LACY ROAD
INTERSECTION DESIGN REPORT

CITY OF FITCHBURG
DANE COUNTY, WISCONSIN

DATE SUBMITTED: JUNE 17, 2021

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KL Engineering
[A] Better Experience

LACY ROAD
INTERSECTION DESIGN REPORT

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1.0 INTRODUCTION

1.1 PROJECT DESCRIPTION

Lacy Road will be reconstructed in 2022 between Fitchrona Road and a point just west of the Badger State Trail (*approximately 600 feet west of S Seminole Highway*). This project is being reconstructed as part of a cooperative project between the City of Fitchburg and the Promega Corporation, with funding sources to include tax increment financing (TIF), WisDOT TEA grant assistance, and private development contribution. The roadway reconstruction is being completed in conjunction with the development of a Promega Corporation manufacturing facility, currently being constructed at 3075 Sub-Zero Parkway.

The project will include a full reconstruction of Lacy Road that will upgrade the current unimproved rural roadway to function as an urban minor arterial roadway with curbs and multi-modal facilities. Commerce Park Drive will be extended and connected to Lacy Road as a minor street stop-controlled intersection with plans for future signalization.

In addition, intersection geometric and traffic control improvements are planned in the future at the intersections of Lacy Road & Fitchrona Road and Lacy Road & S Seminole Hwy. These improvements will not be included with the Lacy Road reconstruction project, but are being evaluated now to determine the appropriate alignment to ensure that future construction will align with the Lacy Road improvements.

It is anticipated that Lacy Road will be constructed to provide a 20+ year life-cycle improvement, designed to handle long-term traffic demand created by a full build-out of the adjacent land properties. A project overview map is provide in **Figure 1**.

Study Purpose and Objective

The objective of this report is to evaluate the Lacy Road corridor and project intersections and provide the following:

- Intersection control evaluation and geometric recommendations at the Lacy Road & Fitchrona Road intersection for future construction that aligns with the Lacy Road reconstruction in 2022.
- Intersection control evaluation and geometric recommendations at the Lacy Road & S Seminole Hwy intersection for future construction that aligns with the Lacy Road reconstruction in 2022.
- Geometric design and pedestrian/bicycle accommodation recommendations at Commerce Park Drive, Legend Rock Road, Rock Ridge Road, and the Hammersley Quarry driveway along Lacy Road

Note: Since the original draft of this report (submitted in May 2020), it has been decided that the intersection of Lacy Road & S Seminole Hwy will be constructed in conjunction with the adjacent Lacy Road reconstruction project in 2022 as a separate project.

FIGURE 1. Project Overview Map

1.2 EXISTING CONDITIONS

In the vicinity of the project, Lacy Road is a two-lane undivided rural minor collector with minimal/no shoulders. The current speed limit of Lacy Road is 50 mph. There are no pedestrian or bicycle accommodations along the existing roadway. Based on recent intersection count data (Year 2020), estimated average annual daily traffic (AADT) is between 5,850 – 6,050 vehicles per day (vpd) along this section of Lacy Road.

Existing land use along Lacy Road is primarily agricultural. On the far west side of the project, near Fitchrona Road, there is a residential neighborhood on the north side of Lacy Road and a couple of businesses on the south side. There are several future development plans in the vicinity of this project, including the development of the Promega Corporation manufacturing facility.

1.3 EXISTING TRAFFIC VOLUMES

KL Engineering conducted 24-hour roadway volume counts on S Seminole Hwy, just north of Lacy Road during the week of March 9th, 2020. Additional AADT traffic count information for Lacy Road, Fitchrona Road, and S Seminole Hwy was provided by the City of Fitchburg and WisDOT.

Fourteen-hour intersection turning movement counts were conducted by KL Engineering at the Lacy Road & Fitchrona Road and Lacy Road & S Seminole Hwy intersections on Tuesday, March 10th, 2020. The morning and evening peak traffic volume hours at the study intersections were found to be 7:30 – 8:30 am and 4:30 – 5:30 pm. Detailed intersection turning movement traffic count information is provided in **Appendix A**.

A map of available existing AADT and intersection turning movement volumes is provided in **Figure 2**.

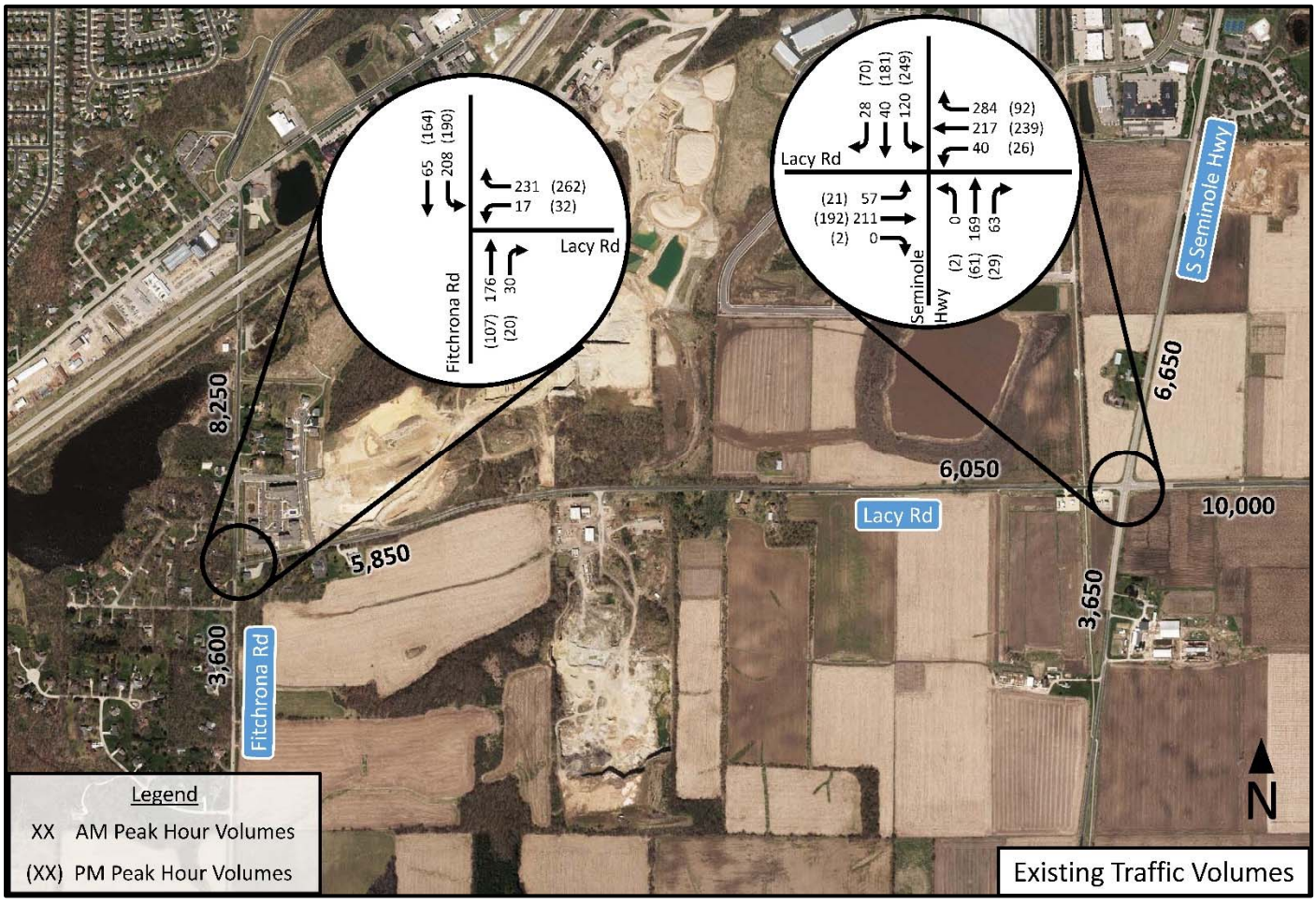


FIGURE 2. Existing Corridor and Intersection Traffic Volumes

1.4 PROPOSED LAND USE AND FUTURE DEVELOPMENT PLANS

Development in this area has increased significantly in recent years. In addition to the planned Promega Corporation manufacturing facility, there are several other future developments anticipated in the areas surrounding the Lacy Road corridor that are currently farmland/agriculture. This includes several potential residential neighborhoods, industrial/commercial developments, an athletic complex, and a solar farm. A map of new and potential development land uses is provided in **Figure 3**.

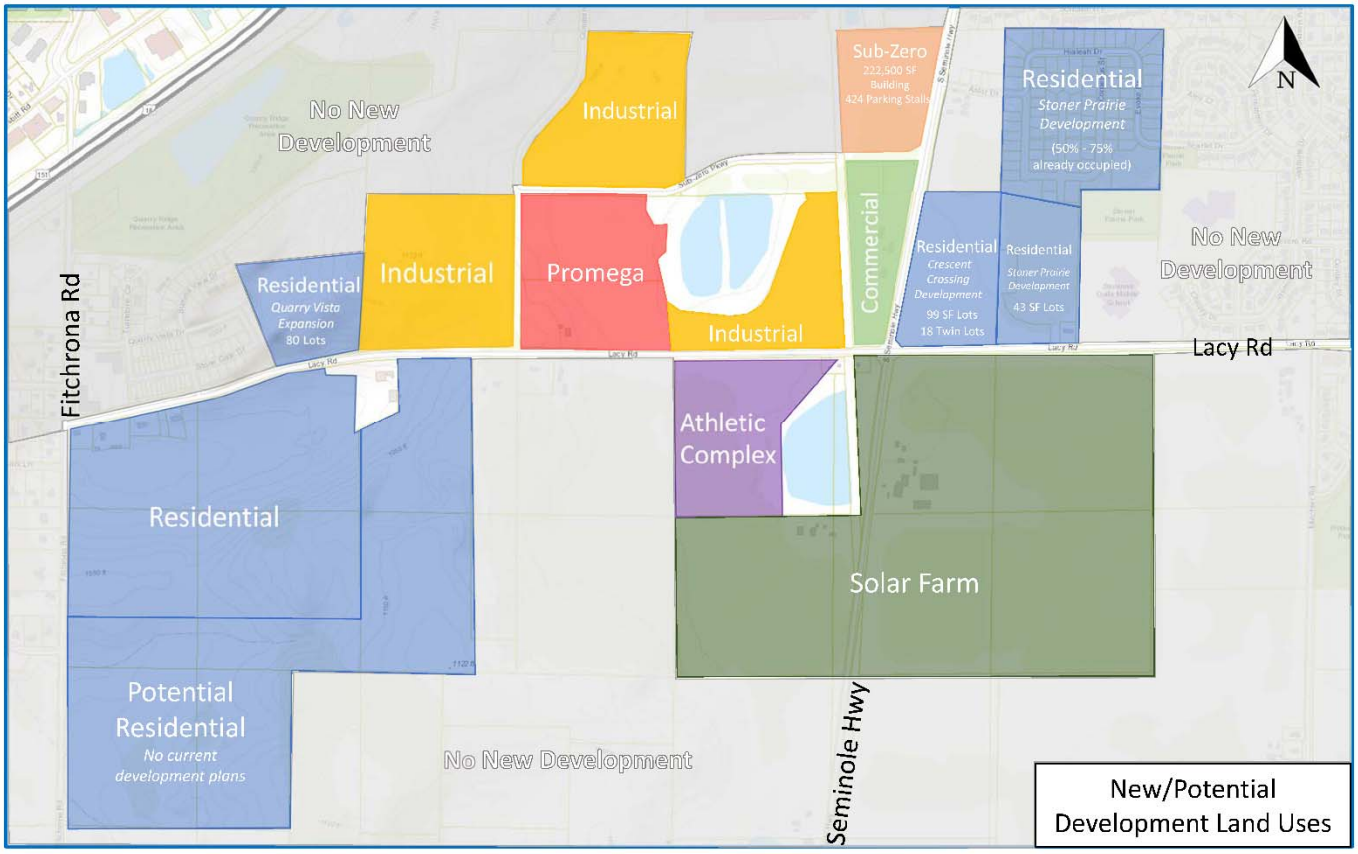


FIGURE 3. Future Land Use and Potential Development Map

1.5 FUTURE ROADWAY IMPROVEMENT PROJECTS

The City of Fitchburg has several other roadway reconstruction projects anticipated in the surrounding area of Lacy Road as part of their Capital Improvement Program. These include the following:

- Lacy Road (Fitchrona to Seminole) – *Construction 2022 (Subject of this report)*
- Fitchrona Road (Lacy to Nesbitt) – *Construction 2025*
- Fitchrona Road (Whalen to Lacy) – *Construction 2025*
- Lacy/Seminole Intersect, Lacy E, Seminole N – *Construction 2022*
- Possible S Seminole Hwy Road Diet (Schumann to McKee) – *Next 5-10 years*

Upgrades to these roadways were considered when evaluating appropriate intersection traffic control at the two project intersections.

1.6 TRAFFIC FORECASTING

Metropolitan Planning Organization (MPO) provided traffic projections for Lacy Road and the surrounding area, based on expected background growth and future land use/development anticipated in the vicinity. Requested

AADT traffic forecast projections include Lacy Road, Fitchrona Road, S Seminole Hwy, and Commerce Park Drive. Future average daily traffic volumes will be developed for 2021, 2031, and the design year, 2041.

Future AM and PM peak hour turning movement traffic volumes were also developed by MPO for the major intersections along Lacy Road. This included the following locations:

- Lacy Road & Fitchrona Road
- Lacy Road & Commerce Park Drive (new intersection)
- Lacy Road & S Seminole Hwy

Existing and forecasted traffic volumes were used to evaluate intersection control alternatives for their ability to handle additional capacity. Additionally, a sensitivity analysis was conducted to determine how much additional capacity each intersection alternative could accommodate above existing traffic volumes before reaching failing operations.

Detailed forecast information from MPO is provided in **Appendix A**.

A map of design year, 2041 AADT and intersection turning movement volumes is provided in **Figure 4**.

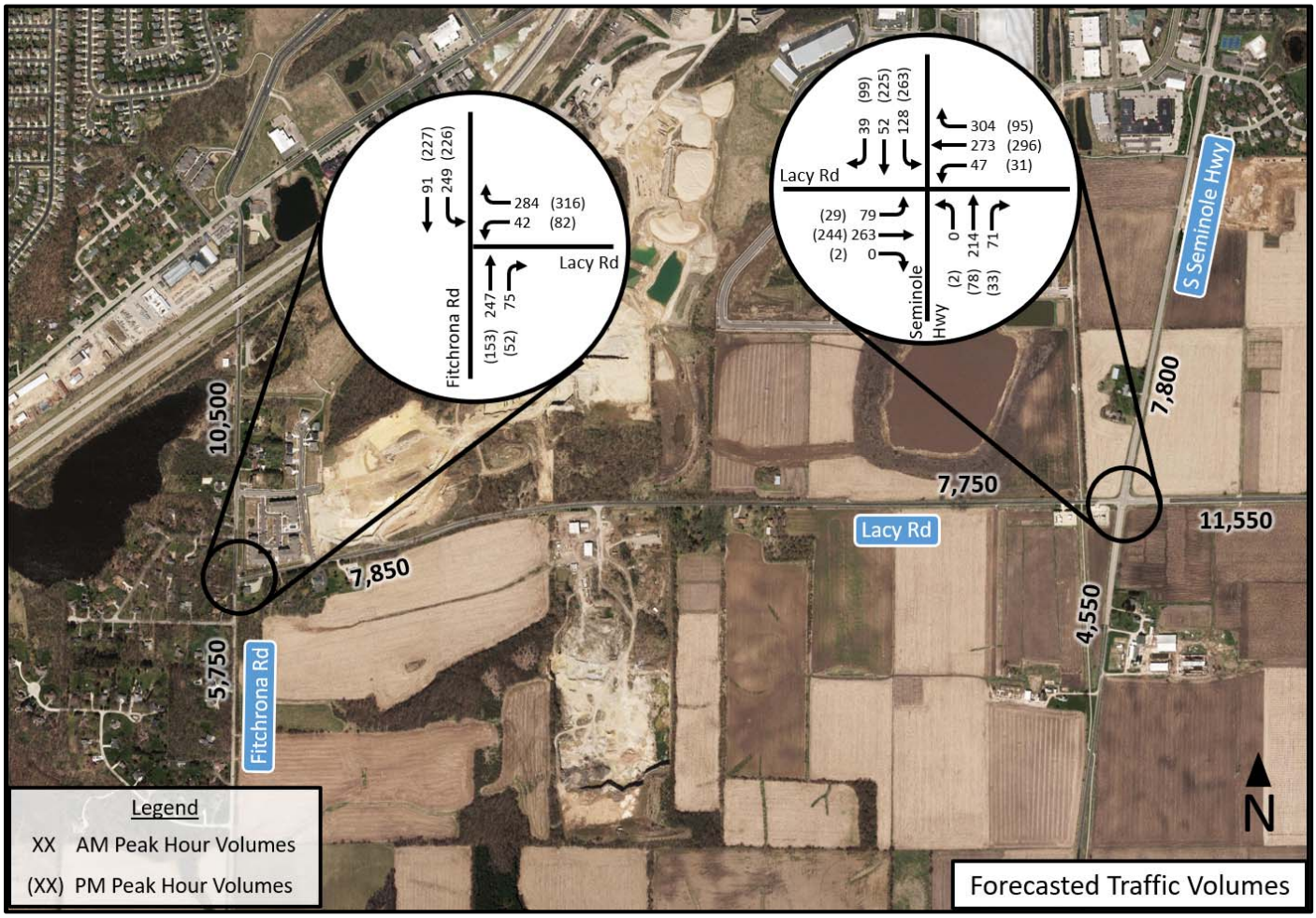


FIGURE 4. Design Year 2041 Corridor and Intersection Traffic Volumes

2.0 LACY ROAD RECONSTRUCTION

2.1 EXISTING CRASH ANALYSIS

A crash analysis was performed along Lacy Road from Fitchrona Road to S Seminole Hwy (not including the intersections), using reported crash data from the five-year period of 2015-2019. Data was collected using the University of Wisconsin Traffic Operations and Safety Laboratory's WisTransPortal database.

During the five-year period, fourteen segment-related crashes were reported along Lacy Road. The crash rate is 133.18 crashes per 100 million entering vehicles. Three of the fourteen (21%) crashes resulted in injuries. Common crash types included the following:

- Eleven single vehicle, lane departure crashes
  - *Two crashes involving suspected minor injury (Type B)*
  - *Eight crashes involving poor weather/roadway conditions (snow, rain, wind)*
- One rear-end crash related to a vehicle stopping quickly on Lacy Road to allow for pedestrians to cross Lacy Road on the Badger State Trail

A crash diagram is included in **Appendix B**.

2.2 PROPOSED CORRIDOR TYPICAL SECTION

Lacy Road improvements will include full reconstruction of the roadway and will include the following:

- 10-foot travel lanes (one lane in each direction)
- Curb & gutter
- On-street bicycle facilities (5-foot bike lane with 2-foot painted buffer in each direction)
- 10-foot multi-use path on north side of Lacy Road

With the geometric improvements along Lacy Road, the posted speed limit will be reduced from 50 mph to 35 mph as part of the project. In addition, Commerce Park Drive will be extended to connect to Lacy Road as a minor street stop-controlled intersection with plans for future signalization. Basswood Drive between Commerce Park Drive and Bud's Drive will be eliminated.

2.3 INTERSECTION DESIGN RECOMMENDATIONS

The reconstruction of Lacy Road will include full reconstruction with improvements to the intersections of Lacy Road with Rock Ridge Road, Legend Rock Road, Hammersley Quarry Access, and Commerce Park Drive. Geometric recommendations for each intersection include the following:

Lacy Road & Rock Ridge Road

- Stop control on Rock Ridge Road
- Median islands on Lacy Road with pedestrian refuge for neighborhood connection
- See **Figure 5** for example intersection design
  - *Lacy Road & Jones Farm Road*

Lacy Road & Legend Rock Road (future intersection)

- Proposed Legend Rock Road will run north and south of Lacy Road to future residential developments
  - *Stub out intersection as part of project*
- Stop control on Legend Rock Road
- 150 ft EB & WB left-turn lane
- Median islands on Lacy Road with pedestrian refuge for neighborhood connection
- See **Figure 5** for example intersection design
  - *Lacy Road and Sunflower Drive*

Hammersley Quarry Driveway

- Quarry Driveway access to utilize Legend Rock Road stub
- Stop control on Hammersley Quarry Driveway
- No proposed turn lanes

Lacy Road & Commerce Park Drive

- Stop control on Commerce Park Drive with accommodations for future installation of traffic signals
- 250 ft WB right-turn lane
- 250 ft EB left-turn lane
- Median islands with pedestrian refuge

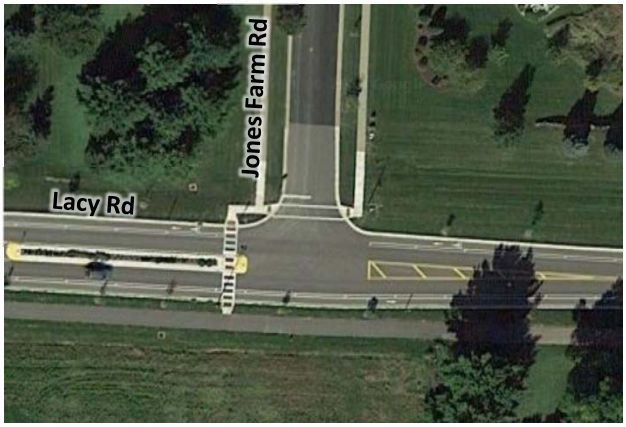
Proposed Intersection Configuration for Lacy Road & Rock Ridge Road	**Proposed Intersection Configuration for Lacy Road & Legend Rock Road**
	
Example Location: Lacy Road & Jones Farm Road	*Example Location: Lacy Road & Sunflower Drive*

FIGURE 5. Example Intersection Configurations

Geometric and intersection control changes have been evaluated at the Lacy Road & Fitchrona Road and Lacy Road & S Seminole Hwy intersections. The alternatives are being developed to match the alignment of the Lacy Road reconstruction to minimize future impacts to the newly constructed Lacy Road. See Sections 3.0 and 4.0 of this report for the intersection traffic control evaluations of these two intersections.

Proposed turn lane lengths at all the intersections includes queue storage and deceleration of vehicles in the turn lane following WisDOT Facilities Development Manual (FDM) standards.

3.0 INTERSECTION CONTROL EVALUATION: LACY ROAD AND FITCHRONA ROAD INTERSECTION

3.1 EXISTING CONDITIONS

Fitchrona Road is a rural two-lane undivided minor collector with minimal/no shoulders and a posted speed limit of 40 mph. As part of this project, the speed limit for Fitchrona Road will be reduced to 35 mph. The most recent (Year 2017) AADT for Fitchrona Road is 2,526 vpd north of Whalen Road.

Lacy Road will be upgraded to a two-lane undivided urban minor arterial roadway with curb & gutter and multi-modal facilities as part of this project. The posted speed limit along Lacy Road will be reduced to 35 mph.

The intersection of Lacy Road & Fitchrona Road is a three-leg intersection with stop control on Lacy Road. The intersection has a rural footprint with minor curb & gutter and all intersection approaches are single lane. There is a multi-use path in the northeast quadrant of the intersection with a connection and curb ramp leading to the intersection. Currently, this connection to the intersection does not include any pedestrian crosswalk markings or connections to other bicycle/pedestrian facilities since there are none in the area.

3.2 FIELD OBSERVATIONS

Existing traffic patterns were observed during turning movement count processing at the intersection. The major traffic movements at the intersection are the southbound left-turn and eastbound right-turn movements. AM and PM peak volumes are similar with a higher truck percentage occurring during the AM peak.

During the peak periods, minor delays and queuing was observed. Although, southbound left-turn and westbound right-turn movements are some of the higher volume movements at the intersection, delays are minimal because there are limited northbound vehicles conflicting these movements. Queues rarely exceeded three cars for turning movements and cleared quickly. There were also some minor delays to westbound left-turn vehicles. In addition, a few diagonal crossing pedestrian movements were observed from the path to the west side of the intersection.

3.3 EXISTING CRASH ANALYSIS

A crash analysis was performed for the intersection of Lacy Road & Fitchrona Road, using reported crash data from the five-year period of 2015-2019. Data was collected using the University of Wisconsin Traffic Operations and Safety Laboratory's WisTransPortal database.

During the five-year period, eight intersection-related crashes were reported at the intersection. The crash rate is 0.64 crashes per million entering vehicles and three of the eight (38%) crashes resulted in high severity injuries (Type A or B). Common crash types included the following:

- Two angle crashes involving a southbound left-turning vehicle colliding into a northbound through vehicle
  - *One crash involving suspected serious injury (Type A)*
- Two southbound rear-end crashes
- Two sideswipe crashes involving a westbound right-turning vehicle colliding with a northbound through vehicle
  - *Both crashes involving suspected minor injury (Type B)*

A crash diagram is included in **Appendix B**.

3.4 ALTERNATIVE ANALYSIS

Intersection Traffic Control Alternatives

Intersection control alternatives evaluated as part of this study for the Lacy Road & Fitchrona Road intersection included the following:

- Existing/No-Build: Stop control on Lacy Road
- Alternative 1: Stop control on Lacy Road with Lane Improvements

- Alternative 2: All-Way Stop Control
- Alternative 3: Traffic Signal
- Alternative 4: Roundabout

The proposed intersection geometric layout for Alternatives 1, 2, & 3 are the same. The difference between these alternatives is the type of traffic control provided. By providing an intersection layout that is compatible for the stop and signal alternatives, implementation of traffic control improvements can occur over time as development and traffic volumes increase at the intersection.

Each of these traffic control alternatives were evaluated for operational efficiency, safety, multi-modal considerations, access, compatibility with future development and planned roadway projects, right-of-way impacts, and construction costs to determine the appropriate intersection control at this location.

Intersection alternatives conceptual drawings are included in **Appendix E**.

Traffic Signal Warrants

A traffic signal warrant analysis for this intersection was completed in accordance with WisDOT and the *Manual on Uniform Traffic Control Devices* (MUTCD) guidelines. Because the current posted speed limit on Fitchrona Road is 40 mph with a design speed of 45 mph, signal warrants were evaluated at the 70% volume thresholds.

Of the nine traffic signal warrants, the warrants most likely to apply to the Lacy Road & Fitchrona Road intersection are Warrant 1: Eight-Hour Vehicular Volume and Warrant 2: Four-Hour Vehicular Volume. Warrant 3: Peak Hour Volume is rarely used as a standalone warrant. Other non-volume-based traffic signal warrants are not directly applicable to this intersection except for Warrant 7: Crash Experience.

Using the observed 2020 turning movement traffic volumes, Warrant 2 (*Four-Hour Vehicular Volume*) was satisfied for this intersection. Detailed traffic signal warrants are included in **Appendix C**.

Operational Analysis

An operational analysis was completed at the intersection to evaluate the different traffic control alternatives using the software program Highway Capacity Software (HCS) for stop control and roundabout alternatives and Synchro for signalized alternatives. These software programs were used to implement the Highway Capacity Manual 6th Edition (HCM 6) traffic analysis methodologies to estimate the measures of effectiveness of each alternative at the intersection.

The analysis was conducted for the AM and PM peak hours under the five traffic control scenarios. Analysis results quantify operations at the intersection by estimating level of service (LOS), vehicular delays, v/c ratios, and queues with the existing and forecasted intersection turning movement volumes. **Table 1** and **Table 2** summarizes the results of the existing year 2020 and design year 2041 traffic scenarios, respectively. Detailed traffic modeling outputs are in **Appendix D**.

TABLE 1: Intersection Traffic Control Alternative Results
Lacy Road & Fitchrona Road (Existing Year 2020)

Peak Period	Traffic Control	Meaure of Effectiveness	Intersection Movements						
			Westbound		Northbound		Southbound		Overall Intersection
			Left	Right	Thru	Right	Left	Thru	
AM Peak	Existing: *Stop Control on Lacy Rd*	LOS	B		--		A	--	--
		Delay (s)	12		--		8	--	--
		V/C	0.35		--		0.17	--	--
		Queue (ft)	40		--		<25	--	--
	Alternative 1: *Stop Control on Lacy Rd with Lane Improvements*	LOS	C	B	--		A	--	--
		Delay (s)	17	11	--		8	--	--
		V/C	0.05	0.30	--		0.17	--	--
		Queue (ft)	<25	30	--		<25	--	--
	Alternative 2: *AWSC*	LOS	A	B	B		B	A	**B**
		Delay (s)	9	11	11		12	9	**11**
		V/C	0.03	0.35	0.33		0.37	0.11	--
		Queue (ft)	<25	40	35		45	<25	--
	Alternative 3: *Traffic Signal*	LOS	A	A	A		A	A	**A**
		Delay (s)	8	10	6		8	5	**8**
		V/C	0.05	0.45	0.32		0.36	0.10	--
		Queue (ft)	<25	<25	<25		<25	<25	--
	Alternative 4: *Roundabout*	LOS	A		A		A		**A**
		Delay (s)	6		6		5		**5**
		V/C	0.33		0.33		0.33		--
		Queue (ft)	25		25		25		--
PM Peak	Existing: *Stop Control on Lacy Rd*	LOS	B		--		A	--	--
		Delay (s)	13		--		8	--	--
		V/C	0.40		--		0.14	--	--
		Queue (ft)	50		--		<25	--	--
	Alternative 1: *Stop Control on Lacy Rd with Lane Improvements*	LOS	C	B	--		A	--	--
		Delay (s)	17	11	--		8	--	--
		V/C	0.10	0.30	--		0.15	--	--
		Queue (ft)	<25	35	--		<25	--	--
	Alternative 2: *AWSC*	LOS	A	B	B		B	A	**B**
		Delay (s)	10	11	10		12	10	**11**
		V/C	0.06	0.41	0.21		0.34	0.27	--
		Queue (ft)	<25	50	25		40	30	--
	Alternative 3: *Traffic Signal*	LOS	A	A	A		A	A	**A**
		Delay (s)	7	9	6		8	6	**7**
		V/C	0.08	0.45	0.22		0.32	0.28	--
		Queue (ft)	<25	<25	<25		25	<25	--
	Alternative 4: *Roundabout*	LOS	A		A		A		**A**
		Delay (s)	6		5		6		**6**
		V/C	0.27		0.13		0.31		--
		Queue (ft)	30		<25		35		--

TABLE 2: Intersection Traffic Control Alternative Results
Lacy Road & Fitchrona Road (Design Year 2041)

Peak Period	Traffic Control	Meaure of Effectiveness	Intersection Movements						
			Westbound		Northbound		Southbound		Overall Intersection
			Left	Right	Thru	Right	Left	Thru	
AM Peak	Existing: *Stop Control on Lacy Rd*	LOS	C		--		A	--	--
		Delay (s)	21		--		9	--	--
		V/C	0.61		--		0.22	--	--
		Queue (ft)	105		--		<25	--	--
	Alternative 1: *Stop Control on Lacy Rd with Lane Improvements*	LOS	C	B	--		A	--	--
		Delay (s)	24	13	--		9	--	--
		V/C	0.19	0.41	--		0.22	--	--
		Queue (ft)	40	50	--		<25	--	--
	Alternative 2: *AWSC*	LOS	B	B	C		C	A	**B**
		Delay (s)	10	14	16		15	10	**14**
		V/C	0.09	0.49	0.55		0.49	0.16	--
		Queue (ft)	<25	70	85		65	<25	--
	Alternative 3: *Traffic Signal*	LOS	B	B	A		B	A	**B**
		Delay (s)	11	16	7		12	6	**11**
		V/C	0.10	0.76	0.42		0.50	0.11	--
		Queue (ft)	<25	90	45		65	<25	--
	Alternative 4: *Roundabout*	LOS	A		A		A		**A**
		Delay (s)	7		7		6		**7**
		V/C	0.35		0.34		0.31		--
		Queue (ft)	40		40		35		--
PM Peak	Existing: *Stop Control on Lacy Rd*	LOS	D		--		A	--	--
		Delay (s)	30		--		8	--	--
		V/C	0.77		--		0.18	--	--
		Queue (ft)	175		--		<25	--	--
	Alternative 1: *Stop Control on Lacy Rd with Lane Improvements*	LOS	D	B	--		A	--	--
		Delay (s)	26	12	--		8	--	--
		V/C	0.34	0.39	--		0.17	--	--
		Queue (ft)	40	45	--		<25	--	--
	Alternative 2: *AWSC*	LOS	B	C	B		B	B	**B**
		Delay (s)	11	15	13		15	13	**14**
		V/C	0.17	0.54	0.37		0.45	0.42	--
		Queue (ft)	<25	85	45		60	50	--
	Alternative 3: *Traffic Signal*	LOS	A	B	A		B	A	**A**
		Delay (s)	9	13	7		11	7	**10**
		V/C	0.17	0.75	0.31		0.42	0.33	--
		Queue (ft)	<25	80	25		45	30	--
	Alternative 4: *Roundabout*	LOS	A		A		A		**A**
		Delay (s)	7		6		7		**7**
		V/C	0.39		0.21		0.41		--
		Queue (ft)	50		<25		55		--

Existing: Stop Control on Lacy Road

The traffic modeling results for existing conditions matched field observations. All intersection turning movements operated at a LOS B or better with minimal delays and queuing with current traffic volumes. Design year operations will deteriorate to a LOS D for the Lacy Road stop controlled approach during the PM peak.

Alternative 1: Stop Control on Lacy Road with Lane Improvements

Geometric improvements include the addition of a southbound left-turn lane and providing westbound left- and right-turn lanes. With these lane improvements, all intersection turning movements will operate at a LOS C or better, with the exception of the Lacy Road westbound left-turn movement, which will operate at a LOS D during the design year PM peak. Minimal queuing is anticipated for all intersection movements. The addition of the southbound left-turn lane will also likely reduce rear-end crashes along Fitchrona Road. See **Figure 6** for a concept drawing of the intersection alternative.

Alternative 2: All-Way Stop Control

Geometric improvements for an all-way stop control would be the same Alternative 1. With the addition of stop signs on Fitchrona Road, all intersection movements will operate at LOS C or better with minimal queuing. Overall, intersection delays would increase with this alternative since all movements would now be required to stop to proceed through the intersection, including the higher volume northbound and southbound through movements. See **Figure 6** for a concept drawing of the intersection alternative.

Alternative 3: Traffic Signal

Geometric improvements for the traffic signal alternative would be the same as Alternative 1 & 2. Providing for similar geometric improvements for the traffic signal to the first two stop control alternatives, traffic signals could be installed with the project or be added at a later date when development and traffic volumes at the intersection increase. All intersection movements will operate at LOS B with minimal queuing and signalization would provide improved overall intersection operations compared to the stop control alternatives. See **Figure 6** for a concept drawing of the intersection alternative.

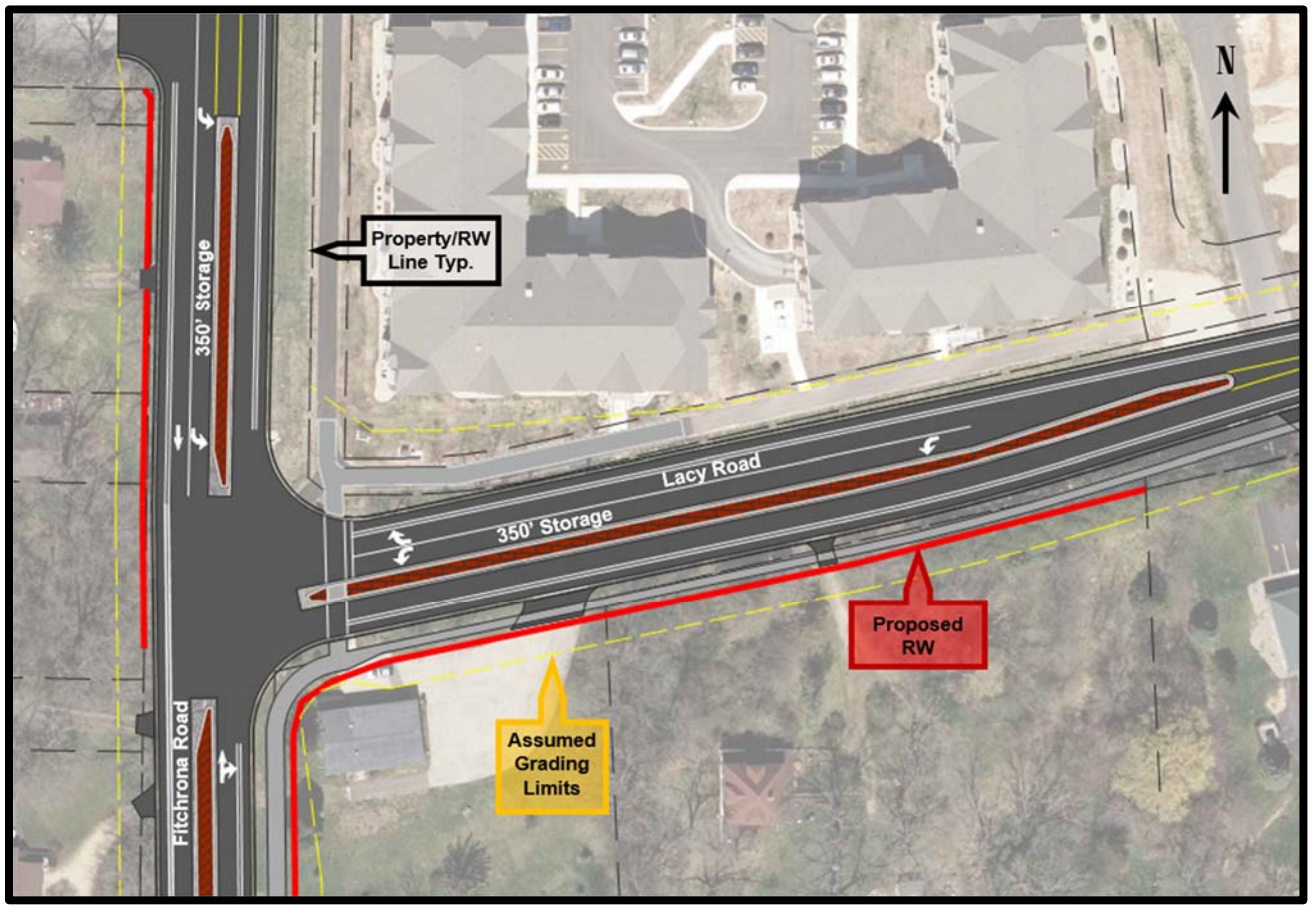


FIGURE 6.
Lacy Road & Fitchrona Road
Alternative 1 – 3 Intersection Concept Drawing

Alternative 4: Roundabout

A single lane roundabout at this intersection will operate at LOS A with minimal queuing. This alternative would provide optimal operations and safety at this location. In addition, the roundabout will provide the least amount of delay throughout the entire day since traffic will not have to make unnecessary stops when there are no other vehicles at the intersection. See **Figure 7** for a concept drawing of the intersection alternative.

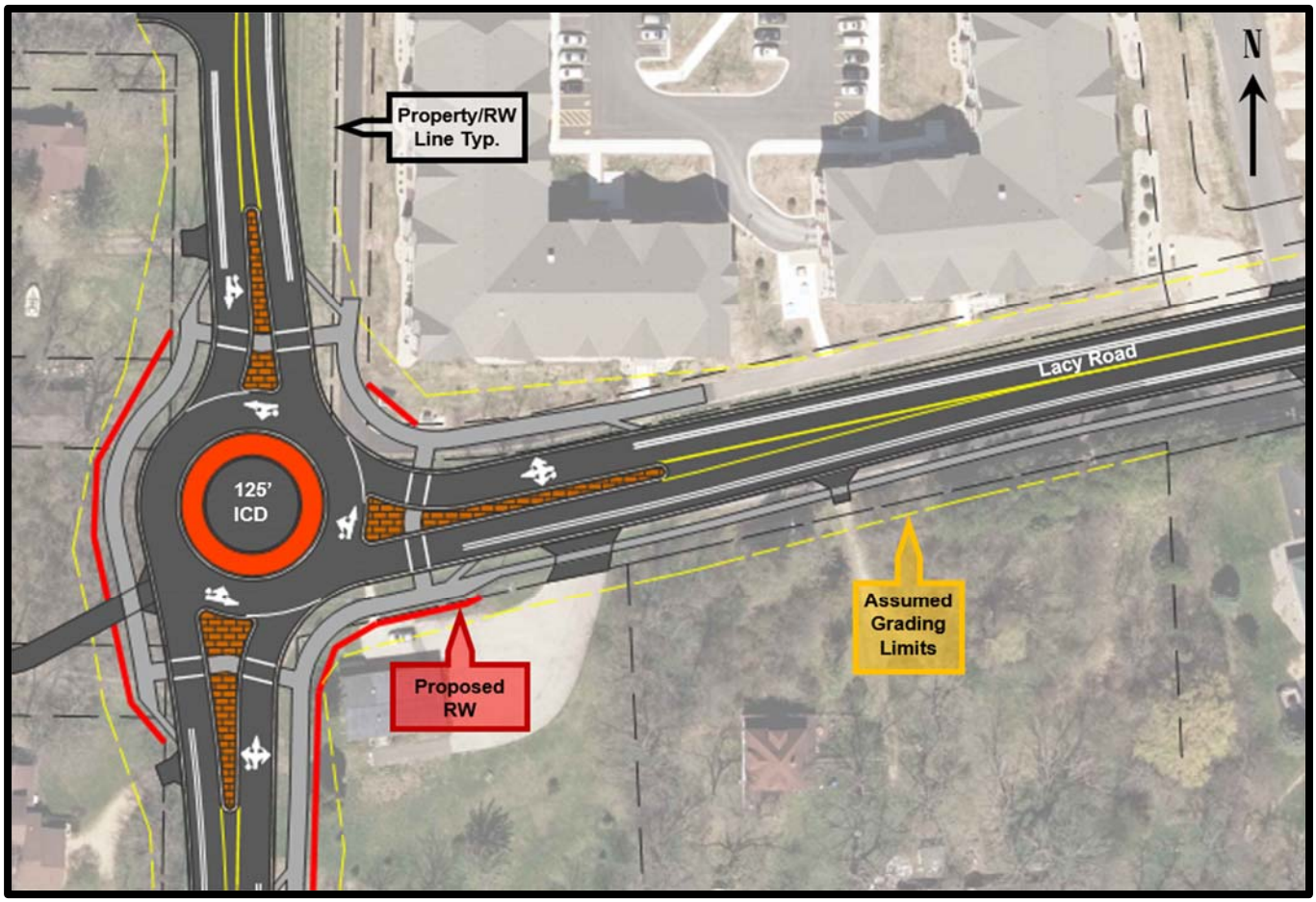


FIGURE 7.
Lacy Road & Fitchrona Road
Alternative 4 Intersection Concept Drawing

Total Intersection Delay Comparison

A total intersection delay comparison analysis was completed for each of the traffic control alternatives. Hourly total vehicle delay was calculated for each of the five alternatives from 6:00 am to 7:00 pm using existing traffic volume data. **Figure 8** summarizes the results of this analysis.

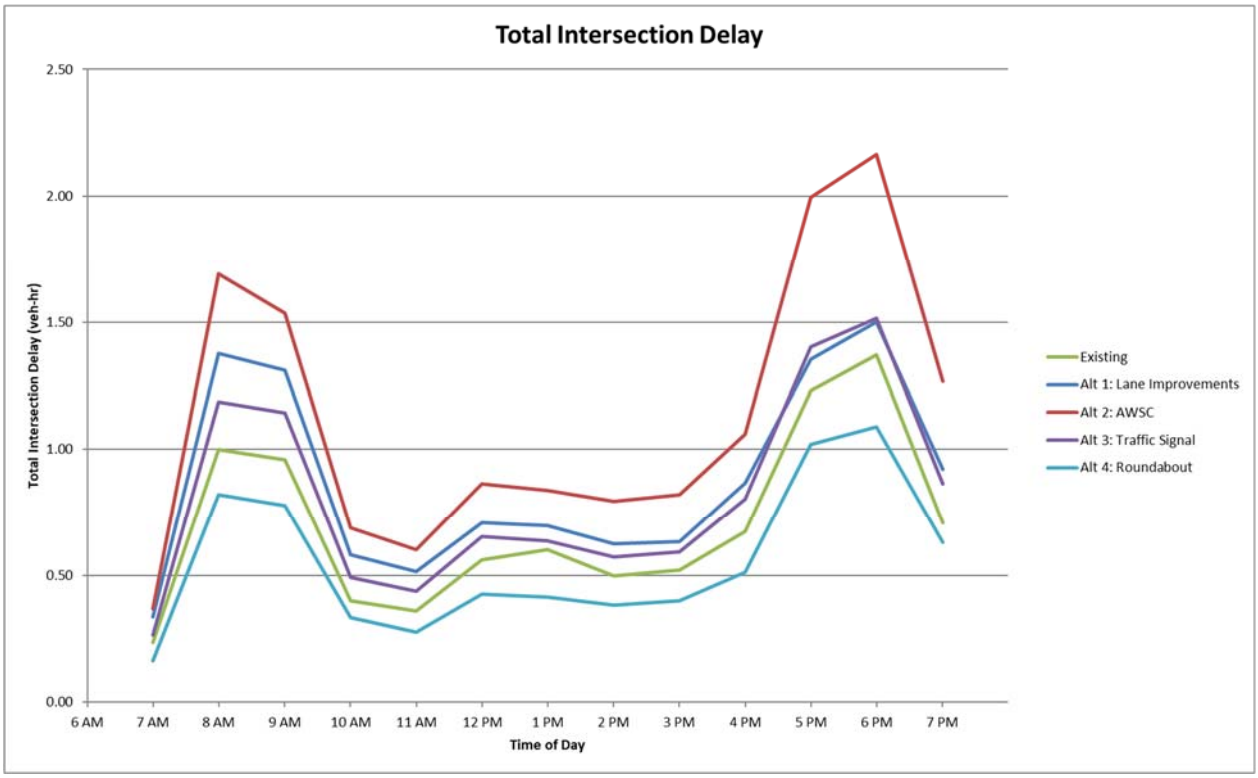


FIGURE 8.
Hourly Total Intersection Delay Comparison
Existing Year 2020 Traffic Volumes

Based on the hourly total intersection delay comparison of the traffic control alternatives, the roundabout alternative will provide the least amount of total delay, while the all-way stop control will provide the highest amount of total delay at the intersection.

Sensitivity Analysis

An operational sensitivity analysis was conducted at the intersection to assess how much additional capacity above the existing year traffic volumes each traffic control alternative can accommodate. The analysis was based on how much extra traffic each alternative could handle before a movement reached LOS F. **Table 3** summarizes the results of this analysis.

TABLE 3: Sensitivity Analysis
Additional Capacity from Existing Year 2020 Traffic Volumes

Traffic Control Alternatives	Peak Period	
	AM Peak	PM Peak
Existing: *Stop Control on Lacy Rd*	77%	66%
Alternative 1: *Stop Control on Lacy Rd w/ Lane Improvements*	84%	79%
Alternative 2: *AWSC*	92%	86%
Alternative 3: *Traffic Signal*	124%	166%
Alternative 4: *Roundabout*	203%	210%

Overall, all traffic control alternatives have additional capacity to handle future development and increased traffic volumes at this location. The traffic signal and roundabout alternatives provide the most additional capacity for all intersection movements.

Safety Analysis

Each intersection alternative was evaluated for their ability to reduce existing crash trends and improve safety for all intersection users. Crash modification factors (CMFs) provided in the *Highway Safety Manual* (HSM) and the Crash Modification Factor Clearinghouse are a way to estimate the change in crash frequency as a result of a particular safety treatment, such as a change in intersection control. **Table 4** summarizes the safety effectiveness of each alternative compared to the existing stop-controlled intersection.

TABLE 4: Intersection Control Safety Effectiveness

Lacy Road & Fitchrona Road

Traffic Control Alternatives	Safety Performance		
	CMF	Estimated # of Crashes in Five Year Period	Crash Trend(s) being Improved with Alternative
Existing: *Stop Control on Lacy Rd*	N/A	8 Existing Crashes	None
Alternative 1: *Stop Control on Lacy Rd w/ Lane Improvements*	N/A	N/A	Addition of southbound left-turn lane could reduce southbound rear-end crashes occuring at the intersection.
Alternative 2: *AWSC*	0.393	3.14	Anticipated to reduce the potential and severity of the angle crashes occuring at the intersection. Rear-end crashes along Fitchrona Rd may increase with addition of stop signs.
Alternative 3: *Traffic Signal*	0.56	4.48	Conversion to a traffic signal is anticipated to reduce angle crashes but will likely increase rear-end crashes. Overall, it is anticipated that there will be a decrease in crashes with the installation of a traffic signal.
Alternative 4: *Roundabout*	0.42	3.36	Conversion to a single-lane roundabout will reduce intersection conflict points from 32 to 8. The roundabout would decrease/eliminate the angle crashes occurring at this intersection, however, property damage crashes as a result of rear-end and sideswipe crashes are likely to increase creating an overall increase in crashes at the intersection.

All intersection control alternatives are expected to reduce the probability of future crashes at this location. In addition, the reduction in the posted speed limit along Fitchrona Road and Lacy Road could also reduce the number and severity of future crash potential.

Multimodal Considerations

Lacy Road improvements will include the addition of a sidewalk along the south side of the roadway. At the Lacy Road & Fitchrona Road intersection, a crosswalk will be included on the east approach allowing for a designated crossing for pedestrians along with a median/splitter island to provide a mid-crossing refuge for pedestrians. In addition, designated bicycle lanes will be provided for all approaches. All intersection control alternatives will allow for adequate accommodations for multi-modal users; however, the traffic signal alternative may provide better accessibility for people with visual disabilities.

Future Development and Planned Roadway Projects

Compatibility of each intersection control alternative with anticipated future development in the surrounding area and planned roadway projects is essential. This includes consideration of existing and future access points near the intersection. Currently, there are multiple residential driveways located near the intersection along the west side of Fitchrona Road, including two driveways that are immediately south of the intersection. In addition, there are several existing nearby street connections (*some less than 330 feet from the intersection*) on Fitchrona Road. There is also potential for an additional street connection on the east side of Fitchrona Road south of the intersection (*approx. 580 ft*) for the potential new residential neighborhood located in the southwest quadrant of

the intersection. Once the preferred intersection control alternative is selected, opportunities for potential developer contributions to assist in building some portion of the intersection should be explored. This could include providing the City with right-of-way dedication or financial assistance towards construction of the intersection improvements.

The City of Fitchburg also has two roadway projects planned along Fitchrona Road to be constructed in 2025. This includes a project from Whalen Road to Lacy Road and a project from Lacy Road to Nesbitt Road. Depending on the proposed Fitchrona Road roadway improvements, certain intersection control alternatives may provide better compatibility with construction activities and final design improvements. Minimizing future intersection approach reconstruction (*throw away work*) or limiting construction staging and access disruptions during construction activities could be considered when determining the appropriate intersection control type for this location.

Currently, there is a sharp crest vertical curve on Fitchrona Road, south of Lacy Road. This crest is speed rated for 25 mph and is located approximately 1,200 feet from the intersection. Sight distance was evaluated and is adequate for all intersection alternatives since the crest is far enough from the intersection.

Overall, all intersection control alternatives will work with existing and future access, development traffic, and anticipated roadway projects. With the recently constructed roundabout at the Lacy Road & Nesbitt Road intersection, the implementation of a roundabout at this location may be better for corridor continuity, keeping traveling speeds lower, and provide for the additional capacity needed for future development.

Intersection Alternative Costs, Advantages, and Disadvantages Summary

Table 5 provides a comparison of the advantages, disadvantages, and estimated construction costs of each intersection control alternative. See **Appendix F** for Detailed Construction and Right-of-Way Cost Estimates.

