TRANSPORTATION MEMORANDUM

For

Sunflower Landscapes
El Paso County, Colorado

PCD File No: VA265

June 2026

Prepared for:

Sunflower Landscapes
1925 Aeroplaza Drive
Colorado Springs, Colorado 80916

Prepared by:

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Project Engineer
Leo Ornelas, EIT

Engineer in Responsible Charge:
Brandon Wilson, PE

26-052670

Traffic Engineer's Statement

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

Brandon Wilson

06/30/2026

Brandon Wilson, P.E. #68282 Date

Developer's Statement

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

Dustin Hamilton Date
Sunflower Landscapes
1925 Aeroplaza Drive
Colorado Springs, Colorado 80916

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The description of the proposed access points does not match what is shown on the current site plan. The site plan depicts the existing access and a proposed access near the north side of the property; however, no access is shown across from the school driveway as described in the narrative. Please revise the site description and access-point analysis so they accurately reflect the access locations shown on the current site plan drawing.

Project Overview

This transportation memorandum is provided as a planning document and addresses the capacity, geometric, and control requirements associated with the development entitled Sunflower Landscapes. This analysis was prepared in accordance with Section B.1.2.C of the County's Engineering Criteria Manual (ECM)[1].

This proposed industrial development consists of a Sunflower Landscapes contractor equipment yard. The development is located near the northwest corner of Woodmen Road and Mohawk Road in El Paso County, Colorado.

Study Area

The study area to be examined in this analysis encompasses the Mohawk Road intersections with Woodmen Road, Woodmen Frontage Road, and the proposed site access.

Figure 1 illustrates location of the site and study intersections.

Site Description

Land for the development is currently occupied by a single-family detached home. The area is surrounded by a mix of industrial, recreational, and residential land uses.

The proposed development is understood to entail the new construction of a contractor equipment yard with an associated shop and office building constructed over approximately five acres of land.

Proposed access to the development is provided via one full-movement access on Mohawk Road aligning with School Access (referred to as Site Access). The existing access currently serving the single-family detached home will remain and will be gated. An additional third access is proposed near the north side of the property and will also be gated. In order to provide a conservative analysis, all site trips are assumed to enter/exit the site through the proposed Site Access.

General site and access locations are shown on Figure 1.

A site plan, as prepared by Sunflower Landscapes, is shown in Figure 2. This plan is provided for illustrative purposes only.

[1] El Paso County Engineering Criteria Manual, El Paso County, January 9, 2025.

A conceptual sight distance exhibit, illustrating approximate intersection sight distance triangles, is included for reference in Appendix D. This two-dimensional exhibit does not consider the potential for landscaping, utility, nor vertical curve obstructions, and was prepared in accordance to Table 2-35 of the County's ECM and Section 9.5.3.2 of the American Association of State Highway and Transportation Officials' (AASHTO) A Policy on Geometric Design of Highway and Streets (Green Book)[2] and is provided for illustrative purposes only.

A two-dimensional exhibit does not accurately reflect whether the required sight distance is met, the vertical profile must be considered. A statement must be included whether or not the sight distance is met.

The sight distance analysis may be performed at the site development plan application instead of the variance application. If the applicant is planning to postpone the sight distance analysis, please clearly state that in this report.

Please note the the sight distance analysis shall be reflective of the type of traffic utilizing the site.

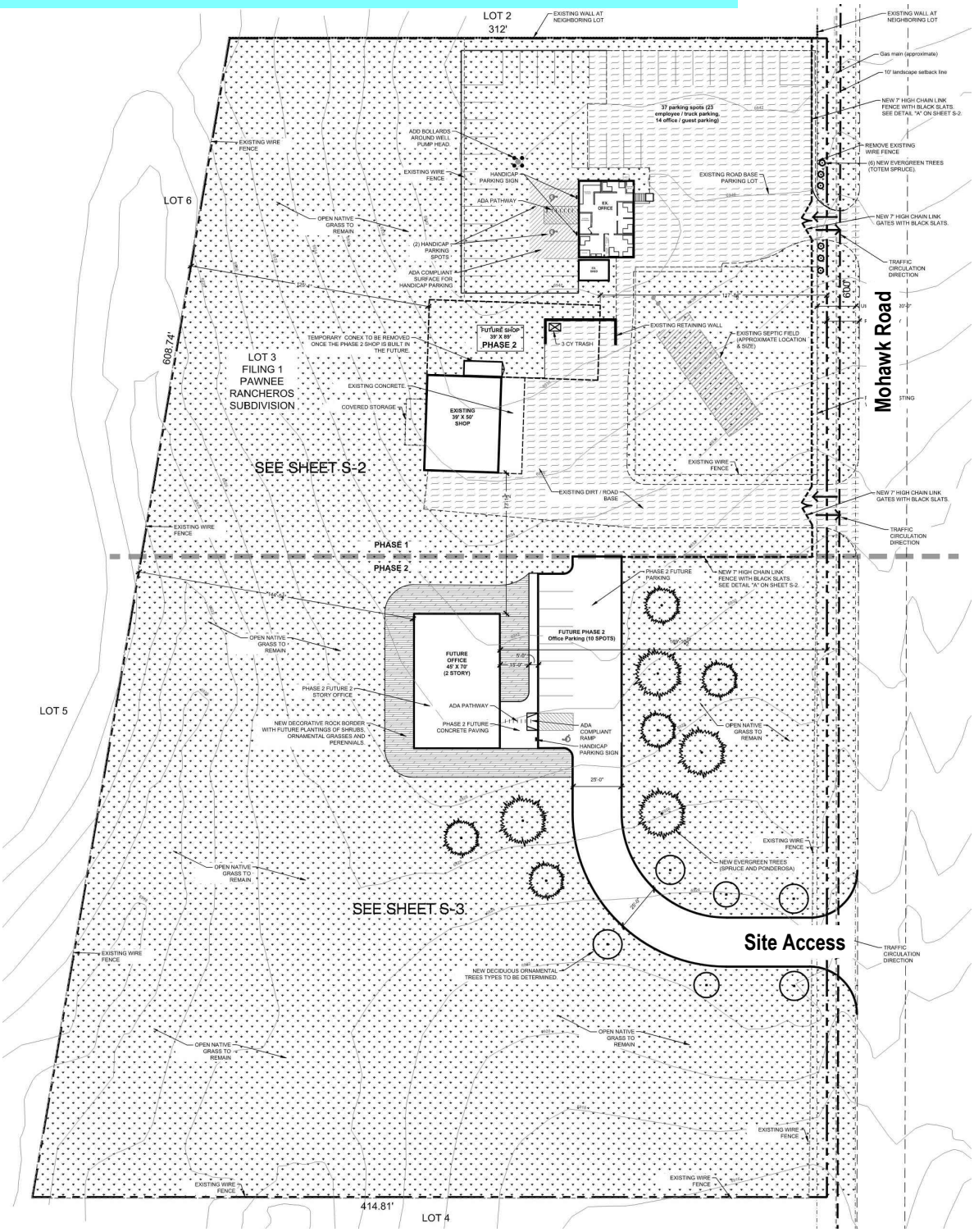
[2] A Policy on Geometric Design of Highways and Streets (7th Edition), American Association of State Highway and Transportation Officials, 2018.


North
Not to Scale
Kenosha Drive
Ponca Road
Development Site
Mohawk Road
Brule Road
Mounted Range Drive
Woodmen Frontage Road
Woodmen Road

This is a previous version of the site plan drawing. The current drawing does not depict a third access across from the school driveway. Please update and revise the access narrative on Page 1 and the corresponding access analysis so they accurately reflect the access points shown on the current site plan drawing.

North

Not to Scale



Existing and Committed Surface Transportation Network

Within the study area, Woodmen Road is the primary roadway that will accommodate traffic to and from the proposed development. The secondary roadways include Woodmen Frontage Road and Mohawk Road. A brief description of each roadway, based on Colorado Springs Major Thoroughfare Plan (MTP)[3] and the County's Major Transportation Corridors Plan (MTCP)[4] is provided below.

Please include ownership

City

Woodmen Road is an east-west expressway roadway having six through lanes (three lanes in each direction) with exclusive turn lanes at the intersection within the study area. Woodmen Road provides a posted speed limit of 55 MPH.

Woodmen Frontage Road is an east-west roadway having two through lanes (one lane in each direction) with shared turn lanes at the intersection within the study area. Woodmen Frontage Road is unclassified in the municipal transportation plans. However, per Table 2-5 of the County's ECM and the roadway's apparent cross-section, Woodmen Frontage Road is assumed to be classified as a rural minor collector roadway and has a posted speed limit of 35 MPH.

County

Mohawk Road is a north-south roadway having two through lanes (one lane in each direction) with a combination of shared and exclusive turn lanes at the intersections within the study area. Mohawk Road is unclassified in the municipal transportation plans. However, per Table 2-5 of the County's ECM, and the roadway's apparent cross-section, Mohawk Road is assumed to be classified as a rural local road and has a posted speed limit of 30 MPH.

The study intersection of Woodmen Road and Mohawk Road is signalized. All other study intersections operate under a stop-controlled condition. A stop-controlled intersection is defined as a roadway intersection where vehicle rights-of-way are controlled by one or more "STOP" signs.

Pursuant to the County's MTCP, Woodmen Road will be widened from four lanes to six lanes from Golden Sage Road to U.S. Highway 24. However, this improvement isn't anticipated until Year 2045 and therefore was not considered within this analysis.

[3] Major Thoroughfare Plan, City of Colorado Springs, May 2025.
[4] Major Transportation Corridors Plan, Felsburg Holt & Ullevig, July 18, 2024.

II. Existing Traffic Conditions

Morning (AM) and afternoon (PM) peak hour traffic counts were collected at the intersections of Mohawk Road with Woodmen Road and Woodmen Frontage Road. Average daily traffic (ADT) volumes were collected over a 24-hour period on Mohawk Road. Counts were collected on Tuesday, June 2, 2026, with AM peak hour counts being collected during the period of 7:00 a.m. to 9:00 a.m. and PM peak hour counts being collected during the period of 4:00 p.m. to 6:00 p.m.

Peak hour traffic counts shown for the Mohawk Road and School Access intersection were considered using standard traffic generation characteristics compiled by the Institute of Transportation Engineers (ITE) in their report entitled Trip Generation Manual, 12th Edition. However, the adjacent school is closed, therefore no ingress/egress trips were shown at this intersection.

Existing volumes and intersection geometry are shown in Figure 3. Traffic count data is included for reference in Appendix A.

Existing signal timing parameters for Woodmen Road and Mohawk Road were obtained from the City of Colorado Springs and used throughout this study to the best extent possible in order to remain consistent with existing signal coordination plans. City signal timing information received is included for reference in Appendix A.

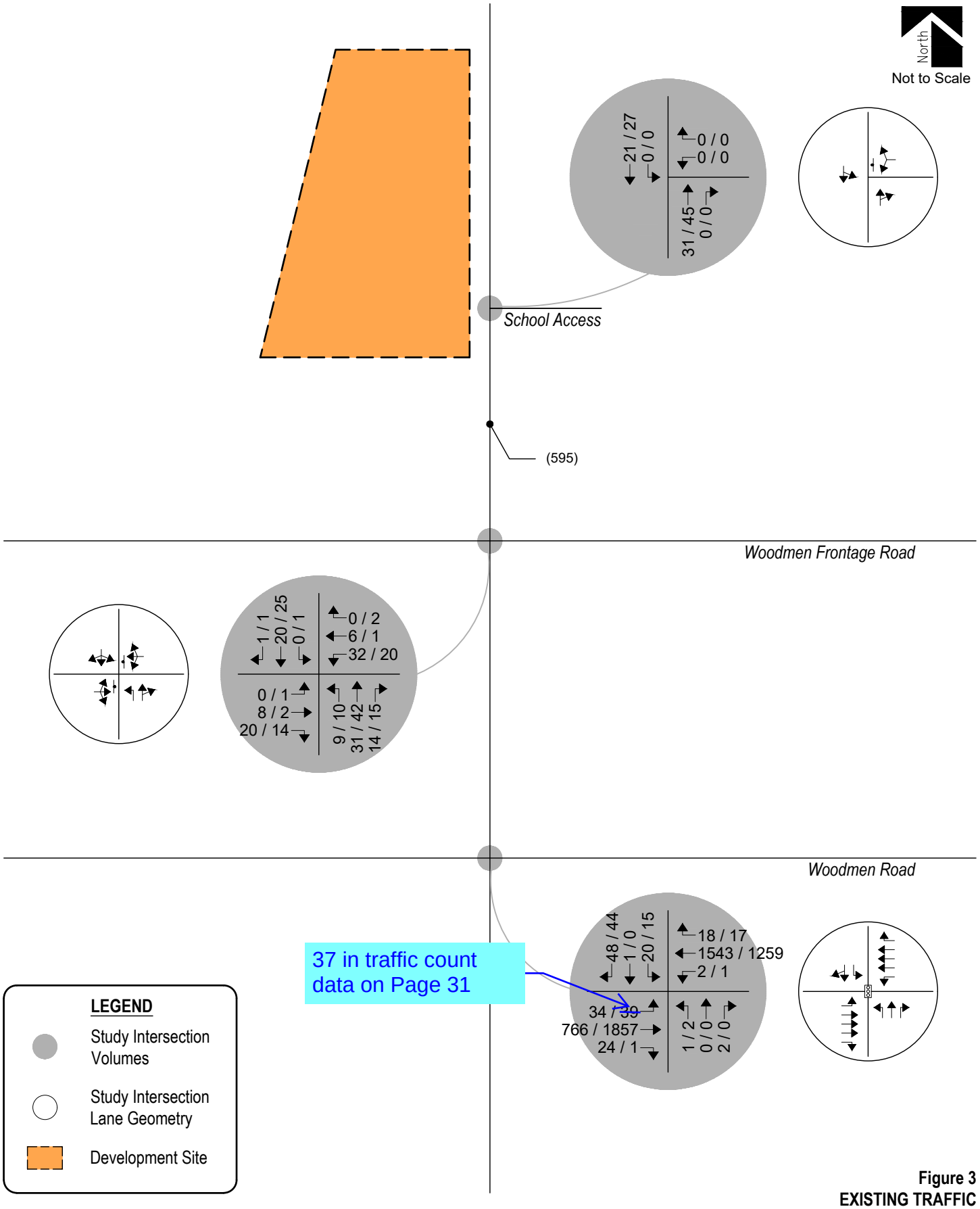


Figure 3
EXISTING TRAFFIC
Volumes & Intersection Geometry
AM / PM Peak Traffic Hour
(ADT) : Average Daily Traffic

Peak Hour Intersection Levels of Service – Existing Traffic

The Signalized and Unsignalized Intersection Analysis techniques, as published in the Highway Capacity Manual (HCM), 7th Edition, by the Transportation Research Board and as incorporated into the SYNCHRO computer program, were used to analyze the study intersections for existing and future traffic conditions. These nationally accepted techniques allow for the determination of intersection level of service (LOS) based on the congestion and delay of each traffic movement.

Pursuant to Section B.4.1.A of the County's ECM, the design objective of each scenario of this study shall be level of service "D". Level of service is a method of measurement used by transportation professionals to quantify a driver's perception of travel conditions that include travel time, number of stops, and total amount of stopped delay experienced on a roadway network. The HCM categorizes level of service into a range from "A" which indicates little, if any, vehicle delay, to "F" which indicates a level of operation considered unacceptable to most drivers. These levels of service grades with brief descriptions of the operating condition, for unsignalized and signalized intersections, are included for reference in Appendix B and have been used throughout this study.

The level of service analyses results for existing conditions are summarized in Table 1.

Intersection capacity worksheets developed for this study are provided in Appendix C.

Table 1 – Intersection Capacity Analysis Summary – Existing Traffic

INTERSECTION LANE GROUPS	LEVEL OF SERVICE AM PEAK HOUR	 PM PEAK HOUR
Woodmen Road / Mohawk Road (Signalized)	A (7.4)	A (6.5)
Woodmen Frontage Road / Mohawk Road (Stop-Controlled)		
Eastbound Left, Through, and Right	A	A
Westbound Left, Through, and Right	A	A
Northbound Left	A	A
Southbound Left, Through, and Right	A	A
Mohawk Road / School Access (Stop-Controlled)		
Westbound Left and Right	A	A
Southbound Left and Through	A	A

Key: Signalized Intersection: Level of Service (Control Delay in sec/veh)
Stop-Controlled Intersection: Level of Service

Existing Traffic Analysis Results

Under existing conditions, operational analysis shows that all intersections have overall operations at LOS A during the morning and afternoon peak traffic hours.

III. Future Traffic Conditions Without Proposed Development

Background traffic is the traffic projected to be on area roadways without consideration of the proposed development. Background traffic includes traffic generated by development of vacant parcels in the area.

To account for projected increases in background traffic for Year 2028, a compounded annual growth rate was determined using population growth estimates provided by the County's MTCP, which anticipates a 10-year growth rate between one and two percent. Therefore, in order to provide for a conservative analysis, a growth rate of two percent was applied to existing traffic volumes.

To account for projected traffic from adjacent developments not yet built, trip generations from the Woodmen & Mohawk Residential[5], the Percheron Master Plan Amendment[6], and the Woodmen East Commercial Center Traffic Impact Analysis[7] were added to background traffic volumes.

Projected background traffic volumes and intersection geometry for Year 2028 are shown in Figure 4.

The soccer complex south of Woodmen Road is not mentioned in the narrative. Please include in the analysis and narrative.

[5] Woodmen & Mohawk Residential: Traffic Impact Study, SM ROCHA, LLC, July 2022.
[6] Percheron Master Plan Amendment: Traffic Impact Study, SM ROCHA, LLC, October 2025.
[7] Woodmen East Commercial Center: Traffic Impact Analysis, LSC Transportation Consultants, December 8, 2021.

