Traffic Impact Study

Carrington Ridge Development

City of Pataskala, Ohio

February 26, 2014

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Executive Summary

Study Purpose and Scope

The purpose of this traffic impact study (TIS) is to determine the operational impacts of a proposed 23.5-acre development on the surrounding roadway network in Pataskala, Ohio. This study focuses on the access points to the development and the SR 310 and Mill Street intersection.

Background Information

The proposed development is to be located east of SR 310 in Pataskala, Ohio. Access to the site is proposed at two driveways: one full access drive aligned with Pataskala Ridge Drive Southwest and one right-in/right-out drive aligned with Fork Street. The expected land use consists of 119 attached residential dwelling units. The opening year of the site is 2014 and the design year is 2034.

Traffic Forecast

Traffic has been forecasted by determining the base year (2014) traffic volumes using existing traffic data collected by American Structurepoint, Inc., then applying a background traffic growth rate of 2.25% per year to obtain the 2034 background traffic volumes, and finally adding in any new trips generated by the development to the background traffic.

Capacity Analysis

The existing traffic data, the traffic forecast for the year 2034, and the existing lane configurations were used as the input for the capacity analysis. During the capacity analysis, the proposed intersection lane configurations were developed based upon the intersection improvements required to achieve an acceptable LOS (LOS "D" or better) for the study intersection with no movement being worse than LOS E.

Conclusions

Based on the capacity analysis results, the SR 310 and Pataskala Ridge Drive SW intersection will operate at an acceptable level of service for all study scenarios as two-way stop control, with Pataskala Ridge Drive SW and the full access development drive stopping for SR 310. No additional turn lanes are required at the full access drive to the Carrington Ridge development.

The SR 310 and Mill Street intersection will require improvements by the design year 2034. The improvements are required based on the 2034 background traffic volumes. Improvements are required without the Carrington Ridge development; therefore, a recommendation is not being made to improve this intersection for this development.

1.0 Study Purpose and Scope

1.1 Purpose

The purpose of this traffic impact study (TIS) is to determine the operational impacts of a proposed development on the surrounding roadway network in Pataskala, Ohio. The proposed Carrington Ridge development is to be comprised of 119 dwelling units of attached housing. This study identifies the effects of the proposed development and provides necessary recommendations for roadway improvements.

1.2 Scope

To solidify the scope of this study and to gain input from the City of Pataskala, a meeting was held the week of January 20, 2014, with the City of Pataskala's Engineer. The scope discussed during this meeting is outlined in a Memorandum of Understanding that is attached in **Appendix A**. This study focuses on the access points to the development and the intersection of SR 310 & Mill Street. The study area is shown in **Figure 1.1.**

The study intersections include the following:

- SR 310 & Mill Street
- SR 310 & Fork Street
- SR 310 & Pataskala Ridge Drive Southwest

The study scenarios are as follows:

- Scenario 1: Opening Year (2014) – AM and PM peak hour No-Build (without development) with existing lane configurations and traffic control
- Scenario 2: Opening Year (2014) – AM and PM peak hour Build (with development) with existing lane configurations and stop controlled exits from the development
- Scenario 3: Design Year (2034) – AM and PM peak hour No-Build (without development) with existing lane configurations and traffic control
- Scenario 4: Design Year (2034) – AM and PM peak hour Build (with development) with existing lane configurations and stop controlled exits from the development

The study procedures follow ODOT's Traffic Impact Study requirements. All analysis results and recommendations have been summarized and documented in this TIS.

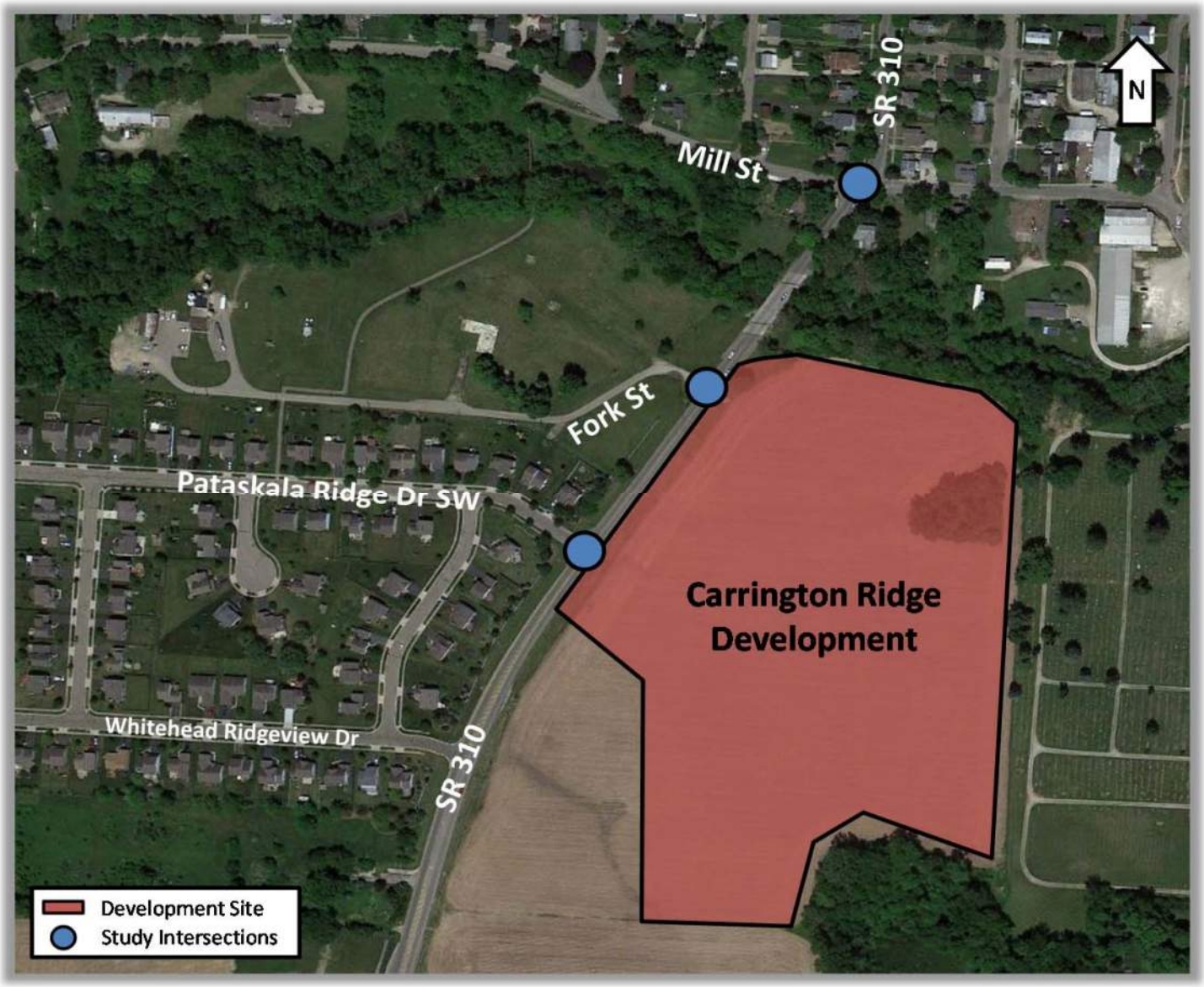

Figure 1.1 – Study Area

2.0 Background Information

2.1 Surrounding Roadway Network

2.1.1 SR 310

SR 310 is a state highway that runs through downtown Pataskala. SR 310 is currently a two-lane north/south facility that is classified as a Minor Arterial. The posted speed limit on SR 310 is 50 mph northbound and 35 mph southbound in the vicinity of the study area.

2.1.2 Mill Street

Mill Street is a two-lane east/west facility that is classified as a Local Collector. The intersection of **SR 310 & Mill Street** is a two-way stop controlled intersection with Mill Street stopping for SR 310. There are single approach lanes in each direction.

2.1.3 Pataskala Ridge Drive Southwest

Pataskala Ridge Drive Southwest serves the Pataskala Ridge neighborhood. The intersection of **SR 310 & Pataskala Ridge Drive Southwest** is one-way stop-controlled with Pataskala Ridge Drive Southwest stopping for SR 310. When the proposed Redwood development is constructed, a proposed full access drive is to be aligned with Pataskala Ridge Drive Southwest.

