Traffic Impact Study

Reagan Ranch
Colorado Springs, Colorado

Prepared for:

Pikes Peak Investments LLC

Kimley»Horn

T R A F F I C I M P A C T S T U D Y

Reagan Ranch

Colorado Springs, Colorado

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September 2020

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1.0 EXECUTIVE SUMMARY

Reagan Ranch is proposed to be located along the south side of SH-94 at Marksheffel Road in Colorado Springs, Colorado. This traffic study evaluates three distinct project areas; one area is located on the southwest corner of the SH-94 and Marksheffel Road intersection, a second area is located on the southeast corner of the SH-94 and Marksheffel Road intersection, while a third development area is located on the southeast corner of the intersection of Space Village Avenue and Marksheffel Road.

Reagan Ranch was studied to include 919 single family detached housing units, 562 multifamily housing units, 95,382 square feet of office space, a 218,020 square foot business park, and 577,500 square feet of retail space. It is anticipated that for study purposes these development areas would be completed within the next five years. Therefore, for purposes of this analysis, this project was evaluated for the short-term 2025 and long-term 2040 horizons.

The purpose of this study is to identify project traffic generation characteristics, to identify potential project traffic related impacts on the local street system, and to develop mitigation measures required for identified impacts. The following intersections were incorporated into this traffic study in accordance with City of Colorado Springs standards and requirements:

- Marksheffel Road and US-24
- SH-94 and Marksheffel Road
- SH-94 and Space Village Avenue
- Space Village Avenue and Marksheffel Road
- SH-94 and US-24

In addition, project accesses proposed along SH-94, Space Village Avenue, and Marksheffel Road were included for evaluation.

Regional access to Reagan Ranch is provided by Interstate 25 (I-25) and US-24. Primary access to the project will be provided by SH-94, Marksheffel Road, and Space Village Avenue. Direct access to the proposed project is to be provided by several accesses along these roadways.

For the development area on the southwest corner of the SH-94 and Marksheffel Road intersection, a right-in/right-out access along the south side of SH-94 between US-24 and Marksheffel Road and a right-in/right-out access on the west side of Marksheffel Road between SH-94 and Space Village Avenue are proposed.

Access to the development area on the southeast corner of SH-94 and Marksheffel Road will include three accesses. These include a right-in/right-out access on the east side of Marksheffel Road between SH-94 and Space Village Avenue and two roundabouts providing full turning movements along Space Village Avenue between Marksheffel Road and SH-94.

For the development area on the southeast corner of Space Village Avenue and Marksheffel Road, access will be gained at these same two roundabouts along Space Village Avenue as well as seven (7) accesses planned along the east side of Marksheffel Road south of Space Village Avenue at the standard City 600-foot spacing. The access intersection at the approximate half-mile spacing as well as the access in alignment with Peterson Air Force Base will be full movement signalized intersections. The accesses at the quarter-mile spacing are proposed as three-quarter movement accesses while the accesses at the eighth-mile spacing are proposed as right-in/right-out accesses.

Reagan Ranch is expected to generate a total of approximately 33,266 daily weekday external driveway trips. Of these, a total of 1,622 weekday morning peak hour and 2,764 weekday afternoon peak hour trips are expected.

Distribution of site traffic on the street system was based on the area street system characteristics, existing traffic patterns and volumes, anticipated surrounding development areas, expected roadway improvements, and the proposed access system for the project. Assignment of project traffic was based upon the trip generation described previously and the distributions developed. Assigned traffic was added to future traffic volumes projected at the study area intersections to conduct a traffic analysis for the determination of possible improvements needed.

Based on the analysis presented in this report, Kimley-Horn believes the proposed Reagan Ranch will be successfully incorporated into the existing and future roadway network. The proposed project development and expected traffic volumes resulted in the following recommendations/conclusions:

2025 Recommendations:

- CDOT Access Permits will be required for the SH-94 and Marksheffel Road intersection along with the new right-in/right-out access and Space Village Avenue intersections along SH-94 in association with the project. Likewise, since improvements were found to be needed at the US-24/Marksheffel Road and US-24/SH-94 intersections, CDOT Access Permits will likely be required at these intersections as well.

- It was found that US-24 may need to provide three through lanes in each direction from the Peterson Road interchange through the intersection with SH-94 in the near-term horizon. The intersection of US-24/SH-94 is projected to operate poorly in 2025 with existing configurations. The additional through lanes are a regional capacity improvement that should be considered by CDOT in the near future. If and when US-24 is improved to provide three through lanes in each direction, it is recommended that a separate right turn lane be constructed along US-24 to maintain free right turn movements to eastbound SH-94. For westbound US-24 at SH-94, the existing right turn lane along US-24 can be converted to a shared through/right turn lane.

- Southwestbound dual left turn lanes are recommended to be designated along US-24 at the Marksheffel Road intersection. Presently there is a single left turn lane with a striped-out area to shadow the dual left turn lanes on northeastbound US-24. These new southwestbound dual left turn lanes should be designated with a length of 950 feet plus 600-foot taper (25 to 1).

- At SH-94 and Marksheffel Road, the intersection is proposed to be improved to provide dual left turn lanes, two through lanes, and separate right turn lanes on each approach. Therefore, an additional eastbound and westbound through lane is recommended along SH-94 and dual left turn lanes are needed on each approach. Likewise, it is recommended that

the eastbound and westbound right turns operate with overlap phasing, while the northbound and southbound right turns operate with free movements with acceleration lanes constructed in accordance with the CDOT State Highway Access Code (SHAC). The acceleration lane along westbound SH-94 is recommended to tie into the outside through lane on the approach to US-24. The dual eastbound left turn lanes shall be constructed to a length of 750 feet with a 225-foot taper. The westbound dual left turn lanes should be constructed to a length of 650 feet with a 225-foot taper. The westbound right turn lane should be extended to 600 feet. The eastbound acceleration lane from the Marksheffel Road northbound right turn should be constructed to 1,380 feet with a 300-fot taper.

- In order to comply with the CDOT State Highway Access Code it is recommended that the existing 150-foot westbound left turn lane at the intersection of SH-94 and Space Village Avenue be lengthened to 875 feet with a 300-foot taper. An eastbound acceleration lane along SH-94 from the Space Village Avenue northbound right turn is also warranted. It is recommended that the existing 300-foot with 200-foot taper acceleration lane be extended to a length of 1,380 feet with a 300-foot taper to meet current CDOT standards.

- Currently the intersection of Space Village Avenue and Marksheffel Road is unsignalized. By 2025, this intersection is anticipated to meet the Four-Hour Vehicle Volume signal warrant; therefore, it is recommended that a traffic signal be installed at this intersection. It is also recommended that the northbound left turn lane be constructed to 665 feet with a 240-foot taper to accommodate queues.

- At the intersection of SH-94 and US-24, it is recommended that the existing dual westbound left turn lanes on SH-94 be converted to triple left turn lanes by converting and restriping the inside westbound through lane to a left turn lane. The inside two westbound left turn lanes should be extended to a length of 695 feet plus a 290-foot taper per CDOT SHAC requirements. A traffic signal modification will be required at the intersection to incorporate these westbound triple left turn lanes.

- An eastbound right turn deceleration lane is recommended at the right-in/right-out access along SH-94. It is recommended that this deceleration lane be constructed as a continuous

auxiliary lane to tie in with the acceleration lane from the northbound right turn at US-24. An eastbound acceleration lane along SH-94 from the northbound right turn exit from this right-in/right-out access is also recommended to be constructed. This is recommended to be constructed as a continuous auxiliary lane to tie into the eastbound right turn deceleration lane at the SH-94 and Marksheffel Road intersection.

- Single lane roundabouts are planned to be constructed at the accesses along Space Village Avenue. It is recommended that the roundabouts have single lane approaches on all entering legs.

- It is recommended that the northern three-quarter movement access along Marksheffel Road (Intersection #11) have a 490-foot plus 240-foot taper southbound left turn lane to accommodate volumes entering Reagan Ranch.

- A traffic signal is anticipated to be needed at the northern full movement access intersection along Marksheffel Road (Intersection #13). It is recommended that a 700-foot southbound left turn lane with a 240-foot taper be constructed.

- It is recommended that the southern three-quarter movement access along Marksheffel Road (Intersection #15) have a 540-foot plus 240-foot taper southbound left turn lane to accommodate volumes entering the site.

- The southern full movement access intersection is proposed to align with the existing Peterson Air Force Base High-T intersection (Intersection #16). With this access alignment, it is recommended that the intersection be signalized. This intersection will need to be reconfigured so that a southbound left turn lane and dual eastbound left turn lanes can be provided. The southbound left turn lane is recommended to include a length of 535 feet plus 240-foot taper and the dual eastbound left turn lanes are recommended to provide a length of 375 feet.

2040 Recommendations:

- If future traffic volume projections are realized, US-24 may need to provide three through lanes in each direction through the Marksheffel Road intersection. Likewise, Marksheffel Road between US-24 and Peterson Air Force Base East Gate may need to provide three through lanes in each direction. It is recommended that traffic volumes continue to be monitored by CDOT, the City of Colorado Springs, and El Paso County, as applicable, to determine if and when these regional improvements will be needed.

General Recommendations:

- Any on-site and off-site roadway, signing, striping, and signal improvements should be incorporated into the Civil Drawings, and conform to City of Colorado Springs and/or CDOT standards as applicable, as well as the Manual on Uniform Traffic Control Devices – 2009 Edition (MUTCD).

2.0 INTRODUCTION

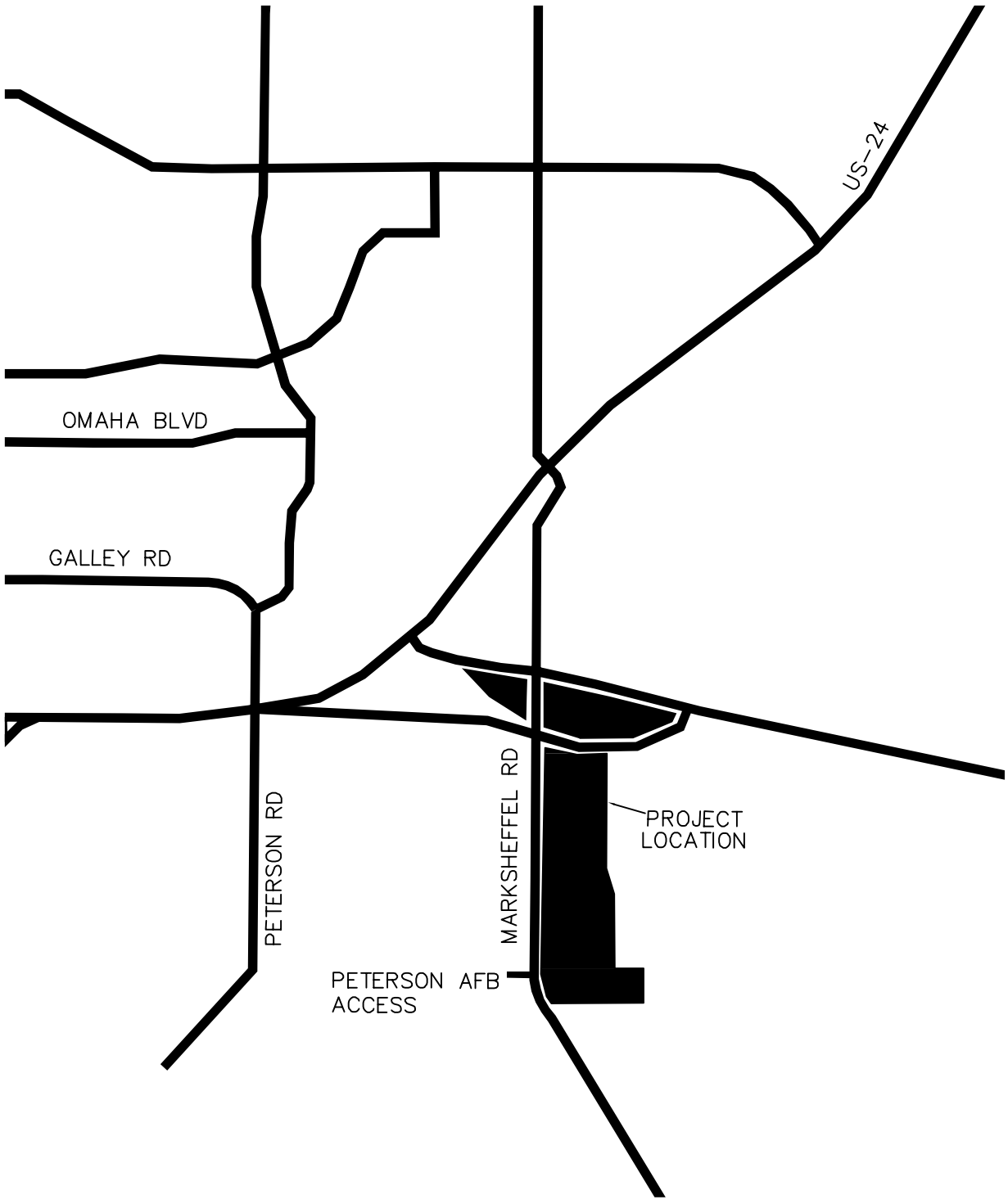
Kimley-Horn and Associates, Inc. (Kimley-Horn) has prepared this report to document the results of a Traffic Impact Study of future traffic conditions associated with Reagan Ranch to be located along the south side of SH-94 at Marksheffel Road in Colorado Springs, Colorado. A vicinity map illustrating the location of the Reagan Ranch is shown in **Figure 1**.

This traffic study evaluates three distinct project areas; one area is located on the southwest corner of the SH-94 and Marksheffel Road intersection, a second area is located on the southeast corner of the SH-94 and Marksheffel Road intersection, while a third development area is located on the southeast corner of the intersection of Space Village Avenue and Marksheffel Road. Trip generation, trip distribution, and traffic assignment were calculated separately for these areas to accurately identify the amount of entering and exiting traffic into each development area. Reagan Ranch was studied to include 919 single family detached housing units, 562 multifamily housing units, 95,382 square feet of office space, a 218,020 square foot business park, and 577,500 square feet of retail space. A conceptual site plan for the project is attached in **Appendix G**. It is anticipated that for study purposes these development areas would be completed within the next five years. Therefore, for purposes of this analysis, this project was evaluated for the short-term 2025 and long-term 2040 horizons.

The purpose of this study is to identify project traffic generation characteristics, to identify potential project traffic related impacts on the local street system, and to develop mitigation measures required for identified impacts. The following intersections were incorporated into this traffic study in accordance with City of Colorado Springs standards and requirements:

- Marksheffel Road and US-24
- SH-94 and Marksheffel Road
- SH-94 and Space Village Avenue
- Space Village Avenue and Marksheffel Road
- SH-94 and US-24

In addition, project accesses proposed along SH-94, Space Village Avenue, and Marksheffel Road were included for evaluation.



REAGAN RANCH
COLORADO SPRINGS, CO
VICINITY MAP

FIGURE 1

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3.0 EXISTING AND FUTURE CONDITIONS

3.1 Existing and Future Study Area

The existing site is comprised of vacant land. The surrounding area contains a mix of uses. Directly to the north of the site exists a water treatment plant. Directly to the south and the east of the project is vacant land. Directly to the west is mainly industrial land. Outside of these uses, Peterson Air Force Base and the Colorado Springs Airport exists to the southwest and residential areas exist to the west. The site area is shown in **Figure 2**.

3.2 Existing and Future Roadway Network

Regional access to Reagan Ranch is provided by Interstate 25 (I-25) and US-24. Primary access to the project will be provided by SH-94, Marksheffel Road, and Space Village Avenue. Direct access to the proposed project is to be provided by several accesses along these roadways. For the development area on the southwest corner of the SH-94 and Marksheffel Road intersection, a right-in/right-out access along the south side of SH-94 between US-24 and Marksheffel Road and a right-in/right-out access on the west side of Marksheffel Road between SH-94 and Space Village Avenue are proposed.

Access to the development area on the southeast corner of SH-94 and Marksheffel Road will include three accesses. These include a right-in/right-out access on the east side of Marksheffel Road between SH-94 and Space Village Avenue and two roundabouts providing full turning movements along Space Village Avenue between Marksheffel Road and SH-94.

For the development area on the southeast corner of Space Village Avenue and Marksheffel Road, access will be gained at these same two roundabouts along Space Village Avenue as well as seven (7) accesses planned along the east side of Marksheffel Road south of Space Village Avenue at the standard City 600-foot spacing. The access intersection at the approximate half-mile spacing as well as the access in alignment with Peterson Air Force Base will be full movement signalized intersections. The accesses at the quarter-mile spacing are proposed as three-quarter movement accesses while the accesses at the eighth-mile spacing are proposed as right-in/right-out accesses.

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SITE AREA

FIGURE 2

SH-94 is a CDOT Highway, categorized E-X: Expressway, Major Bypass that provides one through lane of travel both eastbound and westbound in the vicinity of the site. SH-94 has a 40 mile per hour speed limit at US-24, a 55-mph speed limit through the Marksheffel Road intersection and a 65-mph speed limit east of Marksheffel Road. US-24 is a CDOT Highway, categorized E-X: Expressway, Major Bypass that provides two through lanes of travel with a 55 mile per hour speed limit through the study area. Marksheffel Road provides two lanes of travel in each direction, northbound and southbound, with a 55 mile per hour speed limit through the study area. Space Village Avenue provides one lane of travel in each direction, eastbound and westbound, with a 45 mile per hour speed limit through the study area.

The Marksheffel Road and US-24 intersection is a four-leg signalized intersection. The traffic software for this intersection assigned Marksheffel Road as east-west and US-24 as north-south based on roadway alignment. The southbound US-24 and the eastbound and westbound Marksheffel Road approaches consist of a left turn lane, two through lanes, and separate right turn lanes operating with free right turn movements. The northbound US-24 approach consists of dual left turn lanes, two through lanes, and a right turn lane with free movements.

The intersection of SH-94 and US-24 is signalized with four-legs. Both state highways run east-west, however the traffic software for this intersection assigned SH-94 as east-west and US-24 as north-south. The eastbound Newt Drive approach consists of dual left turn lanes, one through lane, and a free right turn lane. The westbound SH-94 approach consists of dual left turn lanes, two through lanes, and a free right turn lane. The US-24 approaches each consist of a left turn lane, two through lanes, and a right turn lane.

The SH-94 and Marksheffel Road intersection is a four-leg signalized intersection. The eastbound and westbound approaches consist of a left turn lane, one through lane, and one right turn lane. The northbound and southbound approaches consist of a left turn lane, two through lanes, and a right turn lane.

The SH-94 and Space Village Avenue intersection is a T-intersection with stop control on the northbound approach. The eastbound approach consists of one through lane and a right turn

lane. The westbound approach consists of one left turn lane and one through lane. The northbound approach consists of a single lane for shared left turn and right turn movements.

The Space Village Avenue and Marksheffel Road intersection is a four-leg intersection that operates with stop-control on the eastbound and westbound approaches. The eastbound and westbound approaches consist of a left turn lane, one through lane, and one right turn lane. The northbound and southbound approaches each consist of one left turn lane, two through lanes, and one right turn lane.

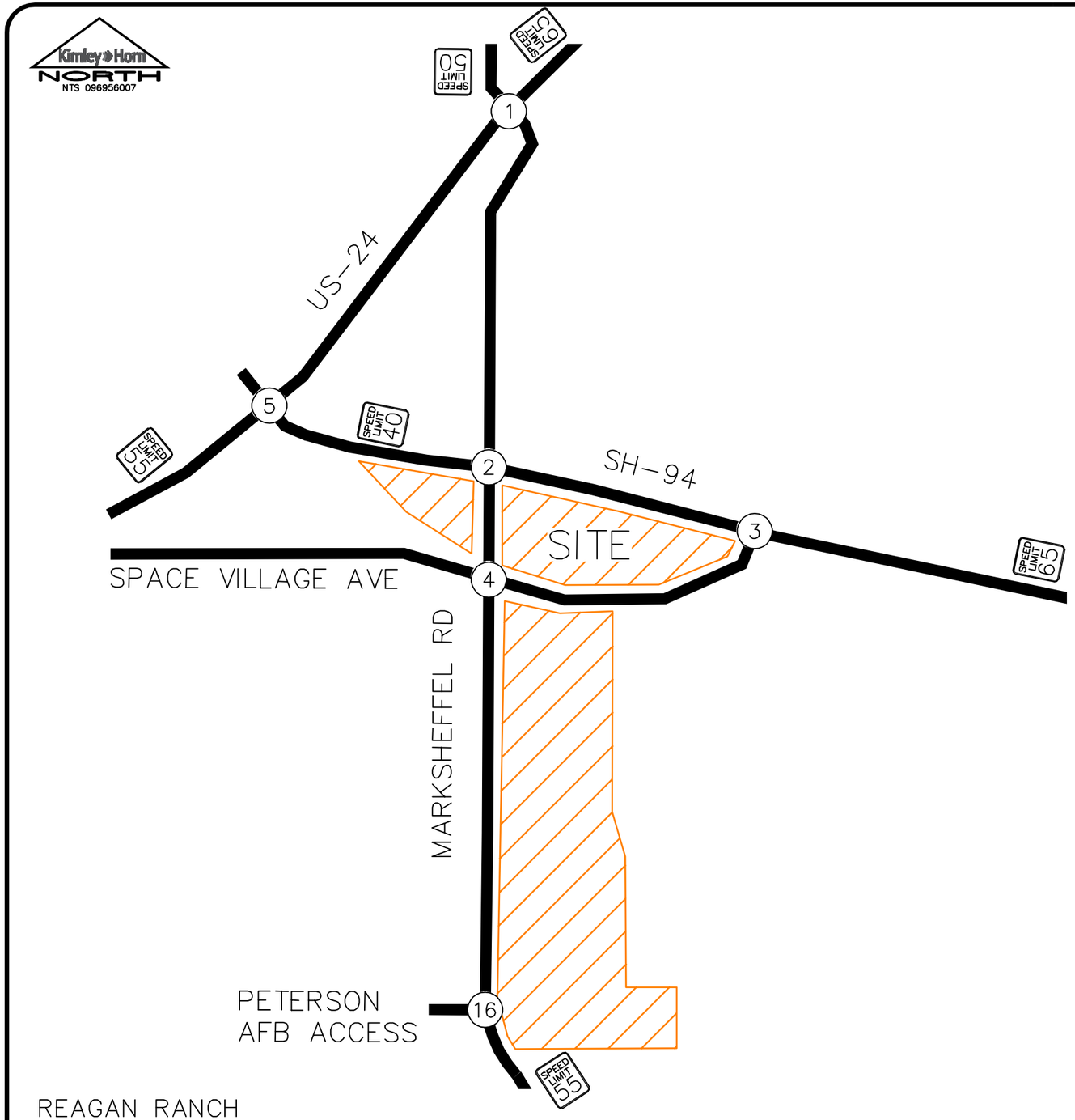
Existing intersection lane configurations and control for the study area are shown in **Figure 3**.

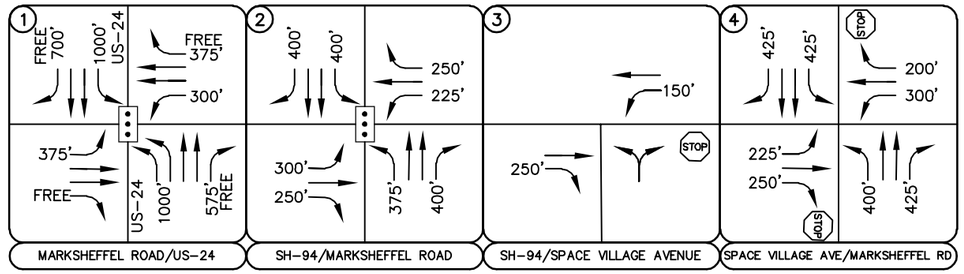
3.3 Existing Traffic Volumes

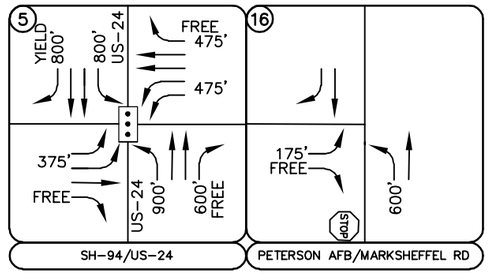
Due to the effects on traffic from COVID-19, traffic counts at each intersection were derived by different methodologies. Existing peak hour turning movement counts were conducted at the intersections of Marksheffel Road and US-24, SH-94 and Space Village Avenue, and SH-94 and US-24 on Tuesday, June 2, 2020 during the morning and afternoon peak hours. The weekday counts were conducted in 15-minute intervals during the AM and PM peak hours of adjacent street traffic from 7:00 AM to 9:00 AM and 4:00 PM to 6:00 PM. The turning movement counts were grown based on data obtained from hourly counts from the CDOT OTIS database to account for a COVID-19 adjustment for this area. The morning and afternoon peak hour counts were adjusted by 20% and 10%, respectively except for the counts at the intersection of SH-94 and Marksheffel Road which were not adjusted in the morning peak hour but were adjusted by 44% for the afternoon peak hour.

The existing peak hour turning movement for the intersection of Marksheffel Road and Space Village Avenue were obtained from a signal warrant study and were conducted on Thursday, March 12, 2020. The counts at the intersection of Marksheffel Road and Space Village Avenue were used without adjustment since the counts were conducted before the COVID-19 pandemic.

These adjusted turning movement counts are shown in **Figure 4** with count sheets and CDOT OTIS data provided in **Appendix A**.







LEGEND

- X — Study Area Key Intersection
- Signalized Intersection
- STOP — Stop Controlled Approach
- SPEED LIMIT XX — Roadway Speed Limit
- 100' — Turn Lane Length (feet)

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EXISTING LANE CONFIGURATIONS AND CONTROL

FIGURE 3

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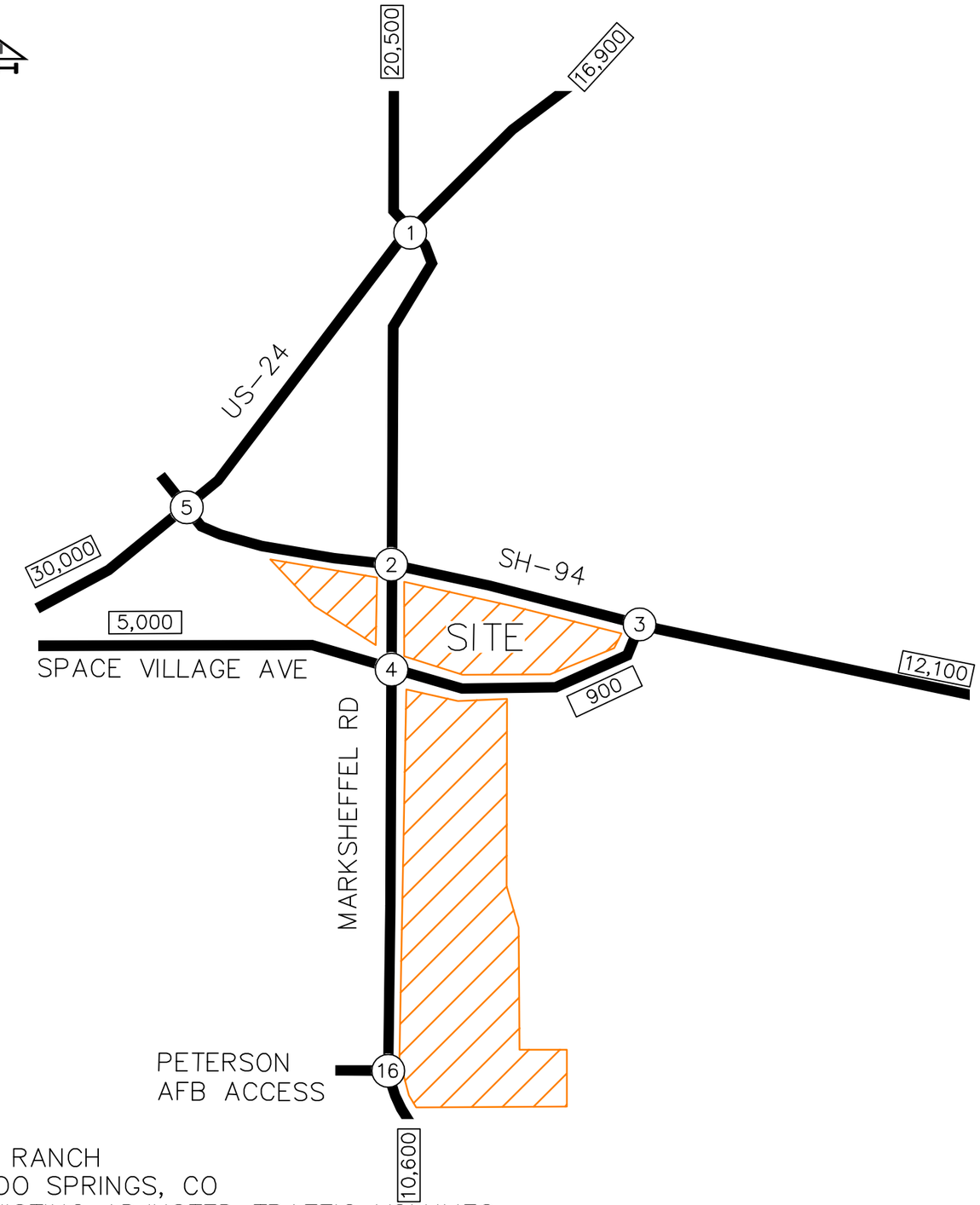
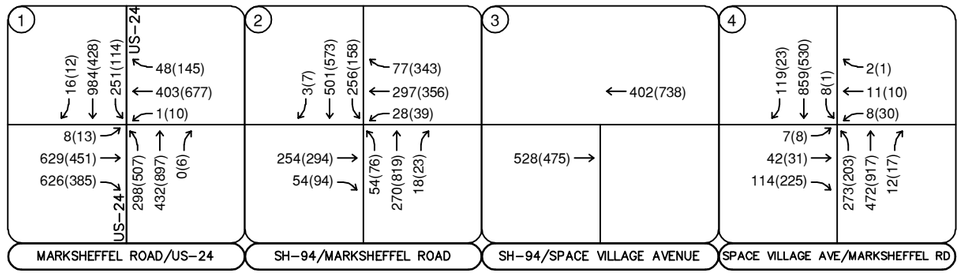
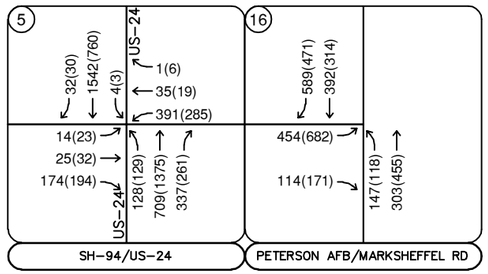
NORTH
096956007







LEGEND

- ● Study Area Key Intersection
- XXX(XXX) Weekday AM(PM) Peak Hour Traffic Volumes
- XX,X00 Estimated Daily Traffic Volume

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COLORADO SPRINGS, CO
2020 EXISTING ADJUSTED TRAFFIC VOLUMES

FIGURE 4

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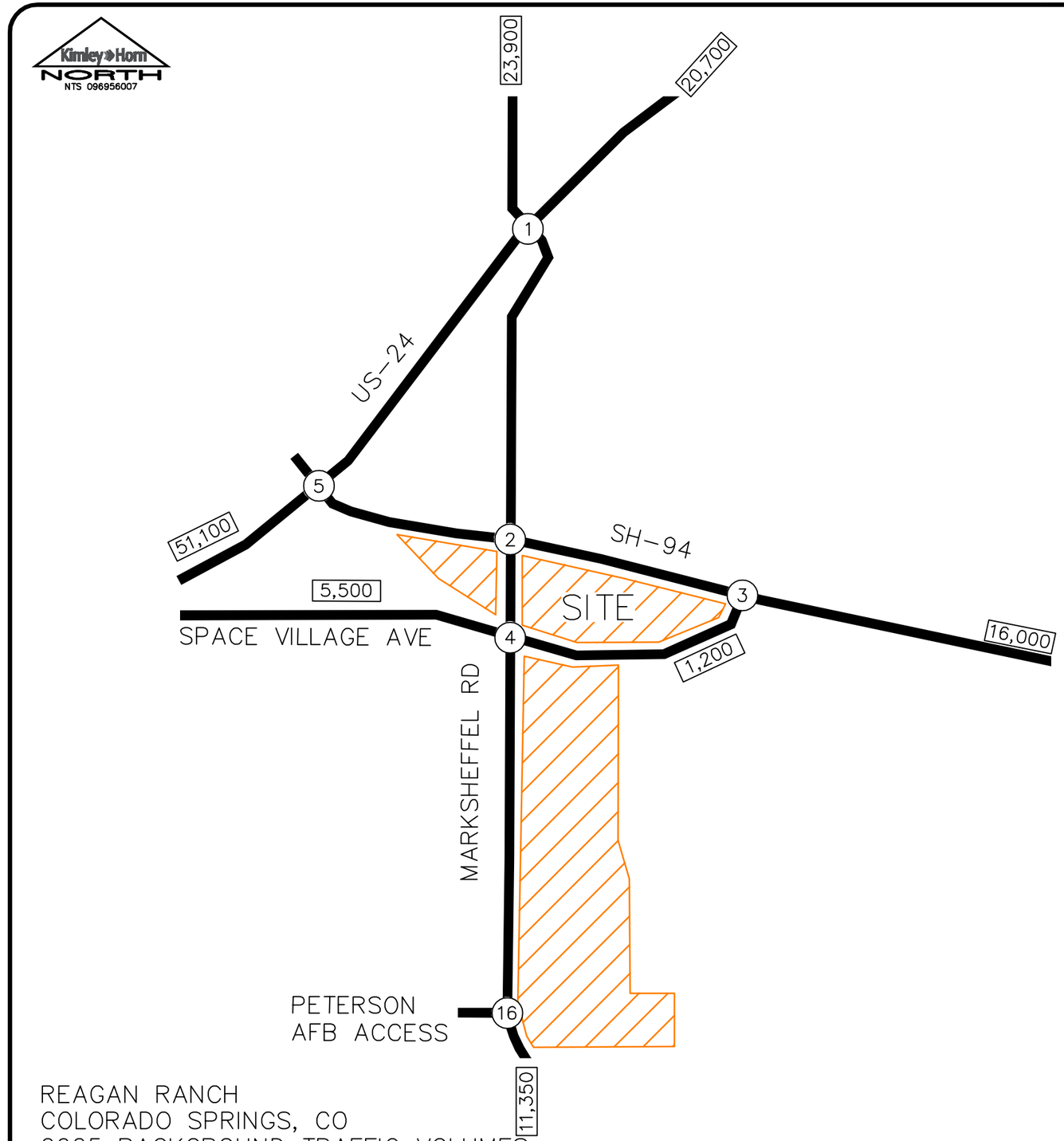
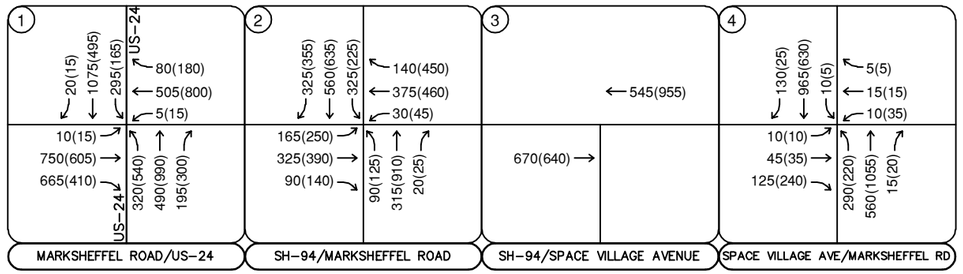
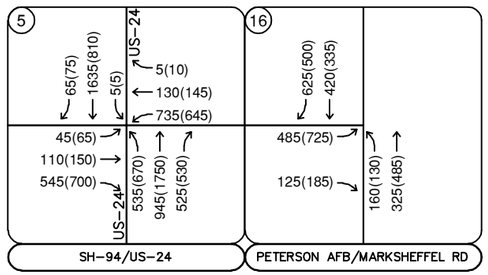
3.4 Unspecified Development Traffic Growth

According to information provided on the website for the Colorado Department of Transportation (CDOT), the average 20-year growth factor along SH-94 in the vicinity of the site is 1.29. This value equates to an annual growth rate of 1.16 percent. SH-94 traffic information from the CDOT Online Transportation Information System (OTIS) website is included in **Appendix B**. Based on this, an annual growth rate of 1.16 percent was used to calculate future traffic volumes within the project study area. This annual growth rate was used to estimate near term 2025 and long term 2040 traffic volume projections at the key intersections. Along with the annual growth, traffic volumes from the adjacent Crossroads-Meadowbrook development were added to the 2025 and 2040 background volumes. Likewise, calculated trips from an additional 1,123 single family detached housing units, located in the parcel on the southeast corner of Space Village Avenue and Marksheffel Road, were added to the 2040 background volumes. Background traffic volumes for 2025 and 2040 are shown in **Figures 5** and **6**, respectively.







LEGEND

- ● Study Area Key Intersection
- XXX(XXX) Weekday AM(PM) Peak Hour Traffic Volumes
- XX,X00 Estimated Daily Traffic Volume

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COLORADO SPRINGS, CO
2025 BACKGROUND TRAFFIC VOLUMES

FIGURE 5

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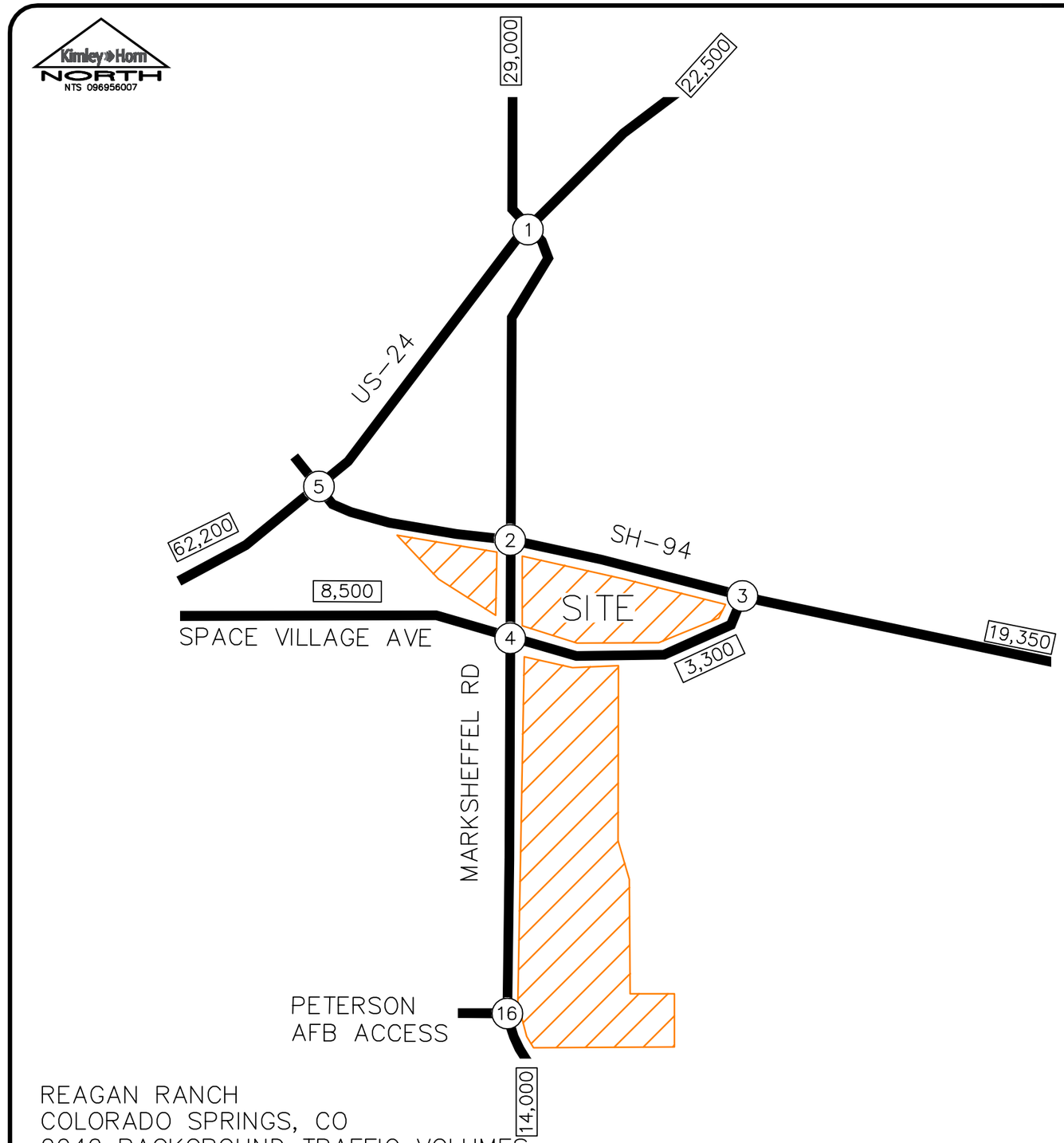

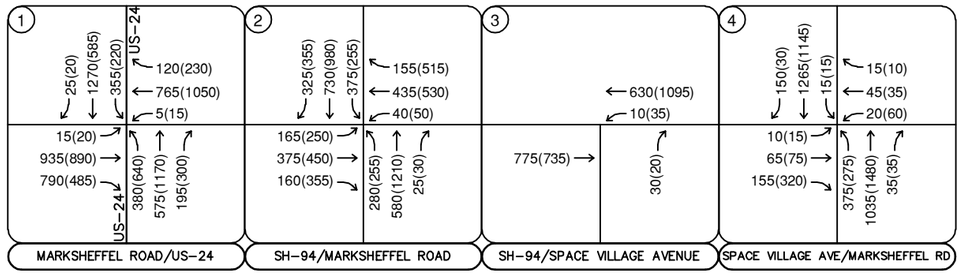

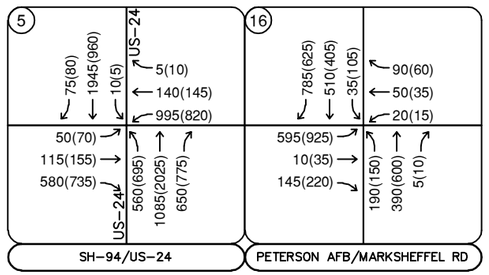

LEGEND

- ● Study Area Key Intersection
- XXX(XXX) Weekday AM(PM) Peak Hour Traffic Volumes
- XX,X00 Estimated Daily Traffic Volume

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2040 BACKGROUND TRAFFIC VOLUMES

FIGURE 6

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4.0 PROJECT TRAFFIC CHARACTERISTICS

4.1 Trip Generation

Site-generated traffic estimates are determined through a process known as trip generation. Rates and equations are applied to the proposed land use to estimate traffic generated by the development during a specific time interval. The acknowledged source for trip generation rates is the *Trip Generation Manual*[1] published by the Institute of Transportation Engineers (ITE). ITE has established trip rates in nationwide studies of similar land uses.

For purposes of this traffic evaluation, the project was studied to include approximately 919 single family detached housing units, 562 multifamily housing units, 95,382 square feet of general office space, a 218,020 square foot business park, and 577,500 square feet of retail space for the 2025 horizon. Based on this, Kimley-Horn used the ITE Trip Generation Manual average rates that apply to Single-Family Detached House (ITE Code 210), Multifamily Housing (Low-Rise) (ITE Code 220), General Office Building (ITE Code 710), Business Park (ITE Code 770), and Shopping Center (ITE Code 820) for traffic associated with the proposed Reagan Ranch project. The trip generation calculations are included in **Appendix C**. These calculations illustrate the equations used and directional distribution of trips based on ITE studies.

Reagan Ranch is expected to generate a total of approximately 33,266 daily weekday external driveway trips. Of these, a total of 1,622 weekday morning peak hour and 2,764 weekday afternoon peak hour trips are expected. Calculations were based on the procedure and information provided in the ITE *Trip Generation Manual, 10th Edition – Volume 1: User's Guide and Handbook*, 2017. **Table 1** provides the estimated external trip generation for the Reagan Ranch project.

[1] Institute of Transportation Engineers, *Trip Generation Manual*, Tenth Edition, Washington DC, 2017.

Table 1 – Reagan Ranch Project External Traffic Generation

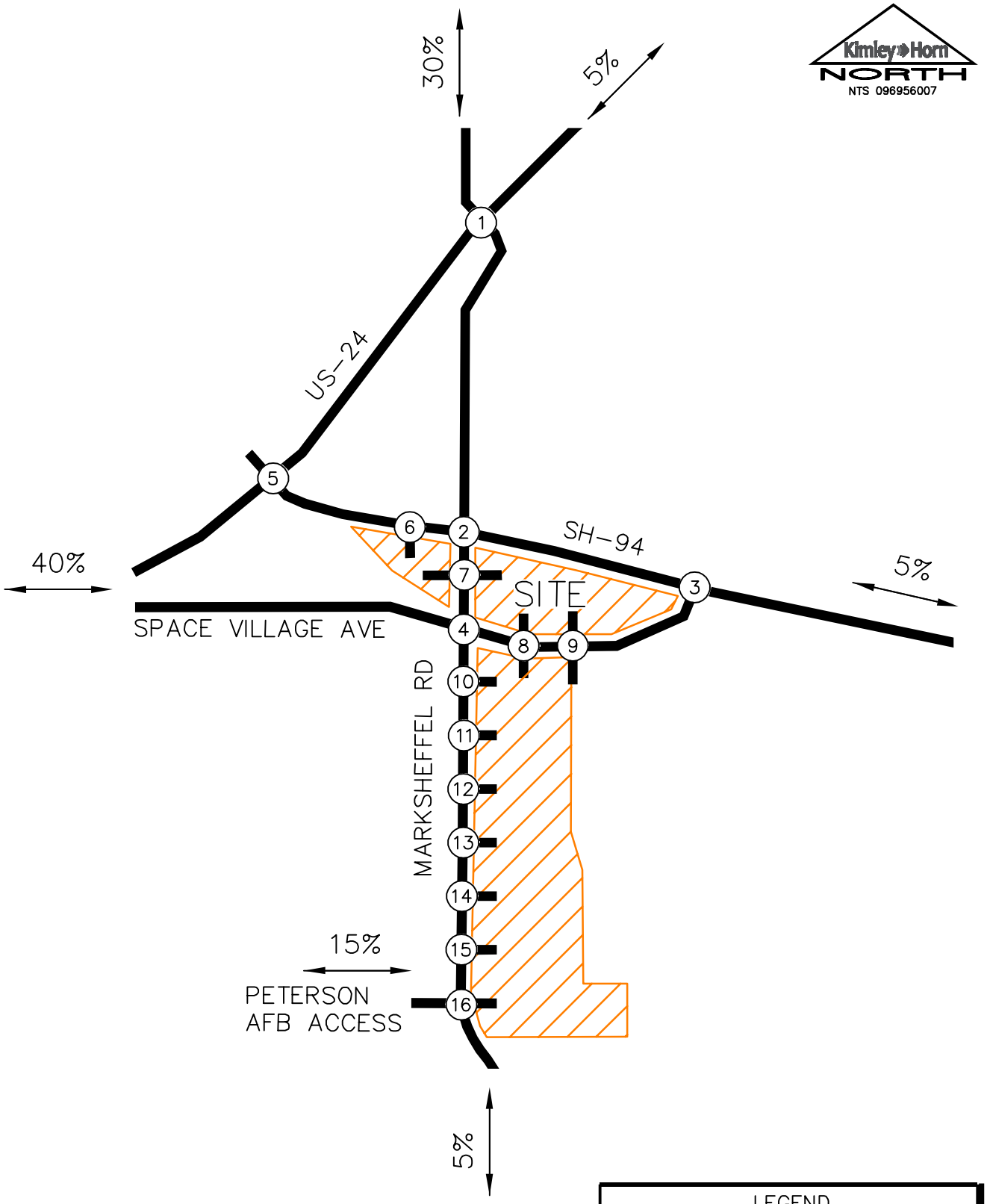
Use and Quantity	Daily	Weekday Vehicles Trips					
		AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Single-Family Detached Housing (ITE 210) – 919 Dwelling Units	6,880	162	489	651	344	235	579
Multifamily Housing (Low-Rise) (ITE 220) – 562 Dwelling Units	3,450	59	196	255	129	90	219
General Office Building (ITE 710) – 95,832 Square Feet	808	94	12	106	2	72	74
Business Park (ITE 770) – 218,020 Square Feet	2,714	53	34	87	42	50	92
Shopping Center (ITE 820) – 577,500 Square Feet	19,414	326	197	523	934	866	1,800
Total Site Trip Generation	**33,266**	**694**	**928**	**1,622**	**1,451**	**1,313**	**2,764**

4.2 Trip Distribution

Distribution of site traffic on the street system was based on the area street system characteristics, existing traffic patterns, existing and anticipated surrounding demographic information, expected roadway improvements, and the proposed access system for the project. The directional distribution of traffic is a means to quantify the percentage of site-generated traffic that approaches the site from a given direction and departs the site back to the original source. The project trip distribution is illustrated in **Figure 7.**

4.3 Traffic Assignment and Total (Background Plus Project) Traffic

Traffic assignment was obtained by applying the project trip distribution to the estimated traffic generation of the development shown in **Table 1**. Project traffic assignment for the Reagan Ranch project during the peak hours studied is shown in **Figure 8**. Project traffic volumes were added to the background volumes to represent estimated traffic conditions for the short term 2025 horizon and long term 2040 horizon. These background plus project (total) traffic volumes for the project are illustrated for the 2025 and 2040 horizon years in **Figures 9** and **10**, respectively.



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TRIP DISTRIBUTION

FIGURE 7

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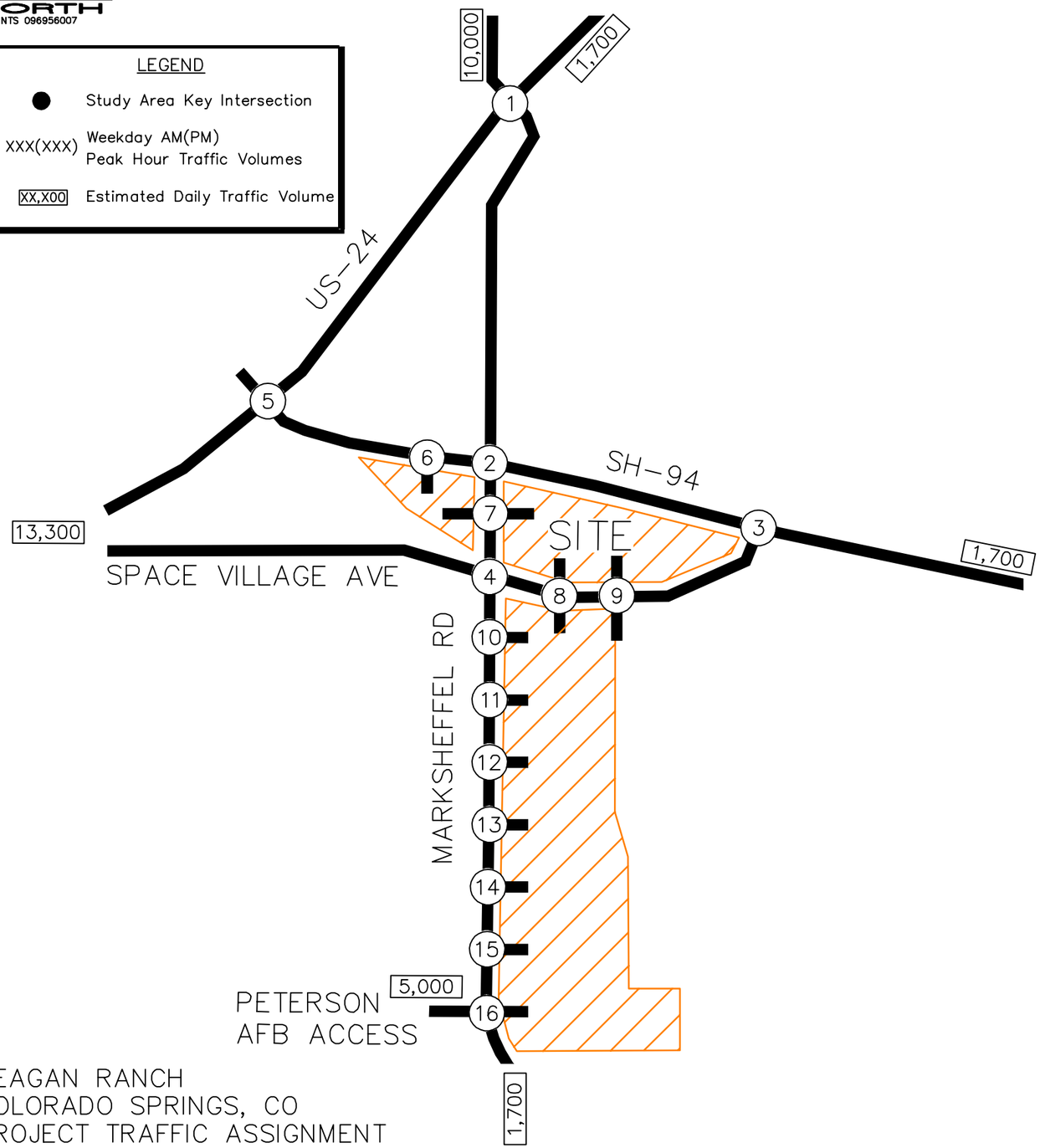
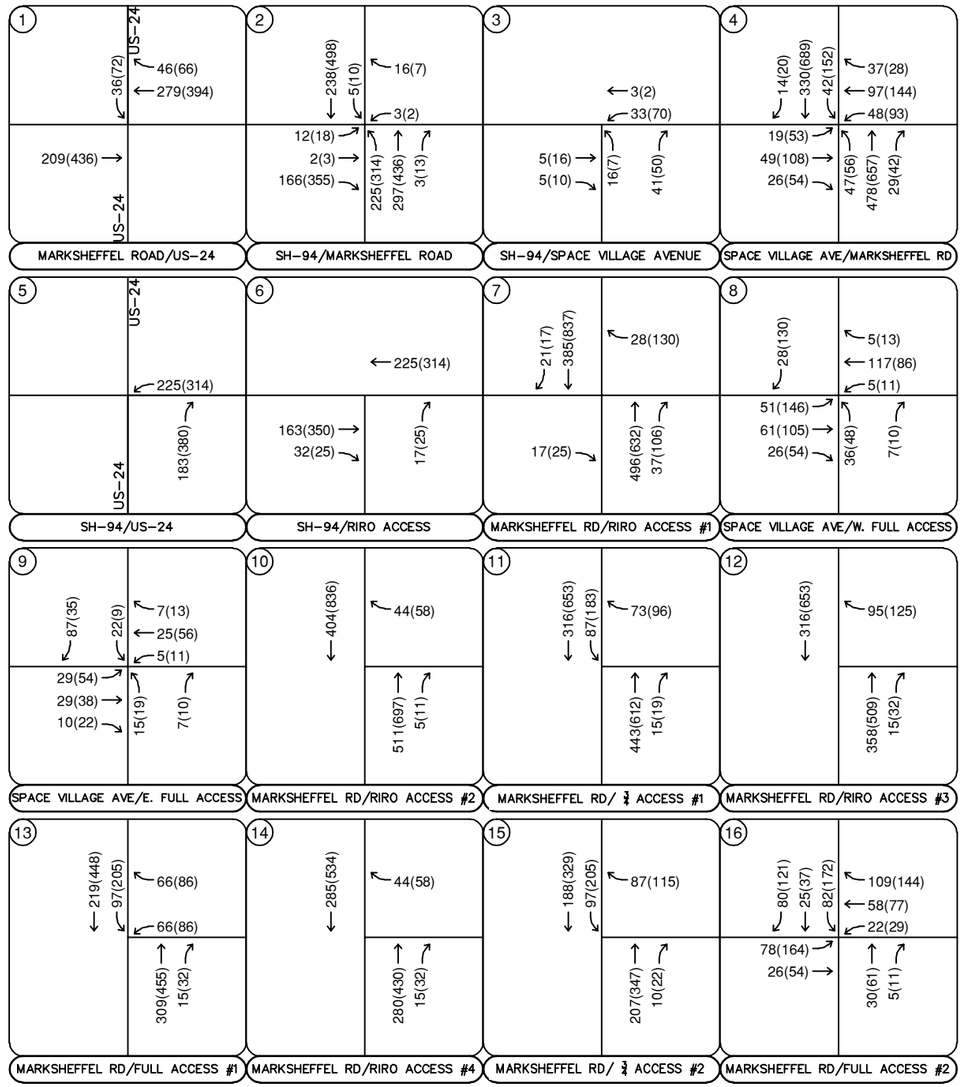
NORTH

NTS 096956007

LEGEND

- ● Study Area Key Intersection
- XXX(XXX) Weekday AM(PM) Peak Hour Traffic Volumes
- XX,X00 Estimated Daily Traffic Volume





REAGAN RANCH
COLORADO SPRINGS, CO
PROJECT TRAFFIC ASSIGNMENT

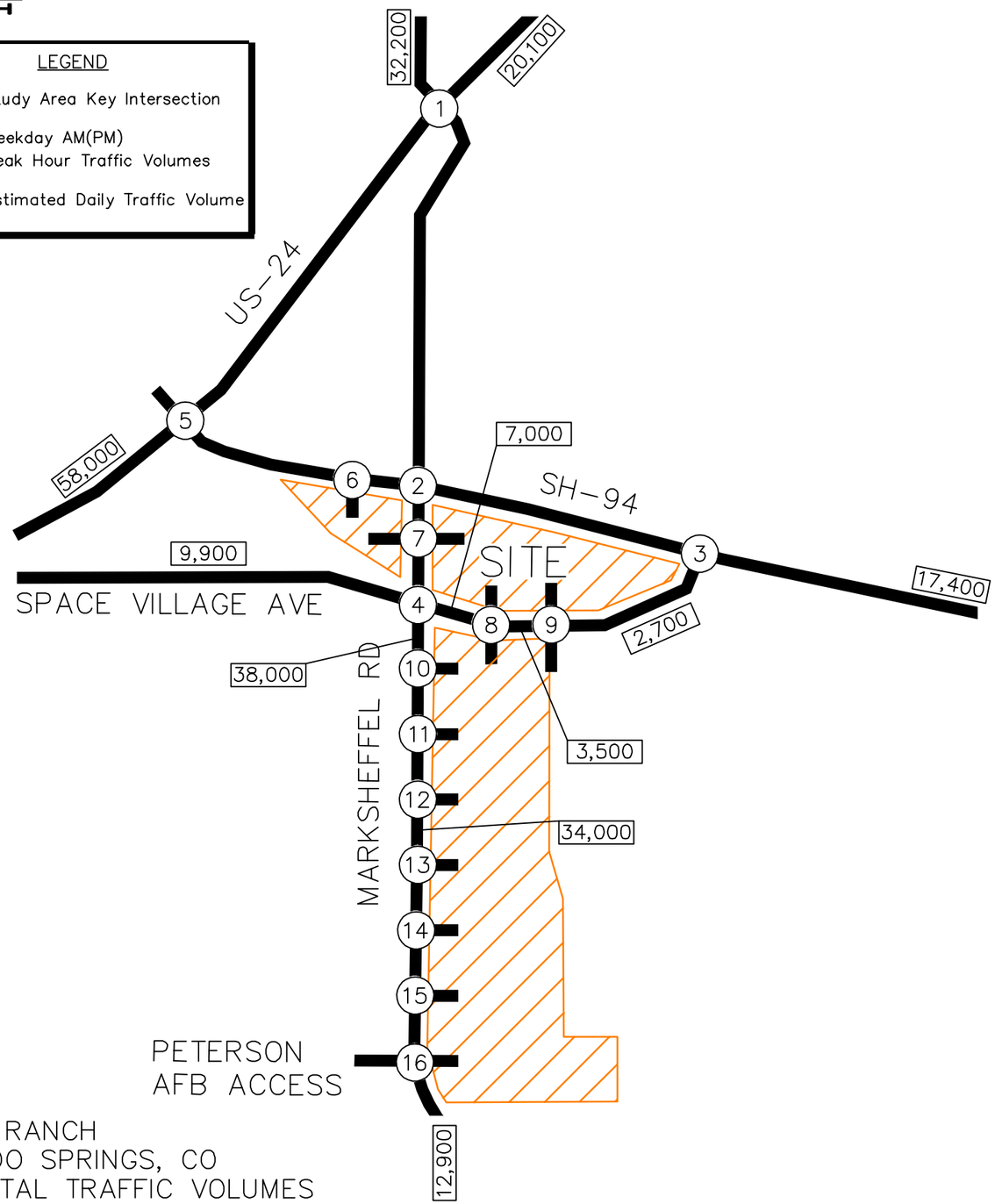
FIGURE 8

Kimley»Horn

NORTH
NTS 096956007

LEGEND

- ● Study Area Key Intersection
- XXX(XXX) Weekday AM(PM) Peak Hour Traffic Volumes
- XX,X00 Estimated Daily Traffic Volume



REAGAN RANCH
COLORADO SPRINGS, CO
2025 TOTAL TRAFFIC VOLUMES

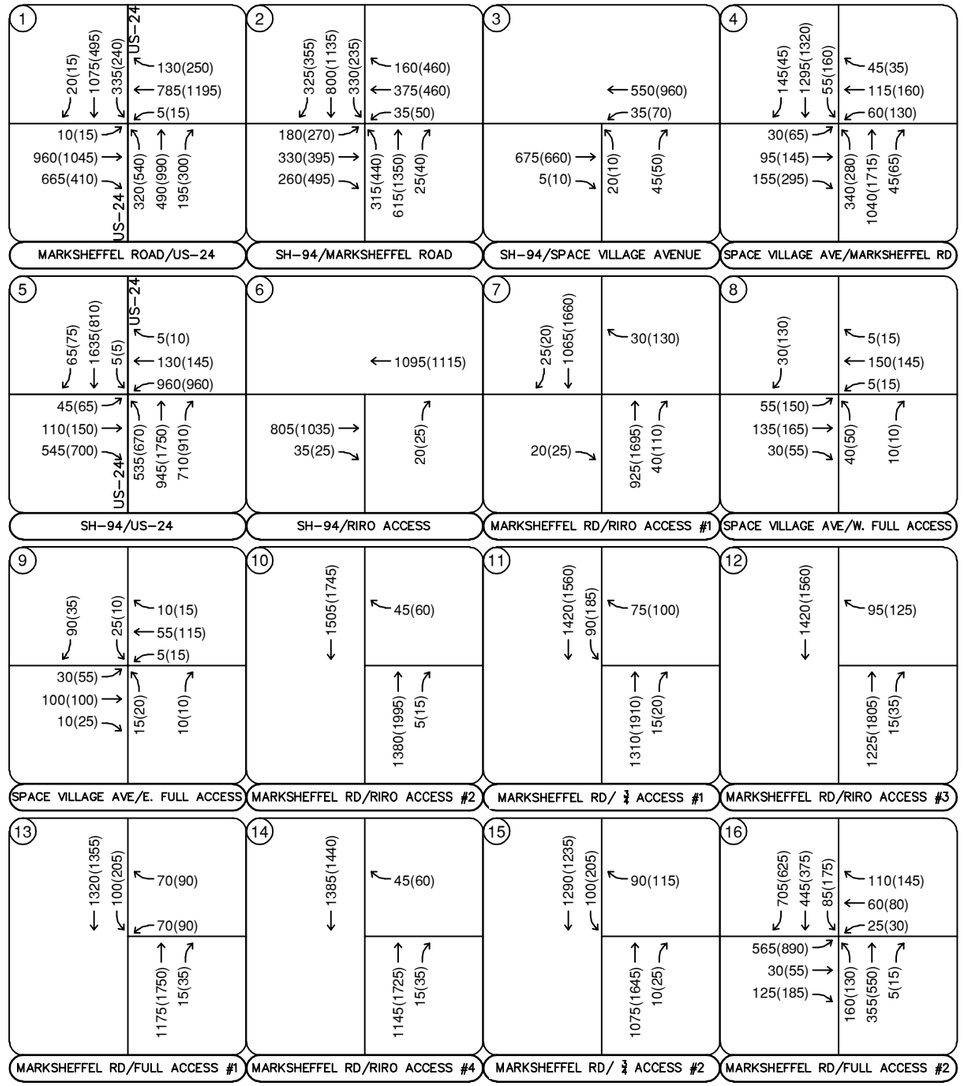


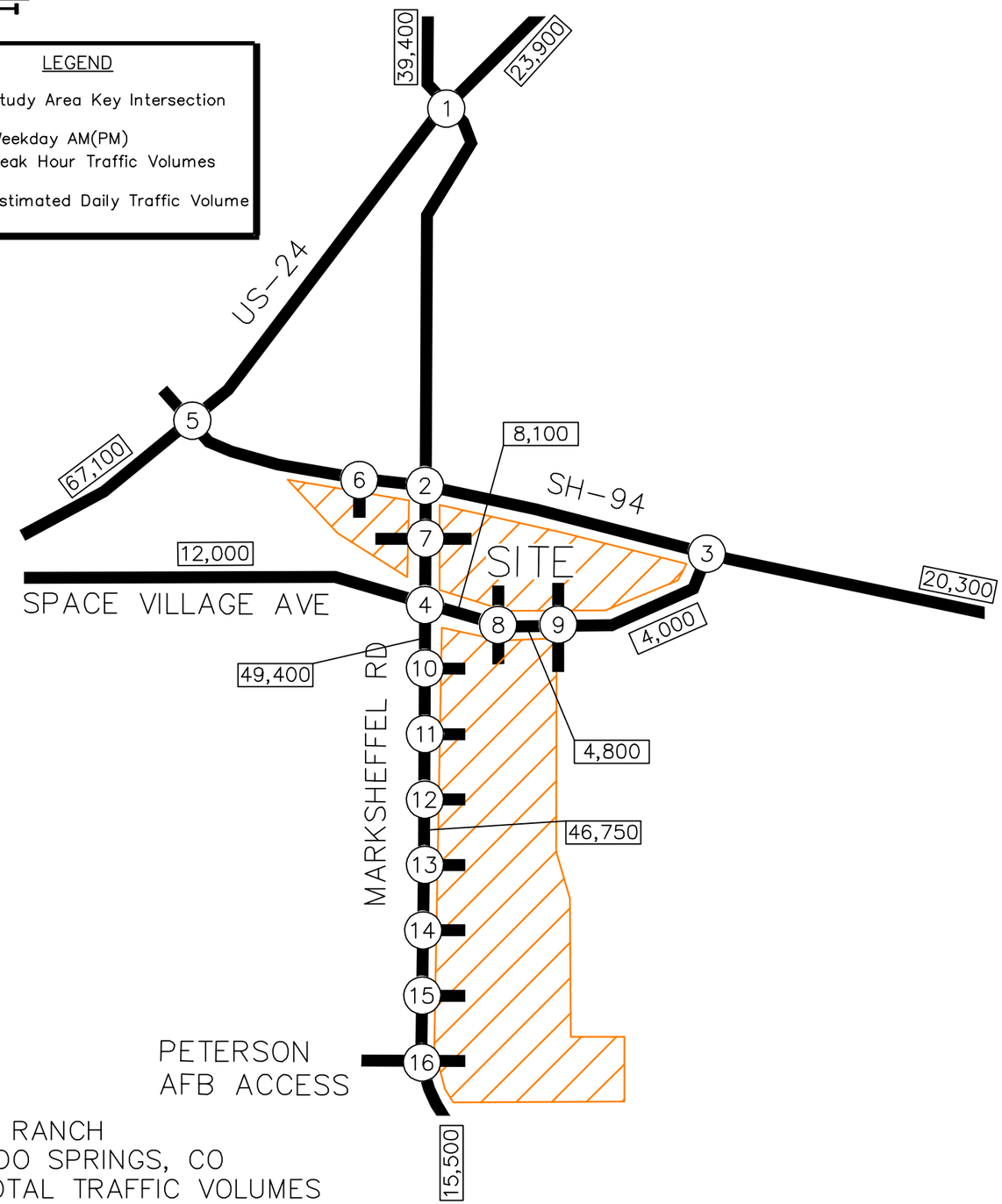
FIGURE 9

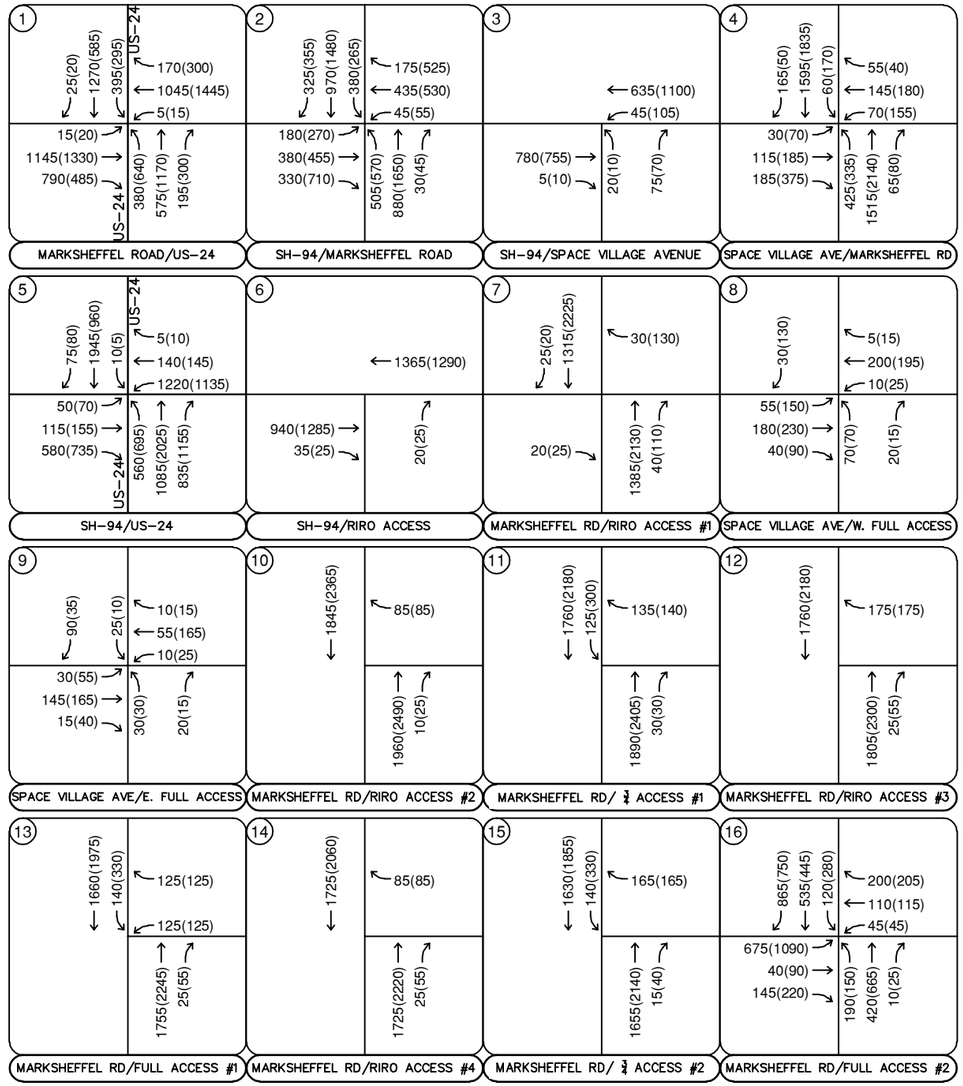
Kimley»Horn

NORTH
NTS 096956007

LEGEND

- ● Study Area Key Intersection
- XXX(XXX) Weekday AM(PM) Peak Hour Traffic Volumes
- XX,X00 Estimated Daily Traffic Volume





REAGAN RANCH
COLORADO SPRINGS, CO
2040 TOTAL TRAFFIC VOLUMES

FIGURE 10

Kimley»Horn

5.0 TRAFFIC OPERATIONS ANALYSIS

Kimley-Horn's analysis of traffic operations in the site vicinity was conducted to determine potential capacity deficiencies in the 2025 and 2040 development horizons at the identified key intersections. The acknowledged source for determining overall capacity is the *Highway Capacity Manual*[2]*.*

5.1 Analysis Methodology

Capacity analysis results are listed in terms of Level of Service (LOS). LOS is a qualitative term describing operating conditions a driver will experience while traveling on a particular street or highway during a specific time interval. It ranges from A (very little delay) to F (long delays and congestion). For intersections and roadways in this study area, standard traffic engineering practice recommends intersection LOS D as the minimum threshold for acceptable operations for signalized intersections and LOS E for movements of unsignalized intersections. **Table 2** shows the definition of level of service for signalized and unsignalized intersections.

Table 2 – Level of Service Definitions

Level of Service	Signalized Intersection Average Total Delay (sec/veh)	Unsignalized Intersection Average Total Delay (sec/veh)
A	≤ 10	≤ 10
B	> 10 and ≤ 20	> 10 and ≤ 15
C	> 20 and ≤ 35	> 15 and ≤ 25
D	> 35 and ≤ 55	> 25 and ≤ 35
E	> 55 and ≤ 80	> 35 and ≤ 50
F	> 80	> 50

Study area intersections were analyzed based on average total delay analysis for signalized and unsignalized intersections. Under the unsignalized analysis, the level of service (LOS) for a two-way stop-controlled intersection is determined by the computed or measured control delay and is defined for each minor movement. Level of service for a two-way stop-controlled intersection is not defined for the intersection as a whole. Level of service for a signalized and four-way stop controlled intersection is defined for each approach and for the intersection.

[2] Transportation Research Board, *Highway Capacity Manual*, Sixth Edition, Washington DC, 2016.

5.2 Key Intersection Operational Analysis

Calculations for the level of service at the key intersections identified for study are provided in **Appendix D**. The existing and background traffic analyses are based on the lane geometry and intersection control shown in **Figure 3**. The signalized intersection analysis utilizes the observed cycle lengths with existing phasing and timing. Based on increased national attention given to setting appropriate yellow and all-red clearance intervals to improve intersection safety, these have been calculated and are applied for the approaches to the signalized intersections. The increase in the yellow and all red time sacrifices intersection capacity for improved safety. Existing peak hour factors were used for the existing and 2025 conditions, and the recommended HCM urban area peak hour factor of 0.92 was used for the project access and the 2040 conditions. Synchro traffic analysis software was used to analyze the study area intersections and access drives for level of service. The Synchro Highway Capacity Manual (HCM) methodology reports were used to analyze intersection delay and level of service.

Marksheffel Road and US-24

Marksheffel Road and US-24 is a four-leg signalized intersection. Although US-24 is east-west and Marksheffel Road is north-south, the traffic software at this intersection assigned US-24 as north-south based on the true alignment of the roadways at this intersection. This intersection currently operates with a LOS D during the morning and afternoon peak hours under the existing lane configuration and signal control. With or without the completion of the proposed developments in 2025, the intersection is anticipated to operate acceptably with LOS D during both the morning and afternoon peak hours.

During the afternoon peak hour in 2025, the intersection may operate with a LOS E, with the addition of development project traffic. Therefore, it is recommended that southwestbound dual left turn lanes be designated along US-24. With these improvements, the intersection is expected to operate with LOS D during both peak hours in the 2025 total condition.

