR  | SBL   | SBT   | SBR  |
|----------------------|-------|-------|------|-------|-------|-------|-------|-------|------|-------|-------|------|
| Lane Configurations  |       |       |      |       |       |       |       |       |      |       |       |      |
| Traffic Volume (vph) | 293   | 645   | 100  | 100   | 754   | 167   | 150   | 381   | 50   | 241   | 621   | 807  |
| Future Volume (vph)  | 293   | 645   | 100  | 100   | 754   | 167   | 150   | 381   | 50   | 241   | 621   | 807  |
| Turn Type            | Prot  | NA    | Free | Prot  | NA    | Perm  | Prot  | NA    | Free | Prot  | NA    | Free |
| Protected Phases     | 5     | 2     |      | 1     | 6     |       | 3     | 8     |      | 7     | 4     |      |
| Permitted Phases     |       |       | Free |       |       | 6     |       |       | Free |       |       | Free |
| Detector Phase       | 5     | 2     |      | 1     | 6     | 6     | 3     | 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   |      |
| Minimum Split (s)    | 10.0  | 11.5  |      | 10.0  | 11.5  | 11.5  | 10.0  | 11.5  |      | 10.0  | 11.5  |      |
| Total Split (s)      | 21.0  | 56.0  |      | 12.0  | 47.0  | 47.0  | 16.0  | 34.0  |      | 18.0  | 36.0  |      |
| Total Split (%)      | 17.5% | 46.7% |      | 10.0% | 39.2% | 39.2% | 13.3% | 28.3% |      | 15.0% | 30.0% |      |
| Yellow Time (s)      | 3.0   | 4.5   |      | 3.0   | 4.5   | 4.5   | 3.0   | 4.5   |      | 3.0   | 4.5   |      |
| All-Red Time (s)     | 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  |      |
| Total Lost Time (s)  | 4.0   | 5.5   |      | 4.0   | 5.5   | 5.5   | 4.0   | 5.5   |      | 4.0   | 5.5   |      |
| Lead/Lag             | Lead  | Lag   |      | Lead  | Lag   | Lag   | Lead  | Lag   |      | Lead  | Lag   |      |
| Lead-Lag Optimize?   | Yes   | Yes   |      | Yes   | Yes   | Yes   | Yes   | Yes   |      | Yes   | Yes   |      |
| Recall Mode          | None  | Min   |      | None  | Min   | Min   | None  | None  |      | None  | None  |      |
| Act Effct Green (s)  | 14.6  | 40.0  | 99.6 | 8.0   | 30.4  | 30.4  | 10.6  | 22.3  | 99.6 | 12.8  | 24.5  | 99.6 |
| Actuated g/C Ratio   | 0.15  | 0.40  | 1.00 | 0.08  | 0.31  | 0.31  | 0.11  | 0.22  | 1.00 | 0.13  | 0.25  | 1.00 |
| v/c Ratio            | 0.59  | 0.46  | 0.06 | 0.37  | 0.71  | 0.28  | 0.42  | 0.49  | 0.03 | 0.56  | 0.73  | 0.52 |
| Control Delay        | 47.4  | 24.4  | 0.1  | 52.4  | 35.4  | 5.5   | 48.9  | 37.3  | 0.0  | 49.0  | 41.2  | 1.2  |
| Queue Delay          | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0  |
| Total Delay          | 47.4  | 24.4  | 0.1  | 52.4  | 35.4  | 5.5   | 48.9  | 37.3  | 0.0  | 49.0  | 41.2  | 1.2  |
| LOS                  | D     | C     | A    | D     | D     | A     | D     | D     | A    | D     | D     | A    |
| Approach Delay       |       | 28.5  |      |       | 32.2  |       |       | 37.1  |      |       | 23.0  |      |
| Approach LOS         |       | C     |      |       | C     |       |       | D     |      |       | C     |      |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 99.6  
 Natural Cycle: 60  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.73  
 Intersection Signal Delay: 28.4  
 Intersection LOS: C  
 Intersection Capacity Utilization 66.5%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 1: Meridian Rd & Woodmen Rd



Timings  
2: Meridian Rd & Eastonville Rd

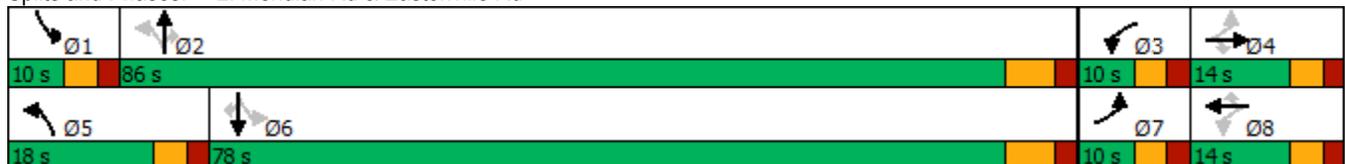
Short-Term Total Traffic WITHOUT Right-in Access  
AM Peak Hour

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       |       |       |       |       |       |       |       |       |       |       |       |
| Traffic Volume (vph) | 113   | 42    | 89    | 75    | 45    | 75    | 285   | 481   | 75    | 90    | 1458  | 78    |
| Future Volume (vph)  | 113   | 42    | 89    | 75    | 45    | 75    | 285   | 481   | 75    | 90    | 1458  | 78    |
| Turn Type            | pm+pt | NA    | Perm  |
| Protected Phases     | 7     | 4     |       | 3     | 8     |       | 5     | 2     |       | 1     | 6     |       |
| Permitted Phases     | 4     |       | 4     | 8     |       | 8     | 2     |       | 2     | 6     |       | 6     |
| Detector Phase       | 7     | 4     | 4     | 3     | 8     | 8     | 5     | 2     | 2     | 1     | 6     | 6     |
| 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   | 5.0   |
| Minimum Split (s)    | 10.0  | 10.0  | 10.0  | 10.0  | 10.0  | 10.0  | 10.0  | 11.5  | 11.5  | 10.0  | 11.5  | 11.5  |
| Total Split (s)      | 10.0  | 14.0  | 14.0  | 10.0  | 14.0  | 14.0  | 18.0  | 86.0  | 86.0  | 10.0  | 78.0  | 78.0  |
| Total Split (%)      | 8.3%  | 11.7% | 11.7% | 8.3%  | 11.7% | 11.7% | 15.0% | 71.7% | 71.7% | 8.3%  | 65.0% | 65.0% |
| Yellow Time (s)      | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.5   | 4.5   | 3.0   | 4.5   | 4.5   |
| 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   | 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  | -1.0  |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 5.5   | 5.5   | 4.0   | 5.5   | 5.5   |
| Lead/Lag             | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?   | Yes   |
| Recall Mode          | None  | Min   | Min   | None  | Min   | Min   |
| Act Effct Green (s)  | 13.2  | 8.7   | 8.7   | 13.0  | 8.7   | 8.7   | 71.2  | 62.1  | 62.1  | 58.7  | 50.8  | 50.8  |
| Actuated g/C Ratio   | 0.14  | 0.09  | 0.09  | 0.14  | 0.09  | 0.09  | 0.74  | 0.65  | 0.65  | 0.61  | 0.53  | 0.53  |
| v/c Ratio            | 0.31  | 0.26  | 0.32  | 0.37  | 0.28  | 0.27  | 0.86  | 0.21  | 0.07  | 0.16  | 0.79  | 0.09  |
| Control Delay        | 39.3  | 50.4  | 2.8   | 43.9  | 50.8  | 2.2   | 51.8  | 8.0   | 0.7   | 5.1   | 21.5  | 0.2   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 39.3  | 50.4  | 2.8   | 43.9  | 50.8  | 2.2   | 51.8  | 8.0   | 0.7   | 5.1   | 21.5  | 0.2   |
| LOS                  | D     | D     | A     | D     | D     | A     | D     | A     | A     | A     | C     | A     |
| Approach Delay       |       | 27.8  |       |       | 29.4  |       |       | 22.4  |       |       | 19.5  |       |
| Approach LOS         |       | C     |       |       | C     |       |       | C     |       |       | B     |       |

Intersection Summary

|   |                        |
|---|------------------------|
| Cycle Length: 120                       |                        |
| Actuated Cycle Length: 95.7             |                        |
| Natural Cycle: 80                       |                        |
| Control Type: Actuated-Uncoordinated    |                        |
| Maximum v/c Ratio: 0.86                 |                        |
| Intersection Signal Delay: 21.8         | Intersection LOS: C    |
| Intersection Capacity Utilization 78.2% | ICU Level of Service D |
| Analysis Period (min) 15                |                        |

Splits and Phases: 2: Meridian Rd & Eastonville Rd



Timings  
25: Golden Sage Rd & Woodmen Rd

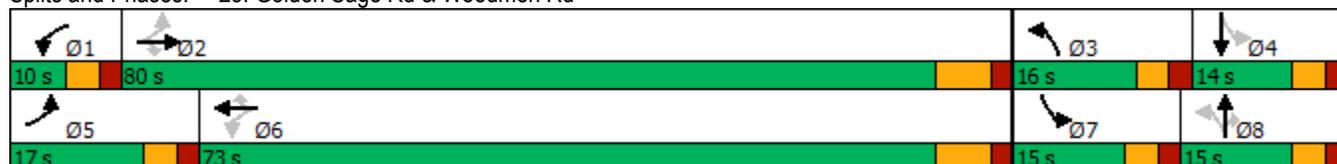
Short-Term Total Traffic WITHOUT Right-in Access  
AM Peak Hour

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       |       |       |       |       |       |       |       |       |       |       |
| Traffic Volume (vph) | 93    | 826   | 38    | 7     | 1680  | 24    | 132   | 10    | 4     | 27    | 7     |
| Future Volume (vph)  | 93    | 826   | 38    | 7     | 1680  | 24    | 132   | 10    | 4     | 27    | 7     |
| Turn Type            | pm+pt | NA    | Perm  | pm+pt | NA    | Perm  | pm+pt | NA    | Perm  | pm+pt | NA    |
| Protected Phases     | 5     | 2     |       | 1     | 6     |       | 3     | 8     |       | 7     | 4     |
| Permitted Phases     | 2     |       | 2     | 6     |       | 6     | 8     |       | 8     | 4     |       |
| 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)      | 17.0  | 80.0  | 80.0  | 10.0  | 73.0  | 73.0  | 16.0  | 15.0  | 15.0  | 15.0  | 14.0  |
| Total Split (%)      | 14.2% | 66.7% | 66.7% | 8.3%  | 60.8% | 60.8% | 13.3% | 12.5% | 12.5% | 12.5% | 11.7% |
| 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   |
| Recall Mode          | None  | Min   | Min   | None  | Min   | Min   | None  | None  | None  | None  | None  |
| Act Effct Green (s)  | 74.1  | 70.3  | 70.3  | 66.7  | 60.2  | 60.2  | 21.1  | 15.9  | 15.9  | 18.2  | 8.6   |
| Actuated g/C Ratio   | 0.70  | 0.66  | 0.66  | 0.63  | 0.57  | 0.57  | 0.20  | 0.15  | 0.15  | 0.17  | 0.08  |
| v/c Ratio            | 0.39  | 0.36  | 0.04  | 0.02  | 0.86  | 0.03  | 0.60  | 0.04  | 0.01  | 0.10  | 0.70  |
| Control Delay        | 16.5  | 8.8   | 0.1   | 5.4   | 26.0  | 0.0   | 52.3  | 49.5  | 0.0   | 38.1  | 31.2  |
| 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          | 16.5  | 8.8   | 0.1   | 5.4   | 26.0  | 0.0   | 52.3  | 49.5  | 0.0   | 38.1  | 31.2  |
| LOS                  | B     | A     | A     | A     | C     | A     | D     | D     | A     | D     | C     |
| Approach Delay       |       | 9.2   |       |       | 25.6  |       |       | 50.7  |       |       | 32.2  |
| Approach LOS         |       | A     |       |       | C     |       |       | D     |       |       | C     |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 106.4  
 Natural Cycle: 75  
 Control Type: Semi Act-Uncoord  
 Maximum v/c Ratio: 0.86  
 Intersection Signal Delay: 22.1  
 Intersection Capacity Utilization 84.3%  
 Analysis Period (min) 15  
 Intersection LOS: C  
 ICU Level of Service E

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



**Intersection**

Int Delay, s/veh 5.7

| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations      |      | ↔    |      |      | ↔    |      |      | ↔    | ↔    |      | ↔    |      |
| Traffic Vol, veh/h       | 0    | 0    | 0    | 195  | 0    | 0    | 0    | 0    | 127  | 0    | 0    | 0    |
| Future Vol, veh/h        | 0    | 0    | 0    | 195  | 0    | 0    | 0    | 0    | 127  | 0    | 0    | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | -    | -    | 0    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 95   | 95   | 95   | 95   | 92   | 95   | 92   | 95   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 0    | 0    | 205  | 0    | 0    | 0    | 0    | 134  | 0    | 0    | 0    |

| Major/Minor          | Minor2  | Minor1      | Major1        | Major2    |
|----------------------|---------|-------------|---------------|-----------|
| Conflicting Flow All | - 135   | 1 1         | 1 - 1         | 0 0 134   |
| Stage 1              | - 1     | - 0         | 0 - -         | - - -     |
| Stage 2              | - 134   | - 1         | 1 - -         | - - -     |
| Critical Hdwy        | - 6.52  | 6.22 7.12   | 6.52 - 4.12   | - - 4.12  |
| Critical Hdwy Stg 1  | - 5.52  | - 6.12      | 5.52 - -      | - - -     |
| Critical Hdwy Stg 2  | - 5.52  | - 6.12      | 5.52 - -      | - - -     |
| Follow-up Hdwy       | - 4.018 | 3.318 3.518 | 4.018 - 2.218 | - - 2.218 |
| Pot Cap-1 Maneuver   | 0 756   | 1084 1022   | 895 0 1622    | - - 1451  |
| Stage 1              | 0 895   | - -         | 0 - -         | - - -     |
| Stage 2              | 0 785   | - 1022      | 895 0 -       | - - -     |
| Platoon blocked, %   |         |             |               | - - -     |
| Mov Cap-1 Maneuver   | - 756   | 1084 1022   | 895 - 1622    | - - 1451  |
| Mov Cap-2 Maneuver   | - 756   | - 1022      | 895 - -       | - - -     |
| Stage 1              | - 895   | - -         | - - -         | - - -     |
| Stage 2              | - 785   | - 1022      | 895 - -       | - - -     |

| Approach             | EB | WB  | NB | SB |
|----------------------|----|-----|----|----|
| HCM Control Delay, s | 0  | 9.4 | 0  | 0  |
| HCM LOS              | A  | A   |    |    |

| Minor Lane/Major Mvmt | NBL  | NBT | NBR | EBLn1WBLn1 | SBL  | SBT | SBR |
|-----------------------|------|-----|-----|------------|------|-----|-----|
| Capacity (veh/h)      | 1622 | -   | -   | - 1022     | 1451 | -   | -   |
| HCM Lane V/C Ratio    | -    | -   | -   | - 0.201    | -    | -   | -   |
| HCM Control Delay (s) | 0    | -   | -   | 0 9.4      | 0    | -   | -   |
| HCM Lane LOS          | A    | -   | -   | A A        | A    | -   | -   |
| HCM 95th %tile Q(veh) | 0    | -   | -   | - 0.7      | 0    | -   | -   |

## SimTraffic Performance Report

## 87: Meridian Rd &amp; Site RIRO Performance by movement Interval #1 7:00

| Movement         | EBR  | NBT | SBT | SBR | All |
|------------------|------|-----|-----|-----|-----|
| Stop Del/Veh (s) | 11.6 | 0.7 | 0.1 | 0.1 | 1.1 |

## 87: Meridian Rd &amp; Site RIRO Performance by movement Interval #2 7:15

| Movement         | EBR  | NBT | SBT | SBR | All |
|------------------|------|-----|-----|-----|-----|
| Stop Del/Veh (s) | 18.8 | 0.7 | 0.1 | 0.1 | 1.5 |

## 87: Meridian Rd &amp; Site RIRO Performance by movement Interval #3 7:30

| Movement         | EBR  | NBT | SBT | SBR | All |
|------------------|------|-----|-----|-----|-----|
| Stop Del/Veh (s) | 15.3 | 0.7 | 0.1 | 0.1 | 1.2 |

## 87: Meridian Rd &amp; Site RIRO Performance by movement Interval #4 7:45

| Movement         | EBR | NBT | SBT | SBR | All |
|------------------|-----|-----|-----|-----|-----|
| Stop Del/Veh (s) | 9.2 | 0.6 | 0.1 | 0.1 | 0.8 |

## 87: Meridian Rd &amp; Site RIRO Performance by movement Entire Run

| Movement         | EBR  | NBT | SBT | SBR | All |
|------------------|------|-----|-----|-----|-----|
| Stop Del/Veh (s) | 14.1 | 0.7 | 0.1 | 0.1 | 1.1 |

## Total Zone Performance By Interval

| Interval Start   | 7:00 | 7:15 | 7:30 | 7:45 | All   |
|------------------|------|------|------|------|-------|
| Stop Del/Veh (s) | 74.9 | 78.3 | 52.8 | 85.8 | 499.8 |

Timings

Short-Term Total Traffic WITHOUT Right-in Access

1: Meridian Rd & Woodmen Rd

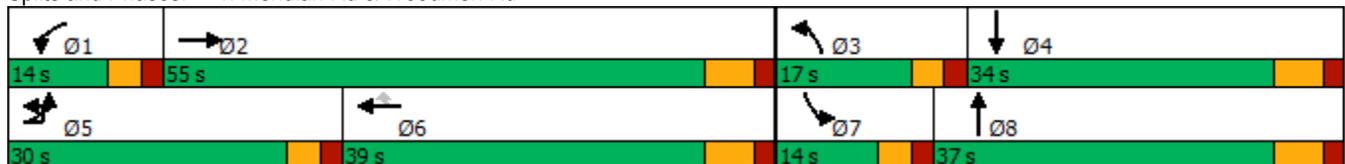
PM Peak Hour

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       |       |       |       |       |       |       |       |       |       |       |       |
| Traffic Volume (vph) | 622   | 669   | 200   | 150   | 611   | 258   | 175   | 871   | 175   | 225   | 566   | 368   |
| Future Volume (vph)  | 622   | 669   | 200   | 150   | 611   | 258   | 175   | 871   | 175   | 225   | 566   | 368   |
| Turn Type            | Prot  | NA    | Free  | Prot  | NA    | Perm  | Prot  | NA    | Free  | Prot  | NA    | Free  |
| Protected Phases     | 5     | 2     |       | 1     | 6     |       | 3     | 8     |       | 7     | 4     |       |
| Permitted Phases     |       |       | Free  |       |       | 6     |       |       | Free  |       |       | Free  |
| Detector Phase       | 5     | 2     |       | 1     | 6     | 6     | 3     | 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   |       |
| Minimum Split (s)    | 10.0  | 11.5  |       | 10.0  | 11.5  | 11.5  | 10.0  | 11.5  |       | 10.0  | 11.5  |       |
| Total Split (s)      | 30.0  | 55.0  |       | 14.0  | 39.0  | 39.0  | 17.0  | 37.0  |       | 14.0  | 34.0  |       |
| Total Split (%)      | 25.0% | 45.8% |       | 11.7% | 32.5% | 32.5% | 14.2% | 30.8% |       | 11.7% | 28.3% |       |
| Yellow Time (s)      | 3.0   | 4.5   |       | 3.0   | 4.5   | 4.5   | 3.0   | 4.5   |       | 3.0   | 4.5   |       |
| All-Red Time (s)     | 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  |       |
| Total Lost Time (s)  | 4.0   | 5.5   |       | 4.0   | 5.5   | 5.5   | 4.0   | 5.5   |       | 4.0   | 5.5   |       |
| Lead/Lag             | Lead  | Lag   |       | Lead  | Lag   | Lag   | Lead  | Lag   |       | Lead  | Lag   |       |
| Lead-Lag Optimize?   | Yes   | Yes   |       | Yes   | Yes   | Yes   | Yes   | Yes   |       | Yes   | Yes   |       |
| Recall Mode          | None  | Min   |       | None  | Min   | Min   | None  | None  |       | None  | None  |       |
| Act Effct Green (s)  | 24.5  | 42.1  | 112.1 | 9.7   | 27.3  | 27.3  | 11.5  | 31.1  | 112.1 | 10.1  | 29.6  | 112.1 |
| Actuated g/C Ratio   | 0.22  | 0.38  | 1.00  | 0.09  | 0.24  | 0.24  | 0.10  | 0.28  | 1.00  | 0.09  | 0.26  | 1.00  |
| v/c Ratio            | 0.85  | 0.51  | 0.13  | 0.52  | 0.72  | 0.50  | 0.51  | 0.91  | 0.11  | 0.75  | 0.62  | 0.24  |
| Control Delay        | 54.3  | 28.4  | 0.2   | 57.1  | 44.3  | 14.8  | 54.0  | 53.6  | 0.1   | 66.9  | 41.0  | 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          | 54.3  | 28.4  | 0.2   | 57.1  | 44.3  | 14.8  | 54.0  | 53.6  | 0.1   | 66.9  | 41.0  | 0.4   |
| LOS                  | D     | C     | A     | E     | D     | B     | D     | D     | A     | E     | D     | A     |
| Approach Delay       |       | 35.4  |       |       | 38.7  |       |       | 46.0  |       |       | 33.1  |       |
| Approach LOS         |       | D     |       |       | D     |       |       | D     |       |       | C     |       |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 112.1  
 Natural Cycle: 80  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.91  
 Intersection Signal Delay: 38.2  
 Intersection LOS: D  
 Intersection Capacity Utilization 81.0%  
 ICU Level of Service D  
 Analysis Period (min) 15

Splits and Phases: 1: Meridian Rd & Woodmen Rd



Timings  
2: Meridian Rd & Eastonville Rd

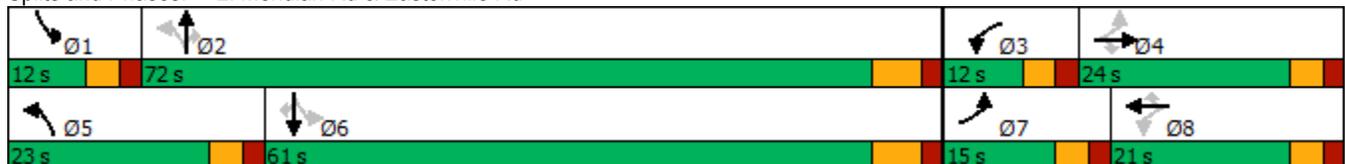
Short-Term Total Traffic WITHOUT Right-in Access  
PM Peak Hour

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       |       |       |       |       |       |       |       |       |       |       |       |
| Traffic Volume (vph) | 262   | 113   | 134   | 40    | 68    | 150   | 442   | 1133  | 175   | 75    | 881   | 91    |
| Future Volume (vph)  | 262   | 113   | 134   | 40    | 68    | 150   | 442   | 1133  | 175   | 75    | 881   | 91    |
| Turn Type            | pm+pt | NA    | Perm  |
| Protected Phases     | 7     | 4     |       | 3     | 8     |       | 5     | 2     |       | 1     | 6     |       |
| Permitted Phases     | 4     |       | 4     | 8     |       | 8     | 2     |       | 2     | 6     |       | 6     |
| Detector Phase       | 7     | 4     | 4     | 3     | 8     | 8     | 5     | 2     | 2     | 1     | 6     | 6     |
| 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   | 5.0   |
| Minimum Split (s)    | 10.0  | 10.0  | 10.0  | 10.0  | 10.0  | 10.0  | 10.0  | 11.5  | 11.5  | 10.0  | 11.5  | 11.5  |
| Total Split (s)      | 15.0  | 24.0  | 24.0  | 12.0  | 21.0  | 21.0  | 23.0  | 72.0  | 72.0  | 12.0  | 61.0  | 61.0  |
| Total Split (%)      | 12.5% | 20.0% | 20.0% | 10.0% | 17.5% | 17.5% | 19.2% | 60.0% | 60.0% | 10.0% | 50.8% | 50.8% |
| Yellow Time (s)      | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.5   | 4.5   | 3.0   | 4.5   | 4.5   |
| 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   | 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  | -1.0  |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 5.5   | 5.5   | 4.0   | 5.5   | 5.5   |
| Lead/Lag             | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?   | Yes   |
| Recall Mode          | None  | Min   | Min   | None  | Min   | Min   |
| Act Effct Green (s)  | 24.3  | 18.2  | 18.2  | 17.5  | 10.0  | 10.0  | 55.3  | 44.6  | 44.6  | 39.7  | 30.5  | 30.5  |
| Actuated g/C Ratio   | 0.28  | 0.21  | 0.21  | 0.20  | 0.11  | 0.11  | 0.63  | 0.51  | 0.51  | 0.45  | 0.35  | 0.35  |
| v/c Ratio            | 0.39  | 0.31  | 0.31  | 0.14  | 0.34  | 0.48  | 0.94  | 0.65  | 0.21  | 0.27  | 0.74  | 0.15  |
| Control Delay        | 27.6  | 36.9  | 5.8   | 26.9  | 43.0  | 11.1  | 51.7  | 19.0  | 2.7   | 10.8  | 29.3  | 1.1   |
| 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          | 27.6  | 36.9  | 5.8   | 26.9  | 43.0  | 11.1  | 51.7  | 19.0  | 2.7   | 10.8  | 29.3  | 1.1   |
| LOS                  | C     | D     | A     | C     | D     | B     | D     | B     | A     | B     | C     | A     |
| Approach Delay       |       | 23.9  |       |       | 22.0  |       |       | 25.8  |       |       | 25.4  |       |
| Approach LOS         |       | C     |       |       | C     |       |       | C     |       |       | C     |       |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 88.3  
 Natural Cycle: 65  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.94  
 Intersection Signal Delay: 25.1  
 Intersection Capacity Utilization 74.2%  
 Analysis Period (min) 15  
 Intersection LOS: C  
 ICU Level of Service D

Splits and Phases: 2: Meridian Rd & Eastonville Rd



Timings  
25: Golden Sage Rd & Woodmen Rd

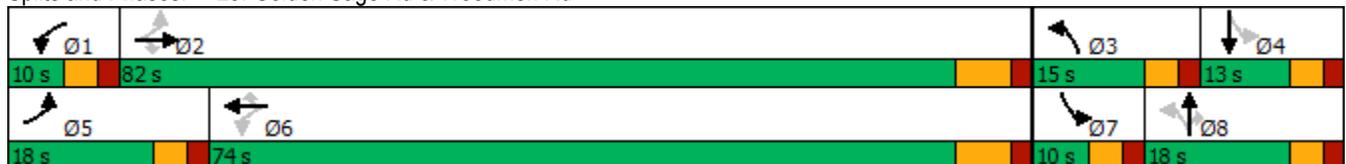
Short-Term Total Traffic WITHOUT Right-in Access  
PM Peak Hour

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   |  |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--|
| Lane Configurations  |       |       |       |       |       |       |       |       |       |       |       |  |
| Traffic Volume (vph) | 170   | 1505  | 85    | 15    | 1115  | 24    | 106   | 20    | 16    | 30    | 10    |  |
| Future Volume (vph)  | 170   | 1505  | 85    | 15    | 1115  | 24    | 106   | 20    | 16    | 30    | 10    |  |
| Turn Type            | pm+pt | NA    | Perm  | pm+pt | NA    | Perm  | pm+pt | NA    | Perm  | pm+pt | NA    |  |
| Protected Phases     | 5     | 2     |       | 1     | 6     |       | 3     | 8     |       | 7     | 4     |  |
| Permitted Phases     | 2     |       | 2     | 6     |       | 6     | 8     |       | 8     | 4     |       |  |
| 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)      | 18.0  | 82.0  | 82.0  | 10.0  | 74.0  | 74.0  | 15.0  | 18.0  | 18.0  | 10.0  | 13.0  |  |
| Total Split (%)      | 15.0% | 68.3% | 68.3% | 8.3%  | 61.7% | 61.7% | 12.5% | 15.0% | 15.0% | 8.3%  | 10.8% |  |
| 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   |  |
| Recall Mode          | None  | Min   | Min   | None  | Min   | Min   | None  | None  | None  | None  | None  |  |
| Act Effct Green (s)  | 57.5  | 52.3  | 52.3  | 48.8  | 40.2  | 40.2  | 19.0  | 13.5  | 13.5  | 12.5  | 7.9   |  |
| Actuated g/C Ratio   | 0.68  | 0.62  | 0.62  | 0.57  | 0.47  | 0.47  | 0.22  | 0.16  | 0.16  | 0.15  | 0.09  |  |
| v/c Ratio            | 0.48  | 0.70  | 0.09  | 0.07  | 0.68  | 0.03  | 0.41  | 0.07  | 0.04  | 0.14  | 0.57  |  |
| Control Delay        | 10.5  | 14.6  | 1.3   | 5.9   | 19.4  | 0.1   | 36.6  | 40.7  | 0.2   | 33.4  | 18.5  |  |
| 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          | 10.5  | 14.6  | 1.3   | 5.9   | 19.4  | 0.1   | 36.6  | 40.7  | 0.2   | 33.4  | 18.5  |  |
| LOS                  | B     | B     | A     | A     | B     | A     | D     | D     | A     | C     | B     |  |
| Approach Delay       |       | 13.5  |       |       | 18.8  |       |       | 33.0  |       |       | 20.9  |  |
| Approach LOS         |       | B     |       |       | B     |       |       | C     |       |       | C     |  |

Intersection Summary

|   |                        |
|---|------------------------|
| Cycle Length: 120                       |                        |
| Actuated Cycle Length: 84.9             |                        |
| Natural Cycle: 65                       |                        |
| Control Type: Semi Act-Uncoord          |                        |
| Maximum v/c Ratio: 0.70                 |                        |
| Intersection Signal Delay: 16.7         | Intersection LOS: B    |
| Intersection Capacity Utilization 76.2% | ICU Level of Service D |
| Analysis Period (min) 15                |                        |

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



| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 4.4  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      |      | ↔    |      |      | ↔    |      |      | ↔    | ↔    |      | ↔    |      |
| Traffic Vol, veh/h       | 0    | 0    | 0    | 187  | 0    | 0    | 0    | 0    | 215  | 0    | 0    | 0    |
| Future Vol, veh/h        | 0    | 0    | 0    | 187  | 0    | 0    | 0    | 0    | 215  | 0    | 0    | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | -    | -    | 0    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 95   | 95   | 95   | 95   | 92   | 95   | 92   | 95   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 0    | 0    | 197  | 0    | 0    | 0    | 0    | 226  | 0    | 0    | 0    |

| Major/Minor          | Minor2 |       | Minor1 |       | Major1 |   |       | Major2 |   |       |   |   |
|----------------------|--------|-------|--------|-------|--------|---|-------|--------|---|-------|---|---|
| Conflicting Flow All | -      | 227   | 1      | 1     | 1      | - | 1     | 0      | 0 | 226   | 0 | 0 |
| Stage 1              | -      | 1     | -      | 0     | 0      | - | -     | -      | - | -     | - | - |
| Stage 2              | -      | 226   | -      | 1     | 1      | - | -     | -      | - | -     | - | - |
| Critical Hdwy        | -      | 6.52  | 6.22   | 7.12  | 6.52   | - | 4.12  | -      | - | 4.12  | - | - |
| Critical Hdwy Stg 1  | -      | 5.52  | -      | 6.12  | 5.52   | - | -     | -      | - | -     | - | - |
| Critical Hdwy Stg 2  | -      | 5.52  | -      | 6.12  | 5.52   | - | -     | -      | - | -     | - | - |
| Follow-up Hdwy       | -      | 4.018 | 3.318  | 3.518 | 4.018  | - | 2.218 | -      | - | 2.218 | - | - |
| Pot Cap-1 Maneuver   | 0      | 672   | 1084   | 1022  | 895    | 0 | 1622  | -      | - | 1342  | - | - |
| Stage 1              | 0      | 895   | -      | -     | -      | 0 | -     | -      | - | -     | - | - |
| Stage 2              | 0      | 717   | -      | 1022  | 895    | 0 | -     | -      | - | -     | - | - |
| Platoon blocked, %   |        |       |        |       |        |   |       |        |   |       |   |   |
| Mov Cap-1 Maneuver   | -      | 672   | 1084   | 1022  | 895    | - | 1622  | -      | - | 1342  | - | - |
| Mov Cap-2 Maneuver   | -      | 672   | -      | 1022  | 895    | - | -     | -      | - | -     | - | - |
| Stage 1              | -      | 895   | -      | -     | -      | - | -     | -      | - | -     | - | - |
| Stage 2              | -      | 717   | -      | 1022  | 895    | - | -     | -      | - | -     | - | - |

| Approach             | EB |  | WB  |  | NB |  |  | SB |  |  |
|----------------------|----|--|-----|--|----|--|--|----|--|--|
| HCM Control Delay, s | 0  |  | 9.4 |  | 0  |  |  | 0  |  |  |
| HCM LOS              | A  |  | A   |  |    |  |  |    |  |  |

| Minor Lane/Major Mvmt | NBL  | NBT | NBR | EBLn1WBLn1 | SBL   | SBT  | SBR |
|-----------------------|------|-----|-----|------------|-------|------|-----|
| Capacity (veh/h)      | 1622 | -   | -   | -          | 1022  | 1342 | -   |
| HCM Lane V/C Ratio    | -    | -   | -   | -          | 0.193 | -    | -   |
| HCM Control Delay (s) | 0    | -   | -   | 0          | 9.4   | 0    | -   |
| HCM Lane LOS          | A    | -   | -   | A          | A     | A    | -   |
| HCM 95th %tile Q(veh) | 0    | -   | -   | -          | 0.7   | 0    | -   |

## SimTraffic Performance Report

## 87: Meridian Rd &amp; Site RIRO Performance by movement Interval #1 5:00

| Movement         | EBR | NBT | SBT | SBR | All |
|------------------|-----|-----|-----|-----|-----|
| Stop Del/Veh (s) | 8.5 | 2.0 | 0.1 | 0.1 | 1.8 |

## 87: Meridian Rd &amp; Site RIRO Performance by movement Interval #2 5:15

| Movement         | EBR | NBT | SBT | SBR | All |
|------------------|-----|-----|-----|-----|-----|
| Stop Del/Veh (s) | 7.9 | 1.8 | 0.1 | 0.1 | 1.7 |

## 87: Meridian Rd &amp; Site RIRO Performance by movement Interval #3 5:30

| Movement         | EBR | NBT | SBT | SBR | All |
|------------------|-----|-----|-----|-----|-----|
| Stop Del/Veh (s) | 9.4 | 1.9 | 0.1 | 0.1 | 1.8 |

## 87: Meridian Rd &amp; Site RIRO Performance by movement Interval #4 5:45

| Movement         | EBR | NBT | SBT | SBR | All |
|------------------|-----|-----|-----|-----|-----|
| Stop Del/Veh (s) | 6.7 | 2.1 | 0.2 | 0.1 | 1.8 |

## 87: Meridian Rd &amp; Site RIRO Performance by movement Entire Run

| Movement         | EBR | NBT | SBT | SBR | All |
|------------------|-----|-----|-----|-----|-----|
| Stop Del/Veh (s) | 8.1 | 2.0 | 0.1 | 0.1 | 1.8 |

## Total Zone Performance By Interval

| Interval Start   | 5:00 | 5:15 | 5:30 | 5:45 | All  |
|------------------|------|------|------|------|------|
| Stop Del/Veh (s) | 50.4 | 72.0 | 40.5 | 40.3 | 82.2 |

Timings  
1: Meridian Rd & Woodmen Rd

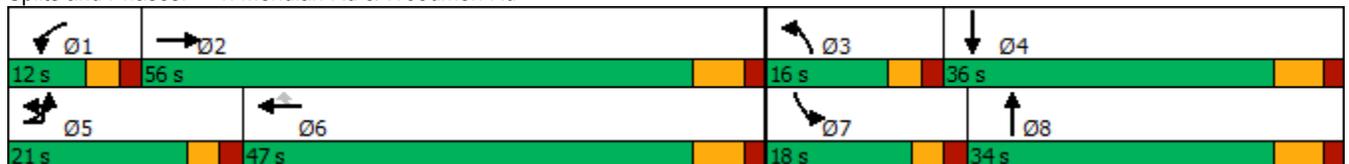
Short-Term Total Traffic WITH Right-in Access  
AM Peak Hour

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       |       |       |       |       |       |       |       |       |       |       |       |
| Traffic Volume (vph) | 286   | 645   | 100   | 100   | 852   | 69    | 212   | 319   | 50    | 241   | 621   | 842   |
| Future Volume (vph)  | 286   | 645   | 100   | 100   | 852   | 69    | 212   | 319   | 50    | 241   | 621   | 842   |
| Turn Type            | Prot  | NA    | Free  | Prot  | NA    | Perm  | Prot  | NA    | Free  | Prot  | NA    | Free  |
| Protected Phases     | 5     | 2     |       | 1     | 6     |       | 3     | 8     |       | 7     | 4     |       |
| Permitted Phases     |       |       | Free  |       |       | 6     |       |       | Free  |       |       | Free  |
| Detector Phase       | 5     | 2     |       | 1     | 6     | 6     | 3     | 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   |       |
| Minimum Split (s)    | 10.0  | 11.5  |       | 10.0  | 11.5  | 11.5  | 10.0  | 11.5  |       | 10.0  | 11.5  |       |
| Total Split (s)      | 21.0  | 56.0  |       | 12.0  | 47.0  | 47.0  | 16.0  | 34.0  |       | 18.0  | 36.0  |       |
| Total Split (%)      | 17.5% | 46.7% |       | 10.0% | 39.2% | 39.2% | 13.3% | 28.3% |       | 15.0% | 30.0% |       |
| Yellow Time (s)      | 3.0   | 4.5   |       | 3.0   | 4.5   | 4.5   | 3.0   | 4.5   |       | 3.0   | 4.5   |       |
| All-Red Time (s)     | 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  |       |
| Total Lost Time (s)  | 4.0   | 5.5   |       | 4.0   | 5.5   | 5.5   | 4.0   | 5.5   |       | 4.0   | 5.5   |       |
| Lead/Lag             | Lead  | Lag   |       | Lead  | Lag   | Lag   | Lead  | Lag   |       | Lead  | Lag   |       |
| Lead-Lag Optimize?   | Yes   | Yes   |       | Yes   | Yes   | Yes   | Yes   | Yes   |       | Yes   | Yes   |       |
| Recall Mode          | None  | Min   |       | None  | Min   | Min   | None  | None  |       | None  | None  |       |
| Act Effct Green (s)  | 14.9  | 40.3  | 104.4 | 8.0   | 33.4  | 33.4  | 11.4  | 23.8  | 104.4 | 12.8  | 25.2  | 104.4 |
| Actuated g/C Ratio   | 0.14  | 0.39  | 1.00  | 0.08  | 0.32  | 0.32  | 0.11  | 0.23  | 1.00  | 0.12  | 0.24  | 1.00  |
| v/c Ratio            | 0.62  | 0.48  | 0.06  | 0.39  | 0.77  | 0.11  | 0.57  | 0.40  | 0.03  | 0.58  | 0.74  | 0.54  |
| Control Delay        | 50.1  | 25.5  | 0.1   | 54.8  | 37.7  | 0.4   | 53.6  | 37.2  | 0.0   | 51.8  | 43.5  | 1.3   |
| 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          | 50.1  | 25.5  | 0.1   | 54.8  | 37.7  | 0.4   | 53.6  | 37.2  | 0.0   | 51.8  | 43.5  | 1.3   |
| LOS                  | D     | C     | A     | D     | D     | A     | D     | D     | A     | D     | D     | A     |
| Approach Delay       |       | 30.1  |       |       | 36.9  |       |       | 40.0  |       |       | 23.9  |       |
| Approach LOS         |       | C     |       |       | D     |       |       | D     |       |       | C     |       |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 104.4  
 Natural Cycle: 65  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.77  
 Intersection Signal Delay: 30.6  
 Intersection LOS: C  
 Intersection Capacity Utilization 71.1%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 1: Meridian Rd & Woodmen Rd



Timings  
2: Meridian Rd & Eastonville Rd

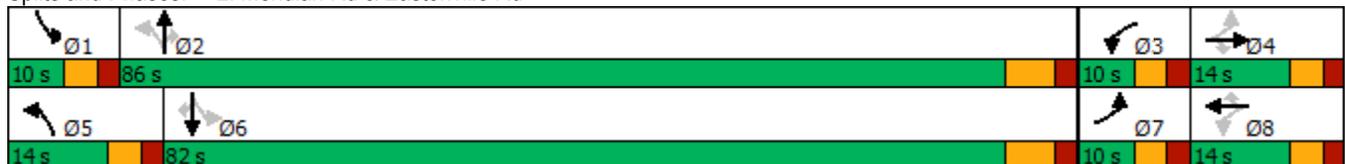
Short-Term Total Traffic WITH Right-in Access  
AM Peak Hour

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       |       |       |       |       |       |       |       |       |       |       |       |
| Traffic Volume (vph) | 113   | 42    | 89    | 75    | 45    | 75    | 117   | 482   | 75    | 90    | 1472  | 64    |
| Future Volume (vph)  | 113   | 42    | 89    | 75    | 45    | 75    | 117   | 482   | 75    | 90    | 1472  | 64    |
| Turn Type            | pm+pt | NA    | Perm  |
| Protected Phases     | 7     | 4     |       | 3     | 8     |       | 5     | 2     |       | 1     | 6     |       |
| Permitted Phases     | 4     |       | 4     | 8     |       | 8     | 2     |       | 2     | 6     |       | 6     |
| Detector Phase       | 7     | 4     | 4     | 3     | 8     | 8     | 5     | 2     | 2     | 1     | 6     | 6     |
| 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   | 5.0   |
| Minimum Split (s)    | 10.0  | 10.0  | 10.0  | 10.0  | 10.0  | 10.0  | 10.0  | 11.5  | 11.5  | 10.0  | 11.5  | 11.5  |
| Total Split (s)      | 10.0  | 14.0  | 14.0  | 10.0  | 14.0  | 14.0  | 14.0  | 86.0  | 86.0  | 10.0  | 82.0  | 82.0  |
| Total Split (%)      | 8.3%  | 11.7% | 11.7% | 8.3%  | 11.7% | 11.7% | 11.7% | 71.7% | 71.7% | 8.3%  | 68.3% | 68.3% |
| Yellow Time (s)      | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.5   | 4.5   | 3.0   | 4.5   | 4.5   |
| 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   | 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  | -1.0  |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 5.5   | 5.5   | 4.0   | 5.5   | 5.5   |
| Lead/Lag             | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?   | Yes   |
| Recall Mode          | None  | Min   | Min   | None  | Min   | Min   |
| Act Effct Green (s)  | 13.1  | 9.0   | 9.0   | 13.1  | 9.0   | 9.0   | 64.7  | 57.9  | 57.9  | 56.8  | 48.5  | 48.5  |
| Actuated g/C Ratio   | 0.15  | 0.10  | 0.10  | 0.15  | 0.10  | 0.10  | 0.75  | 0.67  | 0.67  | 0.66  | 0.57  | 0.57  |
| v/c Ratio            | 0.26  | 0.23  | 0.34  | 0.33  | 0.24  | 0.29  | 0.40  | 0.21  | 0.07  | 0.15  | 0.75  | 0.07  |
| Control Delay        | 35.2  | 45.8  | 8.0   | 38.8  | 46.1  | 5.2   | 12.8  | 8.4   | 0.8   | 4.9   | 17.9  | 0.6   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 35.2  | 45.8  | 8.0   | 38.8  | 46.1  | 5.2   | 12.8  | 8.4   | 0.8   | 4.9   | 17.9  | 0.6   |
| LOS                  | D     | D     | A     | D     | D     | A     | B     | A     | A     | A     | B     | A     |
| Approach Delay       |       | 27.1  |       |       | 27.5  |       |       | 8.3   |       |       | 16.5  |       |
| Approach LOS         |       | C     |       |       | C     |       |       | A     |       |       | B     |       |

Intersection Summary

|   |                        |
|---|------------------------|
| Cycle Length: 120                       |                        |
| Actuated Cycle Length: 85.8             |                        |
| Natural Cycle: 65                       |                        |
| Control Type: Actuated-Uncoordinated    |                        |
| Maximum v/c Ratio: 0.75                 |                        |
| Intersection Signal Delay: 16.2         | Intersection LOS: B    |
| Intersection Capacity Utilization 69.2% | ICU Level of Service C |
| Analysis Period (min) 15                |                        |

Splits and Phases: 2: Meridian Rd & Eastonville Rd



Timings  
25: Golden Sage Rd & Woodmen Rd

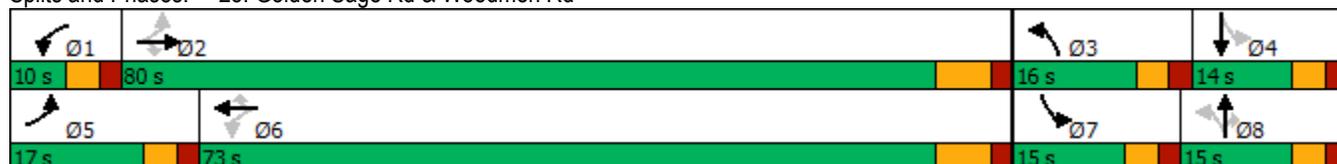
Short-Term Total Traffic WITH Right-in Access  
AM Peak Hour

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       |       |       |       |       |       |       |       |       |       |       |
| Traffic Volume (vph) | 89    | 826   | 38    | 7     | 1680  | 24    | 132   | 10    | 4     | 27    | 7     |
| Future Volume (vph)  | 89    | 826   | 38    | 7     | 1680  | 24    | 132   | 10    | 4     | 27    | 7     |
| Turn Type            | pm+pt | NA    | Perm  | pm+pt | NA    | Perm  | pm+pt | NA    | Perm  | pm+pt | NA    |
| Protected Phases     | 5     | 2     |       | 1     | 6     |       | 3     | 8     |       | 7     | 4     |
| Permitted Phases     | 2     |       | 2     | 6     |       | 6     | 8     |       | 8     | 4     |       |
| 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)      | 17.0  | 80.0  | 80.0  | 10.0  | 73.0  | 73.0  | 16.0  | 15.0  | 15.0  | 15.0  | 14.0  |
| Total Split (%)      | 14.2% | 66.7% | 66.7% | 8.3%  | 60.8% | 60.8% | 13.3% | 12.5% | 12.5% | 12.5% | 11.7% |
| 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   |
| Recall Mode          | None  | Min   | Min   | None  | Min   | Min   | None  | None  | None  | None  | None  |
| Act Effct Green (s)  | 74.0  | 70.2  | 70.2  | 66.7  | 60.2  | 60.2  | 21.1  | 15.9  | 15.9  | 18.2  | 8.6   |
| Actuated g/C Ratio   | 0.70  | 0.66  | 0.66  | 0.63  | 0.57  | 0.57  | 0.20  | 0.15  | 0.15  | 0.17  | 0.08  |
| v/c Ratio            | 0.38  | 0.36  | 0.04  | 0.02  | 0.86  | 0.03  | 0.60  | 0.04  | 0.01  | 0.10  | 0.70  |
| Control Delay        | 15.5  | 8.8   | 0.1   | 5.4   | 25.9  | 0.0   | 52.2  | 49.4  | 0.0   | 38.1  | 31.2  |
| 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          | 15.5  | 8.8   | 0.1   | 5.4   | 25.9  | 0.0   | 52.2  | 49.4  | 0.0   | 38.1  | 31.2  |
| LOS                  | B     | A     | A     | A     | C     | A     | D     | D     | A     | D     | C     |
| Approach Delay       |       | 9.1   |       |       | 25.5  |       |       | 50.7  |       |       | 32.1  |
| Approach LOS         |       | A     |       |       | C     |       |       | D     |       |       | C     |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 106.3  
 Natural Cycle: 75  
 Control Type: Semi Act-Uncoord  
 Maximum v/c Ratio: 0.86  
 Intersection Signal Delay: 22.0  
 Intersection Capacity Utilization 84.1%  
 Analysis Period (min) 15  
 Intersection LOS: C  
 ICU Level of Service E

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



HCM 6th TWSC  
 26: Golden Sage Rd & Woodmen Frontage Rd

Short-Term Total Traffic WITH Right-in Access  
 AM Peak Hour

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 5.7  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      |      | ↔    |      |      | ↔    |      |      | ↔    | ↔    |      | ↔    |      |
| Traffic Vol, veh/h       | 0    | 0    | 0    | 195  | 0    | 0    | 0    | 0    | 123  | 0    | 0    | 0    |
| Future Vol, veh/h        | 0    | 0    | 0    | 195  | 0    | 0    | 0    | 0    | 123  | 0    | 0    | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | -    | -    | 0    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 95   | 95   | 95   | 95   | 92   | 95   | 92   | 95   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 0    | 0    | 205  | 0    | 0    | 0    | 0    | 129  | 0    | 0    | 0    |

| Major/Minor          | Minor2 |       | Minor1 |       | Major1 |   |       | Major2 |   |       |   |   |
|----------------------|--------|-------|--------|-------|--------|---|-------|--------|---|-------|---|---|
| Conflicting Flow All | -      | 130   | 1      | 1     | 1      | - | 1     | 0      | 0 | 129   | 0 | 0 |
| Stage 1              | -      | 1     | -      | 0     | 0      | - | -     | -      | - | -     | - | - |
| Stage 2              | -      | 129   | -      | 1     | 1      | - | -     | -      | - | -     | - | - |
| Critical Hdwy        | -      | 6.52  | 6.22   | 7.12  | 6.52   | - | 4.12  | -      | - | 4.12  | - | - |
| Critical Hdwy Stg 1  | -      | 5.52  | -      | 6.12  | 5.52   | - | -     | -      | - | -     | - | - |
| Critical Hdwy Stg 2  | -      | 5.52  | -      | 6.12  | 5.52   | - | -     | -      | - | -     | - | - |
| Follow-up Hdwy       | -      | 4.018 | 3.318  | 3.518 | 4.018  | - | 2.218 | -      | - | 2.218 | - | - |
| Pot Cap-1 Maneuver   | 0      | 761   | 1084   | 1022  | 895    | 0 | 1622  | -      | - | 1457  | - | - |
| Stage 1              | 0      | 895   | -      | -     | -      | 0 | -     | -      | - | -     | - | - |
| Stage 2              | 0      | 789   | -      | 1022  | 895    | 0 | -     | -      | - | -     | - | - |
| Platoon blocked, %   | -      | -     | -      | -     | -      | - | -     | -      | - | -     | - | - |
| Mov Cap-1 Maneuver   | -      | 761   | 1084   | 1022  | 895    | - | 1622  | -      | - | 1457  | - | - |
| Mov Cap-2 Maneuver   | -      | 761   | -      | 1022  | 895    | - | -     | -      | - | -     | - | - |
| Stage 1              | -      | 895   | -      | -     | -      | - | -     | -      | - | -     | - | - |
| Stage 2              | -      | 789   | -      | 1022  | 895    | - | -     | -      | - | -     | - | - |

| Approach             | EB |  | WB  |  | NB |  | SB |  |
|----------------------|----|--|-----|--|----|--|----|--|
| HCM Control Delay, s | 0  |  | 9.4 |  | 0  |  | 0  |  |
| HCM LOS              | A  |  | A   |  |    |  |    |  |

| Minor Lane/Major Mvmt | NBL  | NBT | NBR | EBLn1WBLn1 | SBL  | SBT | SBR |
|-----------------------|------|-----|-----|------------|------|-----|-----|
| Capacity (veh/h)      | 1622 | -   | -   | - 1022     | 1457 | -   | -   |
| HCM Lane V/C Ratio    | -    | -   | -   | - 0.201    | -    | -   | -   |
| HCM Control Delay (s) | 0    | -   | -   | 0 9.4      | 0    | -   | -   |
| HCM Lane LOS          | A    | -   | -   | A A        | A    | -   | -   |
| HCM 95th %tile Q(veh) | 0    | -   | -   | - 0.7      | 0    | -   | -   |

## SimTraffic Performance Report

## 87: Meridian Rd &amp; Site RIRO Performance by movement Interval #1 7:00

| Movement         | EBR  | NBT | SBT | SBR | All |
|------------------|------|-----|-----|-----|-----|
| Stop Del/Veh (s) | 10.6 | 0.5 | 0.1 | 0.1 | 0.9 |

## 87: Meridian Rd &amp; Site RIRO Performance by movement Interval #2 7:15

| Movement         | EBR  | NBT | SBT | SBR | All |
|------------------|------|-----|-----|-----|-----|
| Stop Del/Veh (s) | 12.7 | 0.4 | 0.1 | 0.0 | 0.9 |

## 87: Meridian Rd &amp; Site RIRO Performance by movement Interval #3 7:30

| Movement         | EBR  | NBT | SBT | SBR | All |
|------------------|------|-----|-----|-----|-----|
| Stop Del/Veh (s) | 11.2 | 0.4 | 0.1 | 0.0 | 0.9 |

## 87: Meridian Rd &amp; Site RIRO Performance by movement Interval #4 7:45

| Movement         | EBR | NBT | SBT | SBR | All |
|------------------|-----|-----|-----|-----|-----|
| Stop Del/Veh (s) | 9.9 | 0.4 | 0.1 | 0.1 | 0.7 |

## 87: Meridian Rd &amp; Site RIRO Performance by movement Entire Run

| Movement         | EBR  | NBT | SBT | SBR | All |
|------------------|------|-----|-----|-----|-----|
| Stop Del/Veh (s) | 11.3 | 0.4 | 0.1 | 0.1 | 0.9 |

## Total Zone Performance By Interval

| Interval Start   | 7:00 | 7:15 | 7:30 | 7:45 | All   |
|------------------|------|------|------|------|-------|
| Stop Del/Veh (s) | 58.7 | 42.2 | 61.8 | 47.8 | 191.3 |

Timings  
1: Meridian Rd & Woodmen Rd

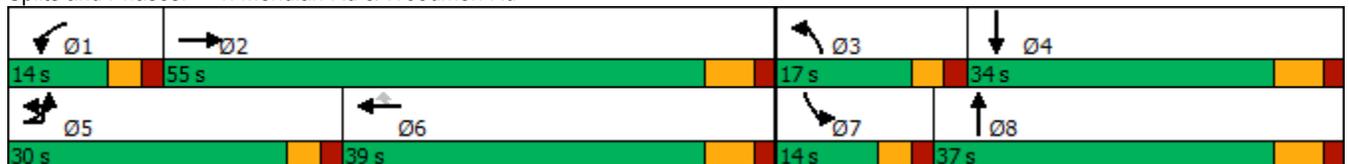
Short-Term Total Traffic WITH Right-in Access  
PM Peak Hour

