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Falcon Field 2021 Rezone
Master Traffic Impact Study
PCD File No. P217
(LSC #S214730)
January 21, 2022

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.

COLORADO LICENSED
JEFFREY C. HODSDON
31684
1-21-22
PROFESSIONAL ENGINEER

Developer's Statement

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

1/20/22
Date

Falcon Field Rezone

Master Traffic Impact Study

PCD File No. P217

Prepared for:
P.J. Anderson
31 N Tejon, Ste 500
Colorado Springs, CO 80903

Contact: Mr. P.J. Anderson

JANUARY 21, 2022

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

LSC #S214730

CONTENTS

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January 21, 2022

P.J. Anderson
31 N Tejon, Ste 500
Colorado Springs, CO 80903

RE: Falcon Field 2021 Rezone
El Paso County, CO
Traffic Impact Study
LSC #S214730

Dear Mr. Anderson,

LSC Transportation Consultants, Inc. has prepared this updated Traffic Impact Study for the Falcon Field development in the Falcon area of El Paso County, Colorado. Falcon Field is a proposed development to be located southeast of the intersection of US Highway 24 (US Hwy 24) and Woodmen Road. This report has been prepared to accompany a rezone application submittal to El Paso County and the Colorado Department of Transportation (CDOT). The plans for development have been revised from commercial to a mix of commercial and residential land uses. LSC previously completed traffic reports for the original rezone and the Preliminary Plan.

REPORT CONTENTS

The preparation of this report included the following:

- An inventory of existing roadway and traffic conditions on the adjacent and nearby roadway system, including functional classification, widths, pavement markings, surface conditions, traffic, traffic-control signs, posted speed limits, intersection and access spacing, roadway and intersection alignments, roadway grades, and auxiliary turn lanes;
- Weekday peak-hour turning-movement traffic counts at the following intersections:
    - Woodmen Road/US Hwy 24
    - Rio Lane/US Hwy 24
    - US Highway 24/"New" Meridian Road
- Estimated current average weekday traffic (AWT) volumes on the study-area streets including US Hwy 24, Meridian Road, McLaughlin Road, and Rio Lane;
- Projections of 20-year background traffic volumes on the study-area streets;
- The proposed site land uses;

- Estimates of average weekday and weekday peak-hour trip generation for the proposed Falcon Field development and the estimated directional distribution of site-generated vehicle trips on the area street and roadway network;
- Projected site-generated and resulting total peak-hour intersection traffic volumes at the study-area intersections;
- Projected total daily (AWT) volumes on the study-area streets;
- Intersection level of service analysis at the study-area intersections;
- Vehicle queuing and sight distance analysis at the proposed site access points;
- Recommended street classifications; and
- Findings and recommendations.

LIST OF OTHER TRAFFIC REPORTS USED IN THE PREPARATION OF THIS REPORT

A master TIS report for the original/prior Falcon Field rezone - is dated February 24, 2020. Additionally, a report for the previously submitted preliminary plan is dated November 5, 2020.

Comparison to the TIS for the initial property rezone dated February 24, 2020 (and the TIS for the Preliminary Plan Report dated November 5, 2020): The site trip generation and site-generated traffic based on the currently-proposed zoning **is significantly lower** than for the strictly commercial zoning that was originally approved. Details are included in the Trip Generation section.

December 2021 Update **[unchanged in this January 2022 version]**: The site-generated traffic for the residential parcels in this report is slightly higher than the prior [August 2021] version. This was in response to [a previous] staff comment regarding the maximum potential number of units within the residential zones. The commercial site-generated traffic was not modified. Offsite intersections were added in response to the comments. New traffic counts were conducted at these added intersections. As a result of those newer counts, further background traffic adjustments were also made. The findings and recommendations remain unchanged.

The most recent versions of the following traffic reports were utilized in preparing this report: *Falcon Marketplace*, *Meadowlake Ranch* (LSC), *The Ranch* (LSC), and the School District 49 Transportation Facility study (LSC) *US Hwy 24 Planning and Linkage Study* (CDOT). This report is generally consistent with these reports. Minor adjustments to background traffic volumes have been made to account for newer traffic counts, and traffic projections in the CDOT PEL study.

LAND USE AND ACCESS

Figure 1 shows the site location relative to the adjacent and nearby roadways. The development is planned to have commercial and residential land uses. The site is directly southeast of the intersection of Woodmen Road/US Hwy 24 in Parcels 4307000001 and 4307200015. The site plan/land use map is shown in Figure 2.

As shown on the site plan, the primary access will be a new southeast leg of the Woodmen Road/US Hwy 24 intersection (currently a T-intersection). This entry/access street will be classified as an Urban Non-Residential Collector. The proposed series of new street connections between this entry drive and existing Rio Lane to the east would be classified as Urban Non-Residential Collectors or Urban Local streets. Recommended street classifications are presented near the end of this report. The intersection of the entry street and other primary internal street (southwest to northeast orientation) is proposed as a modern roundabout.

Street stubs to the west and south are shown, which would allow for future connections to future adjacent developments if ever needed. Currently, these connections are not proposed for use by this project. These are being provided for the benefit of US Hwy 24 access management and adjacent property owners, should future connections to adjacent future developments become necessary.

PROPOSED RIO LANE CLOSURE AT US HIGHWAY 24

The intersection of Rio Lane/US Hwy 24 is proposed to be closed, as shown in the adopted *US Highway 24 Access Management Plan* and the *US 24 Planning and Environmental Linkages Study, October 2017*. The project will help implement the US Hwy 24 Access Management Plan by providing an alternative to the Rio Lane/US Hwy 24 intersection.

The site plan shows the proposed internal public streets for site circulation and the new connection to Rio Lane that would allow for the prescribed closure of the US Hwy 24/Rio intersection per CDOT's *US Highway 24 Access Management Plan*.

EXISTING ROADWAY AND TRAFFIC VOLUMES

Area Roadways

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

- **Woodmen Road** is a four-lane east/west Expressway that ends at the intersection with US Hwy 24. The intersections of Woodmen Road with Meridian Road, McLaughlin Road, and US Hwy 24 are all signalized.

- **US Highway 24** is a two-lane, category EX - Expressway/Major Bypass adjacent to the site that runs northeast/southwest with a 55-mile-per hour (mph) posted speed limit. The corridor was studied in-depth in the *US 24 Planning and Environmental Linkages Study*. Two alternatives were carried forward in this study for the segment of US Hwy 24 adjacent to the site:
    - US Hwy 24 as a six-lane corridor
    - US Hwy 24 as a four-lane corridor with a peak-period shoulder lane in each direction

Because both scenarios result in US Hwy 24 operating a six-lane road during peak hours, this has been assumed for the 2040 analysis.

- **Meridian Road** is a four-lane north/south Principal Arterial. Meridian Road has recently been connected with US Hwy 24 with traffic-signal control. The US Hwy 24/Old Meridian Road intersection has been converted to a right-in/right-out intersection. To the south, Old Meridian Road will continue to connect to Swingline Road and will provide access to the new park-n-ride lot.

- **McLaughlin Road** is a two-lane, Non-Residential Collector road that extends north from Rolling Thunder Avenue to Eastonville Road. The roadway provides retail and residential access, both north and south of Woodmen Road.

- **Rio Lane and Rio Road** are two-lane Rural Local roadways that connect US Hwy 24 to Falcon Highway. The roadways are about 24 feet wide. The intersection with US Hwy 24 is stop-sign-controlled. The intersection with US Hwy 24 is planned to be closed and the new internal roads planned as part of this development will serve as the replacement connection to US Hwy 24.

Existing Traffic Volumes

Figure 3a shows the results of morning and afternoon peak-hour turning-movement traffic counts at the intersections of Woodmen Road/US Hwy 24, US Highway 24/"New" Meridian Road, US Hwy 24/"Old" Meridian Road, Woodmen/McLaughlin, and Rio Lane/US Hwy 24. The intersection-traffic counts were collected in August 2021 and late November/early December 2021.

Existing Levels of Service

Level of service (LOS) is a quantitative measure of the level of 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. Table 1 shows the level of service delay ranges.

Table 1. Intersection Levels of Service Delay Ranges

Level of Service	Signalized Intersections Average Control Delay (seconds per vehicle)	Unsignalized Intersections Average Control Delay (seconds per vehicle)(1)
A	10.0 sec or less	10.0 sec or less
B	10.1-20.0 sec	10.1-15.0 sec
C	20.1-35.0 sec	15.1-25.0 sec
D	35.1-55.0 sec	25.1-35.0 sec
E	55.1-80.0 sec	35.1-50.0 sec
F	80.1 sec or more	50.1 sec or more

(1) For unsignalized intersections, if V/C ratio is greater than 1.0 the level of service is LOS F, regardless of the projected average control delay per vehicle.

Figure 3b presents the results of the existing intersection level of service analysis. The signalized intersections were analyzed using Synchro. While the unsignalized intersection of US Hwy 24/Rio Lane was analyzed based on the unsignalized method of analysis procedures from the *Highway Capacity Manual, 6th Edition* by the Transportation Research Board. The level of service reports are attached.

The southwest-bound through/left at the stop-sign-controlled intersection of US Hwy 24/Rio Lane currently operates at LOS B or better during the peak hours. The shared northwest-bound left-/right-turning movement on Rio Lane operates at LOS F during the peak hours. The levels of service F for this movement are due both to the volume of left-turning vehicles and the high volume of through vehicles on US Hwy 24.

The intersection of US Hwy 24/Woodmen Road currently operates at LOS B during both peak hours, with all movements operating at LOS C or better.

TRIP GENERATION

Estimates of the vehicle trips projected to be generated by the proposed development have been made using the nationally-published trip-generation rates from *Trip Generation, 11th Edition, 2021* by the Institute of Transportation Engineers (ITE). Table 2 below presents a summary of the estimated site trip generation. The detailed trip-generation estimate for the development, including ITE rates for the proposed land use, is presented in Table 3.

Table 2: Estimated External Falcon Field Weekday Vehicle-Trip Generation

Analysis Period	Total External Trips			Pass-By Trips			Diverted Trips		
	In	Out	Total	In	Out	Total	In	Out	Total
A.M. Peak Hour	112	142	254	23	23	46	18	18	36
P.M. Peak Hour	286	252	538	69	69	138	53	53	106
Daily/24-Hour	3,522	3,522	7,045	925	925	1,851	708	708	1,416

Approximately 7,045 total external daily trips are projected to enter and exit the site at the access point ("driveway trips") on the average weekday. During the morning peak hour, approximately 112 vehicles would enter, and 142 vehicles would exit the site. During the evening peak, approximately 286 vehicles would enter, and 252 vehicles would exit. The proposed development is projected to generate approximately 5,194 (non-pass-by) vehicle trips on the average weekday during a 24-hour period.

A detailed trip-generation estimate for the Falcon Field development, including ITE rates for the proposed land use, is presented in Table 3 (attached).

Internal Trips

Internal trips are trips that occur within the site and do not impact the external roadways. Because the site is planned to have multiple retail pads and housing, some of the generated trips will be traveling within the site. Table 3 includes estimates of internal trip capture to account for trips generated within the site.

Pass-by and Diverted Trips

The trips generated by the commercial portions of the site have also been aggregated by trip type to account for the pass-by phenomenon. A pass-by trip is one made by a motorist who would already be on an adjacent road regardless of the proposed development, but who stops in at the site while passing by. The pass-by motorist would then continue on his or her way to a final destination in the original direction. For purposes of this report, pass-by trips are trips by motorists already traveling through the intersection of US Hwy 24/Woodmen Road.

Because the site is near the intersections of US Hwy 24/Falcon Highway and US Hwy 24/Meridian Road, vehicles traveling through these intersections, but not through the intersection of US Hwy 24/Woodmen Road may still stop at the site on the way to their destination. Because these intersections are not directly adjacent to the site, these trips would be considered "diverted trips", based on ITE terminology, and therefore are referred to as such in this report. These trips would result in altered turning movements at the nearby major intersections of US Hwy 24/Falcon Highway, US Hwy 24/Meridian Road, and Woodmen Road/Meridian Road and new turning movements at the intersection of US Hwy 24/Woodmen Road. In addition, it has been assumed that some of these diverted trips coming to and from Falcon Highway to the east will use Rio Road and Rio Lane to access the site.

Pass-by and diverted trips are shown in Table 3 and are based on *Trip Generation Handbook - An ITE Proposed Recommended Practice*, 3rd Edition, 2014 by ITE.

Trip Generation Comparison

Table 3 also includes comparisons to both the TIS for the initial property rezone dated February 24, 2020 and the TIS for the Preliminary Plan Report dated November 5, 2020. The current site trip-generation estimate for the currently-proposed zoning/land uses assumed is significantly lower than for the strictly commercial zoning that was originally approved.

TRIP DISTRIBUTION

An estimate of the directional distribution of site-generated vehicle trips to the study-area roads and intersections is a necessary component in determining the site-generated traffic volumes. Figure 4 shows the directional-distribution estimate for the primary site-generated trips. The figure shows the percentages of the site-generated vehicle trips (primary trips) projected to be oriented to and from the site's major approaches. Estimates have been based on the following factors: traffic counts conducted at major intersections adjacent to the proposed development, the proposed land uses, the access plan, the area road system serving the site, the site's geographic location, and previously-conducted LSC studies in the vicinity.

The directional-distribution estimates for primary trips are based on the anticipated service area for the retail portion of the development. This commercial center will primarily serve the Falcon area. The higher percentages for Meridian Road north of Woodmen, McLaughlin Road north of Woodmen Road, and US Hwy 24 east of the site reflect the higher current density of "rooftops" and the anticipated growth areas to the north and northeast. The ten-percent split is associated with current residential development and potential future developments to the east (Falcon Highway corridor) and southeast. The five-percent split to/from the southwest on US Hwy 24 (primary trips, like the other directional splits) is intended to account for some future Banning Lewis Ranch connections to US Hwy 24 and potentially some trips from the Cimarron Hills area (likely limited by the longer trip length and availability of retail shops in the Powers Boulevard corridor). The six-percent split to/from west Rolling Thunder Way reflects the residential development in that direction. While the seven-percent split to/from west Woodmen Road accounts for some traffic coming from areas to the west, including northern Colorado Springs, via this route.

Additionally, Figure 4 shows what percentage of overall pass-by and diverted trips have been pulled from each turning movement at the affected intersections to be rerouted as part of the site-generated traffic.

For the residential portion of the development, the directional distribution of the trips is based on residential-oriented destinations during peak hours, such as places of employment, shopping centers, schools, etc. It is anticipated that most trips will travel to/from the west either via Woodmen Road or US Hwy 24, as most retail and employment centers are to the west. Most of

the remaining trips are expected to go to/from the north and east via US Hwy 24, McLaughlin Road, and Meridian Road.

Site-Generated Traffic

Site-generated traffic volumes for the development during the weekday morning and evening peak hours are shown in Figure 5 for the following intersections:

- Woodmen Road/US Hwy 24
- Woodmen Road/Meridian Road
- Woodmen Road/McLaughlin Road
- US Hwy 24/Meridian Road (long-term only)
- US Hwy 24/Old Meridian Road (long-term only)
- Internal roundabout
- Internal access points

Site-generated traffic volumes have been calculated by applying the directional-distribution percentages estimated by LSC (from Figure 4) to the trip-generation estimates (from Table 3). The pass-by trips and diverted trips were assigned, based on the magnitude and direction of the peak-hour traffic volumes projected for the major study-area streets/roads.

BACKGROUND TRAFFIC VOLUMES

Background traffic is traffic on the adjacent roadways that is forecast to be present without the proposed development. Short-term and 2040 background traffic scenarios were developed.

Both future forecasts also assume that the intersection of US Hwy 24/Rio Lane has been closed and the associated traffic has been re-routed. Because Rio Lane will no longer directly access US Hwy 24, LSC projects that some of the previous trips using Rio Lane and Rio Road will redistribute and use Falcon Highway or Meridian Road to access US Hwy 24.

Short Term

Figure 6a shows the estimated short-term background traffic volumes at the study-area intersections. The short-term background volumes assume that the US Hwy 24/Rio Lane intersection has been closed and traffic has been rerouted through the new fourth leg of the US Hwy 24/Woodmen Road intersection.

Long Term

Figure 7a shows the estimated 2040 background traffic volumes. These projected volumes include estimates from planned future Falcon area development and increases in through traffic volumes on the study-area roadways. The 2040 background volumes were developed using the US Hwy 24 PEL study. Volumes were modified as needed, based on newer count volumes and

expected development in the study area. The 2040 background assumes future commercial development on the parcel to the west of the site with access through the proposed Falcon Field development and the internal roundabout.

TOTAL TRAFFIC VOLUMES

Site-generated traffic volumes from Figure 5 were added to short-term background traffic volumes from Figure 6a to calculate short-term total traffic volumes provided on Figure 8a. Similarly, 2040 total traffic volumes provided in Figure 9a were calculated by adding the site-generated traffic (Figure 5) with the 2040 background traffic volumes (Figure 7a).

LEVEL OF SERVICE ANALYSIS

Short-Term

Levels of service were calculated for both the short-term background and short-term total traffic volumes, as shown in Figure 6b and Figure 8b, respectively. Traffic lanes used in the analysis are also provided in these figures.

US Highway 24/Woodmen

In the short-term scenarios, it has been assumed that no baseline capacity improvements (additional eastbound/westbound through lanes) will occur on US Hwy 24. The improvements assumed at the intersection of US Hwy 24/Woodmen Road would include:

- The fourth leg of the intersection with a left-lane, two through-lanes, and right-lane outbound at the site access;
- Auxiliary turn lanes on US Hwy 24 to serve the trips/vehicle turning movements associated with the new fourth leg - the development, and the “replacement” Rio Lane connection;
- Raised right-turn islands for pedestrian accessibility;
- Any lane alignment and/or median modifications on the Woodmen side of the intersection (to be determined with preliminary design); and
- Signal modifications.

Overall, the signalized intersection is forecast to operate at LOS C or better during both peak hours in both the short-term background and total scenarios.

US Highway 24/“New” Meridian Road

Overall, the recently-reconstructed, signalized intersection of US 24/“New” Meridian Road is forecast to operate at LOS D or better during both peak hours in both the short-term background and total scenarios.

US Highway 24/"Old" Meridian Road

All individual turn lanes/approaches at the intersection of US 24/"Old" Meridian Road are projected to operate at LOS C or better during both short-term peak hours, with or without the addition of site-generated traffic.

Woodmen Road/McLaughlin Road

All individual turn lanes/approaches at the intersection of Woodmen Road/McLaughlin Road are projected to operate at LOS D or better during both short-term peak hours, with or without the addition of site-generated traffic.

Roundabout Intersection

The proposed roundabout has been analyzed using methodology found in the *Highway Capacity Manual, 6th Edition*. The roundabout is expected to have all approaches operate at LOS A during both peak hours.

Internal Site-Access Points

The access points to the proposed public streets internal to the site have been analyzed as stop-sign-controlled (unsignalized) intersections. All yielding turning movements at the proposed access points are anticipated to operate at LOS B or better.

Long Term - 2040

Levels of service and traffic lanes/traffic control are provided for the 2040 background and 2040 total traffic scenarios in Figure 7b and Figure 9b, respectively.

US Highway 24/Woodmen

In the 2040 scenarios it has been assumed that US Hwy 24 has been widened to six lanes. Additionally, it has been assumed that the southeast-bound laneage on Woodmen Road at the US Hwy 24/Woodmen Road intersection reflects the laneage in the US Hwy 24 PEL (dual left turns, single through lane, dual right turns).

Overall, the signalized intersection of US Hwy 24/Woodmen Road is projected to operate at LOS C or better during both peak hours in the 2040 scenarios. All individual turning movements are projected to operate at LOS D or better, with or without the addition of site traffic.

US Highway 24/"New" Meridian Road

Overall, the signalized intersection of US 24/"New" Meridian Road is forecast to operate at LOS D or better during both peak hours in both the short-term background and total scenarios.

US Highway 24/"Old" Meridian Road

All individual turn lanes/approaches at the intersection of US 24/"Old" Meridian Road are projected to operate at LOS D or better during both long-term peak hours, with or without the addition of site-generated traffic.

Woodmen Road/McLaughlin Road

All individual turn lanes/approaches at the intersection of Woodmen Road/McLaughlin Road are projected to operate at LOS D or better during both long-term peak hours, with or without the addition of site-generated traffic.

Roundabout Intersection

The roundabout is expected to have all approaches operate at LOS A. With both the background commercial traffic traveling to/from the west through the roundabout and the site-generated traffic, LSC is showing a southbound right-turn bypass lane. This is shown to significantly reduce the potential queue length on the southbound approach to avoid impacts to the US Hwy 24/Woodmen Road intersection.

Internal Site-Access Points

The turning movements at the access points are all anticipated to operate at LOS D or better in all long-term scenarios.

QUEUING ANALYSIS

The 95th percentile queues at the intersection of US Hwy 24/Woodmen Road along with the queues at the intersection of the proposed Collector and Rio Lane were analyzed to develop laneage on the Collector. Figure 11 provides the 95th percentile queue lengths for the study intersections.

The El Paso County *Engineering Criteria Manual* (*ECM*) standards were followed to develop turn-lane recommendations at the intersections. Figure 10 provides the turn-lane conceptual design for the roadway between US Hwy 24 and Rio Lane. As shown, it is recommended that the outbound left turn be 270 feet in length and the outbound right turn should be at least 275 feet. Table 4 provides the proposed recommended turn-lane lengths along with the relevant standards and 95th percentile queues. Queueing reports are attached.

Right-In-Only Access Points

The assumption is that the site will be designed such that traffic entering the businesses via the proposed right-in-only access points will have a "free movement" into internal private-access drives, parking bays etc., such that queues will not form and back onto the right-in access points or onto the main entry street. This would likely be accomplished with a sufficient entry "throat" and other site-design elements that would give priority to entering traffic. The on-site/internal design and operation of these right-in access points would need to be verified with the Preliminary Plan and/or Site Development Plan stages of development.

SIGHT DISTANCE ANALYSIS

Sight distance will be addressed at the Preliminary Plan and Site Development Plan stages of development.

CONCLUSIONS AND RECOMMENDATIONS

Trip Generation

- Falcon Field is expected to generate about 7,045 new external vehicle trips on the average weekday, with about half entering and half exiting the site during a 24-hour period. During the morning peak hour, about 112 vehicles would enter and 142 vehicles would exit the site. During the afternoon peak hour, approximately 286 vehicles would enter and 252 vehicles would exit the site.

Traffic Operations Analysis

- The signalized intersection of US Hwy 24/Woodmen Road is projected to operate at LOS C or better during both peak hours for the short-term and year-2040 scenarios. The El Paso County *Engineering Criteria Manual* (*ECM*) standards were followed to develop turn-lane recommendations at the intersections. Figure 10 provides the turn-lane conceptual design for the roadway between US Hwy 24 and Rio Lane. Please refer to the Level of Service and Queuing Analysis sections of this report for additional details and discussion.

Recommended Improvements

- A list of recommended improvements within the site and in the study area is presented in Table 5.
- The intersection of US Hwy 24/Rio Lane is to be closed and the proposed Collector roads within the site will connect Rio Lane to the US Hwy 24/Woodmen intersection.

Short-term improvements assumed at the intersection of US 24/Woodmen Road would include:

- The fourth leg of the intersection with a left-lane, two through-lanes, and right-lane outbound at the site access;
- Raised right-turn islands for pedestrian accessibility;
- Any lane alignment and/or median modifications on the Woodmen side of the intersection (to be determined with preliminary design);
- Signal modifications; and
- Auxiliary turn lanes on US Hwy 24 to serve the trips/vehicle turning movements associated with the new fourth leg of this intersection. This new fourth leg would serve site traffic and background traffic shifted from the closure of the US Hwy 24/ Rio Lane connection.

Based on the 2040 total traffic volumes shown in Figure 9a and the criteria contained in the *State of Colorado Highway Access Code,* the following deceleration and acceleration lanes are required on US Hwy 24:

- A northeast-bound right-turn deceleration lane is warranted on US Hwy 24 approaching Woodmen Road. Based on a posted speed limit of 55 mph, the prescribed lane length for the deceleration lane is 600 feet plus a 222-foot taper.
- A southwest-bound left-turn deceleration lane is warranted on US Hwy 24 approaching Woodmen Road. Based on a posted speed limit of 55 mph, the prescribed lane length for the deceleration lane is 600 feet plus 100 feet of storage and a 222-foot taper.
- A northwest-bound right-turn acceleration lane is warranted on US Hwy 24 east of Woodmen Road. Based on a posted speed limit of 55 mph, the prescribed lane length for the acceleration lane is 960 feet plus a 222-foot taper.
- Based on the total traffic volumes shown in Figure 9a and the criteria contained in the El Paso County *Engineering Criteria Manual (ECM)*, turn lanes are required on the urban non-residential Collector at the intersection with US Hwy 24 and the intersection with Rio Lane. Additional details are provided in Figure 10.

DEVIATIONS TO ECM CRITERIA

The following deviations may be required. Deviations are not submitted at this stage of the development review process. These would be submitted with the Preliminary Plan.

- Public street intersection spacing along a Non-Residential Collector for the first intersection back from an arterial roadway;
- Access to an Urban Non-Residential Collector;
- *ECM*-standard auxiliary turn-lane lengths on an Urban Non-Residential Collector.

ROADWAY CLASSIFICATIONS

- The roads proposed for this project would be classified as Urban Non-Residential Collector streets. Please refer to the "Existing Roadways" section above for classification information of existing roads as well as Figure 12.

MTCP-IDENTIFIED FUTURE NEEDED ROADWAY IMPROVEMENT PROJECTS

- The *El Paso County Major Transportation Corridors Plan* (*MTCP*) calls for improvement to US Hwy 24 from Garrett Road to Woodmen Road and upgrade to a rural six-lane Principal Arterial.
- Although not in the immediate area, the *MTCP* calls for an upgrade to Falcon Highway to a two-lane, rural Minor Arterial from US Hwy 24 to one mile east of Curtis Road. Also, the *MTCP* calls for an upgrade to Eastonville Road from McLaughlin to Latigo Boulevard as a rural road upgrade to a two-lane Rural Minor Arterial.
-

MULTI-MODAL TRANSPORTATION & TRANSPORTATION DEMAND MANAGEMENT OPPORTUNITIES

- The project would include urban street sections with sidewalks.
- Figure 10 shows the recommendation for pedestrian crossing of US Hwy 24. LSC recommends pedestrian/bicycle trail connections between the US Hwy 24 Woodmen intersection to the Rock Island Trail and the existing sidewalks within the existing shopping center areas of Falcon.
- Also, trail connections exist between the Rock Island Trail and the Woodmen Hills neighborhoods to the north of US Hwy 24.
- A Park & Ride is planned for a site south of US Hwy 24 & Woodmen. Future Mountain Metropolitan Transit bus service may be added to/from this Park & Ride location.
- This site is within two miles of Falcon Elementary School. No residential uses are proposed for this development.

COUNTY ROAD IMPROVEMENT FEE PROGRAM

- This project is potentially subject to participation in the County Roadway Improvement Fee Program. The site is located within the Woodmen Road Metropolitan District service area. However, Fee Program participation may replace Woodmen Road fees, depending on timing of development and platting.

US HIGHWAY ACCESS MANAGEMENT PLAN AND RIO LANE CLOSURE AT US HIGHWAY 24

- This project will implement part of the *US Highway Access Management Plan*. The intersection of Rio Lane/US Hwy 24 is proposed to be closed, as shown in the *adopted US Highway 24 Access Management Plan* and the *US 24 Planning and Environmental*

Linkages Study, October 2017. The project will help implement the *US Highway 24 Access Management Plan* by providing an alternative to the Rio Lane/US Hwy 24 intersection.

- The site plan shows the proposed internal public streets for site circulation and the new connection to Rio Lane that would allow for the prescribed closure of the US Hwy 24/Rio intersection per CDOT's *US Highway 24 Access Management Plan*.
- This will benefit safety and traffic operations on US Hwy 24. The existing Rio Lane/US Hwy 24 intersection is substandard, as there are no left- and right-turn lanes. The level of service during the peak hour is LOS F (96 seconds of delay per vehicle on average for vehicles wanting to turn onto US Hwy 24).
- The project will generate trips using Rio Lane and Rio Road between Falcon Highway and the site, but it is important to note that by closing the direct Rio Lane connection to US Hwy 24, the route used by cut-through traffic will be significantly more circuitous and will likely discourage motorists who currently use Rio Lane and Rio Road as a cut-through route to Falcon Highway.
- The recent "New" Meridian Road extension south of Rolling Thunder, across US Hwy 24 to Falcon Highway will also improve the roadway connectivity to Falcon Highway (and further discourage cut through traffic on Rio Lane and Rio Road). This is expected to be a significant improvement to the previous Meridian Road connection across US Hwy 24.
- The County has indicated that they will require upgrades to Rio Lane and Rio Road, necessary to accommodate the resulting net traffic volumes on Rio Lane and Rio Road between Falcon Highway and the site. The details of upgrades will be addressed as part of the upcoming Preliminary Plan application. The "net" traffic volumes will be estimated with the Preliminary Plan. The net volumes would be the current volumes plus increases due to site-generated traffic minus reductions in cut-through traffic and redistribution of area resident traffic (due to the closure of the direct connection of Rio Lane to US Hwy 24).
- The project will add a signal-controlled connection to US Hwy 24 and Woodmen - not only for this development but also for the benefit of the residents in Falcon Ranch Estates and Arrowhead Estates Filing No. 1. This connection will have left- and right-turn lanes on US Hwy 24.
- The proposed roundabout is proposed to be constructed as a T-intersection (no south leg). However, a fourth (south) leg could be added in the future if/when adjacent propert(ies) southeast of Falcon Field redevelop in the future. The applicant will reserve land southeast of the roundabout as right-of-way preservation for a potential future extension to the adjacent property, if ever needed.

* * * * *

Please contact me if you have any questions regarding this report.

Sincerely,

LSC TRANSPORTATION CONSULTANTS, INC.

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

JCH/CRG/JAB:jas

Enclosures: Tables 3-5
Figures 1-12
Traffic Count Reports
Level of Service Reports

References:

Trip Generation Handbook - An ITE Proposed Recommended Practice, Third Edition September 2017, Institute of Transportation Engineers
Trip Generation, 10th Edition, 2017, Institute of Transportation Engineers
El Paso County Major Transportation Corridors Plan, 2016
Engineering Criteria Manual, 2016, El Paso County
NCHRP Report 684 Enhancing Internal Trip Capture Estimation for Mixed-Use Developments, 2011, Transportation Research Board
State Highway Access Code, Volume Two, 2002, Colorado Department of Transportation
US 24 Access Control Plan, 2005
US 24/Meridian Road Construction Plans
US 24 PEL Final Corridor Conditions Report, December 2016

Tables

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Table 3: Detailed Trip Generation Estimate

Land Use Code	Land Use Description	Trip Generation Units	Trip Generation Rates (1) Average Weekday Traffic	Morning Peak Hour In	Morning Peak Hour Out	Afternoon Peak Hour In	Afternoon Peak Hour Out	Total Trips Generated Average Weekday Traffic	Morning Peak Hour In	Morning Peak Hour Out	Afternoon Peak Hour In	Afternoon Peak Hour Out	Daily Internal Trip %	Internal Trips Generated Average Weekday Traffic	Morning Peak Hour In	Morning Peak Hour Out	Afternoon Peak Hour In	Afternoon Peak Hour Out	External Trips Generated Average Weekday Traffic	Morning Peak Hour In	Morning Peak Hour Out	Afternoon Peak Hour In	Afternoon Peak Hour Out	Pass-By Trips (2)	Non-Passby External Trips Generated Average Weekday Traffic
	Current Rezone Land Uses																								
821	Shopping Plaza (40-150k)	84 KSF(3)	67.52	1.07	0.65	2.55	2.64	5,672	90	55	214	222	4%	227	6	4	15	16	5,445	84	51	199	206	34%	3,594
210	Single Family Detached Housing	80 DU	10.28	0.20	0.56	0.64	0.38	822	16	45	51	30	12%	102	2	3	8	7	720	14	42	43	23	0%	720
220	Multi Family Housing (Low Rise)	145 DU	6.93	0.11	0.36	0.36	0.21	1,005	16	52	52	31		125	2	3	8	8	880	14	49	44	23	0%	880
							Total Trip Generation Estimate	**7,499**	**122**	**152**	**317**	**283**		**454**	**10**	**10**	**31**	**31**	**7,045**	**112**	**142**	**286**	**252**		**5,194**
	FOR COMPARISON - Trip Generation From November 5, 2020 Preliminary Plan TIS (PCD File No. SP211)																								
820,862	Shopping Center and Home Improvement Supterstore																		**13544**	**265**	**183**	**590**	**631**		**8,247**
	FOR COMPARISON - Trip Generation From February 24, 2020 Master TIS (PCD File No. CR191)																								
820,862	Shopping Center and Home Improvement Supterstore																		**13544**	**265**	**183**	**590**	**631**		**8,247**

Notes:

(1) Source: "Trip Generation, 11th Edition, 2021" by the Institute of Transportation Engineers (ITE)

(2) Source: "Trip Generation Handbook - An ITE Proposed Recommended Practice, Third Edition September 2017" by ITE

(3) KSF = one thousand square feet of floor space

Source: LSC Transportation Consultants, Inc. (REV. 12/8/2021 JCH; added prior report trip generation comparison 1/21/22)

Table 4: Auxiliary Lane Analysis

Intersection	Turning Movement	Recommended Length (feet)	ECM/CDOT Standard (feet)	95th Percentile Queue (feet)
US 24/Woodmen	Northbound Left	270 Decel + Storage 120 Bay Taper	115 Decel 270 Storage 120 Bay Taper	40
	Northbound Through	270 (second through lane)		135
	Northbound Right	320 Decel	115 Decel	60
	Northbound Right (Accel)	960 Accel	225 Taper	N/A
	Eastbound Right	600 Decel 225 Taper	600 Decel 225 Taper	137
	Westbound Left	600 Decel 100 Storage 225 Taper	600 Decel 100 Storage 225 Taper	84
Falcon Fields/West Access	Eastbound Left	135 (Decel + Storage) 160 Bay Taper	155 Decel 50 Storage 160 Bay Taper	25
	Westbound Left	190 (Decel + Storage) 75 Bay Taper	115 Decel 100 Storage 120 Bay Taper	25
Falcon Fields/East Access	Eastbound Left	120 (Decel + Storage) 75 Bay Taper	115 Decel 250 Storage 120 Bay Taper	25
Falcon Fields/Rio Lane	Eastbound Left	130 (Decel + Storage) 75 Bay Taper	155 Decel 100 Storage 160 Bay Taper	25
REV. 1/21/2022	(1) In calculating queue lengths, Synchro does not assume the use of a free or yielding right turn. As a result, these queue lengths represent the worst case scenario. These turns are proposed to be channelized with yielding or free right turn operations, which will result in lower queues.			

Table 5: Recommended Improvements

Item #	Improvement	Timing	Responsibility
Roadway Segment Improvements			
1	Construct an Urban Non-Residential Collector street between the site "entry" street (See Item #10) to existing Rio Lane as per the US Highway 24 Access Management Plan.	With the subdivision (plat)	Applicant
2	Upgrade Rio Lane (Falcon Highway to the site) to Urban Local standards or a County approved alternative; pedestrian facilities would be included in the Urban Local cross section evaluate the roadway for potential traffic calming measures.	Current Traffic Volumes exceed Rural Local Design ADT	Applicant to contribute a proportionate share to an escrow account. Proportionate share shall be finalized with the plat. The plat or site development plan warranting the improvements will be responsible to construct
3	Widen US Highway 24 to provide three through lanes in each direction.	Shown in 2040 MTCP and the US Highway 24 PEL Study	CDOT/per PEL Study
US 24/Woodmen Road Intersection			
4	Construct a 700 foot-long southwestbound left-turn deceleration lane plus transition taper on US 24 (westbound) approaching Woodmen Road. This requires widening of the box culvert under US 24 just west of the US 24/Rio Lane intersection.	With site development, when the peak hour volume for this movement exceeds 10 vph	Applicant
5	Extend the southwestbound left-turn deceleration lane plus transition taper on US 24 (westbound) approaching Woodmen Road to 700 feet.	With site development, when the peak hour volume for this movement exceeds 60 vph. Requires the closure of Rio Lane	Applicant
6	Lengthening/extension of the westbound right turn deceleration lane on US Highway 24 at Woodmen Road to CDOT standards (600 feet plus transition taper) with the necessary widening of the box culvert under US 24. The culvert widening should accommodate an extension of the westbound right turn deceleration lane on US Highway 24 to CDOT standards.	With the culvert widening	The additional cost associated with the culvert widening for the right turn lane, and the lengthening of the right turn lane itself should not be the responsibility of this applicant. CDOT and/or EPC funds should reimburse the applicant for this improvement if completed as part of this project. NOTE: Staff has indicated that the applicant shall pursue any reimbursements with the advisory committee and/or CDOT. There may be potential for credit through the County Fee program.
7	Construct a 600 foot-long northeastbound right-turn deceleration lane plus transition taper on US 24 (eastbound) approaching Woodmen Road	With site development, when the peak hour volume for this movement exceeds 10 vph	Applicant
8	Construct a northwestbound right-turn acceleration lane on US 24 (eastbound) from the Woodmen Road intersection. Rio Lane would be closed with the added southern leg of the woodmen/hwy24 intersection and this will allow for the full-length, CDOT standard acceleration lane.	With site development, when the peak hour volume for this movement exceeds 10 vph	Applicant
9	Construct a 960 foot-long northwestbound right-turn acceleration lane (plus transition taper) on US 24 (eastbound) east of Woodmen Road.	With the closure of Rio Lane	Applicant
10	Construct the southeast leg of the intersection. Lanes need to align across US 24 (within allowable/acceptable lane offset tolerances and considering protected/permissive left turn sight distance and left turning vehicle paths).	With the subdivision (plat)	Applicant
11	Modify the northwest leg (Woodmen Road) **as needed** so lanes align across US 24; The details would be determined with the Preliminary Plan (One option would be to narrow raised median nose to about 6 feet); construct raised/curbed right turn islands for pedestrians and for installing a signal pole on the northeast corner, construct a sidewalk connection to the Rock Island Trail (which connects to the sidewalk along the north side of Woodmen Road adjacent to the Falcon Town Center (Safeway).	With the subdivision (plat)	Applicant
12	Traffic signal system modifications, pedestrian accommodations, signing/striping improvements to convert the existing intersection from a T intersection to a four-leg intersection.	With the subdivision (plat)	Applicant
The Planned On-Site Collector Streets			
13	Construct a modern roundabout (See Figure 10)	With the subdivision (plat)	Applicant
14	Construct access points where shown on Figure 10b and incorporate associated left and right turn bays into the design on the Non-Residential Collector Streets	With the subdivision (plat)	Applicant
US Highway 24 Right-of-Way Dedication & Preservation			
15	CDOT required Right-of-way Dedication & Preservation along US Highway 24	With the subdivision (plat)	Applicant
US 24/Rio Lane Intersection			
16	Close intersection in conjuction with Improvement #1	Short-Term - The closing shall be coordinated with CDOT and EPC.	Applicant
Falcon Highway/Rio Lane Intersection			
17	Construct westbound right turn deceleration lane	Once westbound right turning volume exceeds 50 right turning vehicles per hour.	Applicant

Source: LSC Transportation Consultants, Inc. (REV. 12-15-2021)

Figures

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Figure 1

Vicinity Map

Falcon Field 2021 Rezone (LSC# S214730)

LSC TRANSPORTATION CONSULTANTS, INC.