By 2040, it is anticipated that the intersection will operate poorly at LOS F during the morning and afternoon peak hours. To improve operations at this intersection, both US-24 and Marksheffel Road may need to provide three through lanes on all approaches. With these improvements the intersection is anticipated to operate at LOS D during the 2040 buildout. **Table 3** provides the results of the level of service at this intersection.

Table 3 – Marksheffel Road and US-24 LOS Results

Scenario	AM Peak Hour		PM Peak Hour	
	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
2020 Existing	37.2	D	38.2	D
2025 Background	42.1	D	42.2	D
2025 Background Plus Project	51.7	D	59.7	E
2025 Background Plus Project #	53.3	D	53.7	D
2040 Background #	68.1	E	55.7	E
2040 Background Plus Project #	86.6	F	100.5	F
2040 Background Plus Project ##	43.0	D	48.1	D

US-24 Southwestbound Dual Left Turn Lanes
Three through lanes on all approaches

SH-94 and Marksheffel Road

The existing intersection of SH-94 and Marksheffel Road is currently a four-leg signalized intersection. This intersection currently operates with LOS D or better during the morning and afternoon peaks hours with existing traffic volumes and lane configurations. By 2025, with or without the addition of project traffic, this intersection is anticipated to operate poorly during the afternoon peak hour. With the completion of the proposed development in 2025 the following improvements are recommended: the eastbound and westbound right turns to be changed to permissive/overlap phasing, two eastbound and westbound through lanes, dual eastbound, westbound, and northbound left turn lanes (protected phasing), and the southbound right turn at this intersection is recommended to be a free southbound right turn. With these improvements, this intersection is anticipated to operate acceptable with LOS D or better throughout the 2025 buildout. By 2040 with the addition of project trips, this intersection is anticipated to operate at LOS F during the afternoon peak hour. If future volumes are realized it is recommended that the northbound and southbound right turn lanes be restriped to shared through/right turn lanes. With this improvement the intersection is anticipated to operate acceptably throughout 2040 buildout. **Table 4** provides the results of the level of service at this intersection.

Table 4 – SH-94 and Marksheffel Road LOS Results

Scenario	AM Peak Hour		PM Peak Hour	
	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
2020 Existing	24.2	C	35.1	D
2025 Background	28.6	C	73.1	E
2025 Background Plus Project	47.0	D	127.7	F
2025 Background Plus Project #	34.1	C	51.6	D
2040 Background #	34.6	C	46.1	D
2040 Background Plus Project #	36.9	D	81.8	F
2040 Background Plus Project ##	34.3	C	51.5	D

Permissive/Overlap phasing on the eastbound and westbound right turn lanes, two eastbound and westbound through lanes, dual eastbound and westbound left turn lanes, dual northbound left turn lane, free southbound right turn lane
Three northbound and southbound through lanes

SH-94 and Space Village Avenue

The existing intersection of SH-94 and Space Village Avenue is a three-leg stop-controlled intersection with the northbound leg providing stop control. This intersection currently operates with all movements at LOS A. With or without the completion of the proposed development, all movements at the intersection are anticipated to operate acceptably during the peak hours throughout the 2040 horizon. **Table 5** provides the results of the level of service at this intersection.

Table 5 – SH-94 and Space Village Avenue LOS Results

Scenario	AM Peak Hour		PM Peak Hour	
	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
2020 Existing				
Westbound Left	0.0	A	0.0	A
Northbound Approach	0.0	A	0.0	A
2025 Background				
Westbound Left	0.0	A	0.0	A
Northbound Approach	0.0	A	0.0	A
2025 Background Plus Project				
Westbound Left	9.3	A	9.5	A
Northbound Approach	17.1	C	17.6	C
2040 Background				
Westbound Left	9.6	A	9.6	A
Northbound Approach	15.9	C	14.9	B
2025 Background Plus Project				
Westbound Left	9.9	A	10.2	B
Northbound Approach	21.1	C	21.4	C

Space Village Avenue and Marksheffel Road

The existing intersection of Space Village Avenue and Marksheffel Road is a four-leg two-way stop-controlled intersection with the east and west legs providing stop control. This intersection currently operates poorly with LOS F on the westbound approach during the afternoon peak hour unsignalized. By 2025 buildout, a signal is warranted for this intersection. With construction of a traffic signal, the intersection operates acceptably with LOS D or better throughout 2040 buildout conditions. By 2040, three through lanes northbound and southbound are recommended along Marksheffel Road north of the Peterson Air Force Base Access. With construction of the additional through lanes this intersection continues to operate acceptably with LOS D or better during both peak hours during the 2040 buildout. Signal warrant analysis is included in **Appendix E**. **Table 6** provides the results of the level of service at this intersection.

Table 6 – Space Village Avenue and Marksheffel Road LOS Results

Scenario	AM Peak Hour		PM Peak Hour	
	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
2020 Existing				
Eastbound Approach	21.6	C	15.1	C
Westbound Approach	42.1	E	63.5	F
Northbound Left	10.4	B	8.5	A
Southbound Left	8.5	A	10.4	B
2025 Background				
Eastbound Approach	29.4	D	19.2	C
Westbound Approach	62.7	F	110.6	F
Northbound Left	11.1	B	8.7	A
Southbound Left	8.9	A	11.2	B
2025 Background Plus Project				
Eastbound Approach	>300	F	45.6	E
Westbound Approach	>300	F	>300	F
Northbound Left	14.5	C	12.7	B
Southbound Left	12.0	B	35.2	E
2025 Background Plus Project #	12.9	B	30.5	C
2040 Background #	7.7	A	14.6	B
2040 Background Plus Project #	12.3	B	39.2	D
2040 Background Plus Project ##	11.9	C	34.9	D

Signalized

Northbound and southbound right turn lanes restriped to shared through/right turn lanes

SH-94 and US-24

SH-94 and US-24 is a four-leg signalized intersection. Although both highways are east-west, the traffic software at this intersection assigned US-24 as north-south based on cardinal direction of existing roadway alignments. This intersection currently operates with LOS C during the morning and afternoon peak hours under the existing lane configuration and signal control. With the completion of the proposed development in 2025, the intersection is anticipated to operate poorly during the morning and afternoon peak hours with LOS F. If future project volumes are realized, it is recommended that an additional through lane be considered as a regional improvement on the US-24 approaches. The US-24 right turn to eastbound SH-94 is recommended to include a separate right turn lane operating with free movements. The US-24 southbound right turn lane for Newt Drive can be absolved as a shared through/right turn lane. Also, it is recommended that triple westbound left turns be designated by converting the inside westbound through lane to a left turn lane. It is believed that with these improvements, the intersection is at its ultimate configuration. With the ultimate configuration the intersection improves significantly, but long delays may still occur during the peak hours. **Table 7** provides the results of the level of service at this intersection.

Table 7 – SH-94 and US-24 LOS Results

Scenario	AM Peak Hour		PM Peak Hour	
	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
2020 Existing	32.3	C	24.1	C
2025 Background	196.3	F	149.4	F
2025 Background Plus Project	250.1	F	227.4	F
2025 Background Plus Project #	67.4	E	52.8	D
2040 Background #	85.3	F	44.9	D
2040 Background Plus Project #	106.2	F	63.0	E

Three northbound and southbound through lanes, separate northbound right turn lane, triple westbound left turn lanes.

5.3 Project Access Operational Analysis

With completion of the Reagan Ranch project, direct access to the proposed project is to be provided by several accesses along SH-94, Space Village Avenue, and Marksheffel Road. For the development area on the southwest corner of the SH-94 and Marksheffel Road intersection, a right-in/right-out access along the south side of SH-94 between US-24 and Marksheffel Road and a right-in/right-out access on the west side of Marksheffel Road between SH-94 and Space Village Avenue are proposed. Access to the development area on the southeast corner of SH-94 and Marksheffel Road will include three accesses. These include a right-in/right-out access on the east side of Marksheffel Road between SH-94 and Space Village Avenue and two roundabouts providing full turning movements along Space Village Avenue between Marksheffel Road and SH-94. For the development area on the southeast corner of Space Village Avenue and Marksheffel Road, access will be gained at these same two roundabouts along Space Village Avenue as well as seven (7) accesses planned along the east side of Marksheffel Road south of Space Village Avenue at the standard City 600-foot spacing. The access intersection at the approximate half-mile spacing as well as the access in alignment with Peterson Air Force Base will be full movement signalized intersections. The accesses at the quarter-mile spacing are proposed as three-quarter movement accesses while the accesses at the eighth-mile spacing are proposed as right-in/right-out accesses.

The access along SH-94 is proposed as a right-in/right-out access. Based on the CDOT State Highway Access Code, a right turn lane is required for any access with a projected peak hour right ingress turning volume of 10 vehicles per hour or greater for expressways, therefore it is recommended that an eastbound right turn lane be constructed at this intersection due to the volumes being 35 vehicles per hour. It is also recommended that two additional westbound through lane be constructed here to act as a receiving lane for the dual northbound left turns and the free southbound right turn at the intersection of SH-94 and Marksheffel Road.

By 2040, most of the accesses along Marksheffel Road to the south of SH-94 are anticipated to operate poorly. For these intersections to operate acceptably it is recommended that three northbound and southbound through lanes be considered on Marksheffel Road, north of the Peterson Air Force Base Access throughout the project area if future traffic volume growth is realized.

With the recommended lane configurations and intersection control, all movements at the project accesses are expected to operate acceptably with LOS D or better during the peak hours in the 2025 and 2040 horizons except for the north Marksheffel Road three-quarter access. It is anticipated that if there is a long delay at the north Marksheffel Road three-quarter access then vehicles will reroute to the signalized access to the south. A four-hour vehicle volume signal warrant analysis was performed at the north and south full movement accesses along Marksheffel Road. The south access along Marksheffel Road is proposed to align with the access to Peterson Air Force Base. The 2025 traffic volume projections do warrant signalization. The signal warrant analysis graphs are attached in **Appendix E**. With the signal improvements at both full movement accesses along Marksheffel Road and dual westbound left turns at the Peterson Air Force Base Access, the intersections operate acceptably with LOS C or better throughout the 2025 horizon. With the additional northbound and southbound through lanes in 2040, the north signalized full movement access along Marksheffel Road is anticipated to continue operating acceptably. For the south full access to operate acceptably in 2040 it is recommended that the westbound right turn lane be a free movement. The operational analysis at the proposed project driveways is summarized in **Table 8** for the short-term 2025 horizon and for the long-term 2040 horizon. Detailed results of the operational analysis are also provided in **Appendix D**.

Table 8 – Project Access LOS Results

Access and Movement	2022 Total Traffic				2040 Total Traffic			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
	Delay (sec/ veh)	LOS	Delay (sec/ veh)	LOS	Delay (sec/ veh)	LOS	Delay (sec/ veh)	LOS
SH-94 RIRO Access #6 (Three Westbound Through Lanes)								
Northbound Right	16.0	C	21.2	C	18.6	C	29.8	D
Marksheffel Rd RIRO Access #7								
Eastbound Right	10.9	B	15.4	B	12.1	B	37.4	E
Westbound Right	12.7	B	36.9	E	12.7	B	93.2	F
Marksheffel Rd RIRO Access #7 (Three NB & SB Through Lanes)								
Eastbound Right	-	-	-	-	11.2	B	15.2	C
Westbound Right	-	-	-	-	11.3	B	18.7	C
Space Village Ave West Full Access #8 (Roundabout)	4.1	A	5.0	A	4.6	A	5.9	A

Access and Movement	2022 Total Traffic				2040 Total Traffic			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
	Delay (sec/ veh)	LOS	Delay (sec/ veh)	LOS	Delay (sec/ veh)	LOS	Delay (sec/ veh)	LOS
Space Village Ave East Full Access #9 (Roundabout)	3.6	A	3.9	A	3.9	A	4.4	A
Marksheffel Rd RIRO Access #10								
Westbound Approach	16.9	C	29.7	D	28.8	D	>300	F
Marksheffel Rd RIRO Access #10 (Three NB & SB Through Lanes)								
Westbound Approach	-	-	-	-	15.1	C	31.1	C
Marksheffel Rd Three-Quarter Access #11								
Westbound Approach	17.5	C	35.3	E	33.6	D	147.1	F
Southbound Left	14.7	B	54.5	F	18.5	C	>300	F
Marksheffel Rd Three-Quarter Access #11 (Three NB & SB Through Lanes)								
Westbound Approach	-	-	-	-	16.1	C	213.4	F
Southbound Left	-	-	-	-	12.9	B	>300	F
Marksheffel Rd RIRO Access #12								
Westbound Approach	17.2	C	37.6	E	31.5	D	>300	F
Marksheffel Rd RIRO Access #12 (Three NB & SB Through Lanes)								
Westbound Approach	-	-	-	-	16.9	C	25.8	D
Marksheffel Rd Full Access #13								
Westbound Approach	45.1	E	>300	F	-	-	-	-
Southbound Left	13.5	B	45.3	F	-	-	-	-
Marksheffel Rd Full Access #13 (Signalized)	4.0	A	7.7	A	6.4	A	51.6	D
Marksheffel Rd Full Access #13 (Three NB & SB Through Lanes)	-	-	-	-	5.7	A	46.0	D
Marksheffel Rd RIRO Access #14								
Westbound Approach	14.6	B	23.6	C	19.2	C	72.4	F
Marksheffel Rd RIRO Access #14 (Three NB & SB Through Lanes)								
Westbound Approach	-	-	-	-	13.5	B	17.4	C
Marksheffel Rd Three-Quarter Access #15								
Westbound Approach	15.2	C	28.1	D	23.4	C	154.1	F
Southbound Left	12.5	B	34.9	D	13.9	B	267.6	F
Marksheffel Rd Three-Quarter Access #15 (Three NB & SB Through Lanes)								
Westbound Approach	-	-	-	-	15.1	C	20.9	C
Southbound Left	-	-	-	-	11.9	B	27.5	D
Marksheffel Rd Peterson AFB / Access #16								
Eastbound Approach	>300	F	>300	F	-	-	-	-
Westbound Approach	>300	F	>300	F	-	-	-	-
Northbound Left	14.5	B	12.2	B	-	-	-	-
Southbound Left	8.4	A	9.7	A	-	-	-	-
Marksheffel Rd Peterson AFB / Access #16 (Signalized and Dual Westbound Lefts)	20.4	C	30.6	C	32.0	C	59.6	E

Access and Movement	2022 Total Traffic				2040 Total Traffic			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
	Delay (sec/ veh)	LOS	Delay (sec/ veh)	LOS	Delay (sec/ veh)	LOS	Delay (sec/ veh)	LOS
Marksheffel Rd Peterson AFB / Access #16 (Free Westbound Right Turn)	-	-	-	-	19.8	B	31.3	C

5.4 CDOT Access Permit Analysis Needs

CDOT Access Permits will be required for the SH-94 and Marksheffel Road intersection along with the new right-in/right-out access and Space Village Avenue intersections along SH-94 in association with the project. Likewise, since improvements were found to be needed at the US-24 and SH-94 intersection, a CDOT Access Permit may be required at this intersection as well.

Since US-24 and SH-94 are state owned and maintained facilities, it is recommended that auxiliary turn lanes along US-24 and SH-94 be constructed in accordance with the current CDOT State Highway Access Code (SHAC). CDOT categorizes the segments of US-24 and SH-94 through the study area as E-X: Expressway, Major Bypass. According to the State Highway Access Code for category E-X roadways, the following thresholds apply:

- A left turn deceleration lane is required for any access with a projected average daily left turn ingress volume greater than 10 with the transition taper included within the required deceleration length. If the projected peak hour left ingress turning volume is greater than 10 vehicles per hour (vph), a left turn deceleration, storage, and taper lane is required for any access.
- A right turn lane with deceleration and taper lengths is required for any access with a projected peak hour right ingress turning volume greater than 10 vph.
- A right turn lane with acceleration and taper lengths is required for any access with a project peak hour turning volume greater than 10 vph.

Based on traffic projections and the above thresholds, auxiliary turn lane requirements were calculated for the key intersections along SH-94. SH-94 provides one lane of travel in each direction and has a posted speed limit of 40 miles per hour at US-24, 55 miles per hour west of Marksheffel Road and 65 miles per hour east of Marksheffel Road. US-24 provides two lanes of

travel in each direction and has a posted speed limit of 55 miles per hour through the SH-94 intersection. As such, turn lane requirements at the study area intersections along SH-94 to be impacted by project traffic are as follows:

SH-94 and Marksheffel Road

- An eastbound right turn deceleration lane **is** warranted based on projected 2025 background plus project traffic being 495 eastbound right turns during the peak hour and the threshold being 10 vph. Since SH-94 has a category of E-X the right turn lane requirement is deceleration plus taper length. The eastbound right turn lane is currently 250 feet long with a 200-foot taper. Based on the 55-mile per hour speed limit, the deceleration lane length requirement is 600 feet plus a 225-foot taper. Therefore, the existing eastbound right turn lane does not meet current CDOT SHAC requirements. It is recommended that this eastbound right turn lane be extended as a continuous auxiliary lane to tie-in with the eastbound acceleration lane from the northbound right turn out of the proposed right-in/right-out project access approximately 1,000 feet to the west.

- An eastbound left turn deceleration lane **is** warranted based on projected 2025 background plus project traffic being 270 eastbound left turns during the peak hour and the threshold being 10 vph. Since SH-94 has a category of E-X the left turn lane requirement is deceleration, storage, and taper lengths. Currently the eastbound left-turn lanes are approximately 300 feet long with a 100-foot taper. Based on the 55-mile per hour speed limit, the deceleration lane length is 600 feet, plus a 225-foot taper. The storage requirement is 270 feet based on the projected left turning volume. Since dual left turn lanes are recommended here the storage requirement is 150 feet per lane. Therefore, it is recommended that these two left turn lanes be constructed and designated to 750 feet plus a 225-foot taper.

- A westbound left turn deceleration lane **is** warranted based on projected 2025 background plus project traffic being 50 westbound left turns during the peak hour and the threshold being 10 vph. Since SH-94 has a category of E-X the left turn lane requirement is deceleration, storage, and taper lengths. Currently the westbound left-turn lanes are approximately 225 feet long with a 200-foot taper. Based on the 55-mile

per hour speed limit, the deceleration lane length is 600 feet, plus a 225-foot taper. The storage requirement is 50 feet based on the projected left turning volume. Therefore, it is recommended that this lane be constructed to 650 feet with a 225-foot taper.

- A westbound right turn deceleration lane **is** warranted based on projected 2025 background plus project traffic being 460 westbound right turns during the peak hour and the threshold being 10 vph. Since SH-94 has a category of E-X the right turn lane requirement is deceleration plus taper length. The westbound right turn lane is currently 250 feet long with a 275-foot taper. Based on the 55-mile per hour speed limit, the deceleration lane length requirement is 600 feet plus a 225-foot taper. Therefore, the existing westbound right turn lane does not meet current CDOT SHAC requirements. It is recommended that this lane be constructed to 600 feet plus a 225-foot taper.

- An eastbound acceleration lane along SH-94 from the Marksheffel Road northbound right turn **is** warranted based on projected 2025 background plus project traffic being 40 northbound right turns during the peak hour and the threshold being 10 vph. Since SH-94 has a category of E-X the right turn lane requirement is acceleration, and taper lengths. The right turn lane currently has no acceleration lane. Based on the 65-mile per hour speed limit, a 1,380-foot acceleration lane with 300-foot taper is recommended.

SH-94 and Space Village Avenue

- An eastbound right turn deceleration lane **is not** warranted based on projected 2025 background plus project traffic being 10 eastbound right turns during the peak hour and the threshold being 10 vph. A short 250-foot with 225-foot taper eastbound right turn lane exists at this intersection already today and is recommended to remain in place as-is with development of the project.

- A westbound left turn deceleration lane **is** warranted based on projected 2025 background plus project traffic being 70 westbound left turns during the peak hour and the threshold being 10 vph. Since SH-94 has a category of E-X, the left turn lane requirement is deceleration, storage, and taper lengths. Currently the westbound left-turn lane is approximately 150 feet long with a 100-foot taper. Based on the 65-mile per

hour speed limit, the deceleration lane length is 800 feet, plus a 300-foot taper. The storage requirement is 75 feet based on the projected 70 left turns. Therefore, it is recommended that this lane be constructed to 875 feet with a 300-foot taper by 2025.

- An eastbound acceleration lane along SH-94 from the Space Village Avenue northbound right turn **is** warranted based on projected 2025 background plus project traffic being 50 northbound right turns during the peak hour and the threshold being 10 vph. Since SH-94 has a category of E-X the right turn lane requirement is acceleration, and taper lengths. The right turn movement currently has a short 300-foot with 200-foot taper acceleration lane. Based on the 65-mile per hour speed limit, a 1,380-foot acceleration lane with 300-foot taper is recommended.

SH-94 and US-24

- A westbound left turn deceleration lane **is** warranted based on projected 2025 background plus project traffic being 960 westbound left turns during the peak hour and the threshold being 10 vph. Since SH-94 has a category of E-X the left turn lane requirement is deceleration, storage, and taper lengths. Currently there are westbound dual left-turn lanes of approximately a 475-foot length with a 525-foot taper. Based on the 40-mile per hour speed limit, the deceleration lane length is 370 feet, plus a 150-foot taper. Since triple left turn lanes are recommended here with conversion of the inside westbound through lane to a left turn lane, the storage requirement is 325 feet per lane. Therefore, it is recommended that these two left turn lanes be constructed and designated to 695 feet plus a 200-foot taper, with the outside third left turn lane being continuous.

- An eastbound acceleration lane along SH-94 from the US-24 northbound right turn **is** warranted based on projected 2025 background plus project traffic being 910 northbound right turns during the peak hour and the threshold being 10 vph. Since SH-94 has a category of E-X the right turn lane requirement is acceleration and taper length. Currently the eastbound acceleration lane is approximately 425 feet long with a 175-foot taper. Based on the 40-mile per hour speed limit, the acceleration lane length

requirement is 380 feet plus a 145-foot taper. Therefore, no improvements are needed for this lane.

- A northbound right turn deceleration lane along US-24 **is** warranted based on projected 2025 background plus project traffic being 1910 northbound right turns during the peak hour and the threshold being 10 vph. Since US-24 has a category of E-X the right turn lane requirement is deceleration and taper lengths. The northbound right turn lane is currently 600 feet with a 225-foot taper. Based on the 55-mile per hour speed limit, the deceleration lane length is 600 feet plus a 225-foot taper. Therefore, the existing northbound right turn lane meets current CDOT SHAC requirements.

SH-94 and Right-In/Right-Out Access

- An eastbound right turn deceleration lane **is** warranted based on projected 2025 background plus project traffic being 35 eastbound right turns during the peak hour and the threshold being 10 vph. Since SH-94 has a category of E-X the right turn lane requirement is deceleration and taper lengths. Since this is a new access no eastbound right turn lane exists. Based on the 55-mile per hour speed limit, the deceleration lane length is 600 feet plus a 225-foot taper. It is recommended that this lane be constructed as a continuous lane to tie in with the acceleration lane from the northbound right turn from US-24.

- An eastbound acceleration lane along SH-94 from the northbound right turn out of the right-in/right-out access **is** warranted based on projected 2025 background plus project traffic being 25 northbound right turns during the peak hour and the threshold being 10 vph. Since SH-94 has a category of E-X the right turn lane requirement is acceleration, and taper lengths. Based on the 55-mile per hour speed limit, this acceleration length would be 960 feet plus 225-foot taper. It is recommended that this be a continuous auxiliary lane to tie-in with the eastbound right turn deceleration lane for Marksheffel Road approximately 1,000 feet to the east.

5.5 Queuing Analysis

A vehicle queuing analysis was conducted for the study area intersections. The queuing analysis was performed using Synchro presenting the results of the 95th percentile queue lengths. Results are shown in the following **Table 9** with calculations provided within the level of service operational sheets of **Appendix D** for the unsignalized intersections and **Appendix F** for signalized intersections.

Table 9 – Turn Lane Storage Length Analysis Results

Intersection Turn Lane	Existing Turn Lane Length (feet)	2025 Total Queue Length (feet)	2025 Recommended Turn Lane Length (feet)	2040 Total Queue Length (feet)	2040 Recommended Turn Lane Length (feet)
Marksheffel Road & US-24					
Eastbound Marksheffel Left	375’	38’	375’	45’	375’
Westbound Marksheffel Left	300’	13’	300’	15’	300’
Westbound Marksheffel Right	375’	0’	375’	0’	375’
Northbound US-24 Left	1200’ DL	248’ DL	1200’ DL	217’ DL	1200’ DL
Northbound US-24 Right	575’	173’	575’	0’ #	**C #**
Southbound US-24 Left	1100’	188’ DL	**950’ + 600’T DL**	221’ DL	**975’ + 600’T DL**
Southbound US-24 Right	700’	0’	700’	0’ #	**C #**
SH-94 & Marksheffel Road					
Eastbound Left	300’	164’ DL	**750’ (CDOT) DL**	154’ DL	875’ (CDOT) DL
Eastbound Right	250’	243’	**C (CDOT)**	731’	C (CDOT)
Westbound Left	225’	42’	**650’ (CDOT)**	45’	650’ (CDOT)
Westbound Right	250’	631’	**600’ (CDOT)**	692’	600’ (CDOT)
Northbound Left	375’	253’	375’	345’	375’ *
Northbound Right	400’	1’	400’	0’ #	**C #**
Southbound Left	400’	183’	400’	214’	400’
Southbound Right	400’	0’	400’	0’ #	**C #**
SH-94 & Space Village Avenue					
Eastbound Right	250’	25’	250’	25’	C (CDOT)
Westbound Left	150’	25’	**875’ (CDOT)**	25’	875’ (CDOT)
Space Village Avenue & Marksheffel Road					
Eastbound Left	225’	100’	225’	101’	225’
Eastbound Right	250’	203’	250’	151’	250’
Westbound Left	300’	202’	300’	260’	300’
Westbound Right	200’	17’	200’	41’	200’
Northbound Left	400’	374’	**665’ + 240’T**	455’	**745’ + 240’T**
Northbound Right	425’	26’	425’	0’ #	**C #**
Southbound Left	425’	263’	425’	236’	425’
Southbound Right	425’	14’	425’	0’ #	**C #**
SH-94 & US-24					
Eastbound Newt Drive Left	375’ DL	50’ DL	375’ DL	56’ DL	375’ DL
Westbound SH-94 Left	475’ DL	401’ TL	**695’ (CDOT) TL**	522’ TL	695’ (CDOT) TL
Westbound SH-94 Right	475’	0’	**C**	0’	C
Northbound US-24 Left	900’	331’ DL	900’ DL	390’ DL	900’ DL
Northbound US-24 Right	600’	0’	600’	0’	600’
Southbound US-24 Left	800’	3’	800’	3’	800’
Southbound US-24 Right	800’	0’ #	800’ #	0’ #	800’ #
Marksheffel Road ¾ Access #11					
Westbound Approach	DNE	75’	**C**	250’	C
Southbound Left	DNE	150’	**490’ + 240’T**	925’	**925’**
Marksheffel Road Full Access #13^					
Westbound Approach	DNE	196’	**C**	284’	C
Southbound Left	DNE	408’	**700’ + 240’T**	653’	**950’ + 240’T**

Intersection Turn Lane	Existing Turn Lane Length (feet)	2025 Total Queue Length (feet)	2025 Recommended Turn Lane Length (feet)	2040 Total Queue Length (feet)	2040 Recommended Turn Lane Length (feet)
Marksheffel Road ¾ Access #15					
Westbound Approach	DNE	75’	**C**	75’	C
Southbound Left	DNE	125’	**540’ + 240’T**	150’	540’ + 240’T
Marksheffel Road Full Access #16^					
Eastbound Left	175’	374’	**375’**	548’	**C**
Westbound Left	DNE	53’	**165’+120’T**	74’	165’+120’T
Westbound Through/Right	DNE	221’	**C**	457’	C
Northbound Left	600’	136’	600’	218’	600’
Southbound Left	DNE	244’	**535’ +240’T**	507’	**800’ + 240’T**
Southbound Right	C	349’	C	344’	C

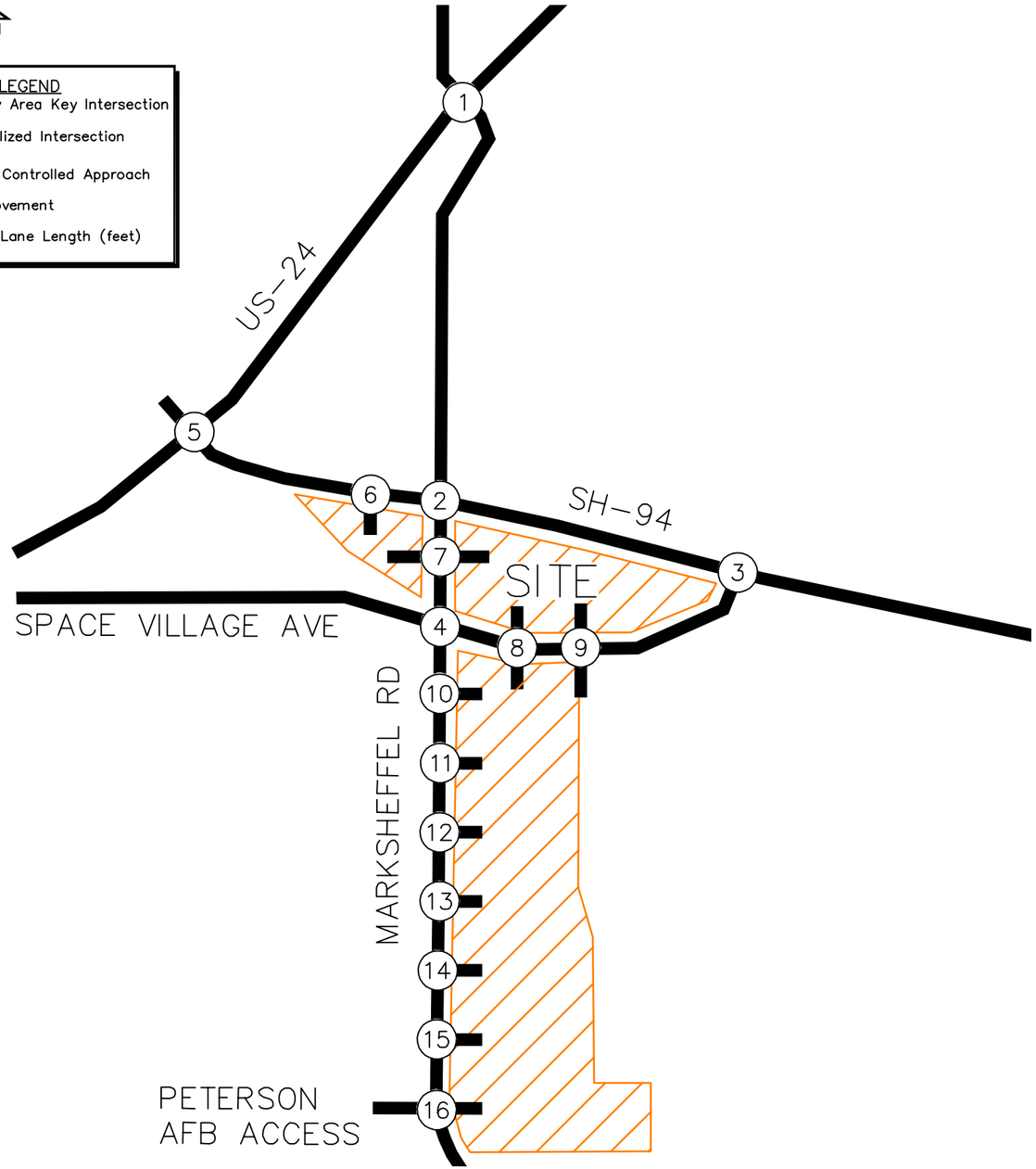
^ = Signalized, # = Through/Right Turn Lane, * = Maximum Length, DL = Dual Left Turn Lanes, TL = Triple Left Turn Lanes, DNE = Does Not Exist, C = Continuous, CDOT = CDOT SHAC Requirement

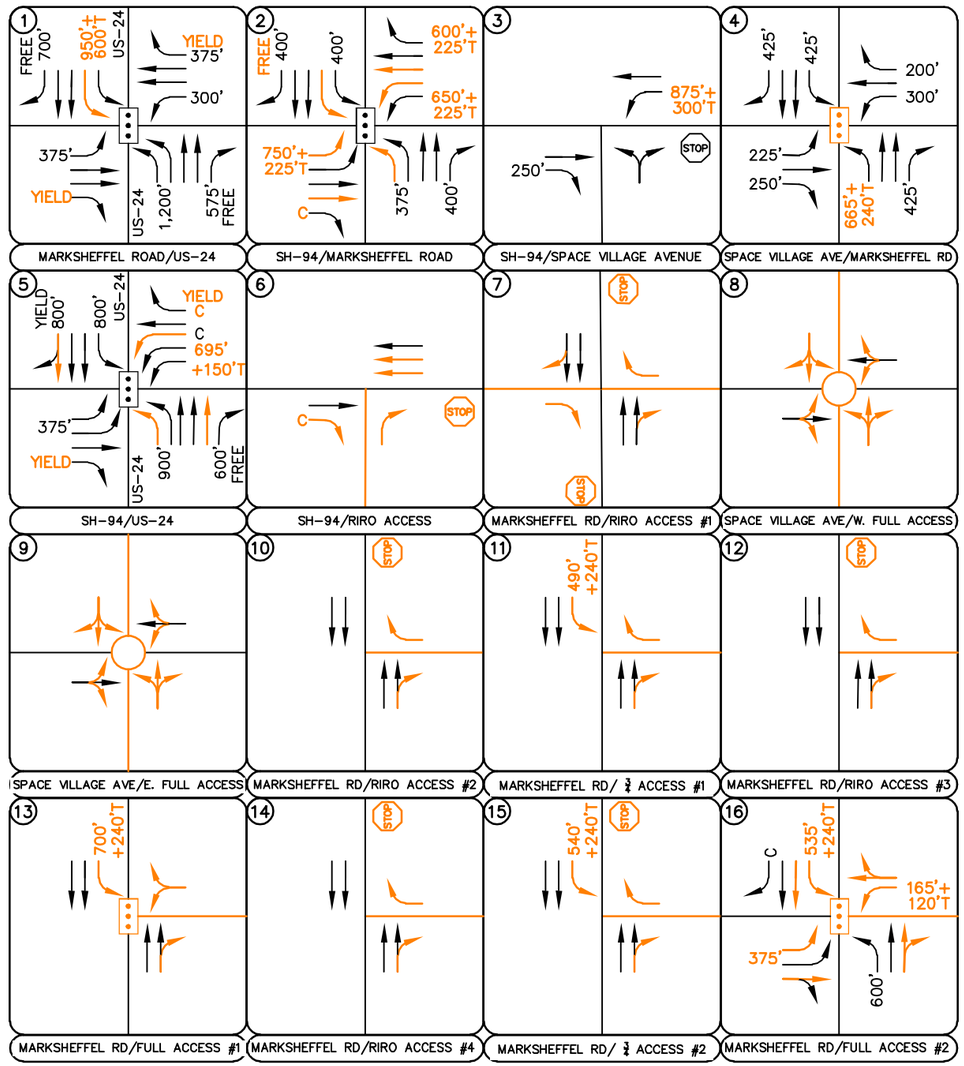
In order to comply with Colorado Springs Standards, it is recommended that the dual southbound left turn lanes at the intersection of Marksheffel Road and US-24 be constructed to a length of 950 feet with a 600-foot taper, that the northbound left turn at the intersection of Space Village Avenue and Marksheffel Road be constructed to a length of 665 feet plus a 240-foot taper, that the southbound left turn at the north three-quarter access along Marksheffel Road be constructed to a length of 490 feet (200 feet storage plus 290 feet deceleration) plus a 240-foot taper to meet City standards for 60 mph, that the southbound left turn lane at the north full movement signalized access along Marksheffel Road be constructed with a length of 700 feet plus a 240-foot taper, that the southbound left turn lane at the south three-quarter access along Marksheffel Road be constructed to 540 feet (250 feet storage plus 290 feet deceleration) plus a 240-foot taper, and that the southbound left turn lane at the south full movement signalized access along Marksheffel Road be constructed with a length of 535 feet plus a 240-foot taper. By 2040, if future volumes are realized multiple turn lanes will need to be lengthened to accommodate the queues.

Based on the results of the level of service operational and turn lane analysis, recommended lane configurations and control of the study area intersections for the 2025 short term build out horizon as well as the 2040 long-term twenty-year horizon are shown in **Figures 11** and **12**, respectively.

NORTH
NTS 096956007

LEGEND
- Study Area Key Intersection
- Signalized Intersection
- STOP Stop Controlled Approach
- Improvement
- 100' Turn Lane Length (feet)





REAGAN RANCH
COLORADO SPRINGS, CO
2025 RECOMMENDED CONFIGURATIONS AND CONTROL

FIGURE 11

Kimley»Horn

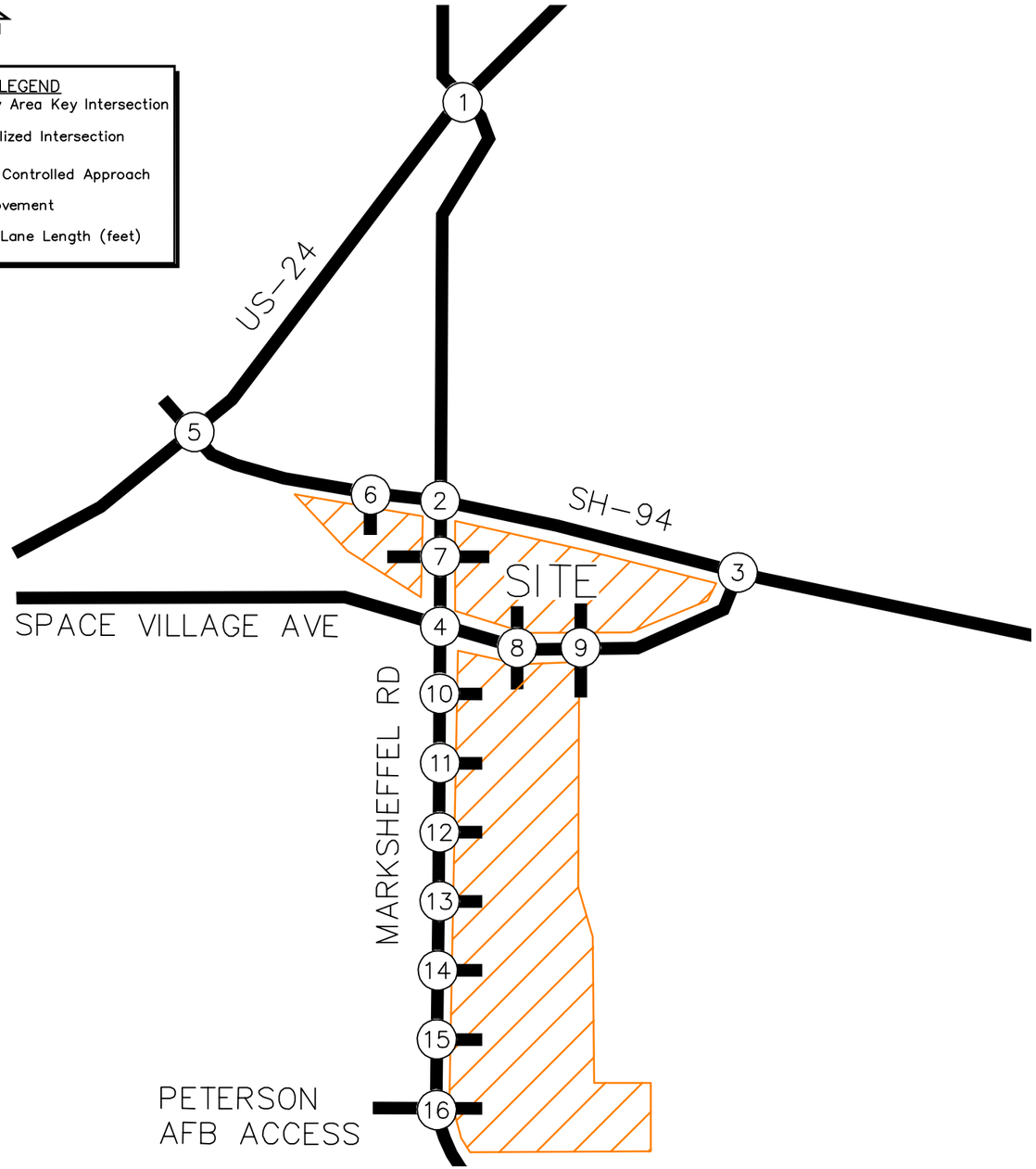
Kimley»Horn

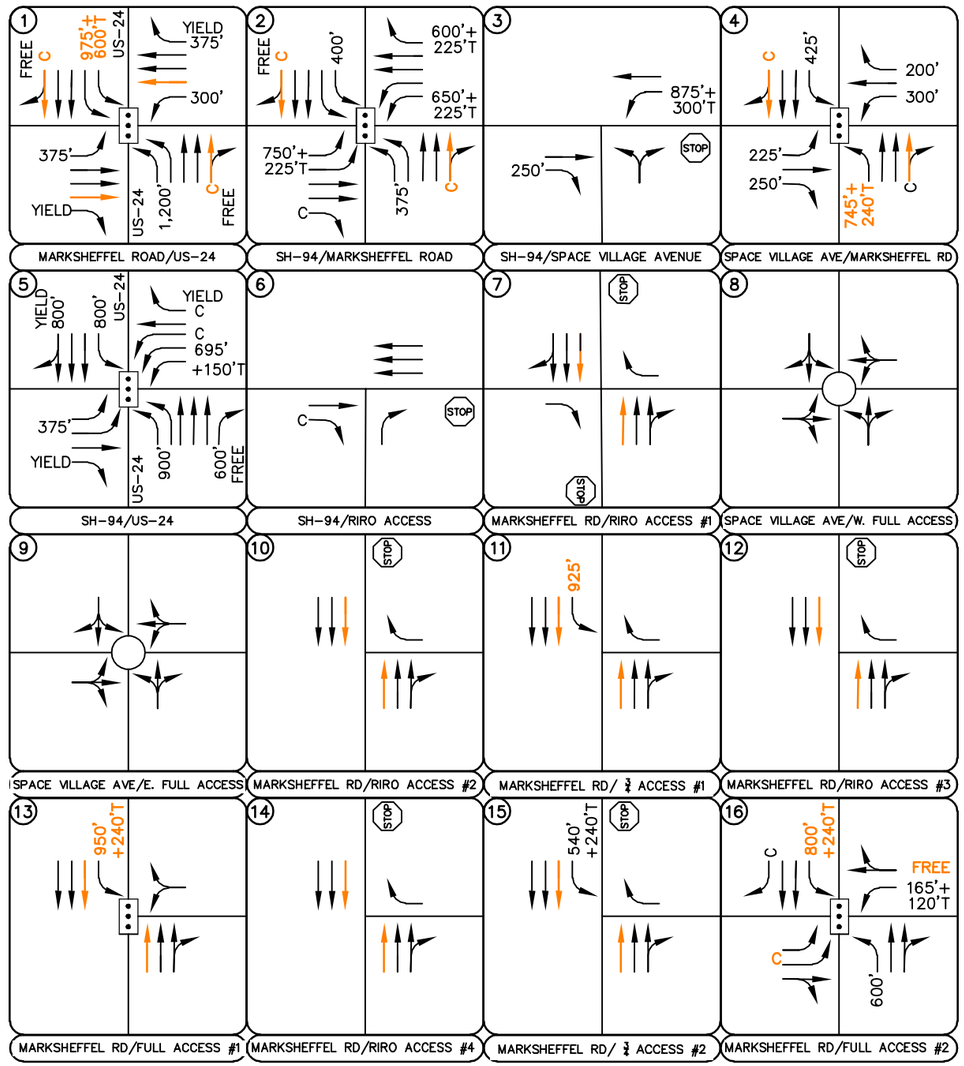
NORTH

NTS 096956007

LEGEND

- Study Area Key Intersection
- Signalized Intersection
- STOP Stop Controlled Approach
- Improvement
- 100' Turn Lane Length (feet)





REAGAN RANCH
COLORADO SPRINGS, CO
2040 RECOMMENDED CONFIGURATIONS AND CONTROL

FIGURE 12

Kimley»Horn

6.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the analysis presented in this report, Kimley-Horn believes the proposed Reagan Ranch will be successfully incorporated into the existing and future roadway network. The proposed project development and expected traffic volumes resulted in the following recommendations/conclusions:

2025 Recommendations:

- CDOT Access Permits will be required for the SH-94 and Marksheffel Road intersection along with the new right-in/right-out access and Space Village Avenue intersections along SH-94 in association with the project. Likewise, since improvements were found to be needed at the US-24/Marksheffel Road and US-24/SH-94 intersections, CDOT Access Permits will likely be required at these intersections as well.

- It was found that US-24 may need to provide three through lanes in each direction from the Peterson Road interchange through the intersection with SH-94 in the near-term horizon. The intersection of US-24/SH-94 is projected to operate poorly in 2025 with existing configurations. The additional through lanes are a regional capacity improvement that should be considered by CDOT in the near future. If and when US-24 is improved to provide three through lanes in each direction, it is recommended that a separate right turn lane be constructed along US-24 to maintain free right turn movements to eastbound SH-94. For westbound US-24 at SH-94, the existing right turn lane along US-24 can be converted to a shared through/right turn lane.

- Southwestbound dual left turn lanes are recommended to be designated along US-24 at the Marksheffel Road intersection. Presently there is a single left turn lane with a striped-out area to shadow the dual left turn lanes on northeastbound US-24. These new southwestbound dual left turn lanes should be designated with a length of 950 feet plus 600-foot taper (25 to 1).

- At SH-94 and Marksheffel Road, the intersection is proposed to be improved to provide dual left turn lanes, two through lanes, and separate right turn lanes on each approach.

Therefore, an additional eastbound and westbound through lane is recommended along SH-94 and dual left turn lanes are needed on each approach. Likewise, it is recommended that the eastbound and westbound right turns operate with overlap phasing, while the northbound and southbound right turns operate with free movements with acceleration lanes constructed in accordance with the CDOT State Highway Access Code (SHAC). The acceleration lane along westbound SH-94 is recommended to tie into the outside through lane on the approach to US-24. The dual eastbound left turn lanes shall be constructed to a length of 750 feet with a 225-foot taper. The westbound dual left turn lanes should be constructed to a length of 650 feet with a 225-foot taper. The westbound right turn lane should be extended to 600 feet. The eastbound acceleration lane from the Marksheffel Road northbound right turn should be constructed to 1,380 feet with a 300-fot taper.

- In order to comply with the CDOT State Highway Access Code it is recommended that the existing 150-foot westbound left turn lane at the intersection of SH-94 and Space Village Avenue be lengthened to 875 feet with a 300-foot taper. An eastbound acceleration lane along SH-94 from the Space Village Avenue northbound right turn is also warranted. It is recommended that the existing 300-foot with 200-foot taper acceleration lane be extended to a length of 1,380 feet with a 300-foot taper to meet current CDOT standards.

- Currently the intersection of Space Village Avenue and Marksheffel Road is unsignalized. By 2025, this intersection is anticipated to meet the Four-Hour Vehicle Volume signal warrant; therefore, it is recommended that a traffic signal be installed at this intersection. It is also recommended that the northbound left turn lane be constructed to 665 feet with a 240-foot taper to accommodate queues.

- At the intersection of SH-94 and US-24, it is recommended that the existing dual westbound left turn lanes on SH-94 be converted to triple left turn lanes by converting and restriping the inside westbound through lane to a left turn lane. The inside two westbound left turn lanes should be extended to a length of 695 feet plus a 290-foot taper per CDOT SHAC requirements. A traffic signal modification will be required at the intersection to incorporate these westbound triple left turn lanes.

- An eastbound right turn deceleration lane is recommended at the right-in/right-out access along SH-94. It is recommended that this deceleration lane be constructed as a continuous auxiliary lane to tie in with the acceleration lane from the northbound right turn at US-24. An eastbound acceleration lane along SH-94 from the northbound right turn exit from this right-in/right-out access is also recommended to be constructed. This is recommended to be constructed as a continuous auxiliary lane to tie into the eastbound right turn deceleration lane at the SH-94 and Marksheffel Road intersection.

- Single lane roundabouts are planned to be constructed at the accesses along Space Village Avenue. It is recommended that the roundabouts have single lane approaches on all entering legs.

- It is recommended that the northern three-quarter movement access along Marksheffel Road (Intersection #11) have a 490-foot plus 240-foot taper southbound left turn lane to accommodate volumes entering Reagan Ranch.

- A traffic signal is anticipated to be needed at the northern full movement access intersection along Marksheffel Road (Intersection #13). It is recommended that a 700-foot southbound left turn lane with a 240-foot taper be constructed.

- It is recommended that the southern three-quarter movement access along Marksheffel Road (Intersection #15) have a 540-foot plus 240-foot taper southbound left turn lane to accommodate volumes entering the site.

- The southern full movement access intersection is proposed to align with the existing Peterson Air Force Base High-T intersection (Intersection #16). With this access alignment, it is recommended that the intersection be signalized. This intersection will need to be reconfigured so that a southbound left turn lane and dual eastbound left turn lanes can be provided. The southbound left turn lane is recommended to include a length of 535 feet plus 240-foot taper and the dual eastbound left turn lanes are recommended to provide a length of 375 feet.

2040 Recommendations:

- If future traffic volume projections are realized, US-24 may need to provide three through lanes in each direction through the Marksheffel Road intersection. Likewise, Marksheffel Road between US-24 and Peterson Air Force Base East Gate may need to provide three through lanes in each direction. It is recommended that traffic volumes continue to be monitored by CDOT, the City of Colorado Springs, and El Paso County, as applicable, to determine if and when these regional improvements will be needed.

General Recommendations:

- Any on-site and off-site roadway, signing, striping, and signal improvements should be incorporated into the Civil Drawings, and conform to City of Colorado Springs and/or CDOT standards as applicable, as well as the Manual on Uniform Traffic Control Devices – 2009 Edition (MUTCD).

APPENDICES

APPENDIX A

Intersection Count Sheets

Traffic Data Resources

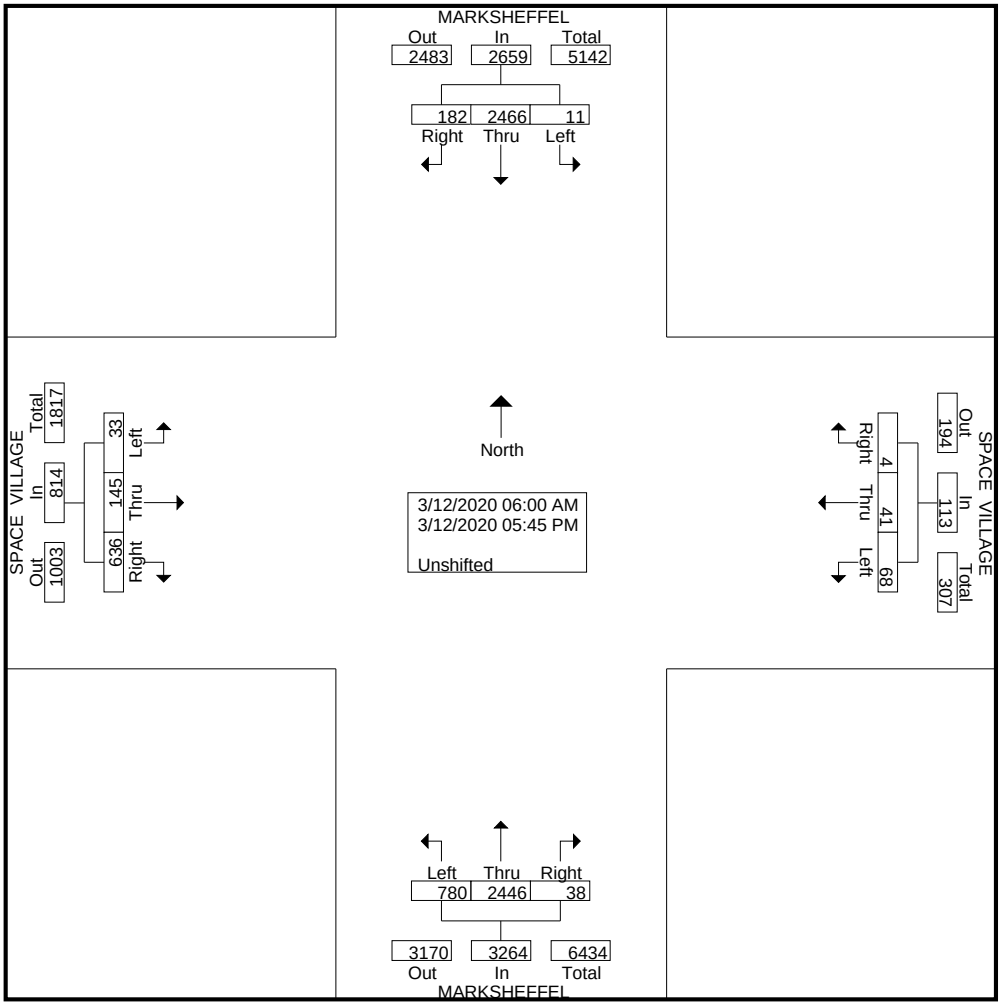
Location: Marksheffel @ Space Village
Turning Movement Count
Weather: Clear
Comments: Heavy truck traffic

File Name : MARKSHEFFEL @ SPACE VILLAGE-THUR-WSP-3-20
Site Code : 00000000
Start Date : 3/12/2020
Page No : 1

Groups Printed- Unshifted

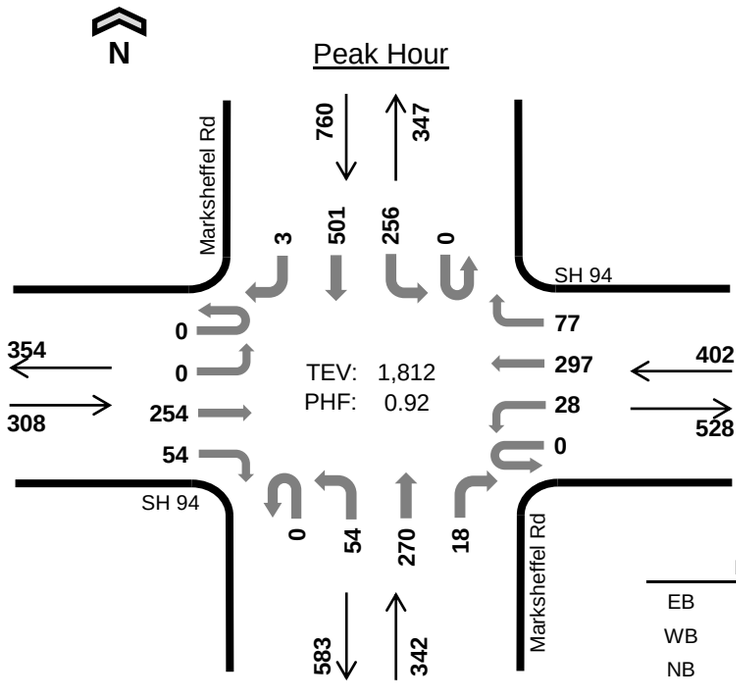
	MARKSHEFFEL From North				SPACE VILLAGE From East				MARKSHEFFEL From South				SPACE VILLAGE From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Factor	1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		
06:00 AM	1	84	0	85	0	0	7	7	0	47	20	67	23	5	1	29	188
06:15 AM	4	140	0	144	0	2	2	4	2	68	33	103	17	9	1	27	278
06:30 AM	4	157	0	161	0	2	0	2	1	92	40	133	19	13	2	34	330
06:45 AM	13	164	0	177	0	6	8	14	2	109	54	165	26	9	4	39	395
Total	22	545	0	567	0	10	17	27	5	316	147	468	85	36	8	129	1191
07:00 AM	18	196	6	220	1	1	3	5	6	121	51	178	35	19	2	56	459
07:15 AM	37	201	0	238	1	4	3	8	1	110	62	173	35	8	2	45	464
07:30 AM	33	235	1	269	0	3	1	4	4	124	83	211	23	9	2	34	518
07:45 AM	31	227	1	259	0	3	1	4	1	117	77	195	21	6	1	28	486
Total	119	859	8	986	2	11	8	21	12	472	273	757	114	42	7	163	1927
*** BREAK ***																	
04:00 PM	7	147	0	154	0	4	4	8	3	210	40	253	55	8	3	66	481
04:15 PM	8	149	0	157	0	3	7	10	5	263	46	314	46	8	2	56	537
04:30 PM	5	122	1	128	0	2	10	12	6	228	56	290	52	10	1	63	493
04:45 PM	3	132	0	135	1	3	9	13	1	213	46	260	62	6	4	72	480
Total	23	550	1	574	1	12	30	43	15	914	188	1117	215	32	10	257	1991
05:00 PM	7	127	0	134	0	2	4	6	5	213	55	273	65	7	1	73	486
05:15 PM	4	155	2	161	0	1	2	3	1	226	48	275	58	10	4	72	511
05:30 PM	5	119	0	124	1	2	6	9	0	153	38	191	53	12	1	66	390
05:45 PM	2	111	0	113	0	3	1	4	0	152	31	183	46	6	2	54	354
Total	18	512	2	532	1	8	13	22	6	744	172	922	222	35	8	265	1741
Grand Total	182	2466	11	2659	4	41	68	113	38	2446	780	3264	636	145	33	814	6850
Apprch %	6.8	92.7	0.4		3.5	36.3	60.2		1.2	74.9	23.9		78.1	17.8	4.1		
Total %	2.7	36	0.2	38.8	0.1	0.6	1	1.6	0.6	35.7	11.4	47.6	9.3	2.1	0.5	11.9	

File Name : MARKSHEFFEL @ SPACE VILLAGE-THUR-WSP-3-20
Site Code : 00000000
Start Date : 3/12/2020
Page No : 2

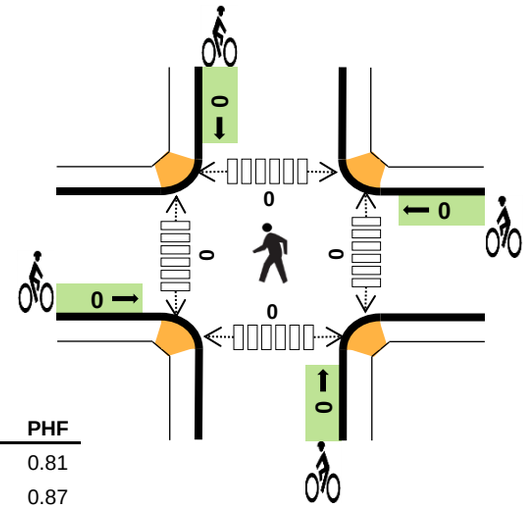


	MARKSHEFFEL From North				SPACE VILLAGE From East				MARKSHEFFEL From South				SPACE VILLAGE From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	**8**	**149**	0	**157**	0	**3**	7	10	5	**263**	46	**314**	46	8	2	56	**537**
04:30 PM	5	122	**1**	128	0	2	**10**	12	**6**	228	**56**	290	52	**10**	1	63	493
04:45 PM	3	132	0	135	**1**	3	9	**13**	1	213	46	260	62	6	**4**	72	480
05:00 PM	7	127	0	134	0	2	4	6	5	213	55	273	**65**	7	1	**73**	486
Total Volume	23	530	1	554	1	10	30	41	17	917	203	1137	225	31	8	264	1996
% App. Total	4.2	95.7	0.2		2.4	24.4	73.2		1.5	80.7	17.9		85.2	11.7	3		
PHF	.719	.889	.250	.882	.250	.833	.750	.788	.708	.872	.906	.905	.865	.775	.500	.904	.929

Marksheffel Rd
SH 94



Date: Tue, Jun 02, 2020
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:00 AM to 8:00 AM



	HV %:	PHF
EB	8.1%	0.81
WB	5.5%	0.87
NB	4.7%	0.82
SB	2.6%	0.87
TOTAL	4.6%	0.92

Two-Hour Count Summaries

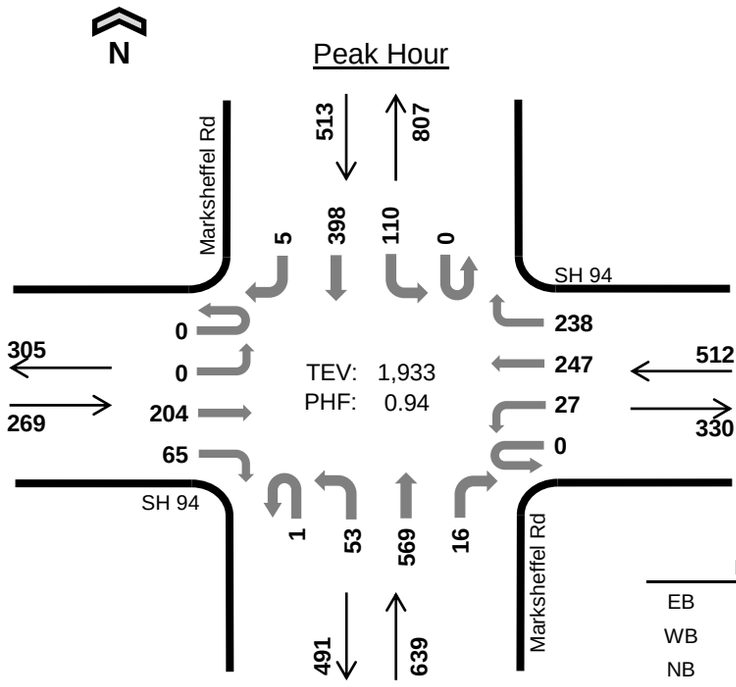
Interval Start	SH 94 Eastbound				SH 94 Westbound				Marksheffel Rd Northbound				Marksheffel Rd Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	**0**	**0**	**57**	**8**	**0**	**2**	**73**	**22**	**0**	**11**	**71**	**7**	**0**	**79**	**110**	**0**	**440**	0
7:15 AM	**0**	**0**	**79**	**16**	**0**	**7**	**87**	**21**	**0**	**10**	**51**	**3**	**0**	**74**	**143**	**1**	**492**	0
7:30 AM	**0**	**0**	**61**	**21**	**0**	**8**	**69**	**13**	**0**	**24**	**76**	**4**	**0**	**67**	**133**	**1**	**477**	0
7:45 AM	**0**	**0**	**57**	**9**	**0**	**11**	**68**	**21**	**0**	**9**	**72**	**4**	**0**	**36**	**115**	**1**	**403**	**1,812**
8:00 AM	0	4	39	14	0	2	43	12	0	10	50	2	0	47	115	1	339	1,711
8:15 AM	0	0	61	11	0	2	49	21	0	8	59	2	0	32	89	0	334	1,553
8:30 AM	0	1	50	15	0	6	67	25	0	9	52	4	0	32	85	1	347	1,423
8:45 AM	0	0	36	14	0	4	44	17	0	14	49	1	0	21	85	2	287	1,307
Count Total	0	5	440	108	0	42	500	152	0	95	480	27	0	388	875	7	3,119	0
Peak Hour	**0**	**0**	**254**	**54**	**0**	**28**	**297**	**77**	**0**	**54**	**270**	**18**	**0**	**256**	**501**	**3**	**1,812**	**0**

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

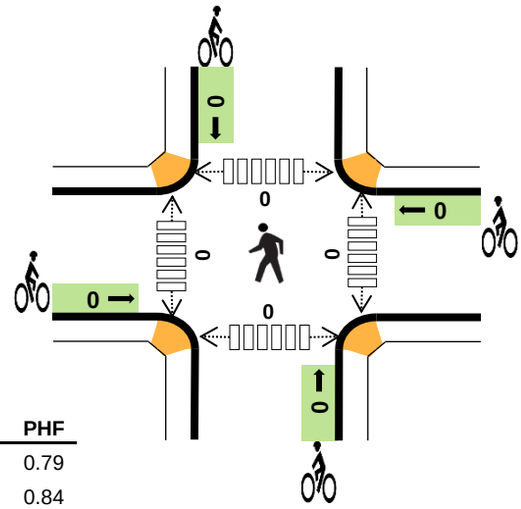
Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	**4**	**2**	**5**	**5**	***16***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
7:15 AM	**6**	**4**	**4**	**4**	***18***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
7:30 AM	**9**	**6**	**4**	**8**	***27***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
7:45 AM	**6**	**10**	**3**	**3**	***22***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
8:00 AM	3	7	2	9	*21*	0	0	0	0	*0*	0	0	0	0	*0*
8:15 AM	10	5	2	4	*21*	0	0	0	0	*0*	0	0	0	0	*0*
8:30 AM	8	5	8	7	*28*	0	0	0	0	*0*	0	0	0	0	*0*
8:45 AM	8	6	1	5	*20*	0	0	0	0	*0*	0	0	0	0	*0*
Count Total	54	45	29	45	*173*	0	0	0	0	*0*	0	0	0	0	*0*
Peak Hour	**25**	**22**	**16**	**20**	***83***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***

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

Marksheffel Rd
SH 94



Date: Tue, Jun 02, 2020
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:00 PM to 5:00 PM



	HV %:	PHF
EB	3.3%	0.79
WB	2.7%	0.84
NB	2.3%	0.92
SB	3.9%	0.97
TOTAL	3.0%	0.94

Two-Hour Count Summaries

Interval Start	SH 94 Eastbound				SH 94 Westbound				Marksheffel Rd Northbound				Marksheffel Rd Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	**0**	**0**	**58**	**27**	**0**	**7**	**63**	**49**	**0**	**14**	**140**	**2**	**0**	**24**	**94**	**1**	**479**	0
4:15 PM	**0**	**0**	**57**	**15**	**0**	**10**	**65**	**78**	**1**	**10**	**142**	**6**	**0**	**28**	**102**	**1**	**515**	0
4:30 PM	**0**	**0**	**42**	**13**	**0**	**6**	**47**	**62**	**0**	**12**	**159**	**2**	**0**	**25**	**105**	**1**	**474**	0
4:45 PM	**0**	**0**	**47**	**10**	**0**	**4**	**72**	**49**	**0**	**17**	**128**	**6**	**0**	**33**	**97**	**2**	**465**	**1,933**
5:00 PM	1	1	72	14	0	5	52	48	0	8	107	2	0	20	84	2	416	1,870
5:15 PM	1	0	73	13	0	5	37	44	0	18	112	3	0	29	110	0	445	1,800
5:30 PM	0	0	69	19	0	1	40	31	0	12	75	3	0	28	115	0	393	1,719
5:45 PM	0	0	47	21	0	0	32	31	0	7	122	2	0	28	110	0	400	1,654
Count Total	2	1	465	132	0	38	408	392	1	98	985	26	0	215	817	7	3,587	0
Peak Hour	**0**	**0**	**204**	**65**	**0**	**27**	**247**	**238**	**1**	**53**	**569**	**16**	**0**	**110**	**398**	**5**	**1,933**	**0**

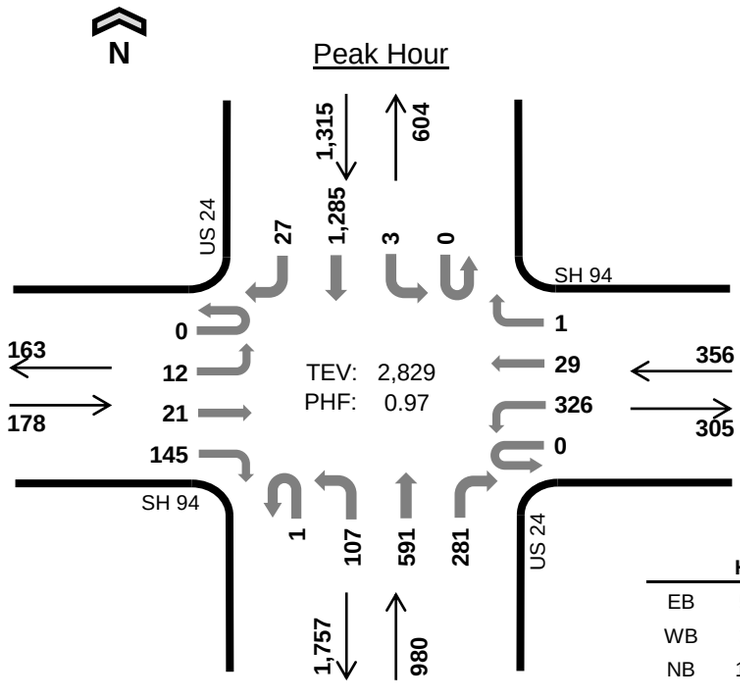
Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

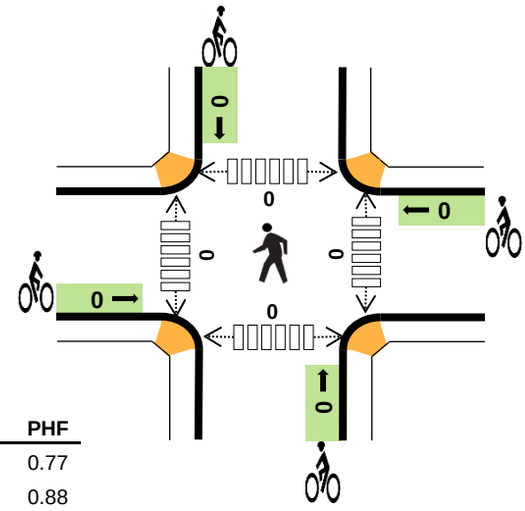
Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	**1**	**5**	**4**	**7**	***17***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
4:15 PM	**2**	**3**	**4**	**4**	***13***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
4:30 PM	**2**	**4**	**5**	**8**	***19***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
4:45 PM	**4**	**2**	**2**	**1**	***9***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
5:00 PM	1	2	2	4	*9*	0	0	0	0	*0*	0	0	0	0	*0*
5:15 PM	2	1	3	2	*8*	0	0	1	0	*1*	0	0	0	0	*0*
5:30 PM	3	0	2	1	*6*	0	0	0	0	*0*	0	0	0	0	*0*
5:45 PM	1	1	3	4	*9*	0	0	0	0	*0*	0	0	0	0	*0*
Count Total	16	18	25	31	*90*	0	0	1	0	*1*	0	0	0	0	*0*
Peak Hour	**9**	**14**	**15**	**20**	***58***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***

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

US 24
SH 94

Date: Tue, Jun 02, 2020
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:00 AM to 8:00 AM





	HV %:	PHF
EB	5.1%	0.77
WB	3.9%	0.88
NB	10.4%	0.97
SB	5.5%	0.96
TOTAL	7.0%	0.97

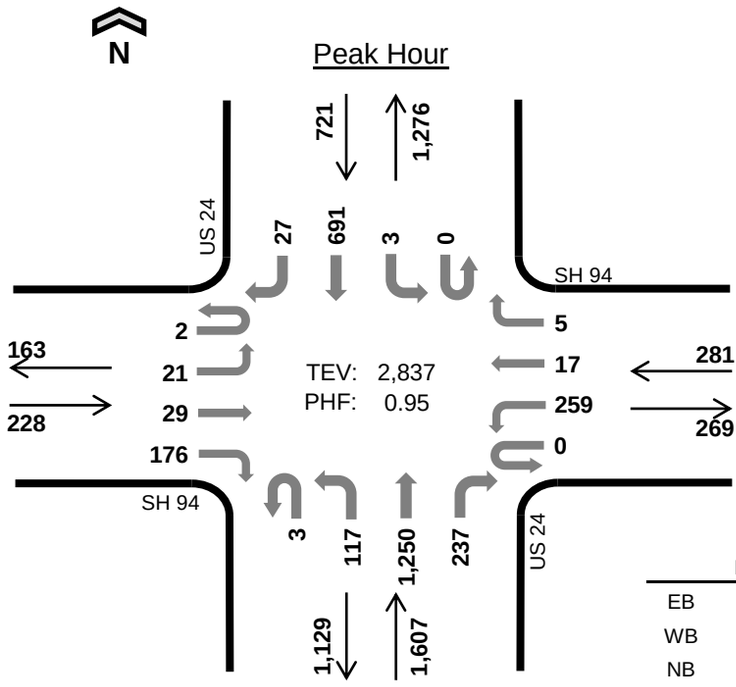
Two-Hour Count Summaries

Interval Start	SH 94 Eastbound				SH 94 Westbound				US 24 Northbound				US 24 Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	**0**	**1**	**6**	**45**	**0**	**81**	**10**	**0**	**0**	**27**	**147**	**65**	**0**	**1**	**319**	**7**	**709**	0
7:15 AM	**0**	**6**	**7**	**21**	**0**	**90**	**10**	**1**	**0**	**25**	**145**	**79**	**0**	**0**	**336**	**8**	**728**	0
7:30 AM	**0**	**5**	**6**	**47**	**0**	**85**	**5**	**0**	**0**	**20**	**152**	**80**	**0**	**0**	**310**	**6**	**716**	0
7:45 AM	**0**	**0**	**2**	**32**	**0**	**70**	**4**	**0**	**1**	**35**	**147**	**57**	**0**	**2**	**320**	**6**	**676**	**2,829**
8:00 AM	0	4	4	25	0	51	7	1	0	28	120	54	0	3	230	5	532	2,652
8:15 AM	0	4	4	34	0	51	6	0	1	17	107	64	0	1	207	10	506	2,430
8:30 AM	0	1	4	26	0	66	2	0	0	25	128	55	0	0	223	4	534	2,248
8:45 AM	0	3	7	29	0	48	6	1	1	23	131	44	0	1	197	9	500	2,072
Count Total	0	24	40	259	0	542	50	3	3	200	1,077	498	0	8	2,142	55	4,901	0
Peak Hour	**0**	**12**	**21**	**145**	**0**	**326**	**29**	**1**	**1**	**107**	**591**	**281**	**0**	**3**	**1,285**	**27**	**2,829**	**0**

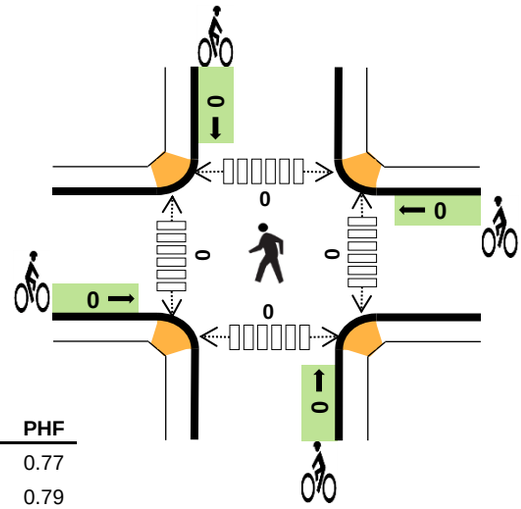
Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	**4**	**1**	**19**	**20**	***44***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
7:15 AM	**0**	**5**	**27**	**16**	***48***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
7:30 AM	**4**	**3**	**31**	**15**	***53***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
7:45 AM	**1**	**5**	**25**	**21**	***52***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
8:00 AM	1	8	20	15	*44*	0	0	0	0	*0*	0	0	0	0	*0*
8:15 AM	3	2	24	9	*38*	0	0	0	0	*0*	0	0	0	0	*0*
8:30 AM	0	7	27	13	*47*	0	0	0	0	*0*	0	0	0	0	*0*
8:45 AM	2	5	15	18	*40*	0	0	0	0	*0*	0	0	0	0	*0*
Count Total	15	36	188	127	*366*	0	0	0	0	*0*	0	0	0	0	*0*
Peak Hour	**9**	**14**	**102**	**72**	***197***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***