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       |       |       |       |       |       |       |       |       |       |       |       |
| Traffic Volume (vph) | 612   | 669   | 200   | 150   | 753   | 116   | 279   | 767   | 175   | 225   | 566   | 398   |
| Future Volume (vph)  | 612   | 669   | 200   | 150   | 753   | 116   | 279   | 767   | 175   | 225   | 566   | 398   |
| Turn Type            | Prot  | NA    | Free  | Prot  | NA    | Perm  | Prot  | NA    | Free  | Prot  | NA    | Free  |
| Protected Phases     | 5     | 2     |       | 1     | 6     |       | 3     | 8     |       | 7     | 4     |       |
| Permitted Phases     |       |       | Free  |       |       | 6     |       |       | Free  |       |       | Free  |
| Detector Phase       | 5     | 2     |       | 1     | 6     | 6     | 3     | 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   |       |
| Minimum Split (s)    | 10.0  | 11.5  |       | 10.0  | 11.5  | 11.5  | 10.0  | 11.5  |       | 10.0  | 11.5  |       |
| Total Split (s)      | 30.0  | 55.0  |       | 14.0  | 39.0  | 39.0  | 17.0  | 37.0  |       | 14.0  | 34.0  |       |
| Total Split (%)      | 25.0% | 45.8% |       | 11.7% | 32.5% | 32.5% | 14.2% | 30.8% |       | 11.7% | 28.3% |       |
| Yellow Time (s)      | 3.0   | 4.5   |       | 3.0   | 4.5   | 4.5   | 3.0   | 4.5   |       | 3.0   | 4.5   |       |
| All-Red Time (s)     | 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  |       |
| Total Lost Time (s)  | 4.0   | 5.5   |       | 4.0   | 5.5   | 5.5   | 4.0   | 5.5   |       | 4.0   | 5.5   |       |
| Lead/Lag             | Lead  | Lag   |       | Lead  | Lag   | Lag   | Lead  | Lag   |       | Lead  | Lag   |       |
| Lead-Lag Optimize?   | Yes   | Yes   |       | Yes   | Yes   | Yes   | Yes   | Yes   |       | Yes   | Yes   |       |
| Recall Mode          | None  | Min   |       | None  | Min   | Min   | None  | None  |       | None  | None  |       |
| Act Effct Green (s)  | 24.9  | 45.8  | 114.3 | 9.7   | 30.6  | 30.6  | 12.7  | 29.6  | 114.3 | 10.1  | 27.0  | 114.3 |
| Actuated g/C Ratio   | 0.22  | 0.40  | 1.00  | 0.08  | 0.27  | 0.27  | 0.11  | 0.26  | 1.00  | 0.09  | 0.24  | 1.00  |
| v/c Ratio            | 0.86  | 0.48  | 0.13  | 0.53  | 0.81  | 0.22  | 0.75  | 0.85  | 0.11  | 0.76  | 0.69  | 0.26  |
| Control Delay        | 56.8  | 26.9  | 0.2   | 58.6  | 47.2  | 2.3   | 63.2  | 51.1  | 0.1   | 69.2  | 45.5  | 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          | 56.8  | 26.9  | 0.2   | 58.6  | 47.2  | 2.3   | 63.2  | 51.1  | 0.1   | 69.2  | 45.5  | 0.4   |
| LOS                  | E     | C     | A     | E     | D     | A     | E     | D     | A     | E     | D     | A     |
| Approach Delay       |       | 35.9  |       |       | 43.8  |       |       | 46.5  |       |       | 34.9  |       |
| Approach LOS         |       | D     |       |       | D     |       |       | D     |       |       | C     |       |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 114.3  
 Natural Cycle: 75  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.86  
 Intersection Signal Delay: 39.9  
 Intersection LOS: D  
 Intersection Capacity Utilization 82.3%  
 ICU Level of Service E  
 Analysis Period (min) 15

Splits and Phases: 1: Meridian Rd & Woodmen Rd



Timings  
2: Meridian Rd & Eastonville Rd

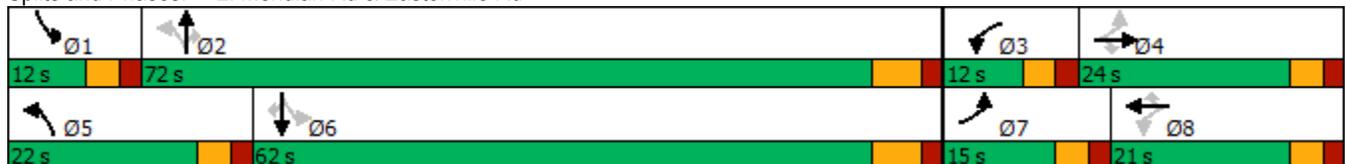
Short-Term Total Traffic WITH Right-in Access  
PM Peak Hour

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       |       |       |       |       |       |       |       |       |       |       |       |
| Traffic Volume (vph) | 262   | 113   | 134   | 40    | 68    | 150   | 187   | 1133  | 175   | 75    | 895   | 77    |
| Future Volume (vph)  | 262   | 113   | 134   | 40    | 68    | 150   | 187   | 1133  | 175   | 75    | 895   | 77    |
| Turn Type            | pm+pt | NA    | Perm  |
| Protected Phases     | 7     | 4     |       | 3     | 8     |       | 5     | 2     |       | 1     | 6     |       |
| Permitted Phases     | 4     |       | 4     | 8     |       | 8     | 2     |       | 2     | 6     |       | 6     |
| Detector Phase       | 7     | 4     | 4     | 3     | 8     | 8     | 5     | 2     | 2     | 1     | 6     | 6     |
| 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   | 5.0   |
| Minimum Split (s)    | 10.0  | 10.0  | 10.0  | 10.0  | 10.0  | 10.0  | 10.0  | 11.5  | 11.5  | 10.0  | 11.5  | 11.5  |
| Total Split (s)      | 15.0  | 24.0  | 24.0  | 12.0  | 21.0  | 21.0  | 22.0  | 72.0  | 72.0  | 12.0  | 62.0  | 62.0  |
| Total Split (%)      | 12.5% | 20.0% | 20.0% | 10.0% | 17.5% | 17.5% | 18.3% | 60.0% | 60.0% | 10.0% | 51.7% | 51.7% |
| Yellow Time (s)      | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.5   | 4.5   | 3.0   | 4.5   | 4.5   |
| 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   | 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  | -1.0  |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 5.5   | 5.5   | 4.0   | 5.5   | 5.5   |
| Lead/Lag             | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?   | Yes   |
| Recall Mode          | None  | Min   | Min   | None  | Min   | Min   |
| Act Effct Green (s)  | 24.4  | 18.4  | 18.4  | 17.5  | 9.9   | 9.9   | 49.1  | 39.1  | 39.1  | 41.9  | 32.6  | 32.6  |
| Actuated g/C Ratio   | 0.29  | 0.22  | 0.22  | 0.21  | 0.12  | 0.12  | 0.59  | 0.47  | 0.47  | 0.51  | 0.39  | 0.39  |
| v/c Ratio            | 0.36  | 0.29  | 0.29  | 0.13  | 0.32  | 0.47  | 0.51  | 0.69  | 0.22  | 0.28  | 0.65  | 0.11  |
| Control Delay        | 25.5  | 35.2  | 5.6   | 25.6  | 41.0  | 10.7  | 12.3  | 20.4  | 2.8   | 10.2  | 22.8  | 0.3   |
| 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          | 25.5  | 35.2  | 5.6   | 25.6  | 41.0  | 10.7  | 12.3  | 20.4  | 2.8   | 10.2  | 22.8  | 0.3   |
| LOS                  | C     | D     | A     | C     | D     | B     | B     | C     | A     | B     | C     | A     |
| Approach Delay       |       | 22.5  |       |       | 21.0  |       |       | 17.2  |       |       | 20.2  |       |
| Approach LOS         |       | C     |       |       | C     |       |       | B     |       |       | C     |       |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 82.8  
 Natural Cycle: 60  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.69  
 Intersection Signal Delay: 19.3  
 Intersection Capacity Utilization 60.9%  
 Analysis Period (min) 15  
 Intersection LOS: B  
 ICU Level of Service B

Splits and Phases: 2: Meridian Rd & Eastonville Rd



Timings  
25: Golden Sage Rd & Woodmen Rd

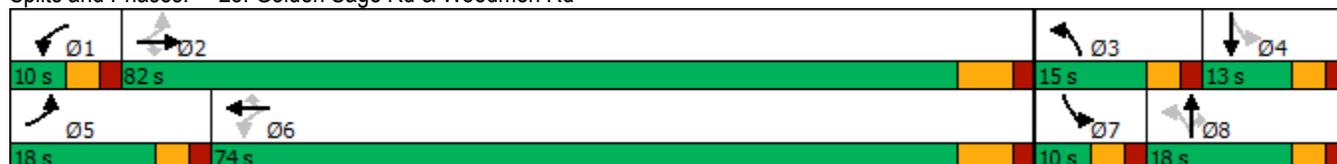
Short-Term Total Traffic WITH Right-in Access  
PM Peak Hour

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       |       |       |       |       |       |       |       |       |       |       |
| Traffic Volume (vph) | 160   | 1515  | 85    | 15    | 1115  | 24    | 106   | 20    | 16    | 30    | 10    |
| Future Volume (vph)  | 160   | 1515  | 85    | 15    | 1115  | 24    | 106   | 20    | 16    | 30    | 10    |
| Turn Type            | pm+pt | NA    | Perm  | pm+pt | NA    | Perm  | pm+pt | NA    | Perm  | pm+pt | NA    |
| Protected Phases     | 5     | 2     |       | 1     | 6     |       | 3     | 8     |       | 7     | 4     |
| Permitted Phases     | 2     |       | 2     | 6     |       | 6     | 8     |       | 8     | 4     |       |
| 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)      | 18.0  | 82.0  | 82.0  | 10.0  | 74.0  | 74.0  | 15.0  | 18.0  | 18.0  | 10.0  | 13.0  |
| Total Split (%)      | 15.0% | 68.3% | 68.3% | 8.3%  | 61.7% | 61.7% | 12.5% | 15.0% | 15.0% | 8.3%  | 10.8% |
| 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   |
| Recall Mode          | None  | Min   | Min   | None  | Min   | Min   | None  | None  | None  | None  | None  |
| Act Effct Green (s)  | 57.5  | 52.3  | 52.3  | 49.1  | 40.4  | 40.4  | 19.0  | 13.5  | 13.5  | 12.5  | 7.9   |
| Actuated g/C Ratio   | 0.68  | 0.62  | 0.62  | 0.58  | 0.48  | 0.48  | 0.22  | 0.16  | 0.16  | 0.15  | 0.09  |
| v/c Ratio            | 0.46  | 0.71  | 0.09  | 0.07  | 0.68  | 0.03  | 0.41  | 0.07  | 0.04  | 0.14  | 0.57  |
| Control Delay        | 9.4   | 14.7  | 1.3   | 5.9   | 19.1  | 0.1   | 36.7  | 40.9  | 0.2   | 33.5  | 18.5  |
| 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          | 9.4   | 14.7  | 1.3   | 5.9   | 19.1  | 0.1   | 36.7  | 40.9  | 0.2   | 33.5  | 18.5  |
| LOS                  | A     | B     | A     | A     | B     | A     | D     | D     | A     | C     | B     |
| Approach Delay       |       | 13.5  |       |       | 18.5  |       |       | 33.1  |       |       | 20.9  |
| Approach LOS         |       | B     |       |       | B     |       |       | C     |       |       | C     |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 84.9  
 Natural Cycle: 65  
 Control Type: Semi Act-Uncoord  
 Maximum v/c Ratio: 0.71  
 Intersection Signal Delay: 16.6  
 Intersection LOS: B  
 Intersection Capacity Utilization 76.5%  
 ICU Level of Service D  
 Analysis Period (min) 15

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



HCM 6th TWSC  
26: Golden Sage Rd & Woodmen Frontage Rd

Short-Term Total Traffic WITH Right-in Access  
PM Peak Hour

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 4.5  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      |      | ↔    |      |      | ↔    |      |      | ↔    | ↔    |      | ↔    |      |
| Traffic Vol, veh/h       | 0    | 0    | 0    | 187  | 0    | 0    | 0    | 0    | 204  | 0    | 0    | 0    |
| Future Vol, veh/h        | 0    | 0    | 0    | 187  | 0    | 0    | 0    | 0    | 204  | 0    | 0    | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | -    | -    | 0    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 95   | 95   | 95   | 95   | 92   | 95   | 92   | 95   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 0    | 0    | 197  | 0    | 0    | 0    | 0    | 215  | 0    | 0    | 0    |

| Major/Minor          | Minor2 |       | Minor1 |       | Major1 |   |       | Major2 |   |       |   |   |
|----------------------|--------|-------|--------|-------|--------|---|-------|--------|---|-------|---|---|
| Conflicting Flow All | -      | 216   | 1      | 1     | 1      | - | 1     | 0      | 0 | 215   | 0 | 0 |
| Stage 1              | -      | 1     | -      | 0     | 0      | - | -     | -      | - | -     | - | - |
| Stage 2              | -      | 215   | -      | 1     | 1      | - | -     | -      | - | -     | - | - |
| Critical Hdwy        | -      | 6.52  | 6.22   | 7.12  | 6.52   | - | 4.12  | -      | - | 4.12  | - | - |
| Critical Hdwy Stg 1  | -      | 5.52  | -      | 6.12  | 5.52   | - | -     | -      | - | -     | - | - |
| Critical Hdwy Stg 2  | -      | 5.52  | -      | 6.12  | 5.52   | - | -     | -      | - | -     | - | - |
| Follow-up Hdwy       | -      | 4.018 | 3.318  | 3.518 | 4.018  | - | 2.218 | -      | - | 2.218 | - | - |
| Pot Cap-1 Maneuver   | 0      | 682   | 1084   | 1022  | 895    | 0 | 1622  | -      | - | 1355  | - | - |
| Stage 1              | 0      | 895   | -      | -     | -      | 0 | -     | -      | - | -     | - | - |
| Stage 2              | 0      | 725   | -      | 1022  | 895    | 0 | -     | -      | - | -     | - | - |
| Platoon blocked, %   |        |       |        |       |        |   |       |        |   |       |   |   |
| Mov Cap-1 Maneuver   | -      | 682   | 1084   | 1022  | 895    | - | 1622  | -      | - | 1355  | - | - |
| Mov Cap-2 Maneuver   | -      | 682   | -      | 1022  | 895    | - | -     | -      | - | -     | - | - |
| Stage 1              | -      | 895   | -      | -     | -      | - | -     | -      | - | -     | - | - |
| Stage 2              | -      | 725   | -      | 1022  | 895    | - | -     | -      | - | -     | - | - |

| Approach             | EB |  | WB  |  | NB |  |  | SB |  |  |
|----------------------|----|--|-----|--|----|--|--|----|--|--|
| HCM Control Delay, s | 0  |  | 9.4 |  | 0  |  |  | 0  |  |  |
| HCM LOS              | A  |  | A   |  |    |  |  |    |  |  |

| Minor Lane/Major Mvmt | NBL  | NBT | NBR | EBLn1 | WBLn1 | SBL  | SBT | SBR |
|-----------------------|------|-----|-----|-------|-------|------|-----|-----|
| Capacity (veh/h)      | 1622 | -   | -   | -     | 1022  | 1355 | -   | -   |
| HCM Lane V/C Ratio    | -    | -   | -   | -     | 0.193 | -    | -   | -   |
| HCM Control Delay (s) | 0    | -   | -   | 0     | 9.4   | 0    | -   | -   |
| HCM Lane LOS          | A    | -   | -   | A     | A     | A    | -   | -   |
| HCM 95th %tile Q(veh) | 0    | -   | -   | -     | 0.7   | 0    | -   | -   |

## SimTraffic Performance Report

## 87: Meridian Rd &amp; Site RIRO Performance by movement Interval #1 5:00

| Movement         | EBR | NBT | SBT | SBR | All |
|------------------|-----|-----|-----|-----|-----|
| Stop Del/Veh (s) | 7.2 | 0.8 | 0.1 | 0.1 | 1.1 |

## 87: Meridian Rd &amp; Site RIRO Performance by movement Interval #2 5:15

| Movement         | EBR | NBT | SBT | SBR | All |
|------------------|-----|-----|-----|-----|-----|
| Stop Del/Veh (s) | 7.9 | 1.0 | 0.1 | 0.2 | 1.2 |

## 87: Meridian Rd &amp; Site RIRO Performance by movement Interval #3 5:30

| Movement         | EBR | NBT | SBT | SBR | All |
|------------------|-----|-----|-----|-----|-----|
| Stop Del/Veh (s) | 8.1 | 0.9 | 0.1 | 0.1 | 1.2 |

## 87: Meridian Rd &amp; Site RIRO Performance by movement Interval #4 5:45

| Movement         | EBR | NBT | SBT | SBR | All |
|------------------|-----|-----|-----|-----|-----|
| Stop Del/Veh (s) | 9.3 | 1.2 | 0.1 | 0.1 | 1.4 |

## 87: Meridian Rd &amp; Site RIRO Performance by movement Entire Run

| Movement         | EBR | NBT | SBT | SBR | All |
|------------------|-----|-----|-----|-----|-----|
| Stop Del/Veh (s) | 8.2 | 1.0 | 0.1 | 0.1 | 1.3 |

## Total Zone Performance By Interval

| Interval Start   | 5:00 | 5:15 | 5:30 | 5:45 | All  |
|------------------|------|------|------|------|------|
| Stop Del/Veh (s) | 27.5 | 50.1 | 31.4 | 36.3 | 62.0 |

Timings

2040 Background Traffic WITHOUT Right-in Access

1: Meridian Rd & Woodmen Rd

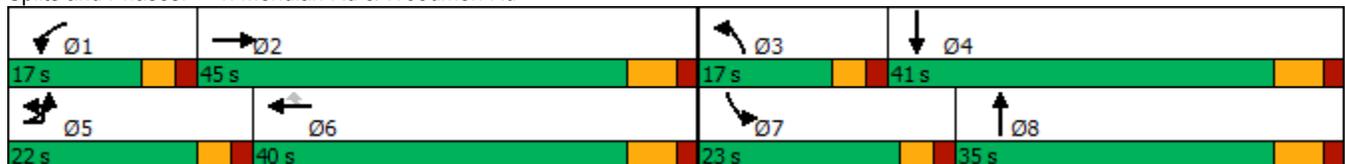
AM Peak Hour

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       |       |       |       |       |       |       |       |       |       |       |       |
| Traffic Volume (vph) | 450   | 550   | 175   | 150   | 850   | 150   | 250   | 350   | 100   | 250   | 900   | 925   |
| Future Volume (vph)  | 450   | 550   | 175   | 150   | 850   | 150   | 250   | 350   | 100   | 250   | 900   | 925   |
| Turn Type            | Prot  | NA    | Free  | Prot  | NA    | Perm  | Prot  | NA    | Free  | Prot  | NA    | Free  |
| Protected Phases     | 5     | 2     |       | 1     | 6     |       | 3     | 8     |       | 7     | 4     |       |
| Permitted Phases     |       |       | Free  |       |       | 6     |       |       | Free  |       |       | Free  |
| Detector Phase       | 5     | 2     |       | 1     | 6     | 6     | 3     | 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   |       |
| Minimum Split (s)    | 10.0  | 11.5  |       | 10.0  | 11.5  | 11.5  | 10.0  | 11.5  |       | 10.0  | 11.5  |       |
| Total Split (s)      | 22.0  | 45.0  |       | 17.0  | 40.0  | 40.0  | 17.0  | 35.0  |       | 23.0  | 41.0  |       |
| Total Split (%)      | 18.3% | 37.5% |       | 14.2% | 33.3% | 33.3% | 14.2% | 29.2% |       | 19.2% | 34.2% |       |
| Yellow Time (s)      | 3.0   | 4.5   |       | 3.0   | 4.5   | 4.5   | 3.0   | 4.5   |       | 3.0   | 4.5   |       |
| All-Red Time (s)     | 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  |       |
| Total Lost Time (s)  | 4.0   | 5.5   |       | 4.0   | 5.5   | 5.5   | 4.0   | 5.5   |       | 4.0   | 5.5   |       |
| Lead/Lag             | Lead  | Lag   |       | Lead  | Lag   | Lag   | Lead  | Lag   |       | Lead  | Lag   |       |
| Lead-Lag Optimize?   | Yes   | Yes   |       | Yes   | Yes   | Yes   | Yes   | Yes   |       | Yes   | Yes   |       |
| Recall Mode          | None  | Min   |       | None  | Min   | Min   | None  | None  |       | None  | None  |       |
| Act Effct Green (s)  | 17.9  | 39.5  | 116.4 | 11.2  | 32.9  | 32.9  | 12.6  | 31.6  | 116.4 | 15.0  | 34.0  | 116.4 |
| Actuated g/C Ratio   | 0.15  | 0.34  | 1.00  | 0.10  | 0.28  | 0.28  | 0.11  | 0.27  | 1.00  | 0.13  | 0.29  | 1.00  |
| v/c Ratio            | 0.88  | 0.47  | 0.11  | 0.46  | 0.87  | 0.27  | 0.69  | 0.37  | 0.06  | 0.58  | 0.89  | 0.60  |
| Control Delay        | 67.9  | 32.3  | 0.1   | 55.1  | 50.4  | 5.1   | 61.2  | 36.6  | 0.1   | 53.5  | 51.3  | 1.7   |
| 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          | 67.9  | 32.3  | 0.1   | 55.1  | 50.4  | 5.1   | 61.2  | 36.6  | 0.1   | 53.5  | 51.3  | 1.7   |
| LOS                  | E     | C     | A     | E     | D     | A     | E     | D     | A     | D     | D     | A     |
| Approach Delay       |       | 41.2  |       |       | 45.1  |       |       | 40.2  |       |       | 29.4  |       |
| Approach LOS         |       | D     |       |       | D     |       |       | D     |       |       | C     |       |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 116.4  
 Natural Cycle: 80  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.89  
 Intersection Signal Delay: 37.1  
 Intersection LOS: D  
 Intersection Capacity Utilization 84.3%  
 ICU Level of Service E  
 Analysis Period (min) 15

Splits and Phases: 1: Meridian Rd & Woodmen Rd



Timings  
2: Meridian Rd & Eastonville Rd

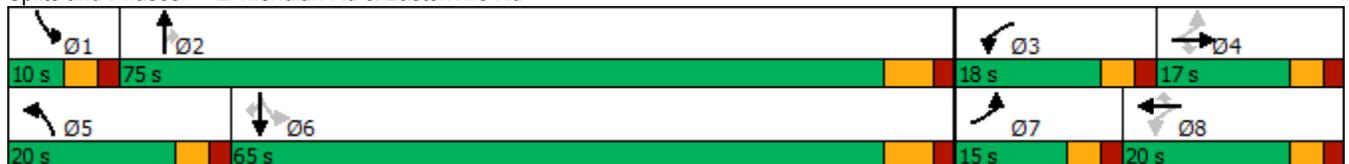
2040 Background Traffic WITHOUT Right-in Access  
AM Peak Hour

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       |       |       |       |       |       |       |       |       |       |       |       |
| Traffic Volume (vph) | 36    | 25    | 52    | 250   | 55    | 125   | 155   | 645   | 150   | 100   | 1724  | 73    |
| Future Volume (vph)  | 36    | 25    | 52    | 250   | 55    | 125   | 155   | 645   | 150   | 100   | 1724  | 73    |
| Turn Type            | pm+pt | NA    | Perm  | pm+pt | NA    | Perm  | Prot  | NA    | Perm  | pm+pt | NA    | Perm  |
| Protected Phases     | 7     | 4     |       | 3     | 8     |       | 5     | 2     |       | 1     | 6     |       |
| Permitted Phases     | 4     |       | 4     | 8     |       | 8     |       |       | 2     | 6     |       | 6     |
| Detector Phase       | 7     | 4     | 4     | 3     | 8     | 8     | 5     | 2     | 2     | 1     | 6     | 6     |
| 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   | 5.0   |
| Minimum Split (s)    | 10.0  | 11.5  | 11.5  | 10.0  | 11.5  | 11.5  | 10.0  | 11.5  | 11.5  | 10.0  | 11.5  | 11.5  |
| Total Split (s)      | 15.0  | 17.0  | 17.0  | 18.0  | 20.0  | 20.0  | 20.0  | 75.0  | 75.0  | 10.0  | 65.0  | 65.0  |
| Total Split (%)      | 12.5% | 14.2% | 14.2% | 15.0% | 16.7% | 16.7% | 16.7% | 62.5% | 62.5% | 8.3%  | 54.2% | 54.2% |
| Yellow Time (s)      | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.5   | 4.5   | 3.0   | 4.5   | 4.5   |
| 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   | 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  | -1.0  |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 5.5   | 5.5   | 4.0   | 5.5   | 5.5   |
| Lead/Lag             | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?   | Yes   |
| Recall Mode          | None  | Min   | Min   | None  | Min   | Min   |
| Act Effct Green (s)  | 14.1  | 8.1   | 8.1   | 23.8  | 16.9  | 16.9  | 11.5  | 65.2  | 65.2  | 67.3  | 59.8  | 59.8  |
| Actuated g/C Ratio   | 0.13  | 0.07  | 0.07  | 0.22  | 0.16  | 0.16  | 0.11  | 0.60  | 0.60  | 0.62  | 0.55  | 0.55  |
| v/c Ratio            | 0.10  | 0.19  | 0.20  | 0.85  | 0.20  | 0.34  | 0.45  | 0.31  | 0.16  | 0.20  | 0.90  | 0.08  |
| Control Delay        | 34.3  | 52.1  | 1.7   | 64.0  | 44.9  | 5.6   | 50.4  | 11.6  | 2.0   | 7.2   | 31.0  | 0.2   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 34.3  | 52.1  | 1.7   | 64.0  | 44.9  | 5.6   | 50.4  | 11.6  | 2.0   | 7.2   | 31.0  | 0.2   |
| LOS                  | C     | D     | A     | E     | D     | A     | D     | B     | A     | A     | C     | A     |
| Approach Delay       |       | 23.1  |       |       | 44.5  |       |       | 16.5  |       |       | 28.5  |       |
| Approach LOS         |       | C     |       |       | D     |       |       | B     |       |       | C     |       |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 108.6  
 Natural Cycle: 90  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.90  
 Intersection Signal Delay: 27.0  
 Intersection Capacity Utilization 83.8%  
 Analysis Period (min) 15  
 Intersection LOS: C  
 ICU Level of Service E

Splits and Phases: 2: Meridian Rd & Eastonville Rd



Timings  
25: Golden Sage Rd & Woodmen Rd

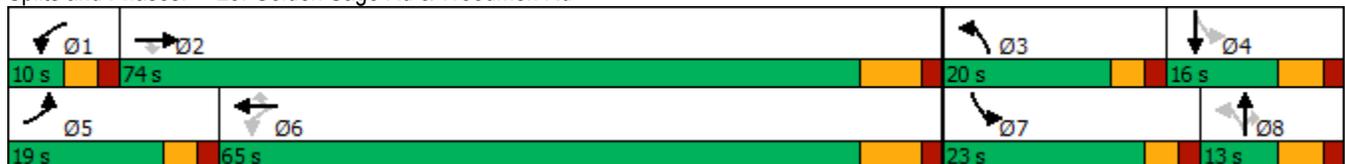
2040 Background Traffic WITHOUT Right-in Access  
AM Peak Hour

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       |       |       |       |       |       |       |       |       |       |       |       |
| Traffic Volume (vph) | 383   | 876   | 74    | 77    | 1764  | 184   | 150   | 16    | 48    | 251   | 21    | 299   |
| Future Volume (vph)  | 383   | 876   | 74    | 77    | 1764  | 184   | 150   | 16    | 48    | 251   | 21    | 299   |
| 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  | 12.5  | 12.5  | 10.0  | 12.5  | 12.5  | 10.0  | 11.0  | 11.0  | 10.0  | 11.0  |       |
| Total Split (s)      | 19.0  | 74.0  | 74.0  | 10.0  | 65.0  | 65.0  | 20.0  | 13.0  | 13.0  | 23.0  | 16.0  |       |
| Total Split (%)      | 15.8% | 61.7% | 61.7% | 8.3%  | 54.2% | 54.2% | 16.7% | 10.8% | 10.8% | 19.2% | 13.3% |       |
| Yellow Time (s)      | 3.0   | 5.5   | 5.5   | 3.0   | 5.5   | 5.5   | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   |       |
| 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   | 6.5   | 6.5   | 4.0   | 6.5   | 6.5   | 4.0   | 5.0   | 5.0   | 4.0   | 5.0   |       |
| Lead/Lag             | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   |       |
| Lead-Lag Optimize?   | Yes   |       |
| Recall Mode          | None  | Min   | Min   | None  | Min   | Min   | None  | None  | None  | None  | None  |       |
| Act Effct Green (s)  | 15.0  | 70.0  | 70.0  | 67.2  | 58.7  | 58.7  | 23.7  | 7.4   | 7.4   | 25.2  | 9.3   | 116.2 |
| Actuated g/C Ratio   | 0.13  | 0.60  | 0.60  | 0.58  | 0.51  | 0.51  | 0.20  | 0.06  | 0.06  | 0.22  | 0.08  | 1.00  |
| v/c Ratio            | 0.91  | 0.42  | 0.08  | 0.20  | 1.01  | 0.22  | 0.46  | 0.15  | 0.19  | 0.73  | 0.15  | 0.20  |
| Control Delay        | 75.9  | 14.5  | 0.8   | 8.9   | 52.9  | 3.0   | 41.2  | 55.9  | 1.6   | 53.6  | 52.8  | 0.3   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 10.3  | 0.0   | 0.0   |
| Total Delay          | 75.9  | 14.5  | 0.8   | 8.9   | 52.9  | 3.0   | 41.2  | 55.9  | 1.6   | 63.9  | 52.8  | 0.3   |
| LOS                  | E     | B     | A     | A     | D     | A     | D     | E     | A     | E     | D     | A     |
| Approach Delay       |       | 31.7  |       |       | 46.6  |       |       | 33.4  |       |       | 30.1  |       |
| Approach LOS         |       | C     |       |       | D     |       |       | C     |       |       | C     |       |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 116.2  
 Natural Cycle: 90  
 Control Type: Semi Act-Uncoord  
 Maximum v/c Ratio: 1.01  
 Intersection Signal Delay: 38.8  
 Intersection Capacity Utilization 93.2%  
 Analysis Period (min) 15  
 Intersection LOS: D  
 ICU Level of Service F

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

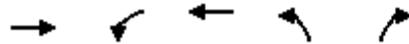


Timings

2040 Background Traffic WITHOUT Right-in Access

26: Golden Sage Rd & Woodmen Frontage Rd

AM Peak Hour

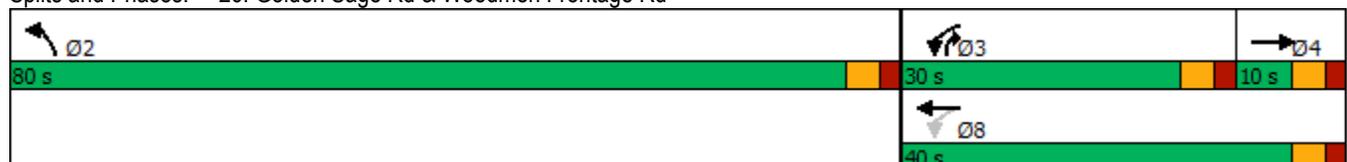


| Lane Group           | EBT  | WBL   | WBT   | NBL   | NBR   |
|----------------------|------|-------|-------|-------|-------|
| Lane Configurations  | →    |       | ←     | ↔     | ↔     |
| Traffic Volume (vph) | 27   | 320   | 2     | 100   | 483   |
| Future Volume (vph)  | 27   | 320   | 2     | 100   | 483   |
| Turn Type            | NA   | pm+pt | NA    | Prot  | Over  |
| Protected Phases     | 4    | 3     | 8     | 2     | 3     |
| Permitted Phases     |      | 8     |       |       |       |
| Detector Phase       | 4    | 3     | 8     | 2     | 3     |
| Switch Phase         |      |       |       |       |       |
| Minimum Initial (s)  | 5.0  | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)    | 10.0 | 10.0  | 10.0  | 10.0  | 10.0  |
| Total Split (s)      | 10.0 | 30.0  | 40.0  | 80.0  | 30.0  |
| Total Split (%)      | 8.3% | 25.0% | 33.3% | 66.7% | 25.0% |
| Yellow Time (s)      | 3.0  | 3.0   | 3.0   | 3.0   | 3.0   |
| All-Red Time (s)     | 2.0  | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | -1.0 |       | -1.0  | -1.0  | -1.0  |
| Total Lost Time (s)  | 4.0  |       | 4.0   | 4.0   | 4.0   |
| Lead/Lag             | Lag  | Lead  |       |       | Lead  |
| Lead-Lag Optimize?   | Yes  | Yes   |       |       | Yes   |
| Recall Mode          | None | None  | None  | Min   | None  |
| Act Effect Green (s) | 14.8 |       | 27.1  | 11.6  | 8.1   |
| Actuated g/C Ratio   | 0.31 |       | 0.57  | 0.25  | 0.17  |
| v/c Ratio            | 0.42 |       | 0.59  | 0.60  | 0.59  |
| Control Delay        | 5.1  |       | 9.9   | 14.1  | 8.9   |
| Queue Delay          | 0.0  |       | 0.0   | 0.0   | 0.0   |
| Total Delay          | 5.1  |       | 9.9   | 14.2  | 8.9   |
| LOS                  | A    |       | A     | B     | A     |
| Approach Delay       | 5.1  |       | 9.9   | 11.6  |       |
| Approach LOS         | A    |       | A     | B     |       |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 47.2  
 Natural Cycle: 45  
 Control Type: Semi Act-Uncoord  
 Maximum v/c Ratio: 0.60  
 Intersection Signal Delay: 9.6  
 Intersection LOS: A  
 Intersection Capacity Utilization 60.1%  
 ICU Level of Service B  
 Analysis Period (min) 15

Splits and Phases: 26: Golden Sage Rd & Woodmen Frontage Rd



Timings

2040 Background Traffic WITHOUT Right-in Access

1: Meridian Rd & Woodmen Rd

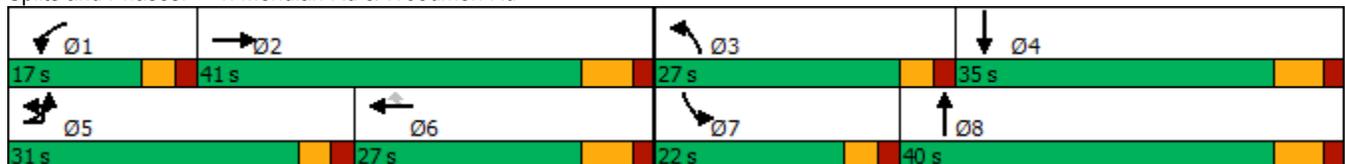
PM Peak Hour

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       |       |       |       |       |       |       |       |       |       |       |       |
| Traffic Volume (vph) | 750   | 850   | 375   | 225   | 600   | 250   | 350   | 900   | 200   | 400   | 600   | 500   |
| Future Volume (vph)  | 750   | 850   | 375   | 225   | 600   | 250   | 350   | 900   | 200   | 400   | 600   | 500   |
| Turn Type            | Prot  | NA    | Free  | Prot  | NA    | Perm  | Prot  | NA    | Free  | Prot  | NA    | Free  |
| Protected Phases     | 5     | 2     |       | 1     | 6     |       | 3     | 8     |       | 7     | 4     |       |
| Permitted Phases     |       |       | Free  |       |       | 6     |       |       | Free  |       |       | Free  |
| Detector Phase       | 5     | 2     |       | 1     | 6     | 6     | 3     | 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   |       |
| Minimum Split (s)    | 10.0  | 11.5  |       | 10.0  | 11.5  | 11.5  | 10.0  | 11.5  |       | 10.0  | 11.5  |       |
| Total Split (s)      | 31.0  | 41.0  |       | 17.0  | 27.0  | 27.0  | 27.0  | 40.0  |       | 22.0  | 35.0  |       |
| Total Split (%)      | 25.8% | 34.2% |       | 14.2% | 22.5% | 22.5% | 22.5% | 33.3% |       | 18.3% | 29.2% |       |
| Yellow Time (s)      | 3.0   | 4.5   |       | 3.0   | 4.5   | 4.5   | 3.0   | 4.5   |       | 3.0   | 4.5   |       |
| All-Red Time (s)     | 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  |       |
| Total Lost Time (s)  | 4.0   | 5.5   |       | 4.0   | 5.5   | 5.5   | 4.0   | 5.5   |       | 4.0   | 5.5   |       |
| Lead/Lag             | Lead  | Lag   |       | Lead  | Lag   | Lag   | Lead  | Lag   |       | Lead  | Lag   |       |
| Lead-Lag Optimize?   | Yes   | Yes   |       | Yes   | Yes   | Yes   | Yes   | Yes   |       | Yes   | Yes   |       |
| Recall Mode          | None  | Min   |       | None  | Min   | Min   | None  | None  |       | None  | None  |       |
| Act Effct Green (s)  | 27.0  | 36.1  | 118.7 | 12.4  | 21.5  | 21.5  | 18.5  | 33.7  | 118.7 | 17.5  | 32.7  | 118.7 |
| Actuated g/C Ratio   | 0.23  | 0.30  | 1.00  | 0.10  | 0.18  | 0.18  | 0.16  | 0.28  | 1.00  | 0.15  | 0.28  | 1.00  |
| v/c Ratio            | 0.99  | 0.81  | 0.24  | 0.64  | 0.95  | 0.52  | 0.67  | 0.91  | 0.13  | 0.81  | 0.63  | 0.32  |
| Control Delay        | 76.6  | 45.4  | 0.4   | 59.9  | 74.6  | 9.2   | 53.5  | 55.6  | 0.2   | 62.5  | 41.7  | 0.5   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 76.6  | 45.4  | 0.4   | 59.9  | 74.6  | 9.2   | 53.5  | 55.6  | 0.2   | 62.5  | 41.7  | 0.5   |
| LOS                  | E     | D     | A     | E     | E     | A     | D     | E     | A     | E     | D     | A     |
| Approach Delay       |       | 48.8  |       |       | 56.3  |       |       | 47.4  |       |       | 33.5  |       |
| Approach LOS         |       | D     |       |       | E     |       |       | D     |       |       | C     |       |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 118.7  
 Natural Cycle: 90  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.99  
 Intersection Signal Delay: 46.0  
 Intersection LOS: D  
 Intersection Capacity Utilization 90.4%  
 ICU Level of Service E  
 Analysis Period (min) 15

Splits and Phases: 1: Meridian Rd & Woodmen Rd



Timings  
2: Meridian Rd & Eastonville Rd

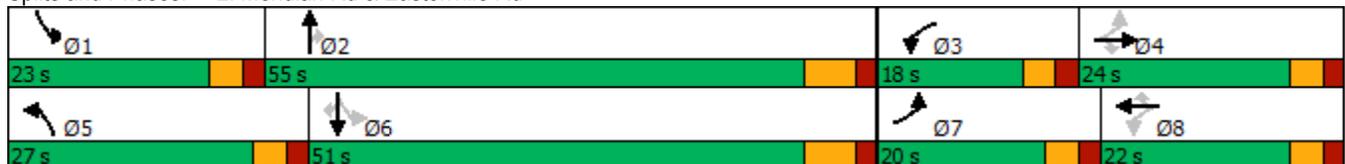
2040 Background Traffic WITHOUT Right-in Access  
PM Peak Hour

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       |       |       |       |       |       |       |       |       |       |       |       |
| Traffic Volume (vph) | 119   | 66    | 103   | 200   | 50    | 225   | 280   | 1370  | 250   | 100   | 1128  | 92    |
| Future Volume (vph)  | 119   | 66    | 103   | 200   | 50    | 225   | 280   | 1370  | 250   | 100   | 1128  | 92    |
| Turn Type            | pm+pt | NA    | Perm  | pm+pt | NA    | Perm  | Prot  | NA    | Perm  | pm+pt | NA    | Perm  |
| Protected Phases     | 7     | 4     |       | 3     | 8     |       | 5     | 2     |       | 1     | 6     |       |
| Permitted Phases     | 4     |       | 4     | 8     |       | 8     |       |       | 2     | 6     |       | 6     |
| Detector Phase       | 7     | 4     | 4     | 3     | 8     | 8     | 5     | 2     | 2     | 1     | 6     | 6     |
| 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   | 5.0   |
| Minimum Split (s)    | 10.0  | 10.0  | 10.0  | 10.0  | 10.0  | 10.0  | 10.0  | 11.5  | 11.5  | 10.0  | 11.5  | 11.5  |
| Total Split (s)      | 20.0  | 24.0  | 24.0  | 18.0  | 22.0  | 22.0  | 27.0  | 55.0  | 55.0  | 23.0  | 51.0  | 51.0  |
| Total Split (%)      | 16.7% | 20.0% | 20.0% | 15.0% | 18.3% | 18.3% | 22.5% | 45.8% | 45.8% | 19.2% | 42.5% | 42.5% |
| Yellow Time (s)      | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.5   | 4.5   | 3.0   | 4.5   | 4.5   |
| 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   | 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  | -1.0  |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 5.5   | 5.5   | 4.0   | 5.5   | 5.5   |
| Lead/Lag             | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?   | Yes   |
| Recall Mode          | None  | Min   | Min   | None  | Min   | Min   |
| Act Effct Green (s)  | 19.5  | 10.2  | 10.2  | 26.9  | 14.1  | 14.1  | 14.9  | 48.3  | 48.3  | 53.3  | 42.5  | 42.5  |
| Actuated g/C Ratio   | 0.20  | 0.10  | 0.10  | 0.27  | 0.14  | 0.14  | 0.15  | 0.49  | 0.49  | 0.54  | 0.43  | 0.43  |
| v/c Ratio            | 0.21  | 0.36  | 0.40  | 0.57  | 0.20  | 0.55  | 0.57  | 0.81  | 0.29  | 0.43  | 0.75  | 0.13  |
| Control Delay        | 29.0  | 48.9  | 10.7  | 37.1  | 41.6  | 10.9  | 44.4  | 26.3  | 2.9   | 17.4  | 28.2  | 3.5   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 29.0  | 48.9  | 10.7  | 37.1  | 41.6  | 10.9  | 44.4  | 26.3  | 2.9   | 17.4  | 28.2  | 3.5   |
| LOS                  | C     | D     | B     | D     | D     | B     | D     | C     | A     | B     | C     | A     |
| Approach Delay       |       | 27.0  |       |       | 25.2  |       |       | 25.9  |       |       | 25.6  |       |
| Approach LOS         |       | C     |       |       | C     |       |       | C     |       |       | C     |       |

Intersection Summary

|   |                        |
|---|------------------------|
| Cycle Length: 120                       |                        |
| Actuated Cycle Length: 98.6             |                        |
| Natural Cycle: 65                       |                        |
| Control Type: Actuated-Uncoordinated    |                        |
| Maximum v/c Ratio: 0.81                 |                        |
| Intersection Signal Delay: 25.8         | Intersection LOS: C    |
| Intersection Capacity Utilization 72.4% | ICU Level of Service C |
| Analysis Period (min) 15                |                        |

Splits and Phases: 2: Meridian Rd & Eastonville Rd



Timings  
25: Golden Sage Rd & Woodmen Rd

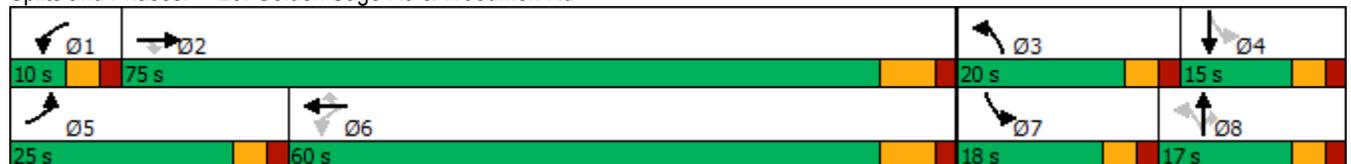
2040 Background Traffic WITHOUT Right-in Access  
PM Peak Hour

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       |       |       |       |       |       |       |       |       |       |       |       |
| Traffic Volume (vph) | 329   | 1671  | 121   | 99    | 1030  | 329   | 152   | 35    | 114   | 191   | 22    | 408   |
| Future Volume (vph)  | 329   | 1671  | 121   | 99    | 1030  | 329   | 152   | 35    | 114   | 191   | 22    | 408   |
| 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)      | 25.0  | 75.0  | 75.0  | 10.0  | 60.0  | 60.0  | 20.0  | 17.0  | 17.0  | 18.0  | 15.0  |       |
| Total Split (%)      | 20.8% | 62.5% | 62.5% | 8.3%  | 50.0% | 50.0% | 16.7% | 14.2% | 14.2% | 15.0% | 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   |       |
| Recall Mode          | None  | Min   | Min   | None  | Min   | Min   | None  | None  | None  | None  | None  |       |
| Act Effct Green (s)  | 17.0  | 60.5  | 60.5  | 57.7  | 49.6  | 49.6  | 25.4  | 9.1   | 9.1   | 18.5  | 8.0   | 107.5 |
| Actuated g/C Ratio   | 0.16  | 0.56  | 0.56  | 0.54  | 0.46  | 0.46  | 0.24  | 0.08  | 0.08  | 0.17  | 0.07  | 1.00  |
| v/c Ratio            | 0.64  | 0.86  | 0.13  | 0.60  | 0.64  | 0.38  | 0.44  | 0.24  | 0.41  | 0.70  | 0.17  | 0.27  |
| Control Delay        | 49.3  | 25.1  | 2.3   | 32.7  | 24.8  | 3.3   | 39.5  | 52.9  | 6.3   | 52.8  | 53.3  | 0.4   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 1.6   | 0.0   | 0.0   |
| Total Delay          | 49.3  | 25.1  | 2.3   | 32.7  | 24.8  | 3.3   | 39.5  | 52.9  | 6.3   | 54.4  | 53.3  | 0.4   |
| LOS                  | D     | C     | A     | C     | C     | A     | D     | D     | A     | D     | D     | A     |
| Approach Delay       |       | 27.6  |       |       | 20.4  |       |       | 28.5  |       |       | 18.9  |       |
| Approach LOS         |       | C     |       |       | C     |       |       | C     |       |       | B     |       |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 107.5  
 Natural Cycle: 70  
 Control Type: Semi Act-Uncoord  
 Maximum v/c Ratio: 0.86  
 Intersection Signal Delay: 24.1  
 Intersection Capacity Utilization 80.6%  
 Analysis Period (min) 15  
 Intersection LOS: C  
 ICU Level of Service D

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

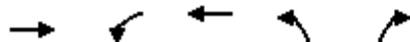


Timings

2040 Background Traffic WITHOUT Right-in Access

26: Golden Sage Rd & Woodmen Frontage Rd

PM Peak Hour

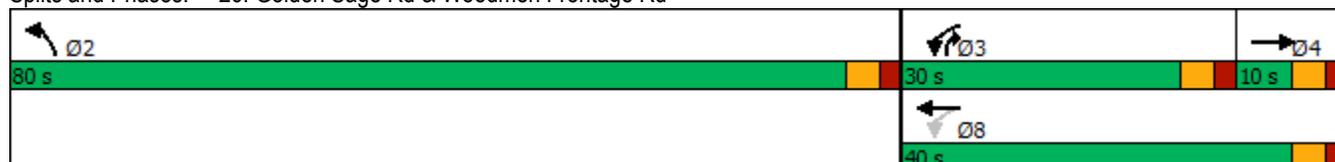


| Lane Group           | EBT  | WBL   | WBT   | NBL   | NBR   |
|----------------------|------|-------|-------|-------|-------|
| Lane Configurations  | →    |       | ←     | ↔     | ↔     |
| Traffic Volume (vph) | 19   | 446   | 8     | 300   | 393   |
| Future Volume (vph)  | 19   | 446   | 8     | 300   | 393   |
| Turn Type            | NA   | pm+pt | NA    | Prot  | Over  |
| Protected Phases     | 4    | 3     | 8     | 2     | 3     |
| Permitted Phases     |      | 8     |       |       |       |
| Detector Phase       | 4    | 3     | 8     | 2     | 3     |
| Switch Phase         |      |       |       |       |       |
| Minimum Initial (s)  | 5.0  | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)    | 10.0 | 10.0  | 10.0  | 10.0  | 10.0  |
| Total Split (s)      | 10.0 | 30.0  | 40.0  | 80.0  | 30.0  |
| Total Split (%)      | 8.3% | 25.0% | 33.3% | 66.7% | 25.0% |
| Yellow Time (s)      | 3.0  | 3.0   | 3.0   | 3.0   | 3.0   |
| All-Red Time (s)     | 2.0  | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | -1.0 |       | -1.0  | -1.0  | -1.0  |
| Total Lost Time (s)  | 4.0  |       | 4.0   | 4.0   | 4.0   |
| Lead/Lag             | Lag  | Lead  |       |       | Lead  |
| Lead-Lag Optimize?   | Yes  | Yes   |       |       | Yes   |
| Recall Mode          | None | None  | None  | Min   | None  |
| Act Effct Green (s)  | 23.8 |       | 36.2  | 19.3  | 8.3   |
| Actuated g/C Ratio   | 0.37 |       | 0.57  | 0.30  | 0.13  |
| v/c Ratio            | 0.28 |       | 0.76  | 0.71  | 0.70  |
| Control Delay        | 5.5  |       | 19.2  | 26.3  | 11.6  |
| Queue Delay          | 0.0  |       | 0.0   | 0.0   | 0.0   |
| Total Delay          | 5.5  |       | 19.2  | 26.3  | 11.6  |
| LOS                  | A    |       | B     | C     | B     |
| Approach Delay       | 5.5  |       | 19.2  | 19.3  |       |
| Approach LOS         | A    |       | B     | B     |       |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 63.5  
 Natural Cycle: 50  
 Control Type: Semi Act-Uncoord  
 Maximum v/c Ratio: 0.76  
 Intersection Signal Delay: 17.3  
 Intersection LOS: B  
 Intersection Capacity Utilization 71.6%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 26: Golden Sage Rd & Woodmen Frontage Rd



Timings  
1: Meridian Rd & Woodmen Rd

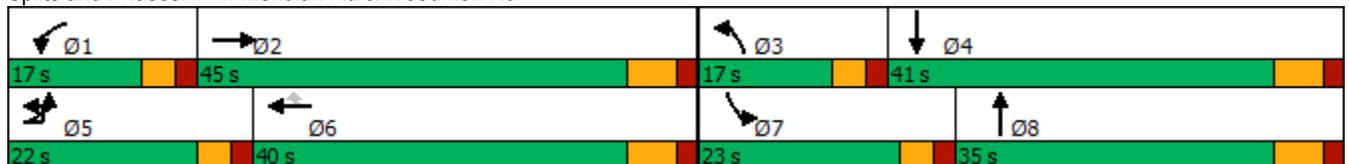
2040 Background Traffic WITH Right-in Access  
AM Peak Hour

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       |       |       |       |       |       |       |       |       |       |       |       |
| Traffic Volume (vph) | 450   | 550   | 175   | 150   | 860   | 140   | 282   | 318   | 100   | 250   | 900   | 1012  |
| Future Volume (vph)  | 450   | 550   | 175   | 150   | 860   | 140   | 282   | 318   | 100   | 250   | 900   | 1012  |
| Turn Type            | Prot  | NA    | Free  | Prot  | NA    | Perm  | Prot  | NA    | Free  | Prot  | NA    | Free  |
| Protected Phases     | 5     | 2     |       | 1     | 6     |       | 3     | 8     |       | 7     | 4     |       |
| Permitted Phases     |       |       | Free  |       |       | 6     |       |       | Free  |       |       | Free  |
| Detector Phase       | 5     | 2     |       | 1     | 6     | 6     | 3     | 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   |       |
| Minimum Split (s)    | 10.0  | 11.5  |       | 10.0  | 11.5  | 11.5  | 10.0  | 11.5  |       | 10.0  | 11.5  |       |
| Total Split (s)      | 22.0  | 45.0  |       | 17.0  | 40.0  | 40.0  | 17.0  | 35.0  |       | 23.0  | 41.0  |       |
| Total Split (%)      | 18.3% | 37.5% |       | 14.2% | 33.3% | 33.3% | 14.2% | 29.2% |       | 19.2% | 34.2% |       |
| Yellow Time (s)      | 3.0   | 4.5   |       | 3.0   | 4.5   | 4.5   | 3.0   | 4.5   |       | 3.0   | 4.5   |       |
| All-Red Time (s)     | 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  |       |
| Total Lost Time (s)  | 4.0   | 5.5   |       | 4.0   | 5.5   | 5.5   | 4.0   | 5.5   |       | 4.0   | 5.5   |       |
| Lead/Lag             | Lead  | Lag   |       | Lead  | Lag   | Lag   | Lead  | Lag   |       | Lead  | Lag   |       |
| Lead-Lag Optimize?   | Yes   | Yes   |       | Yes   | Yes   | Yes   | Yes   | Yes   |       | Yes   | Yes   |       |
| Recall Mode          | None  | Min   |       | None  | Min   | Min   | None  | None  |       | None  | None  |       |
| Act Effct Green (s)  | 17.9  | 39.7  | 116.9 | 11.3  | 33.1  | 33.1  | 12.8  | 31.9  | 116.9 | 15.0  | 34.1  | 116.9 |
| Actuated g/C Ratio   | 0.15  | 0.34  | 1.00  | 0.10  | 0.28  | 0.28  | 0.11  | 0.27  | 1.00  | 0.13  | 0.29  | 1.00  |
| v/c Ratio            | 0.88  | 0.47  | 0.11  | 0.46  | 0.88  | 0.25  | 0.77  | 0.34  | 0.06  | 0.58  | 0.89  | 0.65  |
| Control Delay        | 68.6  | 32.4  | 0.1   | 55.3  | 51.3  | 4.1   | 65.7  | 36.1  | 0.1   | 53.7  | 51.7  | 2.1   |
| 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          | 68.6  | 32.4  | 0.1   | 55.3  | 51.3  | 4.1   | 65.7  | 36.1  | 0.1   | 53.7  | 51.7  | 2.1   |
| LOS                  | E     | C     | A     | E     | D     | A     | E     | D     | A     | D     | D     | A     |
| Approach Delay       |       | 41.5  |       |       | 46.1  |       |       | 42.9  |       |       | 28.7  |       |
| Approach LOS         |       | D     |       |       | D     |       |       | D     |       |       | C     |       |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 116.9  
 Natural Cycle: 90  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.89  
 Intersection Signal Delay: 37.4  
 Intersection LOS: D  
 Intersection Capacity Utilization 85.5%  
 ICU Level of Service E  
 Analysis Period (min) 15

Splits and Phases: 1: Meridian Rd & Woodmen Rd



Timings  
2: Meridian Rd & Eastonville Rd

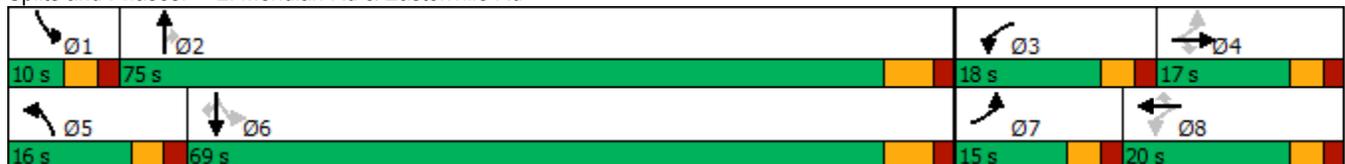
2040 Background Traffic WITH Right-in Access  
AM Peak Hour