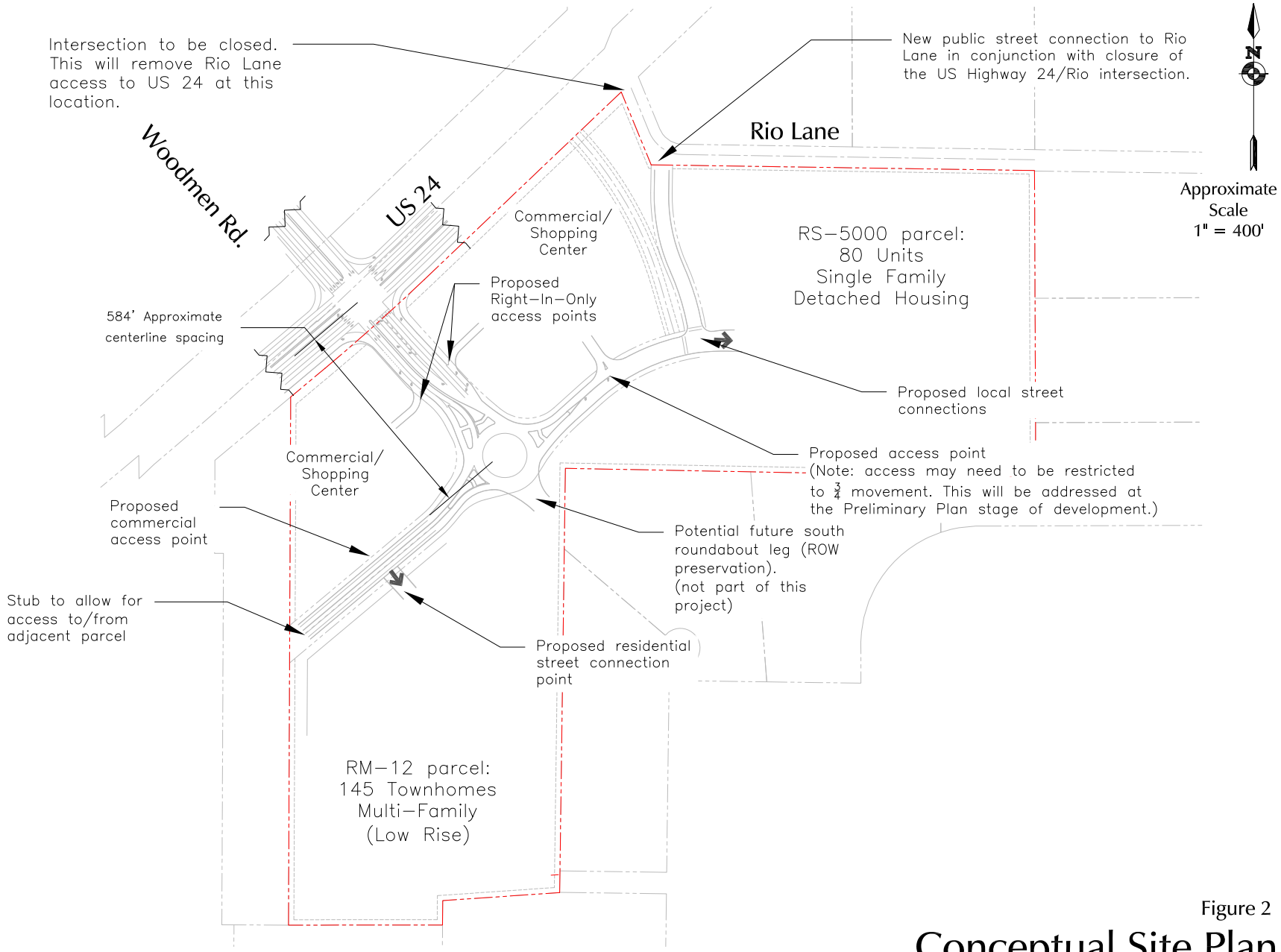
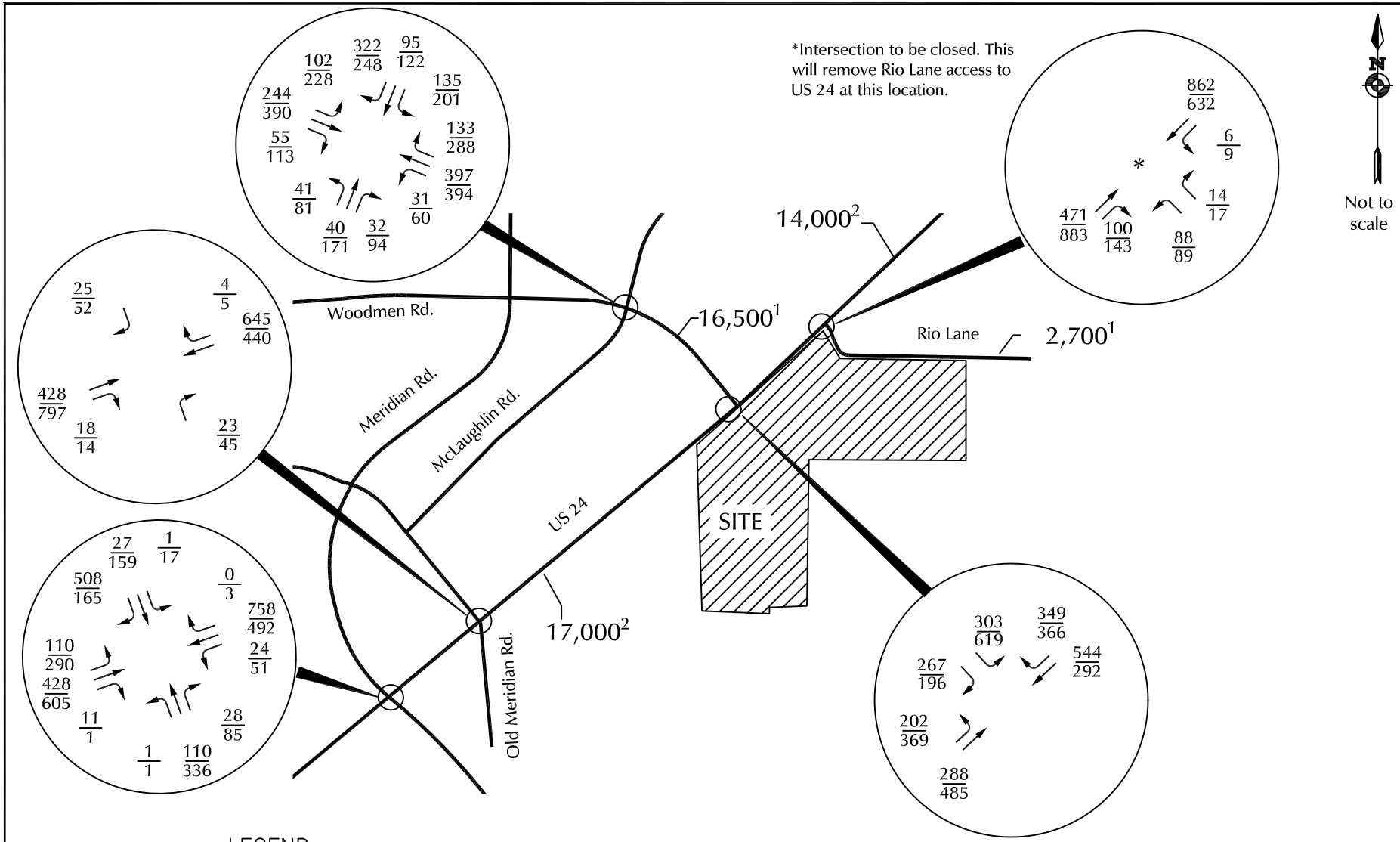


Figure 2

Conceptual Site Plan

Falcon Field 2021 Rezone (LSC# S214730)

LSC TRANSPORTATION CONSULTANTS, INC.



LEGEND: $\frac{XX}{XX} = \frac{\text{AM Peak-Hour Traffic (veh/hr)}}{\text{PM Peak-Hour Traffic (veh/hr)}}$ Counts by LSC August 2021

XXX = Average Weekday Traffic (vehicles per day)

[1] Estimates by LSC based on Peak Hour Volumes

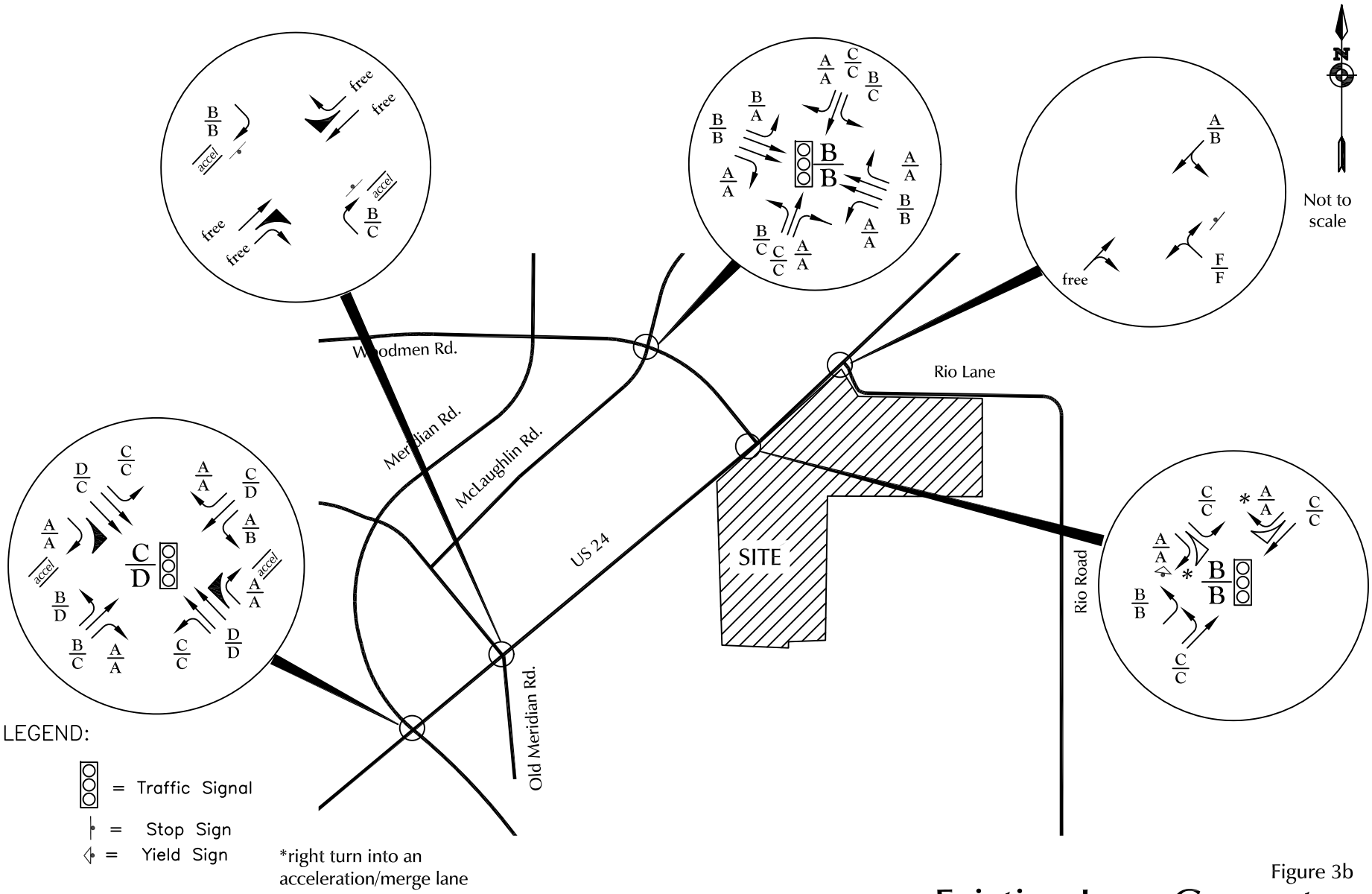
[2] CDOT AADT (2019)

LSC TRANSPORTATION CONSULTANTS, INC.

Figure 3a

Existing Traffic

Falcon Field 2021 Rezone (LSC# S214730)



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

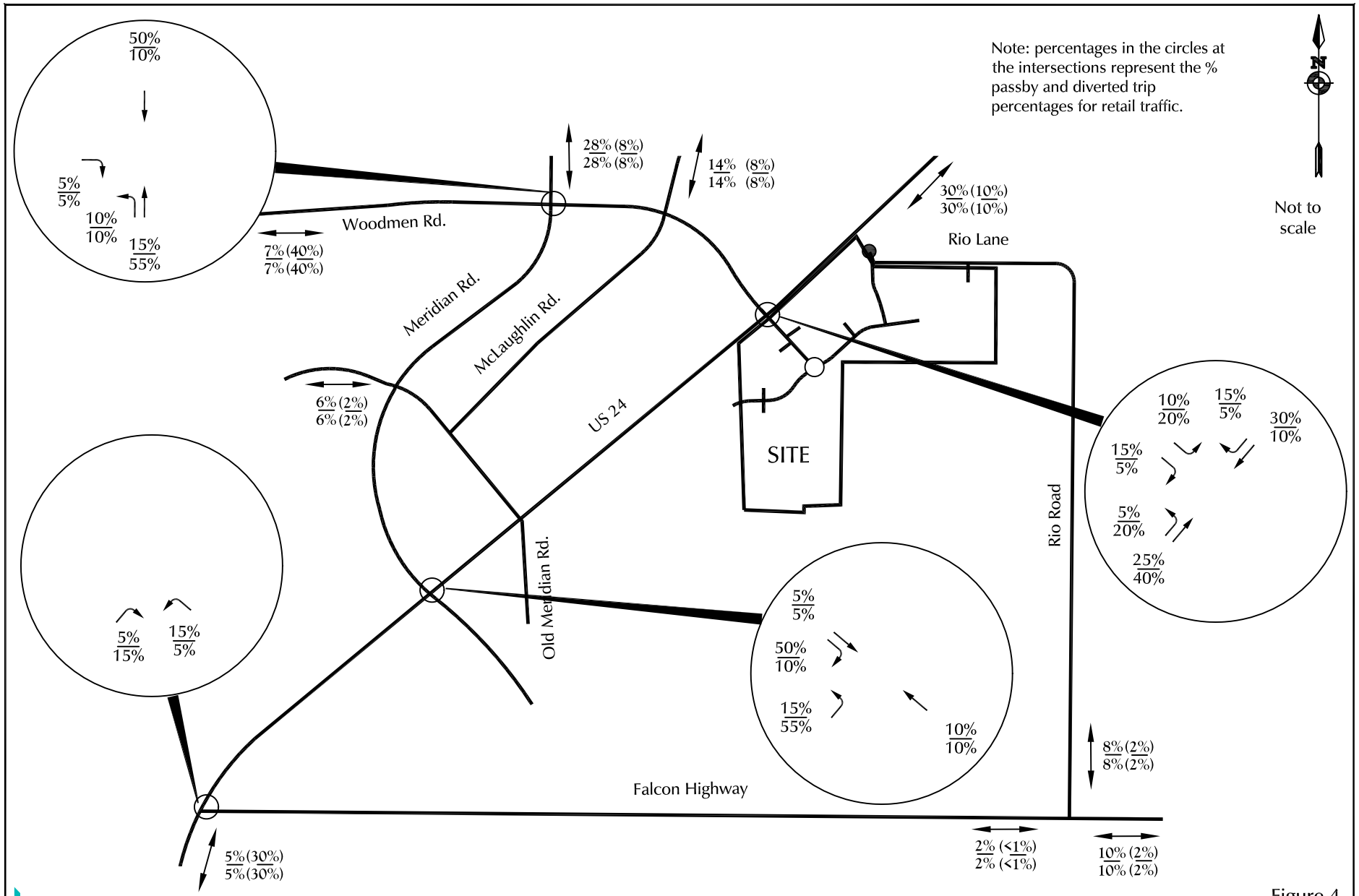
$$\frac{C}{D} = \frac{\text{AM Entire Intersection Peak–Hour Level of Service}}{\text{PM Entire Intersection Peak–Hour Level of Service}}$$

LSC TRANSPORTATION CONSULTANTS, INC.

Figure 3b

Existing Lane Geometry, Traffic Control, and Level of Service

Falcon Field 2021 Rezone (LSC# S214730)



LEGEND:

$$\frac{\text{xx\% (xx\%)}}{\text{xx\% (xx\%)}} = \frac{\text{AM Percent Commercial (Residential) Directional Distribution}}{\text{PM Percent Commercial (Residential) Directional Distribution}}$$

LSC TRANSPORTATION CONSULTANTS, INC.

Figure 4

Directional Distribution

Falcon Field 2021 Rezone (LSC# S214730)

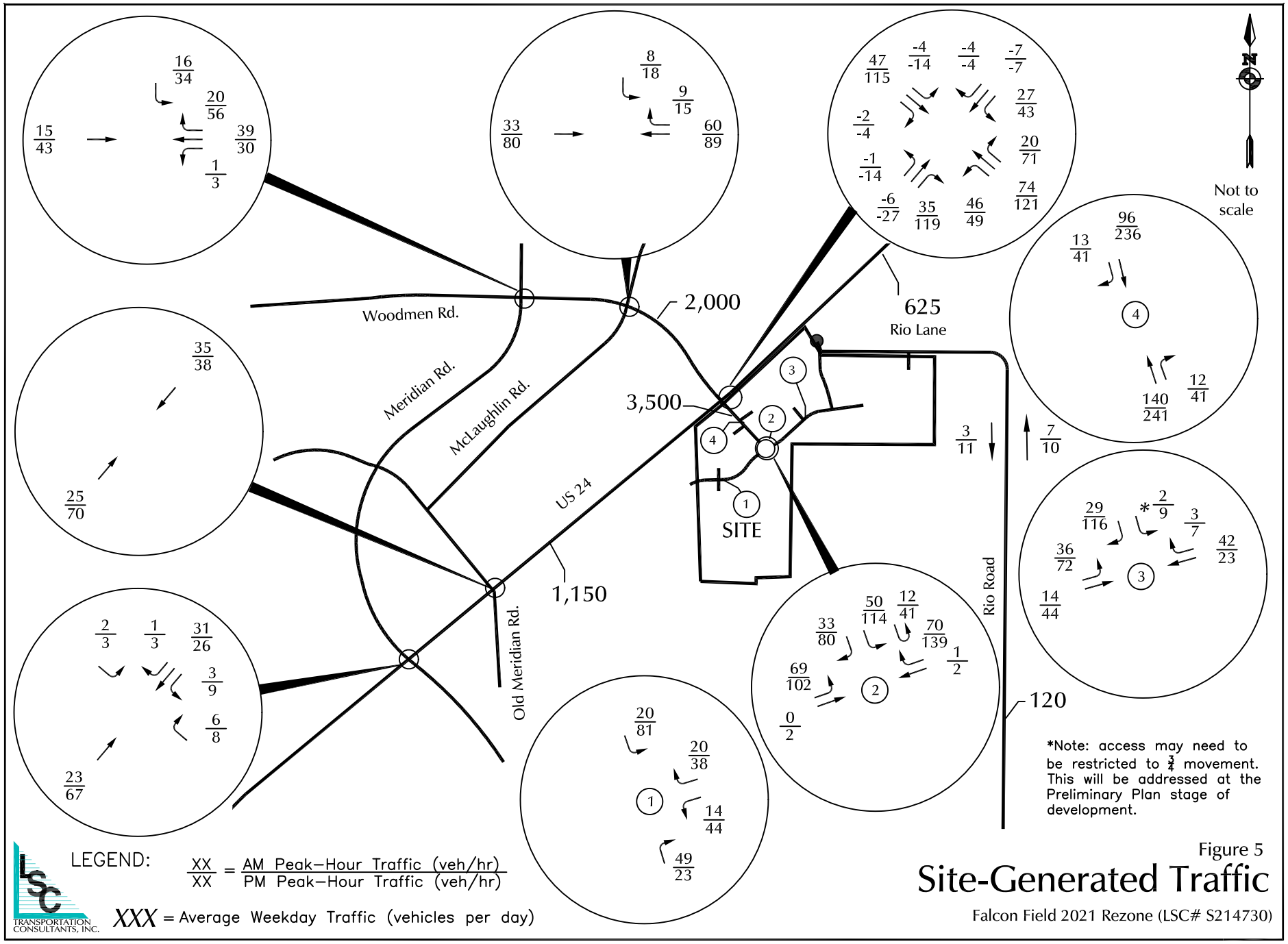
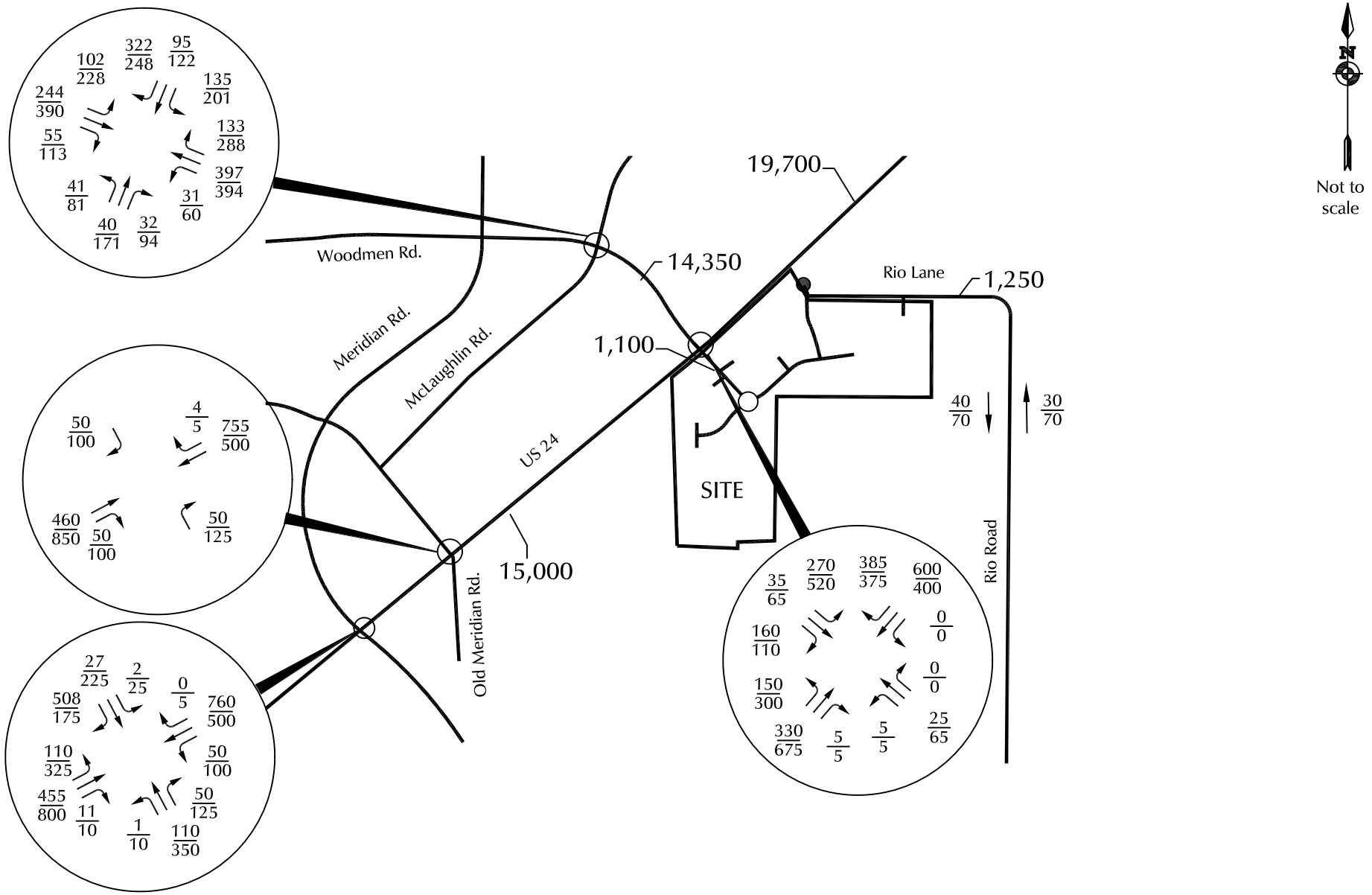


Figure 5

Site-Generated Traffic

Falcon Field 2021 Rezone (LSC# S214730)



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

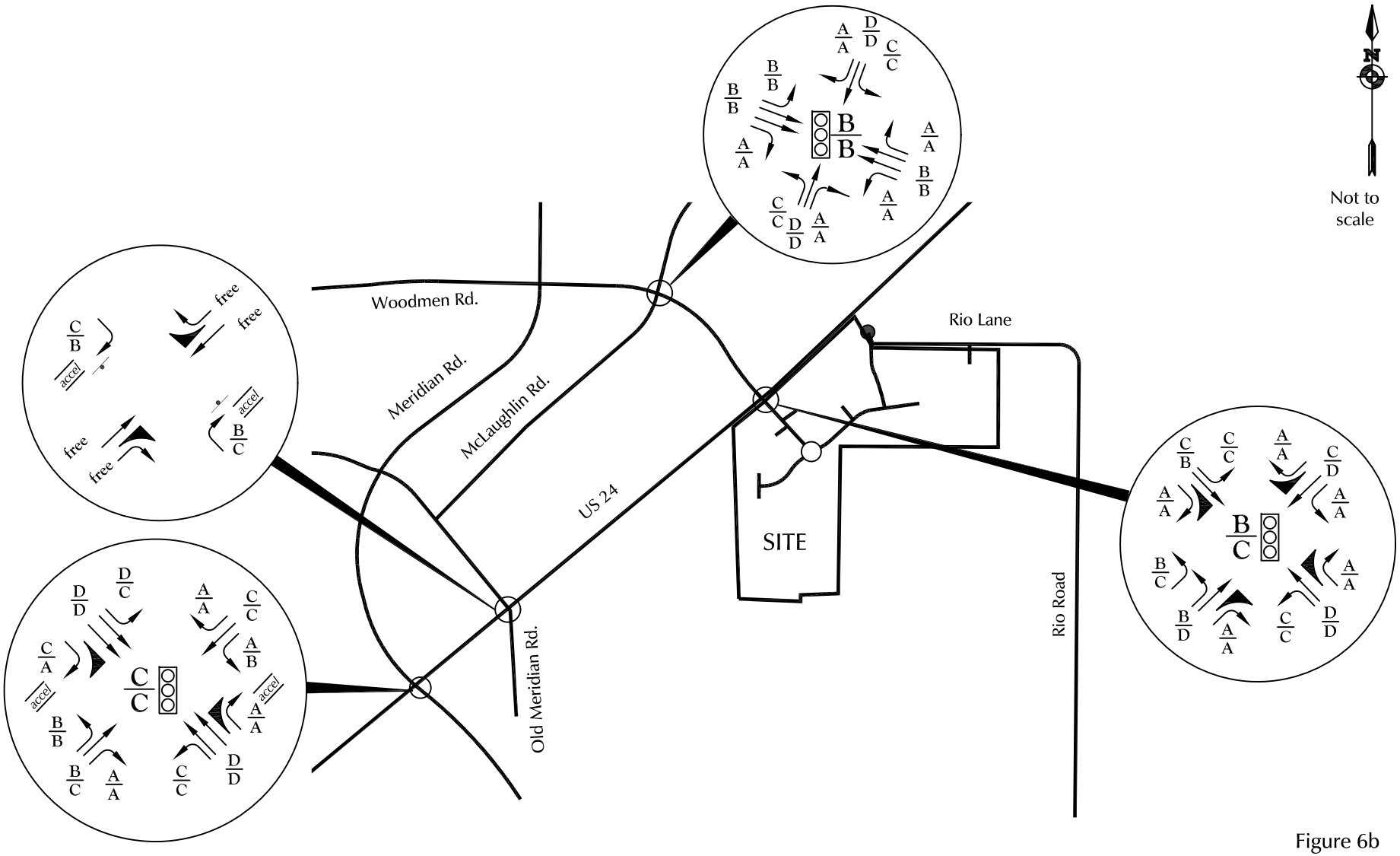
XXX = Average Weekday Traffic (veh/hr)

LSC TRANSPORTATION CONSULTANTS, INC.

Figure 6a

Short-Term Background Traffic

Falcon Field 2021 Rezone (LSC# S214730)



LEGEND: ▣ = Traffic Signal ◊ = Yield Sign

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

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

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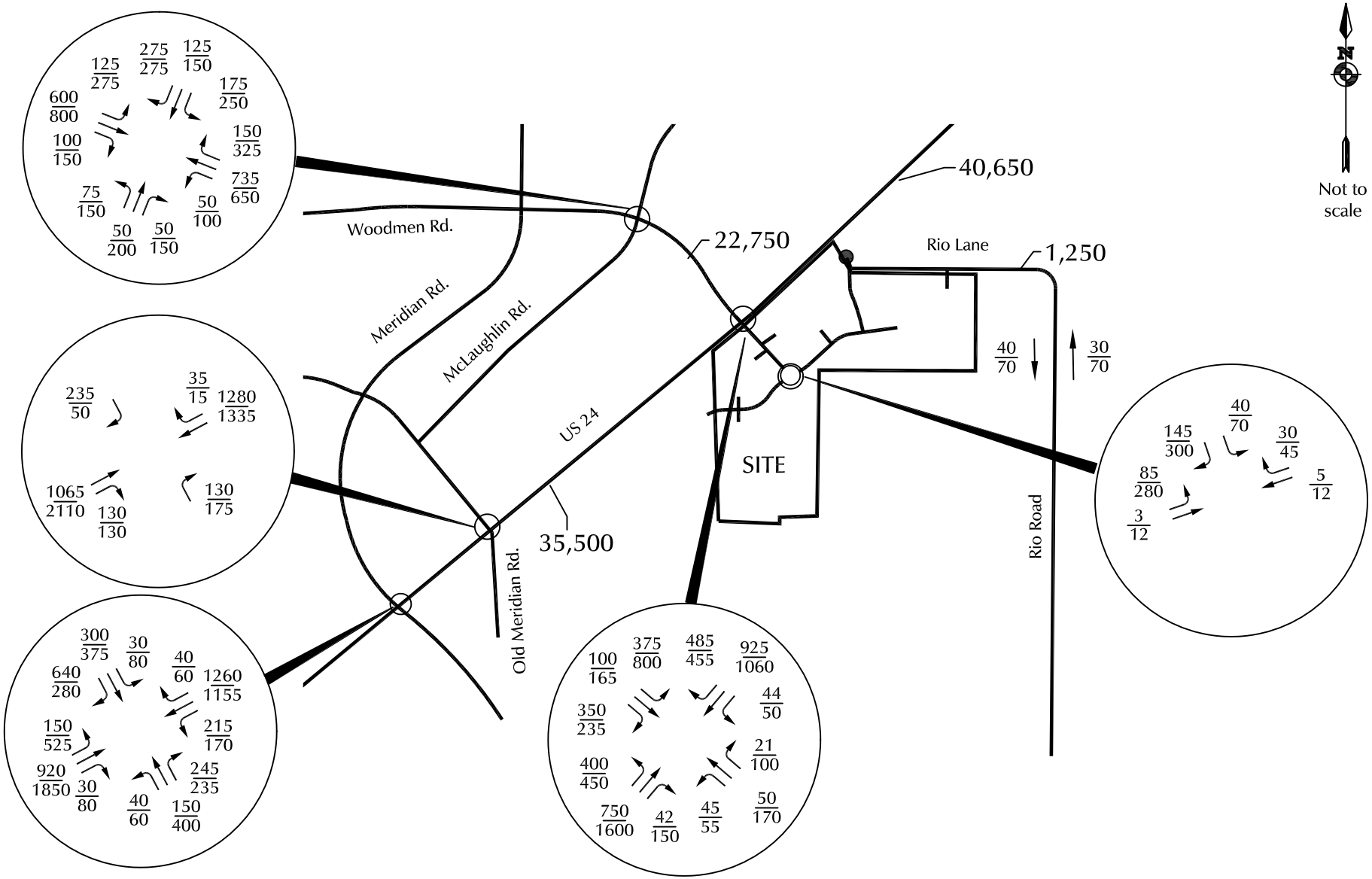
Figure 6b

Short-Term Background Lane Geometry, Traffic Control, and Level of Service

Falcon Field 2021 Rezone (LSC# S214730)



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

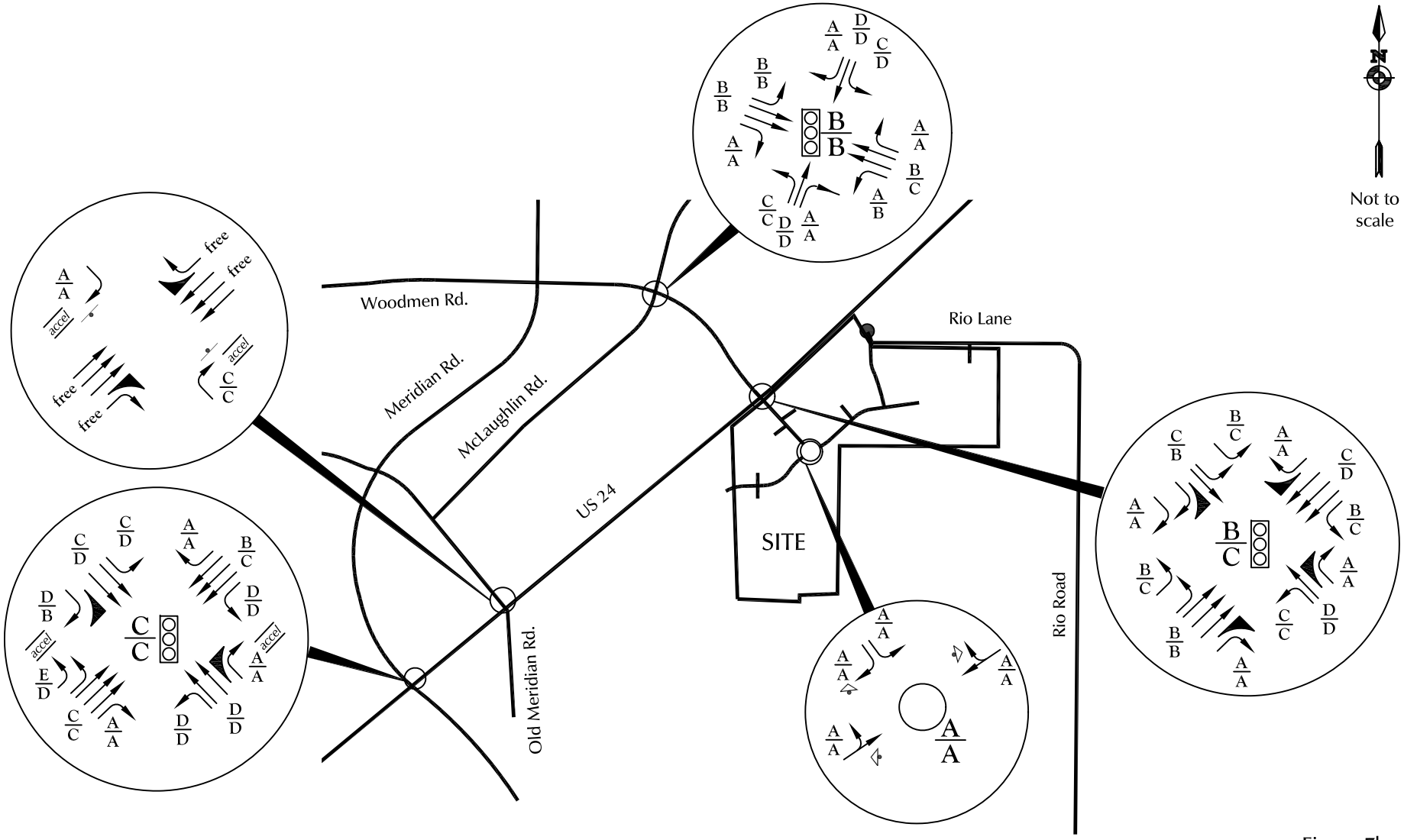
XXX = Average Weekday Traffic (veh/hr)

LSC TRANSPORTATION CONSULTANTS, INC.

Figure 7a

2040 Background Traffic

Falcon Field 2021 Rezone (LSC# S214730)



= Traffic Signal = Yield Sign = Roundabout

LEGEND: $\frac{A}{B}$ = AM Individual Movement Peak–Hour Level of Service / PM Individual Movement Peak–Hour Level of Service

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

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Figure 7b

2040 Background Lane Geometry, Traffic Control, and Level of Service

Falcon Field 2021 Rezone (LSC# S214730)

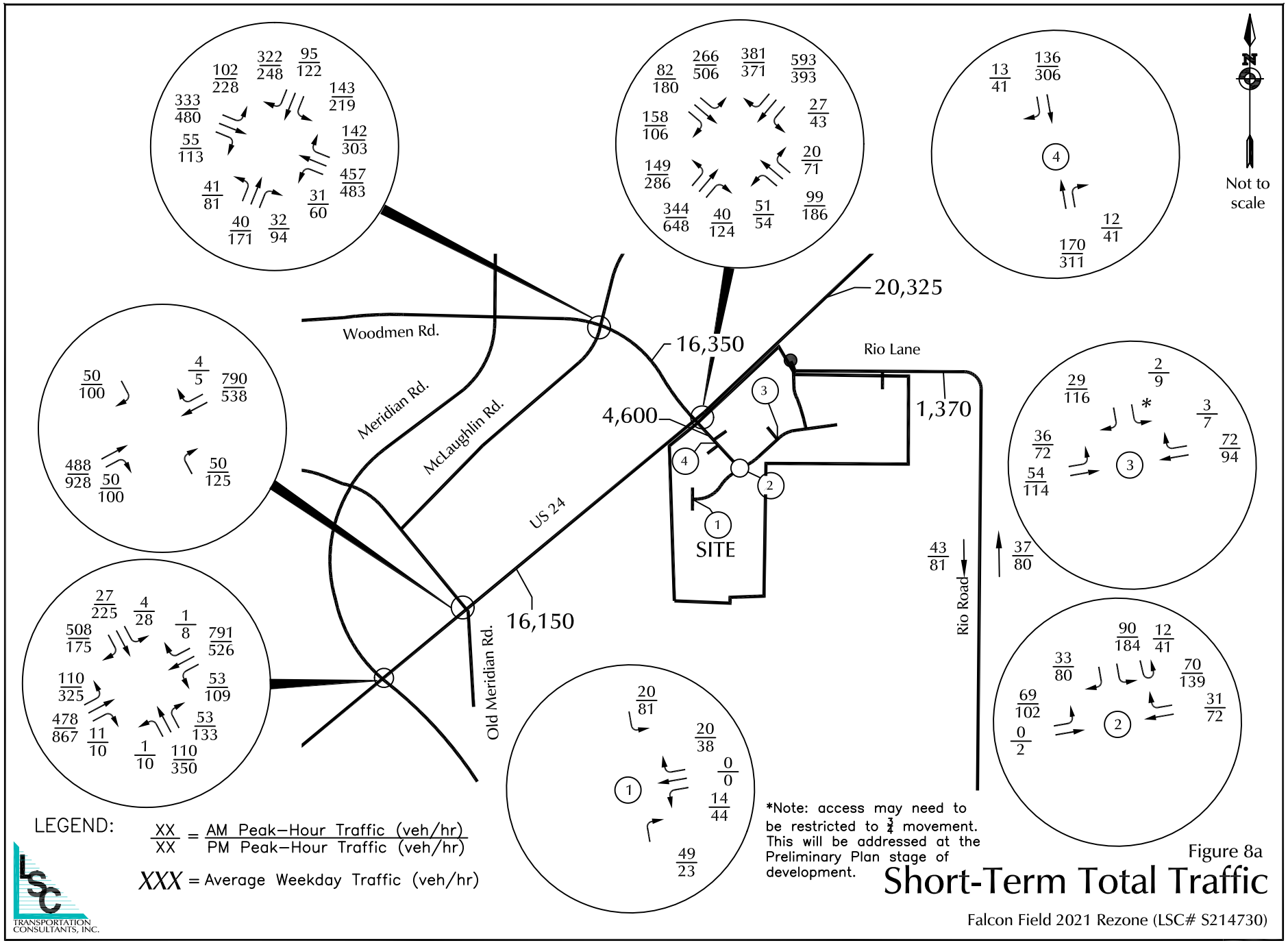
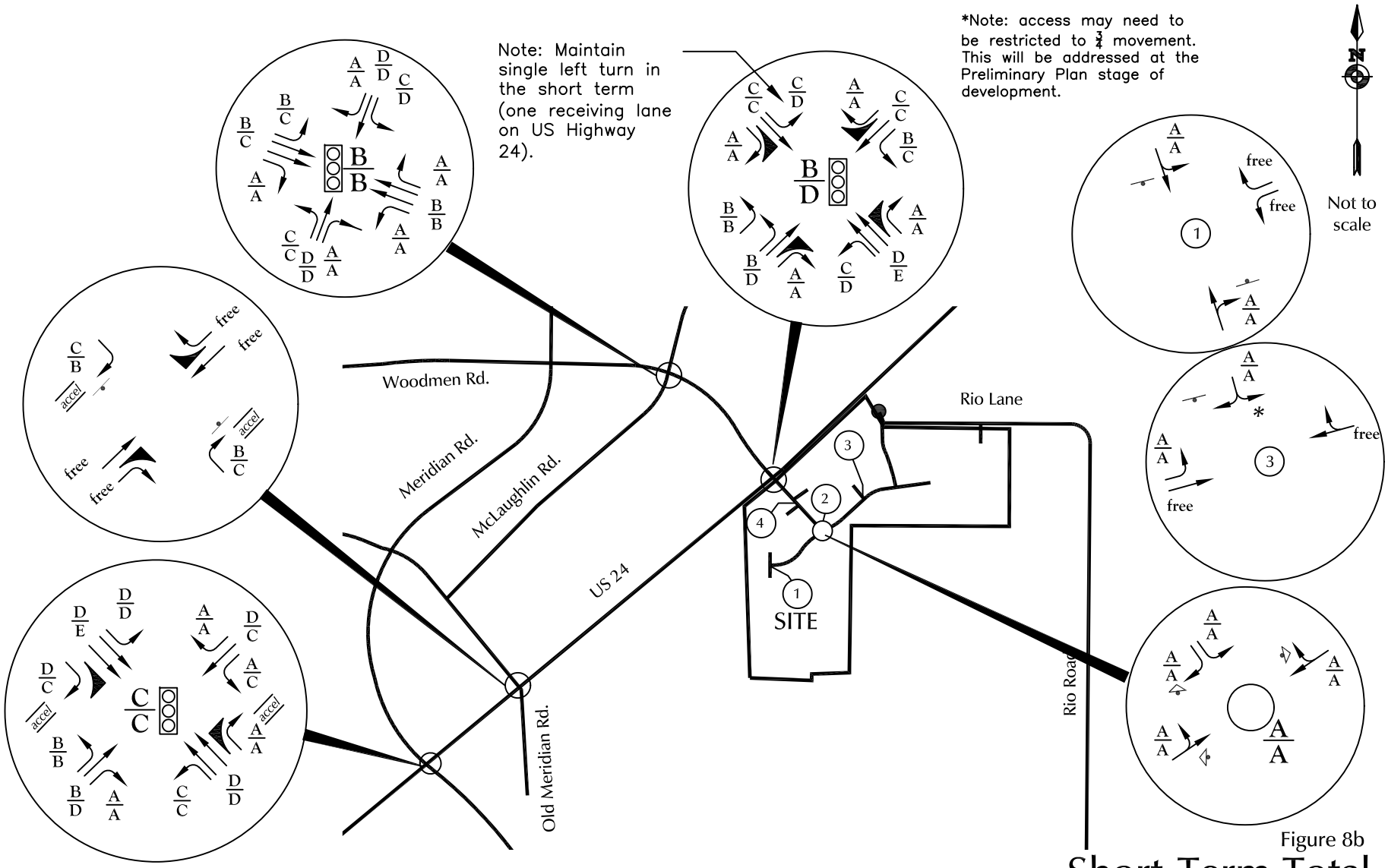


Figure 8a

Short-Term Total Traffic

Falcon Field 2021 Rezone (LSC# S214730)



LEGEND: = Traffic Signal = Stop Sign

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

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

TRANSPORTATION CONSULTANTS, INC.