2.1.4 Fork Street

Fork Street serves the Pataskala water tower and has very minimal to no daily traffic volumes. The intersection of **SR 310 & Fork Street** is one-way stop-controlled with Fork Street stopping for SR 310. When the proposed Redwood development is constructed, a proposed right-in/right-out (RIRO) access is to be aligned with Fork Street.

2.2 Future Roadway Improvements

MORPC's Regional Thoroughfare Plan does not indicate any roadway improvements near the study area.

2.3 Proposed Development

The proposed development is to be located east of SR 310, at the southern end of Pataskala. The Carrington Ridge development will include two driveways: one full access drive aligned with Pataskala Ridge Drive Southwest and one RIRO drive aligned with Fork Street. The full access drive will consist of a single shared lane.

The proposed Carrington Ridge development will consist of 119 attached residential dwelling units. The Carrington Ridge development will be similar in nature to other Redwood developments in Ohio. The opening year of the site is 2014 and the design year is 2034. The proposed development layout with access drives is shown on **Figure 2.1**.

Figure 2.1 – Site Plan

3.0 Traffic Forecast

Traffic has been forecasted by determining the base year (2014) traffic volumes using existing traffic data collected by American Structurepoint, Inc., then applying a background traffic growth rate to obtain the 2034 background traffic volumes, and finally adding in any new trips generated by the development to the background traffic. The following sections of the report provide greater detail of these steps.

3.1 Existing Traffic Data

Intersection turning movement counts (6-9 AM and 4-7 PM) were collected by American Structurepoint, Inc. on a typical weekday in January 2014 for each of the existing study area intersections. Daily traffic counts along SR 310 were provided by ODOT. The raw data from the traffic counts are provided in **Appendix B**.

3.2 Background Traffic Growth

Background traffic growth was determined by forecasting the turning movement volumes using a growth rate provided by MORPC. A background growth rate of 2.25% per year was applied to obtain the design year (2034) traffic volumes.

3.3 Trip Generation and Trip Distribution

Carrington Ridge is a Redwood development. Redwood developments, although not classified as senior housing, typically attract "empty nesters" which includes retired and senior tenants often demonstrating slightly different travel patterns than tenants of multi-family apartments. While Redwood is unable to provide a median age of their residents due to fair housing regulations, they were anecdotally able to provide information that their average age is "early-to-mid 50's", while the 2010 census noted a national average of renters of 37 years old.

The above description of Redwood developments suggests that such developments do not fall within the standard land use categories provided in the Institute of Transportation Engineers (ITE) *Trip Generation Manual*, which is typically utilized in studies such as this. The ITE *Trip Generation Manual* provides trip generation rates for apartments and also for senior adult housing. A recent study of the Redwood trip generation rates performed by Oxbow Engineering, Inc. confirms this.

Oxbow Engineering, Inc. conducted a study of three fully occupied Redwood developments within the State of Ohio. Trip generation rates for these developments were calculated from the entering/exiting volumes and the size of the developments. The average trip generation rates for these Redwood developments were compared to the trip generation rates from ITE for Apartment and Senior Housing-Attached land uses. The Redwood developments, due to demographics, were found to generally lie in between the Apartment and Senior Housing-Attached rates provided by ITE in terms of peak hour trips. Also worth noting is the portion of traffic entering Redwood developments in the PM peak is larger than entering rates associated with either of the ITE land uses. These trip generation rates and the supporting traffic counts are provided in **Appendix C**.

Further rationale for using the Redwood trip generation rates stems from the reliability of the ITE data for the trip generation rates for the land use: Senior Adult Housing – Attached. The data for this land use was collected 10-30 years ago with a limited sample size. Additionally, the data collection sites were spread out

among various states across the U.S. The Trails at Montville study gathered trip generation rates exclusively in Ohio. Also, the data collection, which was performed in 2010, provides much more recent data than does ITE.

The trip generation rates of the Trails at Montville study were utilized in the development of trips for this study. **Table 3.1** contains the number of AM peak and PM peak trips that are generated by the Carrington Ridge development.

Table 3.1 – Trip Generation

Land Use	Size	AM Enter	AM Exit	PM Enter	PM Exit
Attached Housing	119 Dwelling Units	*7*	*35*	*36*	*16*

Trip distribution percentages were calculated using the 2014 turning movement counts collected by American Structurepoint, Inc. and application of the gravity model. The trip distribution percentages are provided in **Appendix C**.

3.4 Resulting Traffic Volumes

After applying the background growth rate of 2.25% per year to the 2014 traffic volumes and adding trips generated by the proposed Carrington Ridge development, the total traffic volumes were obtained for each of the study intersections for each study scenario. The traffic volumes are provided in **Appendix D**.

4.0 Capacity Analysis

A capacity analysis has been performed for each study intersection and for each study scenario. The capacity analysis is based on the methodology outlined in the *Highway Capacity Manual* (TRB 2010). The standard parameter used to evaluate traffic operating conditions is referred to as the level-of-service (LOS). There are six LOS (A through F) which relate to driving conditions from best to worst, respectively. LOS for signalized and unsignalized intersections is defined in terms of control delay per vehicle, which is a direct correlation to driver discomfort, frustration, fuel consumption, and lost travel time. **Table 4.1** provides the LOS criteria as defined in the *Highway Capacity Manual*.

Table 4.1 – LOS Thresholds

LOS	Unsignalized Intersection Control Delay per Vehicle (second)
A	≤ 10
B	> 10 and ≤ 15
C	> 15 and ≤ 25
D	> 25 and ≤ 35
E	> 35 and ≤ 50
F	> 50

To facilitate the intersection analyses, the computer software Synchro (Version 8) was used for the stop-controlled intersections. The output from Synchro includes the average vehicle control delay, LOS, and 95th percentile (or maximum) queue length. These software outputs are included in **Appendix E**.

4.1 Lane Configurations

The traffic forecast for the years 2014 and 2034 and the existing lane configurations were used as input for the capacity analysis. During the capacity analysis, the proposed intersection lane configurations were developed based upon the intersection improvements required to achieve an acceptable LOS (LOS "D" or better) for the overall intersection with no movement being worse than LOS E. The No-Build condition lane configurations are shown on **Figure 4.1**. The Build condition lane configurations are shown on **Figure 4.2**.

4.2 Level of Service and Delay Results

The capacity analysis was performed for each scenario at the study intersections using the existing lane configurations and traffic control for Scenarios 1 and 3 and the proposed lane configurations and traffic control for Scenarios 2 and 4. **Table 4.2**, **Table 4.3**, and **Table 4.4** summarize the results from the capacity analysis.