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       |       |       |       |       |       |       |       |       |       |       |       |
| Traffic Volume (vph) | 36    | 25    | 52    | 250   | 55    | 125   | 112   | 645   | 150   | 100   | 1798  | 29    |
| Future Volume (vph)  | 36    | 25    | 52    | 250   | 55    | 125   | 112   | 645   | 150   | 100   | 1798  | 29    |
| Turn Type            | pm+pt | NA    | Perm  | pm+pt | NA    | Perm  | Prot  | NA    | Perm  | pm+pt | NA    | Perm  |
| Protected Phases     | 7     | 4     |       | 3     | 8     |       | 5     | 2     |       | 1     | 6     |       |
| Permitted Phases     | 4     |       | 4     | 8     |       | 8     |       |       | 2     | 6     |       | 6     |
| Detector Phase       | 7     | 4     | 4     | 3     | 8     | 8     | 5     | 2     | 2     | 1     | 6     | 6     |
| 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   | 5.0   |
| Minimum Split (s)    | 10.0  | 11.5  | 11.5  | 10.0  | 11.5  | 11.5  | 10.0  | 11.5  | 11.5  | 10.0  | 11.5  | 11.5  |
| Total Split (s)      | 15.0  | 17.0  | 17.0  | 18.0  | 20.0  | 20.0  | 16.0  | 75.0  | 75.0  | 10.0  | 69.0  | 69.0  |
| Total Split (%)      | 12.5% | 14.2% | 14.2% | 15.0% | 16.7% | 16.7% | 13.3% | 62.5% | 62.5% | 8.3%  | 57.5% | 57.5% |
| Yellow Time (s)      | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.5   | 4.5   | 3.0   | 4.5   | 4.5   |
| 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   | 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  | -1.0  |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 5.5   | 5.5   | 4.0   | 5.5   | 5.5   |
| Lead/Lag             | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?   | Yes   |
| Recall Mode          | None  | Min   | Min   | None  | Min   | Min   |
| Act Effct Green (s)  | 14.0  | 8.1   | 8.1   | 23.7  | 16.9  | 16.9  | 10.0  | 65.7  | 65.7  | 69.3  | 61.7  | 61.7  |
| Actuated g/C Ratio   | 0.13  | 0.07  | 0.07  | 0.22  | 0.15  | 0.15  | 0.09  | 0.60  | 0.60  | 0.64  | 0.57  | 0.57  |
| v/c Ratio            | 0.10  | 0.19  | 0.20  | 0.85  | 0.20  | 0.34  | 0.37  | 0.31  | 0.16  | 0.20  | 0.92  | 0.03  |
| Control Delay        | 35.2  | 53.0  | 1.7   | 65.5  | 45.9  | 5.6   | 51.9  | 11.5  | 2.0   | 6.9   | 31.0  | 0.1   |
| 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          | 35.2  | 53.0  | 1.7   | 65.5  | 45.9  | 5.6   | 51.9  | 11.5  | 2.0   | 6.9   | 31.0  | 0.1   |
| LOS                  | D     | D     | A     | E     | D     | A     | D     | B     | A     | A     | C     | A     |
| Approach Delay       |       | 23.6  |       |       | 45.6  |       |       | 15.0  |       |       | 29.2  |       |
| Approach LOS         |       | C     |       |       | D     |       |       | B     |       |       | C     |       |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 109.1  
 Natural Cycle: 90  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.92  
 Intersection Signal Delay: 27.3  
 Intersection Capacity Utilization 85.6%  
 Analysis Period (min) 15  
 Intersection LOS: C  
 ICU Level of Service E

Splits and Phases: 2: Meridian Rd & Eastonville Rd



Timings  
25: Golden Sage Rd & Woodmen Rd

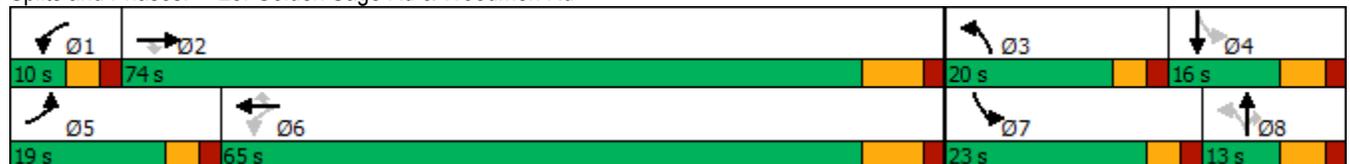
2040 Background Traffic WITH Right-in Access  
AM Peak Hour

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       |       |       |       |       |       |       |       |       |       |       |       |
| Traffic Volume (vph) | 382   | 877   | 74    | 77    | 1764  | 116   | 150   | 16    | 48    | 251   | 21    | 299   |
| Future Volume (vph)  | 382   | 877   | 74    | 77    | 1764  | 116   | 150   | 16    | 48    | 251   | 21    | 299   |
| 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  | 12.5  | 12.5  | 10.0  | 12.5  | 12.5  | 10.0  | 11.0  | 11.0  | 10.0  | 11.0  |       |
| Total Split (s)      | 19.0  | 74.0  | 74.0  | 10.0  | 65.0  | 65.0  | 20.0  | 13.0  | 13.0  | 23.0  | 16.0  |       |
| Total Split (%)      | 15.8% | 61.7% | 61.7% | 8.3%  | 54.2% | 54.2% | 16.7% | 10.8% | 10.8% | 19.2% | 13.3% |       |
| Yellow Time (s)      | 3.0   | 5.5   | 5.5   | 3.0   | 5.5   | 5.5   | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   |       |
| 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   | 6.5   | 6.5   | 4.0   | 6.5   | 6.5   | 4.0   | 5.0   | 5.0   | 4.0   | 5.0   |       |
| Lead/Lag             | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   |       |
| Lead-Lag Optimize?   | Yes   |       |
| Recall Mode          | None  | Min   | Min   | None  | Min   | Min   | None  | None  | None  | None  | None  |       |
| Act Effct Green (s)  | 15.0  | 70.0  | 70.0  | 67.2  | 58.7  | 58.7  | 23.7  | 7.4   | 7.4   | 25.2  | 9.3   | 116.2 |
| Actuated g/C Ratio   | 0.13  | 0.60  | 0.60  | 0.58  | 0.51  | 0.51  | 0.20  | 0.06  | 0.06  | 0.22  | 0.08  | 1.00  |
| v/c Ratio            | 0.91  | 0.42  | 0.08  | 0.20  | 1.01  | 0.14  | 0.46  | 0.15  | 0.19  | 0.73  | 0.15  | 0.20  |
| Control Delay        | 75.5  | 14.5  | 0.8   | 8.9   | 52.9  | 1.3   | 41.2  | 55.9  | 1.6   | 53.6  | 52.8  | 0.3   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 10.3  | 0.0   | 0.0   |
| Total Delay          | 75.5  | 14.5  | 0.8   | 8.9   | 52.9  | 1.3   | 41.2  | 55.9  | 1.6   | 63.9  | 52.8  | 0.3   |
| LOS                  | E     | B     | A     | A     | D     | A     | D     | E     | A     | E     | D     | A     |
| Approach Delay       |       | 31.5  |       |       | 48.0  |       |       | 33.4  |       |       | 30.1  |       |
| Approach LOS         |       | C     |       |       | D     |       |       | C     |       |       | C     |       |

Intersection Summary

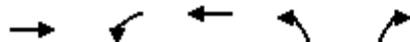
Cycle Length: 120  
 Actuated Cycle Length: 116.2  
 Natural Cycle: 90  
 Control Type: Semi Act-Uncoord  
 Maximum v/c Ratio: 1.01  
 Intersection Signal Delay: 39.3  
 Intersection Capacity Utilization 93.1%  
 Analysis Period (min) 15  
 Intersection LOS: D  
 ICU Level of Service F

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



Timings  
26: Golden Sage Rd & Woodmen Frontage Rd

2040 Background Traffic WITH Right-in Access  
AM Peak Hour

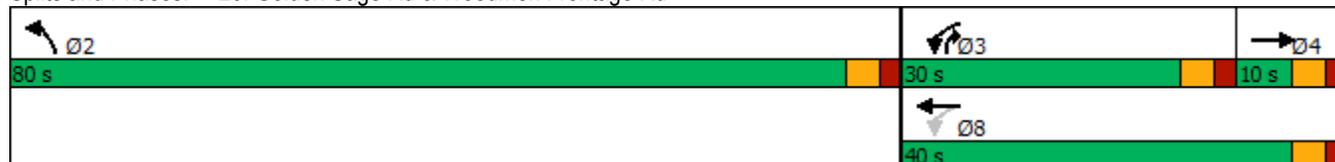


| Lane Group           | EBT  | WBL   | WBT   | NBL   | NBR   |
|----------------------|------|-------|-------|-------|-------|
| Lane Configurations  |      |       |       |       |       |
| Traffic Volume (vph) | 27   | 320   | 2     | 100   | 414   |
| Future Volume (vph)  | 27   | 320   | 2     | 100   | 414   |
| Turn Type            | NA   | pm+pt | NA    | Prot  | Over  |
| Protected Phases     | 4    | 3     | 8     | 2     | 3     |
| Permitted Phases     |      | 8     |       |       |       |
| Detector Phase       | 4    | 3     | 8     | 2     | 3     |
| Switch Phase         |      |       |       |       |       |
| Minimum Initial (s)  | 5.0  | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)    | 10.0 | 10.0  | 10.0  | 10.0  | 10.0  |
| Total Split (s)      | 10.0 | 30.0  | 40.0  | 80.0  | 30.0  |
| Total Split (%)      | 8.3% | 25.0% | 33.3% | 66.7% | 25.0% |
| Yellow Time (s)      | 3.0  | 3.0   | 3.0   | 3.0   | 3.0   |
| All-Red Time (s)     | 2.0  | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | -1.0 |       | -1.0  | -1.0  | -1.0  |
| Total Lost Time (s)  | 4.0  |       | 4.0   | 4.0   | 4.0   |
| Lead/Lag             | Lag  | Lead  |       |       | Lead  |
| Lead-Lag Optimize?   | Yes  | Yes   |       |       | Yes   |
| Recall Mode          | None | None  | None  | Min   | None  |
| Act Effect Green (s) | 14.8 |       | 27.0  | 11.2  | 8.0   |
| Actuated g/C Ratio   | 0.32 |       | 0.58  | 0.24  | 0.17  |
| v/c Ratio            | 0.42 |       | 0.58  | 0.55  | 0.56  |
| Control Delay        | 4.9  |       | 9.6   | 14.4  | 8.7   |
| Queue Delay          | 0.0  |       | 0.0   | 0.0   | 0.0   |
| Total Delay          | 4.9  |       | 9.6   | 14.4  | 8.7   |
| LOS                  | A    |       | A     | B     | A     |
| Approach Delay       | 4.9  |       | 9.6   | 11.6  |       |
| Approach LOS         | A    |       | A     | B     |       |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 46.7  
 Natural Cycle: 45  
 Control Type: Semi Act-Uncoord  
 Maximum v/c Ratio: 0.58  
 Intersection Signal Delay: 9.4  
 Intersection Capacity Utilization 58.7%  
 Analysis Period (min) 15  
 Intersection LOS: A  
 ICU Level of Service B

Splits and Phases: 26: Golden Sage Rd & Woodmen Frontage Rd



Timings  
1: Meridian Rd & Woodmen Rd

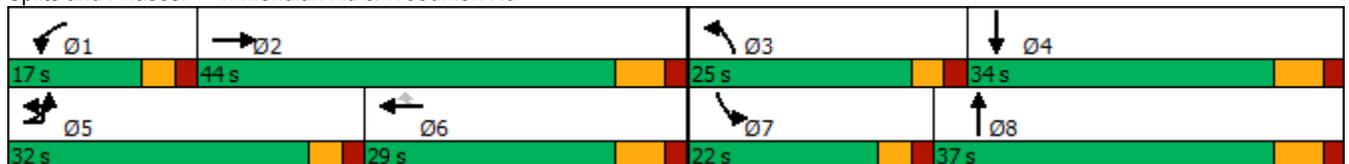
2040 Background Traffic WITH Right-in Access  
PM Peak Hour

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       |       |       |       |       |       |       |       |       |       |       |       |
| Traffic Volume (vph) | 750   | 850   | 375   | 225   | 615   | 235   | 403   | 847   | 200   | 400   | 600   | 555   |
| Future Volume (vph)  | 750   | 850   | 375   | 225   | 615   | 235   | 403   | 847   | 200   | 400   | 600   | 555   |
| Turn Type            | Prot  | NA    | Free  | Prot  | NA    | Perm  | Prot  | NA    | Free  | Prot  | NA    | Free  |
| Protected Phases     | 5     | 2     |       | 1     | 6     |       | 3     | 8     |       | 7     | 4     |       |
| Permitted Phases     |       |       | Free  |       |       | 6     |       |       | Free  |       |       | Free  |
| Detector Phase       | 5     | 2     |       | 1     | 6     | 6     | 3     | 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   |       |
| Minimum Split (s)    | 10.0  | 11.5  |       | 10.0  | 11.5  | 11.5  | 10.0  | 11.5  |       | 10.0  | 11.5  |       |
| Total Split (s)      | 32.0  | 44.0  |       | 17.0  | 29.0  | 29.0  | 25.0  | 37.0  |       | 22.0  | 34.0  |       |
| Total Split (%)      | 26.7% | 36.7% |       | 14.2% | 24.2% | 24.2% | 20.8% | 30.8% |       | 18.3% | 28.3% |       |
| Yellow Time (s)      | 3.0   | 4.5   |       | 3.0   | 4.5   | 4.5   | 3.0   | 4.5   |       | 3.0   | 4.5   |       |
| All-Red Time (s)     | 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  |       |
| Total Lost Time (s)  | 4.0   | 5.5   |       | 4.0   | 5.5   | 5.5   | 4.0   | 5.5   |       | 4.0   | 5.5   |       |
| Lead/Lag             | Lead  | Lag   |       | Lead  | Lag   | Lag   | Lead  | Lag   |       | Lead  | Lag   |       |
| Lead-Lag Optimize?   | Yes   | Yes   |       | Yes   | Yes   | Yes   | Yes   | Yes   |       | Yes   | Yes   |       |
| Recall Mode          | None  | Min   |       | None  | Min   | Min   | None  | None  |       | None  | None  |       |
| Act Effct Green (s)  | 28.0  | 39.0  | 119.2 | 12.5  | 23.4  | 23.4  | 19.3  | 31.2  | 119.2 | 17.5  | 29.5  | 119.2 |
| Actuated g/C Ratio   | 0.23  | 0.33  | 1.00  | 0.10  | 0.20  | 0.20  | 0.16  | 0.26  | 1.00  | 0.15  | 0.25  | 1.00  |
| v/c Ratio            | 0.97  | 0.75  | 0.24  | 0.64  | 0.90  | 0.48  | 0.74  | 0.93  | 0.13  | 0.81  | 0.70  | 0.36  |
| Control Delay        | 70.2  | 40.9  | 0.4   | 60.1  | 64.4  | 8.6   | 56.3  | 60.5  | 0.2   | 62.8  | 46.2  | 0.6   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 70.2  | 40.9  | 0.4   | 60.1  | 64.4  | 8.6   | 56.3  | 60.5  | 0.2   | 62.8  | 46.2  | 0.6   |
| LOS                  | E     | D     | A     | E     | E     | A     | E     | E     | A     | E     | D     | A     |
| Approach Delay       |       | 44.5  |       |       | 51.3  |       |       | 51.0  |       |       | 34.2  |       |
| Approach LOS         |       | D     |       |       | D     |       |       | D     |       |       | C     |       |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 119.2  
 Natural Cycle: 90  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.97  
 Intersection Signal Delay: 44.6  
 Intersection LOS: D  
 Intersection Capacity Utilization 89.5%  
 ICU Level of Service E  
 Analysis Period (min) 15

Splits and Phases: 1: Meridian Rd & Woodmen Rd



Timings  
2: Meridian Rd & Eastonville Rd

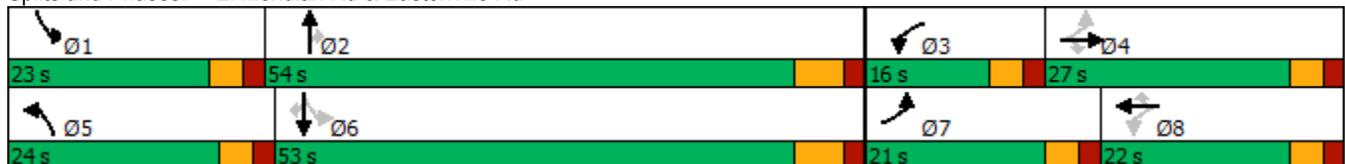
2040 Background Traffic WITH Right-in Access  
PM Peak Hour

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       |       |       |       |       |       |       |       |       |       |       |       |
| Traffic Volume (vph) | 119   | 66    | 103   | 200   | 50    | 225   | 212   | 1370  | 250   | 100   | 1172  | 67    |
| Future Volume (vph)  | 119   | 66    | 103   | 200   | 50    | 225   | 212   | 1370  | 250   | 100   | 1172  | 67    |
| Turn Type            | pm+pt | NA    | Perm  | pm+pt | NA    | Perm  | Prot  | NA    | Perm  | pm+pt | NA    | Perm  |
| Protected Phases     | 7     | 4     |       | 3     | 8     |       | 5     | 2     |       | 1     | 6     |       |
| Permitted Phases     | 4     |       | 4     | 8     |       | 8     |       |       | 2     | 6     |       | 6     |
| Detector Phase       | 7     | 4     | 4     | 3     | 8     | 8     | 5     | 2     | 2     | 1     | 6     | 6     |
| 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   | 5.0   |
| Minimum Split (s)    | 10.0  | 10.0  | 10.0  | 10.0  | 10.0  | 10.0  | 10.0  | 11.5  | 11.5  | 10.0  | 11.5  | 11.5  |
| Total Split (s)      | 21.0  | 27.0  | 27.0  | 16.0  | 22.0  | 22.0  | 24.0  | 54.0  | 54.0  | 23.0  | 53.0  | 53.0  |
| Total Split (%)      | 17.5% | 22.5% | 22.5% | 13.3% | 18.3% | 18.3% | 20.0% | 45.0% | 45.0% | 19.2% | 44.2% | 44.2% |
| Yellow Time (s)      | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.5   | 4.5   | 3.0   | 4.5   | 4.5   |
| 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   | 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  | -1.0  |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 5.5   | 5.5   | 4.0   | 5.5   | 5.5   |
| Lead/Lag             | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?   | Yes   |
| Recall Mode          | None  | Min   | Min   | None  | Min   | Min   |
| Act Effct Green (s)  | 19.5  | 10.2  | 10.2  | 24.4  | 12.6  | 12.6  | 12.8  | 48.1  | 48.1  | 55.1  | 44.5  | 44.5  |
| Actuated g/C Ratio   | 0.20  | 0.11  | 0.11  | 0.25  | 0.13  | 0.13  | 0.13  | 0.50  | 0.50  | 0.57  | 0.46  | 0.46  |
| v/c Ratio            | 0.21  | 0.35  | 0.39  | 0.60  | 0.22  | 0.58  | 0.49  | 0.79  | 0.29  | 0.43  | 0.74  | 0.09  |
| Control Delay        | 29.0  | 47.1  | 10.4  | 38.6  | 42.3  | 11.7  | 44.0  | 25.0  | 2.8   | 16.1  | 25.3  | 1.4   |
| 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          | 29.0  | 47.1  | 10.4  | 38.6  | 42.3  | 11.7  | 44.0  | 25.0  | 2.8   | 16.1  | 25.3  | 1.4   |
| LOS                  | C     | D     | B     | D     | D     | B     | D     | C     | A     | B     | C     | A     |
| Approach Delay       |       | 26.5  |       |       | 26.2  |       |       | 24.1  |       |       | 23.4  |       |
| Approach LOS         |       | C     |       |       | C     |       |       | C     |       |       | C     |       |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 96.8  
 Natural Cycle: 65  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.79  
 Intersection Signal Delay: 24.3  
 Intersection LOS: C  
 Intersection Capacity Utilization 72.4%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 2: Meridian Rd & Eastonville Rd



Timings  
25: Golden Sage Rd & Woodmen Rd

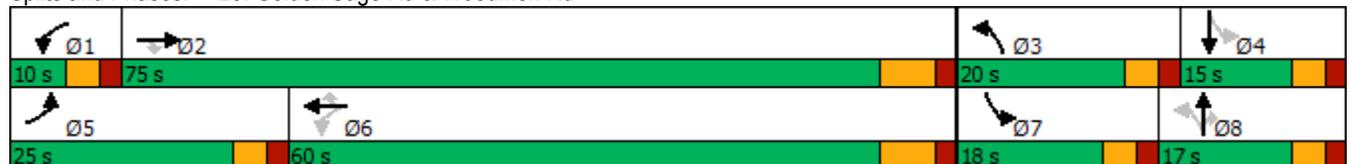
2040 Background Traffic WITH Right-in Access  
PM Peak Hour

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       |       |       |       |       |       |       |       |       |       |       |       |
| Traffic Volume (vph) | 324   | 1676  | 121   | 99    | 1030  | 300   | 152   | 35    | 114   | 191   | 26    | 408   |
| Future Volume (vph)  | 324   | 1676  | 121   | 99    | 1030  | 300   | 152   | 35    | 114   | 191   | 26    | 408   |
| 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)      | 25.0  | 75.0  | 75.0  | 10.0  | 60.0  | 60.0  | 20.0  | 17.0  | 17.0  | 18.0  | 15.0  |       |
| Total Split (%)      | 20.8% | 62.5% | 62.5% | 8.3%  | 50.0% | 50.0% | 16.7% | 14.2% | 14.2% | 15.0% | 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   |       |
| Recall Mode          | None  | Min   | Min   | None  | Min   | Min   | None  | None  | None  | None  | None  |       |
| Act Effct Green (s)  | 16.9  | 60.6  | 60.6  | 58.0  | 49.8  | 49.8  | 25.6  | 9.2   | 9.2   | 18.6  | 8.2   | 107.8 |
| Actuated g/C Ratio   | 0.16  | 0.56  | 0.56  | 0.54  | 0.46  | 0.46  | 0.24  | 0.09  | 0.09  | 0.17  | 0.08  | 1.00  |
| v/c Ratio            | 0.64  | 0.86  | 0.13  | 0.61  | 0.64  | 0.35  | 0.44  | 0.23  | 0.41  | 0.70  | 0.19  | 0.27  |
| Control Delay        | 49.5  | 25.4  | 2.3   | 33.3  | 24.8  | 3.2   | 39.5  | 52.7  | 6.2   | 52.9  | 53.7  | 0.4   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 1.5   | 0.0   | 0.0   |
| Total Delay          | 49.5  | 25.4  | 2.3   | 33.3  | 24.8  | 3.2   | 39.5  | 52.7  | 6.2   | 54.4  | 53.7  | 0.4   |
| LOS                  | D     | C     | A     | C     | C     | A     | D     | D     | A     | D     | D     | A     |
| Approach Delay       |       | 27.8  |       |       | 20.8  |       |       | 28.4  |       |       | 19.1  |       |
| Approach LOS         |       | C     |       |       | C     |       |       | C     |       |       | B     |       |

Intersection Summary

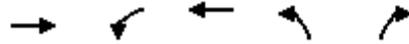
Cycle Length: 120  
 Actuated Cycle Length: 107.8  
 Natural Cycle: 75  
 Control Type: Semi Act-Uncoord  
 Maximum v/c Ratio: 0.86  
 Intersection Signal Delay: 24.4  
 Intersection Capacity Utilization 80.7%  
 Analysis Period (min) 15  
 Intersection LOS: C  
 ICU Level of Service D

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



Timings  
26: Golden Sage Rd & Woodmen Frontage Rd

2040 Background Traffic WITH Right-in Access  
PM Peak Hour

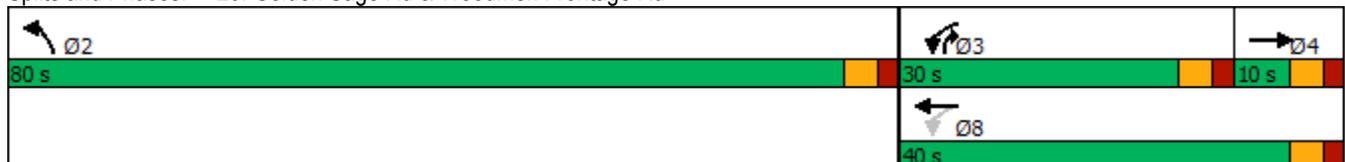


| Lane Group           | EBT  | WBL   | WBT   | NBL   | NBR   |
|----------------------|------|-------|-------|-------|-------|
| Lane Configurations  |      |       |       |       |       |
| Traffic Volume (vph) | 19   | 446   | 8     | 300   | 359   |
| Future Volume (vph)  | 19   | 446   | 8     | 300   | 359   |
| Turn Type            | NA   | pm+pt | NA    | Prot  | Over  |
| Protected Phases     | 4    | 3     | 8     | 2     | 3     |
| Permitted Phases     |      | 8     |       |       |       |
| Detector Phase       | 4    | 3     | 8     | 2     | 3     |
| Switch Phase         |      |       |       |       |       |
| Minimum Initial (s)  | 5.0  | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)    | 10.0 | 10.0  | 10.0  | 10.0  | 10.0  |
| Total Split (s)      | 10.0 | 30.0  | 40.0  | 80.0  | 30.0  |
| Total Split (%)      | 8.3% | 25.0% | 33.3% | 66.7% | 25.0% |
| Yellow Time (s)      | 3.0  | 3.0   | 3.0   | 3.0   | 3.0   |
| All-Red Time (s)     | 2.0  | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | -1.0 |       | -1.0  | -1.0  | -1.0  |
| Total Lost Time (s)  | 4.0  |       | 4.0   | 4.0   | 4.0   |
| Lead/Lag             | Lag  | Lead  |       |       | Lead  |
| Lead-Lag Optimize?   | Yes  | Yes   |       |       | Yes   |
| Recall Mode          | None | None  | None  | Min   | None  |
| Act Effct Green (s)  | 23.9 |       | 36.2  | 18.6  | 8.2   |
| Actuated g/C Ratio   | 0.38 |       | 0.58  | 0.30  | 0.13  |
| v/c Ratio            | 0.28 |       | 0.75  | 0.69  | 0.68  |
| Control Delay        | 5.3  |       | 18.3  | 26.2  | 11.5  |
| Queue Delay          | 0.0  |       | 0.0   | 0.0   | 0.0   |
| Total Delay          | 5.3  |       | 18.3  | 26.2  | 11.5  |
| LOS                  | A    |       | B     | C     | B     |
| Approach Delay       | 5.3  |       | 18.3  | 19.2  |       |
| Approach LOS         | A    |       | B     | B     |       |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 62.8  
 Natural Cycle: 45  
 Control Type: Semi Act-Uncoord  
 Maximum v/c Ratio: 0.75  
 Intersection Signal Delay: 16.8  
 Intersection LOS: B  
 Intersection Capacity Utilization 70.9%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 26: Golden Sage Rd & Woodmen Frontage Rd



Timings

2040 Total Traffic WITHOUT Right-in Access

1: Meridian Rd & Woodmen Rd

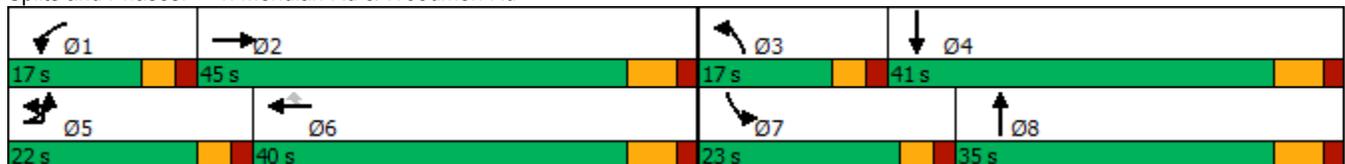
AM Peak Hour

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       |       |       |       |       |       |       |       |       |       |       |       |
| Traffic Volume (vph) | 464   | 520   | 175   | 150   | 804   | 248   | 250   | 422   | 100   | 294   | 941   | 929   |
| Future Volume (vph)  | 464   | 520   | 175   | 150   | 804   | 248   | 250   | 422   | 100   | 294   | 941   | 929   |
| Turn Type            | Prot  | NA    | Free  | Prot  | NA    | Perm  | Prot  | NA    | Free  | Prot  | NA    | Free  |
| Protected Phases     | 5     | 2     |       | 1     | 6     |       | 3     | 8     |       | 7     | 4     |       |
| Permitted Phases     |       |       | Free  |       |       | 6     |       |       | Free  |       |       | Free  |
| Detector Phase       | 5     | 2     |       | 1     | 6     | 6     | 3     | 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   |       |
| Minimum Split (s)    | 10.0  | 11.5  |       | 10.0  | 11.5  | 11.5  | 10.0  | 11.5  |       | 10.0  | 11.5  |       |
| Total Split (s)      | 22.0  | 45.0  |       | 17.0  | 40.0  | 40.0  | 17.0  | 35.0  |       | 23.0  | 41.0  |       |
| Total Split (%)      | 18.3% | 37.5% |       | 14.2% | 33.3% | 33.3% | 14.2% | 29.2% |       | 19.2% | 34.2% |       |
| Yellow Time (s)      | 3.0   | 4.5   |       | 3.0   | 4.5   | 4.5   | 3.0   | 4.5   |       | 3.0   | 4.5   |       |
| All-Red Time (s)     | 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  |       |
| Total Lost Time (s)  | 4.0   | 5.5   |       | 4.0   | 5.5   | 5.5   | 4.0   | 5.5   |       | 4.0   | 5.5   |       |
| Lead/Lag             | Lead  | Lag   |       | Lead  | Lag   | Lag   | Lead  | Lag   |       | Lead  | Lag   |       |
| Lead-Lag Optimize?   | Yes   | Yes   |       | Yes   | Yes   | Yes   | Yes   | Yes   |       | Yes   | Yes   |       |
| Recall Mode          | None  | Min   |       | None  | Min   | Min   | None  | None  |       | None  | None  |       |
| Act Effct Green (s)  | 18.1  | 39.3  | 116.6 | 11.3  | 32.5  | 32.5  | 12.5  | 30.9  | 116.6 | 16.1  | 34.5  | 116.6 |
| Actuated g/C Ratio   | 0.16  | 0.34  | 1.00  | 0.10  | 0.28  | 0.28  | 0.11  | 0.27  | 1.00  | 0.14  | 0.30  | 1.00  |
| v/c Ratio            | 0.90  | 0.45  | 0.11  | 0.46  | 0.83  | 0.41  | 0.69  | 0.46  | 0.06  | 0.63  | 0.92  | 0.60  |
| Control Delay        | 70.1  | 32.1  | 0.1   | 55.1  | 48.1  | 6.1   | 61.4  | 38.6  | 0.1   | 54.1  | 54.4  | 1.7   |
| 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          | 70.1  | 32.1  | 0.1   | 55.1  | 48.1  | 6.1   | 61.4  | 38.6  | 0.1   | 54.1  | 54.4  | 1.7   |
| LOS                  | E     | C     | A     | E     | D     | A     | E     | D     | A     | D     | D     | A     |
| Approach Delay       |       | 42.6  |       |       | 40.3  |       |       | 41.0  |       |       | 31.7  |       |
| Approach LOS         |       | D     |       |       | D     |       |       | D     |       |       | C     |       |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 116.6  
 Natural Cycle: 80  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.92  
 Intersection Signal Delay: 37.4  
 Intersection LOS: D  
 Intersection Capacity Utilization 84.6%  
 ICU Level of Service E  
 Analysis Period (min) 15

Splits and Phases: 1: Meridian Rd & Woodmen Rd



Timings  
2: Meridian Rd & Eastonville Rd

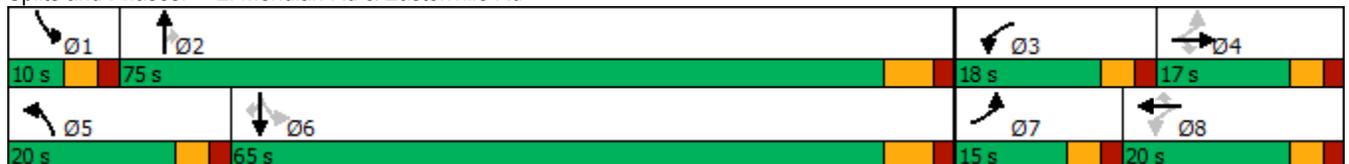
2040 Total Traffic WITHOUT Right-in Access  
AM Peak Hour

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       |       |       |       |       |       |       |       |       |       |       |       |
| Traffic Volume (vph) | 122   | 73    | 138   | 250   | 113   | 125   | 387   | 596   | 150   | 100   | 1722  | 141   |
| Future Volume (vph)  | 122   | 73    | 138   | 250   | 113   | 125   | 387   | 596   | 150   | 100   | 1722  | 141   |
| Turn Type            | pm+pt | NA    | Perm  | pm+pt | NA    | Perm  | Prot  | NA    | Perm  | pm+pt | NA    | Perm  |
| Protected Phases     | 7     | 4     |       | 3     | 8     |       | 5     | 2     |       | 1     | 6     |       |
| Permitted Phases     | 4     |       | 4     | 8     |       | 8     |       |       | 2     | 6     |       | 6     |
| Detector Phase       | 7     | 4     | 4     | 3     | 8     | 8     | 5     | 2     | 2     | 1     | 6     | 6     |
| 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   | 5.0   |
| Minimum Split (s)    | 10.0  | 11.5  | 11.5  | 10.0  | 11.5  | 11.5  | 10.0  | 11.5  | 11.5  | 10.0  | 11.5  | 11.5  |
| Total Split (s)      | 15.0  | 17.0  | 17.0  | 18.0  | 20.0  | 20.0  | 20.0  | 75.0  | 75.0  | 10.0  | 65.0  | 65.0  |
| Total Split (%)      | 12.5% | 14.2% | 14.2% | 15.0% | 16.7% | 16.7% | 16.7% | 62.5% | 62.5% | 8.3%  | 54.2% | 54.2% |
| Yellow Time (s)      | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.5   | 4.5   | 3.0   | 4.5   | 4.5   |
| 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   | 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  | -1.0  |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 5.5   | 5.5   | 4.0   | 5.5   | 5.5   |
| Lead/Lag             | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?   | Yes   |
| Recall Mode          | None  | Min   | Min   | None  | Min   | Min   |
| Act Effct Green (s)  | 20.4  | 10.8  | 10.8  | 28.4  | 15.1  | 15.1  | 16.0  | 69.5  | 69.5  | 67.0  | 59.5  | 59.5  |
| Actuated g/C Ratio   | 0.17  | 0.09  | 0.09  | 0.24  | 0.13  | 0.13  | 0.14  | 0.59  | 0.59  | 0.57  | 0.51  | 0.51  |
| v/c Ratio            | 0.25  | 0.45  | 0.49  | 0.82  | 0.50  | 0.38  | 0.87  | 0.29  | 0.16  | 0.21  | 0.98  | 0.17  |
| Control Delay        | 36.4  | 59.4  | 10.7  | 61.8  | 55.9  | 6.3   | 70.3  | 12.6  | 2.1   | 8.4   | 46.9  | 2.7   |
| 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          | 36.4  | 59.4  | 10.7  | 61.8  | 55.9  | 6.3   | 70.3  | 12.6  | 2.1   | 8.4   | 46.9  | 2.7   |
| LOS                  | D     | E     | B     | E     | E     | A     | E     | B     | A     | A     | D     | A     |
| Approach Delay       |       | 30.8  |       |       | 46.2  |       |       | 31.2  |       |       | 41.6  |       |
| Approach LOS         |       | C     |       |       | D     |       |       | C     |       |       | D     |       |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 117.8  
 Natural Cycle: 90  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.98  
 Intersection Signal Delay: 38.2  
 Intersection Capacity Utilization 90.4%  
 Analysis Period (min) 15  
 Intersection LOS: D  
 ICU Level of Service E

Splits and Phases: 2: Meridian Rd & Eastonville Rd



Timings  
25: Golden Sage Rd & Woodmen Rd

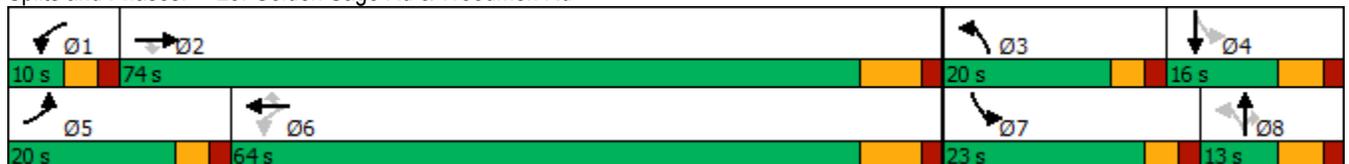
2040 Total Traffic WITHOUT Right-in Access  
AM Peak Hour

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       |       |       |       |       |       |       |       |       |       |       |       |
| Traffic Volume (vph) | 422   | 860   | 74    | 77    | 1722  | 184   | 150   | 19    | 48    | 251   | 21    | 354   |
| Future Volume (vph)  | 422   | 860   | 74    | 77    | 1722  | 184   | 150   | 19    | 48    | 251   | 21    | 354   |
| 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   | 5.0   |
| Minimum Split (s)    | 10.0  | 12.5  | 12.5  | 10.0  | 12.5  | 12.5  | 10.0  | 11.0  | 11.0  | 10.0  | 11.0  | 11.0  |
| Total Split (s)      | 20.0  | 74.0  | 74.0  | 10.0  | 64.0  | 64.0  | 20.0  | 13.0  | 13.0  | 23.0  | 16.0  | 16.0  |
| Total Split (%)      | 16.7% | 61.7% | 61.7% | 8.3%  | 53.3% | 53.3% | 16.7% | 10.8% | 10.8% | 19.2% | 13.3% | 13.3% |
| Yellow Time (s)      | 3.0   | 5.5   | 5.5   | 3.0   | 5.5   | 5.5   | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   | 4.0   |
| 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   | 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  | -1.0  |
| Total Lost Time (s)  | 4.0   | 6.5   | 6.5   | 4.0   | 6.5   | 6.5   | 4.0   | 5.0   | 5.0   | 4.0   | 5.0   | 5.0   |
| Lead/Lag             | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?   | Yes   |
| Recall Mode          | None  | Min   | Min   | None  | Min   | Min   | None  | None  | None  | None  | None  | None  |
| Act Effct Green (s)  | 16.1  | 70.0  | 70.0  | 66.2  | 57.7  | 57.7  | 23.7  | 7.4   | 7.4   | 25.2  | 9.4   | 116.3 |
| Actuated g/C Ratio   | 0.14  | 0.60  | 0.60  | 0.57  | 0.50  | 0.50  | 0.20  | 0.06  | 0.06  | 0.22  | 0.08  | 1.00  |
| v/c Ratio            | 0.94  | 0.41  | 0.08  | 0.20  | 1.00  | 0.22  | 0.46  | 0.17  | 0.19  | 0.73  | 0.15  | 0.24  |
| Control Delay        | 79.2  | 14.4  | 0.8   | 9.0   | 52.1  | 3.1   | 41.2  | 56.4  | 1.6   | 53.6  | 52.7  | 0.4   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 10.3  | 0.0   | 0.0   |
| Total Delay          | 79.2  | 14.4  | 0.8   | 9.0   | 52.1  | 3.1   | 41.2  | 56.4  | 1.6   | 63.9  | 52.7  | 0.4   |
| LOS                  | E     | B     | A     | A     | D     | A     | D     | E     | A     | E     | D     | A     |
| Approach Delay       |       | 34.2  |       |       | 45.7  |       |       | 33.7  |       |       | 27.6  |       |
| Approach LOS         |       | C     |       |       | D     |       |       | C     |       |       | C     |       |

Intersection Summary

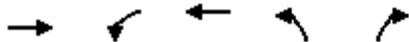
Cycle Length: 120  
 Actuated Cycle Length: 116.3  
 Natural Cycle: 90  
 Control Type: Semi Act-Uncoord  
 Maximum v/c Ratio: 1.00  
 Intersection Signal Delay: 38.6  
 Intersection LOS: D  
 Intersection Capacity Utilization 93.1%  
 ICU Level of Service F  
 Analysis Period (min) 15

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



Timings  
26: Golden Sage Rd & Woodmen Frontage Rd

2040 Total Traffic WITHOUT Right-in Access  
AM Peak Hour

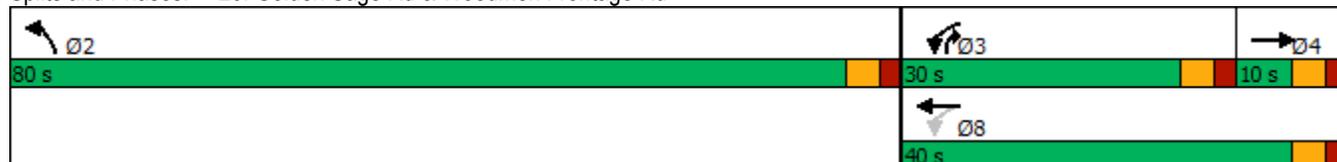


| Lane Group           | EBT  | WBL   | WBT   | NBL   | NBR   |
|----------------------|------|-------|-------|-------|-------|
| Lane Configurations  | →    |       | ←     | ↔     | ↔     |
| Traffic Volume (vph) | 30   | 377   | 4     | 100   | 525   |
| Future Volume (vph)  | 30   | 377   | 4     | 100   | 525   |
| Turn Type            | NA   | pm+pt | NA    | Prot  | Over  |
| Protected Phases     | 4    | 3     | 8     | 2     | 3     |
| Permitted Phases     |      | 8     |       |       |       |
| Detector Phase       | 4    | 3     | 8     | 2     | 3     |
| Switch Phase         |      |       |       |       |       |
| Minimum Initial (s)  | 5.0  | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)    | 10.0 | 10.0  | 10.0  | 10.0  | 10.0  |
| Total Split (s)      | 10.0 | 30.0  | 40.0  | 80.0  | 30.0  |
| Total Split (%)      | 8.3% | 25.0% | 33.3% | 66.7% | 25.0% |
| Yellow Time (s)      | 3.0  | 3.0   | 3.0   | 3.0   | 3.0   |
| All-Red Time (s)     | 2.0  | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | -1.0 |       | -1.0  | -1.0  | -1.0  |
| Total Lost Time (s)  | 4.0  |       | 4.0   | 4.0   | 4.0   |
| Lead/Lag             | Lag  | Lead  |       |       | Lead  |
| Lead-Lag Optimize?   | Yes  | Yes   |       |       | Yes   |
| Recall Mode          | None | None  | None  | Min   | None  |
| Act Effct Green (s)  | 21.9 |       | 34.0  | 12.1  | 8.0   |
| Actuated g/C Ratio   | 0.40 |       | 0.63  | 0.22  | 0.15  |
| v/c Ratio            | 0.36 |       | 0.64  | 0.67  | 0.65  |
| Control Delay        | 4.7  |       | 10.8  | 16.4  | 10.1  |
| Queue Delay          | 0.0  |       | 0.0   | 0.0   | 0.0   |
| Total Delay          | 4.7  |       | 10.8  | 16.4  | 10.1  |
| LOS                  | A    |       | B     | B     | B     |
| Approach Delay       | 4.7  |       | 10.8  | 13.3  |       |
| Approach LOS         | A    |       | B     | B     |       |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 54.2  
 Natural Cycle: 50  
 Control Type: Semi Act-Uncoord  
 Maximum v/c Ratio: 0.67  
 Intersection Signal Delay: 10.7  
 Intersection LOS: B  
 Intersection Capacity Utilization 64.4%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 26: Golden Sage Rd & Woodmen Frontage Rd



SimTraffic Performance Report

87: Meridian Rd & Site RIRO Performance by movement Interval #1 7:00

| Movement         | EBR  | NBT | SBT | SBR | All |
|------------------|------|-----|-----|-----|-----|
| Stop Del/Veh (s) | 21.7 | 1.0 | 0.1 | 0.1 | 1.4 |

87: Meridian Rd & Site RIRO Performance by movement Interval #2 7:15

| Movement         | EBR  | NBT | SBT | SBR | All |
|------------------|------|-----|-----|-----|-----|
| Stop Del/Veh (s) | 26.5 | 1.2 | 0.1 | 0.1 | 1.6 |

87: Meridian Rd & Site RIRO Performance by movement Interval #3 7:30

| Movement         | EBR  | NBT | SBT | SBR | All |
|------------------|------|-----|-----|-----|-----|
| Stop Del/Veh (s) | 17.2 | 1.2 | 0.1 | 0.1 | 1.1 |

87: Meridian Rd & Site RIRO Performance by movement Interval #4 7:45

| Movement         | EBR  | NBT | SBT | SBR | All |
|------------------|------|-----|-----|-----|-----|
| Stop Del/Veh (s) | 20.7 | 1.1 | 0.1 | 0.1 | 1.4 |

87: Meridian Rd & Site RIRO Performance by movement Entire Run

| Movement         | EBR  | NBT | SBT | SBR | All |
|------------------|------|-----|-----|-----|-----|
| Stop Del/Veh (s) | 22.3 | 1.1 | 0.1 | 0.1 | 1.4 |

Total Zone Performance By Interval

| Interval Start   | 7:00 | 7:15 | 7:30 | 7:45 | All  |
|------------------|------|------|------|------|------|
| Stop Del/Veh (s) | 34.1 | 70.8 | 38.1 | 31.2 | 70.5 |

| Intersection                |       |       |       |
|-----------------------------|-------|-------|-------|
| Intersection Delay, s/veh   | 3.6   |       |       |
| Intersection LOS            | A     |       |       |
| Approach                    | EB    | WB    | SB    |
| Entry Lanes                 | 1     | 1     | 1     |
| Conflicting Circle Lanes    | 1     | 1     | 1     |
| Adj Approach Flow, veh/h    | 162   | 168   | 40    |
| Demand Flow Rate, veh/h     | 165   | 171   | 40    |
| Vehicles Circulating, veh/h | 17    | 0     | 171   |
| Vehicles Exiting, veh/h     | 194   | 182   | 0     |
| Ped Vol Crossing Leg, #/h   | 0     | 0     | 0     |
| Ped Cap Adj                 | 1.000 | 1.000 | 1.000 |
| Approach Delay, s/veh       | 3.7   | 3.7   | 3.4   |
| Approach LOS                | A     | A     | A     |
| Lane                        | Left  | Left  | Left  |
| Designated Moves            | T     | T     | LR    |
| Assumed Moves               | T     | T     | LR    |
| RT Channelized              |       |       |       |
| Lane Util                   | 1.000 | 1.000 | 1.000 |
| Follow-Up Headway, s        | 2.609 | 2.609 | 2.609 |
| Critical Headway, s         | 4.976 | 4.976 | 4.976 |
| Entry Flow, veh/h           | 165   | 171   | 40    |
| Cap Entry Lane, veh/h       | 1356  | 1380  | 1159  |
| Entry HV Adj Factor         | 0.980 | 0.980 | 1.000 |
| Flow Entry, veh/h           | 162   | 168   | 40    |
| Cap Entry, veh/h            | 1330  | 1353  | 1159  |
| V/C Ratio                   | 0.122 | 0.124 | 0.035 |
| Control Delay, s/veh        | 3.7   | 3.7   | 3.4   |
| LOS                         | A     | A     | A     |
| 95th %tile Queue, veh       | 0     | 0     | 0     |

| Intersection                |       |        |       |       |
|-----------------------------|-------|--------|-------|-------|
| Intersection Delay, s/veh   | 3.8   |        |       |       |
| Intersection LOS            | A     |        |       |       |
| Approach                    | WB    | NB     |       | SB    |
| Entry Lanes                 | 1     | 1      |       | 1     |
| Conflicting Circle Lanes    | 1     | 1      |       | 1     |
| Adj Approach Flow, veh/h    | 533   | 278    |       | 82    |
| Demand Flow Rate, veh/h     | 544   | 283    |       | 84    |
| Vehicles Circulating, veh/h | 3     | 79     |       | 355   |
| Vehicles Exiting, veh/h     | 359   | 360    |       | 3     |
| Ped Vol Crossing Leg, #/h   | 0     | 0      |       | 0     |
| Ped Cap Adj                 | 1.000 | 1.000  |       | 1.000 |
| Approach Delay, s/veh       | 3.2   | 4.8    |       | 4.6   |
| Approach LOS                | A     | A      |       | A     |
| Lane                        | Left  | Bypass | Left  | Left  |
| Designated Moves            | L     | R      | TR    | LT    |
| Assumed Moves               | L     | R      | TR    | LT    |
| RT Channelized              | Free  |        |       |       |
| Lane Util                   | 1.000 |        | 1.000 | 1.000 |
| Follow-Up Headway, s        | 2.609 |        | 2.609 | 2.609 |
| Critical Headway, s         | 4.976 | 189    | 4.976 | 4.976 |
| Entry Flow, veh/h           | 355   | 1938   | 283   | 84    |
| Cap Entry Lane, veh/h       | 1376  | 0.980  | 1273  | 961   |
| Entry HV Adj Factor         | 0.980 | 185    | 0.982 | 0.975 |
| Flow Entry, veh/h           | 348   | 1900   | 278   | 82    |
| Cap Entry, veh/h            | 1348  | 0.097  | 1250  | 937   |
| V/C Ratio                   | 0.258 | 0.0    | 0.222 | 0.087 |
| Control Delay, s/veh        | 4.9   | A      | 4.8   | 4.6   |
| LOS                         | A     | 0      | A     | A     |
| 95th %tile Queue, veh       | 1     |        | 1     | 0     |

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1    |      |      |      |      |      |
| Movement                 | EBL  | EBT  | WBT  | WBR  | SBL  | SBR  |
| Lane Configurations      |      |      |      |      |      |      |
| Traffic Vol, veh/h       | 13   | 157  | 160  | 53   | 27   | 0    |
| Future Vol, veh/h        | 13   | 157  | 160  | 53   | 27   | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 150  | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | -    | 0    | 0    | -    | 0    | -    |
| Grade, %                 | -    | 0    | 0    | -    | 0    | -    |
| Peak Hour Factor         | 95   | 95   | 95   | 95   | 95   | 95   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 14   | 165  | 168  | 56   | 28   | 0    |

| Major/Minor          | Major1 | Major2 | Minor2 |   |             |
|----------------------|--------|--------|--------|---|-------------|
| Conflicting Flow All | 224    | 0      | -      | 0 | 389 196     |
| Stage 1              | -      | -      | -      | - | 196 -       |
| Stage 2              | -      | -      | -      | - | 193 -       |
| 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   | 1345   | -      | -      | - | 615 845     |
| Stage 1              | -      | -      | -      | - | 837 -       |
| Stage 2              | -      | -      | -      | - | 840 -       |
| Platoon blocked, %   |        | -      | -      | - |             |
| Mov Cap-1 Maneuver   | 1345   | -      | -      | - | 609 845     |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | 656 -       |
| Stage 1              | -      | -      | -      | - | 829 -       |
| Stage 2              | -      | -      | -      | - | 840 -       |

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

| Minor Lane/Major Mvmt | EBL  | EBT | WBT | WBR | SBLn1 |
|-----------------------|------|-----|-----|-----|-------|
| Capacity (veh/h)      | 1345 | -   | -   | -   | 656   |
| HCM Lane V/C Ratio    | 0.01 | -   | -   | -   | 0.043 |
| HCM Control Delay (s) | 7.7  | -   | -   | -   | 10.7  |
| HCM Lane LOS          | A    | -   | -   | -   | B     |
| HCM 95th %tile Q(veh) | 0    | -   | -   | -   | 0.1   |

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1.5  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↖    | ↗    |      | ↖    | ↗    |      |      | ↕    |      |      | ↕    |      |
| Traffic Vol, veh/h       | 11   | 170  | 3    | 8    | 195  | 34   | 5    | 6    | 4    | 19   | 2    | 13   |
| Future Vol, veh/h        | 11   | 170  | 3    | 8    | 195  | 34   | 5    | 6    | 4    | 19   | 2    | 13   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None |
| Storage Length           | 100  | -    | -    | 100  | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 12   | 179  | 3    | 8    | 205  | 36   | 5    | 6    | 4    | 20   | 2    | 14   |

| Major/Minor          | Major1 |   |   | Major2 |   |   | Minor1 |       |       | Minor2 |       |       |
|----------------------|--------|---|---|--------|---|---|--------|-------|-------|--------|-------|-------|
| Conflicting Flow All | 241    | 0 | 0 | 182    | 0 | 0 | 452    | 462   | 181   | 449    | 445   | 223   |
| Stage 1              | -      | - | - | -      | - | - | 205    | 205   | -     | 239    | 239   | -     |
| Stage 2              | -      | - | - | -      | - | - | 247    | 257   | -     | 210    | 206   | -     |
| Critical Hdwy        | 4.12   | - | - | 4.12   | - | - | 7.12   | 6.52  | 6.22  | 7.12   | 6.52  | 6.22  |
| Critical Hdwy Stg 1  | -      | - | - | -      | - | - | 6.12   | 5.52  | -     | 6.12   | 5.52  | -     |
| Critical Hdwy Stg 2  | -      | - | - | -      | - | - | 6.12   | 5.52  | -     | 6.12   | 5.52  | -     |
| Follow-up Hdwy       | 2.218  | - | - | 2.218  | - | - | 3.518  | 4.018 | 3.318 | 3.518  | 4.018 | 3.318 |
| Pot Cap-1 Maneuver   | 1326   | - | - | 1393   | - | - | 518    | 497   | 862   | 520    | 508   | 817   |
| Stage 1              | -      | - | - | -      | - | - | 797    | 732   | -     | 764    | 708   | -     |
| Stage 2              | -      | - | - | -      | - | - | 757    | 695   | -     | 792    | 731   | -     |
| Platoon blocked, %   | -      | - | - | -      | - | - | -      | -     | -     | -      | -     | -     |
| Mov Cap-1 Maneuver   | 1326   | - | - | 1393   | - | - | 502    | 490   | 862   | 506    | 500   | 817   |
| Mov Cap-2 Maneuver   | -      | - | - | -      | - | - | 502    | 490   | -     | 506    | 500   | -     |
| Stage 1              | -      | - | - | -      | - | - | 790    | 725   | -     | 757    | 704   | -     |
| Stage 2              | -      | - | - | -      | - | - | 738    | 691   | -     | 774    | 724   | -     |

| Approach             | EB  |  |  | WB  |  |  | NB   |  |  | SB   |  |  |
|----------------------|-----|--|--|-----|--|--|------|--|--|------|--|--|
| HCM Control Delay, s | 0.5 |  |  | 0.3 |  |  | 11.6 |  |  | 11.5 |  |  |
| HCM LOS              |     |  |  |     |  |  | B    |  |  | B    |  |  |

| Minor Lane/Major Mvmt | NBLn1 | EBL   | EBT | EBR | WBL   | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h)      | 559   | 1326  | -   | -   | 1393  | -   | -   | 592   |
| HCM Lane V/C Ratio    | 0.028 | 0.009 | -   | -   | 0.006 | -   | -   | 0.06  |
| HCM Control Delay (s) | 11.6  | 7.7   | -   | -   | 7.6   | -   | -   | 11.5  |
| HCM Lane LOS          | B     | A     | -   | -   | A     | -   | -   | B     |
| HCM 95th %tile Q(veh) | 0.1   | 0     | -   | -   | 0     | -   | -   | 0.2   |