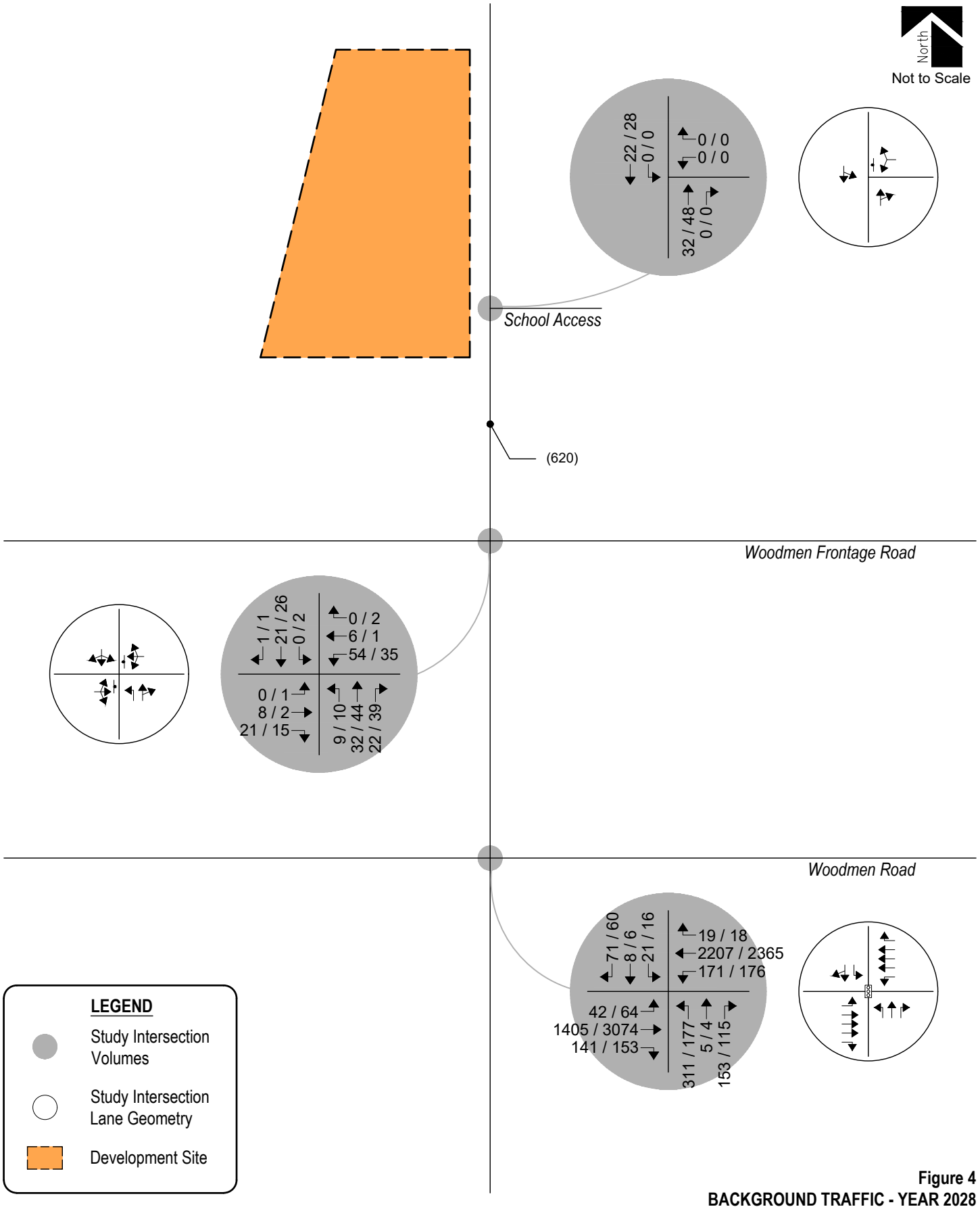


Figure 4
BACKGROUND TRAFFIC - YEAR 2028
Volumes & Intersection Geometry
AM / PM Peak Traffic Hour
(ADT) : Average Daily Traffic

Peak Hour Intersection Levels of Service – Background Traffic

As with existing traffic conditions, the operations of study intersections were analyzed under background conditions, without the proposed development, using the SYNCHRO computer program.

Background traffic level of service analysis results for Year 2028 are listed in Table 2.

Definitions of levels of service are given in Appendix B. Intersection capacity worksheets are provided in Appendix C.

Table 2 – Intersection Capacity Analysis Summary – Background Traffic – Year 2028

INTERSECTION LANE GROUPS	LEVEL OF SERVICE AM PEAK HOUR	 PM PEAK HOUR
Woodmen Road / Mohawk Road (Signalized)	F (98.0)	F (112.7)
Woodmen Road / Mohawk Road (Signalized) (Mitigated)	*C (33.6)*	*D (49.2)*
Woodmen Frontage Road / Mohawk Road (Stop-Controlled)		
Eastbound Left, Through, and Right	A	A
Westbound Left, Through, and Right	A	A
Northbound Left	A	A
Southbound Left, Through, and Right	A	A
Mohawk Road / School Access (Stop-Controlled)		
Westbound Left and Right	A	A
Southbound Left and Through	A	A

Key: Signalized Intersection: Level of Service (Control Delay in sec/veh)
Stop-Controlled Intersection: Level of Service

Background Traffic Analysis Results – Year 2028

By Year 2028 and upon development build-out of the surrounding area, traffic analysis indicates that the signalized intersection of Woodmen Road with Mohawk Road has overall operations at LOS F during the AM and PM peak traffic hours. The LOS F operations anticipated during the both peak traffic periods are attributed to the eastbound and westbound through volumes. To mitigate the projected LOS F operations, it is recommended to increase eastbound and westbound signal split timing by taking away from northbound and southbound split timing. This mitigating scenario is shown to allow for LOS C operations during the morning peak traffic hour and LOS D operations during the afternoon peak traffic hour.

Unsignalized intersections within the study area operate at LOS A during both AM and PM peak traffic periods.

IV. Proposed Project Traffic

Trip Generation

Standard traffic generation characteristics compiled by the Institute of Transportation Engineers (ITE) in their report entitled Trip Generation Manual, 12th Edition, were applied to the existing and proposed land uses in order to estimate average daily traffic (ADT), AM Peak Hour, and PM Peak Hour vehicle trips. A vehicle trip is defined as a one-way vehicle movement from a point of origin to a point of destination.

The ITE land use codes 151 (Mini-Warehouse) and 210 (Single-Family Detached Housing) were used for estimating trip generation because of their conservative rates and best fit to the existing and proposed land use descriptions.

Trip generation rates used in this study are presented in Table 3.

Table 3 – Trip Generation Rates

ITE CODE	LAND USE	UNIT	TRIP GENERATION RATES						
			24 HOUR	AM PEAK HOUR			PM PEAK HOUR		
				ENTER	EXIT	TOTAL	ENTER	EXIT	TOTAL
151	Mini-Warehouse	KSF	1.29	0.05	0.03	0.08	0.07	0.07	0.14
210	Single-Family Detached Housing	DU	9.09	0.19	0.51	0.70	0.58	0.35	0.93

Key: KSF = Thousand Square Feet Gross Floor Area. DU = Dwelling Units.
Note: All data and calculations above are subject to being rounded to nearest value.

Table 4 illustrates projected ADT, AM Peak Hour, and PM Peak Hour traffic volumes likely generated by the proposed development upon build-out.

The peak hour trips provided do not seem reflective of the use or the number of employees.

Table 4 – Trip Generation Summary

ITE CODE	LAND USE	SIZE	TOTAL TRIPS GENERATED						
			24 HOUR	AM PEAK HOUR			PM PEAK HOUR		
				ENTER	EXIT	TOTAL	ENTER	EXIT	TOTAL
Site Development - Existing									
210	Single-Family Detached Housing	1 DU	9	0	1	1	1	0	1
	Existing Total:		*9*	*0*	*1*	*1*	*1*	*0*	*1*
Site Development - Proposed									
151	Mini-Warehouse	218.2 KSF	282	10	7	17	15	16	31
	Proposed Total:		*282*	*10*	*7*	*17*	*15*	*16*	*31*
	Difference Total:		***272***	***10***	***6***	***16***	***14***	***16***	***30***

Key: KSF =
Note: All da

The proposed land-use selection of Mini-Warehouse (151) does not appear to match the operational characteristics described for the project in the Letter of Intent. Per the ITE Trip Generation Manual, Mini-Warehouse (151) is intended for self-storage facilities with individual storage units and limited on-site activity.

Please clarify why the Mini-Warehouse land-use category was selected and explain how it accurately reflects the operational characteristics of this project. If the proposed operations differ from those typical of a self-storage facility, please select a more appropriate land-use category for the trip-generation calculations that better aligns with the intended use.

Upon build-out, Table 4 illustrates that the proposed development has the potential to generate approximately 282 daily vehicle trips with 17 of those occurring during the morning peak hour and 31 during the afternoon peak hour. Compared to the existing land uses, this represents a potential increase in site traffic generation of approximately 272 daily trips with 16 of those occurring during the morning peak hour and 30 during the afternoon peak hour.

Adjustments to Trip Generation Rates

A development of this type is not likely to attract trips from within area land uses nor pass-by or diverted link trips from the adjacent roadway system, therefore no trip reduction was taken in this analysis.

It is important to note that approximately 25 percent of the workers onsite are seasonal employees. Because of this, approximately 25 percent of trips will be reduced from the period of November to late April. Despite this, no trip reduction was taken for this analysis. This provides for a conservative analysis.

Trip Distribution

The overall directional distribution of site-generated traffic was determined based on the location of development site within the County, proposed and existing area land uses, allowed turning movements, and available roadway network.

Overall trip distribution patterns for the development are shown on Figure 5.

Trip Assignment

Traffic assignment is how generated and distributed vehicle trips are expected to be loaded onto the available roadway network. Applying trip distribution patterns to site-generated traffic provides the overall site-generated trip assignments shown on Figure 5.

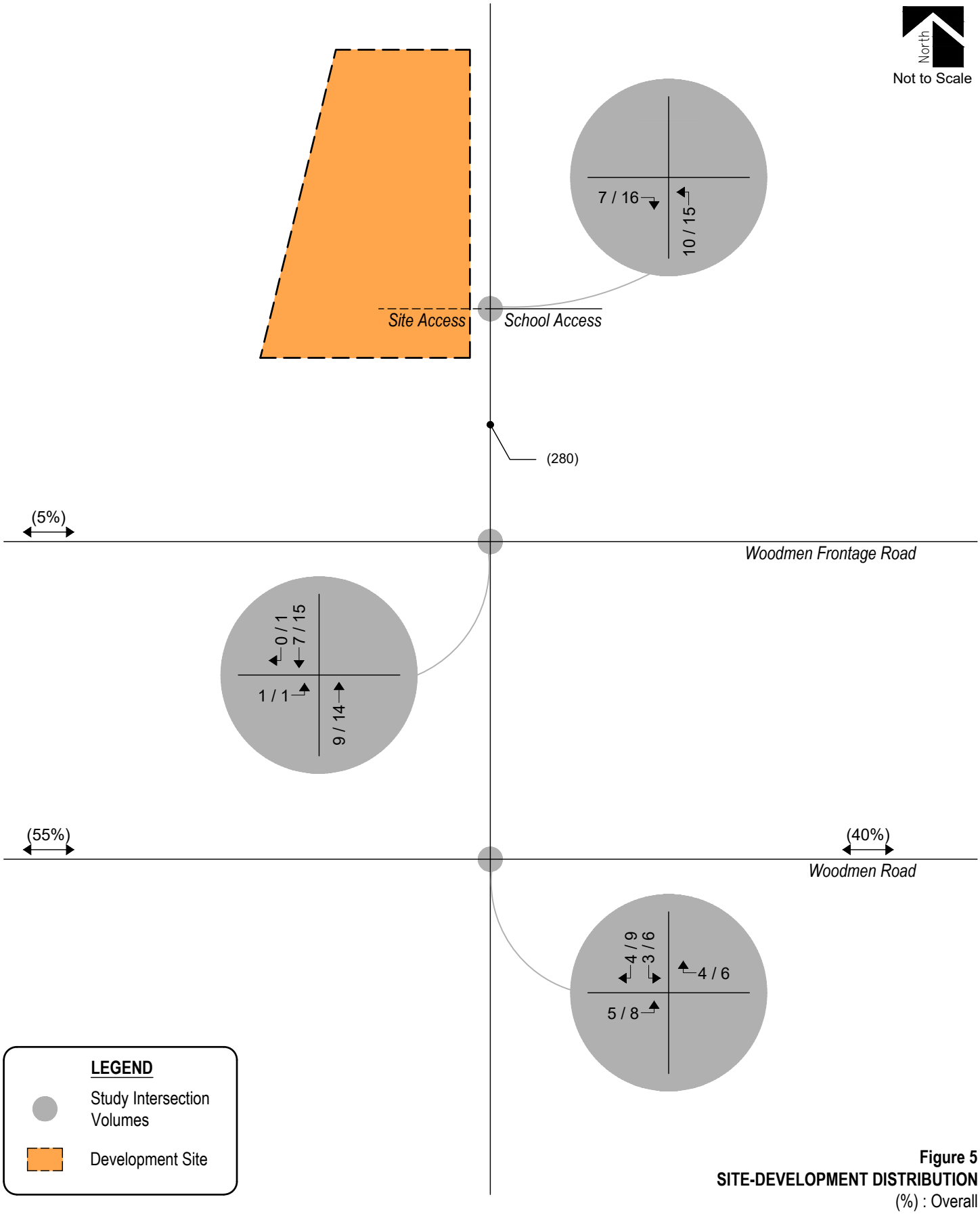


Figure 5
SITE-DEVELOPMENT DISTRIBUTION
(%) : Overall
SITE-GENERATED TRIPS
AM / PM Peak Hour
(ADT) : Average Daily Traffic

V. Future Traffic Conditions With Proposed Development

Total traffic is the traffic projected to be on area roadways with consideration of the proposed development. Total traffic includes background traffic projections for Year 2028 with consideration of site-generated traffic. For analysis purposes, it was assumed that development construction would be completed by end of Year 2028.

Pursuant to area roadway improvement discussions provided in Section III, Year 2028 total traffic conditions assume no roadway improvements to accommodate regional transportation demands. Roadway improvements associated with site development are expected to be limited to site access and frontage as required by the governing agency.

Total Traffic Auxiliary Lane Analysis

Auxiliary lanes for site development access drives were evaluated and are to be based on County's ECM.

Considering development build-out, an evaluation of auxiliary lane requirements, pursuant to Section 2.3.7.D of the County's ECM, reveals that a northbound left turn lane at Site Access along Mohawk road is not required since the development's projected peak hour left turn ingress volume does not exceed the County's threshold of 25 vehicles per hour.

Similarly, a southbound right turn lane is not required since the development's projected peak hour right turn ingress volume does not exceed the County's threshold of 50 vehicles per hour.

Projected Year 2028 total traffic volumes and intersection geometry are shown in Figure 6.

Please include turn lane analysis for the intersection of Mohawk Road and Woodmen Road and state whether the existing turn lanes are adequate.

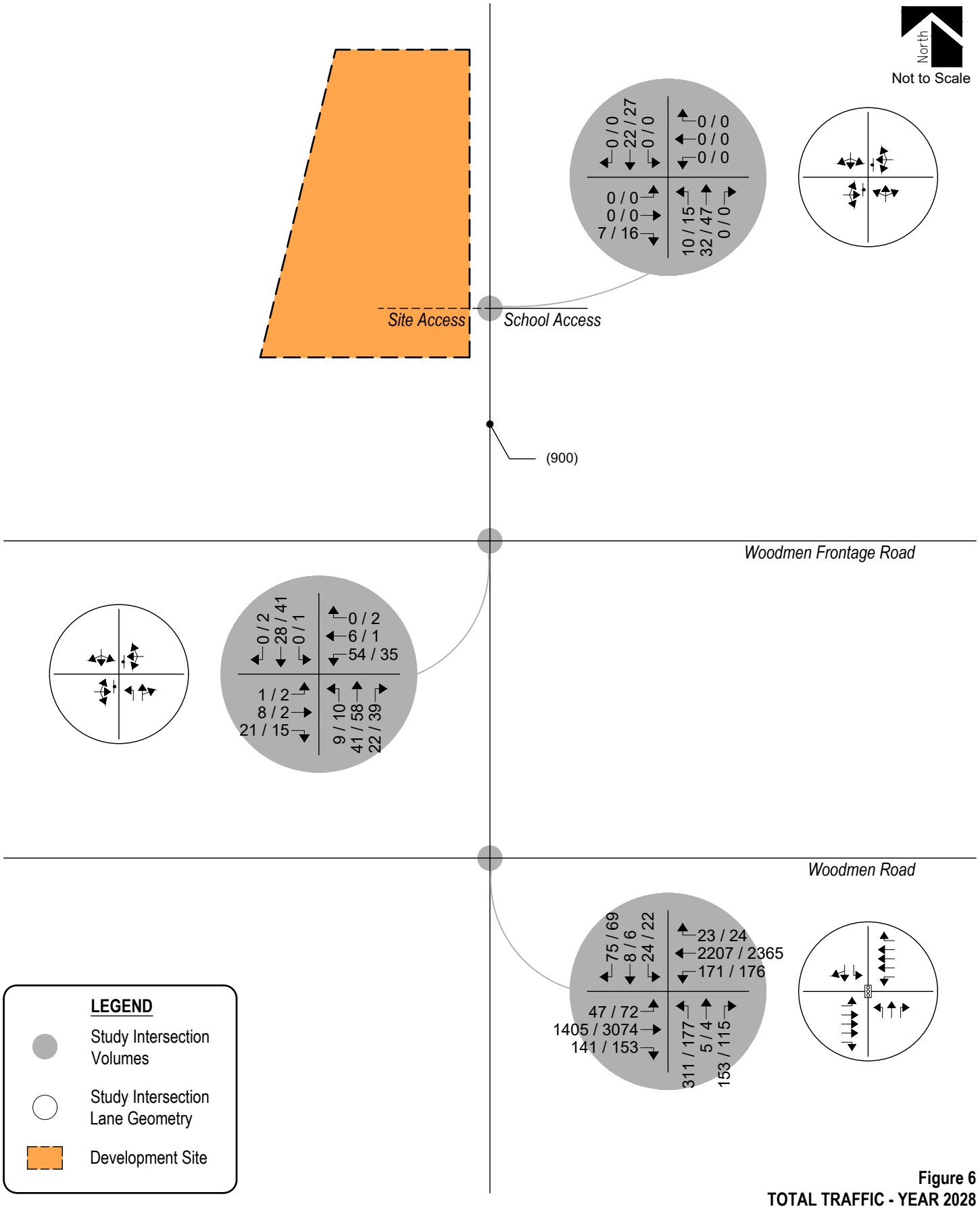


Figure 6
TOTAL TRAFFIC - YEAR 2028
Volumes & Intersection Geometry
AM / PM Peak Traffic Hour
(ADT) : Average Daily Traffic

Peak Hour Intersection Levels of Service – Total Traffic

As with background traffic, the operations of the study intersections were analyzed under projected total traffic conditions using the SYNCHRO computer program. The analyses and procedures were performed in accordance with the latest HCM and are based upon the worst-case conditions that occur during a typical weekday upon build-out of site development and analyzed land uses. Therefore, study intersections are likely to operate with traffic conditions better than those described within this study, which represent the peak hours of weekday operations only.