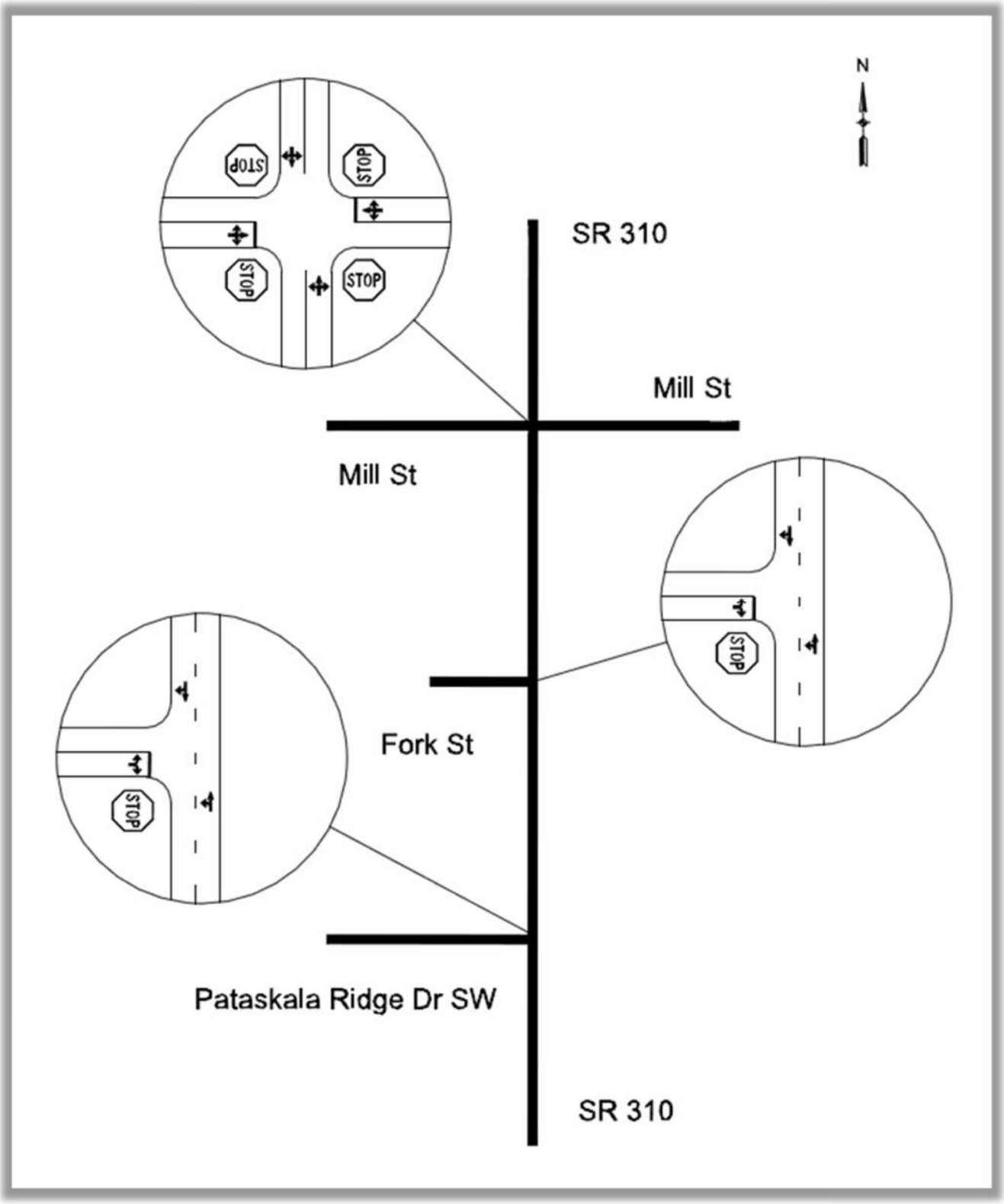

Figure 4.1 – No-Build Condition Lane Configurations

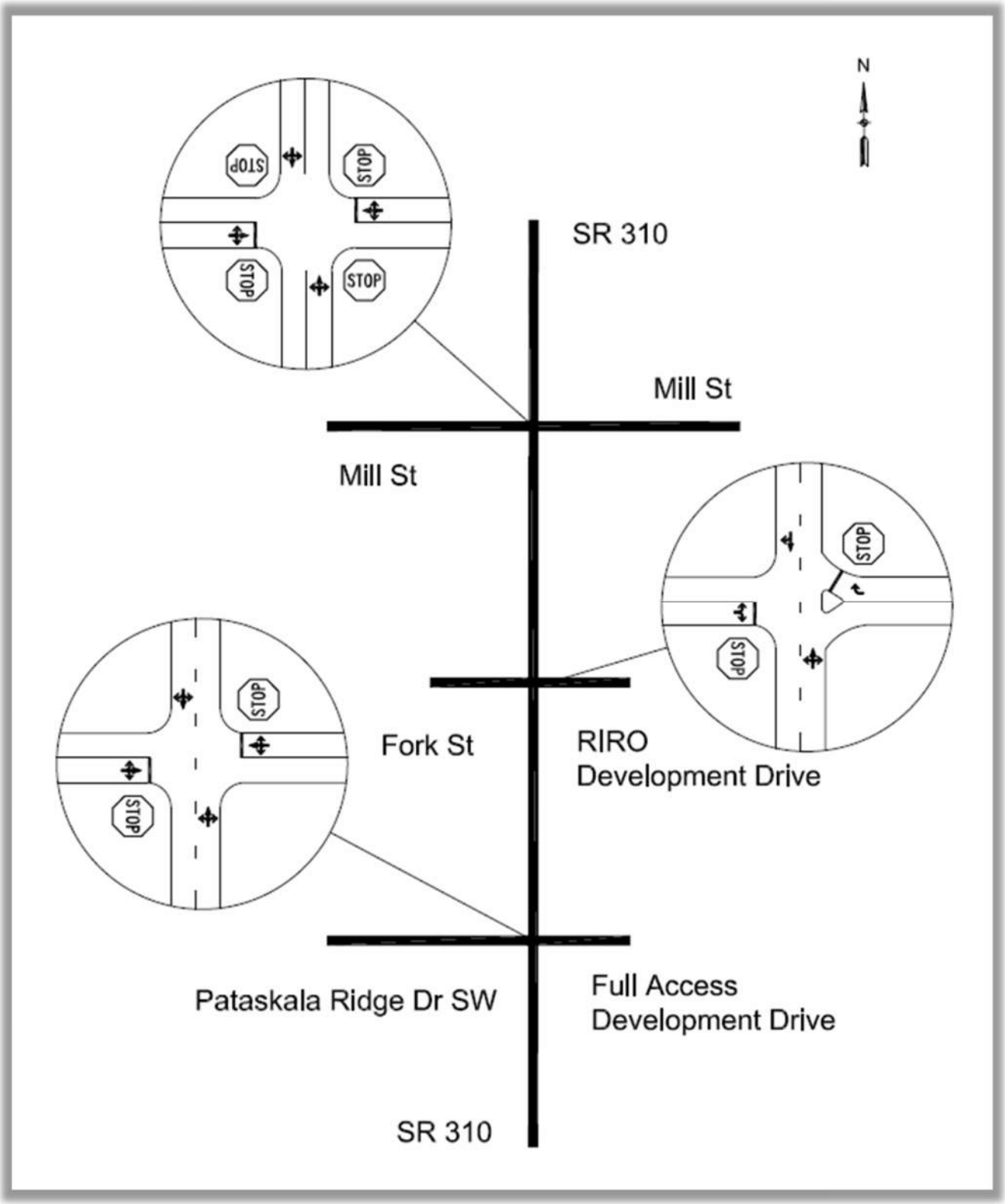

Figure 4.2 – Build Condition Lane Configurations

Table 4.2 – LOS and Delay Results: SR 310 & Mill St

Scenario/Approach	AM Peak LOS	AM Peak Delay (sec/veh)	PM Peak LOS	PM Peak Delay (sec/veh)
1 – 2014 No-Build	**C**	**16.9**	**C**	**21.3**
NB Approach	A	0.3	A	0.3
SB Approach	A	0.1	A	0.4
EB Approach	B	11.7	B	13.6
WB Approach	C	16.9	C	21.3
2 – 2014 Build	**C**	**17.4**	**C**	**22.3**
NB Approach	A	0.3	A	0.3
SB Approach	A	0.1	A	0.4
EB Approach	B	11.8	B	13.9
WB Approach	C	17.4	C	22.3
3 – 2034 No-Build	**D**	**31.9**	**F**	**66.2**
NB Approach	A	0.3	A	0.3
SB Approach	A	0.1	A	0.4
EB Approach	B	14.2	C	21.0
WB Approach	D	31.9	F	66.2
4 – 2034 Build	**D**	**33.3**	**F**	**72.0**
NB Approach	A	0.3	A	0.3
SB Approach	A	0.1	A	0.4
EB Approach	B	14.3	C	21.6
WB Approach	D	33.3	F	72.0

Note: The intersection is two-way stop-controlled. The overall LOS and delay represents the worst approach to the intersection.

Table 4.3 – LOS and Delay Results: SR 310 & Fork St / RIRO Development Dr

Scenario/Approach	AM Peak LOS	AM Peak Delay (sec/veh)	PM Peak LOS	PM Peak Delay (sec/veh)
2 – 2014 Build	**B**	**10.4**	**B**	**12.0**
NB Approach	--	--	--	--
SB Approach	--	--	--	--
EB Approach	A	0.0	A	0.0
WB Approach	B	10.4	B	12.0
4 – 2034 Build	**B**	**11.7**	**B**	**14.7**
NB Approach	--	--	--	--
SB Approach	--	--	--	--
EB Approach	A	0.0	A	0.0
WB Approach	B	11.7	B	14.7

Note: The development drive is limited to RIRO access. The northbound and southbound approaches are free-flow movements; thus there are no delay values.