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1.2  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↖    | ↗    |      | ↖    | ↗    |      |      | ↕    |      |      | ↕    |      |
| Traffic Vol, veh/h       | 7    | 183  | 3    | 9    | 228  | 35   | 0    | 0    | 9    | 24   | 0    | 9    |
| Future Vol, veh/h        | 7    | 183  | 3    | 9    | 228  | 35   | 0    | 0    | 9    | 24   | 0    | 9    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None |
| Storage Length           | 100  | -    | -    | 100  | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 7    | 193  | 3    | 9    | 240  | 37   | 0    | 0    | 9    | 25   | 0    | 9    |

| Major/Minor          | Major1 |   |   | Major2 |   |   | Minor1 |       |       | Minor2 |       |       |
|----------------------|--------|---|---|--------|---|---|--------|-------|-------|--------|-------|-------|
| Conflicting Flow All | 277    | 0 | 0 | 196    | 0 | 0 | 490    | 504   | 195   | 490    | 487   | 259   |
| Stage 1              | -      | - | - | -      | - | - | 209    | 209   | -     | 277    | 277   | -     |
| Stage 2              | -      | - | - | -      | - | - | 281    | 295   | -     | 213    | 210   | -     |
| Critical Hdwy        | 4.12   | - | - | 4.12   | - | - | 7.12   | 6.52  | 6.22  | 7.12   | 6.52  | 6.22  |
| Critical Hdwy Stg 1  | -      | - | - | -      | - | - | 6.12   | 5.52  | -     | 6.12   | 5.52  | -     |
| Critical Hdwy Stg 2  | -      | - | - | -      | - | - | 6.12   | 5.52  | -     | 6.12   | 5.52  | -     |
| Follow-up Hdwy       | 2.218  | - | - | 2.218  | - | - | 3.518  | 4.018 | 3.318 | 3.518  | 4.018 | 3.318 |
| Pot Cap-1 Maneuver   | 1286   | - | - | 1377   | - | - | 489    | 470   | 846   | 489    | 481   | 780   |
| Stage 1              | -      | - | - | -      | - | - | 793    | 729   | -     | 729    | 681   | -     |
| Stage 2              | -      | - | - | -      | - | - | 726    | 669   | -     | 789    | 728   | -     |
| Platoon blocked, %   | -      | - | - | -      | - | - | -      | -     | -     | -      | -     | -     |
| Mov Cap-1 Maneuver   | 1286   | - | - | 1377   | - | - | 479    | 464   | 846   | 479    | 475   | 780   |
| Mov Cap-2 Maneuver   | -      | - | - | -      | - | - | 479    | 464   | -     | 479    | 475   | -     |
| Stage 1              | -      | - | - | -      | - | - | 789    | 725   | -     | 725    | 676   | -     |
| Stage 2              | -      | - | - | -      | - | - | 712    | 664   | -     | 776    | 724   | -     |

| Approach             | EB  |  |  | WB  |  |  | NB  |  |  | SB   |  |  |
|----------------------|-----|--|--|-----|--|--|-----|--|--|------|--|--|
| HCM Control Delay, s | 0.3 |  |  | 0.3 |  |  | 9.3 |  |  | 12.2 |  |  |
| HCM LOS              |     |  |  |     |  |  | A   |  |  | B    |  |  |

| Minor Lane/Major Mvmt | NBLn1 | EBL   | EBT | EBR | WBL   | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h)      | 846   | 1286  | -   | -   | 1377  | -   | -   | 535   |
| HCM Lane V/C Ratio    | 0.011 | 0.006 | -   | -   | 0.007 | -   | -   | 0.065 |
| HCM Control Delay (s) | 9.3   | 7.8   | -   | -   | 7.6   | -   | -   | 12.2  |
| HCM Lane LOS          | A     | A     | -   | -   | A     | -   | -   | B     |
| HCM 95th %tile Q(veh) | 0     | 0     | -   | -   | 0     | -   | -   | 0.2   |

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1.8  |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      |      |      |      |      |      |      |
| Traffic Vol, veh/h       | 188  | 50   | 32   | 249  | 23   | 53   |
| Future Vol, veh/h        | 188  | 50   | 32   | 249  | 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           | -    | -    | 50   | -    | 0    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 204  | 54   | 35   | 271  | 25   | 58   |

| Major/Minor          | Major1 | Major2 | Minor1 |   |             |
|----------------------|--------|--------|--------|---|-------------|
| Conflicting Flow All | 0      | 0      | 258    | 0 | 572 231     |
| Stage 1              | -      | -      | -      | - | 231 -       |
| Stage 2              | -      | -      | -      | - | 341 -       |
| 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   | -      | -      | 1307   | - | 482 808     |
| Stage 1              | -      | -      | -      | - | 807 -       |
| Stage 2              | -      | -      | -      | - | 720 -       |
| Platoon blocked, %   | -      | -      | -      | - | -           |
| Mov Cap-1 Maneuver   | -      | -      | 1307   | - | 469 808     |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | 545 -       |
| Stage 1              | -      | -      | -      | - | 785 -       |
| Stage 2              | -      | -      | -      | - | 720 -       |

| Approach             | EB | WB  | NB   |
|----------------------|----|-----|------|
| HCM Control Delay, s | 0  | 0.9 | 10.8 |
| HCM LOS              |    |     | B    |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL   | WBT |
|-----------------------|-------|-----|-----|-------|-----|
| Capacity (veh/h)      | 705   | -   | -   | 1307  | -   |
| HCM Lane V/C Ratio    | 0.117 | -   | -   | 0.027 | -   |
| HCM Control Delay (s) | 10.8  | -   | -   | 7.8   | -   |
| HCM Lane LOS          | B     | -   | -   | A     | -   |
| HCM 95th %tile Q(veh) | 0.4   | -   | -   | 0.1   | -   |

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.3  |      |      |      |      |      |
| Movement                 | WBL  | WBR  | NBT  | NBR  | SBL  | SBT  |
| Lane Configurations      | ↔    |      | ↔    |      | ↔    | ↔    |
| Traffic Vol, veh/h       | 1    | 9    | 238  | 4    | 14   | 302  |
| Future Vol, veh/h        | 1    | 9    | 238  | 4    | 14   | 302  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | -    | -    | -    | 100  | -    |
| Veh in Median Storage, # | 0    | -    | 0    | -    | -    | 0    |
| Grade, %                 | 0    | -    | 0    | -    | -    | 0    |
| Peak Hour Factor         | 95   | 95   | 95   | 95   | 95   | 95   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 1    | 9    | 251  | 4    | 15   | 318  |

| Major/Minor          | Minor1 | Major1 | Major2 |   |       |   |
|----------------------|--------|--------|--------|---|-------|---|
| Conflicting Flow All | 601    | 253    | 0      | 0 | 255   | 0 |
| Stage 1              | 253    | -      | -      | - | -     | - |
| Stage 2              | 348    | -      | -      | - | -     | - |
| Critical Hdwy        | 6.42   | 6.22   | -      | - | 4.12  | - |
| Critical Hdwy Stg 1  | 5.42   | -      | -      | - | -     | - |
| Critical Hdwy Stg 2  | 5.42   | -      | -      | - | -     | - |
| Follow-up Hdwy       | 3.518  | 3.318  | -      | - | 2.218 | - |
| Pot Cap-1 Maneuver   | 463    | 786    | -      | - | 1310  | - |
| Stage 1              | 789    | -      | -      | - | -     | - |
| Stage 2              | 715    | -      | -      | - | -     | - |
| Platoon blocked, %   |        |        | -      | - |       | - |
| Mov Cap-1 Maneuver   | 458    | 786    | -      | - | 1310  | - |
| Mov Cap-2 Maneuver   | 544    | -      | -      | - | -     | - |
| Stage 1              | 780    | -      | -      | - | -     | - |
| Stage 2              | 715    | -      | -      | - | -     | - |

| Approach             | WB  | NB | SB  |
|----------------------|-----|----|-----|
| HCM Control Delay, s | 9.8 | 0  | 0.3 |
| HCM LOS              | A   |    |     |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL   | SBT   |
|-----------------------|-----|----------|-------|-------|
| Capacity (veh/h)      | -   | -        | 753   | 1310  |
| HCM Lane V/C Ratio    | -   | -        | 0.014 | 0.011 |
| HCM Control Delay (s) | -   | -        | 9.8   | 7.8   |
| HCM Lane LOS          | -   | -        | A     | A     |
| HCM 95th %tile Q(veh) | -   | -        | 0     | 0     |

| Intersection              |      |
|---------------------------|------|
| Intersection Delay, s/veh | 11.1 |
| Intersection LOS          | B    |

| Movement            | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|---------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations |      | ↕    |      |      | ↕    |      | ↕    | ↕    |      | ↕    | ↕    |      |
| Traffic Vol, veh/h  | 52   | 23   | 1    | 52   | 26   | 0    | 5    | 121  | 124  | 1    | 253  | 65   |
| Future Vol, veh/h   | 52   | 23   | 1    | 52   | 26   | 0    | 5    | 121  | 124  | 1    | 253  | 65   |
| Peak Hour Factor    | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Heavy Vehicles, %   | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow           | 55   | 24   | 1    | 55   | 27   | 0    | 5    | 127  | 131  | 1    | 266  | 68   |
| Number of Lanes     | 0    | 1    | 0    | 0    | 1    | 0    | 1    | 1    | 0    | 1    | 1    | 0    |

| Approach                   | EB  | WB  | NB   | SB   |
|----------------------------|-----|-----|------|------|
| Opposing Approach          | WB  | EB  | SB   | NB   |
| Opposing Lanes             | 1   | 1   | 2    | 2    |
| Conflicting Approach Left  | SB  | NB  | EB   | WB   |
| Conflicting Lanes Left     | 2   | 2   | 1    | 1    |
| Conflicting Approach Right | NB  | SB  | WB   | EB   |
| Conflicting Lanes Right    | 2   | 2   | 1    | 1    |
| HCM Control Delay          | 9.5 | 9.6 | 10.4 | 12.4 |
| HCM LOS                    | A   | A   | B    | B    |

| Lane                   | NBLn1 | NBLn2 | EBLn1 | WBLn1 | SBLn1 | SBLn2 |
|------------------------|-------|-------|-------|-------|-------|-------|
| Vol Left, %            | 100%  | 0%    | 68%   | 67%   | 100%  | 0%    |
| Vol Thru, %            | 0%    | 49%   | 30%   | 33%   | 0%    | 80%   |
| Vol Right, %           | 0%    | 51%   | 1%    | 0%    | 0%    | 20%   |
| Sign Control           | Stop  | Stop  | Stop  | Stop  | Stop  | Stop  |
| Traffic Vol by Lane    | 5     | 245   | 76    | 78    | 1     | 318   |
| LT Vol                 | 5     | 0     | 52    | 52    | 1     | 0     |
| Through Vol            | 0     | 121   | 23    | 26    | 0     | 253   |
| RT Vol                 | 0     | 124   | 1     | 0     | 0     | 65    |
| Lane Flow Rate         | 5     | 258   | 80    | 82    | 1     | 335   |
| Geometry Grp           | 7     | 7     | 2     | 2     | 7     | 7     |
| Degree of Util (X)     | 0.008 | 0.354 | 0.125 | 0.128 | 0.002 | 0.472 |
| Departure Headway (Hd) | 5.803 | 4.941 | 5.634 | 5.634 | 5.727 | 5.079 |
| Convergence, Y/N       | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Cap                    | 613   | 722   | 630   | 630   | 622   | 706   |
| Service Time           | 3.57  | 2.708 | 3.728 | 3.728 | 3.49  | 2.841 |
| HCM Lane V/C Ratio     | 0.008 | 0.357 | 0.127 | 0.13  | 0.002 | 0.475 |
| HCM Control Delay      | 8.6   | 10.4  | 9.5   | 9.6   | 8.5   | 12.4  |
| HCM Lane LOS           | A     | B     | A     | A     | A     | B     |
| HCM 95th-tile Q        | 0     | 1.6   | 0.4   | 0.4   | 0     | 2.5   |

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 2.6  |      |      |      |      |      |
| Movement                 | WBL  | WBR  | NBT  | NBR  | SBL  | SBT  |
| Lane Configurations      |      |      |      |      |      |      |
| Traffic Vol, veh/h       | 8    | 101  | 160  | 13   | 100  | 363  |
| Future Vol, veh/h        | 8    | 101  | 160  | 13   | 100  | 363  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | -    | -    | -    | 25   | -    |
| Veh in Median Storage, # | 0    | -    | 0    | -    | -    | 0    |
| Grade, %                 | 0    | -    | 0    | -    | -    | 0    |
| Peak Hour Factor         | 95   | 95   | 95   | 95   | 95   | 95   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 8    | 106  | 168  | 14   | 105  | 382  |

| Major/Minor          | Minor1 | Major1 | Major2 |   |       |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 767    | 175    | 0      | 0 | 182   |
| Stage 1              | 175    | -      | -      | - | -     |
| Stage 2              | 592    | -      | -      | - | -     |
| Critical Hdwy        | 6.42   | 6.22   | -      | - | 4.12  |
| Critical Hdwy Stg 1  | 5.42   | -      | -      | - | -     |
| Critical Hdwy Stg 2  | 5.42   | -      | -      | - | -     |
| Follow-up Hdwy       | 3.518  | 3.318  | -      | - | 2.218 |
| Pot Cap-1 Maneuver   | 370    | 868    | -      | - | 1393  |
| Stage 1              | 855    | -      | -      | - | -     |
| Stage 2              | 553    | -      | -      | - | -     |
| Platoon blocked, %   |        |        | -      | - | -     |
| Mov Cap-1 Maneuver   | 342    | 868    | -      | - | 1393  |
| Mov Cap-2 Maneuver   | 391    | -      | -      | - | -     |
| Stage 1              | 791    | -      | -      | - | -     |
| Stage 2              | 553    | -      | -      | - | -     |

| Approach             | WB   | NB | SB  |
|----------------------|------|----|-----|
| HCM Control Delay, s | 10.3 | 0  | 1.7 |
| HCM LOS              | B    |    |     |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL   | SBT   |
|-----------------------|-----|----------|-------|-------|
| Capacity (veh/h)      | -   | -        | 797   | 1393  |
| HCM Lane V/C Ratio    | -   | -        | 0.144 | 0.076 |
| HCM Control Delay (s) | -   | -        | 10.3  | 7.8   |
| HCM Lane LOS          | -   | -        | B     | A     |
| HCM 95th %tile Q(veh) | -   | -        | 0.5   | 0.2   |

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.1  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      | Y    |      | Y    | ↑    | ↑    |      |
| Traffic Vol, veh/h       | 4    | 2    | 4    | 257  | 461  | 5    |
| Future Vol, veh/h        | 4    | 2    | 4    | 257  | 461  | 5    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | -    | 25   | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 95   | 95   | 95   | 95   | 95   | 95   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 4    | 2    | 4    | 271  | 485  | 5    |

| Major/Minor          | Minor2 | Major1 | Major2 |   |   |   |
|----------------------|--------|--------|--------|---|---|---|
| Conflicting Flow All | 767    | 488    | 490    | 0 | - | 0 |
| Stage 1              | 488    | -      | -      | - | - | - |
| Stage 2              | 279    | -      | -      | - | - | - |
| Critical Hdwy        | 6.42   | 6.22   | 4.12   | - | - | - |
| Critical Hdwy Stg 1  | 5.42   | -      | -      | - | - | - |
| Critical Hdwy Stg 2  | 5.42   | -      | -      | - | - | - |
| Follow-up Hdwy       | 3.518  | 3.318  | 2.218  | - | - | - |
| Pot Cap-1 Maneuver   | 370    | 580    | 1073   | - | - | - |
| Stage 1              | 617    | -      | -      | - | - | - |
| Stage 2              | 768    | -      | -      | - | - | - |
| Platoon blocked, %   |        |        |        | - | - | - |
| Mov Cap-1 Maneuver   | 369    | 580    | 1073   | - | - | - |
| Mov Cap-2 Maneuver   | 369    | -      | -      | - | - | - |
| Stage 1              | 615    | -      | -      | - | - | - |
| Stage 2              | 768    | -      | -      | - | - | - |

| Approach             | EB   | NB  | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 13.7 | 0.1 | 0  |
| HCM LOS              | B    |     |    |

| Minor Lane/Major Mvmt | NBL   | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h)      | 1073  | -   | 420   | -   | -   |
| HCM Lane V/C Ratio    | 0.004 | -   | 0.015 | -   | -   |
| HCM Control Delay (s) | 8.4   | -   | 13.7  | -   | -   |
| HCM Lane LOS          | A     | -   | B     | -   | -   |
| HCM 95th %tile Q(veh) | 0     | -   | 0     | -   | -   |

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1.6  |      |      |      |      |      |
| Movement                 | EBL  | EBT  | WBT  | WBR  | SBL  | SBR  |
| Lane Configurations      |      | ↶    | ↷    |      | ↶    |      |
| Traffic Vol, veh/h       | 50   | 95   | 186  | 19   | 6    | 14   |
| Future Vol, veh/h        | 50   | 95   | 186  | 19   | 6    | 14   |
| 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         | 95   | 95   | 95   | 95   | 95   | 95   |
| Heavy Vehicles, %        | 5    | 2    | 2    | 5    | 5    | 5    |
| Mvmt Flow                | 53   | 100  | 196  | 20   | 6    | 15   |

| Major/Minor          | Major1 | Major2 | Minor2 |   |             |
|----------------------|--------|--------|--------|---|-------------|
| Conflicting Flow All | 216    | 0      | -      | 0 | 412 206     |
| Stage 1              | -      | -      | -      | - | 206 -       |
| Stage 2              | -      | -      | -      | - | 206 -       |
| Critical Hdwy        | 4.15   | -      | -      | - | 6.45 6.25   |
| Critical Hdwy Stg 1  | -      | -      | -      | - | 5.45 -      |
| Critical Hdwy Stg 2  | -      | -      | -      | - | 5.45 -      |
| Follow-up Hdwy       | 2.245  | -      | -      | - | 3.545 3.345 |
| Pot Cap-1 Maneuver   | 1336   | -      | -      | - | 591 827     |
| Stage 1              | -      | -      | -      | - | 821 -       |
| Stage 2              | -      | -      | -      | - | 821 -       |
| Platoon blocked, %   |        | -      | -      | - |             |
| Mov Cap-1 Maneuver   | 1336   | -      | -      | - | 566 827     |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | 566 -       |
| Stage 1              | -      | -      | -      | - | 787 -       |
| Stage 2              | -      | -      | -      | - | 821 -       |

| Approach             | EB  | WB | SB   |
|----------------------|-----|----|------|
| HCM Control Delay, s | 2.7 | 0  | 10.1 |
| HCM LOS              |     |    | B    |

| Minor Lane/Major Mvmt | EBL   | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h)      | 1336  | -   | -   | -   | 726   |
| HCM Lane V/C Ratio    | 0.039 | -   | -   | -   | 0.029 |
| HCM Control Delay (s) | 7.8   | 0   | -   | -   | 10.1  |
| HCM Lane LOS          | A     | A   | -   | -   | B     |
| HCM 95th %tile Q(veh) | 0.1   | -   | -   | -   | 0.1   |

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1.8  |      |      |      |      |      |
| Movement                 | EBL  | EBT  | WBT  | WBR  | SBL  | SBR  |
| Lane Configurations      |      | ↕    | ↕    |      | ↕    |      |
| Traffic Vol, veh/h       | 9    | 92   | 177  | 9    | 27   | 28   |
| Future Vol, veh/h        | 9    | 92   | 177  | 9    | 27   | 28   |
| 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         | 95   | 95   | 95   | 95   | 95   | 95   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 9    | 97   | 186  | 9    | 28   | 29   |

| Major/Minor          | Major1 | Major2 | Minor2 |   |       |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 195    | 0      | -      | 0 | 306   |
| Stage 1              | -      | -      | -      | - | 191   |
| Stage 2              | -      | -      | -      | - | 115   |
| Critical Hdwy        | 4.12   | -      | -      | - | 6.42  |
| Critical Hdwy Stg 1  | -      | -      | -      | - | 5.42  |
| Critical Hdwy Stg 2  | -      | -      | -      | - | 5.42  |
| Follow-up Hdwy       | 2.218  | -      | -      | - | 3.518 |
| Pot Cap-1 Maneuver   | 1378   | -      | -      | - | 686   |
| Stage 1              | -      | -      | -      | - | 841   |
| Stage 2              | -      | -      | -      | - | 910   |
| Platoon blocked, %   |        | -      | -      | - |       |
| Mov Cap-1 Maneuver   | 1378   | -      | -      | - | 681   |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | 681   |
| Stage 1              | -      | -      | -      | - | 835   |
| Stage 2              | -      | -      | -      | - | 910   |

| Approach             | EB  | WB | SB   |
|----------------------|-----|----|------|
| HCM Control Delay, s | 0.7 | 0  | 10.1 |
| HCM LOS              |     |    | B    |

| Minor Lane/Major Mvmt | EBL   | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h)      | 1378  | -   | -   | -   | 758   |
| HCM Lane V/C Ratio    | 0.007 | -   | -   | -   | 0.076 |
| HCM Control Delay (s) | 7.6   | 0   | -   | -   | 10.1  |
| HCM Lane LOS          | A     | A   | -   | -   | B     |
| HCM 95th %tile Q(veh) | 0     | -   | -   | -   | 0.2   |

HCM 6th TWSC  
 202: Woodmen Frontage Rd/Internal Street & Vignola Heights

2040 Total Traffic (No Woodmen Access)  
 AM Peak Hour

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1.8  |      |      |      |      |      |
| Movement                 | EBL  | EBT  | WBT  | WBR  | SBL  | SBR  |
| Lane Configurations      |      | ↕    | ↕    |      | ↕    |      |
| Traffic Vol, veh/h       | 6    | 113  | 168  | 14   | 41   | 18   |
| Future Vol, veh/h        | 6    | 113  | 168  | 14   | 41   | 18   |
| 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         | 95   | 95   | 95   | 95   | 95   | 95   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 6    | 119  | 177  | 15   | 43   | 19   |

| Major/Minor          | Major1 | Major2 | Minor2 |   |             |
|----------------------|--------|--------|--------|---|-------------|
| Conflicting Flow All | 192    | 0      | -      | 0 | 316 185     |
| Stage 1              | -      | -      | -      | - | 185 -       |
| Stage 2              | -      | -      | -      | - | 131 -       |
| 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   | 1381   | -      | -      | - | 677 857     |
| Stage 1              | -      | -      | -      | - | 847 -       |
| Stage 2              | -      | -      | -      | - | 895 -       |
| Platoon blocked, %   |        | -      | -      | - |             |
| Mov Cap-1 Maneuver   | 1381   | -      | -      | - | 674 857     |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | 702 -       |
| Stage 1              | -      | -      | -      | - | 843 -       |
| Stage 2              | -      | -      | -      | - | 895 -       |

| Approach             | EB  | WB | SB   |
|----------------------|-----|----|------|
| HCM Control Delay, s | 0.4 | 0  | 10.3 |
| HCM LOS              |     |    | B    |

| Minor Lane/Major Mvmt | EBL   | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h)      | 1381  | -   | -   | -   | 743   |
| HCM Lane V/C Ratio    | 0.005 | -   | -   | -   | 0.084 |
| HCM Control Delay (s) | 7.6   | 0   | -   | -   | 10.3  |
| HCM Lane LOS          | A     | A   | -   | -   | B     |
| HCM 95th %tile Q(veh) | 0     | -   | -   | -   | 0.3   |

Timings

2040 Total Traffic WITHOUT Right-in Access

1: Meridian Rd & Woodmen Rd

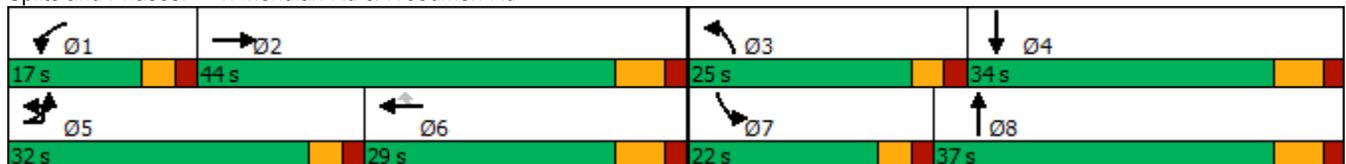
PM Peak Hour

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       |       |       |       |       |       |       |       |       |       |       |       |
| Traffic Volume (vph) | 765   | 794   | 375   | 225   | 561   | 367   | 350   | 1008  | 200   | 483   | 704   | 535   |
| Future Volume (vph)  | 765   | 794   | 375   | 225   | 561   | 367   | 350   | 1008  | 200   | 483   | 704   | 535   |
| Turn Type            | Prot  | NA    | Free  | Prot  | NA    | Perm  | Prot  | NA    | Free  | Prot  | NA    | Free  |
| Protected Phases     | 5     | 2     |       | 1     | 6     |       | 3     | 8     |       | 7     | 4     |       |
| Permitted Phases     |       |       | Free  |       |       | 6     |       |       | Free  |       |       | Free  |
| Detector Phase       | 5     | 2     |       | 1     | 6     | 6     | 3     | 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   |       |
| Minimum Split (s)    | 10.0  | 11.5  |       | 10.0  | 11.5  | 11.5  | 10.0  | 11.5  |       | 10.0  | 11.5  |       |
| Total Split (s)      | 32.0  | 44.0  |       | 17.0  | 29.0  | 29.0  | 25.0  | 37.0  |       | 22.0  | 34.0  |       |
| Total Split (%)      | 26.7% | 36.7% |       | 14.2% | 24.2% | 24.2% | 20.8% | 30.8% |       | 18.3% | 28.3% |       |
| Yellow Time (s)      | 3.0   | 4.5   |       | 3.0   | 4.5   | 4.5   | 3.0   | 4.5   |       | 3.0   | 4.5   |       |
| All-Red Time (s)     | 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  |       |
| Total Lost Time (s)  | 4.0   | 5.5   |       | 4.0   | 5.5   | 5.5   | 4.0   | 5.5   |       | 4.0   | 5.5   |       |
| Lead/Lag             | Lead  | Lag   |       | Lead  | Lag   | Lag   | Lead  | Lag   |       | Lead  | Lag   |       |
| Lead-Lag Optimize?   | Yes   | Yes   |       | Yes   | Yes   | Yes   | Yes   | Yes   |       | Yes   | Yes   |       |
| Recall Mode          | None  | Min   |       | None  | Min   | Min   | None  | None  |       | None  | None  |       |
| Act Effct Green (s)  | 28.0  | 38.5  | 119.5 | 12.5  | 23.0  | 23.0  | 18.2  | 31.5  | 119.5 | 18.0  | 31.4  | 119.5 |
| Actuated g/C Ratio   | 0.23  | 0.32  | 1.00  | 0.10  | 0.19  | 0.19  | 0.15  | 0.26  | 1.00  | 0.15  | 0.26  | 1.00  |
| v/c Ratio            | 0.98  | 0.71  | 0.24  | 0.64  | 0.84  | 0.70  | 0.69  | 1.10  | 0.13  | 0.96  | 0.77  | 0.34  |
| Control Delay        | 73.7  | 39.8  | 0.4   | 60.2  | 58.8  | 19.3  | 54.9  | 103.4 | 0.2   | 80.5  | 48.1  | 0.6   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 73.7  | 39.8  | 0.4   | 60.2  | 58.8  | 19.3  | 54.9  | 103.4 | 0.2   | 80.5  | 48.1  | 0.6   |
| LOS                  | E     | D     | A     | E     | E     | B     | D     | F     | A     | F     | D     | A     |
| Approach Delay       |       | 45.7  |       |       | 46.5  |       |       | 79.2  |       |       | 42.4  |       |
| Approach LOS         |       | D     |       |       | D     |       |       | E     |       |       | D     |       |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 119.5  
 Natural Cycle: 110  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.10  
 Intersection Signal Delay: 53.2  
 Intersection LOS: D  
 Intersection Capacity Utilization 95.1%  
 ICU Level of Service F  
 Analysis Period (min) 15

Splits and Phases: 1: Meridian Rd & Woodmen Rd



Timings  
2: Meridian Rd & Eastonville Rd

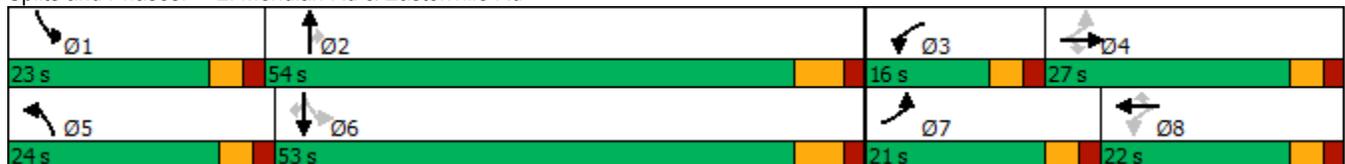
2040 Total Traffic WITHOUT Right-in Access  
PM Peak Hour

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       |       |       |       |       |       |       |       |       |       |       |       |
| Traffic Volume (vph) | 339   | 197   | 228   | 200   | 136   | 225   | 644   | 1246  | 250   | 100   | 1154  | 165   |
| Future Volume (vph)  | 339   | 197   | 228   | 200   | 136   | 225   | 644   | 1246  | 250   | 100   | 1154  | 165   |
| Turn Type            | pm+pt | NA    | Perm  | pm+pt | NA    | Perm  | Prot  | NA    | Perm  | pm+pt | NA    | Perm  |
| Protected Phases     | 7     | 4     |       | 3     | 8     |       | 5     | 2     |       | 1     | 6     |       |
| Permitted Phases     | 4     |       | 4     | 8     |       | 8     |       |       | 2     | 6     |       | 6     |
| Detector Phase       | 7     | 4     | 4     | 3     | 8     | 8     | 5     | 2     | 2     | 1     | 6     | 6     |
| 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   | 5.0   |
| Minimum Split (s)    | 10.0  | 10.0  | 10.0  | 10.0  | 10.0  | 10.0  | 10.0  | 11.5  | 11.5  | 10.0  | 11.5  | 11.5  |
| Total Split (s)      | 21.0  | 27.0  | 27.0  | 16.0  | 22.0  | 22.0  | 24.0  | 54.0  | 54.0  | 23.0  | 53.0  | 53.0  |
| Total Split (%)      | 17.5% | 22.5% | 22.5% | 13.3% | 18.3% | 18.3% | 20.0% | 45.0% | 45.0% | 19.2% | 44.2% | 44.2% |
| Yellow Time (s)      | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.5   | 4.5   | 3.0   | 4.5   | 4.5   |
| 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   | 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  | -1.0  |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 5.5   | 5.5   | 4.0   | 5.5   | 5.5   |
| Lead/Lag             | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?   | Yes   |
| Recall Mode          | None  | Min   | Min   | None  | Min   | Min   |
| Act Effct Green (s)  | 32.9  | 18.3  | 18.3  | 26.9  | 15.1  | 15.1  | 20.2  | 53.7  | 53.7  | 54.6  | 43.3  | 43.3  |
| Actuated g/C Ratio   | 0.30  | 0.16  | 0.16  | 0.24  | 0.14  | 0.14  | 0.18  | 0.48  | 0.48  | 0.49  | 0.39  | 0.39  |
| v/c Ratio            | 0.52  | 0.68  | 0.52  | 0.72  | 0.57  | 0.57  | 1.09  | 0.74  | 0.29  | 0.42  | 0.86  | 0.25  |
| Control Delay        | 33.1  | 56.1  | 9.7   | 47.0  | 55.7  | 11.5  | 106.7 | 27.5  | 3.2   | 16.0  | 38.7  | 6.1   |
| 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          | 33.1  | 56.1  | 9.7   | 47.0  | 55.7  | 11.5  | 106.7 | 27.5  | 3.2   | 16.0  | 38.7  | 6.1   |
| LOS                  | C     | E     | A     | D     | E     | B     | F     | C     | A     | B     | D     | A     |
| Approach Delay       |       | 32.0  |       |       | 34.9  |       |       | 48.9  |       |       | 33.1  |       |
| Approach LOS         |       | C     |       |       | C     |       |       | D     |       |       | C     |       |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 111.3  
 Natural Cycle: 90  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.09  
 Intersection Signal Delay: 40.0  
 Intersection LOS: D  
 Intersection Capacity Utilization 86.3%  
 ICU Level of Service E  
 Analysis Period (min) 15

Splits and Phases: 2: Meridian Rd & Eastonville Rd



Timings  
25: Golden Sage Rd & Woodmen Rd

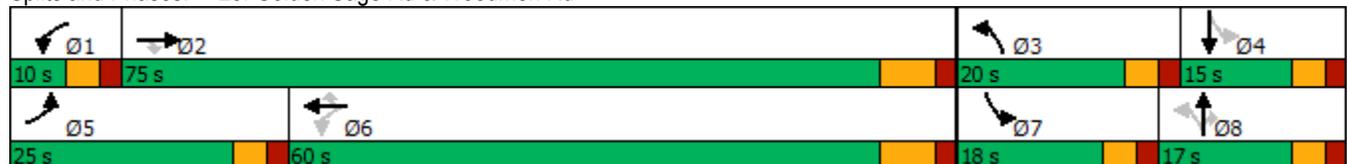
2040 Total Traffic WITHOUT Right-in Access  
PM Peak Hour

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       |       |       |       |       |       |       |       |       |       |       |       |
| Traffic Volume (vph) | 404   | 1630  | 121   | 99    | 1030  | 329   | 152   | 39    | 114   | 191   | 26    | 446   |
| Future Volume (vph)  | 404   | 1630  | 121   | 99    | 1030  | 329   | 152   | 39    | 114   | 191   | 26    | 446   |
| 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   | 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  | 10.0  |
| Total Split (s)      | 25.0  | 75.0  | 75.0  | 10.0  | 60.0  | 60.0  | 20.0  | 17.0  | 17.0  | 18.0  | 15.0  |       |
| Total Split (%)      | 20.8% | 62.5% | 62.5% | 8.3%  | 50.0% | 50.0% | 16.7% | 14.2% | 14.2% | 15.0% | 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   | 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   | 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  | -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   | 4.0   |
| Lead/Lag             | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   |       |
| Lead-Lag Optimize?   | Yes   |
| Recall Mode          | None  | Min   | Min   | None  | Min   | Min   | None  | None  | None  | None  | None  | None  |
| Act Effct Green (s)  | 18.4  | 59.2  | 59.2  | 55.0  | 46.9  | 46.9  | 25.5  | 9.2   | 9.2   | 18.6  | 8.2   | 106.4 |
| Actuated g/C Ratio   | 0.17  | 0.56  | 0.56  | 0.52  | 0.44  | 0.44  | 0.24  | 0.09  | 0.09  | 0.17  | 0.08  | 1.00  |
| v/c Ratio            | 0.72  | 0.84  | 0.14  | 0.60  | 0.67  | 0.39  | 0.43  | 0.26  | 0.41  | 0.69  | 0.19  | 0.30  |
| Control Delay        | 50.3  | 24.6  | 2.3   | 32.1  | 26.5  | 3.4   | 38.9  | 52.8  | 6.1   | 51.8  | 53.1  | 0.5   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 1.4   | 0.0   | 0.0   |
| Total Delay          | 50.3  | 24.6  | 2.3   | 32.1  | 26.5  | 3.4   | 38.9  | 52.8  | 6.1   | 53.2  | 53.1  | 0.5   |
| LOS                  | D     | C     | A     | C     | C     | A     | D     | D     | A     | D     | D     | A     |
| Approach Delay       |       | 28.2  |       |       | 21.6  |       |       | 28.4  |       |       | 17.7  |       |
| Approach LOS         |       | C     |       |       | C     |       |       | C     |       |       | B     |       |

Intersection Summary

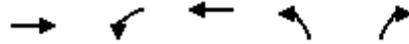
Cycle Length: 120  
 Actuated Cycle Length: 106.4  
 Natural Cycle: 70  
 Control Type: Semi Act-Uncoord  
 Maximum v/c Ratio: 0.84  
 Intersection Signal Delay: 24.6  
 Intersection Capacity Utilization 79.5%  
 Analysis Period (min) 15  
 Intersection LOS: C  
 ICU Level of Service D

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



Timings  
26: Golden Sage Rd & Woodmen Frontage Rd

2040 Total Traffic WITHOUT Right-in Access  
PM Peak Hour

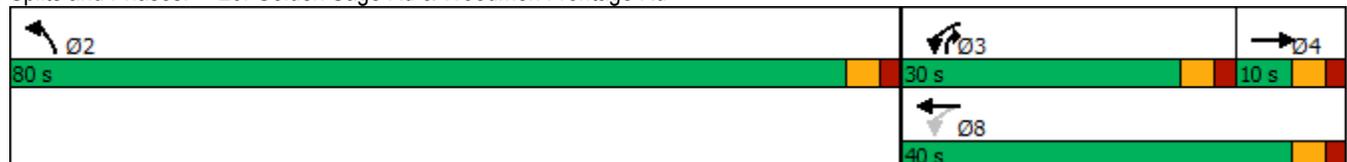


| Lane Group           | EBT  | WBL   | WBT   | NBL   | NBR   |
|----------------------|------|-------|-------|-------|-------|
| Lane Configurations  | →    |       | ←     | ↔     | ↔     |
| Traffic Volume (vph) | 23   | 488   | 12    | 300   | 473   |
| Future Volume (vph)  | 23   | 488   | 12    | 300   | 473   |
| Turn Type            | NA   | pm+pt | NA    | Prot  | Over  |
| Protected Phases     | 4    | 3     | 8     | 2     | 3     |
| Permitted Phases     |      | 8     |       |       |       |
| Detector Phase       | 4    | 3     | 8     | 2     | 3     |
| Switch Phase         |      |       |       |       |       |
| Minimum Initial (s)  | 5.0  | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)    | 10.0 | 10.0  | 10.0  | 10.0  | 10.0  |
| Total Split (s)      | 10.0 | 30.0  | 40.0  | 80.0  | 30.0  |
| Total Split (%)      | 8.3% | 25.0% | 33.3% | 66.7% | 25.0% |
| Yellow Time (s)      | 3.0  | 3.0   | 3.0   | 3.0   | 3.0   |
| All-Red Time (s)     | 2.0  | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | -1.0 |       | -1.0  | -1.0  | -1.0  |
| Total Lost Time (s)  | 4.0  |       | 4.0   | 4.0   | 4.0   |
| Lead/Lag             | Lag  | Lead  |       |       | Lead  |
| Lead-Lag Optimize?   | Yes  | Yes   |       |       | Yes   |
| Recall Mode          | None | None  | None  | Min   | None  |
| Act Effct Green (s)  | 23.6 |       | 36.2  | 21.1  | 8.6   |
| Actuated g/C Ratio   | 0.36 |       | 0.55  | 0.32  | 0.13  |
| v/c Ratio            | 0.29 |       | 0.87  | 0.74  | 0.73  |
| Control Delay        | 6.1  |       | 29.5  | 26.6  | 12.0  |
| Queue Delay          | 0.0  |       | 0.0   | 0.0   | 0.0   |
| Total Delay          | 6.1  |       | 29.5  | 26.6  | 12.0  |
| LOS                  | A    |       | C     | C     | B     |
| Approach Delay       | 6.1  |       | 29.5  | 19.7  |       |
| Approach LOS         | A    |       | C     | B     |       |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 65.4  
 Natural Cycle: 60  
 Control Type: Semi Act-Uncoord  
 Maximum v/c Ratio: 0.87  
 Intersection Signal Delay: 21.2  
 Intersection Capacity Utilization 75.9%  
 Analysis Period (min) 15  
 Intersection LOS: C  
 ICU Level of Service D

Splits and Phases: 26: Golden Sage Rd & Woodmen Frontage Rd



## SimTraffic Performance Report

## 87: Meridian Rd &amp; Site RIRO Performance by movement Interval #1 5:00

| Movement         | EBR  | NBT | SBT | SBR | All |
|------------------|------|-----|-----|-----|-----|
| Stop Del/Veh (s) | 14.7 | 2.6 | 0.2 | 0.1 | 2.2 |

## 87: Meridian Rd &amp; Site RIRO Performance by movement Interval #2 5:15

| Movement         | EBR  | NBT | SBT | SBR | All |
|------------------|------|-----|-----|-----|-----|
| Stop Del/Veh (s) | 23.5 | 2.6 | 0.2 | 0.2 | 3.0 |

## 87: Meridian Rd &amp; Site RIRO Performance by movement Interval #3 5:30

| Movement         | EBR  | NBT | SBT | SBR | All |
|------------------|------|-----|-----|-----|-----|
| Stop Del/Veh (s) | 19.3 | 2.4 | 0.1 | 0.2 | 2.6 |

## 87: Meridian Rd &amp; Site RIRO Performance by movement Interval #4 5:45

| Movement         | EBR  | NBT | SBT | SBR | All |
|------------------|------|-----|-----|-----|-----|
| Stop Del/Veh (s) | 17.8 | 2.6 | 0.1 | 0.1 | 2.6 |

## 87: Meridian Rd &amp; Site RIRO Performance by movement Entire Run

| Movement         | EBR  | NBT | SBT | SBR | All |
|------------------|------|-----|-----|-----|-----|
| Stop Del/Veh (s) | 19.7 | 2.6 | 0.1 | 0.1 | 2.6 |

## Total Zone Performance By Interval

| Interval Start   | 5:00 | 5:15  | 5:30 | 5:45  | All   |
|------------------|------|-------|------|-------|-------|
| Stop Del/Veh (s) | 76.0 | 124.7 | 82.1 | 130.8 | 395.4 |

| Intersection                |       |       |       |
|-----------------------------|-------|-------|-------|
| Intersection Delay, s/veh   | 4.1   |       |       |
| Intersection LOS            | A     |       |       |
| Approach                    | EB    | WB    | SB    |
| Entry Lanes                 | 1     | 1     | 1     |
| Conflicting Circle Lanes    | 1     | 1     | 1     |
| Adj Approach Flow, veh/h    | 269   | 177   | 9     |
| Demand Flow Rate, veh/h     | 274   | 181   | 9     |
| Vehicles Circulating, veh/h | 5     | 0     | 181   |
| Vehicles Exiting, veh/h     | 185   | 279   | 0     |
| Ped Vol Crossing Leg, #/h   | 0     | 0     | 0     |
| Ped Cap Adj                 | 1.000 | 1.000 | 1.000 |
| Approach Delay, s/veh       | 4.3   | 3.7   | 3.2   |
| Approach LOS                | A     | A     | A     |
| Lane                        | Left  | Left  | Left  |
| Designated Moves            | T     | T     | LR    |
| Assumed Moves               | T     | T     | LR    |
| RT Channelized              |       |       |       |
| Lane Util                   | 1.000 | 1.000 | 1.000 |
| Follow-Up Headway, s        | 2.609 | 2.609 | 2.609 |
| Critical Headway, s         | 4.976 | 4.976 | 4.976 |
| Entry Flow, veh/h           | 274   | 181   | 9     |
| Cap Entry Lane, veh/h       | 1373  | 1380  | 1147  |
| Entry HV Adj Factor         | 0.980 | 0.980 | 1.000 |
| Flow Entry, veh/h           | 269   | 177   | 9     |
| Cap Entry, veh/h            | 1346  | 1353  | 1147  |
| V/C Ratio                   | 0.200 | 0.131 | 0.008 |
| Control Delay, s/veh        | 4.3   | 3.7   | 3.2   |
| LOS                         | A     | A     | A     |
| 95th %tile Queue, veh       | 1     | 0     | 0     |

| Intersection                |       |        |       |       |
|-----------------------------|-------|--------|-------|-------|
| Intersection Delay, s/veh   | 7.3   |        |       |       |
| Intersection LOS            | A     |        |       |       |
| Approach                    | WB    | NB     |       | SB    |
| Entry Lanes                 | 1     | 1      |       | 1     |
| Conflicting Circle Lanes    | 1     | 1      |       | 1     |
| Adj Approach Flow, veh/h    | 992   | 599    |       | 226   |
| Demand Flow Rate, veh/h     | 1012  | 611    |       | 230   |
| Vehicles Circulating, veh/h | 8     | 221    |       | 674   |
| Vehicles Exiting, veh/h     | 824   | 683    |       | 8     |
| Ped Vol Crossing Leg, #/h   | 0     | 0      |       | 0     |
| Ped Cap Adj                 | 1.000 | 1.000  |       | 1.000 |
| Approach Delay, s/veh       | 5.1   | 10.2   |       | 9.5   |
| Approach LOS                | A     | B      |       | A     |
| Lane                        | Left  | Bypass | Left  | Left  |
| Designated Moves            | L     | R      | TR    | LT    |
| Assumed Moves               | L     | R      | TR    | LT    |
| RT Channelized              | Free  |        |       |       |
| Lane Util                   | 1.000 | 1.000  |       | 1.000 |
| Follow-Up Headway, s        | 2.609 |        | 2.609 | 2.609 |
| Critical Headway, s         | 4.976 | 338    | 4.976 | 4.976 |
| Entry Flow, veh/h           | 674   | 1938   | 611   | 230   |
| Cap Entry Lane, veh/h       | 1369  | 0.980  | 1101  | 694   |
| Entry HV Adj Factor         | 0.981 | 331    | 0.980 | 0.982 |
| Flow Entry, veh/h           | 661   | 1900   | 599   | 226   |
| Cap Entry, veh/h            | 1342  | 0.174  | 1079  | 681   |
| V/C Ratio                   | 0.492 | 0.0    | 0.555 | 0.331 |
| Control Delay, s/veh        | 7.7   | A      | 10.2  | 9.5   |
| LOS                         | A     | 1      | B     | A     |
| 95th %tile Queue, veh       | 3     | 4      |       | 1     |

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1    |      |      |      |      |      |
| Movement                 | EBL  | EBT  | WBT  | WBR  | SBL  | SBR  |
| Lane Configurations      |      |      |      |      |      |      |
| Traffic Vol, veh/h       | 8    | 253  | 167  | 39   | 39   | 1    |
| Future Vol, veh/h        | 8    | 253  | 167  | 39   | 39   | 1    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 150  | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | -    | 0    | 0    | -    | 0    | -    |
| Grade, %                 | -    | 0    | 0    | -    | 0    | -    |
| Peak Hour Factor         | 95   | 95   | 95   | 95   | 95   | 95   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 8    | 266  | 176  | 41   | 41   | 1    |

| Major/Minor          | Major1 | Major2 | Minor2 |   |             |
|----------------------|--------|--------|--------|---|-------------|
| Conflicting Flow All | 217    | 0      | -      | 0 | 479 197     |
| Stage 1              | -      | -      | -      | - | 197 -       |
| Stage 2              | -      | -      | -      | - | 282 -       |
| 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   | 1353   | -      | -      | - | 545 844     |
| Stage 1              | -      | -      | -      | - | 836 -       |
| Stage 2              | -      | -      | -      | - | 766 -       |
| Platoon blocked, %   |        | -      | -      | - |             |
| Mov Cap-1 Maneuver   | 1353   | -      | -      | - | 542 844     |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | 608 -       |
| Stage 1              | -      | -      | -      | - | 831 -       |
| Stage 2              | -      | -      | -      | - | 766 -       |

| Approach             | EB  | WB | SB   |
|----------------------|-----|----|------|
| HCM Control Delay, s | 0.2 | 0  | 11.3 |
| HCM LOS              |     |    | B    |

| Minor Lane/Major Mvmt | EBL   | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h)      | 1353  | -   | -   | -   | 612   |
| HCM Lane V/C Ratio    | 0.006 | -   | -   | -   | 0.069 |
| HCM Control Delay (s) | 7.7   | -   | -   | -   | 11.3  |
| HCM Lane LOS          | A     | -   | -   | -   | B     |
| HCM 95th %tile Q(veh) | 0     | -   | -   | -   | 0.2   |

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 3    |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↖    | ↗    |      | ↖    | ↗    |      |      | ↕    |      |      | ↕    |      |
| Traffic Vol, veh/h       | 31   | 258  | 3    | 19   | 181  | 54   | 5    | 4    | 21   | 57   | 4    | 20   |
| Future Vol, veh/h        | 31   | 258  | 3    | 19   | 181  | 54   | 5    | 4    | 21   | 57   | 4    | 20   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None |
| Storage Length           | 100  | -    | -    | 100  | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 33   | 272  | 3    | 20   | 191  | 57   | 5    | 4    | 22   | 60   | 4    | 21   |

| Major/Minor          | Major1 |   |   | Major2 |   |   | Minor1 |       |       | Minor2 |       |       |
|----------------------|--------|---|---|--------|---|---|--------|-------|-------|--------|-------|-------|
| Conflicting Flow All | 248    | 0 | 0 | 275    | 0 | 0 | 612    | 628   | 274   | 613    | 601   | 220   |
| Stage 1              | -      | - | - | -      | - | - | 340    | 340   | -     | 260    | 260   | -     |
| Stage 2              | -      | - | - | -      | - | - | 272    | 288   | -     | 353    | 341   | -     |
| Critical Hdwy        | 4.12   | - | - | 4.12   | - | - | 7.12   | 6.52  | 6.22  | 7.12   | 6.52  | 6.22  |
| Critical Hdwy Stg 1  | -      | - | - | -      | - | - | 6.12   | 5.52  | -     | 6.12   | 5.52  | -     |
| Critical Hdwy Stg 2  | -      | - | - | -      | - | - | 6.12   | 5.52  | -     | 6.12   | 5.52  | -     |
| Follow-up Hdwy       | 2.218  | - | - | 2.218  | - | - | 3.518  | 4.018 | 3.318 | 3.518  | 4.018 | 3.318 |
| Pot Cap-1 Maneuver   | 1318   | - | - | 1288   | - | - | 405    | 400   | 765   | 405    | 414   | 820   |
| Stage 1              | -      | - | - | -      | - | - | 675    | 639   | -     | 745    | 693   | -     |
| Stage 2              | -      | - | - | -      | - | - | 734    | 674   | -     | 664    | 639   | -     |
| Platoon blocked, %   | -      | - | - | -      | - | - | -      | -     | -     | -      | -     | -     |
| Mov Cap-1 Maneuver   | 1318   | - | - | 1288   | - | - | 379    | 384   | 765   | 378    | 397   | 820   |
| Mov Cap-2 Maneuver   | -      | - | - | -      | - | - | 379    | 384   | -     | 378    | 397   | -     |
| Stage 1              | -      | - | - | -      | - | - | 658    | 623   | -     | 726    | 682   | -     |
| Stage 2              | -      | - | - | -      | - | - | 700    | 663   | -     | 624    | 623   | -     |

| Approach             | EB  |  |  | WB  |  |  | NB   |  |  | SB   |  |  |
|----------------------|-----|--|--|-----|--|--|------|--|--|------|--|--|
| HCM Control Delay, s | 0.8 |  |  | 0.6 |  |  | 11.5 |  |  | 15.2 |  |  |
| HCM LOS              |     |  |  |     |  |  | B    |  |  | C    |  |  |

| Minor Lane/Major Mvmt | NBLn1 | EBL   | EBT | EBR | WBL   | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h)      | 588   | 1318  | -   | -   | 1288  | -   | -   | 437   |
| HCM Lane V/C Ratio    | 0.054 | 0.025 | -   | -   | 0.016 | -   | -   | 0.195 |
| HCM Control Delay (s) | 11.5  | 7.8   | -   | -   | 7.8   | -   | -   | 15.2  |
| HCM Lane LOS          | B     | A     | -   | -   | A     | -   | -   | C     |
| HCM 95th %tile Q(veh) | 0.2   | 0.1   | -   | -   | 0     | -   | -   | 0.7   |

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 2.7  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↖    | ↗    |      | ↖    | ↗    |      |      | ↕    |      |      | ↕    |      |
| Traffic Vol, veh/h       | 20   | 312  | 4    | 14   | 239  | 58   | 3    | 9    | 21   | 60   | 4    | 12   |
| Future Vol, veh/h        | 20   | 312  | 4    | 14   | 239  | 58   | 3    | 9    | 21   | 60   | 4    | 12   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None |
| Storage Length           | 100  | -    | -    | 100  | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 21   | 328  | 4    | 15   | 252  | 61   | 3    | 9    | 22   | 63   | 4    | 13   |

| Major/Minor          | Major1 |   |   | Major2 |   |   | Minor1 |       |       | Minor2 |       |       |
|----------------------|--------|---|---|--------|---|---|--------|-------|-------|--------|-------|-------|
| Conflicting Flow All | 313    | 0 | 0 | 332    | 0 | 0 | 693    | 715   | 330   | 701    | 687   | 283   |
| Stage 1              | -      | - | - | -      | - | - | 372    | 372   | -     | 313    | 313   | -     |
| Stage 2              | -      | - | - | -      | - | - | 321    | 343   | -     | 388    | 374   | -     |
| Critical Hdwy        | 4.12   | - | - | 4.12   | - | - | 7.12   | 6.52  | 6.22  | 7.12   | 6.52  | 6.22  |
| Critical Hdwy Stg 1  | -      | - | - | -      | - | - | 6.12   | 5.52  | -     | 6.12   | 5.52  | -     |
| Critical Hdwy Stg 2  | -      | - | - | -      | - | - | 6.12   | 5.52  | -     | 6.12   | 5.52  | -     |
| Follow-up Hdwy       | 2.218  | - | - | 2.218  | - | - | 3.518  | 4.018 | 3.318 | 3.518  | 4.018 | 3.318 |
| Pot Cap-1 Maneuver   | 1247   | - | - | 1227   | - | - | 358    | 356   | 712   | 353    | 370   | 756   |
| Stage 1              | -      | - | - | -      | - | - | 648    | 619   | -     | 698    | 657   | -     |
| Stage 2              | -      | - | - | -      | - | - | 691    | 637   | -     | 636    | 618   | -     |
| Platoon blocked, %   | -      | - | - | -      | - | - | -      | -     | -     | -      | -     | -     |
| Mov Cap-1 Maneuver   | 1247   | - | - | 1227   | - | - | 341    | 346   | 712   | 328    | 359   | 756   |
| Mov Cap-2 Maneuver   | -      | - | - | -      | - | - | 341    | 346   | -     | 328    | 359   | -     |
| Stage 1              | -      | - | - | -      | - | - | 637    | 608   | -     | 686    | 649   | -     |
| Stage 2              | -      | - | - | -      | - | - | 667    | 629   | -     | 596    | 607   | -     |

| Approach             | EB  |  |  | WB  |  |  | NB   |  |  | SB   |  |  |
|----------------------|-----|--|--|-----|--|--|------|--|--|------|--|--|
| HCM Control Delay, s | 0.5 |  |  | 0.4 |  |  | 12.5 |  |  | 17.7 |  |  |
| HCM LOS              |     |  |  |     |  |  | B    |  |  | C    |  |  |

| Minor Lane/Major Mvmt | NBLn1 | EBL   | EBT | EBR | WBL   | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h)      | 513   | 1247  | -   | -   | 1227  | -   | -   | 362   |
| HCM Lane V/C Ratio    | 0.068 | 0.017 | -   | -   | 0.012 | -   | -   | 0.221 |
| HCM Control Delay (s) | 12.5  | 7.9   | -   | -   | 8     | -   | -   | 17.7  |
| HCM Lane LOS          | B     | A     | -   | -   | A     | -   | -   | C     |
| HCM 95th %tile Q(veh) | 0.2   | 0.1   | -   | -   | 0     | -   | -   | 0.8   |