Total traffic level of service analysis results for Year 2028 are summarized in Table 5.

Definitions of levels of service are given in Appendix B. Intersection capacity worksheets are provided in Appendix C.

Table 5 – Intersection Capacity Analysis Summary – Total Traffic – Year 2028

INTERSECTION LANE GROUPS	LEVEL OF SERVICE AM PEAK HOUR	 PM PEAK HOUR
Woodmen Road / Mohawk Road (Signalized)	F (97.9)	F (112.6)
Woodmen Road / Mohawk Road (Signalized) (Mitigated)	*C (33.8)*	*D (49.2)*
Woodmen Frontage Road / Mohawk Road (Stop-Controlled)		
Eastbound Left, Through, and Right	A	A
Westbound Left, Through, and Right	A	A
Northbound Left	A	A
Southbound Left, Through, and Right	A	A
Mohawk Road / Site Access (Stop-Controlled)		
Eastbound Left, Through and Right	A	A
Westbound Left, Through and Right	A	A
Northbound Left, Through and Right	A	A
Southbound Left, Through, and Right	A	A

Key: Signalized Intersection: Level of Service (Control Delay in sec/veh)
Stop-Controlled Intersection: Level of Service

Total Traffic Analysis Results Upon Development Build-Out

Table 5 illustrates how, by Year 2028 and upon development build-out, the signalized intersection of Woodmen Road with Mohawk Road shows overall LOS F operations during the morning and afternoon peak traffic hours. The LOS F operations projected during both peak traffic periods are attributed to the eastbound and westbound through volumes. Compared to the background traffic analysis, the traffic generated by the proposed development is not expected to significantly change the operations of the study intersection. To mitigate the anticipated LOS F operations, it is recommended to increase eastbound and westbound signal split timing by taking away from northbound and southbound split timing. This mitigating scenario is shown to allow for LOS C operations during the morning peak traffic hour and LOS D operations during the afternoon peak traffic hour.

The stop-controlled intersections within the study area are projected to have turning movement operations at LOS A for the morning and afternoon peak traffic hours.

These intersection operations are similar to background conditions.

The Synchro results on page 75 show the 2028 mitigated PM peak conditions with the EBL, WBL, and NBL movements operating at LOS F. Please revise the recommendations so that the mitigated LOS for these approaches is acceptable and meets the required performance thresholds.

VI. Project Impacts

It is emphasized that the analyses and procedures described in this study were performed in accordance with the latest HCM and are based upon the worst-case conditions that occur during a typical weekday upon build-out of site development and analyzed land uses. Therefore, study intersections are likely to operate with traffic conditions better than those described within this study, which represent the peak hours of weekday operations only.

Multi-Modal Assessment

In accordance with Section B.2.4.D of the County's ECM, an assessment to adequacy of pedestrian and bicycle facilities within the study area was considered.

Due to the rural characteristics of the development site and surrounding area, this area currently does not accommodate pedestrians nor bicyclists with detached sidewalks, trails, nor bike lanes. It is important to note that, pursuant to existing roadway characteristics provided in Section I, typical roadway cross-sections defined within the County's ECM, and per the assumed classification, Mohawk Road is not expected to provide sidewalks nor bicycle lanes adjacent the development area due to the County's plans to maintain the rural characteristic of the surrounding area roadways.

Queue Length Analysis

Queue lengths for the study intersections were analyzed using Year 2028 background and total traffic conditions. The analysis yields estimate of 95th percentile queue lengths, which have only a five percent probability of being exceeded during the analysis time period. An average vehicle length of 25 feet was assumed. Queue lengths were modeled and are included with the Synchro worksheets in Appendix C.

Table 6 summarizes the 95th percentile queue results in comparison to the projected storage requirements for turn movements within study area for Year 2028.

Table 6 – Turn Lane Queues and Storage Requirements – Total Traffic – Year 2028

Intersection	Turn Movement		Existing Turn Lane Length (feet)	Background 2028		Total 2028		Recommended Turn Lane Length (feet)
				AM Peak Hour (feet)	PM Peak Hour (feet)	AM Peak Hour (feet)	PM Peak Hour (feet)	
Signalized Intersections								
Woodmen Road / Mohawk Road	EB	L	300'	69'	100'	73'	108'	300'
		T	-	228'	1468'	228'	1468'	-
		R	400'	23'	70'	23'	70'	400'
	WB	L	315'	279'	226'	279'	226'	315'
		T	-	456'	948'	461'	958'	-
		R	375'	0'	0'	0'	0'	375'
	NB	L	165'	617'	211'	618'	212'	310' x2
		T	-	16'	12'	16'	12'	-
		R	165'	66'	48'	66'	48'	165'
	SB	L	35'	43'	30'	48'	37'	35'
		T,R	-	56'	41'	58'	44'	-
Woodmen Road / Mohawk Road (Mitigated)	*EB*	*L*	*300'*	*88'*	*105'*	*98'*	*136'*	*300'*
		T	*-*	*388'*	*1150'*	*388'*	*1150'*	*-*
		R	*400'*	*39'*	*27'*	*39'*	*27'*	*400'*
	WB	*L*	*315'*	*243'*	*332'*	*243'*	*332'*	*335'*
		T	*-*	*658'*	*584'*	*658'*	*569'*	*-*
		R	*375'*	*0'*	*0'*	*0'*	*0'*	*375'*
	NB	*L*	*165'*	*431'*	*331'*	*432'*	*333'*	*220' x2*
		T	*-*	*12'*	*14'*	*12'*	*14'*	*-*
		R	*165'*	*52'*	*62'*	*52'*	*72'*	*165'*
	SB	*L*	*35'*	*34'*	*35'*	*37'*	*45'*	*35'*
		T,R	*-*	*44'*	*50'*	*45'*	*53'*	*-*
Stop-Controlled Intersections								
Woodmen Frontage Road / Mohawk Road	EB	L,T,R	-	3'	3'	3'	3'	-
	WB	L,T,R	-	5'	5'	8'	5'	-
	NB	L	25'	0'	0'	0'	0'	25'
		T,R	-	0'	0'	0'	0'	-
	SB	L,T,R	-	0'	0'	0'	0'	-
Mohawk Road / Site Access / School Access	EB	L,T,R	-	0'	0'	0'	3'	-
	WB	L,T,R	-	0'	0'	0'	0'	-
	NB	L,T,R	-	0'	0'	0'	0'	-
	SB	L,T,R	-	0'	0'	0'	0'	-

Note: Turn Lane Length does not include taper length.
Key: x2 = Dual Turn Lanes.

As Table 6 shows, the majority of turn lane lengths at the study intersections have sufficient storage to accommodate future traffic volumes. However, at the Woodmen Road and Mohawk Road intersection, significant vehicle queuing was indicated for the northbound left turn movement. It is acknowledged that existing aerial imagery of the area shows site and roadway constraints which limit the ability to lengthen the existing southbound left turn lane.

It is to be noted that significant vehicle queuing exists during background traffic conditions without the proposed development at the intersection of Woodmen Road and Mohawk Road. As previously mentioned, increasing eastbound and westbound signal split timing by taking away from northbound and southbound split timing is a possible measure of mitigation to poor operations and projected vehicle queuing. This mitigating scenario is shown to allow for 432 feet of vehicle queuing for the northbound left turn movement during either peak traffic hour.

Development Impacts

Analysis of future traffic conditions indicates that the addition of site-generated traffic is expected to create no negative impact to traffic operations for the existing and surrounding roadway system upon roadway and intersection control improvements assumed within this analysis. With all conservative assumptions defined in this analysis, the study intersections are projected to operate at future levels of service comparable to Year 2028 background traffic conditions.

Recommended Improvements

Roadway and intersection improvement recommendations were assessed pursuant to roadway descriptions in Section I, projected peak hour traffic volumes, level of service results, projected 95th percentile queue lengths, and per requirements defined within the County's ECM.

When considering Year 2028 total traffic conditions, no public improvements to the surrounding roadway network were identified to be needed, therefore none are being recommended with this development.

The signalized intersection of Woodmen Road and Mohawk Road should be monitored further by County Staff as area development occurs to determine when, or if, mitigating improvements are appropriate.

VII. Conclusion

This transportation memorandum addressed the capacity, geometric, and control requirements associated with the development entitled Sunflower Landscapes. This proposed industrial development consisted of a Sunflower Landscapes contractor equipment yard. The development is located near the northwest corner of Woodmen Road and Mohawk Road in El Paso County, Colorado.

The study area to be examined in this analysis encompassed the Mohawk Road intersections with Woodmen Road and Woodmen Frontage Road and the proposed site access.

Analysis was conducted for critical AM Peak Hour and PM Peak Hour traffic operations for existing traffic conditions, Year 2028 background traffic conditions, and Year 2028 total traffic conditions.

Analysis of existing traffic conditions indicates that all intersections operate under LOS A conditions during both the morning and afternoon peak traffic hours.

Under Year 2028 background traffic conditions, operational analysis shows that the signalized intersection is projected to operate with LOS F during morning and afternoon peak traffic hours. All stop-controlled intersections anticipate turn movement operations at LOS A during both morning and afternoon peak traffic periods. Mitigated scenarios are shown to allow for LOS C operations during the morning peak traffic hour and LOS D operations during the afternoon peak traffic hour.

Analysis of future traffic conditions indicates that the addition of site-generated traffic is expected to create no negative impact to traffic operations for the existing and surrounding roadway system. With all conservative assumptions defined in this analysis, the study intersections are projected to operate at future levels of service comparable to Year 2028 background traffic conditions. Proposed site accesses have long-term operations at LOS A or better during peak traffic periods and upon build-out.

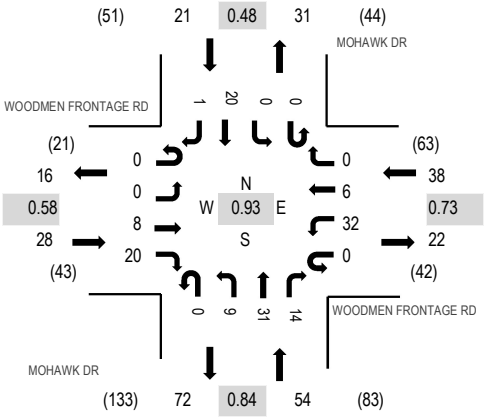
APPENDIX A

Traffic Count Data
Signal Timing Information

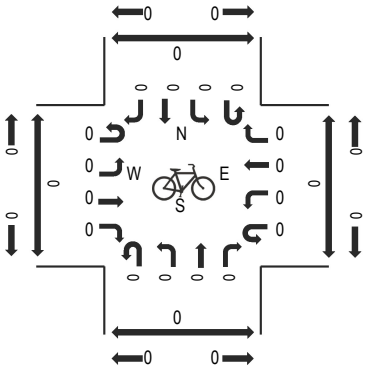
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 2 MOHAWK DR & WOODMEN FRONTAGE RD AM
Date: Tuesday, June 2, 2026
Peak Hour: 07:30 AM - 08:30 AM
Peak 15-Minutes: 07:30 AM - 07:45 AM

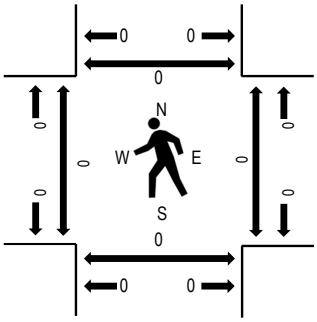
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

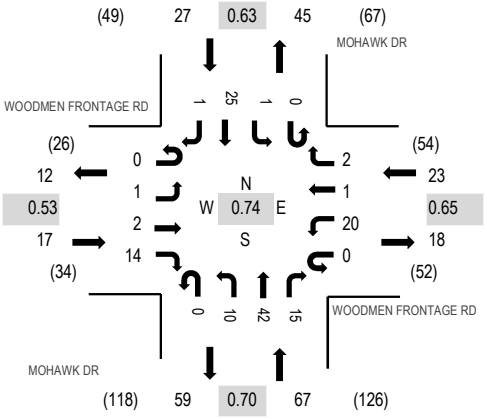
Traffic Counts - Motorized Vehicles

Interval Start Time	WOODMEN FRONTAGE RD Eastbound				WOODMEN FRONTAGE RD Westbound				MOHAWK DR Northbound				MOHAWK DR Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	0	1	1	0	4	0	0	0	1	2	3	0	0	15	0	27	118	0	0	0	0
7:15 AM	0	0	2	2	0	6	0	0	0	1	2	5	0	0	5	0	23	126	0	0	0	0
7:30 AM	0	0	4	8	0	9	0	0	0	3	5	4	0	0	5	0	38	141	0	0	0	0
7:45 AM	0	0	1	6	0	7	1	0	0	2	5	4	0	0	4	0	30	134	0	0	0	0
8:00 AM	0	0	0	3	0	7	1	0	0	3	9	4	0	0	7	1	35	122	0	0	0	0
8:15 AM	0	0	3	3	0	9	4	0	0	1	12	2	0	0	4	0	38		0	0	0	0
8:30 AM	0	1	0	5	0	7	2	0	0	0	3	6	0	1	6	0	31		0	0	0	0
8:45 AM	0	0	1	2	0	5	1	0	0	0	5	1	0	0	3	0	18		0	0	0	0
Count Total	0	1	12	30	0	54	9	0	0	11	43	29	0	1	49	1	240		0	0	0	0
Peak Hour	0	0	8	20	0	32	6	0	0	9	31	14	0	0	20	1	141		0	0	0	0

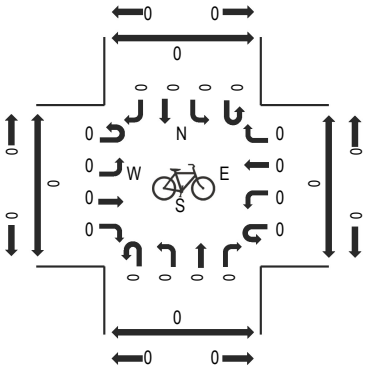
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 2 MOHAWK DR & WOODMEN FRONTAGE RD PM
Date: Tuesday, June 2, 2026
Peak Hour: 05:00 PM - 06:00 PM
Peak 15-Minutes: 05:45 PM - 06:00 PM

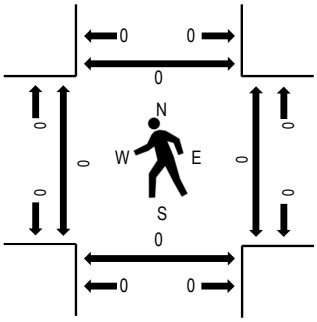
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

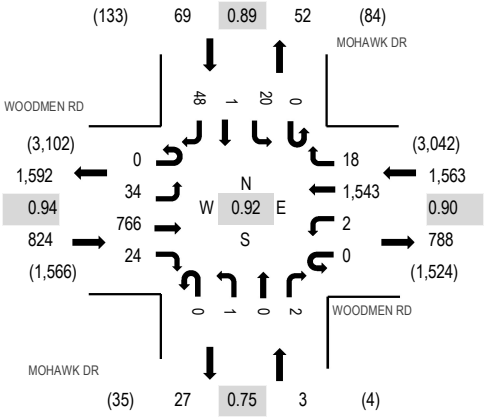
Traffic Counts - Motorized Vehicles

Interval Start Time	WOODMEN FRONTAGE RD Eastbound				WOODMEN FRONTAGE RD Westbound				MOHAWK DR Northbound				MOHAWK DR Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	0	3	2	0	7	0	1	0	3	8	4	0	0	4	0	32	129	0	0	0	0
4:15 PM	0	0	2	4	0	10	1	1	0	3	3	10	0	0	2	0	36	124	0	0	0	0
4:30 PM	0	0	1	2	0	4	0	0	0	4	5	6	0	0	5	0	27	118	0	0	0	0
4:45 PM	0	0	0	3	0	7	0	0	0	3	4	6	0	2	9	0	34	123	0	0	0	0
5:00 PM	0	0	0	3	0	2	1	0	0	1	10	3	0	1	6	0	27	134	0	0	0	0
5:15 PM	0	0	0	2	0	2	0	0	0	2	8	1	0	0	14	1	30		0	0	0	0
5:30 PM	0	1	2	5	0	3	0	0	0	4	9	5	0	0	3	0	32		0	0	0	0
5:45 PM	0	0	0	4	0	13	0	2	0	3	15	6	0	0	2	0	45		0	0	0	0
Count Total	0	1	8	25	0	48	2	4	0	23	62	41	0	3	45	1	263		0	0	0	0
Peak Hour	0	1	2	14	0	20	1	2	0	10	42	15	0	1	25	1	134		0	0	0	0

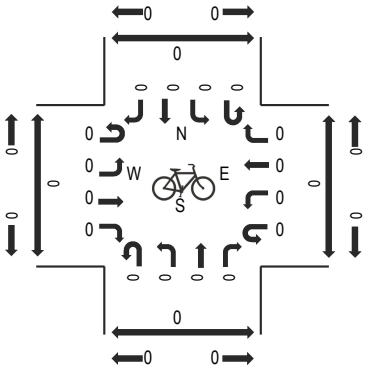
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 1 MOHAWK DR & WOODMEN RD AM
Date: Tuesday, June 2, 2026
Peak Hour: 07:30 AM - 08:30 AM
Peak 15-Minutes: 07:30 AM - 07:45 AM

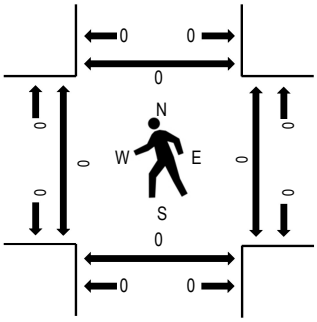
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