Table 4.4 – LOS and Delay Results: SR 310 & Pataskala Ridge Dr

Scenario/Approach	AM Peak LOS	AM Peak Delay (sec/veh)	PM Peak LOS	PM Peak Delay (sec/veh)
1 – 2014 No-Build	**B**	**13.7**	**C**	**15.2**
NB Approach	A	0.1	A	0.1
SB Approach	--	--	--	--
EB Approach	B	13.7	C	15.2
2 – 2014 Build	**C**	**15.6**	**C**	**19.8**
NB Approach	A	0.1	A	0.1
SB Approach	A	0.1	A	0.3
EB Approach	C	15.0	C	17.9
WB Approach	C	15.6	C	19.8
3 – 2034 No-Build	**C**	**19.1**	**C**	**23.6**
NB Approach	A	0.1	A	0.1
SB Approach	--	--	--	--
EB Approach	C	19.1	C	23.6
4 – 2034 Build	**C**	**23.1**	**D**	**34.6**
NB Approach	A	0.1	A	0.1
SB Approach	A	0.1	A	0.3
EB Approach	C	22.8	D	32.0
WB Approach	C	23.1	D	34.6

Note: The intersection is two-way stop-controlled. The overall LOS and delay represents the worst approach to the intersection.

5.0 Findings and Recommendations

5.1 SR 310

SR 310 will operate acceptably as a two-lane facility for each study scenario.

5.2 SR 310 & Mill Street Intersection

The capacity analysis has shown that this intersection will operate below an acceptable level of service during the design year 2034. Intersection improvements are required to accommodate the 2034 background traffic volumes. The impact to the intersection from the Carrington Ridge development traffic is negligible in comparison to the background traffic volumes.

5.3 SR 310 & Pataskala Ridge Drive SW Intersection

The capacity analysis has shown that this intersection will operate at an acceptable level of service for all study scenarios. A single-lane full access drive to/from the Carrington Ridge development will be aligned with Pataskala Ridge Drive SW. No improvements are required in addition to the single-lane access drive.

5.4 Summary of Recommended Improvements

Based on the capacity analysis results, the SR 310 and Pataskala Ridge Drive SW intersection will operate at an acceptable level of service for all study scenarios as two-way stop control, with Pataskala Ridge Drive SW and the full access development drive stopping for SR 310.

The SR 310 and Mill Street intersection will require improvements by the design year 2034. The improvements are required based on the 2034 background traffic volumes. Improvements are required without the Carrington Ridge development; therefore, a recommendation is not being made to improve this intersection for this development.

Appendix A – Memorandum of Understanding

AMERICAN STRUCTUREPOINT INC.

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TEL 614.901.2235 FAX 614.901.2236

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MEMORANDUM OF UNDERSTANDING

DATE: January 15, 2014

TO: Mr. Eric Fischer, City of Pataskala, Director of Planning

FROM: Amanda Johnson, American Structurepoint

RE: Traffic Study for Proposed Redwood Mixed-Use Development

CC: Shawn Goodwin, Jeromy Grenard

This memorandum of understanding (MOU) has been prepared to describe and obtain a consensus for the traffic study scope for the proposed Redwood mixed-use development located on Hazelton-Ethna Rd (SR 3) in Pataskala, Ohio.

Topic 1: Purpose of Study

- Evaluate the traffic impacts of the proposed development on Hazelton-Ethna Rd traffic operations
- Investigate the need for turn lanes on Hazelton-Ethna Rd into the development
- Identify improvements necessary at the proposed access points to the development.

Topic 2: Proposed Development

- Multi-Family Residential – Mostly Senior Housing
- Two access drives to the site as shown in Attachment 1. See Attachment 2 for Site Plan
- Anticipated opening in 2014

Topic 3: Study Scenarios

- Scenario 1: Opening Day (2014) – AM and PM peak hour No-Build (without development) with existing lane configurations
- Scenario 2: Opening Day (2014) + Proposed Development – AM and PM peak hour Build (with development) with existing lane configurations and stop controlled exits from the development
- Scenario 3: Design Year (2034) – AM and PM peak hour No-Build (without development) with existing lane configurations and stop controlled exits from the development
- Scenario 4: Design Year (2034) + Proposed Development – AM and PM peak hour Build (with development) with existing lane configurations and stop controlled exits from the development

Study Intersections:

- Hazelton-Ethna Rd (SR 301) & Mill St
- Hazelton-Ethna Rd (SR 301) & Fork St – Right-in/Right-out Drive
- Hazelton-Ethna Rd (SR 301) & Pataskala Ridge Dr SW – Full Access Drive

Analyzed Time Periods:

- Year 2014 Weekday AM & PM Peak Hours
- Year 2034 Weekday AM & PM Peak Hours

Existing Traffic Data

- Traffic data for two study intersections obtained by Miovision:
  - Hazelton-Ethna Rd (SR 301) & Mill St
  - Hazelton-Ethna Rd (SR 301) & Pataskala Ridge Dr SW
  - See Attachment 3 for count locations
- Peak hour factor (PHF) specific to each intersection for both AM and PM peak hours
- Truck percentages specific to each intersection for both AM and PM peak hours

Background Traffic Growth

- A linear traffic growth of 2%/year will be applied to 2014 traffic volumes to estimate background 2034 traffic volumes at the study intersections
- Background growth was calculated from ODOT historical AADT traffic counts from 2011 and 2008
- See Attachment 4 for background growth calculations

Trip Generation

- Based on trip generation rates from similar Redwood developments
- Data collected by Oxbow Engineering, Inc. for Trails at Montville Traffic Study. Data included in Attachment 4

Trip Distribution and Assignment

- Trip distribution percentages will be calculated using the 2014 daily traffic counts and application of the gravity model.

Capacity Analysis for Study Intersections

- Synchro 8 to be used to estimate the delay and LOS at the three (3) study intersections:
  - Hazelton-Ethna Rd (SR 310) & Mill St
  - Hazelton-Ethna Rd (SR 310) & Fork St
  - Hazelton-Ethna Rd (SR 310) & Pataskala Ridge Dr
- Necessary improvements identified to achieve acceptable levels of service (LOS D) for each intersection

Turn Lane Warrant Analysis

- Turn lane warrants will be checked for each of the study intersections
- ODOT State Highway Access Management Manual procedures will be used for the turn lane warrant analysis

Concurrence to this Memorandum of Understanding, by signing and returning the attached signature page, is requested of the following individuals:

Name	**Organization**	**Role**
Eric Fischer	City of Pataskala	Reviewer
Amanda Johnson	American Structurepoint	Preparer

Please sign and return to Amanda Johnson or Jeromy Grenard by fax (317.543.0270) or by email (ajohnson@structurepoint.com, jgrenard@structurepoint.com).

I concur with this Memorandum of Understanding for Redwood Mixed-Use development TIS.

_____
Sign Here

_____
Date

Additional comments:

_____

_____

_____

_____

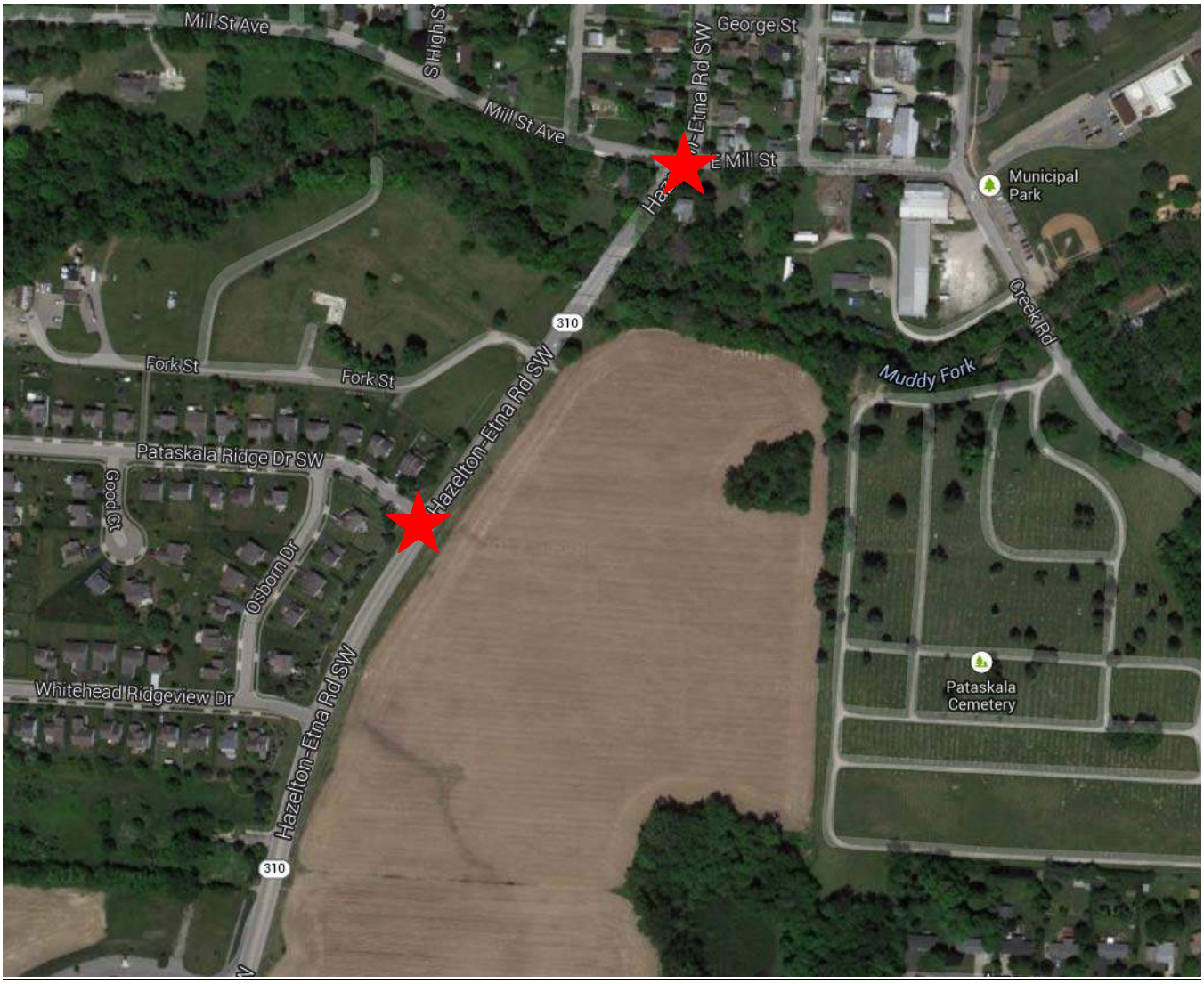
_____

Attachment 1: Access Point Location

Site Driveway

Attachment 2: Site Layout

Attachment 3: Traffic Count Locations



Traffic Count Locations

Attachment 3: ODOT Traffic Count Locations

Site	Location
5645	SR 310 N of T30 Refugee

Year	AADT
2011	11401
2008	10766
Avg. Annual Growth Rate	1.96% ~ 2.0%

HUNTERS CROSSING
(Findley)
February 2, 2010

TIME	IN	OUT
7:00 - 7:15	2	6
7:15 - 7:30	3	6
7:30 - 7:45	1	9
7:45 - 8:00	0	12
8:00 - 8:15	1	4
8:15 - 8:30	1	3
8:30 - 8:45	1	5
8:45 - 9:00	2	2

PEAK HOUR: 7:00 - 8:00

TIME	IN	OUT
4:00 - 4:15	7	7
4:15 - 4:30	3	2
4:30 - 4:45	2	2
4:45 - 5:00	5	2
5:00 - 5:15	10	4
5:15 - 5:30	4	3
5:30 - 5:45	12	4
5:45 - 6:00	3	2

PEAK HOUR: 4:45 - 5:45

FINDLEY: HUNTERS CROSSING

		IN	*OUT*	*TOTAL*
A.M. PEAK	***7:00 - 8:00***	6	33	39
P.M. PEAK	***4:45 - 5:45***	31	13	44

TRIP GENERATION DETERMINATION:

A.M. Peak:

$$\frac{\text{39 Trip Ends}}{\text{84 Units}} = \text{0.46 Trip Ends/Unit}$$

$$\frac{\text{6 Enter}}{\text{39 Total}} = \text{15\% Enter}$$

$$\frac{\text{33 Exit}}{\text{39 Total}} = \text{85\% Exit}$$

P.M. Peak:

$$\frac{\text{44 Trip Ends}}{\text{84 Units}} = \text{0.52 Trip Ends/Unit}$$

$$\frac{\text{31 Enter}}{\text{44 Total}} = \text{70\% Enter}$$

$$\frac{\text{13 Exit}}{\text{44 Total}} = \text{30\% Exit}$$

VILLAGE OF NORTHAMPTON
(Akron)
February 3, 2010

TIME	IN	OUT
7:00 - 7:15	1	5
7:15 - 7:30	0	6
7:30 - 7:45	0	3
7:45 - 8:00	1	5
8:00 - 8:15	3	5
8:15 - 8:30	1	3
8:30 - 8:45	0	3
8:45 - 9:00	0	4

PEAK HOUR: 7:15 - 8:15

TIME	IN	OUT
4:00 - 4:15	4	1
4:15 - 4:30	3	1
4:30 - 4:45	4	1
4:45 - 5:00	2	4
5:00 - 5:15	6	1
5:15 - 5:30	6	4
5:30 - 5:45	6	3
5:45 - 6:00	4	2

PEAK HOUR: 5:00 - 6:00

AKRON: VILLAGE OF NORTHAMPTON

		IN	*OUT*	*TOTAL*
A.M. PEAK	***7:15 - 8:15***	4	19	23
P.M. PEAK	***5:00 - 6:00***	22	10	32

TRIP GENERATION DETERMINATION:

A.M. Peak:

$$\frac{\text{23 Trip Ends}}{\text{95 Units}} = \text{0.24 Trip Ends/Unit}$$

$$\frac{\text{4 Enter}}{\text{23 Total}} = \text{17\% Enter}$$

$$\frac{\text{19 Exit}}{\text{23 Total}} = \text{83\% Exit}$$

P.M. Peak:

$$\frac{\text{32 Trip Ends}}{\text{95 Units}} = \text{0.34 Trip Ends/Unit}$$

$$\frac{\text{22 Enter}}{\text{32 Total}} = \text{69\% Enter}$$

$$\frac{\text{10 Exit}}{\text{32 Total}} = \text{31\% Exit}$$

MILLTOWN POINT
(Wooster)
February 4, 2010

TIME	IN	OUT
7:00 - 7:15	3	9
7:15 - 7:30	0	11
7:30 - 7:45	0	12
7:45 - 8:00	5	13
8:00 - 8:15	2	8
8:15 - 8:30	4	10
8:30 - 8:45	1	5
8:45 - 9:00	2	1

PEAK HOUR: 7:30 - 8:30

TIME	IN	OUT
4:00 - 4:15	8	9
4:15 - 4:30	9	5
4:30 - 4:45	8	1
4:45 - 5:00	5	8
5:00 - 5:15	12	3
5:15 - 5:30	12	4
5:30 - 5:45	14	11
5:45 - 6:00	12	7

PEAK HOUR: 5:00 - 6:00

WOOSTER: MILLTOWN POINT

		IN	*OUT*	*TOTAL*
A.M. PEAK	***7:30 - 8:30***	11	43	54
P.M. PEAK	***5:00 - 6:00***	50	25	75

TRIP GENERATION DETERMINATION:

A.M. Peak:

$$\frac{\text{54 Trip Ends}}{\text{158 Units}} = \text{0.34 Trip Ends/Unit}$$

$$\frac{\text{11 Enter}}{\text{54 Total}} = \text{20\% Enter}$$

$$\frac{\text{43 Exit}}{\text{54 Total}} = \text{80\% Exit}$$

P.M. Peak:

$$\frac{\text{75 Trip Ends}}{\text{158 Units}} = \text{0.47 Trip Ends/Unit}$$

$$\frac{\text{50 Enter}}{\text{75 Total}} = \text{67\% Enter}$$

$$\frac{\text{25 Exit}}{\text{75 Total}} = \text{33\% Exit}$$

TRIP GENERATION RATES SUMMARY

for

THE TRAILS AT MONTVILLE

	A.M. PEAK			P.M. PEAK		
	Trip Rate	*Enter*	*Exit*	*Trip Rate*	*Enter*	*Exit*
Findley - Hunters Crossing 84 Units	.46	15%	85%	.52	70%	30%
Akron - Village of Northampton 95 Units	.24	17%	83%	.34	69%	31%
Wooster - Milltown Point 158 Units	.34	20%	80%	.47	67%	33%