Figure 8b

Short-Term Total Lane Geometry, Traffic Control, and Level of Service

Falcon Field 2021 Rezone (LSC# S214730)

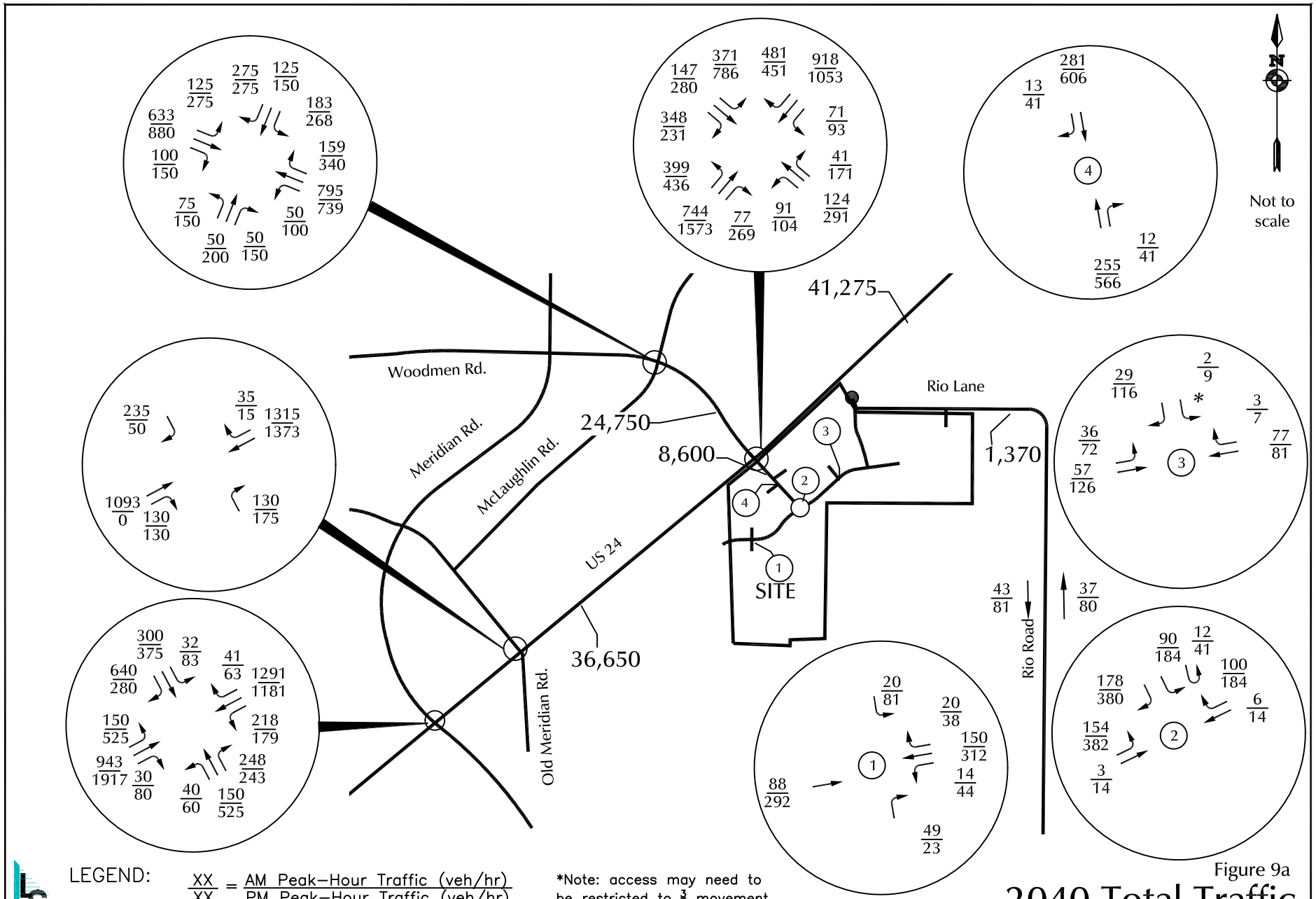
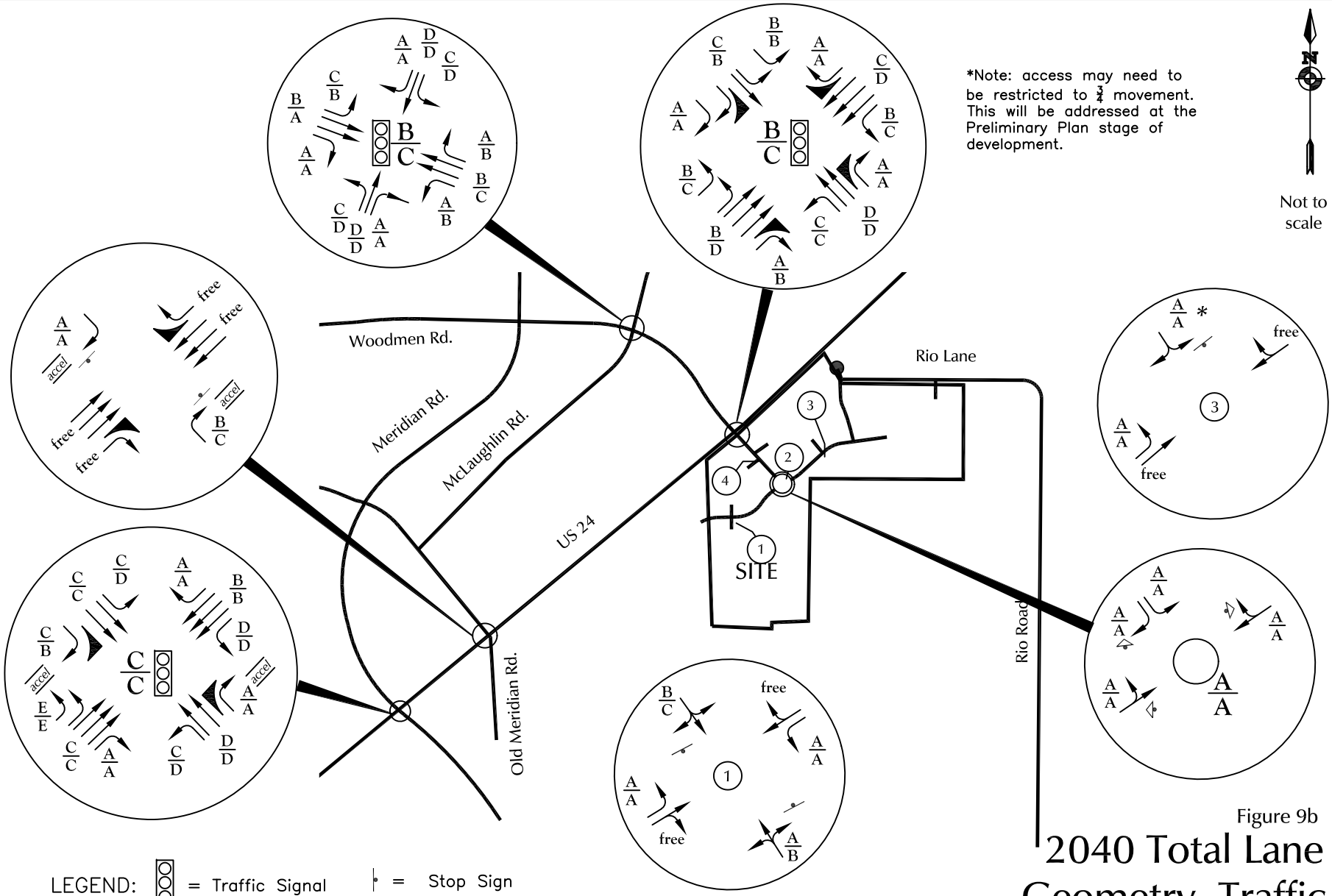


Figure 9a

2040 Total Traffic

Falcon Field 2021 Rezone (LSC# S214730)



LEGEND: = Traffic Signal = Stop Sign

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

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

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Figure 9b

2040 Total Lane Geometry, Traffic Control, and Level of Service

Falcon Field 2021 Rezone (LSC# S214730)

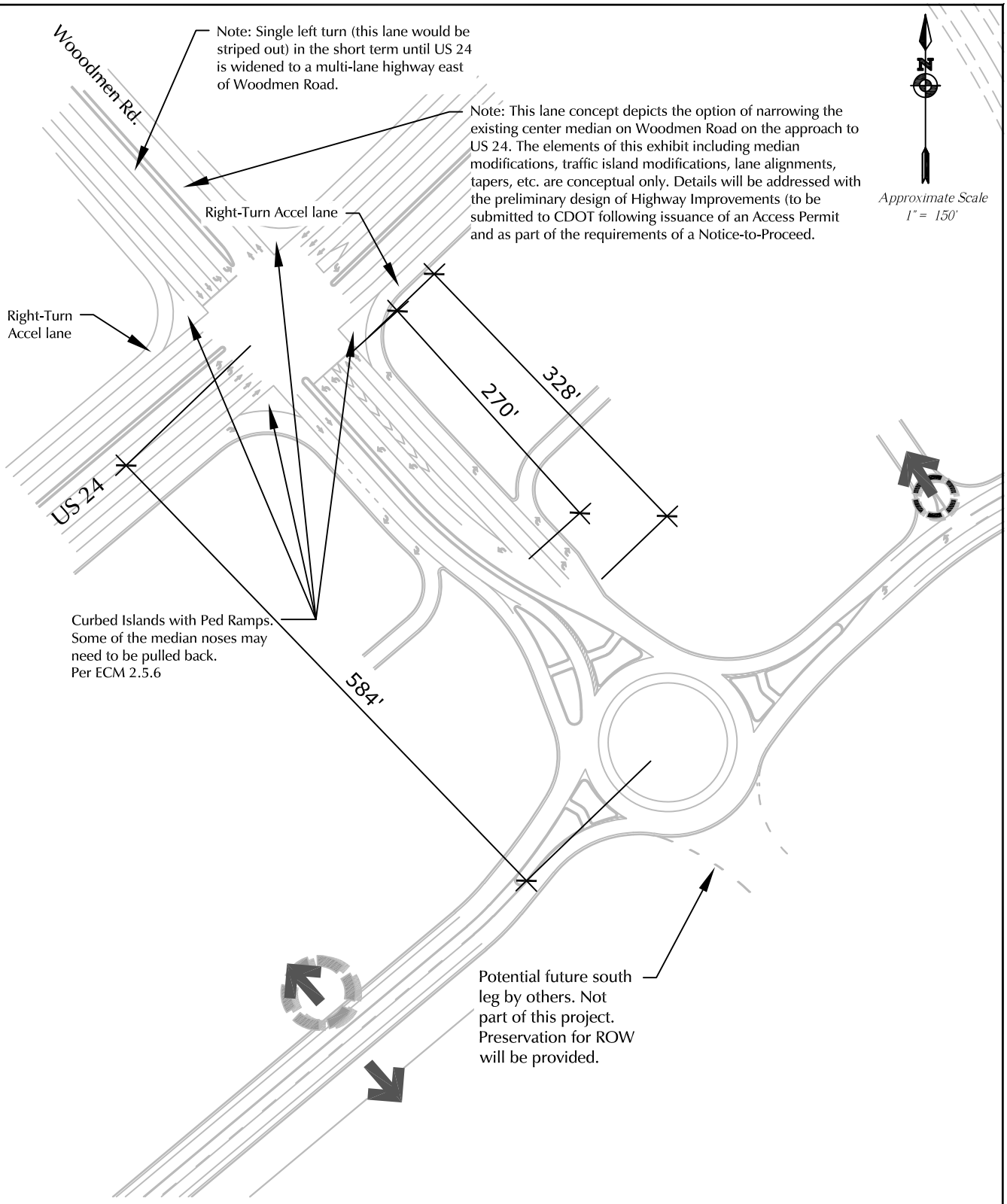


Figure 10a

Preliminary Intersection Lane Concept Plan (2040 - Six Lanes on US 24)

Falcon Field 2021 Rezone (LSC# S214730)

LSC TRANSPORTATION CONSULTANTS, INC.

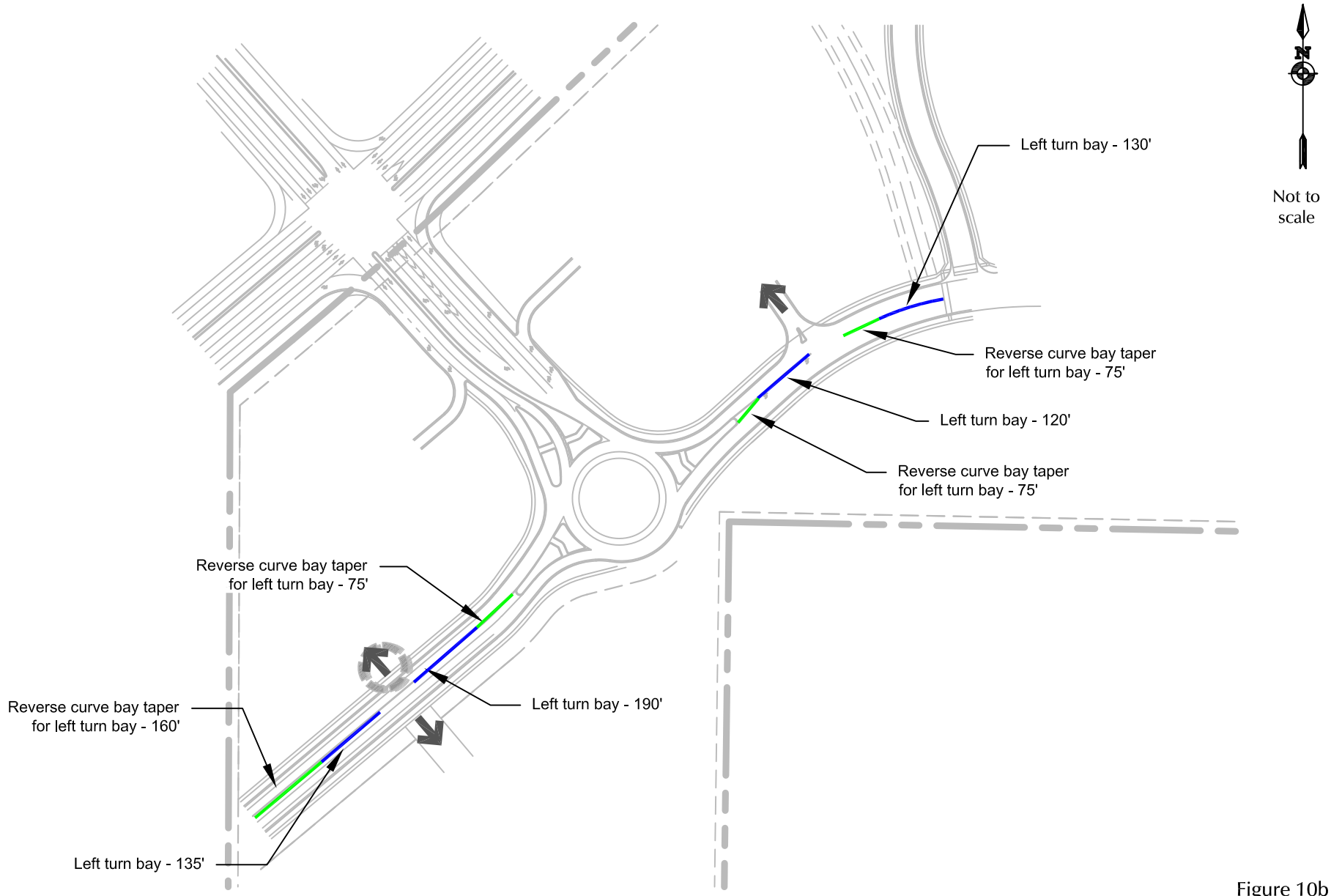


Figure 10b

Preliminary Internal Lane Concept Plan

Falcon Field 2021 Rezone (LSC# S214730)

LSC TRANSPORTATION CONSULTANTS, INC.

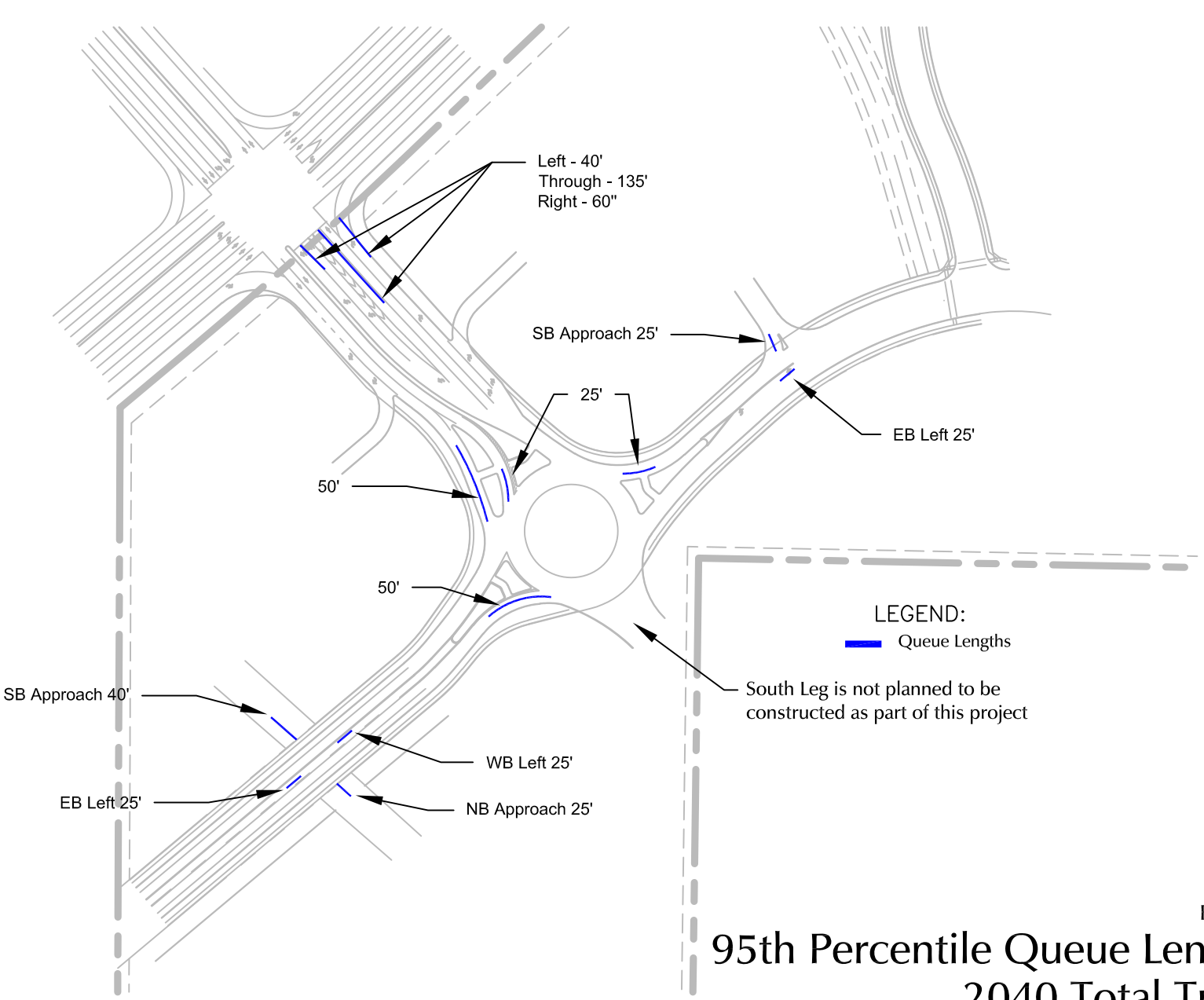
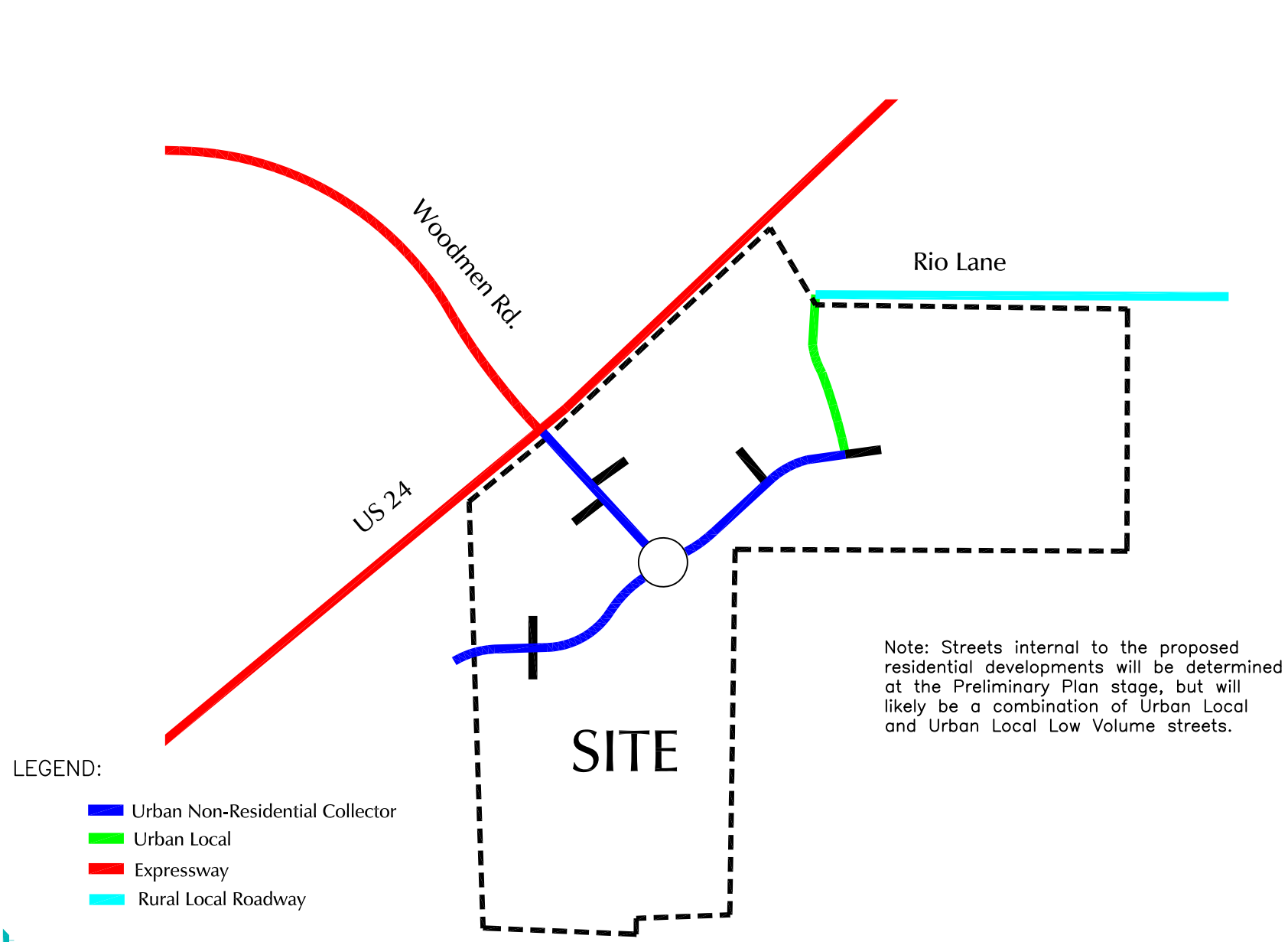


Figure 11

95th Percentile Queue Lengths 2040 Total Traffic

Falcon Field 2021 Rezone (LSC# S214730)

LSC TRANSPORTATION CONSULTANTS, INC.



Note: Streets internal to the proposed residential developments will be determined at the Preliminary Plan stage, but will likely be a combination of Urban Local and Urban Local Low Volume streets.

LSC TRANSPORTATION CONSULTANTS, INC.

Figure 12

Street Classification

Falcon Field 2021 Rezone (LSC# S214730)

Traffic Counts

TRANSPORTATION
CONSULTANTS, INC.

LSC Transportation Consultants, Inc.

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

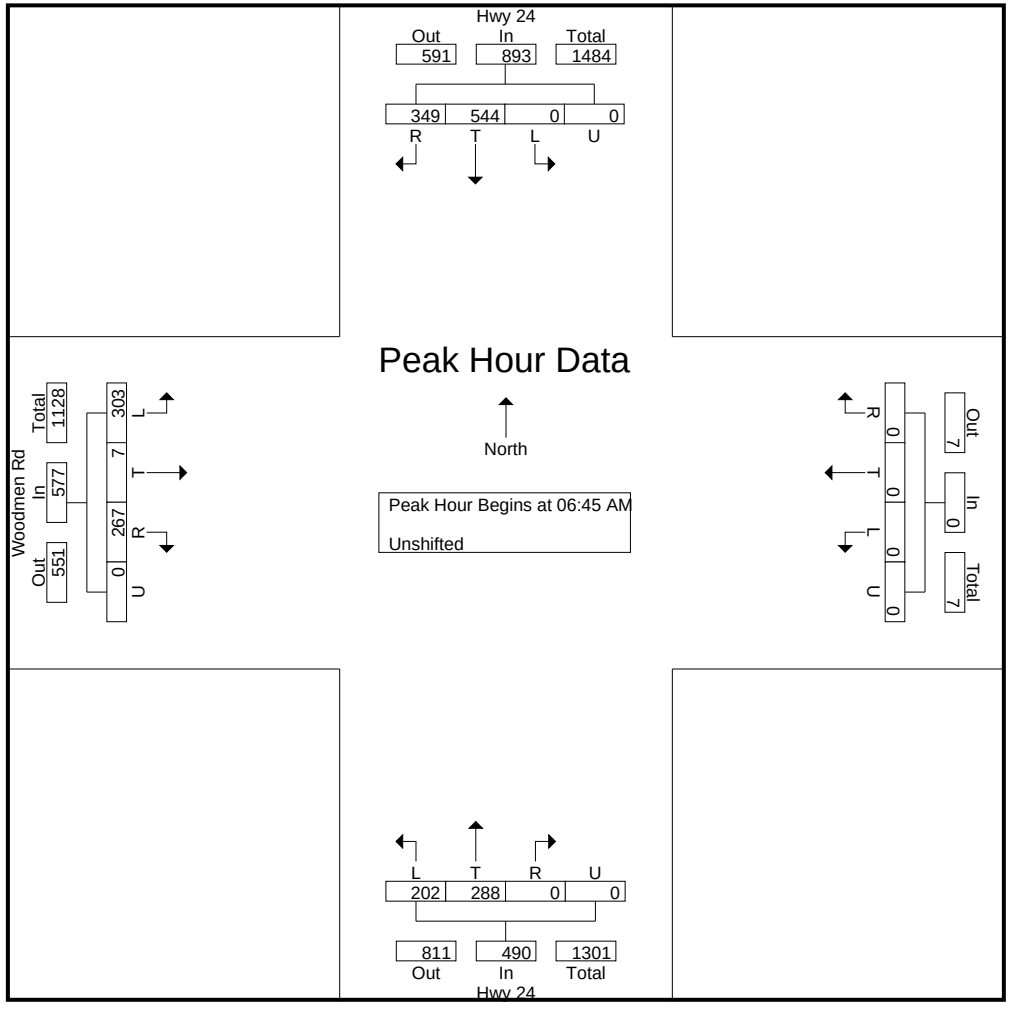
File Name : Hwy 24 - Woodmen Rd AM
Site Code : S214730
Start Date : 8/12/2021
Page No : 1

Groups Printed- Unshifted

	Hwy 24 Southbound					Westbound					Hwy 24 Northbound					Woodmen Rd Eastbound					
Start Time	**L**	**T**	**R**	**U**	**App. Total**	**L**	**T**	**R**	**U**	**App. Total**	**L**	**T**	**R**	**U**	**App. Total**	**L**	**T**	**R**	**U**	**App. Total**	**Int. Total**
06:30 AM	0	140	79	0	219	0	0	0	0	0	39	59	0	0	98	49	0	71	0	120	437
06:45 AM	0	123	64	0	187	0	0	0	0	0	48	86	0	0	134	84	5	70	0	159	480
Total	0	263	143	0	406	0	0	0	0	0	87	145	0	0	232	133	5	141	0	279	917
07:00 AM	0	137	84	0	221	0	0	0	0	0	52	71	0	0	123	64	2	58	0	124	468
07:15 AM	0	150	99	0	249	0	0	0	0	0	54	72	0	0	126	72	0	74	0	146	521
07:30 AM	0	134	102	0	236	0	0	0	0	0	48	59	0	0	107	83	0	65	0	148	491
07:45 AM	0	100	79	0	179	0	0	0	0	0	63	67	0	0	130	81	0	55	2	138	447
Total	0	521	364	0	885	0	0	0	0	0	217	269	0	0	486	300	2	252	2	556	1927
08:00 AM	0	75	83	0	158	0	0	0	0	0	33	72	0	0	105	68	0	59	0	127	390
08:15 AM	0	93	69	0	162	0	0	0	0	0	44	82	0	0	126	68	0	61	0	129	417
Grand Total	0	952	659	0	1611	0	0	0	0	0	381	568	0	0	949	569	7	513	2	1091	3651
Apprch %	0	59.1	40.9	0		0	0	0	0		40.1	59.9	0	0		52.2	0.6	47	0.2		
Total %	0	26.1	18	0	44.1	0	0	0	0	0	10.4	15.6	0	0	26	15.6	0.2	14.1	0.1	29.9	

LSC Transportation Consultants, Inc.
545 E Pikes Peak Ave, Suite 210
Colorado Springs, CO 80905
719-633-2868

File Name : Hwy 24 - Woodmen Rd AM
Site Code : S214730
Start Date : 8/12/2021
Page No : 3



LSC Transportation Consultants, Inc.

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

File Name : Hwy 24 - Woodmen Rd PM
Site Code : S214730
Start Date : 8/12/2021
Page No : 1

Groups Printed- Unshifted

	Hwy 24 Southbound					Westbound					Hwy 24 Northbound					Woodmen Rd Eastbound					
Start Time	**L**	**T**	**R**	**U**	**App. Total**	**L**	**T**	**R**	**U**	**App. Total**	**L**	**T**	**R**	**U**	**App. Total**	**L**	**T**	**R**	**U**	**App. Total**	**Int. Total**
04:00 PM	0	102	91	0	193	0	0	0	0	0	60	117	0	0	177	120	0	44	0	164	534
04:15 PM	0	68	99	2	169	0	0	0	0	0	85	113	0	0	198	144	0	58	2	204	571
04:30 PM	0	70	101	0	171	0	0	0	0	0	85	103	0	0	188	141	0	43	1	185	544
04:45 PM	0	79	105	0	184	0	0	0	0	0	93	120	0	0	213	156	0	51	1	208	605
Total	0	319	396	2	717	0	0	0	0	0	323	453	0	0	776	561	0	196	4	761	2254
05:00 PM	0	72	91	0	163	0	0	0	0	0	108	115	0	0	223	157	0	57	0	214	600
05:15 PM	0	71	69	0	140	0	0	0	0	0	83	147	0	0	230	165	0	45	0	210	580
05:30 PM	0	81	87	0	168	0	0	0	0	0	70	104	0	0	174	130	0	43	0	173	515
05:45 PM	0	42	78	0	120	0	0	0	0	0	74	128	0	0	202	160	0	47	0	207	529
Total	0	266	325	0	591	0	0	0	0	0	335	494	0	0	829	612	0	192	0	804	2224
Grand Total	0	585	721	2	1308	0	0	0	0	0	658	947	0	0	1605	1173	0	388	4	1565	4478
Apprch %	0	44.7	55.1	0.2		0	0	0	0		41	59	0	0		75	0	24.8	0.3		
Total %	0	13.1	16.1	0	29.2	0	0	0	0	0	14.7	21.1	0	0	35.8	26.2	0	8.7	0.1	34.9	

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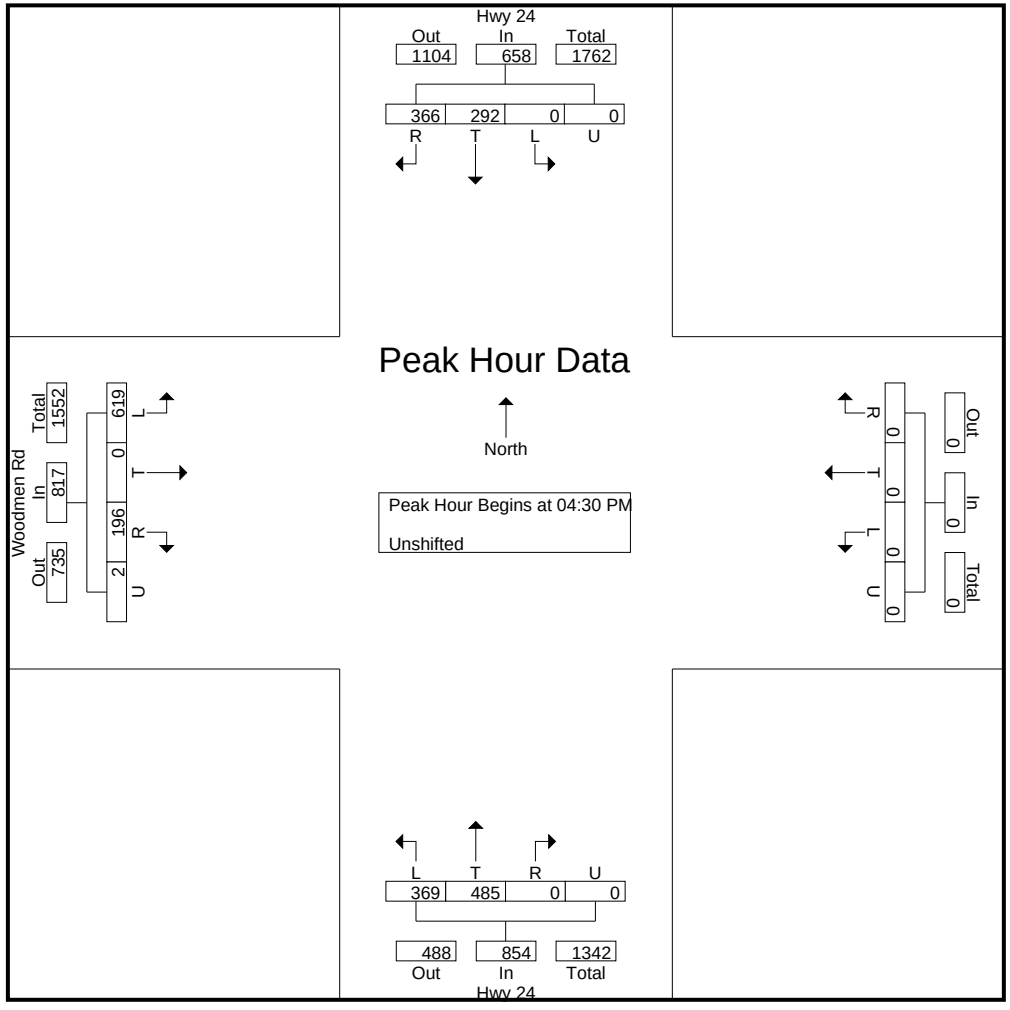
719-633-2868

File Name : Hwy 24 - Woodmen Rd PM
Site Code : S214730
Start Date : 8/12/2021
Page No : 3



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Colorado Springs, CO 80905
719-633-2868

File Name : Hwy 24 - New Meridian Rd AM
Site Code : S214620
Start Date : 8/5/2021
Page No : 1

Groups Printed- Unshifted

	Hwy 24 Southbound					New Meridian Rd Westbound					Hwy 24 Northbound					New Meridian Rd Eastbound					
Start Time	**L**	**T**	**R**	**U**	**App. Total**	**L**	**T**	**R**	**U**	**App. Total**	**L**	**T**	**R**	**U**	**App. Total**	**L**	**T**	**R**	**U**	**App. Total**	**Int. Total**
06:30 AM	9	173	0	0	182	1	36	7	0	44	30	109	2	0	141	1	22	93	0	116	483
06:45 AM	10	213	0	0	223	0	28	10	0	38	21	109	4	0	134	0	1	120	0	121	516
Total	19	386	0	0	405	1	64	17	0	82	51	218	6	0	275	1	23	213	0	237	999
07:00 AM	3	171	0	0	174	0	44	10	0	54	15	92	4	0	111	0	4	126	1	131	470
07:15 AM	2	201	0	0	203	0	2	1	0	3	44	118	1	0	163	0	0	169	0	169	538
Grand Total	24	758	0	0	782	1	110	28	0	139	110	428	11	0	549	1	27	508	1	537	2007
Apprch %	3.1	96.9	0	0		0.7	79.1	20.1	0		20	78	2	0		0.2	5	94.6	0.2		
Total %	1.2	37.8	0	0	39	0	5.5	1.4	0	6.9	5.5	21.3	0.5	0	27.4	0	1.3	25.3	0	26.8	