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1.7  |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      |      |      |      |      |      |      |
| Traffic Vol, veh/h       | 377  | 16   | 62   | 294  | 17   | 53   |
| Future Vol, veh/h        | 377  | 16   | 62   | 294  | 17   | 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           | -    | -    | 50   | -    | 0    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 410  | 17   | 67   | 320  | 18   | 58   |

| Major/Minor          | Major1 | Major2 | Minor1 |   |       |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 0      | 0      | 427    | 0 | 873   |
| Stage 1              | -      | -      | -      | - | 419   |
| Stage 2              | -      | -      | -      | - | 454   |
| Critical Hdwy        | -      | -      | 4.12   | - | 6.42  |
| Critical Hdwy Stg 1  | -      | -      | -      | - | 5.42  |
| Critical Hdwy Stg 2  | -      | -      | -      | - | 5.42  |
| Follow-up Hdwy       | -      | -      | 2.218  | - | 3.518 |
| Pot Cap-1 Maneuver   | -      | -      | 1132   | - | 321   |
| Stage 1              | -      | -      | -      | - | 664   |
| Stage 2              | -      | -      | -      | - | 640   |
| Platoon blocked, %   | -      | -      | -      | - | -     |
| Mov Cap-1 Maneuver   | -      | -      | 1132   | - | 302   |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | 410   |
| Stage 1              | -      | -      | -      | - | 625   |
| Stage 2              | -      | -      | -      | - | 640   |

| Approach             | EB | WB  | NB   |
|----------------------|----|-----|------|
| HCM Control Delay, s | 0  | 1.5 | 12.4 |
| HCM LOS              |    |     | B    |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL  | WBT |
|-----------------------|-------|-----|-----|------|-----|
| Capacity (veh/h)      | 560   | -   | -   | 1132 | -   |
| HCM Lane V/C Ratio    | 0.136 | -   | -   | 0.06 | -   |
| HCM Control Delay (s) | 12.4  | -   | -   | 8.4  | -   |
| HCM Lane LOS          | B     | -   | -   | A    | -   |
| HCM 95th %tile Q(veh) | 0.5   | -   | -   | 0.2  | -   |

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.6  |      |      |      |      |      |
| Movement                 | WBL  | WBR  | NBT  | NBR  | SBL  | SBT  |
| Lane Configurations      | ↔    |      | ↔    |      | ↔    | ↔    |
| Traffic Vol, veh/h       | 2    | 29   | 424  | 6    | 20   | 354  |
| Future Vol, veh/h        | 2    | 29   | 424  | 6    | 20   | 354  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | -    | -    | -    | 100  | -    |
| Veh in Median Storage, # | 0    | -    | 0    | -    | -    | 0    |
| Grade, %                 | 0    | -    | 0    | -    | -    | 0    |
| Peak Hour Factor         | 95   | 95   | 95   | 95   | 95   | 95   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 2    | 31   | 446  | 6    | 21   | 373  |

| Major/Minor          | Minor1 | Major1 | Major2 |   |       |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 864    | 449    | 0      | 0 | 452   |
| Stage 1              | 449    | -      | -      | - | -     |
| Stage 2              | 415    | -      | -      | - | -     |
| Critical Hdwy        | 6.42   | 6.22   | -      | - | 4.12  |
| Critical Hdwy Stg 1  | 5.42   | -      | -      | - | -     |
| Critical Hdwy Stg 2  | 5.42   | -      | -      | - | -     |
| Follow-up Hdwy       | 3.518  | 3.318  | -      | - | 2.218 |
| Pot Cap-1 Maneuver   | 325    | 610    | -      | - | 1109  |
| Stage 1              | 643    | -      | -      | - | -     |
| Stage 2              | 666    | -      | -      | - | -     |
| Platoon blocked, %   |        |        |        |   |       |
| Mov Cap-1 Maneuver   | 319    | 610    | -      | - | 1109  |
| Mov Cap-2 Maneuver   | 437    | -      | -      | - | -     |
| Stage 1              | 631    | -      | -      | - | -     |
| Stage 2              | 666    | -      | -      | - | -     |

| Approach             | WB   | NB | SB  |
|----------------------|------|----|-----|
| HCM Control Delay, s | 11.4 | 0  | 0.4 |
| HCM LOS              | B    |    |     |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL   | SBT   |
|-----------------------|-----|----------|-------|-------|
| Capacity (veh/h)      | -   | -        | 595   | 1109  |
| HCM Lane V/C Ratio    | -   | -        | 0.055 | 0.019 |
| HCM Control Delay (s) | -   | -        | 11.4  | 8.3   |
| HCM Lane LOS          | -   | -        | B     | A     |
| HCM 95th %tile Q(veh) | -   | -        | 0.2   | 0.1   |

| Intersection              |      |
|---------------------------|------|
| Intersection Delay, s/veh | 45.7 |
| Intersection LOS          | E    |

| Movement            | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|---------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations |      | ↕    |      |      | ↕    |      | ↕    | ↕    |      | ↕    | ↕    |      |
| Traffic Vol, veh/h  | 174  | 71   | 2    | 60   | 44   | 0    | 4    | 278  | 171  | 1    | 312  | 200  |
| Future Vol, veh/h   | 174  | 71   | 2    | 60   | 44   | 0    | 4    | 278  | 171  | 1    | 312  | 200  |
| Peak Hour Factor    | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Heavy Vehicles, %   | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow           | 183  | 75   | 2    | 63   | 46   | 0    | 4    | 293  | 180  | 1    | 328  | 211  |
| Number of Lanes     | 0    | 1    | 0    | 0    | 1    | 0    | 1    | 1    | 0    | 1    | 1    | 0    |

| Approach                   | EB   | WB   | NB   | SB |
|----------------------------|------|------|------|----|
| Opposing Approach          | WB   | EB   | SB   | NB |
| Opposing Lanes             | 1    | 1    | 2    | 2  |
| Conflicting Approach Left  | SB   | NB   | EB   | WB |
| Conflicting Lanes Left     | 2    | 2    | 1    | 1  |
| Conflicting Approach Right | NB   | SB   | WB   | EB |
| Conflicting Lanes Right    | 2    | 2    | 1    | 1  |
| HCM Control Delay          | 20.1 | 14.5 | 43.9 | 66 |
| HCM LOS                    | C    | B    | E    | F  |

| Lane                   | NBLn1 | NBLn2 | EBLn1 | WBLn1 | SBLn1 | SBLn2 |
|------------------------|-------|-------|-------|-------|-------|-------|
| Vol Left, %            | 100%  | 0%    | 70%   | 58%   | 100%  | 0%    |
| Vol Thru, %            | 0%    | 62%   | 29%   | 42%   | 0%    | 61%   |
| Vol Right, %           | 0%    | 38%   | 1%    | 0%    | 0%    | 39%   |
| Sign Control           | Stop  | Stop  | Stop  | Stop  | Stop  | Stop  |
| Traffic Vol by Lane    | 4     | 449   | 247   | 104   | 1     | 512   |
| LT Vol                 | 4     | 0     | 174   | 60    | 1     | 0     |
| Through Vol            | 0     | 278   | 71    | 44    | 0     | 312   |
| RT Vol                 | 0     | 171   | 2     | 0     | 0     | 200   |
| Lane Flow Rate         | 4     | 473   | 260   | 109   | 1     | 539   |
| Geometry Grp           | 7     | 7     | 2     | 2     | 7     | 7     |
| Degree of Util (X)     | 0.009 | 0.897 | 0.555 | 0.255 | 0.002 | 1.005 |
| Departure Headway (Hd) | 7.725 | 6.936 | 7.815 | 8.562 | 7.504 | 6.71  |
| Convergence, Y/N       | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Cap                    | 466   | 525   | 465   | 423   | 474   | 539   |
| Service Time           | 5.425 | 4.636 | 5.815 | 6.562 | 5.303 | 4.508 |
| HCM Lane V/C Ratio     | 0.009 | 0.901 | 0.559 | 0.258 | 0.002 | 1     |
| HCM Control Delay      | 10.5  | 44.2  | 20.1  | 14.5  | 10.3  | 66.1  |
| HCM Lane LOS           | B     | E     | C     | B     | B     | F     |
| HCM 95th-tile Q        | 0     | 10.3  | 3.3   | 1     | 0     | 14.3  |

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 2.9  |      |      |      |      |      |
| Movement                 | WBL  | WBR  | NBT  | NBR  | SBL  | SBT  |
| Lane Configurations      |      |      |      |      |      |      |
| Traffic Vol, veh/h       | 15   | 149  | 421  | 31   | 132  | 497  |
| Future Vol, veh/h        | 15   | 149  | 421  | 31   | 132  | 497  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | -    | -    | -    | 25   | -    |
| Veh in Median Storage, # | 0    | -    | 0    | -    | -    | 0    |
| Grade, %                 | 0    | -    | 0    | -    | -    | 0    |
| Peak Hour Factor         | 95   | 95   | 95   | 95   | 95   | 95   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 16   | 157  | 443  | 33   | 139  | 523  |

| Major/Minor          | Minor1 | Major1 | Major2 |   |       |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 1261   | 460    | 0      | 0 | 476   |
| Stage 1              | 460    | -      | -      | - | -     |
| Stage 2              | 801    | -      | -      | - | -     |
| Critical Hdwy        | 6.42   | 6.22   | -      | - | 4.12  |
| Critical Hdwy Stg 1  | 5.42   | -      | -      | - | -     |
| Critical Hdwy Stg 2  | 5.42   | -      | -      | - | -     |
| Follow-up Hdwy       | 3.518  | 3.318  | -      | - | 2.218 |
| Pot Cap-1 Maneuver   | 188    | 601    | -      | - | 1086  |
| Stage 1              | 636    | -      | -      | - | -     |
| Stage 2              | 442    | -      | -      | - | -     |
| Platoon blocked, %   |        |        |        |   |       |
| Mov Cap-1 Maneuver   | 164    | 601    | -      | - | 1086  |
| Mov Cap-2 Maneuver   | 243    | -      | -      | - | -     |
| Stage 1              | 555    | -      | -      | - | -     |
| Stage 2              | 442    | -      | -      | - | -     |

| Approach             | WB | NB | SB  |
|----------------------|----|----|-----|
| HCM Control Delay, s | 15 | 0  | 1.8 |
| HCM LOS              | C  |    |     |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL   | SBT   |
|-----------------------|-----|----------|-------|-------|
| Capacity (veh/h)      | -   | -        | 530   | 1086  |
| HCM Lane V/C Ratio    | -   | -        | 0.326 | 0.128 |
| HCM Control Delay (s) | -   | -        | 15    | 8.8   |
| HCM Lane LOS          | -   | -        | C     | A     |
| HCM 95th %tile Q(veh) | -   | -        | 1.4   | 0.4   |

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.6  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      |      |      |      |      |      |      |
| Traffic Vol, veh/h       | 14   | 9    | 20   | 550  | 620  | 14   |
| Future Vol, veh/h        | 14   | 9    | 20   | 550  | 620  | 14   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | -    | 25   | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 95   | 95   | 95   | 95   | 95   | 95   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 15   | 9    | 21   | 579  | 653  | 15   |

| Major/Minor          | Minor2 | Major1 | Major2 |   |   |   |
|----------------------|--------|--------|--------|---|---|---|
| Conflicting Flow All | 1282   | 661    | 668    | 0 | - | 0 |
| Stage 1              | 661    | -      | -      | - | - | - |
| Stage 2              | 621    | -      | -      | - | - | - |
| Critical Hdwy        | 6.42   | 6.22   | 4.12   | - | - | - |
| Critical Hdwy Stg 1  | 5.42   | -      | -      | - | - | - |
| Critical Hdwy Stg 2  | 5.42   | -      | -      | - | - | - |
| Follow-up Hdwy       | 3.518  | 3.318  | 2.218  | - | - | - |
| Pot Cap-1 Maneuver   | 182    | 462    | 922    | - | - | - |
| Stage 1              | 514    | -      | -      | - | - | - |
| Stage 2              | 536    | -      | -      | - | - | - |
| Platoon blocked, %   |        |        |        | - | - | - |
| Mov Cap-1 Maneuver   | 178    | 462    | 922    | - | - | - |
| Mov Cap-2 Maneuver   | 178    | -      | -      | - | - | - |
| Stage 1              | 502    | -      | -      | - | - | - |
| Stage 2              | 536    | -      | -      | - | - | - |

| Approach             | EB   | NB  | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 22.2 | 0.3 | 0  |
| HCM LOS              | C    |     |    |

| Minor Lane/Major Mvmt | NBL   | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h)      | 922   | -   | 234   | -   | -   |
| HCM Lane V/C Ratio    | 0.023 | -   | 0.103 | -   | -   |
| HCM Control Delay (s) | 9     | -   | 22.2  | -   | -   |
| HCM Lane LOS          | A     | -   | C     | -   | -   |
| HCM 95th %tile Q(veh) | 0.1   | -   | 0.3   | -   | -   |

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1.8  |      |      |      |      |      |
| Movement                 | EBL  | EBT  | WBT  | WBR  | SBL  | SBR  |
| Lane Configurations      |      | ↕    | ↕    |      | ↕    |      |
| Traffic Vol, veh/h       | 48   | 244  | 270  | 7    | 18   | 46   |
| Future Vol, veh/h        | 48   | 244  | 270  | 7    | 18   | 46   |
| 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         | 95   | 95   | 95   | 95   | 95   | 95   |
| Heavy Vehicles, %        | 5    | 2    | 2    | 5    | 5    | 5    |
| Mvmt Flow                | 51   | 257  | 284  | 7    | 19   | 48   |

| Major/Minor          | Major1 | Major2 | Minor2 |   |             |
|----------------------|--------|--------|--------|---|-------------|
| Conflicting Flow All | 291    | 0      | -      | 0 | 647 288     |
| Stage 1              | -      | -      | -      | - | 288 -       |
| Stage 2              | -      | -      | -      | - | 359 -       |
| Critical Hdwy        | 4.15   | -      | -      | - | 6.45 6.25   |
| Critical Hdwy Stg 1  | -      | -      | -      | - | 5.45 -      |
| Critical Hdwy Stg 2  | -      | -      | -      | - | 5.45 -      |
| Follow-up Hdwy       | 2.245  | -      | -      | - | 3.545 3.345 |
| Pot Cap-1 Maneuver   | 1254   | -      | -      | - | 431 744     |
| Stage 1              | -      | -      | -      | - | 754 -       |
| Stage 2              | -      | -      | -      | - | 700 -       |
| Platoon blocked, %   |        | -      | -      | - |             |
| Mov Cap-1 Maneuver   | 1254   | -      | -      | - | 411 744     |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | 411 -       |
| Stage 1              | -      | -      | -      | - | 719 -       |
| Stage 2              | -      | -      | -      | - | 700 -       |

| Approach             | EB  | WB | SB   |
|----------------------|-----|----|------|
| HCM Control Delay, s | 1.3 | 0  | 11.7 |
| HCM LOS              |     |    | B    |

| Minor Lane/Major Mvmt | EBL  | EBT | WBT | WBR | SBLn1 |
|-----------------------|------|-----|-----|-----|-------|
| Capacity (veh/h)      | 1254 | -   | -   | -   | 606   |
| HCM Lane V/C Ratio    | 0.04 | -   | -   | -   | 0.111 |
| HCM Control Delay (s) | 8    | 0   | -   | -   | 11.7  |
| HCM Lane LOS          | A    | A   | -   | -   | B     |
| HCM 95th %tile Q(veh) | 0.1  | -   | -   | -   | 0.4   |

**Intersection**

Int Delay, s/veh 1.1

**Movement** EBL EBT WBT WBR SBL SBR

|                          |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations      |      | ↶    | ↷    |      | ↶    |      |
| Traffic Vol, veh/h       | 31   | 231  | 259  | 31   | 18   | 18   |
| Future Vol, veh/h        | 31   | 231  | 259  | 31   | 18   | 18   |
| 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         | 95   | 95   | 95   | 95   | 95   | 95   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 33   | 243  | 273  | 33   | 19   | 19   |

**Major/Minor** Major1 Major2 Minor2

|                      |       |   |   |   |       |       |
|----------------------|-------|---|---|---|-------|-------|
| Conflicting Flow All | 306   | 0 | - | 0 | 599   | 290   |
| Stage 1              | -     | - | - | - | 290   | -     |
| Stage 2              | -     | - | - | - | 309   | -     |
| 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   | 1255  | - | - | - | 465   | 749   |
| Stage 1              | -     | - | - | - | 759   | -     |
| Stage 2              | -     | - | - | - | 745   | -     |
| Platoon blocked, %   |       | - | - | - |       |       |
| Mov Cap-1 Maneuver   | 1255  | - | - | - | 451   | 749   |
| Mov Cap-2 Maneuver   | -     | - | - | - | 451   | -     |
| Stage 1              | -     | - | - | - | 736   | -     |
| Stage 2              | -     | - | - | - | 745   | -     |

**Approach** EB WB SB

|                      |     |   |      |
|----------------------|-----|---|------|
| HCM Control Delay, s | 0.9 | 0 | 11.9 |
| HCM LOS              |     |   | B    |

**Minor Lane/Major Mvmt** EBL EBT WBT WBR SBLn1

|                       |       |   |   |   |       |
|-----------------------|-------|---|---|---|-------|
| Capacity (veh/h)      | 1255  | - | - | - | 563   |
| HCM Lane V/C Ratio    | 0.026 | - | - | - | 0.067 |
| HCM Control Delay (s) | 7.9   | 0 | - | - | 11.9  |
| HCM Lane LOS          | A     | A | - | - | B     |
| HCM 95th %tile Q(veh) | 0.1   | - | - | - | 0.2   |

HCM 6th TWSC  
 202: Woodmen Frontage Rd/Internal Street & Vignola Heights

2040 Total Traffic Without Right-in Access  
 PM Peak Hour

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1    |      |      |      |      |      |
| Movement                 | EBL  | EBT  | WBT  | WBR  | SBL  | SBR  |
| Lane Configurations      |      | ↕    | ↕    |      | ↕    |      |
| Traffic Vol, veh/h       | 21   | 228  | 278  | 46   | 28   | 12   |
| Future Vol, veh/h        | 21   | 228  | 278  | 46   | 28   | 12   |
| 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         | 95   | 95   | 95   | 95   | 95   | 95   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 22   | 240  | 293  | 48   | 29   | 13   |

| Major/Minor          | Major1 | Major2 | Minor2 |   |       |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 341    | 0      | -      | 0 | 601   |
| Stage 1              | -      | -      | -      | - | 317   |
| Stage 2              | -      | -      | -      | - | 284   |
| Critical Hdwy        | 4.12   | -      | -      | - | 6.42  |
| Critical Hdwy Stg 1  | -      | -      | -      | - | 5.42  |
| Critical Hdwy Stg 2  | -      | -      | -      | - | 5.42  |
| Follow-up Hdwy       | 2.218  | -      | -      | - | 3.518 |
| Pot Cap-1 Maneuver   | 1218   | -      | -      | - | 463   |
| Stage 1              | -      | -      | -      | - | 738   |
| Stage 2              | -      | -      | -      | - | 764   |
| Platoon blocked, %   |        | -      | -      | - |       |
| Mov Cap-1 Maneuver   | 1218   | -      | -      | - | 453   |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | 541   |
| Stage 1              | -      | -      | -      | - | 723   |
| Stage 2              | -      | -      | -      | - | 764   |

| Approach             | EB  | WB | SB   |
|----------------------|-----|----|------|
| HCM Control Delay, s | 0.7 | 0  | 11.6 |
| HCM LOS              |     |    | B    |

| Minor Lane/Major Mvmt | EBL   | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h)      | 1218  | -   | -   | -   | 585   |
| HCM Lane V/C Ratio    | 0.018 | -   | -   | -   | 0.072 |
| HCM Control Delay (s) | 8     | 0   | -   | -   | 11.6  |
| HCM Lane LOS          | A     | A   | -   | -   | B     |
| HCM 95th %tile Q(veh) | 0.1   | -   | -   | -   | 0.2   |

Timings  
1: Meridian Rd & Woodmen Rd

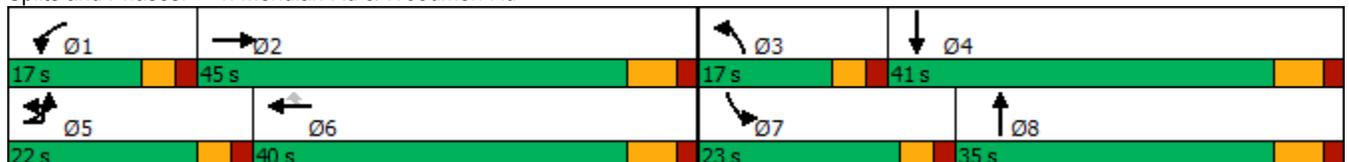
2040 Total Traffic WITH Right-in Access  
AM Peak Hour

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       |       |       |       |       |       |       |       |       |       |       |       |
| Traffic Volume (vph) | 457   | 520   | 175   | 150   | 884   | 168   | 328   | 344   | 100   | 294   | 941   | 1041  |
| Future Volume (vph)  | 457   | 520   | 175   | 150   | 884   | 168   | 328   | 344   | 100   | 294   | 941   | 1041  |
| Turn Type            | Prot  | NA    | Free  | Prot  | NA    | Perm  | Prot  | NA    | Free  | Prot  | NA    | Free  |
| Protected Phases     | 5     | 2     |       | 1     | 6     |       | 3     | 8     |       | 7     | 4     |       |
| Permitted Phases     |       |       | Free  |       |       | 6     |       |       | Free  |       |       | Free  |
| Detector Phase       | 5     | 2     |       | 1     | 6     | 6     | 3     | 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   |       |
| Minimum Split (s)    | 10.0  | 11.5  |       | 10.0  | 11.5  | 11.5  | 10.0  | 11.5  |       | 10.0  | 11.5  |       |
| Total Split (s)      | 22.0  | 45.0  |       | 17.0  | 40.0  | 40.0  | 17.0  | 35.0  |       | 23.0  | 41.0  |       |
| Total Split (%)      | 18.3% | 37.5% |       | 14.2% | 33.3% | 33.3% | 14.2% | 29.2% |       | 19.2% | 34.2% |       |
| Yellow Time (s)      | 3.0   | 4.5   |       | 3.0   | 4.5   | 4.5   | 3.0   | 4.5   |       | 3.0   | 4.5   |       |
| All-Red Time (s)     | 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  |       |
| Total Lost Time (s)  | 4.0   | 5.5   |       | 4.0   | 5.5   | 5.5   | 4.0   | 5.5   |       | 4.0   | 5.5   |       |
| Lead/Lag             | Lead  | Lag   |       | Lead  | Lag   | Lag   | Lead  | Lag   |       | Lead  | Lag   |       |
| Lead-Lag Optimize?   | Yes   | Yes   |       | Yes   | Yes   | Yes   | Yes   | Yes   |       | Yes   | Yes   |       |
| Recall Mode          | None  | Min   |       | None  | Min   | Min   | None  | None  |       | None  | None  |       |
| Act Effct Green (s)  | 18.0  | 40.4  | 118.4 | 11.3  | 33.6  | 33.6  | 13.0  | 31.5  | 118.4 | 16.2  | 34.7  | 118.4 |
| Actuated g/C Ratio   | 0.15  | 0.34  | 1.00  | 0.10  | 0.28  | 0.28  | 0.11  | 0.27  | 1.00  | 0.14  | 0.29  | 1.00  |
| v/c Ratio            | 0.92  | 0.44  | 0.11  | 0.47  | 0.90  | 0.30  | 0.89  | 0.37  | 0.06  | 0.64  | 0.93  | 0.67  |
| Control Delay        | 74.5  | 32.1  | 0.1   | 55.7  | 53.5  | 6.6   | 78.3  | 37.5  | 0.1   | 54.9  | 55.9  | 2.3   |
| 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          | 74.5  | 32.1  | 0.1   | 55.7  | 53.5  | 6.6   | 78.3  | 37.5  | 0.1   | 54.9  | 55.9  | 2.3   |
| LOS                  | E     | C     | A     | E     | D     | A     | E     | D     | A     | D     | E     | A     |
| Approach Delay       |       | 44.4  |       |       | 47.2  |       |       | 50.0  |       |       | 31.3  |       |
| Approach LOS         |       | D     |       |       | D     |       |       | D     |       |       | C     |       |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 118.4  
 Natural Cycle: 90  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.93  
 Intersection Signal Delay: 40.3  
 Intersection LOS: D  
 Intersection Capacity Utilization 89.1%  
 ICU Level of Service E  
 Analysis Period (min) 15

Splits and Phases: 1: Meridian Rd & Woodmen Rd



Timings  
2: Meridian Rd & Eastonville Rd

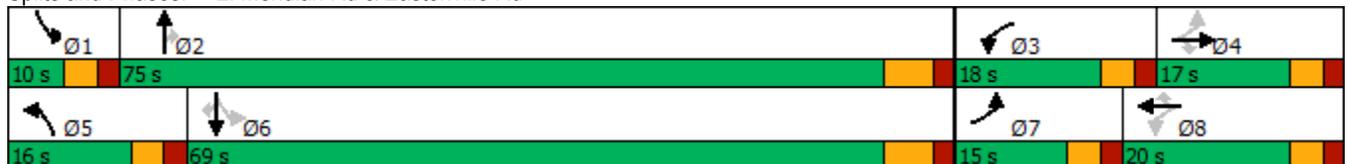
2040 Total Traffic WITH Right-in Access  
AM Peak Hour

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       |       |       |       |       |       |       |       |       |       |       |       |
| Traffic Volume (vph) | 122   | 73    | 138   | 250   | 113   | 125   | 222   | 596   | 150   | 100   | 1807  | 86    |
| Future Volume (vph)  | 122   | 73    | 138   | 250   | 113   | 125   | 222   | 596   | 150   | 100   | 1807  | 86    |
| Turn Type            | pm+pt | NA    | Perm  | pm+pt | NA    | Perm  | Prot  | NA    | Perm  | pm+pt | NA    | Perm  |
| Protected Phases     | 7     | 4     |       | 3     | 8     |       | 5     | 2     |       | 1     | 6     |       |
| Permitted Phases     | 4     |       | 4     | 8     |       | 8     |       |       | 2     | 6     |       | 6     |
| Detector Phase       | 7     | 4     | 4     | 3     | 8     | 8     | 5     | 2     | 2     | 1     | 6     | 6     |
| 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   | 5.0   |
| Minimum Split (s)    | 10.0  | 11.5  | 11.5  | 10.0  | 11.5  | 11.5  | 10.0  | 11.5  | 11.5  | 10.0  | 11.5  | 11.5  |
| Total Split (s)      | 15.0  | 17.0  | 17.0  | 18.0  | 20.0  | 20.0  | 16.0  | 75.0  | 75.0  | 10.0  | 69.0  | 69.0  |
| Total Split (%)      | 12.5% | 14.2% | 14.2% | 15.0% | 16.7% | 16.7% | 13.3% | 62.5% | 62.5% | 8.3%  | 57.5% | 57.5% |
| Yellow Time (s)      | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.5   | 4.5   | 3.0   | 4.5   | 4.5   |
| 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   | 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  | -1.0  |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 5.5   | 5.5   | 4.0   | 5.5   | 5.5   |
| Lead/Lag             | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?   | Yes   |
| Recall Mode          | None  | Min   | Min   | None  | Min   | Min   |
| Act Effct Green (s)  | 20.4  | 10.8  | 10.8  | 28.4  | 15.1  | 15.1  | 11.7  | 69.2  | 69.2  | 71.0  | 63.5  | 63.5  |
| Actuated g/C Ratio   | 0.17  | 0.09  | 0.09  | 0.24  | 0.13  | 0.13  | 0.10  | 0.59  | 0.59  | 0.60  | 0.54  | 0.54  |
| v/c Ratio            | 0.25  | 0.45  | 0.49  | 0.82  | 0.50  | 0.38  | 0.69  | 0.29  | 0.16  | 0.20  | 0.96  | 0.10  |
| Control Delay        | 36.3  | 59.3  | 10.7  | 61.4  | 55.8  | 6.3   | 62.5  | 12.6  | 2.1   | 7.8   | 40.3  | 0.3   |
| 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          | 36.3  | 59.3  | 10.7  | 61.4  | 55.8  | 6.3   | 62.5  | 12.6  | 2.1   | 7.8   | 40.3  | 0.3   |
| LOS                  | D     | E     | B     | E     | E     | A     | E     | B     | A     | A     | D     | A     |
| Approach Delay       |       | 30.8  |       |       | 46.0  |       |       | 22.6  |       |       | 36.9  |       |
| Approach LOS         |       | C     |       |       | D     |       |       | C     |       |       | D     |       |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 117.5  
 Natural Cycle: 90  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.96  
 Intersection Signal Delay: 33.9  
 Intersection LOS: C  
 Intersection Capacity Utilization 88.1%  
 ICU Level of Service E  
 Analysis Period (min) 15

Splits and Phases: 2: Meridian Rd & Eastonville Rd



Timings  
25: Golden Sage Rd & Woodmen Rd

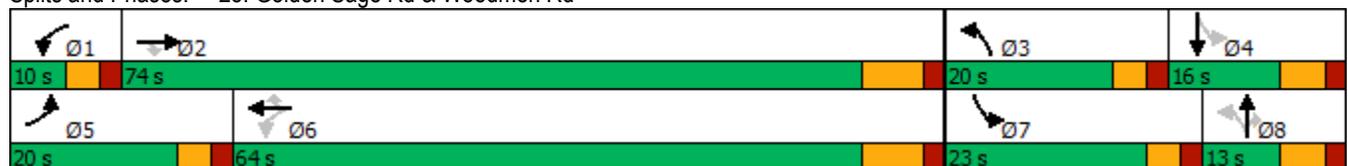
2040 Total Traffic WITH Right-in Access  
AM Peak Hour

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       |       |       |       |       |       |       |       |       |       |       |       |
| Traffic Volume (vph) | 418   | 864   | 74    | 77    | 1730  | 116   | 150   | 19    | 48    | 251   | 21    | 354   |
| Future Volume (vph)  | 418   | 864   | 74    | 77    | 1730  | 116   | 150   | 19    | 48    | 251   | 21    | 354   |
| 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  | 12.5  | 12.5  | 10.0  | 12.5  | 12.5  | 10.0  | 11.0  | 11.0  | 10.0  | 11.0  |       |
| Total Split (s)      | 20.0  | 74.0  | 74.0  | 10.0  | 64.0  | 64.0  | 20.0  | 13.0  | 13.0  | 23.0  | 16.0  |       |
| Total Split (%)      | 16.7% | 61.7% | 61.7% | 8.3%  | 53.3% | 53.3% | 16.7% | 10.8% | 10.8% | 19.2% | 13.3% |       |
| Yellow Time (s)      | 3.0   | 5.5   | 5.5   | 3.0   | 5.5   | 5.5   | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   |       |
| 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   | 6.5   | 6.5   | 4.0   | 6.5   | 6.5   | 4.0   | 5.0   | 5.0   | 4.0   | 5.0   |       |
| Lead/Lag             | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   |       |
| Lead-Lag Optimize?   | Yes   |       |
| Recall Mode          | None  | Min   | Min   | None  | Min   | Min   | None  | None  | None  | None  | None  |       |
| Act Effct Green (s)  | 16.1  | 70.0  | 70.0  | 66.2  | 57.7  | 57.7  | 23.7  | 7.4   | 7.4   | 25.2  | 9.4   | 116.3 |
| Actuated g/C Ratio   | 0.14  | 0.60  | 0.60  | 0.57  | 0.50  | 0.50  | 0.20  | 0.06  | 0.06  | 0.22  | 0.08  | 1.00  |
| v/c Ratio            | 0.93  | 0.41  | 0.08  | 0.20  | 1.01  | 0.14  | 0.46  | 0.17  | 0.19  | 0.73  | 0.15  | 0.24  |
| Control Delay        | 77.7  | 14.4  | 0.8   | 9.0   | 53.2  | 1.3   | 41.2  | 56.4  | 1.6   | 53.6  | 52.7  | 0.4   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 10.3  | 0.0   | 0.0   |
| Total Delay          | 77.7  | 14.4  | 0.8   | 9.0   | 53.2  | 1.3   | 41.2  | 56.4  | 1.6   | 63.9  | 52.7  | 0.4   |
| LOS                  | E     | B     | A     | A     | D     | A     | D     | E     | A     | E     | D     | A     |
| Approach Delay       |       | 33.6  |       |       | 48.2  |       |       | 33.7  |       |       | 27.6  |       |
| Approach LOS         |       | C     |       |       | D     |       |       | C     |       |       | C     |       |

Intersection Summary

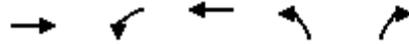
Cycle Length: 120  
 Actuated Cycle Length: 116.3  
 Natural Cycle: 90  
 Control Type: Semi Act-Uncoord  
 Maximum v/c Ratio: 1.01  
 Intersection Signal Delay: 39.4  
 Intersection Capacity Utilization 93.2%  
 Analysis Period (min) 15  
 Intersection LOS: D  
 ICU Level of Service F

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



Timings  
26: Golden Sage Rd & Woodmen Frontage Rd

2040 Total Traffic WITH Right-in Access  
AM Peak Hour

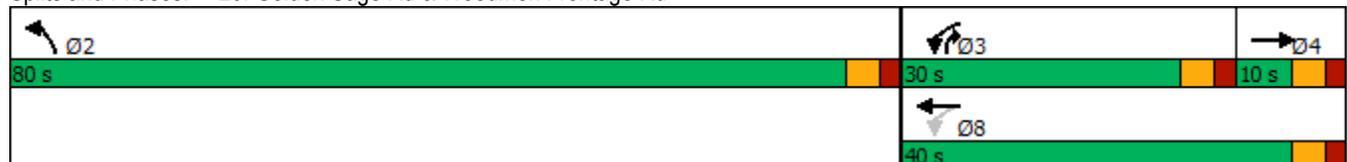


| Lane Group           | EBT  | WBL   | WBT   | NBL   | NBR   |
|----------------------|------|-------|-------|-------|-------|
| Lane Configurations  | →    |       | ←     | ↔     | ↔     |
| Traffic Volume (vph) | 30   | 377   | 4     | 100   | 453   |
| Future Volume (vph)  | 30   | 377   | 4     | 100   | 453   |
| Turn Type            | NA   | pm+pt | NA    | Prot  | Over  |
| Protected Phases     | 4    | 3     | 8     | 2     | 3     |
| Permitted Phases     |      | 8     |       |       |       |
| Detector Phase       | 4    | 3     | 8     | 2     | 3     |
| Switch Phase         |      |       |       |       |       |
| Minimum Initial (s)  | 5.0  | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)    | 10.0 | 10.0  | 10.0  | 10.0  | 10.0  |
| Total Split (s)      | 10.0 | 30.0  | 40.0  | 80.0  | 30.0  |
| Total Split (%)      | 8.3% | 25.0% | 33.3% | 66.7% | 25.0% |
| Yellow Time (s)      | 3.0  | 3.0   | 3.0   | 3.0   | 3.0   |
| All-Red Time (s)     | 2.0  | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | -1.0 |       | -1.0  | -1.0  | -1.0  |
| Total Lost Time (s)  | 4.0  |       | 4.0   | 4.0   | 4.0   |
| Lead/Lag             | Lag  | Lead  |       |       | Lead  |
| Lead-Lag Optimize?   | Yes  | Yes   |       |       | Yes   |
| Recall Mode          | None | None  | None  | Min   | None  |
| Act Effct Green (s)  | 22.0 |       | 34.0  | 11.6  | 7.9   |
| Actuated g/C Ratio   | 0.41 |       | 0.63  | 0.22  | 0.15  |
| v/c Ratio            | 0.36 |       | 0.64  | 0.63  | 0.62  |
| Control Delay        | 4.5  |       | 10.3  | 16.5  | 9.9   |
| Queue Delay          | 0.0  |       | 0.0   | 0.0   | 0.0   |
| Total Delay          | 4.5  |       | 10.3  | 16.5  | 9.9   |
| LOS                  | A    |       | B     | B     | A     |
| Approach Delay       | 4.5  |       | 10.3  | 13.2  |       |
| Approach LOS         | A    |       | B     | B     |       |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 53.7  
 Natural Cycle: 45  
 Control Type: Semi Act-Uncoord  
 Maximum v/c Ratio: 0.64  
 Intersection Signal Delay: 10.3  
 Intersection Capacity Utilization 62.9%  
 Analysis Period (min) 15  
 Intersection LOS: B  
 ICU Level of Service B

Splits and Phases: 26: Golden Sage Rd & Woodmen Frontage Rd



## SimTraffic Performance Report

## 87: Meridian Rd &amp; Site RIRO Performance by movement Interval #1 7:00

| Movement         | EBR  | NBT | SBT | SBR | All |
|------------------|------|-----|-----|-----|-----|
| Stop Del/Veh (s) | 28.2 | 0.8 | 0.1 | 0.1 | 1.5 |

## 87: Meridian Rd &amp; Site RIRO Performance by movement Interval #2 7:15

| Movement         | EBR  | NBT | SBT | SBR | All |
|------------------|------|-----|-----|-----|-----|
| Stop Del/Veh (s) | 16.4 | 0.7 | 0.1 | 0.1 | 1.0 |

## 87: Meridian Rd &amp; Site RIRO Performance by movement Interval #3 7:30

| Movement         | EBR  | NBT | SBT | SBR | All |
|------------------|------|-----|-----|-----|-----|
| Stop Del/Veh (s) | 22.8 | 0.8 | 0.1 | 0.1 | 1.3 |

## 87: Meridian Rd &amp; Site RIRO Performance by movement Interval #4 7:45

| Movement         | EBR  | NBT | SBT | SBR | All |
|------------------|------|-----|-----|-----|-----|
| Stop Del/Veh (s) | 16.1 | 0.9 | 0.1 | 0.1 | 1.0 |

## 87: Meridian Rd &amp; Site RIRO Performance by movement Entire Run

| Movement         | EBR  | NBT | SBT | SBR | All |
|------------------|------|-----|-----|-----|-----|
| Stop Del/Veh (s) | 21.2 | 0.8 | 0.1 | 0.1 | 1.2 |

## Total Zone Performance By Interval

| Interval Start   | 7:00 | 7:15 | 7:30 | 7:45 | All   |
|------------------|------|------|------|------|-------|
| Stop Del/Veh (s) | 87.3 | 39.9 | 68.5 | 61.0 | 219.4 |

HCM 6th Roundabout  
 58: Woodmen Right-In Only/Lot 11 Access & Internal Street

2040 Total Traffic With Right-in Access  
 AM Peak Hour

| Intersection                |       |       |       |       |
|-----------------------------|-------|-------|-------|-------|
| Intersection Delay, s/veh   | 5.3   |       |       |       |
| Intersection LOS            | A     |       |       |       |
| Approach                    | EB    | WB    | NB    | SB    |
| Entry Lanes                 | 1     | 1     | 1     | 1     |
| Conflicting Circle Lanes    | 1     | 1     | 1     | 1     |
| Adj Approach Flow, veh/h    | 159   | 63    | 368   | 40    |
| Demand Flow Rate, veh/h     | 162   | 64    | 375   | 40    |
| Vehicles Circulating, veh/h | 17    | 213   | 179   | 277   |
| Vehicles Exiting, veh/h     | 300   | 341   | 0     | 0     |
| Ped Vol Crossing Leg, #/h   | 0     | 0     | 0     | 0     |
| Ped Cap Adj                 | 1.000 | 1.000 | 1.000 | 1.000 |
| Approach Delay, s/veh       | 3.7   | 3.8   | 6.4   | 3.8   |
| Approach LOS                | A     | A     | A     | A     |
| Lane                        | Left  | Left  | Left  | Left  |
| Designated Moves            | T     | T     | LR    | LR    |
| Assumed Moves               | T     | T     | LR    | LR    |
| RT Channelized              |       |       |       |       |
| Lane Util                   | 1.000 | 1.000 | 1.000 | 1.000 |
| Follow-Up Headway, s        | 2.609 | 2.609 | 2.609 | 2.609 |
| Critical Headway, s         | 4.976 | 4.976 | 4.976 | 4.976 |
| Entry Flow, veh/h           | 162   | 64    | 375   | 40    |
| Cap Entry Lane, veh/h       | 1356  | 1110  | 1150  | 1040  |
| Entry HV Adj Factor         | 0.980 | 0.980 | 0.981 | 1.000 |
| Flow Entry, veh/h           | 159   | 63    | 368   | 40    |
| Cap Entry, veh/h            | 1330  | 1089  | 1128  | 1040  |
| V/C Ratio                   | 0.119 | 0.058 | 0.326 | 0.038 |
| Control Delay, s/veh        | 3.7   | 3.8   | 6.4   | 3.8   |
| LOS                         | A     | A     | A     | A     |
| 95th %tile Queue, veh       | 0     | 0     | 1     | 0     |

| Intersection                |       |        |       |       |
|-----------------------------|-------|--------|-------|-------|
| Intersection Delay, s/veh   | 3.5   |        |       |       |
| Intersection LOS            | A     |        |       |       |
| Approach                    | WB    | NB     |       | SB    |
| Entry Lanes                 | 1     | 1      |       | 1     |
| Conflicting Circle Lanes    | 1     | 1      |       | 1     |
| Adj Approach Flow, veh/h    | 444   | 278    |       | 83    |
| Demand Flow Rate, veh/h     | 453   | 283    |       | 85    |
| Vehicles Circulating, veh/h | 3     | 79     |       | 264   |
| Vehicles Exiting, veh/h     | 359   | 270    |       | 3     |
| Ped Vol Crossing Leg, #/h   | 0     | 0      |       | 0     |
| Ped Cap Adj                 | 1.000 | 1.000  |       | 1.000 |
| Approach Delay, s/veh       | 2.5   | 4.8    |       | 4.2   |
| Approach LOS                | A     | A      |       | A     |
| Lane                        | Left  | Bypass | Left  | Left  |
| Designated Moves            | L     | R      | TR    | LT    |
| Assumed Moves               | L     | R      | TR    | LT    |
| RT Channelized              | Free  |        |       |       |
| Lane Util                   | 1.000 |        | 1.000 | 1.000 |
| Follow-Up Headway, s        | 2.609 |        | 2.609 | 2.609 |
| Critical Headway, s         | 4.976 | 189    | 4.976 | 4.976 |
| Entry Flow, veh/h           | 264   | 1938   | 283   | 85    |
| Cap Entry Lane, veh/h       | 1376  | 0.980  | 1273  | 1054  |
| Entry HV Adj Factor         | 0.981 | 185    | 0.982 | 0.975 |
| Flow Entry, veh/h           | 259   | 1900   | 278   | 83    |
| Cap Entry, veh/h            | 1350  | 0.097  | 1250  | 1028  |
| V/C Ratio                   | 0.192 | 0.0    | 0.222 | 0.081 |
| Control Delay, s/veh        | 4.3   | A      | 4.8   | 4.2   |
| LOS                         | A     | 0      | A     | A     |
| 95th %tile Queue, veh       | 1     |        | 1     | 0     |

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1.7  |      |      |      |      |      |
| Movement                 | EBL  | EBT  | WBT  | WBR  | SBL  | SBR  |
| Lane Configurations      |      |      |      |      |      |      |
| Traffic Vol, veh/h       | 49   | 262  | 60   | 17   | 27   | 0    |
| Future Vol, veh/h        | 49   | 262  | 60   | 17   | 27   | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 150  | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | -    | 0    | 0    | -    | 0    | -    |
| Grade, %                 | -    | 0    | 0    | -    | 0    | -    |
| Peak Hour Factor         | 95   | 95   | 95   | 95   | 95   | 95   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 52   | 276  | 63   | 18   | 28   | 0    |

| Major/Minor          | Major1 | Major2 | Minor2 |   |             |
|----------------------|--------|--------|--------|---|-------------|
| Conflicting Flow All | 81     | 0      | -      | 0 | 452 72      |
| Stage 1              | -      | -      | -      | - | 72 -        |
| Stage 2              | -      | -      | -      | - | 380 -       |
| 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   | 1517   | -      | -      | - | 565 990     |
| Stage 1              | -      | -      | -      | - | 951 -       |
| Stage 2              | -      | -      | -      | - | 691 -       |
| Platoon blocked, %   |        | -      | -      | - |             |
| Mov Cap-1 Maneuver   | 1517   | -      | -      | - | 546 990     |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | 566 -       |
| Stage 1              | -      | -      | -      | - | 919 -       |
| Stage 2              | -      | -      | -      | - | 691 -       |

| Approach             | EB  | WB | SB   |
|----------------------|-----|----|------|
| HCM Control Delay, s | 1.2 | 0  | 11.7 |
| HCM LOS              |     |    | B    |

| Minor Lane/Major Mvmt | EBL   | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h)      | 1517  | -   | -   | -   | 566   |
| HCM Lane V/C Ratio    | 0.034 | -   | -   | -   | 0.05  |
| HCM Control Delay (s) | 7.5   | -   | -   | -   | 11.7  |
| HCM Lane LOS          | A     | -   | -   | -   | B     |
| HCM 95th %tile Q(veh) | 0.1   | -   | -   | -   | 0.2   |

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 2.4  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↖    | ↗    |      | ↖    | ↗    |      |      | ↕    |      |      | ↕    |      |
| Traffic Vol, veh/h       | 60   | 227  | 9    | 4    | 59   | 23   | 5    | 6    | 4    | 19   | 2    | 13   |
| Future Vol, veh/h        | 60   | 227  | 9    | 4    | 59   | 23   | 5    | 6    | 4    | 19   | 2    | 13   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None |
| Storage Length           | 100  | -    | -    | 100  | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 63   | 239  | 9    | 4    | 62   | 24   | 5    | 6    | 4    | 20   | 2    | 14   |

| Major/Minor          | Major1 |   |   | Major2 |   |   | Minor1 |       |       | Minor2 |       |       |
|----------------------|--------|---|---|--------|---|---|--------|-------|-------|--------|-------|-------|
| Conflicting Flow All | 86     | 0 | 0 | 248    | 0 | 0 | 460    | 464   | 244   | 457    | 456   | 74    |
| Stage 1              | -      | - | - | -      | - | - | 370    | 370   | -     | 82     | 82    | -     |
| Stage 2              | -      | - | - | -      | - | - | 90     | 94    | -     | 375    | 374   | -     |
| Critical Hdwy        | 4.12   | - | - | 4.12   | - | - | 7.12   | 6.52  | 6.22  | 7.12   | 6.52  | 6.22  |
| Critical Hdwy Stg 1  | -      | - | - | -      | - | - | 6.12   | 5.52  | -     | 6.12   | 5.52  | -     |
| Critical Hdwy Stg 2  | -      | - | - | -      | - | - | 6.12   | 5.52  | -     | 6.12   | 5.52  | -     |
| Follow-up Hdwy       | 2.218  | - | - | 2.218  | - | - | 3.518  | 4.018 | 3.318 | 3.518  | 4.018 | 3.318 |
| Pot Cap-1 Maneuver   | 1510   | - | - | 1318   | - | - | 512    | 495   | 795   | 514    | 501   | 988   |
| Stage 1              | -      | - | - | -      | - | - | 650    | 620   | -     | 926    | 827   | -     |
| Stage 2              | -      | - | - | -      | - | - | 917    | 817   | -     | 646    | 618   | -     |
| Platoon blocked, %   | -      | - | - | -      | - | - | -      | -     | -     | -      | -     | -     |
| Mov Cap-1 Maneuver   | 1510   | - | - | 1318   | - | - | 486    | 473   | 795   | 489    | 478   | 988   |
| Mov Cap-2 Maneuver   | -      | - | - | -      | - | - | 486    | 473   | -     | 489    | 478   | -     |
| Stage 1              | -      | - | - | -      | - | - | 623    | 594   | -     | 887    | 825   | -     |
| Stage 2              | -      | - | - | -      | - | - | 899    | 815   | -     | 609    | 592   | -     |

| Approach             | EB  |  |  | WB  |  |  | NB   |  |  | SB   |  |  |
|----------------------|-----|--|--|-----|--|--|------|--|--|------|--|--|
| HCM Control Delay, s | 1.5 |  |  | 0.4 |  |  | 11.9 |  |  | 11.3 |  |  |
| HCM LOS              |     |  |  |     |  |  | B    |  |  | B    |  |  |

| Minor Lane/Major Mvmt | NBLn1 | EBL   | EBT | EBR | WBL   | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h)      | 536   | 1510  | -   | -   | 1318  | -   | -   | 605   |
| HCM Lane V/C Ratio    | 0.029 | 0.042 | -   | -   | 0.003 | -   | -   | 0.059 |
| HCM Control Delay (s) | 11.9  | 7.5   | -   | -   | 7.7   | -   | -   | 11.3  |
| HCM Lane LOS          | B     | A     | -   | -   | A     | -   | -   | B     |
| HCM 95th %tile Q(veh) | 0.1   | 0.1   | -   | -   | 0     | -   | -   | 0.2   |

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1.9  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↖    | ↗    |      | ↖    | ↗    |      |      | ↕    |      |      | ↕    |      |
| Traffic Vol, veh/h       | 36   | 211  | 3    | 5    | 77   | 24   | 0    | 0    | 9    | 24   | 0    | 9    |
| Future Vol, veh/h        | 36   | 211  | 3    | 5    | 77   | 24   | 0    | 0    | 9    | 24   | 0    | 9    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None |
| Storage Length           | 100  | -    | -    | 100  | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 38   | 222  | 3    | 5    | 81   | 25   | 0    | 0    | 9    | 25   | 0    | 9    |

| Major/Minor          | Major1 |   |   | Major2 |   |   | Minor1 |       |       | Minor2 |       |       |
|----------------------|--------|---|---|--------|---|---|--------|-------|-------|--------|-------|-------|
| Conflicting Flow All | 106    | 0 | 0 | 225    | 0 | 0 | 408    | 416   | 224   | 408    | 405   | 94    |
| Stage 1              | -      | - | - | -      | - | - | 300    | 300   | -     | 104    | 104   | -     |
| Stage 2              | -      | - | - | -      | - | - | 108    | 116   | -     | 304    | 301   | -     |
| Critical Hdwy        | 4.12   | - | - | 4.12   | - | - | 7.12   | 6.52  | 6.22  | 7.12   | 6.52  | 6.22  |
| Critical Hdwy Stg 1  | -      | - | - | -      | - | - | 6.12   | 5.52  | -     | 6.12   | 5.52  | -     |
| Critical Hdwy Stg 2  | -      | - | - | -      | - | - | 6.12   | 5.52  | -     | 6.12   | 5.52  | -     |
| Follow-up Hdwy       | 2.218  | - | - | 2.218  | - | - | 3.518  | 4.018 | 3.318 | 3.518  | 4.018 | 3.318 |
| Pot Cap-1 Maneuver   | 1485   | - | - | 1344   | - | - | 554    | 527   | 815   | 554    | 535   | 963   |
| Stage 1              | -      | - | - | -      | - | - | 709    | 666   | -     | 902    | 809   | -     |
| Stage 2              | -      | - | - | -      | - | - | 897    | 800   | -     | 705    | 665   | -     |
| Platoon blocked, %   | -      | - | - | -      | - | - | -      | -     | -     | -      | -     | -     |
| Mov Cap-1 Maneuver   | 1485   | - | - | 1344   | - | - | 536    | 511   | 815   | 535    | 519   | 963   |
| Mov Cap-2 Maneuver   | -      | - | - | -      | - | - | 536    | 511   | -     | 535    | 519   | -     |
| Stage 1              | -      | - | - | -      | - | - | 691    | 649   | -     | 879    | 806   | -     |
| Stage 2              | -      | - | - | -      | - | - | 885    | 797   | -     | 679    | 648   | -     |

| Approach             | EB  |  |  | WB  |  |  | NB  |  |  | SB   |  |  |
|----------------------|-----|--|--|-----|--|--|-----|--|--|------|--|--|
| HCM Control Delay, s | 1.1 |  |  | 0.4 |  |  | 9.5 |  |  | 11.3 |  |  |
| HCM LOS              |     |  |  |     |  |  | A   |  |  | B    |  |  |

| Minor Lane/Major Mvmt | NBLn1 | EBL   | EBT | EBR | WBL   | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h)      | 815   | 1485  | -   | -   | 1344  | -   | -   | 609   |
| HCM Lane V/C Ratio    | 0.012 | 0.026 | -   | -   | 0.004 | -   | -   | 0.057 |
| HCM Control Delay (s) | 9.5   | 7.5   | -   | -   | 7.7   | -   | -   | 11.3  |
| HCM Lane LOS          | A     | A     | -   | -   | A     | -   | -   | B     |
| HCM 95th %tile Q(veh) | 0     | 0.1   | -   | -   | 0     | -   | -   | 0.2   |

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 2.4  |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      |      |      |      |      |      |      |
| Traffic Vol, veh/h       | 194  | 50   | 32   | 83   | 23   | 53   |
| Future Vol, veh/h        | 194  | 50   | 32   | 83   | 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           | -    | -    | 50   | -    | 0    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 211  | 54   | 35   | 90   | 25   | 58   |

| Major/Minor          | Major1 | Major2 | Minor1 |   |             |
|----------------------|--------|--------|--------|---|-------------|
| Conflicting Flow All | 0      | 0      | 265    | 0 | 398 238     |
| Stage 1              | -      | -      | -      | - | 238 -       |
| Stage 2              | -      | -      | -      | - | 160 -       |
| 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   | -      | -      | 1299   | - | 607 801     |
| Stage 1              | -      | -      | -      | - | 802 -       |
| Stage 2              | -      | -      | -      | - | 869 -       |
| Platoon blocked, %   | -      | -      | -      | - | -           |
| Mov Cap-1 Maneuver   | -      | -      | 1299   | - | 591 801     |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | 637 -       |
| Stage 1              | -      | -      | -      | - | 780 -       |
| Stage 2              | -      | -      | -      | - | 869 -       |

| Approach             | EB | WB  | NB   |
|----------------------|----|-----|------|
| HCM Control Delay, s | 0  | 2.2 | 10.5 |
| HCM LOS              |    |     | B    |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL   | WBT |
|-----------------------|-------|-----|-----|-------|-----|
| Capacity (veh/h)      | 743   | -   | -   | 1299  | -   |
| HCM Lane V/C Ratio    | 0.111 | -   | -   | 0.027 | -   |
| HCM Control Delay (s) | 10.5  | -   | -   | 7.8   | -   |
| HCM Lane LOS          | B     | -   | -   | A     | -   |
| HCM 95th %tile Q(veh) | 0.4   | -   | -   | 0.1   | -   |