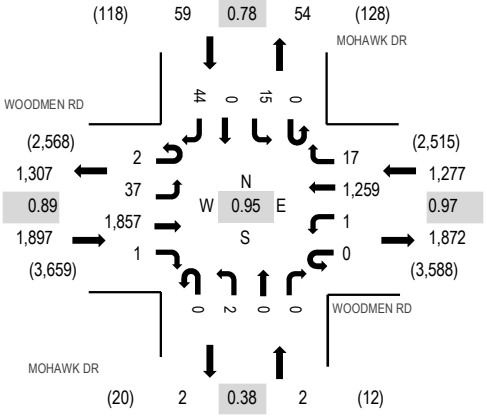
Traffic Counts - Motorized Vehicles

Interval Start Time	WOODMEN RD Eastbound				WOODMEN RD Westbound				MOHAWK DR Northbound				MOHAWK DR Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	2	170	2	0	0	336	3	0	0	0	1	0	1	0	17	532	2,434	0	0	0	0
7:15 AM	0	8	172	1	0	0	396	2	0	0	0	0	0	4	0	11	594	2,449	0	0	0	0
7:30 AM	0	9	197	2	0	0	437	3	0	0	0	1	0	3	0	17	669	2,459	0	0	0	0
7:45 AM	0	7	210	1	0	1	400	2	0	0	0	1	0	8	1	8	639	2,404	0	0	0	0
8:00 AM	0	10	173	8	0	1	328	8	0	0	0	0	0	8	0	11	547	2,311	0	0	0	0
8:15 AM	0	8	186	13	0	0	378	5	0	1	0	0	0	1	0	12	604		0	0	0	0
8:30 AM	0	6	187	1	0	1	395	3	0	0	0	0	0	9	1	11	614		0	0	0	0
8:45 AM	0	4	187	2	0	0	339	4	0	0	0	0	0	5	0	5	546		0	0	0	0
Count Total	0	54	1,482	30	0	3	3,009	30	0	1	0	3	0	39	2	92	4,745		0	0	0	0
Peak Hour	0	34	766	24	0	2	1,543	18	0	1	0	2	0	20	1	48	2,459		0	0	0	0

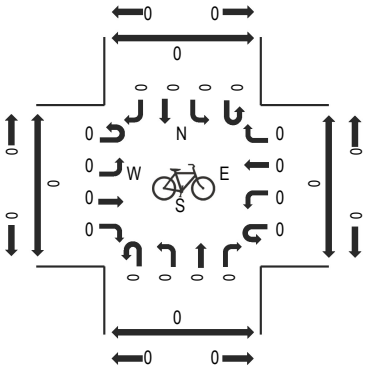
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 1 MOHAWK DR & WOODMEN RD PM
Date: Tuesday, June 2, 2026
Peak Hour: 04:30 PM - 05:30 PM
Peak 15-Minutes: 05:15 PM - 05:30 PM

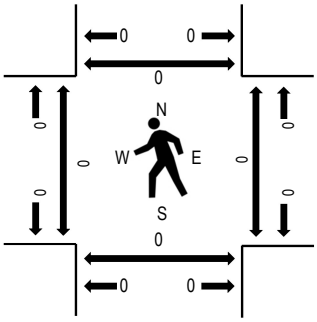
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

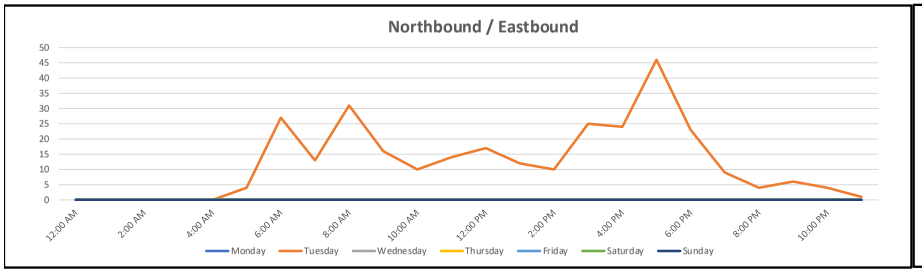
Traffic Counts - Motorized Vehicles

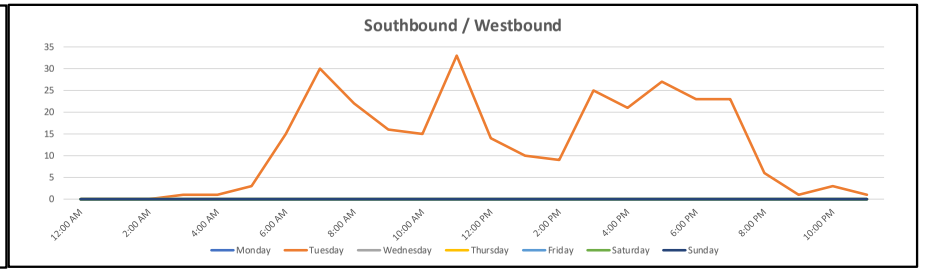
Interval Start Time	WOODMEN RD Eastbound				WOODMEN RD Westbound				MOHAWK DR Northbound				MOHAWK DR Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	1	7	404	2	0	0	325	8	0	2	0	0	0	4	0	9	762	3,158	0	0	0	0
4:15 PM	1	9	433	2	0	0	327	7	0	0	0	0	0	3	0	13	795	3,175	0	0	0	0
4:30 PM	0	8	484	0	0	0	315	6	0	0	0	0	0	4	0	7	824	3,235	0	0	0	0
4:45 PM	0	10	430	0	0	1	311	5	0	1	0	0	0	3	0	16	777	3,220	0	0	0	0
5:00 PM	1	10	419	0	0	0	335	3	0	0	0	0	0	2	0	9	779	3,146	0	0	0	0
5:15 PM	1	9	524	1	0	0	298	3	0	1	0	0	0	6	0	12	855		0	0	0	0
5:30 PM	5	14	449	5	0	2	318	3	0	1	0	1	0	4	0	7	809		0	0	0	0
5:45 PM	0	17	408	5	0	2	237	9	0	4	0	2	0	8	0	11	703		0	0	0	0
Count Total	9	84	3,551	15	0	5	2,466	44	0	9	0	3	0	34	0	84	6,304		0	0	0	0
Peak Hour	2	37	1,857	1	0	1	1,259	17	0	2	0	0	0	15	0	44	3,235		0	0	0	0

Vehicle Volume Report - Hourly

Site Description: MOHAWK RD N.O. WOODMEN FRONTAGE RD
Site Number: 3
Start Date: 06/02/2026
End Date: 06/02/2026

Time	Monday 6/8/26			Tuesday 6/2/26			Wednesday 6/3/26			Thursday 6/4/26			Friday 6/5/26			Saturday 6/6/26			Sunday 6/7/26			3 Day Avg Tue-Thu		5 Day Avg Mon-Fri		7 Day Avg Mon-Sun	
	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	NB	SB	NB	SB
12:00 AM	-	-	-	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1:00 AM	-	-	-	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2:00 AM	-	-	-	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3:00 AM	-	-	-	0	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 AM	-	-	-	0	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5:00 AM	-	-	-	4	3	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6:00 AM	-	-	-	27	15	42	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7:00 AM	-	-	-	13	30	43	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8:00 AM	-	-	-	31	22	53	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9:00 AM	-	-	-	16	16	32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10:00 AM	-	-	-	10	15	25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11:00 AM	-	-	-	14	33	47	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12:00 PM	-	-	-	17	14	31	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1:00 PM	-	-	-	12	10	22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2:00 PM	-	-	-	10	9	19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3:00 PM	-	-	-	25	25	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	-	-	-	24	21	45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5:00 PM	-	-	-	46	27	73	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6:00 PM	-	-	-	23	23	46	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7:00 PM	-	-	-	9	23	32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8:00 PM	-	-	-	4	6	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9:00 PM	-	-	-	6	1	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10:00 PM	-	-	-	4	3	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11:00 PM	-	-	-	1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6:00 AM - 9:00 AM	-	-	-	**71**	**67**	**138**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3:00 PM - 6:00 PM	-	-	-	**95**	**73**	**168**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6:00 AM - 7:00 PM	-	-	-	**268**	**260**	**528**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12:00 AM - 12:00 AM	-	-	-	**296**	**299**	**595**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Percent	-	-	-	***49.7%***	***50.3%***	***100.0%***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AM Peak	-	-		8:00 AM	9:00 AM		-	-		-	-		-	-		-	-		-	-							
PM Peak	-	-		5:00 PM	6:00 PM		-	-		-	-		-	-		-	-		-	-							





Intersection 644 at Woodmen Rd and Mohawk Rd - Timing table, page 1

Page 1	Phases											
	1	2	3	4	5	6	7	8	9	10	11	12
Min Green	5	10	0	6	5	10	0	6	0	0	0	0
Passage Time I	1.5	1.5	0.0	1.5	1.5	1.5	0.0	1.5	0.0	0.0	0.0	0.0
Passage Time II	1.5	1.5	0.0	1.5	1.5	1.5	0.0	1.5	0.0	0.0	0.0	0.0
Max Green I	12	40	0	15	12	40	0	15	0	0	0	0
Max Green II	12	40	0	15	12	40	0	15	0	0	0	0
Yellow Clearance	3.0	5.5	0.0	6.0	3.0	5.5	0.0	6.0	0.0	0.0	0.0	0.0
Red Clearance	2.0	2.0	0.0	2.0	2.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0
Added Initial	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Added Initial	0	0	0	0	0	0	0	0	0	0	0	0
Time Before Reduction	0	0	0	0	0	0	0	0	0	0	0	0
Cars Before Reduction	0	0	0	0	0	0	0	0	0	0	0	0
Time To Reduce	0	0	0	0	0	0	0	0	0	0	0	0
Min Passage	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Green Time	0	0	0	0	0	0	0	0	0	0	0	0
Red Revert Time	0.0	5.0	0.0	5.0	0.0	5.0	0.0	5.0	0.0	0.0	0.0	0.0
Advance Walk Time	0	0	0	0	0	0	0	0	0	0	0	0
Walk Time	0	7	0	7	0	7	0	7	0	0	0	0
Pedestrian Clearance	0	23	0	52	0	26	0	50	0	0	0	0
Handicap Walk	0	12	0	12	0	12	0	12	0	0	0	0
Handicap Ped Clearance	0	26	0	60	0	30	0	58	0	0	0	0
Woodmen Rd	X	X			X	X						
Mohawk Rd				X				X				
Compass Direction	W	E		S	E	W		N				
Through, Turn or XPed	Left,prt	Thru		Thru	Left,prt	Thru		Thru				

Intersection 644 at Woodmen Rd and Mohawk Rd - Sequence table, page 1

Page 1	Ring 1 Phases				Ring 2 Phases				Ring 3 Phases			
	1	2	3	4	5	6	7	8	9	10	11	12
State 1	Vehicle				Vehicle							
Barrier 1												
State 2		V & P				V & P						
Barrier 2	XXXXXXXXXXXXXXXXXXXXXX				XXXXXXXXXXXXXXXXXXXXXX							
State 3				V & P				V & P				
Barrier 3	XXXXXXXXXXXXXXXXXXXXXX				XXXXXXXXXXXXXXXXXXXXXX							
State 4												
Barrier 4												
State 5												
Barrier 5												
State 6												
Barrier 6												
State 7												
Barrier 7												
State 8												
Barrier 8												
State 9												
Barrier 9												
State 10												
Barrier 10												
State 11												
Barrier 11												
State 12												
Barrier 12												

Intersection 644 at Woodmen Rd and Mohawk Rd - Phases control table, page 1

Page 1	Vehicle Phases 111 123456789012		Ped Phases 111 123456789012
Min Recalls		Ped Recalls	
Max Recalls	2 6	Handicap Ped Recalls	
Recall If Maxed		Soft Ped Recalls	
Dual Entry	4 8	Don't Recall (FDW Offset)	2 4 6 8
Do Not Skip		Allow Walk Reduction	
Simultaneous Gap Out		Hold In Walk	
Restricted Phases		Allow Ped Re-service	2 6
Sequential Initial Timing		Rest In Walk	No
Max Timer Starts For Call			
Reduction Starts For Call			
Red To Avoid Left Turn Trap			
Rest In Red	No		

Intersection 644 at Woodmen Rd and Mohawk Rd - Coordination table, plans 1-2

	_____111	Cycle Length	0			Alternate	Alternate	Alternate	No Ped
Plan 1	123456789012	Offset 1	0	Phases	Splits	Mins	Walks	Maxes	Splits
Coordinated		Offset 2	0	1	0	0	0	0	0
Phases	_____	Offset 3	0	2	0	0	0	0	0
Secondary		Offset 4	0	3	0	0	0	0	0
Coordinated		Relative Secondary Offset	0	4	0	0	0	0	0
Phases		Permissive Period	Auto	5	0	0	0	0	0
Extra Time		Max Cycle Addition	0	6	0	0	0	0	0
Phases		Max Cycle Subtraction	0	7	0	0	0	0	0
Additional		Coord Actuated Period	0	8	0	0	0	0	0
Max Recalls	_____	Top Of Cycle Green Point	End	9	0	0	0	0	0
Units	Seconds	Big Bang Preempt Recvry	No	10	0	0	0	0	0
		Big Bang Ped Recovery	No	11	0	0	0	0	0
		Min Lagging Left Split	0%	12	0	0	0	0	0
	_____111	Cycle Length	110			Alternate	Alternate	Alternate	No Ped
Plan 2	123456789012	Offset 1	77	Phases	Splits	Mins	Walks	Maxes	Splits
Coordinated		Offset 2	0	1	17	0	0	17	17
Phases	2 6	Offset 3	0	2	77	0	0	89	77
Secondary		Offset 4	0	3	0	0	0	0	0
Coordinated		Relative Secondary Offset	0	4	16	4	0	13	16
Phases		Permissive Period	Auto	5	17	0	0	17	17
Extra Time		Max Cycle Addition	36	6	77	0	0	89	77
Phases		Max Cycle Subtraction	0	7	0	0	0	0	0
Additional		Coord Actuated Period	0	8	16	4	0	13	16
Max Recalls	_____	Top Of Cycle Green Point	End	9	0	0	0	0	0
Units	Seconds	Big Bang Preempt Recvry	No	10	0	0	0	0	0
		Big Bang Ped Recovery	No	11	0	0	0	0	0
		Min Lagging Left Split	0%	12	0	0	0	0	0

Intersection 644 at Woodmen Rd and Mohawk Rd - Coordination table, plans 1-2

Alternate Maxes

Intersection 644 at Woodmen Rd and Mohawk Rd - Coordination table, plans 3-4

	_____111	Cycle Length	110			Alternate	Alternate	Alternate	No Ped
Plan 3	123456789012	Offset 1	52	Phases	Splits	Mins	Walks	Maxes	Splits
Coordinated		Offset 2	0	1	17	0	0	17	17
Phases	_2___6____	Offset 3	0	2	65	0	0	74	65
Secondary		Offset 4	0	3	0	0	0	0	0
Coordinated		Relative Secondary Offset	0	4	28	0	0	28	28
Phases		Permissive Period	Auto	5	17	0	0	17	17
Extra Time		Max Cycle Addition	36	6	65	0	0	74	65
Phases		Max Cycle Subtraction	0	7	0	0	0	0	0
Additional		Coord Actuated Period	0	8	28	0	0	28	28
Max Recalls	_____	Top Of Cycle Green Point	End	9	0	0	0	0	0
Units	Seconds	Big Bang Preempt Recvry	No	10	0	0	0	0	0
		Big Bang Ped Recovery	No	11	0	0	0	0	0
		Min Lagging Left Split	0%	12	0	0	0	0	0
	_____111	Cycle Length	120			Alternate	Alternate	Alternate	No Ped
Plan 4	123456789012	Offset 1	72	Phases	Splits	Mins	Walks	Maxes	Splits
Coordinated		Offset 2	0	1	19	0	0	19	19
Phases	2___6____	Offset 3	0	2	56	0	0	63	56
Secondary		Offset 4	0	3	0	0	0	0	0
Coordinated		Relative Secondary Offset	0	4	45	0	0	49	45
Phases		Permissive Period	Auto	5	19	0	0	19	19
Extra Time		Max Cycle Addition	40	6	56	0	0	63	56
Phases		Max Cycle Subtraction	0	7	0	0	0	0	0
Additional		Coord Actuated Period	0	8	45	0	0	49	45
Max Recalls	_____	Top Of Cycle Green Point	End	9	0	0	0	0	0
Units	Seconds	Big Bang Preempt Recvry	No	10	0	0	0	0	0
		Big Bang Ped Recovery	No	11	0	0	0	0	0
		Min Lagging Left Split	0%	12	0	0	0	0	0

Intersection 644 at Woodmen Rd and Mohawk Rd - Coordination table, plans 3-4

Alternate Maxes

Intersection 644 at Woodmen Rd and Mohawk Rd - Coordination table, plans 5-6

	_____111	Cycle Length	120			Alternate	Alternate	Alternate	No Ped
Plan 5	123456789012	Offset 1	104	Phases	Splits	Mins	Walks	Maxes	Splits
Coordinated		Offset 2	0	1	20	0	0	21	20
Phases	_2__6____	Offset 3	0	2	60	0	0	68	60
Secondary		Offset 4	0	3	0	0	0	0	0
Coordinated		Relative Secondary Offset	0	4	40	0	0	43	40
Phases		Permissive Period	Auto	5	20	0	0	21	20
Extra Time		Max Cycle Addition	40	6	60	0	0	68	60
Phases		Max Cycle Subtraction	0	7	0	0	0	0	0
Additional		Coord Actuated Period	0	8	40	0	0	43	40
Max Recalls	_____	Top Of Cycle Green Point	End	9	0	0	0	0	0
Units	Seconds	Big Bang Preempt Recvry	No	10	0	0	0	0	0
		Big Bang Ped Recovery	No	11	0	0	0	0	0
		Min Lagging Left Split	0%	12	0	0	0	0	0
	_____111	Cycle Length	90			Alternate	Alternate	Alternate	No Ped
Plan 6	123456789012	Offset 1	63	Phases	Splits	Mins	Walks	Maxes	Splits
Coordinated		Offset 2	0	1	15	0	0	14	15
Phases	2__6____	Offset 3	0	2	40	0	0	43	40
Secondary		Offset 4	0	3	0	0	0	0	0
Coordinated		Relative Secondary Offset	0	4	35	0	0	36	35
Phases		Permissive Period	Auto	5	15	0	0	14	15
Extra Time		Max Cycle Addition	30	6	40	0	0	43	40
Phases		Max Cycle Subtraction	0	7	0	0	0	0	0
Additional		Coord Actuated Period	0	8	35	0	0	36	35
Max Recalls	_____	Top Of Cycle Green Point	End	9	0	0	0	0	0
Units	Seconds	Big Bang Preempt Recvry	No	10	0	0	0	0	0
		Big Bang Ped Recovery	No	11	0	0	0	0	0
		Min Lagging Left Split	0%	12	0	0	0	0	0

Intersection 644 at Woodmen Rd and Mohawk Rd - Coordination table, plans 5-6

Alternate Maxes

Intersection 644 at Woodmen Rd and Mohawk Rd - Schedule table, events 1-25

Event	Ena-		Event Parameters		Start					Duration	Stop		Repetition		
Num	bled	Event Type	Param 1	Param 2	Mon	Day	Hour	Min	Sec	Minutes	Mon	Day	Repeat	Intervals	Priority
1	Yes	Run Plan	Plan 2	Ofst #1	1	1	05	00	00	300	12	31	Weekly	_MTWTF_	Low
2	Yes	Run Plan	Plan 3	Ofst #1	1	1	10	00	00	240	12	31	Weekly	_MTWTF_	Low
3	Yes	Run Plan	Plan 4	Ofst #1	1	1	14	00	00	480	12	31	Weekly	_MTWTF	Very Low
4	Yes	Run Plan	Plan 5	Ofst #1	1	1	10	00	00	600	12	31	Weekly	S S	Low
5	Yes	Run Plan	Plan 6	Ofst #1	1	1	06	00	00	240	12	31	Weekly	S S	Medium
6	Yes	Run Plan	Plan 6	Ofst #1	1	1	18	00	00	240	12	31	Weekly	S S	Medium
7															
8															
9															
10															
11															
12															
13															
14															
15															
16															
17															
18															
19															
20															
21															
22															
23															
24															
25															

APPENDIX B

Level of Service Definitions

The following information is referenced from the Highway Capacity Manual: A Guide for Multimodal Mobility Analysis, 7th Edition, Transportation Research Board, 2022: Chapter 19 – Signalized Intersections.