US 24
SH 94



Date: Tue, Jun 02, 2020
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:15 PM to 5:15 PM



	HV %:	PHF
EB	0.9%	0.77
WB	2.8%	0.79
NB	3.0%	0.96
SB	5.0%	0.90
TOTAL	3.3%	0.95

Two-Hour Count Summaries

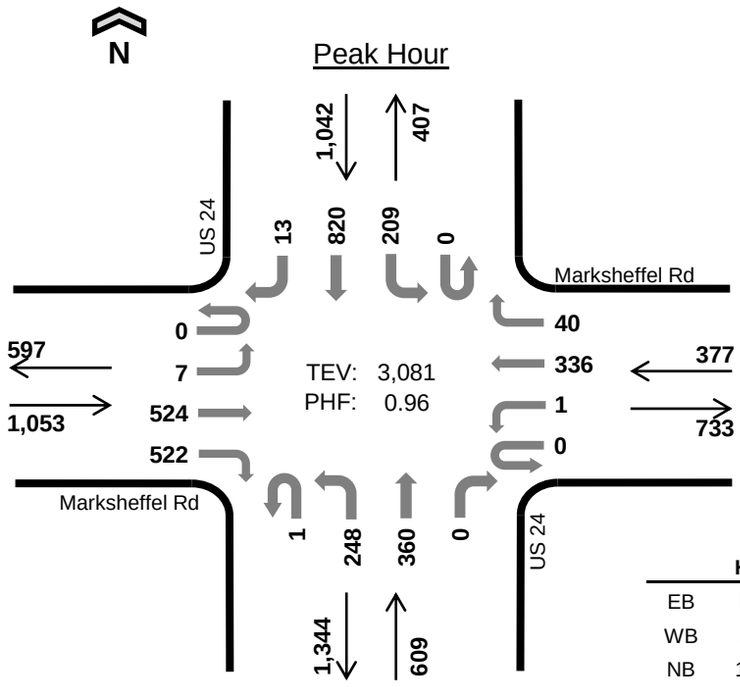
Interval Start	SH 94 Eastbound				SH 94 Westbound				US 24 Northbound				US 24 Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	5	4	32	0	73	7	0	1	31	284	80	1	2	177	7	704	0
4:15 PM	**0**	**5**	**4**	**45**	**0**	**51**	**2**	**2**	**1**	**30**	**327**	**62**	**0**	**3**	**153**	**7**	**692**	0
4:30 PM	**0**	**4**	**13**	**33**	**0**	**66**	**7**	**0**	**1**	**29**	**300**	**46**	**0**	**0**	**194**	**7**	**700**	0
4:45 PM	**0**	**9**	**1**	**40**	**0**	**83**	**5**	**1**	**0**	**31**	**307**	**53**	**0**	**0**	**158**	**7**	**695**	2,791
5:00 PM	**2**	**3**	**11**	**58**	**0**	**59**	**3**	**2**	**1**	**27**	**316**	**76**	**0**	**0**	**186**	**6**	**750**	**2,837**
5:15 PM	0	8	7	36	0	49	8	0	0	19	299	80	0	0	170	8	684	2,829
5:30 PM	0	5	4	29	0	44	7	1	0	19	267	85	0	0	183	4	648	2,777
5:45 PM	0	3	8	24	0	38	4	1	0	12	252	62	0	0	142	10	556	2,638
Count Total	2	42	52	297	0	463	43	7	4	198	2,352	544	1	5	1,363	56	5,429	0
Peak Hour	**2**	**21**	**29**	**176**	**0**	**259**	**17**	**5**	**3**	**117**	**1,250**	**237**	**0**	**3**	**691**	**27**	**2,837**	**0**

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

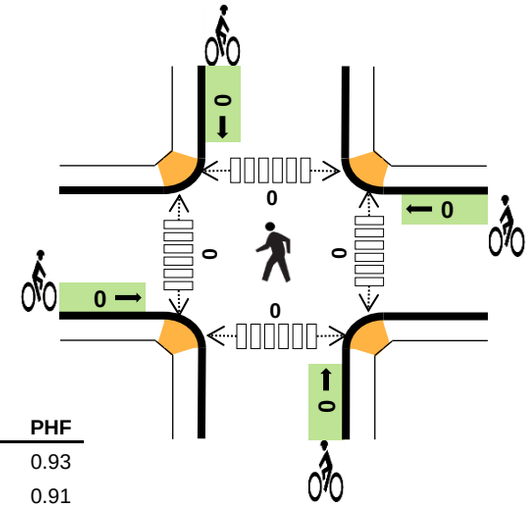
Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	0	4	16	12	*32*	0	0	0	0	*0*	0	0	0	0	*0*
4:15 PM	**0**	**3**	**11**	**12**	***26***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
4:30 PM	**1**	**1**	**20**	**12**	***34***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
4:45 PM	**1**	**1**	**14**	**5**	***21***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
5:00 PM	**0**	**3**	**4**	**7**	***14***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
5:15 PM	1	2	10	6	*19*	0	0	0	0	*0*	0	0	0	0	*0*
5:30 PM	2	1	7	11	*21*	0	0	0	0	*0*	0	0	0	0	*0*
5:45 PM	1	2	3	7	*13*	0	0	0	0	*0*	0	0	0	0	*0*
Count Total	6	17	85	72	*180*	0	0	0	0	*0*	0	0	0	0	*0*
Peak Hour	**2**	**8**	**49**	**36**	***95***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***

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

US 24
Marksheffel Rd



Date: Thu, Jun 04, 2020
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:00 AM to 8:00 AM



	HV %:	PHF
EB	5.5%	0.93
WB	3.2%	0.91
NB	10.5%	0.93
SB	3.9%	0.94
TOTAL	5.7%	0.96

Two-Hour Count Summaries

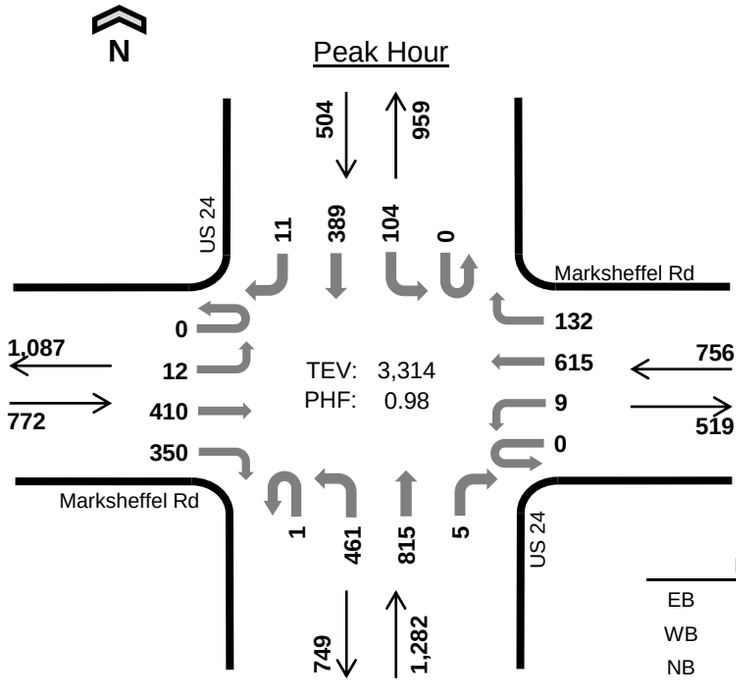
Interval Start	Marksheffel Rd Eastbound				Marksheffel Rd Westbound				US 24 Northbound				US 24 Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	**0**	**0**	**122**	**138**	**0**	**0**	**94**	**6**	**0**	**68**	**96**	**0**	**0**	**50**	**203**	**1**	**778**	0
7:15 AM	**0**	**0**	**155**	**127**	**0**	**0**	**96**	**8**	**1**	**59**	**96**	**0**	**0**	**43**	**213**	**3**	**801**	0
7:30 AM	**0**	**3**	**123**	**142**	**0**	**1**	**80**	**14**	**0**	**62**	**78**	**0**	**0**	**59**	**214**	**5**	**781**	0
7:45 AM	**0**	**4**	**124**	**115**	**0**	**0**	**66**	**12**	**0**	**59**	**90**	**0**	**0**	**57**	**190**	**4**	**721**	**3,081**
8:00 AM	0	8	106	109	0	2	57	17	0	50	75	0	0	37	125	7	593	2,896
8:15 AM	0	1	87	90	0	0	48	16	0	50	73	1	0	42	138	1	547	2,642
8:30 AM	0	3	83	105	0	1	84	13	0	48	71	0	0	30	155	1	594	2,455
8:45 AM	0	0	92	85	0	2	58	8	0	52	91	0	0	39	162	5	594	2,328
Count Total	0	19	892	911	0	6	583	94	1	448	670	1	0	357	1,400	27	5,409	0
Peak Hour	**0**	**7**	**524**	**522**	**0**	**1**	**336**	**40**	**1**	**248**	**360**	**0**	**0**	**209**	**820**	**13**	**3,081**	**0**

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

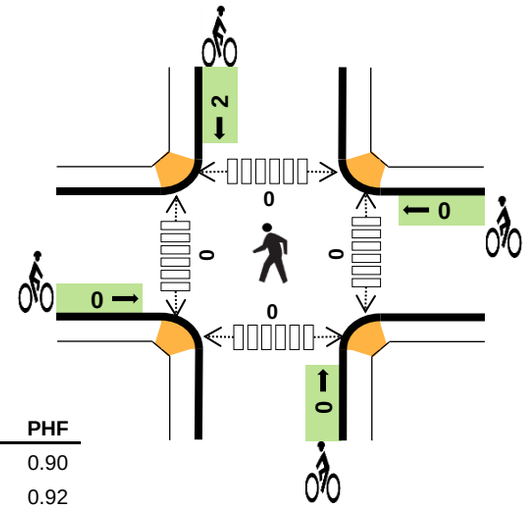
Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	**18**	**3**	**10**	**8**	***39***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
7:15 AM	**12**	**3**	**17**	**10**	***42***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
7:30 AM	**14**	**4**	**21**	**13**	***52***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
7:45 AM	**14**	**2**	**16**	**10**	***42***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
8:00 AM	9	3	18	11	*41*	0	0	0	0	*0*	0	0	0	0	*0*
8:15 AM	9	1	12	7	*29*	0	0	0	0	*0*	0	0	0	0	*0*
8:30 AM	9	2	10	9	*30*	0	0	0	0	*0*	0	0	0	0	*0*
8:45 AM	11	4	22	21	*58*	0	0	0	0	*0*	0	0	0	0	*0*
Count Total	96	22	126	89	*333*	0	0	0	0	*0*	0	0	0	0	*0*
Peak Hour	**58**	**12**	**64**	**41**	***175***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***

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

US 24
Marksheffel Rd



Date: Thu, Jun 04, 2020
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:30 PM to 5:30 PM



	HV %:	PHF
EB	2.8%	0.90
WB	1.3%	0.92
NB	1.7%	0.97
SB	2.8%	0.91
TOTAL	2.1%	0.98

Two-Hour Count Summaries

Interval Start	Marksheffel Rd Eastbound				Marksheffel Rd Westbound				US 24 Northbound				US 24 Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	2	102	84	0	3	163	33	0	78	159	0	1	21	132	0	778	0
4:15 PM	0	7	82	73	0	1	172	39	2	131	166	1	0	32	121	4	831	0
4:30 PM	**0**	**4**	**92**	**73**	**0**	**4**	**165**	**37**	**0**	**119**	**207**	**0**	**0**	**23**	**100**	**2**	**826**	0
4:45 PM	**0**	**5**	**117**	**92**	**0**	**1**	**162**	**34**	**0**	**128**	**185**	**4**	**0**	**17**	**90**	**5**	**840**	3,275
5:00 PM	**0**	**3**	**96**	**92**	**0**	**2**	**140**	**34**	**1**	**96**	**210**	**1**	**0**	**27**	**101**	**1**	**804**	3,301
5:15 PM	**0**	**0**	**105**	**93**	**0**	**2**	**148**	**27**	**0**	**118**	**213**	**0**	**0**	**37**	**98**	**3**	**844**	**3,314**
5:30 PM	0	3	111	87	0	1	115	29	0	108	178	1	0	15	109	2	759	3,247
5:45 PM	0	3	78	62	0	6	110	20	0	96	122	0	0	24	91	1	613	3,020
Count Total	0	27	783	656	0	20	1,175	253	3	874	1,440	7	1	196	842	18	6,295	0
Peak Hour	**0**	**12**	**410**	**350**	**0**	**9**	**615**	**132**	**1**	**461**	**815**	**5**	**0**	**104**	**389**	**11**	**3,314**	**0**

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

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	12	3	7	8	*30*	0	0	0	0	*0*	0	0	0	0	*0*
4:15 PM	6	2	10	5	*23*	0	0	0	0	*0*	0	0	0	0	*0*
4:30 PM	**4**	**4**	**6**	**6**	***20***	**0**	**0**	**0**	**1**	***1***	**0**	**0**	**0**	**0**	*0*
4:45 PM	**6**	**2**	**6**	**1**	***15***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
5:00 PM	**7**	**2**	**6**	**3**	***18***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
5:15 PM	**5**	**2**	**4**	**4**	***15***	**0**	**0**	**0**	**1**	***1***	**0**	**0**	**0**	**0**	***0***
5:30 PM	6	0	5	5	*16*	0	0	0	0	*0*	0	0	0	0	*0*
5:45 PM	2	2	3	2	*9*	0	0	0	1	*1*	0	0	0	0	*0*
Count Total	48	17	47	34	*146*	0	0	0	3	*3*	0	0	0	0	*0*
Peak Hour	**22**	**10**	**22**	**14**	***68***	**0**	**0**	**0**	**2**	***2***	**0**	**0**	**0**	**0**	***0***

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

Station ID: 103943
Date: 7/11/2019
Route: 094A
Description: SH 94 E/O Marksheffel Rd, Colorado Springs

COUNTDIR	12:00 AM	1:00 AM	2:00 AM	3:00 AM	4:00 AM	5:00 AM	6:00 AM	7:00 AM	8:00 AM	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM	9:00 PM	10:00 PM	11:00 PM
P	21	16	9	23	82	299	705	500	366	246	211	243	253	246	252	271	391	383	282	193	178	120	99	54
S	17	6	10	14	45	141	322	359	287	278	237	292	270	272	395	606	824	541	282	153	90	54	40	51

Marsheffel and SH 94			
Peak Hour Counts	528	95%	
	402	89%	
Percent Difference	92%		

Marsheffel and SH 94			
Peak Hour Counts	330	118%	
	512	161%	
Percent Difference	144%		

Station ID: 100851
Date: 2/20/2020
Route: 024G
Description: SH 24 NE/O SH 94, Colorado Springs

COUNTDIR	12:00 AM	1:00 AM	2:00 AM	3:00 AM	4:00 AM	5:00 AM	6:00 AM	7:00 AM	8:00 AM	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM	9:00 PM	10:00 PM	11:00 PM
P	55	33	24	26	94	150	465	601	503	409	468	614	622	633	920	1088	1495	1289	704	712	452	268	159	82
S	36	17	38	95	301	818	1863	1716	1023	715	636	665	609	577	613	655	693	685	369	224	183	124	79	53

US 24 and SH 94			
Peak Hour Counts	604	100%	
	1315	130%	
Percent Difference	121%		

US 24 and Marksheffel			
Peak Hour Counts	609	99%	
	1344	128%	
Percent Difference	119%		

US 24 and SH 94			
Peak Hour Counts	1276	117%	
	721	96%	
Percent Difference	110%		

US 24 and Marksheffel			
Peak Hour Counts	1282	117%	
	749	93%	
Percent Difference	108%		

APPENDIX B

CDOT Annual Traffic Data

Reagan Ranch Growth Rate

Station ID	2018 AADT	2040 AADT	Growth Factor	Yearly Growth Rate
103943	10000	13630	1.33	1.30%
103944	11000	14025	1.25	1.02%
		Avg Growth Rate		1.16%

APPENDIX C

Trip Generation Worksheets

Trip Generation Planner (ITE 10th Edition) - Summary Report

Weekday Trip Generation
Trips Based on Average Rates/Equations

Project Name **Reagan Ranch (NW Parcel)**
Project Number **096956007**

Kimley»Horn

							Rates			Total Trips							Net Trips after Internal Capture						
ITE Code	Internal Capture Land Use	Land Use Description	Independent Variable	Setting/Location	No. of Units	Avg Rate or Eq	Daily Rate	AM Rate	PM Rate	Daily Trips	AM Trips	PM Trips	AM Trips In	AM Trips Out	PM Trips In	PM Trips Out	Daily Trips	AM Trips	PM Trips	AM Trips In	AM Trips Out	PM Trips In	PM Trips Out
770	Office	Business Park (1)	1,000 Sq Ft	General Urban/Suburban	218.02	Avg	12.44	0.40	0.42	2,714	87	92	53	34	42	50	2,714	87	92	53	34	42	50
									Grand Total	2,714	87	92	53	34	42	50	2,714	87	92	53	34	42	50

Notes:
(1) AM and/or PM rates correspond to peak hour of generator
(2) Land use was removed in *Trip Generation, 10 Edition,* trip generation data from the ITE *Trip Generation, 9th Edition*

Kimley»Horn

Project	Reagan Ranch				
Subject	Trip Generation for Business Park (NW Parcel)				
Designed by	TES	*Date*	August 10, 2020	*Job No.*	96956007
Checked by		*Date*		*Sheet No.*	1 of 1

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 10th Edition, Average Rates

Land Use Code - Business Park (770)

Independant Variable - 1000 Square Feet Gross Floor Feet (X)
Gross Floor Area = 218,018
X = 218.0
T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (700 Series Page 281)

Directional Distribution: 61% ent. 39% exit.
(T) = 0.40 (X) T = 87 Average Vehicle Trip Ends
(T) = 0.40 * (218.0) 53 entering 34 exiting

53 + 34 = 87

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (700 Series Page 282)

Directional Distribution: 46% ent. 54% exit.
(T) = 0.42 (X) T = 92 Average Vehicle Trip Ends
(T) = 0.42 * (218.0) 42 entering 50 exiting

42 + 50 = 92

Weekday (700 Series Page 280)

Average Weekday Directional Distribution: 50% ent. 50% exit.
(T) = 12.44 (X) T = 2714 Average Vehicle Trip Ends
(T) = 12.44 * (218.0) 1357 entering 1357 exiting

1357 + 1357 = 2714

1 Fill in all cells which are red.

Trip Generation Planner (ITE 10th Edition) - Summary Report

Weekday Trip Generation
Trips Based on Average Rates/Equations

Project Name **Reagan Ranch (NE Parcel)**
Project Number **096956007**

Kimley»Horn

ITE Code	Internal Capture Land Use	Land Use Description	Independent Variable	Setting/Location	No. of Units	Avg Rate or Eq	Rates: Daily Rate	Rates: AM Rate	Rates: PM Rate	Total Trips: Daily Trips	Total Trips: AM Trips	Total Trips: PM Trips	Total Trips: AM Trips In	Total Trips: AM Trips Out	Total Trips: PM Trips In	Total Trips: PM Trips Out	Net Trips after Internal Capture: Daily Trips	Net Trips after Internal Capture: AM Trips	Net Trips after Internal Capture: PM Trips	Net Trips after Internal Capture: AM Trips In	Net Trips after Internal Capture: AM Trips Out	Net Trips after Internal Capture: PM Trips In	Net Trips after Internal Capture: PM Trips Out
210	Residential	Single-Family Detached Housing	Dwelling Unit(s)	General Urban/Suburban	200	Eq	N/A	N/A	N/A	1,968	147	198	37	110	125	73	1,526	145	111	36	109	67	44
820	Retail	Shopping Center	1,000 Sq Ft GLA	General Urban/Suburban	160.52	Avg	37.75	0.94	3.81	6,060	151	612	94	57	294	318	5,590	149	525	93	56	265	260
		Total Office		1,000 Sq Ft																			
		Total Retail		1,000 Sq Ft	**160.52**					6,060	151	612	94	57	294	318	5,589	149	525	93	56	265	260
	Subtotal before Internal Capture	**Total Restaurant**		1,000 Sq Ft																			
		Total Ciema/Entertainment		Screen(s)																			
		Total Residential		Dwelling Unit(s)	**200**					1,968	147	198	37	110	125	73	1,525	145	111	36	109	67	44
		Total Hotel		Room(s)																			
		Total Other																					
									Grand Total	8,028	298	810	131	167	419	391	7,116	294	636	129	165	332	304

Notes:
(1) AM and/or PM rates correspond to peak hour of generator
(2) Land use was removed in *Trip Generation, 10 Edition,* trip generation data from the ITE *Trip Generation, 9th Edition*

Kimley»Horn

Project	Reagan Ranch				
Subject	Trip Generation for Single-Family Detached Housing (NE Parcel)				
Designed by	TES	*Date*	August 10, 2020	*Job No.*	96956007
Checked by		*Date*		*Sheet No.*	of

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 10th Edition, Fitted Curve Equations

Land Use Code - Single-Family Detached Housing (210)

Independant Variable - Dwelling Units (X)

X = 200
T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (200 Series Page 3)

Average Weekday
(T) = 0.71 (X) + 4.80
(T) = 0.71 * (200) + 4.80

Directional Distribution: 25% ent. 75% exit.
T = 147 Average Vehicle Trip Ends
37 entering 110 exiting

37 + 110 = 147

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (200 Series Page 4)

Average Weekday
Ln(T) = 0.96 Ln(X) + 0.20
Ln(T) = 0.96 * Ln(200) + 0.20

Directional Distribution: 63% ent. 37% exit.
T = 198 Average Vehicle Trip Ends
125 entering 73 exiting

125 + 73 = 198

Peak Hour of Generator, Saturday (200 Series Page 8)

Average Saturday
(T) = 0.84 (X) + 17.99
(T) = 0.84 * (200) + 17.99

Directional Distribution: 54% ent. 46% exit.
T = 186 Average Vehicle Trip Ends
100 entering 86 exiting

100 + 86 = 186

Weekday (200 Series Page 2)

Average Weekday
Ln(T) = 0.92 Ln(X) + 2.71
Ln(T) = 0.92 * Ln(200) + 2.71

Directional Distribution: 50% entering, 50% exiting
T = 1968 Average Vehicle Trip Ends
984 entering 984 exiting

984 + 984 = 1968

Kimley»Horn

Project	Reagan Ranch				
Subject	Trip Generation for Shopping Center (NE Parcel)				
Designed by	TES	*Date*	June 08, 2020	*Job No.*	096956007
Checked by		*Date*		*Sheet No.*	1 *of* 1

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 10th Edition, Average Rate Equations

Land Use Code - Shopping Center (820)

Independant Variable - 1000 Square Feet Gross Leasable Area (X)

Gross Leasable Area = 160,519 Square Feet
X = 160.519
T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (800 Series Page 139)

Average Weekday — Directional Distribution: 62% ent. 38% exit.
T = 0.94 * (X) — T = 151 Average Vehicle Trip Ends
T = 0.94 * 160.519 — 94 entering 57 exiting

94 + 57 = 151

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (800 Series page 140)

Average Weekday — Directional Distribution: 48% ent. 52% exit.
T = 3.81 * (X) — T = 612 Average Vehicle Trip Ends
T = 3.81 * 160.519 — 294 entering 318 exiting

294 + 318 = 612

Weekday (800 Series page 138)

Average Weekday — Directional Distribution: 50% entering, 50% exiting
T = 37.75 * (X) — T = 6060 Average Vehicle Trip Ends
T = 37.75 * 160.519 — 3030 entering 3030 exiting

3030 + 3030 = 6060

Non Pass-By Trip Volumes (Per ITE Trip Generation Handbook, 3rd Edition September 2017-Page 190)

AM Peak Hour = 66% Non-Pass By — PM Peak Hour = 66% Non-Pass By

	IN	Out	Total
AM Peak	62	38	100
PM Peak	194	210	404
Daily	2000	2000	4000

PM Peak Hour Rate Applied to Daily

Pass-By Trip Volumes (Per ITE Trip Generation Handbook, 3rd Edition September 2017 -Page 190)

AM Peak Hour = 34% Pass By — PM Peak Hour = 34% Pass By

	IN	Out	Total
AM Peak	32	19	52
PM Peak	100	108	208
Daily	1030	1030	2060

PM Peak Hour Rate Applied to Daily

Trip Generation Planner (ITE 10th Edition) - Summary Report

Weekday Trip Generation
Trips Based on Average Rates/Equations

Project Name **Reagan Ranch (South Parcel)**
Project Number **096956007**

Kimley»Horn

ITE Code	Internal Capture Land Use	Land Use Description	Independent Variable	Setting/Location	No. of Units	Avg Rate or Eq	Rates: Daily Rate	Rates: AM Rate	Rates: PM Rate	Total Trips: Daily Trips	Total Trips: AM Trips	Total Trips: PM Trips	Total Trips: AM Trips In	Total Trips: AM Trips Out	Total Trips: PM Trips In	Total Trips: PM Trips Out	Net Trips after Internal Capture: Daily Trips	Net Trips after Internal Capture: AM Trips	Net Trips after Internal Capture: PM Trips	Net Trips after Internal Capture: AM Trips In	Net Trips after Internal Capture: AM Trips Out	Net Trips after Internal Capture: PM Trips In	Net Trips after Internal Capture: PM Trips Out
210	Residential	Single-Family Detached Housing	Dwelling Unit(s)	General Urban/Suburban	719	Eq	N/A	N/A	N/A	6,384	515	675	129	386	425	250	5,354	506	468	126	380	277	191
220	Residential	Multifamily Housing (Low-Rise)	Dwelling Unit(s)	General Urban/Suburban	562	Avg	7.32	0.46	0.56	4,114	259	315	60	199	198	117	3,450	255	219	59	196	129	90
710	Office	General Office Building	1,000 Sq Ft	General Urban/Suburban	95.832	Eq	N/A	N/A	N/A	1,018	117	109	101	16	17	92	808	106	74	94	12	2	72
820	Retail	Shopping Center	1,000 Sq Ft GLA	General Urban/Suburban	416.98	Avg	37.75	0.94	3.81	15,740	392	1,589	243	149	763	826	13,824	374	1,275	233	141	669	606
		Total Office		1,000 Sq Ft	**95.832**					1,018	117	109	101	16	17	92	807	106	74	94	12	2	72
		Total Retail		1,000 Sq Ft	**416.98**					15,740	392	1,589	243	149	763	826	13,823	374	1,275	233	141	669	606
	Subtotal before Internal Capture	**Total Restaurant**		1,000 Sq Ft																			
		Total Ciema/Entertainment		Screen(s)																			
		Total Residential		Dwelling Unit(s)	**1281**					10,498	774	990	189	585	623	367	8,801	761	687	185	576	406	281
		Total Hotel		Room(s)																			
		Total Other																					
									Grand Total	27,256	1,283	2,688	533	750	1,403	1,285	23,436	1,241	2,036	512	729	1,077	959

Notes:
(1) AM and/or PM rates correspond to peak hour of generator
(2) Land use was removed in *Trip Generation, 10 Edition,* trip generation data from the ITE *Trip Generation, 9th Edition*

Kimley»Horn

Project	Reagan Ranch				
Subject	Trip Generation for Single-Family Detached Housing (South Parcel)				
Designed by	TES	*Date*	August 10, 2020	*Job No.*	96956007
Checked by		*Date*		*Sheet No.*	of

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 10th Edition, Fitted Curve Equations

Land Use Code - Single-Family Detached Housing (210)

Independant Variable - Dwelling Units (X)

X = 719
T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (200 Series Page 3)

Average Weekday
(T) = 0.71 (X) + 4.80
(T) = 0.71 * (719) + 4.80

Directional Distribution: 25% ent. 75% exit.
T = 515 Average Vehicle Trip Ends
129 entering 386 exiting

129 + 386 = 515

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (200 Series Page 4)

Average Weekday
Ln(T) = 0.96 Ln(X) + 0.20
Ln(T) = 0.96 * Ln(719) + 0.20

Directional Distribution: 63% ent. 37% exit.
T = 675 Average Vehicle Trip Ends
425 entering 250 exiting

425 + 250 = 675

Peak Hour of Generator, Saturday (200 Series Page 8)

Average Saturday
(T) = 0.84 (X) + 17.99
(T) = 0.84 * (719) + 17.99

Directional Distribution: 54% ent. 46% exit.
T = 622 Average Vehicle Trip Ends
336 entering 286 exiting

336 + 286 = 622

Weekday (200 Series Page 2)

Average Weekday
Ln(T) = 0.92 Ln(X) + 2.71
Ln(T) = 0.92 * Ln(719) + 2.71

Directional Distribution: 50% entering, 50% exiting
T = 6384 Average Vehicle Trip Ends
3192 entering 3192 exiting

3192 + 3192 = 6384

Kimley»Horn

Project	Reagan Ranch				
Subject	Trip Generation for Multifamily Housing (Low-Rise)(South Parcel)				
Designed by	TES	*Date*	August 10, 2020	*Job No.*	96956007
Checked by				*Sheet No.*	1 *of* 1

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 10th Edition, Average Rate Equations

Land Use Code - Multifamily Housing (Low-Rise) (220)

Independant Variable - Dwelling Units (X)

X = 562
T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (Series 200 Page 32)

Directional Distribution: 23% ent. 77% exit.

T = 0.46 * X
T = 0.46 * 562.0

T = 259 Average Vehicle Trip Ends
60 entering 199 exiting

60 + 199 = 259

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (Series 200 page 33)

Directional Distribution: 63% ent. 37% exit.

T = 0.56 * X
T = 0.56 * 562.0

T = 315 Average Vehicle Trip Ends
198 entering 117 exiting

198 + 117 = 315

Weekday (Series 200 Page 31)

Daily Weekday
T = 7.32 * X
T = 7.32* 562.0

Directional Distribution: 50% entering, 50% exiting
T = 4114 Average Vehicle Trip Ends
2057 entering 2057 exiting

2057 + 2057 = 4114

Peak Hour of Generator, Saturday (Series 200 Page 37)

Daily Weekday
T = 0.70 * X
T = 0.70 * 562.0

Directional Distribution: 50% ent. 50% exit.
T = 393 Average Vehicle Trip Ends
197 entering 197 exiting

197 + 197 = not ok

Kimley»Horn

Project	Reagan Ranch				
Subject	Trip Generation for Office Building (South Parcel)				
Designed by	TES	*Date*	August 10, 2020	*Job No.*	96956007
Checked by				*Sheet No.*	1 *of* 1

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 10th Edition, Fitted Curve Equations

Land Use Code - General Office Building (710)

Independent Variable - 1000 Square Feet (X)
SF = 95,832
X = 95.832
T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (700 Series Page 4)

T = 0.94 (X) + 26.49
T = 0.94 * (95.8) + 26.49

Directional Distribution: 86% ent. 14% exit.
T = 117 Average Vehicle Trip Ends
101 entering 16 exiting

101 + 16 = 117

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (700 Series Page 5)

Ln(T) = 0.95 Ln(X) + 0.36
Ln(T) = 0.95 * Ln(95.8) + 0.36

Directional Distribution: 16% ent. 84% exit.
T = 109 Average Vehicle Trip Ends
17 entering 92 exiting

17 + 92 = 109

Weekday (700 Series Page 3)

Average Weekday
Ln(T) = 0.97 Ln(X) + 2.50
Ln(T) = 0.97 * Ln(95.8) + 2.50

Directional Distribution: 50% entering, 50% exiting
T = 1018 Average Vehicle Trip Ends
509 entering 509 exiting

509 + 509 = 1018

Kimley»Horn

Project	Reagan Ranch				
Subject	Trip Generation for Shopping Center (South Parcel)				
Designed by	TES	*Date*	August 10, 2020	*Job No.*	096956007
Checked by		*Date*		*Sheet No.*	1 *of* 1

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 10th Edition, Average Rate Equations

Land Use Code - Shopping Center (820)

Independant Variable - 1000 Square Feet Gross Leasable Area (X)

Gross Leasable Area = 416,978 Square Feet
X = 416.978
T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (800 Series Page 139)

Average Weekday — Directional Distribution: 62% ent. 38% exit.
T = 0.94 * (X) — T = 392 Average Vehicle Trip Ends
T = 0.94 * 416.978 — 243 entering 149 exiting

243 + 149 = 392

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (800 Series page 140)

Average Weekday — Directional Distribution: 48% ent. 52% exit.
T = 3.81 * (X) — T = 1589 Average Vehicle Trip Ends
T = 3.81 * 416.978 — 763 entering 826 exiting

763 + 826 = 1589

Weekday (800 Series page 138)

Average Weekday — Directional Distribution: 50% entering, 50% exiting
T = 37.75 * (X) — T = 15740 Average Vehicle Trip Ends
T = 37.75 * 416.978 — 7870 entering 7870 exiting

7870 + 7870 = 15740

Non Pass-By Trip Volumes (Per ITE Trip Generation Handbook, 3rd Edition September 2017-Page 190)

AM Peak Hour = 66% Non-Pass By — PM Peak Hour = 66% Non-Pass By

	IN	Out	Total
AM Peak	160	98	259
PM Peak	504	545	1049
Daily	5194	5194	10388

PM Peak Hour Rate Applied to Daily

Pass-By Trip Volumes (Per ITE Trip Generation Handbook, 3rd Edition September 2017 -Page 190)

AM Peak Hour = 34% Pass By — PM Peak Hour = 34% Pass By

	IN	Out	Total
AM Peak	83	51	134
PM Peak	259	281	540
Daily	2676	2676	5352

PM Peak Hour Rate Applied to Daily

Kimley»Horn

Project	Reagan Ranch				
Subject	Trip Generation for Single-Family Detached Housing (2040 South Parcel)				
Designed by	TES	*Date*	August 10, 2020	*Job No.*	96956007
Checked by		*Date*		*Sheet No.*	of

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 10th Edition, Fitted Curve Equations

Land Use Code - Single-Family Detached Housing (210)

Independant Variable - Dwelling Units (X)

X = 1,123
T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (200 Series Page 3)

Average Weekday
(T) = 0.71 (X) + 4.80
(T) = 0.71 * (1123) + 4.80

Directional Distribution: 25% ent. 75% exit.
T = 802 Average Vehicle Trip Ends
201 entering 602 exiting

201 + 601 = 802

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (200 Series Page 4)

Average Weekday
Ln(T) = 0.96 Ln(X) + 0.20
Ln(T) = 0.96 * Ln(1123) + 0.20

Directional Distribution: 63% ent. 37% exit.
T = 1036 Average Vehicle Trip Ends
653 entering 383 exiting

653 + 383 = 1036

Peak Hour of Generator, Saturday (200 Series Page 8)

Average Saturday
(T) = 0.84 (X) + 17.99
(T) = 0.84 * (1123) + 17.99

Directional Distribution: 54% ent. 46% exit.
T = 961 Average Vehicle Trip Ends
519 entering 442 exiting

519 + 442 = 961

Weekday (200 Series Page 2)

Average Weekday
Ln(T) = 0.92 Ln(X) + 2.71
Ln(T) = 0.92 * Ln(1123) + 2.71

Directional Distribution: 50% entering, 50% exiting
T = 9622 Average Vehicle Trip Ends
4811 entering 4811 exiting

4811 + 4811 = 9622

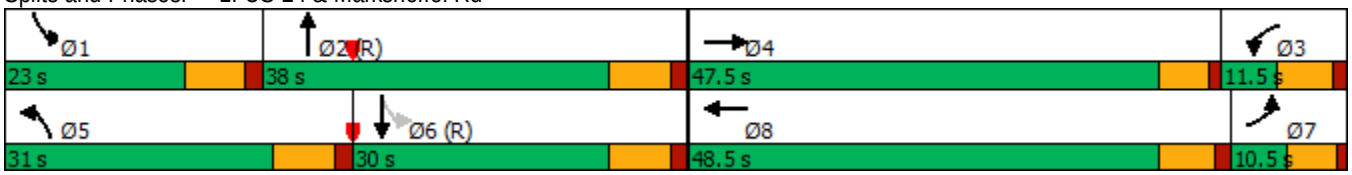
APPENDIX D

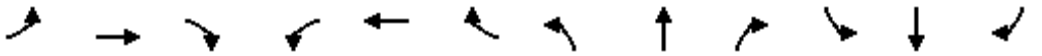
Intersection Analysis Worksheets

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	8	629	626	1	403	48	298	432	251	984	16
Future Volume (vph)	8	629	626	1	403	48	298	432	251	984	16
Turn Type	Prot	NA	Free	Prot	NA	Free	Prot	NA	pm+pt	NA	Free
Protected Phases	7	4		3	8		5	2	1	6	
Permitted Phases			Free			Free			6		Free
Detector Phase	7	4		3	8		5	2	1	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)	10.5	10.5		11.5	11.5		12.0	12.0	12.0	12.0	
Total Split (s)	10.5	47.5		11.5	48.5		31.0	38.0	23.0	30.0	
Total Split (%)	8.8%	39.6%		9.6%	40.4%		25.8%	31.7%	19.2%	25.0%	
Yellow Time (s)	4.5	4.5		5.0	5.0		5.5	5.5	5.5	5.5	
All-Red Time (s)	1.0	1.0		1.5	1.5		1.5	1.5	1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.5	5.5		6.5	6.5		7.0	7.0	7.0	7.0	
Lead/Lag	Lag	Lead		Lag	Lead		Lead	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	
Recall Mode	None	None		None	None		None	C-Max	None	C-Max	
Act Effct Green (s)	8.2	30.8	120.0	5.6	27.7	120.0	17.4	53.6	63.5	49.9	120.0
Actuated g/C Ratio	0.07	0.26	1.00	0.05	0.23	1.00	0.14	0.45	0.53	0.42	1.00
v/c Ratio	0.08	0.78	0.44	0.01	0.55	0.03	0.70	0.32	0.48	0.73	0.01
Control Delay	50.6	47.6	0.9	47.0	29.9	0.0	46.5	44.8	16.0	35.0	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.6	47.6	0.9	47.0	29.9	0.0	46.5	44.8	16.0	35.0	0.0
LOS	D	D	A	D	C	A	D	D	B	C	A
Approach Delay		24.5			26.8			45.5		30.7	
Approach LOS		C			C			D		C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 97 (81%), Referenced to phase 2:NBT and 6:SBTL, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.78	
Intersection Signal Delay: 31.0	Intersection LOS: C
Intersection Capacity Utilization 69.3%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 1: US-24 & Marksheffel Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	629	626	1	403	48	298	432	0	251	984	16
Future Volume (veh/h)	8	629	626	1	403	48	298	432	0	251	984	16
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	1811	1811	1811	1856	1856	1856	1737	1737	1737	1841	1841	1841
Adj Flow Rate, veh/h	9	676	0	1	443	0	320	465	0	267	1047	0
Peak Hour Factor	0.93	0.93	0.93	0.91	0.91	0.91	0.93	0.93	0.93	0.94	0.94	0.94
Percent Heavy Veh, %	6	6	6	3	3	3	11	11	11	4	4	4
Cap, veh/h	121	824		2	573		388	1446		559	1474	
Arrive On Green	0.07	0.24	0.00	0.00	0.16	0.00	0.12	0.44	0.00	0.10	0.42	0.00
Sat Flow, veh/h	1725	3441	1535	1767	3526	1572	3209	3300	1472	1753	3497	1560
Grp Volume(v), veh/h	9	676	0	1	443	0	320	465	0	267	1047	0
Grp Sat Flow(s),veh/h/ln	1725	1721	1535	1767	1763	1572	1605	1650	1472	1753	1749	1560
Q Serve(g_s), s	0.6	22.3	0.0	0.1	14.4	0.0	11.7	11.1	0.0	10.2	29.7	0.0
Cycle Q Clear(g_c), s	0.6	22.3	0.0	0.1	14.4	0.0	11.7	11.1	0.0	10.2	29.7	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	121	824		2	573		388	1446		559	1474	
V/C Ratio(X)	0.07	0.82		0.41	0.77		0.82	0.32		0.48	0.71	
Avail Cap(c_a), veh/h	121	1204		74	1234		642	1446		610	1474	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	52.2	43.2	0.0	59.9	48.1	0.0	51.5	22.0	0.0	16.4	28.7	0.0
Incr Delay (d2), s/veh	0.3	3.0	0.0	85.9	2.3	0.0	4.4	0.6	0.0	0.6	2.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	9.8	0.0	0.1	6.5	0.0	4.9	4.4	0.0	4.2	12.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.4	46.2	0.0	145.8	50.4	0.0	55.9	22.6	0.0	17.0	31.6	0.0
LnGrp LOS	D	D		F	D		E	C		B	C	
Approach Vol, veh/h		685	A		444	A		785	A		1314	A
Approach Delay, s/veh		46.3			50.6			36.2			28.6	
Approach LOS		D			D			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.5	59.6	6.7	34.2	21.5	57.6	14.9	26.0
Change Period (Y+Rc), s	7.0	7.0	6.5	5.5	7.0	7.0	6.5	* 6.5
Max Green Setting (Gmax), s	16.0	31.0	5.0	42.0	24.0	23.0	5.0	* 42
Max Q Clear Time (g_c+I1), s	12.2	13.1	2.1	24.3	13.7	31.7	2.6	16.4
Green Ext Time (p_c), s	0.3	2.9	0.0	4.4	0.8	0.0	0.0	3.1

Intersection Summary	
HCM 6th Ctrl Delay	37.2
HCM 6th LOS	D

Notes

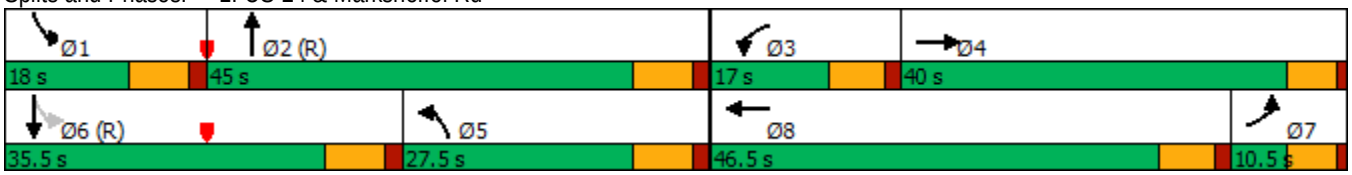
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

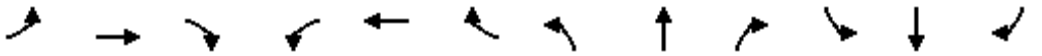
Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	451	385	10	677	145	507	897	6	114	428	12
Future Volume (vph)	13	451	385	10	677	145	507	897	6	114	428	12
Turn Type	Prot	NA	Free	Prot	NA	Free	Prot	NA	Free	pm+pt	NA	Free
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			Free			Free			Free	6		Free
Detector Phase	7	4		3	8		5	2		1	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)	10.5	10.5		11.5	11.5		12.0	12.0		12.0	12.0	
Total Split (s)	10.5	40.0		17.0	46.5		27.5	45.0		18.0	35.5	
Total Split (%)	8.8%	33.3%		14.2%	38.8%		22.9%	37.5%		15.0%	29.6%	
Yellow Time (s)	4.5	4.5		5.0	5.0		5.5	5.5		5.5	5.5	
All-Red Time (s)	1.0	1.0		1.5	1.5		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.5	5.5		6.5	6.5		7.0	7.0		7.0	7.0	
Lead/Lag	Lag	Lag		Lead	Lead		Lag	Lag		Lead	Lead	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Act Effct Green (s)	6.1	35.1	120.0	6.3	32.1	120.0	20.5	52.1	120.0	42.1	42.1	120.0
Actuated g/C Ratio	0.05	0.29	1.00	0.05	0.27	1.00	0.17	0.43	1.00	0.35	0.35	1.00
v/c Ratio	0.16	0.49	0.27	0.12	0.78	0.10	0.89	0.60	0.00	0.55	0.38	0.01
Control Delay	58.5	36.2	0.4	58.7	33.7	0.1	44.6	13.8	0.0	40.9	32.8	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	58.5	36.2	0.4	58.7	33.7	0.1	44.6	13.8	0.0	40.9	32.8	0.0
LOS	E	D	A	E	C	A	D	B	A	D	C	A
Approach Delay		20.3			28.2			24.8			33.7	
Approach LOS		C			C			C			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 13 (11%), Referenced to phase 2:NBT and 6:SBTL, Start of Green	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.89	
Intersection Signal Delay: 25.9	Intersection LOS: C
Intersection Capacity Utilization 66.9%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 1: US-24 & Marksheffel Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	451	385	10	677	145	507	897	6	114	428	12
Future Volume (veh/h)	13	451	385	10	677	145	507	897	6	114	428	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1870	1870	1870	1870	1870	1870	1856	1856	1856
Adj Flow Rate, veh/h	14	501	0	11	736	0	523	925	0	125	470	0
Peak Hour Factor	0.90	0.90	0.90	0.92	0.92	0.92	0.97	0.97	0.97	0.91	0.91	0.91
Percent Heavy Veh, %	3	3	3	2	2	2	2	2	2	3	3	3
Cap, veh/h	27	889		23	887		970	1568		196	837	
Arrive On Green	0.02	0.25	0.00	0.01	0.25	0.00	0.28	0.44	0.00	0.08	0.24	0.00
Sat Flow, veh/h	1767	3526	1572	1781	3554	1585	3456	3554	1585	1767	3526	1572
Grp Volume(v), veh/h	14	501	0	11	736	0	523	925	0	125	470	0
Grp Sat Flow(s),veh/h/ln	1767	1763	1572	1781	1777	1585	1728	1777	1585	1767	1763	1572
Q Serve(g_s), s	0.9	14.9	0.0	0.7	23.5	0.0	15.4	23.6	0.0	7.3	14.1	0.0
Cycle Q Clear(g_c), s	0.9	14.9	0.0	0.7	23.5	0.0	15.4	23.6	0.0	7.3	14.1	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	27	889		23	887		970	1568		196	837	
V/C Ratio(X)	0.51	0.56		0.48	0.83		0.54	0.59		0.64	0.56	
Avail Cap(c_a), veh/h	74	1014		156	1185		970	1568		222	837	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	58.6	39.1	0.0	58.8	42.6	0.0	36.6	25.3	0.0	42.6	40.3	0.0
Incr Delay (d2), s/veh	13.9	0.6	0.0	15.0	3.8	0.0	0.6	1.6	0.0	4.9	2.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	6.5	0.0	0.4	10.7	0.0	6.6	10.2	0.0	3.5	6.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	72.5	39.7	0.0	73.8	46.5	0.0	37.2	27.0	0.0	47.5	43.0	0.0
LnGrp LOS	E	D		E	D		D	C		D	D	
Approach Vol, veh/h		515	A		747	A		1448	A		595	A
Approach Delay, s/veh		40.6			46.9			30.7			43.9	
Approach LOS		D			D			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.2	59.9	8.0	35.8	40.7	35.5	7.4	36.4
Change Period (Y+Rc), s	7.0	7.0	6.5	5.5	7.0	7.0	5.5	6.5
Max Green Setting (Gmax), s	11.0	38.0	10.5	34.5	20.5	28.5	5.0	40.0
Max Q Clear Time (g_c+I1), s	9.3	25.6	2.7	16.9	17.4	16.1	2.9	25.5
Green Ext Time (p_c), s	0.0	5.2	0.0	3.1	0.7	2.5	0.0	4.4

Intersection Summary	
HCM 6th Ctrl Delay	38.2
HCM 6th LOS	D

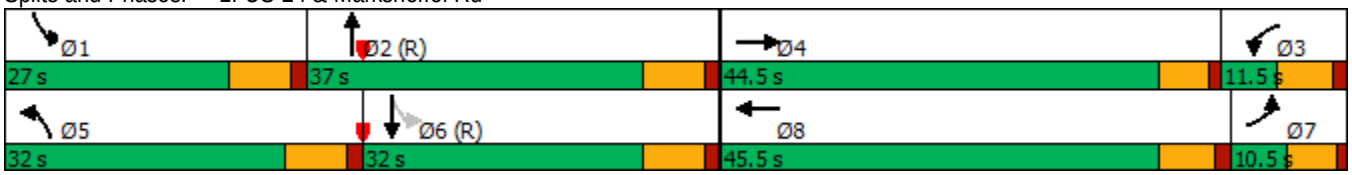
Notes

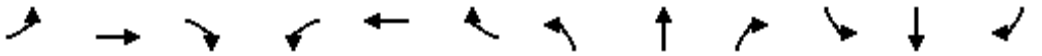
Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	750	665	5	505	80	320	490	195	295	1075	20
Future Volume (vph)	10	750	665	5	505	80	320	490	195	295	1075	20
Turn Type	Prot	NA	Free	Prot	NA	Free	Prot	NA	Free	pm+pt	NA	Free
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			Free			Free			Free	6		Free
Detector Phase	7	4		3	8		5	2		1	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)	10.5	10.5		11.5	11.5		12.0	12.0		12.0	12.0	
Total Split (s)	10.5	44.5		11.5	45.5		32.0	37.0		27.0	32.0	
Total Split (%)	8.8%	37.1%		9.6%	37.9%		26.7%	30.8%		22.5%	26.7%	
Yellow Time (s)	4.5	4.5		5.0	5.0		5.5	5.5		5.5	5.5	
All-Red Time (s)	1.0	1.0		1.5	1.5		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.5	5.5		6.5	6.5		7.0	7.0		7.0	7.0	
Lead/Lag	Lag	Lead		Lag	Lead		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Act Effct Green (s)	7.3	34.6	120.0	5.5	32.4	120.0	18.3	47.3	120.0	61.5	45.3	120.0
Actuated g/C Ratio	0.06	0.29	1.00	0.05	0.27	1.00	0.15	0.39	1.00	0.51	0.38	1.00
v/c Ratio	0.11	0.82	0.47	0.06	0.59	0.06	0.72	0.41	0.14	0.62	0.87	0.01
Control Delay	53.7	47.1	1.0	48.0	31.6	0.1	45.2	58.0	0.2	20.7	44.6	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	53.7	47.1	1.0	48.0	31.6	0.1	45.2	58.0	0.2	20.7	44.6	0.0
LOS	D	D	A	D	C	A	D	E	A	C	D	A
Approach Delay		25.7			27.5			42.7			38.9	
Approach LOS		C			C			D			D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 105 (88%), Referenced to phase 2:NBT and 6:SBTL, Start of Green	
Natural Cycle: 100	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.87	
Intersection Signal Delay: 33.9	Intersection LOS: C
Intersection Capacity Utilization 75.8%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 1: US-24 & Marksheffel Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	750	665	5	505	80	320	490	195	295	1075	20
Future Volume (veh/h)	10	750	665	5	505	80	320	490	195	295	1075	20
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	1811	1811	1811	1856	1856	1856	1737	1737	1737	1841	1841	1841
Adj Flow Rate, veh/h	11	806	0	5	555	0	344	527	0	314	1144	0
Peak Hour Factor	0.93	0.93	0.93	0.91	0.91	0.91	0.93	0.93	0.93	0.94	0.94	0.94
Percent Heavy Veh, %	6	6	6	3	3	3	11	11	11	4	4	4
Cap, veh/h	127	938		11	694		414	1240		507	1313	
Arrive On Green	0.07	0.27	0.00	0.01	0.20	0.00	0.13	0.38	0.00	0.13	0.38	0.00
Sat Flow, veh/h	1725	3441	1535	1767	3526	1572	3209	3300	1472	1753	3497	1560
Grp Volume(v), veh/h	11	806	0	5	555	0	344	527	0	314	1144	0
Grp Sat Flow(s),veh/h/ln	1725	1721	1535	1767	1763	1572	1605	1650	1472	1753	1749	1560
Q Serve(g_s), s	0.7	26.7	0.0	0.3	18.0	0.0	12.5	14.2	0.0	13.0	36.4	0.0
Cycle Q Clear(g_c), s	0.7	26.7	0.0	0.3	18.0	0.0	12.5	14.2	0.0	13.0	36.4	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	127	938		11	694		414	1240		507	1313	
V/C Ratio(X)	0.09	0.86		0.44	0.80		0.83	0.43		0.62	0.87	
Avail Cap(c_a), veh/h	127	1118		74	1146		669	1240		574	1313	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	51.8	41.4	0.0	59.4	45.9	0.0	51.0	27.8	0.0	19.3	34.8	0.0
Incr Delay (d2), s/veh	0.3	6.0	0.0	24.8	2.2	0.0	4.8	1.1	0.0	1.7	8.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	12.0	0.0	0.2	8.1	0.0	5.3	5.8	0.0	5.4	16.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.1	47.4	0.0	84.2	48.1	0.0	55.8	28.9	0.0	21.0	42.9	0.0
LnGrp LOS	D	D		F	D		E	C		C	D	
Approach Vol, veh/h		817	A		560	A		871	A		1458	A
Approach Delay, s/veh		47.5			48.4			39.5			38.2	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	22.4	52.1	7.3	38.2	22.5	52.0	15.4	30.1
Change Period (Y+Rc), s	7.0	7.0	6.5	5.5	7.0	7.0	6.5	* 6.5
Max Green Setting (Gmax), s	20.0	30.0	5.0	39.0	25.0	25.0	5.0	* 39
Max Q Clear Time (g_c+I1), s	15.0	16.2	2.3	28.7	14.5	38.4	2.7	20.0
Green Ext Time (p_c), s	0.4	3.0	0.0	4.0	0.9	0.0	0.0	3.6

Intersection Summary	
HCM 6th Ctrl Delay	42.1
HCM 6th LOS	D

Notes

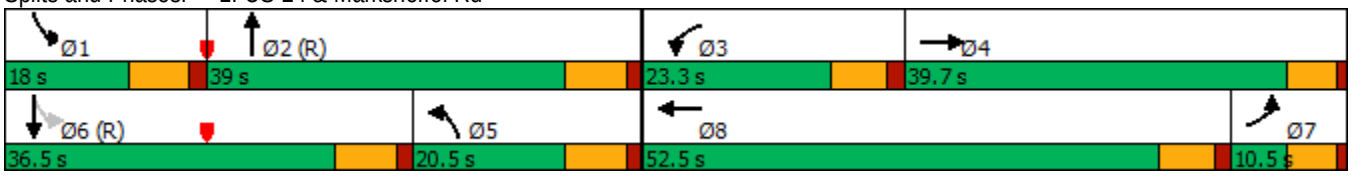
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

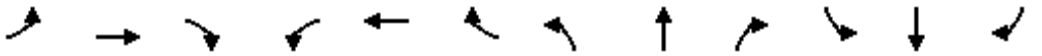
Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	605	410	15	800	180	540	990	300	165	495	15
Future Volume (vph)	15	605	410	15	800	180	540	990	300	165	495	15
Turn Type	Prot	NA	Free	Prot	NA	Free	Prot	NA	Free	pm+pt	NA	Free
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			Free			Free			Free	6		Free
Detector Phase	7	4		3	8		5	2		1	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)	10.5	10.5		11.5	11.5		12.0	12.0		12.0	12.0	
Total Split (s)	10.5	39.7		23.3	52.5		20.5	39.0		18.0	36.5	
Total Split (%)	8.8%	33.1%		19.4%	43.8%		17.1%	32.5%		15.0%	30.4%	
Yellow Time (s)	4.5	4.5		5.0	5.0		5.5	5.5		5.5	5.5	
All-Red Time (s)	1.0	1.0		1.5	1.5		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.5	5.5		6.5	6.5		7.0	7.0		7.0	7.0	
Lead/Lag	Lag	Lag		Lead	Lead		Lag	Lag		Lead	Lead	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Act Effct Green (s)	6.3	37.7	120.0	6.7	37.5	120.0	13.5	44.5	120.0	43.5	43.5	120.0
Actuated g/C Ratio	0.05	0.31	1.00	0.06	0.31	1.00	0.11	0.37	1.00	0.36	0.36	1.00
v/c Ratio	0.18	0.61	0.29	0.16	0.79	0.12	1.44	0.78	0.20	0.72	0.43	0.01
Control Delay	59.0	37.1	0.5	67.0	23.7	0.1	235.9	33.6	0.0	48.3	32.6	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	59.0	37.1	0.5	67.0	23.7	0.1	235.9	33.6	0.0	48.3	32.6	0.0
LOS	E	D	A	E	C	A	F	C	A	D	C	A
Approach Delay		22.8			20.0			87.8			35.7	
Approach LOS		C			C			F			D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 12 (10%), Referenced to phase 2:NBT and 6:SBTL, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.44	
Intersection Signal Delay: 49.4	Intersection LOS: D
Intersection Capacity Utilization 75.7%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 1: US-24 & Marksheffel Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	605	410	15	800	180	540	990	300	165	495	15
Future Volume (veh/h)	15	605	410	15	800	180	540	990	300	165	495	15
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1870	1870	1870	1870	1870	1870	1856	1856	1856
Adj Flow Rate, veh/h	17	672	0	16	870	0	557	1021	0	181	544	0
Peak Hour Factor	0.90	0.90	0.90	0.92	0.92	0.92	0.97	0.97	0.97	0.91	0.91	0.91
Percent Heavy Veh, %	3	3	3	2	2	2	2	2	2	3	3	3
Cap, veh/h	32	1037		31	1042		782	1352		222	867	
Arrive On Green	0.02	0.29	0.00	0.02	0.29	0.00	0.23	0.38	0.00	0.09	0.25	0.00
Sat Flow, veh/h	1767	3526	1572	1781	3554	1585	3456	3554	1585	1767	3526	1572
Grp Volume(v), veh/h	17	672	0	16	870	0	557	1021	0	181	544	0
Grp Sat Flow(s),veh/h/ln	1767	1763	1572	1781	1777	1585	1728	1777	1585	1767	1763	1572
Q Serve(g_s), s	1.1	20.0	0.0	1.1	27.5	0.0	17.8	30.0	0.0	10.9	16.5	0.0
Cycle Q Clear(g_c), s	1.1	20.0	0.0	1.1	27.5	0.0	17.8	30.0	0.0	10.9	16.5	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	32	1037		31	1042		782	1352		222	867	
V/C Ratio(X)	0.53	0.65		0.52	0.83		0.71	0.76		0.82	0.63	
Avail Cap(c_a), veh/h	74	1037		249	1362		782	1352		222	867	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	58.4	36.9	0.0	58.5	39.7	0.0	42.8	32.3	0.0	43.1	40.4	0.0
Incr Delay (d2), s/veh	13.2	1.4	0.0	13.0	3.6	0.0	3.1	4.0	0.0	20.4	3.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	8.8	0.0	0.6	12.4	0.0	7.9	13.5	0.0	6.0	7.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	71.6	38.4	0.0	71.5	43.3	0.0	45.9	36.3	0.0	63.5	43.8	0.0
LnGrp LOS	E	D		E	D		D	D		E	D	
Approach Vol, veh/h		689	A		886	A		1578	A		725	A
Approach Delay, s/veh		39.2			43.8			39.7			48.7	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.0	52.7	8.6	40.8	34.2	36.5	7.7	41.7
Change Period (Y+Rc), s	7.0	7.0	6.5	5.5	7.0	7.0	5.5	6.5
Max Green Setting (Gmax), s	11.0	32.0	16.8	34.2	13.5	29.5	5.0	46.0
Max Q Clear Time (g_c+I1), s	12.9	32.0	3.1	22.0	19.8	18.5	3.1	29.5
Green Ext Time (p_c), s	0.0	0.0	0.0	3.7	0.0	2.7	0.0	5.7

Intersection Summary	
HCM 6th Ctrl Delay	42.2
HCM 6th LOS	D

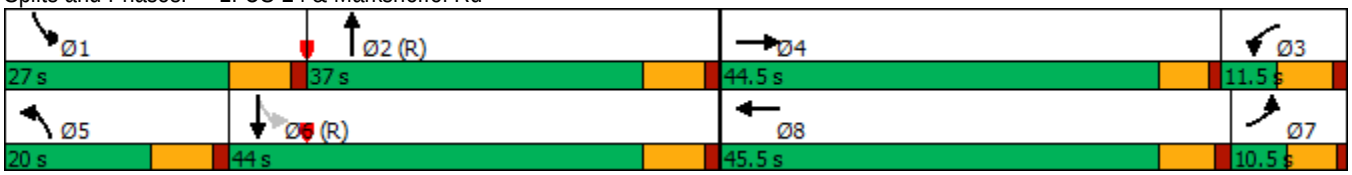
Notes

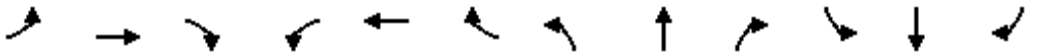
Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	960	665	5	785	130	320	490	195	335	1075	20
Future Volume (vph)	10	960	665	5	785	130	320	490	195	335	1075	20
Turn Type	Prot	NA	Free	Prot	NA	Free	Prot	NA	Free	pm+pt	NA	Free
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			Free			Free			Free	6		Free
Detector Phase	7	4		3	8		5	2		1	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)	10.5	10.5		11.5	11.5		12.0	12.0		12.0	12.0	
Total Split (s)	10.5	44.5		11.5	45.5		20.0	37.0		27.0	44.0	
Total Split (%)	8.8%	37.1%		9.6%	37.9%		16.7%	30.8%		22.5%	36.7%	
Yellow Time (s)	4.5	4.5		5.0	5.0		5.5	5.5		5.5	5.5	
All-Red Time (s)	1.0	1.0		1.5	1.5		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.5	5.5		6.5	6.5		7.0	7.0		7.0	7.0	
Lead/Lag	Lag	Lead		Lag	Lead		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Act Effct Green (s)	5.4	38.9	120.0	5.1	38.1	120.0	18.7	40.1	120.0	59.8	40.6	120.0
Actuated g/C Ratio	0.04	0.32	1.00	0.04	0.32	1.00	0.16	0.33	1.00	0.50	0.34	1.00
v/c Ratio	0.14	0.93	0.47	0.07	0.78	0.09	0.70	0.48	0.14	0.73	0.97	0.01
Control Delay	59.6	55.0	1.0	42.6	23.1	0.1	50.4	64.5	0.2	26.6	60.6	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	59.6	55.0	1.0	42.6	23.1	0.1	50.4	64.5	0.2	26.6	60.6	0.0
LOS	E	D	A	D	C	A	D	E	A	C	E	A
Approach Delay		33.1			19.9			47.5			51.8	
Approach LOS		C			B			D			D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 105 (88%), Referenced to phase 2:NBT and 6:SBTL, Start of Green	
Natural Cycle: 120	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.97	
Intersection Signal Delay: 38.8	Intersection LOS: D
Intersection Capacity Utilization 81.6%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 1: US-24 & Marksheffel Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	960	665	5	785	130	320	490	195	335	1075	20
Future Volume (veh/h)	10	960	665	5	785	130	320	490	195	335	1075	20
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	1811	1811	1811	1856	1856	1856	1737	1737	1737	1841	1841	1841
Adj Flow Rate, veh/h	11	1032	0	5	863	0	344	527	0	356	1144	0
Peak Hour Factor	0.93	0.93	0.93	0.91	0.91	0.91	0.93	0.93	0.93	0.94	0.94	0.94
Percent Heavy Veh, %	6	6	6	3	3	3	11	11	11	4	4	4
Cap, veh/h	60	1098		11	995		348	998		479	1222	
Arrive On Green	0.03	0.32	0.00	0.01	0.28	0.00	0.11	0.30	0.00	0.16	0.35	0.00
Sat Flow, veh/h	1725	3441	1535	1767	3526	1572	3209	3300	1472	1753	3497	1560
Grp Volume(v), veh/h	11	1032	0	5	863	0	344	527	0	356	1144	0
Grp Sat Flow(s),veh/h/ln	1725	1721	1535	1767	1763	1572	1605	1650	1472	1753	1749	1560
Q Serve(g_s), s	0.7	35.0	0.0	0.3	27.9	0.0	12.8	15.9	0.0	16.4	38.0	0.0
Cycle Q Clear(g_c), s	0.7	35.0	0.0	0.3	27.9	0.0	12.8	15.9	0.0	16.4	38.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	60	1098		11	995		348	998		479	1222	
V/C Ratio(X)	0.18	0.94		0.44	0.87		0.99	0.53		0.74	0.94	
Avail Cap(c_a), veh/h	72	1118		74	1146		348	998		499	1222	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	56.2	39.7	0.0	59.4	40.9	0.0	53.4	34.7	0.0	23.7	37.7	0.0
Incr Delay (d2), s/veh	1.4	14.6	0.0	24.8	6.5	0.0	45.3	2.0	0.0	5.7	14.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	16.8	0.0	0.2	12.9	0.0	7.4	6.7	0.0	7.4	18.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.7	54.3	0.0	84.2	47.4	0.0	98.7	36.7	0.0	29.4	52.1	0.0
LnGrp LOS	E	D		F	D		F	D		C	D	
Approach Vol, veh/h		1043	A		868	A		871	A		1500	A
Approach Delay, s/veh		54.3			47.7			61.2			46.7	
Approach LOS		D			D			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	25.6	43.3	7.3	43.8	20.0	48.9	10.7	40.4
Change Period (Y+Rc), s	7.0	7.0	6.5	5.5	7.0	7.0	6.5	* 6.5
Max Green Setting (Gmax), s	20.0	30.0	5.0	39.0	13.0	37.0	5.0	* 39
Max Q Clear Time (g_c+I1), s	18.4	17.9	2.3	37.0	14.8	40.0	2.7	29.9
Green Ext Time (p_c), s	0.2	2.8	0.0	1.3	0.0	0.0	0.0	4.0

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

Notes

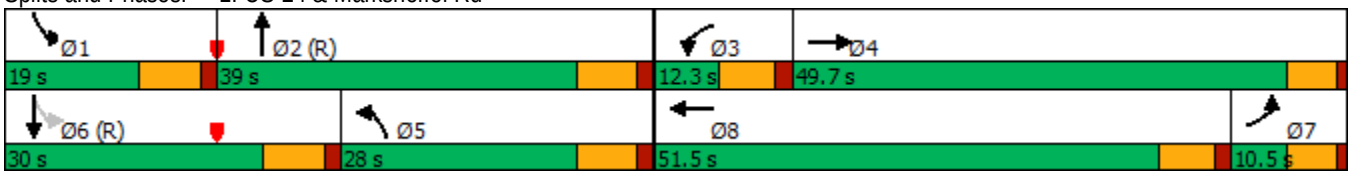
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

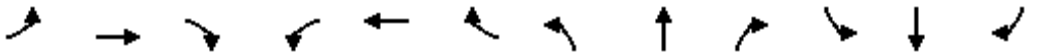
Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	1045	410	15	1195	250	540	990	300	240	495	15
Future Volume (vph)	15	1045	410	15	1195	250	540	990	300	240	495	15
Turn Type	Prot	NA	Free	Prot	NA	Free	Prot	NA	Free	pm+pt	NA	Free
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			Free			Free			Free	6		Free
Detector Phase	7	4		3	8		5	2		1	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)	10.5	10.5		11.5	11.5		12.0	12.0		12.0	12.0	
Total Split (s)	10.5	49.7		12.3	51.5		28.0	39.0		19.0	30.0	
Total Split (%)	8.8%	41.4%		10.3%	42.9%		23.3%	32.5%		15.8%	25.0%	
Yellow Time (s)	4.5	4.5		5.0	5.0		5.5	5.5		5.5	5.5	
All-Red Time (s)	1.0	1.0		1.5	1.5		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.5	5.5		6.5	6.5		7.0	7.0		7.0	7.0	
Lead/Lag	Lag	Lag		Lead	Lead		Lag	Lag		Lead	Lead	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Act Effct Green (s)	5.0	45.7	120.0	5.7	45.4	120.0	21.0	32.0	120.0	28.9	28.9	120.0
Actuated g/C Ratio	0.04	0.38	1.00	0.05	0.38	1.00	0.18	0.27	1.00	0.24	0.24	1.00
v/c Ratio	0.23	0.87	0.29	0.19	0.97	0.17	0.93	1.08	0.20	0.74	0.64	0.01
Control Delay	63.5	43.0	0.5	59.8	30.8	0.0	52.1	80.9	0.0	56.5	46.1	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	63.5	43.0	0.5	59.8	30.8	0.0	52.1	80.9	0.0	56.5	46.1	0.0
LOS	E	D	A	E	C	A	D	F	A	E	D	A
Approach Delay		31.3			25.9			59.1			48.6	
Approach LOS		C			C			E			D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 12 (10%), Referenced to phase 2:NBT and 6:SBTL, Start of Green	
Natural Cycle: 140	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.08	
Intersection Signal Delay: 41.1	Intersection LOS: D
Intersection Capacity Utilization 90.8%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 1: US-24 & Marksheffel Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	1045	410	15	1195	250	540	990	300	240	495	15
Future Volume (veh/h)	15	1045	410	15	1195	250	540	990	300	240	495	15
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1870	1870	1870	1870	1870	1870	1856	1856	1856
Adj Flow Rate, veh/h	17	1161	0	16	1299	0	557	1021	0	264	544	0
Peak Hour Factor	0.90	0.90	0.90	0.92	0.92	0.92	0.97	0.97	0.97	0.91	0.91	0.91
Percent Heavy Veh, %	3	3	3	2	2	2	2	2	2	3	3	3
Cap, veh/h	32	1325		31	1333		686	1032		237	676	
Arrive On Green	0.02	0.38	0.00	0.02	0.38	0.00	0.20	0.29	0.00	0.10	0.19	0.00
Sat Flow, veh/h	1767	3526	1572	1781	3554	1585	3456	3554	1585	1767	3526	1572
Grp Volume(v), veh/h	17	1161	0	16	1299	0	557	1021	0	264	544	0
Grp Sat Flow(s),veh/h/ln	1767	1763	1572	1781	1777	1585	1728	1777	1585	1767	1763	1572
Q Serve(g_s), s	1.1	36.8	0.0	1.1	43.2	0.0	18.5	34.3	0.0	12.0	17.7	0.0
Cycle Q Clear(g_c), s	1.1	36.8	0.0	1.1	43.2	0.0	18.5	34.3	0.0	12.0	17.7	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	32	1325		31	1333		686	1032		237	676	
V/C Ratio(X)	0.53	0.88		0.52	0.97		0.81	0.99		1.12	0.81	
Avail Cap(c_a), veh/h	74	1325		86	1333		686	1032		237	676	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	58.4	34.9	0.0	58.5	36.9	0.0	45.9	42.4	0.0	51.0	46.4	0.0
Incr Delay (d2), s/veh	13.2	6.9	0.0	13.0	18.8	0.0	7.3	25.6	0.0	92.9	9.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	16.8	0.0	0.6	21.9	0.0	8.6	18.5	0.0	7.4	8.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	71.6	41.8	0.0	71.5	55.8	0.0	53.3	68.0	0.0	144.0	56.2	0.0
LnGrp LOS	E	D		E	E		D	E		F	E	
Approach Vol, veh/h		1178	A		1315	A		1578	A		808	A
Approach Delay, s/veh		42.2			56.0			62.8			84.9	
Approach LOS		D			E			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.0	41.8	8.6	50.6	30.8	30.0	7.7	51.5
Change Period (Y+Rc), s	7.0	7.0	6.5	5.5	7.0	7.0	5.5	6.5
Max Green Setting (Gmax), s	12.0	32.0	5.8	44.2	21.0	23.0	5.0	45.0
Max Q Clear Time (g_c+I1), s	14.0	36.3	3.1	38.8	20.5	19.7	3.1	45.2
Green Ext Time (p_c), s	0.0	0.0	0.0	3.5	0.1	1.1	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	59.7
HCM 6th LOS	E

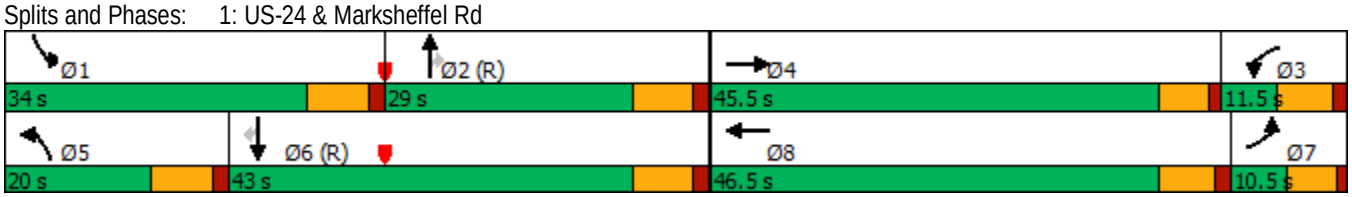
Notes

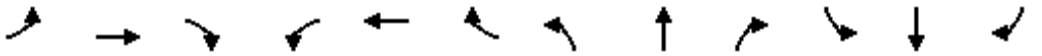
Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	960	665	5	785	130	320	490	195	335	1075	20
Future Volume (vph)	10	960	665	5	785	130	320	490	195	335	1075	20
Turn Type	Prot	NA	Free	Prot	NA	Free	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			Free			Free			2			6
Detector Phase	7	4		3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.5	10.5		11.5	11.5		12.0	12.0	12.0	12.0	12.0	12.0
Total Split (s)	10.5	45.5		11.5	46.5		20.0	29.0	29.0	34.0	43.0	43.0
Total Split (%)	8.8%	37.9%		9.6%	38.8%		16.7%	24.2%	24.2%	28.3%	35.8%	35.8%
Yellow Time (s)	4.5	4.5		5.0	5.0		5.5	5.5	5.5	5.5	5.5	5.5
All-Red Time (s)	1.0	1.0		1.5	1.5		1.5	1.5	1.5	1.5	1.5	1.5
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)	5.5	5.5		6.5	6.5		7.0	7.0	7.0	7.0	7.0	7.0
Lead/Lag	Lag	Lead		Lag	Lead		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None		None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	5.4	39.6	120.0	5.1	38.8	120.0	18.7	40.6	40.6	18.0	39.9	39.9
Actuated g/C Ratio	0.04	0.33	1.00	0.04	0.32	1.00	0.16	0.34	0.34	0.15	0.33	0.33
v/c Ratio	0.14	0.92	0.47	0.07	0.76	0.09	0.70	0.48	0.33	0.71	0.99	0.03
Control Delay	59.6	52.1	1.0	50.0	30.9	0.1	47.7	61.5	34.4	56.2	65.0	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.6	52.1	1.0	50.0	30.9	0.1	47.7	61.5	34.4	56.2	65.0	0.1
LOS	E	D	A	D	C	A	D	E	C	E	E	A
Approach Delay		31.4			26.7			51.8			62.0	
Approach LOS		C			C			D			E	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 105 (88%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 120	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.99	
Intersection Signal Delay: 43.3	Intersection LOS: D
Intersection Capacity Utilization 81.6%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 1: US-24 & Marksheffel Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	960	665	5	785	130	320	490	195	335	1075	20
Future Volume (veh/h)	10	960	665	5	785	130	320	490	195	335	1075	20
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	1811	1811	1811	1856	1856	1856	1737	1737	1737	1841	1841	1841
Adj Flow Rate, veh/h	11	1032	0	5	863	0	344	527	0	356	1144	0
Peak Hour Factor	0.93	0.93	0.93	0.91	0.91	0.91	0.93	0.93	0.93	0.94	0.94	0.94
Percent Heavy Veh, %	6	6	6	3	3	3	11	11	11	4	4	4
Cap, veh/h	64	1113		11	1002		348	1077		433	1208	
Arrive On Green	0.04	0.32	0.00	0.01	0.28	0.00	0.11	0.33	0.00	0.13	0.35	0.00
Sat Flow, veh/h	1725	3441	1535	1767	3526	1572	3209	3300	1472	3401	3497	1560
Grp Volume(v), veh/h	11	1032	0	5	863	0	344	527	0	356	1144	0
Grp Sat Flow(s),veh/h/ln	1725	1721	1535	1767	1763	1572	1605	1650	1472	1700	1749	1560
Q Serve(g_s), s	0.7	34.8	0.0	0.3	27.8	0.0	12.8	15.4	0.0	12.2	38.2	0.0
Cycle Q Clear(g_c), s	0.7	34.8	0.0	0.3	27.8	0.0	12.8	15.4	0.0	12.2	38.2	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	64	1113		11	1002		348	1077		433	1208	
V/C Ratio(X)	0.17	0.93		0.44	0.86		0.99	0.49		0.82	0.95	
Avail Cap(c_a), veh/h	72	1147		74	1175		348	1077		765	1208	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	56.0	39.2	0.0	59.4	40.7	0.0	53.4	32.4	0.0	51.0	38.2	0.0
Incr Delay (d2), s/veh	1.3	12.6	0.0	24.8	5.9	0.0	45.3	1.6	0.0	4.0	16.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	16.4	0.0	0.2	12.8	0.0	7.4	6.4	0.0	5.4	18.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.2	51.8	0.0	84.2	46.6	0.0	98.7	34.0	0.0	55.0	54.2	0.0
LnGrp LOS	E	D		F	D		F	C		D	D	
Approach Vol, veh/h		1043	A		868	A		871	A		1500	A
Approach Delay, s/veh		51.9			46.9			59.6			54.4	
Approach LOS		D			D			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	22.3	46.2	7.3	44.3	20.0	48.4	11.0	40.6
Change Period (Y+Rc), s	7.0	7.0	6.5	5.5	7.0	7.0	6.5	* 6.5
Max Green Setting (Gmax), s	27.0	22.0	5.0	40.0	13.0	36.0	5.0	* 40
Max Q Clear Time (g_c+I1), s	14.2	17.4	2.3	36.8	14.8	40.2	2.7	29.8
Green Ext Time (p_c), s	1.0	1.4	0.0	2.0	0.0	0.0	0.0	4.3