TABLE 5: Intersection Control Evaluation Comparison

Lacy Road & Fitchrona Road

	Advantages	Disadvantages
Alternative 1 – Stop Control on Lacy  **$2,00,000 – 1.67 AC (Fee & TLE)**	• Reduced southbound left-turn rear-end crash risk • Pedestrian crossing along stop-controlled approach for better safety • Compatible with future roadway projects • Lowest cost alternative • Low/no operation and maintenance cost	• Increase delay for Lacy Road traffic • Least amount of capacity to handle future traffic and development growth • Does not reduce angle crash potential • May encourage higher traveling speeds along Fitchrona Rd • Intersection sight distance is required due to stop control
Alternative 2 – AWSC  **$2,000,000 – 1.67 AC (Fee & TLE)**	• Reduced risk of angle crashes • Pedestrian crossing along stop-controlled approach for better safety • Lowest cost alternative • Low/no operation and maintenance cost • Easy and safe access to and from nearby residential driveways	• Requires all traffic to stop at the intersection • Could result in long delays and queues as traffic/development growths • Could increase NB/SB rear-end crashes • Intersection sight distance is required due to stop control
Alternative 3 – Traffic Signal  **$2,2600,000 – 1.67 AC (Fee & TLE)**	• Can handle future traffic and development growth • Low delays and queues for all intersection movements • Reduced risk of angle crashes • Provides best accessibility for people with visual disabilities • Signal could be installed when needed and as part of future development project(s) • Intersection sight distance is not required due to signalization	• Could increase rear-end crashes • May increase difficulty for nearby residential driveway access • Most expensive option
Alternative 4 - Roundabout  **$2,220,000 – 1.47 AC (Fee & TLE)**	• Handles the most additional traffic capacity • Best operations all day • Reduces angle and high severity crashes • Provides corridor continuity with other nearby major intersections • Provides safest access for driveways along Fitchrona Road • 10% less impervious area than all other alternatives	• May increase property damage rear-end and sideswipe crashes • Does not provide any visual/audio assistance to pedestrians on when to cross the street • Tight constraints between house in SE quadrant and shed in NW quadrant

3.5 CONCLUSIONS/RECOMMENDATIONS

All intersection control alternatives would be acceptable at this location. The single lane roundabout is the preferred traffic control alternative at the Lacy Road & Fitchrona Road intersection because it provides acceptable traffic operations with capacity to accommodate additional traffic, delivers the lowest total vehicular delay throughout a typical day, increases intersection safety especially for turning maneuvers, provides corridor continuity with other nearby major intersections, and accommodates existing and future access near the intersection. The alternative also offers the safest access for driveways along Fitchrona Road while incurring the lowest construction costs impervious areas compared to the others.

4.0 INTERSECTION CONTROL EVALUATION: LACY ROAD AND S SEMINOLE HWY INTERSECTION

4.1 EXISTING CONDITIONS

S Seminole Hwy north of Lacy Road is a two-lane undivided minor collector with a 6-foot paved curb lane for bicyclist and right-turning vehicles. In 2020, the posted speed limit was reduced from 50 mph to 35 mph.

S Seminole Hwy south of Lacy Road is a two-lane undivided major collector with 6-foot paved shoulders (near intersection) and a posted speed limit of 50 mph. The most recent AADT is 6,660 vpd (Year 2020) for S Seminole Hwy north of Lacy Road and 3,644 vpd (Year 2019) for S Seminole Hwy south of Lacy Road.

Lacy Road west of S Seminole Hwy will be upgraded to a two-lane undivided urban minor arterial roadway with curb & gutter and multi-modal facilities as part of this project. The posted speed limit along Lacy Road will be reduced to 35 mph.

The intersection of Lacy Road & S Seminole Hwy is a four-legged, all-way stop controlled intersection. The intersection has a rural footprint with no curb & gutter (except at the intersection turning radii). The northbound and eastbound approaches consist of a single shared left/through/right lane. The southbound S Seminole Hwy approach consists of an exclusive left-turn lane and a shared through right lane and the westbound Lacy Road approach consists of a shared left/through lane and an exclusive right-turn lane. There are bicycle lanes at the intersection and the Badger State Trail is located approximately 300 feet west of the intersection.

4.2 FIELD OBSERVATIONS

Existing traffic patterns were observed during turning movement count processing at the intersection. The major traffic movements at the intersection are the southbound left-turn, westbound right-turn, and westbound and eastbound through movements. AM and PM peak volumes are similar with a higher truck percentage occurring during the AM peak, specifically for the southbound approach.

During the peak periods, minor delays and queuing was observed on all intersection approaches. Queuing was generally less than five vehicles, with occasional queuing to a maximum of ten vehicles for the southbound and westbound approaches due to short traffic increases. These short traffic increases were usually ten minutes or less and are likely the result of shift changes at Sub-Zero and school/church start and release times.

In addition, frequent confusion was observed from drivers about which vehicle should be yielding with the current all-way stop configuration and multiple lane approaches at the intersection. Rolling stops were also observed during off-peak times.

4.3 EXISTING CRASH ANALYSIS

A crash analysis was performed for the intersection of Lacy Road & S Seminole Hwy, using reported crash data from the five-year period of 2015-2019. Data was collected using the University of Wisconsin Traffic Operations and Safety Laboratory's WisTransPortal database.

During the five-year period, eleven intersection-related crashes were reported at the intersection. The crash rate is 0.57 crashes per million entering vehicles and three of the eleven (27%) crashes resulted in injuries. The most common crash type, which accounted for eight of the eleven (73%), was right-angle crashes involving someone disregarding the stop sign or failing to yield to other traffic at the intersection. Other common crash types included the following:

- Four right-angle crashes involving a northbound through vehicle and a westbound through vehicle
  - *One crash involving suspected minor injury (Type B) and one crash involving possible injury (Type C)*
- Two angle crashes involving a southbound through vehicle and a westbound through vehicle
- Two westbound rear-end crashes

A crash diagram is included in **Appendix B**.

4.4 ALTERNATIVE ANALYSIS

Intersection Traffic Control Alternatives

Intersection control alternatives evaluated as part of this study for the Lacy Road & S Seminole Hwy intersection included the following:

- Existing/No-Build: All-Way Stop Control
- Alternative 1: Traffic Signal
- Alternative 2: Roundabout

Other traffic control alternatives such as two-way stop control was considered but was eliminated due to insufficient capacity to handle current traffic volumes.

Each of these traffic control alternatives were evaluated for operational efficiency, safety, multimodal considerations, access, compatibility with future development and planned roadway projects, right-of-way impacts, and construction costs to determine the appropriate intersection control at this location.

Intersection alternatives conceptual drawings are included in **Appendix E**.

Traffic Signal Warrants

A traffic signal warrant analysis for this intersection was completed in accordance with WisDOT and the *Manual on Uniform Traffic Control Devices* (MUTCD) guidelines. Because the current posted speed limit on Lacy Road is 50 mph, signal warrants were evaluated at the 70% volume thresholds.

Of the nine traffic signal warrants, the warrants most likely to apply to the Lacy Road & S Seminole Hwy intersection are Warrant 1: Eight-Hour Vehicular Volume and Warrant 2: Four-Hour Vehicular Volume. Warrant 3: Peak Hour Volume is rarely used as a standalone warrant. Other non-volume-based traffic signal warrants are not directly applicable to this intersection except for Warrant 7: Crash Experience.

Using the observed 2020 turning movement traffic volumes, Warrant 2 (*Four-Hour Vehicular Volume*) was satisfied for this intersection. Detailed traffic signal warrants are included in **Appendix C**.

Operational Analysis

An operational analysis was completed at the intersection to evaluate the different traffic control alternatives using the software programs Highway Capacity Software (HCS) for stop control and roundabout alternatives and Synchro for signalized alternatives. These software programs were used to implement the Highway Capacity Manual 6th Edition (HCM 6) traffic analysis methodologies to estimate the measures of effectiveness of each alternative at the intersection.

The analysis was conducted for the AM and PM peak hours under the three traffic control scenarios. Analysis results quantify operations at the intersection by estimating level of service (LOS), vehicular delays, v/c ratios, and queues with the existing and forecasted intersection turning movement volumes. **Table 6** and **Table 7** summarizes the results of the existing year 2020 and design year 2041 traffic scenarios, respectively. Detailed traffic modeling outputs are in **Appendix D**.

TABLE 6: Intersection Traffic Control Alternative Results
Lacy Road & S Seminole Hwy (Existing Year 2020)

Peak Period	Traffic Control	Meaure of Effectiveness	Intersection Movement												
			Eastbound			Westbound			Northbound			Southbound			Overall Intersection
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
AM Peak	Existing: *AWSC*	LOS	C			C		C	C			B	B		**C**
		Delay (s)	19			17		15	17			14	12		**17**
		V/C	0.57			0.52		0.51	0.50			0.29	0.15		--
		Queue (ft)	90			75		75	70			30	<25		--
	Alternative 1: *Traffic Signal*	LOS	B	A		B	A	A	-	A		B	A		**A**
		Delay (s)	11	9		10	9	9	-	9		11	7		**9**
		V/C	0.14	0.43		0.09	0.45	0.43	0.00	0.45		0.28	0.14		--
		Queue (ft)	<25	30		<25	30	25	<25	25		<25	<25		--
	Alternative 2: *Roundabout*	LOS	A			A		A	A			A			**A**
		Delay (s)	6			6		7	7			6			**6**
		V/C	0.28			0.27		0.29	0.27			0.21			--
		Queue (ft)	30			30		30	30			25			--
PM Peak	Existing: *AWSC*	LOS	C			C		B	B			C	C		**C**
		Delay (s)	16			18		10	12			18	15		**16**
		V/C	0.46			0.56		0.17	0.20			0.54	0.49		--
		Queue (ft)	60			85		<25	25			80	70		--
	Alternative 1: *Traffic Signal*	LOS	B	A		B	B	B	B	A		A	A		**A**
		Delay (s)	12	11		12	11	9	10	7		9	9		**10**
		V/C	0.14	0.43		0.09	0.45	0.43	0.00	0.45		0.28	0.14		--
		Queue (ft)	<25	40		<25	50	<25	<25	25		40	60		--
	Alternative 2: *Roundabout*	LOS	A			A		A	A			A			**A**
		Delay (s)	7			5		4	5			10			**8**
		V/C	0.27			0.24		0.08	0.12			0.54			--
		Queue (ft)	30			25		<25	<25			85			--

TABLE 7: Intersection Traffic Control Alternative Results
Lacy Road & S Seminole Hwy (Design Year 2041)

Peak Period	Traffic Control	Meaure of Effectiveness	Intersection Movement												
			Eastbound			Westbound			Northbound			Southbound			Overall Intersection
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
AM Peak	Existing: *AWSC*	LOS	E			D		C	D			C	B		**D**
		Delay (s)	38			30		21	28			17	14		**28**
		V/C	0.81			0.74		0.63	0.69			0.35	0.23		--
		Queue (ft)	190			155		110	130			40	25		--
	Alternative 1: *Traffic Signal*	LOS	B	B		B	B	B	-	B		B	A		**B**
		Delay (s)	13	10		12	10	12	-	10		14	9		**11**
		V/C	0.23	0.46		0.11	0.47	0.62	0.00	0.50		0.33	0.17		--
		Queue (ft)	<25	55		<25	55	70	<25	60		35	<25		--
	Alternative 2: *Roundabout*	LOS	A			A		A	A			A			**A**
		Delay (s)	8			8		7	9			7			**8**
		V/C	0.36			0.35		0.33	0.36			0.26			--
		Queue (ft)	45			40		40	45			25			--
PM Peak	Existing: *AWSC*	LOS	C			D		B	B			C	D		**C**
		Delay (s)	24			31		11	15			23	25		**24**
		V/C	0.65			0.76		0.20	0.29			0.63	0.70		--
		Queue (ft)	115			160		<25	30			105	140		--
	Alternative 1: *Traffic Signal*	LOS	B	B		B	B	A	B	A		B	A		**B**
		Delay (s)	14	11		13	12	10	11	7		11	9		**11**
		V/C	0.09	0.50		0.09	0.61	0.23	0.00	0.18		0.45	0.52		--
		Queue (ft)	<25	55		<25	70	<25	<25	<25		55	60		--
	Alternative 2: *Roundabout*	LOS	A			A		A	A			B			**A**
		Delay (s)	9			6		4	6			14			**10**
		V/C	0.37			0.31		0.09	0.15			0.66			--
		Queue (ft)	45			35		<25	<25			130			--

Existing: All-Way Stop Control

The traffic modeling results for existing conditions matched field observations. All intersection turning movements operated at a LOS C or better with some vehicular delays and queuing with current 2020 traffic volumes. By the design year, 2041 operations will deteriorate to LOS D and E for many of the intersection movements.

Alternative 1: Traffic Signal

Geometric improvements for the traffic signal alternative include providing a designated left-turn lane and a shared thru/right lane for the eastbound, northbound, and southbound approaches and a designated left-turn, thru, and right-turn lane for the westbound approach.

Permissive left-turn phasing would be provided in all directions with the ability to add protective phasing at a later date. With these improvements, all intersection movements will operate at LOS B or better with minimal queuing and signalization would provide improved overall intersection operations compared to the stop control alternatives.

See **Figure 9** for a concept drawing of the intersection alternative.

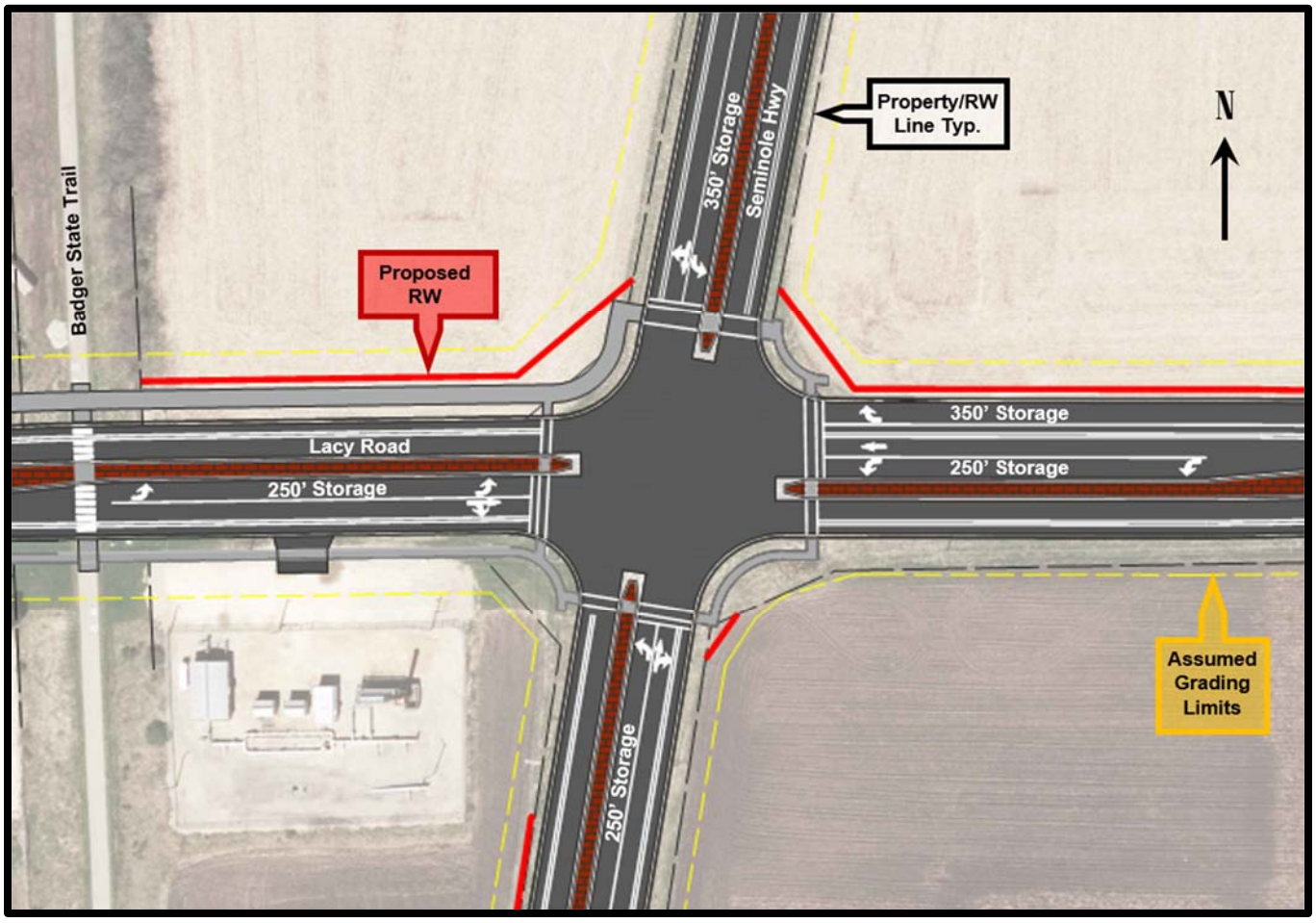


FIGURE 9.
Lacy Road & S Seminole Hwy
Alternative 1 Intersection Concept Drawing

Alternative 2: Roundabout

Several different roundabout layouts were considered for this intersection. Based on existing volumes and potential future development in the area, a single lane roundabout with a westbound right-turn bypass was determined as the preferred roundabout design. All intersection movements will operate at LOS B or better with

minimal queuing. In addition, the roundabout will provide the least amount of delay throughout the entire day since traffic will not have to make unnecessary stops when there are no other vehicles at the intersection. See **Figure 10** for a concept drawing of the intersection alternative.

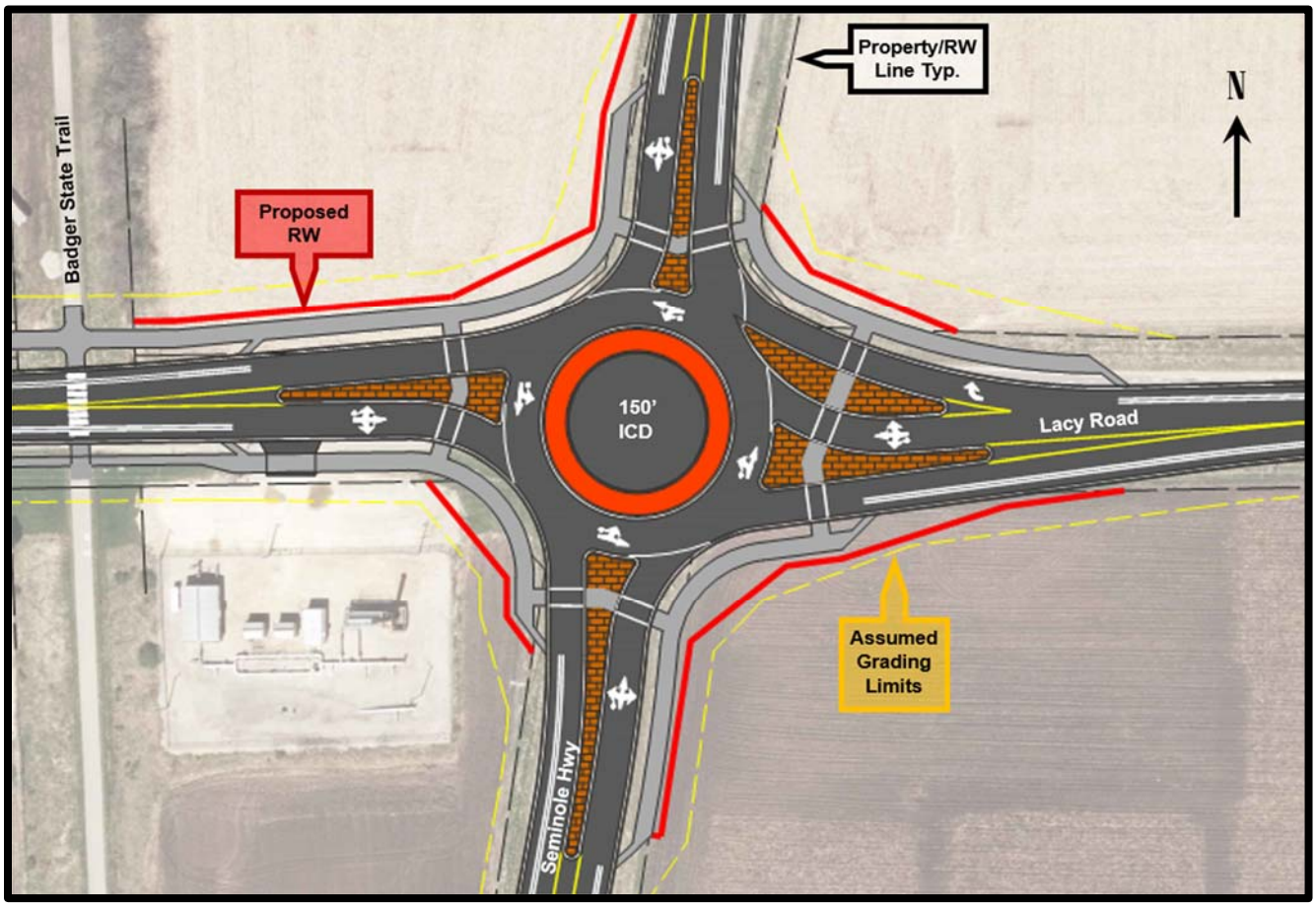


FIGURE 10.
Lacy Road & S Seminole Hwy
Alternative 2 Intersection Concept Drawing

Total Intersection Delay Comparison

A total intersection delay comparison analysis was completed for each of the traffic control alternatives. Hourly total vehicle delay was calculated for each of the five alternatives from 6:00 am to 7:00 pm using existing traffic volume data. **Figure 11** summarizes the results of this analysis.

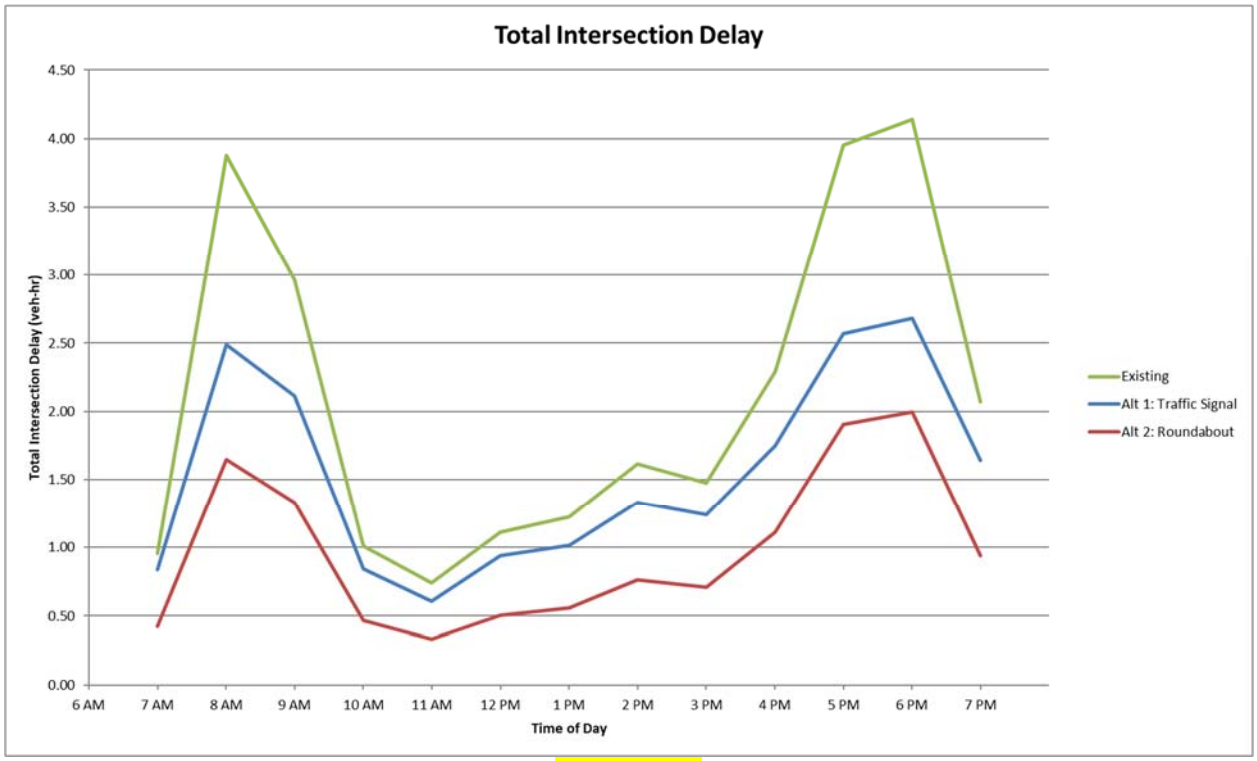


FIGURE 11.

Hourly Total Intersection Delay Comparison

Existing Year 2020 Traffic Volumes

Based on the hourly total intersection delay comparison of the traffic control alternatives, the roundabout alternative will provide the least amount of total delay, while the existing all-way stop control alternative will provide the highest amount of total delay at the intersection.

Sensitivity Analysis

An operational sensitivity analysis was conducted at the intersection to assess how much additional capacity above the existing year traffic volumes each traffic control alternative can accommodate. The analysis was based on how much extra traffic each alternative could handle before a movement reached LOS F. **Table 8** summarizes the results of this analysis.

TABLE 8: Sensitivity Analysis

Additional Capacity from Existing Year 2020 Traffic Volumes

Traffic Control Alternatives	Peak Period	
	AM Peak	PM Peak
Existing: *All-Way Stop Control*	32%	39%
Alternative 1: *Traffic Signal*	102%	111%
Alternative 2: *Roundabout*	126%	63%

Overall, both the traffic signal and roundabout alternative have additional capacity to handle future development and increased traffic volumes at this location. If additional PM peak capacity is desired for the roundabout

alternative, a second southbound lane would need to be included at the intersection. This would increase the PM peak capacity to 121% of current traffic volumes.

Safety Analysis

Each intersection alternative was evaluated for their ability to reduce existing crash trends and improve safety for all intersection users. Crash modification factors (CMFs) provided in the *Highway Safety Manual* (HSM) and the Crash Modification Factor Clearinghouse are a way to estimate the change in crash frequency as a result of a particular safety treatment, such as a change in intersection control. **Table 9** summarizes the safety effectiveness of each alternative compared to the existing stop-controlled intersection.

TABLE 9: Intersection Control Safety Effectiveness

Lacy Road & S Seminole Hwy

Traffic Control Alternatives	Safety Performance		
	CMF	Estimated # of Crashes in Five Year Period	Crash Trend(s) being Improved with Alternative
Existing: *All-Way Stop Control*	N/A	11 Existing Crashes	All-way stop control intersections require vehicles approaching the intersection to stop in all directions prior to entering the intersection. This results in reduced speeds and lower crash frequency and crash severity. However, because of the required stopping of all vehicles at the intersection and delays associated with it, capacity is limited.
Alternative 1: *Traffic Signal*	N/A	N/A	Conversion to a traffic signal is anticipated to reduce angle crashes and current confusion at the intersection. However, the traffic signal will likely increase rear-end crashes. Overall, there will likely be an overall increase in the amount of crashes with the installation of a traffic signal.
Alternative 2: *Roundabout*	1.114	12.254	Conversion to a single-lane roundabout will reduce intersection conflict points from 32 to 8. The roundabout would decrease/eliminate the angle crashes occurring at this intersection, however, property damage crashes as a result of rear-end and sideswipe crashes are likely to increase creating an overall increase in crashes at the intersection.

The existing all-way stop controlled intersection is expected to have the lowest crash frequency out of the intersection alternatives. However, the traffic signal and roundabout alternative are expected to reduce the risk of angle crashes (*currently the most common type of crash at the intersection*) and crash severity. With the implementation of a traffic signal or a roundabout, property damage crashes related to rear-end and sideswipe type crashes are anticipated to increase, resulting in the higher amount of overall crashes at the intersection.

Although overall crash frequency may increase because of these alternatives, improvements at this intersection are needed because the all-way stop controlled design is not capable of handling anticipated increases in traffic volumes. Without improvements, operations will continue to deteriorate, and delays and queuing will increase, resulting in additional intersection crashes. The roundabout option will significantly reduce/eliminate the angle crashes and higher severity crashes occurring at this intersection, providing the best safety alternative. This alternative will also improve operations and significantly increase intersection capacity to accommodate the future development anticipated in the area.

Multimodal Considerations

Lacy Road improvements will include the addition of a multi-use path along the north side of the roadway. At the Lacy Road & S Seminole Hwy intersection, crosswalks will be included on all intersection approaches with median/splitter island to provide a mid-crossing refuge for pedestrians. In addition, designated bicycle lanes will be provided for all approaches. Both the traffic signal and roundabout alternatives will allow for adequate accommodations for multi-modal users. The traffic signal alternative does provide pedestrians with a better indication of when it is safe to cross the roadway and would provide better accessibility for people with visual disabilities.

Badger State Trail Crossing

Another multi-modal consideration at this location is the close proximity of the intersection to the Badger State Trail. The trail is located approximately 300 feet west of the intersection. Proper signing and marking for the trail crossing will be critical to ensure safety. With the traffic signal alternative, the trail crossing is located at the start of the left-turn lane and requires a longer crossing distance which could create potential safety concerns. However, the median does provide refuge for trail users and allows them to cross one direction of traffic at a time. With the roundabout alternative, the crossing distance is much shorter. This decreases potential exposure to vehicular/pedestrian conflicts. Currently, the roundabout alternative does not include a pedestrian refuge to cross each direction separately, but the eastbound splitter island could be extended if a refuge was desired.

Future Development and Planned Roadway Projects

Compatibility of each intersection control alternative with anticipated future development in the surrounding area and planned roadway projects is essential. This includes consideration of existing and future access points near the intersection. In addition, new roadway connections are planned as part of future residential development in the northwest quadrant of the intersection. This includes Minong Lane, which will be constructed on the east side of S Seminole Hwy approximately 1,300 feet north of the intersection and Wayfair Street, which will be constructed on the north side of Lacy Road approximately 1,300 feet east of the intersection. Once the preferred intersection control alternative is selected, opportunities for potential developer contributions to assist in building some portion of the intersection should be explored. This could include providing the City with right-of-way dedication or financial assistance towards construction of the intersection improvements.

Overall, all intersection control alternatives will work with existing and future access, development traffic, and anticipated roadway projects. The implementation of a roundabout at this location may be best compatible with the current traffic volumes, anticipated development traffic, and close proximity of the Badger State Trail to this intersection.

Intersection Alternative Costs, Advantages, and Disadvantages Summary

Table 10 provides a comparison of the advantages, disadvantages, and estimated construction costs of each intersection control alternative. See **Appendix F** for Detailed Construction and Right-of-Way Cost Estimates.

TABLE 10: Intersection Control Evaluation Comparison

Lacy Road & S Seminole Hwy

	Advantages	Disadvantages
Alternative 1 – Traffic Signal  **$2,760,000 – 2.03 AC (Fee & TLE)**	• Handles future traffic and development growth • Low delays and queues for all intersection movements • Reduced risk of angle crashes • Provides best accessibility for people with visual disabilities	• Could increase rear-end crashes • May increase difficulty for nearby residential driveway access • Most expensive option • Longer crossing distance at Badger State Trail • 50% more impervious area than Alternative 2
Alternative 2 - Roundabout  **$2,460,000 – 1.67 AC (Fee & TLE)**	• Handles future traffic and development growth • Best operations during peak periods • Provides shortest vehicular delays during off-peak periods • Lowest crash risk and reduces angle and high severity crashes • Provides shorter crossing distance at Badger State Trail	• May increase property damage rear-end and sideswipe crashes • Does not provide any visual/audio assistance to pedestrians on when to cross the street

4.5 CONCLUSIONS/RECOMMENDATIONS

All intersection control alternatives would be acceptable at this location. The single lane roundabout with westbound right-turn bypass is the preferred traffic control alternative at the Lacy Road & S Seminole Hwy intersection because it provides acceptable traffic operations with capacity to accommodate additional traffic, delivers the lowest total vehicular delay throughout a typical day, reduces high severity and angle crashes, provides safer crossing for the Badger State Trail, compatible with proposed roadway geometrics and future development plans, and accommodates existing and future access near the intersection. This alternative also has a lower construction cost than the other intersection alternative.

APPENDICES

APPENDIX A

Intersection Turning Movement Counts and Traffic Forecast

Intersection Turning Movement Counts

Intersection Traffic Volume Report

Count Basics	Version 2011.J2		Page 1 of 11
Start Date:	Tuesday, March 10, 2020	Weekday	Schools in Session
Total Number of Hours Counted: 14		Non-Holiday	No Special Events

Base Information, Observed (14) Hour and Estimated (24) Hour Volume Summaries

Intersection of: Fitchrona Rd and Lacy Rd

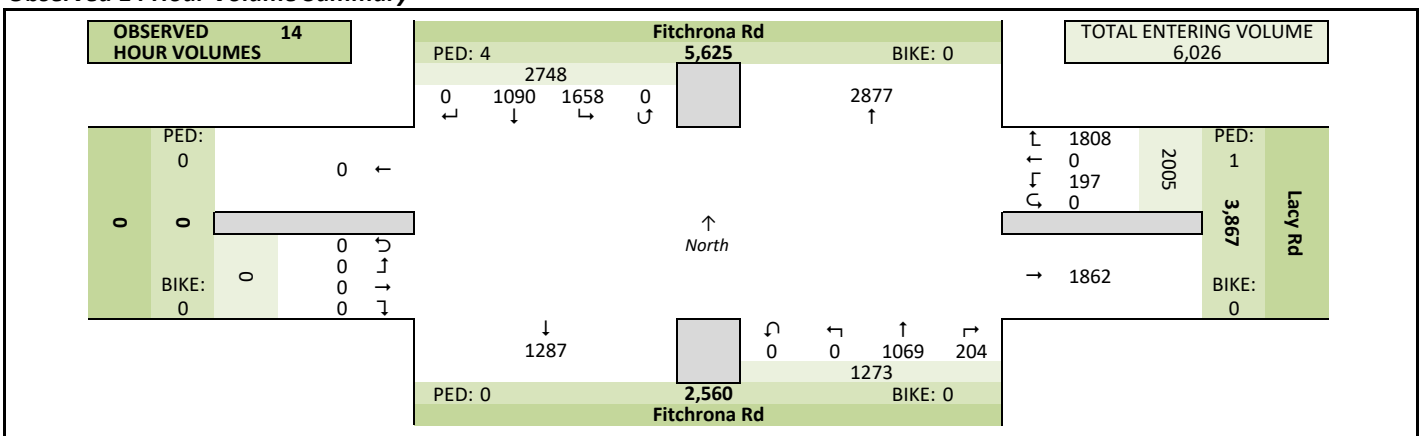
Site Information

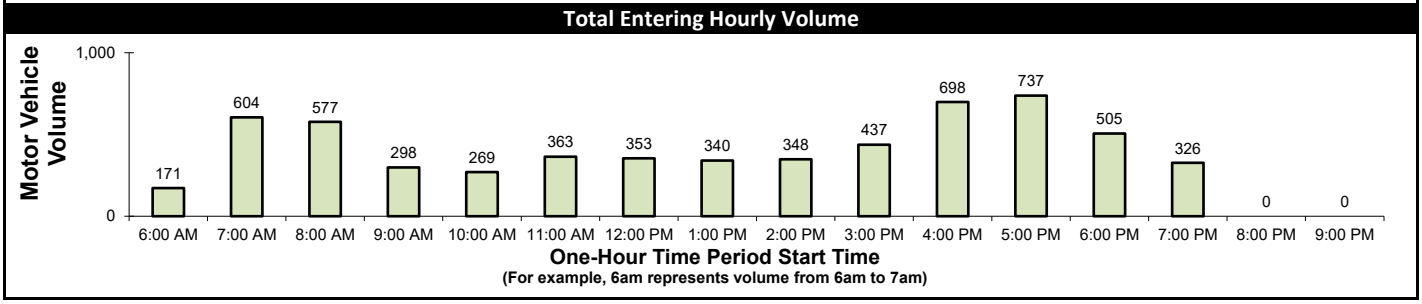
Municipality	Fitchburg		
County	Dane	WisDOT Region	SW-M
Traffic Control	Partial Stop Control		
Roadway Names		North Direction	↑
North Leg	Fitchrona Rd		
East Leg	Lacy Rd		
South Leg	Fitchrona Rd		
West Leg			
Special Considerations			
Schools	In Session		
Holidays			
Special Events			
Special Pedestrians Observed			
Pre-school children	None		
Elementry school age children	None		
Visually impaired (white cane/helper dog)	None		
Elderly/disabled (except wheelchairs)	None		
Wheelchairs/electric scooters	None		
Other (describe)	None		

Count Information

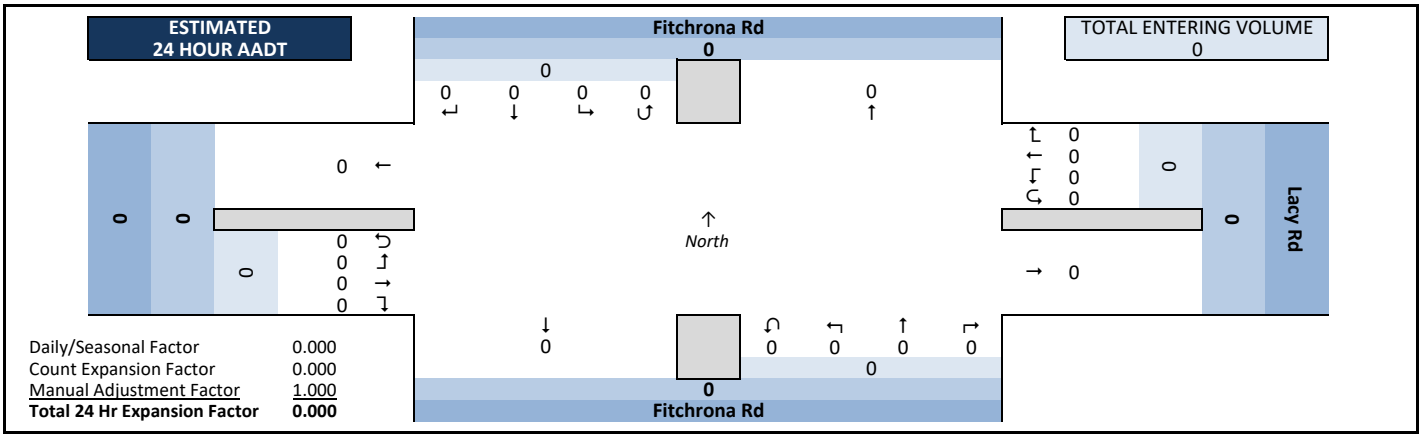
Hrs Counted:	6:00 AM-8:00 PM				
Count Dates				Weather	
AM Peak Period	Tuesday, March 10, 2020				
Midday Peak Period	Tuesday, March 10, 2020				
PM Peak Period	Tuesday, March 10, 2020				
Calculated Peak Hours					
AM	7:30-8:30am	MD	11:30-12:30am	PM	4:45-5:45pm
Peak Hours Selected for Analysis					
AM	7:30-8:30am	MD	11:30-12:30am	PM	4:45-5:45pm
Daily/Seasonal Adjustment Group					
Count Expansion Group					
Daily/Seasonal Adjustment Factor		Count Expansion Factor			
Company Name				Manual Adj.	1.000
Observers	AM Peak Period	N. Greuel			
	Midday Peak Period	N. Greuel			
	PM Peak Period	N. Greuel			
Comments					

Observed 14 Hour Volume Summary





Estimated 24 Hour AADT



Intersection Traffic Volume Report

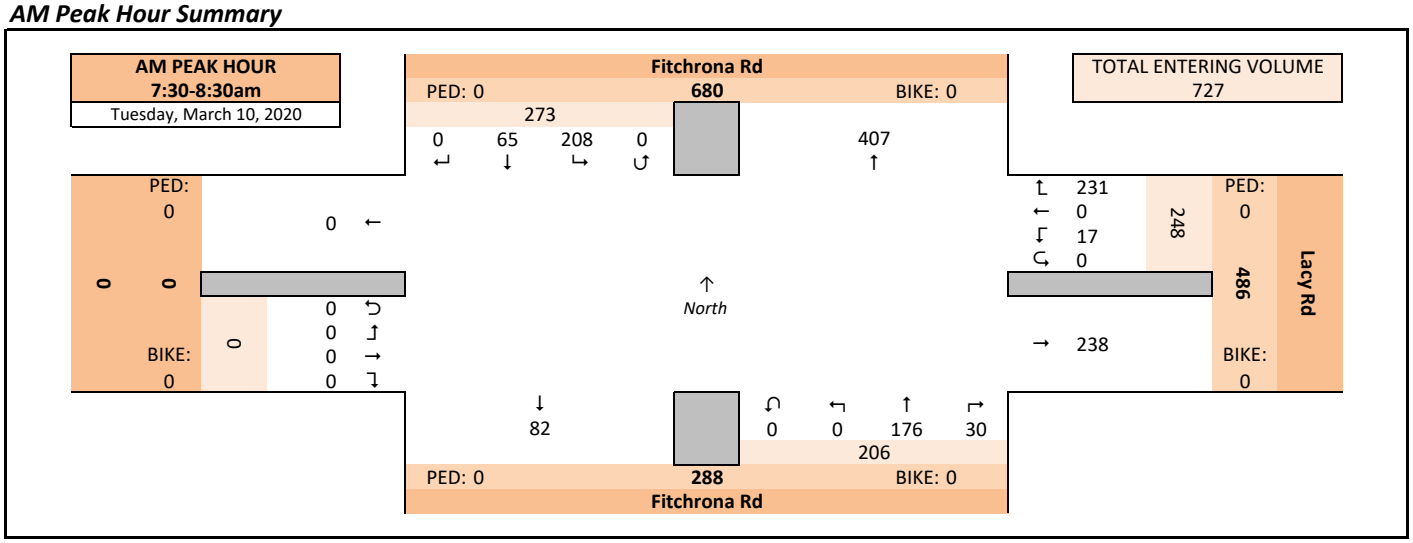
Count Basics			Page 2 of 11
Start Date:	Tuesday, March 10, 2020	Weekday	Schools in Session
Total Number of Hours Counted: 14		Non-Holiday	No Special Events

Peak Hour Volume Graphical Summary

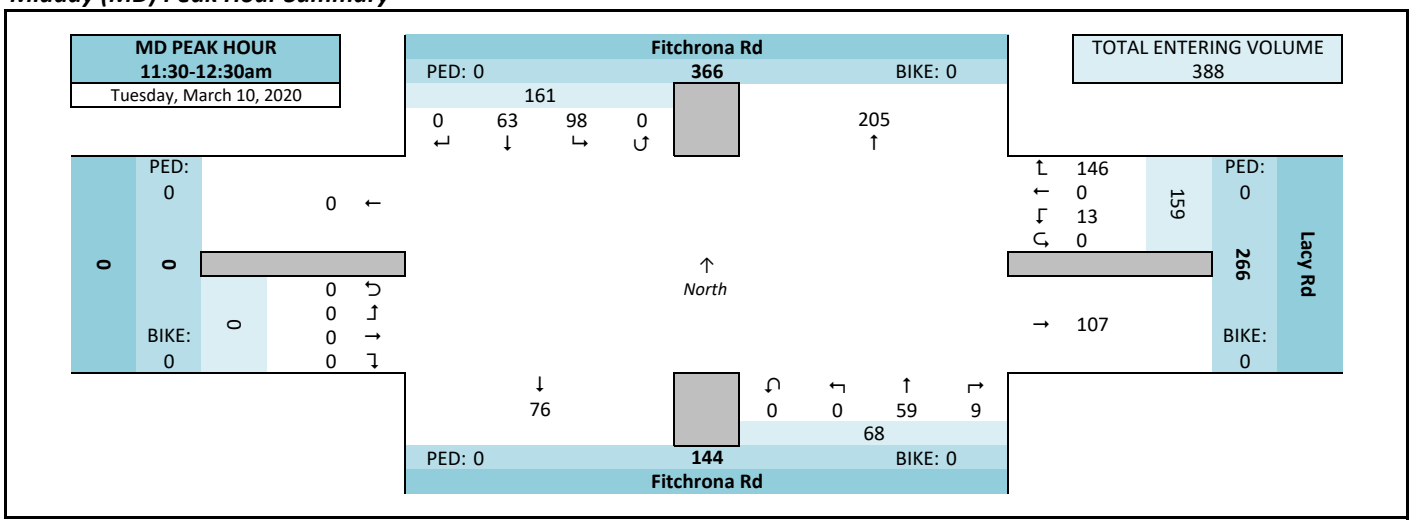
All Motor Vehicles

Fitchrona Rd and Lacy Rd

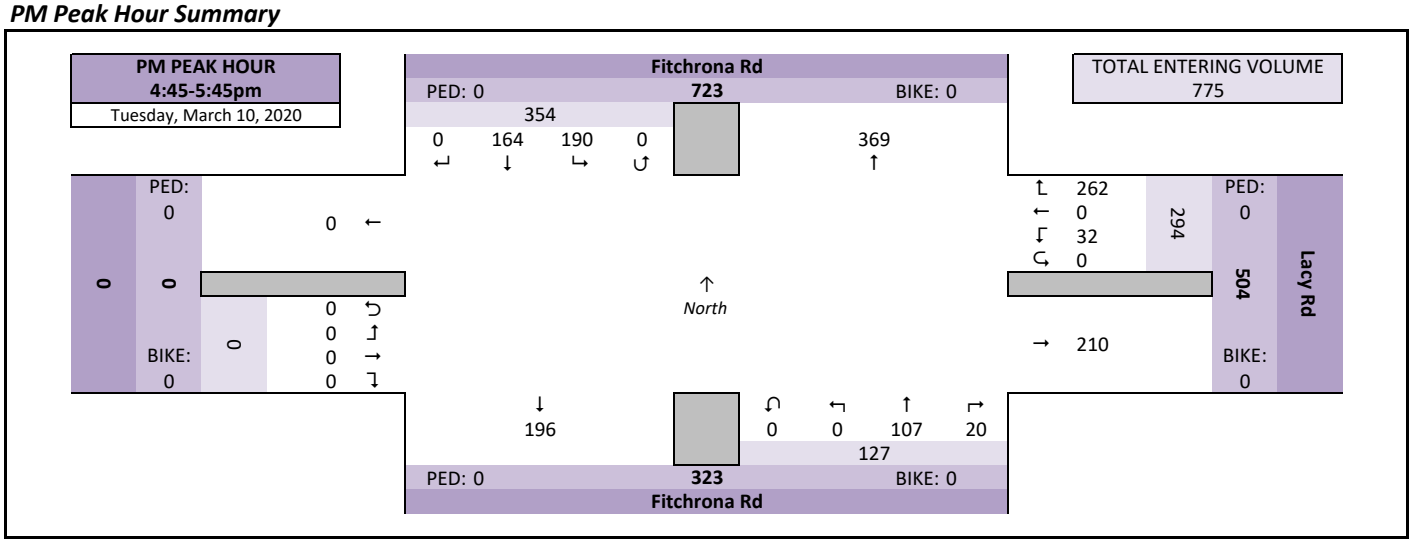
AM Peak Hour Summary



Midday (MD) Peak Hour Summary



PM Peak Hour Summary



Intersection Traffic Volume Report

Count Basics			*Page 3 of 11*
Start Date:	Tuesday, March 10, 2020	Weekday	Schools in Session
Total Number of Hours Counted: 14		Non-Holiday	No Special Events

Peak Hour Volume Summary

Fitchrona Rd and Lacy Rd

All Motor Vehicles

Peak Hour Volumes, Truck Percentages, and PHFs

Tuesday, March 10, 2020		From North					From East					From South					From West					
	AM Peak Hour	Fitchrona Rd					Lacy Rd					Fitchrona Rd					0					
	Start Time	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Totals
AM Peak Hour	7:30 AM	0	20	57	0	77	60	0	4	0	64	7	45	0	0	52	0	0	0	0	0	193
	7:45 AM	0	11	62	0	73	55	0	5	0	60	3	49	0	0	52	0	0	0	0	0	185
	8:00 AM	0	13	44	0	57	50	0	4	0	54	13	43	0	0	56	0	0	0	0	0	167
	8:15 AM	0	21	45	0	66	66	0	4	0	70	7	39	0	0	46	0	0	0	0	0	182
	Peak Hour Volume	0	65	208	0	273	231	0	17	0	248	30	176	0	0	206	0	0	0	0	0	727
	Rounded Hourly Volume	0	65	210	0	275	230	0	15	0	245	30	175	0	0	205	0	0	0	0	0	725
	% Single Unit Trucks	0.0	0.0	6.2	0.0	4.8	4.8	0.0	0.0	0.0	4.4	6.7	3.4	0.0	0.0	3.9	0.0	0.0	0.0	0.0	0.0	4.4
	% Heavy Trucks	0.0	0.0	0.5	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
	% Trucks (Total)	0.0	0.0	6.7	0.0	5.1	4.8	0.0	0.0	0.0	4.4	6.7	3.4	0.0	0.0	3.9	0.0	0.0	0.0	0.0	0.0	4.5
	Peak Hour Factor (PHF)	0.00	0.77	0.84	0.00	0.89	0.87	0.00	0.85	0.00	0.89	0.58	0.90	0.00	0.00	0.92	0.00	0.00	0.00	0.00	0.00	0.94

Tuesday, March 10, 2020		From North					From East					From South					From West					
	MD Peak Hour	Fitchrona Rd					Lacy Rd					Fitchrona Rd					0					
	Start Time	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Totals
Midday (MD) Peak Hour	11:30 AM	0	16	19	0	35	38	0	3	0	41	3	15	0	0	18	0	0	0	0	0	94
	11:45 AM	0	21	27	0	48	34	0	3	0	37	4	22	0	0	26	0	0	0	0	0	111
	12:00 PM	0	12	25	0	37	41	0	2	0	43	2	8	0	0	10	0	0	0	0	0	90
	12:15 PM	0	14	27	0	41	33	0	5	0	38	0	14	0	0	14	0	0	0	0	0	93
	Peak Hour Volume	0	63	98	0	161	146	0	13	0	159	9	59	0	0	68	0	0	0	0	0	388
	Rounded Hourly Volume	0	65	100	0	165	145	0	15	0	160	10	60	0	0	70	0	0	0	0	0	395
	% Single Unit Trucks	0.0	1.6	13.3	0.0	8.7	9.6	0.0	7.7	0.0	9.4	22.2	3.4	0.0	0.0	5.9	0.0	0.0	0.0	0.0	0.0	8.5
	% Heavy Trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	% Trucks (Total)	0.0	1.6	13.3	0.0	8.7	9.6	0.0	7.7	0.0	9.4	22.2	3.4	0.0	0.0	5.9	0.0	0.0	0.0	0.0	0.0	8.5
	Peak Hour Factor (PHF)	0.00	0.75	0.91	0.00	0.84	0.89	0.00	0.65	0.00	0.92	0.56	0.67	0.00	0.00	0.65	0.00	0.00	0.00	0.00	0.00	0.87

Tuesday, March 10, 2020		From North					From East					From South					From West					
	PM Peak Hour	Fitchrona Rd					Lacy Rd					Fitchrona Rd					0					
	Start Time	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Totals
PM Peak Hour	4:45 PM	0	37	47	0	84	58	0	8	0	66	5	24	0	0	29	0	0	0	0	0	179
	5:00 PM	0	45	44	0	89	79	0	8	0	87	6	26	0	0	32	0	0	0	0	0	208
	5:15 PM	0	48	52	0	100	67	0	5	0	72	4	31	0	0	35	0	0	0	0	0	207
	5:30 PM	0	34	47	0	81	58	0	11	0	69	5	26	0	0	31	0	0	0	0	0	181
	Peak Hour Volume	0	164	190	0	354	262	0	32	0	294	20	107	0	0	127	0	0	0	0	0	775
	Rounded Hourly Volume	0	165	190	0	355	260	0	30	0	290	20	105	0	0	125	0	0	0	0	0	770
	% Single Unit Trucks	0.0	0.6	0.0	0.0	0.3	0.4	0.0	3.1	0.0	0.7	0.0	0.9	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.5
	% Heavy Trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	% Trucks (Total)	0.0	0.6	0.0	0.0	0.3	0.4	0.0	3.1	0.0	0.7	0.0	0.9	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.5
	Peak Hour Factor (PHF)	0.00	0.85	0.91	0.00	0.88	0.83	0.00	0.73	0.00	0.84	0.83	0.86	0.00	0.00	0.91	0.00	0.00	0.00	0.00	0.00	0.93

Peak Hour Pedestrian and Bicyclist Volumes

Pedestrians and Bicyclists		Crossing North Approach			Crossing East Approach			Crossing South Approach			Crossing West Approach			Total Ped & Bike Volume
		Fitchrona Rd			Lacy Rd			Fitchrona Rd			0			
	15-Minute Start Time	Pedestrian	Bicyclist	Total	Pedestrian	Bicyclist	Total	Pedestrian	Bicyclist	Total	Pedestrian	Bicyclist	Total	
AM	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total	0	0	0	0	0	0	0	0	0	0	0	0	0
MD	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total	0	0	0	0	0	0	0	0	0	0	0	0	0