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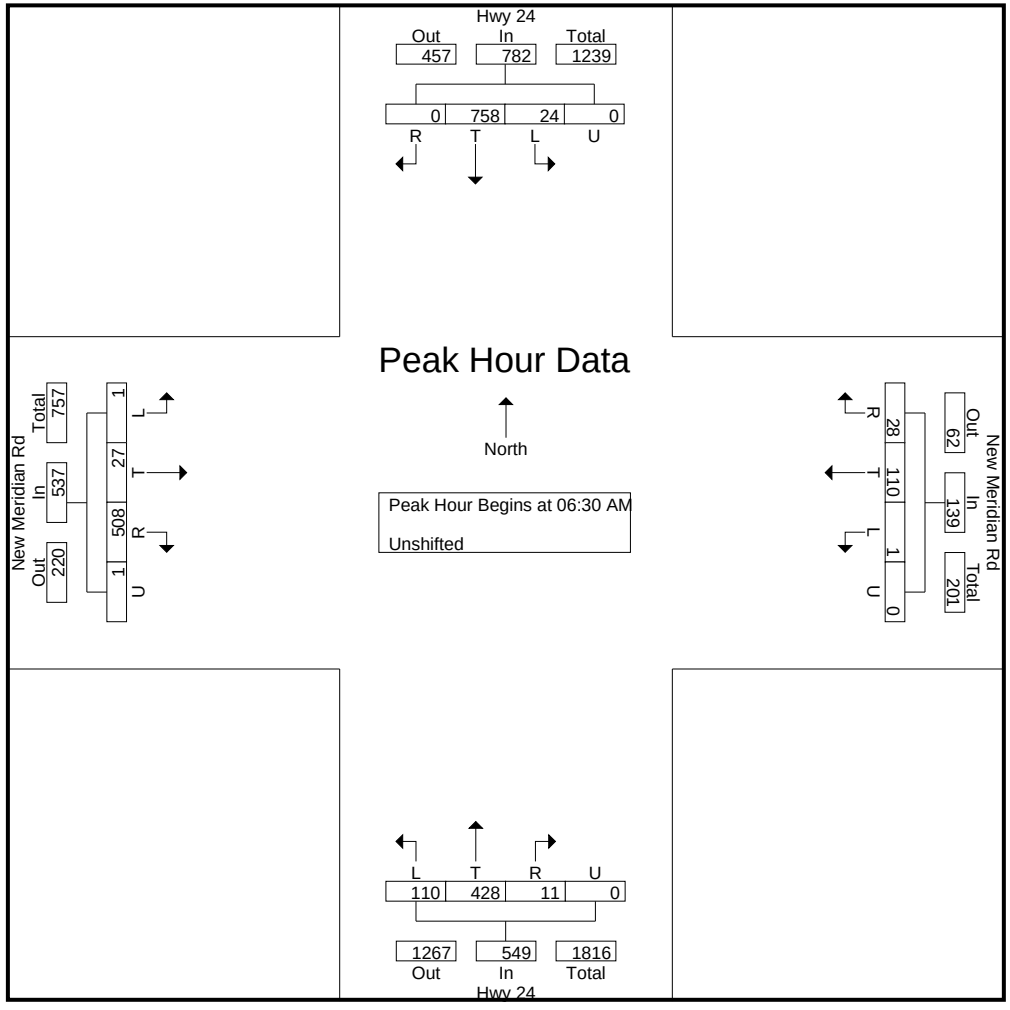
File Name : Hwy 24 - New Meridian Rd AM
Site Code : S214620
Start Date : 8/5/2021
Page No : 3



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545 E Pikes Peak Ave, Suite 210
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File Name : Hwy 24 - New Meridian Rd PM
Site Code : S214620
Start Date : 8/4/2021
Page No : 1

Groups Printed- Unshifted

	Hwy 24 Southbound					New Meridian Rd Westbound					Hwy 24 Northbound					New Meridian Rd Eastbound					
Start Time	**L**	**T**	**R**	**U**	**App. Total**	**L**	**T**	**R**	**U**	**App. Total**	**L**	**T**	**R**	**U**	**App. Total**	**L**	**T**	**R**	**U**	**App. Total**	**Int. Total**
04:00 PM	18	138	0	0	156	1	61	22	0	84	62	156	0	0	218	4	30	43	0	77	535
04:15 PM	9	139	2	0	150	0	72	29	0	101	60	149	1	0	210	4	37	37	0	78	539
04:30 PM	17	105	1	0	123	0	91	17	0	108	88	161	0	0	249	4	40	42	0	86	566
04:45 PM	11	139	0	0	150	1	82	12	0	95	63	145	0	0	208	4	41	38	3	86	539
Total	55	521	3	0	579	2	306	80	0	388	273	611	1	0	885	16	148	160	3	327	2179
05:00 PM	14	109	0	0	123	0	91	27	0	118	79	150	0	0	229	5	41	48	0	94	564
05:15 PM	6	114	1	0	121	0	52	26	0	78	78	162	0	0	240	3	32	42	1	78	517
05:30 PM	11	89	4	0	104	1	81	14	0	96	76	156	0	0	232	1	55	44	0	100	532
05:45 PM	22	119	1	0	142	1	45	10	0	56	81	174	0	0	255	2	52	33	0	87	540
Total	53	431	6	0	490	2	269	77	0	348	314	642	0	0	956	11	180	167	1	359	2153
Grand Total	108	952	9	0	1069	4	575	157	0	736	587	1253	1	0	1841	27	328	327	4	686	4332
Apprch %	10.1	89.1	0.8	0		0.5	78.1	21.3	0		31.9	68.1	0.1	0		3.9	47.8	47.7	0.6		
Total %	2.5	22	0.2	0	24.7	0.1	13.3	3.6	0	17	13.6	28.9	0	0	42.5	0.6	7.6	7.5	0.1	15.8	

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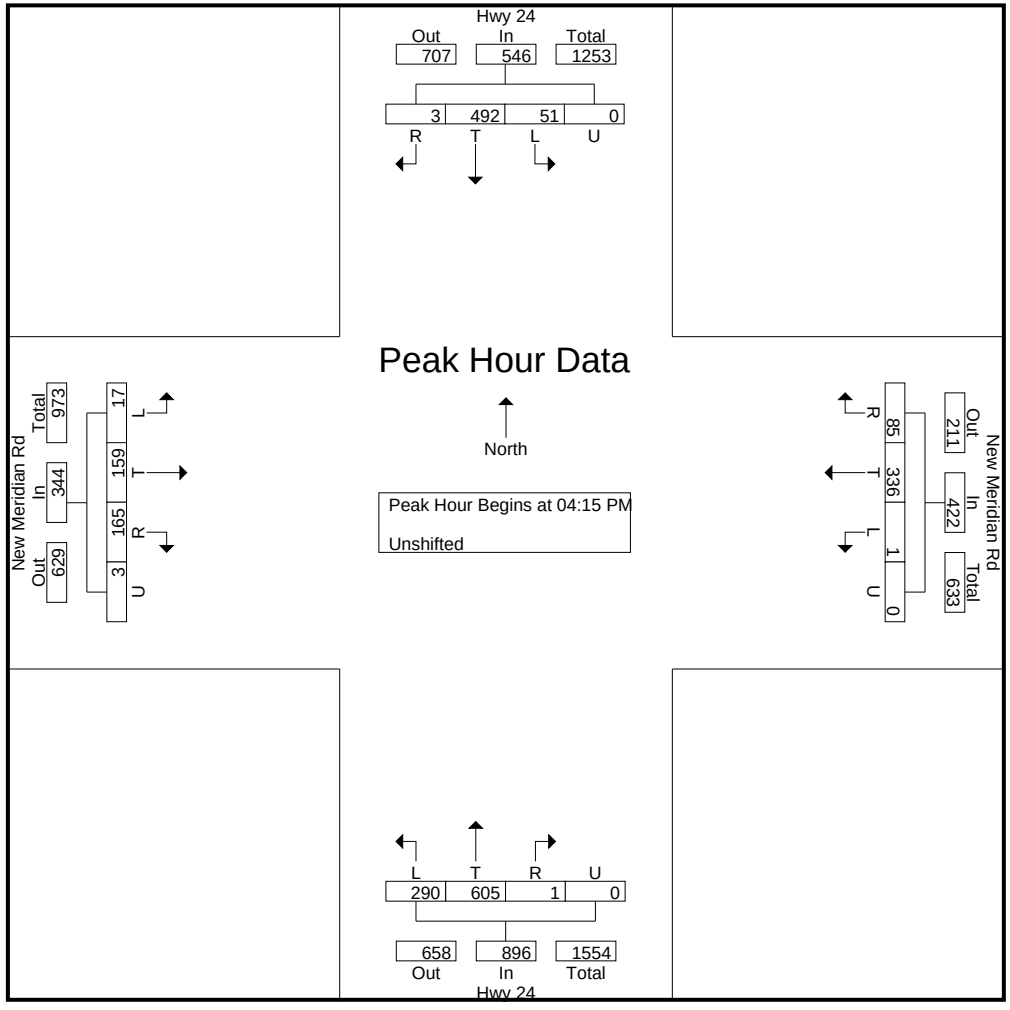
File Name : Hwy 24 - New Meridian Rd PM
Site Code : S214620
Start Date : 8/4/2021
Page No : 3



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545 E Pikes Peak Ave, Suite 210
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719-633-2868

File Name : Hwy 24 - Rio Ln AM
Site Code : S214730
Start Date : 8/12/2021
Page No : 1

Groups Printed- Unshifted

	Hwy 24 Southbound					Rio Ln Westbound					Hwy 24 Northbound					Eastbound					
Start Time	**L**	**T**	**R**	**U**	**App. Total**	**L**	**T**	**R**	**U**	**App. Total**	**L**	**T**	**R**	**U**	**App. Total**	**L**	**T**	**R**	**U**	**App. Total**	**Int. Total**
06:30 AM	2	213	0	0	215	22	0	0	0	22	0	89	16	0	105	0	0	0	0	0	342
06:45 AM	0	177	0	0	177	23	0	5	0	28	0	135	28	0	163	0	0	0	0	0	368
Total	2	390	0	0	392	45	0	5	0	50	0	224	44	0	268	0	0	0	0	0	710
07:00 AM	0	206	0	0	206	21	0	4	0	25	0	117	20	0	137	0	0	0	0	0	368
07:15 AM	3	241	0	0	244	21	0	3	0	24	0	116	21	0	137	0	0	0	0	0	405
07:30 AM	3	238	0	0	241	23	0	2	0	25	0	103	31	0	134	0	0	0	0	0	400
07:45 AM	2	180	0	0	182	11	0	3	0	14	0	119	31	0	150	0	0	0	0	0	346
Total	8	865	0	0	873	76	0	12	0	88	0	455	103	0	558	0	0	0	0	0	1519
08:00 AM	0	144	0	0	144	14	2	1	0	17	0	115	19	0	134	0	0	0	0	0	295
08:15 AM	1	150	0	0	151	17	0	4	0	21	0	123	30	0	153	0	0	0	0	0	325
Grand Total	11	1549	0	0	1560	152	2	22	0	176	0	917	196	0	1113	0	0	0	0	0	2849
Apprch %	0.7	99.3	0	0		86.4	1.1	12.5	0		0	82.4	17.6	0		0	0	0	0		
Total %	0.4	54.4	0	0	54.8	5.3	0.1	0.8	0	6.2	0	32.2	6.9	0	39.1	0	0	0	0	0	

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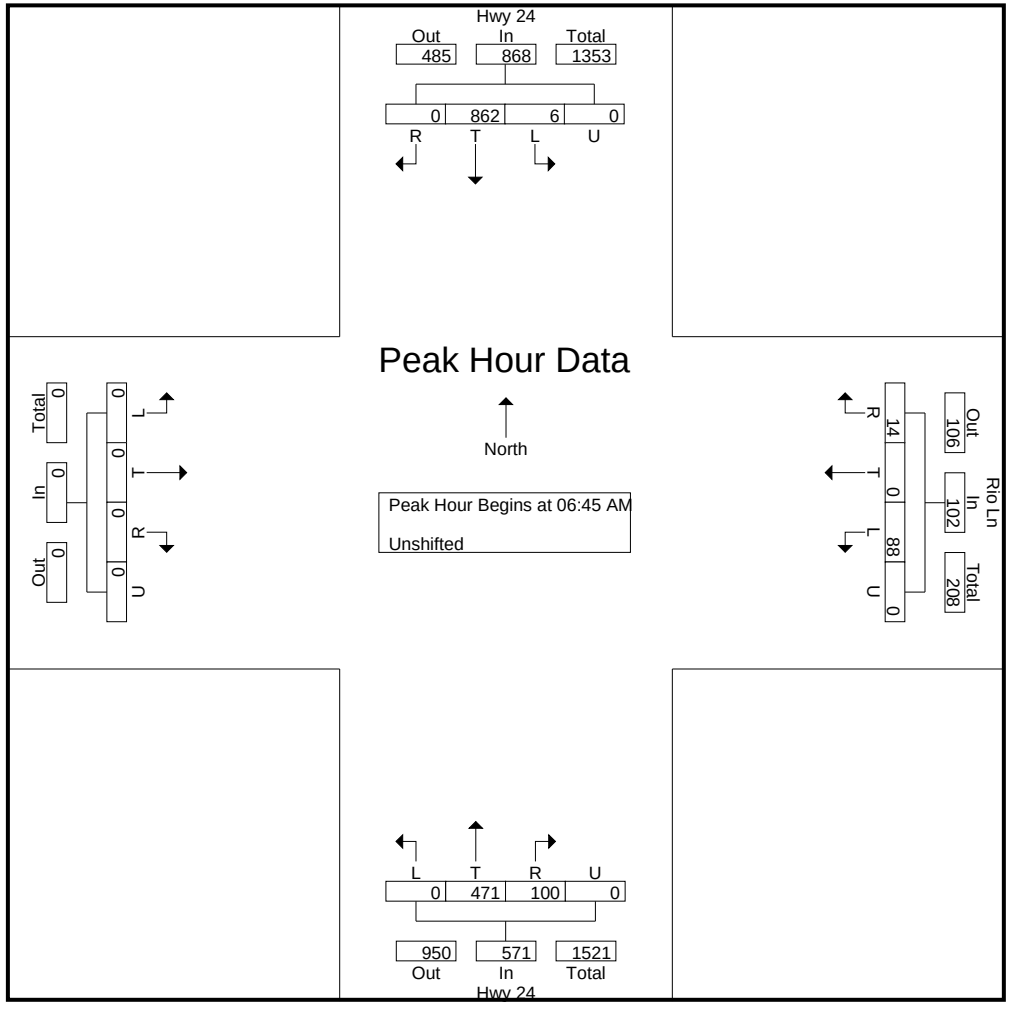
File Name : Hwy 24 - Rio Ln AM
Site Code : S214730
Start Date : 8/12/2021
Page No : 3



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545 E Pikes Peak Ave, Suite 210
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719-633-2868

File Name : Hwy 24 - Rio Ln PM
Site Code : S214730
Start Date : 8/12/2021
Page No : 1

Groups Printed- Unshifted

	Hwy 24 Southbound					Rio Ln Westbound					Hwy 24 Northbound					Eastbound					
Start Time	**L**	**T**	**R**	**U**	**App. Total**	**L**	**T**	**R**	**U**	**App. Total**	**L**	**T**	**R**	**U**	**App. Total**	**L**	**T**	**R**	**U**	**App. Total**	**Int. Total**
04:00 PM	1	184	0	0	185	23	0	1	0	24	0	204	26	0	230	0	0	0	0	0	439
04:15 PM	1	168	0	0	169	20	0	1	0	21	0	204	33	0	237	0	0	0	0	0	427
04:30 PM	1	152	0	0	153	31	0	1	0	32	0	193	27	0	220	0	0	0	0	0	405
04:45 PM	2	181	0	0	183	21	0	2	0	23	0	215	32	0	247	0	0	0	0	0	453
Total	5	685	0	0	690	95	0	5	0	100	0	816	118	0	934	0	0	0	0	0	1724
05:00 PM	5	143	0	0	148	28	0	4	0	32	0	223	49	0	272	0	0	0	0	0	452
05:15 PM	1	156	0	0	157	9	0	10	0	19	0	252	35	0	287	0	0	0	0	0	463
05:30 PM	4	147	0	0	151	25	0	2	0	27	0	194	28	0	222	0	0	0	0	0	400
05:45 PM	1	106	0	0	107	9	0	1	0	10	0	253	35	0	288	0	0	0	0	0	405
Total	11	552	0	0	563	71	0	17	0	88	0	922	147	0	1069	0	0	0	0	0	1720
Grand Total	16	1237	0	0	1253	166	0	22	0	188	0	1738	265	0	2003	0	0	0	0	0	3444
Apprch %	1.3	98.7	0	0		88.3	0	11.7	0		0	86.8	13.2	0		0	0	0	0		
Total %	0.5	35.9	0	0	36.4	4.8	0	0.6	0	5.5	0	50.5	7.7	0	58.2	0	0	0	0	0	

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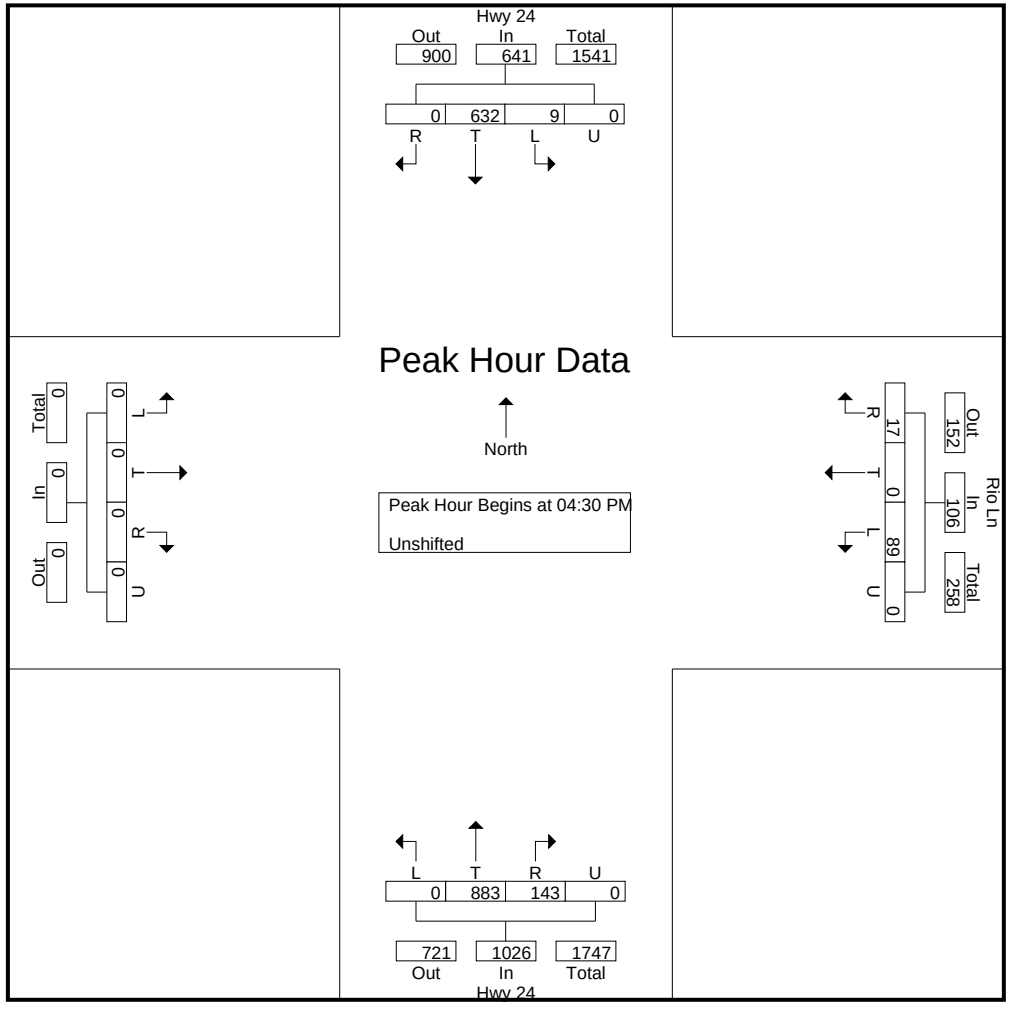
719-633-2868

File Name : Hwy 24 - Rio Ln PM
Site Code : S214730
Start Date : 8/12/2021
Page No : 3



LSC Transportation Consultants, Inc.

545 E Pikes Peak Ave, Suite 210
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719-633-2868

File Name : McLaughlin Rd - Woodmen Rd AM
Site Code : S214730
Start Date : 11/10/2021
Page No : 1

Groups Printed- Unshifted

	McLaughlin Rd Southbound					Woodmen Rd Westbound					McLaughlin Rd Northbound					Woodmen Rd Eastbound					
Start Time	**L**	**T**	**R**	**U**	**App. Total**	**L**	**T**	**R**	**U**	**App. Total**	**L**	**T**	**R**	**U**	**App. Total**	**L**	**T**	**R**	**U**	**App. Total**	**Int. Total**
06:30 AM	22	9	21	0	52	0	72	21	0	93	4	5	5	0	14	12	61	4	0	77	236
06:45 AM	43	15	42	0	100	2	82	38	1	123	5	9	4	0	18	17	70	4	0	91	332
Total	65	24	63	0	152	2	154	59	1	216	9	14	9	0	32	29	131	8	0	168	568
07:00 AM	36	19	82	0	137	6	106	18	0	130	4	12	2	0	18	20	69	6	0	95	380
07:15 AM	30	26	105	0	161	4	120	28	0	152	16	9	9	0	34	22	54	12	0	88	435
07:30 AM	33	36	90	0	159	13	96	40	1	150	9	11	9	0	29	30	58	16	1	105	443
07:45 AM	36	14	45	0	95	8	75	47	0	130	12	8	12	0	32	30	63	21	0	114	371
Total	135	95	322	0	552	31	397	133	1	562	41	40	32	0	113	102	244	55	1	402	1629
08:00 AM	29	9	53	0	91	10	60	26	0	96	11	15	13	0	39	29	54	12	0	95	321
08:15 AM	42	15	51	0	108	12	82	23	0	117	10	11	6	0	27	17	61	16	1	95	347
Grand Total	271	143	489	0	903	55	693	241	2	991	71	80	60	0	211	177	490	91	2	760	2865
Apprch %	30	15.8	54.2	0		5.5	69.9	24.3	0.2		33.6	37.9	28.4	0		23.3	64.5	12	0.3		
Total %	9.5	5	17.1	0	31.5	1.9	24.2	8.4	0.1	34.6	2.5	2.8	2.1	0	7.4	6.2	17.1	3.2	0.1	26.5	

LSC Transportation Consultants, Inc.
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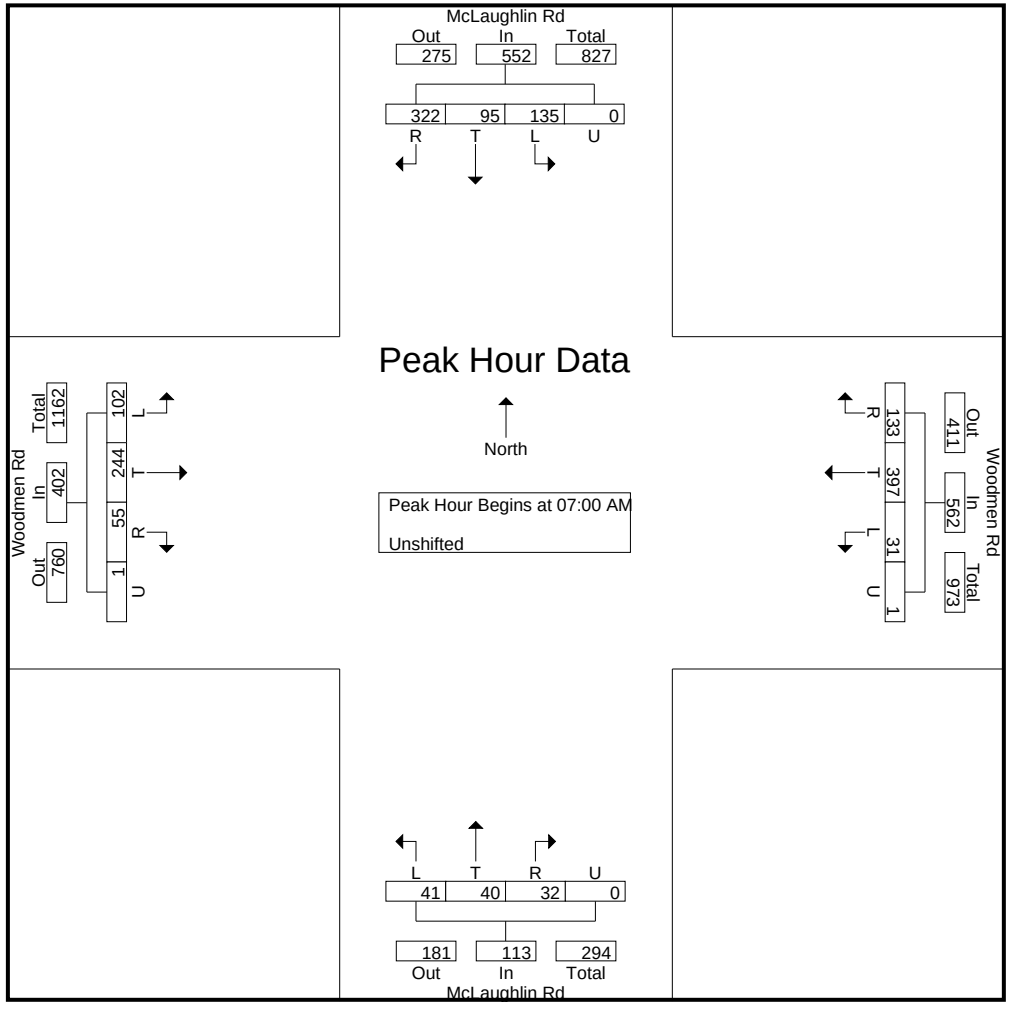
719-633-2868

File Name : McLaughlin Rd - Woodmen Rd AM
Site Code : S214730
Start Date : 11/10/2021
Page No : 3



LSC Transportation Consultants, Inc.

545 E Pikes Peak Ave, Suite 210
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719-633-2868

File Name : McLaughlin Rd - Woodmen Rd PM
Site Code : S214730
Start Date : 11/10/2021
Page No : 1

Groups Printed- Unshifted

	Mc Laughlin Rd Southbound					Woodmen Rd Westbound					McLaughlin Rd Northbound					Woodmen Rd Eastbound					
Start Time	**L**	**T**	**R**	**U**	**App. Total**	**L**	**T**	**R**	**U**	**App. Total**	**L**	**T**	**R**	**U**	**App. Total**	**L**	**T**	**R**	**U**	**App. Total**	**Int. Total**
04:00 PM	40	31	60	0	131	10	86	60	1	157	21	43	33	0	97	57	74	20	0	151	536
04:15 PM	51	29	76	0	156	16	95	71	0	182	23	32	20	0	75	54	95	24	0	173	586
04:30 PM	58	28	64	1	151	13	103	65	0	181	9	45	25	0	79	62	109	28	2	201	612
04:45 PM	53	38	47	0	138	16	104	77	2	199	24	45	28	0	97	38	93	30	0	161	595
Total	202	126	247	1	576	55	388	273	3	719	77	165	106	0	348	211	371	102	2	686	2329
05:00 PM	39	27	61	0	127	15	92	75	0	182	25	49	21	0	95	74	93	31	0	198	602
05:15 PM	38	24	66	0	128	6	87	58	0	151	15	42	28	0	85	59	85	20	0	164	528
05:30 PM	37	24	58	0	119	11	91	48	1	151	15	26	17	0	58	57	96	30	0	183	511
05:45 PM	39	11	30	0	80	8	75	54	0	137	24	33	24	0	81	63	91	23	0	177	475
Total	153	86	215	0	454	40	345	235	1	621	79	150	90	0	319	253	365	104	0	722	2116
Grand Total	355	212	462	1	1030	95	733	508	4	1340	156	315	196	0	667	464	736	206	2	1408	4445
Apprch %	34.5	20.6	44.9	0.1		7.1	54.7	37.9	0.3		23.4	47.2	29.4	0		33	52.3	14.6	0.1		
Total %	8	4.8	10.4	0	23.2	2.1	16.5	11.4	0.1	30.1	3.5	7.1	4.4	0	15	10.4	16.6	4.6	0	31.7	

LSC Transportation Consultants, Inc.
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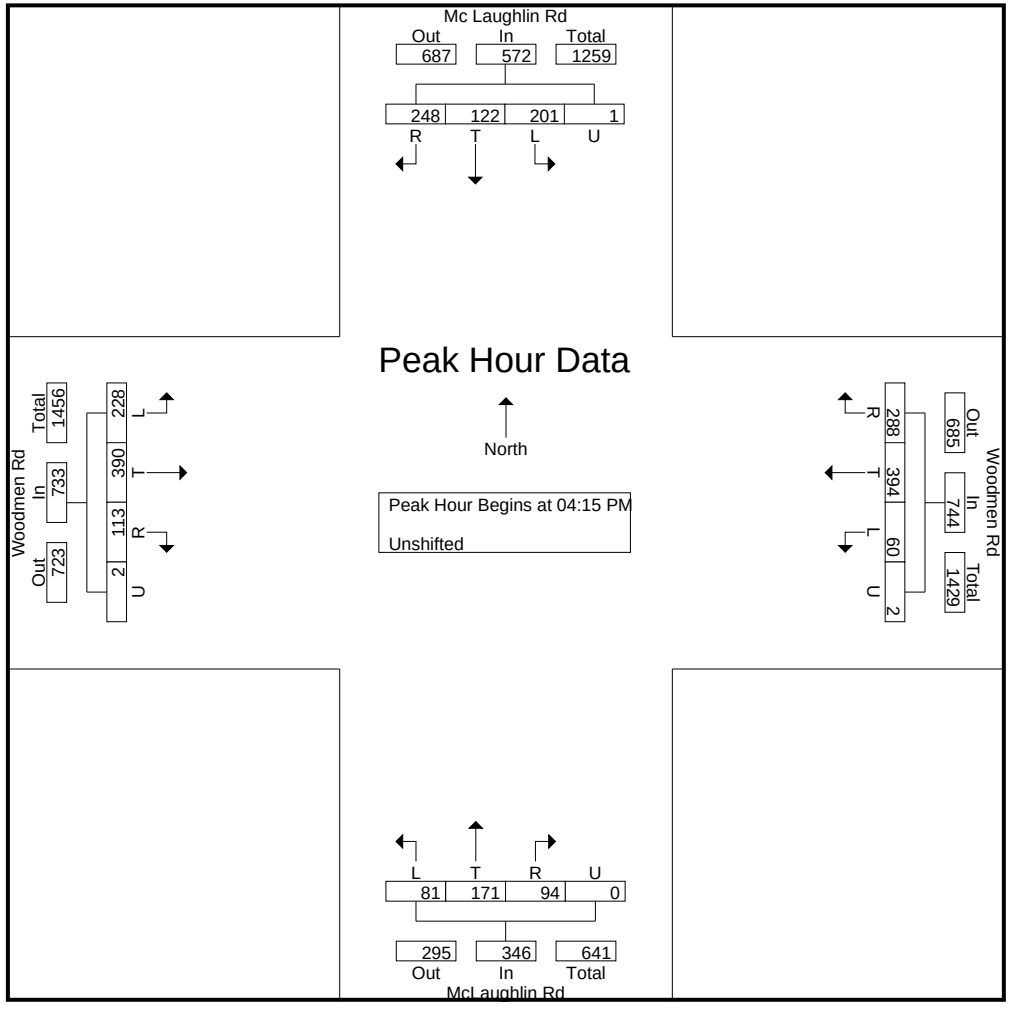
File Name : McLaughlin Rd - Woodmen Rd PM
Site Code : S214730
Start Date : 11/10/2021
Page No : 3



LSC Transportation Consultants, Inc.

545 E Pikes Peak Ave, Suite 210
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719-633-2868

File Name : Hwy 24 - Old Meridian Rd AM
Site Code : 00000000
Start Date : 11/30/2021
Page No : 1

Groups Printed- Unshifted

	Hwy 24 Southbound					Old Meridian Rd Westbound					Hwy 24 Northbound					Old Meridian Rd Eastbound					
Start Time	**L**	**T**	**R**	**U**	**App. Total**	**L**	**T**	**R**	**U**	**App. Total**	**L**	**T**	**R**	**U**	**App. Total**	**L**	**T**	**R**	**U**	**App. Total**	**Int. Total**
06:30 AM	0	187	0	0	187	0	0	4	0	4	0	76	2	0	78	0	0	7	0	7	276
06:45 AM	0	183	0	0	183	0	0	2	0	2	0	116	5	0	121	0	0	7	0	7	313
Total	0	370	0	0	370	0	0	6	0	6	0	192	7	0	199	0	0	14	0	14	589
07:00 AM	0	182	2	0	184	0	0	7	0	7	0	115	7	0	122	0	0	4	0	4	317
07:15 AM	0	125	1	0	126	0	0	7	0	7	0	92	2	0	94	0	0	6	0	6	233
07:30 AM	0	155	1	0	156	0	0	7	0	7	0	105	4	0	109	0	0	8	0	8	280
07:45 AM	0	167	3	0	170	0	0	11	0	11	0	95	4	0	99	0	0	3	0	3	283
Total	0	629	7	0	636	0	0	32	0	32	0	407	17	0	424	0	0	21	0	21	1113
08:00 AM	0	112	0	0	112	0	0	10	0	10	0	82	5	0	87	0	0	9	0	9	218
08:15 AM	0	144	4	0	148	0	0	6	0	6	0	91	5	0	96	0	1	8	0	9	259
Grand Total	0	1255	11	0	1266	0	0	54	0	54	0	772	34	0	806	0	1	52	0	53	2179
Apprch %	0	99.1	0.9	0		0	0	100	0		0	95.8	4.2	0		0	1.9	98.1	0		
Total %	0	57.6	0.5	0	58.1	0	0	2.5	0	2.5	0	35.4	1.6	0	37	0	0	2.4	0	2.4	

LSC Transportation Consultants, Inc.
545 E Pikes Peak Ave, Suite 210
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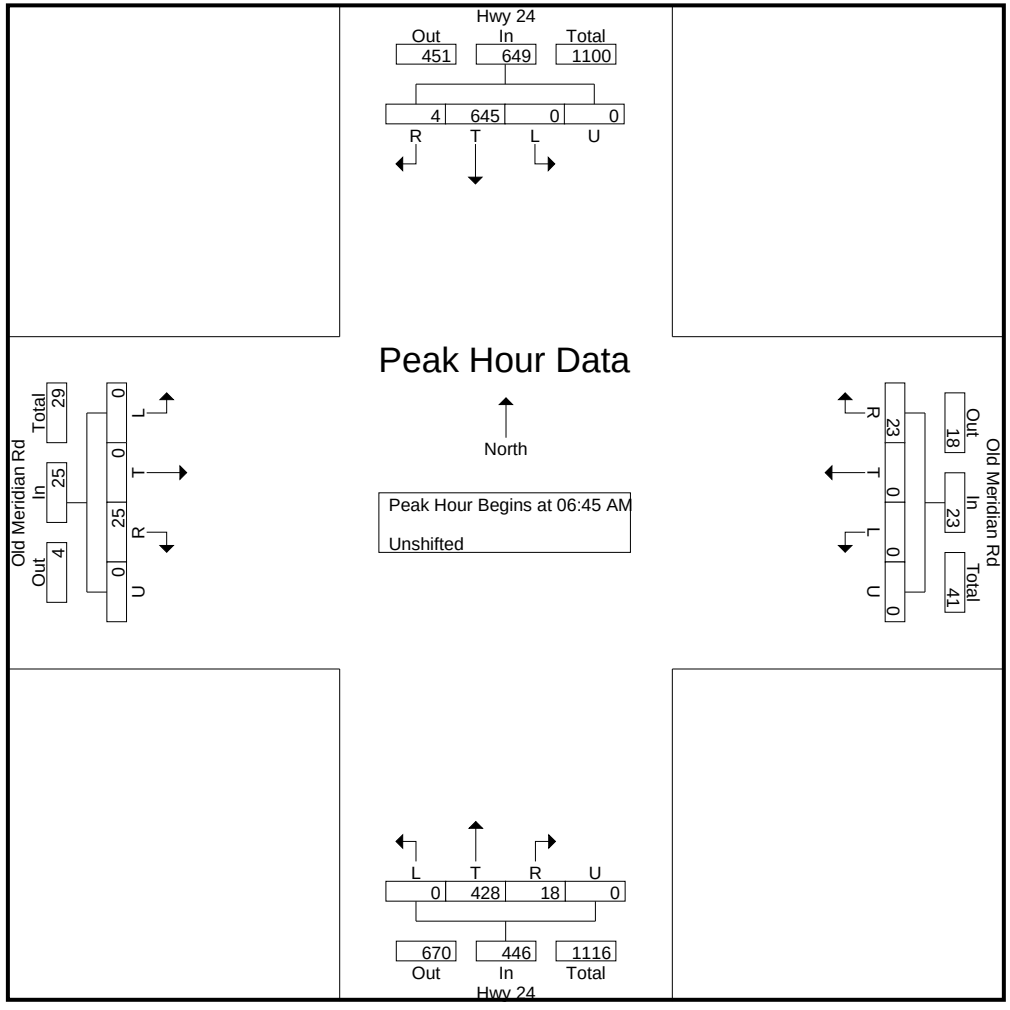
719-633-2868

File Name : Hwy 24 - Old Meridian Rd AM
Site Code : 00000000
Start Date : 11/30/2021
Page No : 3



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545 E Pikes Peak Ave, Suite 210
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719-633-2868

File Name : Hwy 24 - Old Meridian Rd PM
Site Code : 00000000
Start Date : 12/1/2021
Page No : 1

Groups Printed- Unshifted

	Hwy 24 Southbound					Old Meridian Rd Westbound					Hwy 24 Northbound					Old Meridian Rd Eastbound					
Start Time	**L**	**T**	**R**	**U**	**App. Total**	**L**	**T**	**R**	**U**	**App. Total**	**L**	**T**	**R**	**U**	**App. Total**	**L**	**T**	**R**	**U**	**App. Total**	**Int. Total**
04:00 PM	0	118	3	0	121	0	0	12	0	12	0	152	7	0	159	0	0	19	0	19	311
04:15 PM	0	106	3	0	109	0	0	11	0	11	0	178	1	0	179	0	0	11	0	11	310
04:30 PM	0	109	3	0	112	0	0	12	0	12	0	219	1	0	220	0	0	12	0	12	356
04:45 PM	0	82	1	0	83	0	0	12	0	12	0	191	1	0	192	0	0	15	0	15	302
Total	0	415	10	0	425	0	0	47	0	47	0	740	10	0	750	0	0	57	0	57	1279
05:00 PM	0	119	1	0	120	0	0	8	0	8	0	192	6	0	198	0	0	17	0	17	343
05:15 PM	0	130	0	0	130	0	0	13	0	13	0	195	6	0	201	0	0	8	0	8	352
05:30 PM	0	89	2	0	91	0	0	12	0	12	0	179	5	0	184	0	0	16	0	16	303
05:45 PM	0	100	1	0	101	0	0	6	0	6	0	208	6	0	214	0	0	10	0	10	331
Total	0	438	4	0	442	0	0	39	0	39	0	774	23	0	797	0	0	51	0	51	1329
Grand Total	0	853	14	0	867	0	0	86	0	86	0	1514	33	0	1547	0	0	108	0	108	2608
Apprch %	0	98.4	1.6	0		0	0	100	0		0	97.9	2.1	0		0	0	100	0		
Total %	0	32.7	0.5	0	33.2	0	0	3.3	0	3.3	0	58.1	1.3	0	59.3	0	0	4.1	0	4.1	