Intersection Summary	
HCM 6th Ctrl Delay	53.3
HCM 6th LOS	D

Notes

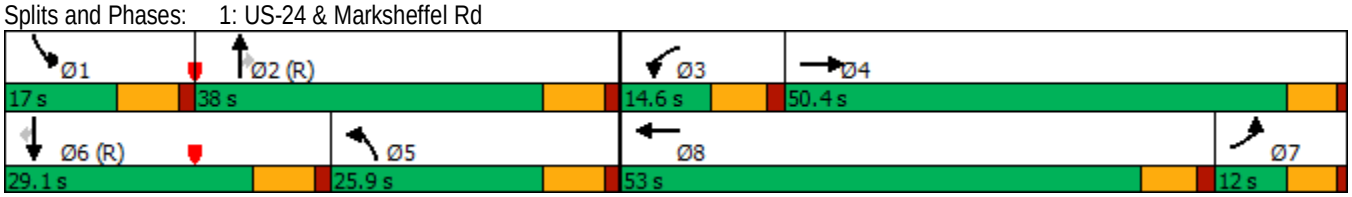
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

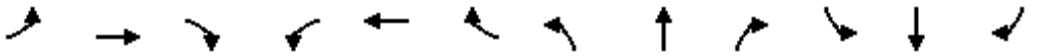
Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	1045	410	15	1195	250	540	990	300	240	495	15
Future Volume (vph)	15	1045	410	15	1195	250	540	990	300	240	495	15
Turn Type	Prot	NA	Free	Prot	NA	Free	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			Free			Free			2			6
Detector Phase	7	4		3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.5	10.5		11.5	11.5		12.0	12.0	12.0	12.0	12.0	12.0
Total Split (s)	12.0	50.4		14.6	53.0		25.9	38.0	38.0	17.0	29.1	29.1
Total Split (%)	10.0%	42.0%		12.2%	44.2%		21.6%	31.7%	31.7%	14.2%	24.3%	24.3%
Yellow Time (s)	4.5	4.5		5.0	5.0		5.5	5.5	5.5	5.5	5.5	5.5
All-Red Time (s)	1.0	1.0		1.5	1.5		1.5	1.5	1.5	1.5	1.5	1.5
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)	5.5	5.5		6.5	6.5		7.0	7.0	7.0	7.0	7.0	7.0
Lead/Lag	Lag	Lag		Lead	Lead		Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None		None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	6.2	46.6	120.0	6.6	46.5	120.0	18.9	35.6	35.6	12.6	29.3	29.3
Actuated g/C Ratio	0.05	0.39	1.00	0.06	0.39	1.00	0.16	0.30	0.30	0.10	0.24	0.24
v/c Ratio	0.19	0.85	0.29	0.16	0.95	0.17	1.03	0.97	0.50	0.74	0.64	0.03
Control Delay	59.4	41.1	0.5	60.1	47.0	0.1	70.3	47.4	19.8	65.7	45.8	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.4	41.1	0.5	60.1	47.0	0.1	70.3	47.4	19.8	65.7	45.8	0.1
LOS	E	D	A	E	D	A	E	D	B	E	D	A
Approach Delay		30.0			39.1			49.6			51.3	
Approach LOS		C			D			D			D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 12 (10%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 110	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.03	
Intersection Signal Delay: 41.6	Intersection LOS: D
Intersection Capacity Utilization 84.3%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 1: US-24 & Marksheffel Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	1045	410	15	1195	250	540	990	300	240	495	15
Future Volume (veh/h)	15	1045	410	15	1195	250	540	990	300	240	495	15
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1870	1870	1870	1870	1870	1870	1856	1856	1856
Adj Flow Rate, veh/h	17	1161	0	16	1299	0	557	1021	0	264	544	0
Peak Hour Factor	0.90	0.90	0.90	0.92	0.92	0.92	0.97	0.97	0.97	0.91	0.91	0.91
Percent Heavy Veh, %	3	3	3	2	2	2	2	2	2	3	3	3
Cap, veh/h	32	1356		31	1364		682	1060		286	649	
Arrive On Green	0.02	0.38	0.00	0.02	0.38	0.00	0.20	0.30	0.00	0.08	0.18	0.00
Sat Flow, veh/h	1767	3526	1572	1781	3554	1585	3456	3554	1585	3428	3526	1572
Grp Volume(v), veh/h	17	1161	0	16	1299	0	557	1021	0	264	544	0
Grp Sat Flow(s),veh/h/ln	1767	1763	1572	1781	1777	1585	1728	1777	1585	1714	1763	1572
Q Serve(g_s), s	1.1	36.3	0.0	1.1	42.6	0.0	18.5	33.9	0.0	9.2	17.9	0.0
Cycle Q Clear(g_c), s	1.1	36.3	0.0	1.1	42.6	0.0	18.5	33.9	0.0	9.2	17.9	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	32	1356		31	1364		682	1060		286	649	
V/C Ratio(X)	0.53	0.86		0.52	0.95		0.82	0.96		0.92	0.84	
Avail Cap(c_a), veh/h	96	1356		120	1377		682	1060		286	649	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	58.4	33.9	0.0	58.5	35.9	0.0	46.1	41.5	0.0	54.6	47.2	0.0
Incr Delay (d2), s/veh	13.2	5.6	0.0	13.0	14.4	0.0	7.7	20.1	0.0	33.9	12.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	16.3	0.0	0.6	20.8	0.0	8.7	17.7	0.0	5.3	8.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	71.6	39.5	0.0	71.5	50.3	0.0	53.7	61.6	0.0	88.5	59.5	0.0
LnGrp LOS	E	D		E	D		D	E		F	E	
Approach Vol, veh/h		1178	A		1315	A		1578	A		808	A
Approach Delay, s/veh		40.0			50.6			58.8			69.0	
Approach LOS		D			D			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.0	42.8	8.6	51.6	30.7	29.1	7.7	52.6
Change Period (Y+Rc), s	7.0	7.0	6.5	5.5	7.0	7.0	5.5	6.5
Max Green Setting (Gmax), s	10.0	31.0	8.1	44.9	18.9	22.1	6.5	46.5
Max Q Clear Time (g_c+I1), s	11.2	35.9	3.1	38.3	20.5	19.9	3.1	44.6
Green Ext Time (p_c), s	0.0	0.0	0.0	4.1	0.0	0.8	0.0	1.4

Intersection Summary	
HCM 6th Ctrl Delay	53.7
HCM 6th LOS	D

Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	935	790	5	765	120	380	575	195	355	1270	25
Future Volume (vph)	15	935	790	5	765	120	380	575	195	355	1270	25
Turn Type	Prot	NA	Free	Prot	NA	Free	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			Free			Free			2			6
Detector Phase	7	4		3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.5	10.5		11.5	11.5		12.0	12.0	12.0	12.0	12.0	12.0
Total Split (s)	12.5	40.0		12.0	39.5		22.0	34.0	34.0	34.0	46.0	46.0
Total Split (%)	10.4%	33.3%		10.0%	32.9%		18.3%	28.3%	28.3%	28.3%	38.3%	38.3%
Yellow Time (s)	4.5	4.5		5.0	5.0		5.5	5.5	5.5	5.5	5.5	5.5
All-Red Time (s)	1.0	1.0		1.5	1.5		1.5	1.5	1.5	1.5	1.5	1.5
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)	5.5	5.5		6.5	6.5		7.0	7.0	7.0	7.0	7.0	7.0
Lead/Lag	Lag	Lead		Lag	Lead		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None		None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	6.4	36.9	120.0	5.5	33.3	120.0	19.9	42.5	42.5	18.7	41.3	41.3
Actuated g/C Ratio	0.05	0.31	1.00	0.05	0.28	1.00	0.17	0.35	0.35	0.16	0.34	0.34
v/c Ratio	0.18	0.96	0.56	0.06	0.86	0.08	0.78	0.54	0.32	0.72	1.13	0.04
Control Delay	58.6	60.6	1.5	48.8	38.9	0.1	54.2	66.7	33.3	56.0	106.7	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	58.6	60.6	1.5	48.8	38.9	0.1	54.2	66.7	33.3	56.0	106.7	0.1
LOS	E	E	A	D	D	A	D	E	C	E	F	A
Approach Delay		33.7			33.7			56.9			94.2	
Approach LOS		C			C			E			F	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 105 (88%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.13	
Intersection Signal Delay: 56.8	Intersection LOS: E
Intersection Capacity Utilization 88.0%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 1: US-24 & Marksheffel Rd

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	935	790	5	765	120	380	575	195	355	1270	25
Future Volume (veh/h)	15	935	790	5	765	120	380	575	195	355	1270	25
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	1811	1811	1811	1856	1856	1856	1737	1737	1737	1841	1841	1841
Adj Flow Rate, veh/h	16	1005	0	5	832	0	409	618	0	378	1351	0
Peak Hour Factor	0.93	0.93	0.93	0.92	0.92	0.92	0.93	0.93	0.93	0.94	0.94	0.94
Percent Heavy Veh, %	6	6	6	3	3	3	11	11	11	4	4	4
Cap, veh/h	43	989		11	918		401	1173		456	1275	
Arrive On Green	0.03	0.29	0.00	0.01	0.26	0.00	0.13	0.36	0.00	0.13	0.36	0.00
Sat Flow, veh/h	1725	3441	1535	1767	3526	1572	3209	3300	1472	3401	3497	1560
Grp Volume(v), veh/h	16	1005	0	5	832	0	409	618	0	378	1351	0
Grp Sat Flow(s),veh/h/ln	1725	1721	1535	1767	1763	1572	1605	1650	1472	1700	1749	1560
Q Serve(g_s), s	1.1	34.5	0.0	0.3	27.4	0.0	15.0	17.8	0.0	13.0	43.7	0.0
Cycle Q Clear(g_c), s	1.1	34.5	0.0	0.3	27.4	0.0	15.0	17.8	0.0	13.0	43.7	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	43	989		11	918		401	1173		456	1275	
V/C Ratio(X)	0.37	1.02		0.44	0.91		1.02	0.53		0.83	1.06	
Avail Cap(c_a), veh/h	101	989		81	970		401	1173		765	1275	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	57.6	42.7	0.0	59.4	42.9	0.0	52.5	30.7	0.0	50.6	38.1	0.0
Incr Delay (d2), s/veh	5.2	32.6	0.0	24.8	11.5	0.0	50.0	1.7	0.0	3.9	42.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	19.0	0.0	0.2	13.3	0.0	8.8	7.3	0.0	5.8	25.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	62.7	75.4	0.0	84.2	54.5	0.0	102.5	32.4	0.0	54.6	80.9	0.0
LnGrp LOS	E	F		F	D		F	C		D	F	
Approach Vol, veh/h		1021	A		837	A		1027	A		1729	A
Approach Delay, s/veh		75.2			54.7			60.3			75.1	
Approach LOS		E			D			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	23.1	49.7	7.3	40.0	22.0	50.7	9.5	37.8
Change Period (Y+Rc), s	7.0	7.0	6.5	5.5	7.0	7.0	6.5	* 6.5
Max Green Setting (Gmax), s	27.0	27.0	5.5	34.5	15.0	39.0	7.0	* 33
Max Q Clear Time (g_c+I1), s	15.0	19.8	2.3	36.5	17.0	45.7	3.1	29.4
Green Ext Time (p_c), s	1.1	2.4	0.0	0.0	0.0	0.0	0.0	1.8

Intersection Summary	
HCM 6th Ctrl Delay	68.1
HCM 6th LOS	E

Notes

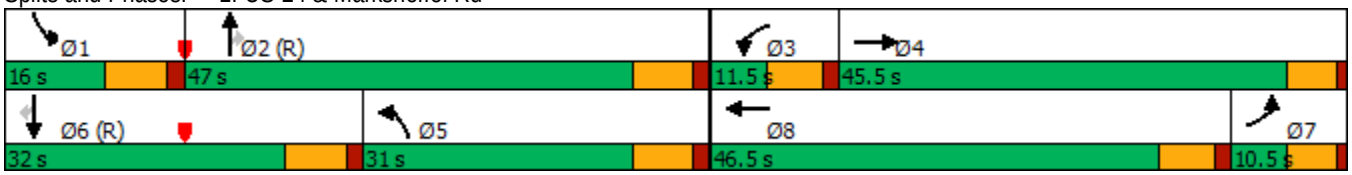
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

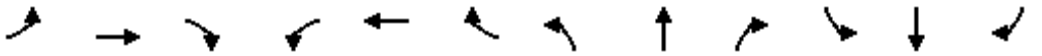
Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	890	485	15	1050	230	640	1170	300	220	585	20
Future Volume (vph)	20	890	485	15	1050	230	640	1170	300	220	585	20
Turn Type	Prot	NA	Free	Prot	NA	Free	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			Free			Free			2			6
Detector Phase	7	4		3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.5	10.5		11.5	11.5		12.0	12.0	12.0	12.0	12.0	12.0
Total Split (s)	10.5	45.5		11.5	46.5		31.0	47.0	47.0	16.0	32.0	32.0
Total Split (%)	8.8%	37.9%		9.6%	38.8%		25.8%	39.2%	39.2%	13.3%	26.7%	26.7%
Yellow Time (s)	4.5	4.5		5.0	5.0		5.5	5.5	5.5	5.5	5.5	5.5
All-Red Time (s)	1.0	1.0		1.5	1.5		1.5	1.5	1.5	1.5	1.5	1.5
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)	5.5	5.5		6.5	6.5		7.0	7.0	7.0	7.0	7.0	7.0
Lead/Lag	Lag	Lag		Lead	Lead		Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None		None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	5.0	42.7	120.0	5.0	40.0	120.0	24.0	42.5	42.5	10.7	29.2	29.2
Actuated g/C Ratio	0.04	0.36	1.00	0.04	0.33	1.00	0.20	0.35	0.35	0.09	0.24	0.24
v/c Ratio	0.30	0.78	0.34	0.22	0.97	0.16	0.96	0.96	0.45	0.80	0.75	0.04
Control Delay	66.7	39.8	0.6	64.9	56.6	0.1	41.4	29.3	5.3	74.2	49.6	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	66.7	39.8	0.6	64.9	56.6	0.1	41.4	29.3	5.3	74.2	49.6	0.1
LOS	E	D	A	E	E	A	D	C	A	E	D	A
Approach Delay		26.5			46.6			29.6			55.0	
Approach LOS		C			D			C			D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 12 (10%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 120	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.97	
Intersection Signal Delay: 36.6	Intersection LOS: D
Intersection Capacity Utilization 84.7%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 1: US-24 & Marksheffel Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	890	485	15	1050	230	640	1170	300	220	585	20
Future Volume (veh/h)	20	890	485	15	1050	230	640	1170	300	220	585	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1870	1870	1870	1870	1870	1870	1856	1856	1856
Adj Flow Rate, veh/h	22	967	0	16	1141	0	660	1206	0	242	643	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.97	0.97	0.97	0.91	0.91	0.91
Percent Heavy Veh, %	3	3	3	2	2	2	2	2	2	3	3	3
Cap, veh/h	38	1190		31	1183		761	1257		257	734	
Arrive On Green	0.02	0.34	0.00	0.02	0.33	0.00	0.22	0.35	0.00	0.08	0.21	0.00
Sat Flow, veh/h	1767	3526	1572	1781	3554	1585	3456	3554	1585	3428	3526	1572
Grp Volume(v), veh/h	22	967	0	16	1141	0	660	1206	0	242	643	0
Grp Sat Flow(s),veh/h/ln	1767	1763	1572	1781	1777	1585	1728	1777	1585	1714	1763	1572
Q Serve(g_s), s	1.5	30.0	0.0	1.1	37.9	0.0	22.1	39.8	0.0	8.4	21.2	0.0
Cycle Q Clear(g_c), s	1.5	30.0	0.0	1.1	37.9	0.0	22.1	39.8	0.0	8.4	21.2	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	38	1190		31	1183		761	1257		257	734	
V/C Ratio(X)	0.57	0.81		0.52	0.96		0.87	0.96		0.94	0.88	
Avail Cap(c_a), veh/h	74	1190		74	1185		761	1257		257	734	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	58.2	36.3	0.0	58.5	39.3	0.0	45.1	37.9	0.0	55.2	46.0	0.0
Incr Delay (d2), s/veh	12.9	4.4	0.0	13.0	18.1	0.0	10.4	17.4	0.0	40.3	13.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	13.5	0.0	0.6	19.2	0.0	10.5	20.1	0.0	5.1	10.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	71.0	40.7	0.0	71.5	57.5	0.0	55.5	55.3	0.0	95.5	59.8	0.0
LnGrp LOS	E	D		E	E		E	E		F	E	
Approach Vol, veh/h		989	A		1157	A		1866	A		885	A
Approach Delay, s/veh		41.4			57.7			55.4			69.6	
Approach LOS		D			E			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.0	49.4	8.6	46.0	33.4	32.0	8.1	46.5
Change Period (Y+Rc), s	7.0	7.0	6.5	5.5	7.0	7.0	5.5	6.5
Max Green Setting (Gmax), s	9.0	40.0	5.0	40.0	24.0	25.0	5.0	40.0
Max Q Clear Time (g_c+I1), s	10.4	41.8	3.1	32.0	24.1	23.2	3.5	39.9
Green Ext Time (p_c), s	0.0	0.0	0.0	4.0	0.0	0.8	0.0	0.1

Intersection Summary	
HCM 6th Ctrl Delay	55.7
HCM 6th LOS	E

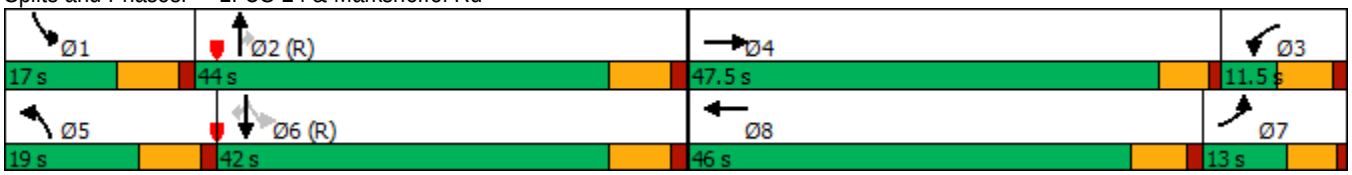
Notes

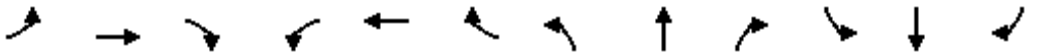
Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	1145	790	5	1045	170	380	575	195	395	1270	25
Future Volume (vph)	15	1145	790	5	1045	170	380	575	195	395	1270	25
Turn Type	Prot	NA	Free	Prot	NA	Free	Prot	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			Free			Free			2	6		6
Detector Phase	7	4		3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.5	10.5		11.5	11.5		12.0	12.0	12.0	12.0	12.0	12.0
Total Split (s)	13.0	47.5		11.5	46.0		19.0	44.0	44.0	17.0	42.0	42.0
Total Split (%)	10.8%	39.6%		9.6%	38.3%		15.8%	36.7%	36.7%	14.2%	35.0%	35.0%
Yellow Time (s)	4.5	4.5		5.0	5.0		5.5	5.5	5.5	5.5	5.5	5.5
All-Red Time (s)	1.0	1.0		1.5	1.5		1.5	1.5	1.5	1.5	1.5	1.5
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)	5.5	5.5		6.5	6.5		7.0	7.0	7.0	7.0	7.0	7.0
Lead/Lag	Lag	Lead		Lag	Lead		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None		None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	6.5	44.3	120.0	5.0	40.4	120.0	18.9	42.8	42.8	46.1	35.0	35.0
Actuated g/C Ratio	0.05	0.37	1.00	0.04	0.34	1.00	0.16	0.36	0.36	0.38	0.29	0.29
v/c Ratio	0.17	0.98	0.56	0.07	0.96	0.12	0.82	0.53	0.34	0.61	1.33	0.05
Control Delay	58.0	58.4	1.5	63.4	53.1	0.1	63.2	64.9	40.4	23.7	192.6	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	58.0	58.4	1.5	63.4	53.1	0.1	63.2	64.9	40.4	23.7	192.6	0.2
LOS	E	E	A	E	D	A	E	E	D	C	F	A
Approach Delay		35.4			45.8			60.2			150.3	
Approach LOS		D			D			E			F	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 105 (88%), Referenced to phase 2:NBT and 6:SBTL, Start of Green	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.33	
Intersection Signal Delay: 74.3	Intersection LOS: E
Intersection Capacity Utilization 93.8%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 1: US-24 & Marksheffel Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	1145	790	5	1045	170	380	575	195	395	1270	25
Future Volume (veh/h)	15	1145	790	5	1045	170	380	575	195	395	1270	25
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	1811	1811	1811	1856	1856	1856	1737	1737	1737	1841	1841	1841
Adj Flow Rate, veh/h	16	1231	0	5	1136	0	409	618	0	420	1351	0
Peak Hour Factor	0.93	0.93	0.93	0.92	0.92	0.92	0.93	0.93	0.93	0.94	0.94	0.94
Percent Heavy Veh, %	6	6	6	3	3	3	11	11	11	4	4	4
Cap, veh/h	33	1204		11	1160		321	1134		699	1143	
Arrive On Green	0.02	0.35	0.00	0.01	0.33	0.00	0.10	0.34	0.00	0.08	0.33	0.00
Sat Flow, veh/h	1725	3441	1535	1767	3526	1572	3209	3300	1472	3401	3497	1560
Grp Volume(v), veh/h	16	1231	0	5	1136	0	409	618	0	420	1351	0
Grp Sat Flow(s),veh/h/ln	1725	1721	1535	1767	1763	1572	1605	1650	1472	1700	1749	1560
Q Serve(g_s), s	1.1	42.0	0.0	0.3	38.3	0.0	12.0	18.1	0.0	10.0	39.2	0.0
Cycle Q Clear(g_c), s	1.1	42.0	0.0	0.3	38.3	0.0	12.0	18.1	0.0	10.0	39.2	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	33	1204		11	1160		321	1134		699	1143	
V/C Ratio(X)	0.49	1.02		0.44	0.98		1.27	0.54		0.60	1.18	
Avail Cap(c_a), veh/h	108	1204		74	1160		321	1134		699	1143	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	58.3	39.0	0.0	59.4	39.8	0.0	54.0	31.8	0.0	25.3	40.4	0.0
Incr Delay (d2), s/veh	11.0	31.7	0.0	24.8	21.4	0.0	145.6	1.9	0.0	1.4	90.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	22.7	0.0	0.2	19.8	0.0	11.3	7.5	0.0	4.1	31.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	69.3	70.7	0.0	84.2	61.2	0.0	199.6	33.7	0.0	26.7	131.3	0.0
LnGrp LOS	E	F		F	E		F	C		C	F	
Approach Vol, veh/h		1247	A		1141	A		1027	A		1771	A
Approach Delay, s/veh		70.6			61.3			99.8			106.5	
Approach LOS		E			E			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.0	48.2	7.3	47.5	19.0	46.2	8.8	46.0
Change Period (Y+Rc), s	7.0	7.0	6.5	5.5	7.0	7.0	6.5	* 6.5
Max Green Setting (Gmax), s	10.0	37.0	5.0	42.0	12.0	35.0	7.5	* 40
Max Q Clear Time (g_c+I1), s	12.0	20.1	2.3	44.0	14.0	41.2	3.1	40.3
Green Ext Time (p_c), s	0.0	3.9	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	86.6
HCM 6th LOS	F

Notes

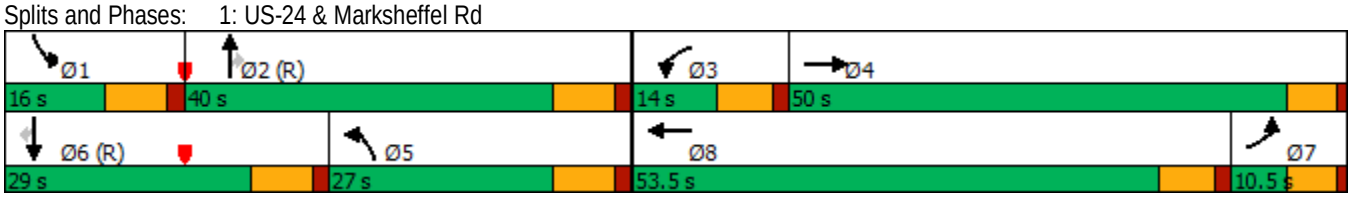
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

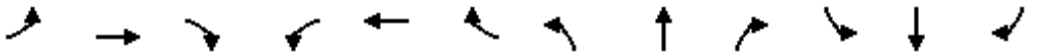
Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	1330	485	15	1445	300	640	1170	300	295	585	20
Future Volume (vph)	20	1330	485	15	1445	300	640	1170	300	295	585	20
Turn Type	Prot	NA	Free	Prot	NA	Free	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			Free			Free			2			6
Detector Phase	7	4		3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.5	10.5		11.5	11.5		12.0	12.0	12.0	12.0	12.0	12.0
Total Split (s)	10.5	50.0		14.0	53.5		27.0	40.0	40.0	16.0	29.0	29.0
Total Split (%)	8.8%	41.7%		11.7%	44.6%		22.5%	33.3%	33.3%	13.3%	24.2%	24.2%
Yellow Time (s)	4.5	4.5		5.0	5.0		5.5	5.5	5.5	5.5	5.5	5.5
All-Red Time (s)	1.0	1.0		1.5	1.5		1.5	1.5	1.5	1.5	1.5	1.5
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)	5.5	5.5		6.5	6.5		7.0	7.0	7.0	7.0	7.0	7.0
Lead/Lag	Lag	Lag		Lead	Lead		Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None		None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	5.0	52.9	120.0	6.5	51.2	120.0	20.0	33.0	33.0	9.0	22.0	22.0
Actuated g/C Ratio	0.04	0.44	1.00	0.05	0.43	1.00	0.17	0.28	0.28	0.08	0.18	0.18
v/c Ratio	0.30	0.94	0.34	0.17	1.04	0.21	1.15	1.24	0.53	1.27	1.00	0.05
Control Delay	66.7	45.0	0.6	53.3	60.6	0.0	110.7	141.4	13.7	193.3	85.0	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	66.7	45.0	0.6	53.3	60.6	0.0	110.7	141.4	13.7	193.3	85.0	0.2
LOS	E	D	A	D	E	A	F	F	B	F	F	A
Approach Delay		33.5			50.2			113.9			118.6	
Approach LOS		C			D			F			F	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 12 (10%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.27	
Intersection Signal Delay: 74.7	Intersection LOS: E
Intersection Capacity Utilization 97.8%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 1: US-24 & Marksheffel Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	1330	485	15	1445	300	640	1170	300	295	585	20
Future Volume (veh/h)	20	1330	485	15	1445	300	640	1170	300	295	585	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1870	1870	1870	1870	1870	1870	1856	1856	1856
Adj Flow Rate, veh/h	22	1446	0	16	1571	0	660	1206	0	324	643	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.97	0.97	0.97	0.91	0.91	0.91
Percent Heavy Veh, %	3	3	3	2	2	2	2	2	2	3	3	3
Cap, veh/h	38	1396		31	1392		645	1048		257	646	
Arrive On Green	0.02	0.40	0.00	0.02	0.39	0.00	0.19	0.30	0.00	0.08	0.18	0.00
Sat Flow, veh/h	1767	3526	1572	1781	3554	1585	3456	3554	1585	3428	3526	1572
Grp Volume(v), veh/h	22	1446	0	16	1571	0	660	1206	0	324	643	0
Grp Sat Flow(s),veh/h/ln	1767	1763	1572	1781	1777	1585	1728	1777	1585	1714	1763	1572
Q Serve(g_s), s	1.5	47.5	0.0	1.1	47.0	0.0	22.4	35.4	0.0	9.0	21.9	0.0
Cycle Q Clear(g_c), s	1.5	47.5	0.0	1.1	47.0	0.0	22.4	35.4	0.0	9.0	21.9	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	38	1396		31	1392		645	1048		257	646	
V/C Ratio(X)	0.57	1.04		0.52	1.13		1.02	1.15		1.26	0.99	
Avail Cap(c_a), veh/h	74	1396		111	1392		645	1048		257	646	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	58.2	36.2	0.0	58.5	36.5	0.0	48.8	42.3	0.0	55.5	48.9	0.0
Incr Delay (d2), s/veh	12.9	33.8	0.0	13.0	67.6	0.0	41.4	78.9	0.0	144.5	34.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	26.5	0.0	0.6	33.0	0.0	13.3	26.8	0.0	9.0	12.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	71.0	70.0	0.0	71.5	104.1	0.0	90.2	121.2	0.0	200.0	83.1	0.0
LnGrp LOS	E	F		E	F		F	F		F	F	
Approach Vol, veh/h		1468	A		1587	A		1866	A		967	A
Approach Delay, s/veh		70.0			103.8			110.2			122.3	
Approach LOS		E			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.0	42.4	8.6	53.0	29.4	29.0	8.1	53.5
Change Period (Y+Rc), s	7.0	7.0	6.5	5.5	7.0	7.0	5.5	6.5
Max Green Setting (Gmax), s	9.0	33.0	7.5	44.5	20.0	22.0	5.0	47.0
Max Q Clear Time (g_c+I1), s	11.0	37.4	3.1	49.5	24.4	23.9	3.5	49.0
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	100.5
HCM 6th LOS	F

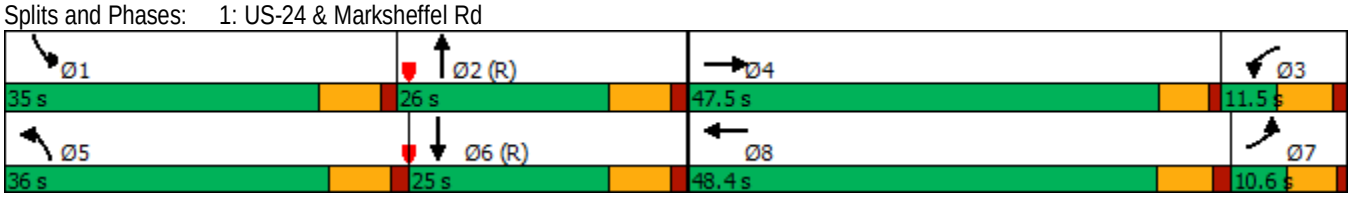
Notes

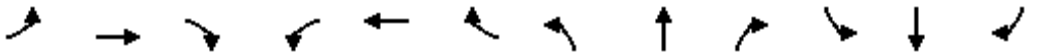
Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	15	1145	790	5	1045	170	380	575	395	1270
Future Volume (vph)	15	1145	790	5	1045	170	380	575	395	1270
Turn Type	Prot	NA	Free	Prot	NA	Free	Prot	NA	Prot	NA
Protected Phases	7	4		3	8		5	2	1	6
Permitted Phases			Free			Free				
Detector Phase	7	4		3	8		5	2	1	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)	10.5	10.5		11.5	11.5		12.0	12.0	12.0	12.0
Total Split (s)	10.6	47.5		11.5	48.4		36.0	26.0	35.0	25.0
Total Split (%)	8.8%	39.6%		9.6%	40.3%		30.0%	21.7%	29.2%	20.8%
Yellow Time (s)	4.5	4.5		5.0	5.0		5.5	5.5	5.5	5.5
All-Red Time (s)	1.0	1.0		1.5	1.5		1.5	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5		6.5	6.5		7.0	7.0	7.0	7.0
Lead/Lag	Lag	Lead		Lag	Lead		Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None		None	C-Max	None	C-Max
Act Effct Green (s)	6.0	41.2	120.0	5.6	37.9	120.0	20.8	36.8	20.2	36.2
Actuated g/C Ratio	0.05	0.34	1.00	0.05	0.32	1.00	0.17	0.31	0.17	0.30
v/c Ratio	0.19	0.73	0.56	0.06	0.72	0.12	0.75	0.58	0.74	0.92
Control Delay	60.0	37.2	1.5	50.6	28.2	0.1	42.7	58.8	55.6	52.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.0	37.2	1.5	50.6	28.2	0.1	42.7	58.8	55.6	52.0
LOS	E	D	A	D	C	A	D	E	E	D
Approach Delay		22.9			24.4			53.5		52.8
Approach LOS		C			C			D		D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 105 (88%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.92	
Intersection Signal Delay: 37.4	Intersection LOS: D
Intersection Capacity Utilization 74.3%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 1: US-24 & Marksheffel Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	1145	790	5	1045	170	380	575	195	395	1270	25
Future Volume (veh/h)	15	1145	790	5	1045	170	380	575	195	395	1270	25
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	1811	1811	1811	1856	1856	1856	1737	1737	1737	1841	1841	1841
Adj Flow Rate, veh/h	16	1231	0	5	1136	0	409	618	0	420	1351	0
Peak Hour Factor	0.93	0.93	0.93	0.92	0.92	0.92	0.93	0.93	0.93	0.94	0.94	0.94
Percent Heavy Veh, %	6	6	6	3	3	3	11	11	11	4	4	4
Cap, veh/h	33	1502		11	1434		484	1546		500	1619	
Arrive On Green	0.02	0.30	0.00	0.01	0.28	0.00	0.15	0.33	0.00	0.15	0.32	0.00
Sat Flow, veh/h	1725	4944	1535	1767	5066	1572	3209	4898	0	3401	5191	0
Grp Volume(v), veh/h	16	1231	0	5	1136	0	409	618	0	420	1351	0
Grp Sat Flow(s),veh/h/ln	1725	1648	1535	1767	1689	1572	1605	1581	0	1700	1675	0
Q Serve(g_s), s	1.1	27.7	0.0	0.3	24.9	0.0	14.9	12.1	0.0	14.4	29.9	0.0
Cycle Q Clear(g_c), s	1.1	27.7	0.0	0.3	24.9	0.0	14.9	12.1	0.0	14.4	29.9	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.00	1.00		0.00
Lane Grp Cap(c), veh/h	33	1502		11	1434		484	1546		500	1619	
V/C Ratio(X)	0.49	0.82		0.44	0.79		0.85	0.40		0.84	0.83	
Avail Cap(c_a), veh/h	73	1730		74	1769		776	1546		794	1619	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	58.3	38.7	0.0	59.4	39.8	0.0	49.6	31.3	0.0	49.8	37.7	0.0
Incr Delay (d2), s/veh	11.0	2.9	0.0	24.8	2.1	0.0	4.9	0.8	0.0	4.7	5.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	11.5	0.0	0.2	10.5	0.0	6.3	4.7	0.0	6.4	12.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	69.3	41.6	0.0	84.2	41.8	0.0	54.5	32.1	0.0	54.5	42.9	0.0
LnGrp LOS	E	D		F	D		D	C		D	D	
Approach Vol, veh/h		1247	A		1141	A		1027	A		1771	A
Approach Delay, s/veh		41.9			42.0			41.0			45.7	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	24.6	46.1	7.3	42.0	25.1	45.7	8.8	40.5
Change Period (Y+Rc), s	7.0	7.0	6.5	5.5	7.0	7.0	6.5	* 6.5
Max Green Setting (Gmax), s	28.0	19.0	5.0	42.0	29.0	18.0	5.1	* 42
Max Q Clear Time (g_c+I1), s	16.4	14.1	2.3	29.7	16.9	31.9	3.1	26.9
Green Ext Time (p_c), s	1.2	1.8	0.0	6.8	1.2	0.0	0.0	7.1

Intersection Summary	
HCM 6th Ctrl Delay	43.0
HCM 6th LOS	D

Notes

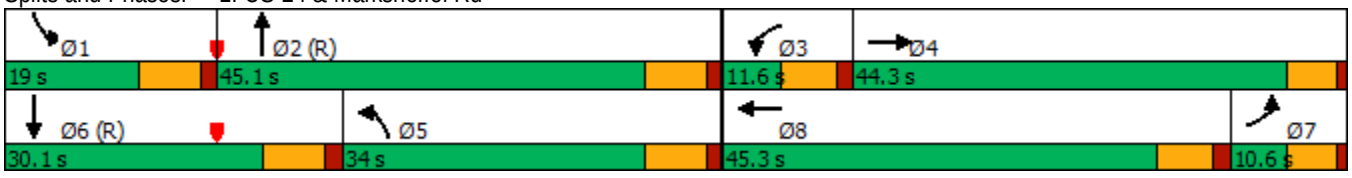
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

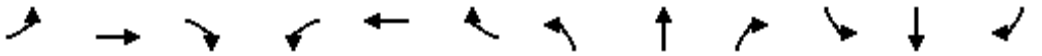
Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	20	1330	485	15	1445	300	640	1170	295	585
Future Volume (vph)	20	1330	485	15	1445	300	640	1170	295	585
Turn Type	Prot	NA	Free	Prot	NA	Free	Prot	NA	Prot	NA
Protected Phases	7	4		3	8		5	2	1	6
Permitted Phases			Free			Free				
Detector Phase	7	4		3	8		5	2	1	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)	10.5	10.5		11.5	11.5		12.0	12.0	12.0	12.0
Total Split (s)	10.6	44.3		11.6	45.3		34.0	45.1	19.0	30.1
Total Split (%)	8.8%	36.9%		9.7%	37.8%		28.3%	37.6%	15.8%	25.1%
Yellow Time (s)	4.5	4.5		5.0	5.0		5.5	5.5	5.5	5.5
All-Red Time (s)	1.0	1.0		1.5	1.5		1.5	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5		6.5	6.5		7.0	7.0	7.0	7.0
Lead/Lag	Lag	Lag		Lead	Lead		Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None		None	C-Max	None	C-Max
Act Effct Green (s)	5.1	42.2	120.0	5.1	39.4	120.0	27.0	40.2	13.5	26.7
Actuated g/C Ratio	0.04	0.35	1.00	0.04	0.33	1.00	0.22	0.34	0.11	0.22
v/c Ratio	0.30	0.82	0.34	0.21	0.94	0.21	0.85	0.90	0.85	0.60
Control Delay	66.2	40.3	0.6	66.3	50.6	0.1	32.2	25.0	72.8	44.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	66.2	40.3	0.6	66.3	50.6	0.1	32.2	25.0	72.8	44.9
LOS	E	D	A	E	D	A	C	C	E	D
Approach Delay		30.1			42.2			27.2		54.1
Approach LOS		C			D			C		D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 12 (10%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 110	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.94	
Intersection Signal Delay: 35.8	Intersection LOS: D
Intersection Capacity Utilization 82.7%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 1: US-24 & Marksheffel Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	1330	485	15	1445	300	640	1170	300	295	585	20
Future Volume (veh/h)	20	1330	485	15	1445	300	640	1170	300	295	585	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1870	1870	1870	1870	1870	1870	1856	1856	1856
Adj Flow Rate, veh/h	22	1446	0	16	1571	0	660	1206	0	324	643	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.97	0.97	0.97	0.91	0.91	0.91
Percent Heavy Veh, %	3	3	3	2	2	2	2	2	2	3	3	3
Cap, veh/h	38	1656		31	1647		852	1732		343	975	
Arrive On Green	0.02	0.33	0.00	0.02	0.32	0.00	0.25	0.34	0.00	0.10	0.19	0.00
Sat Flow, veh/h	1767	5066	1572	1781	5106	1585	3456	5274	0	3428	5233	0
Grp Volume(v), veh/h	22	1446	0	16	1571	0	660	1206	0	324	643	0
Grp Sat Flow(s),veh/h/ln	1767	1689	1572	1781	1702	1585	1728	1702	0	1714	1689	0
Q Serve(g_s), s	1.5	32.3	0.0	1.1	36.1	0.0	21.3	24.5	0.0	11.3	14.1	0.0
Cycle Q Clear(g_c), s	1.5	32.3	0.0	1.1	36.1	0.0	21.3	24.5	0.0	11.3	14.1	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.00	1.00		0.00
Lane Grp Cap(c), veh/h	38	1656		31	1647		852	1732		343	975	
V/C Ratio(X)	0.57	0.87		0.52	0.95		0.77	0.70		0.95	0.66	
Avail Cap(c_a), veh/h	75	1656		76	1651		852	1732		343	975	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	58.2	38.0	0.0	58.5	39.8	0.0	42.1	34.3	0.0	53.7	44.8	0.0
Incr Delay (d2), s/veh	12.9	5.5	0.0	13.0	12.9	0.0	4.5	2.3	0.0	34.5	3.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	14.0	0.0	0.6	16.9	0.0	9.6	10.5	0.0	6.5	6.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	71.0	43.5	0.0	71.5	52.7	0.0	46.6	36.6	0.0	88.1	48.3	0.0
LnGrp LOS	E	D		E	D		D	D		F	D	
Approach Vol, veh/h		1468	A		1587	A		1866	A		967	A
Approach Delay, s/veh		43.9			52.9			40.2			61.7	
Approach LOS		D			D			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.0	47.7	8.6	44.7	36.6	30.1	8.1	45.2
Change Period (Y+Rc), s	7.0	7.0	6.5	5.5	7.0	7.0	5.5	6.5
Max Green Setting (Gmax), s	12.0	38.1	5.1	38.8	27.0	23.1	5.1	38.8
Max Q Clear Time (g_c+I1), s	13.3	26.5	3.1	34.3	23.3	16.1	3.5	38.1
Green Ext Time (p_c), s	0.0	6.3	0.0	3.4	1.0	2.5	0.0	0.6

Intersection Summary	
HCM 6th Ctrl Delay	48.1
HCM 6th LOS	D

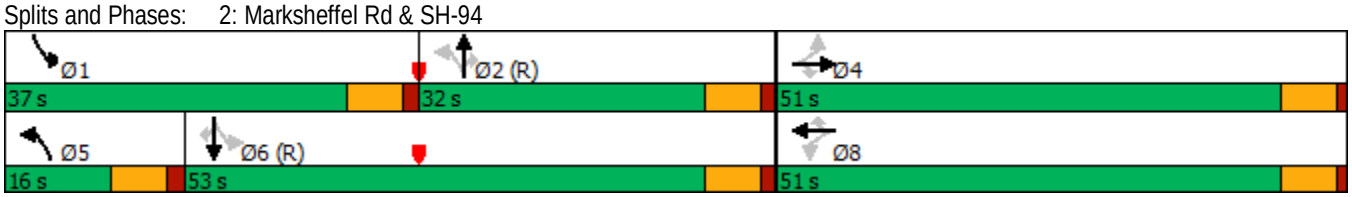
Notes

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

Lane Group	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	254	54	28	297	77	54	270	18	256	501	3
Future Volume (vph)	254	54	28	297	77	54	270	18	256	501	3
Turn Type	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	4			8		5	2		1	6	
Permitted Phases		4	8		8	2		2	6		6
Detector Phase	4	4	8	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	11.0	11.0	11.0	11.0	11.5	11.5	11.5	11.5	11.5	11.5
Total Split (s)	51.0	51.0	51.0	51.0	51.0	16.0	32.0	32.0	37.0	53.0	53.0
Total Split (%)	42.5%	42.5%	42.5%	42.5%	42.5%	13.3%	26.7%	26.7%	30.8%	44.2%	44.2%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.5	1.5	1.5	1.5	1.5	1.5
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)	6.0	6.0	6.0	6.0	6.0	6.5	6.5	6.5	6.5	6.5	6.5
Lead/Lag						Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	29.0	29.0	29.0	29.0	29.0	64.9	57.6	57.6	78.2	67.1	67.1
Actuated g/C Ratio	0.24	0.24	0.24	0.24	0.24	0.54	0.48	0.48	0.65	0.56	0.56
v/c Ratio	0.74	0.14	0.24	0.79	0.19	0.14	0.20	0.03	0.42	0.29	0.00
Control Delay	49.1	0.6	38.3	55.3	1.2	10.9	20.7	0.1	7.0	6.6	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.1	0.6	38.3	55.3	1.2	10.9	20.7	0.1	7.0	6.6	0.0
LOS	D	A	D	E	A	B	C	A	A	A	A
Approach Delay	40.6			43.7			18.1			6.7	
Approach LOS	D			D			B			A	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 28 (23%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.79	
Intersection Signal Delay: 23.0	Intersection LOS: C
Intersection Capacity Utilization 60.7%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 2: Marksheffel Rd & SH-94



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	254	54	28	297	77	54	270	18	256	501	3
Future Volume (veh/h)	0	254	54	28	297	77	54	270	18	256	501	3
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	1781	1781	1781	1811	1811	1811	1826	1826	1826	1856	1856	1856
Adj Flow Rate, veh/h	0	314	67	32	341	89	66	329	22	294	576	3
Peak Hour Factor	0.81	0.81	0.81	0.87	0.87	0.87	0.82	0.82	0.82	0.87	0.87	0.87
Percent Heavy Veh, %	8	8	8	6	6	6	5	5	5	3	3	3
Cap, veh/h	60	394	334	127	400	339	534	1820	812	715	2057	918
Arrive On Green	0.00	0.44	0.44	0.22	0.22	0.22	0.04	0.52	0.52	0.10	0.58	0.58
Sat Flow, veh/h	912	1781	1510	970	1811	1535	1739	3469	1547	1767	3526	1572
Grp Volume(v), veh/h	0	314	67	32	341	89	66	329	22	294	576	3
Grp Sat Flow(s),veh/h/ln	912	1781	1510	970	1811	1535	1739	1735	1547	1767	1763	1572
Q Serve(g_s), s	0.0	18.2	3.3	3.8	21.7	5.8	2.1	6.0	0.8	8.7	9.8	0.1
Cycle Q Clear(g_c), s	0.0	18.2	3.3	22.0	21.7	5.8	2.1	6.0	0.8	8.7	9.8	0.1
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	60	394	334	127	400	339	534	1820	812	715	2057	918
V/C Ratio(X)	0.00	0.80	0.20	0.25	0.85	0.26	0.12	0.18	0.03	0.41	0.28	0.00
Avail Cap(c_a), veh/h	200	668	566	276	679	576	607	1820	812	994	2057	918
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.98	0.98	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	31.2	27.0	53.8	44.9	38.6	12.0	15.0	13.8	9.8	12.4	10.4
Incr Delay (d2), s/veh	0.0	3.7	0.3	1.0	5.3	0.4	0.1	0.2	0.1	0.4	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	6.6	1.2	1.0	10.3	2.2	0.8	2.4	0.3	3.3	3.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	34.8	27.3	54.8	50.1	39.1	12.1	15.2	13.8	10.2	12.8	10.4
LnGrp LOS	A	C	C	D	D	D	B	B	B	B	B	B
Approach Vol, veh/h		381			462			417			873	
Approach Delay, s/veh		33.5			48.3			14.6			11.9	
Approach LOS		C			D			B			B	

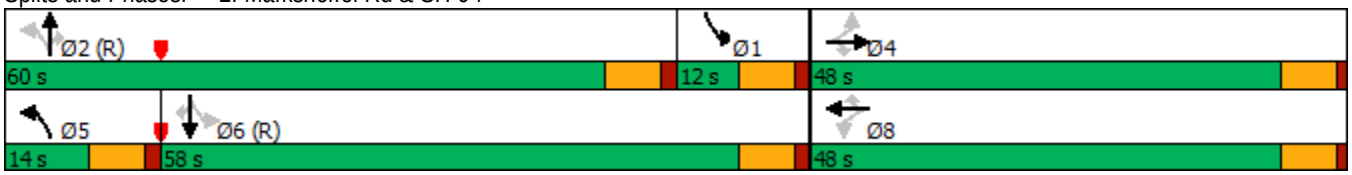
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	18.0	69.5		32.5	10.9	76.5		32.5				
Change Period (Y+Rc), s	6.5	6.5		6.0	6.5	6.5		6.0				
Max Green Setting (Gmax), s	30.5	25.5		45.0	9.5	46.5		45.0				
Max Q Clear Time (g_c+I1), s	10.7	8.0		20.2	4.1	11.8		24.0				
Green Ext Time (p_c), s	0.8	2.0		2.1	0.0	4.4		2.5				

Intersection Summary			
HCM 6th Ctrl Delay		24.2	
HCM 6th LOS		C	

Lane Group	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	294	94	39	356	343	76	819	23	158	573	7
Future Volume (vph)	294	94	39	356	343	76	819	23	158	573	7
Turn Type	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	4			8		5	2		1	6	
Permitted Phases		4	8		8	2		2	6		6
Detector Phase	4	4	8	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	11.0	11.0	11.0	11.0	11.5	11.5	11.5	11.5	11.5	11.5
Total Split (s)	48.0	48.0	48.0	48.0	48.0	14.0	60.0	60.0	12.0	58.0	58.0
Total Split (%)	40.0%	40.0%	40.0%	40.0%	40.0%	11.7%	50.0%	50.0%	10.0%	48.3%	48.3%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.5	1.5	1.5	1.5	1.5	1.5
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)	6.0	6.0	6.0	6.0	6.0	6.5	6.5	6.5	6.5	6.5	6.5
Lead/Lag						Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	34.6	34.6	34.6	34.6	34.6	60.9	60.9	60.9	61.2	61.2	61.2
Actuated g/C Ratio	0.29	0.29	0.29	0.29	0.29	0.51	0.51	0.51	0.51	0.51	0.51
v/c Ratio	0.70	0.21	0.30	0.80	0.70	0.22	0.50	0.03	0.48	0.33	0.01
Control Delay	46.8	4.8	36.6	50.6	26.4	18.7	21.7	0.0	20.9	10.4	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.8	4.8	36.6	50.6	26.4	18.7	21.7	0.0	20.9	10.4	0.0
LOS	D	A	D	D	C	B	C	A	C	B	A
Approach Delay	36.6			38.6			20.9			12.6	
Approach LOS	D			D			C			B	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 72 (60%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.80	
Intersection Signal Delay: 26.3	Intersection LOS: C
Intersection Capacity Utilization 75.1%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 2: Marksheffel Rd & SH-94



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	294	94	39	356	343	76	819	23	158	573	7
Future Volume (veh/h)	0	294	94	39	356	343	76	819	23	158	573	7
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1870	1870	1870	1841	1841	1841
Adj Flow Rate, veh/h	0	372	119	46	424	408	83	890	25	163	591	7
Peak Hour Factor	0.79	0.79	0.79	0.84	0.84	0.84	0.92	0.92	0.92	0.97	0.97	0.97
Percent Heavy Veh, %	3	3	3	3	3	3	2	2	2	4	4	4
Cap, veh/h	60	542	460	148	542	460	340	1584	707	388	1771	790
Arrive On Green	0.00	0.10	0.10	0.29	0.29	0.29	0.04	0.45	0.45	0.10	0.51	0.51
Sat Flow, veh/h	654	1856	1572	898	1856	1572	1781	3554	1585	1753	3497	1560
Grp Volume(v), veh/h	0	372	119	46	424	408	83	890	25	163	591	7
Grp Sat Flow(s),veh/h/ln	654	1856	1572	898	1856	1572	1781	1777	1585	1753	1749	1560
Q Serve(g_s), s	0.0	23.3	8.4	5.8	25.2	29.8	3.5	22.2	1.1	0.0	12.0	0.3
Cycle Q Clear(g_c), s	0.0	23.3	8.4	29.1	25.2	29.8	3.5	22.2	1.1	0.0	12.0	0.3
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	60	542	460	148	542	460	340	1584	707	388	1771	790
V/C Ratio(X)	0.00	0.69	0.26	0.31	0.78	0.89	0.24	0.56	0.04	0.42	0.33	0.01
Avail Cap(c_a), veh/h	98	649	550	200	649	550	375	1584	707	388	1771	790
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.99	0.99	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	48.9	42.2	51.4	38.9	40.6	22.9	24.6	18.7	35.1	17.6	14.7
Incr Delay (d2), s/veh	0.0	2.3	0.3	1.2	5.1	14.3	0.4	1.4	0.1	0.7	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	12.0	3.5	1.4	12.2	13.2	1.5	9.6	0.4	4.3	5.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	51.2	42.5	52.6	44.1	54.9	23.3	26.0	18.8	35.8	18.1	14.7
LnGrp LOS	A	D	D	D	D	D	C	C	B	D	B	B
Approach Vol, veh/h		491			878			998			761	
Approach Delay, s/veh		49.1			49.6			25.6			21.9	
Approach LOS		D			D			C			C	

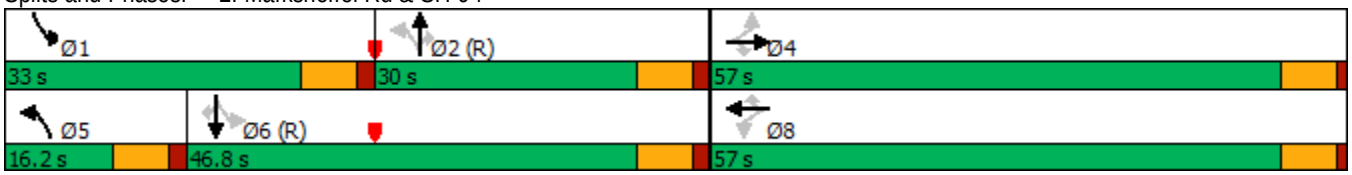
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	18.9	60.0		41.1	11.7	67.3		41.1				
Change Period (Y+Rc), s	6.5	6.5		6.0	6.5	6.5		6.0				
Max Green Setting (Gmax), s	5.5	53.5		42.0	7.5	51.5		42.0				
Max Q Clear Time (g_c+I1), s	2.0	24.2		25.3	5.5	14.0		31.8				
Green Ext Time (p_c), s	0.1	7.4		2.5	0.0	4.6		3.3				

Intersection Summary												
HCM 6th Ctrl Delay			35.1									
HCM 6th LOS			D									

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	165	325	90	30	375	140	90	315	20	325	560	325
Future Volume (vph)	165	325	90	30	375	140	90	315	20	325	560	325
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	11.0	11.0	11.0	11.0	11.0	11.5	11.5	11.5	11.5	11.5	11.5
Total Split (s)	57.0	57.0	57.0	57.0	57.0	57.0	16.2	30.0	30.0	33.0	46.8	46.8
Total Split (%)	47.5%	47.5%	47.5%	47.5%	47.5%	47.5%	13.5%	25.0%	25.0%	27.5%	39.0%	39.0%
Yellow Time (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
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.5	1.5	1.5	1.5	1.5	1.5
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)	6.0	6.0	6.0	6.0	6.0	6.0	6.5	6.5	6.5	6.5	6.5	6.5
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	43.6	43.6	43.6	43.6	43.6	43.6	45.3	36.7	36.7	63.7	48.7	48.7
Actuated g/C Ratio	0.36	0.36	0.36	0.36	0.36	0.36	0.38	0.31	0.31	0.53	0.41	0.41
v/c Ratio	1.06	0.63	0.17	0.16	0.66	0.25	0.32	0.37	0.04	0.66	0.45	0.45
Control Delay	110.8	27.4	0.6	24.4	36.3	4.1	21.0	37.5	0.1	17.4	13.9	2.2
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	110.8	27.4	0.6	24.4	36.3	4.1	21.0	37.5	0.1	17.4	13.9	2.2
LOS	F	C	A	C	D	A	C	D	A	B	B	A
Approach Delay		47.0			27.4			32.3			11.7	
Approach LOS		D			C			C			B	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 33 (28%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.06	
Intersection Signal Delay: 25.8	Intersection LOS: C
Intersection Capacity Utilization 76.4%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 2: Marksheffel Rd & SH-94



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	165	325	90	30	375	140	90	315	20	325	560	325
Future Volume (veh/h)	165	325	90	30	375	140	90	315	20	325	560	325
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	1781	1781	1781	1811	1811	1811	1826	1826	1826	1856	1856	1856
Adj Flow Rate, veh/h	204	401	111	34	431	161	110	384	24	374	644	374
Peak Hour Factor	0.81	0.81	0.81	0.87	0.87	0.87	0.82	0.82	0.82	0.87	0.87	0.87
Percent Heavy Veh, %	8	8	8	6	6	6	5	5	5	3	3	3
Cap, veh/h	253	757	642	373	770	652	282	841	375	512	1249	557
Arrive On Green	0.85	0.85	0.85	0.43	0.43	0.43	0.06	0.24	0.24	0.17	0.35	0.35
Sat Flow, veh/h	786	1781	1510	860	1811	1535	1739	3469	1547	1767	3526	1572
Grp Volume(v), veh/h	204	401	111	34	431	161	110	384	24	374	644	374
Grp Sat Flow(s),veh/h/ln	786	1781	1510	860	1811	1535	1739	1735	1547	1767	1763	1572
Q Serve(g_s), s	29.5	7.4	1.6	3.1	21.5	8.1	5.6	11.3	1.4	18.3	17.3	24.2
Cycle Q Clear(g_c), s	51.0	7.4	1.6	10.5	21.5	8.1	5.6	11.3	1.4	18.3	17.3	24.2
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	253	757	642	373	770	652	282	841	375	512	1249	557
V/C Ratio(X)	0.81	0.53	0.17	0.09	0.56	0.25	0.39	0.46	0.06	0.73	0.52	0.67
Avail Cap(c_a), veh/h	253	757	642	373	770	652	314	841	375	594	1249	557
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.91	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.6	5.7	5.3	25.3	26.0	22.2	31.0	38.7	35.0	25.6	30.6	32.8
Incr Delay (d2), s/veh	16.0	0.6	0.1	0.1	0.9	0.2	0.9	1.8	0.3	3.9	1.5	6.3
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	5.9	1.9	0.5	0.7	9.4	3.0	2.4	5.0	0.6	8.1	7.6	10.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.5	6.4	5.4	25.4	27.0	22.4	31.9	40.5	35.3	29.5	32.1	39.1
LnGrp LOS	D	A	A	C	C	C	C	D	D	C	C	D
Approach Vol, veh/h		716			626			518			1392	
Approach Delay, s/veh		14.8			25.7			38.4			33.3	
Approach LOS		B			C			D			C	

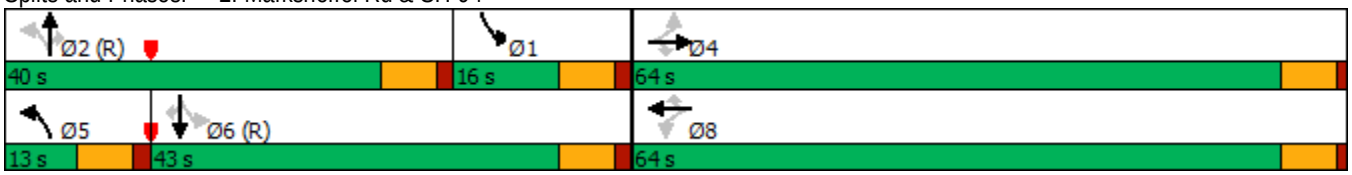
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	27.4	35.6		57.0	14.0	49.0		57.0				
Change Period (Y+Rc), s	6.5	6.5		6.0	6.5	6.5		6.0				
Max Green Setting (Gmax), s	26.5	23.5		51.0	9.7	40.3		51.0				
Max Q Clear Time (g_c+I1), s	20.3	13.3		53.0	7.6	26.2		23.5				
Green Ext Time (p_c), s	0.7	1.8		0.0	0.0	5.0		3.7				

Intersection Summary												
HCM 6th Ctrl Delay			28.6									
HCM 6th LOS			C									

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	250	390	140	45	460	450	125	910	25	225	635	355
Future Volume (vph)	250	390	140	45	460	450	125	910	25	225	635	355
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	11.0	11.0	11.0	11.0	11.0	11.5	11.5	11.5	11.5	11.5	11.5
Total Split (s)	64.0	64.0	64.0	64.0	64.0	64.0	13.0	40.0	40.0	16.0	43.0	43.0
Total Split (%)	53.3%	53.3%	53.3%	53.3%	53.3%	53.3%	10.8%	33.3%	33.3%	13.3%	35.8%	35.8%
Yellow Time (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
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.5	1.5	1.5	1.5	1.5	1.5
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)	6.0	6.0	6.0	6.0	6.0	6.0	6.5	6.5	6.5	6.5	6.5	6.5
Lead/Lag							Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	58.0	58.0	58.0	58.0	58.0	58.0	33.5	33.5	33.5	36.5	36.5	36.5
Actuated g/C Ratio	0.48	0.48	0.48	0.48	0.48	0.48	0.28	0.28	0.28	0.30	0.30	0.30
v/c Ratio	1.22	0.55	0.21	0.18	0.62	0.59	0.87	1.00	0.05	1.17	0.62	0.57
Control Delay	158.7	28.1	5.4	19.6	26.5	12.5	80.8	72.5	0.2	154.9	32.5	13.5
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	158.7	28.1	5.4	19.6	26.5	12.5	80.8	72.5	0.2	154.9	32.5	13.5
LOS	F	C	A	B	C	B	F	E	A	F	C	B
Approach Delay		65.8			19.6			71.8			49.6	
Approach LOS		E			B			E			D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 71 (59%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 100	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.22	
Intersection Signal Delay: 51.2	Intersection LOS: D
Intersection Capacity Utilization 96.5%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 2: Marksheffel Rd & SH-94



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	250	390	140	45	460	450	125	910	25	225	635	355
Future Volume (veh/h)	250	390	140	45	460	450	125	910	25	225	635	355
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1870	1870	1870	1841	1841	1841
Adj Flow Rate, veh/h	316	494	177	54	548	536	136	989	27	232	655	366
Peak Hour Factor	0.79	0.79	0.79	0.84	0.84	0.84	0.92	0.92	0.92	0.97	0.97	0.97
Percent Heavy Veh, %	3	3	3	3	3	3	2	2	2	4	4	4
Cap, veh/h	198	897	760	241	897	760	162	992	442	199	1064	474
Arrive On Green	0.16	0.16	0.16	0.48	0.48	0.48	0.05	0.28	0.28	0.08	0.30	0.30
Sat Flow, veh/h	516	1856	1572	760	1856	1572	1781	3554	1585	1753	3497	1560
Grp Volume(v), veh/h	316	494	177	54	548	536	136	989	27	232	655	366
Grp Sat Flow(s),veh/h/ln	516	1856	1572	760	1856	1572	1781	1777	1585	1753	1749	1560
Q Serve(g_s), s	32.0	29.4	11.8	7.0	26.0	32.1	6.5	33.4	1.5	9.5	19.2	25.6
Cycle Q Clear(g_c), s	58.0	29.4	11.8	36.4	26.0	32.1	6.5	33.4	1.5	9.5	19.2	25.6
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	198	897	760	241	897	760	162	992	442	199	1064	474
V/C Ratio(X)	1.60	0.55	0.23	0.22	0.61	0.71	0.84	1.00	0.06	1.17	0.62	0.77
Avail Cap(c_a), veh/h	198	897	760	241	897	760	162	992	442	199	1064	474
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.89	0.89	0.89	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	68.3	38.4	31.0	37.5	22.7	24.3	41.7	43.2	31.7	53.8	35.7	38.0
Incr Delay (d2), s/veh	289.3	0.6	0.1	0.5	1.2	3.0	30.3	27.8	0.3	116.1	2.7	11.5
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	22.3	14.8	5.0	1.3	11.4	12.3	2.3	18.3	0.6	12.1	8.6	11.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	357.6	39.1	31.1	38.0	24.0	27.3	72.0	71.0	32.0	170.0	38.4	49.5
LnGrp LOS	F	D	C	D	C	C	E	E	C	F	D	D
Approach Vol, veh/h		987			1138			1152			1253	
Approach Delay, s/veh		139.6			26.2			70.2			66.0	
Approach LOS		F			C			E			E	

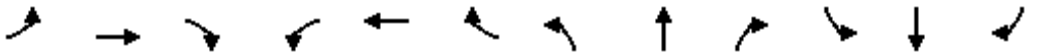
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	16.0	40.0		64.0	13.0	43.0		64.0				
Change Period (Y+Rc), s	6.5	6.5		6.0	6.5	6.5		6.0				
Max Green Setting (Gmax), s	9.5	33.5		58.0	6.5	36.5		58.0				
Max Q Clear Time (g_c+I1), s	11.5	35.4		60.0	8.5	27.6		38.4				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	3.9		6.2				

Intersection Summary												
HCM 6th Ctrl Delay			73.1									
HCM 6th LOS			E									

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	180	330	260	35	375	160	315	615	25	330	800	325
Future Volume (vph)	180	330	260	35	375	160	315	615	25	330	800	325
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	11.0	11.0	11.0	11.0	11.0	11.5	11.5	11.5	11.5	11.5	11.5
Total Split (s)	49.0	49.0	49.0	49.0	49.0	49.0	27.0	36.0	36.0	35.0	44.0	44.0
Total Split (%)	40.8%	40.8%	40.8%	40.8%	40.8%	40.8%	22.5%	30.0%	30.0%	29.2%	36.7%	36.7%
Yellow Time (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
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.5	1.5	1.5	1.5	1.5	1.5
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)	6.0	6.0	6.0	6.0	6.0	6.0	6.5	6.5	6.5	6.5	6.5	6.5
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	43.0	43.0	43.0	43.0	43.0	43.0	53.3	32.8	32.8	62.1	37.5	37.5
Actuated g/C Ratio	0.36	0.36	0.36	0.36	0.36	0.36	0.44	0.27	0.27	0.52	0.31	0.31
v/c Ratio	1.20	0.65	0.43	0.19	0.67	0.28	1.08	0.80	0.06	0.84	0.84	0.61
Control Delay	159.4	31.8	2.7	29.8	38.8	4.9	104.2	48.7	0.2	55.6	27.9	7.0
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	159.4	31.8	2.7	29.8	38.8	4.9	104.2	48.7	0.2	55.6	27.9	7.0
LOS	F	C	A	C	D	A	F	D	A	E	C	A
Approach Delay		51.8			28.7			65.7			29.5	
Approach LOS		D			C			E			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 33 (28%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 100	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.20	
Intersection Signal Delay: 43.6	Intersection LOS: D
Intersection Capacity Utilization 90.1%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 2: Marksheffel Rd & SH-94



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	180	330	260	35	375	160	315	615	25	330	800	325
Future Volume (veh/h)	180	330	260	35	375	160	315	615	25	330	800	325
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	1781	1781	1781	1811	1811	1811	1826	1826	1826	1856	1856	1856
Adj Flow Rate, veh/h	222	407	136	40	431	69	384	750	30	379	920	374
Peak Hour Factor	0.81	0.81	0.81	0.87	0.87	0.87	0.82	0.82	0.82	0.87	0.87	0.87
Percent Heavy Veh, %	8	8	8	6	6	6	5	5	5	3	3	3
Cap, veh/h	195	638	541	235	649	550	386	1100	491	442	1102	491
Arrive On Green	0.60	0.60	0.60	0.36	0.36	0.36	0.17	0.32	0.32	0.17	0.31	0.31
Sat Flow, veh/h	855	1781	1510	836	1811	1535	1739	3469	1547	1767	3526	1572
Grp Volume(v), veh/h	222	407	136	40	431	69	384	750	30	379	920	374
Grp Sat Flow(s),veh/h/ln	855	1781	1510	836	1811	1535	1739	1735	1547	1767	1763	1572
Q Serve(g_s), s	19.0	17.8	5.1	4.8	24.0	3.6	20.3	22.6	1.6	17.1	29.1	25.7
Cycle Q Clear(g_c), s	43.0	17.8	5.1	22.6	24.0	3.6	20.3	22.6	1.6	17.1	29.1	25.7
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	195	638	541	235	649	550	386	1100	491	442	1102	491
V/C Ratio(X)	1.14	0.64	0.25	0.17	0.66	0.13	0.99	0.68	0.06	0.86	0.84	0.76
Avail Cap(c_a), veh/h	195	638	541	235	649	550	386	1100	491	568	1102	491
HCM Platoon Ratio	1.67	1.67	1.67	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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.0	19.0	16.5	39.3	32.4	25.9	32.6	35.7	28.5	24.8	38.4	37.2
Incr Delay (d2), s/veh	106.4	2.1	0.2	0.3	2.6	0.1	44.3	3.4	0.2	10.1	7.5	10.6
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	11.3	6.0	1.7	1.0	10.9	1.4	11.8	10.0	0.6	8.2	13.6	11.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	145.5	21.1	16.7	39.7	35.0	26.0	76.9	39.1	28.8	34.9	45.9	47.8
LnGrp LOS	F	C	B	D	C	C	E	D	C	C	D	D
Approach Vol, veh/h		765			540			1164			1673	
Approach Delay, s/veh		56.4			34.2			51.3			43.8	
Approach LOS		E			C			D			D	

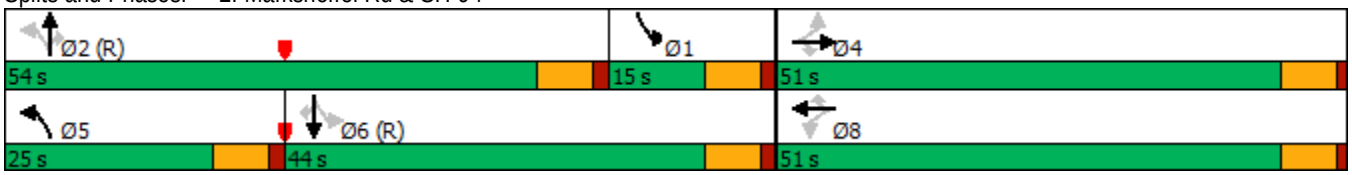
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	26.4	44.6		49.0	27.0	44.0		49.0				
Change Period (Y+Rc), s	6.5	6.5		6.0	6.5	6.5		6.0				
Max Green Setting (Gmax), s	28.5	29.5		43.0	20.5	37.5		43.0				
Max Q Clear Time (g_c+I1), s	19.1	24.6		45.0	22.3	31.1		26.0				
Green Ext Time (p_c), s	0.9	2.2		0.0	0.0	3.9		3.0				

Intersection Summary												
HCM 6th Ctrl Delay			47.0									
HCM 6th LOS			D									

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	270	395	495	50	460	460	440	1350	40	235	1135	355
Future Volume (vph)	270	395	495	50	460	460	440	1350	40	235	1135	355
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	11.0	11.0	11.0	11.0	11.0	11.5	11.5	11.5	11.5	11.5	11.5
Total Split (s)	51.0	51.0	51.0	51.0	51.0	51.0	25.0	54.0	54.0	15.0	44.0	44.0
Total Split (%)	42.5%	42.5%	42.5%	42.5%	42.5%	42.5%	20.8%	45.0%	45.0%	12.5%	36.7%	36.7%
Yellow Time (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
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.5	1.5	1.5	1.5	1.5	1.5
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)	6.0	6.0	6.0	6.0	6.0	6.0	6.5	6.5	6.5	6.5	6.5	6.5
Lead/Lag							Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	45.0	45.0	45.0	45.0	45.0	45.0	47.5	47.5	47.5	37.5	37.5	37.5
Actuated g/C Ratio	0.38	0.38	0.38	0.38	0.38	0.38	0.40	0.40	0.40	0.31	0.31	0.31
v/c Ratio	2.69	0.72	0.74	0.37	0.79	0.77	1.43	1.05	0.06	1.32	1.08	0.64
Control Delay	800.7	38.7	15.9	35.4	43.3	29.5	239.2	73.4	0.5	201.8	76.9	16.4
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	800.7	38.7	15.9	35.4	43.3	29.5	239.2	73.4	0.5	201.8	76.9	16.4
LOS	F	D	B	D	D	C	F	E	A	F	E	B
Approach Delay		206.4			36.3			111.7			81.4	
Approach LOS		F			D			F			F	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 71 (59%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 140	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 2.69	
Intersection Signal Delay: 111.4	Intersection LOS: F
Intersection Capacity Utilization 115.8%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 2: Marksheffel Rd & SH-94



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	270	395	495	50	460	460	440	1350	40	235	1135	355
Future Volume (veh/h)	270	395	495	50	460	460	440	1350	40	235	1135	355
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1870	1870	1870	1841	1841	1841
Adj Flow Rate, veh/h	342	500	317	60	548	274	478	1467	43	242	1170	366
Peak Hour Factor	0.79	0.79	0.79	0.84	0.84	0.84	0.92	0.92	0.92	0.97	0.97	0.97
Percent Heavy Veh, %	3	3	3	3	3	3	2	2	2	4	4	4
Cap, veh/h	135	696	590	137	696	590	335	1407	627	184	1093	487
Arrive On Green	0.12	0.12	0.12	0.38	0.38	0.38	0.15	0.40	0.40	0.07	0.31	0.31
Sat Flow, veh/h	661	1856	1572	664	1856	1572	1781	3554	1585	1753	3497	1560
Grp Volume(v), veh/h	342	500	317	60	548	274	478	1467	43	242	1170	366
Grp Sat Flow(s),veh/h/ln	661	1856	1572	664	1856	1572	1781	1777	1585	1753	1749	1560
Q Serve(g_s), s	13.6	31.1	22.7	10.5	31.4	15.8	18.5	47.5	2.0	8.5	37.5	25.3
Cycle Q Clear(g_c), s	45.0	31.1	22.7	41.6	31.4	15.8	18.5	47.5	2.0	8.5	37.5	25.3
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	135	696	590	137	696	590	335	1407	627	184	1093	487
V/C Ratio(X)	2.54	0.72	0.54	0.44	0.79	0.46	1.43	1.04	0.07	1.31	1.07	0.75
Avail Cap(c_a), veh/h	135	696	590	137	696	590	335	1407	627	184	1093	487
HCM Platoon Ratio	0.33	0.33	0.33	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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	71.3	46.5	42.8	51.6	33.3	28.4	35.3	36.3	22.5	54.4	41.3	37.1
Incr Delay (d2), s/veh	714.1	3.6	1.0	2.2	6.0	0.6	209.3	36.0	0.2	174.4	48.2	10.2
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	31.1	16.2	9.8	1.8	15.1	6.0	27.4	27.1	0.8	14.2	23.2	11.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	785.4	50.1	43.8	53.8	39.3	29.0	244.6	72.2	22.7	228.8	89.4	47.3
LnGrp LOS	F	D	D	D	D	C	F	F	C	F	F	D
Approach Vol, veh/h		1159			882			1988			1778	
Approach Delay, s/veh		265.3			37.1			112.6			99.7	
Approach LOS		F			D			F			F	