Intersection Traffic Volume Report

Count Basics			Page 4 of 11
Start Date:	Tuesday, March 10, 2020	Weekday	Schools in Session
Total Number of Hours Counted: 14		Non-Holiday	No Special Events

Hourly Volume Summary - Motor Vehicle Data

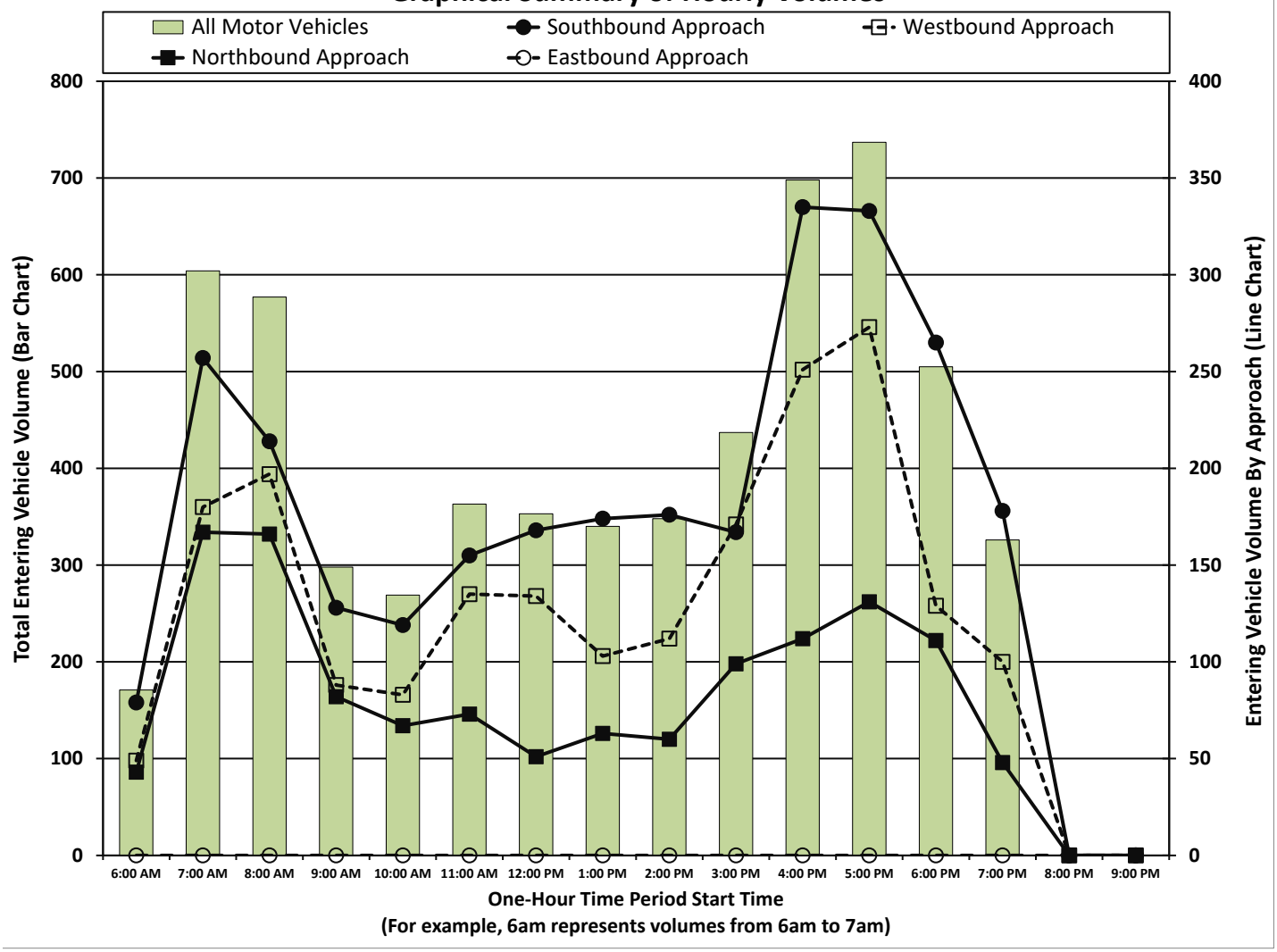
All Motor Vehicles

Fitchrona Rd and Lacy Rd

One-Hour Motor Vehicle Data

	One-Hour Time Period Start Time	From North (↓) Fitchrona Rd					From East (←) Lacy Rd					From South (↑) Fitchrona Rd					From West (→) 0					Total Vehicle Volume	Directional Volume Totals E/W	Directional Volume Totals N/S
		Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total			
AM	6:00 AM	0	23	56	0	79	43	0	6	0	49	16	27	0	0	43	0	0	0	0	0	171	49	122
AM	7:00 AM	0	64	193	0	257	167	0	13	0	180	22	145	0	0	167	0	0	0	0	0	604	180	424
AM	8:00 AM	0	60	154	0	214	182	0	15	0	197	30	136	0	0	166	0	0	0	0	0	577	197	380
AM	9:00 AM	0	51	77	0	128	81	0	7	0	88	8	74	0	0	82	0	0	0	0	0	298	88	210
MD	10:00 AM	0	50	69	0	119	75	0	8	0	83	8	59	0	0	67	0	0	0	0	0	269	83	186
MD	11:00 AM	0	66	89	0	155	123	0	12	0	135	11	62	0	0	73	0	0	0	0	0	363	135	228
MD	12:00 PM	0	58	110	0	168	119	0	15	0	134	8	43	0	0	51	0	0	0	0	0	353	134	219
MD	1:00 PM	0	69	105	0	174	97	0	6	0	103	8	55	0	0	63	0	0	0	0	0	340	103	237
PM	2:00 PM	0	76	100	0	176	101	0	11	0	112	10	50	0	0	60	0	0	0	0	0	348	112	236
PM	3:00 PM	0	80	87	0	167	151	0	20	0	171	13	86	0	0	99	0	0	0	0	0	437	171	266
PM	4:00 PM	0	158	177	0	335	226	0	25	0	251	19	93	0	0	112	0	0	0	0	0	698	251	447
PM	5:00 PM	0	152	181	0	333	244	0	29	0	273	17	114	0	0	131	0	0	0	0	0	737	273	464
PM	6:00 PM	0	114	151	0	265	119	0	10	0	129	27	84	0	0	111	0	0	0	0	0	505	129	376
PM	7:00 PM	0	69	109	0	178	80	0	20	0	100	7	41	0	0	48	0	0	0	0	0	326	100	226
PM	8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals		0	1090	1658	0	2748	1808	0	197	0	2005	204	1069	0	0	1273	0	0	0	0	0	6026	2005	4021

Graphical Summary of Hourly Volumes



Intersection Traffic Volume Report

Count Basics		*Page 5 of 11*
Start Date: Tuesday, March 10, 2020	Weekday	Schools in Session
Total Number of Hours Counted: 14	Non-Holiday	No Special Events

15-Minute Motor Vehicle Data

All Motor Vehicles

Fitchrona Rd and Lacy Rd

15-Minute Motor Vehicle Data

	15-Minute Time Period	From North (↓) Fitchrona Rd					From East (←) Lacy Rd					From South (↑) Fitchrona Rd					From West (→) 0					15-Min	Hourly	
	Start Time	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Totals	Sum	PHF
AM Peak Period	6:00 AM	0	7	7	0	14	9	0	1	0	10	3	4	0	0	7	0	0	0	0	0	31	171	0.72
	6:15 AM	0	6	8	0	14	5	0	1	0	6	4	4	0	0	8	0	0	0	0	0	28	216	0.71
	6:30 AM	0	5	23	0	28	13	0	3	0	16	5	10	0	0	15	0	0	0	0	0	59	338	0.56
	6:45 AM	0	5	18	0	23	16	0	1	0	17	4	9	0	0	13	0	0	0	0	0	53	472	0.61
	7:00 AM	0	13	26	0	39	15	0	1	0	16	5	16	0	0	21	0	0	0	0	0	76	604	0.78
	7:15 AM	0	20	48	0	68	37	0	3	0	40	7	35	0	0	42	0	0	0	0	0	150	695	0.90
	7:30 AM	0	20	57	0	77	60	0	4	0	64	7	45	0	0	52	0	0	0	0	0	193	727	0.94
	7:45 AM	0	11	62	0	73	55	0	5	0	60	3	49	0	0	52	0	0	0	0	0	185	657	0.89
	8:00 AM	0	13	44	0	57	50	0	4	0	54	13	43	0	0	56	0	0	0	0	0	167	577	0.79
	8:15 AM	0	21	45	0	66	66	0	4	0	70	7	39	0	0	46	0	0	0	0	0	182	476	0.65
	8:30 AM	0	16	41	0	57	28	0	3	0	31	6	29	0	0	35	0	0	0	0	0	123	373	0.76
	8:45 AM	0	10	24	0	34	38	0	4	0	42	4	25	0	0	29	0	0	0	0	0	105	329	0.78
	9:00 AM	0	9	16	0	25	21	0	1	0	22	5	14	0	0	19	0	0	0	0	0	66	298	0.94
	9:15 AM	0	12	23	0	35	19	0	2	0	21	2	21	0	0	23	0	0	0	0	0	79	290	0.92
	9:30 AM	0	13	25	0	38	19	0	2	0	21	0	20	0	0	20	0	0	0	0	0	79	272	0.86
	9:45 AM	0	17	13	0	30	22	0	2	0	24	1	19	0	0	20	0	0	0	0	0	74	271	0.87
Midday Peak Period	10:00 AM	0	8	13	0	21	25	0	3	0	28	2	7	0	0	9	0	0	0	0	0	58	269	0.86
	10:15 AM	0	11	15	0	26	14	0	0	0	14	5	16	0	0	21	0	0	0	0	0	61	286	0.92
	10:30 AM	0	15	24	0	39	15	0	1	0	16	1	22	0	0	23	0	0	0	0	0	78	308	0.93
	10:45 AM	0	16	17	0	33	21	0	4	0	25	0	14	0	0	14	0	0	0	0	0	72	324	0.86
	11:00 AM	0	13	17	0	30	29	0	4	0	33	1	11	0	0	12	0	0	0	0	0	75	363	0.82
	11:15 AM	0	16	26	0	42	22	0	2	0	24	3	14	0	0	17	0	0	0	0	0	83	378	0.85
	11:30 AM	0	16	19	0	35	38	0	3	0	41	3	15	0	0	18	0	0	0	0	0	94	388	0.87
	11:45 AM	0	21	27	0	48	34	0	3	0	37	4	22	0	0	26	0	0	0	0	0	111	373	0.84
	12:00 PM	0	12	25	0	37	41	0	2	0	43	2	8	0	0	10	0	0	0	0	0	90	353	0.95
	12:15 PM	0	14	27	0	41	33	0	5	0	38	0	14	0	0	14	0	0	0	0	0	93	355	0.95
	12:30 PM	0	14	35	0	49	15	0	2	0	17	3	10	0	0	13	0	0	0	0	0	79	356	0.95
	12:45 PM	0	18	23	0	41	30	0	6	0	36	3	11	0	0	14	0	0	0	0	0	91	362	0.96
	1:00 PM	0	20	27	0	47	25	0	1	0	26	3	16	0	0	19	0	0	0	0	0	92	340	0.90
	1:15 PM	0	17	28	0	45	29	0	1	0	30	3	16	0	0	19	0	0	0	0	0	94	343	0.90
	1:30 PM	0	20	20	0	40	27	0	3	0	30	2	13	0	0	15	0	0	0	0	0	85	330	0.87
	1:45 PM	0	12	30	0	42	16	0	1	0	17	0	10	0	0	10	0	0	0	0	0	69	326	0.86
PM Peak Period	2:00 PM	0	19	28	0	47	30	0	5	0	35	3	10	0	0	13	0	0	0	0	0	95	348	0.92
	2:15 PM	0	16	28	0	44	21	0	3	0	24	1	12	0	0	13	0	0	0	0	0	81	341	0.94
	2:30 PM	0	17	26	0	43	21	0	1	0	22	3	13	0	0	16	0	0	0	0	0	81	353	0.95
	2:45 PM	0	24	18	0	42	29	0	2	0	31	3	15	0	0	18	0	0	0	0	0	91	373	0.92
	3:00 PM	0	21	17	0	38	28	0	4	0	32	7	11	0	0	18	0	0	0	0	0	88	437	0.70
	3:15 PM	0	15	27	0	42	27	0	6	0	33	1	17	0	0	18	0	0	0	0	0	93	519	0.76
	3:30 PM	0	20	18	0	38	39	0	4	0	43	2	18	0	0	20	0	0	0	0	0	101	605	0.84
	3:45 PM	0	24	25	0	49	57	0	6	0	63	3	40	0	0	43	0	0	0	0	0	155	674	0.94
	4:00 PM	0	38	44	0	82	49	0	9	0	58	7	23	0	0	30	0	0	0	0	0	170	698	0.97
	4:15 PM	0	42	38	0	80	63	0	2	0	65	5	29	0	0	34	0	0	0	0	0	179	736	0.88
	4:30 PM	0	41	48	0	89	56	0	6	0	62	2	17	0	0	19	0	0	0	0	0	170	764	0.92
	4:45 PM	0	37	47	0	84	58	0	8	0	66	5	24	0	0	29	0	0	0	0	0	179	775	0.93
	5:00 PM	0	45	44	0	89	79	0	8	0	87	6	26	0	0	32	0	0	0	0	0	208	737	0.89
	5:15 PM	0	48	52	0	100	67	0	5	0	72	4	31	0	0	35	0	0	0	0	0	207	664	0.80
	5:30 PM	0	34	47	0	81	58	0	11	0	69	5	26	0	0	31	0	0	0	0	0	181	585	0.81
	5:45 PM	0	25	38	0	63	40	0	5	0	45	2	31	0	0	33	0	0	0	0	0	141	525	0.93
	6:00 PM	0	31	42	0	73	36	0	4	0	40	6	16	0	0	22	0	0	0	0	0	135	505	0.94
	6:15 PM	0	30	44	0	74	23	0	3	0	26	6	22	0	0	28	0	0	0	0	0	128	447	0.87
	6:30 PM	0	22	30	0	52	30	0	2	0	32	10	27	0	0	37	0	0	0	0	0	121	379	0.78
	6:45 PM	0	31	35	0	66	30	0	1	0	31	5	19	0	0	24	0	0	0	0	0	121	346	0.71
	7:00 PM	0	22	29	0	51	14	0	2	0	16	0	10	0	0	10	0	0	0	0	0	77	326	0.81
	7:15 PM	0	11	22	0	33	12	0	2	0	14	3	10	0	0	13	0	0	0	0	0	60		
	7:30 PM	0	23	34	0	57	8	0	3	0	11	4	16	0	0	20	0	0	0	0	0	88		
	7:45 PM	0	13	24	0	37	46	0	13	0	59	0	5	0	0	5	0	0	0	0	0	101		
	8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	8:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	8:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	8:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	9:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	9:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Totals		0	1090	1658	0	2748	1808	0	197	0	2005	204	1069	0	0	1273	0	0	0	0	0	6026		

Peak Hour All Vehicle Volume Summary

	Hourly Time Period	From North (↓) Fitchrona Rd					From East (←) Lacy Rd					From South (↑) Fitchrona Rd					From West (→) 0					Total Hourly	
	Start Time	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Volume	PHF
AM	7:30 AM	0	65	208	0	273	231	0	17	0	248	30	176	0	0	206	0	0	0	0	0	727	0.94
MD	11:30 AM	0	63	98	0	161	146	0	13	0	159	9	59	0	0	68	0	0	0	0	0	388	0.87
PM	4:45 PM	0	164	190	0	354	262	0	32	0	294	20	107	0	0	127	0	0	0	0	0	775	0.93

Intersection Traffic Volume Report

Count Basics			*Page 6 of 11*
Start Date:	Tuesday, March 10, 2020	Weekday	Schools in Session
Total Number of Hours Counted: 14		Non-Holiday	No Special Events

15-Minute Automobile Data

Automobiles (Cars, Light Trucks, & Motorcycles)

Fitchrona Rd and Lacy Rd

15-Minute Automobile Data

15-Minute Time Period		From North (↓)					From East (←)					From South (↑)					From West (→)					15-Min	Hourly
		Fitchrona Rd					Lacy Rd					Fitchrona Rd					0						
Start Time		Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Totals	Sum
AM Peak Period	6:00 AM	0	7	7	0	14	9	0	1	0	10	3	4	0	0	7	0	0	0	0	0	31	164
	6:15 AM	0	6	8	0	14	5	0	1	0	6	3	3	0	0	6	0	0	0	0	0	26	206
	6:30 AM	0	5	21	0	26	13	0	3	0	16	5	10	0	0	15	0	0	0	0	0	57	326
	6:45 AM	0	5	17	0	22	15	0	0	0	15	4	9	0	0	13	0	0	0	0	0	50	454
	7:00 AM	0	13	25	0	38	13	0	1	0	14	5	16	0	0	21	0	0	0	0	0	73	580
	7:15 AM	0	20	47	0	67	35	0	3	0	38	6	35	0	0	41	0	0	0	0	0	146	666
	7:30 AM	0	20	55	0	75	56	0	4	0	60	7	43	0	0	50	0	0	0	0	0	185	694
	7:45 AM	0	11	59	0	70	52	0	5	0	57	3	46	0	0	49	0	0	0	0	0	176	627
	8:00 AM	0	13	38	0	51	50	0	4	0	54	12	42	0	0	54	0	0	0	0	0	159	549
	8:15 AM	0	21	42	0	63	62	0	4	0	66	6	39	0	0	45	0	0	0	0	0	174	448
	8:30 AM	0	16	40	0	56	24	0	3	0	27	6	29	0	0	35	0	0	0	0	0	118	346
	8:45 AM	0	10	22	0	32	34	0	4	0	38	4	24	0	0	28	0	0	0	0	0	98	299
	9:00 AM	0	8	12	0	20	18	0	1	0	19	5	14	0	0	19	0	0	0	0	0	58	268
	9:15 AM	0	12	20	0	32	15	0	2	0	17	2	21	0	0	23	0	0	0	0	0	72	264
	9:30 AM	0	13	19	0	32	17	0	2	0	19	0	20	0	0	20	0	0	0	0	0	71	253
	9:45 AM	0	17	11	0	28	17	0	2	0	19	1	19	0	0	20	0	0	0	0	0	67	251
Midday Peak Period	10:00 AM	0	8	13	0	21	21	0	3	0	24	2	7	0	0	9	0	0	0	0	0	54	252
	10:15 AM	0	11	15	0	26	14	0	0	0	14	5	16	0	0	21	0	0	0	0	0	61	266
	10:30 AM	0	15	17	0	32	14	0	1	0	15	1	21	0	0	22	0	0	0	0	0	69	282
	10:45 AM	0	16	16	0	32	19	0	4	0	23	0	13	0	0	13	0	0	0	0	0	68	298
	11:00 AM	0	13	15	0	28	24	0	4	0	28	1	11	0	0	12	0	0	0	0	0	68	332
	11:15 AM	0	16	24	0	40	19	0	2	0	21	3	13	0	0	16	0	0	0	0	0	77	345
	11:30 AM	0	15	15	0	30	37	0	2	0	39	2	14	0	0	16	0	0	0	0	0	85	355
	11:45 AM	0	21	25	0	46	28	0	3	0	31	4	21	0	0	25	0	0	0	0	0	102	343
	12:00 PM	0	12	21	0	33	37	0	2	0	39	1	8	0	0	9	0	0	0	0	0	81	321
	12:15 PM	0	14	24	0	38	30	0	5	0	35	0	14	0	0	14	0	0	0	0	0	87	326
	12:30 PM	0	14	31	0	45	14	0	1	0	15	3	10	0	0	13	0	0	0	0	0	73	326
	12:45 PM	0	18	18	0	36	25	0	6	0	31	2	11	0	0	13	0	0	0	0	0	80	330
	1:00 PM	0	20	26	0	46	20	0	1	0	21	3	16	0	0	19	0	0	0	0	0	86	316
	1:15 PM	0	16	23	0	39	28	0	1	0	29	3	16	0	0	19	0	0	0	0	0	87	315
	1:30 PM	0	20	17	0	37	22	0	3	0	25	2	13	0	0	15	0	0	0	0	0	77	304
	1:45 PM	0	12	28	0	40	15	0	1	0	16	0	10	0	0	10	0	0	0	0	0	66	302
PM Peak Period	2:00 PM	0	19	23	0	42	25	0	5	0	30	3	10	0	0	13	0	0	0	0	0	85	315
	2:15 PM	0	16	27	0	43	17	0	3	0	20	1	12	0	0	13	0	0	0	0	0	76	312
	2:30 PM	0	17	21	0	38	20	0	1	0	21	3	13	0	0	16	0	0	0	0	0	75	328
	2:45 PM	0	20	16	0	36	24	0	2	0	26	3	14	0	0	17	0	0	0	0	0	79	353
	3:00 PM	0	21	16	0	37	25	0	4	0	29	6	10	0	0	16	0	0	0	0	0	82	422
	3:15 PM	0	15	26	0	41	27	0	6	0	33	1	17	0	0	18	0	0	0	0	0	92	504
	3:30 PM	0	20	17	0	37	39	0	4	0	43	2	18	0	0	20	0	0	0	0	0	100	589
	3:45 PM	0	23	25	0	48	55	0	3	0	58	3	39	0	0	42	0	0	0	0	0	148	657
	4:00 PM	0	35	44	0	79	48	0	9	0	57	5	23	0	0	28	0	0	0	0	0	164	687
	4:15 PM	0	42	38	0	80	63	0	2	0	65	5	27	0	0	32	0	0	0	0	0	177	731
	4:30 PM	0	41	47	0	88	55	0	6	0	61	2	17	0	0	19	0	0	0	0	0	168	760
	4:45 PM	0	37	47	0	84	58	0	8	0	66	5	23	0	0	28	0	0	0	0	0	178	771
	5:00 PM	0	45	44	0	89	79	0	8	0	87	6	26	0	0	32	0	0	0	0	0	208	734
	5:15 PM	0	47	52	0	99	67	0	5	0	72	4	31	0	0	35	0	0	0	0	0	206	660
	5:30 PM	0	34	47	0	81	57	0	10	0	67	5	26	0	0	31	0	0	0	0	0	179	580
	5:45 PM	0	25	38	0	63	40	0	5	0	45	2	31	0	0	33	0	0	0	0	0	141	521
	6:00 PM	0	30	42	0	72	36	0	4	0	40	6	16	0	0	22	0	0	0	0	0	134	501
	6:15 PM	0	28	44	0	72	23	0	3	0	26	6	22	0	0	28	0	0	0	0	0	126	444
	6:30 PM	0	22	30	0	52	30	0	1	0	31	10	27	0	0	37	0	0	0	0	0	120	378
	6:45 PM	0	31	35	0	66	30	0	1	0	31	5	19	0	0	24	0	0	0	0	0	121	346
	7:00 PM	0	22	29	0	51	14	0	2	0	16	0	10	0	0	10	0	0	0	0	0	77	326
	7:15 PM	0	11	22	0	33	12	0	2	0	14	3	10	0	0	13	0	0	0	0	0	60	
	7:30 PM	0	23	34	0	57	8	0	3	0	11	4	16	0	0	20	0	0	0	0	0	88	
	7:45 PM	0	13	24	0	37	46	0	13	0	59	0	5	0	0	5	0	0	0	0	0	101	
	8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Totals		0	1075	1559	0	2634	1700	0	189	0	1889	194	1050	0	0	1244	0	0	0	0	0	5767	

Peak Hour Automobile Volume Summary

Hourly Time Period		From North (↓)					From East (←)					From South (↑)					From West (→)					Total Hourly
		Fitchrona Rd					Lacy Rd					Fitchrona Rd					0					
Start Time		Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Volume
AM	7:30 AM	0	65	194	0	259	220	0	17	0	237	28	170	0	0	198	0	0	0	0	0	694
MD	11:30 AM	0	62	85	0	147	132	0	12	0	144	7	57	0	0	64	0	0	0	0	0	355
PM	4:45 PM	0	163	190	0	353	261	0	31	0	292	20	106	0	0	126	0	0	0	0	0	771

Intersection Traffic Volume Report

Count Basics			*Page 7 of 11*
Start Date:	Tuesday, March 10, 2020	Weekday	Schools in Session
Total Number of Hours Counted: 14		Non-Holiday	No Special Events

15-Minute Single Unit (SU) Truck & Bus Data

Single Unit (SU) Trucks & Buses

Fitchrona Rd and Lacy Rd

15-Minute Single Unit (SU) Truck & Bus Data

	15-Minute Time Period	From North (↓) Fitchrona Rd					From East (←) Lacy Rd					From South (↑) Fitchrona Rd					From West (→) 0					15-Min	Hourly
	Start Time	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Totals	Sum
AM Peak Period	6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
	6:15 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	2	10
	6:30 AM	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	12
	6:45 AM	0	0	1	0	1	1	0	1	0	2	0	0	0	0	0	0	0	0	0	0	3	18
	7:00 AM	0	0	1	0	1	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	3	24
	7:15 AM	0	0	1	0	1	2	0	0	0	2	1	0	0	0	1	0	0	0	0	0	4	29
	7:30 AM	0	0	2	0	2	4	0	0	0	4	0	2	0	0	2	0	0	0	0	0	8	32
	7:45 AM	0	0	3	0	3	3	0	0	0	3	0	3	0	0	3	0	0	0	0	0	9	29
	8:00 AM	0	0	6	0	6	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	8	27
	8:15 AM	0	0	2	0	2	4	0	0	0	4	1	0	0	0	1	0	0	0	0	0	7	27
	8:30 AM	0	0	1	0	1	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0	5	26
	8:45 AM	0	0	2	0	2	4	0	0	0	4	0	1	0	0	1	0	0	0	0	0	7	29
	9:00 AM	0	1	4	0	5	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	8	29
	9:15 AM	0	0	3	0	3	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	6	25
	9:30 AM	0	0	6	0	6	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	8	19
	9:45 AM	0	0	2	0	2	5	0	0	0	5	0	0	0	0	0	0	0	0	0	0	7	20
Midday Peak Period	10:00 AM	0	0	0	0	0	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0	4	17
	10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20
	10:30 AM	0	0	7	0	7	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0	9	26
	10:45 AM	0	0	1	0	1	2	0	0	0	2	0	1	0	0	1	0	0	0	0	0	4	26
	11:00 AM	0	0	2	0	2	5	0	0	0	5	0	0	0	0	0	0	0	0	0	0	7	31
	11:15 AM	0	0	2	0	2	3	0	0	0	3	0	1	0	0	1	0	0	0	0	0	6	33
	11:30 AM	0	1	4	0	5	1	0	1	0	2	1	1	0	0	2	0	0	0	0	0	9	33
	11:45 AM	0	0	2	0	2	6	0	0	0	6	0	1	0	0	1	0	0	0	0	0	9	30
	12:00 PM	0	0	4	0	4	4	0	0	0	4	1	0	0	0	1	0	0	0	0	0	9	32
	12:15 PM	0	0	3	0	3	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	6	29
	12:30 PM	0	0	4	0	4	1	0	1	0	2	0	0	0	0	0	0	0	0	0	0	6	30
	12:45 PM	0	0	5	0	5	5	0	0	0	5	1	0	0	0	1	0	0	0	0	0	11	32
	1:00 PM	0	0	1	0	1	5	0	0	0	5	0	0	0	0	0	0	0	0	0	0	6	24
	1:15 PM	0	1	5	0	6	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	7	28
	1:30 PM	0	0	3	0	3	5	0	0	0	5	0	0	0	0	0	0	0	0	0	0	8	26
	1:45 PM	0	0	2	0	2	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	3	24
PM Peak Period	2:00 PM	0	0	5	0	5	5	0	0	0	5	0	0	0	0	0	0	0	0	0	0	10	33
	2:15 PM	0	0	1	0	1	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0	5	29
	2:30 PM	0	0	5	0	5	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	6	25
	2:45 PM	0	4	2	0	6	5	0	0	0	5	0	1	0	0	1	0	0	0	0	0	12	20
	3:00 PM	0	0	1	0	1	3	0	0	0	3	1	1	0	0	2	0	0	0	0	0	6	15
	3:15 PM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	15
	3:30 PM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	16
	3:45 PM	0	1	0	0	1	2	0	3	0	5	0	1	0	0	1	0	0	0	0	0	7	17
	4:00 PM	0	3	0	0	3	1	0	0	0	1	2	0	0	0	2	0	0	0	0	0	6	11
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2	5
	4:30 PM	0	0	1	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2	4
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	4
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
	5:15 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4
	5:30 PM	0	0	0	0	0	1	0	1	0	2	0	0	0	0	0	0	0	0	0	0	2	5
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
	6:00 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4
	6:15 PM	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	3
	6:30 PM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	1
	6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Totals		0	15	98	0	113	107	0	8	0	115	10	19	0	0	29	0	0	0	0	0	257	

Peak Hour Single Unit (SU) Truck & Buses Volume Summary

	Hourly Time Period	From North (↓) Fitchrona Rd					From East (←) Lacy Rd					From South (↑) Fitchrona Rd					From West (→) 0					Total Hourly
	Start Time	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Volume
AM	7:30 AM	0	0	13	0	13	11	0	0	0	11	2	6	0	0	8	0	0	0	0	0	32
MD	11:30 AM	0	1	13	0	14	14	0	1	0	15	2	2	0	0	4	0	0	0	0	0	33
PM	4:45 PM	0	1	0	0	1	1	0	1	0	2	0	1	0	0	1	0	0	0	0	0	4

Intersection Traffic Volume Report

Count Basics			*Page 8 of 11*
Start Date:	Tuesday, March 10, 2020	Weekday	Schools in Session
Total Number of Hours Counted: 14		Non-Holiday	No Special Events

15-Minute Semi-Truck Data

Semi-Trucks

Fitchrona Rd and Lacy Rd

15-Minute Semi-Truck Data

15-Minute Time Period		From North (↓) Fitchrona Rd					From East (←) Lacy Rd					From South (↑) Fitchrona Rd					From West (→) 0					15-Min Totals	Hourly Sum
Start Time		Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total		
AM Peak Period	6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	8:15 AM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	9:15 AM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	1
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Midday Peak Period	10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM Peak Period	2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Totals		0	0	1	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2	

Peak Hour Semi-Truck Volume Summary

Hourly Time Period		From North (↓) Fitchrona Rd					From East (←) Lacy Rd					From South (↑) Fitchrona Rd					From West (→) 0					Total Hourly Volume
Start Time		Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	
AM	7:30 AM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
MD	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Intersection Traffic Volume Report

Count Basics			*Page 9 of 11*
Start Date:	Tuesday, March 10, 2020	Weekday	Schools in Session
Total Number of Hours Counted: 14		Non-Holiday	No Special Events

15-Minute Heavy Vehicle Data

Fitchrona Rd and Lacy Rd

15-Minute Heavy Vehicle Data

	15-Minute Time Period Start Time	From North (↓) Fitchrona Rd					From East (←) Lacy Rd					From South (↑) Fitchrona Rd					From West (→) 0					15-Min Totals	Hourly Sum
		Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total		
AM Peak Period	6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
	6:15 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	2	10
	6:30 AM	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	12
	6:45 AM	0	0	1	0	1	1	0	1	0	2	0	0	0	0	0	0	0	0	0	0	3	18
	7:00 AM	0	0	1	0	1	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	3	24
	7:15 AM	0	0	1	0	1	2	0	0	0	2	1	0	0	0	1	0	0	0	0	0	4	29
	7:30 AM	0	0	2	0	2	4	0	0	0	4	0	2	0	0	2	0	0	0	0	0	8	33
	7:45 AM	0	0	3	0	3	3	0	0	0	3	0	3	0	0	3	0	0	0	0	0	9	30
	8:00 AM	0	0	6	0	6	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	8	28
	8:15 AM	0	0	3	0	3	4	0	0	0	4	1	0	0	0	1	0	0	0	0	0	8	28
	8:30 AM	0	0	1	0	1	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0	5	27
	8:45 AM	0	0	2	0	2	4	0	0	0	4	0	1	0	0	1	0	0	0	0	0	7	30
	9:00 AM	0	1	4	0	5	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	8	30
	9:15 AM	0	0	3	0	3	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0	7	26
	9:30 AM	0	0	6	0	6	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	8	19
	9:45 AM	0	0	2	0	2	5	0	0	0	5	0	0	0	0	0	0	0	0	0	0	7	20
Midday Peak Period	10:00 AM	0	0	0	0	0	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0	4	17
	10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20
	10:30 AM	0	0	7	0	7	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0	9	26
	10:45 AM	0	0	1	0	1	2	0	0	0	2	0	1	0	0	1	0	0	0	0	0	4	26
	11:00 AM	0	0	2	0	2	5	0	0	0	5	0	0	0	0	0	0	0	0	0	0	7	31
	11:15 AM	0	0	2	0	2	3	0	0	0	3	0	1	0	0	1	0	0	0	0	0	6	33
	11:30 AM	0	1	4	0	5	1	0	1	0	2	1	1	0	0	2	0	0	0	0	0	9	33
	11:45 AM	0	0	2	0	2	6	0	0	0	6	0	1	0	0	1	0	0	0	0	0	9	30
	12:00 PM	0	0	4	0	4	4	0	0	0	4	1	0	0	0	1	0	0	0	0	0	9	32
	12:15 PM	0	0	3	0	3	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	6	29
	12:30 PM	0	0	4	0	4	1	0	1	0	2	0	0	0	0	0	0	0	0	0	0	6	30
	12:45 PM	0	0	5	0	5	5	0	0	0	5	1	0	0	0	1	0	0	0	0	0	11	32
	1:00 PM	0	0	1	0	1	5	0	0	0	5	0	0	0	0	0	0	0	0	0	0	6	24
	1:15 PM	0	1	5	0	6	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	7	28
	1:30 PM	0	0	3	0	3	5	0	0	0	5	0	0	0	0	0	0	0	0	0	0	8	26
	1:45 PM	0	0	2	0	2	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	3	24
PM Peak Period	2:00 PM	0	0	5	0	5	5	0	0	0	5	0	0	0	0	0	0	0	0	0	0	10	33
	2:15 PM	0	0	1	0	1	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0	5	29
	2:30 PM	0	0	5	0	5	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	6	25
	2:45 PM	0	4	2	0	6	5	0	0	0	5	0	1	0	0	1	0	0	0	0	0	12	20
	3:00 PM	0	0	1	0	1	3	0	0	0	3	1	1	0	0	2	0	0	0	0	0	6	15
	3:15 PM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	15
	3:30 PM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	16
	3:45 PM	0	1	0	0	1	2	0	3	0	5	0	1	0	0	1	0	0	0	0	0	7	17
	4:00 PM	0	3	0	0	3	1	0	0	0	1	2	0	0	0	2	0	0	0	0	0	6	11
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2	5
	4:30 PM	0	0	1	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2	4
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	4
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
	5:15 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4
	5:30 PM	0	0	0	0	0	1	0	1	0	2	0	0	0	0	0	0	0	0	0	0	2	5
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
	6:00 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4
	6:15 PM	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	3
	6:30 PM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	1
	6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Totals		0	15	99	0	114	108	0	8	0	116	10	19	0	0	29	0	0	0	0	0	259	

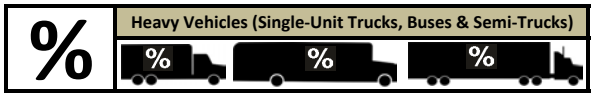
Peak Hour Heavy Vehicle Volume Summary

	Hourly Time Period Start Time	From North (↓) Fitchrona Rd					From East (←) Lacy Rd					From South (↑) Fitchrona Rd					From West (→) 0					Total Hourly Volume
		Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	
AM	7:30 AM	0	0	14	0	14	11	0	0	0	11	2	6	0	0	8	0	0	0	0	0	33
MD	11:30 AM	0	1	13	0	14	14	0	1	0	15	2	2	0	0	4	0	0	0	0	0	33
PM	4:45 PM	0	1	0	0	1	1	0	1	0	2	0	1	0	0	1	0	0	0	0	0	4

Intersection Traffic Volume Report

Count Basics			Page 10 of 11
Start Date:	Tuesday, March 10, 2020	Weekday	Schools in Session
Total Number of Hours Counted: 14		Non-Holiday	No Special Events

15-Minute Heavy Vehicle Percentages



Fitchrona Rd and Lacy Rd

15-Minute Heavy Vehicle Percentages

	15-Minute Time Period	From North (↓) Fitchrona Rd					From East (←) Lacy Rd					From South (↑) Fitchrona Rd					From West (→) 0					Total Heavy Vehicle	Hourly Heavy Vehicle
	Start Time	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Percent	Percent
AM Peak Period	6:00 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.1
	6:15 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	25.0	0.0	0.0	25.0	0.0	0.0	0.0	0.0	0.0	7.1	4.6
	6:30 AM	0.0	0.0	8.7	0.0	7.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4	3.6
	6:45 AM	0.0	0.0	5.6	0.0	4.3	6.2	0.0	100.0	0.0	11.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.7	3.8
	7:00 AM	0.0	0.0	3.8	0.0	2.6	13.3	0.0	0.0	0.0	12.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.9	4.0
	7:15 AM	0.0	0.0	2.1	0.0	1.5	5.4	0.0	0.0	0.0	5.0	14.3	0.0	0.0	0.0	2.4	0.0	0.0	0.0	0.0	0.0	2.7	4.2
	7:30 AM	0.0	0.0	3.5	0.0	2.6	6.7	0.0	0.0	0.0	6.2	0.0	4.4	0.0	0.0	3.8	0.0	0.0	0.0	0.0	0.0	4.1	4.5
	7:45 AM	0.0	0.0	4.8	0.0	4.1	5.5	0.0	0.0	0.0	5.0	0.0	6.1	0.0	0.0	5.8	0.0	0.0	0.0	0.0	0.0	4.9	4.6
	8:00 AM	0.0	0.0	13.6	0.0	10.5	0.0	0.0	0.0	0.0	0.0	7.7	2.3	0.0	0.0	3.6	0.0	0.0	0.0	0.0	0.0	4.8	4.9
	8:15 AM	0.0	0.0	6.7	0.0	4.5	6.1	0.0	0.0	0.0	5.7	14.3	0.0	0.0	0.0	2.2	0.0	0.0	0.0	0.0	0.0	4.4	5.9
	8:30 AM	0.0	0.0	2.4	0.0	1.8	14.3	0.0	0.0	0.0	12.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.1	7.2
	8:45 AM	0.0	0.0	8.3	0.0	5.9	10.5	0.0	0.0	0.0	9.5	0.0	4.0	0.0	0.0	3.4	0.0	0.0	0.0	0.0	0.0	6.7	9.1
	9:00 AM	0.0	11.1	25.0	0.0	20.0	14.3	0.0	0.0	0.0	13.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.1	10.1
	9:15 AM	0.0	0.0	13.0	0.0	8.6	21.1	0.0	0.0	0.0	19.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.9	9.0
	9:30 AM	0.0	0.0	24.0	0.0	15.8	10.5	0.0	0.0	0.0	9.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.1	7.0
	9:45 AM	0.0	0.0	15.4	0.0	6.7	22.7	0.0	0.0	0.0	20.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.5	7.4
Midday Peak Period	10:00 AM	0.0	0.0	0.0	0.0	0.0	16.0	0.0	0.0	0.0	14.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.9	6.3
	10:15 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.0
	10:30 AM	0.0	0.0	29.2	0.0	17.9	6.7	0.0	0.0	0.0	6.2	0.0	4.5	0.0	0.0	4.3	0.0	0.0	0.0	0.0	0.0	11.5	8.4
	10:45 AM	0.0	0.0	5.9	0.0	3.0	9.5	0.0	0.0	0.0	8.0	0.0	7.1	0.0	0.0	7.1	0.0	0.0	0.0	0.0	0.0	5.6	8.0
	11:00 AM	0.0	0.0	11.8	0.0	6.7	17.2	0.0	0.0	0.0	15.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.3	8.5
	11:15 AM	0.0	0.0	7.7	0.0	4.8	13.6	0.0	0.0	0.0	12.5	0.0	7.1	0.0	0.0	5.9	0.0	0.0	0.0	0.0	0.0	7.2	8.7
	11:30 AM	0.0	6.2	21.1	0.0	14.3	2.6	0.0	33.3	0.0	4.9	33.3	6.7	0.0	0.0	11.1	0.0	0.0	0.0	0.0	0.0	9.6	8.5
	11:45 AM	0.0	0.0	7.4	0.0	4.2	17.6	0.0	0.0	0.0	16.2	0.0	4.5	0.0	0.0	3.8	0.0	0.0	0.0	0.0	0.0	8.1	8.0
	12:00 PM	0.0	0.0	16.0	0.0	10.8	9.8	0.0	0.0	0.0	9.3	50.0	0.0	0.0	0.0	10.0	0.0	0.0	0.0	0.0	0.0	10.0	9.1
	12:15 PM	0.0	0.0	11.1	0.0	7.3	9.1	0.0	0.0	0.0	7.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.5	8.2
	12:30 PM	0.0	0.0	11.4	0.0	8.2	6.7	0.0	50.0	0.0	11.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.6	8.4
	12:45 PM	0.0	0.0	21.7	0.0	12.2	16.7	0.0	0.0	0.0	13.9	33.3	0.0	0.0	0.0	7.1	0.0	0.0	0.0	0.0	0.0	12.1	8.8
	1:00 PM	0.0	0.0	3.7	0.0	2.1	20.0	0.0	0.0	0.0	19.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.5	7.1
	1:15 PM	0.0	5.9	17.9	0.0	13.3	3.4	0.0	0.0	0.0	3.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.4	8.2
	1:30 PM	0.0	0.0	15.0	0.0	7.5	18.5	0.0	0.0	0.0	16.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.4	7.9
	1:45 PM	0.0	0.0	6.7	0.0	4.8	6.2	0.0	0.0	0.0	5.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.3	7.4
PM Peak Period	2:00 PM	0.0	0.0	17.9	0.0	10.6	16.7	0.0	0.0	0.0	14.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.5	9.5
	2:15 PM	0.0	0.0	3.6	0.0	2.3	19.0	0.0	0.0	0.0	16.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.2	8.5
	2:30 PM	0.0	0.0	19.2	0.0	11.6	4.8	0.0	0.0	0.0	4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.4	7.1
	2:45 PM	0.0	16.7	11.1	0.0	14.3	17.2	0.0	0.0	0.0	16.1	0.0	6.7	0.0	0.0	5.6	0.0	0.0	0.0	0.0	0.0	13.2	5.4
	3:00 PM	0.0	0.0	5.9	0.0	2.6	10.7	0.0	0.0	0.0	9.4	14.3	9.1	0.0	0.0	11.1	0.0	0.0	0.0	0.0	0.0	6.8	3.4
	3:15 PM	0.0	0.0	3.7	0.0	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	2.9
	3:30 PM	0.0	0.0	5.6	0.0	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	2.6
	3:45 PM	0.0	4.2	0.0	0.0	2.0	3.5	0.0	50.0	0.0	7.9	0.0	2.5	0.0	0.0	2.3	0.0	0.0	0.0	0.0	0.0	4.5	2.5
	4:00 PM	0.0	7.9	0.0	0.0	3.7	2.0	0.0	0.0	0.0	1.7	28.6	0.0	0.0	0.0	6.7	0.0	0.0	0.0	0.0	0.0	3.5	1.6
	4:15 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.9	0.0	0.0	5.9	0.0	0.0	0.0	0.0	0.0	1.1	0.7
	4:30 PM	0.0	0.0	2.1	0.0	1.1	1.8	0.0	0.0	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.5
	4:45 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2	0.0	0.0	3.4	0.0	0.0	0.0	0.0	0.0	0.6	0.5
	5:00 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4
	5:15 PM	0.0	2.1	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.6
	5:30 PM	0.0	0.0	0.0	0.0	0.0	1.7	0.0	9.1	0.0	2.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.9
	5:45 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8
	6:00 PM	0.0	3.2	0.0	0.0	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.8
	6:15 PM	0.0	6.7	0.0	0.0	2.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.7
	6:30 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.0	0.0	3.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.3
	6:45 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	7:00 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	7:15 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	7:30 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	7:45 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	8:00 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	8:15 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	8:30 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	8:45 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	9:00 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	9:15 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	9:30 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	9:45 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Totals		0.0	1.4	6.0	0.0	4.1	6.0	0.0	4.1	0.0	5.8	4.9	1.8	0.0	0.0	2.3	0.0	0.0	0.0	0.0	0.0	4.3	

Peak Hour Heavy Vehicle Percentages Summary

	Hourly Time Period	From North (↓) Fitchrona Rd					From East (←) Lacy Rd					From South (↑) Fitchrona Rd					From West (→) 0					Hourly Heavy Vehicle
	Start Time	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Percent
AM	7:30 AM	0.0	0.0	6.7	0.0	5.1	4.8	0.0	0.0	0.0	4.4	6.7	3.4	0.0	0.0	3.9	0.0	0.0	0.0	0.0	0.0	4.5
MD	11:30 AM	0.0	1.6	13.3	0.0	8.7	9.6	0.0	7.7	0.0	9.4	22.2	3.4	0.0	0.0	5.9	0.0	0.0	0.0	0.0	0.0	8.5
PM	4:45 PM	0.0	0.6	0.0	0.0	0.3	0.4	0.0	3.1	0.0	0.7	0.0	0.9	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.5

Intersection Traffic Volume Report

Count Basics			Page 11 of 11
Start Date:	Tuesday, March 10, 2020	Weekday	Schools in Session
Total Number of Hours Counted: 14		Non-Holiday	No Special Events

15-Minute Pedestrian and Bicyclist Data

Pedestrians and Bicyclists

Fitchrona Rd and Lacy Rd

15-Minute Pedestrian and Bicyclist Data

	15-Minute Time Period	Crossing North Approach			Crossing East Approach			Crossing South Approach			Crossing West Approach			15-Min	Hourly
		Fitchrona Rd			Lacy Rd			Fitchrona Rd			0				
	Start Time	Pedestrian	Bicyclist	Total	Pedestrian	Bicyclist	Total	Pedestrian	Bicyclist	Total	Pedestrian	Bicyclist	Total	Totals	Sum
AM Peak Period	6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	9:30 AM	1	0	1	0	0	0	0	0	0	0	0	0	1	1
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Midday Peak Period	10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2
	10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2
	10:45 AM	1	0	1	0	0	0	0	0	0	0	0	0	1	2
	11:00 AM	1	0	1	0	0	0	0	0	0	0	0	0	1	1
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM Peak Period	2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	4:00 PM	0	0	0	1	0	1	0	0	0	0	0	0	1	1
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	5:45 PM	1	0	1	0	0	0	0	0	0	0	0	0	1	1
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
Totals		4	0	4	1	0	1	0	0	0	0	0	0	5	

Special Pedestrians

Pedestrian Type	None	1 or 2	A Few	Several	Many	Unknown
Pre-school Children	x					
Elementry School Age Children	x					
Visually Impaired (white cane/helper dog)	x					
Elderly/Disabled (except wheelchairs)	x					
Wheelchairs/Electric Scooters	x					
Other (None)	x					

Intersection Traffic Volume Report

Count Basics	Version 2011.J2		Page 1 of 11
Start Date:	Tuesday, March 10, 2020	Weekday	Schools in Session
Total Number of Hours Counted: 14		Non-Holiday	No Special Events

Base Information, Observed (14) Hour and Estimated (24) Hour Volume Summaries

Intersection of: Seminole Hwy and Lacy Rd

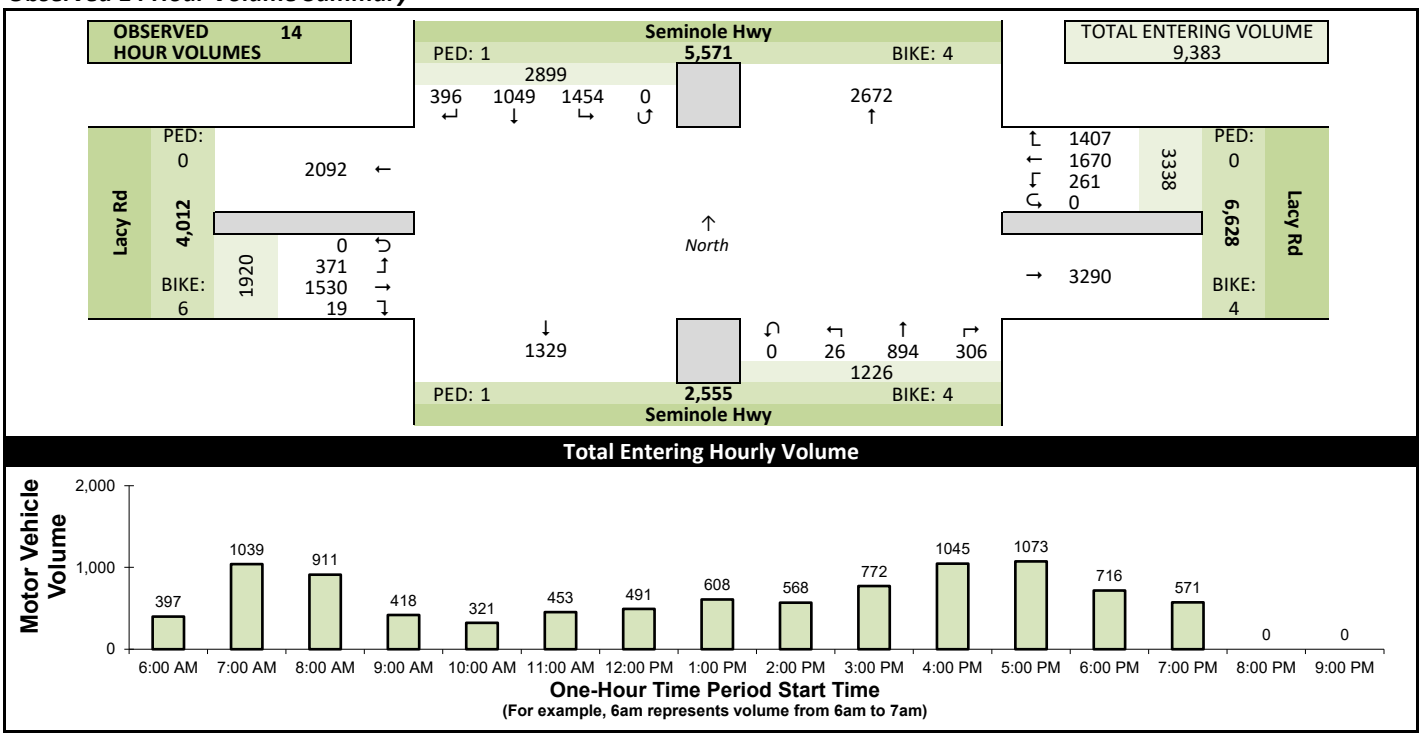
Site Information

Municipality	Fitchburg		
County	Dane	WisDOT Region	SW-M
Traffic Control	All-Way Stop		
Roadway Names		North Direction	↑
North Leg	Seminole Hwy		
East Leg	Lacy Rd		
South Leg	Seminole Hwy		
West Leg	Lacy Rd		
Special Considerations			
Schools	In Session		
Holidays			
Special Events			
Special Pedestrians Observed			
Pre-school children	None		
Elementry school age children	None		
Visually impaired (white cane/helper dog)	None		
Elderly/disabled (except wheelchairs)	None		
Wheelchairs/electric scooters	None		
Other (describe)	None		