Motorized Vehicle Level of Service (LOS) for Signalized Intersections

Levels of service are defined to represent reasonable ranges in control delay.

LOS A Describes operations with a control delay of 10 s/veh or less and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is low and either progression is exceptionally favorable or the cycle length is very short. If it is due to favorable progression, most vehicles arrive during the green indication and travel through the intersection without stopping.

LOS B Describes operations with control delay between 10 and 20 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is low and either progression is highly favorable or the cycle length is short. More vehicles stop than with LOS A.

LOS C Describes operations with control delay between 20 and 35 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when progression is favorable or the cycle length is moderate. Individual *cycle failures* (i.e., one or more queued vehicles are not able to depart as a result of insufficient capacity during the cycle) may begin to appear at this level. The number of vehicles stopping is significant, although many vehicles still pass through the intersection without stopping.

LOS D Describes operations with control delay between 35 and 55 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is high and either progression is ineffective or the cycle length is long. Many vehicles stop and individual cycle failures are noticeable.

LOS E Describes operations with control delay between 55 and 80 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is high, progression is unfavorable, and the cycle length is long. Individual cycle failures are frequent.

LOS F Describes operations with control delay exceeding 80 s/veh or a volume-to-capacity ratio greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is very high, progression is very poor, and the cycle length is long. Most cycles fail to clear the queue.

Control Delay (s/veh)	LOS by Volume-to-Capacity Ratio[a]	
	$v/c \leq 1.0$	$v/c > 1.0$
≤ 10	A	F
> 10 – 20	B	F
> 20 – 35	C	F
> 35 – 55	D	F
> 55 – 80	E	F
> 80	F	F

Note: [a] For approach-based and intersectionwide assessments, LOS is defined solely by control delay.

The following information is referenced from the Highway Capacity Manual: A Guide for Multimodal Mobility Analysis, 7th Edition, Transportation Research Board, 2022: Chapter 20 – Two-Way Stop-Controlled Intersections, Chapter 21 – All-Way Stop-Controlled Intersections, and Chapter 22 - Roundabouts.

Motorized Vehicle Level of Service (LOS) for Unsignalized & Roundabout Intersections

LOS is a quantitative stratification of performance measure(s) representing quality of service. Quality of service describes how well a transportation facility or service operates from a traveler's perspective. LOS is measured on an A – F scale, with LOS A representing the best operating conditions from a traveler's perspective.

Control Delay (s/veh)	LOS by Volume-to-Capacity Ratio[a]	
	$v/c \leq 1.0$	$v/c > 1.0$
0 – 10	A	F
> 10 – 15	B	F
> 15 – 25	C	F
> 25 – 35	D	F
> 35 – 50	E	F
> 50	F	F

Note: The LOS criteria apply to each lane on a given approach and to each approach on the minor street. LOS is not calculated for major-street approaches or for the intersection as a whole.

[a] For approaches and intersectionwide assessment, LOS is defined solely by control delay.

APPENDIX C

Capacity Worksheets

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	34	766	24	2	1543	18	1	0	2	20	1	48
Future Volume (vph)	34	766	24	2	1543	18	1	0	2	20	1	48
Satd. Flow (prot)	1770	5085	1583	1770	5085	1583	1770	1863	1583	1770	1589	0
Flt Permitted	0.950			0.950			0.722			0.757		
Satd. Flow (perm)	1770	5085	1583	1770	5085	1583	1345	1863	1583	1410	1589	0
Satd. Flow (RTOR)			99			99			326		52	
Lane Group Flow (vph)	37	833	26	2	1677	20	1	0	2	22	53	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm		Perm	Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases			2			6	8		8	4		
Detector Phase	5	2	2	1	6	6	8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	6.0	6.0	6.0	6.0	6.0	
Minimum Split (s)	10.0	17.5	17.5	10.0	17.5	17.5	14.0	14.0	14.0	14.0	14.0	
Total Split (s)	17.0	77.0	77.0	17.0	77.0	77.0	16.0	16.0	16.0	16.0	16.0	
Total Split (%)	15.5%	70.0%	70.0%	15.5%	70.0%	70.0%	14.5%	14.5%	14.5%	14.5%	14.5%	
Yellow Time (s)	3.0	5.5	5.5	3.0	5.5	5.5	6.0	6.0	6.0	6.0	6.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	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)	5.0	7.5	7.5	5.0	7.5	7.5	8.0	8.0	8.0	8.0	8.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	None	None	None	C-Max	C-Max	None	None	None	None	None	
Act Effct Green (s)	7.8	89.5	89.5	5.7	83.4	83.4	7.0		7.0	7.0	7.0	
Actuated g/C Ratio	0.07	0.81	0.81	0.05	0.76	0.76	0.06		0.06	0.06	0.06	
v/c Ratio	0.30	0.20	0.02	0.02	0.44	0.02	0.01		0.00	0.24	0.35	
Control Delay (s/veh)	53.9	3.5	0.0	50.0	7.4	0.0	48.0		0.0	55.4	20.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	
Total Delay (s/veh)	53.9	3.5	0.0	50.0	7.4	0.0	48.0		0.0	55.4	20.8	
LOS	D	A	A	D	A	A	D		A	E	C	
Approach Delay (s/veh)		5.5			7.3			16.0			30.9	
Approach LOS		A			A			B			C	
Queue Length 50th (ft)	26	42	0	1	189	0	1		0	15	1	
Queue Length 95th (ft)	59	91	0	10	248	0	6		0	42	41	
Internal Link Dist (ft)		850			876			595			160	
Turn Bay Length (ft)	300		400	315		375	165		165	35		
Base Capacity (vph)	193	4138	1306	193	3854	1223	97		417	102	163	
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	0.20	0.02	0.01	0.44	0.02	0.01		0.00	0.22	0.33	

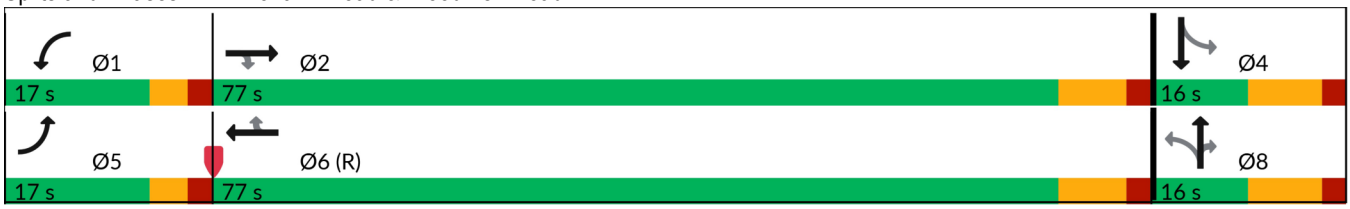
Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 77 (70%), Referenced to phase 6:WBT, Start of Green
Natural Cycle: 55
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.44

Intersection Signal Delay (s/veh): 7.4	Intersection LOS: A
Intersection Capacity Utilization 50.5%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 1: Mohawk Road & Woodmen Road



Intersection	
Int Delay, s/veh	4.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	8	20	32	6	0	9	31	14	0	20	1
Future Vol, veh/h	0	8	20	32	6	0	9	31	14	0	20	1
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	-	-	-	-	-	-	25	-	-	-	-	-
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	9	22	35	7	0	10	34	15	0	22	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	79	91	22	87	84	41	23	0	0	49	0	0
Stage 1	22	22	-	61	61	-	-	-	-	-	-	-
Stage 2	57	68	-	26	23	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	910	799	1055	899	806	1030	1592	-	-	1558	-	-
Stage 1	996	877	-	950	844	-	-	-	-	-	-	-
Stage 2	955	838	-	991	876	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	897	794	1055	865	802	1030	1592	-	-	1558	-	-
Mov Cap-2 Maneuver	897	794	-	865	802	-	-	-	-	-	-	-
Stage 1	996	877	-	945	839	-	-	-	-	-	-	-
Stage 2	942	833	-	961	876	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	8.85	9.43	1.21	0
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1592	-	-	964	855	1558	-	-
HCM Lane V/C Ratio	0.006	-	-	0.032	0.048	-	-	-
HCM Ctrl Dly (s/v)	7.3	-	-	8.9	9.4	0	-	-
HCM Lane LOS	A	-	-	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.2	0	-	-

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	31	0	0	21
Future Vol, veh/h	0	0	31	0	0	21
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	0	34	0	0	23

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	57	34	0	0	34	0
Stage 1	34	-	-	-	-	-
Stage 2	23	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	951	1040	-	-	1578	-
Stage 1	989	-	-	-	-	-
Stage 2	1000	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	951	1040	-	-	1578	-
Mov Cap-2 Maneuver	951	-	-	-	-	-
Stage 1	989	-	-	-	-	-
Stage 2	1000	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1578	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Ctrl Dly (s/v)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

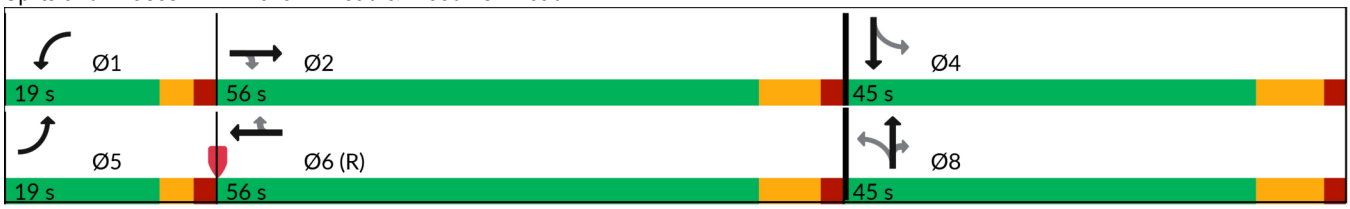
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	39	1857	1	1	1259	17	2	0	0	15	0	44
Future Volume (vph)	39	1857	1	1	1259	17	2	0	0	15	0	44
Satd. Flow (prot)	1770	5085	1583	1770	5085	1583	1770	1863	1863	1770	1583	0
Flt Permitted	0.950			0.950			0.726			0.757		
Satd. Flow (perm)	1770	5085	1583	1770	5085	1583	1352	1863	1863	1410	1583	0
Satd. Flow (RTOR)			91			91					252	
Lane Group Flow (vph)	42	2018	1	1	1368	18	2	0	0	16	48	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm		Perm	Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases			2			6	8		8	4		
Detector Phase	5	2	2	1	6	6	8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	6.0	6.0	6.0	6.0	6.0	
Minimum Split (s)	10.0	17.5	17.5	10.0	17.5	17.5	14.0	14.0	14.0	14.0	14.0	
Total Split (s)	19.0	56.0	56.0	19.0	56.0	56.0	45.0	45.0	45.0	45.0	45.0	
Total Split (%)	15.8%	46.7%	46.7%	15.8%	46.7%	46.7%	37.5%	37.5%	37.5%	37.5%	37.5%	
Yellow Time (s)	3.0	5.5	5.5	3.0	5.5	5.5	6.0	6.0	6.0	6.0	6.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	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)	5.0	7.5	7.5	5.0	7.5	7.5	8.0	8.0	8.0	8.0	8.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	None	None	None	C-Max	C-Max	None	None	None	None	None	
Act Effct Green (s)	8.3	99.5	99.5	5.6	90.5	90.5	7.1			7.1	7.1	
Actuated g/C Ratio	0.07	0.83	0.83	0.05	0.75	0.75	0.06			0.06	0.06	
v/c Ratio	0.34	0.48	0.00	0.01	0.36	0.01	0.03			0.19	0.15	
Control Delay (s/veh)	60.1	4.7	0.0	55.0	7.1	0.0	52.5			58.4	0.9	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0	
Total Delay (s/veh)	60.1	4.7	0.0	55.0	7.1	0.0	52.5			58.4	0.9	
LOS	E	A	A	D	A	A	D			E	A	
Approach Delay (s/veh)		5.9			7.0			52.5			15.3	
Approach LOS		A			A			D			B	
Queue Length 50th (ft)	32	141	0	1	142	0	2			12	0	
Queue Length 95th (ft)	69	292	0	7	197	0	10			36	0	
Internal Link Dist (ft)		850			876			595			160	
Turn Bay Length (ft)	300		400	315		375	165			35		
Base Capacity (vph)	206	4214	1327	206	3833	1215	416			434	662	
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	0.20	0.48	0.00	0.00	0.36	0.01	0.00			0.04	0.07	

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 72 (60%), Referenced to phase 6:WBT, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.48

Intersection Signal Delay (s/veh): 6.5	Intersection LOS: A
Intersection Capacity Utilization 56.3%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 1: Mohawk Road & Woodmen Road



Intersection	
Int Delay, s/veh	3.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↰	↱			↕	
Traffic Vol, veh/h	1	2	14	20	1	2	10	42	15	1	25	1
Future Vol, veh/h	1	2	14	20	1	2	10	42	15	1	25	1
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	-	-	-	-	-	-	25	-	-	-	-	-
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	1	2	15	22	1	2	11	46	16	1	27	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	98	114	28	106	106	54	28	0	0	62	0	0
Stage 1	30	30	-	76	76	-	-	-	-	-	-	-
Stage 2	68	84	-	30	30	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	884	777	1048	874	784	1013	1585	-	-	1541	-	-
Stage 1	987	870	-	934	832	-	-	-	-	-	-	-
Stage 2	942	825	-	986	870	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	874	771	1048	852	778	1013	1585	-	-	1541	-	-
Mov Cap-2 Maneuver	874	771	-	852	778	-	-	-	-	-	-	-
Stage 1	986	870	-	927	826	-	-	-	-	-	-	-
Stage 2	933	820	-	969	869	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	8.69	9.31	1.09	0.27
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1585	-	-	994	860	66	-	-
HCM Lane V/C Ratio	0.007	-	-	0.019	0.029	0.001	-	-
HCM Ctrl Dly (s/v)	7.3	-	-	8.7	9.3	7.3	0	-
HCM Lane LOS	A	-	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0	-	-

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	45	0	0	27
Future Vol, veh/h	0	0	45	0	0	27
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	0	49	0	0	29

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	78	49	0	0	49	0
Stage 1	49	-	-	-	-	-
Stage 2	29	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	924	1020	-	-	1558	-
Stage 1	974	-	-	-	-	-
Stage 2	993	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	924	1020	-	-	1558	-
Mov Cap-2 Maneuver	924	-	-	-	-	-
Stage 1	974	-	-	-	-	-
Stage 2	993	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1558	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Ctrl Dly (s/v)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	42	1405	141	171	2207	19	311	5	153	21	8	71
Future Volume (vph)	42	1405	141	171	2207	19	311	5	153	21	8	71
Satd. Flow (prot)	1770	5085	1583	1770	5085	1583	1770	1863	1583	1770	1613	0
Flt Permitted	0.950			0.950			0.701			0.754		
Satd. Flow (perm)	1770	5085	1583	1770	5085	1583	1306	1863	1583	1405	1613	0
Satd. Flow (RTOR)			153			99			166		77	
Lane Group Flow (vph)	46	1527	153	186	2399	21	338	5	166	23	86	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases			2			6	8		8	4		
Detector Phase	5	2	2	1	6	6	8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	6.0	6.0	6.0	6.0	6.0	
Minimum Split (s)	10.0	17.5	17.5	10.0	17.5	17.5	14.0	14.0	14.0	14.0	14.0	
Total Split (s)	17.0	77.0	77.0	17.0	77.0	77.0	16.0	16.0	16.0	16.0	16.0	
Total Split (%)	15.5%	70.0%	70.0%	15.5%	70.0%	70.0%	14.5%	14.5%	14.5%	14.5%	14.5%	
Yellow Time (s)	3.0	5.5	5.5	3.0	5.5	5.5	6.0	6.0	6.0	6.0	6.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	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)	5.0	7.5	7.5	5.0	7.5	7.5	8.0	8.0	8.0	8.0	8.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	None	None	None	C-Max	C-Max	None	None	None	None	None	
Act Effct Green (s)	8.3	69.5	69.5	12.0	75.3	75.3	8.0	8.0	8.0	8.0	8.0	
Actuated g/C Ratio	0.08	0.63	0.63	0.11	0.68	0.68	0.07	0.07	0.07	0.07	0.07	
v/c Ratio	0.35	0.48	0.14	0.96	0.69	0.02	3.60	0.04	0.62	0.23	0.46	
Control Delay (s/veh)	54.6	11.3	1.6	105.9	12.5	0.1	Error	48.2	18.2	53.8	21.9	
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 (s/veh)	54.6	11.3	1.6	105.9	12.5	0.1	Error	48.2	18.2	53.8	21.9	
LOS	D	B	A	F	B	A	F	D	B	D	C	
Approach Delay (s/veh)		11.6			19.0			809.9			28.6	
Approach LOS		B			B			F			C	
Queue Length 50th (ft)	32	194	0	135	360	0	~435	3	0	16	6	
Queue Length 95th (ft)	69	228	23	#279	456	0	#617	16	66	43	56	
Internal Link Dist (ft)		850			876			595			160	
Turn Bay Length (ft)	300		400	315		375	165		165	35		
Base Capacity (vph)	193	3212	1056	193	3481	1115	94	135	269	102	188	
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	0.24	0.48	0.14	0.96	0.69	0.02	3.60	0.04	0.62	0.23	0.46	