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.6  |      |      |      |      |      |
| Movement                 | WBL  | WBR  | NBT  | NBR  | SBL  | SBT  |
| Lane Configurations      | ↔    |      | ↔    |      | ↔    | ↔    |
| Traffic Vol, veh/h       | 1    | 9    | 243  | 4    | 14   | 114  |
| Future Vol, veh/h        | 1    | 9    | 243  | 4    | 14   | 114  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | -    | -    | -    | 100  | -    |
| Veh in Median Storage, # | 0    | -    | 0    | -    | -    | 0    |
| Grade, %                 | 0    | -    | 0    | -    | -    | 0    |
| Peak Hour Factor         | 95   | 95   | 95   | 95   | 95   | 95   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 1    | 9    | 256  | 4    | 15   | 120  |

| Major/Minor          | Minor1 | Major1 | Major2 |   |       |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 408    | 258    | 0      | 0 | 260   |
| Stage 1              | 258    | -      | -      | - | -     |
| Stage 2              | 150    | -      | -      | - | -     |
| Critical Hdwy        | 6.42   | 6.22   | -      | - | 4.12  |
| Critical Hdwy Stg 1  | 5.42   | -      | -      | - | -     |
| Critical Hdwy Stg 2  | 5.42   | -      | -      | - | -     |
| Follow-up Hdwy       | 3.518  | 3.318  | -      | - | 2.218 |
| Pot Cap-1 Maneuver   | 599    | 781    | -      | - | 1304  |
| Stage 1              | 785    | -      | -      | - | -     |
| Stage 2              | 878    | -      | -      | - | -     |
| Platoon blocked, %   |        |        |        |   |       |
| Mov Cap-1 Maneuver   | 592    | 781    | -      | - | 1304  |
| Mov Cap-2 Maneuver   | 641    | -      | -      | - | -     |
| Stage 1              | 776    | -      | -      | - | -     |
| Stage 2              | 878    | -      | -      | - | -     |

| Approach             | WB  | NB | SB  |
|----------------------|-----|----|-----|
| HCM Control Delay, s | 9.8 | 0  | 0.9 |
| HCM LOS              | A   |    |     |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL   | SBT   |
|-----------------------|-----|----------|-------|-------|
| Capacity (veh/h)      | -   | -        | 764   | 1304  |
| HCM Lane V/C Ratio    | -   | -        | 0.014 | 0.011 |
| HCM Control Delay (s) | -   | -        | 9.8   | 7.8   |
| HCM Lane LOS          | -   | -        | A     | A     |
| HCM 95th %tile Q(veh) | -   | -        | 0     | 0     |

| Intersection              |     |
|---------------------------|-----|
| Intersection Delay, s/veh | 9.4 |
| Intersection LOS          | A   |

| Movement            | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|---------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations |      | ↕    |      |      | ↕    |      | ↕    | ↕    |      | ↕    | ↕    |      |
| Traffic Vol, veh/h  | 52   | 23   | 1    | 39   | 26   | 0    | 5    | 123  | 124  | 1    | 88   | 67   |
| Future Vol, veh/h   | 52   | 23   | 1    | 39   | 26   | 0    | 5    | 123  | 124  | 1    | 88   | 67   |
| Peak Hour Factor    | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Heavy Vehicles, %   | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow           | 55   | 24   | 1    | 41   | 27   | 0    | 5    | 129  | 131  | 1    | 93   | 71   |
| Number of Lanes     | 0    | 1    | 0    | 0    | 1    | 0    | 1    | 1    | 0    | 1    | 1    | 0    |

| Approach                   | EB  | WB  | NB  | SB |
|----------------------------|-----|-----|-----|----|
| Opposing Approach          | WB  | EB  | SB  | NB |
| Opposing Lanes             | 1   | 1   | 2   | 2  |
| Conflicting Approach Left  | SB  | NB  | EB  | WB |
| Conflicting Lanes Left     | 2   | 2   | 1   | 1  |
| Conflicting Approach Right | NB  | SB  | WB  | EB |
| Conflicting Lanes Right    | 2   | 2   | 1   | 1  |
| HCM Control Delay          | 8.9 | 8.8 | 9.9 | 9  |
| HCM LOS                    | A   | A   | A   | A  |

| Lane                   | NBLn1 | NBLn2 | EBLn1 | WBLn1 | SBLn1 | SBLn2 |
|------------------------|-------|-------|-------|-------|-------|-------|
| Vol Left, %            | 100%  | 0%    | 68%   | 60%   | 100%  | 0%    |
| Vol Thru, %            | 0%    | 50%   | 30%   | 40%   | 0%    | 57%   |
| Vol Right, %           | 0%    | 50%   | 1%    | 0%    | 0%    | 43%   |
| Sign Control           | Stop  | Stop  | Stop  | Stop  | Stop  | Stop  |
| Traffic Vol by Lane    | 5     | 247   | 76    | 65    | 1     | 155   |
| LT Vol                 | 5     | 0     | 52    | 39    | 1     | 0     |
| Through Vol            | 0     | 123   | 23    | 26    | 0     | 88    |
| RT Vol                 | 0     | 124   | 1     | 0     | 0     | 67    |
| Lane Flow Rate         | 5     | 260   | 80    | 68    | 1     | 163   |
| Geometry Grp           | 7     | 7     | 2     | 2     | 7     | 7     |
| Degree of Util (X)     | 0.008 | 0.34  | 0.115 | 0.098 | 0.002 | 0.22  |
| Departure Headway (Hd) | 5.568 | 4.712 | 5.166 | 5.175 | 5.653 | 4.845 |
| Convergence, Y/N       | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Cap                    | 642   | 762   | 691   | 690   | 632   | 739   |
| Service Time           | 3.305 | 2.448 | 3.215 | 3.226 | 3.392 | 2.584 |
| HCM Lane V/C Ratio     | 0.008 | 0.341 | 0.116 | 0.099 | 0.002 | 0.221 |
| HCM Control Delay      | 8.4   | 9.9   | 8.9   | 8.8   | 8.4   | 9     |
| HCM Lane LOS           | A     | A     | A     | A     | A     | A     |
| HCM 95th-tile Q        | 0     | 1.5   | 0.4   | 0.3   | 0     | 0.8   |

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 3.6  |      |      |      |      |      |
| Movement                 | WBL  | WBR  | NBT  | NBR  | SBL  | SBT  |
| Lane Configurations      |      |      |      |      |      |      |
| Traffic Vol, veh/h       | 8    | 101  | 162  | 13   | 100  | 147  |
| Future Vol, veh/h        | 8    | 101  | 162  | 13   | 100  | 147  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | -    | -    | -    | 25   | -    |
| Veh in Median Storage, # | 0    | -    | 0    | -    | -    | 0    |
| Grade, %                 | 0    | -    | 0    | -    | -    | 0    |
| Peak Hour Factor         | 95   | 95   | 95   | 95   | 95   | 95   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 8    | 106  | 171  | 14   | 105  | 155  |

| Major/Minor          | Minor1 | Major1 | Major2 |   |       |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 543    | 178    | 0      | 0 | 185   |
| Stage 1              | 178    | -      | -      | - | -     |
| Stage 2              | 365    | -      | -      | - | -     |
| Critical Hdwy        | 6.42   | 6.22   | -      | - | 4.12  |
| Critical Hdwy Stg 1  | 5.42   | -      | -      | - | -     |
| Critical Hdwy Stg 2  | 5.42   | -      | -      | - | -     |
| Follow-up Hdwy       | 3.518  | 3.318  | -      | - | 2.218 |
| Pot Cap-1 Maneuver   | 501    | 865    | -      | - | 1390  |
| Stage 1              | 853    | -      | -      | - | -     |
| Stage 2              | 702    | -      | -      | - | -     |
| Platoon blocked, %   |        |        |        |   |       |
| Mov Cap-1 Maneuver   | 463    | 865    | -      | - | 1390  |
| Mov Cap-2 Maneuver   | 509    | -      | -      | - | -     |
| Stage 1              | 788    | -      | -      | - | -     |
| Stage 2              | 702    | -      | -      | - | -     |

| Approach             | WB   | NB | SB  |
|----------------------|------|----|-----|
| HCM Control Delay, s | 10.1 | 0  | 3.2 |
| HCM LOS              | B    |    |     |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL   | SBT   |
|-----------------------|-----|----------|-------|-------|
| Capacity (veh/h)      | -   | -        | 823   | 1390  |
| HCM Lane V/C Ratio    | -   | -        | 0.139 | 0.076 |
| HCM Control Delay (s) | -   | -        | 10.1  | 7.8   |
| HCM Lane LOS          | -   | -        | B     | A     |
| HCM 95th %tile Q(veh) | -   | -        | 0.5   | 0.2   |

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.2  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      | ↔    |      | ↔    | ↑    | ↑    |      |
| Traffic Vol, veh/h       | 4    | 2    | 4    | 259  | 245  | 5    |
| Future Vol, veh/h        | 4    | 2    | 4    | 259  | 245  | 5    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | -    | 25   | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 95   | 95   | 95   | 95   | 95   | 95   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 4    | 2    | 4    | 273  | 258  | 5    |

| Major/Minor          | Minor2 | Major1 | Major2 |   |   |   |
|----------------------|--------|--------|--------|---|---|---|
| Conflicting Flow All | 542    | 261    | 263    | 0 | - | 0 |
| Stage 1              | 261    | -      | -      | - | - | - |
| Stage 2              | 281    | -      | -      | - | - | - |
| Critical Hdwy        | 6.42   | 6.22   | 4.12   | - | - | - |
| Critical Hdwy Stg 1  | 5.42   | -      | -      | - | - | - |
| Critical Hdwy Stg 2  | 5.42   | -      | -      | - | - | - |
| Follow-up Hdwy       | 3.518  | 3.318  | 2.218  | - | - | - |
| Pot Cap-1 Maneuver   | 501    | 778    | 1301   | - | - | - |
| Stage 1              | 783    | -      | -      | - | - | - |
| Stage 2              | 767    | -      | -      | - | - | - |
| Platoon blocked, %   |        |        |        | - | - | - |
| Mov Cap-1 Maneuver   | 499    | 778    | 1301   | - | - | - |
| Mov Cap-2 Maneuver   | 499    | -      | -      | - | - | - |
| Stage 1              | 781    | -      | -      | - | - | - |
| Stage 2              | 767    | -      | -      | - | - | - |

| Approach             | EB   | NB  | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 11.4 | 0.1 | 0  |
| HCM LOS              | B    |     |    |

| Minor Lane/Major Mvmt | NBL   | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h)      | 1301  | -   | 567   | -   | -   |
| HCM Lane V/C Ratio    | 0.003 | -   | 0.011 | -   | -   |
| HCM Control Delay (s) | 7.8   | -   | 11.4  | -   | -   |
| HCM Lane LOS          | A     | -   | B     | -   | -   |
| HCM 95th %tile Q(veh) | 0     | -   | 0     | -   | -   |

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1.4  |      |      |      |      |      |
| Movement                 | EBL  | EBT  | WBT  | WBR  | SBL  | SBR  |
| Lane Configurations      |      | ↶    | ↷    |      | ↶    |      |
| Traffic Vol, veh/h       | 50   | 91   | 284  | 19   | 6    | 14   |
| Future Vol, veh/h        | 50   | 91   | 284  | 19   | 6    | 14   |
| 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         | 95   | 95   | 95   | 95   | 95   | 95   |
| Heavy Vehicles, %        | 5    | 2    | 2    | 5    | 5    | 5    |
| Mvmt Flow                | 53   | 96   | 299  | 20   | 6    | 15   |

| Major/Minor          | Major1 | Major2 | Minor2 |   |             |
|----------------------|--------|--------|--------|---|-------------|
| Conflicting Flow All | 319    | 0      | -      | 0 | 511 309     |
| Stage 1              | -      | -      | -      | - | 309 -       |
| Stage 2              | -      | -      | -      | - | 202 -       |
| Critical Hdwy        | 4.15   | -      | -      | - | 6.45 6.25   |
| Critical Hdwy Stg 1  | -      | -      | -      | - | 5.45 -      |
| Critical Hdwy Stg 2  | -      | -      | -      | - | 5.45 -      |
| Follow-up Hdwy       | 2.245  | -      | -      | - | 3.545 3.345 |
| Pot Cap-1 Maneuver   | 1224   | -      | -      | - | 517 724     |
| Stage 1              | -      | -      | -      | - | 738 -       |
| Stage 2              | -      | -      | -      | - | 825 -       |
| Platoon blocked, %   |        | -      | -      | - |             |
| Mov Cap-1 Maneuver   | 1224   | -      | -      | - | 493 724     |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | 493 -       |
| Stage 1              | -      | -      | -      | - | 704 -       |
| Stage 2              | -      | -      | -      | - | 825 -       |

| Approach             | EB  | WB | SB   |
|----------------------|-----|----|------|
| HCM Control Delay, s | 2.9 | 0  | 10.9 |
| HCM LOS              |     |    | B    |

| Minor Lane/Major Mvmt | EBL   | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h)      | 1224  | -   | -   | -   | 635   |
| HCM Lane V/C Ratio    | 0.043 | -   | -   | -   | 0.033 |
| HCM Control Delay (s) | 8.1   | 0   | -   | -   | 10.9  |
| HCM Lane LOS          | A     | A   | -   | -   | B     |
| HCM 95th %tile Q(veh) | 0.1   | -   | -   | -   | 0.1   |

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1.5  |      |      |      |      |      |
| Movement                 | EBL  | EBT  | WBT  | WBR  | SBL  | SBR  |
| Lane Configurations      |      | ↶    | ↷    |      | ↶    | ↷    |
| Traffic Vol, veh/h       | 9    | 88   | 275  | 9    | 27   | 28   |
| Future Vol, veh/h        | 9    | 88   | 275  | 9    | 27   | 28   |
| 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         | 95   | 95   | 95   | 95   | 95   | 95   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 9    | 93   | 289  | 9    | 28   | 29   |

| Major/Minor          | Major1 | Major2 | Minor2 |   |             |
|----------------------|--------|--------|--------|---|-------------|
| Conflicting Flow All | 298    | 0      | -      | 0 | 405 294     |
| Stage 1              | -      | -      | -      | - | 294 -       |
| Stage 2              | -      | -      | -      | - | 111 -       |
| 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   | -      | -      | - | 602 745     |
| Stage 1              | -      | -      | -      | - | 756 -       |
| Stage 2              | -      | -      | -      | - | 914 -       |
| Platoon blocked, %   |        | -      | -      | - |             |
| Mov Cap-1 Maneuver   | 1263   | -      | -      | - | 597 745     |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | 597 -       |
| Stage 1              | -      | -      | -      | - | 750 -       |
| Stage 2              | -      | -      | -      | - | 914 -       |

| Approach             | EB  | WB | SB   |
|----------------------|-----|----|------|
| HCM Control Delay, s | 0.7 | 0  | 10.9 |
| HCM LOS              |     |    | B    |

| Minor Lane/Major Mvmt | EBL   | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h)      | 1263  | -   | -   | -   | 664   |
| HCM Lane V/C Ratio    | 0.008 | -   | -   | -   | 0.087 |
| HCM Control Delay (s) | 7.9   | 0   | -   | -   | 10.9  |
| HCM Lane LOS          | A     | A   | -   | -   | B     |
| HCM 95th %tile Q(veh) | 0     | -   | -   | -   | 0.3   |

HCM 6th TWSC  
 202: Woodmen Frontage Rd/Internal Street & Vignola Heights

2040 Total Traffic With Right-in Access  
 AM Peak Hour

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1.5  |      |      |      |      |      |
| Movement                 | EBL  | EBT  | WBT  | WBR  | SBL  | SBR  |
| Lane Configurations      |      | ↔    | ↔    |      | ↔    |      |
| Traffic Vol, veh/h       | 6    | 109  | 266  | 14   | 41   | 18   |
| Future Vol, veh/h        | 6    | 109  | 266  | 14   | 41   | 18   |
| 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         | 95   | 95   | 95   | 95   | 95   | 95   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 6    | 115  | 280  | 15   | 43   | 19   |

| Major/Minor          | Major1 | Major2 | Minor2 |   |             |
|----------------------|--------|--------|--------|---|-------------|
| Conflicting Flow All | 295    | 0      | -      | 0 | 415 288     |
| Stage 1              | -      | -      | -      | - | 288 -       |
| Stage 2              | -      | -      | -      | - | 127 -       |
| 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   | 1266   | -      | -      | - | 594 751     |
| Stage 1              | -      | -      | -      | - | 761 -       |
| Stage 2              | -      | -      | -      | - | 899 -       |
| Platoon blocked, %   |        | -      | -      | - |             |
| Mov Cap-1 Maneuver   | 1266   | -      | -      | - | 591 751     |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | 637 -       |
| Stage 1              | -      | -      | -      | - | 757 -       |
| Stage 2              | -      | -      | -      | - | 899 -       |

| Approach             | EB  | WB | SB   |
|----------------------|-----|----|------|
| HCM Control Delay, s | 0.4 | 0  | 10.9 |
| HCM LOS              |     |    | B    |

| Minor Lane/Major Mvmt | EBL   | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h)      | 1266  | -   | -   | -   | 668   |
| HCM Lane V/C Ratio    | 0.005 | -   | -   | -   | 0.093 |
| HCM Control Delay (s) | 7.9   | 0   | -   | -   | 10.9  |
| HCM Lane LOS          | A     | A   | -   | -   | B     |
| HCM 95th %tile Q(veh) | 0     | -   | -   | -   | 0.3   |

Timings  
1: Meridian Rd & Woodmen Rd

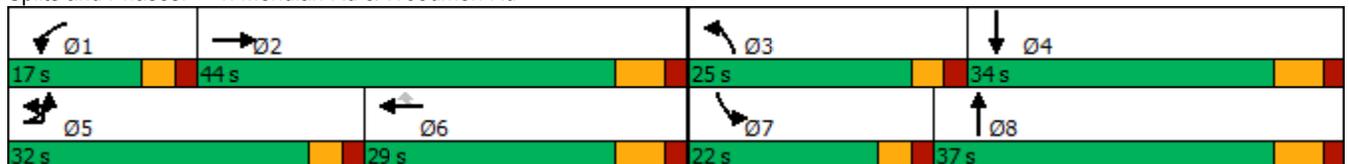
2040 Total Traffic WITH Right-in Access  
PM Peak Hour

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       |       |       |       |       |       |       |       |       |       |       |       |
| Traffic Volume (vph) | 755   | 794   | 375   | 225   | 665   | 262   | 465   | 893   | 200   | 483   | 704   | 602   |
| Future Volume (vph)  | 755   | 794   | 375   | 225   | 665   | 262   | 465   | 893   | 200   | 483   | 704   | 602   |
| Turn Type            | Prot  | NA    | Free  | Prot  | NA    | Perm  | Prot  | NA    | Free  | Prot  | NA    | Free  |
| Protected Phases     | 5     | 2     |       | 1     | 6     |       | 3     | 8     |       | 7     | 4     |       |
| Permitted Phases     |       |       | Free  |       |       | 6     |       |       | Free  |       |       | Free  |
| Detector Phase       | 5     | 2     |       | 1     | 6     | 6     | 3     | 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   |       |
| Minimum Split (s)    | 10.0  | 11.5  |       | 10.0  | 11.5  | 11.5  | 10.0  | 11.5  |       | 10.0  | 11.5  |       |
| Total Split (s)      | 32.0  | 44.0  |       | 17.0  | 29.0  | 29.0  | 25.0  | 37.0  |       | 22.0  | 34.0  |       |
| Total Split (%)      | 26.7% | 36.7% |       | 14.2% | 24.2% | 24.2% | 20.8% | 30.8% |       | 18.3% | 28.3% |       |
| Yellow Time (s)      | 3.0   | 4.5   |       | 3.0   | 4.5   | 4.5   | 3.0   | 4.5   |       | 3.0   | 4.5   |       |
| All-Red Time (s)     | 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  |       |
| Total Lost Time (s)  | 4.0   | 5.5   |       | 4.0   | 5.5   | 5.5   | 4.0   | 5.5   |       | 4.0   | 5.5   |       |
| Lead/Lag             | Lead  | Lag   |       | Lead  | Lag   | Lag   | Lead  | Lag   |       | Lead  | Lag   |       |
| Lead-Lag Optimize?   | Yes   | Yes   |       | Yes   | Yes   | Yes   | Yes   | Yes   |       | Yes   | Yes   |       |
| Recall Mode          | None  | Min   |       | None  | Min   | Min   | None  | None  |       | None  | None  |       |
| Act Effct Green (s)  | 28.0  | 39.0  | 120.0 | 12.5  | 23.5  | 23.5  | 20.3  | 31.5  | 120.0 | 18.0  | 29.2  | 120.0 |
| Actuated g/C Ratio   | 0.23  | 0.32  | 1.00  | 0.10  | 0.20  | 0.20  | 0.17  | 0.26  | 1.00  | 0.15  | 0.24  | 1.00  |
| v/c Ratio            | 1.00  | 0.70  | 0.24  | 0.64  | 0.98  | 0.51  | 0.82  | 0.98  | 0.13  | 0.96  | 0.83  | 0.39  |
| Control Delay        | 78.0  | 39.6  | 0.4   | 60.4  | 77.9  | 8.6   | 60.4  | 69.7  | 0.2   | 81.7  | 53.0  | 0.7   |
| 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          | 78.0  | 39.6  | 0.4   | 60.4  | 77.9  | 8.6   | 60.4  | 69.7  | 0.2   | 81.7  | 53.0  | 0.7   |
| LOS                  | E     | D     | A     | E     | E     | A     | E     | E     | A     | F     | D     | A     |
| Approach Delay       |       | 47.5  |       |       | 58.7  |       |       | 58.0  |       |       | 43.2  |       |
| Approach LOS         |       | D     |       |       | E     |       |       | E     |       |       | D     |       |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Natural Cycle: 110  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.00  
 Intersection Signal Delay: 50.8  
 Intersection LOS: D  
 Intersection Capacity Utilization 95.1%  
 ICU Level of Service F  
 Analysis Period (min) 15

Splits and Phases: 1: Meridian Rd & Woodmen Rd



Timings  
2: Meridian Rd & Eastonville Rd

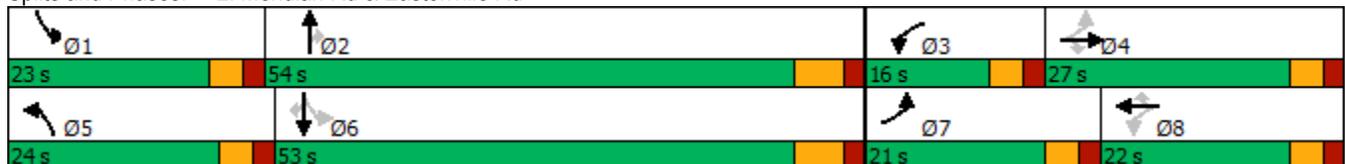
2040 Total Traffic WITH Right-in Access  
PM Peak Hour

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       |       |       |       |       |       |       |       |       |       |       |       |
| Traffic Volume (vph) | 339   | 197   | 228   | 200   | 136   | 225   | 415   | 1246  | 250   | 100   | 1203  | 134   |
| Future Volume (vph)  | 339   | 197   | 228   | 200   | 136   | 225   | 415   | 1246  | 250   | 100   | 1203  | 134   |
| Turn Type            | pm+pt | NA    | Perm  | pm+pt | NA    | Perm  | Prot  | NA    | Perm  | pm+pt | NA    | Perm  |
| Protected Phases     | 7     | 4     |       | 3     | 8     |       | 5     | 2     |       | 1     | 6     |       |
| Permitted Phases     | 4     |       | 4     | 8     |       | 8     |       |       | 2     | 6     |       | 6     |
| Detector Phase       | 7     | 4     | 4     | 3     | 8     | 8     | 5     | 2     | 2     | 1     | 6     | 6     |
| 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   | 5.0   |
| Minimum Split (s)    | 10.0  | 10.0  | 10.0  | 10.0  | 10.0  | 10.0  | 10.0  | 11.5  | 11.5  | 10.0  | 11.5  | 11.5  |
| Total Split (s)      | 21.0  | 27.0  | 27.0  | 16.0  | 22.0  | 22.0  | 24.0  | 54.0  | 54.0  | 23.0  | 53.0  | 53.0  |
| Total Split (%)      | 17.5% | 22.5% | 22.5% | 13.3% | 18.3% | 18.3% | 20.0% | 45.0% | 45.0% | 19.2% | 44.2% | 44.2% |
| Yellow Time (s)      | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.5   | 4.5   | 3.0   | 4.5   | 4.5   |
| 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   | 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  | -1.0  |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 5.5   | 5.5   | 4.0   | 5.5   | 5.5   |
| Lead/Lag             | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?   | Yes   |
| Recall Mode          | None  | Min   | Min   | None  | Min   | Min   |
| Act Effct Green (s)  | 33.0  | 18.3  | 18.3  | 26.8  | 15.1  | 15.1  | 18.5  | 52.7  | 52.7  | 55.4  | 44.0  | 44.0  |
| Actuated g/C Ratio   | 0.30  | 0.17  | 0.17  | 0.24  | 0.14  | 0.14  | 0.17  | 0.48  | 0.48  | 0.50  | 0.40  | 0.40  |
| v/c Ratio            | 0.51  | 0.67  | 0.52  | 0.71  | 0.56  | 0.56  | 0.76  | 0.75  | 0.29  | 0.42  | 0.87  | 0.20  |
| Control Delay        | 32.8  | 55.6  | 9.6   | 46.3  | 55.6  | 11.5  | 54.5  | 27.7  | 3.2   | 16.2  | 39.1  | 6.7   |
| 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          | 32.8  | 55.6  | 9.6   | 46.3  | 55.6  | 11.5  | 54.5  | 27.7  | 3.2   | 16.2  | 39.1  | 6.7   |
| LOS                  | C     | E     | A     | D     | E     | B     | D     | C     | A     | B     | D     | A     |
| Approach Delay       |       | 31.8  |       |       | 34.6  |       |       | 30.4  |       |       | 34.4  |       |
| Approach LOS         |       | C     |       |       | C     |       |       | C     |       |       | C     |       |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 110.4  
 Natural Cycle: 70  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.87  
 Intersection Signal Delay: 32.4  
 Intersection LOS: C  
 Intersection Capacity Utilization 81.1%  
 ICU Level of Service D  
 Analysis Period (min) 15

Splits and Phases: 2: Meridian Rd & Eastonville Rd



Timings  
25: Golden Sage Rd & Woodmen Rd

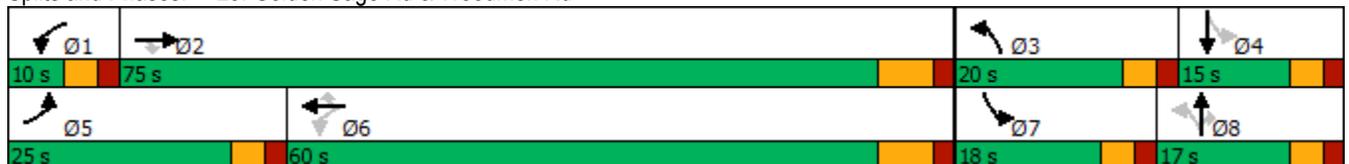
2040 Total Traffic WITH Right-in Access  
PM Peak Hour

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       |       |       |       |       |       |       |       |       |       |       |       |
| Traffic Volume (vph) | 394   | 1640  | 121   | 99    | 1030  | 300   | 152   | 39    | 114   | 191   | 26    | 446   |
| Future Volume (vph)  | 394   | 1640  | 121   | 99    | 1030  | 300   | 152   | 39    | 114   | 191   | 26    | 446   |
| 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   | 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  | 10.0  |
| Total Split (s)      | 25.0  | 75.0  | 75.0  | 10.0  | 60.0  | 60.0  | 20.0  | 17.0  | 17.0  | 18.0  | 15.0  |       |
| Total Split (%)      | 20.8% | 62.5% | 62.5% | 8.3%  | 50.0% | 50.0% | 16.7% | 14.2% | 14.2% | 15.0% | 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   | 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   | 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  | -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   | 4.0   |
| Lead/Lag             | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   |       |
| Lead-Lag Optimize?   | Yes   |
| Recall Mode          | None  | Min   | Min   | None  | Min   | Min   | None  | None  | None  | None  | None  | None  |
| Act Effct Green (s)  | 18.3  | 59.4  | 59.4  | 55.4  | 47.3  | 47.3  | 25.5  | 9.2   | 9.2   | 18.6  | 8.2   | 106.6 |
| Actuated g/C Ratio   | 0.17  | 0.56  | 0.56  | 0.52  | 0.44  | 0.44  | 0.24  | 0.09  | 0.09  | 0.17  | 0.08  | 1.00  |
| v/c Ratio            | 0.71  | 0.85  | 0.14  | 0.60  | 0.67  | 0.36  | 0.43  | 0.26  | 0.41  | 0.70  | 0.19  | 0.30  |
| Control Delay        | 50.1  | 24.7  | 2.3   | 32.1  | 26.3  | 3.4   | 39.0  | 52.9  | 6.2   | 52.0  | 53.2  | 0.5   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 1.5   | 0.0   | 0.0   |
| Total Delay          | 50.1  | 24.7  | 2.3   | 32.1  | 26.3  | 3.4   | 39.0  | 52.9  | 6.2   | 53.5  | 53.2  | 0.5   |
| LOS                  | D     | C     | A     | C     | C     | A     | D     | D     | A     | D     | D     | A     |
| Approach Delay       |       | 28.2  |       |       | 21.8  |       |       | 28.5  |       |       | 17.8  |       |
| Approach LOS         |       | C     |       |       | C     |       |       | C     |       |       | B     |       |

Intersection Summary

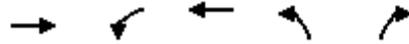
Cycle Length: 120  
 Actuated Cycle Length: 106.6  
 Natural Cycle: 70  
 Control Type: Semi Act-Uncoord  
 Maximum v/c Ratio: 0.85  
 Intersection Signal Delay: 24.7  
 Intersection LOS: C  
 Intersection Capacity Utilization 79.7%  
 ICU Level of Service D  
 Analysis Period (min) 15

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



Timings  
26: Golden Sage Rd & Woodmen Frontage Rd

2040 Total Traffic WITH Right-in Access  
PM Peak Hour

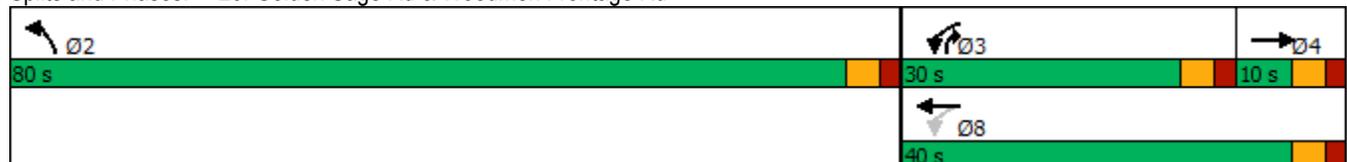


| Lane Group           | EBT  | WBL   | WBT   | NBL   | NBR   |
|----------------------|------|-------|-------|-------|-------|
| Lane Configurations  | →    |       | ←     | ↔     | ↔     |
| Traffic Volume (vph) | 23   | 488   | 12    | 300   | 434   |
| Future Volume (vph)  | 23   | 488   | 12    | 300   | 434   |
| Turn Type            | NA   | pm+pt | NA    | Prot  | Over  |
| Protected Phases     | 4    | 3     | 8     | 2     | 3     |
| Permitted Phases     |      | 8     |       |       |       |
| Detector Phase       | 4    | 3     | 8     | 2     | 3     |
| Switch Phase         |      |       |       |       |       |
| Minimum Initial (s)  | 5.0  | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)    | 10.0 | 10.0  | 10.0  | 10.0  | 10.0  |
| Total Split (s)      | 10.0 | 30.0  | 40.0  | 80.0  | 30.0  |
| Total Split (%)      | 8.3% | 25.0% | 33.3% | 66.7% | 25.0% |
| Yellow Time (s)      | 3.0  | 3.0   | 3.0   | 3.0   | 3.0   |
| All-Red Time (s)     | 2.0  | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | -1.0 |       | -1.0  | -1.0  | -1.0  |
| Total Lost Time (s)  | 4.0  |       | 4.0   | 4.0   | 4.0   |
| Lead/Lag             | Lag  | Lead  |       |       | Lead  |
| Lead-Lag Optimize?   | Yes  | Yes   |       |       | Yes   |
| Recall Mode          | None | None  | None  | Min   | None  |
| Act Effect Green (s) | 23.7 |       | 36.1  | 20.1  | 8.4   |
| Actuated g/C Ratio   | 0.37 |       | 0.56  | 0.31  | 0.13  |
| v/c Ratio            | 0.29 |       | 0.86  | 0.72  | 0.71  |
| Control Delay        | 5.8  |       | 27.2  | 26.3  | 11.8  |
| Queue Delay          | 0.0  |       | 0.0   | 0.0   | 0.0   |
| Total Delay          | 5.8  |       | 27.2  | 26.4  | 11.8  |
| LOS                  | A    |       | C     | C     | B     |
| Approach Delay       | 5.8  |       | 27.2  | 19.4  |       |
| Approach LOS         | A    |       | C     | B     |       |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 64.3  
 Natural Cycle: 60  
 Control Type: Semi Act-Uncoord  
 Maximum v/c Ratio: 0.86  
 Intersection Signal Delay: 20.3  
 Intersection LOS: C  
 Intersection Capacity Utilization 75.1%  
 ICU Level of Service D  
 Analysis Period (min) 15

Splits and Phases: 26: Golden Sage Rd & Woodmen Frontage Rd



## SimTraffic Performance Report

## 87: Meridian Rd &amp; Site RIRO Performance by movement Interval #1 5:00

| Movement         | EBR  | NBT | SBT | SBR | All |
|------------------|------|-----|-----|-----|-----|
| Stop Del/Veh (s) | 15.2 | 2.1 | 0.1 | 0.1 | 2.1 |

## 87: Meridian Rd &amp; Site RIRO Performance by movement Interval #2 5:15

| Movement         | EBR  | NBT | SBT | SBR | All |
|------------------|------|-----|-----|-----|-----|
| Stop Del/Veh (s) | 20.7 | 1.9 | 0.1 | 0.1 | 2.3 |

## 87: Meridian Rd &amp; Site RIRO Performance by movement Interval #3 5:30

| Movement         | EBR  | NBT | SBT | SBR | All |
|------------------|------|-----|-----|-----|-----|
| Stop Del/Veh (s) | 16.8 | 2.0 | 0.1 | 0.2 | 2.1 |

## 87: Meridian Rd &amp; Site RIRO Performance by movement Interval #4 5:45

| Movement         | EBR  | NBT | SBT | SBR | All |
|------------------|------|-----|-----|-----|-----|
| Stop Del/Veh (s) | 23.2 | 2.2 | 0.1 | 0.1 | 2.7 |

## 87: Meridian Rd &amp; Site RIRO Performance by movement Entire Run

| Movement         | EBR  | NBT | SBT | SBR | All |
|------------------|------|-----|-----|-----|-----|
| Stop Del/Veh (s) | 19.3 | 2.1 | 0.1 | 0.1 | 2.3 |

## Total Zone Performance By Interval

| Interval Start   | 5:00 | 5:15  | 5:30 | 5:45 | All   |
|------------------|------|-------|------|------|-------|
| Stop Del/Veh (s) | 49.6 | 103.7 | 52.7 | 77.5 | 135.1 |

HCM 6th Roundabout  
 58: Woodmen Right-In Only/Lot 11 Access & Internal Street

2040 Total Traffic With Right-in Access  
 PM Peak Hour

| Intersection                |       |       |       |       |
|-----------------------------|-------|-------|-------|-------|
| Intersection Delay, s/veh   | 5.6   |       |       |       |
| Intersection LOS            | A     |       |       |       |
| Approach                    | EB    | WB    | NB    | SB    |
| Entry Lanes                 | 1     | 1     | 1     | 1     |
| Conflicting Circle Lanes    | 1     | 1     | 1     | 1     |
| Adj Approach Flow, veh/h    | 264   | 68    | 353   | 9     |
| Demand Flow Rate, veh/h     | 269   | 69    | 360   | 9     |
| Vehicles Circulating, veh/h | 5     | 168   | 274   | 237   |
| Vehicles Exiting, veh/h     | 241   | 466   | 0     | 0     |
| Ped Vol Crossing Leg, #/h   | 0     | 0     | 0     | 0     |
| Ped Cap Adj                 | 1.000 | 1.000 | 1.000 | 1.000 |
| Approach Delay, s/veh       | 4.3   | 3.7   | 7.1   | 3.4   |
| Approach LOS                | A     | A     | A     | A     |
| Lane                        | Left  | Left  | Left  | Left  |
| Designated Moves            | T     | T     | LR    | LR    |
| Assumed Moves               | T     | T     | LR    | LR    |
| RT Channelized              |       |       |       |       |
| Lane Util                   | 1.000 | 1.000 | 1.000 | 1.000 |
| Follow-Up Headway, s        | 2.609 | 2.609 | 2.609 | 2.609 |
| Critical Headway, s         | 4.976 | 4.976 | 4.976 | 4.976 |
| Entry Flow, veh/h           | 269   | 69    | 360   | 9     |
| Cap Entry Lane, veh/h       | 1373  | 1163  | 1043  | 1084  |
| Entry HV Adj Factor         | 0.980 | 0.980 | 0.981 | 1.000 |
| Flow Entry, veh/h           | 264   | 68    | 353   | 9     |
| Cap Entry, veh/h            | 1346  | 1140  | 1023  | 1084  |
| V/C Ratio                   | 0.196 | 0.059 | 0.345 | 0.008 |
| Control Delay, s/veh        | 4.3   | 3.7   | 7.1   | 3.4   |
| LOS                         | A     | A     | A     | A     |
| 95th %tile Queue, veh       | 1     | 0     | 2     | 0     |

| Intersection                |       |        |       |       |
|-----------------------------|-------|--------|-------|-------|
| Intersection Delay, s/veh   | 6.2   |        |       |       |
| Intersection LOS            | A     |        |       |       |
| Approach                    | WB    | NB     |       | SB    |
| Entry Lanes                 | 1     | 1      |       | 1     |
| Conflicting Circle Lanes    | 1     | 1      |       | 1     |
| Adj Approach Flow, veh/h    | 722   | 595    |       | 226   |
| Demand Flow Rate, veh/h     | 737   | 607    |       | 230   |
| Vehicles Circulating, veh/h | 8     | 221    |       | 399   |
| Vehicles Exiting, veh/h     | 820   | 408    |       | 8     |
| Ped Vol Crossing Leg, #/h   | 0     | 0      |       | 0     |
| Ped Cap Adj                 | 1.000 | 1.000  |       | 1.000 |
| Approach Delay, s/veh       | 2.8   | 10.1   |       | 6.6   |
| Approach LOS                | A     | B      |       | A     |
| Lane                        | Left  | Bypass | Left  | Left  |
| Designated Moves            | L     | R      | TR    | LT    |
| Assumed Moves               | L     | R      | TR    | LT    |
| RT Channelized              | Free  |        |       |       |
| Lane Util                   | 1.000 | 1.000  |       | 1.000 |
| Follow-Up Headway, s        | 2.609 |        | 2.609 | 2.609 |
| Critical Headway, s         | 4.976 | 338    | 4.976 | 4.976 |
| Entry Flow, veh/h           | 399   | 1938   | 607   | 230   |
| Cap Entry Lane, veh/h       | 1369  | 0.980  | 1101  | 919   |
| Entry HV Adj Factor         | 0.980 | 331    | 0.980 | 0.982 |
| Flow Entry, veh/h           | 391   | 1900   | 595   | 226   |
| Cap Entry, veh/h            | 1341  | 0.174  | 1079  | 902   |
| V/C Ratio                   | 0.292 | 0.0    | 0.551 | 0.250 |
| Control Delay, s/veh        | 5.2   | A      | 10.1  | 6.6   |
| LOS                         | A     | 1      | B     | A     |
| 95th %tile Queue, veh       | 1     | 3      |       | 1     |

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1.2  |      |      |      |      |      |
| Movement                 | EBL  | EBT  | WBT  | WBR  | SBL  | SBR  |
| Lane Configurations      |      |      |      |      |      |      |
| Traffic Vol, veh/h       | 26   | 409  | 64   | 21   | 39   | 1    |
| Future Vol, veh/h        | 26   | 409  | 64   | 21   | 39   | 1    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 150  | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | -    | 0    | 0    | -    | 0    | -    |
| Grade, %                 | -    | 0    | 0    | -    | 0    | -    |
| Peak Hour Factor         | 95   | 95   | 95   | 95   | 95   | 95   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 27   | 431  | 67   | 22   | 41   | 1    |

| Major/Minor          | Major1 | Major2 | Minor2 |   |             |
|----------------------|--------|--------|--------|---|-------------|
| Conflicting Flow All | 89     | 0      | -      | 0 | 563 78      |
| Stage 1              | -      | -      | -      | - | 78 -        |
| Stage 2              | -      | -      | -      | - | 485 -       |
| 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   | 1506   | -      | -      | - | 487 983     |
| Stage 1              | -      | -      | -      | - | 945 -       |
| Stage 2              | -      | -      | -      | - | 619 -       |
| Platoon blocked, %   |        | -      | -      | - |             |
| Mov Cap-1 Maneuver   | 1506   | -      | -      | - | 478 983     |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | 519 -       |
| Stage 1              | -      | -      | -      | - | 928 -       |
| Stage 2              | -      | -      | -      | - | 619 -       |

| Approach             | EB  | WB | SB   |
|----------------------|-----|----|------|
| HCM Control Delay, s | 0.4 | 0  | 12.5 |
| HCM LOS              |     |    | B    |

| Minor Lane/Major Mvmt | EBL   | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h)      | 1506  | -   | -   | -   | 525   |
| HCM Lane V/C Ratio    | 0.018 | -   | -   | -   | 0.08  |
| HCM Control Delay (s) | 7.4   | -   | -   | -   | 12.5  |
| HCM Lane LOS          | A     | -   | -   | -   | B     |
| HCM 95th %tile Q(veh) | 0.1   | -   | -   | -   | 0.3   |

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 3.8  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      |      |      |      |      |      |      |      |      |      |      |      |      |
| Traffic Vol, veh/h       | 96   | 340  | 12   | 11   | 60   | 36   | 5    | 4    | 21   | 57   | 4    | 20   |
| Future Vol, veh/h        | 96   | 340  | 12   | 11   | 60   | 36   | 5    | 4    | 21   | 57   | 4    | 20   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None |
| Storage Length           | 100  | -    | -    | 100  | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 101  | 358  | 13   | 12   | 63   | 38   | 5    | 4    | 22   | 60   | 4    | 21   |

| Major/Minor          | Major1 |   |   | Major2 |   |   | Minor1 |       |       | Minor2 |       |       |
|----------------------|--------|---|---|--------|---|---|--------|-------|-------|--------|-------|-------|
| Conflicting Flow All | 101    | 0 | 0 | 371    | 0 | 0 | 686    | 692   | 365   | 686    | 679   | 82    |
| Stage 1              | -      | - | - | -      | - | - | 567    | 567   | -     | 106    | 106   | -     |
| Stage 2              | -      | - | - | -      | - | - | 119    | 125   | -     | 580    | 573   | -     |
| Critical Hdwy        | 4.12   | - | - | 4.12   | - | - | 7.12   | 6.52  | 6.22  | 7.12   | 6.52  | 6.22  |
| Critical Hdwy Stg 1  | -      | - | - | -      | - | - | 6.12   | 5.52  | -     | 6.12   | 5.52  | -     |
| Critical Hdwy Stg 2  | -      | - | - | -      | - | - | 6.12   | 5.52  | -     | 6.12   | 5.52  | -     |
| Follow-up Hdwy       | 2.218  | - | - | 2.218  | - | - | 3.518  | 4.018 | 3.318 | 3.518  | 4.018 | 3.318 |
| Pot Cap-1 Maneuver   | 1491   | - | - | 1188   | - | - | 362    | 367   | 680   | 362    | 374   | 978   |
| Stage 1              | -      | - | - | -      | - | - | 508    | 507   | -     | 900    | 807   | -     |
| Stage 2              | -      | - | - | -      | - | - | 885    | 792   | -     | 500    | 504   | -     |
| Platoon blocked, %   | -      | - | - | -      | - | - | -      | -     | -     | -      | -     | -     |
| Mov Cap-1 Maneuver   | 1491   | - | - | 1188   | - | - | 330    | 339   | 680   | 327    | 345   | 978   |
| Mov Cap-2 Maneuver   | -      | - | - | -      | - | - | 330    | 339   | -     | 327    | 345   | -     |
| Stage 1              | -      | - | - | -      | - | - | 473    | 473   | -     | 839    | 799   | -     |
| Stage 2              | -      | - | - | -      | - | - | 853    | 784   | -     | 447    | 470   | -     |

| Approach             | EB  |  |  | WB  |  |  | NB   |  |  | SB   |  |  |
|----------------------|-----|--|--|-----|--|--|------|--|--|------|--|--|
| HCM Control Delay, s | 1.6 |  |  | 0.8 |  |  | 12.4 |  |  | 16.7 |  |  |
| HCM LOS              |     |  |  |     |  |  | B    |  |  | C    |  |  |

| Minor Lane/Major Mvmt | NBLn1 | EBL   | EBT | EBR | WBL  | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|------|-----|-----|-------|
| Capacity (veh/h)      | 519   | 1491  | -   | -   | 1188 | -   | -   | 393   |
| HCM Lane V/C Ratio    | 0.061 | 0.068 | -   | -   | 0.01 | -   | -   | 0.217 |
| HCM Control Delay (s) | 12.4  | 7.6   | -   | -   | 8.1  | -   | -   | 16.7  |
| HCM Lane LOS          | B     | A     | -   | -   | A    | -   | -   | C     |
| HCM 95th %tile Q(veh) | 0.2   | 0.2   | -   | -   | 0    | -   | -   | 0.8   |

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 3.3  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↖    | ↗    |      | ↖    | ↗    |      |      | ↕    |      |      | ↕    |      |
| Traffic Vol, veh/h       | 60   | 344  | 14   | 8    | 92   | 40   | 3    | 9    | 21   | 60   | 4    | 12   |
| Future Vol, veh/h        | 60   | 344  | 14   | 8    | 92   | 40   | 3    | 9    | 21   | 60   | 4    | 12   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None |
| Storage Length           | 100  | -    | -    | 100  | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 63   | 362  | 15   | 8    | 97   | 42   | 3    | 9    | 22   | 63   | 4    | 13   |

| Major/Minor          | Major1 |   |   | Major2 |   |   | Minor1 |       |       | Minor2 |       |       |
|----------------------|--------|---|---|--------|---|---|--------|-------|-------|--------|-------|-------|
| Conflicting Flow All | 139    | 0 | 0 | 377    | 0 | 0 | 639    | 651   | 370   | 645    | 637   | 118   |
| Stage 1              | -      | - | - | -      | - | - | 496    | 496   | -     | 134    | 134   | -     |
| Stage 2              | -      | - | - | -      | - | - | 143    | 155   | -     | 511    | 503   | -     |
| Critical Hdwy        | 4.12   | - | - | 4.12   | - | - | 7.12   | 6.52  | 6.22  | 7.12   | 6.52  | 6.22  |
| Critical Hdwy Stg 1  | -      | - | - | -      | - | - | 6.12   | 5.52  | -     | 6.12   | 5.52  | -     |
| Critical Hdwy Stg 2  | -      | - | - | -      | - | - | 6.12   | 5.52  | -     | 6.12   | 5.52  | -     |
| Follow-up Hdwy       | 2.218  | - | - | 2.218  | - | - | 3.518  | 4.018 | 3.318 | 3.518  | 4.018 | 3.318 |
| Pot Cap-1 Maneuver   | 1445   | - | - | 1181   | - | - | 389    | 388   | 676   | 385    | 395   | 934   |
| Stage 1              | -      | - | - | -      | - | - | 556    | 545   | -     | 869    | 785   | -     |
| Stage 2              | -      | - | - | -      | - | - | 860    | 769   | -     | 545    | 541   | -     |
| Platoon blocked, %   | -      | - | - | -      | - | - | -      | -     | -     | -      | -     | -     |
| Mov Cap-1 Maneuver   | 1445   | - | - | 1181   | - | - | 366    | 368   | 676   | 351    | 375   | 934   |
| Mov Cap-2 Maneuver   | -      | - | - | -      | - | - | 366    | 368   | -     | 351    | 375   | -     |
| Stage 1              | -      | - | - | -      | - | - | 532    | 521   | -     | 831    | 780   | -     |
| Stage 2              | -      | - | - | -      | - | - | 838    | 764   | -     | 495    | 517   | -     |

| Approach             | EB  |  |  | WB  |  |  | NB   |  |  | SB   |  |  |
|----------------------|-----|--|--|-----|--|--|------|--|--|------|--|--|
| HCM Control Delay, s | 1.1 |  |  | 0.5 |  |  | 12.4 |  |  | 16.6 |  |  |
| HCM LOS              |     |  |  |     |  |  | B    |  |  | C    |  |  |

| Minor Lane/Major Mvmt | NBLn1 | EBL   | EBT | EBR | WBL   | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h)      | 518   | 1445  | -   | -   | 1181  | -   | -   | 391   |
| HCM Lane V/C Ratio    | 0.067 | 0.044 | -   | -   | 0.007 | -   | -   | 0.205 |
| HCM Control Delay (s) | 12.4  | 7.6   | -   | -   | 8.1   | -   | -   | 16.6  |
| HCM Lane LOS          | B     | A     | -   | -   | A     | -   | -   | C     |
| HCM 95th %tile Q(veh) | 0.2   | 0.1   | -   | -   | 0     | -   | -   | 0.8   |

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1.8  |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      |      |      |      |      |      |      |
| Traffic Vol, veh/h       | 388  | 37   | 36   | 123  | 17   | 53   |
| Future Vol, veh/h        | 388  | 37   | 36   | 123  | 17   | 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           | -    | -    | 50   | -    | 0    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 422  | 40   | 39   | 134  | 18   | 58   |

| Major/Minor          | Major1 | Major2 | Minor1 |   |       |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 0      | 0      | 462    | 0 | 654   |
| Stage 1              | -      | -      | -      | - | 442   |
| Stage 2              | -      | -      | -      | - | 212   |
| Critical Hdwy        | -      | -      | 4.12   | - | 6.42  |
| Critical Hdwy Stg 1  | -      | -      | -      | - | 5.42  |
| Critical Hdwy Stg 2  | -      | -      | -      | - | 5.42  |
| Follow-up Hdwy       | -      | -      | 2.218  | - | 3.518 |
| Pot Cap-1 Maneuver   | -      | -      | 1099   | - | 431   |
| Stage 1              | -      | -      | -      | - | 648   |
| Stage 2              | -      | -      | -      | - | 823   |
| Platoon blocked, %   | -      | -      | -      | - | -     |
| Mov Cap-1 Maneuver   | -      | -      | 1099   | - | 416   |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | 502   |
| Stage 1              | -      | -      | -      | - | 625   |
| Stage 2              | -      | -      | -      | - | 823   |

| Approach             | EB | WB  | NB   |
|----------------------|----|-----|------|
| HCM Control Delay, s | 0  | 1.9 | 12.1 |
| HCM LOS              |    |     | B    |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL   | WBT |
|-----------------------|-------|-----|-----|-------|-----|
| Capacity (veh/h)      | 583   | -   | -   | 1099  | -   |
| HCM Lane V/C Ratio    | 0.131 | -   | -   | 0.036 | -   |
| HCM Control Delay (s) | 12.1  | -   | -   | 8.4   | -   |
| HCM Lane LOS          | B     | -   | -   | A     | -   |
| HCM 95th %tile Q(veh) | 0.4   | -   | -   | 0.1   | -   |

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.8  |      |      |      |      |      |
| Movement                 | WBL  | WBR  | NBT  | NBR  | SBL  | SBT  |
| Lane Configurations      |      |      |      |      |      |      |
| Traffic Vol, veh/h       | 2    | 29   | 432  | 9    | 17   | 157  |
| Future Vol, veh/h        | 2    | 29   | 432  | 9    | 17   | 157  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | -    | -    | -    | 100  | -    |
| Veh in Median Storage, # | 0    | -    | 0    | -    | -    | 0    |
| Grade, %                 | 0    | -    | 0    | -    | -    | 0    |
| Peak Hour Factor         | 95   | 95   | 95   | 95   | 95   | 95   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 2    | 31   | 455  | 9    | 18   | 165  |

| Major/Minor          | Minor1 | Major1 | Major2 |   |       |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 661    | 460    | 0      | 0 | 464   |
| Stage 1              | 460    | -      | -      | - | -     |
| Stage 2              | 201    | -      | -      | - | -     |
| Critical Hdwy        | 6.42   | 6.22   | -      | - | 4.12  |
| Critical Hdwy Stg 1  | 5.42   | -      | -      | - | -     |
| Critical Hdwy Stg 2  | 5.42   | -      | -      | - | -     |
| Follow-up Hdwy       | 3.518  | 3.318  | -      | - | 2.218 |
| Pot Cap-1 Maneuver   | 427    | 601    | -      | - | 1097  |
| Stage 1              | 636    | -      | -      | - | -     |
| Stage 2              | 833    | -      | -      | - | -     |
| Platoon blocked, %   |        |        |        |   |       |
| Mov Cap-1 Maneuver   | 420    | 601    | -      | - | 1097  |
| Mov Cap-2 Maneuver   | 507    | -      | -      | - | -     |
| Stage 1              | 626    | -      | -      | - | -     |
| Stage 2              | 833    | -      | -      | - | -     |

| Approach             | WB   | NB | SB  |
|----------------------|------|----|-----|
| HCM Control Delay, s | 11.4 | 0  | 0.8 |
| HCM LOS              | B    |    |     |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL   | SBT   |
|-----------------------|-----|----------|-------|-------|
| Capacity (veh/h)      | -   | -        | 594   | 1097  |
| HCM Lane V/C Ratio    | -   | -        | 0.055 | 0.016 |
| HCM Control Delay (s) | -   | -        | 11.4  | 8.3   |
| HCM Lane LOS          | -   | -        | B     | A     |
| HCM 95th %tile Q(veh) | -   | -        | 0.2   | 0.1   |

| Intersection              |      |
|---------------------------|------|
| Intersection Delay, s/veh | 19.8 |
| Intersection LOS          | C    |

| Movement            | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|---------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations |      | ↕    |      |      | ↕    |      | ↕    | ↕    |      | ↕    | ↕    |      |
| Traffic Vol, veh/h  | 174  | 71   | 2    | 46   | 40   | 0    | 10   | 280  | 171  | 1    | 126  | 138  |
| Future Vol, veh/h   | 174  | 71   | 2    | 46   | 40   | 0    | 10   | 280  | 171  | 1    | 126  | 138  |
| Peak Hour Factor    | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Heavy Vehicles, %   | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow           | 183  | 75   | 2    | 48   | 42   | 0    | 11   | 295  | 180  | 1    | 133  | 145  |
| Number of Lanes     | 0    | 1    | 0    | 0    | 1    | 0    | 1    | 1    | 0    | 1    | 1    | 0    |

| Approach                   | EB   | WB   | NB   | SB   |
|----------------------------|------|------|------|------|
| Opposing Approach          | WB   | EB   | SB   | NB   |
| Opposing Lanes             | 1    | 1    | 2    | 2    |
| Conflicting Approach Left  | SB   | NB   | EB   | WB   |
| Conflicting Lanes Left     | 2    | 2    | 1    | 1    |
| Conflicting Approach Right | NB   | SB   | WB   | EB   |
| Conflicting Lanes Right    | 2    | 2    | 1    | 1    |
| HCM Control Delay          | 15.3 | 11.6 | 26.9 | 14.5 |
| HCM LOS                    | C    | B    | D    | B    |

| Lane                   | NBLn1 | NBLn2 | EBLn1 | WBLn1 | SBLn1 | SBLn2 |
|------------------------|-------|-------|-------|-------|-------|-------|
| Vol Left, %            | 100%  | 0%    | 70%   | 53%   | 100%  | 0%    |
| Vol Thru, %            | 0%    | 62%   | 29%   | 47%   | 0%    | 48%   |
| Vol Right, %           | 0%    | 38%   | 1%    | 0%    | 0%    | 52%   |
| Sign Control           | Stop  | Stop  | Stop  | Stop  | Stop  | Stop  |
| Traffic Vol by Lane    | 10    | 451   | 247   | 86    | 1     | 264   |
| LT Vol                 | 10    | 0     | 174   | 46    | 1     | 0     |
| Through Vol            | 0     | 280   | 71    | 40    | 0     | 126   |
| RT Vol                 | 0     | 171   | 2     | 0     | 0     | 138   |
| Lane Flow Rate         | 11    | 475   | 260   | 91    | 1     | 278   |
| Geometry Grp           | 7     | 7     | 2     | 2     | 7     | 7     |
| Degree of Util (X)     | 0.02  | 0.788 | 0.472 | 0.177 | 0.002 | 0.479 |
| Departure Headway (Hd) | 6.758 | 5.978 | 6.541 | 7.026 | 7.086 | 6.201 |
| Convergence, Y/N       | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Cap                    | 532   | 608   | 551   | 510   | 507   | 584   |
| Service Time           | 4.468 | 3.689 | 4.588 | 5.084 | 4.8   | 3.915 |
| HCM Lane V/C Ratio     | 0.021 | 0.781 | 0.472 | 0.178 | 0.002 | 0.476 |
| HCM Control Delay      | 9.6   | 27.3  | 15.3  | 11.6  | 9.8   | 14.5  |
| HCM Lane LOS           | A     | D     | C     | B     | A     | B     |
| HCM 95th-tile Q        | 0.1   | 7.6   | 2.5   | 0.6   | 0     | 2.6   |