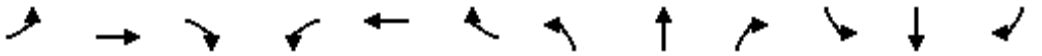
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	15.0	54.0		51.0	25.0	44.0		51.0				
Change Period (Y+Rc), s	6.5	6.5		6.0	6.5	6.5		6.0				
Max Green Setting (Gmax), s	8.5	47.5		45.0	18.5	37.5		45.0				
Max Q Clear Time (g_c+I1), s	10.5	49.5		47.0	20.5	39.5		43.6				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	0.0		0.7				

Intersection Summary												
HCM 6th Ctrl Delay			127.7									
HCM 6th LOS			F									

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	180	330	260	35	375	160	315	615	25	330	800	325
Future Volume (vph)	180	330	260	35	375	160	315	615	25	330	800	325
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Free
Protected Phases	7	4	5	3	8	1	5	2		1	6	
Permitted Phases			4			8			2			Free
Detector Phase	7	4	5	3	8	1	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)	9.5	11.0	11.5	9.5	11.0	11.5	11.5	11.5	11.5	11.5	11.5	
Total Split (s)	20.0	33.5	33.0	15.5	29.0	33.0	33.0	38.0	38.0	33.0	38.0	
Total Split (%)	16.7%	27.9%	27.5%	12.9%	24.2%	27.5%	27.5%	31.7%	31.7%	27.5%	31.7%	
Yellow Time (s)	3.5	5.0	5.0	3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
All-Red Time (s)	1.0	1.0	1.5	1.0	1.0	1.5	1.5	1.5	1.5	1.5	1.5	
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	6.0	6.5	4.5	6.0	6.5	6.5	6.5	6.5	6.5	6.5	
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	
Act Effct Green (s)	13.1	28.2	53.6	6.9	20.0	44.8	19.4	44.6	44.6	18.8	44.0	120.0
Actuated g/C Ratio	0.11	0.24	0.45	0.06	0.17	0.37	0.16	0.37	0.37	0.16	0.37	1.00
v/c Ratio	0.63	0.52	0.42	0.21	0.76	0.30	0.71	0.59	0.05	0.71	0.72	0.24
Control Delay	60.6	48.1	9.7	56.1	56.6	15.6	72.5	22.6	0.2	58.8	27.2	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	60.6	48.1	9.7	56.1	56.6	15.6	72.5	22.6	0.2	58.8	27.2	0.3
LOS	E	D	A	E	E	B	E	C	A	E	C	A
Approach Delay		38.0			45.1			38.5			28.3	
Approach LOS		D			D			D			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.76	
Intersection Signal Delay: 35.5	Intersection LOS: D
Intersection Capacity Utilization 66.2%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 2: Marksheffel Rd & SH-94



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	180	330	260	35	375	160	315	615	25	330	800	325
Future Volume (veh/h)	180	330	260	35	375	160	315	615	25	330	800	325
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	1781	1781	1781	1811	1811	1811	1826	1826	1826	1856	1856	1856
Adj Flow Rate, veh/h	222	407	136	40	431	69	384	750	30	379	920	0
Peak Hour Factor	0.81	0.81	0.81	0.87	0.87	0.87	0.82	0.82	0.82	0.87	0.87	0.87
Percent Heavy Veh, %	8	8	8	6	6	6	5	5	5	3	3	3
Cap, veh/h	279	697	513	103	522	437	451	1507	672	457	1530	
Arrive On Green	0.14	0.34	0.34	0.03	0.15	0.15	0.27	0.87	0.87	0.13	0.43	0.00
Sat Flow, veh/h	3291	3385	1510	3346	3441	1535	3374	3469	1547	3428	3526	1572
Grp Volume(v), veh/h	222	407	136	40	431	69	384	750	30	379	920	0
Grp Sat Flow(s),veh/h/ln	1646	1692	1510	1673	1721	1535	1687	1735	1547	1714	1763	1572
Q Serve(g_s), s	7.8	11.8	6.9	1.4	14.6	4.0	13.0	6.0	0.3	12.9	24.0	0.0
Cycle Q Clear(g_c), s	7.8	11.8	6.9	1.4	14.6	4.0	13.0	6.0	0.3	12.9	24.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	279	697	513	103	522	437	451	1507	672	457	1530	
V/C Ratio(X)	0.80	0.58	0.27	0.39	0.83	0.16	0.85	0.50	0.04	0.83	0.60	
Avail Cap(c_a), veh/h	425	776	548	307	660	499	745	1507	672	757	1530	
HCM Platoon Ratio	1.67	1.67	1.67	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	50.5	35.2	23.5	57.1	49.4	32.1	42.8	4.9	4.5	50.7	26.0	0.0
Incr Delay (d2), s/veh	5.9	0.9	0.3	2.4	6.8	0.2	5.1	1.2	0.1	3.9	1.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	4.5	2.4	0.6	6.7	1.5	5.0	1.7	0.1	5.8	10.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.4	36.1	23.8	59.5	56.2	32.3	47.9	6.0	4.6	54.6	27.8	0.0
LnGrp LOS	E	D	C	E	E	C	D	A	A	D	C	
Approach Vol, veh/h		765			540			1164			1299	A
Approach Delay, s/veh		39.8			53.4			19.8			35.6	
Approach LOS		D			D			B			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	22.5	58.6	8.2	30.7	22.5	58.6	14.7	24.2
Change Period (Y+Rc), s	6.5	6.5	4.5	6.0	6.5	6.5	4.5	6.0
Max Green Setting (Gmax), s	26.5	31.5	11.0	27.5	26.5	31.5	15.5	23.0
Max Q Clear Time (g_c+I1), s	14.9	8.0	3.4	13.8	15.0	26.0	9.8	16.6
Green Ext Time (p_c), s	1.1	5.6	0.0	2.7	1.1	2.9	0.4	1.6

Intersection Summary	
HCM 6th Ctrl Delay	34.1
HCM 6th LOS	C

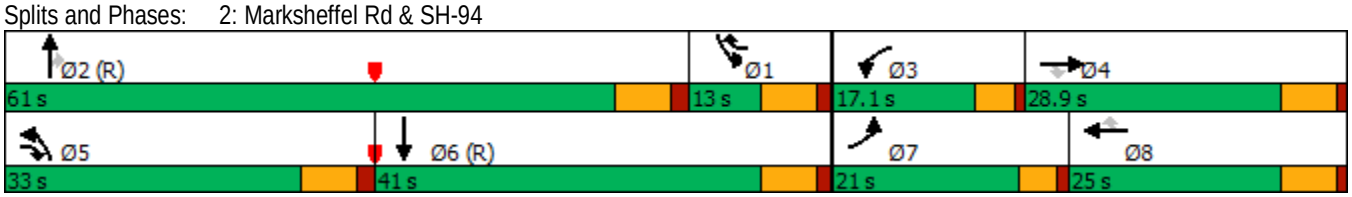
Notes

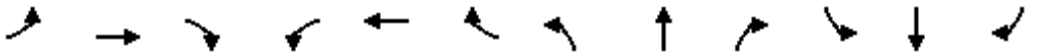
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	270	395	495	50	460	460	440	1350	40	235	1135	355
Future Volume (vph)	270	395	495	50	460	460	440	1350	40	235	1135	355
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Free
Protected Phases	7	4	5	3	8	1	5	2		1	6	
Permitted Phases			4			8			2			Free
Detector Phase	7	4	5	3	8	1	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)	9.5	11.0	11.5	9.5	11.0	11.5	11.5	11.5	11.5	11.5	11.5	
Total Split (s)	21.0	28.9	33.0	17.1	25.0	13.0	33.0	61.0	61.0	13.0	41.0	
Total Split (%)	17.5%	24.1%	27.5%	14.3%	20.8%	10.8%	27.5%	50.8%	50.8%	10.8%	34.2%	
Yellow Time (s)	3.5	5.0	5.0	3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
All-Red Time (s)	1.0	1.0	1.5	1.0	1.0	1.5	1.5	1.5	1.5	1.5	1.5	
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	6.0	6.5	4.5	6.0	6.5	6.5	6.5	6.5	6.5	6.5	
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lead	Lead	Lag	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	
Act Effct Green (s)	15.0	29.3	58.1	7.4	19.7	25.7	22.7	55.3	55.3	6.5	39.0	120.0
Actuated g/C Ratio	0.12	0.24	0.48	0.06	0.16	0.21	0.19	0.46	0.46	0.05	0.32	1.00
v/c Ratio	0.72	0.52	0.67	0.27	0.91	1.19	0.74	0.90	0.05	1.33	1.04	0.24
Control Delay	61.6	48.0	15.4	56.5	70.6	134.6	50.7	42.7	0.4	217.3	80.8	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	61.6	48.0	15.4	56.5	70.6	134.6	50.7	42.7	0.4	217.3	80.8	0.2
LOS	E	D	B	E	E	F	D	D	A	F	F	A
Approach Delay		37.3			100.2			43.7			82.8	
Approach LOS		D			F			D			F	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 120	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.33	
Intersection Signal Delay: 63.6	Intersection LOS: E
Intersection Capacity Utilization 88.1%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 2: Marksheffel Rd & SH-94





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	270	395	495	50	460	460	440	1350	40	235	1135	355
Future Volume (veh/h)	270	395	495	50	460	460	440	1350	40	235	1135	355
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1870	1870	1870	1841	1841	1841
Adj Flow Rate, veh/h	307	449	284	57	523	262	478	1467	43	242	1170	0
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.92	0.92	0.92	0.97	0.97	0.97
Percent Heavy Veh, %	3	3	3	3	3	3	2	2	2	4	4	4
Cap, veh/h	366	809	618	121	558	383	565	1614	720	289	1314	
Arrive On Green	0.18	0.38	0.38	0.04	0.16	0.16	0.05	0.15	0.15	0.08	0.38	0.00
Sat Flow, veh/h	3428	3526	1572	3428	3526	1572	3456	3554	1585	3401	3497	1560
Grp Volume(v), veh/h	307	449	284	57	523	262	478	1467	43	242	1170	0
Grp Sat Flow(s),veh/h/ln	1714	1763	1572	1714	1763	1572	1728	1777	1585	1700	1749	1560
Q Serve(g_s), s	10.4	12.0	15.1	2.0	17.6	5.5	16.5	48.8	2.1	8.4	37.7	0.0
Cycle Q Clear(g_c), s	10.4	12.0	15.1	2.0	17.6	5.5	16.5	48.8	2.1	8.4	37.7	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	366	809	618	121	558	383	565	1614	720	289	1314	
V/C Ratio(X)	0.84	0.55	0.46	0.47	0.94	0.68	0.85	0.91	0.06	0.84	0.89	
Avail Cap(c_a), veh/h	471	809	618	360	558	383	763	1614	720	289	1314	
HCM Platoon Ratio	1.67	1.67	1.67	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	48.3	32.2	21.3	56.8	49.9	21.8	55.3	48.6	17.1	54.1	35.2	0.0
Incr Delay (d2), s/veh	10.2	0.8	0.5	2.8	23.6	5.0	6.6	9.1	0.2	19.0	9.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.7	4.7	4.7	0.9	9.5	4.9	8.2	25.3	1.1	4.4	17.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.5	33.0	21.9	59.6	73.5	26.8	61.9	57.7	17.2	73.1	44.5	0.0
LnGrp LOS	E	C	C	E	E	C	E	E	B	E	D	
Approach Vol, veh/h		1040			842			1988			1412	A
Approach Delay, s/veh		37.5			58.0			57.8			49.4	
Approach LOS		D			E			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.7	61.0	8.8	33.6	26.1	51.6	17.3	25.0
Change Period (Y+Rc), s	6.5	6.5	4.5	6.0	6.5	6.5	4.5	6.0
Max Green Setting (Gmax), s	6.5	54.5	12.6	22.9	26.5	34.5	16.5	19.0
Max Q Clear Time (g_c+I1), s	10.4	50.8	4.0	17.1	18.5	39.7	12.4	19.6
Green Ext Time (p_c), s	0.0	3.0	0.1	2.0	1.2	0.0	0.4	0.0

Intersection Summary	
HCM 6th Ctrl Delay	51.6
HCM 6th LOS	D

Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	165	375	160	40	435	155	280	580	25	375	730	325
Future Volume (vph)	165	375	160	40	435	155	280	580	25	375	730	325
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Free
Protected Phases	7	4	5	3	8	1	5	2		1	6	
Permitted Phases			4			8			2			Free
Detector Phase	7	4	5	3	8	1	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)	9.5	11.0	11.5	9.5	11.0	11.5	11.5	11.5	11.5	11.5	11.5	
Total Split (s)	18.0	38.5	29.0	11.5	32.0	29.0	29.0	41.0	41.0	29.0	41.0	
Total Split (%)	15.0%	32.1%	24.2%	9.6%	26.7%	24.2%	24.2%	34.2%	34.2%	24.2%	34.2%	
Yellow Time (s)	3.5	5.0	5.0	3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
All-Red Time (s)	1.0	1.0	1.5	1.0	1.0	1.5	1.5	1.5	1.5	1.5	1.5	
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	6.0	6.5	4.5	6.0	6.5	6.5	6.5	6.5	6.5	6.5	
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	
Act Effct Green (s)	11.5	28.9	51.1	6.6	21.9	47.1	16.2	43.8	43.8	19.2	46.9	120.0
Actuated g/C Ratio	0.10	0.24	0.43	0.06	0.18	0.39	0.14	0.36	0.36	0.16	0.39	1.00
v/c Ratio	0.58	0.51	0.25	0.24	0.76	0.25	0.68	0.50	0.04	0.75	0.58	0.23
Control Delay	61.8	48.7	7.9	57.4	54.7	8.5	66.7	23.9	0.1	59.1	26.4	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	61.8	48.7	7.9	57.4	54.7	8.5	66.7	23.9	0.1	59.1	26.4	0.2
LOS	E	D	A	E	D	A	E	C	A	E	C	A
Approach Delay		42.4			43.5			36.8			29.1	
Approach LOS		D			D			D			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.76	
Intersection Signal Delay: 36.0	Intersection LOS: D
Intersection Capacity Utilization 64.5%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 2: Marksheffel Rd & SH-94

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	165	375	160	40	435	155	280	580	25	375	730	325
Future Volume (veh/h)	165	375	160	40	435	155	280	580	25	375	730	325
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	1781	1781	1781	1811	1811	1811	1826	1826	1826	1856	1856	1856
Adj Flow Rate, veh/h	179	408	11	43	473	59	304	630	27	408	793	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	8	8	8	6	6	6	5	5	5	3	3	3
Cap, veh/h	233	697	475	106	574	471	368	1480	660	480	1613	
Arrive On Green	0.14	0.41	0.41	0.03	0.17	0.17	0.22	0.85	0.85	0.14	0.46	0.00
Sat Flow, veh/h	3291	3385	1510	3346	3441	1535	3374	3469	1547	3428	3526	1572
Grp Volume(v), veh/h	179	408	11	43	473	59	304	630	27	408	793	0
Grp Sat Flow(s),veh/h/ln	1646	1692	1510	1673	1721	1535	1687	1735	1547	1714	1763	1572
Q Serve(g_s), s	6.3	11.2	0.5	1.5	15.9	3.3	10.3	5.0	0.3	13.9	18.9	0.0
Cycle Q Clear(g_c), s	6.3	11.2	0.5	1.5	15.9	3.3	10.3	5.0	0.3	13.9	18.9	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	233	697	475	106	574	471	368	1480	660	480	1613	
V/C Ratio(X)	0.77	0.59	0.02	0.41	0.82	0.13	0.83	0.43	0.04	0.85	0.49	
Avail Cap(c_a), veh/h	370	917	573	195	746	547	633	1480	660	643	1613	
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	50.5	31.3	21.0	57.0	48.3	30.0	45.8	5.4	5.1	50.4	22.8	0.0
Incr Delay (d2), s/veh	5.2	0.8	0.0	2.5	5.8	0.1	4.7	0.9	0.1	8.1	1.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	4.0	0.2	0.7	7.3	1.3	4.1	1.6	0.1	6.5	8.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.8	32.1	21.0	59.5	54.1	30.1	50.6	6.3	5.2	58.5	23.9	0.0
LnGrp LOS	E	C	C	E	D	C	D	A	A	E	C	
Approach Vol, veh/h		598			575			961			1201	A
Approach Delay, s/veh		39.0			52.1			20.3			35.6	
Approach LOS		D			D			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	23.3	57.7	8.3	30.7	19.6	61.4	13.0	26.0
Change Period (Y+Rc), s	6.5	6.5	4.5	6.0	6.5	6.5	4.5	6.0
Max Green Setting (Gmax), s	22.5	34.5	7.0	32.5	22.5	34.5	13.5	26.0
Max Q Clear Time (g_c+I1), s	15.9	7.0	3.5	13.2	12.3	20.9	8.3	17.9
Green Ext Time (p_c), s	0.9	4.8	0.0	2.6	0.8	4.7	0.2	2.1

Intersection Summary	
HCM 6th Ctrl Delay	34.6
HCM 6th LOS	C

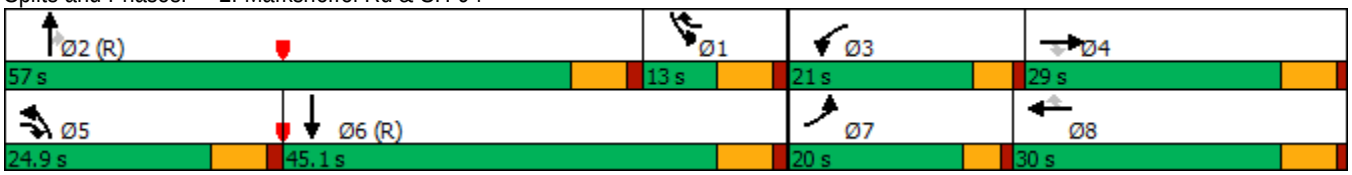
Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	250	450	355	50	530	515	255	1210	30	255	980	355
Future Volume (vph)	250	450	355	50	530	515	255	1210	30	255	980	355
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Free
Protected Phases	7	4	5	3	8	1	5	2		1	6	
Permitted Phases			4			8			2			Free
Detector Phase	7	4	5	3	8	1	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)	9.5	11.0	11.5	9.5	11.0	11.5	11.5	11.5	11.5	11.5	11.5	
Total Split (s)	20.0	29.0	24.9	21.0	30.0	13.0	24.9	57.0	57.0	13.0	45.1	
Total Split (%)	16.7%	24.2%	20.8%	17.5%	25.0%	10.8%	20.8%	47.5%	47.5%	10.8%	37.6%	
Yellow Time (s)	3.5	5.0	5.0	3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
All-Red Time (s)	1.0	1.0	1.5	1.0	1.0	1.5	1.5	1.5	1.5	1.5	1.5	
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	6.0	6.5	4.5	6.0	6.5	6.5	6.5	6.5	6.5	6.5	
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lead	Lead	Lag	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	
Act Effct Green (s)	14.0	31.8	52.8	7.3	23.2	29.2	15.0	52.9	52.9	6.5	44.4	120.0
Actuated g/C Ratio	0.12	0.26	0.44	0.06	0.19	0.24	0.12	0.44	0.44	0.05	0.37	1.00
v/c Ratio	0.69	0.53	0.47	0.26	0.85	1.16	0.65	0.84	0.04	1.45	0.79	0.24
Control Delay	63.4	46.3	7.5	56.4	59.7	123.4	60.6	24.1	0.1	264.8	48.4	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	63.4	46.3	7.5	56.4	59.7	123.4	60.6	24.1	0.1	264.8	48.4	0.2
LOS	E	D	A	E	E	F	E	C	A	F	D	A
Approach Delay		37.3			89.5			29.9			72.3	
Approach LOS		D			F			C			E	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 110	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.45	
Intersection Signal Delay: 56.5	Intersection LOS: E
Intersection Capacity Utilization 87.1%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 2: Marksheffel Rd & SH-94



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	250	450	355	50	530	515	255	1210	30	255	980	355
Future Volume (veh/h)	250	450	355	50	530	515	255	1210	30	255	980	355
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1870	1870	1870	1841	1841	1841
Adj Flow Rate, veh/h	272	489	120	54	576	310	277	1315	33	263	1010	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.97	0.97	0.97
Percent Heavy Veh, %	3	3	3	3	3	3	2	2	2	4	4	4
Cap, veh/h	331	878	550	119	661	451	348	1496	667	338	1468	
Arrive On Green	0.16	0.42	0.42	0.03	0.19	0.19	0.03	0.14	0.14	0.10	0.42	0.00
Sat Flow, veh/h	3428	3526	1572	3428	3526	1572	3456	3554	1585	3401	3497	1560
Grp Volume(v), veh/h	272	489	120	54	576	310	277	1315	33	263	1010	0
Grp Sat Flow(s),veh/h/ln	1714	1763	1572	1714	1763	1572	1728	1777	1585	1700	1749	1560
Q Serve(g_s), s	9.2	12.7	5.3	1.9	19.0	6.0	9.6	43.6	1.7	9.1	28.3	0.0
Cycle Q Clear(g_c), s	9.2	12.7	5.3	1.9	19.0	6.0	9.6	43.6	1.7	9.1	28.3	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	331	878	550	119	661	451	348	1496	667	338	1468	
V/C Ratio(X)	0.82	0.56	0.22	0.45	0.87	0.69	0.80	0.88	0.05	0.78	0.69	
Avail Cap(c_a), veh/h	443	878	550	471	705	471	530	1496	667	338	1468	
HCM Platoon Ratio	1.67	1.67	1.67	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	49.3	30.0	21.1	56.8	47.4	19.6	56.8	48.7	18.9	52.7	28.4	0.0
Incr Delay (d2), s/veh	9.0	0.8	0.2	2.7	11.1	4.0	4.8	7.7	0.1	10.9	2.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.1	4.8	1.9	0.8	9.4	5.5	4.6	22.4	0.9	4.4	12.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.3	30.8	21.3	59.5	58.4	23.6	61.6	56.4	19.0	63.6	31.1	0.0
LnGrp LOS	E	C	C	E	E	C	E	E	B	E	C	
Approach Vol, veh/h		881			940			1625			1273	A
Approach Delay, s/veh		38.0			47.0			56.5			37.8	
Approach LOS		D			D			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.4	57.0	8.7	35.9	18.6	56.9	16.1	28.5
Change Period (Y+Rc), s	6.5	6.5	4.5	6.0	6.5	6.5	4.5	6.0
Max Green Setting (Gmax), s	6.5	50.5	16.5	23.0	18.4	38.6	15.5	24.0
Max Q Clear Time (g_c+I1), s	11.1	45.6	3.9	14.7	11.6	30.3	11.2	21.0
Green Ext Time (p_c), s	0.0	3.6	0.1	2.3	0.5	4.3	0.4	1.4

Intersection Summary	
HCM 6th Ctrl Delay	46.1
HCM 6th LOS	D

Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	180	380	330	45	435	175	505	880	30	380	970	325
Future Volume (vph)	180	380	330	45	435	175	505	880	30	380	970	325
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Free
Protected Phases	7	4	5	3	8	1	5	2		1	6	
Permitted Phases			4			8			2			Free
Detector Phase	7	4	5	3	8	1	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)	9.5	11.0	11.5	9.5	11.0	11.5	11.5	11.5	11.5	11.5	11.5	
Total Split (s)	17.4	32.5	34.0	12.5	27.6	35.0	34.0	40.0	40.0	35.0	41.0	
Total Split (%)	14.5%	27.1%	28.3%	10.4%	23.0%	29.2%	28.3%	33.3%	33.3%	29.2%	34.2%	
Yellow Time (s)	3.5	5.0	5.0	3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
All-Red Time (s)	1.0	1.0	1.5	1.0	1.0	1.5	1.5	1.5	1.5	1.5	1.5	
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	6.0	6.5	4.5	6.0	6.5	6.5	6.5	6.5	6.5	6.5	
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	
Act Effct Green (s)	11.7	27.0	57.6	7.0	20.3	46.3	24.6	44.6	44.6	20.0	39.9	120.0
Actuated g/C Ratio	0.10	0.22	0.48	0.06	0.17	0.39	0.20	0.37	0.37	0.17	0.33	1.00
v/c Ratio	0.62	0.55	0.47	0.25	0.82	0.29	0.80	0.75	0.05	0.73	0.90	0.23
Control Delay	61.6	48.9	14.3	56.9	60.6	10.5	65.5	26.8	0.1	57.1	38.9	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	61.6	48.9	14.3	56.9	60.6	10.5	65.5	26.8	0.1	57.1	38.9	0.1
LOS	E	D	B	E	E	B	E	C	A	E	D	A
Approach Delay		38.7			46.9			40.0			35.5	
Approach LOS		D			D			D			D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.90	
Intersection Signal Delay: 39.1	Intersection LOS: D
Intersection Capacity Utilization 78.0%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 2: Marksheffel Rd & SH-94

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	180	380	330	45	435	175	505	880	30	380	970	325
Future Volume (veh/h)	180	380	330	45	435	175	505	880	30	380	970	325
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	1781	1781	1781	1811	1811	1811	1826	1826	1826	1856	1856	1856
Adj Flow Rate, veh/h	196	413	196	49	473	81	549	957	33	413	1054	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	8	8	8	6	6	6	5	5	5	3	3	3
Cap, veh/h	252	687	580	112	551	467	611	1469	655	494	1362	
Arrive On Green	0.10	0.27	0.27	0.03	0.16	0.16	0.36	0.85	0.85	0.14	0.39	0.00
Sat Flow, veh/h	3291	3385	1510	3346	3441	1535	3374	3469	1547	3428	3526	1572
Grp Volume(v), veh/h	196	413	196	49	473	81	549	957	33	413	1054	0
Grp Sat Flow(s),veh/h/ln	1646	1692	1510	1673	1721	1535	1687	1735	1547	1714	1763	1572
Q Serve(g_s), s	7.0	12.8	10.6	1.7	16.1	4.7	18.5	11.3	0.4	14.1	31.4	0.0
Cycle Q Clear(g_c), s	7.0	12.8	10.6	1.7	16.1	4.7	18.5	11.3	0.4	14.1	31.4	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	252	687	580	112	551	467	611	1469	655	494	1362	
V/C Ratio(X)	0.78	0.60	0.34	0.44	0.86	0.17	0.90	0.65	0.05	0.84	0.77	
Avail Cap(c_a), veh/h	354	747	607	223	619	497	773	1469	655	814	1362	
HCM Platoon Ratio	1.33	1.33	1.33	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	52.9	39.6	23.8	56.9	49.1	30.7	37.2	6.2	5.3	50.0	32.2	0.0
Incr Delay (d2), s/veh	7.1	1.2	0.3	2.7	10.7	0.2	11.4	2.3	0.1	4.0	4.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	5.2	3.6	0.8	7.7	1.8	7.3	2.7	0.2	6.3	14.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.0	40.7	24.2	59.5	59.8	30.8	48.6	8.4	5.5	54.0	36.5	0.0
LnGrp LOS	E	D	C	E	E	C	D	A	A	D	D	
Approach Vol, veh/h		805			603			1539			1467	A
Approach Delay, s/veh		41.4			55.9			22.7			41.5	
Approach LOS		D			E			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	23.8	57.3	8.5	30.4	28.2	52.9	13.7	25.2
Change Period (Y+Rc), s	6.5	6.5	4.5	6.0	6.5	6.5	4.5	6.0
Max Green Setting (Gmax), s	28.5	33.5	8.0	26.5	27.5	34.5	12.9	21.6
Max Q Clear Time (g_c+I1), s	16.1	13.3	3.7	14.8	20.5	33.4	9.0	18.1
Green Ext Time (p_c), s	1.2	7.1	0.0	2.7	1.3	0.8	0.2	1.1

Intersection Summary	
HCM 6th Ctrl Delay	36.9
HCM 6th LOS	D

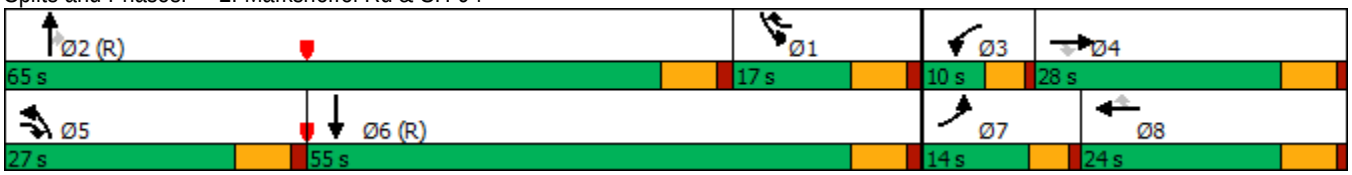
Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	270	455	710	55	530	525	570	1650	45	265	1480	355
Future Volume (vph)	270	455	710	55	530	525	570	1650	45	265	1480	355
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Free
Protected Phases	7	4	5	3	8	1	5	2		1	6	
Permitted Phases			4			8			2			Free
Detector Phase	7	4	5	3	8	1	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)	9.5	11.0	11.5	9.5	11.0	11.5	11.5	11.5	11.5	11.5	11.5	
Total Split (s)	14.0	28.0	27.0	10.0	24.0	17.0	27.0	65.0	65.0	17.0	55.0	
Total Split (%)	11.7%	23.3%	22.5%	8.3%	20.0%	14.2%	22.5%	54.2%	54.2%	14.2%	45.8%	
Yellow Time (s)	3.5	5.0	5.0	3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
All-Red Time (s)	1.0	1.0	1.5	1.0	1.0	1.5	1.5	1.5	1.5	1.5	1.5	
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	6.0	6.5	4.5	6.0	6.5	6.5	6.5	6.5	6.5	6.5	
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lead	Lead	Lag	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	
Act Effct Green (s)	9.5	24.0	50.5	5.5	18.0	28.0	20.5	58.5	58.5	10.5	48.5	120.0
Actuated g/C Ratio	0.08	0.20	0.42	0.05	0.15	0.23	0.17	0.49	0.49	0.09	0.40	1.00
v/c Ratio	1.09	0.71	1.05	0.39	1.10	1.22	1.06	1.04	0.06	0.93	1.09	0.24
Control Delay	127.5	55.8	68.5	63.1	115.7	145.5	92.3	64.1	0.2	80.6	88.1	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	127.5	55.8	68.5	63.1	115.7	145.5	92.3	64.1	0.2	80.6	88.1	0.1
LOS	F	E	E	E	F	F	F	E	A	F	F	A
Approach Delay		75.5			127.2			70.0			72.3	
Approach LOS		E			F			E			E	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.22	
Intersection Signal Delay: 81.2	Intersection LOS: F
Intersection Capacity Utilization 103.6%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 2: Marksheffel Rd & SH-94



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	270	455	710	55	530	525	570	1650	45	265	1480	355
Future Volume (veh/h)	270	455	710	55	530	525	570	1650	45	265	1480	355
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1870	1870	1870	1841	1841	1841
Adj Flow Rate, veh/h	293	495	506	60	576	321	620	1793	49	273	1526	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.97	0.97	0.97
Percent Heavy Veh, %	3	3	3	3	3	3	2	2	2	4	4	4
Cap, veh/h	271	681	572	124	529	373	590	1732	773	298	1414	
Arrive On Green	0.13	0.32	0.32	0.04	0.15	0.15	0.06	0.16	0.16	0.09	0.40	0.00
Sat Flow, veh/h	3428	3526	1572	3428	3526	1572	3456	3554	1585	3401	3497	1560
Grp Volume(v), veh/h	293	495	506	60	576	321	620	1793	49	273	1526	0
Grp Sat Flow(s),veh/h/ln	1714	1763	1572	1714	1763	1572	1728	1777	1585	1700	1749	1560
Q Serve(g_s), s	9.5	14.9	23.2	2.1	18.0	9.8	20.5	58.5	2.4	9.6	48.5	0.0
Cycle Q Clear(g_c), s	9.5	14.9	23.2	2.1	18.0	9.8	20.5	58.5	2.4	9.6	48.5	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	271	681	572	124	529	373	590	1732	773	298	1414	
V/C Ratio(X)	1.08	0.73	0.88	0.49	1.09	0.86	1.05	1.03	0.06	0.92	1.08	
Avail Cap(c_a), veh/h	271	681	572	157	529	373	590	1732	773	298	1414	
HCM Platoon Ratio	1.67	1.67	1.67	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	52.1	37.8	31.3	56.7	51.0	26.7	56.6	50.3	15.3	54.3	35.8	0.0
Incr Delay (d2), s/veh	77.4	3.9	15.2	2.9	65.6	17.9	50.9	31.2	0.2	31.6	48.6	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	6.8	6.1	16.6	0.9	12.7	4.9	13.7	35.4	1.2	5.4	29.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	129.5	41.7	46.5	59.7	116.6	44.6	107.5	81.6	15.4	85.9	84.3	0.0
LnGrp LOS	F	D	D	E	F	D	F	F	B	F	F	
Approach Vol, veh/h		1294			957			2462			1799	A
Approach Delay, s/veh		63.5			88.9			86.8			84.5	
Approach LOS		E			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.0	65.0	8.8	29.2	27.0	55.0	14.0	24.0
Change Period (Y+Rc), s	6.5	6.5	4.5	6.0	6.5	6.5	4.5	6.0
Max Green Setting (Gmax), s	10.5	58.5	5.5	22.0	20.5	48.5	9.5	18.0
Max Q Clear Time (g_c+I1), s	11.6	60.5	4.1	25.2	22.5	50.5	11.5	20.0
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	81.8
HCM 6th LOS	F

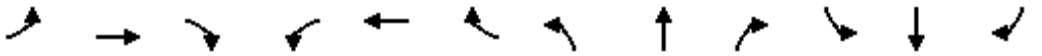
Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	180	380	330	45	435	175	505	880	380	970
Future Volume (vph)	180	380	330	45	435	175	505	880	380	970
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	Prot	NA
Protected Phases	7	4	5	3	8	1	5	2	1	6
Permitted Phases			4			8				
Detector Phase	7	4	5	3	8	1	5	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)	9.5	11.0	11.5	9.5	11.0	11.5	11.5	11.5	11.5	11.5
Total Split (s)	20.0	31.2	33.0	17.8	29.0	34.0	33.0	37.0	34.0	38.0
Total Split (%)	16.7%	26.0%	27.5%	14.8%	24.2%	28.3%	27.5%	30.8%	28.3%	31.7%
Yellow Time (s)	3.5	5.0	5.0	3.5	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.5	1.0	1.0	1.5	1.5	1.5	1.5	1.5
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	6.0	6.5	4.5	6.0	6.5	6.5	6.5	6.5	6.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	None	C-Max
Act Effct Green (s)	12.4	28.5	58.7	7.2	21.2	47.2	24.2	42.9	19.9	38.6
Actuated g/C Ratio	0.10	0.24	0.49	0.06	0.18	0.39	0.20	0.36	0.17	0.32
v/c Ratio	0.59	0.52	0.43	0.25	0.79	0.30	0.82	0.56	0.73	0.88
Control Delay	58.9	46.7	8.4	56.4	57.0	15.0	73.2	18.9	59.4	33.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	58.9	46.7	8.4	56.4	57.0	15.0	73.2	18.9	59.4	33.4
LOS	E	D	A	E	E	B	E	B	E	C
Approach Delay		35.0			45.7			38.3		39.3
Approach LOS		C			D			D		D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.88	
Intersection Signal Delay: 39.1	Intersection LOS: D
Intersection Capacity Utilization 77.1%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 2: Marksheffel Rd & SH-94



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	180	380	330	45	435	175	505	880	30	380	970	325
Future Volume (veh/h)	180	380	330	45	435	175	505	880	30	380	970	325
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	1781	1781	1781	1811	1811	1811	1826	1826	1826	1856	1856	1856
Adj Flow Rate, veh/h	196	413	196	49	473	81	549	957	33	413	1054	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	8	8	8	6	6	6	5	5	5	3	3	3
Cap, veh/h	253	698	584	112	560	470	609	2082	72	493	1946	
Arrive On Green	0.13	0.34	0.34	0.03	0.16	0.16	0.36	0.84	0.84	0.14	0.38	0.00
Sat Flow, veh/h	3291	3385	1510	3346	3441	1535	3374	4948	170	3428	5233	0
Grp Volume(v), veh/h	196	413	196	49	473	81	549	642	348	413	1054	0
Grp Sat Flow(s),veh/h/ln	1646	1692	1510	1673	1721	1535	1687	1662	1795	1714	1689	0
Q Serve(g_s), s	6.9	12.1	10.1	1.7	16.0	4.6	18.5	6.0	6.0	14.1	19.4	0.0
Cycle Q Clear(g_c), s	6.9	12.1	10.1	1.7	16.0	4.6	18.5	6.0	6.0	14.1	19.4	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.09	1.00		0.00
Lane Grp Cap(c), veh/h	253	698	584	112	560	470	609	1398	755	493	1946	
V/C Ratio(X)	0.77	0.59	0.34	0.44	0.85	0.17	0.90	0.46	0.46	0.84	0.54	
Avail Cap(c_a), veh/h	425	711	589	371	660	515	745	1398	755	786	1946	
HCM Platoon Ratio	1.67	1.67	1.67	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	51.3	35.2	21.2	56.9	48.8	30.5	37.3	6.0	6.0	50.0	28.7	0.0
Incr Delay (d2), s/veh	5.0	1.3	0.3	2.7	8.7	0.2	12.4	1.1	2.0	4.6	1.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	4.6	3.2	0.8	7.5	1.8	7.4	1.7	2.1	6.3	8.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.3	36.5	21.5	59.5	57.4	30.6	49.8	7.1	8.0	54.6	29.8	0.0
LnGrp LOS	E	D	C	E	E	C	D	A	A	D	C	
Approach Vol, veh/h		805			603			1539			1467	A
Approach Delay, s/veh		37.7			54.0			22.5			36.8	
Approach LOS		D			D			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	23.8	57.0	8.5	30.7	28.2	52.6	13.7	25.5
Change Period (Y+Rc), s	6.5	6.5	4.5	6.0	6.5	6.5	4.5	6.0
Max Green Setting (Gmax), s	27.5	30.5	13.3	25.2	26.5	31.5	15.5	23.0
Max Q Clear Time (g_c+I1), s	16.1	8.0	3.7	14.1	20.5	21.4	8.9	18.0
Green Ext Time (p_c), s	1.2	7.0	0.1	2.6	1.2	5.1	0.3	1.5

Intersection Summary	
HCM 6th Ctrl Delay	34.3
HCM 6th LOS	C

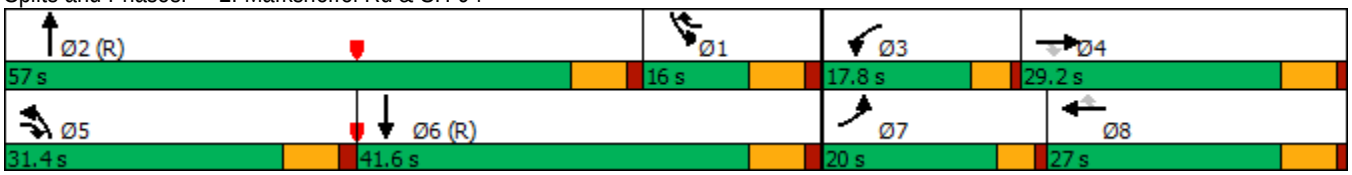
Notes

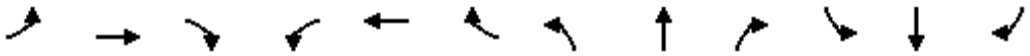
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	270	455	710	55	530	525	570	1650	265	1480
Future Volume (vph)	270	455	710	55	530	525	570	1650	265	1480
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	Prot	NA
Protected Phases	7	4	5	3	8	1	5	2	1	6
Permitted Phases			4			8				
Detector Phase	7	4	5	3	8	1	5	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)	9.5	11.0	11.5	9.5	11.0	11.5	11.5	11.5	11.5	11.5
Total Split (s)	20.0	29.2	31.4	17.8	27.0	16.0	31.4	57.0	16.0	41.6
Total Split (%)	16.7%	24.3%	26.2%	14.8%	22.5%	13.3%	26.2%	47.5%	13.3%	34.7%
Yellow Time (s)	3.5	5.0	5.0	3.5	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.5	1.0	1.0	1.5	1.5	1.5	1.5	1.5
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	6.0	6.5	4.5	6.0	6.5	6.5	6.5	6.5	6.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	None	C-Max
Act Effct Green (s)	14.4	30.2	60.7	7.5	21.4	30.4	24.4	51.3	9.5	36.3
Actuated g/C Ratio	0.12	0.25	0.51	0.06	0.18	0.25	0.20	0.43	0.08	0.30
v/c Ratio	0.72	0.56	0.88	0.28	0.92	1.15	0.89	0.85	1.03	1.26
Control Delay	61.3	46.9	27.4	56.5	70.4	117.2	78.9	37.2	109.5	162.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	61.3	46.9	27.4	56.5	70.4	117.2	78.9	37.2	109.5	162.0
LOS	E	D	C	E	E	F	E	D	F	F
Approach Delay		39.9			91.8			47.7		155.4
Approach LOS		D			F			D		F

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 130	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.26	
Intersection Signal Delay: 84.8	Intersection LOS: F
Intersection Capacity Utilization 99.2%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 2: Marksheffel Rd & SH-94





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	270	455	710	55	530	525	570	1650	45	265	1480	355
Future Volume (veh/h)	270	455	710	55	530	525	570	1650	45	265	1480	355
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1870	1870	1870	1841	1841	1841
Adj Flow Rate, veh/h	293	495	506	60	576	321	620	1793	49	273	1526	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.97	0.97	0.97
Percent Heavy Veh, %	3	3	3	3	3	3	2	2	2	4	4	4
Cap, veh/h	351	851	692	124	617	442	686	2150	59	361	1650	
Arrive On Green	0.17	0.40	0.40	0.04	0.18	0.18	0.07	0.14	0.14	0.11	0.33	0.00
Sat Flow, veh/h	3428	3526	1572	3428	3526	1572	3456	5110	140	3401	5191	0
Grp Volume(v), veh/h	293	495	506	60	576	321	620	1194	648	273	1526	0
Grp Sat Flow(s),veh/h/ln	1714	1763	1572	1714	1763	1572	1728	1702	1845	1700	1675	0
Q Serve(g_s), s	9.9	13.1	29.0	2.1	19.3	6.2	21.4	41.0	41.0	9.4	35.1	0.0
Cycle Q Clear(g_c), s	9.9	13.1	29.0	2.1	19.3	6.2	21.4	41.0	41.0	9.4	35.1	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.08	1.00		0.00
Lane Grp Cap(c), veh/h	351	851	692	124	617	442	686	1433	777	361	1650	
V/C Ratio(X)	0.84	0.58	0.73	0.49	0.93	0.73	0.90	0.83	0.83	0.76	0.92	
Avail Cap(c_a), veh/h	443	851	692	380	617	442	717	1433	777	361	1650	
HCM Platoon Ratio	1.67	1.67	1.67	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	48.8	31.1	22.8	56.7	48.8	19.8	54.9	47.6	47.6	52.1	38.9	0.0
Incr Delay (d2), s/veh	10.7	1.0	4.0	2.9	21.4	5.9	14.5	5.8	10.3	8.9	10.3	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	4.5	5.0	11.6	0.9	10.3	5.9	11.3	19.9	22.5	4.4	15.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.5	32.1	26.8	59.7	70.2	25.7	69.5	53.4	57.9	61.0	49.2	0.0
LnGrp LOS	E	C	C	E	E	C	E	D	E	E	D	
Approach Vol, veh/h		1294			957			2462			1799	A
Approach Delay, s/veh		36.2			54.6			58.6			51.0	
Approach LOS		D			D			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.2	57.0	8.8	35.0	30.3	45.9	16.8	27.0
Change Period (Y+Rc), s	6.5	6.5	4.5	6.0	6.5	6.5	4.5	6.0
Max Green Setting (Gmax), s	9.5	50.5	13.3	23.2	24.9	35.1	15.5	21.0
Max Q Clear Time (g_c+I1), s	11.4	43.0	4.1	31.0	23.4	37.1	11.9	21.3
Green Ext Time (p_c), s	0.0	6.0	0.1	0.0	0.4	0.0	0.4	0.0

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

Notes

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

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	528	0	0	402	0	0
Future Vol, veh/h	528	0	0	402	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	250	150	-	0	-
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	574	0	0	437	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	574	0	1011	574
Stage 1	-	-	-	-	574	-
Stage 2	-	-	-	-	437	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	999	-	265	518
Stage 1	-	-	-	-	563	-
Stage 2	-	-	-	-	651	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	999	-	265	518
Mov Cap-2 Maneuver	-	-	-	-	395	-
Stage 1	-	-	-	-	563	-
Stage 2	-	-	-	-	651	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	999	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	475	0	0	738	0	0
Future Vol, veh/h	475	0	0	738	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	250	150	-	0	-
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	516	0	0	802	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	516	0	1318	516
Stage 1	-	-	-	-	516	-
Stage 2	-	-	-	-	802	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1050	-	173	559
Stage 1	-	-	-	-	599	-
Stage 2	-	-	-	-	441	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1050	-	173	559
Mov Cap-2 Maneuver	-	-	-	-	308	-
Stage 1	-	-	-	-	599	-
Stage 2	-	-	-	-	441	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1050	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	670	0	0	545	0	0
Future Vol, veh/h	670	0	0	545	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	250	150	-	0	-
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	728	0	0	592	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	728	0	1320	728
Stage 1	-	-	-	-	728	-
Stage 2	-	-	-	-	592	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	876	-	173	423
Stage 1	-	-	-	-	478	-
Stage 2	-	-	-	-	553	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	876	-	173	423
Mov Cap-2 Maneuver	-	-	-	-	312	-
Stage 1	-	-	-	-	478	-
Stage 2	-	-	-	-	553	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	876	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	640	0	0	955	0	0
Future Vol, veh/h	640	0	0	955	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	250	150	-	0	-
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	696	0	0	1038	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	696	0	1734	696
Stage 1	-	-	-	-	696	-
Stage 2	-	-	-	-	1038	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	900	-	96	442
Stage 1	-	-	-	-	495	-
Stage 2	-	-	-	-	341	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	900	-	96	442
Mov Cap-2 Maneuver	-	-	-	-	226	-
Stage 1	-	-	-	-	495	-
Stage 2	-	-	-	-	341	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	900	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection	
Int Delay, s/veh	1.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	675	5	35	550	20	45
Future Vol, veh/h	675	5	35	550	20	45
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	250	150	-	0	-
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	734	5	38	598	22	49

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	739	0	1408	734
Stage 1	-	-	-	-	734	-
Stage 2	-	-	-	-	674	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	867	-	153	420
Stage 1	-	-	-	-	475	-
Stage 2	-	-	-	-	506	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	867	-	146	420
Mov Cap-2 Maneuver	-	-	-	-	285	-
Stage 1	-	-	-	-	475	-
Stage 2	-	-	-	-	484	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.6	17.1
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	367	-	-	867	-
HCM Lane V/C Ratio	0.193	-	-	0.044	-
HCM Control Delay (s)	17.1	-	-	9.3	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	0.7	-	-	0.1	-

Intersection	
Int Delay, s/veh	1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	660	10	70	960	10	50
Future Vol, veh/h	660	10	70	960	10	50
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	250	150	-	0	-
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	717	11	76	1043	11	54

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	728	0	1912	717
Stage 1	-	-	-	-	717	-
Stage 2	-	-	-	-	1195	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	876	-	75	430
Stage 1	-	-	-	-	484	-
Stage 2	-	-	-	-	287	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	876	-	68	430
Mov Cap-2 Maneuver	-	-	-	-	183	-
Stage 1	-	-	-	-	484	-
Stage 2	-	-	-	-	262	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.6	17.6
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	351	-	-	876	-
HCM Lane V/C Ratio	0.186	-	-	0.087	-
HCM Control Delay (s)	17.6	-	-	9.5	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	0.7	-	-	0.3	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	775	0	10	630	0	30
Future Vol, veh/h	775	0	10	630	0	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	250	150	-	0	-
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	842	0	11	685	0	33

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	842	0	1549	842
Stage 1	-	-	-	-	842	-
Stage 2	-	-	-	-	707	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	794	-	125	364
Stage 1	-	-	-	-	423	-
Stage 2	-	-	-	-	489	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	794	-	123	364
Mov Cap-2 Maneuver	-	-	-	-	261	-
Stage 1	-	-	-	-	423	-
Stage 2	-	-	-	-	482	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	15.9
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	364	-	-	794	-
HCM Lane V/C Ratio	0.09	-	-	0.014	-
HCM Control Delay (s)	15.9	-	-	9.6	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	0.3	-	-	0	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	735	0	35	1095	0	20
Future Vol, veh/h	735	0	35	1095	0	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	250	150	-	0	-
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	799	0	38	1190	0	22

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	799	0	2065	799
Stage 1	-	-	-	-	799	-
Stage 2	-	-	-	-	1266	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	824	-	60	386
Stage 1	-	-	-	-	443	-
Stage 2	-	-	-	-	265	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	824	-	57	386
Mov Cap-2 Maneuver	-	-	-	-	171	-
Stage 1	-	-	-	-	443	-
Stage 2	-	-	-	-	253	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	14.9
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	386	-	-	824	-
HCM Lane V/C Ratio	0.056	-	-	0.046	-
HCM Control Delay (s)	14.9	-	-	9.6	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0.1	-

Intersection	
Int Delay, s/veh	1.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	780	5	45	635	20	75
Future Vol, veh/h	780	5	45	635	20	75
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	250	150	-	0	-
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	848	5	49	690	22	82

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	853	0	1636	848
Stage 1	-	-	-	-	848	-
Stage 2	-	-	-	-	788	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	786	-	111	361
Stage 1	-	-	-	-	420	-
Stage 2	-	-	-	-	448	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	786	-	104	361
Mov Cap-2 Maneuver	-	-	-	-	239	-
Stage 1	-	-	-	-	420	-
Stage 2	-	-	-	-	420	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.7	21.1
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	326	-	-	786	-
HCM Lane V/C Ratio	0.317	-	-	0.062	-
HCM Control Delay (s)	21.1	-	-	9.9	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	1.3	-	-	0.2	-

Intersection	
Int Delay, s/veh	1.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	755	10	105	1100	10	70
Future Vol, veh/h	755	10	105	1100	10	70
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	250	150	-	0	-
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	821	11	114	1196	11	76

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	832	0	2245	821
Stage 1	-	-	-	-	821	-
Stage 2	-	-	-	-	1424	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	801	-	46	374
Stage 1	-	-	-	-	432	-
Stage 2	-	-	-	-	222	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	801	-	39	374
Mov Cap-2 Maneuver	-	-	-	-	135	-
Stage 1	-	-	-	-	432	-
Stage 2	-	-	-	-	190	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.9	21.4
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	306	-	-	801	-
HCM Lane V/C Ratio	0.284	-	-	0.142	-
HCM Control Delay (s)	21.4	-	-	10.2	-
HCM Lane LOS	C	-	-	B	-
HCM 95th %tile Q(veh)	1.1	-	-	0.5	-

Intersection	
Int Delay, s/veh	4.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	7	42	114	8	11	2	273	472	12	8	859	119
Future Vol, veh/h	7	42	114	8	11	2	273	472	12	8	859	119
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	225	-	250	300	-	200	400	-	425	425	-	425
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	73	73	73	66	66	66	90	90	90	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	58	156	12	17	3	303	524	13	9	934	129

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1829	2095	467	1644	2211	262	1063	0	0	537	0	0
Stage 1	952	952	-	1130	1130	-	-	-	-	-	-	-
Stage 2	877	1143	-	514	1081	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	*84	*65	*737	*133	51	737	969	-	-	1027	-	-
Stage 1	*695	*609	-	*217	277	-	-	-	-	-	-	-
Stage 2	*310	*273	-	*695	510	-	-	-	-	-	-	-
Platoon blocked, %	1	1	1	1	1		1	-	-		-	-
Mov Cap-1 Maneuver	*56	*~ 44	*737	*55	35	737	969	-	-	1027	-	-
Mov Cap-2 Maneuver	*141	*139	-	*100	106	-	-	-	-	-	-	-
Stage 1	*477	*603	-	*149	190	-	-	-	-	-	-	-
Stage 2	*194	*188	-	*491	506	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	21.6	42.1	3.8	0.1
HCM LOS	C	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBL	SBT	SBR
Capacity (veh/h)	969	-	-	141	139	737	100	106	737	1027	-	-
HCM Lane V/C Ratio	0.313	-	-	0.068	0.414	0.212	0.121	0.157	0.004	0.008	-	-
HCM Control Delay (s)	10.4	-	-	32.4	48.1	11.2	45.9	45.2	9.9	8.5	-	-
HCM Lane LOS	B	-	-	D	E	B	E	E	A	A	-	-
HCM 95th %tile Q(veh)	1.3	-	-	0.2	1.8	0.8	0.4	0.5	0	0	-	-

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

Intersection	
Int Delay, s/veh	4.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	31	225	30	10	1	203	917	17	1	530	23
Future Vol, veh/h	8	31	225	30	10	1	203	917	17	1	530	23
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	225	-	250	300	-	200	400	-	425	425	-	425
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	79	79	79	91	91	91	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	34	250	38	13	1	223	1008	19	1	602	26

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1561	2077	301	1774	2084	504	628	0	0	1027	0	0
Stage 1	604	604	-	1454	1454	-	-	-	-	-	-	-
Stage 2	957	1473	-	320	630	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	112	59	*867	*71	58	513	1259	-	-	672	-	-
Stage 1	811	712	-	*137	193	-	-	-	-	-	-	-
Stage 2	277	189	-	*817	689	-	-	-	-	-	-	-
Platoon blocked, %	1	1	1	1	1		1	-	-		-	-
Mov Cap-1 Maneuver	89	49	*867	*~ 35	48	513	1259	-	-	672	-	-
Mov Cap-2 Maneuver	171	128	-	*88	124	-	-	-	-	-	-	-
Stage 1	667	711	-	*113	159	-	-	-	-	-	-	-
Stage 2	209	156	-	*553	689	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	15.1	63.5	1.5	0
HCM LOS	C	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBL	SBT	SBR
Capacity (veh/h)	1259	-	-	171	128	867	88	124	513	672	-	-
HCM Lane V/C Ratio	0.177	-	-	0.052	0.269	0.288	0.432	0.102	0.002	0.002	-	-
HCM Control Delay (s)	8.5	-	-	27.2	43.2	10.8	73.9	37.3	12	10.4	-	-
HCM Lane LOS	A	-	-	D	E	B	F	E	B	B	-	-
HCM 95th %tile Q(veh)	0.6	-	-	0.2	1	1.2	1.8	0.3	0	0	-	-

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

Intersection	
Int Delay, s/veh	5.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	45	125	10	15	5	290	560	15	10	965	130
Future Vol, veh/h	10	45	125	10	15	5	290	560	15	10	965	130
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	225	-	250	300	-	200	400	-	425	425	-	425
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	73	73	73	66	66	66	90	90	90	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	62	171	15	23	8	322	622	17	11	1049	141

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2038	2354	525	1844	2478	311	1190	0	0	639	0	0
Stage 1	1071	1071	-	1266	1266	-	-	-	-	-	-	-
Stage 2	967	1283	-	578	1212	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	*55	*~ 39	*685	*94	29	685	913	-	-	941	-	-
Stage 1	*645	*566	-	*179	238	-	-	-	-	-	-	-
Stage 2	*273	*234	-	*645	477	-	-	-	-	-	-	-
Platoon blocked, %	1	1	1	1	1		1	-	-		-	-
Mov Cap-1 Maneuver	*31	*~ 25	*685	*29	~ 19	685	913	-	-	941	-	-
Mov Cap-2 Maneuver	*105	*109	-	*63	78	-	-	-	-	-	-	-
Stage 1	*418	*559	-	*116	154	-	-	-	-	-	-	-
Stage 2	*149	*151	-	*426	472	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	29.4	62.7	3.7	0.1
HCM LOS	D	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBL	SBT	SBR
Capacity (veh/h)	913	-	-	105	109	685	63	78	685	941	-	-
HCM Lane V/C Ratio	0.353	-	-	0.13	0.566	0.25	0.241	0.291	0.011	0.012	-	-
HCM Control Delay (s)	11.1	-	-	44.4	74.3	12	79.4	69.1	10.3	8.9	-	-
HCM Lane LOS	B	-	-	E	F	B	F	F	B	A	-	-
HCM 95th %tile Q(veh)	1.6	-	-	0.4	2.7	1	0.8	1.1	0	0	-	-

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

Intersection	
Int Delay, s/veh	6.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	35	240	35	15	5	220	1055	20	5	630	25
Future Vol, veh/h	10	35	240	35	15	5	220	1055	20	5	630	25
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	225	-	250	300	-	200	400	-	425	425	-	425
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	79	79	79	91	91	91	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	39	267	44	19	6	242	1159	22	6	716	28

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1801	2393	358	2033	2399	580	744	0	0	1181	0	0
Stage 1	728	728	-	1643	1643	-	-	-	-	-	-	-
Stage 2	1073	1665	-	390	756	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	*74	*~ 34	*815	*~ 44	33	458	1218	-	-	587	-	-
Stage 1	*768	*673	-	*104	156	-	-	-	-	-	-	-
Stage 2	*235	*152	-	*768	662	-	-	-	-	-	-	-
Platoon blocked, %	1	1	1	1	1		1	-	-		-	-
Mov Cap-1 Maneuver	*53	*~ 27	*815	*~ 17	26	458	1218	-	-	587	-	-
Mov Cap-2 Maneuver	*125	*96	-	*62	96	-	-	-	-	-	-	-
Stage 1	*615	*667	-	*83	125	-	-	-	-	-	-	-
Stage 2	*157	*122	-	*482	656	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	19.2	110.6	1.5	0.1
HCM LOS	C	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBL	SBT	SBR
Capacity (veh/h)	1218	-	-	125	96	815	62	96	458	587	-	-
HCM Lane V/C Ratio	0.198	-	-	0.089	0.405	0.327	0.715	0.198	0.014	0.01	-	-
HCM Control Delay (s)	8.7	-	-	36.6	66	11.6	149.8	51.5	13	11.2	-	-
HCM Lane LOS	A	-	-	E	F	B	F	F	B	B	-	-
HCM 95th %tile Q(veh)	0.7	-	-	0.3	1.7	1.4	3.1	0.7	0	0	-	-

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

Intersection	
Int Delay, s/veh	36.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	30	95	155	60	115	45	340	1040	45	55	1295	145
Future Vol, veh/h	30	95	155	60	115	45	340	1040	45	55	1295	145
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	225	-	250	300	-	200	400	-	425	425	-	425
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	73	73	73	66	66	66	90	90	90	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	41	130	212	91	174	68	378	1156	50	60	1408	158

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2949	3490	704	2801	3598	578	1566	0	0	1206	0	0
Stage 1	1528	1528	-	1912	1912	-	-	-	-	-	-	-
Stage 2	1421	1962	-	889	1686	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	*~ 3	*~ 1	*528	*~ 6	~ 1	459	752	-	-	574	-	-
Stage 1	*498	*437	-	*~ 70	~ 114	-	-	-	-	-	-	-
Stage 2	*143	*~ 108	-	*498	322	-	-	-	-	-	-	-
Platoon blocked, %	1	1	1	1	1		1	-	-		-	-
Mov Cap-1 Maneuver	*~ 2	*~ 1	*528	*~ 27	0	459	752	-	-	574	-	-
Mov Cap-2 Maneuver	*~ -75	*~ -6	-	*~ 32	~ 142	-	-	-	-	-	-	-
Stage 1	*248	*391	-	*~ 35	~ 57	-	-	-	-	-	-	-
Stage 2	-	*~ 54	-	*178	288	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s		$ 411	3.5	0.4
HCM LOS	-	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBL	SBT	SBR
Capacity (veh/h)	752	-	-	+	+	528	32	142	459	574	-	-
HCM Lane V/C Ratio	0.502	-	-	-	-	0.402	2.841	1.227	0.149	0.104	-	-
HCM Control Delay (s)	14.5	-	-	-	-	16.3	$ 1093.3	210.3	14.2	12	-	-
HCM Lane LOS	B	-	-	-	-	C	F	F	B	B	-	-
HCM 95th %tile Q(veh)	2.9	-	-	-	-	1.9	10.6	10.3	0.5	0.3	-	-

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

Intersection	
Int Delay, s/veh	255

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	65	145	295	130	160	35	280	1715	65	160	1320	45
Future Vol, veh/h	65	145	295	130	160	35	280	1715	65	160	1320	45
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	225	-	250	300	-	200	400	-	425	425	-	425
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	79	79	79	91	91	91	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	72	161	328	165	203	44	308	1885	71	182	1500	51

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	3524	4436	750	3696	4416	943	1551	0	0	1956	0	0
Stage 1	1864	1864	-	2501	2501	-	-	-	-	-	-	-
Stage 2	1660	2572	-	1195	1915	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	~ 0	0	*528	*0	0	264	771	-	-	294	-	-
Stage 1	201	221	-	*~ 29	~ 57	-	-	-	-	-	-	-
Stage 2	101	~ 52	-	*498	~ 198	-	-	-	-	-	-	-
Platoon blocked, %	1	1	1	1	1		1	-	-		-	-
Mov Cap-1 Maneuver	0	0	*528	*0	0	264	771	-	-	294	-	-
Mov Cap-2 Maneuver	326	173	-	*~ 16	~ 36	-	-	-	-	-	-	-
Stage 1	121	~ 84	-	*~ 17	~ 34	-	-	-	-	-	-	-
Stage 2	-	~ 31	-	-	~ 75	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	45.6	$ 2993.2	1.7	3.7
HCM LOS	E	F		

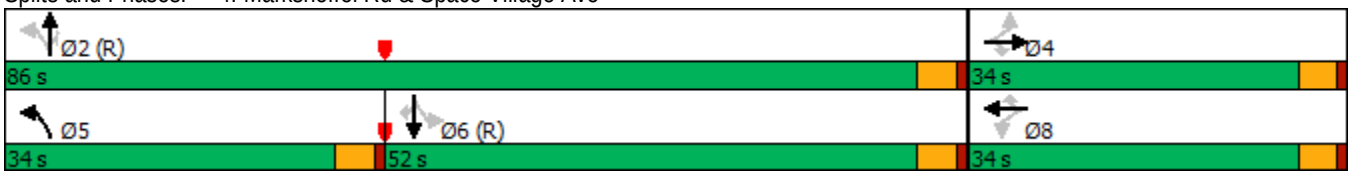
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBL	SBT	SBR
Capacity (veh/h)	771	-	-	326	173	528	16	36	264	294	-	-
HCM Lane V/C Ratio	0.399	-	-	0.222	0.931	0.621	10.285	5.626	0.168	0.618	-	-
HCM Control Delay (s)	12.7	-	-	19.2	105	22.3	$ 4644.1	$ 2301.9	21.4	35.2	-	-
HCM Lane LOS	B	-	-	C	F	C	F	F	C	E	-	-
HCM 95th %tile Q(veh)	1.9	-	-	0.8	7.1	4.2	21.4	24	0.6	3.8	-	-

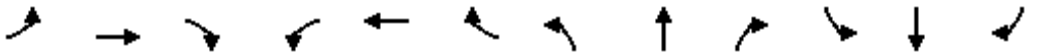
Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	95	155	60	115	45	340	1040	45	55	1295	145
Future Volume (vph)	30	95	155	60	115	45	340	1040	45	55	1295	145
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm
Protected Phases		4			8		5	2			6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phase	4	4	4	8	8	8	5	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5	9.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	34.0	34.0	34.0	34.0	34.0	34.0	34.0	86.0	86.0	52.0	52.0	52.0
Total Split (%)	28.3%	28.3%	28.3%	28.3%	28.3%	28.3%	28.3%	71.7%	71.7%	43.3%	43.3%	43.3%
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	Lag
Lead-Lag Optimize?							Yes			Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	16.7	16.7	16.7	16.7	16.7	16.7	94.3	94.3	94.3	65.0	65.0	65.0
Actuated g/C Ratio	0.14	0.14	0.14	0.14	0.14	0.14	0.79	0.79	0.79	0.54	0.54	0.54
v/c Ratio	0.41	0.50	0.53	0.66	0.67	0.24	0.83	0.42	0.04	0.24	0.74	0.17
Control Delay	57.4	53.6	10.7	70.8	61.4	12.0	30.4	12.9	4.4	20.5	21.1	3.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.4	53.6	10.7	70.8	61.4	12.0	30.4	12.9	4.4	20.5	21.1	3.6
LOS	E	D	B	E	E	B	C	B	A	C	C	A
Approach Delay		30.2			53.9			16.8			19.3	
Approach LOS		C			D			B			B	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.83	
Intersection Signal Delay: 22.3	Intersection LOS: C
Intersection Capacity Utilization 75.9%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 4: Marksheffel Rd & Space Village Ave





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	95	155	60	115	45	340	1040	45	55	1295	145
Future Volume (veh/h)	30	95	155	60	115	45	340	1040	45	55	1295	145
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	41	130	212	91	174	68	378	1156	50	60	1408	158
Peak Hour Factor	0.73	0.73	0.73	0.66	0.66	0.66	0.90	0.90	0.90	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	160	324	274	176	324	274	437	2672	1192	346	2189	977
Arrive On Green	0.17	0.17	0.17	0.17	0.17	0.17	0.10	0.75	0.75	1.00	1.00	1.00
Sat Flow, veh/h	1138	1870	1585	1039	1870	1585	1781	3554	1585	464	3554	1585
Grp Volume(v), veh/h	41	130	212	91	174	68	378	1156	50	60	1408	158
Grp Sat Flow(s),veh/h/ln	1138	1870	1585	1039	1870	1585	1781	1777	1585	464	1777	1585
Q Serve(g_s), s	4.1	7.4	15.3	10.2	10.2	4.4	8.7	14.4	1.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	14.3	7.4	15.3	17.7	10.2	4.4	8.7	14.4	1.0	0.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	160	324	274	176	324	274	437	2672	1192	346	2189	977
V/C Ratio(X)	0.26	0.40	0.77	0.52	0.54	0.25	0.86	0.43	0.04	0.17	0.64	0.16
Avail Cap(c_a), veh/h	243	460	390	251	460	390	700	2672	1192	346	2189	977
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.7	44.1	47.4	51.9	45.2	42.9	9.7	5.5	3.8	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.8	0.8	6.0	2.4	1.4	0.5	6.6	0.5	0.1	1.1	1.5	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	3.5	6.5	2.8	4.9	1.8	3.7	4.8	0.3	0.1	0.4	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.6	44.9	53.4	54.3	46.6	43.3	16.3	6.0	3.9	1.1	1.5	0.4
LnGrp LOS	D	D	D	D	D	D	B	A	A	A	A	A
Approach Vol, veh/h		383			333			1584			1626	
Approach Delay, s/veh		50.4			48.0			8.4			1.3	
Approach LOS		D			D			A			A	

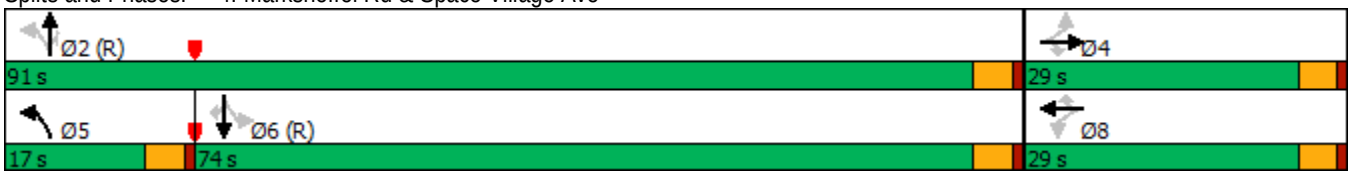
Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		94.7		25.3	16.3	78.4		25.3				
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s		81.5		29.5	29.5	47.5		29.5				
Max Q Clear Time (g_c+I1), s		16.4		17.3	10.7	2.0		19.7				
Green Ext Time (p_c), s		12.4		1.3	1.1	18.6		1.1				

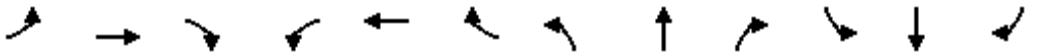
Intersection Summary												
HCM 6th Ctrl Delay			12.9									
HCM 6th LOS			B									

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	65	145	295	130	160	35	280	1715	65	160	1320	45
Future Volume (vph)	65	145	295	130	160	35	280	1715	65	160	1320	45
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm
Protected Phases		4			8		5	2			6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phase	4	4	4	8	8	8	5	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5	9.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	29.0	29.0	29.0	29.0	29.0	29.0	17.0	91.0	91.0	74.0	74.0	74.0
Total Split (%)	24.2%	24.2%	24.2%	24.2%	24.2%	24.2%	14.2%	75.8%	75.8%	61.7%	61.7%	61.7%
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							Lead			Lag	Lag	Lag
Lead-Lag Optimize?							Yes			Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	22.7	22.7	22.7	22.7	22.7	22.7	88.3	88.3	88.3	69.5	69.5	69.5
Actuated g/C Ratio	0.19	0.19	0.19	0.19	0.19	0.19	0.74	0.74	0.74	0.58	0.58	0.58
v/c Ratio	0.50	0.46	0.72	0.92	0.58	0.13	1.02	0.72	0.06	1.86	0.73	0.05
Control Delay	55.5	47.2	27.5	97.4	50.9	8.4	78.1	16.2	3.3	423.9	8.6	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.5	47.2	27.5	97.4	50.9	8.4	78.1	16.2	3.3	423.9	8.6	0.4
LOS	E	D	C	F	D	A	E	B	A	F	A	A
Approach Delay		36.7			65.0			24.2			52.0	
Approach LOS		D			E			C			D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 120	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.86	
Intersection Signal Delay: 38.7	Intersection LOS: D
Intersection Capacity Utilization 86.1%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 4: Marksheffel Rd & Space Village Ave





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	65	145	295	130	160	35	280	1715	65	160	1320	45
Future Volume (veh/h)	65	145	295	130	160	35	280	1715	65	160	1320	45
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	72	161	328	165	203	44	308	1885	71	182	1500	51
Peak Hour Factor	0.90	0.90	0.90	0.79	0.79	0.79	0.91	0.91	0.91	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	182	382	324	177	382	324	342	2562	1143	151	2138	953
Arrive On Green	0.20	0.20	0.20	0.20	0.20	0.20	0.08	0.72	0.72	0.80	0.80	0.80
Sat Flow, veh/h	1133	1870	1585	907	1870	1585	1781	3554	1585	225	3554	1585
Grp Volume(v), veh/h	72	161	328	165	203	44	308	1885	71	182	1500	51
Grp Sat Flow(s),veh/h/ln	1133	1870	1585	907	1870	1585	1781	1777	1585	225	1777	1585
Q Serve(g_s), s	7.3	9.0	24.5	15.5	11.6	2.7	7.5	37.8	1.6	48.7	23.1	0.8
Cycle Q Clear(g_c), s	18.9	9.0	24.5	24.5	11.6	2.7	7.5	37.8	1.6	72.2	23.1	0.8
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	182	382	324	177	382	324	342	2562	1143	151	2138	953
V/C Ratio(X)	0.40	0.42	1.01	0.93	0.53	0.14	0.90	0.74	0.06	1.20	0.70	0.05
Avail Cap(c_a), veh/h	182	382	324	177	382	324	382	2562	1143	151	2138	953
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.1	41.6	47.7	54.5	42.6	39.1	18.6	10.0	4.9	33.4	7.1	4.9
Incr Delay (d2), s/veh	1.4	0.7	53.5	48.0	1.4	0.2	22.2	1.9	0.1	138.5	2.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	4.2	14.4	7.4	5.5	1.1	7.6	13.5	0.5	10.3	5.5	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.5	42.3	101.3	102.5	44.0	39.3	40.8	11.9	5.0	171.9	9.0	5.0
LnGrp LOS	D	D	F	F	D	D	D	B	A	F	A	A
Approach Vol, veh/h		561			412			2264			1733	
Approach Delay, s/veh		78.1			66.9			15.6			26.0	
Approach LOS		E			E			B			C	

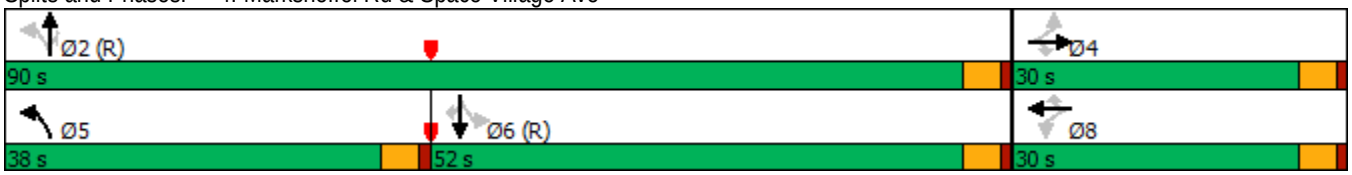
Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		91.0		29.0	14.3	76.7		29.0				
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s		86.5		24.5	12.5	69.5		24.5				
Max Q Clear Time (g_c+I1), s		39.8		26.5	9.5	74.2		26.5				
Green Ext Time (p_c), s		26.4		0.0	0.3	0.0		0.0				

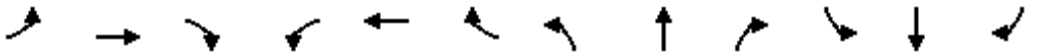
Intersection Summary												
HCM 6th Ctrl Delay			30.5									
HCM 6th LOS			C									

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	65	155	20	45	15	375	1035	35	15	1265	150
Future Volume (vph)	10	65	155	20	45	15	375	1035	35	15	1265	150
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm
Protected Phases		4			8		5	2			6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phase	4	4	4	8	8	8	5	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5	9.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	30.0	30.0	30.0	30.0	30.0	30.0	38.0	90.0	90.0	52.0	52.0	52.0
Total Split (%)	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	31.7%	75.0%	75.0%	43.3%	43.3%	43.3%
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	Lag
Lead-Lag Optimize?							Yes			Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	9.9	9.9	9.9	9.9	9.9	9.9	101.1	101.1	101.1	70.3	70.3	70.3
Actuated g/C Ratio	0.08	0.08	0.08	0.08	0.08	0.08	0.84	0.84	0.84	0.59	0.59	0.59
v/c Ratio	0.10	0.46	0.59	0.20	0.32	0.09	0.79	0.38	0.03	0.06	0.66	0.16
Control Delay	51.0	61.4	16.3	54.2	56.2	0.9	21.1	7.3	2.1	16.2	18.0	3.4
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	51.0	61.4	16.3	54.2	56.2	0.9	21.1	7.3	2.1	16.2	18.0	3.4
LOS	D	E	B	D	E	A	C	A	A	B	B	A
Approach Delay		30.7			45.5			10.8			16.4	
Approach LOS		C			D			B			B	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.79	
Intersection Signal Delay: 15.6	Intersection LOS: B
Intersection Capacity Utilization 74.8%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 4: Marksheffel Rd & Space Village Ave