LSC Transportation Consultants, Inc.
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File Name : Hwy 24 - Old Meridian Rd PM
Site Code : 00000000
Start Date : 12/1/2021
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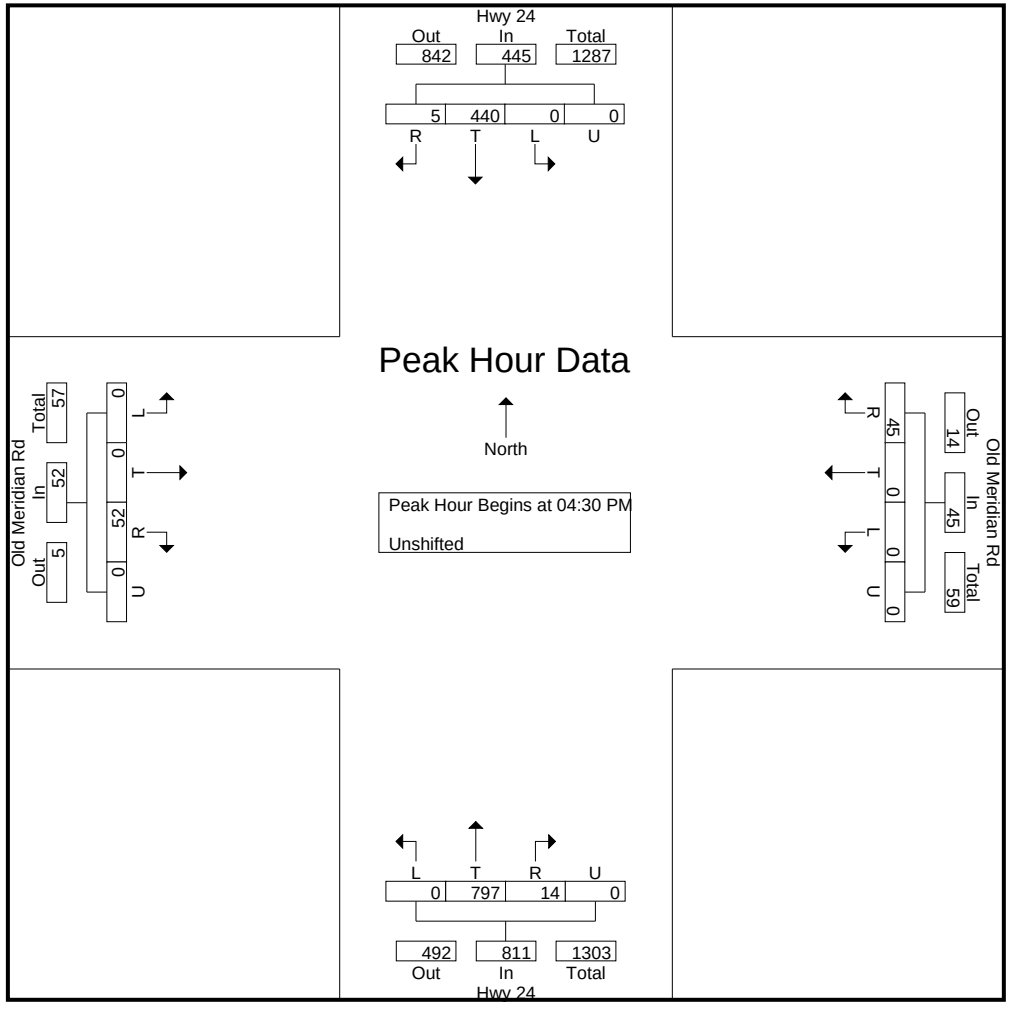


Levels of Service

TRANSPORTATION
CONSULTANTS, INC.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	102	244	55	32	397	133	41	40	32	135	95	322
Future Volume (vph)	102	244	55	32	397	133	41	40	32	135	95	322
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	375		0	350		350	125		125	175		100
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	1863	1583	1770	1863	1583
Flt Permitted	0.402			0.588			0.691			0.623		
Satd. Flow (perm)	749	3539	1583	1095	3539	1583	1287	1863	1583	1160	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			182			182			236			346
Link Speed (mph)		40			40			35			35	
Link Distance (ft)		972			473			511			629	
Travel Time (s)		16.6			8.1			10.0			12.3	
Peak Hour Factor	0.92	0.92	0.92	0.93	0.93	0.93	0.83	0.83	0.83	0.93	0.93	0.93
Adj. Flow (vph)	111	265	60	34	427	143	49	48	39	145	102	346
Shared Lane Traffic (%)												
Lane Group Flow (vph)	111	265	60	34	427	143	49	48	39	145	102	346
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1	1	1	1	1	1	1	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	100	20	20	100	20	20	100	20	20	100	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Free	pm+pt	NA	Free
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		6	8		Free	4		Free
Detector Phase	5	2	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	5.0	
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5		9.5	22.5	
Total Split (s)	13.0	38.0	38.0	11.0	36.0	36.0	11.0	24.0		17.0	30.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (%)	14.4%	42.2%	42.2%	12.2%	40.0%	40.0%	12.2%	26.7%		18.9%	33.3%	
Maximum Green (s)	8.5	33.5	33.5	6.5	31.5	31.5	6.5	19.5		12.5	25.5	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5		-0.5	-0.5	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	Max		None	Max	
Walk Time (s)		7.0	7.0		7.0	7.0		7.0			7.0	
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0			11.0	
Pedestrian Calls (#/hr)		0	0		0	0		0			0	
Act Effct Green (s)	43.8	38.4	38.4	40.2	34.8	34.8	29.2	22.5	90.0	36.9	30.4	90.0
Actuated g/C Ratio	0.49	0.43	0.43	0.45	0.39	0.39	0.32	0.25	1.00	0.41	0.34	1.00
v/c Ratio	0.24	0.18	0.08	0.06	0.31	0.20	0.11	0.10	0.02	0.27	0.16	0.22
Control Delay	12.7	16.6	2.0	8.2	13.5	0.6	17.3	28.0	0.0	18.5	23.8	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	12.7	16.6	2.0	8.2	13.5	0.6	17.3	28.0	0.0	18.5	23.8	0.3
LOS	B	B	A	A	B	A	B	C	A	B	C	A
Approach Delay		13.6			10.1			16.1			8.8	
Approach LOS		B			B			B			A	
Queue Length 50th (ft)	40	51	1	7	58	0	16	21	0	52	44	0
Queue Length 95th (ft)	m72	75	m9	15	71	0	35	47	0	92	83	0
Internal Link Dist (ft)		892			393			431			549	
Turn Bay Length (ft)	375			350		350	125		125	175		100
Base Capacity (vph)	466	1511	780	544	1368	723	459	465	1583	565	629	1583
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.24	0.18	0.08	0.06	0.31	0.20	0.11	0.10	0.02	0.26	0.16	0.22

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 6 (7%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 65
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.31
Intersection Signal Delay: 11.0 Intersection LOS: B
Intersection Capacity Utilization 40.8% ICU Level of Service A
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: McLaughlin Rd & Woodmen Rd

Lane Group	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	303	267	202	288	544	349
Future Volume (vph)	303	267	202	288	544	349
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	850			350
Storage Lanes	1	1	2			1
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	0.97	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	3433	1863	1863	1583
Flt Permitted	0.950		0.239			
Satd. Flow (perm)	1770	1583	864	1863	1863	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		287				375
Link Speed (mph)	40			55	55	
Link Distance (ft)	328			976	994	
Travel Time (s)	5.6			12.1	12.3	
Peak Hour Factor	0.93	0.93	0.92	0.92	0.93	0.93
Adj. Flow (vph)	326	287	220	313	585	375
Shared Lane Traffic (%)						
Lane Group Flow (vph)	326	287	220	313	585	375
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			24	24	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Number of Detectors	1	1	1	1	1	1
Detector Template	Left	Right	Left	Thru	Thru	Right
Leading Detector (ft)	20	20	20	100	100	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	20	100	100	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot	Free	pm+pt	NA	NA	Perm
Protected Phases	4		5	2	6	
Permitted Phases		Free	2			6
Detector Phase	4		5	2	6	6
Switch Phase						
Minimum Initial (s)	5.0		5.0	5.0	5.0	5.0
Minimum Split (s)	22.5		9.5	22.5	22.5	22.5
Total Split (s)	32.0		10.0	58.0	48.0	48.0

Lane Group	SEL	SER	NEL	NET	SWT	SWR
Total Split (%)	35.6%		11.1%	64.4%	53.3%	53.3%
Maximum Green (s)	27.5		5.5	53.5	43.5	43.5
Yellow Time (s)	3.5		3.5	3.5	3.5	3.5
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-0.5		-0.5	-0.5	-0.5	0.0
Total Lost Time (s)	4.0		4.0	4.0	4.0	4.5
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Recall Mode	Max		None	C-Max	C-Max	C-Max
Walk Time (s)	7.0			7.0	7.0	7.0
Flash Dont Walk (s)	11.0			11.0	11.0	11.0
Pedestrian Calls (#/hr)	0			0	0	0
Act Effct Green (s)	28.0	90.0	54.0	54.0	44.0	43.5
Actuated g/C Ratio	0.31	1.00	0.60	0.60	0.49	0.48
v/c Ratio	0.59	0.18	0.32	0.28	0.64	0.39
Control Delay	25.1	0.3	19.9	23.5	21.2	2.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.1	0.3	19.9	23.5	21.2	2.8
LOS	C	A	B	C	C	A
Approach Delay	13.5			22.0	14.0	
Approach LOS	B			C	B	
Queue Length 50th (ft)	149	0	64	183	237	0
Queue Length 95th (ft)	207	0	m98	264	352	44
Internal Link Dist (ft)	248			896	914	
Turn Bay Length (ft)			850			350
Base Capacity (vph)	550	1583	689	1117	910	958
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.59	0.18	0.32	0.28	0.64	0.39

Intersection Summary	
Area Type:	Other
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 0 (0%), Referenced to phase 2:NETL and 6:SWT, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.64	
Intersection Signal Delay: 15.9	Intersection LOS: B
Intersection Capacity Utilization 61.2%	ICU Level of Service B
Analysis Period (min) 15	
m Volume for 95th percentile queue is metered by upstream signal.	

Splits and Phases: 3: US 24 & Woodmen Rd

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	0	0	25	0	0	23	0	428	18	0	645	4
Future Volume (vph)	0	0	25	0	0	23	0	428	18	0	645	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		25	0		50	500		360	570		550
Storage Lanes	0		0	0		0	0		1	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.865			0.865			0.850			0.850
Flt Protected												
Satd. Flow (prot)	0	0	1611	0	0	1611	0	1863	1583	0	1863	1583
Flt Permitted												
Satd. Flow (perm)	0	0	1611	0	0	1611	0	1863	1583	0	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			414			581			127			127
Link Speed (mph)		40			40			55			55	
Link Distance (ft)		936			836			1008			1839	
Travel Time (s)		16.0			14.3			12.5			22.8	
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.92	0.92	0.92	0.93	0.93	0.93
Adj. Flow (vph)	0	0	32	0	0	29	0	465	20	0	694	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	32	0	0	29	0	465	20	0	694	4
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors			1			1		1	1		1	1
Detector Template			Right			Right		Thru	Right		Thru	Right
Leading Detector (ft)			20			20		100	20		100	20
Trailing Detector (ft)			0			0		0	0		0	0
Detector 1 Position(ft)			0			0		0	0		0	0
Detector 1 Size(ft)			20			20		100	20		100	20
Detector 1 Type			Cl+Ex			Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)			0.0			0.0		0.0	0.0		0.0	0.0
Detector 1 Queue (s)			0.0			0.0		0.0	0.0		0.0	0.0
Detector 1 Delay (s)			0.0			0.0		0.0	0.0		0.0	0.0
Turn Type			custom			custom		NA	Perm		NA	Perm
Protected Phases			5			1		2			6	
Permitted Phases			4			3			2			6
Detector Phase			5			1		2	2		6	6
Switch Phase												
Minimum Initial (s)			5.0			5.0		5.0	5.0		5.0	5.0
Minimum Split (s)			9.5			9.5		22.5	22.5		22.5	22.5
Total Split (s)			7.0			9.0		34.0	34.0		36.0	36.0

Lane Group	Ø3	Ø4
Lane Configurations		
Traffic Volume (vph)		
Future Volume (vph)		
Ideal Flow (vphpl)		
Storage Length (ft)		
Storage Lanes		
Taper Length (ft)		
Lane Util. Factor		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Right Turn on Red		
Satd. Flow (RTOR)		
Link Speed (mph)		
Link Distance (ft)		
Travel Time (s)		
Peak Hour Factor		
Adj. Flow (vph)		
Shared Lane Traffic (%)		
Lane Group Flow (vph)		
Enter Blocked Intersection		
Lane Alignment		
Median Width(ft)		
Link Offset(ft)		
Crosswalk Width(ft)		
Two way Left Turn Lane		
Headway Factor		
Turning Speed (mph)		
Number of Detectors		
Detector Template		
Leading Detector (ft)		
Trailing Detector (ft)		
Detector 1 Position(ft)		
Detector 1 Size(ft)		
Detector 1 Type		
Detector 1 Channel		
Detector 1 Extend (s)		
Detector 1 Queue (s)		
Detector 1 Delay (s)		
Turn Type		
Protected Phases	3	4
Permitted Phases		
Detector Phase		
Switch Phase		
Minimum Initial (s)	5.0	5.0
Minimum Split (s)	22.5	22.5
Total Split (s)	19.0	28.0

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Total Split (%)			7.8%			10.0%		37.8%	37.8%		40.0%	40.0%
Maximum Green (s)			2.5			4.5		29.5	29.5		31.5	31.5
Yellow Time (s)			3.5			3.5		3.5	3.5		3.5	3.5
All-Red Time (s)			1.0			1.0		1.0	1.0		1.0	1.0
Lost Time Adjust (s)			-0.5			-0.5		-0.5	-0.5		-0.5	-0.5
Total Lost Time (s)			4.0			4.0		4.0	4.0		4.0	4.0
Lead/Lag			Lead			Lead		Lag	Lag		Lag	Lag
Lead-Lag Optimize?			Yes			Yes		Yes	Yes		Yes	Yes
Vehicle Extension (s)			3.0			3.0		3.0	3.0		3.0	3.0
Recall Mode			None			None		C-Max	C-Max		C-Max	C-Max
Walk Time (s)								7.0	7.0		7.0	7.0
Flash Dont Walk (s)								11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)								0	0		0	0
Act Effct Green (s)			27.0			24.0		33.6	33.6		34.8	34.8
Actuated g/C Ratio			0.30			0.27		0.37	0.37		0.39	0.39
v/c Ratio			0.04			0.03		0.67	0.03		0.96	0.01
Control Delay			0.1			0.1		30.6	0.1		58.7	0.0
Queue Delay			0.0			0.0		0.0	0.0		0.0	0.0
Total Delay			0.1			0.1		30.6	0.1		58.7	0.0
LOS			A			A		C	A		E	A
Approach Delay		0.1			0.1			29.3			58.4	
Approach LOS		A			A			C			E	
Queue Length 50th (ft)			0			0		232	0		~440	0
Queue Length 95th (ft)			0			0		349	0		#665	m0
Internal Link Dist (ft)		856			756			928			1759	
Turn Bay Length (ft)			25			50			360			550
Base Capacity (vph)			773			855		695	670		720	689
Starvation Cap Reductn			0			0		0	0		0	0
Spillback Cap Reductn			0			0		0	0		0	0
Storage Cap Reductn			0			0		0	0		0	0
Reduced v/c Ratio			0.04			0.03		0.67	0.03		0.96	0.01

Intersection Summary

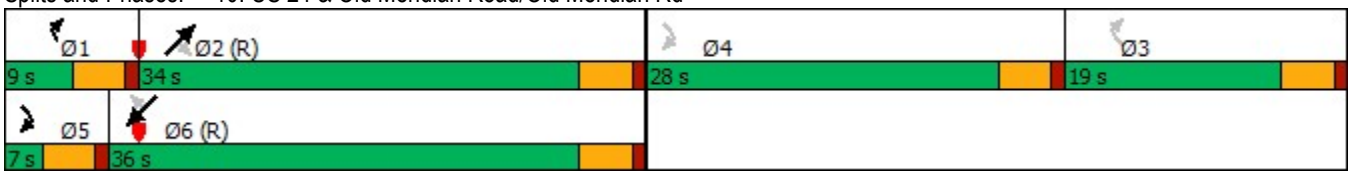
Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 87 (97%), Referenced to phase 2:NET and 6:SWT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.96
Intersection Signal Delay: 44.2 Intersection LOS: D
Intersection Capacity Utilization 44.8% ICU Level of Service A
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 10: US 24 & Old Meridian Road/Old Meridian Rd



Lane Group	Ø3	Ø4
Total Split (%)	21%	31%
Maximum Green (s)	14.5	23.5
Yellow Time (s)	3.5	3.5
All-Red Time (s)	1.0	1.0
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes
Vehicle Extension (s)	3.0	3.0
Recall Mode	Max	Max
Walk Time (s)	7.0	7.0
Flash Dont Walk (s)	11.0	11.0
Pedestrian Calls (#/hr)	0	0
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		
Queue Length 50th (ft)		
Queue Length 95th (ft)		
Internal Link Dist (ft)		
Turn Bay Length (ft)		
Base Capacity (vph)		
Starvation Cap Reductn		
Spillback Cap Reductn		
Storage Cap Reductn		
Reduced v/c Ratio		

Intersection Summary

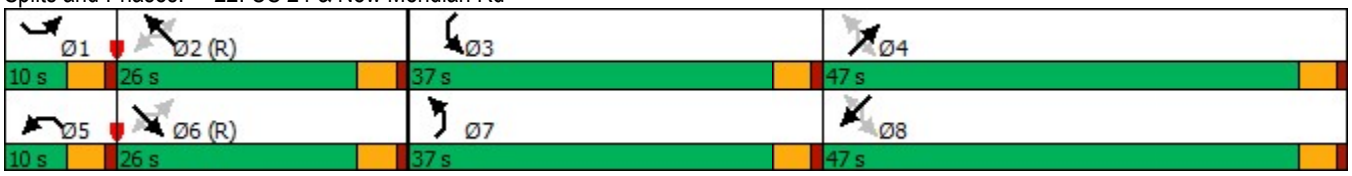
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	1	27	508	1	110	28	110	428	11	24	758	0
Future Volume (vph)	1	27	508	1	110	28	110	428	11	24	758	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850			
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	1863	1583	1770	1863	1863
Flt Permitted	0.668			0.737			0.124			0.469		
Satd. Flow (perm)	1244	3539	1583	1373	3539	1583	231	1863	1583	874	1863	1863
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			541			95			95			
Link Speed (mph)		40			40			55			55	
Link Distance (ft)		1929			665			1417			1008	
Travel Time (s)		32.9			11.3			17.6			12.5	
Peak Hour Factor	0.92	0.92	0.92	0.83	0.83	0.83	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	1	29	552	1	133	34	118	460	12	26	815	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	1	29	552	1	133	34	118	460	12	26	815	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6		6	2		2	4		4	8		8
Detector Phase	1	6	6	5	2	2	7	4	4	3	8	8
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

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5
Total Split (s)	10.0	26.0	26.0	10.0	26.0	26.0	37.0	47.0	47.0	37.0	47.0	47.0
Total Split (%)	8.3%	21.7%	21.7%	8.3%	21.7%	21.7%	30.8%	39.2%	39.2%	30.8%	39.2%	39.2%
Maximum Green (s)	5.5	21.5	21.5	5.5	21.5	21.5	32.5	42.5	42.5	32.5	42.5	42.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (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
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	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	30.6	29.5	29.5	30.6	29.5	29.5	79.5	72.9	72.9	69.3	63.2	
Actuated g/C Ratio	0.26	0.25	0.25	0.26	0.25	0.25	0.66	0.61	0.61	0.58	0.53	
v/c Ratio	0.00	0.03	0.69	0.00	0.15	0.07	0.39	0.41	0.01	0.05	0.83	
Control Delay	33.0	36.6	9.2	33.0	37.2	0.3	11.1	14.5	0.0	7.8	33.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	33.0	36.6	9.2	33.0	37.2	0.3	11.1	14.5	0.0	7.8	33.6	
LOS	C	D	A	C	D	A	B	B	A	A	C	
Approach Delay		10.6			29.7			13.5			32.8	
Approach LOS		B			C			B			C	
Queue Length 50th (ft)	1	8	6	1	41	0	30	191	0	6	513	
Queue Length 95th (ft)	5	24	128	5	70	0	52	274	0	16	#810	
Internal Link Dist (ft)		1849			585			1337			928	
Turn Bay Length (ft)												
Base Capacity (vph)	341	869	797	368	869	460	569	1132	999	821	980	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.00	0.03	0.69	0.00	0.15	0.07	0.21	0.41	0.01	0.03	0.83	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:NWTL and 6:SETL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.83
Intersection Signal Delay: 21.4 Intersection LOS: C
Intersection Capacity Utilization 86.8% ICU Level of Service E
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 22: US 24 & New Meridian Rd



Intersection	
Int Delay, s/veh	0.6

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Vol, veh/h	0	0	25	0	0	23	0	428	18	0	645	4
Future Vol, veh/h	0	0	25	0	0	23	0	428	18	0	645	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Yield	-	-	Yield	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	360	-	-	550
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	78	78	78	92	92	92	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	32	0	0	29	0	465	20	0	694	4

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	694	-	-	465	-	0	0	-	-	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.22	-	-	6.22	-	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.318	-	-	3.318	-	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	443	0	0	746	0	-	-	0	-	-
Stage 1	0	0	-	0	0	-	0	-	-	0	-	-
Stage 2	0	0	-	0	0	-	0	-	-	0	-	-
Platoon blocked, %						1		-	-		-	-
Mov Cap-1 Maneuver	-	-	443	-	-	746	-	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	13.8	10	0	0
HCM LOS	B	B		

Minor Lane/Major Mvmt	NET	NER	NWLn1	SELn1	SWT	SWR
Capacity (veh/h)	-	-	746	443	-	-
HCM Lane V/C Ratio	-	-	0.04	0.072	-	-
HCM Control Delay (s)	-	-	10	13.8	-	-
HCM Lane LOS	-	-	B	B	-	-
HCM 95th %tile Q(veh)	-	-	0.1	0.2	-	-

Intersection	
Int Delay, s/veh	7

Movement	NBL	NBR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	88	14	471	100	6	862
Future Vol, veh/h	88	14	471	100	6	862
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	83	83	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	106	17	506	108	6	927

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1499	560	0	0	614	0
Stage 1	560	-	-	-	-	-
Stage 2	939	-	-	-	-	-
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	135	528	-	-	965	-
Stage 1	572	-	-	-	-	-
Stage 2	380	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	133	528	-	-	965	-
Mov Cap-2 Maneuver	133	-	-	-	-	-
Stage 1	572	-	-	-	-	-
Stage 2	375	-	-	-	-	-

Approach	NB	NE	SW
HCM Control Delay, s	93.8	0	0.1
HCM LOS	F		

Minor Lane/Major Mvmt	NET	NER	NBLn1	SWL	SWT
Capacity (veh/h)	-	-	148	965	-
HCM Lane V/C Ratio	-	-	0.83	0.007	-
HCM Control Delay (s)	-	-	93.8	8.8	0
HCM Lane LOS	-	-	F	A	A
HCM 95th %tile Q(veh)	-	-	5.4	0	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	228	390	113	60	394	288	81	171	94	201	122	248
Future Volume (vph)	228	390	113	60	394	288	81	171	94	201	122	248
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	375		0	350		350	125		125	175		100
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	1863	1583	1770	1863	1583
Flt Permitted	0.371			0.507			0.673			0.438		
Satd. Flow (perm)	691	3539	1583	944	3539	1583	1254	1863	1583	816	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			127			310			236			267
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		972			473			511			629	
Travel Time (s)		22.1			10.8			11.6			14.3	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.92	0.92	0.92	0.93	0.93	0.93
Adj. Flow (vph)	245	419	122	65	424	310	88	186	102	216	131	267
Shared Lane Traffic (%)												
Lane Group Flow (vph)	245	419	122	65	424	310	88	186	102	216	131	267
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Free	pm+pt	NA	Free
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		6	8		Free	4		Free

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2	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	5.0	
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5		9.5	22.5	
Total Split (s)	23.0	41.0	41.0	10.0	28.0	28.0	11.1	24.0		15.0	27.9	
Total Split (%)	25.6%	45.6%	45.6%	11.1%	31.1%	31.1%	12.3%	26.7%		16.7%	31.0%	
Maximum Green (s)	18.5	36.5	36.5	5.5	23.5	23.5	6.6	19.5		10.5	23.4	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5		4.5	4.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	Max		None	Max	
Walk Time (s)		7.0	7.0		7.0	7.0		7.0			7.0	
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0			11.0	
Pedestrian Calls (#/hr)		0	0		0	0		0			0	
Act Effct Green (s)	46.5	38.5	38.5	34.9	29.4	29.4	26.3	19.9	90.0	34.0	25.6	90.0
Actuated g/C Ratio	0.52	0.43	0.43	0.39	0.33	0.33	0.29	0.22	1.00	0.38	0.28	1.00
v/c Ratio	0.48	0.28	0.16	0.16	0.37	0.43	0.22	0.45	0.06	0.52	0.25	0.17
Control Delay	8.6	11.0	5.9	8.9	15.9	2.5	20.0	34.7	0.1	24.6	27.7	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	8.6	11.0	5.9	8.9	15.9	2.5	20.0	34.7	0.1	24.6	27.7	0.2
LOS	A	B	A	A	B	A	C	C	A	C	C	A
Approach Delay		9.5			10.1			21.9			14.7	
Approach LOS		A			B			C			B	
Queue Length 50th (ft)	70	85	16	11	52	0	32	93	0	85	59	0
Queue Length 95th (ft)	94	120	m58	m17	126	8	63	157	0	141	108	0
Internal Link Dist (ft)		892			393			431			549	
Turn Bay Length (ft)	375			350		350	125		125	175		100
Base Capacity (vph)	578	1514	749	416	1156	725	406	410	1583	419	530	1583
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.42	0.28	0.16	0.16	0.37	0.43	0.22	0.45	0.06	0.52	0.25	0.17

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 4 (4%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 65
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.52
Intersection Signal Delay: 12.7 Intersection LOS: B
Intersection Capacity Utilization 58.7% ICU Level of Service B
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: McLaughlin Rd & Woodmen Rd

Lane Group	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	619	196	369	485	292	366
Future Volume (vph)	619	196	369	485	292	366
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	850			350
Storage Lanes	1	1	2			1
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	0.97	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	3433	1863	1863	1583
Flt Permitted	0.950		0.315			
Satd. Flow (perm)	1770	1583	1138	1863	1863	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		139				394
Link Speed (mph)	30			30	30	
Link Distance (ft)	328			976	977	
Travel Time (s)	7.5			22.2	22.2	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	666	211	397	522	314	394
Shared Lane Traffic (%)						
Lane Group Flow (vph)	666	211	397	522	314	394
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			24	24	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Number of Detectors	1	1	1	2	2	1
Detector Template	Left	Right	Left	Thru	Thru	Right
Leading Detector (ft)	20	20	20	100	100	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	20	6	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)				94	94	
Detector 2 Size(ft)				6	6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	Free	pm+pt	NA	NA	Perm
Protected Phases	4		5	2	6	
Permitted Phases		Free	2			6

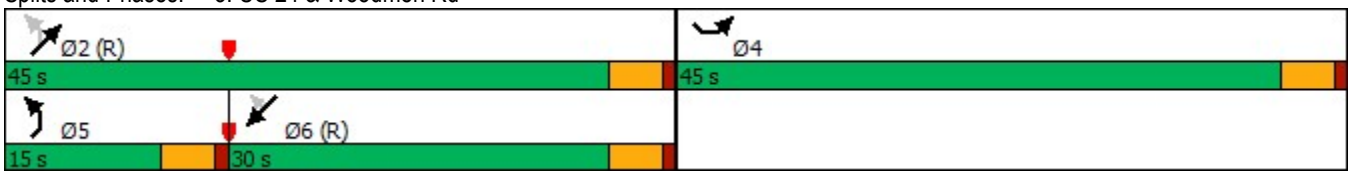
Lane Group	SEL	SER	NEL	NET	SWT	SWR
Detector Phase	4		5	2	6	6
Switch Phase						
Minimum Initial (s)	5.0		5.0	5.0	5.0	5.0
Minimum Split (s)	22.5		9.5	22.5	22.5	22.5
Total Split (s)	45.0		15.0	45.0	30.0	30.0
Total Split (%)	50.0%		16.7%	50.0%	33.3%	33.3%
Maximum Green (s)	40.5		10.5	40.5	25.5	25.5
Yellow Time (s)	3.5		3.5	3.5	3.5	3.5
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5		4.5	4.5	4.5	4.5
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Recall Mode	Max		None	C-Max	C-Max	C-Max
Walk Time (s)	7.0			7.0	7.0	7.0
Flash Dont Walk (s)	11.0			11.0	11.0	11.0
Pedestrian Calls (#/hr)	0			0	0	0
Act Effct Green (s)	40.5	90.0	40.5	40.5	25.8	25.8
Actuated g/C Ratio	0.45	1.00	0.45	0.45	0.29	0.29
v/c Ratio	0.84	0.13	0.51	0.62	0.59	0.54
Control Delay	29.6	0.2	18.0	23.0	33.1	5.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.6	0.2	18.0	23.0	33.1	5.8
LOS	C	A	B	C	C	A
Approach Delay	22.5			20.8	17.9	
Approach LOS	C			C	B	
Queue Length 50th (ft)	340	0	70	219	153	0
Queue Length 95th (ft)	#521	0	101	327	240	66
Internal Link Dist (ft)	248			896	897	
Turn Bay Length (ft)			850			350
Base Capacity (vph)	796	1583	779	838	533	734
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.84	0.13	0.51	0.62	0.59	0.54

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 72 (80%), Referenced to phase 2:NETL and 6:SWT, Start of Green
Natural Cycle: 65
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.84
Intersection Signal Delay: 20.6 Intersection LOS: C
Intersection Capacity Utilization 71.4% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 3: US 24 & Woodmen Rd



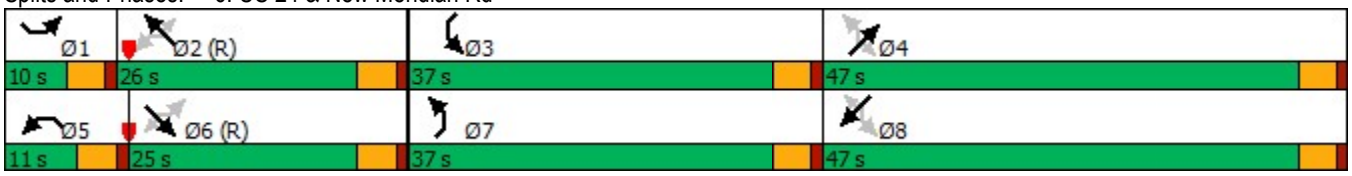
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	165	159	17	1	336	85	290	605	1	51	492	3
Future Volume (vph)	165	159	17	1	336	85	290	605	1	51	492	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	1863	1583	1770	1863	1583
Flt Permitted	0.366			0.643			0.111			0.220		
Satd. Flow (perm)	682	3539	1583	1198	3539	1583	207	1863	1583	410	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			95			95			95			95
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2040			700			1310			1116	
Travel Time (s)		46.4			15.9			29.8			25.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.93	0.93	0.93	0.92	0.92	0.92
Adj. Flow (vph)	179	173	18	1	365	92	312	651	1	55	535	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	179	173	18	1	365	92	312	651	1	55	535	3
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6		6	2		2	4		4	8		8
Detector Phase	1	6	6	5	2	2	7	4	4	3	8	8
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

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5
Total Split (s)	10.0	25.0	25.0	11.0	26.0	26.0	37.0	47.0	47.0	37.0	47.0	47.0
Total Split (%)	8.3%	20.8%	20.8%	9.2%	21.7%	21.7%	30.8%	39.2%	39.2%	30.8%	39.2%	39.2%
Maximum Green (s)	5.5	20.5	20.5	6.5	21.5	21.5	32.5	42.5	42.5	32.5	42.5	42.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (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
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	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	46.6	45.5	45.5	36.2	30.6	30.6	63.5	54.0	54.0	46.0	39.1	39.1
Actuated g/C Ratio	0.39	0.38	0.38	0.30	0.26	0.26	0.53	0.45	0.45	0.38	0.33	0.33
v/c Ratio	0.47	0.13	0.03	0.00	0.40	0.19	0.85	0.78	0.00	0.23	0.88	0.01
Control Delay	34.8	29.1	0.1	30.0	41.2	9.0	48.1	34.4	0.0	15.5	54.8	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	0.0
Total Delay	34.8	29.1	0.1	30.0	41.2	9.0	48.1	34.4	0.0	15.5	54.8	0.0
LOS	C	C	A	C	D	A	D	C	A	B	D	A
Approach Delay		30.4			34.7			38.8			50.9	
Approach LOS		C			C			D			D	
Queue Length 50th (ft)	89	42	0	0	125	0	176	446	0	21	395	0
Queue Length 95th (ft)	#246	96	0	5	188	44	236	452	0	28	484	0
Internal Link Dist (ft)		1960			620			1230			1036	
Turn Bay Length (ft)												
Base Capacity (vph)	377	1340	658	401	903	474	532	838	764	585	674	634
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.47	0.13	0.03	0.00	0.40	0.19	0.59	0.78	0.00	0.09	0.79	0.00

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:NWTL and 6:SETL, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.88
Intersection Signal Delay: 39.7 Intersection LOS: D
Intersection Capacity Utilization 75.4% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 6: US 24 & New Meridian Rd



Intersection	
Int Delay, s/veh	1.1

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Vol, veh/h	0	0	52	0	0	45	0	797	14	0	440	5
Future Vol, veh/h	0	0	52	0	0	45	0	797	14	0	440	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Yield	-	-	Yield	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	500	-	360	570	-	550
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	78	78	78	93	93	93	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	63	0	0	58	0	857	15	0	478	5

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	478	-	-	857	483	0	0	872	0	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.22	-	-	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.318	-	-	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	0	0	587	0	0	*398	1080	-	-	*596	-	-
Stage 1	0	0	-	0	0	-	-	-	-	-	-	-
Stage 2	0	0	-	0	0	-	-	-	-	-	-	-
Platoon blocked, %						1		-	-	1	-	-
Mov Cap-1 Maneuver	-	-	587	-	-	*398	1080	-	-	*596	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	11.9	15.6	0	0
HCM LOS	B	C		

Minor Lane/Major Mvmt	NEL	NET	NER	NWLn1	SELn1	SWL	SWT	SWR
Capacity (veh/h)	1080	-	-	398	587	* 596	-	-
HCM Lane V/C Ratio	-	-	-	0.145	0.107	-	-	-
HCM Control Delay (s)	0	-	-	15.6	11.9	0	-	-
HCM Lane LOS	A	-	-	C	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.5	0.4	0	-	-

Notes

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

Intersection	
Int Delay, s/veh	14.9

Movement	NBL	NBR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	89	17	883	143	9	632
Future Vol, veh/h	89	17	883	143	9	632
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	83	83	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	107	20	949	154	10	680

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1726	1026	0	0	1103	0
Stage 1	1026	-	-	-	-	-
Stage 2	700	-	-	-	-	-
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	~ 98	285	-	-	633	-
Stage 1	346	-	-	-	-	-
Stage 2	493	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 96	285	-	-	633	-
Mov Cap-2 Maneuver	~ 96	-	-	-	-	-
Stage 1	346	-	-	-	-	-
Stage 2	481	-	-	-	-	-

Approach	NB	NE	SW
HCM Control Delay, s	223.5	0	0.2
HCM LOS	F		

Minor Lane/Major Mvmt	NET	NER	NBLn1	SWL	SWT
Capacity (veh/h)	-	-	107	633	-
HCM Lane V/C Ratio	-	-	1.194	0.015	-
HCM Control Delay (s)	-	-	223.5	10.8	0
HCM Lane LOS	-	-	F	B	A
HCM 95th %tile Q(veh)	-	-	8.3	0	-

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	102	300	55	31	397	133	41	40	32	135	95	322
Future Volume (vph)	102	300	55	31	397	133	41	40	32	135	95	322
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	375		0	350		350	125		125	175		100
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	1863	1583	1770	1863	1583
Flt Permitted	0.426			0.555			0.690			0.625		
Satd. Flow (perm)	794	3539	1583	1034	3539	1583	1285	1863	1583	1164	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			136			145			177			350
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		972			473			511			629	
Travel Time (s)		22.1			10.8			11.6			14.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.83	0.83	0.83	0.92	0.92	0.92
Adj. Flow (vph)	111	326	60	34	432	145	49	48	39	147	103	350
Shared Lane Traffic (%)												
Lane Group Flow (vph)	111	326	60	34	432	145	49	48	39	147	103	350
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1	1	1	1	1	1	1	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	100	20	20	100	20	20	100	20	20	100	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Free	pm+pt	NA	Free
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		6	8		Free	4		Free
Detector Phase	5	2	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	5.0	
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5		9.5	22.5	
Total Split (s)	15.0	63.0	63.0	12.0	60.0	60.0	12.0	24.0		21.0	33.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (%)	12.5%	52.5%	52.5%	10.0%	50.0%	50.0%	10.0%	20.0%		17.5%	27.5%	
Maximum Green (s)	10.5	58.5	58.5	7.5	55.5	55.5	7.5	19.5		16.5	28.5	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5		-0.5	-0.5	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	Max		None	Max	
Walk Time (s)		7.0	7.0		7.0	7.0		7.0			7.0	
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0			11.0	
Pedestrian Calls (#/hr)		0	0		0	0		0			0	
Act Effct Green (s)	70.2	64.1	64.1	64.8	57.9	57.9	31.4	24.0	120.0	41.0	31.5	120.0
Actuated g/C Ratio	0.58	0.53	0.53	0.54	0.48	0.48	0.26	0.20	1.00	0.34	0.26	1.00
v/c Ratio	0.21	0.17	0.07	0.06	0.25	0.17	0.13	0.13	0.02	0.32	0.21	0.22
Control Delay	12.7	16.1	2.2	9.6	16.6	2.3	28.4	42.4	0.0	30.6	37.4	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	12.7	16.1	2.2	9.6	16.6	2.3	28.4	42.4	0.0	30.6	37.4	0.3
LOS	B	B	A	A	B	A	C	D	A	C	D	A
Approach Delay		13.7			12.8			25.2			14.1	
Approach LOS		B			B			C			B	
Queue Length 50th (ft)	42	65	3	9	88	0	26	31	0	81	64	0
Queue Length 95th (ft)	m67	88	m11	20	120	24	50	63	0	134	114	0
Internal Link Dist (ft)		892			393			431			549	
Turn Bay Length (ft)	375			350		350	125		125	175		100
Base Capacity (vph)	557	1891	909	616	1706	838	374	371	1583	483	489	1583
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.20	0.17	0.07	0.06	0.25	0.17	0.13	0.13	0.02	0.30	0.21	0.22

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 4 (3%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 65
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.32
Intersection Signal Delay: 14.4 Intersection LOS: B
Intersection Capacity Utilization 40.8% ICU Level of Service A
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: McLaughlin Rd & Woodmen Rd