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 3.5  |      |      |      |      |      |
| Movement                 | WBL  | WBR  | NBT  | NBR  | SBL  | SBT  |
| Lane Configurations      | ↔    |      | ↔    |      | ↔    | ↔    |
| Traffic Vol, veh/h       | 15   | 149  | 423  | 31   | 132  | 249  |
| Future Vol, veh/h        | 15   | 149  | 423  | 31   | 132  | 249  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | -    | -    | -    | 25   | -    |
| Veh in Median Storage, # | 0    | -    | 0    | -    | -    | 0    |
| Grade, %                 | 0    | -    | 0    | -    | -    | 0    |
| Peak Hour Factor         | 95   | 95   | 95   | 95   | 95   | 95   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 16   | 157  | 445  | 33   | 139  | 262  |

| Major/Minor          | Minor1 | Major1 | Major2 |   |       |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 1002   | 462    | 0      | 0 | 478   |
| Stage 1              | 462    | -      | -      | - | -     |
| Stage 2              | 540    | -      | -      | - | -     |
| Critical Hdwy        | 6.42   | 6.22   | -      | - | 4.12  |
| Critical Hdwy Stg 1  | 5.42   | -      | -      | - | -     |
| Critical Hdwy Stg 2  | 5.42   | -      | -      | - | -     |
| Follow-up Hdwy       | 3.518  | 3.318  | -      | - | 2.218 |
| Pot Cap-1 Maneuver   | 269    | 600    | -      | - | 1084  |
| Stage 1              | 634    | -      | -      | - | -     |
| Stage 2              | 584    | -      | -      | - | -     |
| Platoon blocked, %   |        |        |        |   |       |
| Mov Cap-1 Maneuver   | 235    | 600    | -      | - | 1084  |
| Mov Cap-2 Maneuver   | 330    | -      | -      | - | -     |
| Stage 1              | 553    | -      | -      | - | -     |
| Stage 2              | 584    | -      | -      | - | -     |

| Approach             | WB   | NB | SB  |
|----------------------|------|----|-----|
| HCM Control Delay, s | 14.3 | 0  | 3.1 |
| HCM LOS              | B    |    |     |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL   | SBT   |
|-----------------------|-----|----------|-------|-------|
| Capacity (veh/h)      | -   | -        | 558   | 1084  |
| HCM Lane V/C Ratio    | -   | -        | 0.309 | 0.128 |
| HCM Control Delay (s) | -   | -        | 14.3  | 8.8   |
| HCM Lane LOS          | -   | -        | B     | A     |
| HCM 95th %tile Q(veh) | -   | -        | 1.3   | 0.4   |

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.6  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      | Y    |      | Y    | ↑    | ↑    |      |
| Traffic Vol, veh/h       | 14   | 9    | 20   | 552  | 372  | 8    |
| Future Vol, veh/h        | 14   | 9    | 20   | 552  | 372  | 8    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | -    | 25   | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 95   | 95   | 95   | 95   | 95   | 95   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 15   | 9    | 21   | 581  | 392  | 8    |

| Major/Minor          | Minor2 | Major1 | Major2 |   |   |   |
|----------------------|--------|--------|--------|---|---|---|
| Conflicting Flow All | 1019   | 396    | 400    | 0 | - | 0 |
| Stage 1              | 396    | -      | -      | - | - | - |
| Stage 2              | 623    | -      | -      | - | - | - |
| Critical Hdwy        | 6.42   | 6.22   | 4.12   | - | - | - |
| Critical Hdwy Stg 1  | 5.42   | -      | -      | - | - | - |
| Critical Hdwy Stg 2  | 5.42   | -      | -      | - | - | - |
| Follow-up Hdwy       | 3.518  | 3.318  | 2.218  | - | - | - |
| Pot Cap-1 Maneuver   | 263    | 653    | 1159   | - | - | - |
| Stage 1              | 680    | -      | -      | - | - | - |
| Stage 2              | 535    | -      | -      | - | - | - |
| Platoon blocked, %   |        |        |        | - | - | - |
| Mov Cap-1 Maneuver   | 258    | 653    | 1159   | - | - | - |
| Mov Cap-2 Maneuver   | 258    | -      | -      | - | - | - |
| Stage 1              | 668    | -      | -      | - | - | - |
| Stage 2              | 535    | -      | -      | - | - | - |

| Approach             | EB   | NB  | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 16.5 | 0.3 | 0  |
| HCM LOS              | C    |     |    |

| Minor Lane/Major Mvmt | NBL   | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h)      | 1159  | -   | 338   | -   | -   |
| HCM Lane V/C Ratio    | 0.018 | -   | 0.072 | -   | -   |
| HCM Control Delay (s) | 8.2   | -   | 16.5  | -   | -   |
| HCM Lane LOS          | A     | -   | C     | -   | -   |
| HCM 95th %tile Q(veh) | 0.1   | -   | 0.2   | -   | -   |

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 2    |      |      |      |      |      |
| Movement                 | EBL  | EBT  | WBT  | WBR  | SBL  | SBR  |
| Lane Configurations      |      | ↕    | ↕    |      | ↕    |      |
| Traffic Vol, veh/h       | 48   | 234  | 167  | 7    | 18   | 46   |
| Future Vol, veh/h        | 48   | 234  | 167  | 7    | 18   | 46   |
| 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         | 95   | 95   | 95   | 95   | 95   | 95   |
| Heavy Vehicles, %        | 5    | 2    | 2    | 5    | 5    | 5    |
| Mvmt Flow                | 51   | 246  | 176  | 7    | 19   | 48   |

| Major/Minor          | Major1 | Major2 | Minor2 |   |             |
|----------------------|--------|--------|--------|---|-------------|
| Conflicting Flow All | 183    | 0      | -      | 0 | 528 180     |
| Stage 1              | -      | -      | -      | - | 180 -       |
| Stage 2              | -      | -      | -      | - | 348 -       |
| Critical Hdwy        | 4.15   | -      | -      | - | 6.45 6.25   |
| Critical Hdwy Stg 1  | -      | -      | -      | - | 5.45 -      |
| Critical Hdwy Stg 2  | -      | -      | -      | - | 5.45 -      |
| Follow-up Hdwy       | 2.245  | -      | -      | - | 3.545 3.345 |
| Pot Cap-1 Maneuver   | 1374   | -      | -      | - | 506 855     |
| Stage 1              | -      | -      | -      | - | 844 -       |
| Stage 2              | -      | -      | -      | - | 708 -       |
| Platoon blocked, %   |        | -      | -      | - |             |
| Mov Cap-1 Maneuver   | 1374   | -      | -      | - | 484 855     |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | 484 -       |
| Stage 1              | -      | -      | -      | - | 808 -       |
| Stage 2              | -      | -      | -      | - | 708 -       |

| Approach             | EB  | WB | SB   |
|----------------------|-----|----|------|
| HCM Control Delay, s | 1.3 | 0  | 10.7 |
| HCM LOS              |     |    | B    |

| Minor Lane/Major Mvmt | EBL   | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h)      | 1374  | -   | -   | -   | 703   |
| HCM Lane V/C Ratio    | 0.037 | -   | -   | -   | 0.096 |
| HCM Control Delay (s) | 7.7   | 0   | -   | -   | 10.7  |
| HCM Lane LOS          | A     | A   | -   | -   | B     |
| HCM 95th %tile Q(veh) | 0.1   | -   | -   | -   | 0.3   |

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1.3  |      |      |      |      |      |
| Movement                 | EBL  | EBT  | WBT  | WBR  | SBL  | SBR  |
| Lane Configurations      |      | ↶    | ↷    |      | ↶    | ↷    |
| Traffic Vol, veh/h       | 31   | 221  | 156  | 31   | 18   | 18   |
| Future Vol, veh/h        | 31   | 221  | 156  | 31   | 18   | 18   |
| 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         | 95   | 95   | 95   | 95   | 95   | 95   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 33   | 233  | 164  | 33   | 19   | 19   |

| Major/Minor          | Major1 | Major2 | Minor2 |   |             |
|----------------------|--------|--------|--------|---|-------------|
| Conflicting Flow All | 197    | 0      | -      | 0 | 480 181     |
| Stage 1              | -      | -      | -      | - | 181 -       |
| Stage 2              | -      | -      | -      | - | 299 -       |
| 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   | 1376   | -      | -      | - | 545 862     |
| Stage 1              | -      | -      | -      | - | 850 -       |
| Stage 2              | -      | -      | -      | - | 752 -       |
| Platoon blocked, %   |        | -      | -      | - |             |
| Mov Cap-1 Maneuver   | 1376   | -      | -      | - | 530 862     |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | 530 -       |
| Stage 1              | -      | -      | -      | - | 826 -       |
| Stage 2              | -      | -      | -      | - | 752 -       |

| Approach             | EB  | WB | SB   |
|----------------------|-----|----|------|
| HCM Control Delay, s | 0.9 | 0  | 10.8 |
| HCM LOS              |     |    | B    |

| Minor Lane/Major Mvmt | EBL   | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h)      | 1376  | -   | -   | -   | 656   |
| HCM Lane V/C Ratio    | 0.024 | -   | -   | -   | 0.058 |
| HCM Control Delay (s) | 7.7   | 0   | -   | -   | 10.8  |
| HCM Lane LOS          | A     | A   | -   | -   | B     |
| HCM 95th %tile Q(veh) | 0.1   | -   | -   | -   | 0.2   |

HCM 6th TWSC  
 202: Woodmen Frontage Rd/Internal Street & Vignola Heights

2040 Total Traffic With Right-in Access  
 PM Peak Hour

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1.2  |      |      |      |      |      |
| Movement                 | EBL  | EBT  | WBT  | WBR  | SBL  | SBR  |
| Lane Configurations      |      | ↕    | ↕    |      | ↕    |      |
| Traffic Vol, veh/h       | 21   | 218  | 175  | 46   | 28   | 12   |
| Future Vol, veh/h        | 21   | 218  | 175  | 46   | 28   | 12   |
| 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         | 95   | 95   | 95   | 95   | 95   | 95   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 22   | 229  | 184  | 48   | 29   | 13   |

| Major/Minor          | Major1 | Major2 | Minor2 |   |             |
|----------------------|--------|--------|--------|---|-------------|
| Conflicting Flow All | 232    | 0      | -      | 0 | 481 208     |
| Stage 1              | -      | -      | -      | - | 208 -       |
| Stage 2              | -      | -      | -      | - | 273 -       |
| 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   | 1336   | -      | -      | - | 544 832     |
| Stage 1              | -      | -      | -      | - | 827 -       |
| Stage 2              | -      | -      | -      | - | 773 -       |
| Platoon blocked, %   |        | -      | -      | - |             |
| Mov Cap-1 Maneuver   | 1336   | -      | -      | - | 534 832     |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | 599 -       |
| Stage 1              | -      | -      | -      | - | 811 -       |
| Stage 2              | -      | -      | -      | - | 773 -       |

| Approach             | EB  | WB | SB   |
|----------------------|-----|----|------|
| HCM Control Delay, s | 0.7 | 0  | 10.9 |
| HCM LOS              |     |    | B    |

| Minor Lane/Major Mvmt | EBL   | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h)      | 1336  | -   | -   | -   | 654   |
| HCM Lane V/C Ratio    | 0.017 | -   | -   | -   | 0.064 |
| HCM Control Delay (s) | 7.7   | 0   | -   | -   | 10.9  |
| HCM Lane LOS          | A     | A   | -   | -   | B     |
| HCM 95th %tile Q(veh) | 0.1   | -   | -   | -   | 0.2   |

Timings

2040 Total Traffic WITHOUT Right-in Access (3 NB TH)

1: Meridian Rd & Woodmen Rd

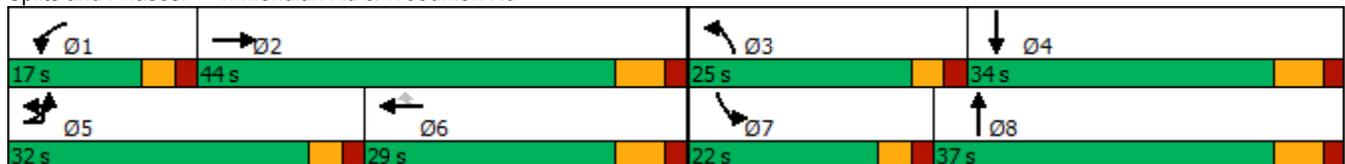
PM Peak Hour

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       |       |       |       |       |       |       |       |       |       |       |       |
| Traffic Volume (vph) | 765   | 794   | 375   | 225   | 561   | 367   | 350   | 1008  | 200   | 483   | 704   | 535   |
| Future Volume (vph)  | 765   | 794   | 375   | 225   | 561   | 367   | 350   | 1008  | 200   | 483   | 704   | 535   |
| Turn Type            | Prot  | NA    | Free  | Prot  | NA    | Perm  | Prot  | NA    | Free  | Prot  | NA    | Free  |
| Protected Phases     | 5     | 2     |       | 1     | 6     |       | 3     | 8     |       | 7     | 4     |       |
| Permitted Phases     |       |       | Free  |       |       | 6     |       |       | Free  |       |       | Free  |
| Detector Phase       | 5     | 2     |       | 1     | 6     | 6     | 3     | 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   |       |
| Minimum Split (s)    | 10.0  | 11.5  |       | 10.0  | 11.5  | 11.5  | 10.0  | 11.5  |       | 10.0  | 11.5  |       |
| Total Split (s)      | 32.0  | 44.0  |       | 17.0  | 29.0  | 29.0  | 25.0  | 37.0  |       | 22.0  | 34.0  |       |
| Total Split (%)      | 26.7% | 36.7% |       | 14.2% | 24.2% | 24.2% | 20.8% | 30.8% |       | 18.3% | 28.3% |       |
| Yellow Time (s)      | 3.0   | 4.5   |       | 3.0   | 4.5   | 4.5   | 3.0   | 4.5   |       | 3.0   | 4.5   |       |
| All-Red Time (s)     | 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  |       |
| Total Lost Time (s)  | 4.0   | 5.5   |       | 4.0   | 5.5   | 5.5   | 4.0   | 5.5   |       | 4.0   | 5.5   |       |
| Lead/Lag             | Lead  | Lag   |       | Lead  | Lag   | Lag   | Lead  | Lag   |       | Lead  | Lag   |       |
| Lead-Lag Optimize?   | Yes   | Yes   |       | Yes   | Yes   | Yes   | Yes   | Yes   |       | Yes   | Yes   |       |
| Recall Mode          | None  | Min   |       | None  | Min   | Min   | None  | None  |       | None  | None  |       |
| Act Effct Green (s)  | 28.0  | 38.4  | 117.8 | 12.4  | 22.8  | 22.8  | 18.0  | 29.9  | 117.8 | 18.0  | 29.9  | 117.8 |
| Actuated g/C Ratio   | 0.24  | 0.33  | 1.00  | 0.11  | 0.19  | 0.19  | 0.15  | 0.25  | 1.00  | 0.15  | 0.25  | 1.00  |
| v/c Ratio            | 0.97  | 0.70  | 0.24  | 0.64  | 0.84  | 0.70  | 0.68  | 0.80  | 0.13  | 0.94  | 0.80  | 0.34  |
| Control Delay        | 69.8  | 39.0  | 0.4   | 59.5  | 57.8  | 19.3  | 54.2  | 46.5  | 0.2   | 77.0  | 49.4  | 0.6   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 69.8  | 39.0  | 0.4   | 59.5  | 57.8  | 19.3  | 54.2  | 46.5  | 0.2   | 77.0  | 49.4  | 0.6   |
| LOS                  | E     | D     | A     | E     | E     | B     | D     | D     | A     | E     | D     | A     |
| Approach Delay       |       | 43.8  |       |       | 45.9  |       |       | 42.3  |       |       | 42.0  |       |
| Approach LOS         |       | D     |       |       | D     |       |       | D     |       |       | D     |       |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 117.8  
 Natural Cycle: 90  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.97  
 Intersection Signal Delay: 43.3  
 Intersection LOS: D  
 Intersection Capacity Utilization 86.7%  
 ICU Level of Service E  
 Analysis Period (min) 15

Splits and Phases: 1: Meridian Rd & Woodmen Rd



# Weaving Level of Service Reports

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| <b>FREEWAY WEAVING WORKSHEET</b>  |               |      |           |        |   |                             |                 |                |          |
|---|---------------|------|-----------|--------|---|-----------------------------|-----------------|----------------|----------|
| <b>General Information</b>  |               |      |           |        | <b>Site Information</b>                         |                             |                 |                |          |
| Analyst   | KDF           |      |           |        | Freeway/Dir of Travel                           | Woodmen Rd                  |                 |                |          |
| Agency/Company  | LSC           |      |           |        | Weaving Segment Location                        | Meridian Rd & Right-in Only |                 |                |          |
| Date Performed  | 7/21/2017     |      |           |        | Analysis Year                                   | 2040                        |                 |                |          |
| Analysis Time Period  | AM Peak Hour  |      |           |        |   |                             |                 |                |          |
| Project Description Falcon Marketplace  |               |      |           |        |   |                             |                 |                |          |
| <b>Inputs</b>   |               |      |           |        |   |                             |                 |                |          |
| Weaving configuration   | One-Sided     |      |           |        | Segment type                                    | Freeway                     |                 |                |          |
| Weaving number of lanes, N  | 3             |      |           |        | Freeway minimum speed, S <sub>MIN</sub>         | 15                          |                 |                |          |
| Weaving segment length, L <sub>S</sub>  | 885ft         |      |           |        | Freeway maximum capacity, C <sub>IFL</sub>      | 1900                        |                 |                |          |
| Freeway free-flow speed, FFS  | 50 mph        |      |           |        | Terrain type                                    | Level                       |                 |                |          |
| <b>Conversions to pc/h Under Base Conditions</b>  |               |      |           |        |   |                             |                 |                |          |
|   | V (veh/h)     | PHF  | Truck (%) | RV (%) | E <sub>T</sub>                                  | E <sub>R</sub>              | f <sub>HV</sub> | f <sub>p</sub> | v (pc/h) |
| V <sub>FF</sub>   | 958           | 0.94 | 2         | 0      | 1.5   | 1.2                         | 0.990           | 1.00           | 1029     |
| V <sub>RF</sub>   | 956           | 0.94 | 2         | 0      | 1.5   | 1.2                         | 0.990           | 1.00           | 1027     |
| V <sub>FR</sub>   | 265           | 0.94 | 2         | 0      | 1.5   | 1.2                         | 0.990           | 1.00           | 285      |
| V <sub>RR</sub>   | 85            | 0.94 | 2         | 0      | 1.5   | 1.2                         | 0.990           | 1.00           | 91       |
| V <sub>NW</sub>   | 1120          |      |           |        |   |                             |                 | V =            | 2432     |
| V <sub>W</sub>  | 1312          |      |           |        |   |                             |                 |                |          |
| VR  | 0.539         |      |           |        |   |                             |                 |                |          |
| <b>Configuration Characteristics</b>  |               |      |           |        |   |                             |                 |                |          |
| Minimum maneuver lanes, N <sub>WL</sub>   | 2 lc          |      |           |        | Minimum weaving lane changes, LC <sub>MIN</sub> | 1312 lc/h                   |                 |                |          |
| Interchange density, ID   | 1.0 int/mi    |      |           |        | Weaving lane changes, LC <sub>W</sub>           | 1460 lc/h                   |                 |                |          |
| Minimum RF lane changes, LC <sub>RF</sub>   | 1 lc/pc       |      |           |        | Non-weaving lane changes, LC <sub>NW</sub>      | 133 lc/h                    |                 |                |          |
| Minimum FR lane changes, LC <sub>FR</sub>   | 1 lc/pc       |      |           |        | Total lane changes, LC <sub>ALL</sub>           | 1593 lc/h                   |                 |                |          |
| Minimum RR lane changes, LC <sub>RR</sub>   | lc/pc         |      |           |        | Non-weaving vehicle index, I <sub>NW</sub>      | 99                          |                 |                |          |
| <b>Weaving Segment Speed, Density, Level of Service, and Capacity</b>   |               |      |           |        |   |                             |                 |                |          |
| Weaving segment flow rate, v  | 2409 veh/h    |      |           |        | Weaving intensity factor, W                     | 0.359                       |                 |                |          |
| Weaving segment capacity, c <sub>w</sub>  | 3959 veh/h    |      |           |        | Weaving segment speed, S                        | 38.8 mph                    |                 |                |          |
| Weaving segment v/c ratio   | 0.608         |      |           |        | Average weaving speed, S <sub>w</sub>           | 40.7 mph                    |                 |                |          |
| Weaving segment density, D  | 20.9 pc/mi/ln |      |           |        | Average non-weaving speed, S <sub>NW</sub>      | 36.7 mph                    |                 |                |          |
| Level of Service, LOS   | C             |      |           |        | Maximum weaving length, L <sub>MAX</sub>        | 8291 ft                     |                 |                |          |
| <b>Notes</b>  |               |      |           |        |   |                             |                 |                |          |
| a. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments". |               |      |           |        |   |                             |                 |                |          |
| b. For volumes that exceed the weaving segment capacity, the level of service is "F".   |               |      |           |        |   |                             |                 |                |          |

| FREEWAY WEAVING WORKSHEET   |           |      |           |        |  |                |                 |                |          |
|---|-----------|------|-----------|--------|--|----------------|-----------------|----------------|----------|
| General Information   |           |      |           |        | Site Information   |                |                 |                |          |
| Analyst   |           |      |           |        | Freeway/Dir of Travel                                    |                |                 |                |          |
| Agency/Company LSC  |           |      |           |        | Woodmen Rd   |                |                 |                |          |
| Date Performed 7/21/2017  |           |      |           |        | Weaving Segment Location Meridian Rd & Right-in Only     |                |                 |                |          |
| Analysis Time Period PM Peak Hour   |           |      |           |        | Analysis Year 2040                                       |                |                 |                |          |
| Project Description Falcon Marketplace  |           |      |           |        |  |                |                 |                |          |
| Inputs  |           |      |           |        |  |                |                 |                |          |
| Weaving configuration One-Sided   |           |      |           |        | Segment type   |                |                 |                |          |
| Weaving number of lanes, N 3  |           |      |           |        | Freeway  |                |                 |                |          |
| Weaving segment length, L <sub>s</sub> 885ft  |           |      |           |        | Freeway minimum speed, S <sub>MIN</sub> 15               |                |                 |                |          |
| Freeway free-flow speed, FFS 50 mph   |           |      |           |        | Freeway maximum capacity, C <sub>IFL</sub> 1900          |                |                 |                |          |
|   |           |      |           |        | Terrain type Level                                       |                |                 |                |          |
| Conversions to pc/h Under Base Conditions   |           |      |           |        |  |                |                 |                |          |
|   | V (veh/h) | PHF  | Truck (%) | RV (%) | E <sub>T</sub>   | E <sub>R</sub> | f <sub>HV</sub> | f <sub>p</sub> | v (pc/h) |
| V <sub>FF</sub>   | 878       | 0.94 | 2         | 0      | 1.5  | 1.2            | 0.990           | 1.00           | 943      |
| V <sub>RF</sub>   | 538       | 0.94 | 2         | 0      | 1.5  | 1.2            | 0.990           | 1.00           | 578      |
| V <sub>FR</sub>   | 272       | 0.94 | 2         | 0      | 1.5  | 1.2            | 0.990           | 1.00           | 292      |
| V <sub>RR</sub>   | 64        | 0.94 | 2         | 0      | 1.5  | 1.2            | 0.990           | 1.00           | 69       |
| V <sub>NW</sub>   | 1012      |      |           |        |  |                |                 | V =            | 1882     |
| V <sub>W</sub>  | 870       |      |           |        |  |                |                 |                |          |
| VR  | 0.462     |      |           |        |  |                |                 |                |          |
| Configuration Characteristics   |           |      |           |        |  |                |                 |                |          |
| Minimum maneuver lanes, N <sub>WL</sub> 2 lc  |           |      |           |        | Minimum weaving lane changes, LC <sub>MIN</sub> 870 lc/h |                |                 |                |          |
| Interchange density, ID 1.0 int/mi  |           |      |           |        | Weaving lane changes, LC <sub>W</sub> 1018 lc/h          |                |                 |                |          |
| Minimum RF lane changes, LC <sub>RF</sub> 1 lc/pc   |           |      |           |        | Non-weaving lane changes, LC <sub>NW</sub> 110 lc/h      |                |                 |                |          |
| Minimum FR lane changes, LC <sub>FR</sub> 1 lc/pc   |           |      |           |        | Total lane changes, LC <sub>ALL</sub> 1128 lc/h          |                |                 |                |          |
| Minimum RR lane changes, LC <sub>RR</sub> lc/pc   |           |      |           |        | Non-weaving vehicle index, I <sub>NW</sub> 90            |                |                 |                |          |
| Weaving Segment Speed, Density, Level of Service, and Capacity  |           |      |           |        |  |                |                 |                |          |
| Weaving segment flow rate, v 1864 veh/h   |           |      |           |        | Weaving intensity factor, W 0.274                        |                |                 |                |          |
| Weaving segment capacity, c <sub>w</sub> 4164 veh/h   |           |      |           |        | Weaving segment speed, S 41.5 mph                        |                |                 |                |          |
| Weaving segment v/c ratio 0.448   |           |      |           |        | Average weaving speed, S <sub>w</sub> 42.5 mph           |                |                 |                |          |
| Weaving segment density, D 15.1 pc/mi/ln  |           |      |           |        | Average non-weaving speed, S <sub>NW</sub> 40.7 mph      |                |                 |                |          |
| Level of Service, LOS B   |           |      |           |        | Maximum weaving length, L <sub>MAX</sub> 7389 ft         |                |                 |                |          |
| Notes   |           |      |           |        |  |                |                 |                |          |
| a. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments". |           |      |           |        |  |                |                 |                |          |
| b. For volumes that exceed the weaving segment capacity, the level of service is "F".   |           |      |           |        |  |                |                 |                |          |

# Queuing Level of Service Reports

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Queuing and Blocking Report

AM Peak Hour

Intersection: 1: Meridian Rd & Woodmen Rd

| Movement              | EB  | EB  | EB   | EB   | WB  | WB  | WB   | WB   | WB   | NB  | NB   | NB   |
|-----------------------|-----|-----|------|------|-----|-----|------|------|------|-----|------|------|
| Directions Served     | UL  | L   | T    | T    | L   | L   | T    | T    | R    | L   | L    | T    |
| Maximum Queue (ft)    | 160 | 168 | 237  | 265  | 62  | 108 | 282  | 286  | 18   | 142 | 161  | 187  |
| Average Queue (ft)    | 81  | 98  | 132  | 147  | 23  | 59  | 188  | 181  | 1    | 37  | 90   | 104  |
| 95th Queue (ft)       | 139 | 152 | 212  | 231  | 54  | 101 | 265  | 263  | 13   | 102 | 148  | 169  |
| Link Distance (ft)    |     |     | 1012 | 1012 |     |     | 2167 | 2167 | 2167 |     | 1181 | 1181 |
| Upstream Blk Time (%) |     |     |      |      |     |     |      |      |      |     |      |      |
| Queuing Penalty (veh) |     |     |      |      |     |     |      |      |      |     |      |      |
| Storage Bay Dist (ft) | 500 | 500 |      |      | 435 | 435 |      |      |      | 315 |      |      |
| Storage Blk Time (%)  |     |     |      |      |     |     |      |      |      |     |      |      |
| Queuing Penalty (veh) |     |     |      |      |     |     |      |      |      |     |      |      |

Intersection: 1: Meridian Rd & Woodmen Rd

| Movement              | NB   | SB  | SB  | SB  | SB  |
|-----------------------|------|-----|-----|-----|-----|
| Directions Served     | T    | L   | L   | T   | T   |
| Maximum Queue (ft)    | 157  | 132 | 147 | 263 | 270 |
| Average Queue (ft)    | 65   | 68  | 86  | 142 | 148 |
| 95th Queue (ft)       | 133  | 121 | 132 | 224 | 231 |
| Link Distance (ft)    | 1181 |     |     | 635 | 635 |
| Upstream Blk Time (%) |      |     |     |     |     |
| Queuing Penalty (veh) |      |     |     |     |     |
| Storage Bay Dist (ft) |      | 475 | 475 |     |     |
| Storage Blk Time (%)  |      |     |     |     |     |
| Queuing Penalty (veh) |      |     |     |     |     |

Queuing and Blocking Report

AM Peak Hour

Intersection: 2: Meridian Rd & Eastonville Rd

| Movement              | EB  | EB  | WB  | WB  | WB | NB  | NB  | NB  | NB | SB  | SB   | SB   |  |
|-----------------------|-----|-----|-----|-----|----|-----|-----|-----|----|-----|------|------|--|
| Directions Served     | L   | T   | L   | T   | R  | L   | T   | T   | R  | L   | T    | T    |  |
| Maximum Queue (ft)    | 44  | 29  | 123 | 64  | 62 | 58  | 100 | 118 | 34 | 58  | 150  | 242  |  |
| Average Queue (ft)    | 12  | 4   | 48  | 3   | 25 | 19  | 25  | 32  | 6  | 27  | 55   | 95   |  |
| 95th Queue (ft)       | 37  | 20  | 100 | 37  | 45 | 44  | 69  | 84  | 23 | 52  | 112  | 196  |  |
| Link Distance (ft)    | 261 | 261 |     | 796 |    |     | 444 | 444 |    |     | 1387 | 1387 |  |
| Upstream Blk Time (%) |     |     |     |     |    |     |     |     |    |     |      |      |  |
| Queuing Penalty (veh) |     |     |     |     |    |     |     |     |    |     |      |      |  |
| Storage Bay Dist (ft) |     |     | 100 |     |    | 200 | 425 |     |    | 525 | 375  |      |  |
| Storage Blk Time (%)  |     |     | 3   |     |    |     |     |     |    |     |      |      |  |
| Queuing Penalty (veh) |     |     | 2   |     |    |     |     |     |    |     |      |      |  |

Intersection: 2: Meridian Rd & Eastonville Rd

| Movement              | SB   |
|-----------------------|------|
| Directions Served     | R    |
| Maximum Queue (ft)    | 8    |
| Average Queue (ft)    | 0    |
| 95th Queue (ft)       | 4    |
| Link Distance (ft)    | 1387 |
| Upstream Blk Time (%) |      |
| Queuing Penalty (veh) |      |
| Storage Bay Dist (ft) |      |
| Storage Blk Time (%)  |      |
| Queuing Penalty (veh) |      |

Queuing and Blocking Report

AM Peak Hour

Intersection: 25: Golden Sage Rd & Woodmen Rd

| Movement              | EB  | EB  | EB  | EB  | WB  | WB  | WB  | WB  | NB  | NB  | NB  | SB  |
|-----------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Directions Served     | L   | T   | T   | R   | L   | T   | T   | R   | L   | T   | R   | L   |
| Maximum Queue (ft)    | 90  | 140 | 152 | 31  | 27  | 348 | 334 | 30  | 187 | 85  | 30  | 65  |
| Average Queue (ft)    | 34  | 57  | 67  | 6   | 5   | 146 | 163 | 5   | 84  | 10  | 4   | 23  |
| 95th Queue (ft)       | 70  | 111 | 121 | 24  | 22  | 287 | 293 | 21  | 152 | 54  | 22  | 56  |
| Link Distance (ft)    |     | 957 | 957 |     |     | 969 | 969 |     |     | 531 |     | 161 |
| Upstream Blk Time (%) |     |     |     |     |     |     |     |     |     |     |     |     |
| Queuing Penalty (veh) |     |     |     |     |     |     |     |     |     |     |     |     |
| Storage Bay Dist (ft) | 465 |     |     | 400 | 475 |     |     | 400 | 125 |     | 200 |     |
| Storage Blk Time (%)  |     |     |     |     |     |     | 0   |     | 5   |     |     |     |
| Queuing Penalty (veh) |     |     |     |     |     |     | 0   |     | 1   |     |     |     |

Intersection: 25: Golden Sage Rd & Woodmen Rd

| Movement              | SB  |
|-----------------------|-----|
| Directions Served     | TR  |
| Maximum Queue (ft)    | 115 |
| Average Queue (ft)    | 43  |
| 95th Queue (ft)       | 83  |
| Link Distance (ft)    | 161 |
| Upstream Blk Time (%) | 0   |
| Queuing Penalty (veh) | 0   |
| Storage Bay Dist (ft) |     |
| Storage Blk Time (%)  |     |
| Queuing Penalty (veh) |     |

Intersection: 26: Golden Sage Rd & Woodmen Frontage Rd

| Movement              | WB   |
|-----------------------|------|
| Directions Served     | LT   |
| Maximum Queue (ft)    | 59   |
| Average Queue (ft)    | 30   |
| 95th Queue (ft)       | 51   |
| Link Distance (ft)    | 1964 |
| Upstream Blk Time (%) |      |
| Queuing Penalty (veh) |      |
| Storage Bay Dist (ft) |      |
| Storage Blk Time (%)  |      |
| Queuing Penalty (veh) |      |

Zone Summary

Zone wide Queuing Penalty: 3

Queuing and Blocking Report

Intersection: 1: Meridian Rd & Woodmen Rd

| Movement              | EB  | EB  | EB   | EB   | B88 | B88 | B88 | WB  | WB  | WB   | WB   | WB   |
|-----------------------|-----|-----|------|------|-----|-----|-----|-----|-----|------|------|------|
| Directions Served     | UL  | L   | T    | T    | T   | T   | T   | L   | L   | T    | T    | R    |
| Maximum Queue (ft)    | 356 | 361 | 282  | 289  | 128 | 537 | 290 | 135 | 160 | 282  | 280  | 121  |
| Average Queue (ft)    | 199 | 206 | 145  | 161  | 5   | 24  | 10  | 42  | 83  | 186  | 182  | 24   |
| 95th Queue (ft)       | 300 | 302 | 231  | 242  | 94  | 228 | 152 | 96  | 130 | 264  | 264  | 84   |
| Link Distance (ft)    |     |     | 1012 | 1012 | 715 | 715 | 715 |     |     | 2167 | 2167 | 2167 |
| Upstream Blk Time (%) |     |     |      |      |     |     | 0   |     |     |      |      |      |
| Queuing Penalty (veh) |     |     |      |      |     |     | 0   |     |     |      |      |      |
| Storage Bay Dist (ft) | 500 | 500 |      |      |     |     |     | 435 | 435 |      |      |      |
| Storage Blk Time (%)  | 0   | 0   |      |      |     |     |     |     |     |      |      |      |
| Queuing Penalty (veh) | 0   | 0   |      |      |     |     |     |     |     |      |      |      |

Intersection: 1: Meridian Rd & Woodmen Rd

| Movement              | NB  | NB   | NB   | NB   | SB  | SB  | SB  | SB  |
|-----------------------|-----|------|------|------|-----|-----|-----|-----|
| Directions Served     | L   | L    | T    | T    | L   | L   | T   | T   |
| Maximum Queue (ft)    | 140 | 176  | 381  | 364  | 129 | 137 | 190 | 208 |
| Average Queue (ft)    | 42  | 98   | 243  | 215  | 51  | 71  | 120 | 126 |
| 95th Queue (ft)       | 113 | 162  | 357  | 331  | 102 | 113 | 177 | 185 |
| Link Distance (ft)    |     | 1181 | 1181 | 1181 |     |     | 635 | 635 |
| Upstream Blk Time (%) |     |      |      |      |     |     |     |     |
| Queuing Penalty (veh) |     |      |      |      |     |     |     |     |
| Storage Bay Dist (ft) | 315 |      |      |      | 475 | 475 |     |     |
| Storage Blk Time (%)  |     |      |      |      |     |     |     |     |
| Queuing Penalty (veh) |     |      |      |      |     |     |     |     |

Queuing and Blocking Report

Intersection: 2: Meridian Rd & Eastonville Rd

| Movement              | EB  | EB  | EB  | WB  | WB  | WB | NB | NB  | NB  | NB | SB | SB   |     |
|-----------------------|-----|-----|-----|-----|-----|----|----|-----|-----|----|----|------|-----|
| Directions Served     | L   | L   | T   | L   | T   | R  | L  | T   | T   | R  | L  | T    |     |
| Maximum Queue (ft)    | 44  | 6   | 17  | 70  | 33  | 66 | 59 | 194 | 217 | 46 | 89 | 151  |     |
| Average Queue (ft)    | 12  | 0   | 2   | 24  | 4   | 33 | 21 | 65  | 82  | 11 | 36 | 52   |     |
| 95th Queue (ft)       | 36  | 4   | 13  | 58  | 19  | 54 | 45 | 147 | 172 | 32 | 73 | 110  |     |
| Link Distance (ft)    | 261 | 261 | 261 |     | 796 |    |    | 444 | 444 |    |    | 1387 |     |
| Upstream Blk Time (%) |     |     |     |     |     |    |    |     |     |    |    |      |     |
| Queuing Penalty (veh) |     |     |     |     |     |    |    |     |     |    |    |      |     |
| Storage Bay Dist (ft) |     |     |     | 100 |     |    |    | 200 | 425 |    |    | 525  | 375 |
| Storage Blk Time (%)  | 0   |     |     |     |     |    |    |     |     |    |    |      |     |
| Queuing Penalty (veh) | 0   |     |     |     |     |    |    |     |     |    |    |      |     |

Intersection: 2: Meridian Rd & Eastonville Rd

| Movement              | SB   | SB   |
|-----------------------|------|------|
| Directions Served     | T    | R    |
| Maximum Queue (ft)    | 182  | 16   |
| Average Queue (ft)    | 54   | 2    |
| 95th Queue (ft)       | 125  | 11   |
| Link Distance (ft)    | 1387 | 1387 |
| Upstream Blk Time (%) |      |      |
| Queuing Penalty (veh) |      |      |
| Storage Bay Dist (ft) |      |      |
| Storage Blk Time (%)  |      |      |
| Queuing Penalty (veh) |      |      |

Queuing and Blocking Report

Intersection: 25: Golden Sage Rd & Woodmen Rd

| Movement              | EB  | EB  | EB  | EB  | WB  | WB  | WB  | WB  | NB  | NB  | NB  | SB  |
|-----------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Directions Served     | L   | T   | T   | R   | L   | T   | T   | R   | L   | T   | R   | L   |
| Maximum Queue (ft)    | 107 | 206 | 224 | 52  | 46  | 264 | 280 | 34  | 139 | 63  | 36  | 61  |
| Average Queue (ft)    | 43  | 107 | 117 | 16  | 11  | 105 | 123 | 5   | 69  | 16  | 14  | 23  |
| 95th Queue (ft)       | 82  | 189 | 197 | 42  | 35  | 218 | 237 | 23  | 118 | 46  | 39  | 52  |
| Link Distance (ft)    |     | 957 | 957 |     |     | 969 | 969 |     |     | 531 |     | 161 |
| Upstream Blk Time (%) |     |     |     |     |     |     |     |     |     |     |     |     |
| Queuing Penalty (veh) |     |     |     |     |     |     |     |     |     |     |     |     |
| Storage Bay Dist (ft) | 465 |     |     | 400 | 475 |     |     | 400 | 125 |     | 200 |     |
| Storage Blk Time (%)  |     |     |     |     |     |     |     |     | 1   | 0   |     |     |
| Queuing Penalty (veh) |     |     |     |     |     |     |     |     | 0   | 0   |     |     |

Intersection: 25: Golden Sage Rd & Woodmen Rd

| Movement              | SB  |
|-----------------------|-----|
| Directions Served     | TR  |
| Maximum Queue (ft)    | 92  |
| Average Queue (ft)    | 45  |
| 95th Queue (ft)       | 82  |
| Link Distance (ft)    | 161 |
| Upstream Blk Time (%) |     |
| Queuing Penalty (veh) |     |
| Storage Bay Dist (ft) |     |
| Storage Blk Time (%)  |     |
| Queuing Penalty (veh) |     |

Intersection: 26: Golden Sage Rd & Woodmen Frontage Rd

| Movement              | WB   |
|-----------------------|------|
| Directions Served     | LT   |
| Maximum Queue (ft)    | 61   |
| Average Queue (ft)    | 33   |
| 95th Queue (ft)       | 54   |
| Link Distance (ft)    | 1964 |
| Upstream Blk Time (%) |      |
| Queuing Penalty (veh) |      |
| Storage Bay Dist (ft) |      |
| Storage Blk Time (%)  |      |
| Queuing Penalty (veh) |      |

Zone Summary

|                              |
|------------------------------|
| Zone wide Queuing Penalty: 1 |
|------------------------------|

Queuing and Blocking Report

Intersection: 1: Meridian Rd & Woodmen Rd

| Movement              | EB  | EB  | EB   | EB   | WB  | WB  | WB   | WB   | WB   | NB  | NB   | NB   |
|-----------------------|-----|-----|------|------|-----|-----|------|------|------|-----|------|------|
| Directions Served     | UL  | L   | T    | T    | L   | L   | T    | T    | R    | L   | L    | T    |
| Maximum Queue (ft)    | 193 | 158 | 246  | 249  | 61  | 112 | 289  | 276  | 60   | 139 | 167  | 242  |
| Average Queue (ft)    | 100 | 93  | 130  | 142  | 24  | 57  | 183  | 176  | 10   | 34  | 90   | 147  |
| 95th Queue (ft)       | 165 | 147 | 211  | 221  | 59  | 104 | 257  | 255  | 46   | 99  | 149  | 218  |
| Link Distance (ft)    |     |     | 1012 | 1012 |     |     | 2167 | 2167 | 2167 |     | 1181 | 1181 |
| Upstream Blk Time (%) |     |     |      |      |     |     |      |      |      |     |      |      |
| Queuing Penalty (veh) |     |     |      |      |     |     |      |      |      |     |      |      |
| Storage Bay Dist (ft) | 500 | 500 |      |      | 435 | 435 |      |      |      | 315 |      |      |
| Storage Blk Time (%)  |     |     |      |      |     |     |      |      |      |     |      |      |
| Queuing Penalty (veh) |     |     |      |      |     |     |      |      |      |     |      |      |

Intersection: 1: Meridian Rd & Woodmen Rd

| Movement              | NB   | SB  | SB  | SB  | SB  |
|-----------------------|------|-----|-----|-----|-----|
| Directions Served     | T    | L   | L   | T   | T   |
| Maximum Queue (ft)    | 198  | 142 | 151 | 267 | 284 |
| Average Queue (ft)    | 88   | 76  | 94  | 149 | 159 |
| 95th Queue (ft)       | 174  | 128 | 139 | 243 | 251 |
| Link Distance (ft)    | 1181 |     |     | 635 | 635 |
| Upstream Blk Time (%) |      |     |     |     |     |
| Queuing Penalty (veh) |      |     |     |     |     |
| Storage Bay Dist (ft) |      | 475 | 475 |     |     |
| Storage Blk Time (%)  |      |     |     |     |     |
| Queuing Penalty (veh) |      |     |     |     |     |

Queuing and Blocking Report

Intersection: 2: Meridian Rd & Eastonville Rd

| Movement              | EB  | EB  | EB  | EB  | WB  | WB  | WB | NB  | NB  | NB  | NB | SB |     |     |
|-----------------------|-----|-----|-----|-----|-----|-----|----|-----|-----|-----|----|----|-----|-----|
| Directions Served     | L   | L   | T   | R   | L   | T   | R  | L   | T   | T   | R  | L  |     |     |
| Maximum Queue (ft)    | 154 | 125 | 111 | 100 | 117 | 108 | 57 | 357 | 147 | 153 | 37 | 76 |     |     |
| Average Queue (ft)    | 92  | 23  | 41  | 41  | 56  | 40  | 29 | 196 | 33  | 48  | 7  | 33 |     |     |
| 95th Queue (ft)       | 149 | 86  | 84  | 76  | 105 | 84  | 50 | 335 | 104 | 119 | 24 | 66 |     |     |
| Link Distance (ft)    | 261 | 261 | 261 | 261 |     | 796 |    |     | 444 | 444 |    |    |     |     |
| Upstream Blk Time (%) |     |     |     |     |     |     |    |     |     |     |    |    |     |     |
| Queuing Penalty (veh) |     |     |     |     |     |     |    |     |     |     |    |    |     |     |
| Storage Bay Dist (ft) |     |     |     |     | 100 |     |    | 200 | 425 |     |    |    | 525 | 375 |
| Storage Blk Time (%)  |     |     |     |     | 3   |     |    | 0   | 0   |     |    |    |     |     |
| Queuing Penalty (veh) |     |     |     |     | 4   |     |    | 1   | 0   |     |    |    |     |     |

Intersection: 2: Meridian Rd & Eastonville Rd

| Movement              | SB   | SB   | SB   |
|-----------------------|------|------|------|
| Directions Served     | T    | T    | R    |
| Maximum Queue (ft)    | 432  | 552  | 59   |
| Average Queue (ft)    | 210  | 315  | 18   |
| 95th Queue (ft)       | 371  | 502  | 44   |
| Link Distance (ft)    | 1387 | 1387 | 1387 |
| Upstream Blk Time (%) |      |      |      |
| Queuing Penalty (veh) |      |      |      |
| Storage Bay Dist (ft) |      |      |      |
| Storage Blk Time (%)  | 0    |      |      |
| Queuing Penalty (veh) | 0    |      |      |

Queuing and Blocking Report

Intersection: 25: Golden Sage Rd & Woodmen Rd

| Movement              | EB  | EB  | EB  | EB  | WB  | WB  | WB  | WB  | NB  | NB  | NB  | SB  |
|-----------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Directions Served     | L   | T   | T   | R   | L   | T   | T   | R   | L   | T   | R   | L   |
| Maximum Queue (ft)    | 122 | 137 | 154 | 42  | 27  | 368 | 371 | 33  | 158 | 88  | 24  | 81  |
| Average Queue (ft)    | 52  | 60  | 69  | 7   | 5   | 182 | 197 | 4   | 84  | 9   | 3   | 23  |
| 95th Queue (ft)       | 98  | 118 | 134 | 27  | 21  | 344 | 352 | 21  | 142 | 40  | 16  | 60  |
| Link Distance (ft)    |     | 957 | 957 |     |     | 969 | 969 |     |     | 531 |     | 161 |
| Upstream Blk Time (%) |     |     |     |     |     |     |     |     |     |     |     |     |
| Queuing Penalty (veh) |     |     |     |     |     |     |     |     |     |     |     |     |
| Storage Bay Dist (ft) | 465 |     |     | 400 | 475 |     |     | 400 | 125 |     | 200 |     |
| Storage Blk Time (%)  |     |     |     |     |     |     | 0   |     | 3   | 0   |     |     |
| Queuing Penalty (veh) |     |     |     |     |     |     | 0   |     | 0   | 0   |     |     |

Intersection: 25: Golden Sage Rd & Woodmen Rd

| Movement              | SB  |
|-----------------------|-----|
| Directions Served     | TR  |
| Maximum Queue (ft)    | 135 |
| Average Queue (ft)    | 56  |
| 95th Queue (ft)       | 108 |
| Link Distance (ft)    | 161 |
| Upstream Blk Time (%) | 1   |
| Queuing Penalty (veh) | 1   |
| Storage Bay Dist (ft) |     |
| Storage Blk Time (%)  |     |
| Queuing Penalty (veh) |     |

Intersection: 26: Golden Sage Rd & Woodmen Frontage Rd

| Movement              | WB   |
|-----------------------|------|
| Directions Served     | LT   |
| Maximum Queue (ft)    | 68   |
| Average Queue (ft)    | 39   |
| 95th Queue (ft)       | 62   |
| Link Distance (ft)    | 1964 |
| Upstream Blk Time (%) |      |
| Queuing Penalty (veh) |      |
| Storage Bay Dist (ft) |      |
| Storage Blk Time (%)  |      |
| Queuing Penalty (veh) |      |

Zone Summary

Zone wide Queuing Penalty: 6

Queuing and Blocking Report

Intersection: 1: Meridian Rd & Woodmen Rd

| Movement              | EB  | EB  | EB   | EB   | B88 | WB  | WB  | WB   | WB   | WB   | NB  | NB   |
|-----------------------|-----|-----|------|------|-----|-----|-----|------|------|------|-----|------|
| Directions Served     | UL  | L   | T    | T    | T   | L   | L   | T    | T    | R    | L   | L    |
| Maximum Queue (ft)    | 354 | 368 | 270  | 268  | 136 | 123 | 150 | 293  | 294  | 218  | 163 | 176  |
| Average Queue (ft)    | 229 | 222 | 133  | 151  | 5   | 43  | 83  | 190  | 186  | 78   | 49  | 104  |
| 95th Queue (ft)       | 331 | 334 | 216  | 227  | 99  | 93  | 131 | 267  | 269  | 181  | 128 | 166  |
| Link Distance (ft)    |     |     | 1012 | 1012 | 715 |     |     | 2167 | 2167 | 2167 |     | 1181 |
| Upstream Blk Time (%) |     |     |      |      |     |     |     |      |      |      |     |      |
| Queuing Penalty (veh) |     |     |      |      |     |     |     |      |      |      |     |      |
| Storage Bay Dist (ft) | 500 | 500 |      |      |     | 435 | 435 |      |      |      | 315 |      |
| Storage Blk Time (%)  |     |     |      |      |     |     |     |      |      |      |     |      |
| Queuing Penalty (veh) |     |     |      |      |     |     |     |      |      |      |     |      |

Intersection: 1: Meridian Rd & Woodmen Rd

| Movement              | NB   | NB   | SB  | SB  | SB  | SB  |
|-----------------------|------|------|-----|-----|-----|-----|
| Directions Served     | T    | T    | L   | L   | T   | T   |
| Maximum Queue (ft)    | 505  | 463  | 146 | 152 | 256 | 266 |
| Average Queue (ft)    | 328  | 283  | 83  | 99  | 160 | 180 |
| 95th Queue (ft)       | 463  | 424  | 134 | 145 | 245 | 265 |
| Link Distance (ft)    | 1181 | 1181 |     |     | 635 | 635 |
| Upstream Blk Time (%) |      |      |     |     |     |     |
| Queuing Penalty (veh) |      |      |     |     |     |     |
| Storage Bay Dist (ft) |      |      | 475 | 475 |     |     |
| Storage Blk Time (%)  |      |      |     |     |     |     |
| Queuing Penalty (veh) |      |      |     |     |     |     |

Queuing and Blocking Report

Intersection: 2: Meridian Rd & Eastonville Rd

| Movement              | EB  | EB  | EB  | EB  | WB  | WB  | WB  | NB  | NB  | NB  | NB  | SB  |
|-----------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Directions Served     | L   | L   | T   | R   | L   | T   | R   | L   | T   | T   | R   | L   |
| Maximum Queue (ft)    | 215 | 162 | 190 | 96  | 77  | 118 | 83  | 415 | 396 | 364 | 76  | 93  |
| Average Queue (ft)    | 130 | 55  | 77  | 43  | 29  | 53  | 35  | 262 | 170 | 161 | 22  | 40  |
| 95th Queue (ft)       | 200 | 146 | 140 | 80  | 67  | 104 | 61  | 431 | 377 | 322 | 57  | 78  |
| Link Distance (ft)    | 261 | 261 | 261 | 261 |     | 796 |     |     | 444 | 444 |     |     |
| Upstream Blk Time (%) |     |     |     |     |     |     |     | 1   | 1   | 0   |     |     |
| Queuing Penalty (veh) |     |     |     |     |     |     |     | 0   | 8   | 0   |     |     |
| Storage Bay Dist (ft) |     |     |     |     | 100 |     | 200 | 425 |     |     | 525 | 375 |
| Storage Blk Time (%)  |     |     |     |     | 0   | 1   |     | 2   | 1   | 0   |     |     |
| Queuing Penalty (veh) |     |     |     |     | 0   | 3   |     | 11  | 4   | 0   |     |     |

Intersection: 2: Meridian Rd & Eastonville Rd

| Movement              | SB   | SB   | SB   |
|-----------------------|------|------|------|
| Directions Served     | T    | T    | R    |
| Maximum Queue (ft)    | 292  | 317  | 89   |
| Average Queue (ft)    | 176  | 191  | 27   |
| 95th Queue (ft)       | 268  | 285  | 63   |
| Link Distance (ft)    | 1387 | 1387 | 1387 |
| Upstream Blk Time (%) |      |      |      |
| Queuing Penalty (veh) |      |      |      |
| Storage Bay Dist (ft) |      |      |      |
| Storage Blk Time (%)  | 0    |      |      |
| Queuing Penalty (veh) | 0    |      |      |

Queuing and Blocking Report

Intersection: 25: Golden Sage Rd & Woodmen Rd

| Movement              | EB  | EB  | EB  | EB  | WB  | WB  | WB  | WB  | NB  | NB  | NB  | SB  |
|-----------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Directions Served     | L   | T   | T   | R   | L   | T   | T   | R   | L   | T   | R   | L   |
| Maximum Queue (ft)    | 149 | 242 | 255 | 52  | 55  | 331 | 328 | 40  | 138 | 53  | 41  | 68  |
| Average Queue (ft)    | 64  | 110 | 119 | 14  | 11  | 120 | 135 | 6   | 68  | 18  | 10  | 21  |
| 95th Queue (ft)       | 118 | 199 | 204 | 41  | 35  | 247 | 259 | 24  | 117 | 48  | 34  | 55  |
| Link Distance (ft)    |     | 957 | 957 |     |     | 969 | 969 |     |     | 531 |     | 161 |
| Upstream Blk Time (%) |     |     |     |     |     |     |     |     |     |     |     |     |
| Queuing Penalty (veh) |     |     |     |     |     |     |     |     |     |     |     |     |
| Storage Bay Dist (ft) | 465 |     |     | 400 | 475 |     |     | 400 | 125 |     | 200 |     |
| Storage Blk Time (%)  |     |     |     |     |     |     | 0   |     | 1   |     |     |     |
| Queuing Penalty (veh) |     |     |     |     |     |     | 0   |     | 0   |     |     |     |