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 77 (70%), Referenced to phase 6:WBT, Start of Green
Natural Cycle: 100
Control Type: Actuated-Coordinated

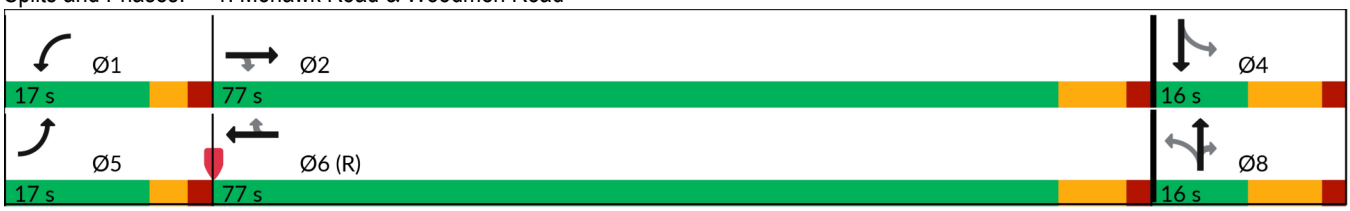
Maximum v/c Ratio: 3.60

Intersection Signal Delay (s/veh): 98.0	Intersection LOS: F
Intersection Capacity Utilization 87.8%	ICU Level of Service E
Analysis Period (min) 15	

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

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

Splits and Phases: 1: Mohawk Road & Woodmen Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	42	1405	141	171	2207	19	311	5	153	21	8	71
Future Volume (vph)	42	1405	141	171	2207	19	311	5	153	21	8	71
Satd. Flow (prot)	1770	5085	1583	1770	5085	1583	1770	1863	1583	1770	1613	0
Flt Permitted	0.950			0.950			0.701			0.754		
Satd. Flow (perm)	1770	5085	1583	1770	5085	1583	1306	1863	1583	1405	1613	0
Satd. Flow (RTOR)			153			99			166		77	
Lane Group Flow (vph)	46	1527	153	186	2399	21	338	5	166	23	86	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases			2			6	8		8	4		
Detector Phase	5	2	2	1	6	6	8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	6.0	6.0	6.0	6.0	6.0	
Minimum Split (s)	10.0	17.5	17.5	10.0	17.5	17.5	14.0	14.0	14.0	14.0	14.0	
Total Split (s)	10.0	53.0	53.0	20.0	63.0	63.0	37.0	37.0	37.0	37.0	37.0	
Total Split (%)	9.1%	48.2%	48.2%	18.2%	57.3%	57.3%	33.6%	33.6%	33.6%	33.6%	33.6%	
Yellow Time (s)	3.0	5.5	5.5	3.0	5.5	5.5	6.0	6.0	6.0	6.0	6.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	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)	5.0	7.5	7.5	5.0	7.5	7.5	8.0	8.0	8.0	8.0	8.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	None	None	None	C-Max	C-Max	None	None	None	None	None	
Act Effct Green (s)	5.0	46.2	46.2	14.3	57.5	57.5	29.0	29.0	29.0	29.0	29.0	
Actuated g/C Ratio	0.05	0.42	0.42	0.13	0.52	0.52	0.26	0.26	0.26	0.26	0.26	
v/c Ratio	0.57	0.71	0.20	0.81	0.90	0.02	0.98	0.01	0.31	0.06	0.18	
Control Delay (s/veh)	79.2	28.9	3.9	73.1	30.3	0.1	85.8	30.0	6.5	31.0	9.7	
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 (s/veh)	79.2	28.9	3.9	73.1	30.3	0.1	85.8	30.0	6.5	31.0	9.7	
LOS	E	C	A	E	C	A	F	C	A	C	A	
Approach Delay (s/veh)		28.0			33.1			59.4			14.2	
Approach LOS		C			C			E			B	
Queue Length 50th (ft)	33	329	0	131	569	0	241	3	0	12	5	
Queue Length 95th (ft)	#88	388	39	#243	#658	0	#431	12	52	34	44	
Internal Link Dist (ft)		850			876			595			160	
Turn Bay Length (ft)	300		400	315		375	165		165	35		
Base Capacity (vph)	80	2137	754	241	2657	874	344	491	539	370	481	
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	0.58	0.71	0.20	0.77	0.90	0.02	0.98	0.01	0.31	0.06	0.18	

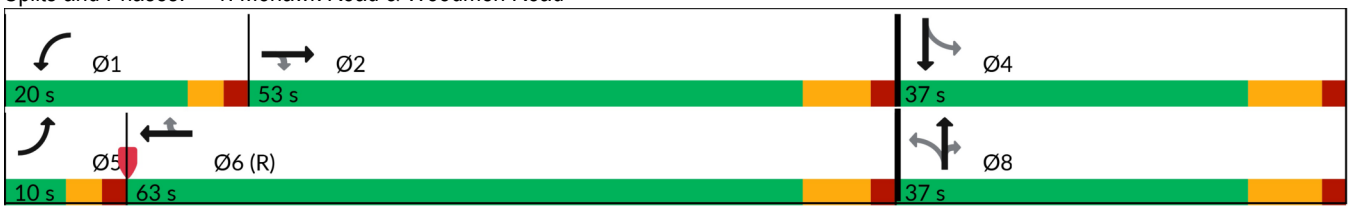
Intersection Summary
Cycle Length: 110
Actuated Cycle Length: 110
Offset: 77 (70%), Referenced to phase 6:WBT, Start of Green
Natural Cycle: 100
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.98

Intersection Signal Delay (s/veh): 33.6	Intersection LOS: C
Intersection Capacity Utilization 87.8%	ICU Level of Service E
Analysis Period (min) 15	

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

Splits and Phases: 1: Mohawk Road & Woodmen Road



Intersection	
Int Delay, s/veh	5.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	8	21	54	6	0	9	32	22	0	21	1
Future Vol, veh/h	0	8	21	54	6	0	9	32	22	0	21	1
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	-	-	-	-	-	-	25	-	-	-	-	-
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	9	23	59	7	0	10	35	24	0	23	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	81	102	23	93	90	47	24	0	0	59	0	0
Stage 1	23	23	-	66	66	-	-	-	-	-	-	-
Stage 2	58	78	-	27	24	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	907	788	1053	890	800	1023	1591	-	-	1545	-	-
Stage 1	995	876	-	944	840	-	-	-	-	-	-	-
Stage 2	954	830	-	990	875	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	894	784	1053	856	795	1023	1591	-	-	1545	-	-
Mov Cap-2 Maneuver	894	784	-	856	795	-	-	-	-	-	-	-
Stage 1	995	876	-	938	835	-	-	-	-	-	-	-
Stage 2	941	825	-	959	875	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	8.87	9.59	1.04	0
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1591	-	-	962	849	1545	-	-
HCM Lane V/C Ratio	0.006	-	-	0.033	0.077	-	-	-
HCM Ctrl Dly (s/v)	7.3	-	-	8.9	9.6	0	-	-
HCM Lane LOS	A	-	-	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.2	0	-	-

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	32	0	0	22
Future Vol, veh/h	0	0	32	0	0	22
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	0	35	0	0	24

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	59	35	0	0	35	0
Stage 1	35	-	-	-	-	-
Stage 2	24	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	948	1038	-	-	1577	-
Stage 1	988	-	-	-	-	-
Stage 2	999	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	948	1038	-	-	1577	-
Mov Cap-2 Maneuver	948	-	-	-	-	-
Stage 1	988	-	-	-	-	-
Stage 2	999	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1577	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Ctrl Dly (s/v)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	64	3074	153	176	2365	18	177	4	115	16	6	60
Future Volume (vph)	64	3074	153	176	2365	18	177	4	115	16	6	60
Satd. Flow (prot)	1770	5085	1583	1770	5085	1583	1770	1863	1583	1770	1611	0
Flt Permitted	0.950			0.950			0.710			0.755		
Satd. Flow (perm)	1770	5085	1583	1770	5085	1583	1323	1863	1583	1406	1611	0
Satd. Flow (RTOR)			116			91			125		65	
Lane Group Flow (vph)	70	3341	166	191	2571	20	192	4	125	17	72	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases			2			6	8		8	4		
Detector Phase	5	2	2	1	6	6	8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	6.0	6.0	6.0	6.0	6.0	
Minimum Split (s)	10.0	17.5	17.5	10.0	17.5	17.5	14.0	14.0	14.0	14.0	14.0	
Total Split (s)	19.0	56.0	56.0	19.0	56.0	56.0	45.0	45.0	45.0	45.0	45.0	
Total Split (%)	15.8%	46.7%	46.7%	15.8%	46.7%	46.7%	37.5%	37.5%	37.5%	37.5%	37.5%	
Yellow Time (s)	3.0	5.5	5.5	3.0	5.5	5.5	6.0	6.0	6.0	6.0	6.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	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)	5.0	7.5	7.5	5.0	7.5	7.5	8.0	8.0	8.0	8.0	8.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	None	None	None	C-Max	C-Max	None	None	None	None	None	
Act Effct Green (s)	10.1	57.7	57.7	19.0	68.8	68.8	22.8	22.8	22.8	22.8	22.8	
Actuated g/C Ratio	0.08	0.48	0.48	0.16	0.57	0.57	0.19	0.19	0.19	0.19	0.19	
v/c Ratio	0.47	1.37	0.20	0.68	0.88	0.02	0.76	0.01	0.31	0.06	0.20	
Control Delay (s/veh)	62.0	196.3	8.0	60.4	29.0	0.1	64.6	35.0	8.3	36.7	11.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	62.0	196.3	8.0	60.4	29.0	0.1	64.6	35.0	8.3	36.7	11.6	
LOS	E	F	A	E	C	A	E	C	A	D	B	
Approach Delay (s/veh)		184.9			31.0			42.3			16.4	
Approach LOS		F			C			D			B	
Queue Length 50th (ft)	53	~1289	21	141	638	0	144	3	0	11	5	
Queue Length 95th (ft)	100	#1468	70	226	#948	0	211	12	48	30	41	
Internal Link Dist (ft)		850			876			595			160	
Turn Bay Length (ft)	300		400	315		375	165		165	35		
Base Capacity (vph)	206	2443	820	280	2916	946	407	574	574	433	541	
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	0.34	1.37	0.20	0.68	0.88	0.02	0.47	0.01	0.22	0.04	0.13	

Intersection Summary

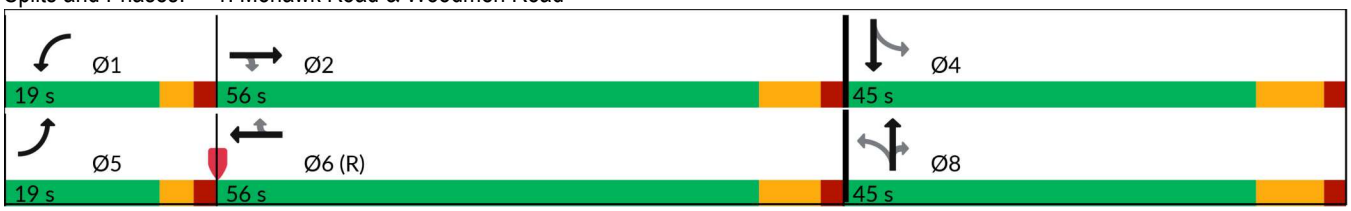
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 72 (60%), Referenced to phase 6:WBT, Start of Green
Natural Cycle: 150
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.37

Intersection Signal Delay (s/veh): 112.7	Intersection LOS: F
Intersection Capacity Utilization 102.7%	ICU Level of Service G
Analysis Period (min) 15	

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

Splits and Phases: 1: Mohawk Road & Woodmen Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	64	3074	153	176	2365	18	177	4	115	16	6	60
Future Volume (vph)	64	3074	153	176	2365	18	177	4	115	16	6	60
Satd. Flow (prot)	1770	5085	1583	1770	5085	1583	1770	1863	1583	1770	1611	0
Flt Permitted	0.950			0.950			0.710			0.755		
Satd. Flow (perm)	1770	5085	1583	1770	5085	1583	1323	1863	1583	1406	1611	0
Satd. Flow (RTOR)			166			91			119		65	
Lane Group Flow (vph)	70	3341	166	191	2571	20	192	4	125	17	72	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases			2			6	8		8	4		
Detector Phase	5	2	2	1	6	6	8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	6.0	6.0	6.0	6.0	6.0	
Minimum Split (s)	10.0	17.5	17.5	10.0	17.5	17.5	14.0	14.0	14.0	14.0	14.0	
Total Split (s)	14.0	81.0	81.0	16.0	83.0	83.0	23.0	23.0	23.0	23.0	23.0	
Total Split (%)	11.7%	67.5%	67.5%	13.3%	69.2%	69.2%	19.2%	19.2%	19.2%	19.2%	19.2%	
Yellow Time (s)	3.0	5.5	5.5	3.0	5.5	5.5	6.0	6.0	6.0	6.0	6.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	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)	5.0	7.5	7.5	5.0	7.5	7.5	8.0	8.0	8.0	8.0	8.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	None	None	None	C-Max	C-Max	None	None	None	None	None	
Act Effct Green (s)	8.3	73.5	73.5	11.0	78.4	78.4	15.0	15.0	15.0	15.0	15.0	
Actuated g/C Ratio	0.07	0.61	0.61	0.09	0.65	0.65	0.13	0.13	0.13	0.13	0.13	
v/c Ratio	0.57	1.07	0.16	1.18	0.77	0.02	1.16	0.02	0.41	0.10	0.28	
Control Delay (s/veh)	72.3	63.8	1.8	174.0	17.4	0.1	167.1	46.5	14.1	48.1	16.5	
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 (s/veh)	72.3	63.8	1.8	174.0	17.4	0.1	167.1	46.5	14.1	48.1	16.5	
LOS	E	E	A	F	B	A	F	D	B	D	B	
Approach Delay (s/veh)		61.1			28.0			106.0			22.6	
Approach LOS		E			C			F			C	
Queue Length 50th (ft)	54	~1069	0	~180	517	0	~179	3	4	12	5	
Queue Length 95th (ft)	105	#1150	27	#332	584	0	#331	14	62	35	50	
Internal Link Dist (ft)		850			876			595			160	
Turn Bay Length (ft)	300		400	315		375	165		165	35		
Base Capacity (vph)	132	3114	1033	162	3322	1065	165	232	302	175	258	
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	0.53	1.07	0.16	1.18	0.77	0.02	1.16	0.02	0.41	0.10	0.28	

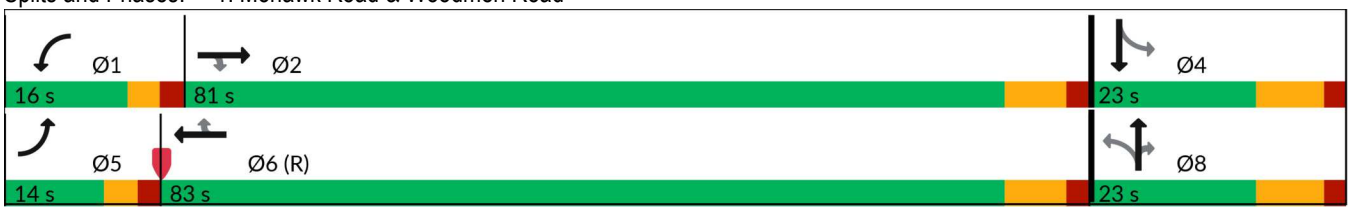
Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 72 (60%), Referenced to phase 6:WBT, Start of Green
Natural Cycle: 150
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.18

Intersection Signal Delay (s/veh): 49.2	Intersection LOS: D
Intersection Capacity Utilization 102.7%	ICU Level of Service G
Analysis Period (min) 15	

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

Splits and Phases: 1: Mohawk Road & Woodmen Road



Intersection	
Int Delay, s/veh	3.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	2	15	35	1	2	10	44	39	1	26	1
Future Vol, veh/h	1	2	15	35	1	2	10	44	39	1	26	1
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	-	-	-	-	-	-	25	-	-	-	-	-
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	1	2	16	38	1	2	11	48	42	1	28	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	101	143	29	122	122	69	29	0	0	90	0	0
Stage 1	31	31	-	91	91	-	-	-	-	-	-	-
Stage 2	70	112	-	32	32	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	880	748	1046	852	768	994	1584	-	-	1505	-	-
Stage 1	986	869	-	916	820	-	-	-	-	-	-	-
Stage 2	940	803	-	985	869	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	870	743	1046	830	762	994	1584	-	-	1505	-	-
Mov Cap-2 Maneuver	870	743	-	830	762	-	-	-	-	-	-	-
Stage 1	985	869	-	910	814	-	-	-	-	-	-	-
Stage 2	930	797	-	966	868	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	8.71	9.53	0.78	0.26
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1584	-	-	990	836	64	-	-
HCM Lane V/C Ratio	0.007	-	-	0.02	0.049	0.001	-	-
HCM Ctrl Dly (s/v)	7.3	-	-	8.7	9.5	7.4	0	-
HCM Lane LOS	A	-	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.2	0	-	-

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	48	0	0	28
Future Vol, veh/h	0	0	48	0	0	28
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	0	52	0	0	30