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	65	155	20	45	15	375	1035	35	15	1265	150
Future Volume (veh/h)	10	65	155	20	45	15	375	1035	35	15	1265	150
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	11	71	168	22	49	16	408	1125	38	16	1375	163
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	197	236	200	165	236	200	458	2839	1266	380	2359	1052
Arrive On Green	0.13	0.13	0.13	0.13	0.13	0.13	0.13	1.00	1.00	1.00	1.00	1.00
Sat Flow, veh/h	1337	1870	1585	1141	1870	1585	1781	3554	1585	483	3554	1585
Grp Volume(v), veh/h	11	71	168	22	49	16	408	1125	38	16	1375	163
Grp Sat Flow(s),veh/h/ln	1337	1870	1585	1141	1870	1585	1781	1777	1585	483	1777	1585
Q Serve(g_s), s	0.9	4.1	12.4	2.1	2.8	1.1	8.5	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	3.7	4.1	12.4	6.3	2.8	1.1	8.5	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	197	236	200	165	236	200	458	2839	1266	380	2359	1052
V/C Ratio(X)	0.06	0.30	0.84	0.13	0.21	0.08	0.89	0.40	0.03	0.04	0.58	0.15
Avail Cap(c_a), veh/h	313	397	337	263	397	337	781	2839	1266	380	2359	1052
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.7	47.6	51.3	50.5	47.1	46.3	8.7	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.7	9.1	0.4	0.4	0.2	7.0	0.4	0.0	0.2	1.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	2.0	5.4	0.6	1.3	0.4	3.2	0.2	0.0	0.0	0.3	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.8	48.3	60.4	50.9	47.5	46.5	15.7	0.4	0.0	0.2	1.1	0.3
LnGrp LOS	D	D	E	D	D	D	B	A	A	A	A	A
Approach Vol, veh/h		250			87			1571			1554	
Approach Delay, s/veh		56.4			48.2			4.4			1.0	
Approach LOS		E			D			A			A	

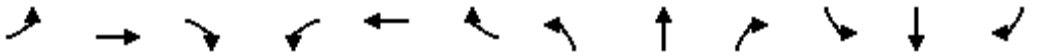
Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		100.4		19.6	16.2	84.1		19.6				
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s		85.5		25.5	33.5	47.5		25.5				
Max Q Clear Time (g_c+I1), s		2.0		14.4	10.5	2.0		8.3				
Green Ext Time (p_c), s		11.9		0.7	1.3	16.7		0.3				

Intersection Summary												
HCM 6th Ctrl Delay			7.7									
HCM 6th LOS			A									

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	75	320	60	35	10	275	1480	35	15	1145	30
Future Volume (vph)	15	75	320	60	35	10	275	1480	35	15	1145	30
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm
Protected Phases		4			8		5	2			6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phase	4	4	4	8	8	8	5	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5	9.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	41.0	41.0	41.0	41.0	41.0	41.0	30.4	79.0	79.0	48.6	48.6	48.6
Total Split (%)	34.2%	34.2%	34.2%	34.2%	34.2%	34.2%	25.3%	65.8%	65.8%	40.5%	40.5%	40.5%
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	Lag
Lead-Lag Optimize?							Yes			Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	12.1	12.1	12.1	12.1	12.1	12.1	98.9	98.9	98.9	76.4	76.4	76.4
Actuated g/C Ratio	0.10	0.10	0.10	0.10	0.10	0.10	0.82	0.82	0.82	0.64	0.64	0.64
v/c Ratio	0.12	0.44	0.74	0.52	0.20	0.05	0.65	0.55	0.03	0.09	0.55	0.03
Control Delay	47.9	56.5	15.0	64.5	49.7	0.5	13.3	11.3	2.5	21.1	18.0	6.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.9	56.5	15.0	64.5	49.7	0.5	13.3	11.3	2.5	21.1	18.0	6.6
LOS	D	E	B	E	D	A	B	B	A	C	B	A
Approach Delay		23.8			53.4			11.4			17.8	
Approach LOS		C			D			B			B	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 70	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.74	
Intersection Signal Delay: 16.3	Intersection LOS: B
Intersection Capacity Utilization 68.1%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 4: Marksheffel Rd & Space Village Ave



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	75	320	60	35	10	275	1480	35	15	1145	30
Future Volume (veh/h)	15	75	320	60	35	10	275	1480	35	15	1145	30
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	16	82	348	65	38	11	299	1609	38	16	1245	33
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	365	450	381	257	450	381	391	2433	1085	228	1968	878
Arrive On Green	0.24	0.24	0.24	0.24	0.24	0.24	0.12	0.91	0.91	0.74	0.74	0.74
Sat Flow, veh/h	1356	1870	1585	958	1870	1585	1781	3554	1585	304	3554	1585
Grp Volume(v), veh/h	16	82	348	65	38	11	299	1609	38	16	1245	33
Grp Sat Flow(s),veh/h/ln	1356	1870	1585	958	1870	1585	1781	1777	1585	304	1777	1585
Q Serve(g_s), s	1.1	4.2	25.6	6.9	1.9	0.6	8.4	12.2	0.3	1.8	20.8	0.7
Cycle Q Clear(g_c), s	3.0	4.2	25.6	11.1	1.9	0.6	8.4	12.2	0.3	1.8	20.8	0.7
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	365	450	381	257	450	381	391	2433	1085	228	1968	878
V/C Ratio(X)	0.04	0.18	0.91	0.25	0.08	0.03	0.76	0.66	0.04	0.07	0.63	0.04
Avail Cap(c_a), veh/h	451	569	482	318	569	482	609	2433	1085	228	1968	878
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.5	36.2	44.4	40.6	35.3	34.9	14.2	2.2	1.7	7.3	9.8	7.1
Incr Delay (d2), s/veh	0.0	0.2	18.9	0.5	0.1	0.0	3.1	1.4	0.1	0.6	1.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	1.9	12.0	1.7	0.9	0.3	3.3	2.5	0.1	0.2	6.2	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.5	36.4	63.2	41.1	35.4	34.9	17.3	3.7	1.8	7.9	11.4	7.2
LnGrp LOS	D	D	E	D	D	C	B	A	A	A	B	A
Approach Vol, veh/h		446			114			1946			1294	
Approach Delay, s/veh		57.3			38.6			5.7			11.2	
Approach LOS		E			D			A			B	

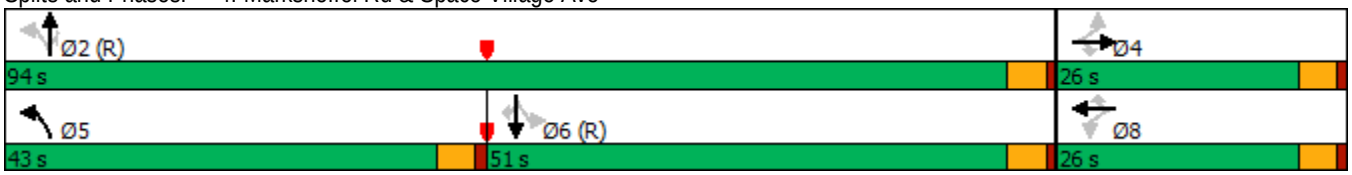
Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		86.6		33.4	15.7	70.9		33.4				
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s		74.5		36.5	25.9	44.1		36.5				
Max Q Clear Time (g_c+I1), s		14.2		27.6	10.4	22.8		13.1				
Green Ext Time (p_c), s		22.0		1.2	0.8	10.3		0.5				

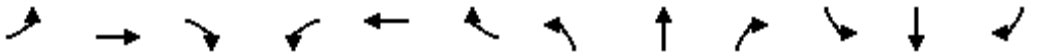
Intersection Summary												
HCM 6th Ctrl Delay			14.6									
HCM 6th LOS			B									

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	115	185	70	145	55	425	1515	65	60	1595	165
Future Volume (vph)	30	115	185	70	145	55	425	1515	65	60	1595	165
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm
Protected Phases		4			8		5	2			6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phase	4	4	4	8	8	8	5	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5	9.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	26.0	26.0	26.0	26.0	26.0	26.0	43.0	94.0	94.0	51.0	51.0	51.0
Total Split (%)	21.7%	21.7%	21.7%	21.7%	21.7%	21.7%	35.8%	78.3%	78.3%	42.5%	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	Lag
Lead-Lag Optimize?							Yes			Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	15.5	15.5	15.5	15.5	15.5	15.5	95.5	95.5	95.5	60.8	60.8	60.8
Actuated g/C Ratio	0.13	0.13	0.13	0.13	0.13	0.13	0.80	0.80	0.80	0.51	0.51	0.51
v/c Ratio	0.33	0.52	0.53	0.59	0.66	0.24	0.91	0.59	0.06	0.46	0.97	0.20
Control Delay	54.5	55.6	11.4	67.1	62.1	14.3	41.0	13.0	2.3	36.2	40.5	6.0
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	54.5	55.6	11.4	67.1	62.1	14.3	41.0	13.0	2.3	36.2	40.5	6.0
LOS	D	E	B	E	E	B	D	B	A	D	D	A
Approach Delay		30.7			53.6			18.6			37.3	
Approach LOS		C			D			B			D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 110	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.97	
Intersection Signal Delay: 29.3	Intersection LOS: C
Intersection Capacity Utilization 94.4%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 4: Marksheffel Rd & Space Village Ave





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	115	185	70	145	55	425	1515	65	60	1595	165
Future Volume (veh/h)	30	115	185	70	145	55	425	1515	65	60	1595	165
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	33	125	201	76	158	60	462	1647	71	65	1734	179
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	146	284	241	156	284	241	487	2747	1225	222	2030	905
Arrive On Green	0.15	0.15	0.15	0.15	0.15	0.15	0.33	1.00	1.00	1.00	1.00	1.00
Sat Flow, veh/h	1163	1870	1585	1054	1870	1585	1781	3554	1585	283	3554	1585
Grp Volume(v), veh/h	33	125	201	76	158	60	462	1647	71	65	1734	179
Grp Sat Flow(s),veh/h/ln	1163	1870	1585	1054	1870	1585	1781	1777	1585	283	1777	1585
Q Serve(g_s), s	3.2	7.3	14.8	8.5	9.4	4.0	16.3	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	12.6	7.3	14.8	15.8	9.4	4.0	16.3	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	146	284	241	156	284	241	487	2747	1225	222	2030	905
V/C Ratio(X)	0.23	0.44	0.83	0.49	0.56	0.25	0.95	0.60	0.06	0.29	0.85	0.20
Avail Cap(c_a), veh/h	177	335	284	185	335	284	765	2747	1225	222	2030	905
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.0	46.2	49.4	53.4	47.1	44.8	13.3	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.8	1.1	16.7	2.3	1.7	0.5	15.6	1.0	0.1	3.3	4.8	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	3.5	7.0	2.3	4.5	1.6	6.8	0.4	0.0	0.2	1.4	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.8	47.3	66.1	55.7	48.8	45.4	28.9	1.0	0.1	3.3	4.8	0.5
LnGrp LOS	D	D	E	E	D	D	C	A	A	A	A	A
Approach Vol, veh/h		359			294			2180			1978	
Approach Delay, s/veh		58.4			49.9			6.9			4.4	
Approach LOS		E			D			A			A	

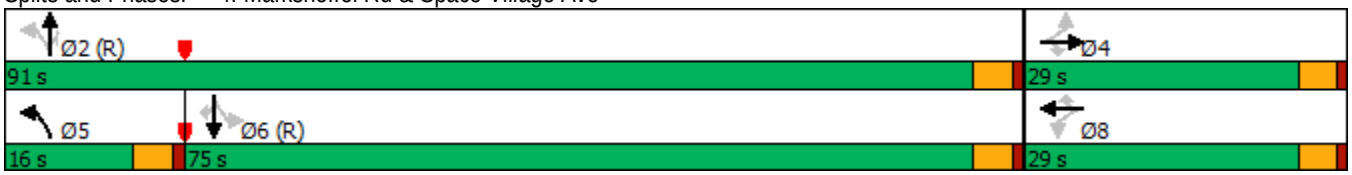
Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		97.3		22.7	24.2	73.0		22.7				
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s		89.5		21.5	38.5	46.5		21.5				
Max Q Clear Time (g_c+I1), s		2.0		16.8	18.3	2.0		17.8				
Green Ext Time (p_c), s		25.4		0.7	1.4	26.3		0.5				

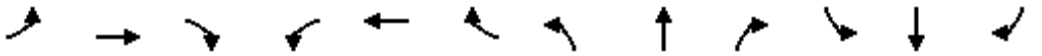
Intersection Summary												
HCM 6th Ctrl Delay			12.3									
HCM 6th LOS			B									

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	70	185	375	155	180	40	335	2140	80	170	1835	50
Future Volume (vph)	70	185	375	155	180	40	335	2140	80	170	1835	50
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm
Protected Phases		4			8		5	2			6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phase	4	4	4	8	8	8	5	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5	9.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	29.0	29.0	29.0	29.0	29.0	29.0	16.0	91.0	91.0	75.0	75.0	75.0
Total Split (%)	24.2%	24.2%	24.2%	24.2%	24.2%	24.2%	13.3%	75.8%	75.8%	62.5%	62.5%	62.5%
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	Lag
Lead-Lag Optimize?							Yes			Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	24.5	24.5	24.5	24.5	24.5	24.5	86.5	86.5	86.5	70.5	70.5	70.5
Actuated g/C Ratio	0.20	0.20	0.20	0.20	0.20	0.20	0.72	0.72	0.72	0.59	0.59	0.59
v/c Ratio	0.45	0.53	0.90	1.01	0.52	0.12	1.58	0.91	0.07	2.98	0.96	0.06
Control Delay	51.5	48.4	52.4	121.2	48.0	7.9	295.9	25.7	2.1	911.4	14.5	0.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.5	48.4	52.4	121.2	48.0	7.9	295.9	25.7	2.1	911.4	14.5	0.7
LOS	D	D	D	F	D	A	F	C	A	F	B	A
Approach Delay		51.1			74.0			60.3			88.4	
Approach LOS		D			E			E			F	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 2.98	
Intersection Signal Delay: 70.5	Intersection LOS: E
Intersection Capacity Utilization 102.6%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 4: Marksheffel Rd & Space Village Ave





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	185	375	155	180	40	335	2140	80	170	1835	50
Future Volume (veh/h)	70	185	375	155	180	40	335	2140	80	170	1835	50
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	76	201	408	168	196	43	364	2326	87	185	1995	54
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	187	382	324	148	382	324	351	2562	1143	133	2088	931
Arrive On Green	0.20	0.20	0.20	0.20	0.20	0.20	0.13	0.96	0.96	1.00	1.00	1.00
Sat Flow, veh/h	1141	1870	1585	812	1870	1585	1781	3554	1585	143	3554	1585
Grp Volume(v), veh/h	76	201	408	168	196	43	364	2326	87	185	1995	54
Grp Sat Flow(s),veh/h/ln	1141	1870	1585	812	1870	1585	1781	1777	1585	143	1777	1585
Q Serve(g_s), s	7.6	11.5	24.5	13.0	11.2	2.7	11.5	25.0	0.3	61.5	0.0	0.0
Cycle Q Clear(g_c), s	18.8	11.5	24.5	24.5	11.2	2.7	11.5	25.0	0.3	70.5	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	187	382	324	148	382	324	351	2562	1143	133	2088	931
V/C Ratio(X)	0.41	0.53	1.26	1.14	0.51	0.13	1.04	0.91	0.08	1.39	0.96	0.06
Avail Cap(c_a), veh/h	187	382	324	148	382	324	351	2562	1143	133	2088	931
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.8	42.6	47.7	56.1	42.4	39.1	18.8	1.2	0.7	18.4	0.0	0.0
Incr Delay (d2), s/veh	1.4	1.3	139.9	115.0	1.2	0.2	57.7	6.1	0.1	213.9	11.7	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	5.5	22.2	9.2	5.3	1.1	10.3	3.4	0.1	11.6	3.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.2	43.9	187.6	171.1	43.6	39.2	76.5	7.3	0.8	232.3	11.7	0.1
LnGrp LOS	D	D	F	F	D	D	F	A	A	F	B	A
Approach Vol, veh/h		685			407			2777			2234	
Approach Delay, s/veh		130.4			95.8			16.1			29.7	
Approach LOS		F			F			B			C	

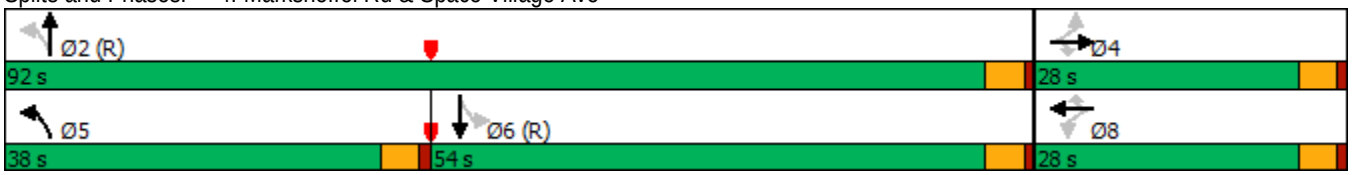
Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		91.0		29.0	16.0	75.0		29.0				
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s		86.5		24.5	11.5	70.5		24.5				
Max Q Clear Time (g_c+I1), s		27.0		26.5	13.5	72.5		26.5				
Green Ext Time (p_c), s		42.3		0.0	0.0	0.0		0.0				

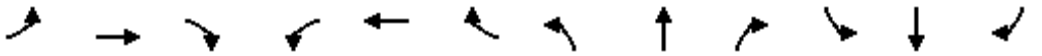
Intersection Summary												
HCM 6th Ctrl Delay			39.2									
HCM 6th LOS			D									

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	30	115	185	70	145	55	425	1515	60	1595
Future Volume (vph)	30	115	185	70	145	55	425	1515	60	1595
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	NA
Protected Phases		4			8		5	2		6
Permitted Phases	4		4	8		8	2		6	
Detector Phase	4	4	4	8	8	8	5	2	6	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5	9.5	22.5	22.5	22.5
Total Split (s)	28.0	28.0	28.0	28.0	28.0	28.0	38.0	92.0	54.0	54.0
Total Split (%)	23.3%	23.3%	23.3%	23.3%	23.3%	23.3%	31.7%	76.7%	45.0%	45.0%
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)	0.0	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 Optimize?							Yes		Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	C-Max
Act Effct Green (s)	15.6	15.6	15.6	15.6	15.6	15.6	95.4	95.4	60.6	60.6
Actuated g/C Ratio	0.13	0.13	0.13	0.13	0.13	0.13	0.80	0.80	0.50	0.50
v/c Ratio	0.32	0.52	0.53	0.59	0.65	0.24	0.91	0.43	0.54	0.75
Control Delay	54.1	55.4	11.3	66.6	61.8	15.2	45.3	10.9	37.6	20.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	54.1	55.4	11.3	66.6	61.8	15.2	45.3	10.9	37.6	20.7
LOS	D	E	B	E	E	B	D	B	D	C
Approach Delay		30.6			53.5			18.2		21.2
Approach LOS		C			D			B		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.91	
Intersection Signal Delay: 22.5	Intersection LOS: C
Intersection Capacity Utilization 84.8%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 4: Marksheffel Rd & Space Village Ave





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	115	185	70	145	55	425	1515	65	60	1595	165
Future Volume (veh/h)	30	115	185	70	145	55	425	1515	65	60	1595	165
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	33	125	201	76	158	60	462	1647	71	65	1734	179
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	148	287	243	158	287	243	494	3873	167	220	2656	273
Arrive On Green	0.15	0.15	0.15	0.15	0.15	0.15	0.23	1.00	1.00	1.00	1.00	1.00
Sat Flow, veh/h	1163	1870	1585	1054	1870	1585	1781	5019	216	283	4703	484
Grp Volume(v), veh/h	33	125	201	76	158	60	462	1117	601	65	1253	660
Grp Sat Flow(s),veh/h/ln	1163	1870	1585	1054	1870	1585	1781	1702	1831	283	1702	1783
Q Serve(g_s), s	3.2	7.3	14.8	8.5	9.4	4.0	17.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	12.6	7.3	14.8	15.7	9.4	4.0	17.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.12	1.00		0.27
Lane Grp Cap(c), veh/h	148	287	243	158	287	243	494	2627	1413	220	1922	1007
V/C Ratio(X)	0.22	0.44	0.83	0.48	0.55	0.25	0.93	0.43	0.43	0.30	0.65	0.66
Avail Cap(c_a), veh/h	197	366	310	202	366	310	690	2627	1413	220	1922	1007
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.8	46.1	49.3	53.2	47.0	44.7	19.5	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.8	1.0	13.5	2.3	1.6	0.5	16.2	0.5	0.9	3.4	1.7	3.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	3.5	6.7	2.3	4.5	1.6	13.1	0.2	0.4	0.2	0.5	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.6	47.1	62.7	55.5	48.6	45.2	35.7	0.5	0.9	3.4	1.7	3.3
LnGrp LOS	D	D	E	E	D	D	D	A	A	A	A	A
Approach Vol, veh/h		359			294			2180			1978	
Approach Delay, s/veh		56.5			49.7			8.1			2.3	
Approach LOS		E			D			A			A	

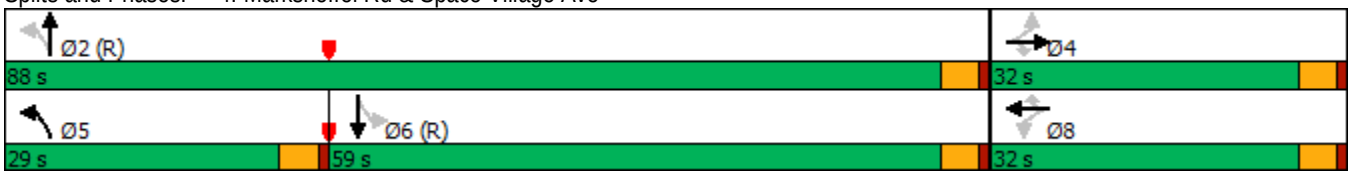
Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		97.1		22.9	24.8	72.3		22.9				
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s		87.5		23.5	33.5	49.5		23.5				
Max Q Clear Time (g_c+I1), s		2.0		16.8	19.0	2.0		17.7				
Green Ext Time (p_c), s		22.3		0.8	1.3	26.5		0.7				

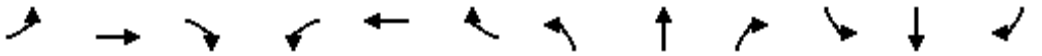
Intersection Summary												
HCM 6th Ctrl Delay			11.9									
HCM 6th LOS			B									

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	70	185	375	155	180	40	335	2140	170	1835
Future Volume (vph)	70	185	375	155	180	40	335	2140	170	1835
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	NA
Protected Phases		4			8		5	2		6
Permitted Phases	4		4	8		8	2		6	
Detector Phase	4	4	4	8	8	8	5	2	6	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5	9.5	22.5	22.5	22.5
Total Split (s)	32.0	32.0	32.0	32.0	32.0	32.0	29.0	88.0	59.0	59.0
Total Split (%)	26.7%	26.7%	26.7%	26.7%	26.7%	26.7%	24.2%	73.3%	49.2%	49.2%
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 Optimize?							Yes		Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	C-Max
Act Effct Green (s)	25.5	25.5	25.5	25.5	25.5	25.5	85.5	85.5	58.4	58.4
Actuated g/C Ratio	0.21	0.21	0.21	0.21	0.21	0.21	0.71	0.71	0.49	0.49
v/c Ratio	0.42	0.51	0.68	0.95	0.50	0.11	0.92	0.67	3.03	0.83
Control Delay	47.8	46.1	14.3	102.3	45.8	7.5	48.3	22.8	929.8	18.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.8	46.1	14.3	102.3	45.8	7.5	48.3	22.8	929.8	18.5
LOS	D	D	B	F	D	A	D	C	F	B
Approach Delay		27.3			65.1			26.1		94.0
Approach LOS		C			E			C		F

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 3.03	
Intersection Signal Delay: 53.7	Intersection LOS: D
Intersection Capacity Utilization 88.5%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 4: Marksheffel Rd & Space Village Ave





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	185	375	155	180	40	335	2140	80	170	1835	50
Future Volume (veh/h)	70	185	375	155	180	40	335	2140	80	170	1835	50
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	76	201	408	168	196	43	364	2326	87	185	1995	54
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	219	429	363	171	429	363	392	3516	131	131	2543	69
Arrive On Green	0.23	0.23	0.23	0.23	0.23	0.23	0.21	0.93	0.93	0.66	0.66	0.66
Sat Flow, veh/h	1141	1870	1585	812	1870	1585	1781	5053	188	143	5111	138
Grp Volume(v), veh/h	76	201	408	168	196	43	364	1563	850	185	1328	721
Grp Sat Flow(s),veh/h/ln	1141	1870	1585	812	1870	1585	1781	1702	1837	143	1702	1845
Q Serve(g_s), s	7.4	11.1	27.5	16.4	10.8	2.6	16.7	10.6	10.8	59.7	32.9	33.1
Cycle Q Clear(g_c), s	18.2	11.1	27.5	27.5	10.8	2.6	16.7	10.6	10.8	59.7	32.9	33.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.10	1.00		0.07
Lane Grp Cap(c), veh/h	219	429	363	171	429	363	392	2369	1278	131	1693	918
V/C Ratio(X)	0.35	0.47	1.12	0.98	0.46	0.12	0.93	0.66	0.67	1.41	0.78	0.79
Avail Cap(c_a), veh/h	219	429	363	171	429	363	469	2369	1278	131	1693	918
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.7	39.9	46.3	54.6	39.8	36.6	30.7	1.8	1.8	34.0	15.8	15.8
Incr Delay (d2), s/veh	0.9	0.8	84.9	64.0	0.8	0.1	22.6	1.5	2.7	223.4	3.7	6.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	5.2	19.3	8.1	5.1	1.0	12.3	2.0	2.7	12.0	11.1	12.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.6	40.7	131.2	118.6	40.6	36.8	53.4	3.2	4.5	257.4	19.5	22.5
LnGrp LOS	D	D	F	F	D	D	D	A	A	F	B	C
Approach Vol, veh/h		685			407			2777			2234	
Approach Delay, s/veh		95.5			72.4			10.2			40.2	
Approach LOS		F			E			B			D	

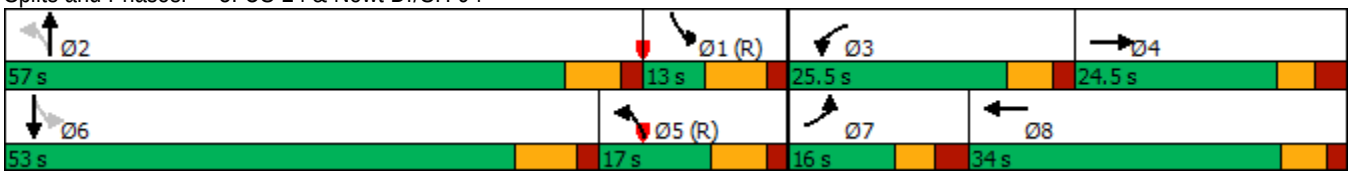
Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		88.0		32.0	23.8	64.2		32.0				
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s		83.5		27.5	24.5	54.5		27.5				
Max Q Clear Time (g_c+I1), s		12.8		29.5	18.7	61.7		29.5				
Green Ext Time (p_c), s		41.8		0.0	0.6	0.0		0.0				

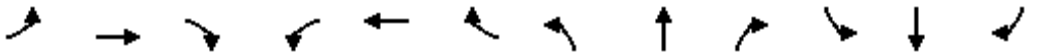
Intersection Summary												
HCM 6th Ctrl Delay			34.9									
HCM 6th LOS			C									

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	14	25	174	391	35	1	128	709	337	4	1542	32
Future Volume (vph)	14	25	174	391	35	1	128	709	337	4	1542	32
Turn Type	Prot	NA	Free	Prot	NA	Free	pm+pt	NA	Free	pm+pt	NA	Free
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			Free			Free	2		Free	6		Free
Detector Phase	7	4		3	8		5	2		1	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)	11.5	24.5		11.0	24.0		12.0	25.0		12.5	25.5	
Total Split (s)	16.0	24.5		25.5	34.0		17.0	57.0		13.0	53.0	
Total Split (%)	13.3%	20.4%		21.3%	28.3%		14.2%	47.5%		10.8%	44.2%	
Yellow Time (s)	3.5	3.5		4.0	4.0		5.0	5.0		5.5	5.5	
All-Red Time (s)	3.0	3.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.5	6.5		6.0	6.0		7.0	7.0		7.5	7.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lag	Lead		Lag	Lead	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		C-Max	Max		C-Max	Max	
Act Effct Green (s)	6.2	7.6	120.0	18.8	22.6	120.0	76.1	66.1	120.0	67.1	61.6	120.0
Actuated g/C Ratio	0.05	0.06	1.00	0.16	0.19	1.00	0.63	0.55	1.00	0.56	0.51	1.00
v/c Ratio	0.11	0.28	0.15	0.84	0.06	0.00	0.68	0.40	0.24	0.01	0.92	0.02
Control Delay	55.3	59.0	0.2	39.7	18.5	0.0	55.2	17.8	0.4	4.8	28.7	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	55.3	59.0	0.2	39.7	18.5	0.0	55.2	17.8	0.4	4.8	28.7	0.0
LOS	E	E	A	D	B	A	E	B	A	A	C	A
Approach Delay		10.6			37.9			16.9			28.1	
Approach LOS		B			D			B			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 110 (92%), Referenced to phase 1:SBL and 5:NBL, Start of Green	
Natural Cycle: 130	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.92	
Intersection Signal Delay: 24.3	Intersection LOS: C
Intersection Capacity Utilization 84.6%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 5: US-24 & Newt Dr/SH-94





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	25	174	391	35	1	128	709	337	4	1542	32
Future Volume (veh/h)	14	25	174	391	35	1	128	709	337	4	1542	32
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	1826	1826	1826	1841	1841	1841	1752	1752	1752	1811	1811	1811
Adj Flow Rate, veh/h	18	32	0	444	40	0	132	731	0	4	1606	0
Peak Hour Factor	0.77	0.77	0.77	0.88	0.88	0.88	0.97	0.97	0.97	0.96	0.96	0.96
Percent Heavy Veh, %	5	5	5	4	4	4	10	10	10	6	6	6
Cap, veh/h	63	72		503	575		171	1929		371	1866	
Arrive On Green	0.02	0.04	0.00	0.15	0.16	0.00	0.04	0.58	0.00	0.01	0.54	0.00
Sat Flow, veh/h	3374	1826	1547	3401	3497	1560	1668	3328	1485	1725	3441	1535
Grp Volume(v), veh/h	18	32	0	444	40	0	132	731	0	4	1606	0
Grp Sat Flow(s),veh/h/ln	1687	1826	1547	1700	1749	1560	1668	1664	1485	1725	1721	1535
Q Serve(g_s), s	0.6	2.1	0.0	15.4	1.2	0.0	1.9	14.2	0.0	0.0	48.1	0.0
Cycle Q Clear(g_c), s	0.6	2.1	0.0	15.4	1.2	0.0	1.9	14.2	0.0	0.0	48.1	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	63	72		503	575		171	1929		371	1866	
V/C Ratio(X)	0.28	0.44		0.88	0.07		0.77	0.38		0.01	0.86	
Avail Cap(c_a), veh/h	267	274		553	816		241	1929		437	1866	
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	0.68	0.68	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	58.1	56.3	0.0	50.1	42.4	0.0	52.7	13.6	0.0	19.5	23.6	0.0
Incr Delay (d2), s/veh	2.4	4.2	0.0	10.5	0.0	0.0	9.6	0.6	0.0	0.0	5.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	1.0	0.0	7.2	0.5	0.0	4.3	5.4	0.0	0.1	20.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.5	60.5	0.0	60.6	42.4	0.0	62.3	14.2	0.0	19.5	29.1	0.0
LnGrp LOS	E	E		E	D		E	B		B	C	
Approach Vol, veh/h		50	A		484	A		863	A		1610	A
Approach Delay, s/veh		60.5			59.1			21.5			29.0	
Approach LOS		E			E			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.4	76.6	23.8	11.3	12.4	72.6	8.8	26.2
Change Period (Y+Rc), s	7.5	7.0	6.0	6.5	7.5	* 7.5	6.5	* 6.5
Max Green Setting (Gmax), s	5.5	50.0	19.5	18.0	10.0	* 46	9.5	* 28
Max Q Clear Time (g_c+I1), s	2.0	16.2	17.4	4.1	3.9	50.1	2.6	3.2
Green Ext Time (p_c), s	0.0	5.9	0.4	0.1	0.2	0.0	0.0	0.2

Intersection Summary	
HCM 6th Ctrl Delay	32.3
HCM 6th LOS	C

Notes

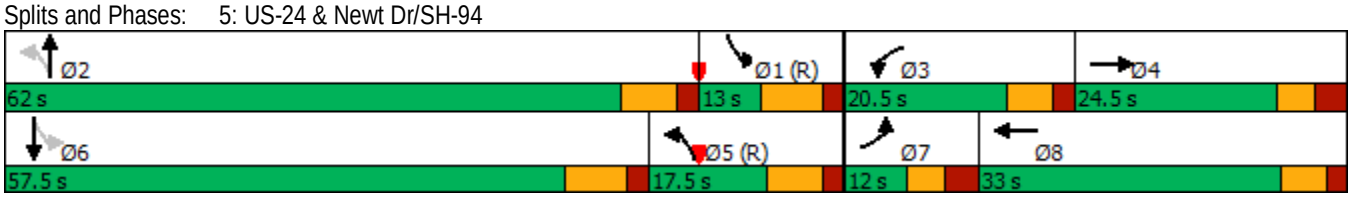
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	23	32	194	285	19	6	129	1375	261	3	760	30
Future Volume (vph)	23	32	194	285	19	6	129	1375	261	3	760	30
Turn Type	Prot	NA	Free	Prot	NA	Free	pm+pt	NA	Free	pm+pt	NA	Free
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			Free			Free	2		Free	6		Free
Detector Phase	7	4		3	8		5	2		1	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)	11.5	24.5		11.0	24.0		12.0	25.0		12.5	25.5	
Total Split (s)	12.0	24.5		20.5	33.0		17.5	62.0		13.0	57.5	
Total Split (%)	10.0%	20.4%		17.1%	27.5%		14.6%	51.7%		10.8%	47.9%	
Yellow Time (s)	3.5	3.5		4.0	4.0		5.0	5.0		5.5	5.5	
All-Red Time (s)	3.0	3.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.5	6.5		6.0	6.0		7.0	7.0		7.5	7.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lag	Lead		Lag	Lead	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		C-Max	Max		C-Max	Max	
Act Effct Green (s)	5.5	8.2	120.0	14.5	19.5	120.0	77.8	67.3	120.0	67.8	62.3	120.0
Actuated g/C Ratio	0.05	0.07	1.00	0.12	0.16	1.00	0.65	0.56	1.00	0.56	0.52	1.00
v/c Ratio	0.19	0.33	0.16	0.88	0.04	0.01	0.30	0.73	0.17	0.02	0.47	0.02
Control Delay	58.1	59.6	0.2	67.2	48.8	0.0	12.9	23.5	0.2	5.3	11.0	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	58.1	59.6	0.2	67.2	48.8	0.0	12.9	23.5	0.2	5.3	11.0	0.0
LOS	E	E	A	E	D	A	B	C	A	A	B	A
Approach Delay		13.3			64.7			19.3			10.6	
Approach LOS		B			E			B			B	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 110 (92%), Referenced to phase 1:SBL and 5:NBL, Start of Green	
Natural Cycle: 100	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.88	
Intersection Signal Delay: 21.7	Intersection LOS: C
Intersection Capacity Utilization 74.1%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 5: US-24 & Newt Dr/SH-94



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	32	194	285	19	6	129	1375	261	3	760	30
Future Volume (veh/h)	23	32	194	285	19	6	129	1375	261	3	760	30
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	1856	1856	1856	1856	1856	1856	1826	1826	1826
Adj Flow Rate, veh/h	30	42	0	361	24	0	134	1432	0	3	844	0
Peak Hour Factor	0.77	0.77	0.77	0.79	0.79	0.79	0.96	0.96	0.96	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	3	3	3	3	3	3	5	5	5
Cap, veh/h	91	75		412	457		412	2153		177	1974	
Arrive On Green	0.03	0.04	0.00	0.12	0.13	0.00	0.04	0.61	0.00	0.00	0.57	0.00
Sat Flow, veh/h	3456	1870	1585	3428	3526	1572	1767	3526	1572	1739	3469	1547
Grp Volume(v), veh/h	30	42	0	361	24	0	134	1432	0	3	844	0
Grp Sat Flow(s),veh/h/ln	1728	1870	1585	1714	1763	1572	1767	1763	1572	1739	1735	1547
Q Serve(g_s), s	1.0	2.6	0.0	12.4	0.7	0.0	0.0	31.9	0.0	0.0	16.6	0.0
Cycle Q Clear(g_c), s	1.0	2.6	0.0	12.4	0.7	0.0	0.0	31.9	0.0	0.0	16.6	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	91	75		412	457		412	2153		177	1974	
V/C Ratio(X)	0.33	0.56		0.88	0.05		0.33	0.67		0.02	0.43	
Avail Cap(c_a), veh/h	158	281		414	793		493	2153		250	1974	
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	0.66	0.66	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	57.4	56.6	0.0	51.9	45.8	0.0	21.1	15.3	0.0	29.1	14.7	0.0
Incr Delay (d2), s/veh	2.1	6.5	0.0	13.1	0.0	0.0	0.5	1.6	0.0	0.0	0.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	1.4	0.0	6.1	0.3	0.0	2.5	12.7	0.0	0.1	6.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.5	63.0	0.0	65.0	45.8	0.0	21.5	16.9	0.0	29.1	15.4	0.0
LnGrp LOS	E	E		E	D		C	B		C	B	
Approach Vol, veh/h		72	A		385	A		1566	A		847	A
Approach Delay, s/veh		61.5			63.8			17.3			15.4	
Approach LOS		E			E			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	80.3	20.4	11.3	12.5	75.8	9.7	22.1
Change Period (Y+Rc), s	7.5	7.0	6.0	6.5	7.5	* 7.5	6.5	* 6.5
Max Green Setting (Gmax), s	5.5	55.0	14.5	18.0	10.5	* 50	5.5	* 27
Max Q Clear Time (g_c+I1), s	2.0	33.9	14.4	4.6	2.0	18.6	3.0	2.7
Green Ext Time (p_c), s	0.0	11.5	0.0	0.1	0.2	6.9	0.0	0.1

Intersection Summary	
HCM 6th Ctrl Delay	24.1
HCM 6th LOS	C

Notes

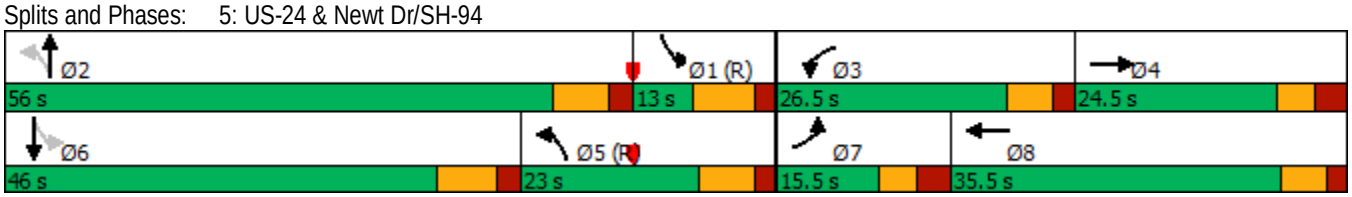
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	110	545	735	130	5	535	945	525	5	1635	65
Future Volume (vph)	45	110	545	735	130	5	535	945	525	5	1635	65
Turn Type	Prot	NA	Free	Prot	NA	Free	pm+pt	NA	Free	pm+pt	NA	Free
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			Free			Free	2		Free	6		Free
Detector Phase	7	4		3	8		5	2		1	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)	11.5	24.5		11.0	24.0		12.0	25.0		12.5	25.5	
Total Split (s)	15.5	24.5		26.5	35.5		23.0	56.0		13.0	46.0	
Total Split (%)	12.9%	20.4%		22.1%	29.6%		19.2%	46.7%		10.8%	38.3%	
Yellow Time (s)	3.5	3.5		4.0	4.0		5.0	5.0		5.5	5.5	
All-Red Time (s)	3.0	3.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.5	6.5		6.0	6.0		7.0	7.0		7.5	7.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lag	Lead		Lag	Lead	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		C-Max	Max		C-Max	Max	
Act Effct Green (s)	7.4	14.3	120.0	20.5	29.8	120.0	65.7	52.7	120.0	47.7	42.2	120.0
Actuated g/C Ratio	0.06	0.12	1.00	0.17	0.25	1.00	0.55	0.44	1.00	0.40	0.35	1.00
v/c Ratio	0.28	0.67	0.46	1.45	0.17	0.00	2.01	0.68	0.37	0.03	1.42	0.04
Control Delay	56.8	65.2	1.0	243.4	31.3	0.0	490.9	30.3	0.7	6.6	215.3	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.8	65.2	1.0	243.4	31.3	0.0	490.9	30.3	0.7	6.6	215.3	0.0
LOS	E	E	A	F	C	A	F	C	A	A	F	A
Approach Delay		14.7			210.2			145.6			206.5	
Approach LOS		B			F			F			F	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 110 (92%), Referenced to phase 1:SBL and 5:NBL, Start of Green	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 2.01	
Intersection Signal Delay: 154.8	Intersection LOS: F
Intersection Capacity Utilization 119.6%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 5: US-24 & Newt Dr/SH-94



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	110	545	735	130	5	535	945	525	5	1635	65
Future Volume (veh/h)	45	110	545	735	130	5	535	945	525	5	1635	65
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	1826	1826	1826	1841	1841	1841	1752	1752	1752	1811	1811	1811
Adj Flow Rate, veh/h	58	143	0	835	148	0	552	974	0	5	1703	0
Peak Hour Factor	0.77	0.77	0.77	0.88	0.88	0.88	0.97	0.97	0.97	0.96	0.96	0.96
Percent Heavy Veh, %	5	5	5	4	4	4	10	10	10	6	6	6
Cap, veh/h	120	176		581	795		282	1524		228	1274	
Arrive On Green	0.04	0.10	0.00	0.06	0.08	0.00	0.13	0.46	0.00	0.05	0.37	0.00
Sat Flow, veh/h	3374	1826	1547	3401	3497	1560	1668	3328	1485	1725	3441	1535
Grp Volume(v), veh/h	58	143	0	835	148	0	552	974	0	5	1703	0
Grp Sat Flow(s),veh/h/ln	1687	1826	1547	1700	1749	1560	1668	1664	1485	1725	1721	1535
Q Serve(g_s), s	2.0	9.2	0.0	20.5	4.8	0.0	16.0	26.9	0.0	0.0	44.4	0.0
Cycle Q Clear(g_c), s	2.0	9.2	0.0	20.5	4.8	0.0	16.0	26.9	0.0	0.0	44.4	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	120	176		581	795		282	1524		228	1274	
V/C Ratio(X)	0.48	0.81		1.44	0.19		1.95	0.64		0.02	1.34	
Avail Cap(c_a), veh/h	253	274		581	860		282	1524		228	1274	
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.83	0.83	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	56.8	53.2	0.0	56.6	45.1	0.0	50.3	24.9	0.0	39.1	37.8	0.0
Incr Delay (d2), s/veh	3.0	10.0	0.0	204.9	0.1	0.0	442.1	2.1	0.0	0.0	156.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	4.7	0.0	25.9	2.1	0.0	42.7	10.9	0.0	0.1	46.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.8	63.2	0.0	261.5	45.2	0.0	492.4	27.0	0.0	39.2	194.5	0.0
LnGrp LOS	E	E		F	D		F	C		D	F	
Approach Vol, veh/h		201	A		983	A		1526	A		1708	A
Approach Delay, s/veh		62.2			228.9			195.4			194.0	
Approach LOS		E			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.5	61.9	26.5	18.1	23.5	51.9	10.8	33.8
Change Period (Y+Rc), s	7.5	7.0	6.0	6.5	7.5	* 7.5	6.5	* 6.5
Max Green Setting (Gmax), s	5.5	49.0	20.5	18.0	16.0	* 39	9.0	* 30
Max Q Clear Time (g_c+I1), s	2.0	28.9	22.5	11.2	18.0	46.4	4.0	6.8
Green Ext Time (p_c), s	0.0	7.2	0.0	0.3	0.0	0.0	0.0	0.8

Intersection Summary	
HCM 6th Ctrl Delay	196.3
HCM 6th LOS	F

Notes

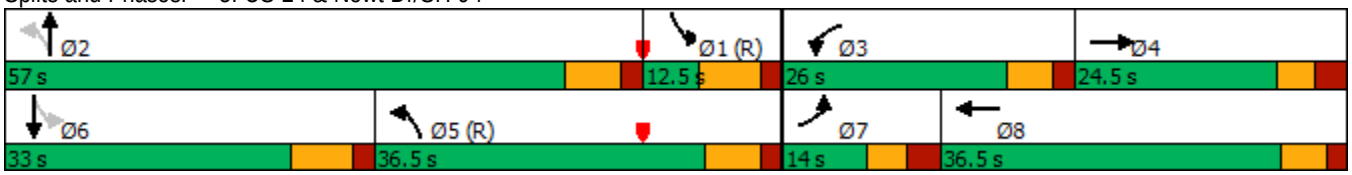
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	65	150	700	645	145	10	670	1750	530	5	810	75
Future Volume (vph)	65	150	700	645	145	10	670	1750	530	5	810	75
Turn Type	Prot	NA	Free	Prot	NA	Free	pm+pt	NA	Free	pm+pt	NA	Free
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			Free			Free	2		Free	6		Free
Detector Phase	7	4		3	8		5	2		1	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)	11.5	24.5		11.0	24.0		12.0	25.0		12.5	25.5	
Total Split (s)	14.0	24.5		26.0	36.5		36.5	57.0		12.5	33.0	
Total Split (%)	11.7%	20.4%		21.7%	30.4%		30.4%	47.5%		10.4%	27.5%	
Yellow Time (s)	3.5	3.5		4.0	4.0		5.0	5.0		5.5	5.5	
All-Red Time (s)	3.0	3.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.5	6.5		6.0	6.0		7.0	7.0		7.5	7.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lag	Lead		Lag	Lead	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		C-Max	Max		C-Max	Max	
Act Effct Green (s)	7.2	16.2	120.0	20.0	31.5	120.0	64.3	51.8	120.0	32.3	27.3	120.0
Actuated g/C Ratio	0.06	0.14	1.00	0.17	0.26	1.00	0.54	0.43	1.00	0.27	0.23	1.00
v/c Ratio	0.41	0.78	0.57	1.44	0.20	0.01	1.42	1.21	0.35	0.05	1.15	0.05
Control Delay	60.4	70.7	1.5	240.9	44.8	0.0	233.3	131.0	0.6	18.6	123.4	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.4	70.7	1.5	240.9	44.8	0.0	233.3	131.0	0.6	18.6	123.4	0.1
LOS	E	E	A	F	D	A	F	F	A	B	F	A
Approach Delay		17.0			202.2			130.8			112.4	
Approach LOS		B			F			F			F	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 110 (92%), Referenced to phase 1:SBL and 5:NBL, Start of Green	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.44	
Intersection Signal Delay: 117.9	Intersection LOS: F
Intersection Capacity Utilization 108.3%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 5: US-24 & Newt Dr/SH-94



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	65	150	700	645	145	10	670	1750	530	5	810	75
Future Volume (veh/h)	65	150	700	645	145	10	670	1750	530	5	810	75
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	1856	1856	1856	1856	1856	1856	1826	1826	1826
Adj Flow Rate, veh/h	84	195	0	816	184	0	698	1823	0	6	900	0
Peak Hour Factor	0.77	0.77	0.77	0.79	0.79	0.79	0.96	0.96	0.96	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	3	3	3	3	3	3	5	5	5
Cap, veh/h	135	227		571	864		494	1554		140	821	
Arrive On Green	0.04	0.12	0.00	0.28	0.41	0.00	0.25	0.44	0.00	0.05	0.24	0.00
Sat Flow, veh/h	3456	1870	1585	3428	3526	1572	1767	3526	1572	1739	3469	1547
Grp Volume(v), veh/h	84	195	0	816	184	0	698	1823	0	6	900	0
Grp Sat Flow(s),veh/h/ln	1728	1870	1585	1714	1763	1572	1767	1763	1572	1739	1735	1547
Q Serve(g_s), s	2.9	12.3	0.0	20.0	4.1	0.0	29.5	52.9	0.0	0.0	28.4	0.0
Cycle Q Clear(g_c), s	2.9	12.3	0.0	20.0	4.1	0.0	29.5	52.9	0.0	0.0	28.4	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	135	227		571	864		494	1554		140	821	
V/C Ratio(X)	0.62	0.86		1.43	0.21		1.41	1.17		0.04	1.10	
Avail Cap(c_a), veh/h	216	281		571	896		494	1554		140	821	
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.73	0.73	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	56.8	51.7	0.0	43.3	28.0	0.0	43.5	33.5	0.0	54.6	45.8	0.0
Incr Delay (d2), s/veh	4.6	19.1	0.0	200.0	0.1	0.0	197.0	84.9	0.0	0.1	60.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	7.0	0.0	23.5	1.7	0.0	40.8	40.2	0.0	0.2	19.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.4	70.8	0.0	243.3	28.1	0.0	240.5	118.5	0.0	54.8	106.7	0.0
LnGrp LOS	E	E		F	C		F	F		D	F	
Approach Vol, veh/h		279	A		1000	A		2521	A		906	A
Approach Delay, s/veh		68.0			203.7			152.3			106.3	
Approach LOS		E			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.0	59.9	26.0	21.1	37.0	35.9	11.2	35.9
Change Period (Y+Rc), s	7.5	7.0	6.0	6.5	7.5	* 7.5	6.5	* 6.5
Max Green Setting (Gmax), s	5.0	50.0	20.0	18.0	29.5	* 26	7.5	* 31
Max Q Clear Time (g_c+I1), s	2.0	54.9	22.0	14.3	31.5	30.4	4.9	6.1
Green Ext Time (p_c), s	0.0	0.0	0.0	0.3	0.0	0.0	0.0	1.1

Intersection Summary	
HCM 6th Ctrl Delay	149.4
HCM 6th LOS	F

Notes

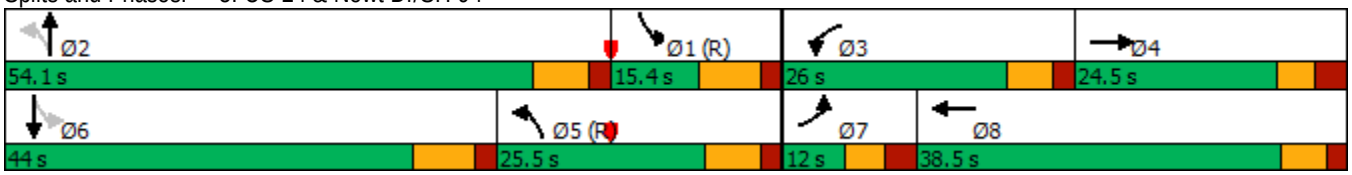
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	110	545	960	130	5	535	945	710	5	1635	65
Future Volume (vph)	45	110	545	960	130	5	535	945	710	5	1635	65
Turn Type	Prot	NA	Free	Prot	NA	Free	pm+pt	NA	Free	pm+pt	NA	Free
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			Free			Free	2		Free	6		Free
Detector Phase	7	4		3	8		5	2		1	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)	11.5	24.5		11.0	24.0		12.0	25.0		12.5	25.5	
Total Split (s)	12.0	24.5		26.0	38.5		25.5	54.1		15.4	44.0	
Total Split (%)	10.0%	20.4%		21.7%	32.1%		21.3%	45.1%		12.8%	36.7%	
Yellow Time (s)	3.5	3.5		4.0	4.0		5.0	5.0		5.5	5.5	
All-Red Time (s)	3.0	3.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.5	6.5		6.0	6.0		7.0	7.0		7.5	7.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lag	Lead		Lag	Lead	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		C-Max	Max		C-Max	Max	
Act Effct Green (s)	5.5	14.3	120.0	20.0	31.2	120.0	66.2	50.8	120.0	48.1	40.2	120.0
Actuated g/C Ratio	0.05	0.12	1.00	0.17	0.26	1.00	0.55	0.42	1.00	0.40	0.34	1.00
v/c Ratio	0.38	0.67	0.46	1.94	0.16	0.00	1.78	0.70	0.50	0.03	1.49	0.04
Control Delay	63.1	65.2	1.0	456.6	36.8	0.0	392.4	32.3	1.2	7.4	246.3	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	63.1	65.2	1.0	456.6	36.8	0.0	392.4	32.3	1.2	7.4	246.3	0.0
LOS	E	E	A	F	D	A	F	C	A	A	F	A
Approach Delay		15.1			404.5			110.3			236.2	
Approach LOS		B			F			F			F	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 110 (92%), Referenced to phase 1:SBL and 5:NBL, Start of Green	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.94	
Intersection Signal Delay: 191.6	Intersection LOS: F
Intersection Capacity Utilization 126.0%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 5: US-24 & Newt Dr/SH-94



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	110	545	960	130	5	535	945	710	5	1635	65
Future Volume (veh/h)	45	110	545	960	130	5	535	945	710	5	1635	65
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	1826	1826	1826	1841	1841	1841	1752	1752	1752	1811	1811	1811
Adj Flow Rate, veh/h	58	143	0	1091	148	0	552	974	0	5	1703	0
Peak Hour Factor	0.77	0.77	0.77	0.88	0.88	0.88	0.97	0.97	0.97	0.96	0.96	0.96
Percent Heavy Veh, %	5	5	5	4	4	4	10	10	10	6	6	6
Cap, veh/h	120	176		567	780		317	1471		249	1217	
Arrive On Green	0.04	0.10	0.00	0.06	0.07	0.00	0.15	0.44	0.00	0.07	0.35	0.00
Sat Flow, veh/h	3374	1826	1547	3401	3497	1560	1668	3328	1485	1725	3441	1535
Grp Volume(v), veh/h	58	143	0	1091	148	0	552	974	0	5	1703	0
Grp Sat Flow(s),veh/h/ln	1687	1826	1547	1700	1749	1560	1668	1664	1485	1725	1721	1535
Q Serve(g_s), s	2.0	9.2	0.0	20.0	4.8	0.0	18.5	27.7	0.0	0.0	42.4	0.0
Cycle Q Clear(g_c), s	2.0	9.2	0.0	20.0	4.8	0.0	18.5	27.7	0.0	0.0	42.4	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	120	176		567	780		317	1471		249	1217	
V/C Ratio(X)	0.48	0.81		1.92	0.19		1.74	0.66		0.02	1.40	
Avail Cap(c_a), veh/h	155	274		567	947		317	1471		249	1217	
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	56.8	53.2	0.0	56.7	45.4	0.0	49.0	26.4	0.0	39.4	38.8	0.0
Incr Delay (d2), s/veh	3.0	10.0	0.0	422.6	0.1	0.0	345.9	2.4	0.0	0.0	184.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	4.7	0.0	42.4	2.2	0.0	39.5	11.3	0.0	0.1	48.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.8	63.2	0.0	479.3	45.5	0.0	394.9	28.8	0.0	39.5	223.4	0.0
LnGrp LOS	E	E		F	D		F	C		D	F	
Approach Vol, veh/h		201	A		1239	A		1526	A		1708	A
Approach Delay, s/veh		62.2			427.5			161.2			222.9	
Approach LOS		E			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.9	60.0	26.0	18.1	26.0	49.9	10.8	33.3
Change Period (Y+Rc), s	7.5	7.0	6.0	6.5	7.5	* 7.5	6.5	* 6.5
Max Green Setting (Gmax), s	7.9	47.1	20.0	18.0	18.5	* 37	5.5	* 33
Max Q Clear Time (g_c+I1), s	2.0	29.7	22.0	11.2	20.5	44.4	4.0	6.8
Green Ext Time (p_c), s	0.0	6.7	0.0	0.3	0.0	0.0	0.0	0.9

Intersection Summary	
HCM 6th Ctrl Delay	250.1
HCM 6th LOS	F

Notes

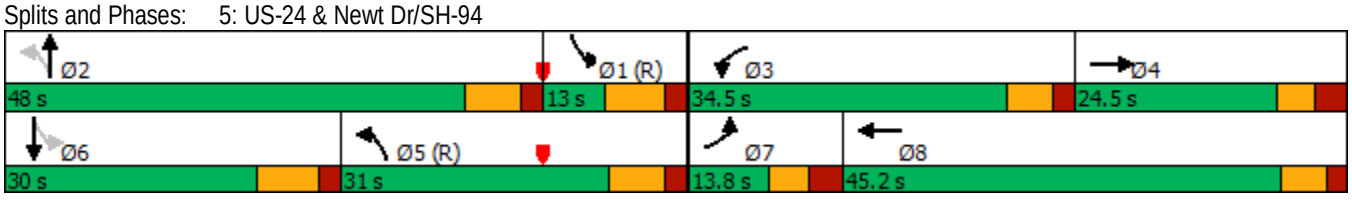
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

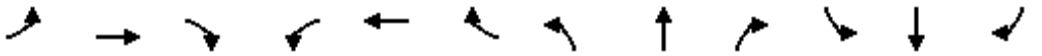
Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	65	150	700	960	145	10	670	1750	910	5	810	75
Future Volume (vph)	65	150	700	960	145	10	670	1750	910	5	810	75
Turn Type	Prot	NA	Free	Prot	NA	Free	pm+pt	NA	Free	pm+pt	NA	Free
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			Free			Free	2		Free	6		Free
Detector Phase	7	4		3	8		5	2		1	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)	11.5	24.5		11.0	24.0		12.0	25.0		12.5	25.5	
Total Split (s)	13.8	24.5		34.5	45.2		31.0	48.0		13.0	30.0	
Total Split (%)	11.5%	20.4%		28.8%	37.7%		25.8%	40.0%		10.8%	25.0%	
Yellow Time (s)	3.5	3.5		4.0	4.0		5.0	5.0		5.5	5.5	
All-Red Time (s)	3.0	3.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.5	6.5		6.0	6.0		7.0	7.0		7.5	7.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lag	Lead		Lag	Lead	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		C-Max	Max		C-Max	Max	
Act Effct Green (s)	7.1	16.2	120.0	28.5	40.2	120.0	55.8	42.8	120.0	29.8	24.3	120.0
Actuated g/C Ratio	0.06	0.14	1.00	0.24	0.34	1.00	0.46	0.36	1.00	0.25	0.20	1.00
v/c Ratio	0.42	0.78	0.57	1.51	0.16	0.01	1.70	1.46	0.60	0.04	1.29	0.05
Control Delay	60.9	70.7	1.5	262.6	33.5	0.0	353.5	242.3	1.7	16.6	174.8	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.9	70.7	1.5	262.6	33.5	0.0	353.5	242.3	1.7	16.6	174.8	0.1
LOS	E	E	A	F	C	A	F	F	A	B	F	A
Approach Delay		17.1			230.3			198.9			159.2	
Approach LOS		B			F			F			F	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 110 (92%), Referenced to phase 1:SBL and 5:NBL, Start of Green	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.70	
Intersection Signal Delay: 169.0	Intersection LOS: F
Intersection Capacity Utilization 117.3%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 5: US-24 & Newt Dr/SH-94





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	65	150	700	960	145	10	670	1750	910	5	810	75
Future Volume (veh/h)	65	150	700	960	145	10	670	1750	910	5	810	75
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	1856	1856	1856	1856	1856	1856	1826	1826	1826
Adj Flow Rate, veh/h	84	195	0	1215	184	0	698	1823	0	6	900	0
Peak Hour Factor	0.77	0.77	0.77	0.79	0.79	0.79	0.96	0.96	0.96	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	3	3	3	3	3	3	5	5	5
Cap, veh/h	135	227		814	1113		413	1290		147	735	
Arrive On Green	0.04	0.12	0.00	0.40	0.53	0.00	0.20	0.37	0.00	0.05	0.21	0.00
Sat Flow, veh/h	3456	1870	1585	3428	3526	1572	1767	3526	1572	1739	3469	1547
Grp Volume(v), veh/h	84	195	0	1215	184	0	698	1823	0	6	900	0
Grp Sat Flow(s),veh/h/ln	1728	1870	1585	1714	1763	1572	1767	1763	1572	1739	1735	1547
Q Serve(g_s), s	2.9	12.3	0.0	28.5	3.2	0.0	24.0	43.9	0.0	0.0	25.4	0.0
Cycle Q Clear(g_c), s	2.9	12.3	0.0	28.5	3.2	0.0	24.0	43.9	0.0	0.0	25.4	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	135	227		814	1113		413	1290		147	735	
V/C Ratio(X)	0.62	0.86		1.49	0.17		1.69	1.41		0.04	1.23	
Avail Cap(c_a), veh/h	210	281		814	1152		413	1290		147	735	
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	56.8	51.7	0.0	36.2	20.2	0.0	46.3	38.0	0.0	54.1	47.3	0.0
Incr Delay (d2), s/veh	4.6	19.1	0.0	228.0	0.1	0.0	320.1	190.6	0.0	0.1	113.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	7.0	0.0	36.1	1.3	0.0	48.4	52.7	0.0	0.2	22.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.4	70.8	0.0	264.2	20.2	0.0	366.3	228.6	0.0	54.3	160.5	0.0
LnGrp LOS	E	E		F	C		F	F		D	F	
Approach Vol, veh/h		279	A		1399	A		2521	A		906	A
Approach Delay, s/veh		68.0			232.1			266.7			159.8	
Approach LOS		E			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.5	50.9	34.5	21.1	31.5	32.9	11.2	44.4
Change Period (Y+Rc), s	7.5	7.0	6.0	6.5	7.5	* 7.5	6.5	* 6.5
Max Green Setting (Gmax), s	5.5	41.0	28.5	18.0	24.0	* 23	7.3	* 39
Max Q Clear Time (g_c+I1), s	2.0	45.9	30.5	14.3	26.0	27.4	4.9	5.2
Green Ext Time (p_c), s	0.0	0.0	0.0	0.3	0.0	0.0	0.0	1.2

Intersection Summary	
HCM 6th Ctrl Delay	227.4
HCM 6th LOS	F

Notes

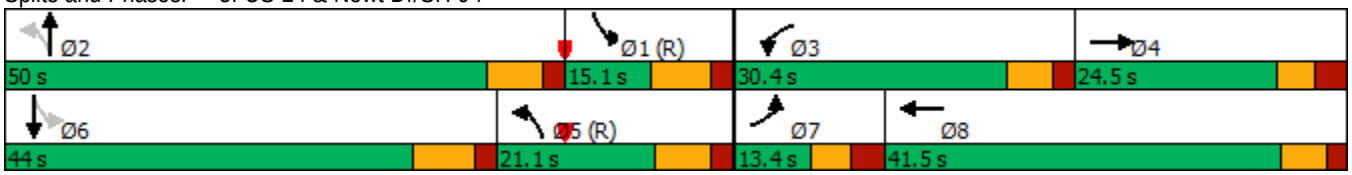
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

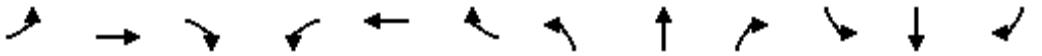
Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	45	110	545	960	130	5	535	945	710	5	1635
Future Volume (vph)	45	110	545	960	130	5	535	945	710	5	1635
Turn Type	Prot	NA	Free	Prot	NA	Free	pm+pt	NA	Free	pm+pt	NA
Protected Phases	7	4		3	8		5	2		1	6
Permitted Phases			Free			Free	2		Free	6	
Detector Phase	7	4		3	8		5	2		1	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)	11.5	24.5		11.0	24.0		12.0	25.0		12.5	25.5
Total Split (s)	13.4	24.5		30.4	41.5		21.1	50.0		15.1	44.0
Total Split (%)	11.2%	20.4%		25.3%	34.6%		17.6%	41.7%		12.6%	36.7%
Yellow Time (s)	3.5	3.5		4.0	4.0		5.0	5.0		5.5	5.5
All-Red Time (s)	3.0	3.0		2.0	2.0		2.0	2.0		2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0
Total Lost Time (s)	6.5	6.5		6.0	6.0		7.0	7.0		7.5	7.5
Lead/Lag	Lead	Lag		Lead	Lag		Lag	Lead		Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes
Recall Mode	None	None		None	None		C-Max	Max		C-Max	Max
Act Effct Green (s)	6.6	14.3	120.0	24.4	34.5	120.0	60.8	46.7	120.0	47.8	40.2
Actuated g/C Ratio	0.06	0.12	1.00	0.20	0.29	1.00	0.51	0.39	1.00	0.40	0.34
v/c Ratio	0.32	0.67	0.46	1.10	0.28	0.00	1.14	0.53	0.50	0.02	1.08
Control Delay	59.2	65.2	1.0	89.3	24.0	0.0	125.7	30.0	1.2	7.6	74.1
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	59.2	65.2	1.0	89.3	24.0	0.0	125.7	30.0	1.2	7.6	74.1
LOS	E	E	A	F	C	A	F	C	A	A	E
Approach Delay		14.8			81.1			44.1			73.9
Approach LOS		B			F			D			E

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 110 (92%), Referenced to phase 1:SBL and 5:NBL, Start of Green	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.14	
Intersection Signal Delay: 55.8	Intersection LOS: E
Intersection Capacity Utilization 90.3%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 5: US-24 & Newt Dr/SH-94





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	110	545	960	130	5	535	945	710	5	1635	65
Future Volume (veh/h)	45	110	545	960	130	5	535	945	710	5	1635	65
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	1826	1826	1826	1841	1841	1841	1752	1752	1752	1811	1811	1811
Adj Flow Rate, veh/h	58	143	0	1091	148	0	552	974	0	5	1703	0
Peak Hour Factor	0.77	0.77	0.77	0.88	0.88	0.88	0.97	0.97	0.97	0.96	0.96	0.96
Percent Heavy Veh, %	5	5	5	4	4	4	10	10	10	6	6	6
Cap, veh/h	120	176		1005	478		503	1951		290	1749	
Arrive On Green	0.04	0.10	0.00	0.20	0.26	0.00	0.12	0.41	0.00	0.07	0.35	0.00
Sat Flow, veh/h	3374	1826	1547	4944	1841	1560	3237	4782	1485	1725	5107	0
Grp Volume(v), veh/h	58	143	0	1091	148	0	552	974	0	5	1703	0
Grp Sat Flow(s),veh/h/ln	1687	1826	1547	1648	1841	1560	1618	1594	1485	1725	1648	0
Q Serve(g_s), s	2.0	9.2	0.0	24.4	7.8	0.0	14.1	18.2	0.0	0.0	40.7	0.0
Cycle Q Clear(g_c), s	2.0	9.2	0.0	24.4	7.8	0.0	14.1	18.2	0.0	0.0	40.7	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	120	176		1005	478		503	1951		290	1749	
V/C Ratio(X)	0.48	0.81		1.09	0.31		1.10	0.50		0.02	0.97	
Avail Cap(c_a), veh/h	194	274		1005	545		503	1951		290	1749	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	56.8	53.2	0.0	47.8	35.7	0.0	51.2	26.4	0.0	32.3	38.2	0.0
Incr Delay (d2), s/veh	3.0	10.0	0.0	54.5	0.4	0.0	69.1	0.9	0.0	0.0	16.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	4.7	0.0	15.0	3.6	0.0	12.0	7.0	0.0	0.1	18.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.8	63.2	0.0	102.3	36.1	0.0	120.3	27.3	0.0	32.3	54.4	0.0
LnGrp LOS	E	E		F	D		F	C		C	D	
Approach Vol, veh/h		201	A		1239	A		1526	A		1708	A
Approach Delay, s/veh		62.2			94.4			61.0			54.3	
Approach LOS		E			F			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.6	55.9	30.4	18.1	21.6	49.9	10.8	37.7
Change Period (Y+Rc), s	7.5	7.0	6.0	6.5	7.5	* 7.5	6.5	* 6.5
Max Green Setting (Gmax), s	7.6	43.0	24.4	18.0	14.1	* 37	6.9	* 36
Max Q Clear Time (g_c+I1), s	2.0	20.2	26.4	11.2	16.1	42.7	4.0	9.8
Green Ext Time (p_c), s	0.0	7.4	0.0	0.3	0.0	0.0	0.0	0.8

Intersection Summary	
HCM 6th Ctrl Delay	67.4
HCM 6th LOS	E

Notes

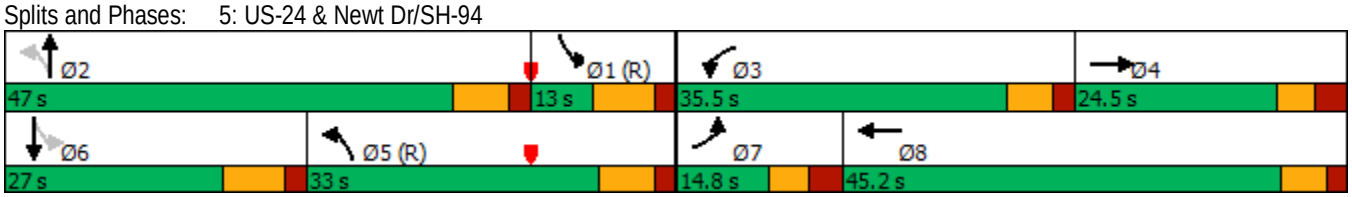
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

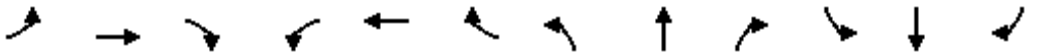
Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	65	150	700	960	145	10	670	1750	910	5	810
Future Volume (vph)	65	150	700	960	145	10	670	1750	910	5	810
Turn Type	Prot	NA	Free	Prot	NA	Free	pm+pt	NA	Free	pm+pt	NA
Protected Phases	7	4		3	8		5	2		1	6
Permitted Phases			Free			Free	2		Free	6	
Detector Phase	7	4		3	8		5	2		1	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)	11.5	24.5		11.0	24.0		12.0	25.0		12.5	25.5
Total Split (s)	14.8	24.5		35.5	45.2		33.0	47.0		13.0	27.0
Total Split (%)	12.3%	20.4%		29.6%	37.7%		27.5%	39.2%		10.8%	22.5%
Yellow Time (s)	3.5	3.5		4.0	4.0		5.0	5.0		5.5	5.5
All-Red Time (s)	3.0	3.0		2.0	2.0		2.0	2.0		2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0
Total Lost Time (s)	6.5	6.5		6.0	6.0		7.0	7.0		7.5	7.5
Lead/Lag	Lead	Lag		Lead	Lag		Lag	Lead		Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes
Recall Mode	None	None		None	None		C-Max	Max		C-Max	Max
Act Effct Green (s)	7.7	16.2	120.0	29.5	40.6	120.0	54.8	41.8	120.0	26.8	21.3
Actuated g/C Ratio	0.06	0.14	1.00	0.25	0.34	1.00	0.46	0.35	1.00	0.22	0.18
v/c Ratio	0.38	0.78	0.57	1.00	0.30	0.01	0.82	1.04	0.60	0.04	1.13
Control Delay	58.9	70.7	1.5	53.6	16.5	0.0	49.1	71.4	1.7	16.0	103.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	58.9	70.7	1.5	53.6	16.5	0.0	49.1	71.4	1.7	16.0	103.7
LOS	E	E	A	D	B	A	D	E	A	B	F
Approach Delay		16.9			48.2			47.9			103.2
Approach LOS		B			D			D			F

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 110 (92%), Referenced to phase 1:SBL and 5:NBL, Start of Green	
Natural Cycle: 120	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.13	
Intersection Signal Delay: 50.5	Intersection LOS: D
Intersection Capacity Utilization 86.6%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 5: US-24 & Newt Dr/SH-94





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	65	150	700	960	145	10	670	1750	910	5	810	75
Future Volume (veh/h)	65	150	700	960	145	10	670	1750	910	5	810	75
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	1856	1856	1856	1856	1856	1856	1826	1826	1826
Adj Flow Rate, veh/h	84	195	0	1215	184	0	698	1823	0	6	900	0
Peak Hour Factor	0.77	0.77	0.77	0.79	0.79	0.79	0.96	0.96	0.96	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	3	3	3	3	3	3	5	5	5
Cap, veh/h	135	227		1225	601		778	2001		82	1117	
Arrive On Green	0.04	0.12	0.00	0.25	0.32	0.00	0.18	0.39	0.00	0.01	0.22	0.00
Sat Flow, veh/h	3456	1870	1585	4983	1856	1572	3428	5066	1572	1739	5149	0
Grp Volume(v), veh/h	84	195	0	1215	184	0	698	1823	0	6	900	0
Grp Sat Flow(s),veh/h/ln	1728	1870	1585	1661	1856	1572	1714	1689	1572	1739	1662	0
Q Serve(g_s), s	2.9	12.3	0.0	29.2	8.9	0.0	18.0	40.8	0.0	0.0	20.5	0.0
Cycle Q Clear(g_c), s	2.9	12.3	0.0	29.2	8.9	0.0	18.0	40.8	0.0	0.0	20.5	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	135	227		1225	601		778	2001		82	1117	
V/C Ratio(X)	0.62	0.86		0.99	0.31		0.90	0.91		0.07	0.81	
Avail Cap(c_a), veh/h	239	281		1225	606		906	2001		140	1117	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	56.8	51.7	0.0	45.1	30.4	0.0	45.6	34.3	0.0	58.5	44.1	0.0
Incr Delay (d2), s/veh	4.6	19.1	0.0	23.7	0.3	0.0	10.5	7.7	0.0	0.4	6.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	7.0	0.0	14.6	4.1	0.0	11.2	17.9	0.0	0.2	9.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.4	70.8	0.0	68.8	30.7	0.0	56.1	42.1	0.0	58.9	50.3	0.0
LnGrp LOS	E	E		E	C		E	D		E	D	
Approach Vol, veh/h		279	A		1399	A		2521	A		906	A
Approach Delay, s/veh		68.0			63.8			45.9			50.4	
Approach LOS		E			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	54.4	35.5	21.1	29.0	34.4	11.2	45.4
Change Period (Y+Rc), s	7.5	7.0	6.0	6.5	7.5	* 7.5	6.5	* 6.5
Max Green Setting (Gmax), s	5.5	40.0	29.5	18.0	26.0	* 20	8.3	* 39
Max Q Clear Time (g_c+I1), s	2.0	42.8	31.2	14.3	20.0	22.5	4.9	10.9
Green Ext Time (p_c), s	0.0	0.0	0.0	0.3	1.5	0.0	0.1	1.0

Intersection Summary	
HCM 6th Ctrl Delay	52.8
HCM 6th LOS	D

Notes

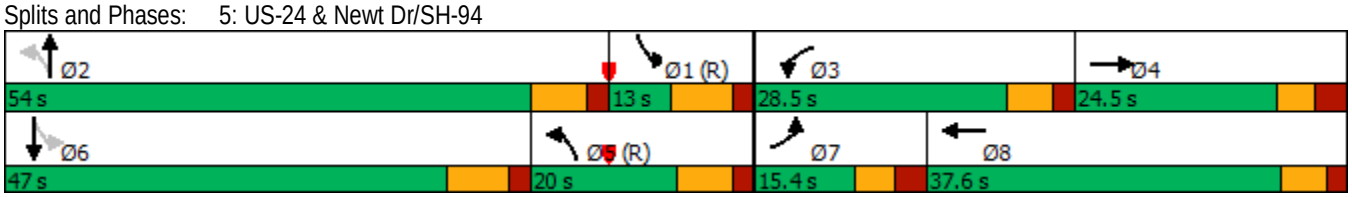
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