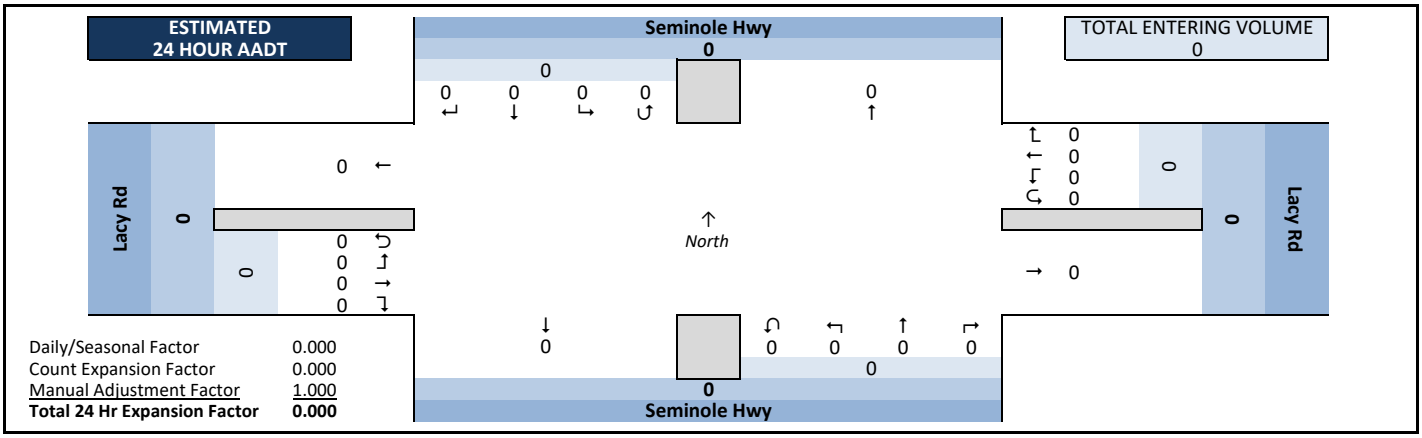
Count Information

Hrs Counted:	6:00 AM-8:00 PM				
Count Dates				Weather	
AM Peak Period	Tuesday, March 10, 2020				
Midday Peak Period	Tuesday, March 10, 2020				
PM Peak Period	Tuesday, March 10, 2020				
Calculated Peak Hours					
AM	7:30-8:30am	MD	1:00-2:00pm	PM	4:30-5:30pm
Peak Hours Selected for Analysis					
AM	7:30-8:30am	MD	12:30-1:30pm	PM	4:30-5:30pm
Daily/Seasonal Adjustment Group					
Count Expansion Group					
Daily/Seasonal Adjustment Factor		Count Expansion Factor			
Company Name				Manual Adj.	1.000
Observers: AM Peak Period	N. Greuel				
Midday Peak Period	N. Greuel				
PM Peak Period	N. Greuel				
Comments					

Observed 14 Hour Volume Summary



Estimated 24 Hour AADT



Daily/Seasonal Factor	0.000
Count Expansion Factor	0.000
Manual Adjustment Factor	1.000
Total 24 Hr Expansion Factor	**0.000**

Intersection Traffic Volume Report

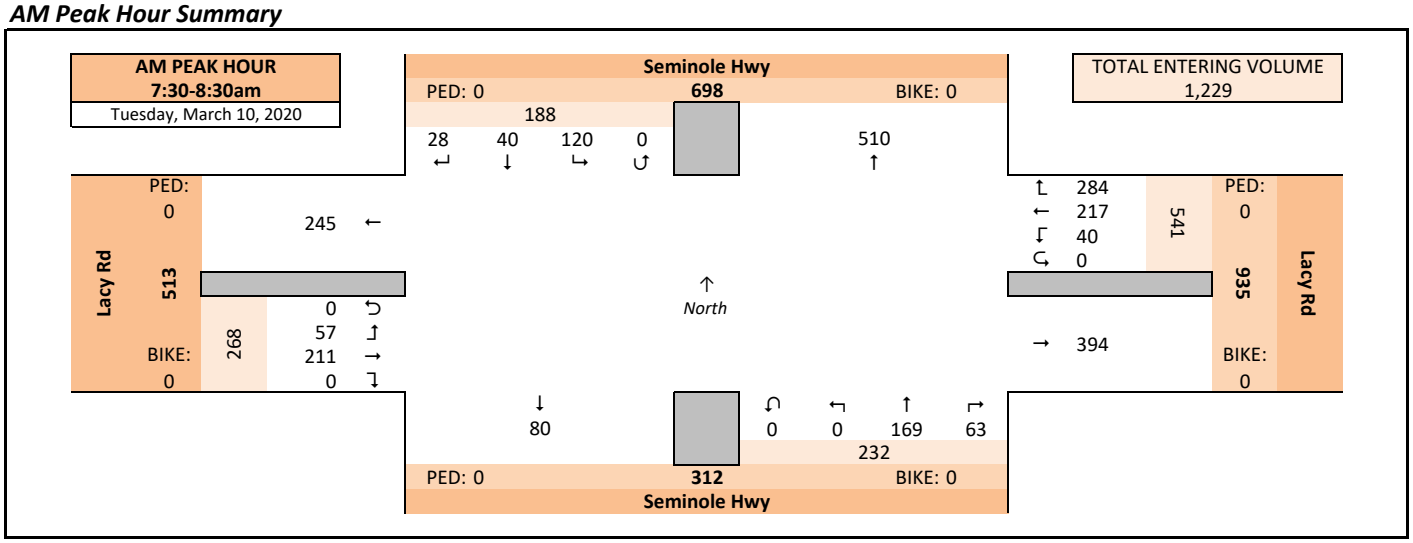
Count Basics			Page 2 of 11
Start Date:	Tuesday, March 10, 2020	Weekday	Schools in Session
Total Number of Hours Counted: 14		Non-Holiday	No Special Events

Peak Hour Volume Graphical Summary

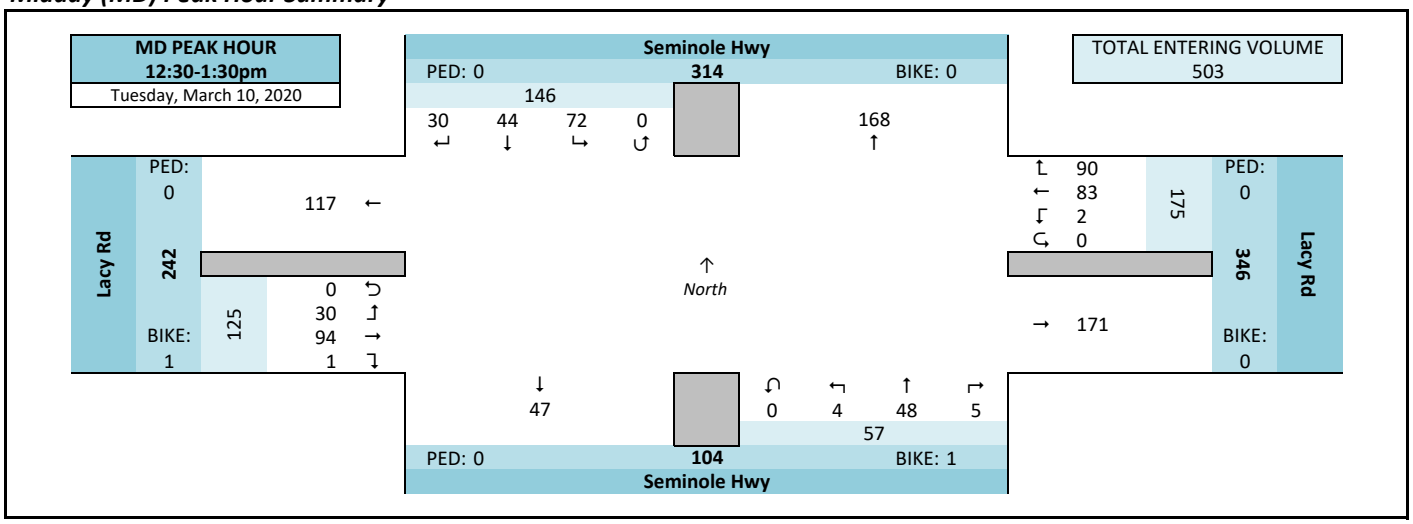
All Motor Vehicles

Seminole Hwy and Lacy Rd

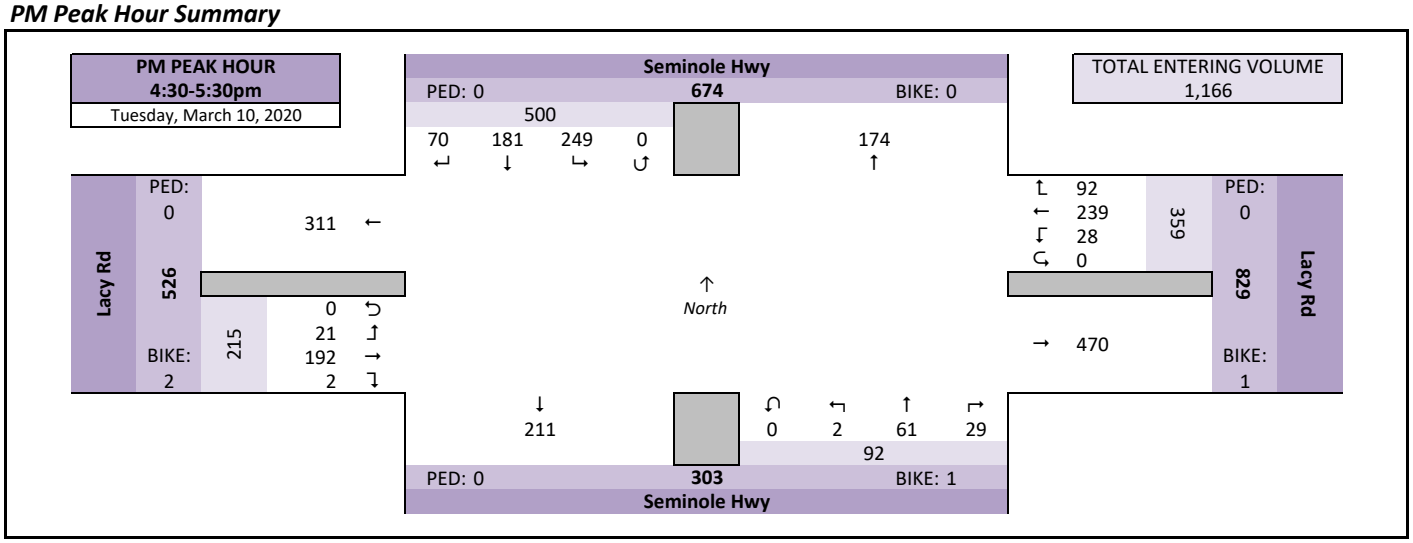
AM Peak Hour Summary



Midday (MD) Peak Hour Summary



PM Peak Hour Summary



Intersection Traffic Volume Report

Count Basics			*Page 3 of 11*
Start Date:	Tuesday, March 10, 2020	Weekday	Schools in Session
Total Number of Hours Counted: 14		Non-Holiday	No Special Events

Peak Hour Volume Summary

Seminole Hwy and Lacy Rd

All Motor Vehicles

Peak Hour Volumes, Truck Percentages, and PHFs

Tuesday, March 10, 2020		From North (↓)					From East (←)					From South (↑)					From West (→)					
	AM Peak Hour	Seminole Hwy					Lacy Rd					Seminole Hwy					Lacy Rd					
	Start Time	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Totals
AM Peak Hour	7:30 AM	3	9	36	0	48	77	58	13	0	148	19	34	0	0	53	0	57	18	0	75	324
	7:45 AM	8	6	19	0	33	80	55	4	0	139	14	63	0	0	77	0	56	15	0	71	320
	8:00 AM	9	12	33	0	54	65	57	5	0	127	18	41	0	0	59	0	52	11	0	63	303
	8:15 AM	8	13	32	0	53	62	47	18	0	127	12	31	0	0	43	0	46	13	0	59	282
	Peak Hour Volume	28	40	120	0	188	284	217	40	0	541	63	169	0	0	232	0	211	57	0	268	1229
	Rounded Hourly Volume	30	40	120	0	190	285	215	40	0	540	65	170	0	0	235	0	210	55	0	265	1230
	% Single Unit Trucks	14.3	7.5	9.2	0.0	9.6	3.5	1.8	22.5	0.0	4.3	4.8	1.8	0.0	0.0	2.6	0.0	2.4	8.8	0.0	3.7	4.6
	% Heavy Trucks	0.0	0.0	0.8	0.0	0.5	0.4	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.4	0.2
	% Trucks (Total)	14.3	7.5	10.0	0.0	10.1	3.9	1.8	22.5	0.0	4.4	4.8	1.8	0.0	0.0	2.6	0.0	2.8	8.8	0.0	4.1	4.9
	Peak Hour Factor (PHF)	0.78	0.77	0.83	0.00	0.87	0.89	0.94	0.56	0.00	0.91	0.83	0.67	0.00	0.00	0.75	0.00	0.93	0.79	0.00	0.89	0.95

Tuesday, March 10, 2020		From North (↓)					From East (←)					From South (↑)					From West (→)					
	MD Peak Hour	Seminole Hwy					Lacy Rd					Seminole Hwy					Lacy Rd					
	Start Time	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Totals
Midday (MD) Peak Hour	12:30 PM	4	9	19	0	32	26	18	1	0	45	0	11	1	0	12	0	31	8	0	39	128
	12:45 PM	14	16	21	0	51	21	20	0	0	41	1	15	1	0	17	0	16	9	0	25	134
	1:00 PM	5	9	17	0	31	19	22	0	0	41	3	13	2	0	18	1	25	8	0	34	124
	1:15 PM	7	10	15	0	32	24	23	1	0	48	1	9	0	0	10	0	22	5	0	27	117
	Peak Hour Volume	30	44	72	0	146	90	83	2	0	175	5	48	4	0	57	1	94	30	0	125	503
	Rounded Hourly Volume	30	45	70	0	145	90	85	0	0	175	5	50	5	0	60	0	95	30	0	125	505
	% Single Unit Trucks	13.3	9.1	2.8	0.0	6.8	1.1	7.2	0.0	0.0	4.0	20.0	0.0	0.0	0.0	1.8	0.0	6.4	6.7	0.0	6.4	5.2
	% Heavy Trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	% Trucks (Total)	13.3	9.1	2.8	0.0	6.8	1.1	7.2	0.0	0.0	4.0	20.0	0.0	0.0	0.0	1.8	0.0	6.4	6.7	0.0	6.4	5.2
	Peak Hour Factor (PHF)	0.54	0.69	0.86	0.00	0.72	0.87	0.90	0.50	0.00	0.91	0.42	0.80	0.50	0.00	0.79	0.25	0.76	0.83	0.00	0.80	0.94

Tuesday, March 10, 2020		From North (↓)					From East (←)					From South (↑)					From West (→)					
	PM Peak Hour	Seminole Hwy					Lacy Rd					Seminole Hwy					Lacy Rd					
	Start Time	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Totals
PM Peak Hour	4:30 PM	14	48	57	0	119	22	51	11	0	84	8	9	0	0	17	0	46	5	0	51	271
	4:45 PM	15	39	72	0	126	21	63	6	0	90	7	5	1	0	13	1	47	6	0	54	283
	5:00 PM	25	48	61	0	134	24	68	8	0	100	8	16	1	0	25	0	50	6	0	56	315
	5:15 PM	16	46	59	0	121	25	57	3	0	85	6	31	0	0	37	1	49	4	0	54	297
	Peak Hour Volume	70	181	249	0	500	92	239	28	0	359	29	61	2	0	92	2	192	21	0	215	1166
	Rounded Hourly Volume	70	180	250	0	500	90	240	30	0	360	30	60	0	0	90	0	190	20	0	210	1160
	% Single Unit Trucks	2.9	1.1	0.8	0.0	1.2	1.1	0.0	3.6	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8	0.0	0.5	0.8
	% Heavy Trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	% Trucks (Total)	2.9	1.1	0.8	0.0	1.2	1.1	0.0	3.6	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8	0.0	0.5	0.8
	Peak Hour Factor (PHF)	0.70	0.94	0.86	0.00	0.93	0.92	0.88	0.64	0.00	0.90	0.91	0.49	0.50	0.00	0.62	0.50	0.96	0.87	0.00	0.96	0.93

Peak Hour Pedestrian and Bicyclist Volumes

Pedestrians and Bicyclists		Crossing North Approach			Crossing East Approach			Crossing South Approach			Crossing West Approach			Total Ped & Bike
		Seminole Hwy			Lacy Rd			Seminole Hwy			Lacy Rd			
	15-Minute Start Time	Pedestrian	Bicyclist	Total	Pedestrian	Bicyclist	Total	Pedestrian	Bicyclist	Total	Pedestrian	Bicyclist	Total	Volume
AM	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total	0	0	0	0	0	0	0	0	0	0	0	0	0
MD	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 PM	0	0	0	0	0	0	0	1	1	0	0	0	1
	1:00 PM	0	0	0	0	0	0	0	0	0	0	1	1	1
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total	0	0	0	0	0	0	0	1	1	0	1	1	2
PM	4:30 PM	0	0	0	0	1	1	0	0	0	0	0	0	1
	4:45 PM	0	0	0	0	0	0	0	1	1	0	0	0	1
	5:00 PM	0	0	0	0	0	0	0	0	0	0	2	2	2
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total	0	0	0	0	1	1	0	1	1	0	2	2	4

Intersection Traffic Volume Report

Count Basics			Page 4 of 11
Start Date:	Tuesday, March 10, 2020	Weekday	Schools in Session
Total Number of Hours Counted: 14		Non-Holiday	No Special Events

Hourly Volume Summary - Motor Vehicle Data

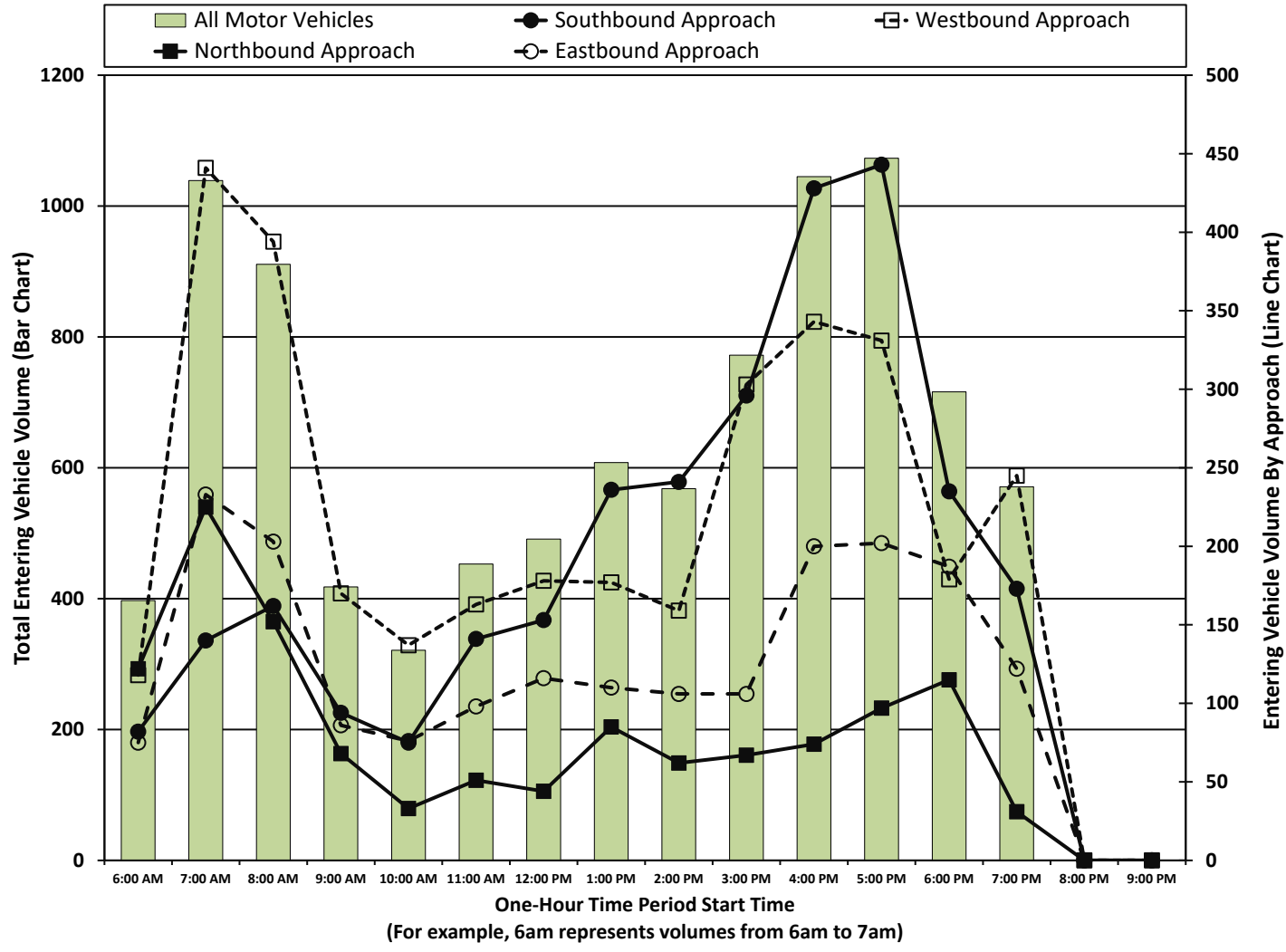
All Motor Vehicles

Seminole Hwy and Lacy Rd

One-Hour Motor Vehicle Data

One-Hour Time Period Start Time		From North (↓) Seminole Hwy					From East (←) Lacy Rd					From South (↑) Seminole Hwy					From West (→) Lacy Rd					Total Vehicle Volume	Directional Volume Totals	
		Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total		E/W	N/S
AM	6:00 AM	16	28	38	0	82	76	36	6	0	118	11	110	1	0	122	1	47	27	0	75	397	193	204
AM	7:00 AM	14	35	91	0	140	244	169	28	0	441	43	181	1	0	225	1	174	58	0	233	1039	674	365
AM	8:00 AM	25	38	99	0	162	195	169	30	0	394	38	113	1	0	152	0	163	40	0	203	911	597	314
AM	9:00 AM	14	32	48	0	94	86	73	11	0	170	7	59	2	0	68	2	67	17	0	86	418	256	162
MD	10:00 AM	8	19	48	0	75	55	77	5	0	137	5	27	1	0	33	0	56	20	0	76	321	213	108
MD	11:00 AM	34	46	61	0	141	56	99	8	0	163	11	40	0	0	51	2	74	22	0	98	453	261	192
MD	12:00 PM	32	50	71	0	153	75	97	6	0	178	3	39	2	0	44	0	85	31	0	116	491	294	197
MD	1:00 PM	22	129	85	0	236	93	80	4	0	177	6	75	4	0	85	1	87	22	0	110	608	287	321
PM	2:00 PM	34	99	108	0	241	76	71	12	0	159	20	42	0	0	62	2	84	20	0	106	568	265	303
PM	3:00 PM	24	119	153	0	296	108	152	43	0	303	31	34	2	0	67	3	92	11	0	106	772	409	363
PM	4:00 PM	42	172	214	0	428	95	223	25	0	343	32	37	5	0	74	2	167	31	0	200	1045	543	502
PM	5:00 PM	75	154	214	0	443	88	222	21	0	331	21	72	4	0	97	2	175	25	0	202	1073	533	540
PM	6:00 PM	33	60	142	0	235	66	105	8	0	179	73	41	1	0	115	3	159	25	0	187	716	366	350
PM	7:00 PM	23	68	82	0	173	94	97	54	0	245	5	24	2	0	31	0	100	22	0	122	571	367	204
PM	8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals		396	1049	1454	0	2899	1407	1670	261	0	3338	306	894	26	0	1226	19	1530	371	0	1920	9383	5258	4125

Graphical Summary of Hourly Volumes



Intersection Traffic Volume Report

Count Basics		*Page 5 of 11*
Start Date: Tuesday, March 10, 2020	Weekday	Schools in Session
Total Number of Hours Counted: 14	Non-Holiday	No Special Events

15-Minute Motor Vehicle Data

All Motor Vehicles

Seminole Hwy and Lacy Rd

15-Minute Motor Vehicle Data

	15-Minute Time Period	From North (↓) Seminole Hwy					From East (←) Lacy Rd					From South (↑) Seminole Hwy					From West (→) Lacy Rd					15-Min	Hourly	
	Start Time	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Totals	Sum	PHF
AM Peak Period	6:00 AM	6	16	15	0	37	12	4	2	0	18	0	13	0	0	13	0	5	4	0	9	77	397	0.70
	6:15 AM	1	4	9	0	14	12	9	1	0	22	1	26	1	0	28	0	9	5	0	14	78	474	0.77
	6:30 AM	4	6	6	0	16	19	8	1	0	28	4	34	0	0	38	0	14	4	0	18	100	637	0.66
	6:45 AM	5	2	8	0	15	33	15	2	0	50	6	37	0	0	43	1	19	14	0	34	142	861	0.66
	7:00 AM	1	10	13	0	24	22	21	7	0	50	5	40	0	0	45	1	25	9	0	35	154	1039	0.80
	7:15 AM	2	10	23	0	35	65	35	4	0	104	5	44	1	0	50	0	36	16	0	52	241	1188	0.92
	7:30 AM	3	9	36	0	48	77	58	13	0	148	19	34	0	0	53	0	57	18	0	75	324	1229	0.95
	7:45 AM	8	6	19	0	33	80	55	4	0	139	14	63	0	0	77	0	56	15	0	71	320	1075	0.84
	8:00 AM	9	12	33	0	54	65	57	5	0	127	18	41	0	0	59	0	52	11	0	63	303	911	0.75
	8:15 AM	8	13	32	0	53	62	47	18	0	127	12	31	0	0	43	0	46	13	0	59	282	735	0.65
	8:30 AM	5	5	14	0	24	41	29	3	0	73	4	21	1	0	26	0	37	10	0	47	170	563	0.83
	8:45 AM	3	8	20	0	31	27	36	4	0	67	4	20	0	0	24	0	28	6	0	34	156	490	0.79
	9:00 AM	8	8	18	0	34	22	19	6	0	47	2	22	0	0	24	1	14	7	0	22	127	418	0.82
	9:15 AM	3	12	11	0	26	26	15	4	0	45	2	14	1	0	17	1	16	5	0	22	110	371	0.84
	9:30 AM	1	5	11	0	17	20	20	0	0	40	1	14	0	0	15	0	23	2	0	25	97	352	0.91
	9:45 AM	2	7	8	0	17	18	19	1	0	38	2	9	1	0	12	0	14	3	0	17	84	318	0.87
Midday Peak Period	10:00 AM	2	5	10	0	17	12	21	4	0	37	1	10	0	0	11	0	9	6	0	15	80	321	0.88
	10:15 AM	0	7	18	0	25	13	17	1	0	31	2	9	0	0	11	0	18	6	0	24	91	352	0.79
	10:30 AM	2	2	7	0	11	14	15	0	0	29	1	1	1	0	3	0	14	6	0	20	63	366	0.82
	10:45 AM	4	5	13	0	22	16	24	0	0	40	1	7	0	0	8	0	15	2	0	17	87	421	0.89
	11:00 AM	7	14	19	0	40	17	21	1	0	39	1	11	0	0	12	1	15	4	0	20	111	453	0.95
	11:15 AM	9	9	10	0	28	16	16	1	0	33	1	13	0	0	14	1	20	9	0	30	105	457	0.96
	11:30 AM	12	10	19	0	41	11	29	4	0	44	3	6	0	0	9	0	19	5	0	24	118	466	0.98
	11:45 AM	6	13	13	0	32	12	33	2	0	47	6	10	0	0	16	0	20	4	0	24	119	476	0.93
	12:00 PM	7	9	14	0	30	15	37	2	0	54	1	7	0	0	8	0	15	8	0	23	115	491	0.92
	12:15 PM	7	16	17	0	40	13	22	3	0	38	1	6	0	0	7	0	23	6	0	29	114	500	0.93
	12:30 PM	4	9	19	0	32	26	18	1	0	45	0	11	1	0	12	0	31	8	0	39	128	503	0.94
	12:45 PM	14	16	21	0	51	21	20	0	0	41	1	15	1	0	17	0	16	9	0	25	134	542	0.81
	1:00 PM	5	9	17	0	31	19	22	0	0	41	3	13	2	0	18	1	25	8	0	34	124	608	0.76
	1:15 PM	7	10	15	0	32	24	23	1	0	48	1	9	0	0	10	0	22	5	0	27	117	655	0.82
	1:30 PM	5	38	17	0	60	28	18	2	0	48	2	34	0	0	36	0	20	3	0	23	167	647	0.81
	1:45 PM	5	72	36	0	113	22	17	1	0	40	0	19	2	0	21	0	20	6	0	26	200	597	0.75
PM Peak Period	2:00 PM	15	50	32	0	97	15	14	3	0	32	1	11	0	0	12	0	26	4	0	30	171	568	0.83
	2:15 PM	7	13	18	0	38	9	13	2	0	24	7	11	0	0	18	0	24	5	0	29	109	549	0.80
	2:30 PM	8	18	24	0	50	14	15	2	0	31	7	6	0	0	13	1	19	3	0	23	117	608	0.89
	2:45 PM	4	18	34	0	56	38	29	5	0	72	5	14	0	0	19	1	15	8	0	24	171	701	0.83
	3:00 PM	5	33	24	0	62	23	21	7	0	51	5	8	2	0	15	1	18	5	0	24	152	772	0.80
	3:15 PM	8	23	44	0	75	14	25	3	0	42	7	12	0	0	19	0	31	1	0	32	168	866	0.88
	3:30 PM	5	33	49	0	87	31	44	9	0	84	12	7	0	0	19	1	17	2	0	20	210	943	0.96
	3:45 PM	6	30	36	0	72	40	62	24	0	126	7	7	0	0	14	1	26	3	0	30	242	1004	0.93
	4:00 PM	7	49	45	0	101	20	54	4	0	78	3	10	2	0	15	1	35	16	0	52	246	1045	0.92
	4:15 PM	6	36	40	0	82	32	55	4	0	91	14	13	2	0	29	0	39	4	0	43	245	1114	0.88
	4:30 PM	14	48	57	0	119	22	51	11	0	84	8	9	0	0	17	0	46	5	0	51	271	1166	0.93
	4:45 PM	15	39	72	0	126	21	63	6	0	90	7	5	1	0	13	1	47	6	0	54	283	1150	0.91
	5:00 PM	25	48	61	0	134	24	68	8	0	100	8	16	1	0	25	0	50	6	0	56	315	1073	0.85
	5:15 PM	16	46	59	0	121	25	57	3	0	85	6	31	0	0	37	1	49	4	0	54	297	911	0.77
	5:30 PM	21	33	47	0	101	17	59	3	0	79	4	16	2	0	22	1	42	10	0	53	255	802	0.79
	5:45 PM	13	27	47	0	87	22	38	7	0	67	3	9	1	0	13	0	34	5	0	39	206	764	0.88
	6:00 PM	13	14	19	0	46	15	27	2	0	44	9	6	0	0	15	0	39	9	0	48	153	716	0.82
	6:15 PM	4	16	39	0	59	16	25	1	0	42	17	16	0	0	33	1	47	6	0	54	188	669	0.77
	6:30 PM	9	17	50	0	76	20	30	4	0	54	35	10	0	0	45	2	38	2	0	42	217	583	0.67
	6:45 PM	7	13	34	0	54	15	23	1	0	39	12	9	1	0	22	0	35	8	0	43	158	484	0.77
	7:00 PM	5	15	11	0	31	13	15	4	0	32	3	6	2	0	11	0	26	6	0	32	106	571	0.58
	7:15 PM	4	9	26	0	39	11	12	2	0	25	1	12	0	0	13	0	20	5	0	25	102		
	7:30 PM	7	27	23	0	57	12	8	1	0	21	1	2	0	0	3	0	30	7	0	37	118		
	7:45 PM	7	17	22	0	46	58	62	47	0	167	0	4	0	0	4	0	24	4	0	28	245		
	8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	8:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	8:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	8:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	9:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	9:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Totals		396	1049	1454	0	2899	1407	1670	261	0	3338	306	894	26	0	1226	19	1530	371	0	1920	9383		

Peak Hour All Vehicle Volume Summary

	Hourly Time Period	From North (↓) Seminole Hwy					From East (←) Lacy Rd					From South (↑) Seminole Hwy					From West (→) Lacy Rd					Total Hourly	
	Start Time	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Volume	PHF
AM	7:30 AM	28	40	120	0	188	284	217	40	0	541	63	169	0	0	232	0	211	57	0	268	1229	0.95
MD	12:30 PM	30	44	72	0	146	90	83	2	0	175	5	48	4	0	57	1	94	30	0	125	503	0.94
PM	4:30 PM	70	181	249	0	500	92	239	28	0	359	29	61	2	0	92	2	192	21	0	215	1166	0.93

Intersection Traffic Volume Report

Count Basics			*Page 6 of 11*
Start Date:	Tuesday, March 10, 2020	Weekday	Schools in Session
Total Number of Hours Counted: 14		Non-Holiday	No Special Events

15-Minute Automobile Data

Automobiles (Cars, Light Trucks, & Motorcycles)

Seminole Hwy and Lacy Rd

15-Minute Automobile Data

15-Minute Time Period		From North (↓) Seminole Hwy					From East (←) Lacy Rd					From South (↑) Seminole Hwy					From West (→) Lacy Rd					15-Min	Hourly
	Start Time	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Totals	Sum
AM Peak Period	6:00 AM	5	16	15	0	36	11	3	2	0	16	0	13	0	0	13	0	5	3	0	8	73	383
	6:15 AM	1	4	9	0	14	12	9	1	0	22	1	26	1	0	28	0	9	5	0	14	78	456
	6:30 AM	4	6	6	0	16	19	8	1	0	28	3	33	0	0	36	0	14	3	0	17	97	610
	6:45 AM	3	2	8	0	13	33	12	2	0	47	4	37	0	0	41	1	19	14	0	34	135	827
	7:00 AM	1	10	11	0	22	20	19	7	0	46	5	39	0	0	44	1	24	9	0	34	146	999
	7:15 AM	1	10	19	0	30	63	35	4	0	102	5	44	1	0	50	0	35	15	0	50	232	1136
	7:30 AM	3	9	33	0	45	73	57	13	0	143	19	34	0	0	53	0	56	17	0	73	314	1169
	7:45 AM	7	4	17	0	28	79	53	4	0	136	14	61	0	0	75	0	56	12	0	68	307	1018
	8:00 AM	7	11	27	0	45	60	57	4	0	121	16	41	0	0	57	0	49	11	0	60	283	856
	8:15 AM	7	13	31	0	51	61	46	10	0	117	11	30	0	0	41	0	44	12	0	56	265	693
	8:30 AM	4	5	13	0	22	39	29	3	0	71	4	21	1	0	26	0	35	9	0	44	163	526
	8:45 AM	3	8	19	0	30	27	31	3	0	61	3	19	0	0	22	0	28	4	0	32	145	452
	9:00 AM	7	8	17	0	32	22	16	6	0	44	2	21	0	0	23	1	13	7	0	21	120	383
	9:15 AM	3	10	10	0	23	22	13	4	0	39	2	14	1	0	17	1	14	4	0	19	98	336
	9:30 AM	1	4	10	0	15	16	19	0	0	35	1	14	0	0	15	0	22	2	0	24	89	323
	9:45 AM	1	6	7	0	14	14	19	1	0	34	2	9	1	0	12	0	13	3	0	16	76	294
Midday Peak Period	10:00 AM	2	5	6	0	13	12	19	4	0	35	1	10	0	0	11	0	8	6	0	14	73	302
	10:15 AM	0	6	17	0	23	11	17	1	0	29	2	8	0	0	10	0	17	6	0	23	85	328
	10:30 AM	2	2	6	0	10	14	14	0	0	28	1	1	0	0	2	0	14	6	0	20	60	344
	10:45 AM	4	5	13	0	22	16	22	0	0	38	1	7	0	0	8	0	14	2	0	16	84	398
	11:00 AM	5	14	15	0	34	16	21	1	0	38	1	10	0	0	11	0	13	3	0	16	99	430
	11:15 AM	8	9	9	0	26	16	15	1	0	32	1	13	0	0	14	1	20	8	0	29	101	442
	11:30 AM	12	10	19	0	41	10	28	4	0	42	2	6	0	0	8	0	19	4	0	23	114	452
	11:45 AM	6	12	13	0	31	12	32	1	0	45	6	10	0	0	16	0	20	4	0	24	116	460
	12:00 PM	6	9	14	0	29	15	34	2	0	51	1	7	0	0	8	0	15	8	0	23	111	466
	12:15 PM	7	16	17	0	40	12	22	3	0	37	1	6	0	0	7	0	22	5	0	27	111	474
	12:30 PM	3	9	19	0	31	26	16	1	0	43	0	11	1	0	12	0	28	8	0	36	122	477
	12:45 PM	11	14	21	0	46	20	18	0	0	38	0	15	1	0	16	0	15	7	0	22	122	519
	1:00 PM	5	9	15	0	29	19	21	0	0	40	3	13	2	0	18	1	23	8	0	32	119	590
	1:15 PM	7	8	15	0	30	24	22	1	0	47	1	9	0	0	10	0	22	5	0	27	114	636
	1:30 PM	5	38	17	0	60	28	18	2	0	48	2	33	0	0	35	0	19	2	0	21	164	627
	1:45 PM	4	72	35	0	111	22	16	1	0	39	0	19	2	0	21	0	18	4	0	22	193	574
PM Peak Period	2:00 PM	14	50	31	0	95	14	13	3	0	30	1	11	0	0	12	0	24	4	0	28	165	540
	2:15 PM	7	13	18	0	38	9	12	2	0	23	4	11	0	0	15	0	24	5	0	29	105	521
	2:30 PM	7	18	23	0	48	14	15	1	0	30	4	6	0	0	10	1	19	3	0	23	111	570
	2:45 PM	4	18	33	0	55	32	27	5	0	64	5	12	0	0	17	1	15	7	0	23	159	665
	3:00 PM	5	33	23	0	61	23	20	7	0	50	5	8	1	0	14	0	18	3	0	21	146	733
	3:15 PM	8	23	38	0	69	13	25	3	0	41	5	8	0	0	13	0	30	1	0	31	154	826
	3:30 PM	5	31	48	0	84	31	44	9	0	84	12	7	0	0	19	1	16	2	0	19	206	912
	3:45 PM	6	29	35	0	70	35	58	22	0	115	6	7	0	0	13	1	25	3	0	29	227	972
	4:00 PM	6	49	45	0	100	18	53	4	0	75	3	10	2	0	15	1	33	15	0	49	239	1028
	4:15 PM	6	34	38	0	78	32	55	3	0	90	14	13	2	0	29	0	39	4	0	43	240	1102
	4:30 PM	13	47	56	0	116	21	51	11	0	83	8	9	0	0	17	0	46	4	0	50	266	1157
	4:45 PM	15	39	72	0	126	21	63	6	0	90	7	5	1	0	13	1	47	6	0	54	283	1143
	5:00 PM	24	48	61	0	133	24	68	7	0	99	8	16	1	0	25	0	50	6	0	56	313	1065
	5:15 PM	16	45	58	0	119	25	57	3	0	85	6	31	0	0	37	1	49	4	0	54	295	905
	5:30 PM	21	33	47	0	101	17	57	3	0	77	4	16	2	0	22	1	41	10	0	52	252	797
	5:45 PM	13	27	47	0	87	22	38	6	0	66	3	9	1	0	13	0	34	5	0	39	205	760
	6:00 PM	13	14	19	0	46	15	27	2	0	44	9	6	0	0	15	0	39	9	0	48	153	713
	6:15 PM	4	16	39	0	59	15	25	1	0	41	17	16	0	0	33	1	47	6	0	54	187	666
	6:30 PM	9	17	50	0	76	20	29	4	0	53	34	10	0	0	44	2	38	2	0	42	215	581
	6:45 PM	7	13	34	0	54	15	23	1	0	39	12	9	1	0	22	0	35	8	0	43	158	484
	7:00 PM	5	15	11	0	31	13	15	4	0	32	3	6	2	0	11	0	26	6	0	32	106	570
	7:15 PM	4	9	26	0	39	11	12	2	0	25	1	12	0	0	13	0	20	5	0	25	102	
	7:30 PM	7	27	23	0	57	12	8	1	0	21	1	2	0	0	3	0	30	7	0	37	118	
	7:45 PM	7	17	21	0	45	58	62	47	0	167	0	4	0	0	4	0	24	4	0	28	244	
	8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Totals		371	1029	1399	0	2799	1354	1618	244	0	3216	287	878	24	0	1189	17	1492	345	0	1854	9058	

Peak Hour Automobile Volume Summary

Hourly Time Period		From North (↓) Seminole Hwy					From East (←) Lacy Rd					From South (↑) Seminole Hwy					From West (→) Lacy Rd					Total Hourly
	Start Time	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Volume
AM	7:30 AM	24	37	108	0	169	273	213	31	0	517	60	166	0	0	226	0	205	52	0	257	1169
MD	12:30 PM	26	40	70	0	136	89	77	2	0	168	4	48	4	0	56	1	88	28	0	117	477
PM	4:30 PM	68	179	247	0	494	91	239	27	0	357	29	61	2	0	92	2	192	20	0	214	1157

Intersection Traffic Volume Report

Count Basics			*Page 7 of 11*
Start Date:	Tuesday, March 10, 2020	Weekday	Schools in Session
Total Number of Hours Counted: 14		Non-Holiday	No Special Events

15-Minute Single Unit (SU) Truck & Bus Data

Single Unit (SU) Trucks & Buses

Seminole Hwy and Lacy Rd

15-Minute Single Unit (SU) Truck & Bus Data

	15-Minute Time Period Start Time	From North (↓) Seminole Hwy					From East (←) Lacy Rd					From South (↑) Seminole Hwy					From West (→) Lacy Rd					15-Min Totals	Hourly Sum
		Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total		
AM Peak Period	6:00 AM	1	0	0	0	1	1	1	0	0	2	0	0	0	0	0	0	0	1	0	1	4	14
	6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18
	6:30 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	0	0	1	0	1	3	27
	6:45 AM	2	0	0	0	2	0	3	0	0	3	2	0	0	0	2	0	0	0	0	0	7	33
	7:00 AM	0	0	2	0	2	2	2	0	0	4	0	1	0	0	1	0	1	0	0	1	8	39
	7:15 AM	1	0	4	0	5	2	0	0	0	2	0	0	0	0	0	0	1	1	0	2	9	51
	7:30 AM	0	0	2	0	2	4	1	0	0	5	0	0	0	0	0	0	1	1	0	2	9	57
	7:45 AM	1	2	2	0	5	1	2	0	0	3	0	2	0	0	2	0	0	3	0	3	13	55
	8:00 AM	2	1	6	0	9	5	0	1	0	6	2	0	0	0	2	0	3	0	0	3	20	53
	8:15 AM	1	0	1	0	2	0	1	8	0	9	1	1	0	0	2	0	1	1	0	2	15	40
	8:30 AM	1	0	1	0	2	2	0	0	0	2	0	0	0	0	0	0	2	1	0	3	7	36
	8:45 AM	0	0	1	0	1	0	5	1	0	6	1	1	0	0	2	0	0	2	0	2	11	37
	9:00 AM	1	0	1	0	2	0	3	0	0	3	0	1	0	0	1	0	1	0	0	1	7	34
	9:15 AM	0	2	1	0	3	4	1	0	0	5	0	0	0	0	0	0	2	1	0	3	11	34
	9:30 AM	0	1	1	0	2	4	1	0	0	5	0	0	0	0	0	0	1	0	0	1	8	29
	9:45 AM	1	1	1	0	3	4	0	0	0	4	0	0	0	0	0	0	1	0	0	1	8	24
Midday Peak Period	10:00 AM	0	0	4	0	4	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	7	19
	10:15 AM	0	1	1	0	2	2	0	0	0	2	0	1	0	0	1	0	1	0	0	1	6	23
	10:30 AM	0	0	1	0	1	0	1	0	0	1	0	0	1	0	1	0	0	0	0	0	3	21
	10:45 AM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	3	22
	11:00 AM	2	0	3	0	5	1	0	0	0	1	0	1	0	0	1	1	2	1	0	4	11	22
	11:15 AM	1	0	1	0	2	0	1	0	0	1	0	0	0	0	0	0	0	1	0	1	4	15
	11:30 AM	0	0	0	0	0	1	1	0	0	2	1	0	0	0	1	0	0	1	0	1	4	14
	11:45 AM	0	1	0	0	1	0	1	1	0	2	0	0	0	0	0	0	0	0	0	0	3	16
	12:00 PM	1	0	0	0	1	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	4	25
	12:15 PM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	1	1	0	2	3	26
	12:30 PM	1	0	0	0	1	0	2	0	0	2	0	0	0	0	0	0	3	0	0	3	6	26
	12:45 PM	3	2	0	0	5	1	2	0	0	3	1	0	0	0	1	0	1	2	0	3	12	23
	1:00 PM	0	0	2	0	2	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	5	18
	1:15 PM	0	2	0	0	2	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	3	19
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1	1	0	2	3	20
	1:45 PM	1	0	1	0	2	0	1	0	0	1	0	0	0	0	0	0	2	2	0	4	7	23
PM Peak Period	2:00 PM	1	0	1	0	2	1	1	0	0	2	0	0	0	0	0	0	2	0	0	2	6	28
	2:15 PM	0	0	0	0	0	0	1	0	0	1	3	0	0	0	3	0	0	0	0	0	4	28
	2:30 PM	1	0	1	0	2	0	0	1	0	1	3	0	0	0	3	0	0	0	0	0	6	37
	2:45 PM	0	0	1	0	1	6	2	0	0	8	0	2	0	0	2	0	0	1	0	1	12	33
	3:00 PM	0	0	1	0	1	0	1	0	0	1	0	0	1	0	1	1	0	2	0	3	6	36
	3:15 PM	0	0	5	0	5	1	0	0	0	1	2	4	0	0	6	0	1	0	0	1	13	36
	3:30 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2	27
	3:45 PM	0	1	1	0	2	5	4	2	0	11	1	0	0	0	1	0	1	0	0	1	15	30
	4:00 PM	1	0	0	0	1	1	1	0	0	2	0	0	0	0	0	0	2	1	0	3	6	15
	4:15 PM	0	2	1	0	3	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	4	11
	4:30 PM	1	1	1	0	3	1	0	0	0	1	0	0	0	0	0	0	0	1	0	1	5	9
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
	5:00 PM	1	0	0	0	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	2	8
	5:15 PM	0	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	6
	5:30 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	3	5
	5:45 PM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	4
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
	6:15 PM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	3
	6:30 PM	0	0	0	0	0	0	1	0	0	1	1	0	0	0	1	0	0	0	0	0	2	2
	6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	7:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:45 PM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
	8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Totals		25	19	50	0	94	51	51	17	0	119	19	16	2	0	37	2	37	26	0	65	315	

Peak Hour Single Unit (SU) Truck & Buses Volume Summary

	Hourly Time Period Start Time	From North (↓) Seminole Hwy					From East (←) Lacy Rd					From South (↑) Seminole Hwy					From West (→) Lacy Rd					Total Hourly Volume
		Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	
AM	7:30 AM	4	3	11	0	18	10	4	9	0	23	3	3	0	0	6	0	5	5	0	10	57
MD	12:30 PM	4	4	2	0	10	1	6	0	0	7	1	0	0	0	1	0	6	2	0	8	26
PM	4:30 PM	2	2	2	0	6	1	0	1	0	2	0	0	0	0	0	0	0	1	0	1	9

Intersection Traffic Volume Report

Count Basics			*Page 8 of 11*
Start Date:	Tuesday, March 10, 2020	Weekday	Schools in Session
Total Number of Hours Counted: 14		Non-Holiday	No Special Events

15-Minute Semi-Truck Data

Semi-Trucks

Seminole Hwy and Lacy Rd

15-Minute Semi-Truck Data

15-Minute Time Period		↓ From North					← From East					↑ From South					→ From West					15-Min	Hourly
		Seminole Hwy					Lacy Rd					Seminole Hwy					Lacy Rd					Totals	Sum
Start Time		Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total		
AM Peak Period	6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	7:30 AM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
	8:15 AM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	1	0	0	1	2	2
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	9:15 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	1
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Midday Peak Period	10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	11:00 AM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM Peak Period	2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
	3:15 PM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4
	3:30 PM	0	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	4
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
	4:00 PM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	2
	4:15 PM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Totals		0	1	5	0	6	2	1	0	0	3	0	0	0	0	0	0	1	0	0	1	10	

Peak Hour Semi-Truck Volume Summary

Hourly Time Period		↓ From North					← From East					↑ From South					→ From West					Total Hourly
		Seminole Hwy					Lacy Rd					Seminole Hwy					Lacy Rd					
Start Time		Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Volume
AM	7:30 AM	0	0	1	0	1	1	0	0	0	1	0	0	0	0	0	0	1	0	0	1	3
MD	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	4:30 PM	0	0	1	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2

Intersection Traffic Volume Report

Count Basics			*Page 9 of 11*
Start Date:	Tuesday, March 10, 2020	Weekday	Schools in Session
Total Number of Hours Counted: 14		Non-Holiday	No Special Events

15-Minute Heavy Vehicle Data

Seminole Hwy and Lacy Rd

15-Minute Heavy Vehicle Data

15-Minute Time Period	Start Time	From North (↓) Seminole Hwy					From East (←) Lacy Rd					From South (↑) Seminole Hwy					From West (→) Lacy Rd					15-Min Totals	Hourly Sum
		Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total		
AM Peak Period	6:00 AM	1	0	0	0	1	1	1	0	0	2	0	0	0	0	0	0	0	1	0	1	4	14
	6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18
	6:30 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	0	0	1	0	1	3	27
	6:45 AM	2	0	0	0	2	0	3	0	0	3	2	0	0	0	2	0	0	0	0	0	7	34
	7:00 AM	0	0	2	0	2	2	2	0	0	4	0	1	0	0	1	0	1	0	0	1	8	40
	7:15 AM	1	0	4	0	5	2	0	0	0	2	0	0	0	0	0	0	1	1	0	2	9	52
	7:30 AM	0	0	3	0	3	4	1	0	0	5	0	0	0	0	0	0	1	1	0	2	10	60
	7:45 AM	1	2	2	0	5	1	2	0	0	3	0	2	0	0	2	0	0	3	0	3	13	57
	8:00 AM	2	1	6	0	9	5	0	1	0	6	2	0	0	0	2	0	3	0	0	3	20	55
	8:15 AM	1	0	1	0	2	1	1	8	0	10	1	1	0	0	2	0	2	1	0	3	17	42
	8:30 AM	1	0	1	0	2	2	0	0	0	2	0	0	0	0	0	0	2	1	0	3	7	37
	8:45 AM	0	0	1	0	1	0	5	1	0	6	1	1	0	0	2	0	0	2	0	2	11	38
	9:00 AM	1	0	1	0	2	0	3	0	0	3	0	1	0	0	1	0	1	0	0	1	7	35
	9:15 AM	0	2	1	0	3	4	2	0	0	6	0	0	0	0	0	0	2	1	0	3	12	35
	9:30 AM	0	1	1	0	2	4	1	0	0	5	0	0	0	0	0	0	1	0	0	1	8	29
	9:45 AM	1	1	1	0	3	4	0	0	0	4	0	0	0	0	0	0	1	0	0	1	8	24
Midday Peak Period	10:00 AM	0	0	4	0	4	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	7	19
	10:15 AM	0	1	1	0	2	2	0	0	0	2	0	1	0	0	1	0	1	0	0	1	6	24
	10:30 AM	0	0	1	0	1	0	1	0	0	1	0	0	1	0	1	0	0	0	0	0	3	22
	10:45 AM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	3	23
	11:00 AM	2	0	4	0	6	1	0	0	0	1	0	1	0	0	1	1	2	1	0	4	12	23
	11:15 AM	1	0	1	0	2	0	1	0	0	1	0	0	0	0	0	0	0	1	0	1	4	15
	11:30 AM	0	0	0	0	0	1	1	0	0	2	1	0	0	0	1	0	0	1	0	1	4	14
	11:45 AM	0	1	0	0	1	0	1	1	0	2	0	0	0	0	0	0	0	0	0	0	3	16
	12:00 PM	1	0	0	0	1	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	4	25
	12:15 PM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	1	1	0	2	3	26
	12:30 PM	1	0	0	0	1	0	2	0	0	2	0	0	0	0	0	0	3	0	0	3	6	26
	12:45 PM	3	2	0	0	5	1	2	0	0	3	1	0	0	0	1	0	1	2	0	3	12	23
	1:00 PM	0	0	2	0	2	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	5	18
	1:15 PM	0	2	0	0	2	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	3	19
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1	1	0	2	3	20
	1:45 PM	1	0	1	0	2	0	1	0	0	1	0	0	0	0	0	0	2	2	0	4	7	23
PM Peak Period	2:00 PM	1	0	1	0	2	1	1	0	0	2	0	0	0	0	0	0	2	0	0	2	6	28
	2:15 PM	0	0	0	0	0	0	1	0	0	1	3	0	0	0	3	0	0	0	0	0	4	28
	2:30 PM	1	0	1	0	2	0	0	1	0	1	3	0	0	0	3	0	0	0	0	0	6	38
	2:45 PM	0	0	1	0	1	6	2	0	0	8	0	2	0	0	2	0	0	1	0	1	12	36
	3:00 PM	0	0	1	0	1	0	1	0	0	1	0	0	1	0	1	1	0	2	0	3	6	39
	3:15 PM	0	0	6	0	6	1	0	0	0	1	2	4	0	0	6	0	1	0	0	1	14	40
	3:30 PM	0	2	1	0	3	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	4	31
	3:45 PM	0	1	1	0	2	5	4	2	0	11	1	0	0	0	1	0	1	0	0	1	15	32
	4:00 PM	1	0	0	0	1	2	1	0	0	3	0	0	0	0	0	0	2	1	0	3	7	17
	4:15 PM	0	2	2	0	4	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	5	12
	4:30 PM	1	1	1	0	3	1	0	0	0	1	0	0	0	0	0	0	0	1	0	1	5	9
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
	5:00 PM	1	0	0	0	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	2	8
	5:15 PM	0	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	6
	5:30 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	3	5
	5:45 PM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	4
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
	6:15 PM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	3
	6:30 PM	0	0	0	0	0	0	1	0	0	1	1	0	0	0	1	0	0	0	0	0	2	2
	6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	7:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:45 PM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
	8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Totals		25	20	55	0	100	53	52	17	0	122	19	16	2	0	37	2	38	26	0	66	325	