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	83	52	0	0	52	0
Stage 1	52	-	-	-	-	-
Stage 2	30	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	919	1015	-	-	1554	-
Stage 1	970	-	-	-	-	-
Stage 2	992	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	919	1015	-	-	1554	-
Mov Cap-2 Maneuver	919	-	-	-	-	-
Stage 1	970	-	-	-	-	-
Stage 2	992	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1554	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Ctrl Dly (s/v)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	47	1405	141	171	2207	23	311	5	153	24	8	75
Future Volume (vph)	47	1405	141	171	2207	23	311	5	153	24	8	75
Satd. Flow (prot)	1770	5085	1583	1770	5085	1583	1770	1863	1583	1770	1611	0
Flt Permitted	0.950			0.950			0.698			0.754		
Satd. Flow (perm)	1770	5085	1583	1770	5085	1583	1300	1863	1583	1405	1611	0
Satd. Flow (RTOR)			153			99			166		82	
Lane Group Flow (vph)	51	1527	153	186	2399	25	338	5	166	26	91	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases			2			6	8		8	4		
Detector Phase	5	2	2	1	6	6	8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	6.0	6.0	6.0	6.0	6.0	
Minimum Split (s)	10.0	17.5	17.5	10.0	17.5	17.5	14.0	14.0	14.0	14.0	14.0	
Total Split (s)	17.0	77.0	77.0	17.0	77.0	77.0	16.0	16.0	16.0	16.0	16.0	
Total Split (%)	15.5%	70.0%	70.0%	15.5%	70.0%	70.0%	14.5%	14.5%	14.5%	14.5%	14.5%	
Yellow Time (s)	3.0	5.5	5.5	3.0	5.5	5.5	6.0	6.0	6.0	6.0	6.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	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)	5.0	7.5	7.5	5.0	7.5	7.5	8.0	8.0	8.0	8.0	8.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	None	None	None	C-Max	C-Max	None	None	None	None	None	
Act Effct Green (s)	8.6	69.5	69.5	12.0	75.0	75.0	8.0	8.0	8.0	8.0	8.0	
Actuated g/C Ratio	0.08	0.63	0.63	0.11	0.68	0.68	0.07	0.07	0.07	0.07	0.07	
v/c Ratio	0.37	0.48	0.14	0.96	0.69	0.02	3.60	0.04	0.62	0.25	0.47	
Control Delay (s/veh)	55.0	11.3	1.6	105.9	12.7	0.0	Error	48.2	18.2	54.8	21.7	
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 (s/veh)	55.0	11.3	1.6	105.9	12.7	0.0	Error	48.2	18.2	54.8	21.7	
LOS	D	B	A	F	B	A	F	D	B	D	C	
Approach Delay (s/veh)		11.7			19.2			809.9			29.0	
Approach LOS		B			B			F			C	
Queue Length 50th (ft)	35	194	0	135	364	0	~435	3	0	18	6	
Queue Length 95th (ft)	73	228	23	#279	461	0	#618	16	66	48	58	
Internal Link Dist (ft)		850			876			595			160	
Turn Bay Length (ft)	300		400	315		375	165		165	35		
Base Capacity (vph)	193	3212	1056	193	3468	1111	94	135	269	102	193	
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	0.26	0.48	0.14	0.96	0.69	0.02	3.60	0.04	0.62	0.25	0.47	

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 77 (70%), Referenced to phase 6:WBT, Start of Green
Natural Cycle: 100
Control Type: Actuated-Coordinated

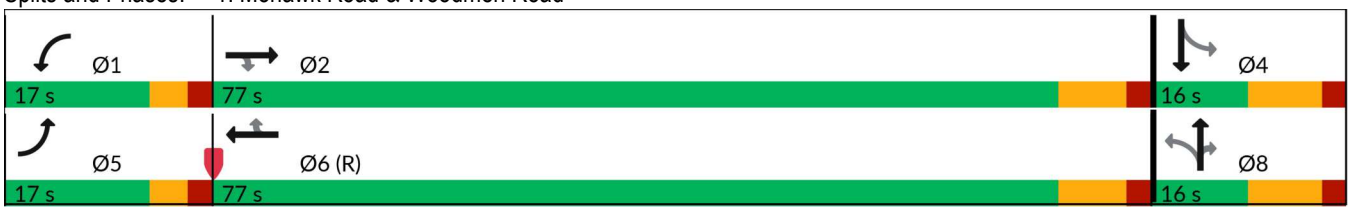
Maximum v/c Ratio: 3.60

Intersection Signal Delay (s/veh): 97.9	Intersection LOS: F
Intersection Capacity Utilization 87.8%	ICU Level of Service E
Analysis Period (min) 15	

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

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

Splits and Phases: 1: Mohawk Road & Woodmen Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	47	1405	141	171	2207	23	311	5	153	24	8	75
Future Volume (vph)	47	1405	141	171	2207	23	311	5	153	24	8	75
Satd. Flow (prot)	1770	5085	1583	1770	5085	1583	1770	1863	1583	1770	1611	0
Flt Permitted	0.950			0.950			0.698			0.754		
Satd. Flow (perm)	1770	5085	1583	1770	5085	1583	1300	1863	1583	1405	1611	0
Satd. Flow (RTOR)			153			99			166		82	
Lane Group Flow (vph)	51	1527	153	186	2399	25	338	5	166	26	91	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases			2			6	8		8	4		
Detector Phase	5	2	2	1	6	6	8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	6.0	6.0	6.0	6.0	6.0	
Minimum Split (s)	10.0	17.5	17.5	10.0	17.5	17.5	14.0	14.0	14.0	14.0	14.0	
Total Split (s)	10.0	53.0	53.0	20.0	63.0	63.0	37.0	37.0	37.0	37.0	37.0	
Total Split (%)	9.1%	48.2%	48.2%	18.2%	57.3%	57.3%	33.6%	33.6%	33.6%	33.6%	33.6%	
Yellow Time (s)	3.0	5.5	5.5	3.0	5.5	5.5	6.0	6.0	6.0	6.0	6.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	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)	5.0	7.5	7.5	5.0	7.5	7.5	8.0	8.0	8.0	8.0	8.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	None	None	None	C-Max	C-Max	None	None	None	None	None	
Act Effct Green (s)	5.0	46.2	46.2	14.3	57.5	57.5	29.0	29.0	29.0	29.0	29.0	
Actuated g/C Ratio	0.05	0.42	0.42	0.13	0.52	0.52	0.26	0.26	0.26	0.26	0.26	
v/c Ratio	0.64	0.71	0.20	0.81	0.90	0.03	0.99	0.01	0.31	0.07	0.19	
Control Delay (s/veh)	85.6	28.9	3.9	73.1	30.3	0.0	87.3	30.0	6.5	31.2	9.5	
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 (s/veh)	85.6	28.9	3.9	73.1	30.3	0.0	87.3	30.0	6.5	31.2	9.5	
LOS	F	C	A	E	C	A	F	C	A	C	A	
Approach Delay (s/veh)		28.4			33.1			60.4			14.3	
Approach LOS		C			C			E			B	
Queue Length 50th (ft)	37	329	0	131	569	0	242	3	0	14	5	
Queue Length 95th (ft)	#98	388	39	#243	#658	0	#432	12	52	37	45	
Internal Link Dist (ft)		850			876			595			160	
Turn Bay Length (ft)	300		400	315		375	165		165	35		
Base Capacity (vph)	80	2137	754	241	2657	874	342	491	539	370	485	
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	0.64	0.71	0.20	0.77	0.90	0.03	0.99	0.01	0.31	0.07	0.19	

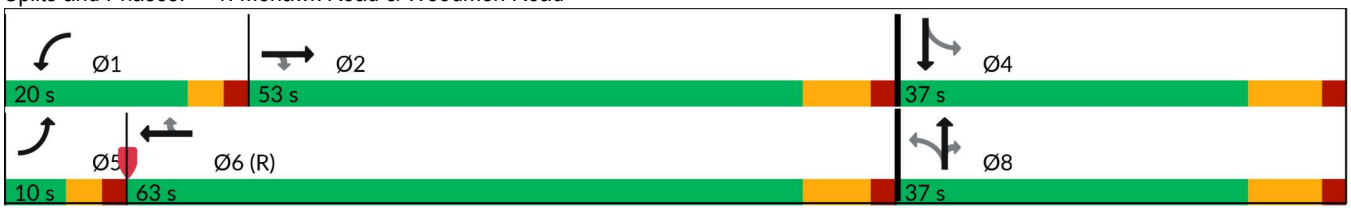
Intersection Summary
Cycle Length: 110
Actuated Cycle Length: 110
Offset: 77 (70%), Referenced to phase 6:WBT, Start of Green
Natural Cycle: 100
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.99

Intersection Signal Delay (s/veh): 33.8	Intersection LOS: C
Intersection Capacity Utilization 87.8%	ICU Level of Service E
Analysis Period (min) 15	

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

Splits and Phases: 1: Mohawk Road & Woodmen Road



Intersection	
Int Delay, s/veh	4.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	8	21	54	6	0	9	41	22	0	28	1
Future Vol, veh/h	1	8	21	54	6	0	9	41	22	0	28	1
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	-	-	-	-	-	-	25	-	-	-	-	-
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	1	9	23	59	7	0	10	45	24	0	30	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	98	119	31	111	108	57	32	0	0	68	0	0
Stage 1	31	31	-	76	76	-	-	-	-	-	-	-
Stage 2	67	88	-	35	32	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	884	771	1043	867	782	1010	1581	-	-	1533	-	-
Stage 1	986	869	-	933	832	-	-	-	-	-	-	-
Stage 2	943	822	-	981	869	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	871	766	1043	833	778	1010	1581	-	-	1533	-	-
Mov Cap-2 Maneuver	871	766	-	833	778	-	-	-	-	-	-	-
Stage 1	986	869	-	927	826	-	-	-	-	-	-	-
Stage 2	930	817	-	950	869	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	8.94	9.72	0.91	0
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1581	-	-	946	827	1533	-	-
HCM Lane V/C Ratio	0.006	-	-	0.034	0.079	-	-	-
HCM Ctrl Dly (s/v)	7.3	-	-	8.9	9.7	0	-	-
HCM Lane LOS	A	-	-	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.3	0	-	-

Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	7	0	0	0	10	32	0	0	22	0
Future Vol, veh/h	0	0	7	0	0	0	10	32	0	0	22	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
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	8	0	0	0	11	35	0	0	24	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	80	80	24	80	80	35	24	0	0	35	0	0
Stage 1	24	24	-	57	57	-	-	-	-	-	-	-
Stage 2	57	57	-	24	24	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	908	810	1053	908	810	1038	1591	-	-	1577	-	-
Stage 1	994	875	-	955	848	-	-	-	-	-	-	-
Stage 2	955	848	-	994	875	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	901	804	1053	895	804	1038	1591	-	-	1577	-	-
Mov Cap-2 Maneuver	901	804	-	895	804	-	-	-	-	-	-	-
Stage 1	994	875	-	949	842	-	-	-	-	-	-	-
Stage 2	949	842	-	987	875	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	8.45	0	1.73	0
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	429	-	-	1053	-	1577	-	-
HCM Lane V/C Ratio	0.007	-	-	0.007	-	-	-	-
HCM Ctrl Dly (s/v)	7.3	0	-	8.4	0	0	-	-
HCM Lane LOS	A	A	-	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0	-	0	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	72	3074	153	176	2365	24	177	4	115	22	6	69
Future Volume (vph)	72	3074	153	176	2365	24	177	4	115	22	6	69
Satd. Flow (prot)	1770	5085	1583	1770	5085	1583	1770	1863	1583	1770	1608	0
Flt Permitted	0.950			0.950			0.704			0.755		
Satd. Flow (perm)	1770	5085	1583	1770	5085	1583	1311	1863	1583	1406	1608	0
Satd. Flow (RTOR)			116			91			125		75	
Lane Group Flow (vph)	78	3341	166	191	2571	26	192	4	125	24	82	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases			2			6	8		8	4		
Detector Phase	5	2	2	1	6	6	8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	6.0	6.0	6.0	6.0	6.0	
Minimum Split (s)	10.0	17.5	17.5	10.0	17.5	17.5	14.0	14.0	14.0	14.0	14.0	
Total Split (s)	19.0	56.0	56.0	19.0	56.0	56.0	45.0	45.0	45.0	45.0	45.0	
Total Split (%)	15.8%	46.7%	46.7%	15.8%	46.7%	46.7%	37.5%	37.5%	37.5%	37.5%	37.5%	
Yellow Time (s)	3.0	5.5	5.5	3.0	5.5	5.5	6.0	6.0	6.0	6.0	6.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	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)	5.0	7.5	7.5	5.0	7.5	7.5	8.0	8.0	8.0	8.0	8.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	None	None	None	C-Max	C-Max	None	None	None	None	None	
Act Effct Green (s)	10.6	57.6	57.6	19.0	68.2	68.2	23.0	23.0	23.0	23.0	23.0	
Actuated g/C Ratio	0.09	0.48	0.48	0.16	0.57	0.57	0.19	0.19	0.19	0.19	0.19	
v/c Ratio	0.50	1.37	0.20	0.68	0.89	0.03	0.77	0.01	0.31	0.09	0.22	
Control Delay (s/veh)	62.4	197.4	8.0	60.6	29.9	0.0	64.8	34.8	8.2	37.3	10.9	
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 (s/veh)	62.4	197.4	8.0	60.6	29.9	0.0	64.8	34.8	8.2	37.3	10.9	
LOS	E	F	A	E	C	A	E	C	A	D	B	
Approach Delay (s/veh)		185.7			31.7			42.4			16.9	
Approach LOS		F			C			D			B	
Queue Length 50th (ft)	60	~1291	21	141	646	0	145	3	0	16	5	
Queue Length 95th (ft)	108	#1468	70	226	#959	0	212	12	48	37	44	
Internal Link Dist (ft)		850			876			595			160	
Turn Bay Length (ft)	300		400	315		375	165		165	35		
Base Capacity (vph)	208	2439	819	279	2890	939	404	574	574	433	547	
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	0.38	1.37	0.20	0.68	0.89	0.03	0.48	0.01	0.22	0.06	0.15	

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 72 (60%), Referenced to phase 6:WBT, Start of Green
Natural Cycle: 150
Control Type: Actuated-Coordinated

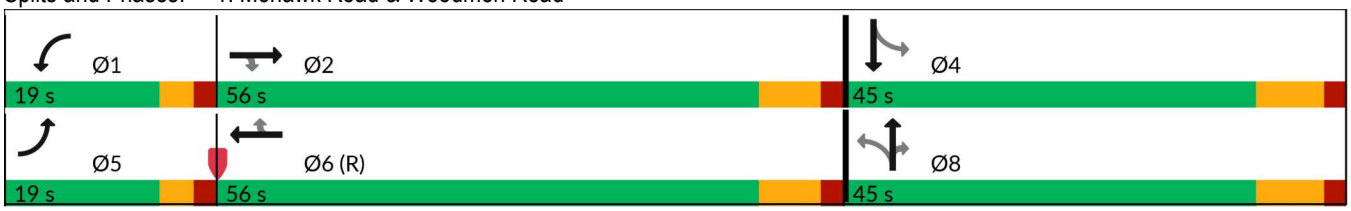
Maximum v/c Ratio: 1.37

Intersection Signal Delay (s/veh): 113.1	Intersection LOS: F
Intersection Capacity Utilization 102.7%	ICU Level of Service G
Analysis Period (min) 15	

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

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

Splits and Phases: 1: Mohawk Road & Woodmen Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	72	3074	153	176	2365	24	177	4	115	22	6	69
Future Volume (vph)	72	3074	153	176	2365	24	177	4	115	22	6	69
Satd. Flow (prot)	1770	5085	1583	1770	5085	1583	1770	1863	1583	1770	1608	0
Flt Permitted	0.950			0.950			0.704			0.755		
Satd. Flow (perm)	1770	5085	1583	1770	5085	1583	1311	1863	1583	1406	1608	0
Satd. Flow (RTOR)			166			91			107		75	
Lane Group Flow (vph)	78	3341	166	191	2571	26	192	4	125	24	82	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases			2			6	8		8	4		
Detector Phase	5	2	2	1	6	6	8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	6.0	6.0	6.0	6.0	6.0	
Minimum Split (s)	10.0	17.5	17.5	10.0	17.5	17.5	14.0	14.0	14.0	14.0	14.0	
Total Split (s)	13.0	81.0	81.0	16.0	84.0	84.0	23.0	23.0	23.0	23.0	23.0	
Total Split (%)	10.8%	67.5%	67.5%	13.3%	70.0%	70.0%	19.2%	19.2%	19.2%	19.2%	19.2%	
Yellow Time (s)	3.0	5.5	5.5	3.0	5.5	5.5	6.0	6.0	6.0	6.0	6.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	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)	5.0	7.5	7.5	5.0	7.5	7.5	8.0	8.0	8.0	8.0	8.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	None	None	None	C-Max	C-Max	None	None	None	None	None	
Act Effct Green (s)	7.8	73.5	73.5	11.0	79.1	79.1	15.0	15.0	15.0	15.0	15.0	
Actuated g/C Ratio	0.07	0.61	0.61	0.09	0.66	0.66	0.13	0.13	0.13	0.13	0.13	
v/c Ratio	0.68	1.07	0.16	1.18	0.77	0.02	1.18	0.02	0.43	0.14	0.31	
Control Delay (s/veh)	83.4	63.8	1.8	174.0	16.8	0.0	172.1	46.5	17.3	49.0	15.9	
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 (s/veh)	83.4	63.8	1.8	174.0	16.8	0.0	172.1	46.5	17.3	49.0	15.9	
LOS	F	E	A	F	B	A	F	D	B	D	B	
Approach Delay (s/veh)		61.4			27.4			110.3			23.4	
Approach LOS		E			C			F			C	
Queue Length 50th (ft)	61	~1059	0	~180	504	0	~180	3	13	17	5	
Queue Length 95th (ft)	#136	#1150	27	#332	569	0	#333	14	72	45	53	
Internal Link Dist (ft)		850			876			595			160	
Turn Bay Length (ft)	300		400	315		375	165		165	35		
Base Capacity (vph)	118	3114	1033	162	3351	1074	163	232	291	175	266	
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	0.66	1.07	0.16	1.18	0.77	0.02	1.18	0.02	0.43	0.14	0.31	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 72 (60%), Referenced to phase 6:WBT, Start of Green

Natural Cycle: 150

Control Type: Actuated-Coordinated

EBL, WBL, and NBL approaches after mitigation are operating at LOS F.