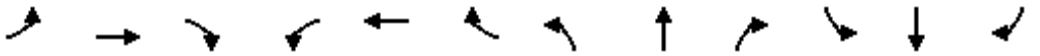
Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	50	115	580	995	140	5	560	1085	650	10	1945
Future Volume (vph)	50	115	580	995	140	5	560	1085	650	10	1945
Turn Type	Prot	NA	Free	Prot	NA	Free	pm+pt	NA	Free	pm+pt	NA
Protected Phases	7	4		3	8		5	2		1	6
Permitted Phases			Free			Free	2		Free	6	
Detector Phase	7	4		3	8		5	2		1	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)	11.5	24.5		11.0	24.0		12.0	25.0		12.5	25.5
Total Split (s)	15.4	24.5		28.5	37.6		20.0	54.0		13.0	47.0
Total Split (%)	12.8%	20.4%		23.8%	31.3%		16.7%	45.0%		10.8%	39.2%
Yellow Time (s)	3.5	3.5		4.0	4.0		5.0	5.0		5.5	5.5
All-Red Time (s)	3.0	3.0		2.0	2.0		2.0	2.0		2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0
Total Lost Time (s)	6.5	6.5		6.0	6.0		7.0	7.0		7.5	7.5
Lead/Lag	Lead	Lag		Lead	Lag		Lag	Lead		Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes
Recall Mode	None	None		None	None		C-Max	Max		C-Max	Max
Act Effct Green (s)	7.3	13.4	120.0	22.5	31.0	120.0	64.6	51.6	120.0	49.6	44.1
Actuated g/C Ratio	0.06	0.11	1.00	0.19	0.26	1.00	0.54	0.43	1.00	0.41	0.37
v/c Ratio	0.27	0.62	0.41	1.18	0.32	0.00	1.26	0.55	0.46	0.05	1.18
Control Delay	56.7	63.6	0.8	125.7	23.9	0.0	173.7	27.4	1.0	6.5	103.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.7	63.6	0.8	125.7	23.9	0.0	173.7	27.4	1.0	6.5	103.9
LOS	E	E	A	F	C	A	F	C	A	A	F
Approach Delay		14.2			112.7			55.6			103.4
Approach LOS		B			F			E			F

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 110 (92%), Referenced to phase 1:SBL and 5:NBL, Start of Green	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.26	
Intersection Signal Delay: 76.8	Intersection LOS: E
Intersection Capacity Utilization 97.9%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 5: US-24 & Newt Dr/SH-94





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	115	580	995	140	5	560	1085	650	10	1945	75
Future Volume (veh/h)	50	115	580	995	140	5	560	1085	650	10	1945	75
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	1826	1826	1826	1841	1841	1841	1752	1752	1752	1811	1811	1811
Adj Flow Rate, veh/h	54	125	0	1082	152	0	577	1119	0	10	2026	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.97	0.97	0.97	0.96	0.96	0.96
Percent Heavy Veh, %	5	5	5	4	4	4	10	10	10	6	6	6
Cap, veh/h	117	158		927	433		471	2157		254	1921	
Arrive On Green	0.03	0.09	0.00	0.19	0.23	0.00	0.11	0.45	0.00	0.05	0.39	0.00
Sat Flow, veh/h	3374	1826	1547	4944	1841	1560	3237	4782	1485	1725	5107	0
Grp Volume(v), veh/h	54	125	0	1082	152	0	577	1119	0	10	2026	0
Grp Sat Flow(s),veh/h/ln	1687	1826	1547	1648	1841	1560	1618	1594	1485	1725	1648	0
Q Serve(g_s), s	1.9	8.1	0.0	22.5	8.3	0.0	13.0	20.1	0.0	0.0	46.6	0.0
Cycle Q Clear(g_c), s	1.9	8.1	0.0	22.5	8.3	0.0	13.0	20.1	0.0	0.0	46.6	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	117	158		927	433		471	2157		254	1921	
V/C Ratio(X)	0.46	0.79		1.17	0.35		1.23	0.52		0.04	1.05	
Avail Cap(c_a), veh/h	250	274		927	485		471	2157		254	1921	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	56.8	53.8	0.0	48.8	38.3	0.0	51.8	23.6	0.0	32.6	36.7	0.0
Incr Delay (d2), s/veh	2.8	8.6	0.0	87.0	0.5	0.0	119.4	0.9	0.0	0.1	36.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	4.1	0.0	16.7	3.8	0.0	14.5	7.7	0.0	0.2	24.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.6	62.3	0.0	135.8	38.8	0.0	171.2	24.5	0.0	32.6	73.4	0.0
LnGrp LOS	E	E		F	D		F	C		C	F	
Approach Vol, veh/h		179	A		1234	A		1696	A		2036	A
Approach Delay, s/veh		61.5			123.8			74.4			73.2	
Approach LOS		E			F			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.5	61.1	28.5	16.9	20.5	54.1	10.7	34.7
Change Period (Y+Rc), s	7.5	7.0	6.0	6.5	7.5	* 7.5	6.5	* 6.5
Max Green Setting (Gmax), s	5.5	47.0	22.5	18.0	13.0	* 40	8.9	* 32
Max Q Clear Time (g_c+I1), s	2.0	22.1	24.5	10.1	15.0	48.6	3.9	10.3
Green Ext Time (p_c), s	0.0	9.1	0.0	0.3	0.0	0.0	0.0	0.8

Intersection Summary	
HCM 6th Ctrl Delay	85.3
HCM 6th LOS	F

Notes

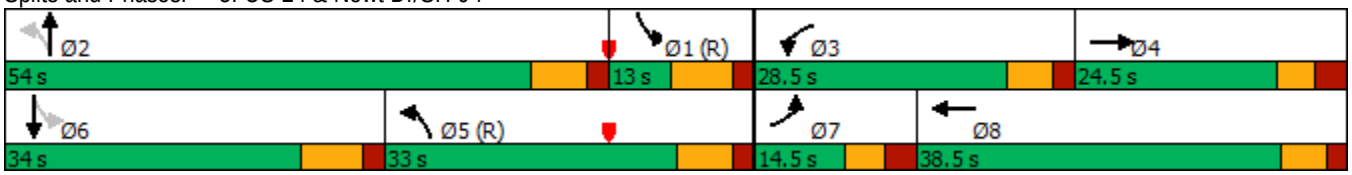
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

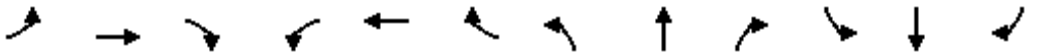
Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	70	155	735	820	145	10	695	2025	775	5	960
Future Volume (vph)	70	155	735	820	145	10	695	2025	775	5	960
Turn Type	Prot	NA	Free	Prot	NA	Free	pm+pt	NA	Free	pm+pt	NA
Protected Phases	7	4		3	8		5	2		1	6
Permitted Phases			Free			Free	2		Free	6	
Detector Phase	7	4		3	8		5	2		1	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)	11.5	24.5		11.0	24.0		12.0	25.0		12.5	25.5
Total Split (s)	14.5	24.5		28.5	38.5		33.0	54.0		13.0	34.0
Total Split (%)	12.1%	20.4%		23.8%	32.1%		27.5%	45.0%		10.8%	28.3%
Yellow Time (s)	3.5	3.5		4.0	4.0		5.0	5.0		5.5	5.5
All-Red Time (s)	3.0	3.0		2.0	2.0		2.0	2.0		2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0
Total Lost Time (s)	6.5	6.5		6.0	6.0		7.0	7.0		7.5	7.5
Lead/Lag	Lead	Lag		Lead	Lag		Lag	Lead		Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes
Recall Mode	None	None		None	None		C-Max	Max		C-Max	Max
Act Effct Green (s)	7.4	15.2	120.0	22.5	32.8	120.0	62.8	49.8	120.0	34.8	29.3
Actuated g/C Ratio	0.06	0.13	1.00	0.19	0.27	1.00	0.52	0.42	1.00	0.29	0.24
v/c Ratio	0.36	0.71	0.50	0.96	0.31	0.01	0.84	1.01	0.51	0.04	0.94
Control Delay	58.6	66.9	1.2	53.8	15.4	0.0	50.1	57.4	1.2	15.2	49.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	58.6	66.9	1.2	53.8	15.4	0.0	50.1	57.4	1.2	15.2	49.5
LOS	E	E	A	D	B	A	D	E	A	B	D
Approach Delay		15.9			47.5			43.5			49.3
Approach LOS		B			D			D			D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 110 (92%), Referenced to phase 1:SBL and 5:NBL, Start of Green	
Natural Cycle: 120	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.01	
Intersection Signal Delay: 40.9	Intersection LOS: D
Intersection Capacity Utilization 89.5%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 5: US-24 & Newt Dr/SH-94





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	155	735	820	145	10	695	2025	775	5	960	80
Future Volume (veh/h)	70	155	735	820	145	10	695	2025	775	5	960	80
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	1856	1856	1856	1856	1856	1856	1826	1826	1826
Adj Flow Rate, veh/h	76	168	0	891	158	0	724	2109	0	5	1043	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.96	0.96	0.96	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	3	3	3	3	3	3	5	5	5
Cap, veh/h	133	201		934	469		819	2398		71	1508	
Arrive On Green	0.04	0.11	0.00	0.19	0.25	0.00	0.17	0.47	0.00	0.01	0.30	0.00
Sat Flow, veh/h	3456	1870	1585	4983	1856	1572	3428	5066	1572	1739	5149	0
Grp Volume(v), veh/h	76	168	0	891	158	0	724	2109	0	5	1043	0
Grp Sat Flow(s),veh/h/ln	1728	1870	1585	1661	1856	1572	1714	1689	1572	1739	1662	0
Q Serve(g_s), s	2.6	10.6	0.0	21.2	8.3	0.0	16.6	45.1	0.0	0.0	22.1	0.0
Cycle Q Clear(g_c), s	2.6	10.6	0.0	21.2	8.3	0.0	16.6	45.1	0.0	0.0	22.1	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	133	201		934	469		819	2398		71	1508	
V/C Ratio(X)	0.57	0.83		0.95	0.34		0.88	0.88		0.07	0.69	
Avail Cap(c_a), veh/h	230	281		934	503		968	2398		140	1508	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	56.7	52.5	0.0	48.2	36.6	0.0	44.4	28.5	0.0	59.2	36.9	0.0
Incr Delay (d2), s/veh	3.9	14.0	0.0	19.1	0.4	0.0	8.7	5.0	0.0	0.4	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	1.2	5.7	0.0	10.4	3.9	0.0	11.3	18.8	0.0	0.2	9.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.6	66.5	0.0	67.4	37.1	0.0	53.1	33.5	0.0	59.6	39.5	0.0
LnGrp LOS	E	E		E	D		D	C		E	D	
Approach Vol, veh/h		244	A		1049	A		2833	A		1048	A
Approach Delay, s/veh		64.7			62.8			38.5			39.6	
Approach LOS		E			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.3	63.8	28.5	19.4	28.3	43.8	11.1	36.8
Change Period (Y+Rc), s	7.5	7.0	6.0	6.5	7.5	* 7.5	6.5	* 6.5
Max Green Setting (Gmax), s	5.5	47.0	22.5	18.0	26.0	* 27	8.0	* 33
Max Q Clear Time (g_c+I1), s	2.0	47.1	23.2	12.6	18.6	24.1	4.6	10.3
Green Ext Time (p_c), s	0.0	0.0	0.0	0.4	1.8	1.5	0.0	0.8

Intersection Summary	
HCM 6th Ctrl Delay	44.9
HCM 6th LOS	D

Notes

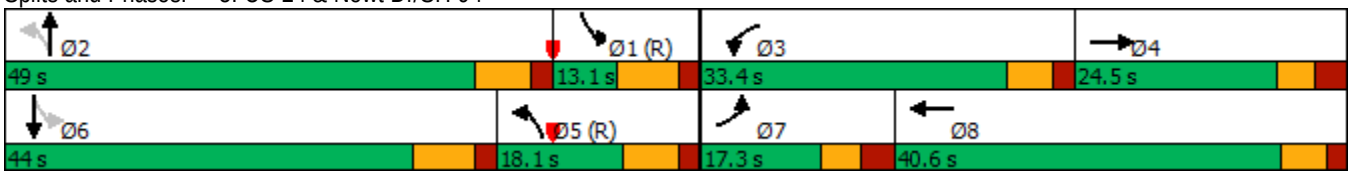
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

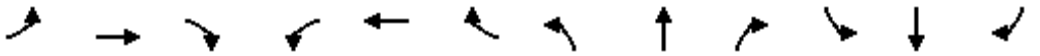
Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	50	115	580	1220	140	5	560	1085	835	10	1945
Future Volume (vph)	50	115	580	1220	140	5	560	1085	835	10	1945
Turn Type	Prot	NA	Free	Prot	NA	Free	pm+pt	NA	Free	pm+pt	NA
Protected Phases	7	4		3	8		5	2		1	6
Permitted Phases			Free			Free	2		Free	6	
Detector Phase	7	4		3	8		5	2		1	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)	11.5	24.5		11.0	24.0		12.0	25.0		12.5	25.5
Total Split (s)	17.3	24.5		33.4	40.6		18.1	49.0		13.1	44.0
Total Split (%)	14.4%	20.4%		27.8%	33.8%		15.1%	40.8%		10.9%	36.7%
Yellow Time (s)	3.5	3.5		4.0	4.0		5.0	5.0		5.5	5.5
All-Red Time (s)	3.0	3.0		2.0	2.0		2.0	2.0		2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0
Total Lost Time (s)	6.5	6.5		6.0	6.0		7.0	7.0		7.5	7.5
Lead/Lag	Lead	Lag		Lead	Lag		Lag	Lead		Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes
Recall Mode	None	None		None	None		C-Max	Max		C-Max	Max
Act Effct Green (s)	7.3	13.4	120.0	27.4	35.9	120.0	57.7	46.6	120.0	46.7	41.1
Actuated g/C Ratio	0.06	0.11	1.00	0.23	0.30	1.00	0.48	0.39	1.00	0.39	0.34
v/c Ratio	0.27	0.62	0.41	1.19	0.28	0.00	1.42	0.61	0.59	0.06	1.26
Control Delay	56.5	63.6	0.8	123.5	19.4	0.0	239.3	31.8	1.7	8.3	143.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.5	63.6	0.8	123.5	19.4	0.0	239.3	31.8	1.7	8.3	143.2
LOS	E	E	A	F	B	A	F	C	A	A	F
Approach Delay		14.2			112.4			68.5			142.6
Approach LOS		B			F			E			F

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 110 (92%), Referenced to phase 1:SBL and 5:NBL, Start of Green	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.42	
Intersection Signal Delay: 94.0	Intersection LOS: F
Intersection Capacity Utilization 102.2%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 5: US-24 & Newt Dr/SH-94





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	115	580	1220	140	5	560	1085	835	10	1945	75
Future Volume (veh/h)	50	115	580	1220	140	5	560	1085	835	10	1945	75
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	1826	1826	1826	1841	1841	1841	1752	1752	1752	1811	1811	1811
Adj Flow Rate, veh/h	54	125	0	1326	152	0	577	1119	0	10	2026	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.97	0.97	0.97	0.96	0.96	0.96
Percent Heavy Veh, %	5	5	5	4	4	4	10	10	10	6	6	6
Cap, veh/h	117	158		1129	508		419	1958		237	1798	
Arrive On Green	0.03	0.09	0.00	0.23	0.28	0.00	0.09	0.41	0.00	0.05	0.36	0.00
Sat Flow, veh/h	3374	1826	1547	4944	1841	1560	3237	4782	1485	1725	5107	0
Grp Volume(v), veh/h	54	125	0	1326	152	0	577	1119	0	10	2026	0
Grp Sat Flow(s),veh/h/ln	1687	1826	1547	1648	1841	1560	1618	1594	1485	1725	1648	0
Q Serve(g_s), s	1.9	8.1	0.0	27.4	7.8	0.0	11.1	21.6	0.0	0.0	43.6	0.0
Cycle Q Clear(g_c), s	1.9	8.1	0.0	27.4	7.8	0.0	11.1	21.6	0.0	0.0	43.6	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	117	158		1129	508		419	1958		237	1798	
V/C Ratio(X)	0.46	0.79		1.17	0.30		1.38	0.57		0.04	1.13	
Avail Cap(c_a), veh/h	304	274		1129	531		419	1958		237	1798	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	56.8	53.8	0.0	46.3	34.3	0.0	52.9	27.3	0.0	35.9	38.2	0.0
Incr Delay (d2), s/veh	2.8	8.6	0.0	88.2	0.3	0.0	183.6	1.2	0.0	0.1	65.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	4.1	0.0	20.3	3.6	0.0	16.7	8.4	0.0	0.2	28.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.6	62.3	0.0	134.5	34.6	0.0	236.4	28.5	0.0	36.0	103.2	0.0
LnGrp LOS	E	E		F	C		F	C		D	F	
Approach Vol, veh/h		179	A		1478	A		1696	A		2036	A
Approach Delay, s/veh		61.5			124.2			99.3			102.9	
Approach LOS		E			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.6	56.1	33.4	16.9	18.6	51.1	10.7	39.6
Change Period (Y+Rc), s	7.5	7.0	6.0	6.5	7.5	* 7.5	6.5	* 6.5
Max Green Setting (Gmax), s	5.6	42.0	27.4	18.0	11.1	* 37	10.8	* 35
Max Q Clear Time (g_c+I1), s	2.0	23.6	29.4	10.1	13.1	45.6	3.9	9.8
Green Ext Time (p_c), s	0.0	7.9	0.0	0.3	0.0	0.0	0.1	0.8

Intersection Summary	
HCM 6th Ctrl Delay	106.2
HCM 6th LOS	F

Notes

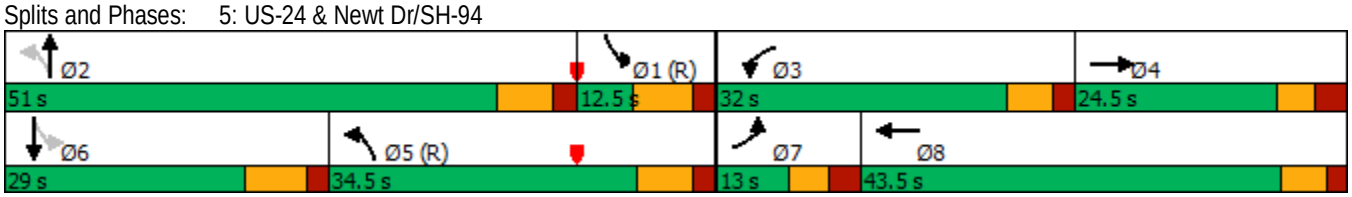
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

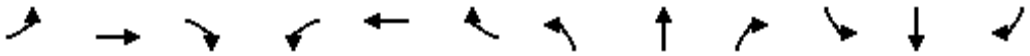
Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	70	155	735	1135	145	10	695	2025	1155	5	960
Future Volume (vph)	70	155	735	1135	145	10	695	2025	1155	5	960
Turn Type	Prot	NA	Free	Prot	NA	Free	pm+pt	NA	Free	pm+pt	NA
Protected Phases	7	4		3	8		5	2		1	6
Permitted Phases			Free			Free	2		Free	6	
Detector Phase	7	4		3	8		5	2		1	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)	11.5	24.5		11.0	24.0		12.0	25.0		12.5	25.5
Total Split (s)	13.0	24.5		32.0	43.5		34.5	51.0		12.5	29.0
Total Split (%)	10.8%	20.4%		26.7%	36.3%		28.8%	42.5%		10.4%	24.2%
Yellow Time (s)	3.5	3.5		4.0	4.0		5.0	5.0		5.5	5.5
All-Red Time (s)	3.0	3.0		2.0	2.0		2.0	2.0		2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0
Total Lost Time (s)	6.5	6.5		6.0	6.0		7.0	7.0		7.5	7.5
Lead/Lag	Lead	Lag		Lead	Lag		Lag	Lead		Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes
Recall Mode	None	None		None	None		C-Max	Max		C-Max	Max
Act Effct Green (s)	6.4	15.2	120.0	26.0	37.3	120.0	59.3	46.8	120.0	29.3	24.3
Actuated g/C Ratio	0.05	0.13	1.00	0.22	0.31	1.00	0.49	0.39	1.00	0.24	0.20
v/c Ratio	0.42	0.71	0.50	1.15	0.28	0.01	0.81	1.07	0.77	0.04	1.13
Control Delay	62.2	66.9	1.2	117.8	8.0	0.0	47.1	79.3	3.7	19.0	116.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	62.2	66.9	1.2	117.8	8.0	0.0	47.1	79.3	3.7	19.0	116.0
LOS	E	E	A	F	A	A	D	E	A	B	F
Approach Delay		16.2			104.5			51.0			115.5
Approach LOS		B			F			D			F

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 110 (92%), Referenced to phase 1:SBL and 5:NBL, Start of Green	
Natural Cycle: 140	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.15	
Intersection Signal Delay: 65.7	Intersection LOS: E
Intersection Capacity Utilization 95.5%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 5: US-24 & Newt Dr/SH-94





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	155	735	1135	145	10	695	2025	1155	5	960	80
Future Volume (veh/h)	70	155	735	1135	145	10	695	2025	1155	5	960	80
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	1856	1856	1856	1856	1856	1856	1826	1826	1826
Adj Flow Rate, veh/h	76	168	0	1234	158	0	724	2109	0	5	1043	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.96	0.96	0.96	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	3	3	3	3	3	3	5	5	5
Cap, veh/h	133	201		1080	523		816	2250		71	1280	
Arrive On Green	0.04	0.11	0.00	0.22	0.28	0.00	0.19	0.44	0.00	0.01	0.26	0.00
Sat Flow, veh/h	3456	1870	1585	4983	1856	1572	3428	5066	1572	1739	5149	0
Grp Volume(v), veh/h	76	168	0	1234	158	0	724	2109	0	5	1043	0
Grp Sat Flow(s),veh/h/ln	1728	1870	1585	1661	1856	1572	1714	1689	1572	1739	1662	0
Q Serve(g_s), s	2.6	10.6	0.0	26.0	8.0	0.0	18.7	47.6	0.0	0.0	23.6	0.0
Cycle Q Clear(g_c), s	2.6	10.6	0.0	26.0	8.0	0.0	18.7	47.6	0.0	0.0	23.6	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	133	201		1080	523		816	2250		71	1280	
V/C Ratio(X)	0.57	0.83		1.14	0.30		0.89	0.94		0.07	0.81	
Avail Cap(c_a), veh/h	187	281		1080	580		951	2250		132	1280	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	56.7	52.5	0.0	47.0	33.8	0.0	44.7	31.8	0.0	59.2	41.9	0.0
Incr Delay (d2), s/veh	3.9	14.0	0.0	75.6	0.3	0.0	9.2	9.0	0.0	0.4	5.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	5.7	0.0	18.2	3.7	0.0	11.4	20.7	0.0	0.2	10.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.6	66.5	0.0	122.6	34.1	0.0	53.9	40.8	0.0	59.6	47.7	0.0
LnGrp LOS	E	E		F	C		D	D		E	D	
Approach Vol, veh/h		244	A		1392	A		2833	A		1048	A
Approach Delay, s/veh		64.7			112.6			44.1			47.8	
Approach LOS		E			F			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.3	60.3	32.0	19.4	30.3	38.3	11.1	40.3
Change Period (Y+Rc), s	7.5	7.0	6.0	6.5	7.5	* 7.5	6.5	* 6.5
Max Green Setting (Gmax), s	5.0	44.0	26.0	18.0	27.5	* 22	6.5	* 38
Max Q Clear Time (g_c+I1), s	2.0	49.6	28.0	12.6	20.7	25.6	4.6	10.0
Green Ext Time (p_c), s	0.0	0.0	0.0	0.4	1.7	0.0	0.0	0.9

Intersection Summary	
HCM 6th Ctrl Delay	63.0
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

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

Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	805	35	0	1095	0	20
Future Vol, veh/h	805	35	0	1095	0	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	875	38	0	1190	0	22

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	875
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.318
Pot Cap-1 Maneuver	-	-	0	-	0	349
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	349
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	16
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	349	-	-	-
HCM Lane V/C Ratio	0.062	-	-	-
HCM Control Delay (s)	16	-	-	-
HCM Lane LOS	C	-	-	-
HCM 95th %tile Q(veh)	0.2	-	-	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1035	25	0	1115	0	25
Future Vol, veh/h	1035	25	0	1115	0	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1125	27	0	1212	0	27

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	1125
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.318
Pot Cap-1 Maneuver	-	-	0	-	0	250
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	250
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	21.1
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	250	-	-	-
HCM Lane V/C Ratio	0.109	-	-	-
HCM Control Delay (s)	21.1	-	-	-
HCM Lane LOS	C	-	-	-
HCM 95th %tile Q(veh)	0.4	-	-	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	805	35	0	1095	0	20
Future Vol, veh/h	805	35	0	1095	0	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	875	38	0	1190	0	22

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	875
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.319
Pot Cap-1 Maneuver	-	-	0	-	0	348
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	348
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	16
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	348	-	-	-
HCM Lane V/C Ratio	0.062	-	-	-
HCM Control Delay (s)	16	-	-	-
HCM Lane LOS	C	-	-	-
HCM 95th %tile Q(veh)	0.2	-	-	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1035	25	0	1115	0	25
Future Vol, veh/h	1035	25	0	1115	0	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1125	27	0	1212	0	27

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	1125
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.319
Pot Cap-1 Maneuver	-	-	0	-	0	249
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	249
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	21.2
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	249	-	-	-
HCM Lane V/C Ratio	0.109	-	-	-
HCM Control Delay (s)	21.2	-	-	-
HCM Lane LOS	C	-	-	-
HCM 95th %tile Q(veh)	0.4	-	-	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↱		↑↑↑		↱
Traffic Vol, veh/h	940	35	0	1365	0	20
Future Vol, veh/h	940	35	0	1365	0	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1022	38	0	1484	0	22

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	1022
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.319
Pot Cap-1 Maneuver	-	-	0	-	0	286
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	286
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	18.6
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	286	-	-	-
HCM Lane V/C Ratio	0.076	-	-	-
HCM Control Delay (s)	18.6	-	-	-
HCM Lane LOS	C	-	-	-
HCM 95th %tile Q(veh)	0.2	-	-	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↱		↑↑↑		↱
Traffic Vol, veh/h	1285	25	0	1290	0	25
Future Vol, veh/h	1285	25	0	1290	0	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1397	27	0	1402	0	27

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	1397
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.319
Pot Cap-1 Maneuver	-	-	0	-	0	172
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	172
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	29.8
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	172	-	-	-
HCM Lane V/C Ratio	0.158	-	-	-
HCM Control Delay (s)	29.8	-	-	-
HCM Lane LOS	D	-	-	-
HCM 95th %tile Q(veh)	0.5	-	-	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	20	0	0	30	0	925	40	0	1065	25
Future Vol, veh/h	0	0	20	0	0	30	0	925	40	0	1065	25
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	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	22	0	0	33	0	1005	43	0	1158	27

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	593	-	-	524	-	0	0	-	-	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.94	-	-	6.94	-	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.32	-	-	3.32	-	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	*633	0	0	498	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	-	-	*633	-	-	498	-	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.9	12.7	0	0
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	SBT	SBR
Capacity (veh/h)	-	-	633	498	-	-
HCM Lane V/C Ratio	-	-	0.034	0.065	-	-
HCM Control Delay (s)	-	-	10.9	12.7	-	-
HCM Lane LOS	-	-	B	B	-	-
HCM 95th %tile Q(veh)	-	-	0.1	0.2	-	-

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

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	25	0	0	130	0	1695	110	0	1660	20
Future Vol, veh/h	0	0	25	0	0	130	0	1695	110	0	1660	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	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	27	0	0	141	0	1842	120	0	1804	22

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	913	-	-	981	-	0	0	-	-	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.94	-	-	6.94	-	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.32	-	-	3.32	-	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	*372	0	0	249	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	-	-	*372	-	-	249	-	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	15.4	36.9	0	0
HCM LOS	C	E		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	SBT	SBR
Capacity (veh/h)	-	-	372	249	-	-
HCM Lane V/C Ratio	-	-	0.073	0.567	-	-
HCM Control Delay (s)	-	-	15.4	36.9	-	-
HCM Lane LOS	-	-	C	E	-	-
HCM 95th %tile Q(veh)	-	-	0.2	3.2	-	-

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

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	20	0	0	30	0	1385	40	0	1315	25
Future Vol, veh/h	0	0	20	0	0	30	0	1385	40	0	1315	25
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	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	22	0	0	33	0	1505	43	0	1429	27

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	728	-	-	774	-	0	0	-	-	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.94	-	-	6.94	-	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.32	-	-	3.32	-	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	*528	0	0	*502	0	-	-	0	-	-
Stage 1	0	0	-	0	0	-	0	-	-	0	-	-
Stage 2	0	0	-	0	0	-	0	-	-	0	-	-
Platoon blocked, %			1			1		-	-		-	-
Mov Cap-1 Maneuver	-	-	*528	-	-	*502	-	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.1	12.7	0	0
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	SBT	SBR
Capacity (veh/h)	-	-	528	502	-	-
HCM Lane V/C Ratio	-	-	0.041	0.065	-	-
HCM Control Delay (s)	-	-	12.1	12.7	-	-
HCM Lane LOS	-	-	B	B	-	-
HCM 95th %tile Q(veh)	-	-	0.1	0.2	-	-

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

Intersection	
Int Delay, s/veh	2.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	25	0	0	130	0	2130	110	0	2225	20
Future Vol, veh/h	0	0	25	0	0	130	0	2130	110	0	2225	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	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	27	0	0	141	0	2315	120	0	2418	22

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	1220	-	-	1218	-	0	0	-	-	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.94	-	-	6.94	-	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.32	-	-	3.32	-	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	*138	0	0	*164	0	-	-	0	-	-
Stage 1	0	0	-	0	0	-	0	-	-	0	-	-
Stage 2	0	0	-	0	0	-	0	-	-	0	-	-
Platoon blocked, %			1			1		-	-		-	-
Mov Cap-1 Maneuver	-	-	*138	-	-	*164	-	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	37.4	93.2	0	0
HCM LOS	E	F		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	SBT	SBR
Capacity (veh/h)	-	-	138	164	-	-
HCM Lane V/C Ratio	-	-	0.197	0.862	-	-
HCM Control Delay (s)	-	-	37.4	93.2	-	-
HCM Lane LOS	-	-	E	F	-	-
HCM 95th %tile Q(veh)	-	-	0.7	6	-	-

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

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	20	0	0	30	0	1385	40	0	1315	25
Future Vol, veh/h	0	0	20	0	0	30	0	1385	40	0	1315	25
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	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	22	0	0	33	0	1505	43	0	1429	27

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	728	-	-	774	-	0	0	-	-	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	7.14	-	-	7.14	-	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.92	-	-	3.92	-	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	*602	0	0	*602	0	-	-	0	-	-
Stage 1	0	0	-	0	0	-	0	-	-	0	-	-
Stage 2	0	0	-	0	0	-	0	-	-	0	-	-
Platoon blocked, %			1			1		-	-		-	-
Mov Cap-1 Maneuver	-	-	*602	-	-	*602	-	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.2	11.3	0	0
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	SBT	SBR
Capacity (veh/h)	-	-	602	602	-	-
HCM Lane V/C Ratio	-	-	0.036	0.054	-	-
HCM Control Delay (s)	-	-	11.2	11.3	-	-
HCM Lane LOS	-	-	B	B	-	-
HCM 95th %tile Q(veh)	-	-	0.1	0.2	-	-

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

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	25	0	0	130	0	2130	110	0	2225	20
Future Vol, veh/h	0	0	25	0	0	130	0	2130	110	0	2225	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	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	27	0	0	141	0	2315	120	0	2418	22

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	1220	-	-	1218	-	0	0	-	-	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	7.14	-	-	7.14	-	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.92	-	-	3.92	-	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	*381	0	0	*403	0	-	-	0	-	-
Stage 1	0	0	-	0	0	-	0	-	-	0	-	-
Stage 2	0	0	-	0	0	-	0	-	-	0	-	-
Platoon blocked, %			1			1		-	-		-	-
Mov Cap-1 Maneuver	-	-	*381	-	-	*403	-	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	15.2	18.7	0	0
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	SBT	SBR
Capacity (veh/h)	-	-	381	403	-	-
HCM Lane V/C Ratio	-	-	0.071	0.351	-	-
HCM Control Delay (s)	-	-	15.2	18.7	-	-
HCM Lane LOS	-	-	C	C	-	-
HCM 95th %tile Q(veh)	-	-	0.2	1.5	-	-

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

Intersection	
Intersection Delay, s/veh	4.1
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	240	173	54	33
Demand Flow Rate, veh/h	245	176	55	34
Vehicles Circulating, veh/h	5	105	211	215
Vehicles Exiting, veh/h	244	161	39	66
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	4.1	4.2	3.7	3.6
Approach LOS	A	A	A	A

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	245	176	55	34
Cap Entry Lane, veh/h	1373	1240	1113	1108
Entry HV Adj Factor	0.980	0.982	0.982	0.971
Flow Entry, veh/h	240	173	54	33
Cap Entry, veh/h	1345	1217	1092	1076
V/C Ratio	0.178	0.142	0.049	0.031
Control Delay, s/veh	4.1	4.2	3.7	3.6
LOS	A	A	A	A
95th %tile Queue, veh	1	0	0	0

Intersection	
Intersection Delay, s/veh	5.0
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	402	190	65	141
Demand Flow Rate, veh/h	410	193	66	144
Vehicles Circulating, veh/h	16	221	349	232
Vehicles Exiting, veh/h	360	194	77	182
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	5.4	4.9	4.4	4.6
Approach LOS	A	A	A	A

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	410	193	66	144
Cap Entry Lane, veh/h	1358	1101	967	1089
Entry HV Adj Factor	0.981	0.984	0.985	0.979
Flow Entry, veh/h	402	190	65	141
Cap Entry, veh/h	1332	1083	952	1066
V/C Ratio	0.302	0.175	0.068	0.132
Control Delay, s/veh	5.4	4.9	4.4	4.6
LOS	A	A	A	A
95th %tile Queue, veh	1	1	0	0

Intersection	
Intersection Delay, s/veh	4.6
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	299	233	98	33
Demand Flow Rate, veh/h	305	237	100	34
Vehicles Circulating, veh/h	11	139	261	310
Vehicles Exiting, veh/h	333	222	55	66
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	4.6	4.8	4.3	4.0
Approach LOS	A	A	A	A

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	305	237	100	34
Cap Entry Lane, veh/h	1364	1197	1057	1006
Entry HV Adj Factor	0.981	0.982	0.980	0.971
Flow Entry, veh/h	299	233	98	33
Cap Entry, veh/h	1338	1176	1036	976
V/C Ratio	0.224	0.198	0.095	0.034
Control Delay, s/veh	4.6	4.8	4.3	4.0
LOS	A	A	A	A
95th %tile Queue, veh	1	1	0	0

Intersection	
Intersection Delay, s/veh	5.9
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	511	255	92	141
Demand Flow Rate, veh/h	521	260	94	144
Vehicles Circulating, veh/h	28	244	421	322
Vehicles Exiting, veh/h	438	271	128	182
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	6.4	5.7	5.1	5.1
Approach LOS	A	A	A	A

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	521	260	94	144
Cap Entry Lane, veh/h	1341	1076	898	994
Entry HV Adj Factor	0.981	0.980	0.979	0.979
Flow Entry, veh/h	511	255	92	141
Cap Entry, veh/h	1315	1054	879	973
V/C Ratio	0.389	0.242	0.105	0.145
Control Delay, s/veh	6.4	5.7	5.1	5.1
LOS	A	A	A	A
95th %tile Queue, veh	2	1	0	1

Intersection	
Intersection Delay, s/veh	3.6
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	153	76	27	125
Demand Flow Rate, veh/h	156	77	27	128
Vehicles Circulating, veh/h	33	50	173	82
Vehicles Exiting, veh/h	177	150	16	45
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	3.7	3.3	3.3	3.7
Approach LOS	A	A	A	A

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	156	77	27	128
Cap Entry Lane, veh/h	1334	1311	1157	1269
Entry HV Adj Factor	0.980	0.984	1.000	0.977
Flow Entry, veh/h	153	76	27	125
Cap Entry, veh/h	1307	1291	1157	1239
V/C Ratio	0.117	0.059	0.023	0.101
Control Delay, s/veh	3.7	3.3	3.3	3.7
LOS	A	A	A	A
95th %tile Queue, veh	0	0	0	0

Intersection	
Intersection Delay, s/veh	3.9
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	196	157	33	49
Demand Flow Rate, veh/h	200	160	33	50
Vehicles Circulating, veh/h	27	83	183	165
Vehicles Exiting, veh/h	188	133	44	77
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	4.0	3.9	3.4	3.5
Approach LOS	A	A	A	A

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	200	160	33	50
Cap Entry Lane, veh/h	1342	1268	1145	1166
Entry HV Adj Factor	0.979	0.984	1.000	0.980
Flow Entry, veh/h	196	157	33	49
Cap Entry, veh/h	1314	1248	1145	1143
V/C Ratio	0.149	0.126	0.029	0.043
Control Delay, s/veh	4.0	3.9	3.4	3.5
LOS	A	A	A	A
95th %tile Queue, veh	1	0	0	0

Intersection	
Intersection Delay, s/veh	3.9
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	207	82	55	125
Demand Flow Rate, veh/h	211	83	56	128
Vehicles Circulating, veh/h	39	68	223	106
Vehicles Exiting, veh/h	195	211	27	45
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	4.1	3.4	3.8	3.8
Approach LOS	A	A	A	A

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	211	83	56	128
Cap Entry Lane, veh/h	1326	1287	1099	1238
Entry HV Adj Factor	0.980	0.986	0.982	0.977
Flow Entry, veh/h	207	82	55	125
Cap Entry, veh/h	1300	1269	1080	1209
V/C Ratio	0.159	0.064	0.051	0.103
Control Delay, s/veh	4.1	3.4	3.8	3.8
LOS	A	A	A	A
95th %tile Queue, veh	1	0	0	0

Intersection	
Intersection Delay, s/veh	4.4
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	282	222	49	49
Demand Flow Rate, veh/h	288	227	50	50
Vehicles Circulating, veh/h	39	95	255	245
Vehicles Exiting, veh/h	256	210	72	77
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	4.6	4.5	3.9	3.8
Approach LOS	A	A	A	A

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	288	227	50	50
Cap Entry Lane, veh/h	1326	1252	1064	1075
Entry HV Adj Factor	0.981	0.980	0.980	0.980
Flow Entry, veh/h	282	222	49	49
Cap Entry, veh/h	1300	1227	1043	1053
V/C Ratio	0.217	0.181	0.047	0.047
Control Delay, s/veh	4.6	4.5	3.9	3.8
LOS	A	A	A	A
95th %tile Queue, veh	1	1	0	0

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	45	1380	5	0	1505
Future Vol, veh/h	0	45	1380	5	0	1505
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, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	49	1500	5	0	1636

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	753	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	352	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	352	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	16.9	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	352	-
HCM Lane V/C Ratio	-	-	0.139	-
HCM Control Delay (s)	-	-	16.9	-
HCM Lane LOS	-	-	C	-
HCM 95th %tile Q(veh)	-	-	0.5	-

Intersection	
Int Delay, s/veh	0.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	60	1995	15	0	1745
Future Vol, veh/h	0	60	1995	15	0	1745
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, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	65	2168	16	0	1897

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	1092	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	210	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	210	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	29.7	0	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	210	-
HCM Lane V/C Ratio	-	-	0.311	-
HCM Control Delay (s)	-	-	29.7	-
HCM Lane LOS	-	-	D	-
HCM 95th %tile Q(veh)	-	-	1.3	-

Intersection	
Int Delay, s/veh	0.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	85	1960	10	0	1845
Future Vol, veh/h	0	85	1960	10	0	1845
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, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	92	2130	11	0	2005

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	1071	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	*242	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		1	-	-		-
Mov Cap-1 Maneuver	-	*242	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	28.8	0	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	242	-
HCM Lane V/C Ratio	-	-	0.382	-
HCM Control Delay (s)	-	-	28.8	-
HCM Lane LOS	-	-	D	-
HCM 95th %tile Q(veh)	-	-	1.7	-

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

Intersection	
Int Delay, s/veh	111.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	85	2490	25	0	2365
Future Vol, veh/h	0	85	2490	25	0	2365
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, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	92	2707	27	0	2571

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	1367	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	*~ 7	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		1	-	-		-
Mov Cap-1 Maneuver	-	*~ 7	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay,$	6517.9	0	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	7	-
HCM Lane V/C Ratio	-	-	13.199	-
HCM Control Delay (s)	-	-	$ 6517.9	-
HCM Lane LOS	-	-	F	-
HCM 95th %tile Q(veh)	-	-	13.3	-

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

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	85	1960	10	0	1845
Future Vol, veh/h	0	85	1960	10	0	1845
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, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	92	2130	11	0	2005

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	1071	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	*447	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		1	-	-		-
Mov Cap-1 Maneuver	-	*447	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15.1	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	447	-
HCM Lane V/C Ratio	-	-	0.207	-
HCM Control Delay (s)	-	-	15.1	-
HCM Lane LOS	-	-	C	-
HCM 95th %tile Q(veh)	-	-	0.8	-

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

Intersection	
Int Delay, s/veh	0.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	85	2490	25	0	2365
Future Vol, veh/h	0	85	2490	25	0	2365
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, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	92	2707	27	0	2571

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	1367	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	*315	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		1	-	-		-
Mov Cap-1 Maneuver	-	*315	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	21.1	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	315	-
HCM Lane V/C Ratio	-	-	0.293	-
HCM Control Delay (s)	-	-	21.1	-
HCM Lane LOS	-	-	C	-
HCM 95th %tile Q(veh)	-	-	1.2	-

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

Intersection	
Int Delay, s/veh	0.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	75	1310	15	90	1420
Future Vol, veh/h	0	75	1310	15	90	1420
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	-	-	150	-
Veh in Median Storage, #	2	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	82	1424	16	98	1543

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	720	0	0	1440	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	4.14	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	0	370	-	-	467	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	370	-	-	467	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	17.5	0	0.9
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	370	467	-
HCM Lane V/C Ratio	-	-	0.22	0.209	-
HCM Control Delay (s)	-	-	17.5	14.7	-
HCM Lane LOS	-	-	C	B	-
HCM 95th %tile Q(veh)	-	-	0.8	0.8	-

Intersection	
Int Delay, s/veh	3.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	100	1910	20	185	1560
Future Vol, veh/h	0	100	1910	20	185	1560
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	-	-	150	-
Veh in Median Storage, #	2	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	109	2076	22	201	1696

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	1049	0	0	2098	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	4.14	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	0	224	-	-	259	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	224	-	-	259	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	35.3	0	5.8
HCM LOS	E		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	224	259	-
HCM Lane V/C Ratio	-	-	0.485	0.776	-
HCM Control Delay (s)	-	-	35.3	54.5	-
HCM Lane LOS	-	-	E	F	-
HCM 95th %tile Q(veh)	-	-	2.4	5.8	-

Intersection	
Int Delay, s/veh	1.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	135	1890	30	125	1760
Future Vol, veh/h	0	135	1890	30	125	1760
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	-	-	150	-
Veh in Median Storage, #	2	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	147	2054	33	136	1913

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	1044	0	0	2087	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	4.14	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	0	*268	-	-	*401	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %		1	-	-	1	-
Mov Cap-1 Maneuver	-	*268	-	-	*401	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	33.6	0	1.2
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	268	* 401	-
HCM Lane V/C Ratio	-	-	0.548	0.339	-
HCM Control Delay (s)	-	-	33.6	18.5	-
HCM Lane LOS	-	-	D	C	-
HCM 95th %tile Q(veh)	-	-	3	1.5	-

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

Intersection	
Int Delay, s/veh	36.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	140	2405	30	300	2180
Future Vol, veh/h	0	140	2405	30	300	2180
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	-	-	150	-
Veh in Median Storage, #	2	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	152	2614	33	326	2370

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	1324	0	0	2647	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	4.14	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	0	~ 146	-	-	~ 157	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	~ 146	-	-	~ 157	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	147.1	0	66.9
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	146	~ 157	-
HCM Lane V/C Ratio	-	-	1.042	2.077	-
HCM Control Delay (s)	-	-	147.1	$ 553.4	-
HCM Lane LOS	-	-	F	F	-
HCM 95th %tile Q(veh)	-	-	8	25.9	-

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

Intersection	
Int Delay, s/veh	1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	135	1890	30	125	1760
Future Vol, veh/h	0	135	1890	30	125	1760
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	-	-	150	-
Veh in Median Storage, #	2	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	147	2054	33	136	1913

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	1044	0	0	2087	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.14	-	-	5.34	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.92	-	-	3.12	-
Pot Cap-1 Maneuver	0	*469	-	-	*590	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %		1	-	-	1	-
Mov Cap-1 Maneuver	-	*469	-	-	*590	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	16.1	0	0.9
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	469	* 590	-
HCM Lane V/C Ratio	-	-	0.313	0.23	-
HCM Control Delay (s)	-	-	16.1	12.9	-
HCM Lane LOS	-	-	C	B	-
HCM 95th %tile Q(veh)	-	-	1.3	0.9	-

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

Intersection	
Int Delay, s/veh	137.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	140	2405	30	300	2180
Future Vol, veh/h	0	140	2405	30	300	2180
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	-	-	150	-
Veh in Median Storage, #	2	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	152	2614	33	326	2370

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	1324	0	0	2647	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.14	-	-	5.34	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.92	-	-	3.12	-
Pot Cap-1 Maneuver	0	~ 126	-	-	~ 58	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	~ 126	-	-	~ 58	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	213.4	0	268.5
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	126	~ 58	-
HCM Lane V/C Ratio	-	-	1.208	5.622	-
HCM Control Delay (s)	-	-	213.4	$ 2220	-
HCM Lane LOS	-	-	F	F	-
HCM 95th %tile Q(veh)	-	-	9.4	36.8	-

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

Intersection	
Int Delay, s/veh	0.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	95	1225	15	0	1420
Future Vol, veh/h	0	95	1225	15	0	1420
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	103	1332	16	0	1543

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	674	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	397	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	397	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	17.2	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	397	-
HCM Lane V/C Ratio	-	-	0.26	-
HCM Control Delay (s)	-	-	17.2	-
HCM Lane LOS	-	-	C	-
HCM 95th %tile Q(veh)	-	-	1	-

Intersection	
Int Delay, s/veh	1.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	125	1805	35	0	1560
Future Vol, veh/h	0	125	1805	35	0	1560
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	136	1962	38	0	1696

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	1000	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	241	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	241	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	37.6	0	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	241	-
HCM Lane V/C Ratio	-	-	0.564	-
HCM Control Delay (s)	-	-	37.6	-
HCM Lane LOS	-	-	E	-
HCM 95th %tile Q(veh)	-	-	3.1	-

Intersection	
Int Delay, s/veh	1.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	175	1805	25	0	1760
Future Vol, veh/h	0	175	1805	25	0	1760
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	190	1962	27	0	1913

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	995	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	*320	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		1	-	-		-
Mov Cap-1 Maneuver	-	*320	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	31.5	0	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	320	-
HCM Lane V/C Ratio	-	-	0.594	-
HCM Control Delay (s)	-	-	31.5	-
HCM Lane LOS	-	-	D	-
HCM 95th %tile Q(veh)	-	-	3.6	-

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

Intersection	
Int Delay, s/veh	15.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	175	2300	55	0	2180
Future Vol, veh/h	0	175	2300	55	0	2180
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	190	2500	60	0	2370

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	1280	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	*~ 112	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		1	-	-		-
Mov Cap-1 Maneuver	-	*~ 112	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	$ 416.2	0	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	112	-
HCM Lane V/C Ratio	-	-	1.698	-
HCM Control Delay (s)	-	-	$ 416.2	-
HCM Lane LOS	-	-	F	-
HCM 95th %tile Q(veh)	-	-	14.6	-

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

Intersection	
Int Delay, s/veh	0.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	175	1805	25	0	1760
Future Vol, veh/h	0	175	1805	25	0	1760
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	190	1962	27	0	1913

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	995	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	*492	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		1	-	-		-
Mov Cap-1 Maneuver	-	*492	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	16.9	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	492	-
HCM Lane V/C Ratio	-	-	0.387	-
HCM Control Delay (s)	-	-	16.9	-
HCM Lane LOS	-	-	C	-
HCM 95th %tile Q(veh)	-	-	1.8	-

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

Intersection	
Int Delay, s/veh	1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	175	2300	55	0	2180
Future Vol, veh/h	0	175	2300	55	0	2180
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	190	2500	60	0	2370

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	1280	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	*359	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		1	-	-		-
Mov Cap-1 Maneuver	-	*359	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	25.8	0	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	359	-
HCM Lane V/C Ratio	-	-	0.53	-
HCM Control Delay (s)	-	-	25.8	-
HCM Lane LOS	-	-	D	-
HCM 95th %tile Q(veh)	-	-	3	-

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

Intersection	
Int Delay, s/veh	2.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	70	70	1175	15	100	1320
Future Vol, veh/h	70	70	1175	15	100	1320
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	-	-	-	150	-
Veh in Median Storage, #	2	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	76	76	1277	16	109	1435

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2221	647	0	0	1293	0
Stage 1	1285	-	-	-	-	-
Stage 2	936	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	~ 37	414	-	-	532	-
Stage 1	223	-	-	-	-	-
Stage 2	342	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 29	414	-	-	532	-
Mov Cap-2 Maneuver	163	-	-	-	-	-
Stage 1	223	-	-	-	-	-
Stage 2	272	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	45.1	0	1
HCM LOS	E		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	234	532	-
HCM Lane V/C Ratio	-	-	0.65	0.204	-
HCM Control Delay (s)	-	-	45.1	13.5	-
HCM Lane LOS	-	-	E	B	-
HCM 95th %tile Q(veh)	-	-	4	0.8	-

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

Intersection	
Int Delay, s/veh	40.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	90	90	1750	35	205	1355
Future Vol, veh/h	90	90	1750	35	205	1355
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	-	-	-	150	-
Veh in Median Storage, #	2	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	98	98	1902	38	223	1473

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	3104	970	0	0	1940	0
Stage 1	1921	-	-	-	-	-
Stage 2	1183	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	~ 9	253	-	-	299	-
Stage 1	101	-	-	-	-	-
Stage 2	253	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 2	253	-	-	299	-
Mov Cap-2 Maneuver	~ 49	-	-	-	-	-
Stage 1	101	-	-	-	-	-
Stage 2	~ 64	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	$ 740.7	0	6
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	82	299	-
HCM Lane V/C Ratio	-	-	2.386	0.745	-
HCM Control Delay (s)	-	-	$ 740.7	45.3	-
HCM Lane LOS	-	-	F	E	-
HCM 95th %tile Q(veh)	-	-	18.2	5.5	-

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

Lane Group	WBL	NBT	SBL	SBT
Lane Configurations				
Traffic Volume (vph)	70	1175	100	1320
Future Volume (vph)	70	1175	100	1320
Turn Type	Prot	NA	Perm	NA
Protected Phases	8	2		6
Permitted Phases			6	
Detector Phase	8	2	6	6
Switch Phase				
Minimum Initial (s)	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5
Total Split (s)	26.0	94.0	94.0	94.0
Total Split (%)	21.7%	78.3%	78.3%	78.3%
Yellow Time (s)	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5
Lead/Lag				
Lead-Lag Optimize?				
Recall Mode	None	C-Max	C-Max	C-Max
Act Effct Green (s)	13.6	97.4	97.4	97.4
Actuated g/C Ratio	0.11	0.81	0.81	0.81
v/c Ratio	0.68	0.45	0.37	0.50
Control Delay	52.8	5.7	9.0	5.4
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	52.8	5.7	9.0	5.4
LOS	D	A	A	A
Approach Delay	52.8	5.7		5.7
Approach LOS	D	A		A

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.68	
Intersection Signal Delay: 8.1	Intersection LOS: A
Intersection Capacity Utilization 57.9%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 13: Marksheffel Rd & Full Access #1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	70	70	1175	15	100	1320
Future Volume (veh/h)	70	70	1175	15	100	1320
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1870	1870	1870	1870
Adj Flow Rate, veh/h	76	76	1277	16	109	1435
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	2	2	2	2
Cap, veh/h	90	90	2938	37	409	2905
Arrive On Green	0.11	0.11	1.00	1.00	1.00	1.00
Sat Flow, veh/h	834	834	3688	45	427	3647
Grp Volume(v), veh/h	153	0	631	662	109	1435
Grp Sat Flow(s),veh/h/ln	1679	0	1777	1862	427	1777
Q Serve(g_s), s	10.7	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	10.7	0.0	0.0	0.0	0.0	0.0
Prop In Lane	0.50	0.50		0.02	1.00	
Lane Grp Cap(c), veh/h	181	0	1452	1522	409	2905
V/C Ratio(X)	0.85	0.00	0.43	0.43	0.27	0.49
Avail Cap(c_a), veh/h	301	0	1452	1522	409	2905
HCM Platoon Ratio	1.00	1.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.6	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	10.9	0.0	0.9	0.9	1.6	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.1	0.0	0.4	0.4	0.2	0.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	63.5	0.0	0.9	0.9	1.6	0.6
LnGrp LOS	E	A	A	A	A	A
Approach Vol, veh/h	153		1293			1544
Approach Delay, s/veh	63.5		0.9			0.7
Approach LOS	E		A			A

Timer - Assigned Phs		2			6	8
Phs Duration (G+Y+Rc), s		102.6			102.6	17.4
Change Period (Y+Rc), s		4.5			4.5	4.5
Max Green Setting (Gmax), s		89.5			89.5	21.5
Max Q Clear Time (g_c+I1), s		2.0			2.0	12.7
Green Ext Time (p_c), s		13.2			23.3	0.3

Intersection Summary	
HCM 6th Ctrl Delay	4.0
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

Lane Group	WBL	NBT	SBL	SBT
Lane Configurations				
Traffic Volume (vph)	90	1750	205	1355
Future Volume (vph)	90	1750	205	1355
Turn Type	Prot	NA	Perm	NA
Protected Phases	8	2		6
Permitted Phases			6	
Detector Phase	8	2	6	6
Switch Phase				
Minimum Initial (s)	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5
Total Split (s)	32.0	88.0	88.0	88.0
Total Split (%)	26.7%	73.3%	73.3%	73.3%
Yellow Time (s)	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5
Lead/Lag				
Lead-Lag Optimize?				
Recall Mode	None	C-Max	C-Max	C-Max
Act Effct Green (s)	17.4	93.6	93.6	93.6
Actuated g/C Ratio	0.14	0.78	0.78	0.78
v/c Ratio	0.73	0.70	2.05	0.53
Control Delay	57.3	12.9	513.7	11.9
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	57.3	12.9	513.7	11.9
LOS	E	B	F	B
Approach Delay	57.3	12.9		77.9
Approach LOS	E	B		E

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 2.05	
Intersection Signal Delay: 43.9	Intersection LOS: D
Intersection Capacity Utilization 82.6%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 13: Marksheffel Rd & Full Access #1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	90	90	1750	35	205	1355
Future Volume (veh/h)	90	90	1750	35	205	1355
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1870	1870	1870	1870
Adj Flow Rate, veh/h	98	98	1902	38	223	1473
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	2	2	2	2
Cap, veh/h	113	113	2815	56	240	2807
Arrive On Green	0.14	0.14	1.00	1.00	1.00	1.00
Sat Flow, veh/h	835	835	3657	71	228	3647
Grp Volume(v), veh/h	197	0	945	995	223	1473
Grp Sat Flow(s),veh/h/ln	1678	0	1777	1858	228	1777
Q Serve(g_s), s	13.8	0.0	0.0	0.0	94.8	0.0
Cycle Q Clear(g_c), s	13.8	0.0	0.0	0.0	94.8	0.0
Prop In Lane	0.50	0.50		0.04	1.00	
Lane Grp Cap(c), veh/h	227	0	1403	1467	240	2807
V/C Ratio(X)	0.87	0.00	0.67	0.68	0.93	0.52
Avail Cap(c_a), veh/h	385	0	1403	1467	240	2807
HCM Platoon Ratio	1.00	1.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.8	0.0	0.0	0.0	9.1	0.0
Incr Delay (d2), s/veh	10.5	0.0	2.6	2.5	42.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.5	0.0	1.0	1.0	6.0	0.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	61.3	0.0	2.6	2.5	51.1	0.7
LnGrp LOS	E	A	A	A	D	A
Approach Vol, veh/h	197		1940			1696
Approach Delay, s/veh	61.3		2.6			7.3
Approach LOS	E		A			A

Timer - Assigned Phs		2			6	8
Phs Duration (G+Y+Rc), s		99.3			99.3	20.7
Change Period (Y+Rc), s		4.5			4.5	4.5
Max Green Setting (Gmax), s		83.5			83.5	27.5
Max Q Clear Time (g_c+I1), s		2.0			96.8	15.8
Green Ext Time (p_c), s		33.8			0.0	0.4

Intersection Summary	
HCM 6th Ctrl Delay	7.7
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

Lane Group	WBL	NBT	SBL	SBT
Lane Configurations				
Traffic Volume (vph)	125	1755	140	1660
Future Volume (vph)	125	1755	140	1660
Turn Type	Prot	NA	Perm	NA
Protected Phases	8	2		6
Permitted Phases			6	
Detector Phase	8	2	6	6
Switch Phase				
Minimum Initial (s)	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5
Total Split (s)	44.0	76.0	76.0	76.0
Total Split (%)	36.7%	63.3%	63.3%	63.3%
Yellow Time (s)	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5
Lead/Lag				
Lead-Lag Optimize?				
Recall Mode	None	C-Max	C-Max	C-Max
Act Effct Green (s)	23.9	87.1	87.1	87.1
Actuated g/C Ratio	0.20	0.73	0.73	0.73
v/c Ratio	0.78	0.75	1.83	0.70
Control Delay	58.1	14.3	420.0	20.6
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	58.1	14.3	420.0	20.6
LOS	E	B	F	C
Approach Delay	58.1	14.3		51.7
Approach LOS	E	B		D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green	
Natural Cycle: 140	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.83	
Intersection Signal Delay: 34.7	Intersection LOS: C
Intersection Capacity Utilization 82.9%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 13: Marksheffel Rd & Full Access #1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	125	125	1755	25	140	1660
Future Volume (veh/h)	125	125	1755	25	140	1660
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1870	1870	1870	1870
Adj Flow Rate, veh/h	136	136	1908	27	152	1804
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	2	2	2	2
Cap, veh/h	152	152	2665	38	230	2640
Arrive On Green	0.18	0.18	1.00	1.00	1.00	1.00
Sat Flow, veh/h	836	836	3681	51	229	3647
Grp Volume(v), veh/h	273	0	943	992	152	1804
Grp Sat Flow(s),veh/h/ln	1678	0	1777	1861	229	1777
Q Serve(g_s), s	19.1	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	19.1	0.0	0.0	0.0	0.0	0.0
Prop In Lane	0.50	0.50		0.03	1.00	
Lane Grp Cap(c), veh/h	306	0	1320	1383	230	2640
V/C Ratio(X)	0.89	0.00	0.71	0.72	0.66	0.68
Avail Cap(c_a), veh/h	552	0	1320	1383	230	2640
HCM Platoon Ratio	1.00	1.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.9	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	9.0	0.0	3.3	3.2	13.9	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.7	0.0	1.2	1.2	0.9	0.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	56.9	0.0	3.3	3.2	13.9	1.5
LnGrp LOS	E	A	A	A	B	A
Approach Vol, veh/h	273		1935			1956
Approach Delay, s/veh	56.9		3.3			2.4
Approach LOS	E		A			A

Timer - Assigned Phs	2			6	8
Phs Duration (G+Y+Rc), s	93.6			93.6	26.4
Change Period (Y+Rc), s	4.5			4.5	4.5
Max Green Setting (Gmax), s	71.5			71.5	39.5
Max Q Clear Time (g_c+I1), s	2.0			2.0	21.1
Green Ext Time (p_c), s	31.7			41.9	0.8

Intersection Summary	
HCM 6th Ctrl Delay	6.4
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

Lane Group	WBL	NBT	SBL	SBT
Lane Configurations				
Traffic Volume (vph)	125	2245	330	1975
Future Volume (vph)	125	2245	330	1975
Turn Type	Prot	NA	Perm	NA
Protected Phases	8	2		6
Permitted Phases			6	
Detector Phase	8	2	6	6
Switch Phase				
Minimum Initial (s)	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5
Total Split (s)	24.0	96.0	96.0	96.0
Total Split (%)	20.0%	80.0%	80.0%	80.0%
Yellow Time (s)	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5
Lead/Lag				
Lead-Lag Optimize?				
Recall Mode	None	C-Max	C-Max	C-Max
Act Effct Green (s)	19.5	91.5	91.5	91.5
Actuated g/C Ratio	0.16	0.76	0.76	0.76
v/c Ratio	0.95	0.93	5.79	0.80
Control Delay	89.0	27.5	2181.5	13.1
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	89.0	27.5	2181.5	13.1
LOS	F	C	F	B
Approach Delay	89.0	27.5		323.7
Approach LOS	F	C		F

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 5.79	
Intersection Signal Delay: 171.3	Intersection LOS: F
Intersection Capacity Utilization 107.9%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 13: Marksheffel Rd & Full Access #1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	125	125	2245	55	330	1975
Future Volume (veh/h)	125	125	2245	55	330	1975
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1870	1870	1870	1870
Adj Flow Rate, veh/h	136	136	2440	60	359	2147
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	2	2	2	2
Cap, veh/h	136	136	2703	66	160	2710
Arrive On Green	0.16	0.16	1.00	1.00	1.00	1.00
Sat Flow, veh/h	836	836	3638	87	131	3647
Grp Volume(v), veh/h	273	0	1218	1282	359	2147
Grp Sat Flow(s),veh/h/ln	1678	0	1777	1855	131	1777
Q Serve(g_s), s	19.5	0.0	0.0	0.0	91.5	0.0
Cycle Q Clear(g_c), s	19.5	0.0	0.0	0.0	91.5	0.0
Prop In Lane	0.50	0.50		0.05	1.00	
Lane Grp Cap(c), veh/h	273	0	1355	1414	160	2710
V/C Ratio(X)	1.00	0.00	0.90	0.91	2.24	0.79
Avail Cap(c_a), veh/h	273	0	1355	1414	160	2710
HCM Platoon Ratio	1.00	1.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.3	0.0	0.0	0.0	17.1	0.0
Incr Delay (d2), s/veh	54.8	0.0	9.7	10.0	578.8	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.3	0.0	3.7	3.9	29.5	0.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	105.0	0.0	9.7	10.0	595.9	2.5
LnGrp LOS	F	A	A	A	F	A
Approach Vol, veh/h	273		2500			2506
Approach Delay, s/veh	105.0		9.9			87.5
Approach LOS	F		A			F

Timer - Assigned Phs		2			6	8
Phs Duration (G+Y+Rc), s		96.0			96.0	24.0
Change Period (Y+Rc), s		4.5			4.5	4.5
Max Green Setting (Gmax), s		91.5			91.5	19.5
Max Q Clear Time (g_c+I1), s		2.0			93.5	21.5
Green Ext Time (p_c), s		65.5			0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	51.6
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Lane Group	WBL	NBT	SBL	SBT
Lane Configurations				
Traffic Volume (vph)	125	1755	140	1660
Future Volume (vph)	125	1755	140	1660
Turn Type	Prot	NA	Perm	NA
Protected Phases	8	2		6
Permitted Phases			6	
Detector Phase	8	2	6	6
Switch Phase				
Minimum Initial (s)	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5
Total Split (s)	31.0	89.0	89.0	89.0
Total Split (%)	25.8%	74.2%	74.2%	74.2%
Yellow Time (s)	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5
Lead/Lag				
Lead-Lag Optimize?				
Recall Mode	None	C-Max	C-Max	C-Max
Act Effct Green (s)	21.8	89.2	89.2	89.2
Actuated g/C Ratio	0.18	0.74	0.74	0.74
v/c Ratio	0.82	0.51	1.32	0.48
Control Delay	62.1	8.5	208.0	10.2
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	62.1	8.5	208.0	10.2
LOS	E	A	F	B
Approach Delay	62.1	8.5		25.6
Approach LOS	E	A		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green	
Natural Cycle: 120	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.32	
Intersection Signal Delay: 20.0	Intersection LOS: C
Intersection Capacity Utilization 68.1%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 13: Marksheffel Rd & Full Access #1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	125	125	1755	25	140	1660
Future Volume (veh/h)	125	125	1755	25	140	1660
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1870	1870	1870	1870
Adj Flow Rate, veh/h	136	136	1908	27	152	1804
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	2	2	2	2
Cap, veh/h	150	150	3868	55	231	3807
Arrive On Green	0.18	0.18	1.00	1.00	1.00	1.00
Sat Flow, veh/h	836	836	5356	73	229	5274
Grp Volume(v), veh/h	273	0	1252	683	152	1804
Grp Sat Flow(s),veh/h/ln	1678	0	1702	1857	229	1702
Q Serve(g_s), s	19.1	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	19.1	0.0	0.0	0.0	0.0	0.0
Prop In Lane	0.50	0.50		0.04	1.00	
Lane Grp Cap(c), veh/h	301	0	2538	1385	231	3807
V/C Ratio(X)	0.91	0.00	0.49	0.49	0.66	0.47
Avail Cap(c_a), veh/h	371	0	2538	1385	231	3807
HCM Platoon Ratio	1.00	1.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.2	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	22.2	0.0	0.7	1.3	13.8	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.8	0.0	0.2	0.5	0.9	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	70.5	0.0	0.7	1.3	13.8	0.4
LnGrp LOS	E	A	A	A	B	A
Approach Vol, veh/h	273		1935			1956
Approach Delay, s/veh	70.5		0.9			1.5
Approach LOS	E		A			A

Timer - Assigned Phs	2			6	8
Phs Duration (G+Y+Rc), s	94.0			94.0	26.0
Change Period (Y+Rc), s	4.5			4.5	4.5
Max Green Setting (Gmax), s	84.5			84.5	26.5
Max Q Clear Time (g_c+I1), s	2.0			2.0	21.1
Green Ext Time (p_c), s	28.4			42.8	0.4

Intersection Summary	
HCM 6th Ctrl Delay	5.7
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

Lane Group	WBL	NBT	SBL	SBT
Lane Configurations				
Traffic Volume (vph)	125	2245	330	1975
Future Volume (vph)	125	2245	330	1975
Turn Type	Prot	NA	Perm	NA
Protected Phases	8	2		6
Permitted Phases			6	
Detector Phase	8	2	6	6
Switch Phase				
Minimum Initial (s)	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5
Total Split (s)	33.0	87.0	87.0	87.0
Total Split (%)	27.5%	72.5%	72.5%	72.5%
Yellow Time (s)	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5
Lead/Lag				
Lead-Lag Optimize?				
Recall Mode	None	C-Max	C-Max	C-Max
Act Effct Green (s)	23.2	87.8	87.8	87.8
Actuated g/C Ratio	0.19	0.73	0.73	0.73
v/c Ratio	0.82	0.67	5.70	0.58
Control Delay	63.9	12.1	2163.2	13.6
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	63.9	12.1	2163.2	13.6
LOS	E	B	F	B
Approach Delay	63.9	12.1		321.5
Approach LOS	E	B		F

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 5.70	
Intersection Signal Delay: 161.7	Intersection LOS: F
Intersection Capacity Utilization 88.7%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 13: Marksheffel Rd & Full Access #1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	125	125	2245	55	330	1975
Future Volume (veh/h)	125	125	2245	55	330	1975
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1870	1870	1870	1870
Adj Flow Rate, veh/h	136	136	2440	60	359	2147
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	2	2	2	2
Cap, veh/h	151	151	3818	94	158	3803
Arrive On Green	0.18	0.18	1.00	1.00	1.00	1.00
Sat Flow, veh/h	836	836	5295	126	131	5274
Grp Volume(v), veh/h	273	0	1617	883	359	2147
Grp Sat Flow(s),veh/h/ln	1678	0	1702	1848	131	1702
Q Serve(g_s), s	19.1	0.0	0.0	0.0	89.4	0.0
Cycle Q Clear(g_c), s	19.1	0.0	0.0	0.0	89.4	0.0
Prop In Lane	0.50	0.50		0.07	1.00	
Lane Grp Cap(c), veh/h	302	0	2535	1376	158	3803
V/C Ratio(X)	0.90	0.00	0.64	0.64	2.28	0.56
Avail Cap(c_a), veh/h	399	0	2535	1376	158	3803
HCM Platoon Ratio	1.00	1.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.2	0.0	0.0	0.0	17.0	0.0
Incr Delay (d2), s/veh	19.4	0.0	1.2	2.3	593.7	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.6	0.0	0.4	0.9	29.7	0.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	67.6	0.0	1.2	2.3	610.7	0.6
LnGrp LOS	E	A	A	A	F	A
Approach Vol, veh/h	273		2500			2506
Approach Delay, s/veh	67.6		1.6			88.0
Approach LOS	E		A			F

Timer - Assigned Phs		2			6	8
Phs Duration (G+Y+Rc), s		93.9			93.9	26.1
Change Period (Y+Rc), s		4.5			4.5	4.5
Max Green Setting (Gmax), s		82.5			82.5	28.5
Max Q Clear Time (g_c+I1), s		2.0			91.4	21.1
Green Ext Time (p_c), s		47.9			0.0	0.5

Intersection Summary	
HCM 6th Ctrl Delay	46.0
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	45	1145	15	0	1385
Future Vol, veh/h	0	45	1145	15	0	1385
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	49	1245	16	0	1505

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	631	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	424	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	424	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.6	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	424	-
HCM Lane V/C Ratio	-	-	0.115	-
HCM Control Delay (s)	-	-	14.6	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q(veh)	-	-	0.4	-

Intersection	
Int Delay, s/veh	0.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	60	1725	35	0	1440
Future Vol, veh/h	0	60	1725	35	0	1440
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	65	1875	38	0	1565

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	957	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	258	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	258	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	23.6	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	258	-
HCM Lane V/C Ratio	-	-	0.253	-
HCM Control Delay (s)	-	-	23.6	-
HCM Lane LOS	-	-	C	-
HCM 95th %tile Q(veh)	-	-	1	-

Intersection	
Int Delay, s/veh	0.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	85	1725	25	0	1725
Future Vol, veh/h	0	85	1725	25	0	1725
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	92	1875	27	0	1875

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	951	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	*346	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		1	-	-		-
Mov Cap-1 Maneuver	-	*346	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	19.2	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	346	-
HCM Lane V/C Ratio	-	-	0.267	-
HCM Control Delay (s)	-	-	19.2	-
HCM Lane LOS	-	-	C	-
HCM 95th %tile Q(veh)	-	-	1.1	-

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

Intersection	
Int Delay, s/veh	1.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	85	2220	55	0	2060
Future Vol, veh/h	0	85	2220	55	0	2060
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	92	2413	60	0	2239

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	1237	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	*138	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		1	-	-		-
Mov Cap-1 Maneuver	-	*138	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	72.4	0	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	138	-
HCM Lane V/C Ratio	-	-	0.67	-
HCM Control Delay (s)	-	-	72.4	-
HCM Lane LOS	-	-	F	-
HCM 95th %tile Q(veh)	-	-	3.7	-

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

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	85	1725	25	0	1725
Future Vol, veh/h	0	85	1725	25	0	1725
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	92	1875	27	0	1875

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	951	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	*514	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		1	-	-		-
Mov Cap-1 Maneuver	-	*514	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.5	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	514	-
HCM Lane V/C Ratio	-	-	0.18	-
HCM Control Delay (s)	-	-	13.5	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q(veh)	-	-	0.6	-

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

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	85	2220	55	0	2060
Future Vol, veh/h	0	85	2220	55	0	2060
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	92	2413	60	0	2239

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	1237	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	*381	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		1	-	-		-
Mov Cap-1 Maneuver	-	*381	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	17.4	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	381	-
HCM Lane V/C Ratio	-	-	0.242	-
HCM Control Delay (s)	-	-	17.4	-
HCM Lane LOS	-	-	C	-
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	1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	90	1075	10	100	1290
Future Vol, veh/h	0	90	1075	10	100	1290
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	-	-	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	98	1168	11	109	1402

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	590	0	0	1179	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	4.14	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	0	451	-	-	588	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	451	-	-	588	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15.2	0	0.9
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	451	588	-
HCM Lane V/C Ratio	-	-	0.217	0.185	-
HCM Control Delay (s)	-	-	15.2	12.5	-
HCM Lane LOS	-	-	C	B	-
HCM 95th %tile Q(veh)	-	-	0.8	0.7	-

Intersection	
Int Delay, s/veh	3.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	115	1645	25	205	1235
Future Vol, veh/h	0	115	1645	25	205	1235
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	-	-	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	125	1788	27	223	1342

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	908	0	0	1815	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	4.14	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	0	278	-	-	334	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	278	-	-	334	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	28.1	0	5
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	278	334	-
HCM Lane V/C Ratio	-	-	0.45	0.667	-
HCM Control Delay (s)	-	-	28.1	34.9	-
HCM Lane LOS	-	-	D	D	-
HCM 95th %tile Q(veh)	-	-	2.2	4.5	-

Intersection	
Int Delay, s/veh	1.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	165	1655	15	140	1630
Future Vol, veh/h	0	165	1655	15	140	1630
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	-	-	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	179	1799	16	152	1772

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	908	0	0	1815	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	4.14	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	0	*372	-	-	*557	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %		1	-	-	1	-
Mov Cap-1 Maneuver	-	*372	-	-	*557	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	23.4	0	1.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	372	* 557	-
HCM Lane V/C Ratio	-	-	0.482	0.273	-
HCM Control Delay (s)	-	-	23.4	13.9	-
HCM Lane LOS	-	-	C	B	-
HCM 95th %tile Q(veh)	-	-	2.5	1.1	-

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

Intersection	
Int Delay, s/veh	25.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	165	2140	40	330	1855
Future Vol, veh/h	0	165	2140	40	330	1855
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	-	-	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	179	2326	43	359	2016

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	1185	0	0	2369	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	4.14	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	0	*~ 164	-	-	*~ 245	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %		1	-	-	1	-
Mov Cap-1 Maneuver	-	*~ 164	-	-	*~ 245	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	154.1	0	40.4
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	164~	* 245	-
HCM Lane V/C Ratio	-	-	1.094	1.464	-
HCM Control Delay (s)	-	-	154.1	267.6	-
HCM Lane LOS	-	-	F	F	-
HCM 95th %tile Q(veh)	-	-	9.2	20.7	-

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

Intersection	
Int Delay, s/veh	1.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	165	1655	15	140	1630
Future Vol, veh/h	0	165	1655	15	140	1630
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	-	-	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	179	1799	16	152	1772