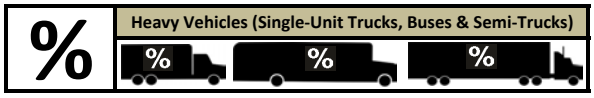
Peak Hour Heavy Vehicle Volume Summary

Hourly Time Period	Start Time	From North (↓) Seminole Hwy					From East (←) Lacy Rd					From South (↑) Seminole Hwy					From West (→) Lacy Rd					Total Hourly Volume
		Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	
AM	7:30 AM	4	3	12	0	19	11	4	9	0	24	3	3	0	0	6	0	6	5	0	11	60
MD	12:30 PM	4	4	2	0	10	1	6	0	0	7	1	0	0	0	1	0	6	2	0	8	26
PM	4:30 PM	2	2	2	0	6	1	0	1	0	2	0	0	0	0	0	0	0	1	0	1	9

Intersection Traffic Volume Report

Count Basics			*Page 10 of 11*
Start Date:	Tuesday, March 10, 2020	Weekday	Schools in Session
Total Number of Hours Counted: 14		Non-Holiday	No Special Events

15-Minute Heavy Vehicle Percentages



Seminole Hwy and Lacy Rd

15-Minute Heavy Vehicle Percentages

15-Minute Time Period		From North (↓) Seminole Hwy					From East (←) Lacy Rd					From South (↑) Seminole Hwy					From West (→) Lacy Rd					Total Heavy Vehicle	Hourly Heavy Vehicle
Start Time		Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Percent	Percent
AM Peak Period	6:00 AM	16.7	0.0	0.0	0.0	2.7	8.3	25.0	0.0	0.0	11.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	0.0	11.1	5.2	3.5
	6:15 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8
	6:30 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	2.9	0.0	0.0	5.3	0.0	0.0	25.0	0.0	5.6	3.0	4.2
	6:45 AM	40.0	0.0	0.0	0.0	13.3	0.0	20.0	0.0	0.0	6.0	33.3	0.0	0.0	0.0	4.7	0.0	0.0	0.0	0.0	0.0	4.9	3.9
	7:00 AM	0.0	0.0	15.4	0.0	8.3	9.1	9.5	0.0	0.0	8.0	0.0	2.5	0.0	0.0	2.2	0.0	4.0	0.0	0.0	2.9	5.2	3.8
	7:15 AM	50.0	0.0	17.4	0.0	14.3	3.1	0.0	0.0	0.0	1.9	0.0	0.0	0.0	0.0	0.0	0.0	2.8	6.2	0.0	3.8	3.7	4.4
	7:30 AM	0.0	0.0	8.3	0.0	6.2	5.2	1.7	0.0	0.0	3.4	0.0	0.0	0.0	0.0	0.0	0.0	1.8	5.6	0.0	2.7	3.1	4.9
	7:45 AM	12.5	33.3	10.5	0.0	15.2	1.2	3.6	0.0	0.0	2.2	0.0	3.2	0.0	0.0	2.6	0.0	0.0	20.0	0.0	4.2	4.1	5.3
	8:00 AM	22.2	8.3	18.2	0.0	16.7	7.7	0.0	20.0	0.0	4.7	11.1	0.0	0.0	0.0	3.4	0.0	5.8	0.0	0.0	4.8	6.6	6.0
	8:15 AM	12.5	0.0	3.1	0.0	3.8	1.6	2.1	44.4	0.0	7.9	8.3	3.2	0.0	0.0	4.7	0.0	4.3	7.7	0.0	5.1	6.0	5.7
	8:30 AM	20.0	0.0	7.1	0.0	8.3	4.9	0.0	0.0	0.0	2.7	0.0	0.0	0.0	0.0	0.0	0.0	5.4	10.0	0.0	6.4	4.1	6.6
	8:45 AM	0.0	0.0	5.0	0.0	3.2	0.0	13.9	25.0	0.0	9.0	25.0	5.0	0.0	0.0	8.3	0.0	0.0	33.3	0.0	5.9	7.1	7.8
	9:00 AM	12.5	0.0	5.6	0.0	5.9	0.0	15.8	0.0	0.0	6.4	0.0	4.5	0.0	0.0	4.2	0.0	7.1	0.0	0.0	4.5	5.5	8.4
	9:15 AM	0.0	16.7	9.1	0.0	11.5	15.4	13.3	0.0	0.0	13.3	0.0	0.0	0.0	0.0	0.0	0.0	12.5	20.0	0.0	13.6	10.9	9.4
	9:30 AM	0.0	20.0	9.1	0.0	11.8	20.0	5.0	0.0	0.0	12.5	0.0	0.0	0.0	0.0	0.0	0.0	4.3	0.0	0.0	4.0	8.2	8.2
	9:45 AM	50.0	14.3	12.5	0.0	17.6	22.2	0.0	0.0	0.0	10.5	0.0	0.0	0.0	0.0	0.0	0.0	7.1	0.0	0.0	5.9	9.5	7.5
Midday Peak Period	10:00 AM	0.0	0.0	40.0	0.0	23.5	0.0	9.5	0.0	0.0	5.4	0.0	0.0	0.0	0.0	0.0	0.0	11.1	0.0	0.0	6.7	8.7	5.9
	10:15 AM	0.0	14.3	5.6	0.0	8.0	15.4	0.0	0.0	0.0	6.5	0.0	11.1	0.0	0.0	9.1	0.0	5.6	0.0	0.0	4.2	6.6	6.8
	10:30 AM	0.0	0.0	14.3	0.0	9.1	0.0	6.7	0.0	0.0	3.4	0.0	0.0	100.0	0.0	33.3	0.0	0.0	0.0	0.0	0.0	4.8	6.0
	10:45 AM	0.0	0.0	0.0	0.0	0.0	0.0	8.3	0.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	6.7	0.0	0.0	5.9	3.4	5.5
	11:00 AM	28.6	0.0	21.1	0.0	15.0	5.9	0.0	0.0	0.0	2.6	0.0	9.1	0.0	0.0	8.3	100.0	13.3	25.0	0.0	20.0	10.8	5.1
	11:15 AM	11.1	0.0	10.0	0.0	7.1	0.0	6.2	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.1	0.0	3.3	3.8	3.3
	11:30 AM	0.0	0.0	0.0	0.0	0.0	9.1	3.4	0.0	0.0	4.5	33.3	0.0	0.0	0.0	11.1	0.0	0.0	20.0	0.0	4.2	3.4	3.0
	11:45 AM	0.0	7.7	0.0	0.0	3.1	0.0	3.0	50.0	0.0	4.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	3.4
	12:00 PM	14.3	0.0	0.0	0.0	3.3	0.0	8.1	0.0	0.0	5.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5	5.1
	12:15 PM	0.0	0.0	0.0	0.0	0.0	7.7	0.0	0.0	0.0	2.6	0.0	0.0	0.0	0.0	0.0	0.0	4.3	16.7	0.0	6.9	2.6	5.2
	12:30 PM	25.0	0.0	0.0	0.0	3.1	0.0	11.1	0.0	0.0	4.4	0.0	0.0	0.0	0.0	0.0	0.0	9.7	0.0	0.0	7.7	4.7	5.2
	12:45 PM	21.4	12.5	0.0	0.0	9.8	4.8	10.0	0.0	0.0	7.3	100.0	0.0	0.0	0.0	5.9	0.0	6.2	22.2	0.0	12.0	9.0	4.2
	1:00 PM	0.0	0.0	11.8	0.0	6.5	0.0	4.5	0.0	0.0	2.4	0.0	0.0	0.0	0.0	0.0	0.0	8.0	0.0	0.0	5.9	4.0	3.0
	1:15 PM	0.0	20.0	0.0	0.0	6.2	0.0	4.3	0.0	0.0	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	2.9
	1:30 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9	0.0	0.0	2.8	0.0	5.0	33.3	0.0	8.7	1.8	3.1
	1:45 PM	20.0	0.0	2.8	0.0	1.8	0.0	5.9	0.0	0.0	2.5	0.0	0.0	0.0	0.0	0.0	0.0	10.0	33.3	0.0	15.4	3.5	3.9
PM Peak Period	2:00 PM	6.7	0.0	3.1	0.0	2.1	6.7	7.1	0.0	0.0	6.2	0.0	0.0	0.0	0.0	0.0	0.0	7.7	0.0	0.0	6.7	3.5	4.9
	2:15 PM	0.0	0.0	0.0	0.0	0.0	0.0	7.7	0.0	0.0	4.2	42.9	0.0	0.0	0.0	16.7	0.0	0.0	0.0	0.0	0.0	3.7	5.1
	2:30 PM	12.5	0.0	4.2	0.0	4.0	0.0	0.0	50.0	0.0	3.2	42.9	0.0	0.0	0.0	23.1	0.0	0.0	0.0	0.0	0.0	5.1	6.2
	2:45 PM	0.0	0.0	2.9	0.0	1.8	15.8	6.9	0.0	0.0	11.1	0.0	14.3	0.0	0.0	10.5	0.0	0.0	12.5	0.0	4.2	7.0	5.1
	3:00 PM	0.0	0.0	4.2	0.0	1.6	0.0	4.8	0.0	0.0	2.0	0.0	0.0	50.0	0.0	6.7	100.0	0.0	40.0	0.0	12.5	3.9	5.1
	3:15 PM	0.0	0.0	13.6	0.0	8.0	7.1	0.0	0.0	0.0	2.4	28.6	33.3	0.0	0.0	31.6	0.0	3.2	0.0	0.0	3.1	8.3	4.6
	3:30 PM	0.0	6.1	2.0	0.0	3.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.9	0.0	0.0	5.0	1.9	3.3
	3:45 PM	0.0	3.3	2.8	0.0	2.8	12.5	6.5	8.3	0.0	8.7	14.3	0.0	0.0	0.0	7.1	0.0	3.8	0.0	0.0	3.3	6.2	3.2
	4:00 PM	14.3	0.0	0.0	0.0	1.0	10.0	1.9	0.0	0.0	3.8	0.0	0.0	0.0	0.0	0.0	0.0	5.7	6.2	0.0	5.8	2.8	1.6
	4:15 PM	0.0	5.6	5.0	0.0	4.9	0.0	0.0	25.0	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	1.1
	4:30 PM	7.1	2.1	1.8	0.0	2.5	4.5	0.0	0.0	0.0	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.0	0.0	2.0	1.8	0.8
	4:45 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6
	5:00 PM	4.0	0.0	0.0	0.0	0.7	0.0	0.0	12.5	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.7
	5:15 PM	0.0	2.2	1.7	0.0	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.7
	5:30 PM	0.0	0.0	0.0	0.0	0.0	0.0	3.4	0.0	0.0	2.5	0.0	0.0	0.0	0.0	0.0	0.0	2.4	0.0	0.0	1.9	1.2	0.6
	5:45 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.3	0.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5
	6:00 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4
	6:15 PM	0.0	0.0	0.0	0.0	0.0	6.2	0.0	0.0	0.0	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.4
	6:30 PM	0.0	0.0	0.0	0.0	0.0	0.0	3.3	0.0	0.0	1.9	2.9	0.0	0.0	0.0	2.2	0.0	0.0	0.0	0.0	0.0	0.9	0.3
	6:45 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	7:00 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
	7:15 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	7:30 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	7:45 PM	0.0	0.0	4.5	0.0	2.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	
	8:00 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	8:15 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	8:30 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	8:45 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	9:00 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	9:15 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	9:30 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	9:45 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Totals		6.3	1.9	3.8	0.0	3.4	3.8	3.1	6.5	0.0	3.7	6.2	1.8	7.7	0.0	3.0	10.5	2.5	7.0	0.0	3.4	3.5	

Peak Hour Heavy Vehicle Percentages Summary

Hourly Time Period		From North (↓) Seminole Hwy					From East (←) Lacy Rd					From South (↑) Seminole Hwy					From West (→) Lacy Rd					Hourly Heavy Vehicle
Start Time		Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Percent
AM	7:30 AM	14.3	7.5	10.0	0.0	10.1	3.9	1.8	22.5	0.0	4.4	4.8	1.8	0.0	0.0	2.6	0.0	2.8	8.8	0.0	4.1	4.9
MD	12:30 PM	13.3	9.1	2.8	0.0	6.8	1.1	7.2	0.0	0.0	4.0	20.0	0.0	0.0	0.0	1.8	0.0	6.4	6.7	0.0	6.4	5.2
PM	4:30 PM	2.9	1.1	0.8	0.0	1.2	1.1	0.0	3.6	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8	0.0	0.5	0.8

Intersection Traffic Volume Report

Count Basics			*Page 11 of 11*
Start Date:	Tuesday, March 10, 2020	Weekday	Schools in Session
Total Number of Hours Counted: 14		Non-Holiday	No Special Events

15-Minute Pedestrian and Bicyclist Data

Pedestrians and Bicyclists

Seminole Hwy and Lacy Rd

15-Minute Pedestrian and Bicyclist Data

	15-Minute Time Period	Crossing North Approach			Crossing East Approach			Crossing South Approach			Crossing West Approach			15-Min	Hourly
		Seminole Hwy			Lacy Rd			Seminole Hwy			Lacy Rd				
	Start Time	Pedestrian	Bicyclist	Total	Pedestrian	Bicyclist	Total	Pedestrian	Bicyclist	Total	Pedestrian	Bicyclist	Total	Totals	Sum
AM Peak Period	6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	9:00 AM	1	0	1	0	0	0	0	0	0	0	0	0	1	1
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Midday Peak Period	10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	10:30 AM	0	0	0	0	0	0	0	0	0	0	1	1	1	1
	10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2
	12:45 PM	0	0	0	0	0	0	0	1	1	0	0	0	1	2
	1:00 PM	0	0	0	0	0	0	0	0	0	0	1	1	1	4
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	4
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	5
	1:45 PM	0	1	1	0	1	1	0	0	0	0	1	1	3	6
PM Peak Period	2:00 PM	0	1	1	0	0	0	0	0	0	0	0	0	1	3
	2:15 PM	0	0	0	0	1	1	0	0	0	0	0	0	1	3
	2:30 PM	0	1	1	0	0	0	0	0	0	0	0	0	1	2
	2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2
	3:00 PM	0	0	0	0	0	0	1	0	1	0	0	0	1	2
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	3:30 PM	0	0	0	0	0	0	0	1	1	0	0	0	1	1
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	4
	4:30 PM	0	0	0	0	1	1	0	0	0	0	0	0	1	4
	4:45 PM	0	0	0	0	0	0	0	1	1	0	0	0	1	4
	5:00 PM	0	0	0	0	0	0	0	0	0	0	2	2	2	4
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2
	5:30 PM	0	1	1	0	0	0	0	0	0	0	0	0	1	3
	5:45 PM	0	0	0	0	0	0	0	0	0	0	1	1	1	3
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2
	6:15 PM	0	0	0	0	0	0	0	1	1	0	0	0	1	2
	6:30 PM	0	0	0	0	1	1	0	0	0	0	0	0	1	1
	6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
Totals		**1**	**4**	**5**	**0**	**4**	**4**	**1**	**4**	**5**	**0**	**6**	**6**	**20**	

Special Pedestrians

Pedestrian Type	None	1 or 2	A Few	Several	Many	Unknown
Pre-school Children	x					
Elementry School Age Children	x					
Visually Impaired (white cane/helper dog)	x					
Elderly/Disabled (except wheelchairs)	x					
Wheelchairs/Electric Scooters	x					
Other (None)	x					

Traffic Forecast

MATPB TRAFFIC FORECAST REPORT

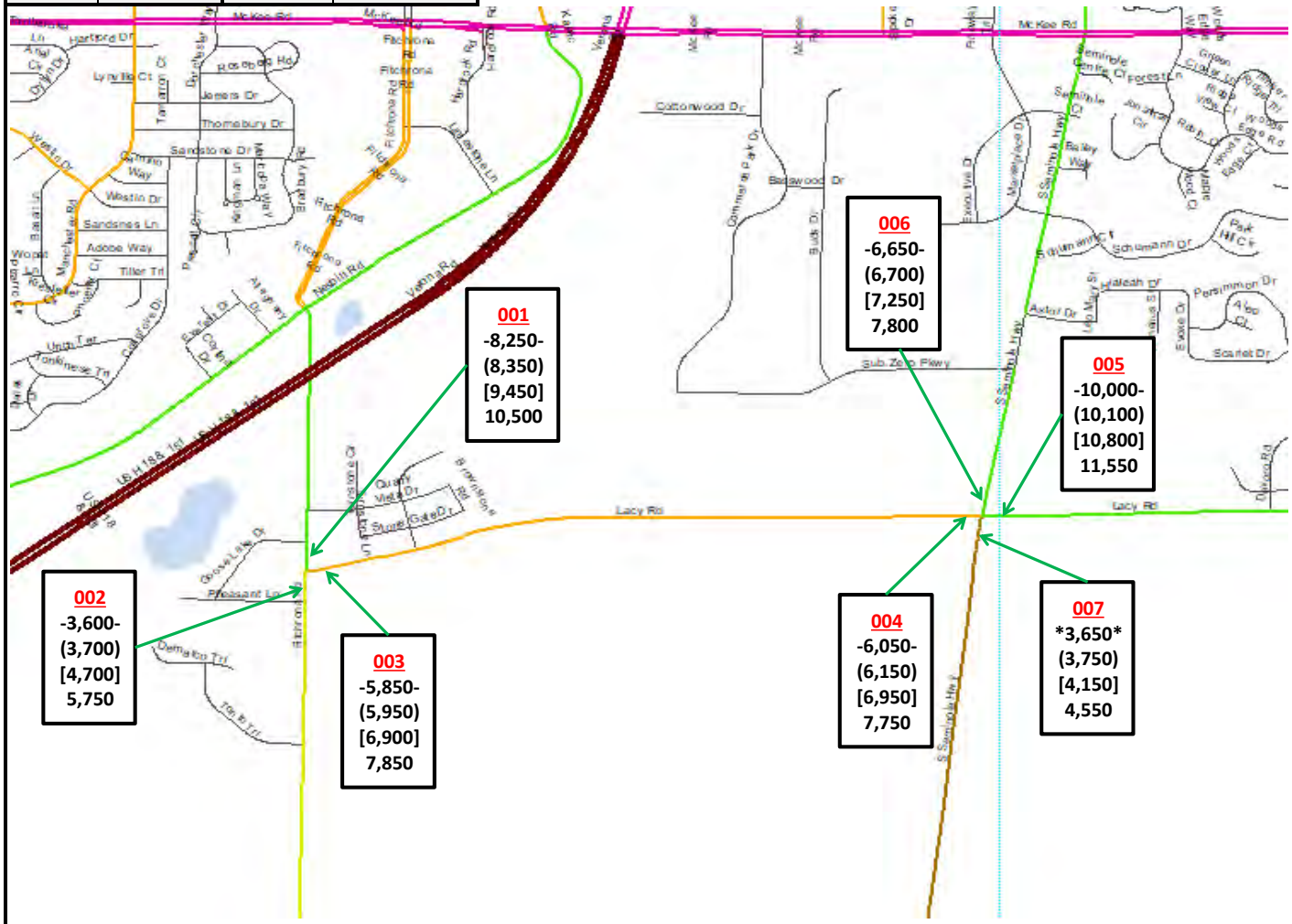
PROJECT ID(S): N/A
ROUTE(S): Lacy, Fitchrona, Seminole Hwy.

Region/COUNTY(IES): Dane
LOCATION: Lacy Road
COMPLETED: May 11, 2020

Developed by: D. Kanning
Phone: (608) 266-4335
E-Mail: dkanning@cityofmadison.com

Madison Area Transportation Planning Board

Site(s)	Route(s)	Volume(s)	Site Growth %
001		10500	1.29%
003		7830	1.64%
005		11570	0.75%



SITE ID = Colored, **bolded**, and underlined

Symbol	Count	Symbol	Forecast
-000-	2020 Count	(000)	2021 AADT
000	2019 Count	[000]	2031 AADT
		000	2041 AADT

NOTES ON THE FORECAST:

1. This projection assumes that no major new traffic generators will be added to the development already included in the 2010/2050 Dane County Regional Travel Demand Model.
2. Vehicle classification data and design values (K factors, directional splits, and percent trucks in design hours) are available here: http://wisconsindot.gov/Pages/projects/data-plan/traf-fore/default.aspx
3. Lacy Road, Fitchrona Road, and Seminole Hwy are Factor Group II (UrbanOther) roadways (indicating low to moderate fluctuation in traffic from a seasonal perspective). Lacy Road is functionally classified as a Collector, and Fitchrona Road and Seminole Hwy are functionaly classifed as Minor Arterials for count purposes.
4. The Dane County Regional Travel Demand Model was used to complete this forecast.

Madison Area TPB
Forecast by: David Kanning
Phone: 608-266-4335
Email: dkanning@cityofmadison.com

Projected AM Design Hour Traffic Volumes

Indicates roundabout

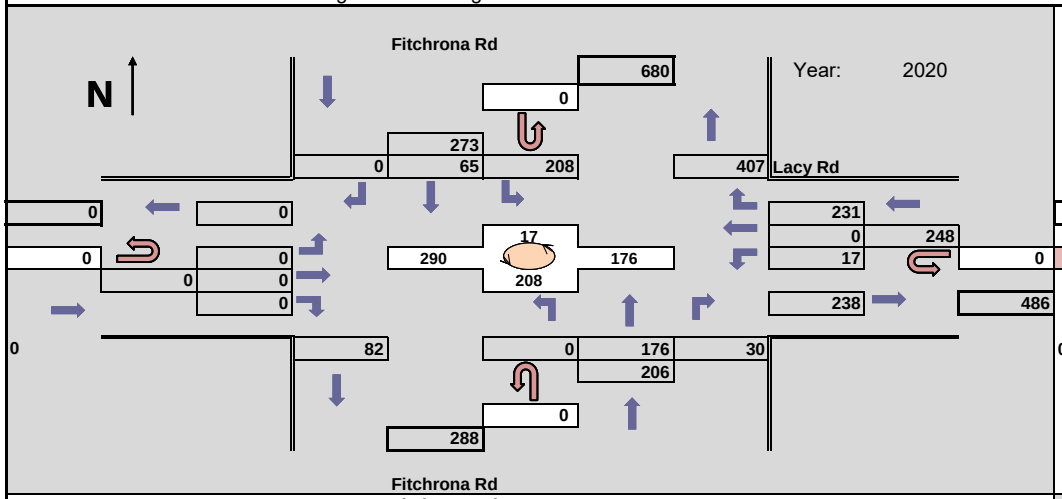
Design Hour: 7:30-8:30am

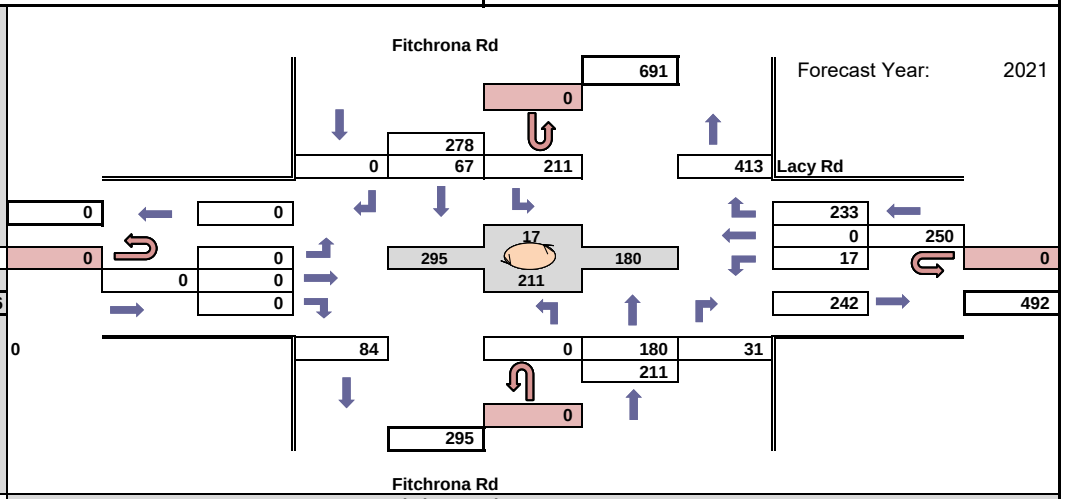
Forecast Completed: 5/11/2020

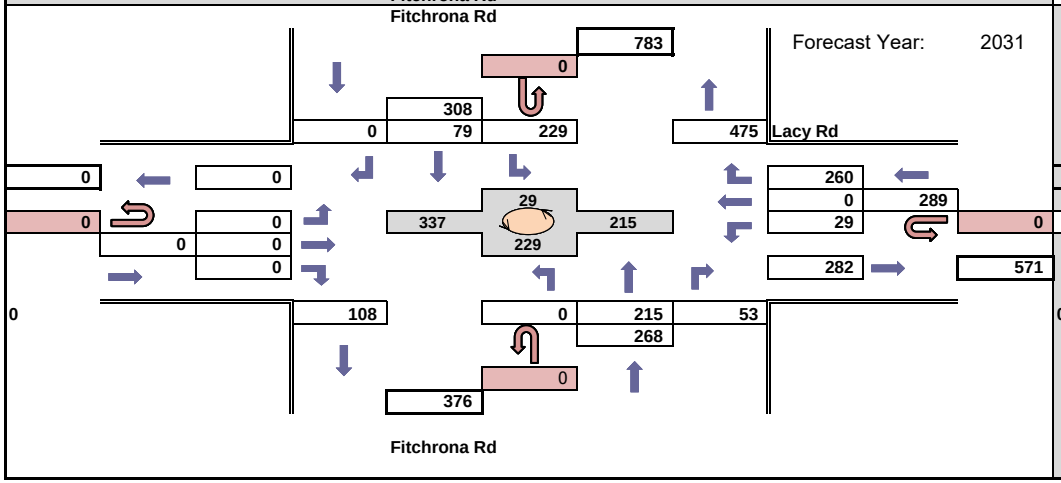
Project Description

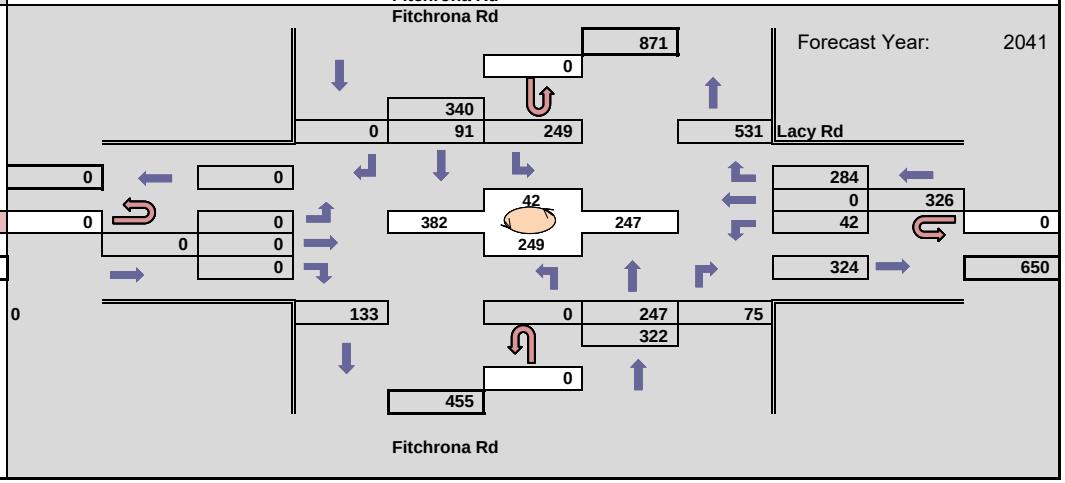
Project ID(s): N/A
Route(s): Lacy Road and Fitchrona Road
Region/COUNTY(IES): Dane
Location: Lacy Road/Fitchrona Road

Design Hour Turning Movement Data









Madison Area TPB
Forecast by: David Kanning
Phone: 608-266-4335
Email: dkanning@cityofmadison.com

Projected PM Design Hour Traffic Volumes

Indicates roundabout

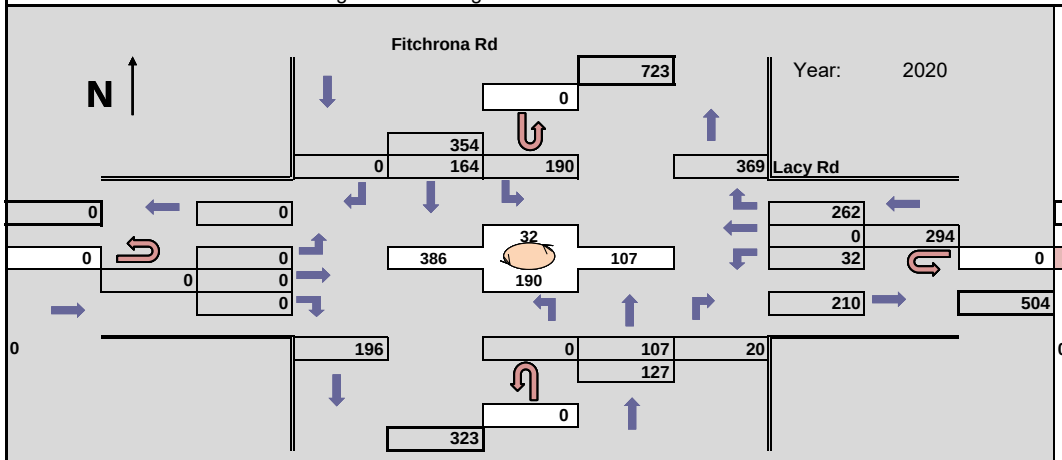
Design Hour: 4:45-5:45pm

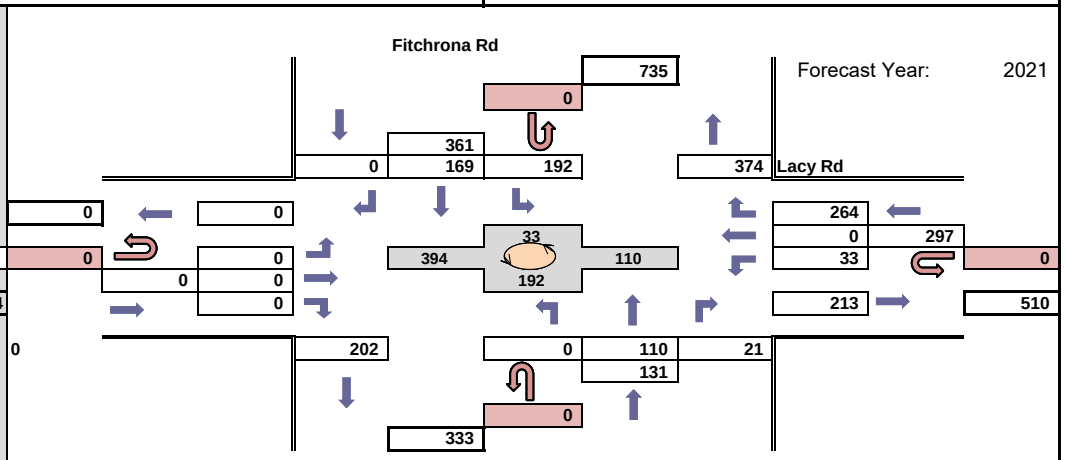
Forecast Completed: 5/11/2020

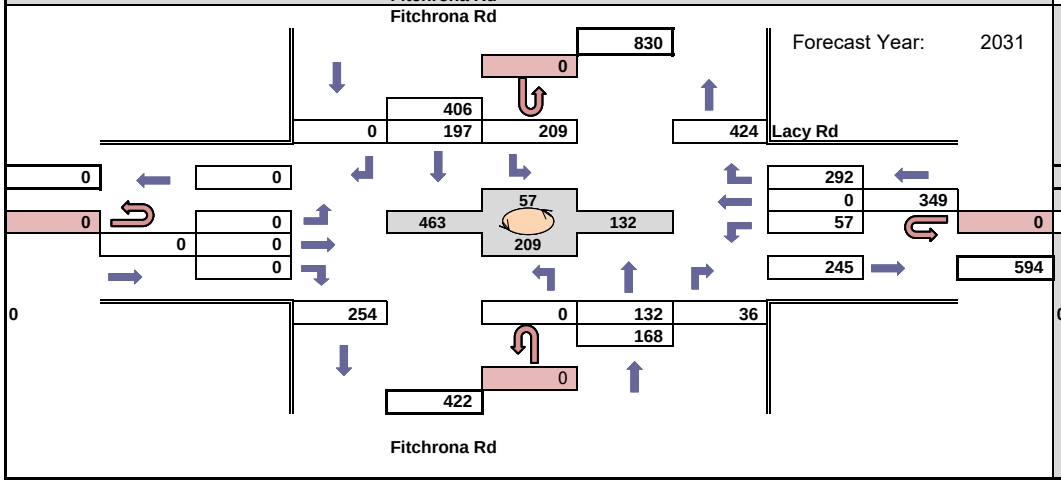
Project Description

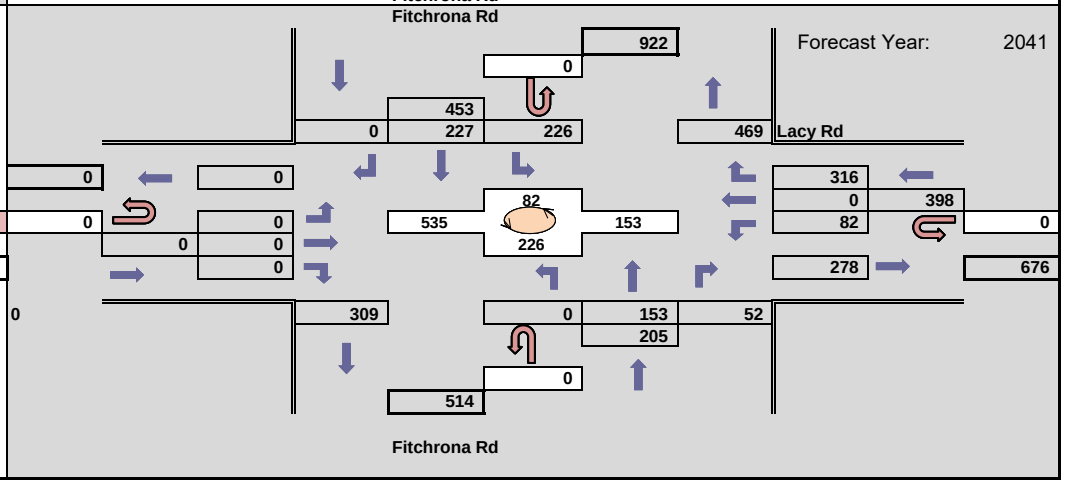
Project ID(s): N/A
Route(s): Lacy Road and Fitchrona Road
Region/COUNTY(IES): Dane
Location: Lacy Road/Fitchrona Road

Design Hour Turning Movement Data









Madison Area TPB
Forecast by: David Kanning
Phone: 608-266-4335
Email: dkanning@cityofmadison.com

Projected AM Design Hour Traffic Volumes

Indicates roundabout

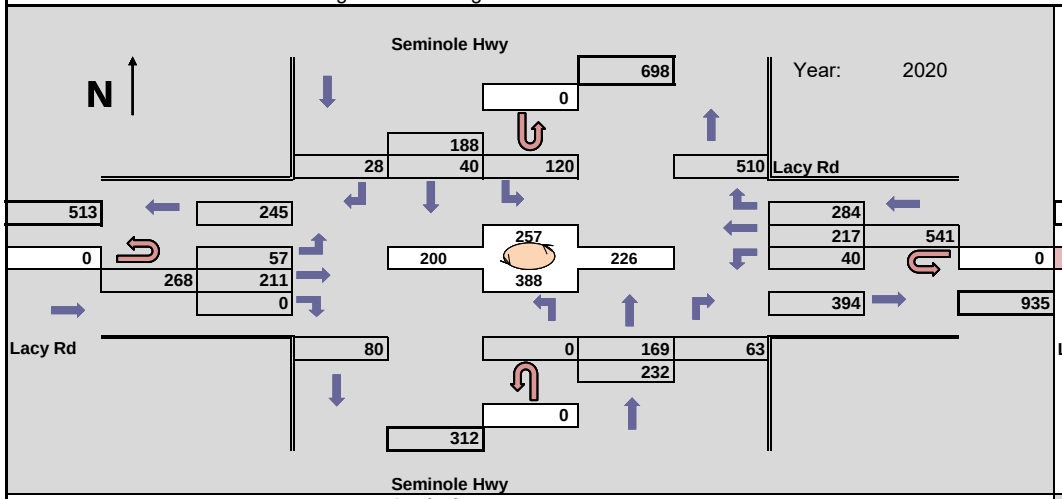
Design Hour: 7:30-8:30am

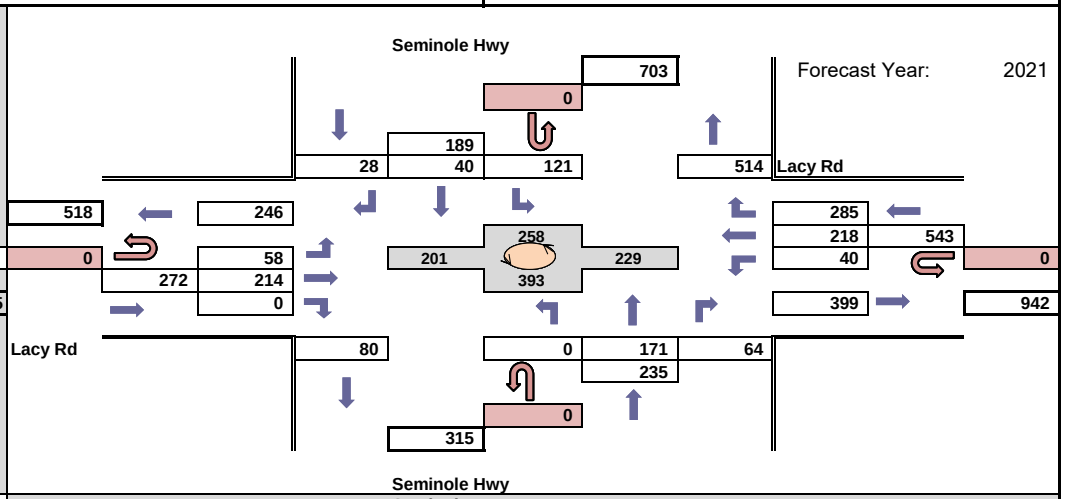
Forecast Completed: 5/11/2020

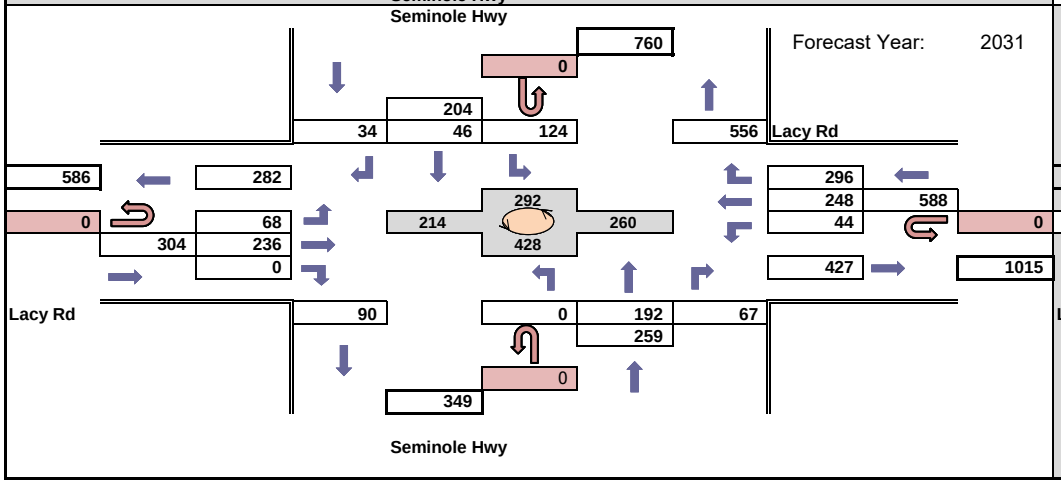
Design Hour Turning Movement Data

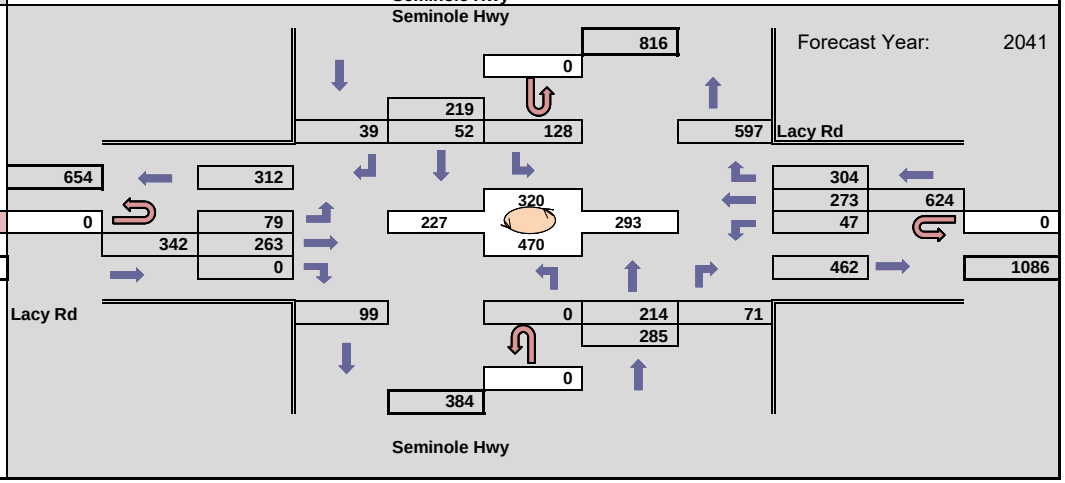
Project Description

Project ID(s): N/A
Route(s): Lacy Road and Seminole Highway
Region/COUNTY(IES): Dane
Location: Lacy Road/Seminole Highway









Madison Area TPB
Forecast by: David Kanning
Phone: 608-266-4335
Email: dkanning@cityofmadison.com

Projected PM Design Hour Traffic Volumes

Indicates roundabout

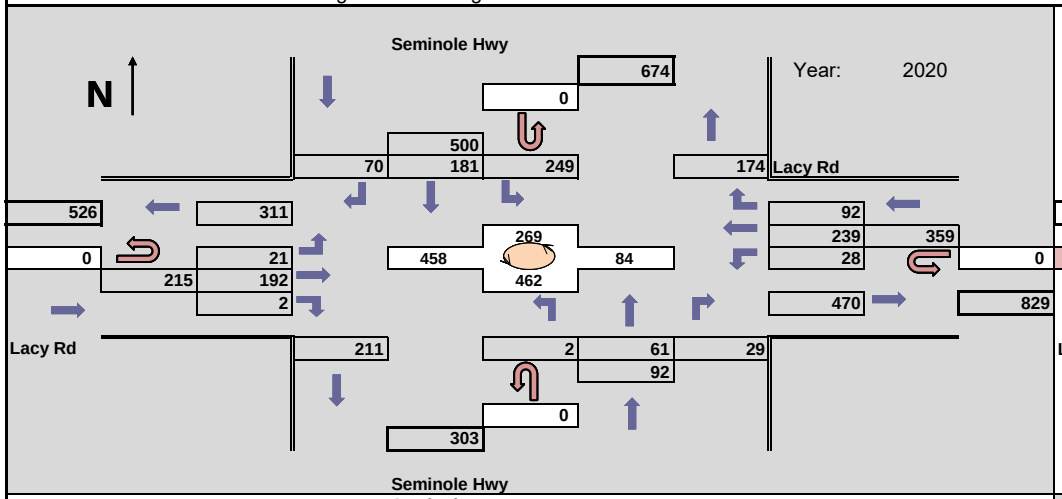
Design Hour: 4:30-5:30pm

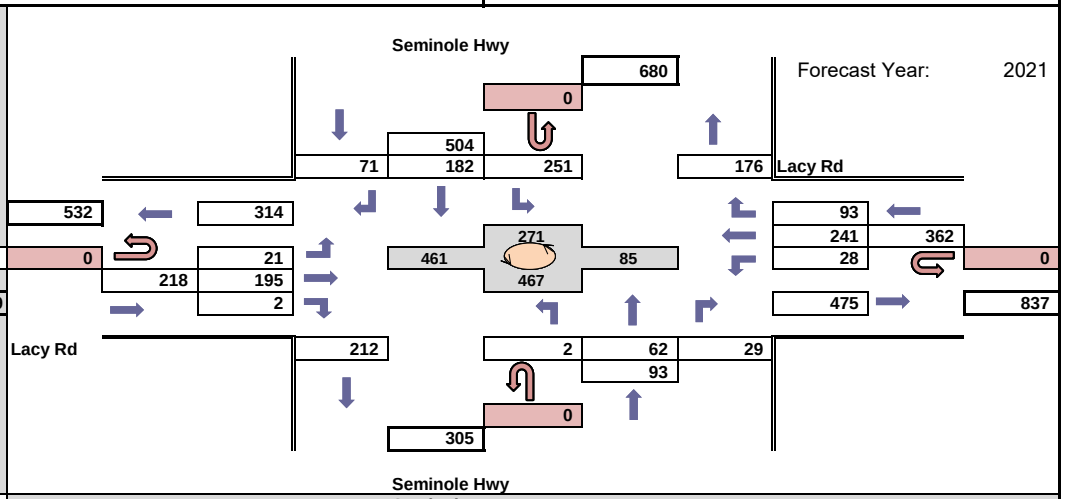
Forecast Completed: 5/11/2020

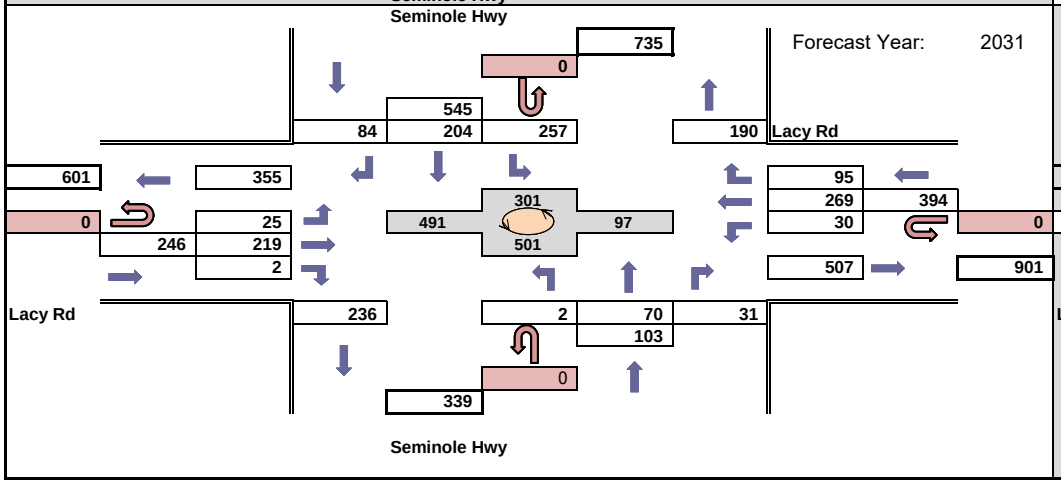
Project Description

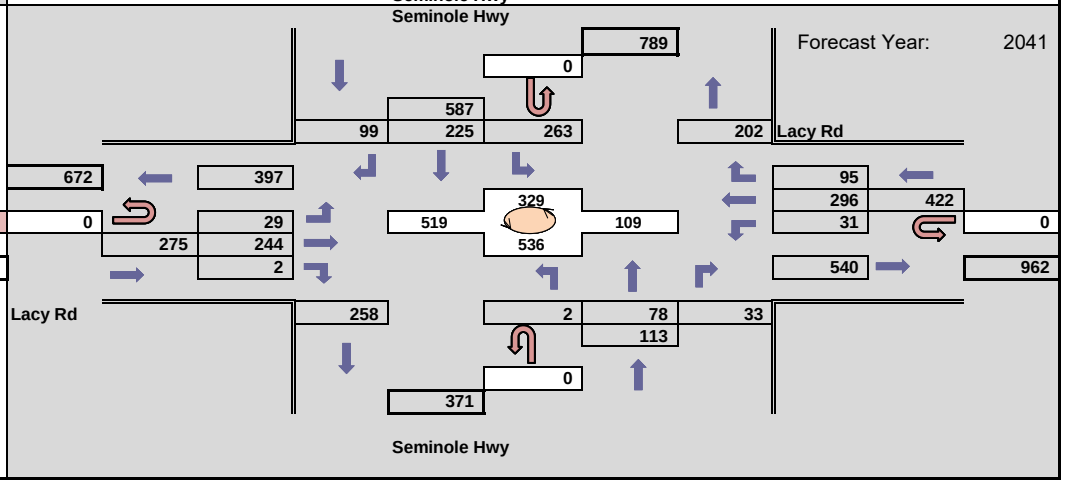
Project ID(s): N/A
Route(s): Lacy Road and Seminole Highway
Region/COUNTY(IES): Dane
Location: Lacy Road/Seminole Highway