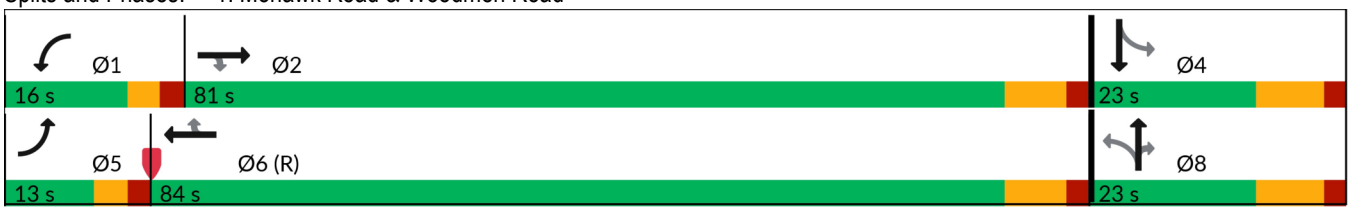
Maximum v/c Ratio: 1.18

Intersection Signal Delay (s/veh): 49.2	Intersection LOS: D
Intersection Capacity Utilization 102.7%	ICU Level of Service G
Analysis Period (min) 15	

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

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

Splits and Phases: 1: Mohawk Road & Woodmen Road



Timings
1: Mohawk Road & Woodmen Road

Background Traffic Conditions - Year 2028 - Mitigated
PM Peak Traffic Hour

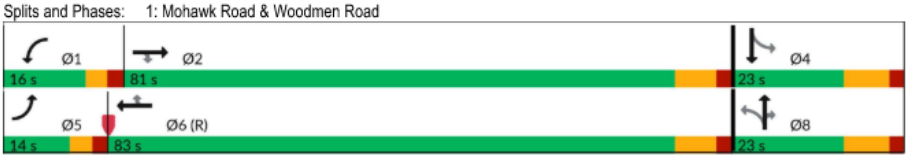
Maximum v/c Ratio: 1.18

Intersection Signal Delay (s/veh): 49.2	Intersection LOS: D
Intersection Capacity Utilization 102.7%	ICU Level of Service G
Analysis Period (min) 15	

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

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

Splits and Phases: 1: Mohawk Road & Woodmen Road



Use the same signal timing for the mitigated traffic conditions for Background and Total Traffic conditions for an apples to apples comparison.

Intersection	
Int Delay, s/veh	3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	2	15	35	1	2	10	58	39	1	41	2
Future Vol, veh/h	2	2	15	35	1	2	10	58	39	1	41	2
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	-	-	-	-	-	-	25	-	-	-	-	-
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	2	2	16	38	1	2	11	63	42	1	45	2

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	133	175	46	154	155	84	47	0	0	105	0	0
Stage 1	48	48	-	106	106	-	-	-	-	-	-	-
Stage 2	85	127	-	48	49	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	839	718	1024	813	737	975	1561	-	-	1486	-	-
Stage 1	966	855	-	900	808	-	-	-	-	-	-	-
Stage 2	923	791	-	966	854	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	829	713	1024	792	731	975	1561	-	-	1486	-	-
Mov Cap-2 Maneuver	829	713	-	792	731	-	-	-	-	-	-	-
Stage 1	965	854	-	893	802	-	-	-	-	-	-	-
Stage 2	913	785	-	947	853	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	8.85	9.76	0.68	0.17
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1561	-	-	956	798	41	-	-
HCM Lane V/C Ratio	0.007	-	-	0.022	0.052	0.001	-	-
HCM Ctrl Dly (s/v)	7.3	-	-	8.8	9.8	7.4	0	-
HCM Lane LOS	A	-	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.2	0	-	-

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	16	0	0	0	15	47	0	0	27	0
Future Vol, veh/h	0	0	16	0	0	0	15	47	0	0	27	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
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	17	0	0	0	16	51	0	0	29	0

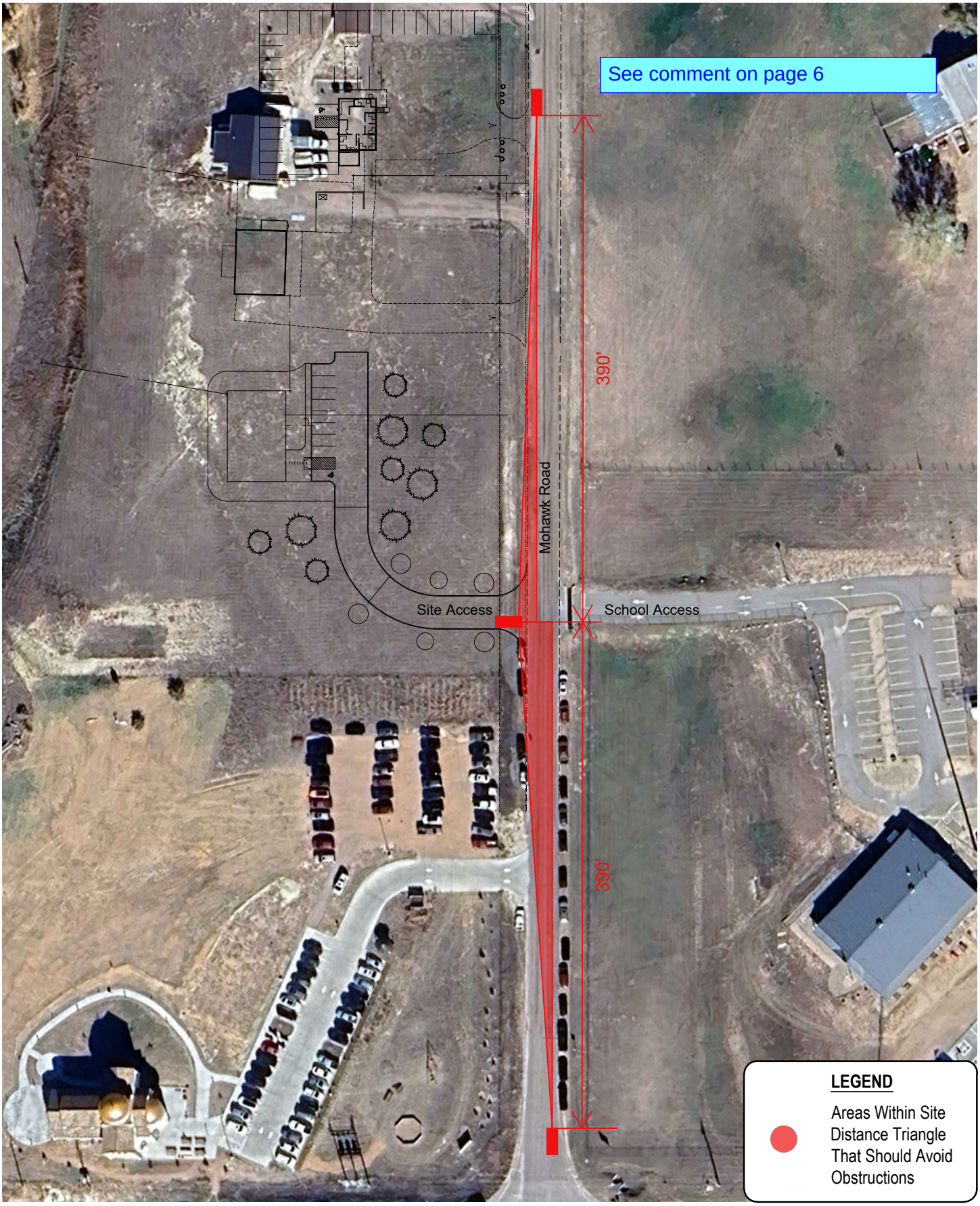
Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	113	113	29	113	113	51	29	0	0	51	0	0
Stage 1	29	29	-	84	84	-	-	-	-	-	-	-
Stage 2	84	84	-	29	29	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	864	777	1045	864	777	1017	1584	-	-	1555	-	-
Stage 1	988	871	-	924	825	-	-	-	-	-	-	-
Stage 2	924	825	-	988	871	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	855	769	1045	841	769	1017	1584	-	-	1555	-	-
Mov Cap-2 Maneuver	855	769	-	841	769	-	-	-	-	-	-	-
Stage 1	988	871	-	915	817	-	-	-	-	-	-	-
Stage 2	915	817	-	971	871	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	8.5	0	1.77	0
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	435	-	-	1045	-	1555	-	-
HCM Lane V/C Ratio	0.01	-	-	0.017	-	-	-	-
HCM Ctrl Dly (s/v)	7.3	0	-	8.5	0	0	-	-
HCM Lane LOS	A	A	-	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	-	0	-	-

APPENDIX D

Sight Distance Exhibit



SUNFLOWER LANDSCAPES
Sight Distance Exhibit

SM ROCHA, LLC
Traffic and Transportation Engineering

June 2026

0 100 North

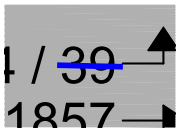
V2_Traffic Impact Study.pdf Markup Summary

7/15/2026 1:19:28 PM (1)

Subject: Callout
Page Label: 8
Author: lbesler
Date: 7/15/2026 1:19:28 PM
Status:
Color:
Layer:
Space:

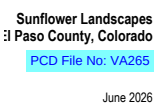
This is a previous version of the site plan drawing. The current drawing does not depict a third access across from the school driveway. Please update and revise the access narrative on Page 1 and the corresponding access analysis so they accurately reflect the access points shown on the current site plan drawing.

7/16/2026 9:16:08 AM (1)



Subject: Line
Page Label: 11
Author: lbesler
Date: 7/16/2026 9:16:08 AM
Status:
Color:
Layer:
Space:

7/20/2026 12:52:55 PM (1)



Subject: Callout
Page Label: 1
Author: lbesler
Date: 7/20/2026 12:52:55 PM
Status:
Color:
Layer:
Space:

PCD File No: VA265

7/20/2026 2:58:43 PM (1)

Subject: Cloud+
Page Label: 5
Author: lbesler
Date: 7/20/2026 2:58:43 PM
Status:
Color:
Layer:
Space:

The description of the proposed access points does not match what is shown on the current site plan. The site plan depicts the existing access and a proposed access near the north side of the property; however, no access is shown across from the school driveway as described in the narrative. Please revise the site description and access-point analysis so they accurately reflect the access locations shown on the current site plan drawing.

7/20/2026 4:26:18 PM (1)

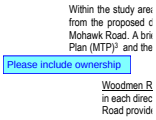
Subject: Text Box
Page Label: 80
Author: Joseph Sandstrom
Date: 7/20/2026 4:26:18 PM
Status:
Color:
Layer:
Space:

See comment on page 6

7/20/2026 4:26:46 PM (1)

Subject: Cloud
Page Label: 6
Author: Joseph Sandstrom
Date: 7/20/2026 4:26:46 PM
Status:
Color:
Layer:
Space:

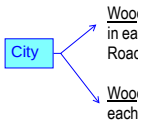
7/20/2026 4:28:35 PM (1)



Subject: Text Box
Page Label: 9
Author: Joseph Sandstrom
Date: 7/20/2026 4:28:35 PM
Status:
Color:
Layer:
Space:

Please include ownership

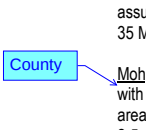
7/20/2026 4:29:00 PM (1)



Subject: Text Box
Page Label: 9
Author: Joseph Sandstrom
Date: 7/20/2026 4:29:00 PM
Status:
Color:
Layer:
Space:

City

7/20/2026 4:29:14 PM (1)



Subject: Text Box
Page Label: 9
Author: Joseph Sandstrom
Date: 7/20/2026 4:29:14 PM
Status:
Color:
Layer:
Space:

County

7/21/2026 7:27:03 AM (1)

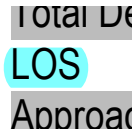
Subject: Cloud+
Page Label: 76
Author: Joseph Sandstrom
Date: 7/21/2026 7:27:03 AM
Status:
Color:
Layer:
Space:

Use the same signal timing for the mitigated traffic conditions for Background and Total Traffic conditions for an apples to apples comparison.

7/21/2026 7:27:31 AM (1)

Subject: Image
Page Label: 76
Author: Joseph Sandstrom
Date: 7/21/2026 7:27:31 AM
Status:
Color:
Layer:
Space:

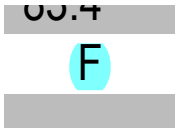
7/21/2026 8:37:20 AM (1)



Subject: Highlight
Page Label: 75
Author: lbesler
Date: 7/21/2026 8:37:20 AM
Status:
Color:
Layer:
Space:

LOS

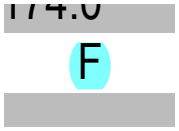
7/21/2026 8:37:33 AM (1)



Subject: Highlight
Page Label: 75
Author: lbesler
Date: 7/21/2026 8:37:33 AM
Status:
Color:
Layer:
Space:

F

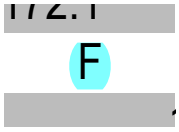
7/21/2026 8:37:34 AM (1)



Subject: Highlight
Page Label: 75
Author: lbesler
Date: 7/21/2026 8:37:34 AM
Status:
Color:
Layer:
Space:

F

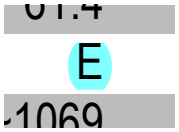
7/21/2026 8:37:35 AM (1)



Subject: Highlight
Page Label: 75
Author: lbesler
Date: 7/21/2026 8:37:35 AM
Status:
Color:
Layer:
Space:

F

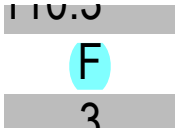
7/21/2026 8:38:43 AM (1)



Subject: Highlight
Page Label: 75
Author: lbesler
Date: 7/21/2026 8:38:43 AM
Status:
Color:
Layer:
Space:

E

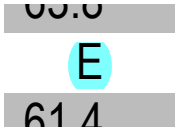
7/21/2026 8:38:44 AM (1)



Subject: Highlight
Page Label: 75
Author: lbesler
Date: 7/21/2026 8:38:44 AM
Status:
Color:
Layer:
Space:

F

7/21/2026 8:41:48 AM (1)



Subject: Highlight
Page Label: 75
Author: lbesler
Date: 7/21/2026 8:41:48 AM
Status:
Color:
Layer:
Space:

E

7/21/2026 8:42:49 AM (1)

Subject: Cloud+
Page Label: 75
Author: lbesler
Date: 7/21/2026 8:42:49 AM
Status:
Color:
Layer:
Space:

EBL, WBL, and NBL approaches after mitigation are operating at LOS F.

7/21/2026 8:44:17 AM (1)

Subject: Highlight
Page Label: 22
Author: lbesler
Date: 7/21/2026 8:44:17 AM
Status:
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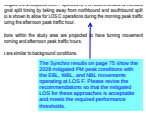
Space:

To mitigate the anticipated LOS F operations, it is recommended to increase
eastbound and westbound signal split timing by taking away from northbound and southbound split

timing. This mitigating scenario is shown to allow for LOS C operations during the morning peak traffic
hour and LOS D operations during the afternoon peak traffic hour.

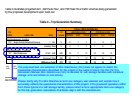
7/21/2026 10:11:03 AM (1)



Subject: Callout
Page Label: 22
Author: lbesler
Date: 7/21/2026 10:11:03 AM
Status:
Color:
Layer:
Space:

The Synchro results on page 75 show the 2028 mitigated PM peak conditions with the EBL, WBL, and NBL movements operating at LOS F. Please revise the recommendations so that the mitigated LOS for these approaches is acceptable and meets the required performance thresholds.

7/21/2026 1:24:26 PM (1)

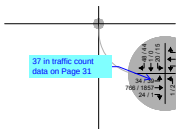


Subject: Cloud+
Page Label: 16
Author: lbesler
Date: 7/21/2026 1:24:26 PM
Status:
Color:
Layer:
Space:

The proposed land-use selection of Mini-Warehouse (151) does not appear to match the operational characteristics described for the project in the Letter of Intent. Per the ITE Trip Generation Manual, Mini-Warehouse (151) is intended for self-storage facilities with individual storage units and limited on-site activity.

Please clarify why the Mini-Warehouse land-use category was selected and explain how it accurately reflects the operational characteristics of this project. If the proposed operations differ from those typical of a self-storage facility, please select a more appropriate land-use category for the trip-generation calculations that better aligns with the intended use.

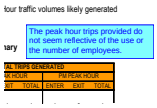
7/21/2026 1:29:34 PM (1)



Subject: Callout
Page Label: 11
Author: lbesler
Date: 7/21/2026 1:29:34 PM
Status:
Color:
Layer:
Space:

37 in traffic count data on Page 31

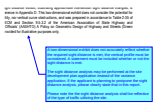
7/21/2026 1:33:10 PM (1)



Subject: Text Box
Page Label: 16
Author: Joseph Sandstrom
Date: 7/21/2026 1:33:10 PM
Status:
Color:
Layer:
Space:

The peak hour trips provided do not seem reflective of the use or the number of employees.

7/21/2026 1:33:59 PM (1)



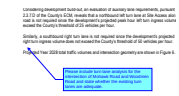
Subject: Callout
Page Label: 6
Author: Joseph Sandstrom
Date: 7/21/2026 1:33:59 PM
Status:
Color:
Layer:
Space:

A two-dimensional exhibit does not accurately reflect whether the required sight distance is met, the vertical profile must be considered. A statement must be included whether or not the sight distance is met.

The sight distance analysis may be performed at the site development plan application instead of the variance application. If the applicant is planning to postpone the sight distance analysis, please clearly state that in this report.

Please note the the sight distance analysis shall be reflective of the type of traffic utilizing the site.

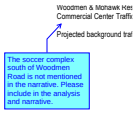
7/21/2026 1:34:42 PM (1)



Subject: Callout
Page Label: 19
Author: Joseph Sandstrom
Date: 7/21/2026 1:34:42 PM
Status:
Color:
Layer:
Space:

Please include turn lane analysis for the intersection of Mohawk Road and Woodmen Road and state whether the existing turn lanes are adequate.

7/21/2026 1:42:23 PM (1)



Subject: Callout
Page Label: 13
Author: Joseph Sandstrom
Date: 7/21/2026 1:42:23 PM
Status:
Color:
Layer:
Space:

The soccer complex south of Woodmen Road is not mentioned in the narrative. Please include in the analysis and narrative.