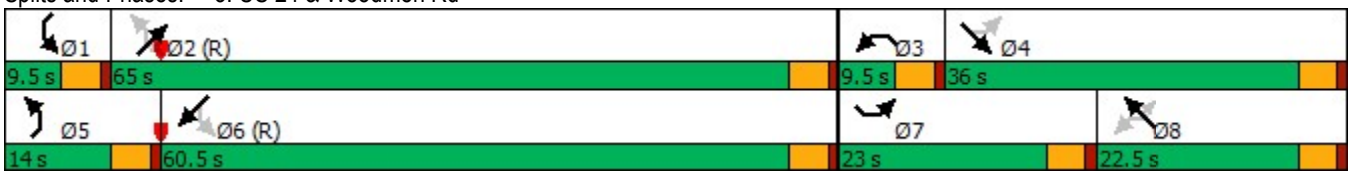
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	220	35	160	5	25	0	150	350	5	0	600	385
Future Volume (vph)	220	35	160	5	25	0	150	350	5	0	600	385
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		250	100		100	850		100	250		350
Storage Lanes	1		1	1		1	2		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	1.00	1.00	1.00	1.00	1.00
Frt			0.850						0.850			0.850
Flt Protected	0.950			0.950			0.950					
Satd. Flow (prot)	1770	1863	1583	1770	1863	1863	3433	1863	1583	1863	1863	1583
Flt Permitted	0.564			0.732			0.157					
Satd. Flow (perm)	1051	1863	1583	1364	1863	1863	567	1863	1583	1863	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			177						136			289
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		328			856			976			1388	
Travel Time (s)		7.5			19.5			22.2			31.5	
Peak Hour Factor	0.92	0.92	0.92	0.78	0.78	0.78	0.92	0.92	0.92	0.93	0.93	0.93
Adj. Flow (vph)	239	38	174	6	32	0	163	380	5	0	645	414
Shared Lane Traffic (%)												
Lane Group Flow (vph)	239	38	174	6	32	0	163	380	5	0	645	414
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	1	1	1	1	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	100	20	20	100	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94							
Detector 2 Size(ft)		6			6							
Detector 2 Type		Cl+Ex			Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							
Turn Type	pm+pt	NA	Free	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Free
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		Free	8		8	2		2	6		Free

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Detector Phase	7	4		3	8	8	5	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)	22.5	22.5		9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	
Total Split (s)	23.0	36.0		9.5	22.5	22.5	14.0	65.0	65.0	9.5	60.5	
Total Split (%)	19.2%	30.0%		7.9%	18.8%	18.8%	11.7%	54.2%	54.2%	7.9%	50.4%	
Maximum Green (s)	18.5	31.5		5.0	18.0	18.0	9.5	60.5	60.5	5.0	56.0	
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	-0.5	0.0		0.0	0.0	0.0	-0.5	-0.5	0.0	0.0	-0.5	
Total Lost Time (s)	4.0	4.5		4.5	4.5	4.5	4.0	4.0	4.5	4.5	4.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Recall Mode	Max	Max		None	None	None	None	C-Max	C-Max	None	C-Max	
Walk Time (s)	7.0	7.0			7.0	7.0		7.0	7.0		7.0	
Flash Dont Walk (s)	11.0	11.0			11.0	11.0		11.0	11.0		11.0	
Pedestrian Calls (#/hr)	0	0			0	0		0	0		0	
Act Effct Green (s)	41.5	39.1	120.0	15.8	13.2		70.5	70.5	70.0		58.1	120.0
Actuated g/C Ratio	0.35	0.33	1.00	0.13	0.11		0.59	0.59	0.58		0.48	1.00
v/c Ratio	0.45	0.06	0.11	0.03	0.16		0.31	0.35	0.01		0.72	0.26
Control Delay	22.8	20.8	0.1	28.0	47.2		12.3	13.9	0.0		30.2	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0
Total Delay	22.8	20.8	0.1	28.0	47.2		12.3	13.9	0.0		30.2	0.4
LOS	C	C	A	C	D		B	B	A		C	A
Approach Delay		13.9			44.2			13.3			18.6	
Approach LOS		B			D			B			B	
Queue Length 50th (ft)	85	13	0	3	22		26	144	0		383	0
Queue Length 95th (ft)	167	40	0	11	45		41	206	0		544	0
Internal Link Dist (ft)		248			776			896			1308	
Turn Bay Length (ft)			250	100			850		100			350
Base Capacity (vph)	531	607	1583	196	279		571	1094	980		901	1583
Starvation Cap Reductn	0	0	0	0	0		0	0	0		0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0		0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0		0	0
Reduced v/c Ratio	0.45	0.06	0.11	0.03	0.11		0.29	0.35	0.01		0.72	0.26

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:NETL and 6:SWTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.72
Intersection Signal Delay: 16.7 Intersection LOS: B
Intersection Capacity Utilization 65.1% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 3: US 24 & Woodmen Rd



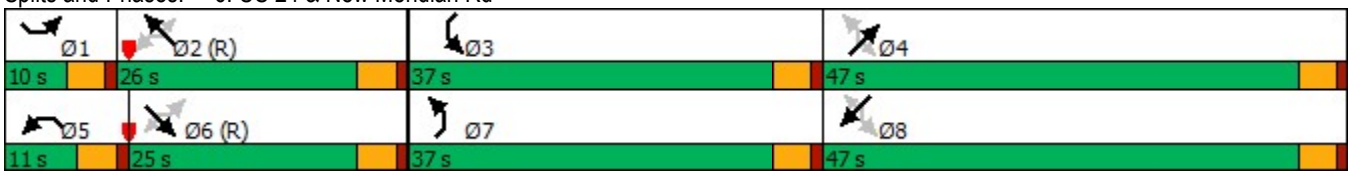
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	2	27	508	1	110	50	110	455	11	50	760	0
Future Volume (vph)	2	27	508	1	110	50	110	455	11	50	760	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850			
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	1863	1583	1770	1863	1863
Flt Permitted	0.672			0.734			0.119			0.423		
Satd. Flow (perm)	1252	3539	1583	1367	3539	1583	222	1863	1583	788	1863	1863
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			540			95			95			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1964			750			1443			983	
Travel Time (s)		44.6			17.0			32.8			22.3	
Peak Hour Factor	0.92	0.92	0.92	0.87	0.87	0.87	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	2	29	552	1	126	57	118	489	12	54	817	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	2	29	552	1	126	57	118	489	12	54	817	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6		6	2		2	4		4	8		8
Detector Phase	1	6	6	5	2	2	7	4	4	3	8	8
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

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5
Total Split (s)	10.0	25.0	25.0	11.0	26.0	26.0	37.0	47.0	47.0	37.0	47.0	47.0
Total Split (%)	8.3%	20.8%	20.8%	9.2%	21.7%	21.7%	30.8%	39.2%	39.2%	30.8%	39.2%	39.2%
Maximum Green (s)	5.5	20.5	20.5	6.5	21.5	21.5	32.5	42.5	42.5	32.5	42.5	42.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (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
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	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	30.5	29.4	29.4	30.7	29.5	29.5	79.4	70.3	70.3	70.3	63.6	
Actuated g/C Ratio	0.25	0.24	0.24	0.26	0.25	0.25	0.66	0.59	0.59	0.59	0.53	
v/c Ratio	0.01	0.03	0.69	0.00	0.14	0.12	0.40	0.45	0.01	0.10	0.83	
Control Delay	42.0	43.8	34.7	33.0	37.1	2.7	11.5	16.3	0.0	8.0	33.1	
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	42.0	43.8	34.7	33.0	37.1	2.7	11.5	16.3	0.0	8.0	33.1	
LOS	D	D	C	C	D	A	B	B	A	A	C	
Approach Delay		35.2			26.4			15.1			31.5	
Approach LOS		D			C			B			C	
Queue Length 50th (ft)	2	12	337	1	39	0	30	210	0	13	510	
Queue Length 95th (ft)	m2	m18	415	5	70	9	52	303	0	28	#810	
Internal Link Dist (ft)		1884			670			1363			903	
Turn Bay Length (ft)												
Base Capacity (vph)	342	867	795	372	869	460	566	1091	966	788	987	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.01	0.03	0.69	0.00	0.14	0.12	0.21	0.45	0.01	0.07	0.83	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:NWTL and 6:SETL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.83
Intersection Signal Delay: 27.5 Intersection LOS: C
Intersection Capacity Utilization 86.9% ICU Level of Service E
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 6: US 24 & New Meridian Rd



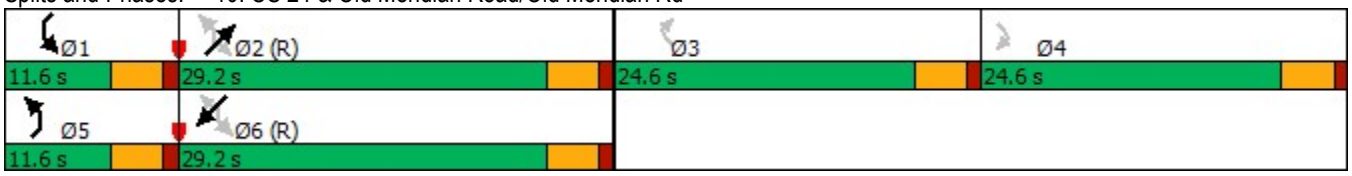
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	0	0	50	0	0	50	0	460	50	0	755	4
Future Volume (vph)	0	0	50	0	0	50	0	460	50	0	755	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		25	0		50	500		360	570		550
Storage Lanes	0		0	0		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.865			0.865			0.850			0.850
Flt Protected												
Satd. Flow (prot)	0	0	1611	0	0	1611	1863	1863	1583	1863	1863	1583
Flt Permitted												
Satd. Flow (perm)	0	0	1611	0	0	1611	1863	1863	1583	1863	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			582			620			127			127
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		936			836			983			1839	
Travel Time (s)		21.3			19.0			22.3			41.8	
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.92	0.92	0.92	0.93	0.93	0.93
Adj. Flow (vph)	0	0	60	0	0	60	0	500	54	0	812	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	60	0	0	60	0	500	54	0	812	4
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors			1			1	1	1	1	1	1	1
Detector Template			Right			Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)			20			20	20	100	20	20	100	20
Trailing Detector (ft)			0			0	0	0	0	0	0	0
Detector 1 Position(ft)			0			0	0	0	0	0	0	0
Detector 1 Size(ft)			20			20	20	100	20	20	100	20
Detector 1 Type			Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)			0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)			0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)			0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type			Perm			Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases							5	2		1	6	
Permitted Phases			4			3	2		2	6		6
Detector Phase			4			3	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
Minimum Split (s)			22.5			22.5	9.5	22.5	22.5	9.5	22.5	22.5
Total Split (s)			24.6			24.6	11.6	29.2	29.2	11.6	29.2	29.2

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Total Split (%)			27.3%			27.3%	12.9%	32.4%	32.4%	12.9%	32.4%	32.4%
Maximum Green (s)			20.1			20.1	7.1	24.7	24.7	7.1	24.7	24.7
Yellow Time (s)			3.5			3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)			1.0			1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)			-0.5			-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Total Lost Time (s)			4.0			4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag			Lag			Lead	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?			Yes			Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)			3.0			3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode			Max			Max	None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)			7.0			7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)			11.0			11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)			0			0		0	0		0	0
Act Effct Green (s)			20.6			20.6		36.8	36.8		36.8	36.8
Actuated g/C Ratio			0.23			0.23		0.41	0.41		0.41	0.41
v/c Ratio			0.07			0.07		0.66	0.07		1.07	0.01
Control Delay			0.2			0.2		26.5	0.2		79.9	0.0
Queue Delay			0.0			0.0		0.0	0.0		0.0	0.0
Total Delay			0.2			0.2		26.5	0.2		79.9	0.0
LOS			A			A		C	A		E	A
Approach Delay		0.2			0.2			24.0			79.5	
Approach LOS		A			A			C			E	
Queue Length 50th (ft)			0			0		224	0		~515	0
Queue Length 95th (ft)			0			0		335	0		#736	0
Internal Link Dist (ft)		856			756			903			1759	
Turn Bay Length (ft)			25			50			360			550
Base Capacity (vph)			817			846		761	722		761	722
Starvation Cap Reductn			0			0		0	0		0	0
Spillback Cap Reductn			0			0		0	0		0	0
Storage Cap Reductn			0			0		0	0		0	0
Reduced v/c Ratio			0.07			0.07		0.66	0.07		1.07	0.01

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:NETL and 6:SWTL, Start of Green
Natural Cycle: 100
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.07
Intersection Signal Delay: 52.5 Intersection LOS: D
Intersection Capacity Utilization 50.6% ICU Level of Service A
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 10: US 24 & Old Meridian Road/Old Meridian Rd



Intersection	
Int Delay, s/veh	1.1

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Vol, veh/h	0	0	50	0	0	50	0	460	50	0	755	4
Future Vol, veh/h	0	0	50	0	0	50	0	460	50	0	755	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Yield	-	-	Yield	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	500	-	360	570	-	550
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	83	83	83	92	92	92	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	60	0	0	60	0	500	54	0	812	4

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	812	-	-	500	816	0	0	554	0	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.22	-	-	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.318	-	-	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	0	0	379	0	0	*711	812	-	-	1014	-	-
Stage 1	0	0	-	0	0	-	-	-	-	-	-	-
Stage 2	0	0	-	0	0	-	-	-	-	-	-	-
Platoon blocked, %						1		-	-	1	-	-
Mov Cap-1 Maneuver	-	-	379	-	-	*711	812	-	-	1014	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	16.3	10.5	0	0
HCM LOS	C	B		

Minor Lane/Major Mvmt	NEL	NET	NER	NWLn1	SELn1	SWL	SWT	SWR
Capacity (veh/h)	812	-	-	711	379	1014	-	-
HCM Lane V/C Ratio	-	-	-	0.085	0.159	-	-	-
HCM Control Delay (s)	0	-	-	10.5	16.3	0	-	-
HCM Lane LOS	A	-	-	B	C	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.3	0.6	0	-	-

Notes

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

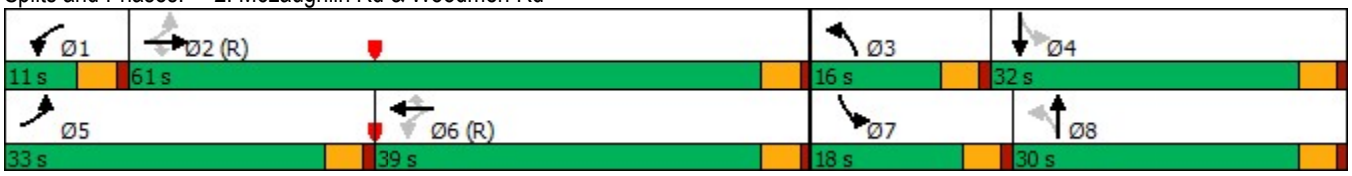
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	228	400	113	60	394	288	81	171	94	201	122	248
Future Volume (vph)	228	400	113	60	394	288	81	171	94	201	122	248
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	375		0	350		350	125		125	175		100
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	1863	1583	1770	1863	1583
Flt Permitted	0.410			0.502			0.673			0.426		
Satd. Flow (perm)	764	3539	1583	935	3539	1583	1254	1863	1583	794	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			122			310			177			267
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		972			473			511			629	
Travel Time (s)		22.1			10.8			11.6			14.3	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.92	0.92	0.92	0.93	0.93	0.93
Adj. Flow (vph)	245	430	122	65	424	310	88	186	102	216	131	267
Shared Lane Traffic (%)												
Lane Group Flow (vph)	245	430	122	65	424	310	88	186	102	216	131	267
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Free	pm+pt	NA	Free
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		6	8		Free	4		Free

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2	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	5.0	
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5		9.5	22.5	
Total Split (s)	33.0	61.0	61.0	11.0	39.0	39.0	16.0	30.0		18.0	32.0	
Total Split (%)	27.5%	50.8%	50.8%	9.2%	32.5%	32.5%	13.3%	25.0%		15.0%	26.7%	
Maximum Green (s)	28.5	56.5	56.5	6.5	34.5	34.5	11.5	25.5		13.5	27.5	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5		4.5	4.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	Max		None	Max	
Walk Time (s)		7.0	7.0		7.0	7.0		7.0			7.0	
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0			11.0	
Pedestrian Calls (#/hr)		0	0		0	0		0			0	
Act Effct Green (s)	67.5	58.7	58.7	55.3	49.0	49.0	35.3	26.1	120.0	42.5	29.7	120.0
Actuated g/C Ratio	0.56	0.49	0.49	0.46	0.41	0.41	0.29	0.22	1.00	0.35	0.25	1.00
v/c Ratio	0.45	0.25	0.15	0.14	0.29	0.37	0.22	0.46	0.06	0.56	0.28	0.17
Control Delay	17.5	17.1	3.8	8.7	16.7	2.3	27.5	45.5	0.1	34.3	39.2	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	17.5	17.1	3.8	8.7	16.7	2.3	27.5	45.5	0.1	34.3	39.2	0.2
LOS	B	B	A	A	B	A	C	D	A	C	D	A
Approach Delay		15.2			10.4			28.9			20.5	
Approach LOS		B			B			C			C	
Queue Length 50th (ft)	89	84	5	12	78	0	45	127	0	121	83	0
Queue Length 95th (ft)	m143	m110	m18	m23	137	10	84	201	0	186	143	0
Internal Link Dist (ft)		892			393			431			549	
Turn Bay Length (ft)	375			350		350	125		125	175		100
Base Capacity (vph)	668	1731	836	477	1444	829	442	404	1583	391	461	1583
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.37	0.25	0.15	0.14	0.29	0.37	0.20	0.46	0.06	0.55	0.28	0.17

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 15 (13%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 65
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.56
Intersection Signal Delay: 17.0 Intersection LOS: B
Intersection Capacity Utilization 58.7% ICU Level of Service B
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: McLaughlin Rd & Woodmen Rd



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	520	65	110	5	65	0	300	675	5	0	400	375
Future Volume (vph)	520	65	110	5	65	0	300	675	5	0	400	375
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		250	100		100	850		100	250		350
Storage Lanes	1		1	1		1	2		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	1.00	1.00	1.00	1.00	1.00
Frt			0.850						0.850			0.850
Flt Protected	0.950			0.950			0.950					
Satd. Flow (prot)	1770	1863	1583	1770	1863	1863	3433	1863	1583	1863	1863	1583
Flt Permitted	0.554			0.711			0.128					
Satd. Flow (perm)	1032	1863	1583	1324	1863	1863	463	1863	1583	1863	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			218						136			403
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		328			831			976			1388	
Travel Time (s)		7.5			18.9			22.2			31.5	
Peak Hour Factor	0.93	0.93	0.93	0.83	0.83	0.83	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	559	70	118	6	78	0	323	726	5	0	430	403
Shared Lane Traffic (%)												
Lane Group Flow (vph)	559	70	118	6	78	0	323	726	5	0	430	403
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Free	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Free
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		Free	8		8	2		2	6		Free

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Detector Phase	7	4		3	8	8	5	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)	22.5	22.5		9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	
Total Split (s)	40.7	52.0		11.2	22.5	22.5	17.8	47.3	47.3	9.5	39.0	
Total Split (%)	33.9%	43.3%		9.3%	18.8%	18.8%	14.8%	39.4%	39.4%	7.9%	32.5%	
Maximum Green (s)	36.2	47.5		6.7	18.0	18.0	13.3	42.8	42.8	5.0	34.5	
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Recall Mode	Max	Max		None	None	None	None	C-Max	C-Max	None	C-Max	
Walk Time (s)	7.0	7.0			7.0	7.0		7.0	7.0		7.0	
Flash Dont Walk (s)	11.0	11.0			11.0	11.0		11.0	11.0		11.0	
Pedestrian Calls (#/hr)	0	0			0	0		0	0		0	
Act Effct Green (s)	58.7	56.5	120.0	20.2	15.7		52.3	52.3	52.3		35.8	120.0
Actuated g/C Ratio	0.49	0.47	1.00	0.17	0.13		0.44	0.44	0.44		0.30	1.00
v/c Ratio	0.74	0.08	0.07	0.02	0.32		0.65	0.90	0.01		0.77	0.25
Control Delay	25.2	14.2	0.1	21.0	49.7		27.6	46.6	0.0		49.6	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0
Total Delay	25.2	14.2	0.1	21.0	49.7		27.6	46.6	0.0		49.6	0.4
LOS	C	B	A	C	D		C	D	A		D	A
Approach Delay		20.2			47.7			40.6			25.8	
Approach LOS		C			D			D			C	
Queue Length 50th (ft)	247	26	0	2	54		78	510	0		306	0
Queue Length 95th (ft)	332	m58	0	9	94		110	#751	0		#463	0
Internal Link Dist (ft)		248			751			896			1308	
Turn Bay Length (ft)			250	100			850		100			350
Base Capacity (vph)	755	877	1583	257	279		530	811	766		555	1583
Starvation Cap Reductn	0	0	0	0	0		0	0	0		0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0		0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0		0	0
Reduced v/c Ratio	0.74	0.08	0.07	0.02	0.28		0.61	0.90	0.01		0.77	0.25

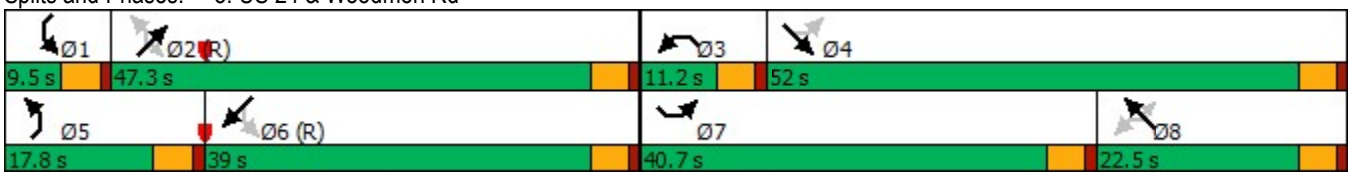
Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 114 (95%), Referenced to phase 2:NETL and 6:SWTL, Start of Green
Natural Cycle: 100
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.90
Intersection Signal Delay: 30.7 Intersection LOS: C
Intersection Capacity Utilization 86.4% ICU Level of Service E
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: US 24 & Woodmen Rd



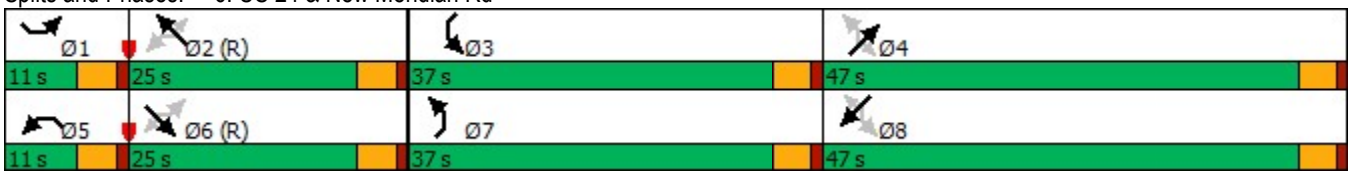
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	25	225	175	10	350	125	325	800	10	100	500	5
Future Volume (vph)	25	225	175	10	350	125	325	800	10	100	500	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	1863	1583	1770	1863	1583
Flt Permitted	0.317			0.595			0.259			0.145		
Satd. Flow (perm)	590	3539	1583	1108	3539	1583	482	1863	1583	270	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			190			136			95			95
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1989			583			1342			1084	
Travel Time (s)		45.2			13.3			30.5			24.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.95	0.95	0.95	0.93	0.93	0.93
Adj. Flow (vph)	27	245	190	11	380	136	342	842	11	108	538	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	27	245	190	11	380	136	342	842	11	108	538	5
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6		6	2		2	4		4	8		8
Detector Phase	1	6	6	5	2	2	7	4	4	3	8	8
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

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5
Total Split (s)	11.0	25.0	25.0	11.0	25.0	25.0	37.0	47.0	47.0	37.0	47.0	47.0
Total Split (%)	9.2%	20.8%	20.8%	9.2%	20.8%	20.8%	30.8%	39.2%	39.2%	30.8%	39.2%	39.2%
Maximum Green (s)	6.5	20.5	20.5	6.5	20.5	20.5	32.5	42.5	42.5	32.5	42.5	42.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (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
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	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	30.6	29.3	29.3	28.7	24.9	24.9	79.5	66.2	66.2	65.4	56.6	56.6
Actuated g/C Ratio	0.26	0.24	0.24	0.24	0.21	0.21	0.66	0.55	0.55	0.54	0.47	0.47
v/c Ratio	0.13	0.28	0.36	0.04	0.52	0.31	0.66	0.82	0.01	0.42	0.61	0.01
Control Delay	34.8	38.9	7.8	33.4	46.4	9.2	15.2	30.8	0.0	15.0	28.9	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	0.0
Total Delay	34.8	38.9	7.8	33.4	46.4	9.2	15.2	30.8	0.0	15.0	28.9	0.0
LOS	C	D	A	C	D	A	B	C	A	B	C	A
Approach Delay		25.9			36.5			26.1			26.4	
Approach LOS		C			D			C			C	
Queue Length 50th (ft)	16	79	0	6	145	0	102	503	0	28	298	0
Queue Length 95th (ft)	40	131	64	22	198	55	148	#826	0	49	488	0
Internal Link Dist (ft)		1909			503			1262			1004	
Turn Bay Length (ft)												
Base Capacity (vph)	214	863	529	301	734	436	668	1027	915	585	878	796
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.13	0.28	0.36	0.04	0.52	0.31	0.51	0.82	0.01	0.18	0.61	0.01

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:NWTL and 6:SETL, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.82	
Intersection Signal Delay: 28.0	Intersection LOS: C
Intersection Capacity Utilization 76.5%	ICU Level of Service D
Analysis Period (min) 15	

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

Splits and Phases: 6: US 24 & New Meridian Rd



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	0	0	100	0	0	125	0	850	100	0	500	5
Future Volume (vph)	0	0	100	0	0	125	0	850	100	0	500	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		25	0		50	500		360	570		550
Storage Lanes	0		0	0		0	0		1	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.865			0.865			0.850			0.850
Flt Protected												
Satd. Flow (prot)	0	0	1611	0	0	1611	0	1863	1583	0	1863	1583
Flt Permitted												
Satd. Flow (perm)	0	0	1611	0	0	1611	0	1863	1583	0	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			551			501			108			83
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		936			836			1084			1839	
Travel Time (s)		21.3			19.0			24.6			41.8	
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.93	0.93	0.93	0.92	0.92	0.92
Adj. Flow (vph)	0	0	120	0	0	151	0	914	108	0	543	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	120	0	0	151	0	914	108	0	543	5
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors			1			1		2	1		2	1
Detector Template			Right			Right		Thru	Right		Thru	Right
Leading Detector (ft)			20			20		100	20		100	20
Trailing Detector (ft)			0			0		0	0		0	0
Detector 1 Position(ft)			0			0		0	0		0	0
Detector 1 Size(ft)			20			20		6	20		6	20
Detector 1 Type			Cl+Ex			Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)			0.0			0.0		0.0	0.0		0.0	0.0
Detector 1 Queue (s)			0.0			0.0		0.0	0.0		0.0	0.0
Detector 1 Delay (s)			0.0			0.0		0.0	0.0		0.0	0.0
Detector 2 Position(ft)								94			94	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type			Perm			Perm		NA	Perm		NA	Perm
Protected Phases								2			6	
Permitted Phases			4			3			2			6

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Detector Phase			4			3		2	2		6	6
Switch Phase												
Minimum Initial (s)			5.0			5.0		5.0	5.0		5.0	5.0
Minimum Split (s)			22.5			22.5		22.5	22.5		22.5	22.5
Total Split (s)			24.6			24.6		29.2	29.2		29.2	29.2
Total Split (%)			31.4%			31.4%		37.2%	37.2%		37.2%	37.2%
Maximum Green (s)			20.1			20.1		24.7	24.7		24.7	24.7
Yellow Time (s)			3.5			3.5		3.5	3.5		3.5	3.5
All-Red Time (s)			1.0			1.0		1.0	1.0		1.0	1.0
Lost Time Adjust (s)			0.0			0.0		0.0	0.0		0.0	0.0
Total Lost Time (s)			4.5			4.5		4.5	4.5		4.5	4.5
Lead/Lag			Lag			Lead						
Lead-Lag Optimize?			Yes			Yes						
Vehicle Extension (s)			3.0			3.0		3.0	3.0		3.0	3.0
Recall Mode			Max			Max		C-Max	C-Max		C-Max	C-Max
Walk Time (s)			7.0			7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)			11.0			11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)			0			0		0	0		0	0
Act Effct Green (s)			20.1			20.1		24.7	24.7		24.7	24.7
Actuated g/C Ratio			0.26			0.26		0.32	0.32		0.32	0.32
v/c Ratio			0.15			0.19		1.56	0.19		0.93	0.01
Control Delay			0.4			0.5		285.0	5.3		51.0	0.0
Queue Delay			0.0			0.0		0.0	0.0		0.0	0.0
Total Delay			0.4			0.5		285.0	5.3		51.0	0.0
LOS			A			A		F	A		D	A
Approach Delay		0.4			0.5			255.4			50.6	
Approach LOS		A			A			F			D	
Queue Length 50th (ft)			0			0		~642	0		254	0
Queue Length 95th (ft)			0			0		#861	33		#444	0
Internal Link Dist (ft)		856			756			1004			1759	
Turn Bay Length (ft)			25			50			360			550
Base Capacity (vph)			822			785		586	572		586	555
Starvation Cap Reductn			0			0		0	0		0	0
Spillback Cap Reductn			0			0		0	0		0	0
Storage Cap Reductn			0			0		0	0		0	0
Reduced v/c Ratio			0.15			0.19		1.56	0.19		0.93	0.01

Intersection Summary

Area Type: Other
Cycle Length: 78.4
Actuated Cycle Length: 78.4
Offset: 0 (0%), Referenced to phase 2:NET and 6:SWT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.56
Intersection Signal Delay: 156.9 Intersection LOS: F
Intersection Capacity Utilization 60.0% ICU Level of Service B
Analysis Period (min) 15

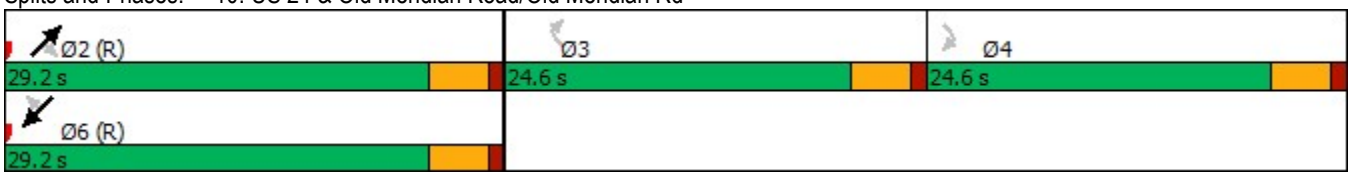
~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

Splits and Phases: 10: US 24 & Old Meridian Road/Old Meridian Rd



Intersection	
Int Delay, s/veh	2.6

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Vol, veh/h	0	0	100	0	0	125	0	850	100	0	500	5
Future Vol, veh/h	0	0	100	0	0	125	0	850	100	0	500	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Yield	-	-	Yield	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	360	-	-	550
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	83	83	83	93	93	93	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	120	0	0	151	0	914	108	0	543	5

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	543	-	-	914	-	0	0	-	-	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.22	-	-	6.22	-	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.318	-	-	3.318	-	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	540	0	0	*372	0	-	-	0	-	-
Stage 1	0	0	-	0	0	-	0	-	-	0	-	-
Stage 2	0	0	-	0	0	-	0	-	-	0	-	-
Platoon blocked, %						1		-	-		-	-
Mov Cap-1 Maneuver	-	-	540	-	-	*372	-	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	13.6	21.1	0	0
HCM LOS	B	C		

Minor Lane/Major Mvmt	NET	NER	NWLn1	SELn1	SWT	SWR
Capacity (veh/h)	-	-	372	540	-	-
HCM Lane V/C Ratio	-	-	0.405	0.223	-	-
HCM Control Delay (s)	-	-	21.1	13.6	-	-
HCM Lane LOS	-	-	C	B	-	-
HCM 95th %tile Q(veh)	-	-	1.9	0.8	-	-

Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	102	333	55	31	457	142	41	40	32	143	95	322
Future Volume (vph)	102	333	55	31	457	142	41	40	32	143	95	322
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	375		0	350		350	125		125	175		100
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	1863	1583	1770	1863	1583
Flt Permitted	0.390			0.536			0.690			0.623		
Satd. Flow (perm)	726	3539	1583	998	3539	1583	1285	1863	1583	1160	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			136			153			177			350
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		972			473			511			629	
Travel Time (s)		22.1			10.8			11.6			14.3	
Peak Hour Factor	0.92	0.92	0.92	0.93	0.93	0.93	0.78	0.78	0.78	0.92	0.92	0.92
Adj. Flow (vph)	111	362	60	33	491	153	53	51	41	155	103	350
Shared Lane Traffic (%)												
Lane Group Flow (vph)	111	362	60	33	491	153	53	51	41	155	103	350
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1	1	1	1	1	1	1	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	100	20	20	100	20	20	100	20	20	100	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Free	pm+pt	NA	Free
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		6	8		Free	4		Free
Detector Phase	5	2	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	5.0	
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5		9.5	22.5	
Total Split (s)	16.0	63.0	63.0	12.0	59.0	59.0	12.0	24.0		21.0	33.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (%)	13.3%	52.5%	52.5%	10.0%	49.2%	49.2%	10.0%	20.0%		17.5%	27.5%	
Maximum Green (s)	11.5	58.5	58.5	7.5	54.5	54.5	7.5	19.5		16.5	28.5	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5		-0.5	-0.5	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	Max		None	Max	
Walk Time (s)		7.0	7.0		7.0	7.0		7.0			7.0	
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0			11.0	
Pedestrian Calls (#/hr)		0	0		0	0		0			0	
Act Effct Green (s)	70.4	64.1	64.1	64.7	57.7	57.7	31.1	23.7	120.0	41.0	31.5	120.0
Actuated g/C Ratio	0.59	0.53	0.53	0.54	0.48	0.48	0.26	0.20	1.00	0.34	0.26	1.00
v/c Ratio	0.22	0.19	0.07	0.06	0.29	0.18	0.15	0.14	0.03	0.33	0.21	0.22
Control Delay	12.4	16.3	2.6	8.5	16.5	2.4	28.6	42.7	0.0	30.9	37.4	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	12.4	16.3	2.6	8.5	16.5	2.4	28.6	42.7	0.0	30.9	37.4	0.3
LOS	B	B	A	A	B	A	C	D	A	C	D	A
Approach Delay		14.0			12.9			25.5			14.4	
Approach LOS		B			B			C			B	
Queue Length 50th (ft)	46	80	3	7	114	0	28	33	0	86	64	0
Queue Length 95th (ft)	m74	106	m12	17	154	35	50	62	0	141	114	0
Internal Link Dist (ft)		892			393			431			549	
Turn Bay Length (ft)	375			350		350	125		125	175		100
Base Capacity (vph)	533	1891	909	598	1702	840	371	367	1583	482	489	1583
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.21	0.19	0.07	0.06	0.29	0.18	0.14	0.14	0.03	0.32	0.21	0.22

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 4 (3%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 65
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.33
Intersection Signal Delay: 14.6 Intersection LOS: B
Intersection Capacity Utilization 42.9% ICU Level of Service A
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: McLaughlin Rd & Woodmen Rd

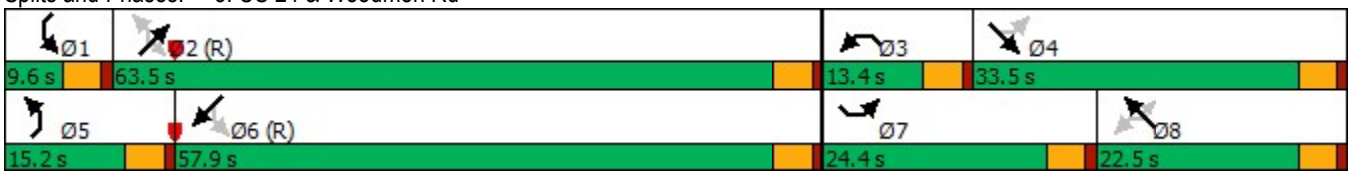
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	266	82	158	51	99	20	149	344	40	27	593	381
Future Volume (vph)	266	82	158	51	99	20	149	344	40	27	593	381
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		250	100		100	850		100	250		350
Storage Lanes	1		1	1		1	2		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00	0.97	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	3539	1583	3433	1863	1583	1770	1863	1583
Flt Permitted	0.564			0.699			0.173			0.474		
Satd. Flow (perm)	1051	1863	1583	1302	3539	1583	625	1863	1583	883	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			218			177			136			289
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		328			275			976			1388	
Travel Time (s)		7.5			6.3			22.2			31.5	
Peak Hour Factor	0.92	0.92	0.92	0.87	0.87	0.87	0.92	0.92	0.92	0.93	0.93	0.93
Adj. Flow (vph)	289	89	172	59	114	23	162	374	43	29	638	410
Shared Lane Traffic (%)												
Lane Group Flow (vph)	289	89	172	59	114	23	162	374	43	29	638	410
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	1	1	1	1	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	100	20	20	100	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94							
Detector 2 Size(ft)		6			6							
Detector 2 Type		Cl+Ex			Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							
Turn Type	pm+pt	NA	Free	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Free
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		Free	8		8	2		2	6		Free

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Detector Phase	7	4		3	8	8	5	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)	22.5	22.5		9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	
Total Split (s)	24.4	33.5		13.4	22.5	22.5	15.2	63.5	63.5	9.6	57.9	
Total Split (%)	20.3%	27.9%		11.2%	18.8%	18.8%	12.7%	52.9%	52.9%	8.0%	48.3%	
Maximum Green (s)	19.9	29.0		8.9	18.0	18.0	10.7	59.0	59.0	5.1	53.4	
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	-0.5	0.0		0.0	0.0	0.0	-0.5	-0.5	0.0	0.0	-0.5	
Total Lost Time (s)	4.0	4.5		4.5	4.5	4.5	4.0	4.0	4.5	4.5	4.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Recall Mode	Max	Max		None	None	None	None	C-Max	C-Max	None	C-Max	
Walk Time (s)	7.0	7.0			7.0	7.0		7.0	7.0		7.0	
Flash Dont Walk (s)	11.0	11.0			11.0	11.0		11.0	11.0		11.0	
Pedestrian Calls (#/hr)	0	0			0	0		0	0		0	
Act Effct Green (s)	42.9	32.2	120.0	25.7	18.0	18.0	68.8	63.3	62.8	61.2	56.6	120.0
Actuated g/C Ratio	0.36	0.27	1.00	0.21	0.15	0.15	0.57	0.53	0.52	0.51	0.47	1.00
v/c Ratio	0.58	0.18	0.11	0.19	0.22	0.06	0.29	0.38	0.05	0.06	0.73	0.26
Control Delay	25.8	27.4	0.1	28.8	46.0	0.3	12.7	19.0	0.1	11.9	31.7	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.8	27.4	0.1	28.8	46.0	0.3	12.7	19.0	0.1	11.9	31.7	0.4
LOS	C	C	A	C	D	A	B	B	A	B	C	A
Approach Delay		18.0			35.5			15.8			19.2	
Approach LOS		B			D			B			B	
Queue Length 50th (ft)	111	41	0	30	41	0	27	177	0	9	387	0
Queue Length 95th (ft)	196	88	0	59	67	0	43	254	0	23	548	0
Internal Link Dist (ft)		248			195			896			1308	
Turn Bay Length (ft)			250	100		100	850		100	250		350
Base Capacity (vph)	497	500	1583	326	530	387	621	983	893	487	878	1583
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.58	0.18	0.11	0.18	0.22	0.06	0.26	0.38	0.05	0.06	0.73	0.26

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:NETL and 6:SWTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.73
Intersection Signal Delay: 19.5 Intersection LOS: B
Intersection Capacity Utilization 67.3% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 3: US 24 & Woodmen Rd