Design Hour Turning Movement Data





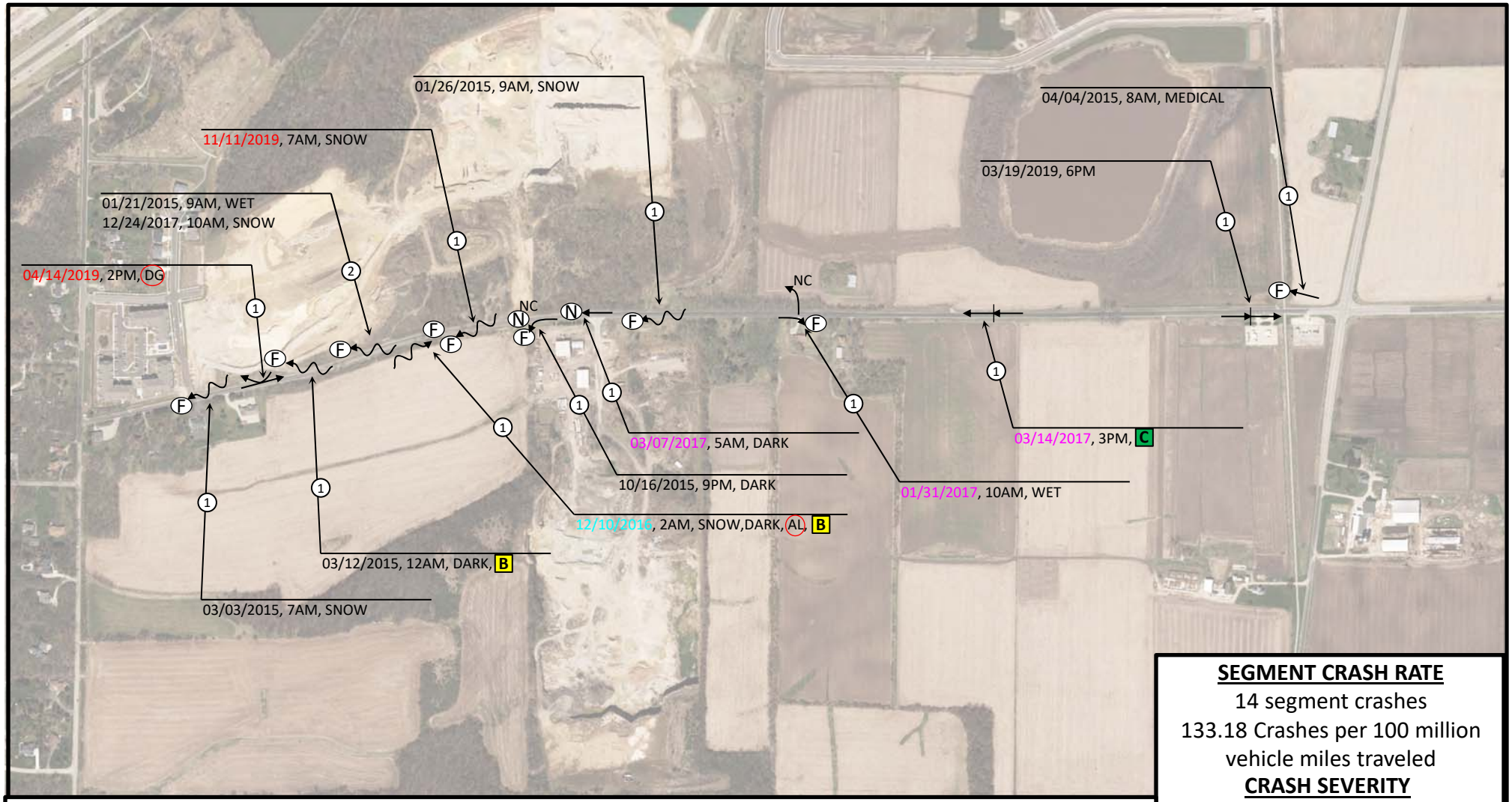




APPENDIX B

Crash Diagrams

Lacy Road Reconstruction *May 2020*



Crash Types

- Moving Vehicle
- Backing Vehicle
- Pedestrian
- Bicyclist
- Parked Vehicle
- NC Non-Contact
- Ⓣ Tree
- Ⓤ Utility Pole
- Ⓕ Fixed Object
- Ⓝ Non-Fixed Object
- Angle (Right Angle)
- Angle (Left-Turn)
- Angle (Right-Turn)
- Sideswipe-Same
- Sideswipe-Opposite
- Head-On
- Rear-End
- Out of Control
- Overtake
- Overturn

LEGEND

YEAR

2015 BLACK
2016 CYAN
2017 MAGENTA
2018 BLUE
2019 RED

XX/XX/XXXX, XX AM/PM, XXX, XXX, #

DATE | TIME | SEE BELOW | CRASH FREQUENCY

[X] = CRASH SEVERITY (SEE DEFINITIONS)
WET = WET PAVEMENT
SNOW = SNOW ON PAVEMENT
LIGHT = STREET LIGHTS OPERATING (DAYTIME IF BLANK)
AL/DG = ALCOHOL/DRUG INVOLVEMENT

CRASH SEVERITY DEFINITIONS

- K = Fatal Crash
- A = Incapacitating Injury Crash
- B = Non-Incapacitating Injury Crash
- C = Possible Injury Crash
- = Property Damage Only Crash

SEGMENT CRASH RATE

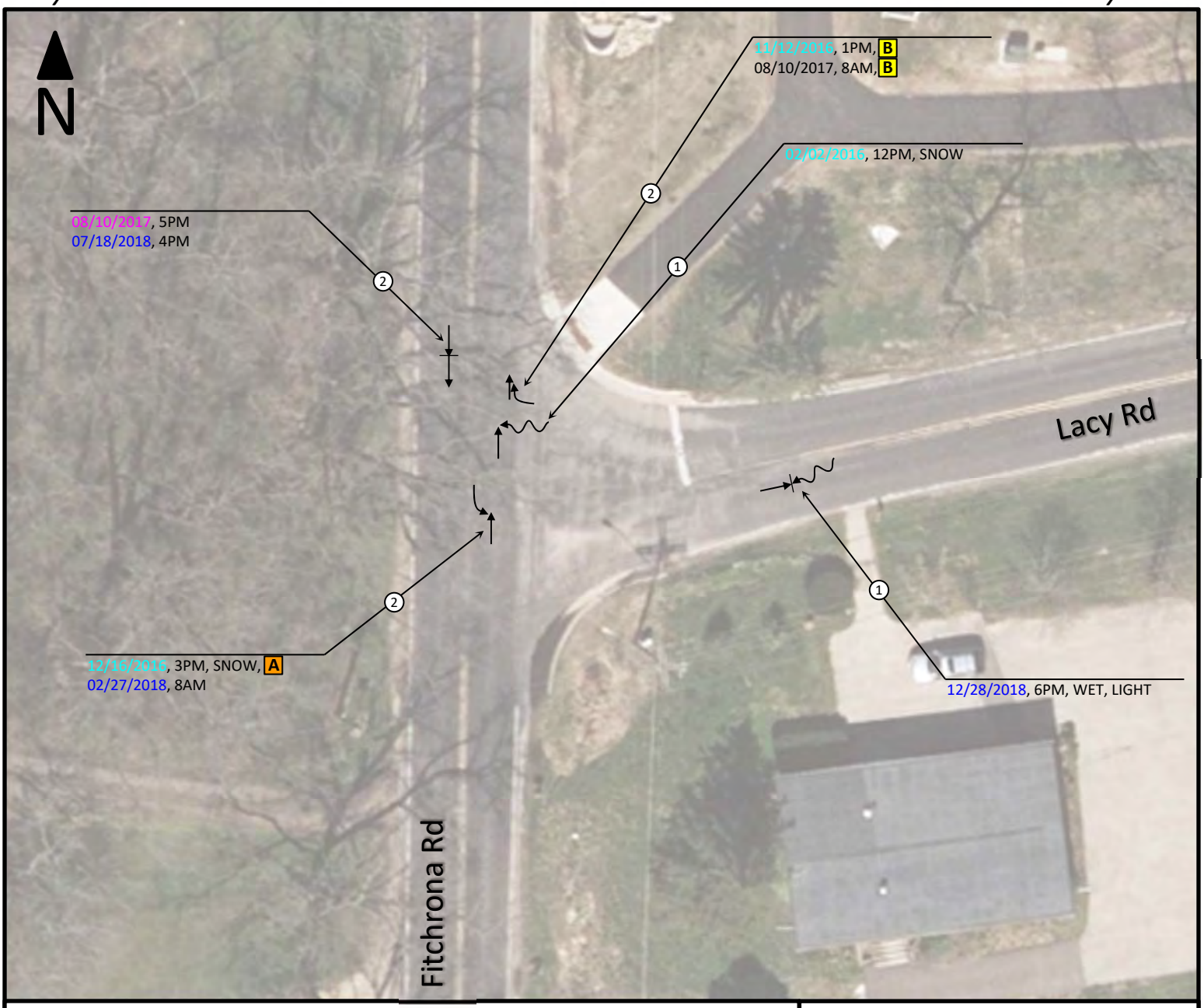
14 segment crashes
133.18 Crashes per 100 million vehicle miles traveled

CRASH SEVERITY

0	Fatal Crash (K)
0	Incapacitating (A-Level)
2	Non-Incapacitating (B-Level)
1	Possible (C-Level)
11	Property Damage Only

Lacy Rd Segment Crashes
January 2015 – December 2019
Fitchburg, WI

KL Engineering [A] Better Experience



INTERSECTION CRASH RATE

8 Crashes

0.64 Crashes/MEV

(Per Million Entering Vehicles)

Entering Vehicles: 6,800/day

CRASH SEVERITY

0	Fatal Crash (K)
1	Incapacitating (A-Level)
2	Non-Incapacitating (B-Level)
0	Possible (C-Level)
5	Property Damage Only

Lacy Rd & Fitchrona Rd
Intersection Crashes
January 2015 – December 2019
Fitchburg, WI

KL Engineering [A] Better Experience

LEGEND

Crash Types

- Moving Vehicle
- Backing Vehicle
- Pedestrian
- Bicyclist
- Parked Vehicle
- Stop/Yield Sign
- Tree
- Utility Pole
- Fixed Object
- Non-Fixed Object
- Angle (Right Angle)
- Angle (Left-Turn)
- Angle (Right-Turn)
- Sideswipe-Same
- Sideswipe-Opposite
- Head-On
- Rear-End
- Out of Control
- Overtake
- Overturn

YEAR

2015 BLACK
2016 CYAN
2017 MAGENTA
2018 BLUE
2019 RED

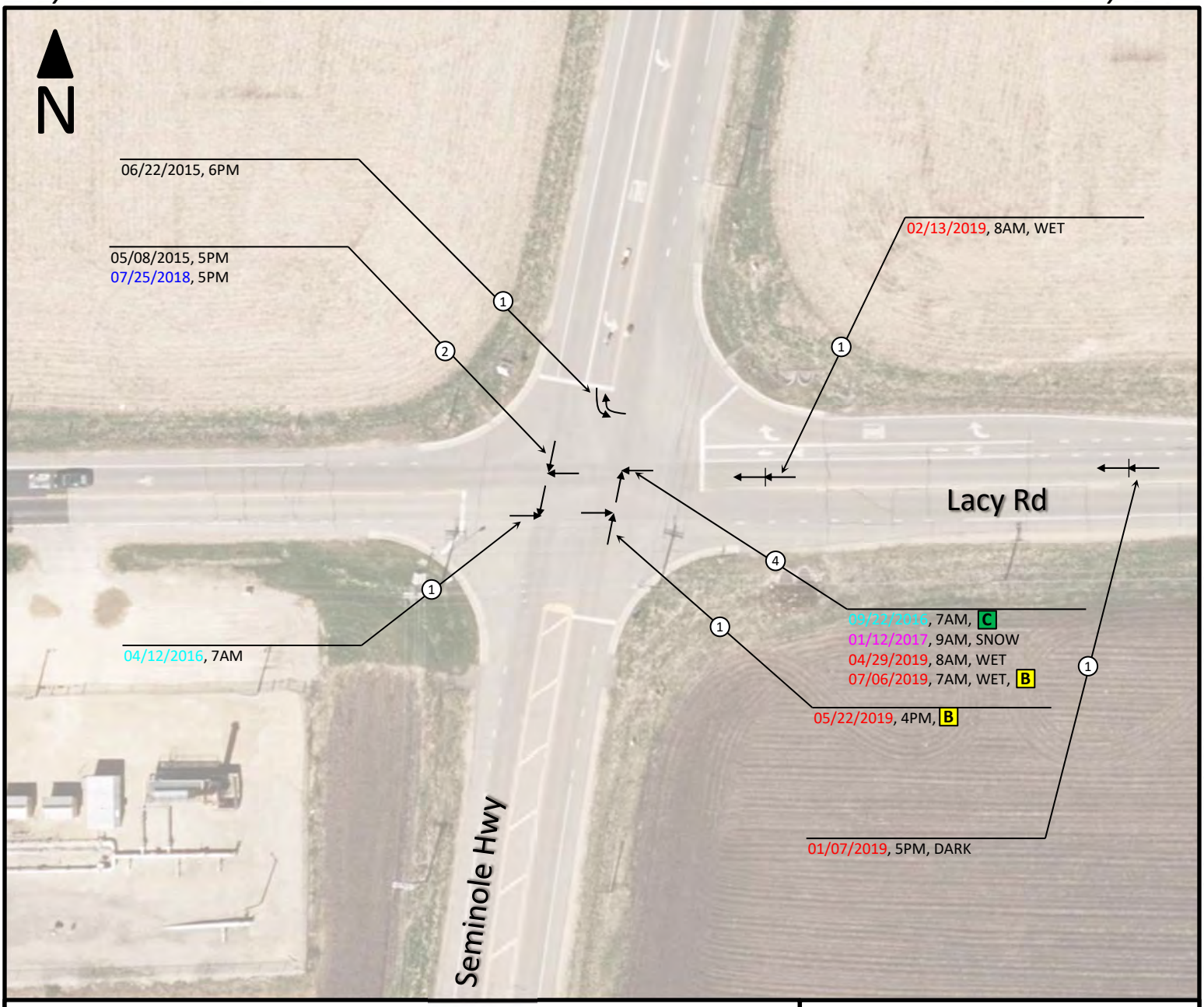
XX/XX/XXXX, XX AM/PM, XXX, XXX, #

DATE | TIME | SEE BELOW | CRASH FREQUENCY

[X] = CRASH SEVERITY (SEE DEFINITIONS)
WET = WET PAVEMENT
SNOW = SNOW ON PAVEMENT
LIGHT = STREET LIGHTS OPERATING (DAYTIME IF BLANK)
AL/DG = ALCOHOL/DRUG INVOLVEMENT

CRASH SEVERITY DEFINITIONS

- K = Fatal Crash
- A = Incapacitating Injury Crash
- B = Non-Incapacitating Injury Crash
- C = Possible Injury Crash
- = Property Damage Only Crash



INTERSECTION CRASH RATE

11 Crashes

0.57 Crashes/MEV

(Per Million Entering Vehicles)

Entering Vehicles: 10,550/day

CRASH SEVERITY

0	Fatal Crash (K)
0	Incapacitating (A-Level)
2	Non-Incapacitating (B-Level)
1	Possible (C-Level)
8	Property Damage Only

Lacy Rd & Seminole Hwy
Intersection Crashes
January 2015 – December 2019
Fitchburg, WI

KL Engineering
[A] Better Experience

Crash Types

- Moving Vehicle
- Backing Vehicle
- Pedestrian
- Bicyclist
- Parked Vehicle
- Stop/Yield Sign
- Tree
- Utility Pole
- Fixed Object
- Non-Fixed Object
- Angle (Right Angle)
- Angle (Left-Turn)
- Angle (Right-Turn)
- Sideswipe-Same
- Sideswipe-Opposite
- Head-On
- Rear-End
- Out of Control
- Overtake
- Overturn

LEGEND

YEAR

2015 BLACK
2016 CYAN
2017 MAGENTA
2018 BLUE
2019 RED

XX/XX/XXXX, XX AM/PM, XXX, XXX, #

DATE | TIME | SEE BELOW | CRASH FREQUENCY

X = CRASH SEVERITY (SEE DEFINITIONS)
WET = WET PAVEMENT
SNOW = SNOW ON PAVEMENT
LIGHT = STREET LIGHTS OPERATING (DAYTIME IF BLANK)
AL/DG = ALCOHOL/DRUG INVOLVEMENT

CRASH SEVERITY DEFINITIONS

- K = Fatal Crash
- A = Incapacitating Injury Crash
- B = Non-Incapacitating Injury Crash
- C = Possible Injury Crash
- = Property Damage Only Crash

APPENDIX C

Traffic Signal Warrants

Wisconsin Department of Transportation Traffic Signal Warrant Summary Worksheet

70%

The Worksheet(s) attached are provided as an attachment to the Engineering Investigation Study for:

Intersection: Lacy Rd & Fitchrona Rd
County: Dane
City: Fitchburg

Major Street: Fitchrona Rd
Critical Approach Speed: 45 mph
Lanes: 1 lane

Minor Street: Lacy Rd
Critical Approach Speed: 50 mph
Lanes: 1 lane

% Right Turns Included
From North (SB) 100%
From East (WB) 100%
From South (NB) 100%
From West (EB) 100%

In built-up area of isolated community of < 10,000 population? No
Total number of approaches at intersection? 3
If it is a "T" intersection, inflate minor threshold to 150%? No
Manually set volume level? No

Analysis based on EXISTING volume data.

Date	Day of the Week	Time (HH:MM)			
		From	AM / PM	To	AM / PM
3/10/2020	Tuesday	6:00		20:00	

Warrant Evaluation Summary	Warrant Met:
Warrant 1: Eight - Hour Vehicular Volume	**No**
Condition A: Minimum Vehicular Volume	No
Condition B: Interruption of Continuous Traffic	No
Condition C: Combination: 80% of A and B	No
Warrant 2: Four-Hour Volume	**Yes**
Warrant 3: Peak Hour Volume	**N/A**
Warrant 4: Pedestrian Volume	**N/A**
Criterion A: Four-Hour	
Criterion B: Peak-Hour	
Warrant 5: School Crossing	**N/A**
Warrant 6: Coordinated Signal System	**N/A**
Warrant 7: Crash Experience	**N/A**
Warrant 8: Roadway Network	**N/A**
Warrant 9: Intersection Near a Grade Crossing	**N/A**

Warrant Analysis Conducted By:

Name: N. Greuel
Agency: KL Engineering
Date: 4/8/2020

Warrant 1: Eight - Hour Vehicular Volume 70%

Warrant Evaluated? Yes **Warrant Satisfied? No** **Manually Set To:**

Condition A : Min. Veh. Volume		
Volume Level	70%	56%
Major Rd. Req	350	280
Minor Rd. Req	105	84
Number of Hours	5	5

Satisfied? No

Condition B: Interruption of Continuous Traffic		
Volume Level	70%	56%
Major Rd. Req	525	420
Minor Rd. Req	53	42
Number of Hours	0	3

Satisfied? No

Condition C: Combination of A & B at 56%

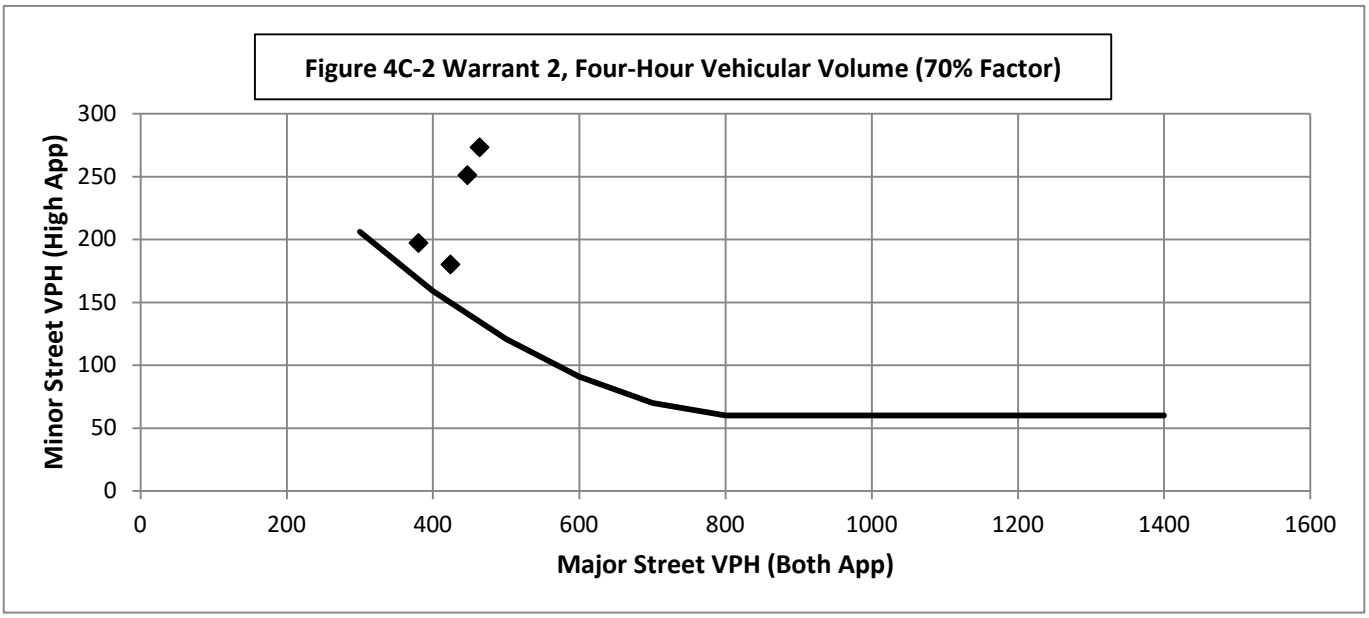
Satisfied? No

6:00 AM		Enter Start Time (Military Time) (HH:MM)			
Time Period	**From**	**To**	**Major Road: Both App. (VPH)**	**Minor Road: High App. (VPH)**	**Total**
1	6:00	7:00	122	49	171
2	7:00	8:00	424	180	604
3	8:00	9:00	380	197	577
4	9:00	10:00	210	88	298
5	10:00	11:00	186	83	269
6	11:00	12:00	228	135	363
7	12:00	13:00	219	134	353
8	13:00	14:00	237	103	340
9	14:00	15:00	236	112	348
10	15:00	16:00	266	171	437
11	16:00	17:00	447	251	698
12	17:00	18:00	464	273	737
13	18:00	19:00	376	129	505
14	19:00	20:00	226	100	326
15	20:00	21:00	0	0	0
16	21:00	22:00	0	0	0

Warrant 2: Four-Hour Volume 70%

Warrant Evaluated? Yes
Warrant Satisfied? Yes
Manually Set To:

Hour Start	17:00	16:00	7:00	8:00
Major Road Vol.	464	447	424	380
Minor Road Vol.	273	251	180	197



Warrant 3: Peak Hour Volume 70%

Warrant Evaluated? No **Warrant Satisfied? N/A** **Manually Set To:**

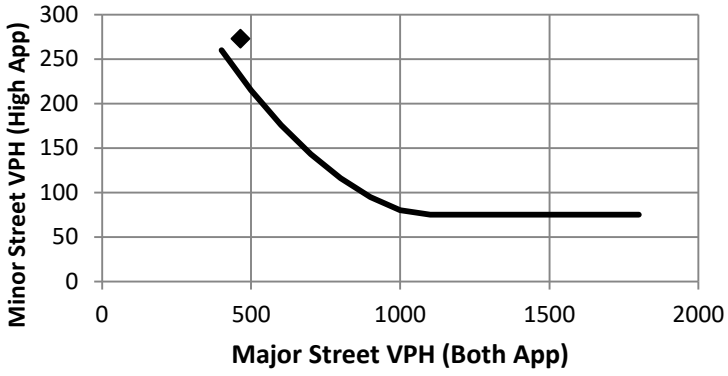
Condition justifying use of warrant:

Criteria		Met?
Delay on Minor Approach	4	
Volume on Minor Approach	100	
Total Entering Volume (veh/h)	650	

Manually Set Peak Hour?

Peak Hour	Major Road Vol. (Both App.)	Minor Road Vol. (High App.)
17:00	464	273

Figure 4C-4 Warrant 3, Peak Hour (70% Factor)



Warrant 4: Pedestrian Volume 70%

Warrant Evaluated? No **Warrant Satisfied? N/A** **Manually Set To:**

Criterion A: Four Hour

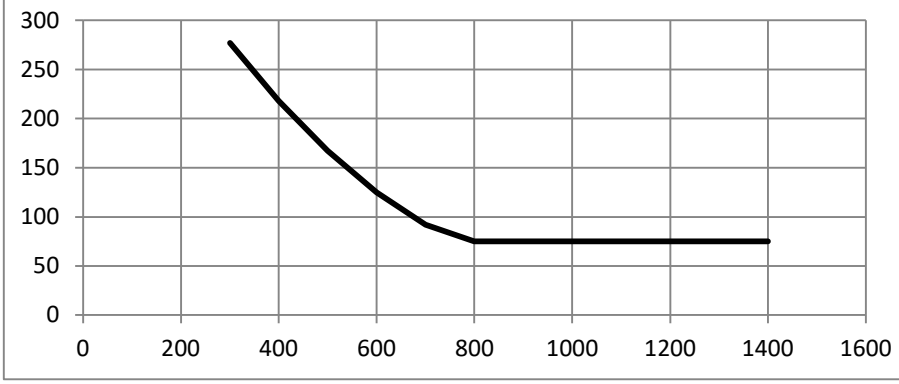
Hour (Start)	Pedestrian Volume	Major Road Vol.
		0
		0
		0
		0

Manually Set Major Rd Vol?

Avg. walk speed less than 3.5 ft/s?

Criterion A Satisfied?

Figure 4C-6 Warrant 4, Pedestrian Four-Hour Volume (70% Factor)

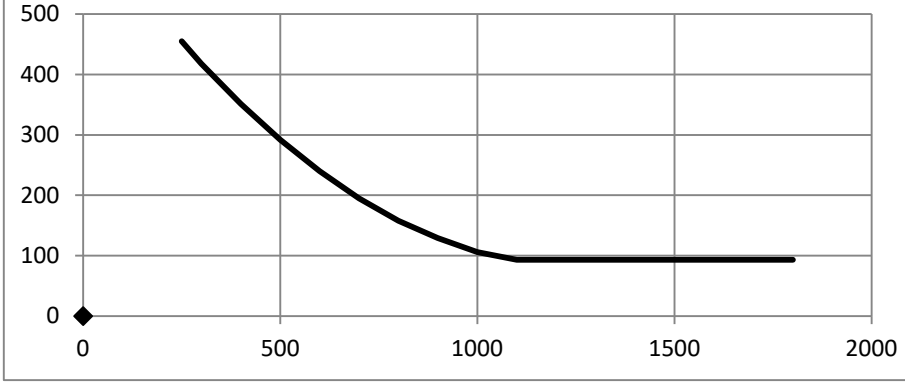


Criterion B: Peak Hour

Peak Hour	Pedestrian Vol.	Major Road Vol.
0:00	0	0

Criterion B Satisfied?

Figure 4C-8 Warrant 4, Pedestrian Peak Hour (70% Factor)



Warrant 5: School Crossing 70%

Warrant Evaluated? No **Warrant Satisfied? N/A** **Manually Set To:**

	Criteria	Fulfilled?
1	There are a MINIMUM of 20 school children during the highest crossing hour.	
2	There are fewer adequate gaps in the major road traffic stream during the period when the school children are using the crossing than the number of minutes in the same period.	
3	The nearest traffic signal along the major road is located more than 300 ft away. Or, the nearest traffic signal is within 300 ft but the proposed traffic signal will not restrict the progressive movement of traffic.	

Warrant 6: Coordinated Signal System 70%

Warrant Evaluated? No **Warrant Satisfied? N/A** **Manually Set To:**

	Criteria	Fulfilled?
1	Signal spacing > 1000 ft	
2	On a one-way road or a road that has traffic predominantly in one direction, the adjacent signals are so far apart that they do not provide the necessary degree of vehicle platooning.	
3	On a two-way road, adjacent signals do not provide the necessary degree of platooning and the proposed and the adjacent signals will collectively provide a progressive operation.	

Warrant 7: Crash Experience 70%

Warrant Evaluated? No **Warrant Satisfied? N/A** **Manually Set To:**

	Criteria		Met?	Fulfilled?
1	Adequate trial of other remedial measures has failed to reduce crash frequency.			No
	Measures Tried:			
2	Five or more reported crashes, of types susceptible to correction by signal, have occurred within a 12 month period.	# of crashes per 12 months		No
3	Warrant 1, Condition A (80%)		No	No
	Warrant 1, Condition B (80%)		No	
	Warrant 4, Criterion A (80%)		No	
	Warrant 4, Criterion B (80%)		No	

Warrant 8: Roadway Network 70%

Warrant Evaluated? No **Warrant Satisfied? N/A** **Manually Set To:**

	Criteria					Met?	Fulfilled?
1	Total entering volume of at least 1,000 veh/h during typical weekday peak hour				737	No	No
	Five-year projected volumes that satisfy one or more of Warrants 1, 2, or 3.					No	
2	Total entering vol. of at least 1,000 veh/h for each of any 5 hrs of non-normal business day (Sat. or Sun.)						
	Hour						
	Volume						

	Characteristics of Major Routes - Select yes if all intersecting routes have characteristic	Fulfilled?
1	Part of the road or highway system that serves as the principal roadway network for through traffic flow	
2	Rural or suburban highway outside of, entering, or traversing a city	
3	Appears as a major route on an official plan	

Warrant 9: Intersection Near a Grade Crossing 70%

Warrant Evaluated? No **Warrant Satisfied? N/A** **Manually Set To:**

Adjustment Factors			Manually Set Peak Hour?				
Rail Traffic per Day	% High Occupancy Buses on Minor Road	% Tractor-Trailer Trucks on Minor Road	D	Peak Hour	Major Road Vol.	Minor Road Vol.	Adjusted Minor Vol.
1	0	0% to 2.5%	660	17:00	464	273	91.455

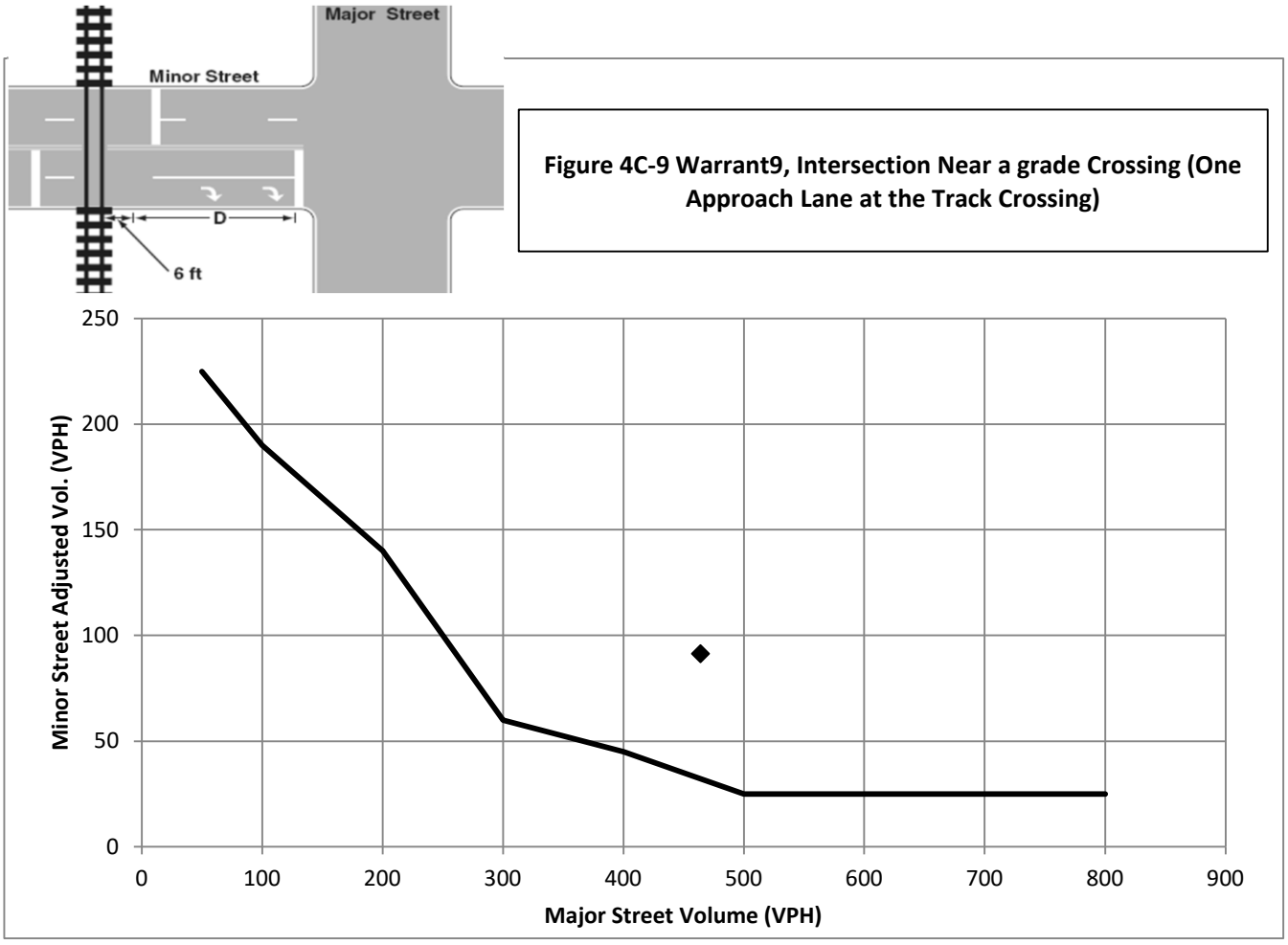


Figure 4C-9 Warrant9, Intersection Near a grade Crossing (One Approach Lane at the Track Crossing)

Conclusions/Comments:

Updated: 12/6/2017

Wisconsin Department of Transportation Traffic Signal Warrant Summary Worksheet

70%

The Worksheet(s) attached are provided as an attachment to the Engineering Investigation Study for:

Intersection: Lacy Rd & Seminole Hwy
County: Dane
City: Fitchburg

Major Street: Lacy Rd
Critical Approach Speed: 50 mph
Lanes: 1 lane

Minor Street: Seminole Hwy
Critical Approach Speed: 35 mph
Lanes: 2 or more lanes

% Right Turns Included
From North (SB) 100%
From East (WB) 100%
From South (NB) 100%
From West (EB) 100%

In built-up area of isolated community of < 10,000 population? No
Total number of approaches at intersection? 4 or more
If it is a "T" intersection, inflate minor threshold to 150%? No
Manually set volume level? No

Analysis based on EXISTING volume data.

Date	Day of the Week	Time (HH:MM)			
		From	AM / PM	To	AM / PM
3/10/2020	Tuesday	6:00		20:00	

Warrant Evaluation Summary	Warrant Met:
Warrant 1: Eight - Hour Vehicular Volume	**No**
Condition A: Minimum Vehicular Volume	No
Condition B: Interruption of Continuous Traffic	No
Condition C: Combination: 80% of A and B	No
Warrant 2: Four-Hour Volume	**Yes**
Warrant 3: Peak Hour Volume	**N/A**
Warrant 4: Pedestrian Volume	**N/A**
Criterion A: Four-Hour	
Criterion B: Peak-Hour	
Warrant 5: School Crossing	**N/A**
Warrant 6: Coordinated Signal System	**N/A**
Warrant 7: Crash Experience	**N/A**
Warrant 8: Roadway Network	**N/A**
Warrant 9: Intersection Near a Grade Crossing	**N/A**

Warrant Analysis Conducted By:

Name: N. Greuel
Agency: KL Engineering
Date: 4/8/2020

Warrant 1: Eight - Hour Vehicular Volume 70%

Warrant Evaluated? Yes **Warrant Satisfied? No** **Manually Set To:**

Condition A : Min. Veh. Volume		
Volume Level	70%	56%
Major Rd. Req	350	280
Minor Rd. Req	140	112
Number of Hours	7	9

Satisfied? No

Condition B: Interruption of Continuous Traffic		
Volume Level	70%	56%
Major Rd. Req	525	420
Minor Rd. Req	70	56
Number of Hours	4	4

Satisfied? No

Condition C: Combination of A & B at 56%

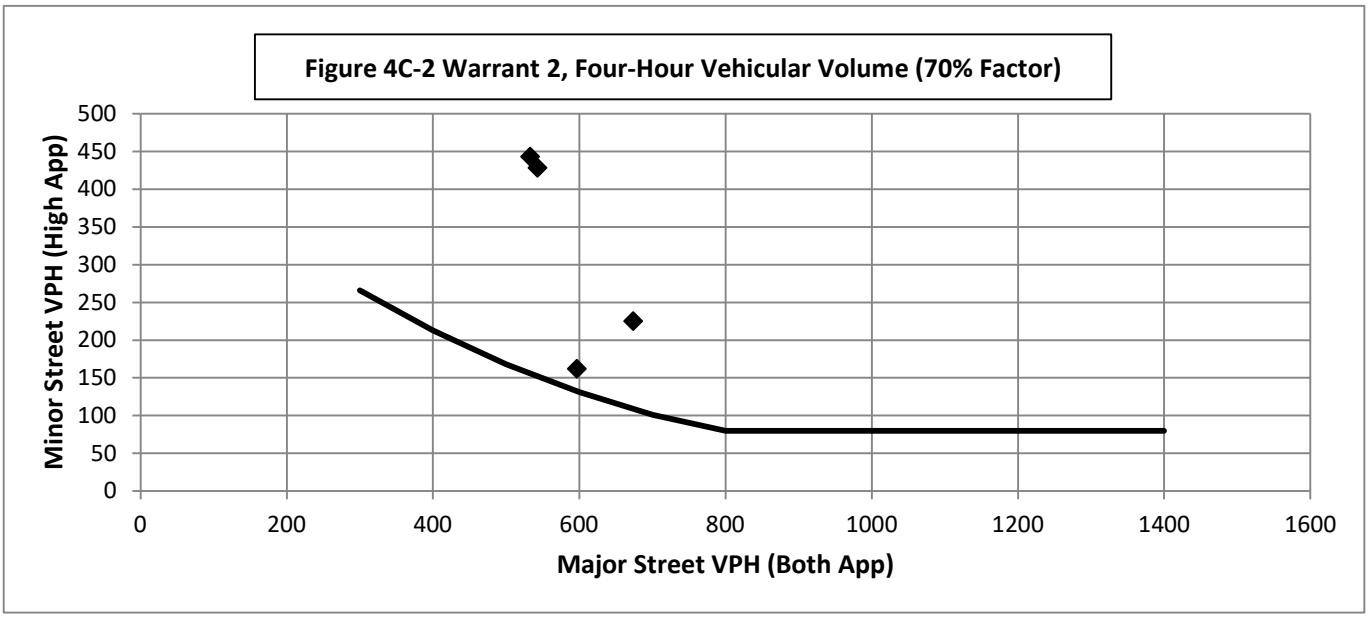
Satisfied? No

6:00 AM	Enter Start Time (Military Time) (HH:MM)				
Time Period	**From**	**To**	**Major Road: Both App. (VPH)**	**Minor Road: High App. (VPH)**	**Total**
1	6:00	7:00	193	122	315
2	7:00	8:00	674	225	899
3	8:00	9:00	597	162	759
4	9:00	10:00	256	94	350
5	10:00	11:00	213	75	288
6	11:00	12:00	261	141	402
7	12:00	13:00	294	153	447
8	13:00	14:00	287	236	523
9	14:00	15:00	265	241	506
10	15:00	16:00	409	296	705
11	16:00	17:00	543	428	971
12	17:00	18:00	533	443	976
13	18:00	19:00	366	235	601
14	19:00	20:00	367	173	540
15	20:00	21:00	0	0	0
16	21:00	22:00	0	0	0

Warrant 2: Four-Hour Volume 70%

Warrant Evaluated? Yes
Warrant Satisfied? Yes
Manually Set To:

Hour Start	17:00	16:00	7:00	8:00
Major Road Vol.	533	543	674	597
Minor Road Vol.	443	428	225	162



Warrant 3: Peak Hour Volume 70%

Warrant Evaluated? No **Warrant Satisfied? N/A** **Manually Set To:**

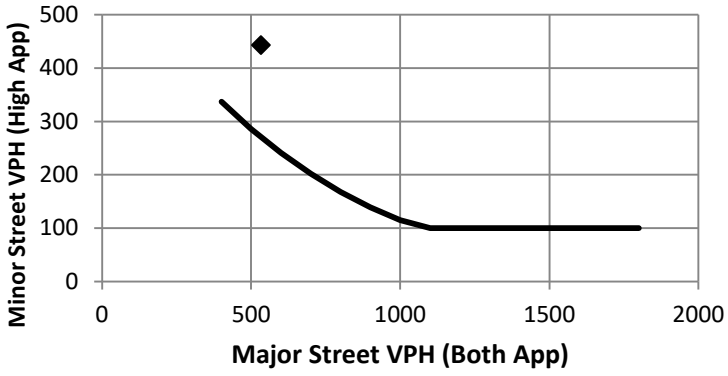
Condition justifying use of warrant:

Criteria		Met?
Delay on Minor Approach	5	
Volume on Minor Approach	150	
Total Entering Volume (veh/h)	800	

Manually Set Peak Hour?

Peak Hour	Major Road Vol. (Both App.)	Minor Road Vol. (High App.)
17:00	533	443

Figure 4C-4 Warrant 3, Peak Hour (70% Factor)



Warrant 4: Pedestrian Volume 70%

Warrant Evaluated? No **Warrant Satisfied? N/A** **Manually Set To:**

Criterion A: Four Hour

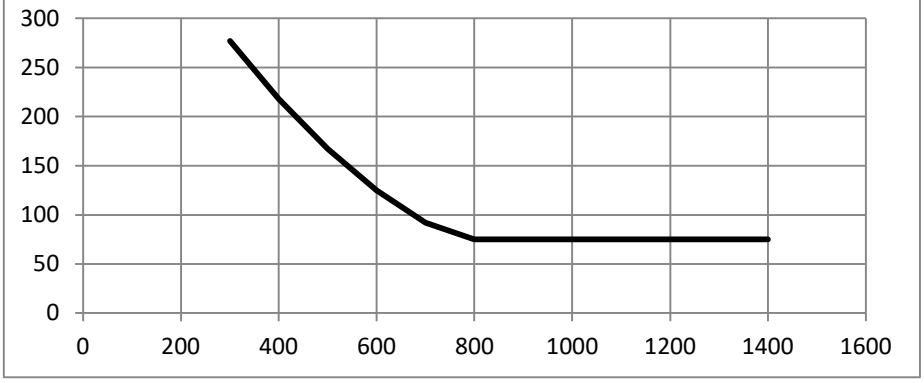
Hour (Start)	Pedestrian Volume	Major Road Vol.
		0
		0
		0
		0

Manually Set Major Rd Vol?

Avg. walk speed less than 3.5 ft/s?

Criterion A Satisfied?

Figure 4C-6 Warrant 4, Pedestrian Four-Hour Volume (70% Factor)

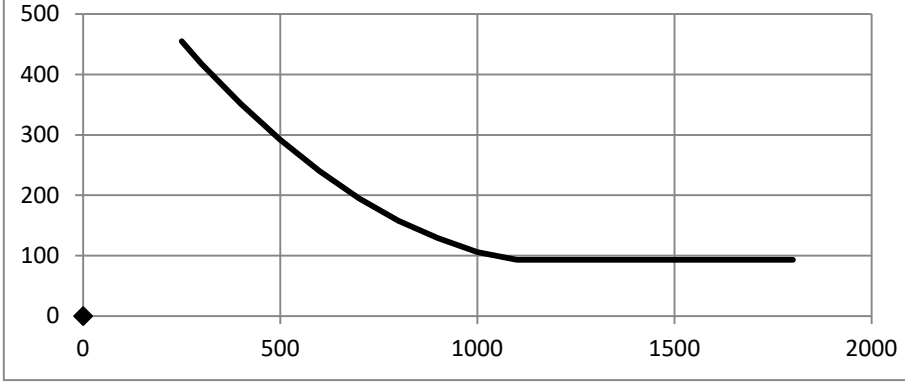


Criterion B: Peak Hour

Peak Hour	Pedestrian Vol.	Major Road Vol.
0:00	0	0

Criterion B Satisfied?

Figure 4C-8 Warrant 4, Pedestrian Peak Hour (70% Factor)



Warrant 5: School Crossing 70%

Warrant Evaluated? No **Warrant Satisfied? N/A** **Manually Set To:**

	Criteria	Fulfilled?
1	There are a MINIMUM of 20 school children during the highest crossing hour.	
2	There are fewer adequate gaps in the major road traffic stream during the period when the school children are using the crossing than the number of minutes in the same period.	
3	The nearest traffic signal along the major road is located more than 300 ft away. Or, the nearest traffic signal is within 300 ft but the proposed traffic signal will not restrict the progressive movement of traffic.	

Warrant 6: Coordinated Signal System 70%

Warrant Evaluated? No **Warrant Satisfied? N/A** **Manually Set To:**

	Criteria	Fulfilled?
1	Signal spacing > 1000 ft	
2	On a one-way road or a road that has traffic predominantly in one direction, the adjacent signals are so far apart that they do not provide the necessary degree of vehicle platooning.	
3	On a two-way road, adjacent signals do not provide the necessary degree of platooning and the proposed and the adjacent signals will collectively provide a progressive operation.	

Warrant 7: Crash Experience 70%

Warrant Evaluated? No **Warrant Satisfied? N/A** **Manually Set To:**

	Criteria		Met?	Fulfilled?
1	Adequate trial of other remedial measures has failed to reduce crash frequency.			No
	Measures Tried:			
2	Five or more reported crashes, of types susceptible to correction by signal, have occurred within a 12 month period.	# of crashes per 12 months		No
3	Warrant 1, Condition A (80%)		Yes	Yes
	Warrant 1, Condition B (80%)		No	
	Warrant 4, Criterion A (80%)		No	
	Warrant 4, Criterion B (80%)		No	

Warrant 8: Roadway Network 70%

Warrant Evaluated? No **Warrant Satisfied? N/A** **Manually Set To:**

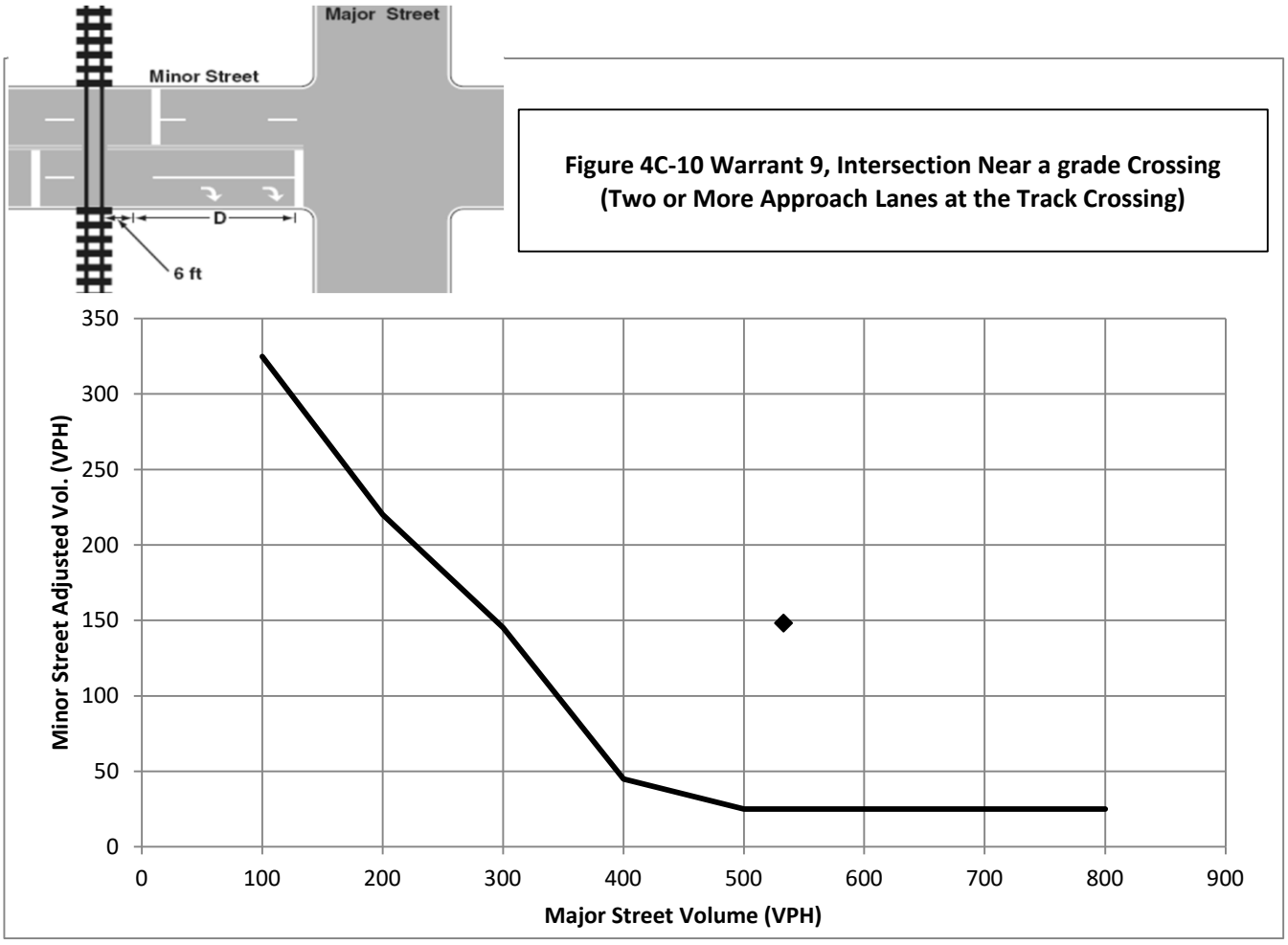
	Criteria					Met?	Fulfilled?
1	Total entering volume of at least 1,000 veh/h during typical weekday peak hour				976	No	No
	Five-year projected volumes that satisfy one or more of Warrants 1, 2, or 3.					No	
2	Total entering vol. of at least 1,000 veh/h for each of any 5 hrs of non-normal business day (Sat. or Sun.)						
		Hour					
		Volume					

	Characteristics of Major Routes - Select yes if all intersecting routes have characteristic	Fulfilled?
1	Part of the road or highway system that serves as the principal roadway network for through traffic flow	
2	Rural or suburban highway outside of, entering, or traversing a city	
3	Appears as a major route on an official plan	

Warrant 9: Intersection Near a Grade Crossing 70%

Warrant Evaluated? No **Warrant Satisfied? N/A** **Manually Set To:**

Adjustment Factors			Manually Set Peak Hour?				
Rail Traffic per Day	% High Occupancy Buses on Minor Road	% Tractor-Trailer Trucks on Minor Road	D	Peak Hour	Major Road Vol.	Minor Road Vol.	Adjusted Minor Vol.
1	0	0% to 2.5%	660	17:00	533	443	148.405



Conclusions/Comments:

Updated: 12/6/2017

APPENDIX D

Traffic Control Analysis/Modeling

Traffic Analysis

Lacy Road & Fitchrona Road

HCS7 Two-Way Stop-Control Report

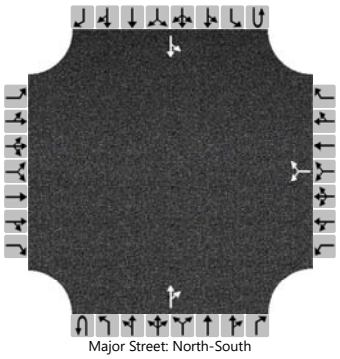
General Information

Analyst	
Agency/Co.	KL Engineering
Date Performed	2020-04-02
Analysis Year	2020
Time Analyzed	AM Peak
Intersection Orientation	North-South
Project Description	Existing

Site Information

Intersection	Lacy Rd & Fitchrona Rd
Jurisdiction	
East/West Street	Lacy Rd
North/South Street	Fitchrona Rd
Peak Hour Factor	0.94
Analysis Time Period (hrs)	0.25

Lanes



Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LR					TR		LT		
Volume (veh/h)						17		231			176	30		208	65	
Percent Heavy Vehicles (%)						4		4						5		
Proportion Time Blocked																
Percent Grade (%)						0										
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)						7.1		6.2						4.1		
Critical Headway (sec)						6.44		6.24						4.15		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.54		3.34						2.25		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)							264							221		
Capacity, c (veh/h)							753							1333		
v/c Ratio							0.35							0.17		
95% Queue Length, Q_{95} (veh)							1.6							0.6		
Control Delay (s/veh)							12.3							8.2		
Level of Service (LOS)							B							A		
Approach Delay (s/veh)						12.3								6.6		
Approach LOS						B										

HCS7 Two-Way Stop-Control Report

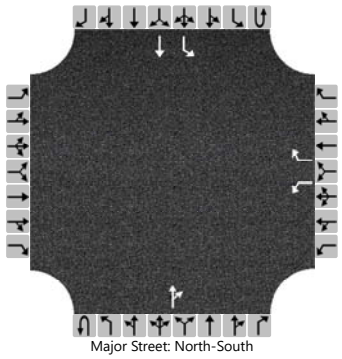
General Information

Analyst	
Agency/Co.	KL Engineering
Date Performed	2020-04-02
Analysis Year	2020
Time Analyzed	AM Peak
Intersection Orientation	North-South
Project Description	Lane Improvements

Site Information

Intersection	Lacy Rd & Fitchrona Rd
Jurisdiction	
East/West Street	Lacy Rd
North/South Street	Fitchrona Rd
Peak Hour Factor	0.94
Analysis Time Period (hrs)	0.25