Average AM Rate: 0.35 **17% Enter**
83% Exit

Average PM Rate: 0.44 **69% Enter**
31% Exit

Appendix B – Traffic Data

TRAFFIC VOLUMES

INTERSECTION: **SR 310 & Mill Street**

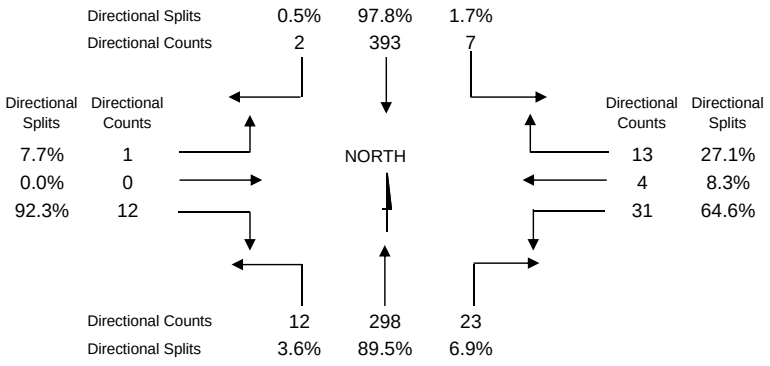
DATA DATE: 1/14/2014 **DURATION:** 6:00 AM - 9:00 AM

VEHICLES - TOTAL **AM Peak**

	NB			SB			EB			WB				
	SR 310			**SR 310**			**Mill Street**			**Mill Street**				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
TIME BEGIN													INTERVAL TOTAL	HOUR TOTAL
06:00AM	0	23	2	1	53	0	0	0	2	4	0	2	87	570
06:15AM	2	34	4	0	85	0	3	0	0	7	0	1	136	659
06:30AM	1	43	4	4	93	0	0	2	6	9	3	3	168	735
06:45AM	1	56	3	10	100	0	1	2	3	1	0	2	179	750
07:00AM	1	46	5	12	92	1	0	3	1	12	1	2	176	766
07:15AM	0	87	5	1	98	1	1	0	4	6	2	7	212	796
07:30AM	2	61	3	1	103	0	0	0	5	7	1	0	183	776
07:45AM	3	76	6	5	92	0	0	0	2	7	1	3	195	786
08:00AM	7	74	9	0	100	1	0	0	1	11	0	3	206	769
08:15AM	7	74	6	1	83	1	0	1	7	8	0	4	192	--
08:30AM	2	78	7	2	84	0	3	1	10	3	1	2	193	--
08:45AM	3	73	5	2	80	0	0	0	2	5	1	7	178	--

NB			SB			EB			WB			TOTAL
SR 310			**SR 310**			**Mill Street**			**Mill Street**			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	
2014 PEAK HOUR VOLUMES												
12	298	23	7	393	2	1	0	12	31	4	13	796
TRUCK PERCENTAGES												
25%	6%	9%	0%	3%	0%	100%	0%	0%	0%	0%	16%	

YEAR 2014 PEAK HOUR TRAFFIC
SR 310 & Mill Street
7:15 - 8:15 AM



OVERALL PHF = 0.94

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TRAFFIC VOLUMES

INTERSECTION: **SR 310 & Mill Street**

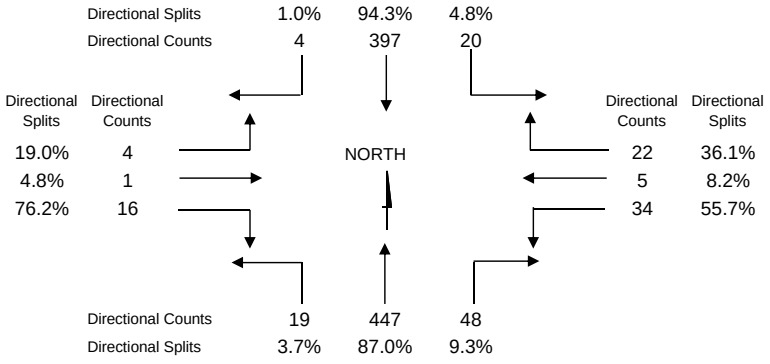
DATA DATE: 1/14/2014 **DURATION:** 4:00 PM - 7:00 PM

VEHICLES - TOTAL **PM Peak**

	NB			SB			EB			WB				
	SR 310			**SR 310**			**Mill Street**			**Mill Street**				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
TIME BEGIN													INTERVAL TOTAL	HOUR TOTAL
04:00PM	6	97	11	4	81	4	0	1	6	11	0	1	222	942
04:15PM	2	95	14	2	91	2	1	0	3	4	0	3	217	974
04:30PM	6	102	16	8	85	1	2	1	5	10	3	7	246	1017
04:45PM	5	117	7	2	106	1	0	0	3	10	1	5	257	1005
05:00PM	6	112	11	4	106	0	0	0	4	7	0	4	254	994
05:15PM	2	116	14	6	100	2	2	0	4	7	1	6	260	994
05:30PM	0	118	15	6	81	0	1	0	6	4	1	2	234	977
05:45PM	3	95	18	3	112	4	0	1	3	4	1	2	246	944
06:00PM	2	118	3	5	109	2	0	1	1	6	1	6	254	870
06:15PM	2	110	13	4	107	1	0	0	1	1	4	0	243	--
06:30PM	3	99	6	5	71	3	0	2	1	7	1	3	201	--
06:45PM	4	69	9	2	71	3	1	0	2	9	1	1	172	--

NB			SB			EB			WB			
SR 310			**SR 310**			**Mill Street**			**Mill Street**			TOTAL
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	
2014 PEAK HOUR VOLUMES												
19	447	48	20	397	4	4	1	16	34	5	22	1017
TRUCK PERCENTAGES												
0%	2%	4%	0%	3%	0%	0%	0%	0%	3%	0%	0%	

YEAR 2014 PEAK HOUR TRAFFIC
SR 310 & Mill Street
4:30 - 5:30 PM



OVERALL PHF = 0.98

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TRAFFIC VOLUMES

INTERSECTION: **SR 310 & Pataskala Ridge Drive**

DATA DATE: 1/14/2014 **DURATION:** 6:00 AM - 9:00 AM

VEHICLES - TOTAL **AM Peak**

	NB			SB			EB			WB				
	SR 310			**SR 310**			**Pataskala Ridge**			**Pataskala Ridge**				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
TIME BEGIN													INTERVAL TOTAL	HOUR TOTAL
06:00AM	0	28	0	0	60	0	1	0	0	0	0	0	89	559
06:15AM	1	46	0	0	92	0	0	0	2	0	0	0	141	637
06:30AM	0	49	0	0	107	1	1	0	3	0	0	0	161	695
06:45AM	0	58	0	0	103	1	2	0	4	0	0	0	168	718
07:00AM	0	52	0	0	109	2	1	0	3	0	0	0	167	740
07:15AM	1	82	0	0	106	0	7	0	3	0	0	0	199	775
07:30AM	1	68	0	0	110	1	1	0	3	0	0	0	184	770
07:45AM	0	77	0	0	104	1	6	0	2	0	0	0	190	777
08:00AM	0	93	0	0	106	0	1	0	2	0	0	0	202	755
08:15AM	1	84	0	0	103	1	2	0	3	0	0	0	194	--
08:30AM	2	88	0	0	96	1	2	0	2	0	0	0	191	--
08:45AM	1	80	0	0	84	2	0	0	1	0	0	0	168	--

NB			SB			EB			WB			TOTAL
SR 310			**SR 310**			**Pataskala Ridge**			**Pataskala Ridge**			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