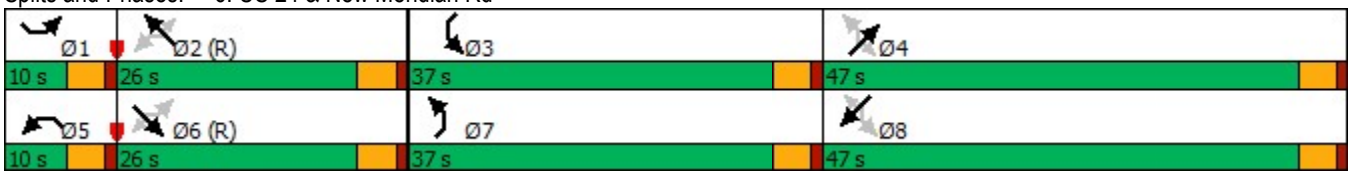
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	4	27	508	1	110	53	110	478	11	53	791	1
Future Volume (vph)	4	27	508	1	110	53	110	478	11	53	791	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	1863	1583	1770	1863	1583
Flt Permitted	0.672			0.737			0.097			0.402		
Satd. Flow (perm)	1252	3539	1583	1373	3539	1583	181	1863	1583	749	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			537			95			95			95
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1957			531			1450			975	
Travel Time (s)		44.5			12.1			33.0			22.2	
Peak Hour Factor	0.92	0.92	0.92	0.87	0.87	0.87	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	4	29	552	1	126	61	118	514	12	57	851	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	4	29	552	1	126	61	118	514	12	57	851	1
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6		6	2		2	4		4	8		8
Detector Phase	1	6	6	5	2	2	7	4	4	3	8	8
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

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5
Total Split (s)	10.0	26.0	26.0	10.0	26.0	26.0	37.0	47.0	47.0	37.0	47.0	47.0
Total Split (%)	8.3%	21.7%	21.7%	8.3%	21.7%	21.7%	30.8%	39.2%	39.2%	30.8%	39.2%	39.2%
Maximum Green (s)	5.5	21.5	21.5	5.5	21.5	21.5	32.5	42.5	42.5	32.5	42.5	42.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (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
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	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	30.6	29.5	29.5	30.6	29.5	29.5	79.3	70.2	70.2	70.5	63.7	63.7
Actuated g/C Ratio	0.26	0.25	0.25	0.26	0.25	0.25	0.66	0.58	0.58	0.59	0.53	0.53
v/c Ratio	0.01	0.03	0.70	0.00	0.14	0.13	0.44	0.47	0.01	0.11	0.86	0.00
Control Delay	38.5	43.1	35.0	33.0	37.1	3.4	13.5	16.8	0.0	8.1	35.5	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	0.0
Total Delay	38.5	43.1	35.0	33.0	37.1	3.4	13.5	16.8	0.0	8.1	35.5	0.0
LOS	D	D	D	C	D	A	B	B	A	A	D	A
Approach Delay		35.5			26.1			15.9			33.8	
Approach LOS		D			C			B			C	
Queue Length 50th (ft)	3	12	341	1	39	0	30	226	0	14	548	0
Queue Length 95th (ft)	m6	m18	415	5	70	12	59	324	0	29	#863	0
Internal Link Dist (ft)		1877			451			1370			895	
Turn Bay Length (ft)												
Base Capacity (vph)	343	869	794	368	869	460	550	1089	965	772	988	884
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.01	0.03	0.70	0.00	0.14	0.13	0.21	0.47	0.01	0.07	0.86	0.00

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:NWTL and 6:SETL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.86
Intersection Signal Delay: 28.6 Intersection LOS: C
Intersection Capacity Utilization 88.5% ICU Level of Service E
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 6: US 24 & New Meridian Rd



Intersection	
Intersection Delay, s/veh	3.8
Intersection LOS	A

Approach	SE	NE	SW
Entry Lanes	2	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	162	83	121
Demand Flow Rate, veh/h	165	85	124
Vehicles Circulating, veh/h	38	124	99
Vehicles Exiting, veh/h	185	79	110
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	3.6	3.9	4.1
Approach LOS	A	A	A

Lane	Left	Right	Left	Left
Designated Moves	L	TR	LT	TR
Assumed Moves	L	TR	LT	TR
RT Channelized				
Lane Util	0.752	0.248	1.000	1.000
Follow-Up Headway, s	2.800	2.800	2.800	2.800
Critical Headway, s	4.544	4.544	4.976	4.976
Entry Flow, veh/h	124	41	85	124
Cap Entry Lane, veh/h	1244	1244	1137	1165
Entry HV Adj Factor	0.982	0.976	0.976	0.978
Flow Entry, veh/h	122	40	83	121
Cap Entry, veh/h	1221	1213	1110	1139
V/C Ratio	0.100	0.033	0.075	0.106
Control Delay, s/veh	3.8	3.2	3.9	4.1
LOS	A	A	A	A
95th %tile Queue, veh	0	0	0	0

Intersection	
Int Delay, s/veh	1.1

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations			↱			↱		↑	↱		↑	↱
Traffic Vol, veh/h	0	0	50	0	0	50	0	488	50	0	790	4
Future Vol, veh/h	0	0	50	0	0	50	0	488	50	0	790	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	360	-	-	550
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	83	83	83	92	92	92	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	60	0	0	60	0	530	54	0	849	4

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	849	-	-	530	-	0	0	-	-	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.22	-	-	6.22	-	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.318	-	-	3.318	-	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	361	0	0	*685	0	-	-	0	-	-
Stage 1	0	0	-	0	0	-	0	-	-	0	-	-
Stage 2	0	0	-	0	0	-	0	-	-	0	-	-
Platoon blocked, %						1		-	-		-	-
Mov Cap-1 Maneuver	-	-	361	-	-	*685	-	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	17	10.8	0	0
HCM LOS	C	B		

Minor Lane/Major Mvmt	NET	NER	NWLn1	SELn1	SWT	SWR
Capacity (veh/h)	-	-	685	361	-	-
HCM Lane V/C Ratio	-	-	0.088	0.167	-	-
HCM Control Delay (s)	-	-	10.8	17	-	-
HCM Lane LOS	-	-	B	C	-	-
HCM 95th %tile Q(veh)	-	-	0.3	0.6	-	-

Notes

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

Intersection	
Int Delay, s/veh	2.9

Movement	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	2	29	36	54	72	3
Future Vol, veh/h	2	29	36	54	72	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	0	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	78	78	83	83	83	83
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	37	43	65	87	4

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	240	89	91	0	-	0
Stage 1	89	-	-	-	-	-
Stage 2	151	-	-	-	-	-
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	748	969	1504	-	-	-
Stage 1	934	-	-	-	-	-
Stage 2	877	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	726	969	1504	-	-	-
Mov Cap-2 Maneuver	726	-	-	-	-	-
Stage 1	907	-	-	-	-	-
Stage 2	877	-	-	-	-	-

Approach	SE	NE	SW
HCM Control Delay, s	9	3	0
HCM LOS	A		

Minor Lane/Major Mvmt	NEL	NET	SELn1	SWT	SWR
Capacity (veh/h)	1504	-	949	-	-
HCM Lane V/C Ratio	0.029	-	0.042	-	-
HCM Control Delay (s)	7.5	-	9	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-

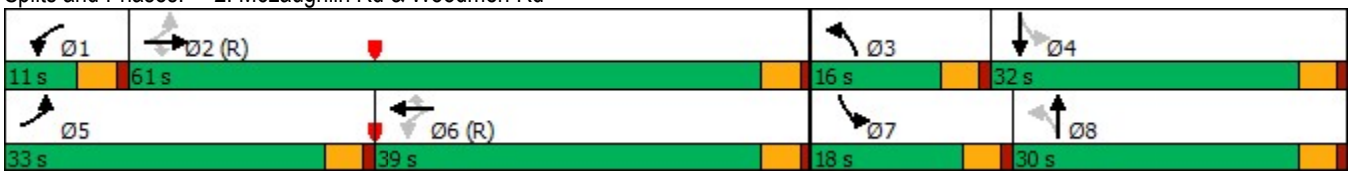
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	228	480	113	60	483	303	81	171	94	219	122	248
Future Volume (vph)	228	480	113	60	483	303	81	171	94	219	122	248
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	375		0	350		350	125		125	175		100
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	1863	1583	1770	1863	1583
Flt Permitted	0.351			0.461			0.673			0.422		
Satd. Flow (perm)	654	3539	1583	859	3539	1583	1254	1863	1583	786	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			122			326			177			267
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		972			473			511			629	
Travel Time (s)		22.1			10.8			11.6			14.3	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.92	0.92	0.92	0.93	0.93	0.93
Adj. Flow (vph)	245	516	122	65	519	326	88	186	102	235	131	267
Shared Lane Traffic (%)												
Lane Group Flow (vph)	245	516	122	65	519	326	88	186	102	235	131	267
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Free	pm+pt	NA	Free
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		6	8		Free	4		Free

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2	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	5.0	
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5		9.5	22.5	
Total Split (s)	33.0	61.0	61.0	11.0	39.0	39.0	16.0	30.0		18.0	32.0	
Total Split (%)	27.5%	50.8%	50.8%	9.2%	32.5%	32.5%	13.3%	25.0%		15.0%	26.7%	
Maximum Green (s)	28.5	56.5	56.5	6.5	34.5	34.5	11.5	25.5		13.5	27.5	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5		4.5	4.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	Max		None	Max	
Walk Time (s)		7.0	7.0		7.0	7.0		7.0			7.0	
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0			11.0	
Pedestrian Calls (#/hr)		0	0		0	0		0			0	
Act Effct Green (s)	67.5	58.7	58.7	55.3	49.0	49.0	35.2	25.9	120.0	42.5	29.7	120.0
Actuated g/C Ratio	0.56	0.49	0.49	0.46	0.41	0.41	0.29	0.22	1.00	0.35	0.25	1.00
v/c Ratio	0.49	0.30	0.15	0.15	0.36	0.39	0.22	0.46	0.06	0.61	0.28	0.17
Control Delay	23.5	22.1	7.8	9.6	16.2	1.3	27.5	45.6	0.1	36.2	39.2	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	23.5	22.1	7.8	9.6	16.2	1.3	27.5	45.6	0.1	36.2	39.2	0.2
LOS	C	C	A	A	B	A	C	D	A	D	D	A
Approach Delay		20.5			10.4			29.0			21.6	
Approach LOS		C			B			C			C	
Queue Length 50th (ft)	130	133	10	14	79	0	45	127	0	133	83	0
Queue Length 95th (ft)	m197	m183	m45	m26	106	3	84	201	0	203	143	0
Internal Link Dist (ft)		892			393			431			549	
Turn Bay Length (ft)	375			350		350	125		125	175		100
Base Capacity (vph)	632	1731	836	446	1444	839	440	402	1583	389	461	1583
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.39	0.30	0.15	0.15	0.36	0.39	0.20	0.46	0.06	0.60	0.28	0.17

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 65
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.61
Intersection Signal Delay: 18.6 Intersection LOS: B
Intersection Capacity Utilization 62.1% ICU Level of Service B
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: McLaughlin Rd & Woodmen Rd



Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	506	180	106	54	186	71	286	648	124	43	393	371
Future Volume (veh/h)	506	180	106	54	186	71	286	648	124	43	393	371
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	544	194	0	59	202	77	301	682	131	46	423	0
Peak Hour Factor	0.93	0.93	0.93	0.92	0.92	0.92	0.95	0.95	0.95	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	596	605		225	273	122	813	847	718	211	790	
Arrive On Green	0.29	0.32	0.00	0.04	0.08	0.08	0.06	0.45	0.45	0.03	0.42	0.00
Sat Flow, veh/h	1781	1870	1585	1781	3554	1585	3456	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	544	194	0	59	202	77	301	682	131	46	423	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1777	1585	1728	1870	1585	1781	1870	1585
Q Serve(g_s), s	32.7	9.4	0.0	3.6	6.7	5.7	5.8	37.7	5.9	1.7	20.3	0.0
Cycle Q Clear(g_c), s	32.7	9.4	0.0	3.6	6.7	5.7	5.8	37.7	5.9	1.7	20.3	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	596	605		225	273	122	813	847	718	211	790	
V/C Ratio(X)	0.91	0.32		0.26	0.74	0.63	0.37	0.81	0.18	0.22	0.54	
Avail Cap(c_a), veh/h	596	605		485	385	172	813	847	718	228	790	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	33.6	30.6	0.0	48.3	54.2	53.7	19.0	28.3	19.6	23.5	25.9	0.0
Incr Delay (d2), s/veh	18.6	0.3	0.0	0.6	4.6	5.3	0.3	8.0	0.6	0.5	2.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	16.9	4.3	0.0	1.7	3.2	2.4	2.3	18.4	2.3	0.7	9.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.2	30.9	0.0	48.9	58.8	59.0	19.3	36.3	20.1	24.0	28.5	0.0
LnGrp LOS	D	C		D	E	E	B	D	C	C	C	
Approach Vol, veh/h		738	A		338			1114			469	A
Approach Delay, s/veh		46.6			57.1			29.8			28.0	
Approach LOS		D			E			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.4	58.8	9.4	43.3	12.1	55.2	39.0	13.7
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.0	49.5	22.5	25.0	7.6	46.9	34.5	13.0
Max Q Clear Time (g_c+I1), s	3.7	39.7	5.6	11.4	7.8	22.3	34.7	8.7
Green Ext Time (p_c), s	0.0	3.7	0.1	0.8	0.0	2.7	0.0	0.6

Intersection Summary	
HCM 6th Ctrl Delay	37.6
HCM 6th LOS	D

Notes

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

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

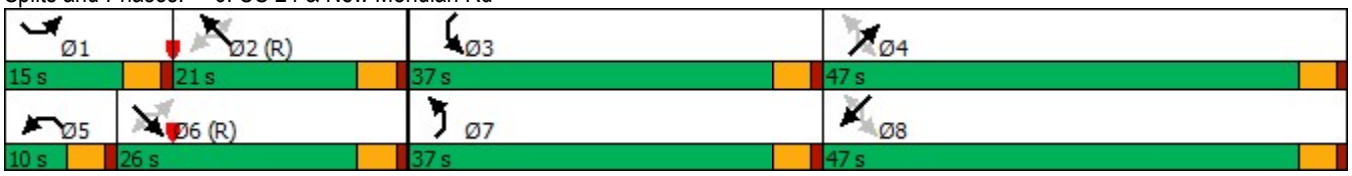
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	28	225	175	10	350	133	325	867	10	109	526	8
Future Volume (vph)	28	225	175	10	350	133	325	867	10	109	526	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	1863	1583	1770	1863	1583
Flt Permitted	0.294			0.600			0.224			0.085		
Satd. Flow (perm)	548	3539	1583	1118	3539	1583	417	1863	1583	158	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			190			145			136			136
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1949			618			1371			1054	
Travel Time (s)		44.3			14.0			31.2			24.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.95	0.95	0.95	0.93	0.93	0.93
Adj. Flow (vph)	30	245	190	11	380	145	342	913	11	117	566	9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	30	245	190	11	380	145	342	913	11	117	566	9
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6		6	2		2	4		4	8		8
Detector Phase	1	6	6	5	2	2	7	4	4	3	8	8
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

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5
Total Split (s)	15.0	26.0	26.0	10.0	21.0	21.0	37.0	47.0	47.0	37.0	47.0	47.0
Total Split (%)	12.5%	21.7%	21.7%	8.3%	17.5%	17.5%	30.8%	39.2%	39.2%	30.8%	39.2%	39.2%
Maximum Green (s)	10.5	21.5	21.5	5.5	16.5	16.5	32.5	42.5	42.5	32.5	42.5	42.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (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
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	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	31.3	29.5	29.5	27.3	24.0	24.0	79.5	65.7	65.7	64.1	54.8	54.8
Actuated g/C Ratio	0.26	0.25	0.25	0.23	0.20	0.20	0.66	0.55	0.55	0.53	0.46	0.46
v/c Ratio	0.14	0.28	0.36	0.04	0.54	0.33	0.68	0.90	0.01	0.56	0.67	0.01
Control Delay	54.0	59.2	29.9	33.6	47.7	9.6	16.9	37.7	0.0	29.8	32.0	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	0.0
Total Delay	54.0	59.2	29.9	33.6	47.7	9.6	16.9	37.7	0.0	29.8	32.0	0.0
LOS	D	E	C	C	D	A	B	D	A	C	C	A
Approach Delay		46.9			37.1			31.7			31.2	
Approach LOS		D			D			C			C	
Queue Length 50th (ft)	24	102	71	6	146	0	102	589	0	30	334	0
Queue Length 95th (ft)	m38	m141	m121	22	204	58	167	#958	0	95	#542	0
Internal Link Dist (ft)		1869			538			1291			974	
Turn Bay Length (ft)												
Base Capacity (vph)	250	869	532	284	708	433	642	1019	928	540	850	796
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.12	0.28	0.36	0.04	0.54	0.33	0.53	0.90	0.01	0.22	0.67	0.01

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:NWTL and 6:SETL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.90
Intersection Signal Delay: 35.0 Intersection LOS: C
Intersection Capacity Utilization 80.5% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 6: US 24 & New Meridian Rd



Intersection	
Intersection Delay, s/veh	5.0
Intersection LOS	A

Approach	SE	NE	SW
Entry Lanes	2	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	332	125	254
Demand Flow Rate, veh/h	339	127	259
Vehicles Circulating, veh/h	89	250	171
Vehicles Exiting, veh/h	341	178	206
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	4.6	4.8	5.6
Approach LOS	A	A	A

Lane	Left	Right	Left	Left
Designated Moves	L	TR	LT	TR
Assumed Moves	L	TR	LT	TR
RT Channelized				
Lane Util	0.737	0.263	1.000	1.000
Follow-Up Headway, s	2.800	2.800	2.800	2.800
Critical Headway, s	4.544	4.544	4.976	4.976
Entry Flow, veh/h	250	89	127	259
Cap Entry Lane, veh/h	1190	1190	1003	1085
Entry HV Adj Factor	0.980	0.978	0.984	0.982
Flow Entry, veh/h	245	87	125	254
Cap Entry, veh/h	1166	1163	987	1065
V/C Ratio	0.210	0.075	0.127	0.239
Control Delay, s/veh	5.0	3.7	4.8	5.6
LOS	A	A	A	A
95th %tile Queue, veh	1	0	0	1

Intersection	
Int Delay, s/veh	1

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Vol, veh/h	0	0	100	0	0	5	0	928	100	0	538	5
Future Vol, veh/h	0	0	100	0	0	5	0	928	100	0	538	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Yield	-	-	Yield	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	360	-	-	550
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	78	78	78	93	93	93	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	120	0	0	6	0	998	108	0	585	5

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	585	-	-	998	-	0	0	-	-	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.22	-	-	6.22	-	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.318	-	-	3.318	-	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	511	0	0	*294	0	-	-	0	-	-
Stage 1	0	0	-	0	0	-	0	-	-	0	-	-
Stage 2	0	0	-	0	0	-	0	-	-	0	-	-
Platoon blocked, %						1		-	-		-	-
Mov Cap-1 Maneuver	-	-	511	-	-	*294	-	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	14.2	17.5	0	0
HCM LOS	B	C		

Minor Lane/Major Mvmt	NET	NER	NWLn1	SELn1	SWT	SWR
Capacity (veh/h)	-	-	294	511	-	-
HCM Lane V/C Ratio	-	-	0.022	0.236	-	-
HCM Control Delay (s)	-	-	17.5	14.2	-	-
HCM Lane LOS	-	-	C	B	-	-
HCM 95th %tile Q(veh)	-	-	0.1	0.9	-	-

Notes

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

Intersection	
Int Delay, s/veh	4.3

Movement	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	9	116	72	114	94	7
Future Vol, veh/h	9	116	72	114	94	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	0	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	83	83	87	87	83	83
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	140	83	131	113	8

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	414	117	121	0	-	0
Stage 1	117	-	-	-	-	-
Stage 2	297	-	-	-	-	-
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	595	935	1467	-	-	-
Stage 1	908	-	-	-	-	-
Stage 2	754	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	561	935	1467	-	-	-
Mov Cap-2 Maneuver	561	-	-	-	-	-
Stage 1	856	-	-	-	-	-
Stage 2	754	-	-	-	-	-

Approach	SE	NE	SW
HCM Control Delay, s	9.9	2.9	0
HCM LOS	A		

Minor Lane/Major Mvmt	NEL	NET	SELn1	SWT	SWR
Capacity (veh/h)	1467	-	892	-	-
HCM Lane V/C Ratio	0.056	-	0.169	-	-
HCM Control Delay (s)	7.6	-	9.9	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0.2	-	0.6	-	-

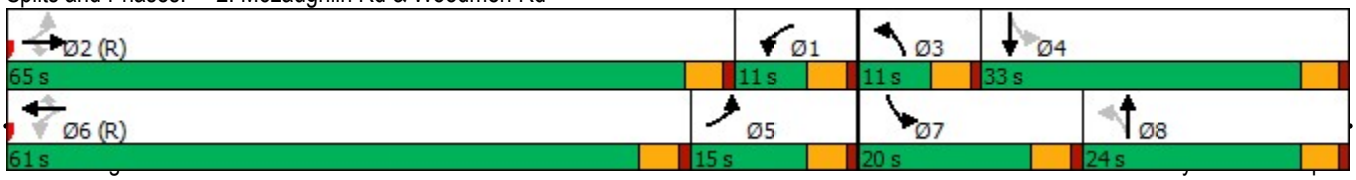
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	125	600	100	50	735	150	75	50	50	175	125	275
Future Volume (vph)	125	600	100	50	735	150	75	50	50	175	125	275
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	375		0	350		350	125		125	175		100
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	1863	1583	1770	1863	1583
Flt Permitted	0.261			0.334			0.670			0.617		
Satd. Flow (perm)	486	3539	1583	622	3539	1583	1248	1863	1583	1149	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			136			161			177			299
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		972			473			511			629	
Travel Time (s)		22.1			10.8			11.6			14.3	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.87	0.87	0.87	0.92	0.92	0.92
Adj. Flow (vph)	134	645	108	54	790	161	86	57	57	190	136	299
Shared Lane Traffic (%)												
Lane Group Flow (vph)	134	645	108	54	790	161	86	57	57	190	136	299
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1	1	1	1	1	1	1	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	100	20	20	100	20	20	100	20	20	100	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Free	pm+pt	NA	Free
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		6	8		Free	4		Free
Detector Phase	5	2	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	5.0	
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5		9.5	22.5	
Total Split (s)	15.0	65.0	65.0	11.0	61.0	61.0	11.0	24.0		20.0	33.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (%)	12.5%	54.2%	54.2%	9.2%	50.8%	50.8%	9.2%	20.0%		16.7%	27.5%	
Maximum Green (s)	10.5	60.5	60.5	6.5	56.5	56.5	6.5	19.5		15.5	28.5	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5		-0.5	-0.5	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	Max		None	Max	
Walk Time (s)		7.0	7.0		7.0	7.0		7.0			7.0	
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0			11.0	
Pedestrian Calls (#/hr)		0	0		0	0		0			0	
Act Effct Green (s)	70.4	62.2	62.2	63.2	57.0	57.0	30.7	23.2	120.0	41.6	32.2	120.0
Actuated g/C Ratio	0.59	0.52	0.52	0.53	0.48	0.48	0.26	0.19	1.00	0.35	0.27	1.00
v/c Ratio	0.35	0.35	0.12	0.14	0.47	0.19	0.24	0.16	0.04	0.40	0.27	0.19
Control Delay	19.4	18.8	4.8	8.0	16.3	1.0	30.1	43.8	0.0	32.1	38.2	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	19.4	18.8	4.8	8.0	16.3	1.0	30.1	43.8	0.0	32.1	38.2	0.3
LOS	B	B	A	A	B	A	C	D	A	C	D	A
Approach Delay		17.2			13.4			25.4			18.2	
Approach LOS		B			B			C			B	
Queue Length 50th (ft)	44	129	10	11	237	0	46	38	0	108	87	0
Queue Length 95th (ft)	71	158	m28	23	299	3	83	76	0	172	145	0
Internal Link Dist (ft)		892			393			431			549	
Turn Bay Length (ft)	375			350		350	125		125	175		100
Base Capacity (vph)	409	1833	885	398	1681	836	352	359	1583	482	500	1583
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.33	0.35	0.12	0.14	0.47	0.19	0.24	0.16	0.04	0.39	0.27	0.19

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 98 (82%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 65
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.47
Intersection Signal Delay: 16.6 Intersection LOS: B
Intersection Capacity Utilization 54.4% ICU Level of Service A
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: McLaughlin Rd & Woodmen Rd



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	375	100	350	45	50	21	400	750	42	44	925	485
Future Volume (vph)	375	100	350	45	50	21	400	750	42	44	925	485
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		100	250		250	850		100	250		350
Storage Lanes	1		2	1		1	2		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	1.00	0.88	1.00	1.00	1.00	0.97	0.91	1.00	1.00	0.91	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	1863	2787	1770	1863	1583	3433	5085	1583	1770	5085	1583
Flt Permitted	0.582			0.687			0.181			0.341		
Satd. Flow (perm)	2103	1863	2787	1280	1863	1583	654	5085	1583	635	5085	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			220			218			136			511
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		328			518			976			1388	
Travel Time (s)		7.5			11.8			22.2			31.5	
Peak Hour Factor	0.93	0.93	0.93	0.87	0.87	0.87	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	403	108	376	52	57	24	421	789	44	46	974	511
Shared Lane Traffic (%)												
Lane Group Flow (vph)	403	108	376	52	57	24	421	789	44	46	974	511
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	1	1	1	1	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	100	20	20	100	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94							
Detector 2 Size(ft)		6			6							
Detector 2 Type		Cl+Ex			Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							
Turn Type	pm+pt	NA	pt+ov	pm+pt	NA	Free	pm+pt	NA	Perm	pm+pt	NA	Free
Protected Phases	7	4	4 5	3	8		5	2		1	6	
Permitted Phases	4			8		Free	2		2	6		Free

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Detector Phase	7	4	4 5	3	8		5	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	
Minimum Split (s)	22.5	22.5		9.5	22.5		9.5	22.5	22.5	9.5	22.5	
Total Split (s)	25.0	39.0		11.0	25.0		28.0	60.5	60.5	9.5	42.0	
Total Split (%)	20.8%	32.5%		9.2%	20.8%		23.3%	50.4%	50.4%	7.9%	35.0%	
Maximum Green (s)	20.5	34.5		6.5	20.5		23.5	56.0	56.0	5.0	37.5	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	-0.5	0.0		0.0	0.0		-0.5	-0.5	0.0	0.0	-0.5	
Total Lost Time (s)	4.0	4.5		4.5	4.5		4.0	4.0	4.5	4.5	4.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	Max	Max		None	None		None	C-Max	C-Max	None	C-Max	
Walk Time (s)	7.0	7.0			7.0			7.0	7.0		7.0	
Flash Dont Walk (s)	11.0	11.0			11.0			11.0	11.0		11.0	
Pedestrian Calls (#/hr)	0	0			0			0	0		0	
Act Effct Green (s)	46.0	36.7	55.2	22.7	17.5	120.0	66.0	58.4	57.9	52.0	47.5	120.0
Actuated g/C Ratio	0.38	0.31	0.46	0.19	0.15	1.00	0.55	0.49	0.48	0.43	0.40	1.00
v/c Ratio	0.37	0.19	0.27	0.19	0.21	0.02	0.61	0.32	0.05	0.14	0.48	0.32
Control Delay	18.8	23.7	7.7	27.4	45.0	0.0	13.1	16.8	2.0	15.0	28.5	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	18.8	23.7	7.7	27.4	45.0	0.0	13.1	16.8	2.0	15.0	28.5	0.5
LOS	B	C	A	C	D	A	B	B	A	B	C	A
Approach Delay		14.7			30.0			15.0			18.8	
Approach LOS		B			C			B			B	
Queue Length 50th (ft)	102	54	38	26	38	0	112	177	2	16	203	0
Queue Length 95th (ft)	135	93	73	52	75	0	75	207	m14	34	263	0
Internal Link Dist (ft)		248			438			896			1308	
Turn Bay Length (ft)	250		100	250		250	850		100	250		350
Base Capacity (vph)	1093	569	1603	270	318	1583	915	2474	834	322	2013	1583
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.37	0.19	0.23	0.19	0.18	0.02	0.46	0.32	0.05	0.14	0.48	0.32

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 99 (83%), Referenced to phase 2:NETL and 6:SWTL, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.61
Intersection Signal Delay: 17.0 Intersection LOS: B
Intersection Capacity Utilization 57.1% ICU Level of Service B
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: US 24 & Woodmen Rd

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	30	300	640	40	150	245	150	920	30	215	1260	40
Future Volume (vph)	30	300	640	40	150	245	150	920	30	215	1260	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300		300	300		300	500		500	500		500
Storage Lanes	1		1	1		1	2		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.91	1.00	1.00	0.91	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	3433	5085	1583	1770	5085	1583
Flt Permitted	0.649			0.394			0.950			0.950		
Satd. Flow (perm)	1209	3539	1583	734	3539	1583	3433	5085	1583	1770	5085	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			492			266			95			95
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		120			890			1387			1038	
Travel Time (s)		2.7			20.2			31.5			23.6	
Peak Hour Factor	0.93	0.93	0.93	0.92	0.92	0.92	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	32	323	688	43	163	266	158	968	32	226	1326	42
Shared Lane Traffic (%)												
Lane Group Flow (vph)	32	323	688	43	163	266	158	968	32	226	1326	42
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6		6	2		2			4			8

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Detector Phase	1	6	6	5	2	2	7	4	4	3	8	8
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)	9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5
Total Split (s)	10.0	25.0	25.0	11.0	26.0	26.0	37.0	47.0	47.0	37.0	47.0	47.0
Total Split (%)	8.3%	20.8%	20.8%	9.2%	21.7%	21.7%	30.8%	39.2%	39.2%	30.8%	39.2%	39.2%
Maximum Green (s)	5.5	20.5	20.5	6.5	21.5	21.5	32.5	42.5	42.5	32.5	42.5	42.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (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
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	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Max	Max	None	Max	Max	None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	27.1	22.7	22.7	29.4	25.5	25.5	10.9	54.4	54.4	20.6	64.1	64.1
Actuated g/C Ratio	0.23	0.19	0.19	0.24	0.21	0.21	0.09	0.45	0.45	0.17	0.53	0.53
v/c Ratio	0.11	0.48	0.99	0.18	0.22	0.49	0.51	0.42	0.04	0.74	0.49	0.05
Control Delay	26.0	31.3	43.9	35.6	41.4	8.4	57.5	23.6	0.1	46.9	18.6	2.5
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	26.0	31.3	43.9	35.6	41.4	8.4	57.5	23.6	0.1	46.9	18.6	2.5
LOS	C	C	D	D	D	A	E	C	A	D	B	A
Approach Delay		39.5			22.3			27.6			22.2	
Approach LOS		D			C			C			C	
Queue Length 50th (ft)	9	78	~505	25	57	0	61	181	0	149	294	4
Queue Length 95th (ft)	m13	m96	m#612	56	91	75	94	244	0	172	360	m15
Internal Link Dist (ft)		40			810			1307			958	
Turn Bay Length (ft)	300		300	300		300	500		500	500		500
Base Capacity (vph)	298	669	698	235	752	545	929	2303	769	479	2718	890
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.11	0.48	0.99	0.18	0.22	0.49	0.17	0.42	0.04	0.47	0.49	0.05

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 100 (83%), Referenced to phase 4:NET and 8:SWT, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.99
Intersection Signal Delay: 27.9 Intersection LOS: C
Intersection Capacity Utilization 79.4% ICU Level of Service D
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.

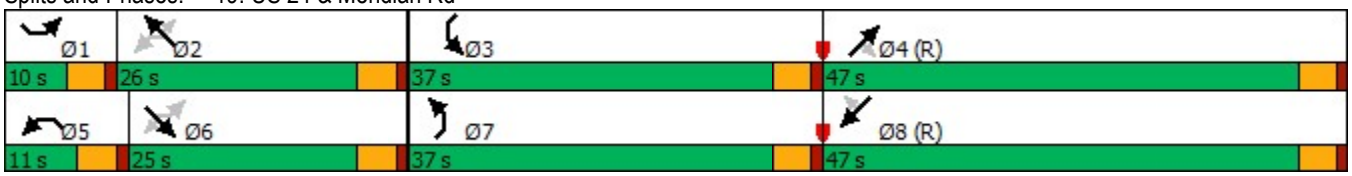
Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 19: US 24 & Meridian Rd



Intersection	
Intersection Delay, s/veh	3.7
Intersection LOS	A

Approach	SE	NE	SW
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	213	106	44
Demand Flow Rate, veh/h	217	108	45
Vehicles Circulating, veh/h	6	47	104
Vehicles Exiting, veh/h	143	176	51
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	4.0	3.5	3.3
Approach LOS	A	A	A

Lane	Left	Left	Left
Designated Moves	LR	LT	TR
Assumed Moves	LR	LT	TR
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	217	108	45
Cap Entry Lane, veh/h	1371	1315	1241
Entry HV Adj Factor	0.982	0.981	0.975
Flow Entry, veh/h	213	106	44
Cap Entry, veh/h	1346	1290	1210
V/C Ratio	0.158	0.082	0.036
Control Delay, s/veh	4.0	3.5	3.3
LOS	A	A	A
95th %tile Queue, veh	1	0	0

Intersection	
Int Delay, s/veh	1

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Vol, veh/h	0	0	235	0	0	130	0	1065	130	0	1280	35
Future Vol, veh/h	0	0	235	0	0	130	0	1065	130	0	1280	35
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	-	-	Free	-	-	Yield	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	500	-	-	550
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	270	0	0	149	0	1121	137	0	1347	37

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	-	-	-	561	-	0	0	-	-	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.14	-	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.92	-	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	0	0	0	403	0	-	-	0	-	-
Stage 1	0	0	0	0	0	-	0	-	-	0	-	-
Stage 2	0	0	0	0	0	-	0	-	-	0	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	-	-	-	-	403	-	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	0	19.1	0	0
HCM LOS	A	C		

Minor Lane/Major Mvmt	NET	NER	NWLn1	SELn1	SWT	SWR
Capacity (veh/h)	-	-	403	-	-	-
HCM Lane V/C Ratio	-	-	0.371	-	-	-
HCM Control Delay (s)	-	-	19.1	0	-	-
HCM Lane LOS	-	-	C	A	-	-
HCM 95th %tile Q(veh)	-	-	1.7	-	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	275	800	150	100	650	325	150	200	150	250	150	275
Future Volume (vph)	275	800	150	100	650	325	150	200	150	250	150	275
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	375		0	350		350	125		125	175		100
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	1863	1583	1770	1863	1583
Flt Permitted	0.250			0.291			0.645			0.338		
Satd. Flow (perm)	466	3539	1583	542	3539	1583	1201	1863	1583	630	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			158			349			177			276
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		972			473			511			629	
Travel Time (s)		22.1			10.8			11.6			14.3	
Peak Hour Factor	0.95	0.95	0.95	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	289	842	158	108	699	349	161	215	161	269	161	296
Shared Lane Traffic (%)												
Lane Group Flow (vph)	289	842	158	108	699	349	161	215	161	269	161	296
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Free	pm+pt	NA	Free
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		6	8		Free	4		Free

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2	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	5.0	
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5		9.5	22.5	
Total Split (s)	31.0	62.1	62.1	10.9	42.0	42.0	15.0	28.0		19.0	32.0	
Total Split (%)	25.8%	51.8%	51.8%	9.1%	35.0%	35.0%	12.5%	23.3%		15.8%	26.7%	
Maximum Green (s)	26.5	57.6	57.6	6.4	37.5	37.5	10.5	23.5		14.5	27.5	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5		4.5	4.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	Max		None	Max	
Walk Time (s)		7.0	7.0		7.0	7.0		7.0			7.0	
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0			11.0	
Pedestrian Calls (#/hr)		0	0		0	0		0			0	
Act Effct Green (s)	68.5	57.6	57.6	54.4	48.0	48.0	33.9	23.7	120.0	42.1	27.9	120.0
Actuated g/C Ratio	0.57	0.48	0.48	0.45	0.40	0.40	0.28	0.20	1.00	0.35	0.23	1.00
v/c Ratio	0.66	0.50	0.19	0.35	0.49	0.41	0.42	0.58	0.10	0.76	0.37	0.19
Control Delay	12.7	11.8	3.0	14.8	27.7	8.3	32.0	51.1	0.1	44.9	41.9	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	12.7	11.8	3.0	14.8	27.7	8.3	32.0	51.1	0.1	44.9	41.9	0.3
LOS	B	B	A	B	C	A	C	D	A	D	D	A
Approach Delay		10.9			20.7			30.1			26.0	
Approach LOS		B			C			C			C	
Queue Length 50th (ft)	42	208	27	30	239	70	88	153	0	157	106	0
Queue Length 95th (ft)	m60	m248	m32	51	325	156	143	236	0	#253	172	0
Internal Link Dist (ft)		892			393			431			549	
Turn Bay Length (ft)	375			350		350	125		125	175		100
Base Capacity (vph)	553	1698	842	310	1414	842	392	368	1583	358	432	1583
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.52	0.50	0.19	0.35	0.49	0.41	0.41	0.58	0.10	0.75	0.37	0.19

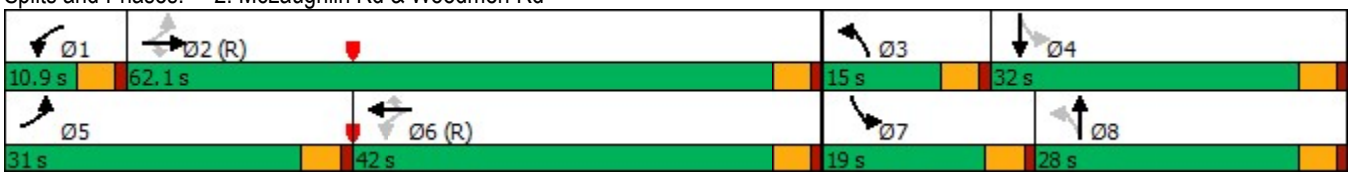
Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 5 (4%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.76
Intersection Signal Delay: 19.7 Intersection LOS: B
Intersection Capacity Utilization 72.6% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: McLaughlin Rd & Woodmen Rd



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	800	165	235	55	170	100	450	1600	150	50	1060	455
Future Volume (vph)	800	165	235	55	170	100	450	1600	150	50	1060	455
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		100	100		100	850		100	250		350
Storage Lanes	2		1	1		1	2		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	1.00	0.88	1.00	1.00	1.00	0.97	0.91	1.00	1.00	0.91	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	1863	2787	1770	1863	1583	3433	5085	1583	1770	5085	1583
Flt Permitted	0.369			0.647			0.111			0.102		
Satd. Flow (perm)	1333	1863	2787	1205	1863	1583	401	5085	1583	190	5085	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			166			177			136			479
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		328			464			976			1388	
Travel Time (s)		7.5			10.5			22.2			31.5	
Peak Hour Factor	0.95	0.95	0.95	0.92	0.92	0.92	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	842	174	247	60	185	109	474	1684	158	53	1116	479
Shared Lane Traffic (%)												
Lane Group Flow (vph)	842	174	247	60	185	109	474	1684	158	53	1116	479
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Free
Protected Phases	7	4	5	3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		Free

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Detector Phase	7	4	5	3	8	8	5	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	5.0	
Minimum Split (s)	22.5	22.5	9.5	9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	
Total Split (s)	28.0	44.0	29.0	9.6	25.6	25.6	29.0	56.9	56.9	9.5	37.4	
Total Split (%)	23.3%	36.7%	24.2%	8.0%	21.3%	21.3%	24.2%	47.4%	47.4%	7.9%	31.2%	
Maximum Green (s)	23.5	39.5	24.5	5.1	21.1	21.1	24.5	52.4	52.4	5.0	32.9	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
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)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Recall Mode	Max	Max	None	None	None	None	None	C-Max	C-Max	None	C-Max	
Walk Time (s)	7.0	7.0			7.0	7.0		7.0	7.0		7.0	
Flash Dont Walk (s)	11.0	11.0			11.0	11.0		11.0	11.0		11.0	
Pedestrian Calls (#/hr)	0	0			0	0		0	0		0	
Act Effct Green (s)	49.1	41.4	63.1	26.2	21.1	21.1	61.9	54.3	54.3	45.2	40.2	120.0
Actuated g/C Ratio	0.41	0.34	0.53	0.22	0.18	0.18	0.52	0.45	0.45	0.38	0.34	1.00
v/c Ratio	0.88	0.27	0.16	0.21	0.57	0.26	0.74	0.73	0.20	0.39	0.65	0.30
Control Delay	27.5	18.6	1.3	25.9	52.9	1.8	27.9	14.9	1.6	25.9	37.0	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	27.5	18.6	1.3	25.9	52.9	1.8	27.9	14.9	1.6	25.9	37.0	0.5
LOS	C	B	A	C	D	A	C	B	A	C	D	A
Approach Delay		21.1			32.6			16.6			26.0	
Approach LOS		C			C			B			C	
Queue Length 50th (ft)	161	72	7	28	133	0	76	432	13	20	268	0
Queue Length 95th (ft)	#232	m110	m9	57	210	4	m114	437	m16	41	348	0
Internal Link Dist (ft)		248			384			896			1308	
Turn Bay Length (ft)	250		100	100		100	850		100	250		350
Base Capacity (vph)	956	643	1704	287	327	424	825	2301	790	137	1704	1583
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.88	0.27	0.14	0.21	0.57	0.26	0.57	0.73	0.20	0.39	0.65	0.30