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		1	0	1	0	0	1	0	0	1	1	0
Configuration						L		R				TR		L	T	
Volume (veh/h)						17		231			176	30		208	65	
Percent Heavy Vehicles (%)						4		4						5		
Proportion Time Blocked																
Percent Grade (%)						0										
Right Turn Channelized						No										
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)						7.1		6.2						4.1		
Critical Headway (sec)						6.44		6.24						4.15		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.54		3.34						2.25		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						18		246						221		
Capacity, c (veh/h)						329		832						1333		
v/c Ratio						0.05		0.30						0.17		
95% Queue Length, Q_{95} (veh)						0.2		1.2						0.6		
Control Delay (s/veh)						16.6		11.1						8.2		
Level of Service (LOS)						C		B						A		
Approach Delay (s/veh)						11.5								6.3		
Approach LOS						B										

HCS7 All-Way Stop Control Report

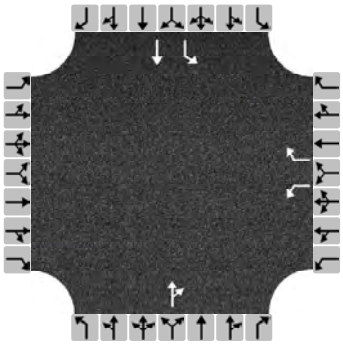
General Information

Analyst	
Agency/Co.	KL Engineering
Date Performed	4/20/2020
Analysis Year	2020
Analysis Time Period (hrs)	0.25
Time Analyzed	AM Peak
Project Description	AWSC Alternative

Site Information

Intersection	Lacy Rd & Fitchrona Rd
Jurisdiction	
East/West Street	Lacy Road
North/South Street	Fitchrona Road
Peak Hour Factor	0.94

Lanes



Vehicle Volume and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume				17		231		176	30	208	65	
% Thrus in Shared Lane												
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration				L	R		TR			L	T	
Flow Rate, v (veh/h)				18	246		219			221	69	
Percent Heavy Vehicles				2	2		2			2	2	

Departure Headway and Service Time

Initial Departure Headway, hd (s)				3.20	3.20		3.20			3.20	3.20	
Initial Degree of Utilization, x				0.016	0.218		0.195			0.197	0.061	
Final Departure Headway, hd (s)				6.39	5.18		5.38			6.02	5.51	
Final Degree of Utilization, x				0.032	0.354		0.328			0.370	0.106	
Move-Up Time, m (s)				2.3	2.3		2.0			2.3	2.3	
Service Time, ts (s)				4.09	2.88		3.38			3.72	3.21	

Capacity, Delay and Level of Service

Flow Rate, v (veh/h)				18	246		219			221	69	
Capacity				563	694		669			598	653	
95% Queue Length, Q_{95} (veh)				0.1	1.6		1.4			1.7	0.4	
Control Delay (s/veh)				9.3	10.7		11.0			12.2	8.9	
Level of Service, LOS				A	B		B			B	A	
Approach Delay (s/veh)				10.6			11.0			11.4		
Approach LOS				B			B			B		
Intersection Delay, s/veh | LOS	11.0						B					

Movement	WBL	WBR	NBT	NBR	SBL	SBT	
Lane Configurations							
Traffic Volume (veh/h)	17	231	176	30	208	65	
Future Volume (veh/h)	17	231	176	30	208	65	
Initial Q (Qb), veh	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach	No		No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1826	1826	
Adj Flow Rate, veh/h	18	152	187	32	221	69	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	
Percent Heavy Veh, %	4	4	4	4	5	5	
Cap, veh/h	381	339	582	100	609	694	
Arrive On Green	0.22	0.22	0.38	0.38	0.38	0.38	
Sat Flow, veh/h	1753	1560	1531	262	1134	1826	
Grp Volume(v), veh/h	18	152	0	219	221	69	
Grp Sat Flow(s),veh/h/ln	1753	1560	0	1794	1134	1826	
Q Serve(g_s), s	0.2	2.2	0.0	2.2	4.5	0.6	
Cycle Q Clear(g_c), s	0.2	2.2	0.0	2.2	6.7	0.6	
Prop In Lane	1.00	1.00		0.15	1.00		
Lane Grp Cap(c), veh/h	381	339	0	682	609	694	
V/C Ratio(X)	0.05	0.45	0.00	0.32	0.36	0.10	
Avail Cap(c_a), veh/h	1681	1496	0	2407	1701	2451	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	8.1	8.9	0.0	5.7	8.1	5.2	
Incr Delay (d2), s/veh	0.1	0.9	0.0	0.3	0.4	0.1	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(95%),veh/ln	0.1	0.7	0.0	0.6	1.0	0.2	
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	8.1	9.8	0.0	6.0	8.4	5.3	
LnGrp LOS	A	A	A	A	A	A	
Approach Vol, veh/h	170		219			290	
Approach Delay, s/veh	9.6		6.0			7.7	
Approach LOS	A		A			A	

Timer - Assigned Phs		2				6	8
Phs Duration (G+Y+Rc), s		15.4				15.4	10.7
Change Period (Y+Rc), s		5.5				5.5	5.0
Max Green Setting (Gmax), s		35.0				35.0	25.0
Max Q Clear Time (g_c+I1), s		4.2				8.7	4.2
Green Ext Time (p_c), s		1.2				1.2	0.5

Intersection Summary		
HCM 6th Ctrl Delay	7.6	
HCM 6th LOS	A	

HCS7 Roundabouts Report

General Information

Analyst	
Agency or Co.	KL Engineering
Date Performed	2020-04-02
Analysis Year	2020
Time Analyzed	AM Peak
Project Description	Roundabout Alternative

Site Information

Intersection	Lacy Rd & Fitchrona Rd
E/W Street Name	Lacy Rd
N/S Street Name	Fitchrona Rd
Analysis Time Period (hrs)	0.25
Peak Hour Factor	0.94
Jurisdiction	

Volume Adjustments and Site Characteristics

Approach	EB				WB				NB				SB			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Number of Lanes (N)	0	0	0	0	0	0	1	0	0	0	1	0	0	0	1	0
Lane Assignment							LR				TR				LT	
Volume (V), veh/h					0	17		231	0		176	30	0	208	65	
Percent Heavy Vehicles, %					4	4		4	4		4	4	5	5	5	
Flow Rate (v_{PCE}), pc/h					0	19		256	0		195	33	0	232	73	
Right-Turn Bypass	None				None				None				None			
Conflicting Lanes					1				1				1			
Pedestrians Crossing, p/h					0				0				0			

Critical and Follow-Up Headway Adjustment

Approach	EB			WB			NB			SB		
Lane	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Critical Headway (s)					4.2000			4.2000			4.2000	
Follow-Up Headway (s)					2.8000			2.8000			2.8000	

Flow Computations, Capacity and v/c Ratios

Approach	EB			WB			NB			SB		
Lane	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Entry Flow (v_e), pc/h					275			228			305	
Entry Volume veh/h					264			219			290	
Circulating Flow (v_c), pc/h	324			195			232			19		
Exiting Flow (v_{ex}), pc/h	265			0			451			92		
Capacity (c_{pce}), pc/h					1105			1073			1267	
Capacity (c), veh/h					1062			1032			1207	
v/c Ratio (x)					0.25			0.21			0.24	

Delay and Level of Service

Approach	EB			WB			NB			SB		
Lane	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Lane Control Delay (d), s/veh					5.8			5.5			5.1	
Lane LOS					A			A			A	
95% Queue, veh					1.0			0.8			0.9	
Approach Delay, s/veh				5.8			5.5			5.1		
Approach LOS				A			A			A		
Intersection Delay, s/veh | LOS	5.4						A					

HCS7 Two-Way Stop-Control Report

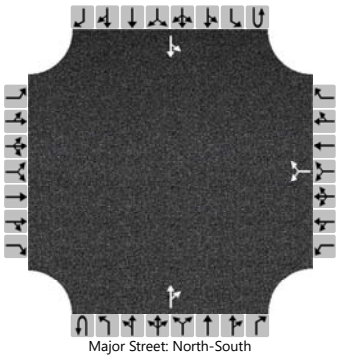
General Information

Analyst	
Agency/Co.	KL Engineering
Date Performed	2020-04-02
Analysis Year	2020
Time Analyzed	PM Peak
Intersection Orientation	North-South
Project Description	Existing

Site Information

Intersection	Lacy Rd & Fitchrona Rd
Jurisdiction	
East/West Street	Lacy Rd
North/South Street	Fitchrona Rd
Peak Hour Factor	0.93
Analysis Time Period (hrs)	0.25

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LR					TR		LT		
Volume (veh/h)						32		262			107	20		190	164	
Percent Heavy Vehicles (%)						2		2						2		
Proportion Time Blocked																
Percent Grade (%)						0										
Right Turn Channelized																
Median Type | Storage						Undivided										

Critical and Follow-up Headways

Base Critical Headway (sec)						7.1		6.2						4.1		
Critical Headway (sec)						6.42		6.22						4.12		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.52		3.32						2.22		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)							316							204		
Capacity, c (veh/h)							781							1447		
v/c Ratio							0.40							0.14		
95% Queue Length, Q_{95} (veh)							2.0							0.5		
Control Delay (s/veh)							12.7							7.9		
Level of Service (LOS)							B							A		
Approach Delay (s/veh)						12.7							4.8			
Approach LOS						B										

HCS7 Two-Way Stop-Control Report

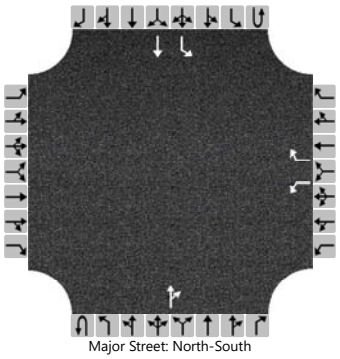
General Information

Analyst	
Agency/Co.	KL Engineering
Date Performed	2020-04-02
Analysis Year	2020
Time Analyzed	PM Peak
Intersection Orientation	North-South
Project Description	Lane Improvements

Site Information

Intersection	Lacy Rd & Fitchrona Rd
Jurisdiction	
East/West Street	Lacy Rd
North/South Street	Fitchrona Rd
Peak Hour Factor	0.93
Analysis Time Period (hrs)	0.25

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		1	0	1	0	0	1	0	0	1	1	0
Configuration						L		R				TR		L	T	
Volume (veh/h)						32		262			107	20		190	164	
Percent Heavy Vehicles (%)						2		2						2		
Proportion Time Blocked																
Percent Grade (%)						0										
Right Turn Channelized						No										
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)						7.1		6.2						4.1		
Critical Headway (sec)						6.42		6.22						4.12		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.52		3.32						2.22		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						34		282						204		
Capacity, c (veh/h)						343		925						1447		
v/c Ratio						0.10		0.30						0.14		
95% Queue Length, Q_{95} (veh)						0.3		1.3						0.5		
Control Delay (s/veh)						16.7		10.6						7.9		
Level of Service (LOS)						C		B						A		
Approach Delay (s/veh)						11.3								4.2		
Approach LOS						B										

HCS7 All-Way Stop Control Report

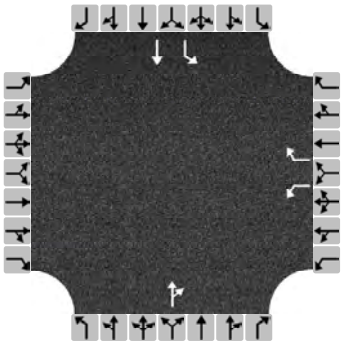
General Information

Analyst	
Agency/Co.	KL Engineering
Date Performed	4/20/2020
Analysis Year	2020
Analysis Time Period (hrs)	0.25
Time Analyzed	PM Peak
Project Description	AWSC Alternative

Site Information

Intersection	Lacy Rd & Fitchrona Rd
Jurisdiction	
East/West Street	Lacy Road
North/South Street	Fitchrona Road
Peak Hour Factor	0.93

Lanes



Vehicle Volume and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume				32		262		107	20	190	164	
% Thrus in Shared Lane												
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration				L	R		TR			L	T	
Flow Rate, v (veh/h)				34	282		137			204	176	
Percent Heavy Vehicles				2	2		2			2	2	

Departure Headway and Service Time

Initial Departure Headway, hd (s)				3.20	3.20		3.20			3.20	3.20	
Initial Degree of Utilization, x				0.031	0.250		0.121			0.182	0.157	
Final Departure Headway, hd (s)				6.39	5.19		5.60			6.07	5.57	
Final Degree of Utilization, x				0.061	0.406		0.213			0.344	0.273	
Move-Up Time, m (s)				2.3	2.3		2.0			2.3	2.3	
Service Time, ts (s)				4.09	2.89		3.60			3.77	3.27	

Capacity, Delay and Level of Service

Flow Rate, v (veh/h)				34	282		137			204	176	
Capacity				563	694		642			593	647	
95% Queue Length, Q_{95} (veh)				0.2	2.0		0.8			1.5	1.1	
Control Delay (s/veh)				9.5	11.4		10.1			11.9	10.3	
Level of Service, LOS				A	B		B			B	B	
Approach Delay (s/veh)				11.2			10.1			11.2		
Approach LOS				B			B			B		
Intersection Delay, s/veh | LOS	11.0						B					

Movement	WBL	WBR	NBT	NBR	SBL	SBT	
Lane Configurations							
Traffic Volume (veh/h)	32	262	107	20	190	164	
Future Volume (veh/h)	32	262	107	20	190	164	
Initial Q (Qb), veh	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach	No		No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	
Adj Flow Rate, veh/h	34	175	115	22	204	176	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	
Percent Heavy Veh, %	2	2	2	2	2	2	
Cap, veh/h	435	387	515	99	642	632	
Arrive On Green	0.24	0.24	0.34	0.34	0.34	0.34	
Sat Flow, veh/h	1781	1585	1526	292	1252	1870	
Grp Volume(v), veh/h	34	175	0	137	204	176	
Grp Sat Flow(s),veh/h/ln	1781	1585	0	1818	1252	1870	
Q Serve(g_s), s	0.4	2.4	0.0	1.4	3.5	1.7	
Cycle Q Clear(g_c), s	0.4	2.4	0.0	1.4	4.9	1.7	
Prop In Lane	1.00	1.00		0.16	1.00		
Lane Grp Cap(c), veh/h	435	387	0	614	642	632	
V/C Ratio(X)	0.08	0.45	0.00	0.22	0.32	0.28	
Avail Cap(c_a), veh/h	1773	1577	0	2533	1964	2606	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	7.3	8.1	0.0	6.0	7.7	6.1	
Incr Delay (d2), s/veh	0.1	0.8	0.0	0.2	0.3	0.2	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(95%),veh/ln	0.1	0.7	0.0	0.4	0.8	0.5	
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	7.4	8.9	0.0	6.1	8.0	6.3	
LnGrp LOS	A	A	A	A	A	A	
Approach Vol, veh/h	209		137			380	
Approach Delay, s/veh	8.6		6.1			7.2	
Approach LOS	A		A			A	

Timer - Assigned Phs		2			6	8
Phs Duration (G+Y+Rc), s		14.0			14.0	11.1
Change Period (Y+Rc), s		5.5			5.5	5.0
Max Green Setting (Gmax), s		35.0			35.0	25.0
Max Q Clear Time (g_c+I1), s		3.4			6.9	4.4
Green Ext Time (p_c), s		0.7			1.6	0.6

Intersection Summary	
HCM 6th Ctrl Delay	7.4
HCM 6th LOS	A

HCS7 Roundabouts Report

General Information

Analyst	
Agency or Co.	KL Engineering
Date Performed	2020-04-02
Analysis Year	2020
Time Analyzed	PM Peak
Project Description	Roundabout Alternative

Site Information

Intersection	Lacy Rd & Fitchrona Rd
E/W Street Name	Lacy Rd
N/S Street Name	Fitchrona Rd
Analysis Time Period (hrs)	0.25
Peak Hour Factor	0.93
Jurisdiction	

Volume Adjustments and Site Characteristics

Approach	EB				WB				NB				SB			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Number of Lanes (N)	0	0	0	0	0	0	1	0	0	0	1	0	0	0	1	0
Lane Assignment							LR				TR				LT	
Volume (V), veh/h					0	32		262	0		107	20	0	190	164	
Percent Heavy Vehicles, %					2	2		2	2		2	2	2	2	2	
Flow Rate (v_{PCE}), pc/h					0	35		287	0		117	22	0	208	180	
Right-Turn Bypass	None				None				None				None			
Conflicting Lanes					1				1				1			
Pedestrians Crossing, p/h					0				0				0			

Critical and Follow-Up Headway Adjustment

Approach	EB			WB			NB			SB		
Lane	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Critical Headway (s)					4.2000			4.2000			4.2000	
Follow-Up Headway (s)					2.8000			2.8000			2.8000	

Flow Computations, Capacity and v/c Ratios

Approach	EB			WB			NB			SB		
Lane	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Entry Flow (v_e), pc/h					322			139			388	
Entry Volume veh/h					316			136			380	
Circulating Flow (v_c), pc/h	423			117			208			35		
Exiting Flow (v_{ex}), pc/h	230			0			404			215		
Capacity (c_{pce}), pc/h					1174			1094			1251	
Capacity (c), veh/h					1151			1072			1227	
v/c Ratio (x)					0.27			0.13			0.31	

Delay and Level of Service

Approach	EB			WB			NB			SB		
Lane	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Lane Control Delay (d), s/veh					5.7			4.5			5.8	
Lane LOS					A			A			A	
95% Queue, veh					1.1			0.4			1.3	
Approach Delay, s/veh				5.7			4.5			5.8		
Approach LOS				A			A			A		
Intersection Delay, s/veh | LOS	5.5						A					

HCS7 Two-Way Stop-Control Report

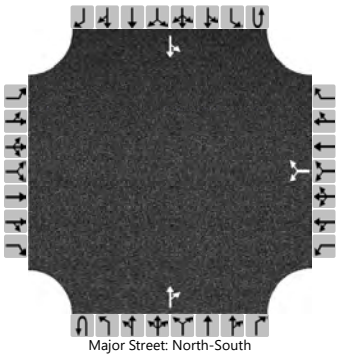
General Information

Analyst	
Agency/Co.	KL Engineering
Date Performed	2020-04-02
Analysis Year	2041
Time Analyzed	AM Peak
Intersection Orientation	North-South
Project Description	Existing

Site Information

Intersection	Lacy Rd & Fitchrona Rd
Jurisdiction	
East/West Street	Lacy Rd
North/South Street	Fitchrona Rd
Peak Hour Factor	0.94
Analysis Time Period (hrs)	0.25

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LR					TR		LT		
Volume (veh/h)						42		284			247	75		249	91	
Percent Heavy Vehicles (%)						4		4						5		
Proportion Time Blocked																
Percent Grade (%)						0										
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						7.1		6.2						4.1		
Critical Headway (sec)						6.44		6.24						4.15		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.54		3.34						2.25		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)							347							265		
Capacity, c (veh/h)							568							1200		
v/c Ratio							0.61							0.22		
95% Queue Length, Q_{95} (veh)							4.1							0.8		
Control Delay (s/veh)							20.8							8.8		
Level of Service (LOS)							C							A		
Approach Delay (s/veh)					20.8								7.0			
Approach LOS					C											

HCS7 Two-Way Stop-Control Report

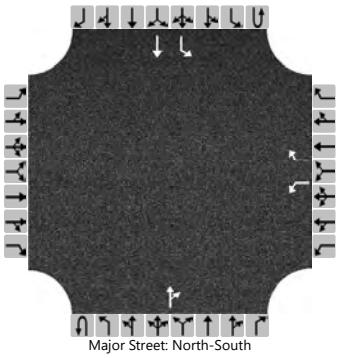
General Information

Analyst	
Agency/Co.	KL Engineering
Date Performed	2020-04-02
Analysis Year	2041
Time Analyzed	AM Peak
Intersection Orientation	North-South
Project Description	Lane Improvements

Site Information

Intersection	Lacy Rd & Fitchrona Rd
Jurisdiction	
East/West Street	Lacy Rd
North/South Street	Fitchrona Rd
Peak Hour Factor	0.94
Analysis Time Period (hrs)	0.25

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		1	0	1	0	0	1	0	0	1	1	0
Configuration						L		R				TR		L	T	
Volume (veh/h)						42		284			247	75		249	91	
Percent Heavy Vehicles (%)						4		4						5		
Proportion Time Blocked																
Percent Grade (%)						0										
Right Turn Channelized						No										
Median Type | Storage						Undivided										

Critical and Follow-up Headways

Base Critical Headway (sec)						7.1		6.2						4.1		
Critical Headway (sec)						6.44		6.24						4.15		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.54		3.34						2.25		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						45		302						265		
Capacity, c (veh/h)						229		732						1200		
v/c Ratio						0.19		0.41						0.22		
95% Queue Length, Q_{95} (veh)						0.7		2.0						0.8		
Control Delay (s/veh)						24.4		13.3						8.8		
Level of Service (LOS)						C		B						A		
Approach Delay (s/veh)						14.8								6.5		
Approach LOS						B										

HCS7 All-Way Stop Control Report

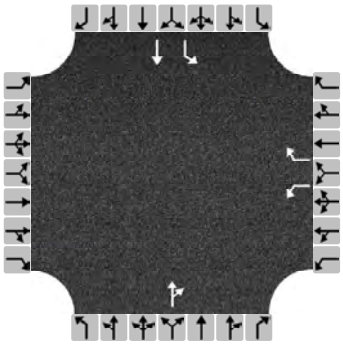
General Information

Analyst	
Agency/Co.	KL Engineering
Date Performed	4/20/2020
Analysis Year	2041
Analysis Time Period (hrs)	0.25
Time Analyzed	AM Peak
Project Description	AWSC Alternative

Site Information

Intersection	Lacy Rd & Fitchrona Rd
Jurisdiction	
East/West Street	Lacy Road
North/South Street	Fitchrona Road
Peak Hour Factor	0.94

Lanes



Vehicle Volume and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume				42		284		247	75	249	91	
% Thrus in Shared Lane												
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration				L	R		TR			L	T	
Flow Rate, v (veh/h)				45	302		343			265	97	
Percent Heavy Vehicles				2	2		2			2	2	

Departure Headway and Service Time

Initial Departure Headway, hd (s)				3.20	3.20		3.20			3.20	3.20	
Initial Degree of Utilization, x				0.040	0.269		0.304			0.235	0.086	
Final Departure Headway, hd (s)				6.99	5.78		5.81			6.59	6.08	
Final Degree of Utilization, x				0.087	0.485		0.552			0.485	0.164	
Move-Up Time, m (s)				2.3	2.3		2.0			2.3	2.3	
Service Time, ts (s)				4.69	3.48		3.81			4.29	3.78	

Capacity, Delay and Level of Service

Flow Rate, v (veh/h)				45	302		343			265	97	
Capacity				515	622		620			546	592	
95% Queue Length, Q_{95} (veh)				0.3	2.7		3.4			2.6	0.6	
Control Delay (s/veh)				10.4	13.8		15.7			15.3	10.0	
Level of Service, LOS				B	B		C			C	A	
Approach Delay (s/veh)				13.4			15.7			13.9		
Approach LOS				B			C			B		
Intersection Delay, s/veh | LOS	14.3						B					

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	42	284	247	75	249	91
Future Volume (veh/h)	42	284	247	75	249	91
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1826	1826
Adj Flow Rate, veh/h	45	302	263	80	265	97
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	4	4	4	4	5	5
Cap, veh/h	444	395	628	191	533	847
Arrive On Green	0.25	0.25	0.46	0.46	0.46	0.46
Sat Flow, veh/h	1753	1560	1355	412	1013	1826
Grp Volume(v), veh/h	45	302	0	343	265	97
Grp Sat Flow(s),veh/h/ln	1753	1560	0	1767	1013	1826
Q Serve(g_s), s	0.7	6.7	0.0	4.8	8.7	1.1
Cycle Q Clear(g_c), s	0.7	6.7	0.0	4.8	13.5	1.1
Prop In Lane	1.00	1.00		0.23	1.00	
Lane Grp Cap(c), veh/h	444	395	0	819	533	847
V/C Ratio(X)	0.10	0.76	0.00	0.42	0.50	0.11
Avail Cap(c_a), veh/h	1181	1051	0	1666	1019	1722
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	10.6	12.8	0.0	6.6	11.1	5.6
Incr Delay (d2), s/veh	0.1	3.1	0.0	0.3	0.7	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.4	3.5	0.0	1.8	2.5	0.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	10.7	15.9	0.0	7.0	11.8	5.7
LnGrp LOS	B	B	A	A	B	A
Approach Vol, veh/h	347		343			362
Approach Delay, s/veh	15.2		7.0			10.2
Approach LOS	B		A			B

Timer - Assigned Phs		2			6	8
Phs Duration (G+Y+Rc), s		22.7			22.7	14.4
Change Period (Y+Rc), s		5.5			5.5	5.0
Max Green Setting (Gmax), s		35.0			35.0	25.0
Max Q Clear Time (g_c+I1), s		6.8			15.5	8.7
Green Ext Time (p_c), s		2.0			1.7	1.0

Intersection Summary	
HCM 6th Ctrl Delay	10.8
HCM 6th LOS	B

HCS7 Roundabouts Report

General Information

Analyst	
Agency or Co.	KL Engineering
Date Performed	2020-04-02
Analysis Year	2041
Time Analyzed	AM Peak
Project Description	Roundabout Alternative

Site Information

Intersection	Lacy Rd & Fitchrona Rd
E/W Street Name	Lacy Rd
N/S Street Name	Fitchrona Rd
Analysis Time Period (hrs)	0.25
Peak Hour Factor	0.94
Jurisdiction	

Volume Adjustments and Site Characteristics

Approach	EB				WB				NB				SB			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Number of Lanes (N)	0	0	0	0	0	0	1	0	0	0	1	0	0	0	1	0
Lane Assignment							LR				TR				LT	
Volume (V), veh/h					0	42		284	0		247	75	0	249	91	
Percent Heavy Vehicles, %					4	4		4	4		4	4	5	5	5	
Flow Rate (v_{PCE}), pc/h					0	46		314	0		273	83	0	278	102	
Right-Turn Bypass	None				None				None				None			
Conflicting Lanes					1				1				1			
Pedestrians Crossing, p/h					0				0				0			

Critical and Follow-Up Headway Adjustment

Approach	EB			WB			NB			SB		
Lane	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Critical Headway (s)					4.2000			4.2000			4.2000	
Follow-Up Headway (s)					2.8000			2.8000			2.8000	

Flow Computations, Capacity and v/c Ratios

Approach	EB			WB			NB			SB		
Lane	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Entry Flow (v_e), pc/h					360			356			380	
Entry Volume, veh/h					346			342			362	
Circulating Flow (v_c), pc/h	426			273			278			46		
Exiting Flow (v_{ex}), pc/h	361			0			587			148		
Capacity (c_{pce}), pc/h					1040			1036			1241	
Capacity (c), veh/h					1000			996			1181	
v/c Ratio (x)					0.35			0.34			0.31	

Delay and Level of Service

Approach	EB			WB			NB			SB		
Lane	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Lane Control Delay (d), s/veh					7.2			7.2			5.9	
Lane LOS					A			A			A	
95% Queue, veh					1.6			1.5			1.3	
Approach Delay, s/veh				7.2			7.2			5.9		
Approach LOS				A			A			A		
Intersection Delay, s/veh | LOS	6.8						A					

HCS7 Two-Way Stop-Control Report

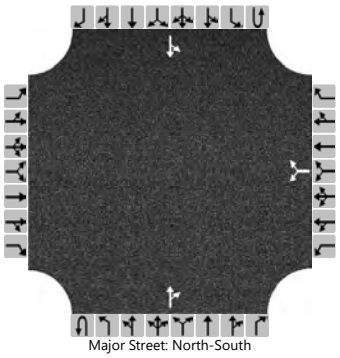
General Information

Analyst	
Agency/Co.	KL Engineering
Date Performed	2020-04-02
Analysis Year	2041
Time Analyzed	PM Peak
Intersection Orientation	North-South
Project Description	Existing

Site Information

Intersection	Lacy Rd & Fitchrona Rd
Jurisdiction	
East/West Street	Lacy Rd
North/South Street	Fitchrona Rd
Peak Hour Factor	0.93
Analysis Time Period (hrs)	0.25

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LR					TR		LT		
Volume (veh/h)						82		316			153	52		226	227	
Percent Heavy Vehicles (%)						2		2						2		
Proportion Time Blocked																
Percent Grade (%)						0										
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						7.1		6.2						4.1		
Critical Headway (sec)						6.42		6.22						4.12		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.52		3.32						2.22		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)							428							243		
Capacity, c (veh/h)							554							1349		
v/c Ratio							0.77							0.18		
95% Queue Length, Q_{95} (veh)							7.0							0.7		
Control Delay (s/veh)							30.1							8.3		
Level of Service (LOS)							D							A		
Approach Delay (s/veh)					30.1								5.0			
Approach LOS					D											

HCS7 Two-Way Stop-Control Report

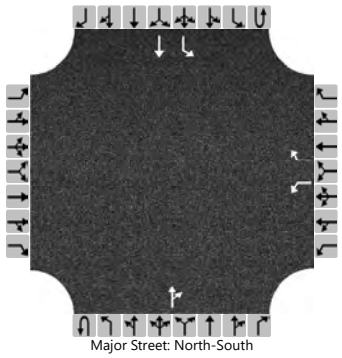
General Information

Analyst	
Agency/Co.	KL Engineering
Date Performed	2020-04-02
Analysis Year	2041
Time Analyzed	PM Peak
Intersection Orientation	North-South
Project Description	Lane Improvements

Site Information

Intersection	Lacy Rd & Fitchrona Rd
Jurisdiction	
East/West Street	Lacy Rd
North/South Street	Fitchrona Rd
Peak Hour Factor	0.93
Analysis Time Period (hrs)	0.25

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		1	0	1	0	0	1	0	0	1	1	0
Configuration						L		R				TR		L	T	
Volume (veh/h)						82		316			153	5		226	227	
Percent Heavy Vehicles (%)						2		2						2		
Proportion Time Blocked																
Percent Grade (%)						0										
Right Turn Channelized						No										
Median Type | Storage						Undivided										

Critical and Follow-up Headways

Base Critical Headway (sec)						7.1		6.2						4.1		
Critical Headway (sec)						6.42		6.22						4.12		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.52		3.32						2.22		

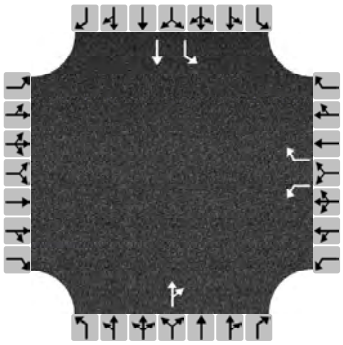
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						88		340						243		
Capacity, c (veh/h)						257		877						1407		
v/c Ratio						0.34		0.39						0.17		
95% Queue Length, Q_{95} (veh)						1.5		1.8						0.6		
Control Delay (s/veh)						26.2		11.7						8.1		
Level of Service (LOS)						D		B						A		
Approach Delay (s/veh)						14.7								4.0		
Approach LOS						B										

HCS7 All-Way Stop Control Report

General Information		Site Information	
Analyst		Intersection	Lacy Rd & Fitchrona Rd
Agency/Co.	KL Engineering	Jurisdiction	
Date Performed	4/20/2020	East/West Street	Lacy Road
Analysis Year	2041	North/South Street	Fitchrona Road
Analysis Time Period (hrs)	0.25	Peak Hour Factor	0.93
Time Analyzed	PM Peak		
Project Description	AWSC Alternative		

Lanes



Vehicle Volume and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume				82		316		153	52	226	227	
% Thrus in Shared Lane												
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration				L	R		TR			L	T	
Flow Rate, v (veh/h)				88	340		220			243	244	
Percent Heavy Vehicles				2	2		2			2	2	

Departure Headway and Service Time

Initial Departure Headway, hd (s)				3.20	3.20		3.20			3.20	3.20	
Initial Degree of Utilization, x				0.078	0.302		0.196			0.216	0.217	
Final Departure Headway, hd (s)				6.97	5.76		6.11			6.65	6.15	
Final Degree of Utilization, x				0.171	0.544		0.374			0.449	0.417	
Move-Up Time, m (s)				2.3	2.3		2.0			2.3	2.3	
Service Time, ts (s)				4.67	3.46		4.11			4.35	3.85	

Capacity, Delay and Level of Service

Flow Rate, v (veh/h)				88	340		220			243	244	
Capacity				517	625		589			541	586	
95% Queue Length, Q_{95} (veh)				0.6	3.3		1.7			2.3	2.0	
Control Delay (s/veh)				11.1	15.1		12.7			14.7	13.2	
Level of Service, LOS				B	C		B			B	B	
Approach Delay (s/veh)				14.3			12.7			13.9		
Approach LOS				B			B			B		
Intersection Delay, s/veh | LOS	13.8						B					

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	82	316	153	52	226	227
Future Volume (veh/h)	82	316	153	52	226	227
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	88	340	165	56	243	244
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	512	456	529	180	578	741
Arrive On Green	0.29	0.29	0.40	0.40	0.40	0.40
Sat Flow, veh/h	1781	1585	1336	453	1160	1870
Grp Volume(v), veh/h	88	340	0	221	243	244
Grp Sat Flow(s),veh/h/ln	1781	1585	0	1789	1160	1870
Q Serve(g_s), s	1.2	6.5	0.0	2.8	6.1	3.0
Cycle Q Clear(g_c), s	1.2	6.5	0.0	2.8	8.9	3.0
Prop In Lane	1.00	1.00		0.25	1.00	
Lane Grp Cap(c), veh/h	512	456	0	708	578	741
V/C Ratio(X)	0.17	0.75	0.00	0.31	0.42	0.33
Avail Cap(c_a), veh/h	1341	1193	0	1886	1341	1972
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	8.9	10.7	0.0	6.9	10.0	7.0
Incr Delay (d2), s/veh	0.2	2.4	0.0	0.2	0.5	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.6	3.1	0.0	1.1	1.8	1.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	9.0	13.2	0.0	7.2	10.5	7.2
LnGrp LOS	A	B	A	A	B	A
Approach Vol, veh/h	428		221			487
Approach Delay, s/veh	12.3		7.2			8.8
Approach LOS	B		A			A

Timer - Assigned Phs		2			6	8
Phs Duration (G+Y+Rc), s		18.7			18.7	14.6
Change Period (Y+Rc), s		5.5			5.5	5.0
Max Green Setting (Gmax), s		35.0			35.0	25.0
Max Q Clear Time (g_c+I1), s		4.8			10.9	8.5
Green Ext Time (p_c), s		1.2			2.3	1.3

Intersection Summary	
HCM 6th Ctrl Delay	9.8
HCM 6th LOS	A

HCS7 Roundabouts Report

General Information

Analyst	
Agency or Co.	KL Engineering
Date Performed	2020-04-02
Analysis Year	2041
Time Analyzed	PM Peak
Project Description	Roundabout Alternative

Site Information

Intersection	Lacy Rd & Fitchrona Rd
E/W Street Name	Lacy Rd
N/S Street Name	Fitchrona Rd
Analysis Time Period (hrs)	0.25
Peak Hour Factor	0.93
Jurisdiction	

Volume Adjustments and Site Characteristics

Approach	EB				WB				NB				SB			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Number of Lanes (N)	0	0	0	0	0	0	1	0	0	0	1	0	0	0	1	0
Lane Assignment							LR				TR				LT	
Volume (V), veh/h					0	82		316	0		153	52	0	226	227	
Percent Heavy Vehicles, %					2	2		2	2		2	2	2	2	2	
Flow Rate (v_{PCE}), pc/h					0	90		347	0		168	57	0	248	249	
Right-Turn Bypass	None				None				None				None			
Conflicting Lanes					1				1				1			
Pedestrians Crossing, p/h					0				0				0			

Critical and Follow-Up Headway Adjustment

Approach	EB			WB			NB			SB		
Lane	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Critical Headway (s)					4.2000			4.2000			4.2000	
Follow-Up Headway (s)					2.8000			2.8000			2.8000	

Flow Computations, Capacity and v/c Ratios

Approach	EB			WB			NB			SB		
Lane	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Entry Flow (v_e), pc/h					437			225			497	
Entry Volume, veh/h					428			221			487	
Circulating Flow (v_c), pc/h	587			168			248			90		
Exiting Flow (v_{ex}), pc/h	305			0			515			339		
Capacity (c_{pce}), pc/h					1128			1060			1199	
Capacity (c), veh/h					1106			1039			1175	
v/c Ratio (x)					0.39			0.21			0.41	

Delay and Level of Service

Approach	EB			WB			NB			SB		
Lane	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Lane Control Delay (d), s/veh					7.2			5.5			7.3	
Lane LOS					A			A			A	
95% Queue, veh					1.9			0.8			2.1	
Approach Delay, s/veh				7.2			5.5			7.3		
Approach LOS				A			A			A		
Intersection Delay, s/veh | LOS	6.9						A					

Traffic Analysis

Lacy Road & S Seminole Hwy

HCS7 All-Way Stop Control Report

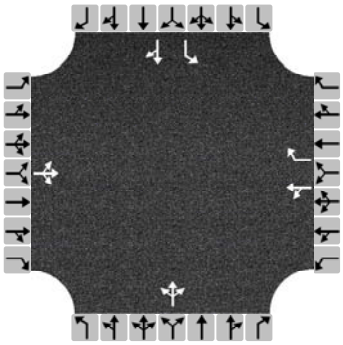
General Information

Analyst	
Agency/Co.	KL Engineering
Date Performed	2020-04-08
Analysis Year	2020
Analysis Time Period (hrs)	0.25
Time Analyzed	Existig
Project Description	AM Peak

Site Information

Intersection	Lacy Rd & Seminole Hwy
Jurisdiction	
East/West Street	Lacy Rd
North/South Street	Seminole Hwy
Peak Hour Factor	0.95

Lanes



Vehicle Volume and Adjustments

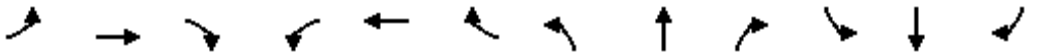
Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume	57	211	0	40	217	284	0	169	63	120	40	28
% Thrus in Shared Lane												
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LTR			LT	R		LTR			L	TR	
Flow Rate, v (veh/h)	282			271	299		244			126	72	
Percent Heavy Vehicles	4			4	4		3			10	10	

Departure Headway and Service Time

Initial Departure Headway, hd (s)	3.20			3.20	3.20		3.20			3.20	3.20	
Initial Degree of Utilization, x	0.251			0.240	0.266		0.217			0.112	0.064	
Final Departure Headway, hd (s)	7.23			6.92	6.13		7.33			8.31	7.50	
Final Degree of Utilization, x	0.566			0.520	0.509		0.497			0.291	0.149	
Move-Up Time, m (s)	2.0			2.3	2.3		2.0			2.3	2.3	
Service Time, ts (s)	5.23			4.62	3.83		5.33			6.01	5.20	

Capacity, Delay and Level of Service

Flow Rate, v (veh/h)	282			271	299		244			126	72	
Capacity	498			520	587		491			433	480	
95% Queue Length, Q_{95} (veh)	3.5			3.0	2.9		2.7			1.2	0.5	
Control Delay (s/veh)	19.2			16.9	15.0		17.4			14.4	11.5	
Level of Service, LOS	C			C	C		C			B	B	
Approach Delay (s/veh)	19.2			15.9			17.4			13.3		
Approach LOS	C			C			C			B		
Intersection Delay, s/veh | LOS	16.5						C					



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	57	211	0	40	217	284	0	169	63	120	40	28
Future Volume (veh/h)	57	211	0	40	217	284	0	169	63	120	40	28
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1856	1856	1856	1752	1752	1752
Adj Flow Rate, veh/h	60	222	0	42	228	185	0	178	66	126	42	29
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	3	3	3	10	10	10
Cap, veh/h	417	511	0	453	511	433	250	396	147	458	296	204
Arrive On Green	0.28	0.28	0.00	0.28	0.28	0.28	0.00	0.31	0.31	0.31	0.31	0.31
Sat Flow, veh/h	958	1841	0	1141	1841	1560	1319	1291	479	1064	965	667
Grp Volume(v), veh/h	60	222	0	42	228	185	0	0	244	126	0	71
Grp Sat Flow(s),veh/h/ln	958	1841	0	1141	1841	1560	1319	0	1769	1064	0	1632
Q Serve(g_s), s	1.6	2.9	0.0	0.9	2.9	2.8	0.0	0.0	3.2	3.1	0.0	0.9
Cycle Q Clear(g_c), s	4.5	2.9	0.0	3.8	2.9	2.8	0.0	0.0	3.2	6.3	0.0	0.9
Prop In Lane	1.00		0.00	1.00		1.00	1.00		0.27	1.00		0.41
Lane Grp Cap(c), veh/h	417	511	0	453	511	433	250	0	542	458	0	500
V/C Ratio(X)	0.14	0.43	0.00	0.09	0.45	0.43	0.00	0.00	0.45	0.28	0.00	0.14
Avail Cap(c_a), veh/h	1480	2553	0	1718	2553	2163	1217	0	1840	1238	0	1697
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	10.5	8.6	0.0	10.1	8.6	8.5	0.0	0.0	8.0	10.6	0.0	7.2
Incr Delay (d2), s/veh	0.2	0.6	0.0	0.1	0.6	0.7	0.0	0.0	0.6	0.3	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.4	1.1	0.0	0.2	1.1	0.9	0.0	0.0	1.0	0.7	0.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.6	9.1	0.0	10.2	9.2	9.2	0.0	0.0	8.6	10.9	0.0	7.4
LnGrp LOS	B	A	A	B	A	A	A	A	A	B	A	A
Approach Vol, veh/h		282			455			244			197	
Approach Delay, s/veh		9.5			9.3			8.6			9.6	
Approach LOS		A			A			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		14.0		14.8		14.0		14.8				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		40.0		30.0		40.0		30.0				
Max Q Clear Time (g_c+I1), s		6.5		8.3		5.8		5.2				
Green Ext Time (p_c), s		1.4		0.8		1.9		1.2				

Intersection Summary												
HCM 6th Ctrl Delay			9.3									
HCM 6th LOS			A									

HCS7 Roundabouts Report

General Information		Site Information	
Analyst		Intersection	Lacy Road & Seminole Hwy
Agency or Co.	KL Engineering	E/W Street Name	Lacy Road
Date Performed	2020-04-02	N/S Street Name	Seminole Hwy
Analysis Year	2020	Analysis Time Period (hrs)	0.25
Time Analyzed	AM Peak	Peak Hour Factor	0.95
Project Description	Roundabout Alternative	Jurisdiction	

Volume Adjustments and Site Characteristics

Approach	EB				WB				NB				SB			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Number of Lanes (N)	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0
Lane Assignment			LTR				LT				LTR				LTR	
Volume (V), veh/h	0	57	211	0	0	40	217	284	0	0	169	63	0	120	40	28
Percent Heavy Vehicles, %	6	6	6	6	4	4	4	4	3	3	3	3	10	10	10	10
Flow Rate (v_{PCE}), pc/h	0	64	235	0	0	44	238	311	0	0	183	68	0	139	46	32
Right-Turn Bypass	None				Yielding				None				None			
Conflicting Lanes	1				1				1				1			
Pedestrians Crossing, p/h	0				0				0				0			

Critical and Follow-Up Headway Adjustment

Approach	EB			WB			NB			SB		
Lane	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Critical Headway (s)		4.2000			4.2000	4.2000		4.2000			4.2000	
Follow-Up Headway (s)		2.8000			2.8000	2.8000		2.8000			2.8000	

Flow Computations, Capacity and v/c Ratios

Approach	EB			WB			NB			SB		
Lane	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Entry Flow (v_e), pc/h		299			282	311		251			217	
Entry Volume veh/h		282			271	299		244			197	
Circulating Flow (v_c), pc/h	229			247			438			282		
Exiting Flow (v_{ex}), pc/h	442			270			247			90		
Capacity (c_{pce}), pc/h		1076			1061	1061		915			1032	
Capacity (c), veh/h		1015			1020	1020		888			939	
v/c Ratio (x)		0.28			0.27	0.29		0.27			0.21	

Delay and Level of Service

Approach	EB			WB			NB			SB		
Lane	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Lane Control Delay (d), s/veh		6.3			6.1	6.5		7.0			5.9	
Lane LOS		A			A	A		A			A	
95% Queue, veh		1.1			1.1	1.2		1.1			0.8	
Approach Delay, s/veh	6.3			6.3			7.0			5.9		
Approach LOS	A			A			A			A		
Intersection Delay, s/veh | LOS	6.4						A					

HCS7 All-Way Stop Control Report

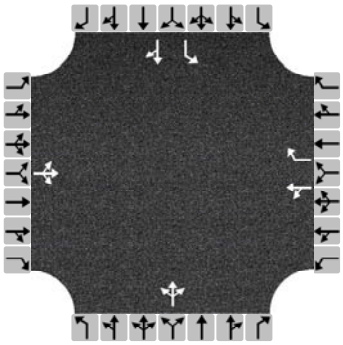
General Information

Analyst	
Agency/Co.	KL Engineering
Date Performed	2020-04-08
Analysis Year	2020
Analysis Time Period (hrs)	0.25
Time Analyzed	Existing
Project Description	PM Peak

Site Information

Intersection	Lacy Rd & Seminole Hwy
Jurisdiction	
East/West Street	Lacy Rd
North/South Street	Seminole Hwy
Peak Hour Factor	0.93

Lanes



Vehicle Volume and Adjustments

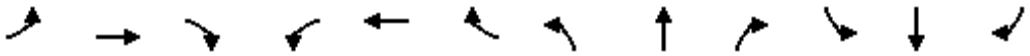
Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume	21	192	2	28	239	92	2	61	29	249	181	70
% Thrus in Shared Lane												
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LTR			LT	R		LTR			L	TR	
Flow Rate, v (veh/h)	231			287	99		99			268	270	
Percent Heavy Vehicles	2			2	2		2			2	2	

Departure Headway and Service Time

Initial Departure Headway, hd (s)	3.20			3.20	3.20		3.20			3.20	3.20	
Initial Degree of Utilization, x	0.205			0.255	0.088		0.088			0.238	0.240	
Final Departure Headway, hd (s)	7.13			7.01	6.24		7.38			7.23	6.53	
Final Degree of Utilization, x	0.458			0.559	0.172		0.203			0.538	0.489	
Move-Up Time, m (s)	2.0			2.3	2.3		2.0			2.3	2.3	
Service Time, ts (s)	5.13			4.71	3.94		5.38			4.93	4.23	

Capacity, Delay and Level of Service

Flow Rate, v (veh/h)	231			287	99		99			268	270	
Capacity	505			514	577		488			498	551	
95% Queue Length, Q_{95} (veh)	2.4			3.4	0.6		0.8			3.1	2.7	
Control Delay (s/veh)	16.0			18.2	10.2		12.3			18.0	15.3	
Level of Service, LOS	C			C	B		B			C	C	
Approach Delay (s/veh)	16.0			16.2			12.3			16.7		
Approach LOS	C			C			B			C		
Intersection Delay, s/veh | LOS	16.1						C					



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	192	2	28	239	92	2	61	29	249	281	70
Future Volume (veh/h)	21	192	2	28	239	92	2	61	29	249	281	70
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	23	206	2	30	257	61	2	66	31	268	302	75
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	369	467	5	414	472	400	431	444	208	658	533	132
Arrive On Green	0.25	0.25	0.25	0.25	0.25	0.25	0.37	0.37	0.37	0.37	0.37	0.37
Sat Flow, veh/h	1062	1849	18	1174	1870	1585	1006	1203	565	1298	1446	359
Grp Volume(v), veh/h	23	0	208	30	257	61	2	0	97	268	0	377
Grp Sat Flow(s),veh/h/ln	1062	0	1867	1174	1870	1585	1006	0	1769	1298	0	1806
Q Serve(g_s), s	0.6	0.0	3.0	0.7	3.8	0.9	0.1	0.0	1.2	5.5	0.0	5.3
Cycle Q Clear(g_c), s	4.4	0.0	3.0	3.7	3.8	0.9	5.3	0.0	1.2	6.7	0.0	5.3
Prop In Lane	1.00		0.01	1.00		1.00	1.00		0.32	1.00		0.20
Lane Grp Cap(c), veh/h	369	0	471	414	472	400	431	0	652	658	0	666
V/C Ratio(X)	0.06	0.00	0.44	0.07	0.54	0.15	0.00	0.00	0.15	0.41	0.00	0.57
Avail Cap(c_a), veh/h	1441	0	2357	1599	2362	2001	1012	0	1675	1409	0	1710
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	12.2	0.0	10.0	11.5	10.3	9.2	10.1	0.0	6.7	8.9	0.0	8.0
Incr Delay (d2), s/veh	0.1	0.0	0.6	0.1	1.0	0.2	0.0	0.0	0.1	0.4	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.2	0.0	1.5	0.2	2.0	0.4	0.0	0.0	0.4	1.7	0.0	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.2	0.0	10.6	11.6	11.2	9.4	10.1	0.0	6.8	9.3	0.0	8.7
LnGrp LOS	B	A	B	B	B	A	B	A	A	A	A	A
Approach Vol, veh/h		231			348			99			645	
Approach Delay, s/veh		10.8			10.9			6.9			9.0	
Approach LOS		B			B			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		14.0		17.7		14.0		17.7				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		40.0		30.0		40.0		30.0				
Max Q Clear Time (g_c+I1), s		6.4		8.7		5.8		7.3				
Green Ext Time (p_c), s		1.2		3.0		1.8		0.4				

Intersection Summary												
HCM 6th Ctrl Delay			9.6									
HCM 6th LOS			A									

HCS7 Roundabouts Report

General Information		Site Information	
Analyst		Intersection	Lacy Road & Seminole Hwy
Agency or Co.	KL Engineering	E/W Street Name	Lacy Road
Date Performed	2020-04-02	N/S Street Name	Seminole Hwy
Analysis Year	2020	Analysis Time Period (hrs)	0.25
Time Analyzed	PM Peak	Peak Hour Factor	0.93
Project Description	Roundabout Alternative	Jurisdiction	

Volume Adjustments and Site Characteristics

Approach	EB				WB				NB				SB			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Number of Lanes (N)	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0
Lane Assignment			LTR				LT				LTR				LTR	
Volume (V), veh/h	0	21	192	2	0	28	239	92	0	2	61	29	0	249	181	70
Percent Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Flow Rate (v_{PCE}), pc/h	0	23	211	2	0	31	262	101	0	2	67	32	0	273	199	77
Right-Turn Bypass	None				Yielding				None				None			
Conflicting Lanes	1				1				1				1			
Pedestrians Crossing, p/h	0				0				0				0			

Critical and Follow-Up Headway Adjustment

Approach	EB			WB			NB			SB		
Lane	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Critical Headway (s)		4.2000			4.2000	4.2000		4.2000			4.2000	
Follow-Up Headway (s)		2.8000			2.8000	2.8000		2.8000			2.8000	

Flow Computations, Capacity and v/c Ratios

Approach	EB			WB			NB			SB		
Lane	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Entry Flow (v_e), pc/h		236			293	101		101			549	
Entry Volume veh/h		231			287	99		99			538	
Circulating Flow (v_c), pc/h		503			92			507			295	
Exiting Flow (v_{ex}), pc/h		516			341			90			232	
Capacity (c_{pce}), pc/h		869			1197	1199		867			1022	
Capacity (c), veh/h		852			1173	1175		850			1002	
v/c Ratio (x)		0.27			0.24	0.08		0.12			0.54	

Delay and Level of Service

Approach	EB			WB			NB			SB		
Lane	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Lane Control Delay (d), s/veh		7.1			5.3	3.8		5.4			10.4	
Lane LOS		A			A	A		A			B	
95% Queue, veh		1.1			1.0	0.3		0.4			3.3	
Approach Delay, s/veh	7.1			4.9			5.4			10.4		
Approach LOS	A			A			A			B		
Intersection Delay, s/veh | LOS	7.7						A					

HCS7 All-Way Stop Control Report

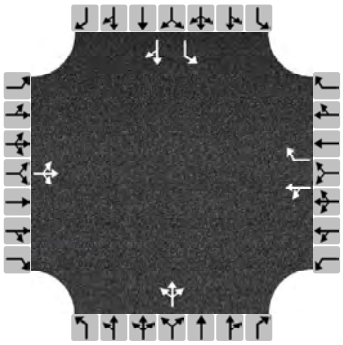
General Information

Analyst	
Agency/Co.	KL Engineering
Date Performed	2020-04-08
Analysis Year	2041
Analysis Time Period (hrs)	0.25
Time Analyzed	Existing
Project Description	AM Peak