Intersection: 25: Golden Sage Rd & Woodmen Rd

| Movement              | SB  |
|-----------------------|-----|
| Directions Served     | TR  |
| Maximum Queue (ft)    | 121 |
| Average Queue (ft)    | 53  |
| 95th Queue (ft)       | 102 |
| Link Distance (ft)    | 161 |
| Upstream Blk Time (%) | 0   |
| Queuing Penalty (veh) | 0   |
| Storage Bay Dist (ft) |     |
| Storage Blk Time (%)  |     |
| Queuing Penalty (veh) |     |

Intersection: 26: Golden Sage Rd & Woodmen Frontage Rd

| Movement              | WB   |
|-----------------------|------|
| Directions Served     | LT   |
| Maximum Queue (ft)    | 78   |
| Average Queue (ft)    | 38   |
| 95th Queue (ft)       | 62   |
| Link Distance (ft)    | 1964 |
| Upstream Blk Time (%) |      |
| Queuing Penalty (veh) |      |
| Storage Bay Dist (ft) |      |
| Storage Blk Time (%)  |      |
| Queuing Penalty (veh) |      |

Zone Summary

Zone wide Queuing Penalty: 26

## Queuing and Blocking Report

## Intersection: 1: Meridian Rd &amp; Woodmen Rd

| Movement              | EB  | EB  | EB   | EB   | WB  | WB  | WB   | WB   | WB   | NB  | NB   | NB   |
|-----------------------|-----|-----|------|------|-----|-----|------|------|------|-----|------|------|
| Directions Served     | UL  | L   | T    | T    | L   | L   | T    | T    | R    | L   | L    | T    |
| Maximum Queue (ft)    | 173 | 164 | 254  | 258  | 77  | 120 | 341  | 339  | 22   | 162 | 196  | 218  |
| Average Queue (ft)    | 92  | 104 | 124  | 139  | 22  | 56  | 216  | 217  | 1    | 70  | 124  | 115  |
| 95th Queue (ft)       | 151 | 158 | 206  | 222  | 59  | 97  | 309  | 315  | 12   | 157 | 184  | 184  |
| Link Distance (ft)    |     |     | 1024 | 1024 |     |     | 2167 | 2167 | 2167 |     | 1181 | 1181 |
| Upstream Blk Time (%) |     |     |      |      |     |     |      |      |      |     |      |      |
| Queuing Penalty (veh) |     |     |      |      |     |     |      |      |      |     |      |      |
| Storage Bay Dist (ft) | 500 | 500 |      |      | 435 | 435 |      |      |      | 315 |      |      |
| Storage Blk Time (%)  |     |     |      |      |     |     |      |      |      |     |      |      |
| Queuing Penalty (veh) |     |     |      |      |     |     |      |      |      |     |      |      |

## Intersection: 1: Meridian Rd &amp; Woodmen Rd

| Movement              | NB   | SB  | SB  | SB  | SB  |
|-----------------------|------|-----|-----|-----|-----|
| Directions Served     | T    | L   | L   | T   | T   |
| Maximum Queue (ft)    | 181  | 168 | 184 | 244 | 258 |
| Average Queue (ft)    | 68   | 84  | 102 | 147 | 158 |
| 95th Queue (ft)       | 147  | 149 | 160 | 227 | 232 |
| Link Distance (ft)    | 1181 |     |     | 635 | 635 |
| Upstream Blk Time (%) |      |     |     |     |     |
| Queuing Penalty (veh) |      |     |     |     |     |
| Storage Bay Dist (ft) |      | 475 | 475 |     |     |
| Storage Blk Time (%)  |      |     |     |     |     |
| Queuing Penalty (veh) |      |     |     |     |     |

## Queuing and Blocking Report

## Intersection: 2: Meridian Rd &amp; Eastonville Rd

| Movement              | EB  | EB  | EB  | EB  | WB  | WB  | WB  | NB  | NB  | NB  | NB  | SB  |
|-----------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Directions Served     | L   | L   | T   | R   | L   | T   | R   | L   | T   | T   | R   | L   |
| Maximum Queue (ft)    | 165 | 125 | 107 | 90  | 114 | 86  | 61  | 128 | 121 | 138 | 41  | 75  |
| Average Queue (ft)    | 79  | 17  | 42  | 36  | 51  | 37  | 28  | 57  | 38  | 54  | 7   | 33  |
| 95th Queue (ft)       | 140 | 74  | 85  | 65  | 96  | 78  | 49  | 110 | 98  | 120 | 24  | 65  |
| Link Distance (ft)    | 261 | 261 | 261 | 261 |     | 796 |     |     | 444 | 444 |     |     |
| Upstream Blk Time (%) |     |     |     |     |     |     |     |     |     |     |     |     |
| Queuing Penalty (veh) |     |     |     |     |     |     |     |     |     |     |     |     |
| Storage Bay Dist (ft) |     |     |     |     | 100 |     | 200 | 425 |     |     | 525 | 375 |
| Storage Blk Time (%)  |     |     |     |     | 2   | 0   |     |     |     |     |     |     |
| Queuing Penalty (veh) |     |     |     |     | 2   | 0   |     |     |     |     |     |     |

## Intersection: 2: Meridian Rd &amp; Eastonville Rd

| Movement              | SB   | SB   | SB   |
|-----------------------|------|------|------|
| Directions Served     | T    | T    | R    |
| Maximum Queue (ft)    | 536  | 609  | 308  |
| Average Queue (ft)    | 147  | 227  | 22   |
| 95th Queue (ft)       | 357  | 445  | 214  |
| Link Distance (ft)    | 1387 | 1387 | 1387 |
| Upstream Blk Time (%) |      | 0    | 0    |
| Queuing Penalty (veh) |      | 0    | 0    |
| Storage Bay Dist (ft) |      |      |      |
| Storage Blk Time (%)  | 0    |      |      |
| Queuing Penalty (veh) | 0    |      |      |

## Intersection: 18: Woodmen frontage rd &amp; Right-In Only/Site Access

| Movement              | NB | SB  | NE  |
|-----------------------|----|-----|-----|
| Directions Served     | LR | LR  | T   |
| Maximum Queue (ft)    | 54 | 50  | 28  |
| Average Queue (ft)    | 8  | 23  | 2   |
| 95th Queue (ft)       | 34 | 47  | 17  |
| Link Distance (ft)    | 80 | 154 | 368 |
| Upstream Blk Time (%) | 0  |     |     |
| Queuing Penalty (veh) | 0  |     |     |
| Storage Bay Dist (ft) |    |     |     |
| Storage Blk Time (%)  |    |     |     |
| Queuing Penalty (veh) |    |     |     |

## Queuing and Blocking Report

## Intersection: 25: Golden Sage Rd &amp; Woodmen Rd

| Movement              | EB  | EB  | EB  | EB  | WB  | WB  | WB  | WB  | NB  | NB  | NB  | SB  |
|-----------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Directions Served     | L   | T   | T   | R   | L   | T   | T   | R   | L   | T   | R   | L   |
| Maximum Queue (ft)    | 108 | 135 | 139 | 36  | 32  | 349 | 367 | 37  | 184 | 130 | 31  | 73  |
| Average Queue (ft)    | 53  | 60  | 69  | 9   | 5   | 166 | 180 | 7   | 84  | 13  | 5   | 24  |
| 95th Queue (ft)       | 98  | 114 | 126 | 30  | 22  | 311 | 324 | 26  | 148 | 64  | 24  | 60  |
| Link Distance (ft)    |     | 957 | 957 |     |     | 969 | 969 |     |     | 531 |     | 161 |
| Upstream Blk Time (%) |     |     |     |     |     |     |     |     |     |     |     |     |
| Queuing Penalty (veh) |     |     |     |     |     |     |     |     |     |     |     |     |
| Storage Bay Dist (ft) | 465 |     |     | 400 | 475 |     |     | 400 | 125 |     | 200 |     |
| Storage Blk Time (%)  |     |     |     |     |     |     | 0   |     | 3   | 0   |     |     |
| Queuing Penalty (veh) |     |     |     |     |     |     | 0   |     | 0   | 0   |     |     |

## Intersection: 25: Golden Sage Rd &amp; Woodmen Rd

| Movement              | SB  |
|-----------------------|-----|
| Directions Served     | TR  |
| Maximum Queue (ft)    | 151 |
| Average Queue (ft)    | 59  |
| 95th Queue (ft)       | 115 |
| Link Distance (ft)    | 161 |
| Upstream Blk Time (%) | 2   |
| Queuing Penalty (veh) | 2   |
| Storage Bay Dist (ft) |     |
| Storage Blk Time (%)  |     |
| Queuing Penalty (veh) |     |

## Intersection: 26: Golden Sage Rd &amp; Woodmen Frontage Rd

| Movement              | WB   |
|-----------------------|------|
| Directions Served     | LT   |
| Maximum Queue (ft)    | 86   |
| Average Queue (ft)    | 41   |
| 95th Queue (ft)       | 71   |
| Link Distance (ft)    | 1964 |
| Upstream Blk Time (%) |      |
| Queuing Penalty (veh) |      |
| Storage Bay Dist (ft) |      |
| Storage Blk Time (%)  |      |
| Queuing Penalty (veh) |      |

## Zone Summary

Zone wide Queuing Penalty: 4

## Queuing and Blocking Report

## Intersection: 1: Meridian Rd &amp; Woodmen Rd

| Movement              | EB  | EB  | EB   | EB   | WB  | WB  | WB   | WB   | WB   | NB  | NB   | NB   |
|-----------------------|-----|-----|------|------|-----|-----|------|------|------|-----|------|------|
| Directions Served     | UL  | L   | T    | T    | L   | L   | T    | T    | R    | L   | L    | T    |
| Maximum Queue (ft)    | 424 | 443 | 238  | 261  | 122 | 146 | 324  | 342  | 114  | 220 | 275  | 404  |
| Average Queue (ft)    | 242 | 251 | 134  | 151  | 43  | 78  | 219  | 231  | 16   | 132 | 179  | 276  |
| 95th Queue (ft)       | 362 | 377 | 218  | 228  | 101 | 132 | 311  | 317  | 73   | 230 | 252  | 387  |
| Link Distance (ft)    |     |     | 1024 | 1024 |     |     | 2167 | 2167 | 2167 |     | 1181 | 1181 |
| Upstream Blk Time (%) |     |     |      |      |     |     |      |      |      |     |      |      |
| Queuing Penalty (veh) |     |     |      |      |     |     |      |      |      |     |      |      |
| Storage Bay Dist (ft) | 500 | 500 |      |      | 435 | 435 |      |      |      | 315 |      |      |
| Storage Blk Time (%)  | 0   | 0   |      |      |     |     |      |      |      |     |      | 0    |
| Queuing Penalty (veh) | 0   | 0   |      |      |     |     |      |      |      |     |      | 0    |

## Intersection: 1: Meridian Rd &amp; Woodmen Rd

| Movement              | NB   | SB  | SB  | SB  | SB  |
|-----------------------|------|-----|-----|-----|-----|
| Directions Served     | T    | L   | L   | T   | T   |
| Maximum Queue (ft)    | 372  | 187 | 202 | 261 | 295 |
| Average Queue (ft)    | 245  | 101 | 115 | 164 | 187 |
| 95th Queue (ft)       | 361  | 172 | 190 | 246 | 269 |
| Link Distance (ft)    | 1181 |     |     | 635 | 635 |
| Upstream Blk Time (%) |      |     |     |     |     |
| Queuing Penalty (veh) |      |     |     |     |     |
| Storage Bay Dist (ft) |      | 475 | 475 |     |     |
| Storage Blk Time (%)  |      |     |     |     |     |
| Queuing Penalty (veh) |      |     |     |     |     |

## Queuing and Blocking Report

## Intersection: 2: Meridian Rd &amp; Eastonville Rd

| Movement              | EB  | EB  | EB  | EB  | WB  | WB  | WB  | NB  | NB  | NB  | NB  | SB  |
|-----------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Directions Served     | L   | L   | T   | R   | L   | T   | R   | L   | T   | T   | R   | L   |
| Maximum Queue (ft)    | 216 | 181 | 161 | 84  | 61  | 112 | 73  | 174 | 329 | 320 | 72  | 100 |
| Average Queue (ft)    | 122 | 45  | 69  | 41  | 23  | 49  | 37  | 83  | 136 | 147 | 18  | 39  |
| 95th Queue (ft)       | 194 | 131 | 129 | 70  | 55  | 93  | 62  | 150 | 293 | 300 | 49  | 77  |
| Link Distance (ft)    | 261 | 261 | 261 | 261 |     | 796 |     |     | 444 | 444 |     |     |
| Upstream Blk Time (%) | 0   |     |     |     |     |     |     |     |     |     |     |     |
| Queuing Penalty (veh) | 0   |     |     |     |     |     |     |     |     |     |     |     |
| Storage Bay Dist (ft) |     |     |     |     | 100 |     | 200 | 425 |     |     | 525 | 375 |
| Storage Blk Time (%)  |     |     |     |     |     | 0   |     |     |     |     |     |     |
| Queuing Penalty (veh) |     |     |     |     |     | 1   |     |     |     |     |     |     |

## Intersection: 2: Meridian Rd &amp; Eastonville Rd

| Movement              | SB   | SB   | SB   |
|-----------------------|------|------|------|
| Directions Served     | T    | T    | R    |
| Maximum Queue (ft)    | 233  | 312  | 60   |
| Average Queue (ft)    | 137  | 156  | 18   |
| 95th Queue (ft)       | 221  | 262  | 42   |
| Link Distance (ft)    | 1387 | 1387 | 1387 |
| Upstream Blk Time (%) |      |      |      |
| Queuing Penalty (veh) |      |      |      |
| Storage Bay Dist (ft) |      |      |      |
| Storage Blk Time (%)  |      |      |      |
| Queuing Penalty (veh) |      |      |      |

## Intersection: 18: Woodmen frontage rd &amp; Right-In Only/Site Access

| Movement              | NB  | SB  | NE  | SW  |
|-----------------------|-----|-----|-----|-----|
| Directions Served     | LR  | LR  | T   | T   |
| Maximum Queue (ft)    | 111 | 29  | 16  | 18  |
| Average Queue (ft)    | 21  | 6   | 1   | 1   |
| 95th Queue (ft)       | 66  | 24  | 10  | 11  |
| Link Distance (ft)    | 80  | 154 | 368 | 203 |
| Upstream Blk Time (%) | 0   |     |     |     |
| Queuing Penalty (veh) | 1   |     |     |     |
| Storage Bay Dist (ft) |     |     |     |     |
| Storage Blk Time (%)  |     |     |     |     |
| Queuing Penalty (veh) |     |     |     |     |

## Queuing and Blocking Report

## Intersection: 25: Golden Sage Rd &amp; Woodmen Rd

| Movement              | EB  | EB  | EB  | EB  | WB  | WB  | WB  | WB  | NB  | NB  | NB  | SB  |
|-----------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Directions Served     | L   | T   | T   | R   | L   | T   | T   | R   | L   | T   | R   | L   |
| Maximum Queue (ft)    | 145 | 189 | 225 | 48  | 46  | 311 | 304 | 31  | 157 | 88  | 36  | 73  |
| Average Queue (ft)    | 62  | 101 | 113 | 16  | 10  | 130 | 147 | 7   | 68  | 18  | 12  | 26  |
| 95th Queue (ft)       | 111 | 179 | 196 | 41  | 33  | 256 | 267 | 26  | 128 | 51  | 37  | 59  |
| Link Distance (ft)    |     | 957 | 957 |     |     | 969 | 969 |     |     | 531 |     | 161 |
| Upstream Blk Time (%) |     |     |     |     |     |     |     |     |     |     |     |     |
| Queuing Penalty (veh) |     |     |     |     |     |     |     |     |     |     |     |     |
| Storage Bay Dist (ft) | 465 |     |     | 400 | 475 |     |     | 400 | 125 |     | 200 |     |
| Storage Blk Time (%)  |     |     |     |     |     |     |     |     | 2   | 0   |     |     |
| Queuing Penalty (veh) |     |     |     |     |     |     |     |     | 1   | 0   |     |     |

## Intersection: 25: Golden Sage Rd &amp; Woodmen Rd

| Movement              | SB  |
|-----------------------|-----|
| Directions Served     | TR  |
| Maximum Queue (ft)    | 150 |
| Average Queue (ft)    | 56  |
| 95th Queue (ft)       | 105 |
| Link Distance (ft)    | 161 |
| Upstream Blk Time (%) | 0   |
| Queuing Penalty (veh) | 0   |
| Storage Bay Dist (ft) |     |
| Storage Blk Time (%)  |     |
| Queuing Penalty (veh) |     |

## Intersection: 26: Golden Sage Rd &amp; Woodmen Frontage Rd

| Movement              | WB   |
|-----------------------|------|
| Directions Served     | LT   |
| Maximum Queue (ft)    | 79   |
| Average Queue (ft)    | 39   |
| 95th Queue (ft)       | 62   |
| Link Distance (ft)    | 1964 |
| Upstream Blk Time (%) |      |
| Queuing Penalty (veh) |      |
| Storage Bay Dist (ft) |      |
| Storage Blk Time (%)  |      |
| Queuing Penalty (veh) |      |

Queuing and Blocking Report

Intersection: 88: Woodmen Rd & Right-In Only

|                       |
|-----------------------|
| Movement              |
| Directions Served     |
| Maximum Queue (ft)    |
| Average Queue (ft)    |
| 95th Queue (ft)       |
| Link Distance (ft)    |
| Upstream Blk Time (%) |
| Queuing Penalty (veh) |
| Storage Bay Dist (ft) |
| Storage Blk Time (%)  |
| Queuing Penalty (veh) |

Zone Summary

|                              |
|------------------------------|
| Zone wide Queuing Penalty: 3 |
|------------------------------|

Queuing and Blocking Report

Intersection: 1: Meridian Rd & Woodmen Rd

| Movement              | EB   | EB   | EB   | EB   | WB  | WB  | WB   | WB   | WB   | NB  | NB   | NB   |  |
|-----------------------|------|------|------|------|-----|-----|------|------|------|-----|------|------|--|
| Directions Served     | UL   | L    | T    | T    | L   | L   | T    | T    | R    | L   | L    | T    |  |
| Maximum Queue (ft)    | 382  | 362  | 196  | 207  | 109 | 129 | 368  | 361  | 120  | 217 | 243  | 250  |  |
| Average Queue (ft)    | 223  | 212  | 113  | 128  | 38  | 76  | 246  | 241  | 30   | 107 | 148  | 156  |  |
| 95th Queue (ft)       | 361  | 354  | 179  | 192  | 85  | 122 | 339  | 333  | 95   | 201 | 213  | 234  |  |
| Link Distance (ft)    | 1011 | 1011 | 1011 | 1011 |     |     | 2167 | 2167 | 2167 |     | 1180 | 1180 |  |
| Upstream Blk Time (%) |      |      |      |      |     |     |      |      |      |     |      |      |  |
| Queuing Penalty (veh) |      |      |      |      |     |     |      |      |      |     |      |      |  |
| Storage Bay Dist (ft) |      |      |      |      | 535 | 535 |      |      |      |     | 400  |      |  |
| Storage Blk Time (%)  |      |      |      |      |     |     |      |      |      |     |      |      |  |
| Queuing Penalty (veh) |      |      |      |      |     |     |      |      |      |     |      |      |  |

Intersection: 1: Meridian Rd & Woodmen Rd

| Movement              | NB   | SB  | SB  | SB  | SB  |
|-----------------------|------|-----|-----|-----|-----|
| Directions Served     | T    | L   | L   | T   | T   |
| Maximum Queue (ft)    | 203  | 160 | 171 | 312 | 326 |
| Average Queue (ft)    | 99   | 92  | 109 | 207 | 233 |
| 95th Queue (ft)       | 184  | 144 | 158 | 301 | 320 |
| Link Distance (ft)    | 1180 |     |     | 635 | 635 |
| Upstream Blk Time (%) |      |     |     |     |     |
| Queuing Penalty (veh) |      |     |     |     |     |
| Storage Bay Dist (ft) |      | 475 | 475 |     |     |
| Storage Blk Time (%)  |      |     |     |     |     |
| Queuing Penalty (veh) |      |     |     |     |     |

Queuing and Blocking Report

Intersection: 2: Meridian Rd & Eastonville Rd

| Movement              | EB  | EB  | EB  | EB  | WB  | WB  | WB  | NB  | NB  | NB  | NB  | NB  |
|-----------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Directions Served     | L   | L   | T   | R   | L   | T   | R   | L   | L   | T   | T   | R   |
| Maximum Queue (ft)    | 154 | 112 | 133 | 153 | 200 | 563 | 300 | 254 | 259 | 219 | 201 | 62  |
| Average Queue (ft)    | 81  | 12  | 64  | 52  | 157 | 226 | 78  | 137 | 148 | 80  | 97  | 21  |
| 95th Queue (ft)       | 138 | 57  | 120 | 103 | 233 | 585 | 241 | 231 | 241 | 166 | 165 | 49  |
| Link Distance (ft)    | 261 | 261 | 261 | 261 |     | 796 |     |     |     | 444 | 444 |     |
| Upstream Blk Time (%) |     |     |     |     |     | 4   |     |     |     |     |     |     |
| Queuing Penalty (veh) |     |     |     |     |     | 0   |     |     |     |     |     |     |
| Storage Bay Dist (ft) |     |     |     |     | 100 |     | 200 | 425 | 425 |     |     | 525 |
| Storage Blk Time (%)  |     |     |     |     | 44  | 8   |     |     |     |     |     |     |
| Queuing Penalty (veh) |     |     |     |     | 105 | 29  |     |     |     |     |     |     |

Intersection: 2: Meridian Rd & Eastonville Rd

| Movement              | SB  | SB   | SB   | SB   |
|-----------------------|-----|------|------|------|
| Directions Served     | L   | T    | T    | R    |
| Maximum Queue (ft)    | 475 | 1417 | 1418 | 1415 |
| Average Queue (ft)    | 211 | 1090 | 1116 | 757  |
| 95th Queue (ft)       | 551 | 1693 | 1693 | 1839 |
| Link Distance (ft)    |     | 1380 | 1380 | 1380 |
| Upstream Blk Time (%) |     | 16   | 37   | 20   |
| Queuing Penalty (veh) |     | 0    | 0    | 0    |
| Storage Bay Dist (ft) | 375 |      |      |      |
| Storage Blk Time (%)  |     | 41   |      |      |
| Queuing Penalty (veh) |     | 41   |      |      |

Queuing and Blocking Report

Intersection: 25: Golden Sage Rd & Woodmen Rd

| Movement              | EB  | EB  | EB   | EB   | EB  | WB  | WB   | WB   | WB  | B16  | B16  | NB  |
|-----------------------|-----|-----|------|------|-----|-----|------|------|-----|------|------|-----|
| Directions Served     | L   | L   | T    | T    | R   | L   | T    | T    | R   | T    | T    | L   |
| Maximum Queue (ft)    | 400 | 421 | 594  | 580  | 40  | 575 | 990  | 988  | 500 | 383  | 407  | 181 |
| Average Queue (ft)    | 291 | 311 | 299  | 294  | 9   | 193 | 665  | 676  | 298 | 65   | 73   | 91  |
| 95th Queue (ft)       | 528 | 575 | 941  | 895  | 26  | 592 | 1154 | 1164 | 677 | 348  | 374  | 154 |
| Link Distance (ft)    |     |     | 1455 | 1455 |     |     | 969  | 969  |     | 3861 | 3861 |     |
| Upstream Blk Time (%) |     |     |      |      |     |     | 11   | 14   |     |      |      |     |
| Queuing Penalty (veh) |     |     |      |      |     |     | 106  | 133  |     |      |      |     |
| Storage Bay Dist (ft) | 450 | 450 |      |      | 400 | 475 |      |      | 400 |      |      | 125 |
| Storage Blk Time (%)  | 16  | 23  | 0    |      |     |     | 28   | 36   |     |      |      | 6   |
| Queuing Penalty (veh) | 68  | 101 | 0    |      |     |     | 22   | 66   |     |      |      | 4   |

Intersection: 25: Golden Sage Rd & Woodmen Rd

| Movement              | NB  | NB  | SB  | SB  |
|-----------------------|-----|-----|-----|-----|
| Directions Served     | T   | R   | L   | T   |
| Maximum Queue (ft)    | 117 | 48  | 171 | 59  |
| Average Queue (ft)    | 17  | 16  | 144 | 23  |
| 95th Queue (ft)       | 67  | 35  | 188 | 54  |
| Link Distance (ft)    | 526 |     | 154 | 154 |
| Upstream Blk Time (%) |     |     | 26  |     |
| Queuing Penalty (veh) |     |     | 54  |     |
| Storage Bay Dist (ft) |     | 200 |     |     |
| Storage Blk Time (%)  | 0   |     |     |     |
| Queuing Penalty (veh) | 0   |     |     |     |

Intersection: 26: Golden Sage Rd & Woodmen Frontage Rd

| Movement              | EB   | WB   | NB  | NB  |
|-----------------------|------|------|-----|-----|
| Directions Served     | TR   | LT   | LR  | R   |
| Maximum Queue (ft)    | 199  | 566  | 146 | 135 |
| Average Queue (ft)    | 81   | 230  | 68  | 13  |
| 95th Queue (ft)       | 156  | 532  | 139 | 83  |
| Link Distance (ft)    | 1503 | 1983 | 154 | 154 |
| Upstream Blk Time (%) |      |      | 0   | 0   |
| Queuing Penalty (veh) |      |      | 0   | 0   |
| Storage Bay Dist (ft) |      |      |     |     |
| Storage Blk Time (%)  |      |      |     |     |
| Queuing Penalty (veh) |      |      |     |     |

Zone Summary

Zone wide Queuing Penalty: 729

Queuing and Blocking Report

Intersection: 1: Meridian Rd & Woodmen Rd

| Movement              | EB   | EB   | EB   | EB   | B88 | B88 | B88 | B88 | WB   | WB   | WB   | WB   |
|-----------------------|------|------|------|------|-----|-----|-----|-----|------|------|------|------|
| Directions Served     | UL   | L    | T    | T    | T   | T   | T   | T   | L    | L    | T    | T    |
| Maximum Queue (ft)    | 860  | 865  | 422  | 340  | 30  | 35  | 146 | 152 | 153  | 177  | 517  | 524  |
| Average Queue (ft)    | 556  | 552  | 212  | 224  | 4   | 5   | 5   | 5   | 78   | 110  | 316  | 315  |
| 95th Queue (ft)       | 1012 | 1021 | 334  | 310  | 35  | 34  | 107 | 111 | 142  | 163  | 554  | 548  |
| Link Distance (ft)    | 1011 | 1011 | 1011 | 1011 | 716 | 716 | 716 | 716 |      |      | 2167 | 2167 |
| Upstream Blk Time (%) | 5    | 6    |      |      |     |     | 0   | 0   |      |      |      |      |
| Queuing Penalty (veh) | 20   | 22   |      |      |     |     | 0   | 0   |      |      |      |      |
| Storage Bay Dist (ft) |      |      |      |      |     |     |     |     | 1000 | 1000 |      |      |
| Storage Blk Time (%)  |      |      |      |      |     |     |     |     |      |      |      |      |
| Queuing Penalty (veh) |      |      |      |      |     |     |     |     |      |      |      |      |

Intersection: 1: Meridian Rd & Woodmen Rd

| Movement              | WB   | NB  | NB   | NB   | NB   | SB  | SB  | SB  | SB  |
|-----------------------|------|-----|------|------|------|-----|-----|-----|-----|
| Directions Served     | R    | L   | L    | T    | T    | L   | L   | T   | T   |
| Maximum Queue (ft)    | 328  | 392 | 929  | 1203 | 1153 | 391 | 407 | 368 | 372 |
| Average Queue (ft)    | 167  | 134 | 332  | 730  | 697  | 276 | 292 | 235 | 227 |
| 95th Queue (ft)       | 290  | 273 | 814  | 1321 | 1281 | 479 | 512 | 521 | 410 |
| Link Distance (ft)    | 2167 |     | 1851 | 1851 | 1851 |     |     | 635 | 635 |
| Upstream Blk Time (%) |      |     |      |      |      |     |     | 3   | 0   |
| Queuing Penalty (veh) |      |     |      |      |      |     |     | 20  | 1   |
| Storage Bay Dist (ft) |      | 400 |      |      |      | 475 | 475 |     |     |
| Storage Blk Time (%)  |      |     | 0    |      |      | 6   | 9   | 0   |     |
| Queuing Penalty (veh) |      |     | 0    |      |      | 19  | 33  | 0   |     |

Queuing and Blocking Report

Intersection: 25: Golden Sage Rd & Woodmen Rd

| Movement              | EB  | EB  | EB  | EB  | EB  | WB  | WB  | WB  | WB  | NB  | NB  | NB  |
|-----------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Directions Served     | L   | L   | T   | T   | R   | L   | T   | T   | R   | L   | T   | R   |
| Maximum Queue (ft)    | 287 | 297 | 390 | 387 | 49  | 130 | 349 | 367 | 165 | 187 | 170 | 131 |
| Average Queue (ft)    | 158 | 141 | 221 | 237 | 14  | 63  | 186 | 196 | 74  | 91  | 39  | 47  |
| 95th Queue (ft)       | 273 | 252 | 353 | 365 | 34  | 114 | 323 | 330 | 139 | 158 | 112 | 101 |
| Link Distance (ft)    |     |     | 944 | 944 |     |     | 969 | 969 |     |     | 525 |     |
| Upstream Blk Time (%) |     |     |     |     |     |     |     |     |     |     |     |     |
| Queuing Penalty (veh) |     |     |     |     |     |     |     |     |     |     |     |     |
| Storage Bay Dist (ft) | 450 | 450 |     |     | 400 | 475 |     |     | 400 | 125 |     | 200 |
| Storage Blk Time (%)  | 0   | 0   | 0   | 0   |     |     |     | 0   |     | 5   | 0   |     |
| Queuing Penalty (veh) | 1   | 0   | 0   | 0   |     |     |     | 0   |     | 8   | 0   |     |

Intersection: 25: Golden Sage Rd & Woodmen Rd

| Movement              | SB  | SB  |
|-----------------------|-----|-----|
| Directions Served     | L   | T   |
| Maximum Queue (ft)    | 166 | 84  |
| Average Queue (ft)    | 129 | 25  |
| 95th Queue (ft)       | 185 | 65  |
| Link Distance (ft)    | 154 | 154 |
| Upstream Blk Time (%) | 12  |     |
| Queuing Penalty (veh) | 28  |     |
| Storage Bay Dist (ft) |     |     |
| Storage Blk Time (%)  |     |     |
| Queuing Penalty (veh) |     |     |

Intersection: 26: Golden Sage Rd & Woodmen Frontage Rd

| Movement              | EB   | WB   | NB  | NB  |
|-----------------------|------|------|-----|-----|
| Directions Served     | TR   | LT   | LR  | R   |
| Maximum Queue (ft)    | 183  | 494  | 164 | 183 |
| Average Queue (ft)    | 55   | 209  | 127 | 19  |
| 95th Queue (ft)       | 119  | 477  | 191 | 106 |
| Link Distance (ft)    | 1503 | 1983 | 154 | 154 |
| Upstream Blk Time (%) |      |      | 6   | 0   |
| Queuing Penalty (veh) |      |      | 24  | 1   |
| Storage Bay Dist (ft) |      |      |     |     |
| Storage Blk Time (%)  |      |      |     |     |
| Queuing Penalty (veh) |      |      |     |     |

Zone Summary

Zone wide Queuing Penalty: 367

Queuing and Blocking Report

Intersection: 2: Meridian Rd & Eastonville Rd

| Movement              | EB  | EB  | EB  | EB  | WB  | WB  | WB  | NB  | NB  | NB  | NB  | NB  |
|-----------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Directions Served     | L   | L   | T   | R   | L   | T   | R   | L   | L   | T   | T   | R   |
| Maximum Queue (ft)    | 258 | 194 | 260 | 194 | 199 | 536 | 300 | 425 | 430 | 500 | 452 | 231 |
| Average Queue (ft)    | 158 | 91  | 127 | 77  | 144 | 232 | 103 | 330 | 338 | 330 | 248 | 35  |
| 95th Queue (ft)       | 227 | 190 | 216 | 147 | 228 | 614 | 277 | 504 | 507 | 603 | 422 | 124 |
| Link Distance (ft)    | 261 | 261 | 261 | 261 |     | 796 |     |     |     | 444 | 444 |     |
| Upstream Blk Time (%) | 0   |     | 1   | 0   |     | 6   |     | 3   | 12  | 19  | 0   | 0   |
| Queuing Penalty (veh) | 0   |     | 0   | 0   |     | 0   |     | 0   | 0   | 208 | 4   | 0   |
| Storage Bay Dist (ft) |     |     |     |     | 100 |     | 200 | 425 | 425 |     |     | 525 |
| Storage Blk Time (%)  |     |     |     |     | 44  | 11  |     | 11  | 21  | 12  | 0   | 0   |
| Queuing Penalty (veh) |     |     |     |     | 159 | 48  |     | 68  | 131 | 79  | 1   | 0   |

Intersection: 2: Meridian Rd & Eastonville Rd

| Movement              | SB  | SB   | SB   | SB   |
|-----------------------|-----|------|------|------|
| Directions Served     | L   | T    | T    | R    |
| Maximum Queue (ft)    | 274 | 510  | 506  | 114  |
| Average Queue (ft)    | 63  | 311  | 315  | 50   |
| 95th Queue (ft)       | 177 | 442  | 457  | 91   |
| Link Distance (ft)    |     | 1380 | 1380 | 1380 |
| Upstream Blk Time (%) |     |      |      |      |
| Queuing Penalty (veh) |     |      |      |      |
| Storage Bay Dist (ft) | 375 |      |      |      |
| Storage Blk Time (%)  |     | 3    |      |      |
| Queuing Penalty (veh) |     | 3    |      |      |

Queuing and Blocking Report

Intersection: 1: Meridian Rd & Woodmen Rd

| Movement              | EB   | EB   | EB   | EB   | WB  | WB  | WB   | WB   | WB   | NB  | NB   | NB   |  |  |
|-----------------------|------|------|------|------|-----|-----|------|------|------|-----|------|------|--|--|
| Directions Served     | UL   | L    | T    | T    | L   | L   | T    | T    | R    | L   | L    | T    |  |  |
| Maximum Queue (ft)    | 350  | 358  | 208  | 205  | 122 | 217 | 511  | 498  | 131  | 281 | 307  | 228  |  |  |
| Average Queue (ft)    | 219  | 219  | 116  | 128  | 49  | 81  | 337  | 341  | 10   | 169 | 207  | 121  |  |  |
| 95th Queue (ft)       | 377  | 383  | 185  | 197  | 98  | 155 | 506  | 504  | 69   | 269 | 296  | 192  |  |  |
| Link Distance (ft)    | 1022 | 1022 | 1022 | 1022 |     |     | 2167 | 2167 | 2167 |     | 1180 | 1180 |  |  |
| Upstream Blk Time (%) |      |      |      |      |     |     |      |      |      |     |      |      |  |  |
| Queuing Penalty (veh) |      |      |      |      |     |     |      |      |      |     |      |      |  |  |
| Storage Bay Dist (ft) |      |      |      |      | 535 | 535 |      |      |      |     | 400  |      |  |  |
| Storage Blk Time (%)  |      |      |      |      |     |     | 1    |      |      |     |      | 0    |  |  |
| Queuing Penalty (veh) |      |      |      |      |     |     | 1    |      |      |     |      | 0    |  |  |

Intersection: 1: Meridian Rd & Woodmen Rd

| Movement              | NB   | SB  | SB  | SB  | SB  |  |
|-----------------------|------|-----|-----|-----|-----|--|
| Directions Served     | T    | L   | L   | T   | T   |  |
| Maximum Queue (ft)    | 178  | 164 | 170 | 413 | 436 |  |
| Average Queue (ft)    | 69   | 97  | 113 | 285 | 301 |  |
| 95th Queue (ft)       | 143  | 151 | 168 | 400 | 415 |  |
| Link Distance (ft)    | 1180 |     |     | 635 | 635 |  |
| Upstream Blk Time (%) |      |     |     |     |     |  |
| Queuing Penalty (veh) |      |     |     |     |     |  |
| Storage Bay Dist (ft) |      | 475 | 475 |     |     |  |
| Storage Blk Time (%)  |      |     |     | 0   |     |  |
| Queuing Penalty (veh) |      |     |     | 0   |     |  |

Queuing and Blocking Report

Intersection: 2: Meridian Rd & Eastonville Rd

| Movement              | EB  | EB  | EB  | EB  | WB  | WB  | WB  | NB  | NB  | NB  | NB  | NB  |
|-----------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Directions Served     | L   | L   | T   | R   | L   | T   | R   | L   | L   | T   | T   | R   |
| Maximum Queue (ft)    | 168 | 105 | 131 | 152 | 200 | 720 | 244 | 137 | 148 | 135 | 148 | 68  |
| Average Queue (ft)    | 79  | 14  | 61  | 50  | 173 | 395 | 138 | 73  | 87  | 61  | 74  | 18  |
| 95th Queue (ft)       | 140 | 61  | 118 | 103 | 237 | 909 | 352 | 127 | 135 | 141 | 156 | 49  |
| Link Distance (ft)    | 261 | 261 | 261 | 261 |     | 796 |     |     |     | 444 | 444 |     |
| Upstream Blk Time (%) |     |     |     |     |     | 11  |     |     |     |     |     |     |
| Queuing Penalty (veh) |     |     |     |     |     | 0   |     |     |     |     |     |     |
| Storage Bay Dist (ft) |     |     |     |     | 100 |     | 200 | 425 | 425 |     |     | 525 |
| Storage Blk Time (%)  |     |     |     |     | 63  | 11  |     |     |     |     |     |     |
| Queuing Penalty (veh) |     |     |     |     | 151 | 40  |     |     |     |     |     |     |

Intersection: 2: Meridian Rd & Eastonville Rd

| Movement              | SB  | SB   | SB   | SB   |
|-----------------------|-----|------|------|------|
| Directions Served     | L   | T    | T    | R    |
| Maximum Queue (ft)    | 475 | 1135 | 1279 | 886  |
| Average Queue (ft)    | 175 | 855  | 909  | 356  |
| 95th Queue (ft)       | 501 | 1481 | 1488 | 1300 |
| Link Distance (ft)    |     | 1380 | 1380 | 1380 |
| Upstream Blk Time (%) |     | 7    | 15   | 9    |
| Queuing Penalty (veh) |     | 0    | 0    | 0    |
| Storage Bay Dist (ft) | 375 |      |      |      |
| Storage Blk Time (%)  |     | 30   |      |      |
| Queuing Penalty (veh) |     | 30   |      |      |

Intersection: 18: Woodmen frontage rd & Right-In Only/Site Access

| Movement              | NB  | SB  | NE  | SW  |
|-----------------------|-----|-----|-----|-----|
| Directions Served     | LR  | LR  | T   | T   |
| Maximum Queue (ft)    | 102 | 41  | 29  | 36  |
| Average Queue (ft)    | 26  | 25  | 1   | 6   |
| 95th Queue (ft)       | 72  | 46  | 13  | 27  |
| Link Distance (ft)    | 80  | 154 | 368 | 203 |
| Upstream Blk Time (%) | 1   |     |     |     |
| Queuing Penalty (veh) | 2   |     |     |     |
| Storage Bay Dist (ft) |     |     |     |     |
| Storage Blk Time (%)  |     |     |     |     |
| Queuing Penalty (veh) |     |     |     |     |

Queuing and Blocking Report

Intersection: 25: Golden Sage Rd & Woodmen Rd

| Movement              | EB  | EB  | EB   | EB   | EB  | WB  | WB  | WB   | WB  | B16  | B16  | NB  |
|-----------------------|-----|-----|------|------|-----|-----|-----|------|-----|------|------|-----|
| Directions Served     | L   | L   | T    | T    | R   | L   | T   | T    | R   | T    | T    | L   |
| Maximum Queue (ft)    | 426 | 437 | 280  | 293  | 42  | 571 | 900 | 923  | 500 | 117  | 120  | 203 |
| Average Queue (ft)    | 276 | 287 | 102  | 116  | 9   | 123 | 558 | 573  | 176 | 20   | 21   | 91  |
| 95th Queue (ft)       | 433 | 442 | 214  | 210  | 29  | 448 | 996 | 1006 | 535 | 147  | 153  | 164 |
| Link Distance (ft)    |     |     | 1455 | 1455 |     |     | 969 | 969  |     | 3861 | 3861 |     |
| Upstream Blk Time (%) |     |     |      |      |     |     | 5   | 5    |     |      |      |     |
| Queuing Penalty (veh) |     |     |      |      |     |     | 45  | 51   |     |      |      |     |
| Storage Bay Dist (ft) | 450 | 450 |      |      | 400 | 475 |     |      | 400 |      |      | 125 |
| Storage Blk Time (%)  | 0   | 0   | 0    |      |     |     | 20  | 28   |     |      |      | 5   |
| Queuing Penalty (veh) | 1   | 1   | 0    |      |     |     | 16  | 32   |     |      |      | 4   |

Intersection: 25: Golden Sage Rd & Woodmen Rd

| Movement              | NB  | NB  | SB  | SB  |
|-----------------------|-----|-----|-----|-----|
| Directions Served     | T   | R   | L   | T   |
| Maximum Queue (ft)    | 157 | 45  | 165 | 70  |
| Average Queue (ft)    | 18  | 14  | 146 | 20  |
| 95th Queue (ft)       | 74  | 34  | 188 | 53  |
| Link Distance (ft)    | 526 |     | 154 | 154 |
| Upstream Blk Time (%) |     |     | 31  |     |
| Queuing Penalty (veh) |     |     | 64  |     |
| Storage Bay Dist (ft) |     | 200 |     |     |
| Storage Blk Time (%)  | 0   |     |     |     |
| Queuing Penalty (veh) | 0   |     |     |     |

Intersection: 26: Golden Sage Rd & Woodmen Frontage Rd

| Movement              | EB   | WB   | NB  | NB  |
|-----------------------|------|------|-----|-----|
| Directions Served     | TR   | LT   | LR  | R   |
| Maximum Queue (ft)    | 220  | 903  | 154 | 170 |
| Average Queue (ft)    | 87   | 422  | 74  | 11  |
| 95th Queue (ft)       | 180  | 1115 | 141 | 79  |
| Link Distance (ft)    | 1503 | 1983 | 154 | 154 |
| Upstream Blk Time (%) |      |      | 0   | 0   |
| Queuing Penalty (veh) |      |      | 1   | 0   |
| Storage Bay Dist (ft) |      |      |     |     |
| Storage Blk Time (%)  |      |      |     |     |
| Queuing Penalty (veh) |      |      |     |     |

Zone Summary

Zone wide Queuing Penalty: 438

Queuing and Blocking Report

Intersection: 1: Meridian Rd & Woodmen Rd

| Movement              | EB   | EB   | EB   | EB   | WB   | WB   | WB   | WB   | WB   | NB  | NB   | NB   |  |
|-----------------------|------|------|------|------|------|------|------|------|------|-----|------|------|--|
| Directions Served     | UL   | L    | T    | T    | L    | L    | T    | T    | R    | L   | L    | T    |  |
| Maximum Queue (ft)    | 805  | 840  | 326  | 334  | 173  | 318  | 511  | 516  | 230  | 346 | 391  | 725  |  |
| Average Queue (ft)    | 532  | 534  | 210  | 217  | 90   | 124  | 344  | 349  | 98   | 167 | 215  | 463  |  |
| 95th Queue (ft)       | 804  | 810  | 285  | 287  | 164  | 209  | 516  | 523  | 198  | 282 | 305  | 769  |  |
| Link Distance (ft)    | 1022 | 1022 | 1022 | 1022 |      |      | 2167 | 2167 | 2167 |     | 1180 | 1180 |  |
| Upstream Blk Time (%) |      |      |      |      |      |      |      |      |      |     |      |      |  |
| Queuing Penalty (veh) |      |      |      |      |      |      |      |      |      |     |      |      |  |
| Storage Bay Dist (ft) |      |      |      |      | 1000 | 1000 |      |      |      |     | 400  |      |  |
| Storage Blk Time (%)  |      |      |      |      |      |      |      |      |      |     |      | 0    |  |
| Queuing Penalty (veh) |      |      |      |      |      |      |      |      |      |     |      | 0    |  |

Intersection: 1: Meridian Rd & Woodmen Rd

| Movement              | NB   | SB  | SB  | SB  | SB  |
|-----------------------|------|-----|-----|-----|-----|
| Directions Served     | T    | L   | L   | T   | T   |
| Maximum Queue (ft)    | 708  | 440 | 434 | 350 | 372 |
| Average Queue (ft)    | 421  | 292 | 305 | 223 | 239 |
| 95th Queue (ft)       | 719  | 416 | 429 | 335 | 350 |
| Link Distance (ft)    | 1180 |     |     | 635 | 635 |
| Upstream Blk Time (%) |      |     |     |     |     |
| Queuing Penalty (veh) |      |     |     |     |     |
| Storage Bay Dist (ft) |      | 475 | 475 |     |     |
| Storage Blk Time (%)  |      |     |     |     |     |
| Queuing Penalty (veh) |      |     |     |     |     |

Queuing and Blocking Report

Intersection: 2: Meridian Rd & Eastonville Rd

| Movement              | EB  | EB  | EB  | EB  | WB  | WB  | WB  | NB  | NB  | NB  | NB  | NB  |
|-----------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Directions Served     | L   | L   | T   | R   | L   | T   | R   | L   | L   | T   | T   | R   |
| Maximum Queue (ft)    | 276 | 219 | 258 | 178 | 194 | 244 | 73  | 222 | 236 | 330 | 352 | 112 |
| Average Queue (ft)    | 163 | 102 | 143 | 80  | 121 | 106 | 42  | 126 | 141 | 176 | 184 | 38  |
| 95th Queue (ft)       | 241 | 202 | 225 | 151 | 195 | 181 | 67  | 203 | 211 | 285 | 295 | 84  |
| Link Distance (ft)    | 261 | 261 | 261 | 261 |     | 796 |     |     |     | 444 | 444 |     |
| Upstream Blk Time (%) | 1   |     | 0   |     |     |     |     |     |     |     |     |     |
| Queuing Penalty (veh) | 0   |     | 0   |     |     |     |     |     |     |     |     |     |
| Storage Bay Dist (ft) |     |     |     |     | 100 |     | 200 | 425 | 425 |     |     | 525 |
| Storage Blk Time (%)  |     |     |     |     | 22  | 10  |     |     |     |     |     |     |
| Queuing Penalty (veh) |     |     |     |     | 80  | 43  |     |     |     |     |     |     |

Intersection: 2: Meridian Rd & Eastonville Rd

| Movement              | SB  | SB   | SB   | SB   |
|-----------------------|-----|------|------|------|
| Directions Served     | L   | T    | T    | R    |
| Maximum Queue (ft)    | 284 | 559  | 534  | 95   |
| Average Queue (ft)    | 70  | 325  | 331  | 35   |
| 95th Queue (ft)       | 204 | 496  | 510  | 70   |
| Link Distance (ft)    |     | 1380 | 1380 | 1380 |
| Upstream Blk Time (%) |     |      |      |      |
| Queuing Penalty (veh) |     |      |      |      |
| Storage Bay Dist (ft) | 375 |      |      |      |
| Storage Blk Time (%)  |     | 6    |      |      |
| Queuing Penalty (veh) |     | 5    |      |      |

Intersection: 18: Woodmen frontage rd & Right-In Only/Site Access

| Movement              | NB  | SB  | NE  | SW  |
|-----------------------|-----|-----|-----|-----|
| Directions Served     | LR  | LR  | T   | T   |
| Maximum Queue (ft)    | 119 | 29  | 16  | 30  |
| Average Queue (ft)    | 39  | 9   | 1   | 7   |
| 95th Queue (ft)       | 92  | 31  | 7   | 27  |
| Link Distance (ft)    | 80  | 154 | 368 | 203 |
| Upstream Blk Time (%) | 1   |     |     |     |
| Queuing Penalty (veh) | 5   |     |     |     |
| Storage Bay Dist (ft) |     |     |     |     |
| Storage Blk Time (%)  |     |     |     |     |
| Queuing Penalty (veh) |     |     |     |     |

Queuing and Blocking Report

Intersection: 25: Golden Sage Rd & Woodmen Rd

| Movement              | EB  | EB  | EB  | EB  | EB  | WB  | WB  | WB  | WB  | NB  | NB  | NB  |
|-----------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Directions Served     | L   | L   | T   | T   | R   | L   | T   | T   | R   | L   | T   | R   |
| Maximum Queue (ft)    | 238 | 221 | 348 | 384 | 49  | 156 | 378 | 360 | 206 | 192 | 164 | 157 |
| Average Queue (ft)    | 149 | 120 | 205 | 218 | 16  | 61  | 188 | 197 | 72  | 94  | 43  | 50  |
| 95th Queue (ft)       | 220 | 186 | 316 | 323 | 37  | 117 | 328 | 334 | 155 | 168 | 111 | 105 |
| Link Distance (ft)    |     |     | 944 | 944 |     |     | 969 | 969 |     |     | 525 |     |
| Upstream Blk Time (%) |     |     |     |     |     |     |     |     |     |     |     |     |
| Queuing Penalty (veh) |     |     |     |     |     |     |     |     |     |     |     |     |
| Storage Bay Dist (ft) | 450 | 450 |     |     | 400 | 475 |     |     | 400 | 125 |     | 200 |
| Storage Blk Time (%)  |     |     |     | 0   |     |     |     |     |     | 4   | 0   |     |
| Queuing Penalty (veh) |     |     |     | 0   |     |     |     |     |     | 6   | 0   |     |

Intersection: 25: Golden Sage Rd & Woodmen Rd

| Movement              | SB  | SB  |
|-----------------------|-----|-----|
| Directions Served     | L   | T   |
| Maximum Queue (ft)    | 167 | 90  |
| Average Queue (ft)    | 130 | 29  |
| 95th Queue (ft)       | 187 | 66  |
| Link Distance (ft)    | 154 | 154 |
| Upstream Blk Time (%) | 16  |     |
| Queuing Penalty (veh) | 36  |     |
| Storage Bay Dist (ft) |     |     |
| Storage Blk Time (%)  |     |     |
| Queuing Penalty (veh) |     |     |

Intersection: 26: Golden Sage Rd & Woodmen Frontage Rd

| Movement              | EB   | WB   | NB  | NB  |
|-----------------------|------|------|-----|-----|
| Directions Served     | TR   | LT   | LR  | R   |
| Maximum Queue (ft)    | 140  | 641  | 170 | 173 |
| Average Queue (ft)    | 50   | 258  | 115 | 17  |
| 95th Queue (ft)       | 101  | 527  | 194 | 99  |
| Link Distance (ft)    | 1503 | 1983 | 154 | 154 |
| Upstream Blk Time (%) |      |      | 5   | 0   |
| Queuing Penalty (veh) |      |      | 20  | 1   |
| Storage Bay Dist (ft) |      |      |     |     |
| Storage Blk Time (%)  |      |      |     |     |
| Queuing Penalty (veh) |      |      |     |     |

Zone Summary

Zone wide Queuing Penalty: 197

Timings

2040 Total Traffic WITH Right-in Access (3 NB TH)

1: Meridian Rd & Woodmen Rd

PM Peak Hour

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       |       |       |       |       |       |       |       |       |       |       |       |
| Traffic Volume (vph) | 755   | 794   | 375   | 225   | 665   | 262   | 465   | 893   | 200   | 483   | 704   | 602   |
| Future Volume (vph)  | 755   | 794   | 375   | 225   | 665   | 262   | 465   | 893   | 200   | 483   | 704   | 602   |
| Turn Type            | Prot  | NA    | Free  | Prot  | NA    | Perm  | Prot  | NA    | Free  | Prot  | NA    | Free  |
| Protected Phases     | 5     | 2     |       | 1     | 6     |       | 3     | 8     |       | 7     | 4     |       |
| Permitted Phases     |       |       | Free  |       |       | 6     |       |       | Free  |       |       | Free  |
| Detector Phase       | 5     | 2     |       | 1     | 6     | 6     | 3     | 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   |       |
| Minimum Split (s)    | 10.0  | 11.5  |       | 10.0  | 11.5  | 11.5  | 10.0  | 11.5  |       | 10.0  | 11.5  |       |
| Total Split (s)      | 32.0  | 45.0  |       | 17.0  | 30.0  | 30.0  | 24.0  | 36.0  |       | 22.0  | 34.0  |       |
| Total Split (%)      | 26.7% | 37.5% |       | 14.2% | 25.0% | 25.0% | 20.0% | 30.0% |       | 18.3% | 28.3% |       |
| Yellow Time (s)      | 3.0   | 4.5   |       | 3.0   | 4.5   | 4.5   | 3.0   | 4.5   |       | 3.0   | 4.5   |       |
| All-Red Time (s)     | 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  |       |
| Total Lost Time (s)  | 4.0   | 5.5   |       | 4.0   | 5.5   | 5.5   | 4.0   | 5.5   |       | 4.0   | 5.5   |       |
| Lead/Lag             | Lead  | Lag   |       | Lead  | Lag   | Lag   | Lead  | Lag   |       | Lead  | Lag   |       |
| Lead-Lag Optimize?   | Yes   | Yes   |       | Yes   | Yes   | Yes   | Yes   | Yes   |       | Yes   | Yes   |       |
| Recall Mode          | None  | Min   |       | None  | Min   | Min   | None  | None  |       | None  | None  |       |
| Act Effct Green (s)  | 28.0  | 40.1  | 118.4 | 12.4  | 24.5  | 24.5  | 19.4  | 28.8  | 118.4 | 18.0  | 27.4  | 118.4 |
| Actuated g/C Ratio   | 0.24  | 0.34  | 1.00  | 0.10  | 0.21  | 0.21  | 0.16  | 0.24  | 1.00  | 0.15  | 0.23  | 1.00  |
| v/c Ratio            | 0.99  | 0.68  | 0.24  | 0.64  | 0.93  | 0.50  | 0.84  | 0.74  | 0.13  | 0.95  | 0.88  | 0.39  |
| Control Delay        | 74.0  | 37.5  | 0.4   | 59.8  | 66.3  | 8.2   | 62.7  | 45.2  | 0.2   | 78.3  | 56.8  | 0.7   |
| 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          | 74.0  | 37.5  | 0.4   | 59.8  | 66.3  | 8.2   | 62.7  | 45.2  | 0.2   | 78.3  | 56.8  | 0.7   |
| LOS                  | E     | D     | A     | E     | E     | A     | E     | D     | A     | E     | E     | A     |
| Approach Delay       |       | 45.0  |       |       | 51.8  |       |       | 44.7  |       |       | 43.8  |       |
| Approach LOS         |       | D     |       |       | D     |       |       | D     |       |       | D     |       |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 118.4  
 Natural Cycle: 90  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.99  
 Intersection Signal Delay: 45.8  
 Intersection LOS: D  
 Intersection Capacity Utilization 89.3%  
 ICU Level of Service E  
 Analysis Period (min) 15

Splits and Phases: 1: Meridian Rd & Woodmen Rd