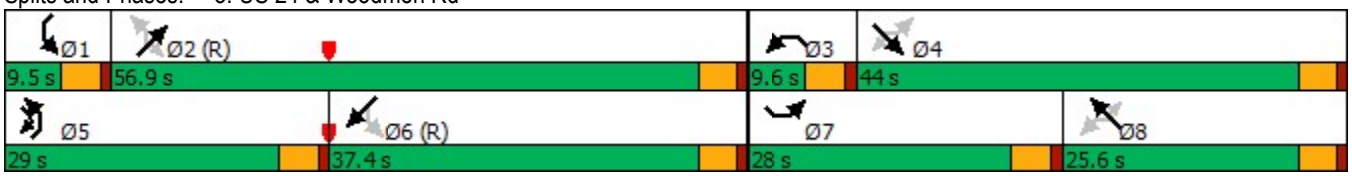
Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 96 (80%), Referenced to phase 2:NETL and 6:SWTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.88
Intersection Signal Delay: 21.4 Intersection LOS: C
Intersection Capacity Utilization 81.9% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: US 24 & Woodmen Rd



Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	60	400	235	80	375	280	525	1850	80	170	1155	60
Future Volume (vph)	60	400	235	80	375	280	525	1850	80	170	1155	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300		300	300		300	500		500	500		500
Storage Lanes	1		2	1		0	2		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.91	1.00	1.00	0.91	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	3433	5085	1583	1770	5085	1583
Flt Permitted	0.515			0.192			0.950			0.950		
Satd. Flow (perm)	959	3539	1583	358	3539	1583	3433	5085	1583	1770	5085	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			253			301			136			136
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		463			120			1364			1042	
Travel Time (s)		10.5			2.7			31.0			23.7	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	65	430	253	86	403	301	553	1947	84	179	1216	63
Shared Lane Traffic (%)												
Lane Group Flow (vph)	65	430	253	86	403	301	553	1947	84	179	1216	63
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2		2	6		6			4			8

Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Detector Phase	5	2	2	1	6	6	7	4	4	3	8	8
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)	9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5
Total Split (s)	9.5	26.6	26.6	13.4	30.5	30.5	31.9	59.0	59.0	21.0	48.1	48.1
Total Split (%)	7.9%	22.2%	22.2%	11.2%	25.4%	25.4%	26.6%	49.2%	49.2%	17.5%	40.1%	40.1%
Maximum Green (s)	5.0	22.1	22.1	8.9	26.0	26.0	27.4	54.5	54.5	16.5	43.6	43.6
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (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
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	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Max	Max	None	Max	Max	None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	24.8	24.8	24.8	27.9	27.9	27.9	27.4	55.7	55.7	15.3	43.6	43.6
Actuated g/C Ratio	0.21	0.21	0.21	0.23	0.23	0.23	0.23	0.46	0.46	0.13	0.36	0.36
v/c Ratio	0.28	0.59	0.48	0.48	0.49	0.50	0.71	0.82	0.10	0.80	0.66	0.10
Control Delay	46.7	47.8	8.5	40.8	38.8	18.6	48.3	31.9	0.8	52.4	21.5	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	46.7	47.8	8.5	40.8	38.8	18.6	48.3	31.9	0.8	52.4	21.5	1.7
LOS	D	D	A	D	D	B	D	C	A	D	C	A
Approach Delay		34.4			31.3			34.4			24.4	
Approach LOS		C			C			C			C	
Queue Length 50th (ft)	43	164	0	67	168	117	204	477	0	137	327	8
Queue Length 95th (ft)	85	221	71	m100	m216	m153	267	546	6	#226	384	m6
Internal Link Dist (ft)		383			40			1284			962	
Turn Bay Length (ft)	300		300	300		300	500		500	500		500
Base Capacity (vph)	232	731	527	188	822	598	783	2361	808	243	1847	661
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.28	0.59	0.48	0.46	0.49	0.50	0.71	0.82	0.10	0.74	0.66	0.10

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 95 (79%), Referenced to phase 4:NET and 8:SWT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.82
Intersection Signal Delay: 31.4 Intersection LOS: C
Intersection Capacity Utilization 75.7% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 19: US 24 & Meridian Rd

Intersection	
Intersection Delay, s/veh	5.2
Intersection LOS	A

Approach	SE	NE	SW
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	402	317	68
Demand Flow Rate, veh/h	411	323	69
Vehicles Circulating, veh/h	14	78	310
Vehicles Exiting, veh/h	365	347	91
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	5.4	5.1	4.3
Approach LOS	A	A	A

Lane	Left	Left	Left
Designated Moves	R	LT	TR
Assumed Moves	R	LT	TR
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	411	323	69
Cap Entry Lane, veh/h	1360	1274	1006
Entry HV Adj Factor	0.978	0.981	0.982
Flow Entry, veh/h	402	317	68
Cap Entry, veh/h	1330	1250	987
V/C Ratio	0.302	0.253	0.069
Control Delay, s/veh	5.4	5.1	4.3
LOS	A	A	A
95th %tile Queue, veh	1	1	0

Intersection	
Int Delay, s/veh	1.1

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations			↱			↱		↑↑↑	↱		↑↑↑	↱
Traffic Vol, veh/h	0	0	50	0	0	175	0	2110	130	0	1335	15
Future Vol, veh/h	0	0	50	0	0	175	0	2110	130	0	1335	15
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	-	-	Free	-	-	Yield	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	500	-	-	550
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	87	87	87	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	60	0	0	201	0	2221	137	0	1405	16

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	-	-	-	1111	-	0	0	-	-	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.14	-	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.92	-	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	0	0	0	*425	0	-	-	0	-	-
Stage 1	0	0	0	0	0	-	0	-	-	0	-	-
Stage 2	0	0	0	0	0	-	0	-	-	0	-	-
Platoon blocked, %						1		-	-		-	-
Mov Cap-1 Maneuver	-	-	-	-	-	*425	-	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	0	20.9	0	0
HCM LOS	A	C		

Minor Lane/Major Mvmt	NET	NER	NWLn1	SELn1	SWT	SWR
Capacity (veh/h)	-	-	425	-	-	-
HCM Lane V/C Ratio	-	-	0.473	-	-	-
HCM Control Delay (s)	-	-	20.9	0	-	-
HCM Lane LOS	-	-	C	A	-	-
HCM 95th %tile Q(veh)	-	-	2.5	-	-	-

Notes

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

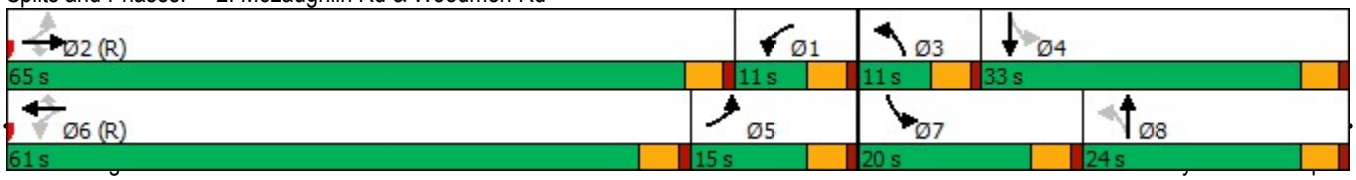
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	125	633	100	50	795	159	75	50	50	183	125	275
Future Volume (vph)	125	633	100	50	795	159	75	50	50	183	125	275
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	375		0	350		350	125		125	175		100
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	1863	1583	1770	1863	1583
Flt Permitted	0.233			0.316			0.670			0.616		
Satd. Flow (perm)	434	3539	1583	589	3539	1583	1248	1863	1583	1147	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			136			171			177			299
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		972			473			511			629	
Travel Time (s)		22.1			10.8			11.6			14.3	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.87	0.87	0.87	0.92	0.92	0.92
Adj. Flow (vph)	134	681	108	54	855	171	86	57	57	199	136	299
Shared Lane Traffic (%)												
Lane Group Flow (vph)	134	681	108	54	855	171	86	57	57	199	136	299
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1	1	1	1	1	1	1	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	100	20	20	100	20	20	100	20	20	100	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Free	pm+pt	NA	Free
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		6	8		Free	4		Free
Detector Phase	5	2	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	5.0	
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5		9.5	22.5	
Total Split (s)	15.0	65.0	65.0	11.0	61.0	61.0	11.0	24.0		20.0	33.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (%)	12.5%	54.2%	54.2%	9.2%	50.8%	50.8%	9.2%	20.0%		16.7%	27.5%	
Maximum Green (s)	10.5	60.5	60.5	6.5	56.5	56.5	6.5	19.5		15.5	28.5	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5		-0.5	-0.5	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	Max		None	Max	
Walk Time (s)		7.0	7.0		7.0	7.0		7.0			7.0	
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0			11.0	
Pedestrian Calls (#/hr)		0	0		0	0		0			0	
Act Effct Green (s)	70.4	62.2	62.2	63.2	57.0	57.0	30.5	22.9	120.0	41.6	32.2	120.0
Actuated g/C Ratio	0.59	0.52	0.52	0.53	0.48	0.48	0.25	0.19	1.00	0.35	0.27	1.00
v/c Ratio	0.37	0.37	0.12	0.15	0.51	0.20	0.25	0.16	0.04	0.42	0.27	0.19
Control Delay	21.5	19.9	5.4	9.9	18.7	2.1	30.2	43.9	0.0	32.4	38.2	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	21.5	19.9	5.4	9.9	18.7	2.1	30.2	43.9	0.0	32.4	38.2	0.3
LOS	C	B	A	A	B	A	C	D	A	C	D	A
Approach Delay		18.5			15.6			25.5			18.5	
Approach LOS		B			B			C			B	
Queue Length 50th (ft)	50	152	12	14	273	0	46	38	0	114	87	0
Queue Length 95th (ft)	81	186	m31	28	338	2	83	76	0	179	145	0
Internal Link Dist (ft)		892			393			431			549	
Turn Bay Length (ft)	375			350		350	125		125	175		100
Base Capacity (vph)	382	1833	885	383	1681	841	350	355	1583	481	500	1583
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.35	0.37	0.12	0.14	0.51	0.20	0.25	0.16	0.04	0.41	0.27	0.19

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 98 (82%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 65
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.51
Intersection Signal Delay: 17.9 Intersection LOS: B
Intersection Capacity Utilization 56.5% ICU Level of Service B
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: McLaughlin Rd & Woodmen Rd



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	371	147	348	91	124	41	399	744	77	71	918	481
Future Volume (vph)	371	147	348	91	124	41	399	744	77	71	918	481
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		100	250		250	850		100	250		350
Storage Lanes	1		2	2		1	2		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	1.00	0.88	0.97	0.95	1.00	0.97	0.91	1.00	1.00	0.91	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	1863	2787	3433	3539	1583	3433	5085	1583	1770	5085	1583
Flt Permitted	0.560			0.657			0.182			0.335		
Satd. Flow (perm)	2024	1863	2787	2374	3539	1583	658	5085	1583	624	5085	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			326			218			136			506
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		328			275			976			1388	
Travel Time (s)		7.5			6.3			22.2			31.5	
Peak Hour Factor	0.93	0.93	0.93	0.92	0.92	0.92	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	399	158	374	99	135	45	420	783	81	75	966	506
Shared Lane Traffic (%)												
Lane Group Flow (vph)	399	158	374	99	135	45	420	783	81	75	966	506
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	1	1	1	1	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	100	20	20	100	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94							
Detector 2 Size(ft)		6			6							
Detector 2 Type		Cl+Ex			Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							
Turn Type	pm+pt	NA	pt+ov	pm+pt	NA	Free	pm+pt	NA	Perm	pm+pt	NA	Free
Protected Phases	7	4	4 5	3	8		5	2		1	6	
Permitted Phases	4			8		Free	2		2	6		Free

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Detector Phase	7	4	4 5	3	8		5	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	
Minimum Split (s)	22.5	22.5		9.5	22.5		9.5	22.5	22.5	9.5	22.5	
Total Split (s)	26.0	33.0		18.0	25.0		30.0	54.0	54.0	15.0	39.0	
Total Split (%)	21.7%	27.5%		15.0%	20.8%		25.0%	45.0%	45.0%	12.5%	32.5%	
Maximum Green (s)	21.5	28.5		13.5	20.5		25.5	49.5	49.5	10.5	34.5	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	-0.5	0.0		0.0	0.0		-0.5	-0.5	0.0	0.0	-0.5	
Total Lost Time (s)	4.0	4.5		4.5	4.5		4.0	4.0	4.5	4.5	4.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	Max	Max		None	None		None	C-Max	C-Max	None	C-Max	
Walk Time (s)	7.0	7.0			7.0			7.0	7.0		7.0	
Flash Dont Walk (s)	11.0	11.0			11.0			11.0	11.0		11.0	
Pedestrian Calls (#/hr)	0	0			0			0	0		0	
Act Effct Green (s)	47.0	34.3	53.1	28.2	20.5	120.0	65.0	54.6	54.1	53.7	46.2	120.0
Actuated g/C Ratio	0.39	0.29	0.44	0.24	0.17	1.00	0.54	0.46	0.45	0.45	0.38	1.00
v/c Ratio	0.38	0.30	0.26	0.16	0.22	0.03	0.60	0.34	0.10	0.21	0.49	0.32
Control Delay	17.8	25.7	6.4	25.3	44.0	0.0	11.8	17.9	4.4	15.7	29.6	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	17.8	25.7	6.4	25.3	44.0	0.0	11.8	17.9	4.4	15.7	29.6	0.5
LOS	B	C	A	C	D	A	B	B	A	B	C	A
Approach Delay		14.5			30.3			15.1			19.4	
Approach LOS		B			C			B			B	
Queue Length 50th (ft)	109	86	42	24	47	0	103	181	14	27	205	0
Queue Length 95th (ft)	144	134	70	43	78	0	41	219	37	51	267	0
Internal Link Dist (ft)		248			195			896			1308	
Turn Bay Length (ft)	250		100	250		250	850		100	250		350
Base Capacity (vph)	1051	533	1645	791	604	1583	957	2314	788	392	1958	1583
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.38	0.30	0.23	0.13	0.22	0.03	0.44	0.34	0.10	0.19	0.49	0.32

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 99 (83%), Referenced to phase 2:NETL and 6:SWTL, Start of Green	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.60	
Intersection Signal Delay: 17.7	Intersection LOS: B
Intersection Capacity Utilization 57.6%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 3: US 24 & Woodmen Rd

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	32	300	640	40	150	248	150	943	30	218	1291	41
Future Volume (vph)	32	300	640	40	150	248	150	943	30	218	1291	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300		300	300		300	500		500	500		500
Storage Lanes	1		1	1		1	2		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.91	1.00	1.00	0.91	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	3433	5085	1583	1770	5085	1583
Flt Permitted	0.649			0.428			0.950			0.950		
Satd. Flow (perm)	1209	3539	1583	797	3539	1583	3433	5085	1583	1770	5085	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			492			270			136			95
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		119			738			1395			1030	
Travel Time (s)		2.7			16.8			31.7			23.4	
Peak Hour Factor	0.93	0.93	0.93	0.92	0.92	0.92	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	34	323	688	43	163	270	158	993	32	229	1359	43
Shared Lane Traffic (%)												
Lane Group Flow (vph)	34	323	688	43	163	270	158	993	32	229	1359	43
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6		6	2		2			4			8

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Detector Phase	1	6	6	5	2	2	7	4	4	3	8	8
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)	9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5
Total Split (s)	9.6	28.0	28.0	9.6	28.0	28.0	34.3	41.4	41.4	41.0	48.1	48.1
Total Split (%)	8.0%	23.3%	23.3%	8.0%	23.3%	23.3%	28.6%	34.5%	34.5%	34.2%	40.1%	40.1%
Maximum Green (s)	5.1	23.5	23.5	5.1	23.5	23.5	29.8	36.9	36.9	36.5	43.6	43.6
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (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
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	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Max	Max	None	Max	Max	None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	29.5	25.4	25.4	30.4	27.3	27.3	10.9	52.5	52.5	20.9	62.5	62.5
Actuated g/C Ratio	0.25	0.21	0.21	0.25	0.23	0.23	0.09	0.44	0.44	0.17	0.52	0.52
v/c Ratio	0.11	0.43	0.95	0.18	0.20	0.47	0.51	0.45	0.04	0.74	0.51	0.05
Control Delay	22.9	26.4	34.0	34.3	39.7	7.8	57.5	25.2	0.1	47.6	19.6	3.1
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	22.9	26.4	34.0	34.3	39.7	7.8	57.5	25.2	0.1	47.6	19.6	3.1
LOS	C	C	C	C	D	A	E	C	A	D	B	A
Approach Delay		31.3			21.1			28.8			23.1	
Approach LOS		C			C			C			C	
Queue Length 50th (ft)	9	63	508	25	56	0	61	193	0	174	298	4
Queue Length 95th (ft)	m11	m68	m#531	55	88	72	94	259	0	195	359	m18
Internal Link Dist (ft)		39			658			1315			950	
Turn Bay Length (ft)	300		300	300		300	500		500	500		500
Base Capacity (vph)	320	750	722	243	806	569	852	2224	769	538	2650	870
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.11	0.43	0.95	0.18	0.20	0.47	0.19	0.45	0.04	0.43	0.51	0.05

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 105 (88%), Referenced to phase 4:NET and 8:SWT, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.95
Intersection Signal Delay: 26.4 Intersection LOS: C
Intersection Capacity Utilization 80.0% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 21: US 24

Intersection	
Intersection Delay, s/veh	4.3
Intersection LOS	A

Approach	SE	NE	SW
Entry Lanes	2	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	304	180	127
Demand Flow Rate, veh/h	310	184	129
Vehicles Circulating, veh/h	7	113	194
Vehicles Exiting, veh/h	316	204	103
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	4.0	4.6	4.5
Approach LOS	A	A	A

Lane	Left	Right	Left	Left
Designated Moves	L	TR	LT	TR
Assumed Moves	L	TR	LT	TR
RT Channelized				
Lane Util	0.365	0.635	1.000	1.000
Follow-Up Headway, s	2.800	2.800	2.800	2.800
Critical Headway, s	4.544	4.544	4.976	4.976
Entry Flow, veh/h	113	197	184	129
Cap Entry Lane, veh/h	1278	1278	1149	1060
Entry HV Adj Factor	0.980	0.980	0.978	0.983
Flow Entry, veh/h	111	193	180	127
Cap Entry, veh/h	1252	1252	1124	1043
V/C Ratio	0.088	0.154	0.160	0.122
Control Delay, s/veh	3.6	4.2	4.6	4.5
LOS	A	A	A	A
95th %tile Queue, veh	0	1	1	0

Intersection	
Int Delay, s/veh	0.7

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations			↱			↱		↑↑↑	↱		↑↑↑	↱
Traffic Vol, veh/h	0	0	235	0	0	130	0	1093	130	0	1315	35
Future Vol, veh/h	0	0	235	0	0	130	0	1093	130	0	1315	35
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	-	-	Free	-	-	Yield	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	500	-	-	550
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	83	83	83	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	270	0	0	157	0	1151	137	0	1384	37

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	-	-	-	576	-	0	0	-	-	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.14	-	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.92	-	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	0	0	0	*668	0	-	-	0	-	-
Stage 1	0	0	0	0	0	-	0	-	-	0	-	-
Stage 2	0	0	0	0	0	-	0	-	-	0	-	-
Platoon blocked, %						1		-	-		-	-
Mov Cap-1 Maneuver	-	-	-	-	-	*668	-	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	0	12	0	0
HCM LOS	A	B		

Minor Lane/Major Mvmt	NET	NER	NWLn1	SELn1	SWT	SWR
Capacity (veh/h)	-	-	668	-	-	-
HCM Lane V/C Ratio	-	-	0.234	-	-	-
HCM Control Delay (s)	-	-	12	0	-	-
HCM Lane LOS	-	-	B	A	-	-
HCM 95th %tile Q(veh)	-	-	0.9	-	-	-

Notes

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

Intersection	
Int Delay, s/veh	2.5

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Vol, veh/h	20	0	0	0	0	49	0	88	0	14	150	20
Future Vol, veh/h	20	0	0	0	0	49	0	88	0	14	150	20
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	78	78	78	83	83	83	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	26	0	0	0	0	63	0	106	0	16	172	23

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	354	322	184	322	333	106	195	0	0	106	0	0
Stage 1	216	216	-	106	106	-	-	-	-	-	-	-
Stage 2	138	106	-	216	227	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
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	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	601	595	858	631	587	948	1378	-	-	1485	-	-
Stage 1	786	724	-	900	807	-	-	-	-	-	-	-
Stage 2	865	807	-	786	716	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	557	588	858	626	581	948	1378	-	-	1485	-	-
Mov Cap-2 Maneuver	557	588	-	626	581	-	-	-	-	-	-	-
Stage 1	786	716	-	900	807	-	-	-	-	-	-	-
Stage 2	808	807	-	778	708	-	-	-	-	-	-	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	11.8	9.1	0	0.6
HCM LOS	B	A		

Minor Lane/Major Mvmt	NEL	NET	NER	NWLn1	SELn1	SWL	SWT	SWR
Capacity (veh/h)	1378	-	-	948	557	1485	-	-
HCM Lane V/C Ratio	-	-	-	0.066	0.046	0.011	-	-
HCM Control Delay (s)	0	-	-	9.1	11.8	7.5	-	-
HCM Lane LOS	A	-	-	A	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.1	0	-	-

Intersection	
Int Delay, s/veh	2.8

Movement	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	2	29	36	57	77	3
Future Vol, veh/h	2	29	36	57	77	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	0	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	78	78	83	83	83	83
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	37	43	69	93	4

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	250	95	97	0	-	0
Stage 1	95	-	-	-	-	-
Stage 2	155	-	-	-	-	-
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	739	962	1496	-	-	-
Stage 1	929	-	-	-	-	-
Stage 2	873	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	718	962	1496	-	-	-
Mov Cap-2 Maneuver	718	-	-	-	-	-
Stage 1	902	-	-	-	-	-
Stage 2	873	-	-	-	-	-

Approach	SE	NE	SW
HCM Control Delay, s	9	2.9	0
HCM LOS	A		

Minor Lane/Major Mvmt	NEL	NET	SELn1	SWT	SWR
Capacity (veh/h)	1496	-	941	-	-
HCM Lane V/C Ratio	0.029	-	0.042	-	-
HCM Control Delay (s)	7.5	-	9	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	275	880	150	100	739	346	200	150	100	268	150	275
Future Volume (vph)	275	880	150	100	739	346	200	150	100	268	150	275
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	375		0	350		350	125		125	175		100
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	1863	1583	1770	1863	1583
Flt Permitted	0.222			0.256			0.514			0.498		
Satd. Flow (perm)	414	3539	1583	477	3539	1583	957	1863	1583	928	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			158			364			177			276
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		972			473			511			629	
Travel Time (s)		22.1			10.8			11.6			14.3	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.92	0.92	0.92	0.93	0.93	0.93
Adj. Flow (vph)	289	926	158	105	778	364	217	163	109	288	161	296
Shared Lane Traffic (%)												
Lane Group Flow (vph)	289	926	158	105	778	364	217	163	109	288	161	296
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Free	pm+pt	NA	Free
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		6	8		Free	4		Free

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2	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	5.0	
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5		9.5	22.5	
Total Split (s)	29.0	64.0	64.0	11.0	46.0	46.0	18.4	27.0		18.0	26.6	
Total Split (%)	24.2%	53.3%	53.3%	9.2%	38.3%	38.3%	15.3%	22.5%		15.0%	22.2%	
Maximum Green (s)	24.5	59.5	59.5	6.5	41.5	41.5	13.9	22.5		13.5	22.1	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5		4.5	4.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	Max		None	Max	
Walk Time (s)		7.0	7.0		7.0	7.0		7.0			7.0	
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0			11.0	
Pedestrian Calls (#/hr)		0	0		0	0		0			0	
Act Effct Green (s)	70.5	59.5	59.5	56.6	50.1	50.1	35.8	22.5	120.0	36.2	22.7	120.0
Actuated g/C Ratio	0.59	0.50	0.50	0.47	0.42	0.42	0.30	0.19	1.00	0.30	0.19	1.00
v/c Ratio	0.68	0.53	0.18	0.36	0.53	0.42	0.58	0.47	0.07	0.77	0.46	0.19
Control Delay	13.9	9.8	2.9	17.3	31.6	10.3	37.3	48.5	0.1	48.1	48.3	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	13.9	9.8	2.9	17.3	31.6	10.3	37.3	48.5	0.1	48.1	48.3	0.3
LOS	B	A	A	B	C	B	D	D	A	D	D	A
Approach Delay		9.8			24.2			32.7			29.2	
Approach LOS		A			C			C			C	
Queue Length 50th (ft)	28	214	24	33	279	79	126	114	0	176	112	0
Queue Length 95th (ft)	m70	260	m31	m55	371	169	196	184	0	#288	183	0
Internal Link Dist (ft)		892			393			431			549	
Turn Bay Length (ft)	375			350		350	125		125	175		100
Base Capacity (vph)	520	1755	864	295	1477	872	384	349	1583	375	352	1583
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.56	0.53	0.18	0.36	0.53	0.42	0.57	0.47	0.07	0.77	0.46	0.19

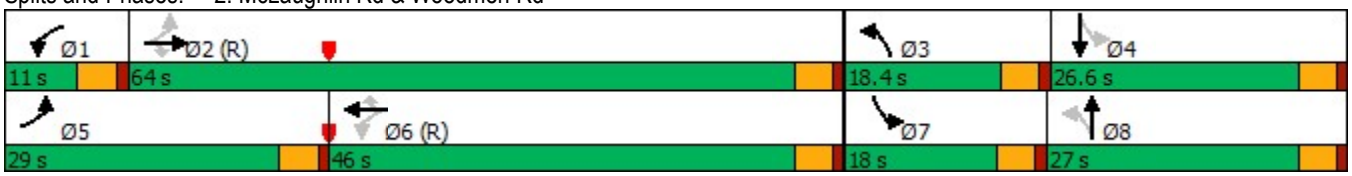
Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 5 (4%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.77
Intersection Signal Delay: 21.1 Intersection LOS: C
Intersection Capacity Utilization 73.4% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: McLaughlin Rd & Woodmen Rd



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	786	280	231	104	249	171	436	1573	269	93	1053	451
Future Volume (vph)	786	280	231	104	249	171	436	1573	269	93	1053	451
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		100	250		200	850		100	250		350
Storage Lanes	2		1	2		1	2		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	1.00	0.88	0.97	0.95	1.00	0.97	0.91	1.00	1.00	0.91	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	1863	2787	3433	3539	1583	3433	5085	1583	1770	5085	1583
Flt Permitted	0.439			0.580			0.103			0.116		
Satd. Flow (perm)	1586	1863	2787	2096	3539	1583	372	5085	1583	216	5085	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			243			185			136			475
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		328			290			976			1388	
Travel Time (s)		7.5			6.6			22.2			31.5	
Peak Hour Factor	0.95	0.95	0.95	0.92	0.92	0.92	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	827	295	243	113	271	186	459	1656	283	98	1108	475
Shared Lane Traffic (%)												
Lane Group Flow (vph)	827	295	243	113	271	186	459	1656	283	98	1108	475
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Free
Protected Phases	7	4	5	3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		Free

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Detector Phase	7	4	5	3	8	8	5	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	5.0	
Minimum Split (s)	22.5	22.5	9.5	9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	
Total Split (s)	28.0	39.8	26.0	20.2	32.0	32.0	26.0	45.0	45.0	15.0	34.0	
Total Split (%)	23.3%	33.2%	21.7%	16.8%	26.7%	26.7%	21.7%	37.5%	37.5%	12.5%	28.3%	
Maximum Green (s)	23.5	35.3	21.5	15.7	27.5	27.5	21.5	40.5	40.5	10.5	29.5	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
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)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Recall Mode	Max	Max	None	None	None	None	None	C-Max	C-Max	None	C-Max	
Walk Time (s)	7.0	7.0			7.0	7.0		7.0	7.0		7.0	
Flash Dont Walk (s)	11.0	11.0			11.0	11.0		11.0	11.0		11.0	
Pedestrian Calls (#/hr)	0	0			0	0		0	0		0	
Act Effct Green (s)	55.5	43.3	64.3	35.2	27.5	27.5	55.5	42.1	42.1	43.5	34.5	120.0
Actuated g/C Ratio	0.46	0.36	0.54	0.29	0.23	0.23	0.46	0.35	0.35	0.36	0.29	1.00
v/c Ratio	0.76	0.44	0.15	0.16	0.33	0.37	0.78	0.93	0.44	0.51	0.76	0.30
Control Delay	15.5	18.6	0.6	20.3	40.0	7.7	24.6	35.9	11.0	31.3	43.5	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	15.5	18.6	0.6	20.3	40.0	7.7	24.6	35.9	11.0	31.3	43.5	0.5
LOS	B	B	A	C	D	A	C	D	B	C	D	A
Approach Delay		13.5			25.5			30.8			30.7	
Approach LOS		B			C			C			C	
Queue Length 50th (ft)	97	119	0	24	92	1	94	487	120	42	284	0
Queue Length 95th (ft)	118	m196	m3	41	133	59	m126	#581	m137	84	#369	0
Internal Link Dist (ft)		248			210			896			1308	
Turn Bay Length (ft)	250		100	250		200	850		100	250		350
Base Capacity (vph)	1095	672	1713	929	811	505	720	1782	643	216	1463	1583
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.76	0.44	0.14	0.12	0.33	0.37	0.64	0.93	0.44	0.45	0.76	0.30

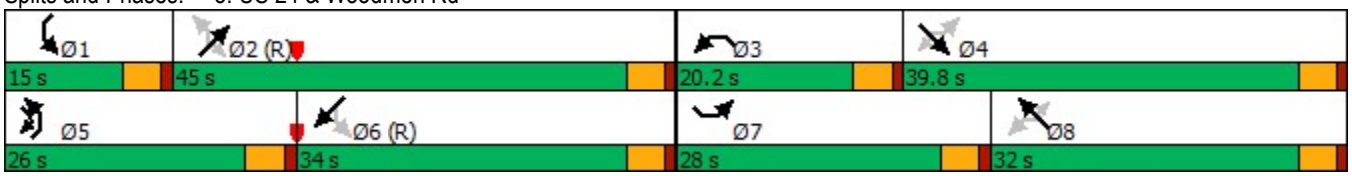
Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 96 (80%), Referenced to phase 2:NETL and 6:SWTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.93
Intersection Signal Delay: 26.3 Intersection LOS: C
Intersection Capacity Utilization 79.9% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: US 24 & Woodmen Rd



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	83	375	280	60	400	243	525	1917	80	179	1181	63
Future Volume (vph)	83	375	280	60	400	243	525	1917	80	179	1181	63
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300		300	300		300	500		500	500		500
Storage Lanes	1		1	1		1	2		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.91	1.00	1.00	0.91	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	3433	5085	1583	1770	5085	1583
Flt Permitted	0.309			0.320			0.950			0.950		
Satd. Flow (perm)	576	3539	1583	596	3539	1583	3433	5085	1583	1770	5085	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			301			261			95			95
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		120			767			1391			1035	
Travel Time (s)		2.7			17.4			31.6			23.5	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	89	403	301	65	430	261	553	2018	84	188	1243	66
Shared Lane Traffic (%)												
Lane Group Flow (vph)	89	403	301	65	430	261	553	2018	84	188	1243	66
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6		6	2		2			4			8

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Detector Phase	1	6	6	5	2	2	7	4	4	3	8	8
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)	9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5
Total Split (s)	11.4	28.0	28.0	9.5	26.1	26.1	28.3	56.5	56.5	26.0	54.2	54.2
Total Split (%)	9.5%	23.3%	23.3%	7.9%	21.8%	21.8%	23.6%	47.1%	47.1%	21.7%	45.2%	45.2%
Maximum Green (s)	6.9	23.5	23.5	5.0	21.6	21.6	23.8	52.0	52.0	21.5	49.7	49.7
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (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
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	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Max	Max	None	Max	Max	None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	30.6	25.1	25.1	26.6	21.6	21.6	23.8	56.4	56.4	17.4	50.0	50.0
Actuated g/C Ratio	0.26	0.21	0.21	0.22	0.18	0.18	0.20	0.47	0.47	0.14	0.42	0.42
v/c Ratio	0.42	0.54	0.53	0.36	0.68	0.52	0.81	0.84	0.11	0.73	0.59	0.09
Control Delay	38.7	34.5	15.8	42.9	52.0	9.2	56.6	32.8	3.5	45.6	13.2	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	38.7	34.5	15.8	42.9	52.0	9.2	56.6	32.8	3.5	45.6	13.2	0.3
LOS	D	C	B	D	D	A	E	C	A	D	B	A
Approach Delay		27.9			36.4			36.9			16.7	
Approach LOS		C			D			D			B	
Queue Length 50th (ft)	62	170	122	38	165	0	212	497	0	78	319	0
Queue Length 95th (ft)	m91	m220	m153	75	222	73	#282	602	25	m112	71	m0
Internal Link Dist (ft)		40			687			1311			955	
Turn Bay Length (ft)	300		300	300		300	500		500	500		500
Base Capacity (vph)	217	741	569	181	637	498	680	2389	794	317	2118	714
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.41	0.54	0.53	0.36	0.68	0.52	0.81	0.84	0.11	0.59	0.59	0.09

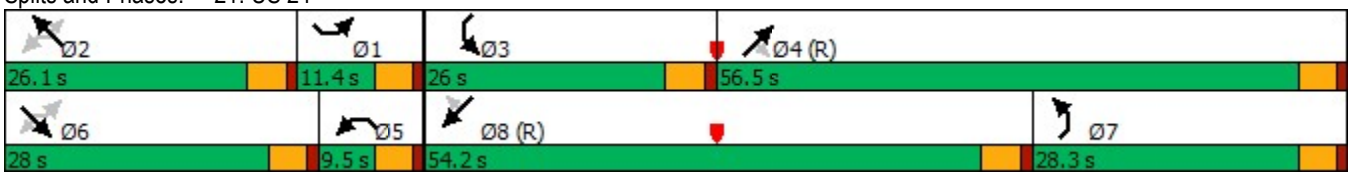
Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 89 (74%), Referenced to phase 4:NET and 8:SWT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.84
Intersection Signal Delay: 30.3 Intersection LOS: C
Intersection Capacity Utilization 77.6% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 21: US 24



Intersection	
Intersection Delay, s/veh	6.9
Intersection LOS	A

Approach	SE	NE	SW
Entry Lanes	2	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	651	430	227
Demand Flow Rate, veh/h	664	438	231
Vehicles Circulating, veh/h	16	247	468
Vehicles Exiting, veh/h	683	433	217
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	5.4	8.6	7.8
Approach LOS	A	A	A

Lane	Left	Right	Left	Left
Designated Moves	L	TR	LT	TR
Assumed Moves	L	TR	LT	TR
RT Channelized				
Lane Util	0.372	0.628	1.000	1.000
Follow-Up Headway, s	2.800	2.800	2.800	2.800
Critical Headway, s	4.544	4.544	4.976	4.976
Entry Flow, veh/h	247	417	438	231
Cap Entry Lane, veh/h	1268	1268	1006	808
Entry HV Adj Factor	0.980	0.981	0.981	0.981
Flow Entry, veh/h	242	409	430	227
Cap Entry, veh/h	1243	1244	987	793
V/C Ratio	0.195	0.329	0.435	0.286
Control Delay, s/veh	4.6	6.0	8.6	7.8
LOS	A	A	A	A
95th %tile Queue, veh	1	1	2	1

Intersection	
Int Delay, s/veh	1.1

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations			↱			↱		↑↑↑	↱		↑↑↑	↱
Traffic Vol, veh/h	0	0	50	0	0	175	0	2188	130	0	1373	15
Future Vol, veh/h	0	0	50	0	0	175	0	2188	130	0	1373	15
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	-	-	Free	-	-	Yield	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	500	-	-	550
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	87	87	87	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	60	0	0	201	0	2303	137	0	1445	16

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	-	-	-	1152	-	0	0	-	-	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.14	-	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.92	-	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	0	0	0	*403	0	-	-	0	-	-
Stage 1	0	0	0	0	0	-	0	-	-	0	-	-
Stage 2	0	0	0	0	0	-	0	-	-	0	-	-
Platoon blocked, %						1		-	-		-	-
Mov Cap-1 Maneuver	-	-	-	-	-	*403	-	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	0	22.5	0	0
HCM LOS	A	C		

Minor Lane/Major Mvmt	NET	NER	NWLn1	SELn1	SWT	SWR
Capacity (veh/h)	-	-	403	-	-	-
HCM Lane V/C Ratio	-	-	0.499	-	-	-
HCM Control Delay (s)	-	-	22.5	0	-	-
HCM Lane LOS	-	-	C	A	-	-
HCM 95th %tile Q(veh)	-	-	2.7	-	-	-

Notes

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

Intersection	
Int Delay, s/veh	3.4

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Vol, veh/h	81	0	0	0	0	23	0	292	0	44	312	38
Future Vol, veh/h	81	0	0	0	0	23	0	292	0	44	312	38
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	78	78	78	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	98	0	0	0	0	29	0	317	0	48	339	41

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	788	773	360	773	793	317	380	0	0	317	0	0
Stage 1	456	456	-	317	317	-	-	-	-	-	-	-
Stage 2	332	317	-	456	476	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
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	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	309	330	684	316	321	724	1178	-	-	1243	-	-
Stage 1	584	568	-	694	654	-	-	-	-	-	-	-
Stage 2	681	654	-	584	557	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	288	317	684	307	308	724	1178	-	-	1243	-	-
Mov Cap-2 Maneuver	288	317	-	307	308	-	-	-	-	-	-	-
Stage 1	584	546	-	694	654	-	-	-	-	-	-	-
Stage 2	653	654	-	561	535	-	-	-	-	-	-	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	23.8	10.2	0	0.9
HCM LOS	C	B		

Minor Lane/Major Mvmt	NEL	NET	NER	NWLn1	SELn1	SWL	SWT	SWR
Capacity (veh/h)	1178	-	-	724	288	1243	-	-
HCM Lane V/C Ratio	-	-	-	0.041	0.339	0.038	-	-
HCM Control Delay (s)	0	-	-	10.2	23.8	8	-	-
HCM Lane LOS	A	-	-	B	C	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	1.4	0.1	-	-

Intersection	
Int Delay, s/veh	4.4

Movement	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	9	116	72	126	81	7
Future Vol, veh/h	9	116	72	126	81	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	0	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	83	83	87	87	83	83
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	140	83	145	98	8

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	413	102	106	0	-	0
Stage 1	102	-	-	-	-	-
Stage 2	311	-	-	-	-	-
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	595	953	1485	-	-	-
Stage 1	922	-	-	-	-	-
Stage 2	743	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	562	953	1485	-	-	-
Mov Cap-2 Maneuver	562	-	-	-	-	-
Stage 1	870	-	-	-	-	-
Stage 2	743	-	-	-	-	-

Approach	SE	NE	SW
HCM Control Delay, s	9.8	2.8	0
HCM LOS	A		

Minor Lane/Major Mvmt	NEL	NET	SELn1	SWT	SWR
Capacity (veh/h)	1485	-	908	-	-
HCM Lane V/C Ratio	0.056	-	0.166	-	-
HCM Control Delay (s)	7.6	-	9.8	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0.2	-	0.6	-	-