Site Information

Intersection	Lacy Rd & Seminole Hwy
Jurisdiction	
East/West Street	Lacy Rd
North/South Street	Seminole Hwy
Peak Hour Factor	0.95

Lanes



Vehicle Volume and Adjustments

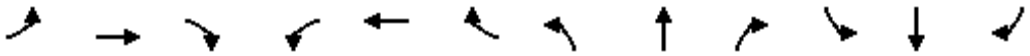
Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume	79	263	0	47	273	304	0	214	71	128	52	39
% Thrus in Shared Lane												
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LTR			LT	R		LTR			L	TR	
Flow Rate, v (veh/h)	360			337	320		300			135	96	
Percent Heavy Vehicles	4			4	4		3			10	10	

Departure Headway and Service Time

Initial Departure Headway, hd (s)	3.20			3.20	3.20		3.20			3.20	3.20	
Initial Degree of Utilization, x	0.320			0.299	0.284		0.267			0.120	0.085	
Final Departure Headway, hd (s)	8.15			7.92	7.12		8.31			9.42	8.59	
Final Degree of Utilization, x	0.815			0.741	0.633		0.692			0.353	0.229	
Move-Up Time, m (s)	2.0			2.3	2.3		2.0			2.3	2.3	
Service Time, ts (s)	6.15			5.62	4.82		6.31			7.12	6.29	

Capacity, Delay and Level of Service

Flow Rate, v (veh/h)	360			337	320		300			135	96	
Capacity	442			455	506		433			382	419	
95% Queue Length, Q_{95} (veh)	7.6			6.1	4.4		5.2			1.6	0.9	
Control Delay (s/veh)	38.2			30.0	21.3		28.0			17.2	13.8	
Level of Service, LOS	E			D	C		D			C	B	
Approach Delay (s/veh)	38.2			25.8			28.0			15.8		
Approach LOS	E			D			D			C		
Intersection Delay, s/veh | LOS	27.6						D					



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	79	263	0	47	273	304	0	214	71	128	52	39
Future Volume (veh/h)	79	263	0	47	273	304	0	214	71	128	52	39
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1856	1856	1856	1752	1752	1752
Adj Flow Rate, veh/h	83	277	0	49	287	320	0	225	75	135	55	41
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	3	3	3	10	10	10
Cap, veh/h	364	608	0	428	608	515	199	451	150	405	316	235
Arrive On Green	0.33	0.33	0.00	0.33	0.33	0.33	0.00	0.34	0.34	0.34	0.34	0.34
Sat Flow, veh/h	801	1841	0	1085	1841	1560	1289	1332	444	1011	932	695
Grp Volume(v), veh/h	83	277	0	49	287	320	0	0	300	135	0	96
Grp Sat Flow(s),veh/h/ln	801	1841	0	1085	1841	1560	1289	0	1776	1011	0	1627
Q Serve(g_s), s	3.3	4.3	0.0	1.4	4.5	6.3	0.0	0.0	4.9	4.4	0.0	1.5
Cycle Q Clear(g_c), s	7.8	4.3	0.0	5.7	4.5	6.3	0.0	0.0	4.9	9.3	0.0	1.5
Prop In Lane	1.00		0.00	1.00		1.00	1.00		0.25	1.00		0.43
Lane Grp Cap(c), veh/h	364	608	0	428	608	515	199	0	601	405	0	551
V/C Ratio(X)	0.23	0.46	0.00	0.11	0.47	0.62	0.00	0.00	0.50	0.33	0.00	0.17
Avail Cap(c_a), veh/h	984	2033	0	1268	2033	1723	830	0	1471	900	0	1347
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	12.7	9.6	0.0	11.8	9.6	10.2	0.0	0.0	9.5	13.2	0.0	8.4
Incr Delay (d2), s/veh	0.3	0.5	0.0	0.1	0.6	1.2	0.0	0.0	0.6	0.5	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.8	2.1	0.0	0.4	2.2	2.8	0.0	0.0	2.3	1.4	0.0	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.0	10.1	0.0	11.9	10.2	11.5	0.0	0.0	10.2	13.7	0.0	8.6
LnGrp LOS	B	B	A	B	B	B	A	A	B	B	A	A
Approach Vol, veh/h		360			656			300			231	
Approach Delay, s/veh		10.8			10.9			10.2			11.6	
Approach LOS		B			B			B			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		18.0		18.3		18.0		18.3				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		40.0		30.0		40.0		30.0				
Max Q Clear Time (g_c+I1), s		9.8		11.3		8.3		6.9				
Green Ext Time (p_c), s		2.1		1.0		3.0		1.7				

Intersection Summary												
HCM 6th Ctrl Delay			10.9									
HCM 6th LOS			B									

HCS7 Roundabouts Report

General Information

Analyst	
Agency or Co.	KL Engineering
Date Performed	2020-04-02
Analysis Year	2041
Time Analyzed	AM Peak
Project Description	Roundabout Alternative

Site Information

Intersection	Lacy Road & Seminole Hwy
E/W Street Name	Lacy Road
N/S Street Name	Seminole Hwy
Analysis Time Period (hrs)	0.25
Peak Hour Factor	0.95
Jurisdiction	

Volume Adjustments and Site Characteristics

Approach	EB				WB				NB				SB			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Number of Lanes (N)	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0
Lane Assignment			LTR				LT				LTR				LTR	
Volume (V), veh/h	0	79	263	0	0	47	273	304	0	0	214	71	0	128	52	39
Percent Heavy Vehicles, %	6	6	6	6	4	4	4	4	3	3	3	3	10	10	10	10
Flow Rate (v_{PCE}), pc/h	0	88	293	0	0	51	299	333	0	0	232	77	0	148	60	45
Right-Turn Bypass	None				Yielding				None				None			
Conflicting Lanes	1				1				1				1			
Pedestrians Crossing, p/h	0				0				0				0			

Critical and Follow-Up Headway Adjustment

Approach	EB			WB			NB			SB		
Lane	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Critical Headway (s)		4.2000			4.9763	4.9763		4.2000			4.2000	
Follow-Up Headway (s)		2.8000			2.6087	2.6087		2.8000			2.8000	

Flow Computations, Capacity and v/c Ratios

Approach	EB			WB			NB			SB		
Lane	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Entry Flow (v_e), pc/h		381			350	333		309			253	
Entry Volume, veh/h		359			337	320		300			230	
Circulating Flow (v_c), pc/h	259			320			529			350		
Exiting Flow (v_{ex}), pc/h	518			344			320			111		
Capacity (c_{pce}), pc/h		1051			996	996		852			979	
Capacity (c), veh/h		992			957	957		827			890	
v/c Ratio (x)		0.36			0.35	0.33		0.36			0.26	

Delay and Level of Service

Approach	EB			WB			NB			SB		
Lane	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Lane Control Delay (d), s/veh		7.5			7.5	7.3		8.6			6.7	
Lane LOS		A			A	A		A			A	
95% Queue, veh		1.7			1.6	1.5		1.7			1.0	
Approach Delay, s/veh	7.5			7.4			8.6			6.7		
Approach LOS	A			A			A			A		
Intersection Delay, s/veh | LOS	7.6						A					

HCS7 All-Way Stop Control Report

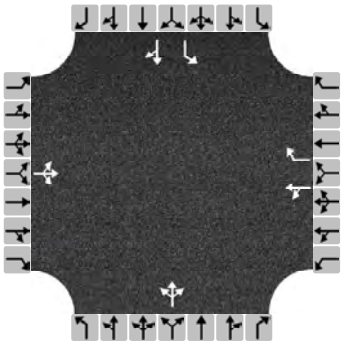
General Information

Analyst	
Agency/Co.	KL Engineering
Date Performed	2020-04-08
Analysis Year	2041
Analysis Time Period (hrs)	0.25
Time Analyzed	Existing
Project Description	PM Peak

Site Information

Intersection	Lacy Rd & Seminole Hwy
Jurisdiction	
East/West Street	Lacy Rd
North/South Street	Seminole Hwy
Peak Hour Factor	0.93

Lanes



Vehicle Volume and Adjustments

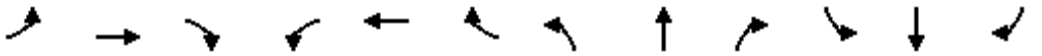
Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume	29	244	2	31	296	95	2	78	33	263	225	99
% Thrus in Shared Lane												
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LTR			LT	R		LTR			L	TR	
Flow Rate, v (veh/h)	296			352	102		122			283	348	
Percent Heavy Vehicles	2			2	2		2			2	2	

Departure Headway and Service Time

Initial Departure Headway, hd (s)	3.20			3.20	3.20		3.20			3.20	3.20	
Initial Degree of Utilization, x	0.263			0.313	0.091		0.108			0.251	0.310	
Final Departure Headway, hd (s)	7.85			7.72	6.96		8.47			7.99	7.26	
Final Degree of Utilization, x	0.645			0.754	0.197		0.286			0.628	0.703	
Move-Up Time, m (s)	2.0			2.3	2.3		2.0			2.3	2.3	
Service Time, ts (s)	5.85			5.42	4.66		6.47			5.69	4.96	

Capacity, Delay and Level of Service

Flow Rate, v (veh/h)	296			352	102		122			283	348	
Capacity	458			466	517		425			450	496	
95% Queue Length, Q_{95} (veh)	4.5			6.4	0.7		1.2			4.2	5.5	
Control Delay (s/veh)	24.0			30.5	11.4		14.8			23.2	25.4	
Level of Service, LOS	C			D	B		B			C	D	
Approach Delay (s/veh)	24.0			26.2			14.8			24.4		
Approach LOS	C			D			B			C		
Intersection Delay, s/veh | LOS	24.1						C					



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	29	244	2	31	296	95	2	78	33	263	225	99
Future Volume (veh/h)	29	244	2	31	296	95	2	78	33	263	225	99
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	31	262	2	33	318	102	2	84	35	283	242	106
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	335	520	4	387	524	444	437	471	196	628	464	203
Arrive On Green	0.28	0.28	0.28	0.28	0.28	0.28	0.38	0.38	0.38	0.38	0.38	0.38
Sat Flow, veh/h	967	1854	14	1115	1870	1585	1033	1254	522	1273	1233	540
Grp Volume(v), veh/h	31	0	264	33	318	102	2	0	119	283	0	348
Grp Sat Flow(s),veh/h/ln	967	0	1868	1115	1870	1585	1033	0	1776	1273	0	1773
Q Serve(g_s), s	1.0	0.0	4.1	0.9	5.1	1.7	0.1	0.0	1.6	6.7	0.0	5.3
Cycle Q Clear(g_c), s	6.2	0.0	4.1	5.0	5.1	1.7	5.4	0.0	1.6	8.2	0.0	5.3
Prop In Lane	1.00		0.01	1.00		1.00	1.00		0.29	1.00		0.30
Lane Grp Cap(c), veh/h	335	0	524	387	524	444	437	0	668	628	0	667
V/C Ratio(X)	0.09	0.00	0.50	0.09	0.61	0.23	0.00	0.00	0.18	0.45	0.00	0.52
Avail Cap(c_a), veh/h	1171	0	2140	1352	2142	1816	936	0	1526	1243	0	1523
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.6	0.0	10.5	12.6	10.9	9.7	10.5	0.0	7.3	10.0	0.0	8.5
Incr Delay (d2), s/veh	0.1	0.0	0.8	0.1	1.1	0.3	0.0	0.0	0.1	0.5	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.3	0.0	2.2	0.3	2.8	0.8	0.0	0.0	0.7	2.2	0.0	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.7	0.0	11.3	12.7	12.0	9.9	10.5	0.0	7.4	10.5	0.0	9.1
LnGrp LOS	B	A	B	B	B	A	B	A	A	B	A	A
Approach Vol, veh/h		295			453			121			631	
Approach Delay, s/veh		11.5			11.6			7.5			9.7	
Approach LOS		B			B			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		15.8		19.1		15.8		19.1				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		40.0		30.0		40.0		30.0				
Max Q Clear Time (g_c+I1), s		8.2		10.2		7.1		7.4				
Green Ext Time (p_c), s		1.6		2.9		2.3		0.5				

Intersection Summary												
HCM 6th Ctrl Delay			10.5									
HCM 6th LOS			B									

HCS7 Roundabouts Report

General Information

Analyst	
Agency or Co.	KL Engineering
Date Performed	2020-04-02
Analysis Year	2041
Time Analyzed	PM Peak
Project Description	Roundabout Alternative

Site Information

Intersection	Lacy Road & Seminole Hwy
E/W Street Name	Lacy Road
N/S Street Name	Seminole Hwy
Analysis Time Period (hrs)	0.25
Peak Hour Factor	0.93
Jurisdiction	

Volume Adjustments and Site Characteristics

Approach	EB				WB				NB				SB			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Number of Lanes (N)	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0
Lane Assignment			LTR				LT				LTR				LTR	
Volume (V), veh/h	0	29	244	2	0	31	296	95	0	2	78	33	0	263	225	99
Percent Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Flow Rate (v_{PCE}), pc/h	0	32	268	2	0	34	325	104	0	2	86	36	0	288	247	109
Right-Turn Bypass	None				Yielding				None				None			
Conflicting Lanes	1				1				1				1			
Pedestrians Crossing, p/h	0				0				0				0			

Critical and Follow-Up Headway Adjustment

Approach	EB			WB			NB			SB		
Lane	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Critical Headway (s)		4.2000			4.2000	4.2000		4.2000			4.2000	
Follow-Up Headway (s)		2.8000			2.8000	2.8000		2.8000			2.8000	

Flow Computations, Capacity and v/c Ratios

Approach	EB			WB			NB			SB		
Lane	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Entry Flow (v_e), pc/h		302			359	104		124			644	
Entry Volume, veh/h		296			352	102		122			631	
Circulating Flow (v_c), pc/h	569			120			588			361		
Exiting Flow (v_{ex}), pc/h	592			436			118			283		
Capacity (c_{pce}), pc/h		826			1171	1173		814			971	
Capacity (c), veh/h		810			1148	1150		798			952	
v/c Ratio (x)		0.37			0.31	0.09		0.15			0.66	

Delay and Level of Service

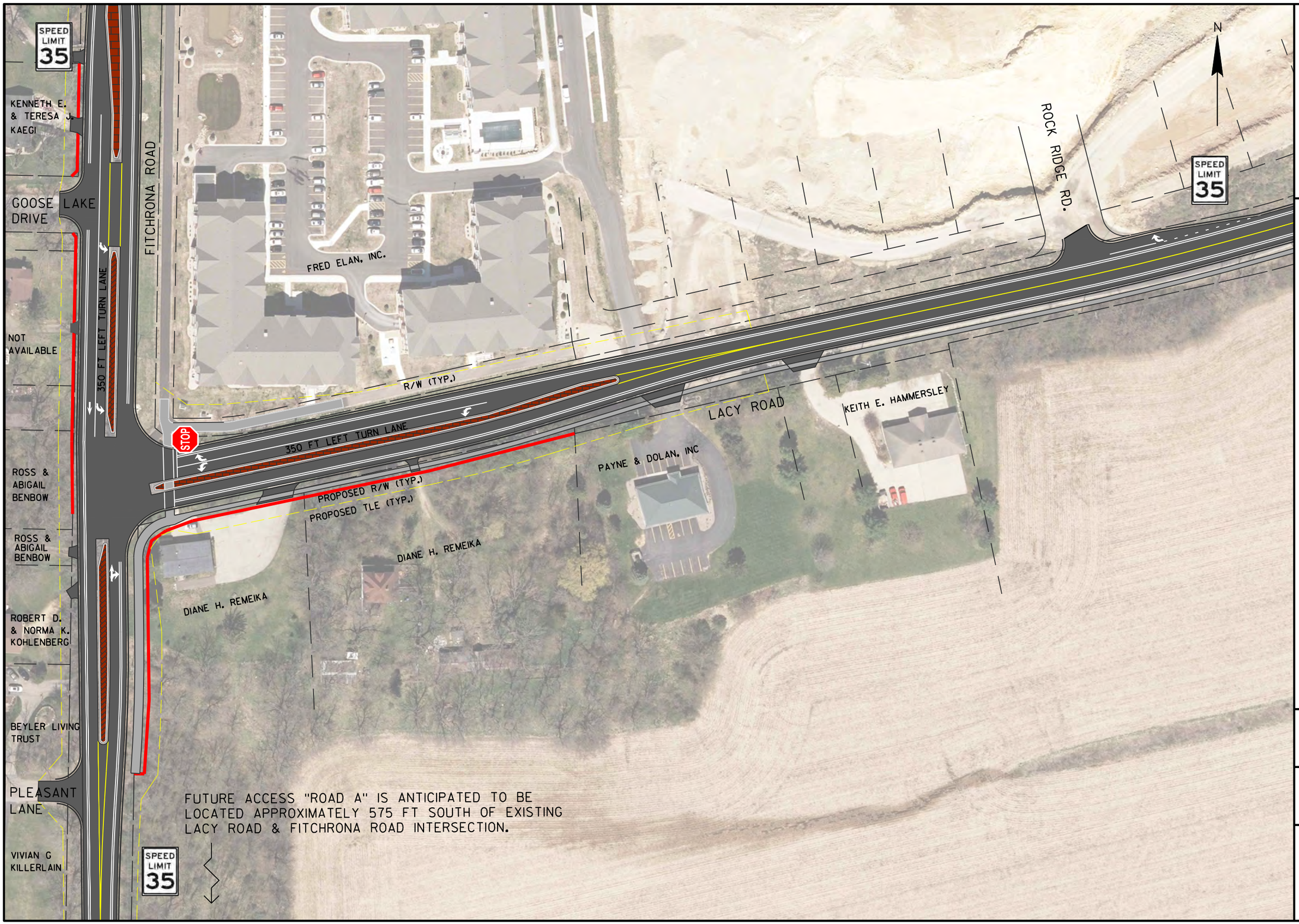
Approach	EB			WB			NB			SB		
Lane	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Lane Control Delay (d), s/veh		8.8			6.0	3.9		6.1			14.2	
Lane LOS		A			A	A		A			B	
95% Queue, veh		1.7			1.3	0.3		0.5			5.2	
Approach Delay, s/veh	8.8			5.6			6.1			14.2		
Approach LOS	A			A			A			B		
Intersection Delay, s/veh | LOS	9.9						A					

APPENDIX E

Intersection Alternatives
Conceptual Drawings

Intersection Alternatives Conceptual Drawings

Lacy Road & Fitchrona Road



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CITY OF FITCHBURG

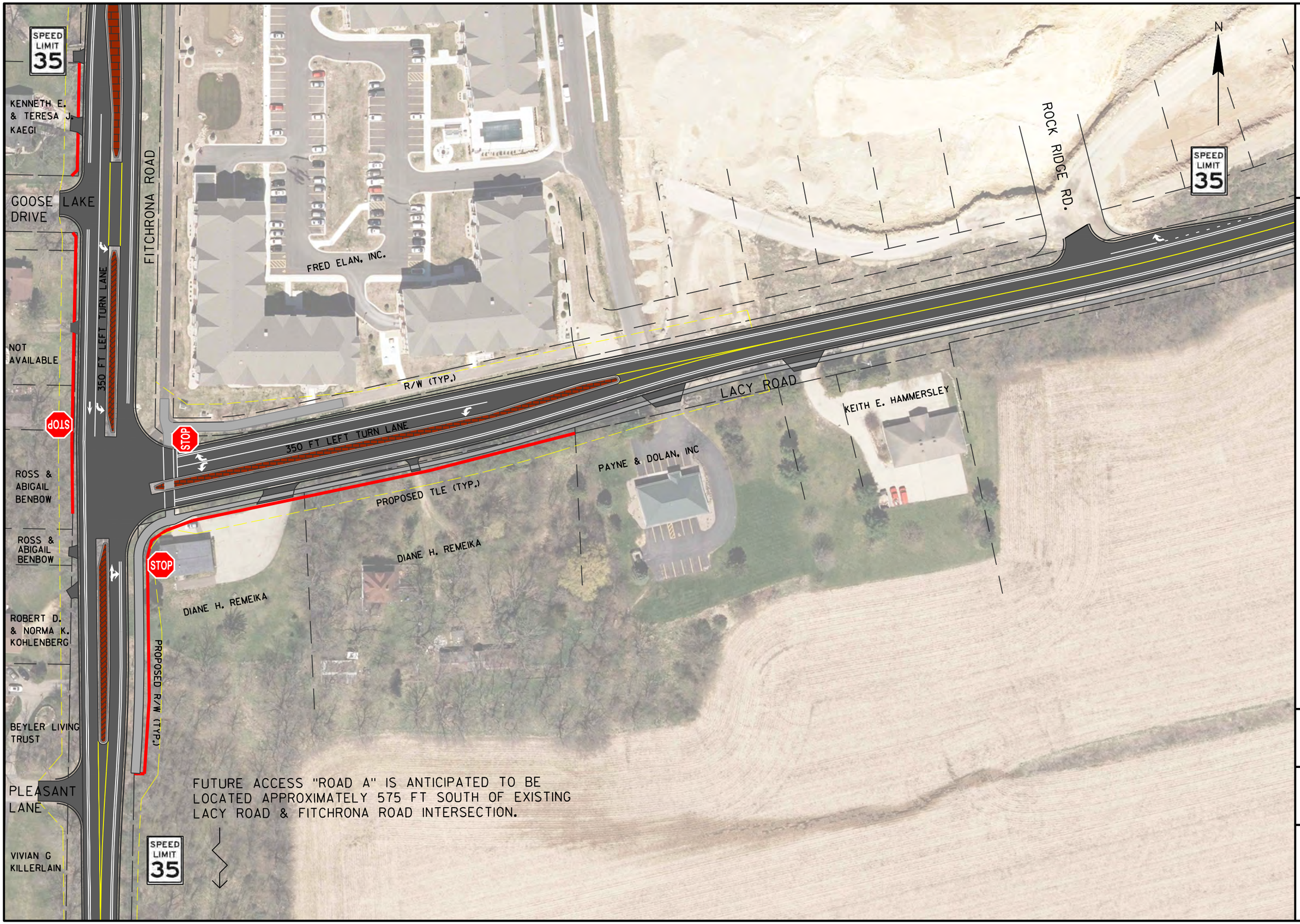
LACY ROAD & FITCHRONA ROAD
ALTERNATIVE 1 - STOP CONTROL ON LACY ROAD

Project No:
Date:
Designed By:
Drafted By:
Checked By:

Revisions:

SHEET NO.

PLOT DATE : 5/11/2020 7:52 PM
PLOT BY : KL ENGINEERING
FILE NAME : G:\PROMEGA\20034-000 (LACY ROAD RECONSTRUCTION)\CIVIL 3D\SHEETSOTHER\EXHIBIT\FITCHRONA_LACY STOP-SIGNAL CONTROL EXHIBIT.DWG



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CITY OF FITCHBURG

LACY ROAD & FITCHRONA ROAD
ALTERNATIVE 2 - ALL-WAY STOP CONTROL

Project No:
Date:
Designed By:
Drafted By:
Checked By:

Revisions:

SHEET NO.

PLOT DATE : 5/11/2020 7:53 PM
PLOT BY : KL ENGINEERING
FILE NAME : G:\PROMEGA\20034-000 (LACY ROAD RECONSTRUCTION)\CIVIL 3D\SHEETSOTHER\EXHIBIT\FITCHRONA_LACY STOP-SIGNAL CONTROL EXHIBIT.DWG

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CITY OF FITCHBURG

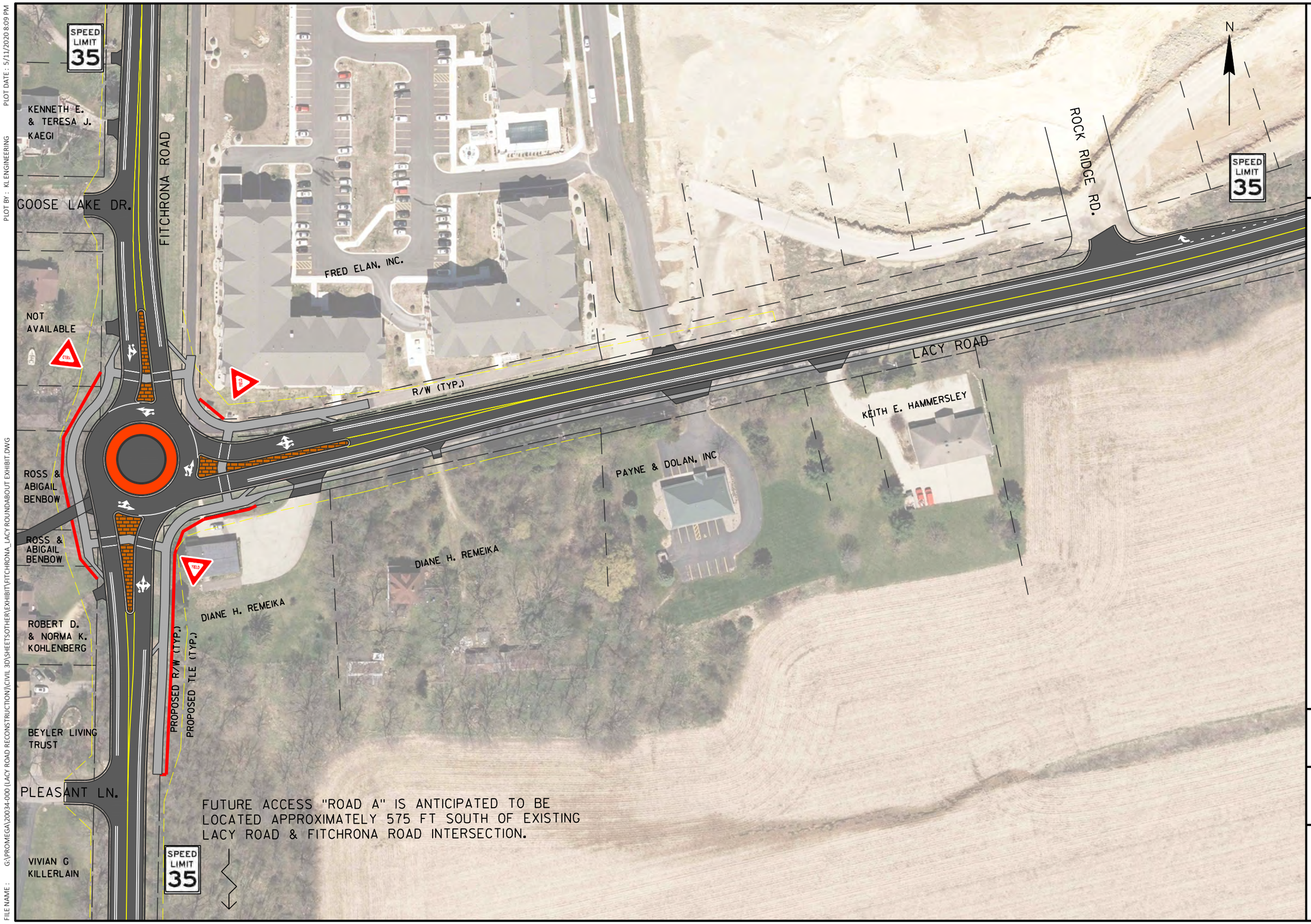
LACY ROAD & FITCHRONA ROAD
ALTERNATIVE 3 - TRAFFIC SIGNAL

Project No:
Date:
Designed By:
Drafted By:
Checked By:

Revisions:

SHEET NO.

PLOT DATE : 5/11/2020 7:54 PM
PLOT BY : KL ENGINEERING
FILE NAME : G:\PROMEGA\20034-000 (LACY ROAD RECONSTRUCTION)\CIVIL 3D\SHEETSOTHER\EXHIBIT\FITCHRONA_LACY STOP-SIGNAL CONTROL EXHIBIT.DWG



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CITY OF FITCHBURG

LACY ROAD & FITCHRONA ROAD
ALTERNATIVE 4 - ROUNDABOUT

Project No:
Date:
Designed By:
Drafted By:
Checked By:

Revisions:

SHEET NO.

PLOT DATE : 5/11/2020 8:09 PM
PLOT BY : KL ENGINEERING
FILE NAME : G:\PROMEGA\20034-000 (LACY ROAD RECONSTRUCTION)\CIVIL 3D\SHEETSOTHER\EXHIBIT\FITCHRONA_LACY ROUNDABOUT EXHIBIT.DWG

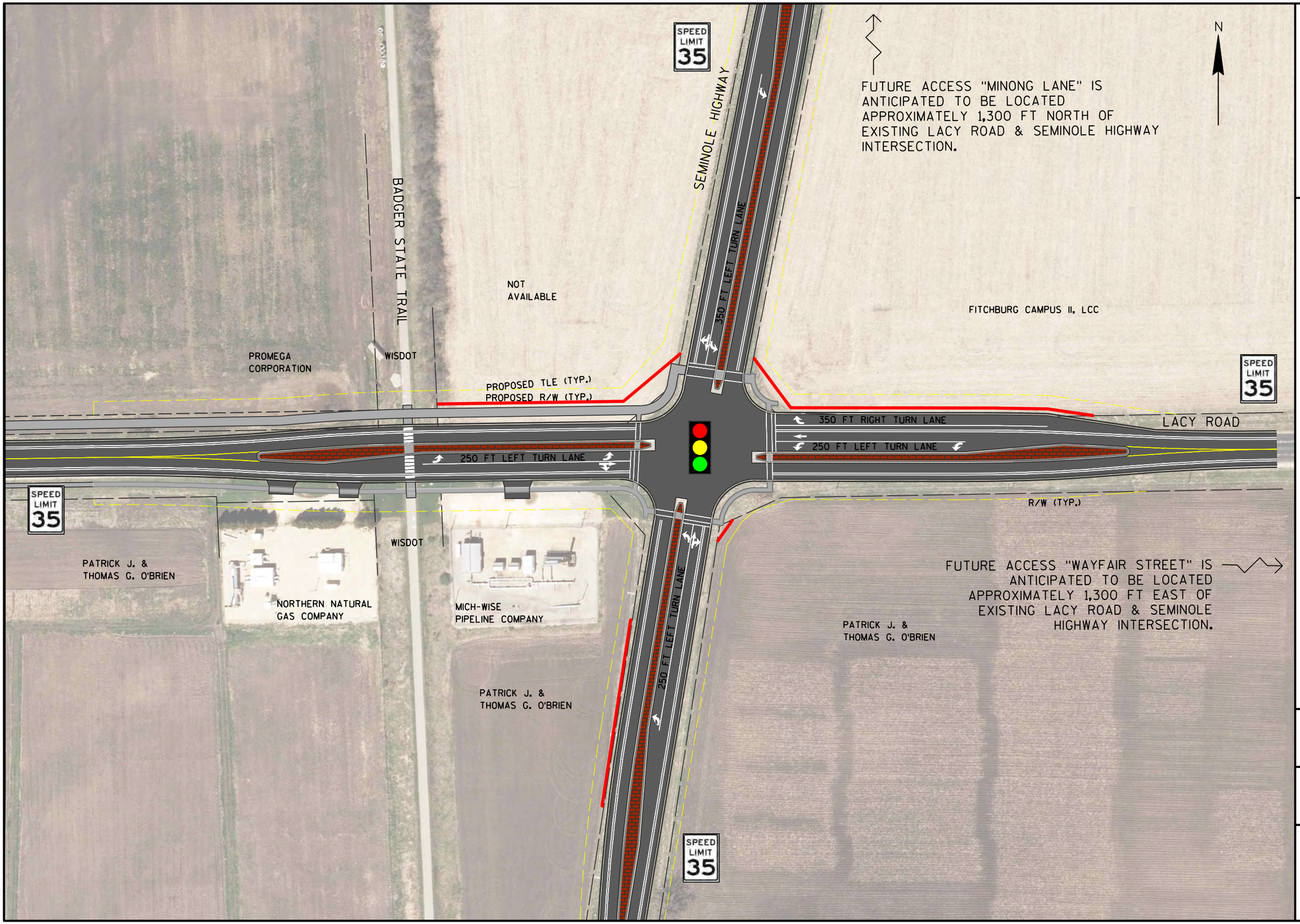
Intersection Alternatives Conceptual Drawings

Lacy Road & S Seminole Hwy

PLOT DATE : 5/11/2020 8:10 PM

PLOT BY : MATT REGNIER

FILE NAME : G:\PROMEGA\20034-000 (LACY ROAD RECONSTRUCTION)\CIVIL 3D\SHEETSOTHER\EXHIBIT\SEMINOLE_LACY TRAFFIC SIGNAL EXHIBIT.DWG



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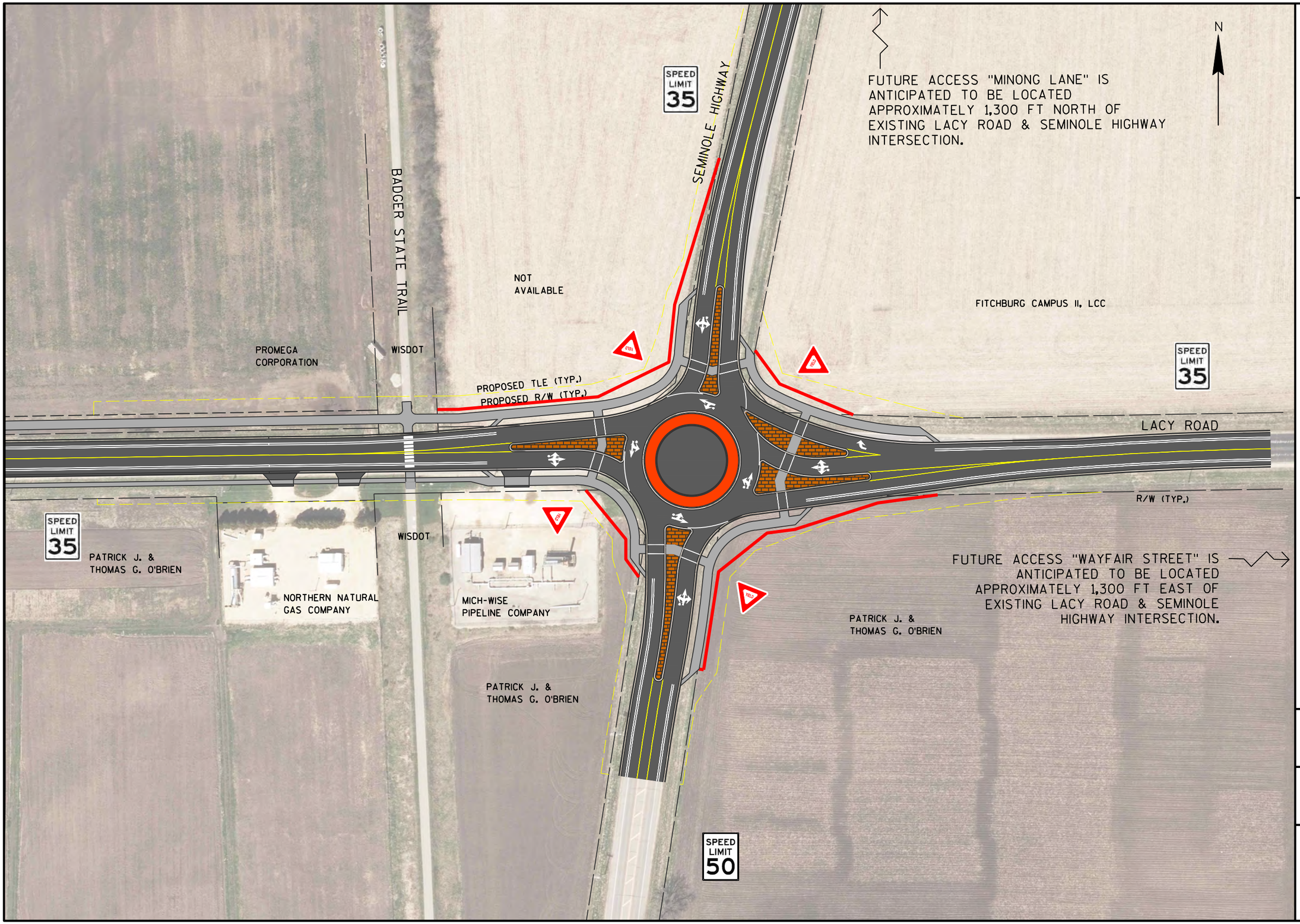
CITY OF FITCHBURG

LACY ROAD & SEMINOLE HIGHWAY
ALTERNATIVE 1 - TRAFFIC SIGNAL

Project No:
Date:
Designed By:
Drafted By:
Checked By:

Revisions:

SHEET NO.



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LACY ROAD & SEMINOLE HIGHWAY
ALTERNATIVE 2 - ROUNDABOUT

Project No:
Date:
Designed By:
Drafted By:
Checked By:

Revisions:

SHEET NO.

PLOT DATE : 5/11/2020 8:12 PM
PLOT BY : KL ENGINEERING
FILE NAME : G:\PROMEGA\20034-000 (LACY ROAD RECONSTRUCTION)\CIVIL 3D\SHEETSOTHER\EXHIBIT\SEMINOLE_LACY ROUNDABOUT EXHIBIT.DWG

APPENDIX F

Intersection Alternatives Cost Estimate

Intersection Alternatives Cost Estimates

Lacy Road & Fitchrona Road

KL Engineering

Preliminary Cost Estimate

Lacy Road Intersection Design Study
Lacy Road & Fitchrona Road Intersection
City of Fitchburg

Alternatives 1 & 2 - Stop Control on Lacy Road / All-Way Stop Control
June 17, 2021

Line No.	Item Description	Unit	Quantity	Unit Price	Total
	Removals				
	Clearing	STA	9	$700.00	$6,300.00
	Grubbing	STA	9	$600.00	$5,400.00
1				Removals Subtotal Cost	$11,700.00
	Earthwork				
	Earthwork	CY	5,800	$25.00	$145,000.00
2				Earthwork Subtotal Cost	$145,000.00
	Drainage				
	Storm Sewer + Water Quality Basin	LS	1	$350,000.00	$350,000.00
3				Drainage Subtotal Cost	$350,000.00
	Electrical Items				
	Intersection Lighting	LS	1	$12,000.00	$12,000.00
4				Electrical Items Subtotal Cost	$12,000.00
	Aggregate				
	Base Aggregate Dense 1 1/4-Inch	TON	7,905	$22.00	$173,918.96
	Base Aggregate Dense 3/4-Inch	TON	485	$28.00	$13,587.16
5				Aggregate Subtotal Cost	$187,506.12
	Paving, Curb & Gutter, & Sidewalk				
	30 Inch Curb and Gutter	LF	3,808	$25.00	$95,200.00
	Concrete Driveway 8-Inch	SY	275	$60.00	$16,500.00
	HMA Pavement	TON	3,335	$95.00	$316,833.91
	Tack Coat	GAL	830	$3.00	$2,490.20
	Concrete Sidewalk 5-Inch	SF	18,717	$6.00	$112,302.00
6				Paving, Curb & Gutter, & Sidewalk Subtotal Cost	$448,126.11
7				**Major Roadway Item Subtotal Costs (Line 1-6)**	**$1,154,332.23**
	Roadway Incidentals				
	Erosion Control & Landscaping	LS	4.0	% of Line 7	$46,173.29
	Signing and Marking	LS	2.5	% of Line 7	$28,858.31
	Traffic Control	LS	5.0	% of Line 7	$57,716.61
8				Roadway Incidentals Subtotal Cost	$132,748.21
9				**Total Roadway Items Subtotal Cost (Lines 7+8)**	**$1,287,080.43**
	Mobilization & Design Contingency				
	Mobilization	LS	7.0	% of Line 9	$90,095.63
	Design Contingency	LS	20.0	% of Line 9	$257,416.09
10				Mobilization & Design Contingency Subtotal Cost	$347,511.72
11				**Total Project Let Cost (Lines 9+10)**	**$1,634,592.15**
	Real Estate				
	Fee (includes 0.25AC for new water quality basin)	ACRES	0.73	$435,600.00	$317,988.00
	Temporary Limited Eeasment	ACRES	0.94	$43,560.00	$40,946.40
12				**Total Real Estate Costs**	**$358,934.40**
Total Estimated Rounded Project Let Cost (Line 11+12)					**$2,000,000**

KL Engineering

Preliminary Cost Estimate

Lacy Road Intersection Design Study
Lacy Road & Fitchrona Road Intersection
City of Fitchburg

Alternative 3 - Traffic Signal
June 17, 2021

Line No.	Item Description	Unit	Quantity	Unit Price	Total
	Removals				
	Clearing	STA	9	$700.00	$6,300.00
	Grubbing	STA	9	$600.00	$5,400.00
1				Removals Subtotal Cost	$11,700.00
	Earthwork				
	Earthwork	CY	5,800	$25.00	$145,000.00
2				Earthwork Subtotal Cost	$145,000.00
	Drainage				
	Storm Sewer + Water Quality Basin	LS	1	$350,000.00	$350,000.00
3				Drainage Subtotal Cost	$350,000.00
	Electrical Items				
	Traffic Signal and Lighting	LS	1	$200,000.00	$200,000.00
4				Electrical Items Subtotal Cost	$200,000.00
	Aggregate				
	Base Aggregate Dense 1 1/4-Inch	TON	7,905	$22.00	$173,918.96
	Base Aggregate Dense 3/4-Inch	TON	485	$28.00	$13,587.16
5				Aggregate Subtotal Cost	$187,506.12
	Paving, Curb & Gutter, & Sidewalk				
	30 Inch Curb and Gutter	LF	3,808	$25.00	$95,200.00
	Concrete Driveway 8-Inch	SY	275	$60.00	$16,500.00
	HMA Pavement	TON	3,335	$95.00	$316,833.91
	Tack Coat	GAL	830	$3.00	$2,490.20
	Concrete Sidewalk 5-Inch	SF	18,717	$6.00	$112,302.00
6				Paving, Curb & Gutter, & Sidewalk Subtotal Cost	$448,126.11
7				**Major Roadway Item Subtotal Costs (Line 1-6)**	**$1,342,332.23**
	Roadway Incidentals				
	Erosion Control & Landscaping	LS	4.0	% of Line 7	$53,693.29
	Signing and Marking	LS	2.5	% of Line 7	$33,558.31
	Traffic Control	LS	5.0	% of Line 7	$67,116.61
8				Roadway Incidentals Subtotal Cost	$154,368.21
9				**Total Roadway Items Subtotal Cost (Lines 7+8)**	**$1,496,700.43**
	Mobilization & Design Contingency				
	Mobilization	LS	7.0	% of Line 9	$104,769.03
	Design Contingency	LS	20.0	% of Line 9	$299,340.09
10				Mobilization & Design Contingency Subtotal Cost	$404,109.12
11				**Total Project Let Cost (Lines 9+10)**	**$1,900,809.55**
	Real Estate				
	Fee (includes 0.25AC for new water quality basin)	ACRES	0.73	$435,600.00	$317,988.00
	Temporary Limited Eeasment	ACRES	0.94	$43,560.00	$40,946.40
12				**Total Real Estate Costs**	**$358,934.40**
Total Estimated Rounded Project Let Cost (Line 11+12)					**$2,260,000**

KL Engineering

Preliminary Cost Estimate

Lacy Road Intersection Design Study
Lacy Road & Fitchrona Road Intersection
City of Fitchburg

Alternative 4 - Roundabout
June 17, 2021

Line No.	Item Description	Unit	Quantity	Unit Price	Total
	Removals				
	Clearing	STA	9	$700.00	$6,300.00
	Grubbing	STA	9	$600.00	$5,400.00
1				Removals Subtotal Cost	$11,700.00
	Earthwork				
	Earthwork	CY	6,495	$25.00	$162,375.00
2				Earthwork Subtotal Cost	$162,375.00
	Drainage				
	Storm Sewer + Water Quality Basin	LS	1	$415,000.00	$415,000.00
3				Drainage Subtotal Cost	$415,000.00
	Electrical Items				
	Roundabout Lighting	LS	1	$105,000.00	$105,000.00
4				Electrical Items Subtotal Cost	$105,000.00
	Aggregate				
	Base Aggregate Dense 1 1/4-Inch	TON	6,278	$22.00	$138,116.00
	Base Aggregate Dense 3/4-Inch	TON	457	$28.00	$12,796.00
5				Aggregate Subtotal Cost	$150,912.00
	Paving, Curb & Gutter, & Sidewalk				
	18 Inch Curb and Gutter	LF	135	$25.00	$3,375.00
	30 Inch Curb and Gutter	LF	4,865	$25.00	$121,625.00
	36 Inch Curb and Gutter	LF	250	$25.00	$6,250.00
	Concrete Truck Apron 12-Inch	SY	310	$75.00	$23,250.00
	Concrete Driveway 8-Inch	SY	275	$60.00	$16,500.00
	HMA Pavement	TON	2,605	$95.00	$247,475.00
	Tack Coat	GAL	650	$3.00	$1,950.00
	Concrete Sidewalk 5-Inch	SF	17,633	$6.00	$105,798.00
6				Paving, Curb & Gutter, & Sidewalk Subtotal Cost	$394,973.00
7				**Major Roadway Item Subtotal Costs (Line 1-6)**	**$1,239,960.00**
	Roadway Incidentals				
	Erosion Control & Landscaping	LS	8.0	% of Line 7	$99,196.80
	Signing and Marking	LS	5.0	% of Line 7	$61,998.00
	Traffic Control	LS	5.0	% of Line 7	$61,998.00
8				Roadway Incidentals Subtotal Cost	$223,192.80
9				**Total Roadway Items Subtotal Cost (Lines 7+8)**	**$1,463,152.80**
	Mobilization & Design Contingency				
	Mobilization	LS	7.0	% of Line 9	$102,420.70
	Design Contingency	LS	20.0	% of Line 9	$292,630.56
10				Mobilization & Design Contingency Subtotal Cost	$395,051.26
11				**Total Project Let Cost (Lines 9+10)**	**$1,858,204.06**
	Real Estate				
	Fee (includes 0.25AC for new water quality basin)	ACRES	0.71	$453,560.00	$322,027.60
	Temporary Limited Eeasment	ACRES	0.76	$45,356.00	$34,470.56
12				**Total Real Estate Costs**	**$356,498.16**
Total Estimated Rounded Project Let Cost (Line 11+12)					**$2,220,000**

Intersection Alternatives Cost Estimates

Lacy Road & S Seminole Hwy

KL Engineering

Preliminary Cost Estimate

Lacy Road Intersection Design Study
Lacy Road & Seminole Highway Intersection
City of Fitchburg

Alternative 1 - Traffic Signals
June 17, 2021

Line No.	Item Description	Unit	Quantity	Unit Price	Total
	Removals				
	Clearing	STA	0	$700.00	$0.00
	Grubbing	STA	0	$600.00	$0.00
1				Removals Subtotal Cost	$0.00
	Earthwork				
	Earthwork	CY	9,700	$25.00	$242,500.00
2				Earthwork Subtotal Cost	$242,500.00
	Drainage				
	Storm Sewer + Water Quality Basin	LS	1	$275,000.00	$275,000.00
3				Drainage Subtotal Cost	$275,000.00
	Electrical Items				
	Traffic Signal and Lighting	LS	1	$250,000.00	$250,000.00
4				Electrical Items Subtotal Cost	$250,000.00
	Aggregate				
	Base Aggregate Dense 1 1/4-Inch	TON	11,370	$22.00	$250,140.00
	Base Aggregate Dense 3/4-Inch	TON	702	$28.00	$19,656.00
5				Aggregate Subtotal Cost	$269,796.00
	Paving, Curb & Gutter, & Sidewalk				
	30 Inch Curb and Gutter	LF	5,437	$25.00	$135,925.00
	Concrete Driveway 8-Inch	SY	281	$60.00	$16,860.00
	HMA Pavement	TON	4,797	$95.00	$455,715.00
	Tack Coat	GAL	1,194	$3.00	$3,582.00
	Concrete Sidewalk 5-Inch	SF	27,089	$6.00	$162,534.00
6				Paving, Curb & Gutter, & Sidewalk Subtotal Cost	$638,691.00
7				**Major Roadway Item Subtotal Costs (Line 1-6)**	**$1,675,987.00**
	Roadway Incidentals				
	Erosion Control & Landscaping	LS	4.0	% of Line 7	$67,039.48
	Signing and Marking	LS	2.5	% of Line 7	$41,899.68
	Traffic Control	LS	5.0	% of Line 7	$83,799.35
8				Roadway Incidentals Subtotal Cost	$192,738.51
9				**Total Roadway Items Subtotal Cost (Lines 7+8)**	**$1,868,725.51**
	Mobilization & Design Contingency				
	Mobilization	LS	7.0	% of Line 9	$130,810.79
	Design Contingency	LS	20.0	% of Line 9	$373,745.10
10				Mobilization & Design Contingency Subtotal Cost	$504,555.89
11				**Total Project Let Cost (Lines 9+10)**	**$2,373,281.39**
	Real Estate				
	Fee (includes 0.25AC for new water quality basin)	ACRES	0.76	$435,600.00	$331,056.00
	Temporary Limited Eeasment	ACRES	1.27	$43,560.00	$55,321.20
12				**Total Real Estate Costs**	**$386,377.20**
Total Estimated Rounded Project Let Cost (Line 9+10)					**$2,760,000**

Engineering

Preliminary Cost Estimate

Lacy Road Intersection Design Study
Lacy Road & Seminole Highway Intersection
City of Fitchburg

Alternative 2 - Roundabout
June 17, 2021

Line No.	Item Description	Unit	Quantity	Unit Price	Total
	Removals				
	Clearing	STA	0	$700.00	$0.00
	Grubbing	STA	0	$600.00	$0.00
1				Removals Subtotal Cost	$0.00
	Earthwork				
	Earthwork	CY	10,705	$25.00	$267,625.00
2				Earthwork Subtotal Cost	$267,625.00
	Drainage				
	Storm Sewer + Water Quality Basin	LS	1	$365,000.00	$365,000.00
3				Drainage Subtotal Cost	$365,000.00
	Electrical Items				
	Roundabout Lighting	LS	1	$115,000.00	$115,000.00
4				Electrical Items Subtotal Cost	$115,000.00
	Aggregate				
	Base Aggregate Dense 1 1/4-Inch	TON	6,968	$22.00	$153,296.00
	Base Aggregate Dense 3/4-Inch	TON	457	$28.00	$12,796.00
5				Aggregate Subtotal Cost	$166,092.00
	Paving, Curb & Gutter, & Sidewalk				
	18 Inch Curb and Gutter	LF	242	$25.00	$6,050.00
	30 Inch Curb and Gutter	LF	5,562	$25.00	$139,050.00
	36 Inch Curb and Gutter	LF	327	$25.00	$8,175.00
	Concrete Truck Apron 12-Inch	SY	426	$75.00	$31,950.00
	Concrete Driveway 8-Inch	SY	196	$60.00	$11,760.00
	HMA Pavement	TON	3,200	$95.00	$304,000.00
	Tack Coat	GAL	800	$3.00	$2,400.00
	Concrete Sidewalk 5-Inch	SF	11,042	$6.00	$66,252.00
6				Paving, Curb & Gutter, & Sidewalk Subtotal Cost	$416,362.00
7				**Major Roadway Item Subtotal Costs (Line 1-6)**	**$1,330,079.00**
	Roadway Incidentals				
	Erosion Control & Landscaping	LS	8.0	% of Line 7	$106,406.32
	Signing and Marking	LS	5.0	% of Line 7	$66,503.95
	Traffic Control	LS	5.0	% of Line 7	$66,503.95
8				Roadway Incidentals Subtotal Cost	$239,414.22
9				**Total Roadway Items Subtotal Cost (Lines 7+8)**	**$1,569,493.22**
	Mobilization & Design Contingency				
	Mobilization	LS	7.0	% of Line 9	$109,864.53
	Design Contingency	LS	20.0	% of Line 9	$313,898.64
10				Mobilization & Design Contingency Subtotal Cost	$423,763.17
11				**Total Project Let Cost (Lines 9+10)**	**$1,993,256.39**
	Real Estate				
	Fee (includes 0.25AC for new water quality basin)	ACRES	0.98	$435,600.00	$426,888.00
	Temporary Limited Eeasment	ACRES	0.69	$43,560.00	$30,056.40
12				**Total Real Estate Costs**	**$456,944.40**
Total Estimated Rounded Project Let Cost (Line 11+12)					**$2,460,000**