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	908	0	0	1815	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.14	-	-	5.34	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.92	-	-	3.12	-
Pot Cap-1 Maneuver	0	*536	-	-	*673	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %		1	-	-	1	-
Mov Cap-1 Maneuver	-	*536	-	-	*673	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15.1	0	0.9
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	536	* 673	-
HCM Lane V/C Ratio	-	-	0.335	0.226	-
HCM Control Delay (s)	-	-	15.1	11.9	-
HCM Lane LOS	-	-	C	B	-
HCM 95th %tile Q(veh)	-	-	1.5	0.9	-

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

Intersection	
Int Delay, s/veh	2.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	165	2140	40	330	1855
Future Vol, veh/h	0	165	2140	40	330	1855
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	-	-	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	179	2326	43	359	2016

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	1185	0	0	2369	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.14	-	-	5.34	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.92	-	-	3.12	-
Pot Cap-1 Maneuver	0	*403	-	-	*507	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %		1	-	-	1	-
Mov Cap-1 Maneuver	-	*403	-	-	*507	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	20.9	0	4.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	403	* 507	-
HCM Lane V/C Ratio	-	-	0.445	0.707	-
HCM Control Delay (s)	-	-	20.9	27.5	-
HCM Lane LOS	-	-	C	D	-
HCM 95th %tile Q(veh)	-	-	2.2	5.6	-

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

Intersection	
Int Delay, s/veh	235.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	565	30	125	25	60	110	160	355	5	85	445	705
Future Vol, veh/h	565	30	125	25	60	110	160	355	5	85	445	705
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	175	-	-	0	-	-	150	-	-	150	-	150
Veh in Median Storage, #	-	0	-	-	2	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	614	33	136	27	65	120	174	386	5	92	484	766

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1242	1407	242	1180	2171	196	1250	0	0	391	0	0
Stage 1	668	668	-	737	737	-	-	-	-	-	-	-
Stage 2	574	739	-	443	1434	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	~ 131	138	759	146	~ 46	812	553	-	-	1164	-	-
Stage 1	~ 414	455	-	376	423	-	-	-	-	-	-	-
Stage 2	~ 471	422	-	564	198	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	87	759	62	~ 29	812	553	-	-	1164	-	-
Mov Cap-2 Maneuver	-	87	-	169	~ 8	-	-	-	-	-	-	-
Stage 1	~ 284	419	-	258	290	-	-	-	-	-	-	-
Stage 2	~ 213	289	-	393	182	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s		$ 3207.5	4.5	0.6
HCM LOS	-	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	553	-	-	-	304	169	22	1164	-	-
HCM Lane V/C Ratio	0.314	-	-	-	0.554	0.161	8.399	0.079	-	-
HCM Control Delay (s)	14.5	-	-	-	30.6	30.3	$ 3674.7	8.4	-	-
HCM Lane LOS	B	-	-	-	D	D	F	A	-	-
HCM 95th %tile Q(veh)	1.3	-	-	-	3.1	0.6	23.3	0.3	-	-

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

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	890	55	185	30	80	145	130	550	15	175	375	625
Future Vol, veh/h	890	55	185	30	80	145	130	550	15	175	375	625
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	175	-	-	0	-	-	150	-	-	150	-	150
Veh in Median Storage, #	-	0	-	-	2	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	967	60	201	33	87	158	141	598	16	190	408	679

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1413	1684	204	1502	2355	307	1087	0	0	614	0	0
Stage 1	788	788	-	888	888	-	-	-	-	-	-	-
Stage 2	625	896	-	614	1467	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	~ 98	93	803	84	~ 35	689	638	-	-	961	-	-
Stage 1	~ 350	400	-	305	360	-	-	-	-	-	-	-
Stage 2	~ 439	357	-	446	190	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	~ 58	803	-	~ 22	689	638	-	-	961	-	-
Mov Cap-2 Maneuver	-	~ 58	-	68	~ 10	-	-	-	-	-	-	-
Stage 1	~ 273	321	-	238	280	-	-	-	-	-	-	-
Stage 2	~ 182	278	-	218	152	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s			2.3	1.4
HCM LOS	-	-		

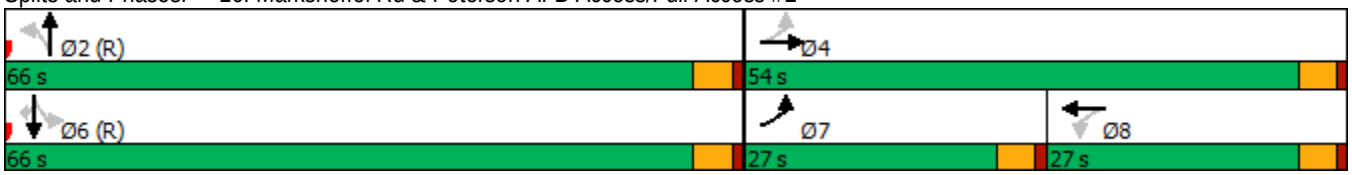
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	638	-	-	-	204	-	27	961	-	-
HCM Lane V/C Ratio	0.221	-	-	-	1.279	-	9.058	0.198	-	-
HCM Control Delay (s)	12.2	-	-	-	204.1	-	$ 3908.6	9.7	-	-
HCM Lane LOS	B	-	-	-	F	-	F	A	-	-
HCM 95th %tile Q(veh)	0.8	-	-	-	14.1	-	30.2	0.7	-	-

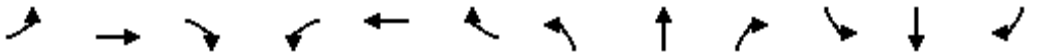
Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	565	30	25	60	160	355	85	445	705
Future Volume (vph)	565	30	25	60	160	355	85	445	705
Turn Type	pm+pt	NA	Perm	NA	Perm	NA	Perm	NA	Perm
Protected Phases	7	4		8		2		6	
Permitted Phases	4		8		2		6		6
Detector Phase	7	4	8	8	2	2	6	6	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	27.0	54.0	27.0	27.0	66.0	66.0	66.0	66.0	66.0
Total Split (%)	22.5%	45.0%	22.5%	22.5%	55.0%	55.0%	55.0%	55.0%	55.0%
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)	0.0	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
Lead/Lag	Lead		Lag	Lag					
Lead-Lag Optimize?	Yes		Yes	Yes					
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	40.7	40.7	14.0	14.0	70.3	70.3	70.3	70.3	70.3
Actuated g/C Ratio	0.34	0.34	0.12	0.12	0.59	0.59	0.59	0.59	0.59
v/c Ratio	0.81	0.26	0.19	0.73	0.35	0.19	0.17	0.23	0.62
Control Delay	40.6	7.6	48.4	47.5	16.9	12.6	11.4	11.9	9.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.6	7.6	48.4	47.5	16.9	12.6	11.4	11.9	9.2
LOS	D	A	D	D	B	B	B	B	A
Approach Delay		33.4		47.6		13.9		10.4	
Approach LOS		C		D		B		B	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.81	
Intersection Signal Delay: 20.0	Intersection LOS: B
Intersection Capacity Utilization 73.7%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 16: Marksheffel Rd & Peterson AFB Access/Full Access #2





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	565	30	125	25	60	110	160	355	5	85	445	705
Future Volume (veh/h)	565	30	125	25	60	110	160	355	5	85	445	705
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	614	33	136	27	65	120	174	386	5	92	484	766
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	760	108	444	218	76	141	319	2109	27	594	2086	931
Arrive On Green	0.17	0.34	0.34	0.13	0.13	0.13	0.59	0.59	0.59	0.98	0.98	0.98
Sat Flow, veh/h	3456	319	1315	1216	588	1086	445	3592	46	993	3554	1585
Grp Volume(v), veh/h	614	0	169	27	0	185	174	191	200	92	484	766
Grp Sat Flow(s),veh/h/ln	1728	0	1634	1216	0	1675	445	1777	1862	993	1777	1585
Q Serve(g_s), s	17.7	0.0	9.2	2.4	0.0	13.0	32.1	6.0	6.0	1.3	0.4	5.9
Cycle Q Clear(g_c), s	17.7	0.0	9.2	2.4	0.0	13.0	32.5	6.0	6.0	7.3	0.4	5.9
Prop In Lane	1.00		0.80	1.00		0.65	1.00		0.02	1.00		1.00
Lane Grp Cap(c), veh/h	760	0	552	218	0	218	319	1043	1093	594	2086	931
V/C Ratio(X)	0.81	0.00	0.31	0.12	0.00	0.85	0.54	0.18	0.18	0.15	0.23	0.82
Avail Cap(c_a), veh/h	819	0	674	288	0	314	319	1043	1093	594	2086	931
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.67	1.67	1.67
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.2	0.0	29.3	46.4	0.0	51.1	17.1	11.5	11.5	0.9	0.5	0.5
Incr Delay (d2), s/veh	5.7	0.0	0.3	0.3	0.0	13.8	6.5	0.4	0.4	0.6	0.3	8.2
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	8.0	0.0	3.7	0.7	0.0	6.3	3.7	2.4	2.6	0.1	0.2	2.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.9	0.0	29.7	46.7	0.0	64.9	23.6	11.8	11.8	1.5	0.7	8.7
LnGrp LOS	D	A	C	D	A	E	C	B	B	A	A	A
Approach Vol, veh/h		783			212			565			1342	
Approach Delay, s/veh		38.5			62.5			15.5			5.3	
Approach LOS		D			E			B			A	

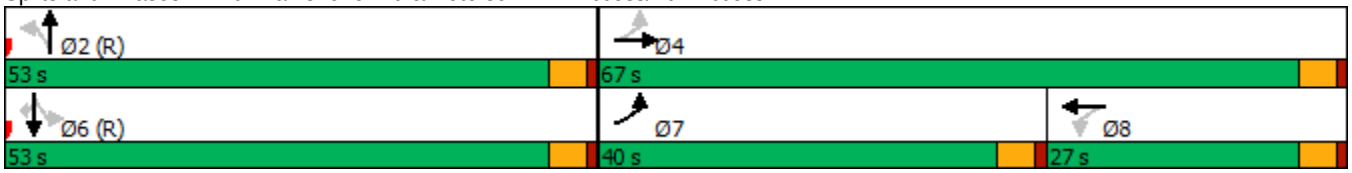
Timer - Assigned Phs		2		4		6	7	8				
Phs Duration (G+Y+Rc), s		75.0		45.0		75.0	24.9	20.1				
Change Period (Y+Rc), s		4.5		4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		61.5		49.5		61.5	22.5	22.5				
Max Q Clear Time (g_c+I1), s		34.5		11.2		9.3	19.7	15.0				
Green Ext Time (p_c), s		5.4		1.1		9.0	0.7	0.6				

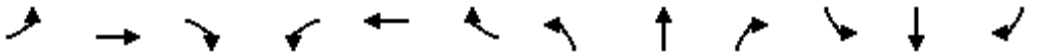
Intersection Summary												
HCM 6th Ctrl Delay			20.4									
HCM 6th LOS			C									

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	890	55	30	80	130	550	175	375	625
Future Volume (vph)	890	55	30	80	130	550	175	375	625
Turn Type	pm+pt	NA	Perm	NA	Perm	NA	Perm	NA	Perm
Protected Phases	7	4		8		2		6	
Permitted Phases	4		8		2		6		6
Detector Phase	7	4	8	8	2	2	6	6	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	40.0	67.0	27.0	27.0	53.0	53.0	53.0	53.0	53.0
Total Split (%)	33.3%	55.8%	22.5%	22.5%	44.2%	44.2%	44.2%	44.2%	44.2%
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)	0.0	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
Lead/Lag	Lead		Lag	Lag					
Lead-Lag Optimize?	Yes		Yes	Yes					
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	57.4	57.4	17.6	17.6	53.6	53.6	53.6	53.6	53.6
Actuated g/C Ratio	0.48	0.48	0.15	0.15	0.45	0.45	0.45	0.45	0.45
v/c Ratio	0.86	0.29	0.20	0.81	0.36	0.39	0.67	0.26	0.63
Control Delay	37.4	5.1	45.9	55.4	26.9	23.9	41.9	24.3	9.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.4	5.1	45.9	55.4	26.9	23.9	41.9	24.3	9.5
LOS	D	A	D	E	C	C	D	C	A
Approach Delay		30.5		54.2		24.4		19.1	
Approach LOS		C		D		C		B	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.86	
Intersection Signal Delay: 27.0	Intersection LOS: C
Intersection Capacity Utilization 78.9%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 16: Marksheffel Rd & Peterson AFB Access/Full Access #2





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	890	55	185	30	80	145	130	550	15	175	375	625
Future Volume (veh/h)	890	55	185	30	80	145	130	550	15	175	375	625
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	967	60	201	33	87	158	141	598	16	190	408	679
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	1058	174	582	243	98	177	285	1645	44	348	1654	738
Arrive On Green	0.26	0.46	0.46	0.16	0.16	0.16	0.47	0.47	0.47	0.78	0.78	0.78
Sat Flow, veh/h	3456	378	1265	1118	595	1081	519	3536	95	808	3554	1585
Grp Volume(v), veh/h	967	0	261	33	0	245	141	300	314	190	408	679
Grp Sat Flow(s),veh/h/ln	1728	0	1643	1118	0	1676	519	1777	1853	808	1777	1585
Q Serve(g_s), s	26.6	0.0	12.2	3.1	0.0	17.2	25.4	13.1	13.1	18.8	3.8	40.3
Cycle Q Clear(g_c), s	26.6	0.0	12.2	3.1	0.0	17.2	29.2	13.1	13.1	31.9	3.8	40.3
Prop In Lane	1.00		0.77	1.00		0.64	1.00		0.05	1.00		1.00
Lane Grp Cap(c), veh/h	1058	0	755	243	0	275	285	827	862	348	1654	738
V/C Ratio(X)	0.91	0.00	0.35	0.14	0.00	0.89	0.49	0.36	0.36	0.55	0.25	0.92
Avail Cap(c_a), veh/h	1188	0	856	270	0	314	285	827	862	348	1654	738
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.67	1.67	1.67
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.0	0.0	20.8	43.2	0.0	49.1	26.4	20.6	20.6	15.1	7.6	11.6
Incr Delay (d2), s/veh	10.1	0.0	0.3	0.3	0.0	23.8	6.0	1.2	1.2	6.0	0.4	18.6
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	12.3	0.0	4.7	0.9	0.0	9.0	3.6	5.7	5.9	3.3	1.4	10.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.1	0.0	21.1	43.5	0.0	73.0	32.4	21.9	21.8	21.1	7.9	30.2
LnGrp LOS	D	A	C	D	A	E	C	C	C	C	A	C
Approach Vol, veh/h		1228			278			755			1277	
Approach Delay, s/veh		35.3			69.5			23.8			21.8	
Approach LOS		D			E			C			C	

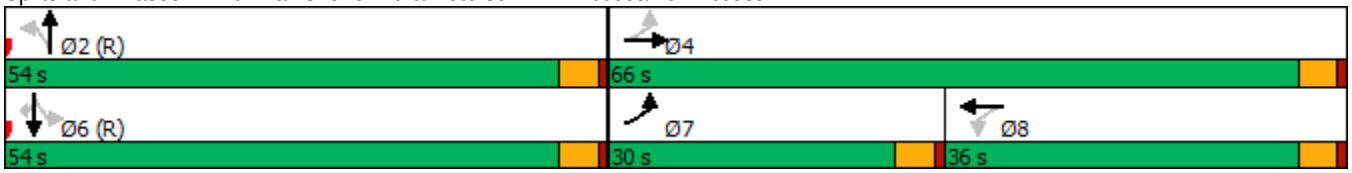
Timer - Assigned Phs		2		4		6	7	8				
Phs Duration (G+Y+Rc), s		60.3		59.7		60.3	35.5	24.2				
Change Period (Y+Rc), s		4.5		4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		48.5		62.5		48.5	35.5	22.5				
Max Q Clear Time (g_c+I1), s		31.2		14.2		42.3	28.6	19.2				
Green Ext Time (p_c), s		5.2		1.9		3.5	2.4	0.5				

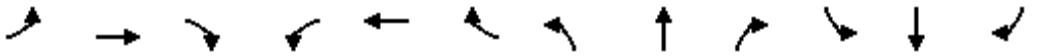
Intersection Summary												
HCM 6th Ctrl Delay			30.6									
HCM 6th LOS			C									

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	675	40	45	110	190	420	120	535	865
Future Volume (vph)	675	40	45	110	190	420	120	535	865
Turn Type	pm+pt	NA	Perm	NA	Perm	NA	Perm	NA	Perm
Protected Phases	7	4		8		2		6	
Permitted Phases	4		8		2		6		6
Detector Phase	7	4	8	8	2	2	6	6	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	30.0	66.0	36.0	36.0	54.0	54.0	54.0	54.0	54.0
Total Split (%)	25.0%	55.0%	30.0%	30.0%	45.0%	45.0%	45.0%	45.0%	45.0%
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)	0.0	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
Lead/Lag	Lead		Lag	Lag					
Lead-Lag Optimize?	Yes		Yes	Yes					
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	54.2	54.2	24.3	24.3	56.8	56.8	56.8	56.8	56.8
Actuated g/C Ratio	0.45	0.45	0.20	0.20	0.47	0.47	0.47	0.47	0.47
v/c Ratio	0.86	0.24	0.21	0.84	0.64	0.28	0.34	0.35	0.79
Control Delay	42.2	5.1	39.4	54.3	37.1	20.7	26.9	23.3	14.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.2	5.1	39.4	54.3	37.1	20.7	26.9	23.3	14.6
LOS	D	A	D	D	D	C	C	C	B
Approach Delay		34.3		52.4		25.7		18.6	
Approach LOS		C		D		C		B	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 70	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.86	
Intersection Signal Delay: 27.5	Intersection LOS: C
Intersection Capacity Utilization 93.4%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 16: Marksheffel Rd & Peterson AFB Access/Full Access #2





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	675	40	145	45	110	200	190	420	10	120	535	865
Future Volume (veh/h)	675	40	145	45	110	200	190	420	10	120	535	865
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	734	43	158	49	120	217	207	457	11	130	582	723
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	810	156	572	322	133	240	244	1706	41	434	1709	762
Arrive On Green	0.18	0.44	0.44	0.22	0.22	0.22	0.48	0.48	0.48	0.80	0.80	0.80
Sat Flow, veh/h	3456	351	1288	1181	597	1079	422	3547	85	925	3554	1585
Grp Volume(v), veh/h	734	0	201	49	0	337	207	229	239	130	582	723
Grp Sat Flow(s),veh/h/ln	1728	0	1639	1181	0	1676	422	1777	1855	925	1777	1585
Q Serve(g_s), s	18.7	0.0	9.3	4.0	0.0	23.5	52.4	9.2	9.2	7.2	5.3	45.2
Cycle Q Clear(g_c), s	18.7	0.0	9.3	4.0	0.0	23.5	57.7	9.2	9.2	16.4	5.3	45.2
Prop In Lane	1.00		0.79	1.00		0.64	1.00		0.05	1.00		1.00
Lane Grp Cap(c), veh/h	810	0	727	322	0	372	244	855	892	434	1709	762
V/C Ratio(X)	0.91	0.00	0.28	0.15	0.00	0.90	0.85	0.27	0.27	0.30	0.34	0.95
Avail Cap(c_a), veh/h	908	0	840	370	0	440	244	855	892	434	1709	762
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.67	1.67	1.67
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.9	0.0	21.1	37.9	0.0	45.4	36.7	18.5	18.6	9.7	6.6	10.6
Incr Delay (d2), s/veh	11.7	0.0	0.2	0.2	0.0	19.9	28.9	0.8	0.7	1.8	0.5	22.2
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	9.0	0.0	3.6	1.2	0.0	11.8	8.3	4.0	4.1	1.2	1.8	9.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.6	0.0	21.3	38.1	0.0	65.3	65.6	19.3	19.3	11.5	7.2	32.7
LnGrp LOS	D	A	C	D	A	E	E	B	B	B	A	C
Approach Vol, veh/h		935			386			675			1435	
Approach Delay, s/veh		36.4			61.9			33.5			20.5	
Approach LOS		D			E			C			C	

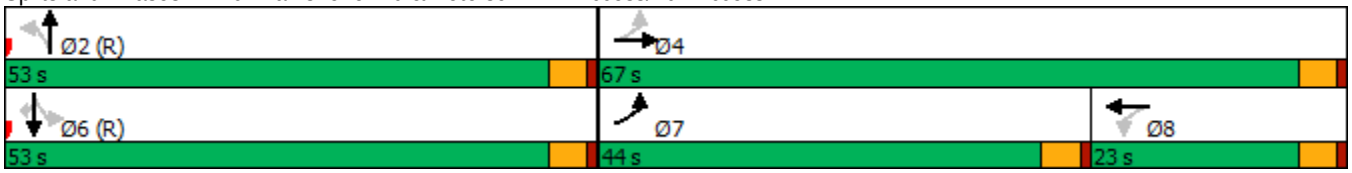
Timer - Assigned Phs		2		4		6	7	8				
Phs Duration (G+Y+Rc), s		62.2		57.8		62.2	26.6	31.2				
Change Period (Y+Rc), s		4.5		4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		49.5		61.5		49.5	25.5	31.5				
Max Q Clear Time (g_c+I1), s		59.7		11.3		47.2	20.7	25.5				
Green Ext Time (p_c), s		0.0		1.4		1.6	1.4	1.2				

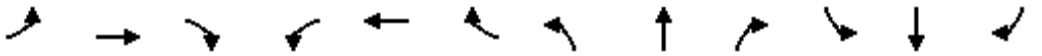
Intersection Summary												
HCM 6th Ctrl Delay			32.0									
HCM 6th LOS			C									

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	1090	90	45	115	150	665	280	445	750
Future Volume (vph)	1090	90	45	115	150	665	280	445	750
Turn Type	pm+pt	NA	Perm	NA	Perm	NA	Perm	NA	Perm
Protected Phases	7	4		8		2		6	
Permitted Phases	4		8		2		6		6
Detector Phase	7	4	8	8	2	2	6	6	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	44.0	67.0	23.0	23.0	53.0	53.0	53.0	53.0	53.0
Total Split (%)	36.7%	55.8%	19.2%	19.2%	44.2%	44.2%	44.2%	44.2%	44.2%
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)	0.0	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
Lead/Lag	Lead		Lag	Lag					
Lead-Lag Optimize?	Yes		Yes	Yes					
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	62.5	62.5	18.5	18.5	48.5	48.5	48.5	48.5	48.5
Actuated g/C Ratio	0.52	0.52	0.15	0.15	0.40	0.40	0.40	0.40	0.40
v/c Ratio	0.95	0.36	0.31	1.12	0.54	0.53	1.63	0.34	0.72
Control Delay	46.3	9.9	51.0	124.1	35.2	28.6	327.2	32.2	10.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.3	9.9	51.0	124.1	35.2	28.6	327.2	32.2	10.3
LOS	D	A	D	F	D	C	F	C	B
Approach Delay		38.3		115.1		29.7		77.1	
Approach LOS		D		F		C		E	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 130	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.63	
Intersection Signal Delay: 57.4	Intersection LOS: E
Intersection Capacity Utilization 99.4%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 16: Marksheffel Rd & Peterson AFB Access/Full Access #2





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1090	90	220	45	115	205	150	665	25	280	445	750
Future Volume (veh/h)	1090	90	220	45	115	205	150	665	25	280	445	750
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	1185	98	239	49	125	223	163	723	27	304	484	462
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	1239	249	606	221	93	166	270	1431	53	242	1455	649
Arrive On Green	0.32	0.52	0.52	0.15	0.15	0.15	0.41	0.41	0.41	0.68	0.68	0.68
Sat Flow, veh/h	3456	482	1176	1043	602	1075	593	3493	130	712	3554	1585
Grp Volume(v), veh/h	1185	0	337	49	0	348	163	368	382	304	484	462
Grp Sat Flow(s),veh/h/ln	1728	0	1659	1043	0	1677	593	1777	1847	712	1777	1585
Q Serve(g_s), s	36.0	0.0	14.8	5.0	0.0	18.5	29.4	18.5	18.5	30.7	6.7	21.5
Cycle Q Clear(g_c), s	36.0	0.0	14.8	5.0	0.0	18.5	36.1	18.5	18.5	49.1	6.7	21.5
Prop In Lane	1.00		0.71	1.00		0.64	1.00		0.07	1.00		1.00
Lane Grp Cap(c), veh/h	1239	0	855	221	0	259	270	728	756	242	1455	649
V/C Ratio(X)	0.96	0.00	0.39	0.22	0.00	1.35	0.60	0.51	0.51	1.26	0.33	0.71
Avail Cap(c_a), veh/h	1258	0	864	221	0	259	270	728	756	242	1455	649
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.67	1.67	1.67
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.6	0.0	17.7	45.0	0.0	50.8	34.6	26.4	26.4	32.0	12.3	14.6
Incr Delay (d2), s/veh	16.0	0.0	0.3	0.5	0.0	179.3	9.7	2.5	2.4	144.6	0.6	6.5
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	17.4	0.0	5.7	1.3	0.0	20.6	4.9	8.3	8.6	16.6	2.5	6.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.6	0.0	18.0	45.5	0.0	230.0	44.2	28.9	28.8	176.6	12.9	21.1
LnGrp LOS	D	A	B	D	A	F	D	C	C	F	B	C
Approach Vol, veh/h		1522			397			913			1250	
Approach Delay, s/veh		41.1			207.2			31.6			55.7	
Approach LOS		D			F			C			E	

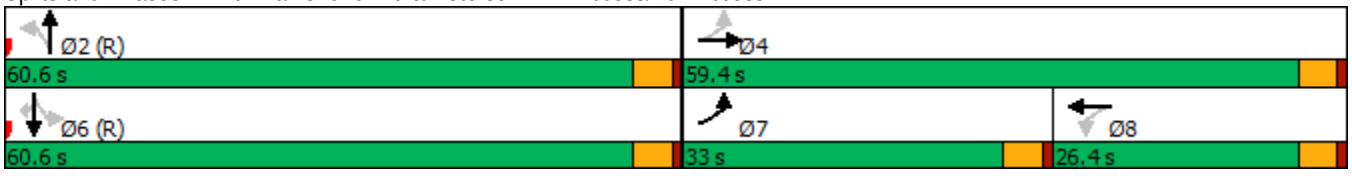
Timer - Assigned Phs		2		4		6	7	8				
Phs Duration (G+Y+Rc), s		53.6		66.4		53.6	43.4	23.0				
Change Period (Y+Rc), s		4.5		4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		48.5		62.5		48.5	39.5	18.5				
Max Q Clear Time (g_c+I1), s		38.1		16.8		51.1	38.0	20.5				
Green Ext Time (p_c), s		4.5		2.5		0.0	0.8	0.0				

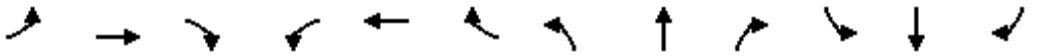
Intersection Summary												
HCM 6th Ctrl Delay			59.6									
HCM 6th LOS			E									

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	675	40	45	110	190	420	120	535	865
Future Volume (vph)	675	40	45	110	190	420	120	535	865
Turn Type	pm+pt	NA	Perm	NA	Perm	NA	Perm	NA	Perm
Protected Phases	7	4		8		2		6	
Permitted Phases	4		8		2		6		6
Detector Phase	7	4	8	8	2	2	6	6	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	33.0	59.4	26.4	26.4	60.6	60.6	60.6	60.6	60.6
Total Split (%)	27.5%	49.5%	22.0%	22.0%	50.5%	50.5%	50.5%	50.5%	50.5%
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)	0.0	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
Lead/Lag	Lead		Lag	Lag					
Lead-Lag Optimize?	Yes		Yes	Yes					
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	53.9	53.9	21.5	21.5	57.1	57.1	57.1	57.1	57.1
Actuated g/C Ratio	0.45	0.45	0.18	0.18	0.48	0.48	0.48	0.48	0.48
v/c Ratio	0.80	0.24	0.23	0.95	0.63	0.28	0.34	0.35	0.79
Control Delay	36.1	5.9	45.3	76.0	34.8	19.7	19.0	17.2	16.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.1	5.9	45.3	76.0	34.8	19.7	19.0	17.2	16.0
LOS	D	A	D	E	C	B	B	B	B
Approach Delay		29.6		72.1		24.3		16.7	
Approach LOS		C		E		C		B	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 70	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.95	
Intersection Signal Delay: 27.2	Intersection LOS: C
Intersection Capacity Utilization 93.4%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 16: Marksheffel Rd & Peterson AFB Access/Full Access #2





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	675	40	145	45	110	200	190	420	10	120	535	865
Future Volume (veh/h)	675	40	145	45	110	200	190	420	10	120	535	865
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	734	43	158	49	120	0	207	457	11	130	582	723
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	907	117	430	159	158		308	2096	50	550	2100	937
Arrive On Green	0.21	0.33	0.33	0.08	0.08	0.00	0.59	0.59	0.59	0.99	0.99	0.99
Sat Flow, veh/h	3456	351	1288	1181	1870	0	422	3547	85	925	3554	1585
Grp Volume(v), veh/h	734	0	201	49	120	0	207	229	239	130	582	723
Grp Sat Flow(s),veh/h/ln	1728	0	1639	1181	1870	0	422	1777	1855	925	1777	1585
Q Serve(g_s), s	22.2	0.0	11.2	4.8	7.5	0.0	47.7	7.3	7.3	2.5	0.4	3.0
Cycle Q Clear(g_c), s	22.2	0.0	11.2	4.8	7.5	0.0	48.0	7.3	7.3	9.8	0.4	3.0
Prop In Lane	1.00		0.79	1.00		0.00	1.00		0.05	1.00		1.00
Lane Grp Cap(c), veh/h	907	0	547	159	158		308	1050	1096	550	2100	937
V/C Ratio(X)	0.81	0.00	0.37	0.31	0.76		0.67	0.22	0.22	0.24	0.28	0.77
Avail Cap(c_a), veh/h	994	0	750	276	341		308	1050	1096	550	2100	937
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.67	1.67	1.67
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.4	0.0	30.3	52.5	53.8	0.0	20.0	11.5	11.5	0.9	0.3	0.3
Incr Delay (d2), s/veh	4.7	0.0	0.4	1.1	7.4	0.0	11.1	0.5	0.5	1.0	0.3	6.1
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	9.9	0.0	4.5	1.5	3.9	0.0	5.4	3.0	3.1	0.2	0.2	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.2	0.0	30.7	53.6	61.2	0.0	31.2	12.0	12.0	1.9	0.7	6.5
LnGrp LOS	D	A	C	D	E		C	B	B	A	A	A
Approach Vol, veh/h		935			169	A		675			1435	
Approach Delay, s/veh		38.9			59.0			17.9			3.7	
Approach LOS		D			E			B			A	

Timer - Assigned Phs		2		4		6	7	8				
Phs Duration (G+Y+Rc), s		75.4		44.6		75.4	30.0	14.6				
Change Period (Y+Rc), s		4.5		4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		56.1		54.9		56.1	28.5	21.9				
Max Q Clear Time (g_c+I1), s		50.0		13.2		11.8	24.2	9.5				
Green Ext Time (p_c), s		2.8		1.4		10.1	1.3	0.6				

Intersection Summary												
HCM 6th Ctrl Delay			19.8									
HCM 6th LOS			B									

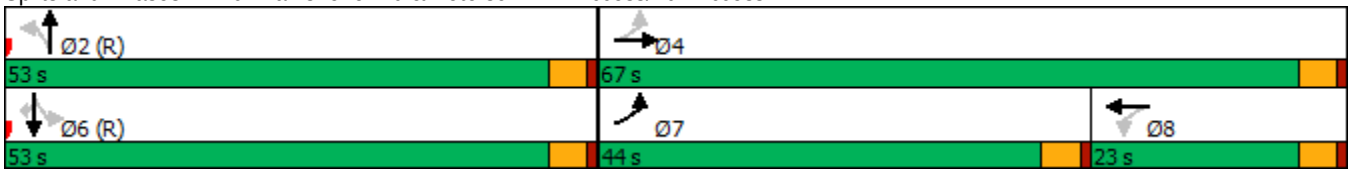
Notes

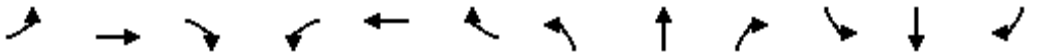
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	1090	90	45	115	150	665	280	445	750
Future Volume (vph)	1090	90	45	115	150	665	280	445	750
Turn Type	pm+pt	NA	Perm	NA	Perm	NA	Perm	NA	Perm
Protected Phases	7	4		8		2		6	
Permitted Phases	4		8		2		6		6
Detector Phase	7	4	8	8	2	2	6	6	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	44.0	67.0	23.0	23.0	53.0	53.0	53.0	53.0	53.0
Total Split (%)	36.7%	55.8%	19.2%	19.2%	44.2%	44.2%	44.2%	44.2%	44.2%
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)	0.0	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
Lead/Lag	Lead		Lag	Lag					
Lead-Lag Optimize?	Yes		Yes	Yes					
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	62.5	62.5	18.5	18.5	48.5	48.5	48.5	48.5	48.5
Actuated g/C Ratio	0.52	0.52	0.15	0.15	0.40	0.40	0.40	0.40	0.40
v/c Ratio	0.95	0.36	0.31	1.12	0.54	0.53	1.63	0.34	0.72
Control Delay	46.3	9.9	51.0	124.1	35.2	28.6	328.8	28.6	12.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.3	9.9	51.0	124.1	35.2	28.6	328.8	28.6	12.5
LOS	D	A	D	F	D	C	F	C	B
Approach Delay		38.3		115.1		29.7		77.4	
Approach LOS		D		F		C		E	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 130	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.63	
Intersection Signal Delay: 57.5	Intersection LOS: E
Intersection Capacity Utilization 99.4%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 16: Marksheffel Rd & Peterson AFB Access/Full Access #2





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1090	90	220	45	115	205	150	665	25	280	445	750
Future Volume (veh/h)	1090	90	220	45	115	205	150	665	25	280	445	750
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	1185	98	239	49	125	0	163	723	27	304	484	462
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	1289	216	526	150	161		322	1669	62	303	1698	757
Arrive On Green	0.32	0.45	0.45	0.09	0.09	0.00	0.48	0.48	0.48	0.80	0.80	0.80
Sat Flow, veh/h	3456	482	1176	1043	1870	0	593	3493	130	712	3554	1585
Grp Volume(v), veh/h	1185	0	337	49	125	0	163	368	382	304	484	462
Grp Sat Flow(s),veh/h/ln	1728	0	1659	1043	1870	0	593	1777	1847	712	1777	1585
Q Serve(g_s), s	35.9	0.0	16.9	5.4	7.9	0.0	25.4	16.3	16.4	41.0	4.3	13.8
Cycle Q Clear(g_c), s	35.9	0.0	16.9	5.4	7.9	0.0	29.7	16.3	16.4	57.3	4.3	13.8
Prop In Lane	1.00		0.71	1.00		0.00	1.00		0.07	1.00		1.00
Lane Grp Cap(c), veh/h	1289	0	742	150	161		322	849	883	303	1698	757
V/C Ratio(X)	0.92	0.00	0.45	0.33	0.78		0.51	0.43	0.43	1.00	0.29	0.61
Avail Cap(c_a), veh/h	1309	0	864	221	288		322	849	883	303	1698	757
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.67	1.67	1.67
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.6	0.0	23.0	52.6	53.7	0.0	25.7	20.6	20.6	24.4	6.8	7.7
Incr Delay (d2), s/veh	10.5	0.0	0.4	1.3	7.7	0.0	5.6	1.6	1.5	52.3	0.4	3.6
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	16.5	0.0	6.7	1.5	4.0	0.0	4.0	7.1	7.4	13.0	1.5	3.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.2	0.0	23.4	53.8	61.4	0.0	31.3	22.2	22.2	76.7	7.2	11.4
LnGrp LOS	D	A	C	D	E		C	C	C	F	A	B
Approach Vol, veh/h		1522			174	A		913			1250	
Approach Delay, s/veh		37.2			59.3			23.8			25.6	
Approach LOS		D			E			C			C	

Timer - Assigned Phs		2		4		6	7	8				
Phs Duration (G+Y+Rc), s		61.8		58.2		61.8	43.3	14.8				
Change Period (Y+Rc), s		4.5		4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		48.5		62.5		48.5	39.5	18.5				
Max Q Clear Time (g_c+I1), s		31.7		18.9		59.3	37.9	9.9				
Green Ext Time (p_c), s		6.0		2.5		0.0	0.9	0.5				

Intersection Summary		
HCM 6th Ctrl Delay	31.3	
HCM 6th LOS	C	

Notes

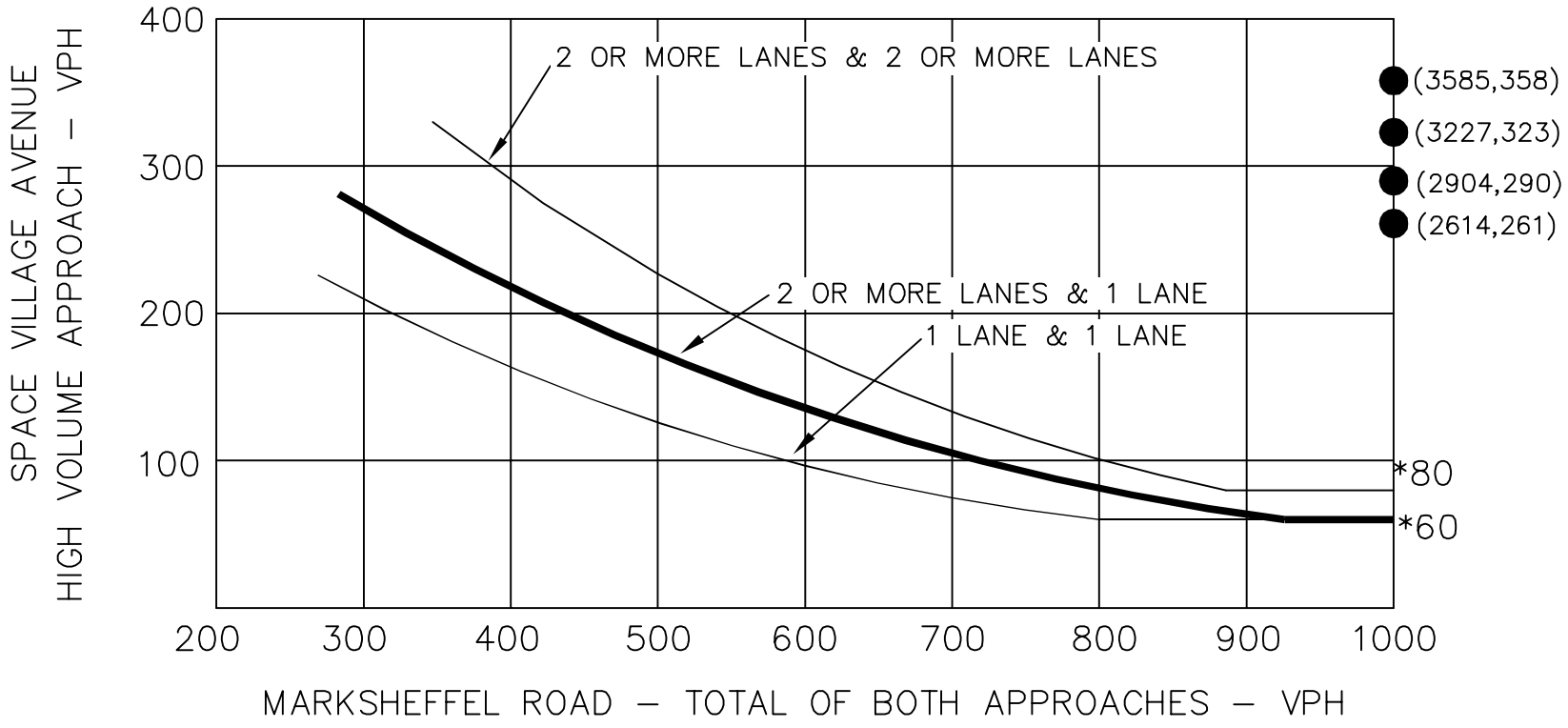
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

APPENDIX E

Signal Warrant Analysis

WARRANT 2 - FOUR HOUR VEHICULAR VOLUME (70% FACTOR)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 70 km/h (40 mph) ON MAJOR STREET)



SPACE VILLAGE AVENUE AND
MARKSHEFFEL ROAD
SIGNAL WARRANT ANALYSIS
FOUR HOUR VOLUME WARRANT

* NOTE: 80 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 60 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

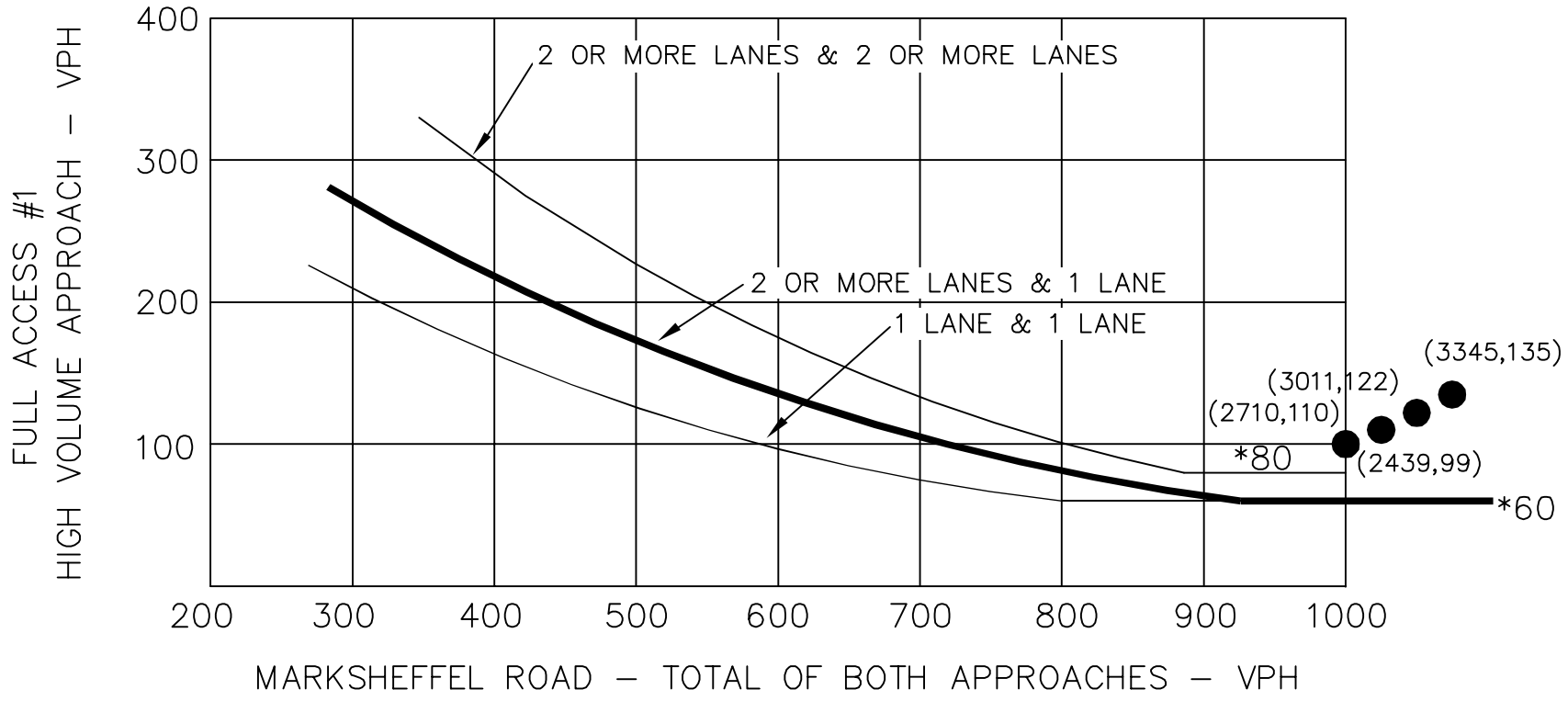
● 2025 TOTAL TRAFFIC DATA POINT WITH PROJECT

Source: Manual of Uniform Traffic Control Devices 2009

Kimley»Horn

WARRANT 2 - FOUR HOUR VEHICULAR VOLUME (70% FACTOR)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 70 km/h (40 mph) ON MAJOR STREET)



FULL ACCESS #1 AND
MARKSHEFFEL ROAD
SIGNAL WARRANT ANALYSIS
FOUR HOUR VOLUME WARRANT

* NOTE: 80 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 60 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

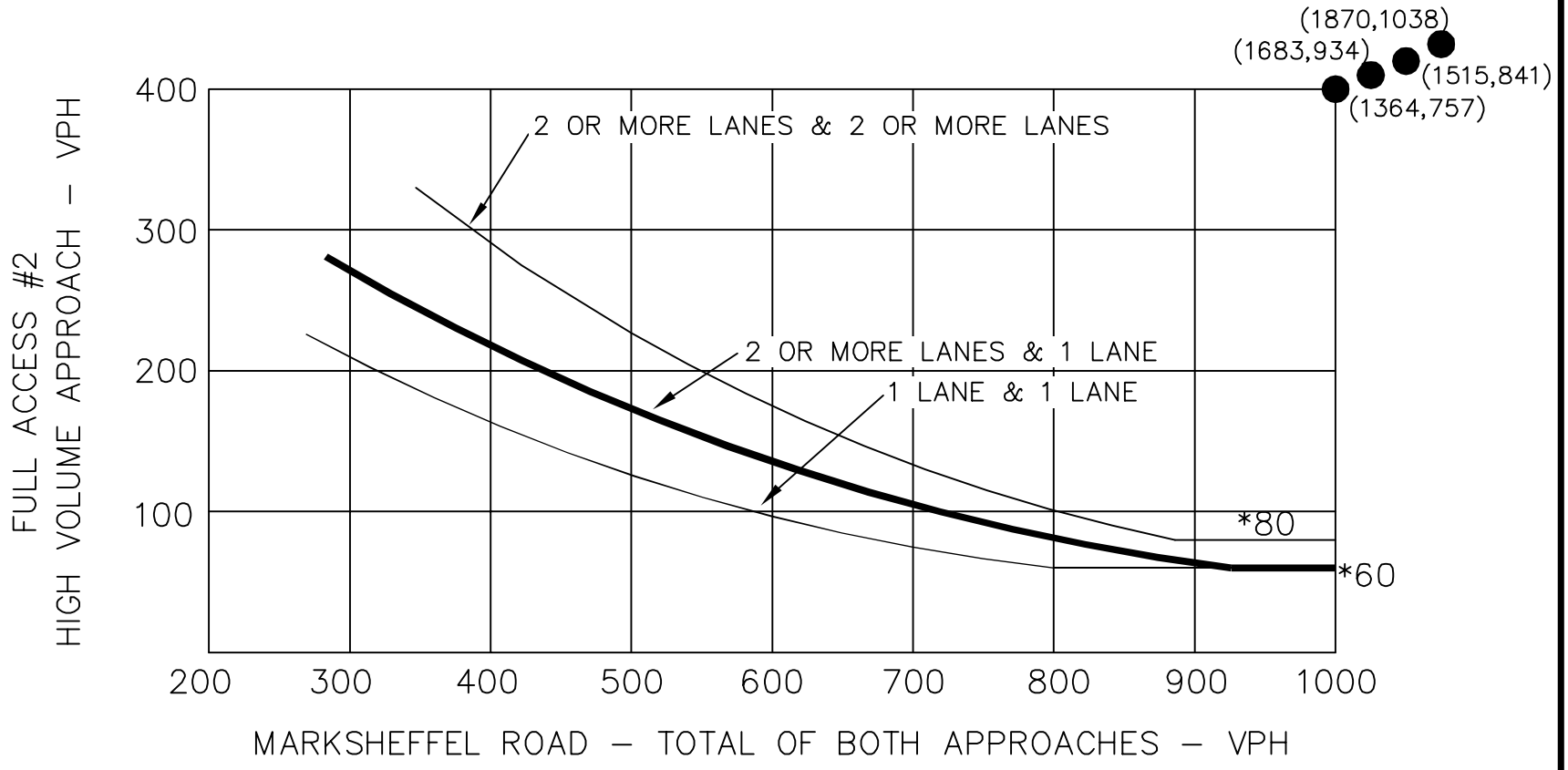
● 2025 TOTAL TRAFFIC DATA POINT WITH PROJECT

Source: Manual of Uniform Traffic Control Devices 2009

Kimley»Horn

WARRANT 2 - FOUR HOUR VEHICULAR VOLUME (70% FACTOR)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 70 km/h (40 mph) ON MAJOR STREET)



FULL ACCESS #2 AND
MARKSHEFFEL ROAD
SIGNAL WARRANT ANALYSIS
FOUR HOUR VOLUME WARRANT

* NOTE: 80 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 60 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

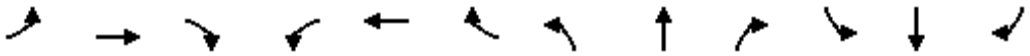
● 2025 TOTAL TRAFFIC DATA POINT WITH PROJECT

Source: Manual of Uniform Traffic Control Devices 2009

Kimley»Horn

APPENDIX F

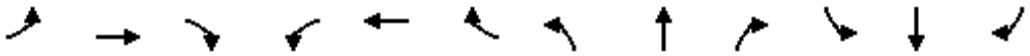
Queueing Analysis Worksheets



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	11	1032	715	5	863	143	344	527	210	356	1144	21
v/c Ratio	0.14	0.92	0.47	0.07	0.76	0.09	0.70	0.48	0.33	0.71	0.99	0.03
Control Delay	59.6	52.1	1.0	50.0	30.9	0.1	47.7	61.5	34.4	56.2	65.0	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.6	52.1	1.0	50.0	30.9	0.1	47.7	61.5	34.4	56.2	65.0	0.1
Queue Length 50th (ft)	8	400	0	4	295	0	147	228	101	136	461	0
Queue Length 95th (ft)	29	#527	0	m8	395	0	#248	289	173	179	#664	0
Internal Link Dist (ft)		711			1080			2518			924	
Turn Bay Length (ft)	375			300		375	1000		575	1000		700
Base Capacity (vph)	77	1141	1524	74	1168	1568	491	1100	631	757	1154	613
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	0.14	0.90	0.47	0.07	0.74	0.09	0.70	0.48	0.33	0.47	0.99	0.03

Intersection Summary

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.



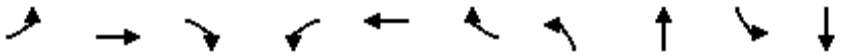
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	17	1161	456	16	1299	272	557	1021	309	264	544	16
v/c Ratio	0.19	0.85	0.29	0.16	0.95	0.17	1.03	0.97	0.50	0.74	0.64	0.03
Control Delay	59.4	41.1	0.5	60.1	47.0	0.1	70.3	47.4	19.8	65.7	45.8	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.4	41.1	0.5	60.1	47.0	0.1	70.3	47.4	19.8	65.7	45.8	0.1
Queue Length 50th (ft)	13	418	0	0	456	0	~196	250	101	100	188	0
Queue Length 95th (ft)	38	#542	0	m13	m494	m0	m#177	m#428	m99	#188	#302	0
Internal Link Dist (ft)		711			1080			2518			924	
Turn Bay Length (ft)	375			300		375	1000		575	1000		700
Base Capacity (vph)	94	1361	1568	119	1374	1583	540	1050	613	357	855	537
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	0.18	0.85	0.29	0.13	0.95	0.17	1.03	0.97	0.50	0.74	0.64	0.03

Intersection Summary

~ 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.

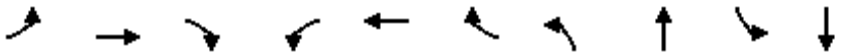
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	16	1231	849	5	1136	185	409	828	420	1378
v/c Ratio	0.19	0.73	0.56	0.06	0.72	0.12	0.75	0.58	0.74	0.92
Control Delay	60.0	37.2	1.5	50.6	28.2	0.1	42.7	58.8	55.6	52.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.0	37.2	1.5	50.6	28.2	0.1	42.7	58.8	55.6	52.0
Queue Length 50th (ft)	12	308	0	4	292	0	174	228	161	361
Queue Length 95th (ft)	37	356	0	m9	335	0	217	#318	206	#658
Internal Link Dist (ft)		711			1080			2518		924
Turn Bay Length (ft)	375			300		375	1000		1000	
Base Capacity (vph)	85	1806	1524	81	1758	1568	762	1420	785	1500
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	0.19	0.68	0.56	0.06	0.65	0.12	0.54	0.58	0.54	0.92

Intersection Summary

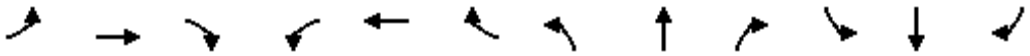
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	22	1446	527	16	1571	326	660	1515	324	665
v/c Ratio	0.30	0.82	0.34	0.21	0.94	0.21	0.85	0.90	0.85	0.60
Control Delay	66.2	40.3	0.6	66.3	50.6	0.1	32.2	25.0	72.8	44.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	66.2	40.3	0.6	66.3	50.6	0.1	32.2	25.0	72.8	44.9
Queue Length 50th (ft)	17	328	0	13	387	0	170	149	130	176
Queue Length 95th (ft)	45	452	0	m15	m#425	m0	m142	m146	#221	221
Internal Link Dist (ft)		711			1080			2518		924
Turn Bay Length (ft)	375			300		375	1000		1000	
Base Capacity (vph)	74	1769	1568	75	1671	1583	772	1686	383	1117
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	0.30	0.82	0.34	0.21	0.94	0.21	0.85	0.90	0.85	0.60

Intersection Summary

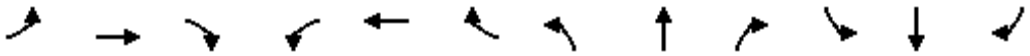
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	222	407	321	40	431	184	384	750	30	379	920	374
v/c Ratio	0.63	0.52	0.42	0.21	0.76	0.30	0.71	0.59	0.05	0.71	0.72	0.24
Control Delay	60.6	48.1	9.7	56.1	56.6	15.6	72.5	22.6	0.2	58.8	27.2	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	60.6	48.1	9.7	56.1	56.6	15.6	72.5	22.6	0.2	58.8	27.2	0.3
Queue Length 50th (ft)	87	153	51	15	168	57	155	243	0	145	183	0
Queue Length 95th (ft)	113	176	70	32	212	95	175	275	1	183	#458	0
Internal Link Dist (ft)		984			1405			463			2674	
Turn Bay Length (ft)	300		250	225		250	375		400	400		400
Base Capacity (vph)	418	809	839	302	653	708	736	1277	651	750	1284	1568
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	0.53	0.50	0.38	0.13	0.66	0.26	0.52	0.59	0.05	0.51	0.72	0.24

Intersection Summary

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



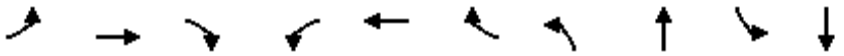
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	307	449	563	57	523	523	478	1467	43	242	1170	366
v/c Ratio	0.72	0.52	0.67	0.27	0.91	1.19	0.74	0.90	0.05	1.33	1.04	0.24
Control Delay	61.6	48.0	15.4	56.5	70.6	134.6	50.7	42.7	0.4	217.3	80.8	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	61.6	48.0	15.4	56.5	70.6	134.6	50.7	42.7	0.4	217.3	80.8	0.2
Queue Length 50th (ft)	120	167	167	22	212	~350	197	527	0	~129	~550	0
Queue Length 95th (ft)	164	220	243	42	#309	#631	253	#619	m0	m#173	m#668	m0
Internal Link Dist (ft)		984			1405			463			2674	
Turn Bay Length (ft)	300		250	225		250	375		400	400		400
Base Capacity (vph)	467	856	890	357	575	439	758	1630	797	182	1129	1553
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	0.66	0.52	0.63	0.16	0.91	1.19	0.63	0.90	0.05	1.33	1.04	0.24

Intersection Summary

~ 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.

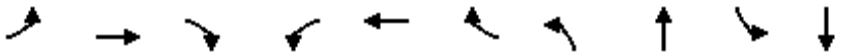
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	196	413	359	49	473	190	549	990	413	1407
v/c Ratio	0.59	0.52	0.43	0.25	0.79	0.30	0.82	0.56	0.73	0.88
Control Delay	58.9	46.7	8.4	56.4	57.0	15.0	73.2	18.9	59.4	33.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	58.9	46.7	8.4	56.4	57.0	15.0	73.2	18.9	59.4	33.4
Queue Length 50th (ft)	77	152	52	19	183	58	192	185	169	179
Queue Length 95th (ft)	113	202	105	39	243	103	260	253	214	#505
Internal Link Dist (ft)		984			1405			463		2674
Turn Bay Length (ft)	300		250	225		250	375		400	
Base Capacity (vph)	418	798	853	366	661	735	736	1759	779	1606
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	0.47	0.52	0.42	0.13	0.72	0.26	0.75	0.56	0.53	0.88

Intersection Summary

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



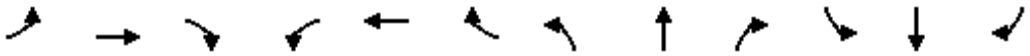
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	293	495	772	60	576	571	620	1842	273	1892
v/c Ratio	0.72	0.56	0.88	0.28	0.92	1.15	0.89	0.85	1.03	1.26
Control Delay	61.3	46.9	27.4	56.5	70.4	117.2	78.9	37.2	109.5	162.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	61.3	46.9	27.4	56.5	70.4	117.2	78.9	37.2	109.5	162.0
Queue Length 50th (ft)	114	183	334	23	234	~372	263	361	~118	~693
Queue Length 95th (ft)	m154	246	#731	45	#344	#692	#345	422	m#166	#793
Internal Link Dist (ft)		984			1405			463		2674
Turn Bay Length (ft)	300		250	225		250	375		400	
Base Capacity (vph)	439	882	883	376	624	495	712	2166	266	1499
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	0.67	0.56	0.87	0.16	0.92	1.15	0.87	0.85	1.03	1.26

Intersection Summary

~ 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.

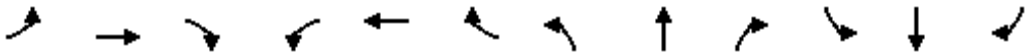
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	41	130	212	91	174	68	378	1156	50	60	1408	158
v/c Ratio	0.41	0.50	0.53	0.66	0.67	0.24	0.83	0.42	0.04	0.24	0.74	0.17
Control Delay	57.4	53.6	10.7	70.8	61.4	12.0	30.4	12.9	4.4	20.5	21.1	3.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.4	53.6	10.7	70.8	61.4	12.0	30.4	12.9	4.4	20.5	21.1	3.6
Queue Length 50th (ft)	29	95	0	68	130	0	188	337	9	17	237	2
Queue Length 95th (ft)	50	118	25	84	136	17	319	440	26	m43	#700	m14
Internal Link Dist (ft)		805			708			537			546	
Turn Bay Length (ft)	225		250	300		200	400		425	425		425
Base Capacity (vph)	179	457	549	243	457	440	534	2781	1254	246	1915	929
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	0.23	0.28	0.39	0.37	0.38	0.15	0.71	0.42	0.04	0.24	0.74	0.17

Intersection Summary

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.



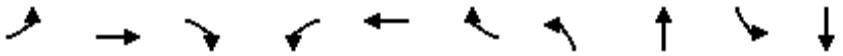
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	72	161	328	165	203	44	308	1885	71	182	1500	51
v/c Ratio	0.50	0.46	0.72	0.92	0.58	0.13	1.02	0.72	0.06	1.86	0.73	0.05
Control Delay	55.5	47.2	27.5	97.4	50.9	8.4	78.1	16.2	3.3	423.9	8.6	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.5	47.2	27.5	97.4	50.9	8.4	78.1	16.2	3.3	423.9	8.6	0.4
Queue Length 50th (ft)	49	110	95	124	142	0	~201	463	5	~216	153	0
Queue Length 95th (ft)	100	178	203	#202	189	17	#374	645	m17	m#263	m165	m0
Internal Link Dist (ft)		805			708			537			546	
Turn Bay Length (ft)	225		250	300		200	400		425	425		425
Base Capacity (vph)	156	380	477	193	380	366	303	2603	1183	98	2049	939
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	0.46	0.42	0.69	0.85	0.53	0.12	1.02	0.72	0.06	1.86	0.73	0.05

Intersection Summary

~ 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.

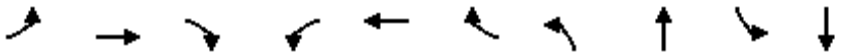
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	33	125	201	76	158	60	462	1718	65	1913
v/c Ratio	0.32	0.52	0.53	0.59	0.65	0.24	0.91	0.43	0.54	0.75
Control Delay	54.1	55.4	11.3	66.6	61.8	15.2	45.3	10.9	37.6	20.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	54.1	55.4	11.3	66.6	61.8	15.2	45.3	10.9	37.6	20.7
Queue Length 50th (ft)	24	92	0	56	118	3	271	299	21	243
Queue Length 95th (ft)	55	146	65	104	180	41	#455	423	m43	334
Internal Link Dist (ft)		805			708			537		546
Turn Bay Length (ft)	225		250	300		200	400		425	
Base Capacity (vph)	154	364	471	194	364	354	565	4021	120	2541
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	0.21	0.34	0.43	0.39	0.43	0.17	0.82	0.43	0.54	0.75

Intersection Summary

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.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	76	201	408	168	196	43	364	2413	185	2049
v/c Ratio	0.42	0.51	0.68	0.95	0.50	0.11	0.92	0.67	3.03	0.83
Control Delay	47.8	46.1	14.3	102.3	45.8	7.5	48.3	22.8	929.8	18.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.8	46.1	14.3	102.3	45.8	7.5	48.3	22.8	929.8	18.5
Queue Length 50th (ft)	50	135	43	126	132	0	216	600	~243	297
Queue Length 95th (ft)	101	211	151	#260	206	23	#391	708	m#236	m254
Internal Link Dist (ft)		805			708			537		546
Turn Bay Length (ft)	225		250	300		200	400		425	
Base Capacity (vph)	195	426	624	191	426	405	421	3608	61	2466
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	0.39	0.47	0.65	0.88	0.46	0.11	0.86	0.67	3.03	0.83

Intersection Summary

~ 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.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	58	143	708	1091	148	6	552	974	732	5	1771
v/c Ratio	0.32	0.67	0.46	1.10	0.28	0.00	1.14	0.53	0.50	0.02	1.08
Control Delay	59.2	65.2	1.0	89.3	24.0	0.0	125.7	30.0	1.2	7.6	74.1
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	59.2	65.2	1.0	89.3	24.0	0.0	125.7	30.0	1.2	7.6	74.1
Queue Length 50th (ft)	22	107	0	~319	81	0	~210	211	0	2	~580
Queue Length 95th (ft)	38	144	0	#401	m116	m0	#331	268	0	m1	#720
Internal Link Dist (ft)		526			1295			785			908
Turn Bay Length (ft)	375			475			900		600	800	
Base Capacity (vph)	191	271	1538	995	554	1553	486	1835	1468	230	1633
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	0.30	0.53	0.46	1.10	0.27	0.00	1.14	0.53	0.50	0.02	1.08

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
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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.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	84	195	909	1215	184	13	698	1823	948	6	983
v/c Ratio	0.38	0.78	0.57	1.00	0.30	0.01	0.82	1.04	0.60	0.04	1.13
Control Delay	58.9	70.7	1.5	53.6	16.5	0.0	49.1	71.4	1.7	16.0	103.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	58.9	70.7	1.5	53.6	16.5	0.0	49.1	71.4	1.7	16.0	103.7
Queue Length 50th (ft)	32	145	0	~285	94	0	215	~579	0	1	~342
Queue Length 95th (ft)	50	190	0	290	m111	m0	288	#677	0	m3	#400
Internal Link Dist (ft)		526			1295			785			908
Turn Bay Length (ft)	375			475			900		600	800	
Base Capacity (vph)	237	279	1583	1214	628	1568	855	1753	1568	139	873
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	0.35	0.70	0.57	1.00	0.29	0.01	0.82	1.04	0.60	0.04	1.13

Intersection Summary

~ 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.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	54	125	630	1326	152	5	577	1119	861	10	2104
v/c Ratio	0.27	0.62	0.41	1.19	0.28	0.00	1.42	0.61	0.59	0.06	1.26
Control Delay	56.5	63.6	0.8	123.5	19.4	0.0	239.3	31.8	1.7	8.3	143.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.5	63.6	0.8	123.5	19.4	0.0	239.3	31.8	1.7	8.3	143.2
Queue Length 50th (ft)	21	94	0	~422	73	0	~265	252	0	2	~768
Queue Length 95th (ft)	41	153	0	#522	m102	m0	#390	321	0	m2	m#808
Internal Link Dist (ft)		526			1295			785			908
Turn Bay Length (ft)	375			475			900		600	800	
Base Capacity (vph)	300	271	1538	1117	556	1553	406	1830	1468	175	1668
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	0.18	0.46	0.41	1.19	0.27	0.00	1.42	0.61	0.59	0.06	1.26

Intersection Summary

~ 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.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	76	168	799	1234	158	11	724	2109	1203	5	1130
v/c Ratio	0.42	0.71	0.50	1.15	0.28	0.01	0.81	1.07	0.77	0.04	1.13
Control Delay	62.2	66.9	1.2	117.8	8.0	0.0	47.1	79.3	3.7	19.0	116.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	62.2	66.9	1.2	117.8	8.0	0.0	47.1	79.3	3.7	19.0	116.0
Queue Length 50th (ft)	29	126	0	~412	47	0	221	~675	0	2	~342
Queue Length 95th (ft)	56	199	0	m#392	m42	m0	298	#795	0	m3	m#435
Internal Link Dist (ft)		526			1295			785			908
Turn Bay Length (ft)	375			475			900		600	800	
Base Capacity (vph)	185	279	1583	1070	592	1568	898	1963	1568	132	996
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	0.41	0.60	0.50	1.15	0.27	0.01	0.81	1.07	0.77	0.04	1.13

Intersection Summary

~ 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.

Lane Group	WBL	NBT	SBL	SBT
Lane Group Flow (vph)	152	1293	109	1435
v/c Ratio	0.68	0.45	0.37	0.50
Control Delay	52.8	5.7	9.0	5.4
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	52.8	5.7	9.0	5.4
Queue Length 50th (ft)	86	268	16	121
Queue Length 95th (ft)	150	336	m42	226
Internal Link Dist (ft)	297	530		470
Turn Bay Length (ft)			150	
Base Capacity (vph)	333	2867	292	2873
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.46	0.45	0.37	0.50

Intersection Summary

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

Lane Group	WBL	NBT	SBL	SBT
Lane Group Flow (vph)	196	1940	223	1473
v/c Ratio	0.73	0.70	2.05	0.53
Control Delay	57.3	12.9	513.7	11.9
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	57.3	12.9	513.7	11.9
Queue Length 50th (ft)	127	513	~266	321
Queue Length 95th (ft)	196	603	m#408	477
Internal Link Dist (ft)	297	530		470
Turn Bay Length (ft)			150	
Base Capacity (vph)	409	2752	109	2759
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.48	0.70	2.05	0.53

Intersection Summary

~ 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.

Lane Group	WBL	NBT	SBL	SBT
Lane Group Flow (vph)	272	1935	152	1804
v/c Ratio	0.82	0.51	1.32	0.48
Control Delay	62.1	8.5	208.0	10.2
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	62.1	8.5	208.0	10.2
Queue Length 50th (ft)	183	267	~151	199
Queue Length 95th (ft)	273	m342	m#244	256
Internal Link Dist (ft)	297	530		470
Turn Bay Length (ft)			150	
Base Capacity (vph)	395	3773	115	3779
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.69	0.51	1.32	0.48

Intersection Summary

~ 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.

Lane Group	WBL	NBT	SBL	SBT
Lane Group Flow (vph)	272	2500	359	2147
v/c Ratio	0.82	0.67	5.70	0.58
Control Delay	63.9	12.1	2163.2	13.6
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	63.9	12.1	2163.2	13.6
Queue Length 50th (ft)	197	431	~520	328
Queue Length 95th (ft)	284	m518	m#653	381
Internal Link Dist (ft)	297	530		470
Turn Bay Length (ft)			150	
Base Capacity (vph)	408	3707	63	3720
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.67	0.67	5.70	0.58

Intersection Summary

~ 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.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	614	169	27	185	174	391	92	484	766
v/c Ratio	0.81	0.26	0.19	0.73	0.35	0.19	0.17	0.23	0.62
Control Delay	40.6	7.6	48.4	47.5	16.9	12.6	11.4	11.9	9.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.6	7.6	48.4	47.5	16.9	12.6	11.4	11.9	9.2
Queue Length 50th (ft)	195	17	19	88	67	70	36	110	140
Queue Length 95th (ft)	228	60	46	158	136	111	70	144	349
Internal Link Dist (ft)		273		317		401		520	
Turn Bay Length (ft)	175				150		150		150
Base Capacity (vph)	764	755	227	370	492	2070	553	2073	1244
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.80	0.22	0.12	0.50	0.35	0.19	0.17	0.23	0.62

Intersection Summary

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	967	261	33	245	141	614	190	408	679
v/c Ratio	0.86	0.29	0.20	0.81	0.36	0.39	0.67	0.26	0.63
Control Delay	37.4	5.1	45.9	55.4	26.9	23.9	41.9	24.3	9.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.4	5.1	45.9	55.4	26.9	23.9	41.9	24.3	9.5
Queue Length 50th (ft)	303	24	23	135	72	166	97	91	69
Queue Length 95th (ft)	374	66	53	221	136	228	#244	175	217
Internal Link Dist (ft)		206		317		401		520	
Turn Bay Length (ft)	175				150		150		150
Base Capacity (vph)	1134	954	208	369	390	1575	283	1580	1082
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.85	0.27	0.16	0.66	0.36	0.39	0.67	0.26	0.63

Intersection Summary

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

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	734	201	49	337	207	468	130	582	940
v/c Ratio	0.80	0.24	0.23	0.95	0.63	0.28	0.34	0.35	0.79
Control Delay	36.1	5.9	45.3	76.0	34.8	19.7	19.0	17.2	16.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.1	5.9	45.3	76.0	34.8	19.7	19.0	17.2	16.0
Queue Length 50th (ft)	219	18	33	213	119	113	63	149	311
Queue Length 95th (ft)	292	62	71	#395	218	151	m111	197	344
Internal Link Dist (ft)		273		317		401		520	
Turn Bay Length (ft)	175				150		150		
Base Capacity (vph)	931	837	214	360	327	1680	387	1685	1183
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.79	0.24	0.23	0.94	0.63	0.28	0.34	0.35	0.79

Intersection Summary

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.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	1185	337	49	348	163	750	304	484	815
v/c Ratio	0.95	0.36	0.31	1.12	0.54	0.53	1.63	0.34	0.72
Control Delay	46.3	9.9	51.0	124.1	35.2	28.6	328.8	28.6	12.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.3	9.9	51.0	124.1	35.2	28.6	328.8	28.6	12.5
Queue Length 50th (ft)	403	75	34	~267	95	226	~333	146	130
Queue Length 95th (ft)	#548	138	74	#457	170	286	#507	216	270
Internal Link Dist (ft)		206		317		401		520	
Turn Bay Length (ft)	175				150		150		
Base Capacity (vph)	1250	940	160	312	304	1425	187	1430	1125
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.95	0.36	0.31	1.12	0.54	0.53	1.63	0.34	0.72

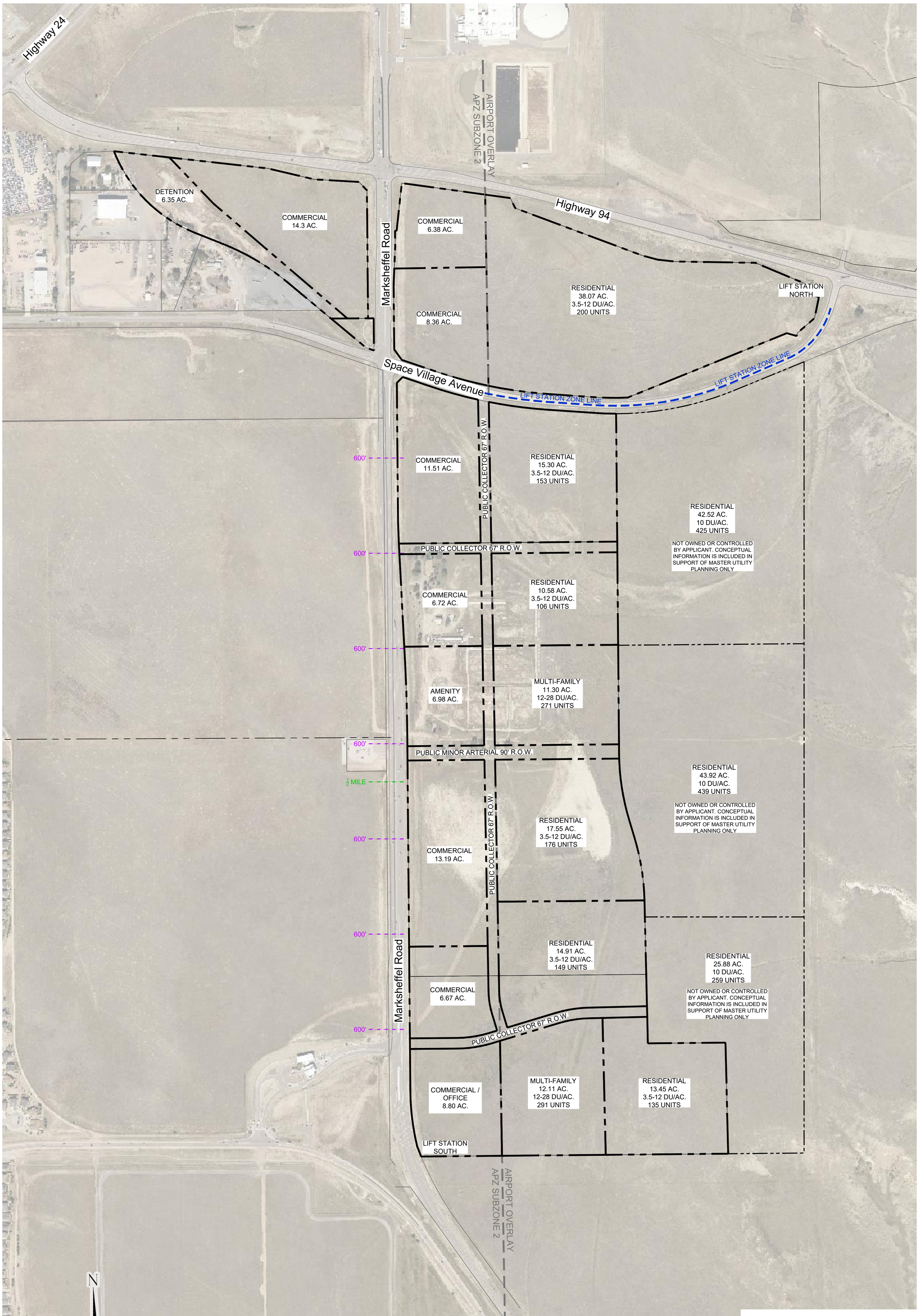
Intersection Summary

~ 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.

APPENDIX G

Conceptual Site Plan



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Reagan Ranch

OVERALL SITE PLAN