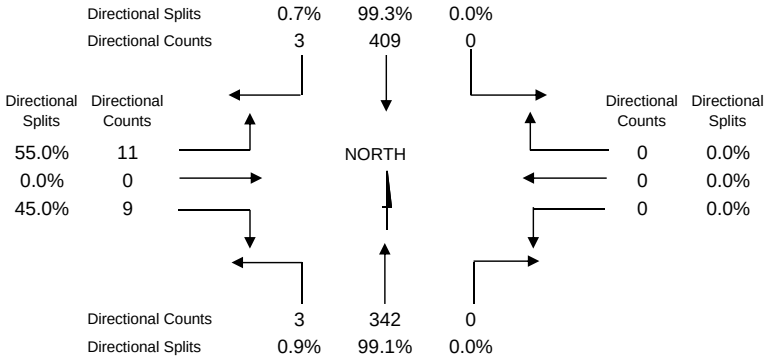
2014 PEAK HOUR VOLUMES

3	342	0	0	409	3	11	0	9	0	0	0	777

TRUCK PERCENTAGES

0%	6%	0%	0%	7%	0%	9%	0%	0%	0%	0%	0%

YEAR 2014 PEAK HOUR TRAFFIC
SR 310 & Pataskala Ridge Drive
7:45 - 8:45 AM



OVERALL PHF = 0.96

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TRAFFIC VOLUMES

INTERSECTION: **SR 310 & Pataskala Ridge Drive**

DATA DATE: 1/14/2014 **DURATION:** 4:00 PM - 7:00 PM

VEHICLES - TOTAL **PM Peak**

	NB			SB			EB			WB				
	SR 310			**SR 310**			**Pataskala Ridge**			**Pataskala Ridge**				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
TIME BEGIN													INTERVAL TOTAL	HOUR TOTAL
04:00PM	0	117	0	0	99	0	0	0	2	0	0	0	218	907
04:15PM	2	103	0	0	92	5	4	0	0	0	0	0	206	929
04:30PM	2	121	0	0	100	7	7	0	2	0	0	0	239	975
04:45PM	0	125	0	0	112	5	0	0	2	0	0	0	244	977
05:00PM	4	122	0	0	102	10	1	0	1	0	0	0	240	965
05:15PM	1	137	0	0	107	3	3	0	1	0	0	0	252	969
05:30PM	3	134	0	0	94	1	5	0	4	0	0	0	241	955
05:45PM	1	118	0	0	109	3	1	0	0	0	0	0	232	903
06:00PM	0	122	0	0	114	6	1	0	1	0	0	0	244	837
06:15PM	0	125	0	0	109	1	1	0	2	0	0	0	238	--
06:30PM	1	103	0	0	78	3	3	0	1	0	0	0	189	--
06:45PM	0	81	0	0	80	4	0	0	1	0	0	0	166	--

NB			SB			EB			WB			
SR 310			**SR 310**			**Pataskala Ridge**			**Pataskala Ridge**			TOTAL
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

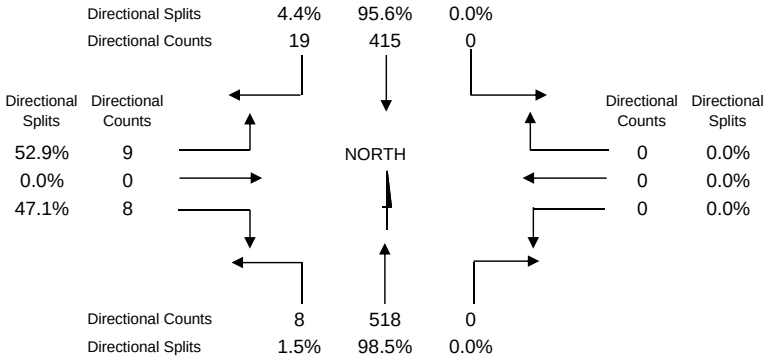
2014 PEAK HOUR VOLUMES

8	518	0	0	415	19	9	0	8	0	0	0	977

TRUCK PERCENTAGES

0%	1%	0%	0%	2%	0%	0%	0%	0%	0%	0%	0%

YEAR 2014 PEAK HOUR TRAFFIC
SR 310 & Pataskala Ridge Drive
4:45 - 5:45 PM



OVERALL PHF = 0.97

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Appendix C – Trip Generation and Trip Distribution

oxbow

ENGINEERING, INC. 10 West Erie Street, Suite 201, Painesville, Ohio 44077 440/ 352-9559

February 15, 2010

Ms. Julie A. Cichello, P.E.
Traffic Planning Engineer
ODOT - District Three
906 North Clark Avenue
Ashland, Ohio 44805-1989

Re: Trails at Montville
Traffic Data

Dear Ms. Cichello:

Transmitted herewith is the information regarding the traffic counts taken at existing developments similar to Trails at Montville.

Three sites were counted:

- Findley - Hunters Crossing - 84 Units
- Akron - Village of Northampton - 95 Units
- Wooster - Milltown Point - 158 Units.

Traffic counts were taken 7:00-9:00 A.M. and 4:00-6:00 P.M. Morning and evening peak hours were determined as well as a trip generation rate and enter/exit distribution.

These calculations are included for your review.

Respectfully,
OXBOW ENGINEERING, INC.

L.M. Egensperger

Lynn M. Egensperger, P.E.
President

attachments:
cc: D. Conwill, Trails of Montville One LLC

HUNTERS CROSSING
(Findley)
February 2, 2010

TIME	IN	OUT
7:00 - 7:15	2	6
7:15 - 7:30	3	6
7:30 - 7:45	1	9
7:45 - 8:00	0	12
8:00 - 8:15	1	4
8:15 - 8:30	1	3
8:30 - 8:45	1	5
8:45 - 9:00	2	2

PEAK HOUR: 7:00 - 8:00

TIME	IN	OUT
4:00 - 4:15	7	7
4:15 - 4:30	3	2
4:30 - 4:45	2	2
4:45 - 5:00	5	2
5:00 - 5:15	10	4
5:15 - 5:30	4	3
5:30 - 5:45	12	4
5:45 - 6:00	3	2

PEAK HOUR: 4:45 - 5:45

FINDLEY: HUNTERS CROSSING

		IN	*OUT*	*TOTAL*
A.M. PEAK	***7:00 - 8:00***	6	33	39
P.M. PEAK	***4:45 - 5:45***	31	13	44

TRIP GENERATION DETERMINATION:

A.M. Peak:

$$\frac{\text{39 Trip Ends}}{\text{84 Units}} = \text{0.46 Trip Ends/Unit}$$

$$\frac{\text{6 Enter}}{\text{39 Total}} = \text{15\% Enter}$$

$$\frac{\text{33 Exit}}{\text{39 Total}} = \text{85\% Exit}$$

P.M. Peak:

$$\frac{\text{44 Trip Ends}}{\text{84 Units}} = \text{0.52 Trip Ends/Unit}$$

$$\frac{\text{31 Enter}}{\text{44 Total}} = \text{70\% Enter}$$

$$\frac{\text{13 Exit}}{\text{44 Total}} = \text{30\% Exit}$$

VILLAGE OF NORTHAMPTON
(Akron)
February 3, 2010

TIME	IN	OUT
7:00 - 7:15	1	5
7:15 - 7:30	0	6
7:30 - 7:45	0	3
7:45 - 8:00	1	5
8:00 - 8:15	3	5
8:15 - 8:30	1	3
8:30 - 8:45	0	3
8:45 - 9:00	0	4

PEAK HOUR: 7:15 - 8:15

TIME	IN	OUT
4:00 - 4:15	4	1
4:15 - 4:30	3	1
4:30 - 4:45	4	1
4:45 - 5:00	2	4
5:00 - 5:15	6	1
5:15 - 5:30	6	4
5:30 - 5:45	6	3
5:45 - 6:00	4	2

PEAK HOUR: 5:00 - 6:00

AKRON: VILLAGE OF NORTHAMPTON

		IN	*OUT*	*TOTAL*
A.M. PEAK	***7:15 - 8:15***	4	19	23
P.M. PEAK	***5:00 - 6:00***	22	10	32

TRIP GENERATION DETERMINATION:

A.M. Peak:

$$\frac{\text{23 Trip Ends}}{\text{95 Units}} = \text{0.24 Trip Ends/Unit}$$

$$\frac{\text{4 Enter}}{\text{23 Total}} = \text{17\% Enter}$$

$$\frac{\text{19 Exit}}{\text{23 Total}} = \text{83\% Exit}$$

P.M. Peak:

$$\frac{\text{32 Trip Ends}}{\text{95 Units}} = \text{0.34 Trip Ends/Unit}$$

$$\frac{\text{22 Enter}}{\text{32 Total}} = \text{69\% Enter}$$

$$\frac{\text{10 Exit}}{\text{32 Total}} = \text{31\% Exit}$$

MILLTOWN POINT
(Wooster)
February 4, 2010

TIME	IN	OUT
7:00 - 7:15	3	9
7:15 - 7:30	0	11
7:30 - 7:45	0	12
7:45 - 8:00	5	13
8:00 - 8:15	2	8
8:15 - 8:30	4	10
8:30 - 8:45	1	5
8:45 - 9:00	2	1

PEAK HOUR: 7:30 - 8:30

TIME	IN	OUT
4:00 - 4:15	8	9
4:15 - 4:30	9	5
4:30 - 4:45	8	1
4:45 - 5:00	5	8
5:00 - 5:15	12	3
5:15 - 5:30	12	4
5:30 - 5:45	14	11
5:45 - 6:00	12	7

PEAK HOUR: 5:00 - 6:00

WOOSTER: MILLTOWN POINT

		IN	*OUT*	*TOTAL*
A.M. PEAK	***7:30 - 8:30***	11	43	54
P.M. PEAK	***5:00 - 6:00***	50	25	75

TRIP GENERATION DETERMINATION:

A.M. Peak:

$$\frac{\text{54 Trip Ends}}{\text{158 Units}} = \text{0.34 Trip Ends/Unit}$$

$$\frac{\text{11 Enter}}{\text{54 Total}} = \text{20\% Enter}$$

$$\frac{\text{43 Exit}}{\text{54 Total}} = \text{80\% Exit}$$

P.M. Peak:

$$\frac{\text{75 Trip Ends}}{\text{158 Units}} = \text{0.47 Trip Ends/Unit}$$

$$\frac{\text{50 Enter}}{\text{75 Total}} = \text{67\% Enter}$$

$$\frac{\text{25 Exit}}{\text{75 Total}} = \text{33\% Exit}$$

TRIP GENERATION RATES SUMMARY

for

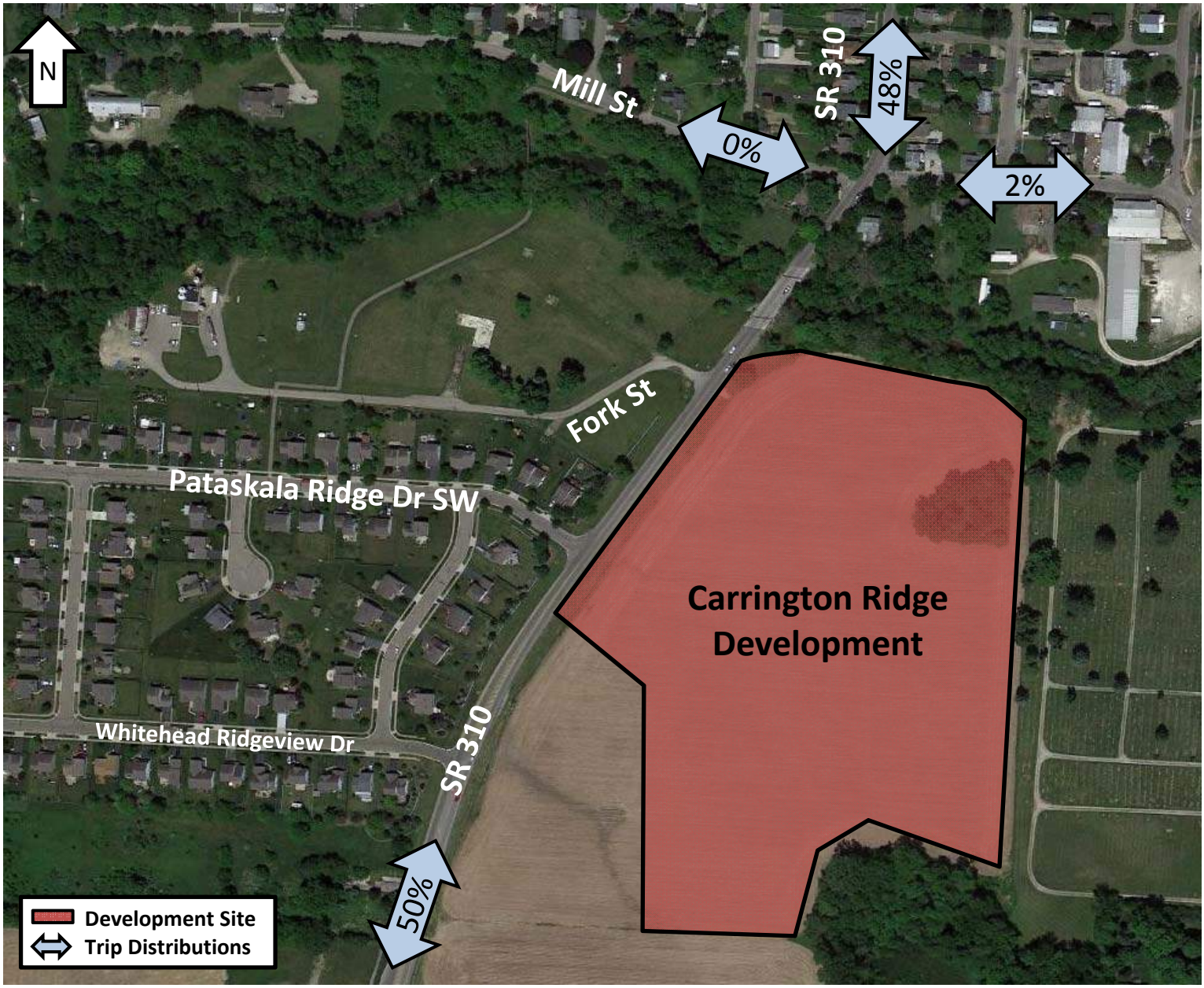
THE TRAILS AT MONTVILLE

	A.M. PEAK			P.M. PEAK		
	Trip Rate	*Enter*	*Exit*	*Trip Rate*	*Enter*	*Exit*
Findley - Hunters Crossing 84 Units	.46	15%	85%	.52	70%	30%
Akron - Village of Northampton 95 Units	.24	17%	83%	.34	69%	31%
Wooster - Milltown Point 158 Units	.34	20%	80%	.47	67%	33%

Average AM Rate: 0.35 **17% Enter**
83% Exit

Average PM Rate: 0.44 **69% Enter**
31% Exit

Trip Distribution Percentages



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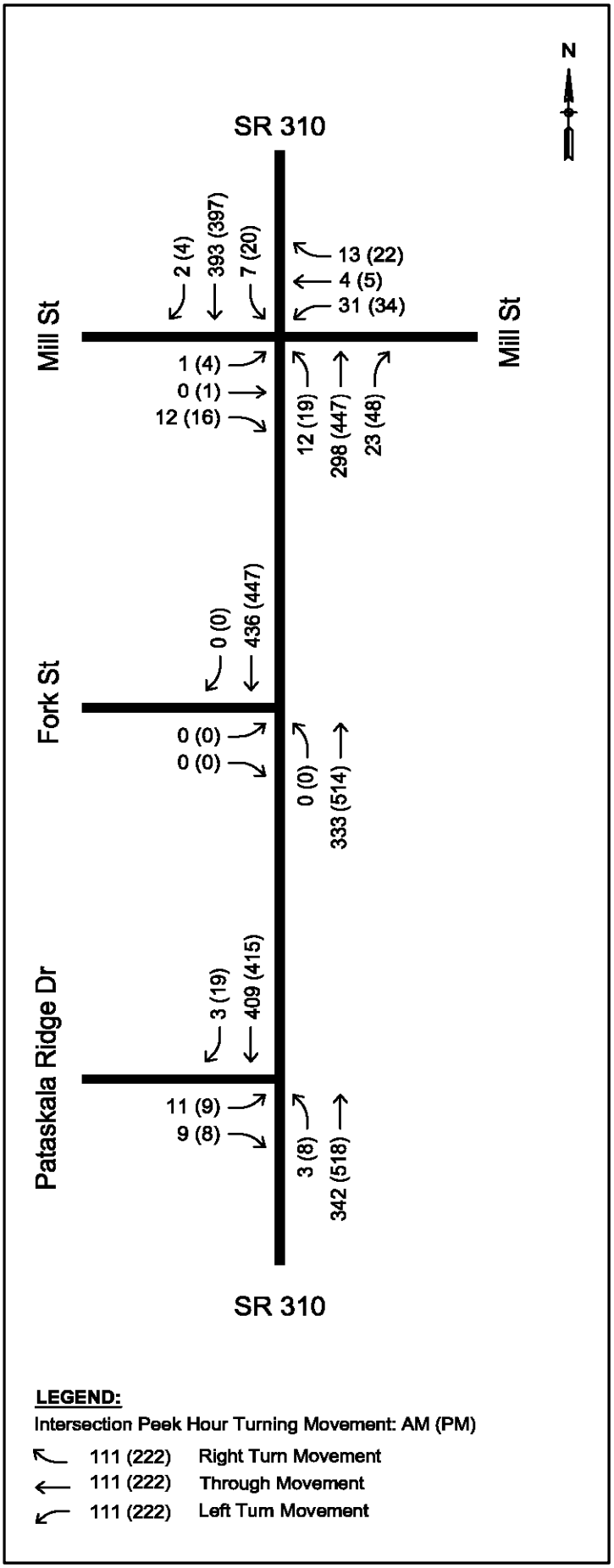
Appendix D – Traffic Volumes

No-Build – 2014 Traffic Volumes



LEGEND:

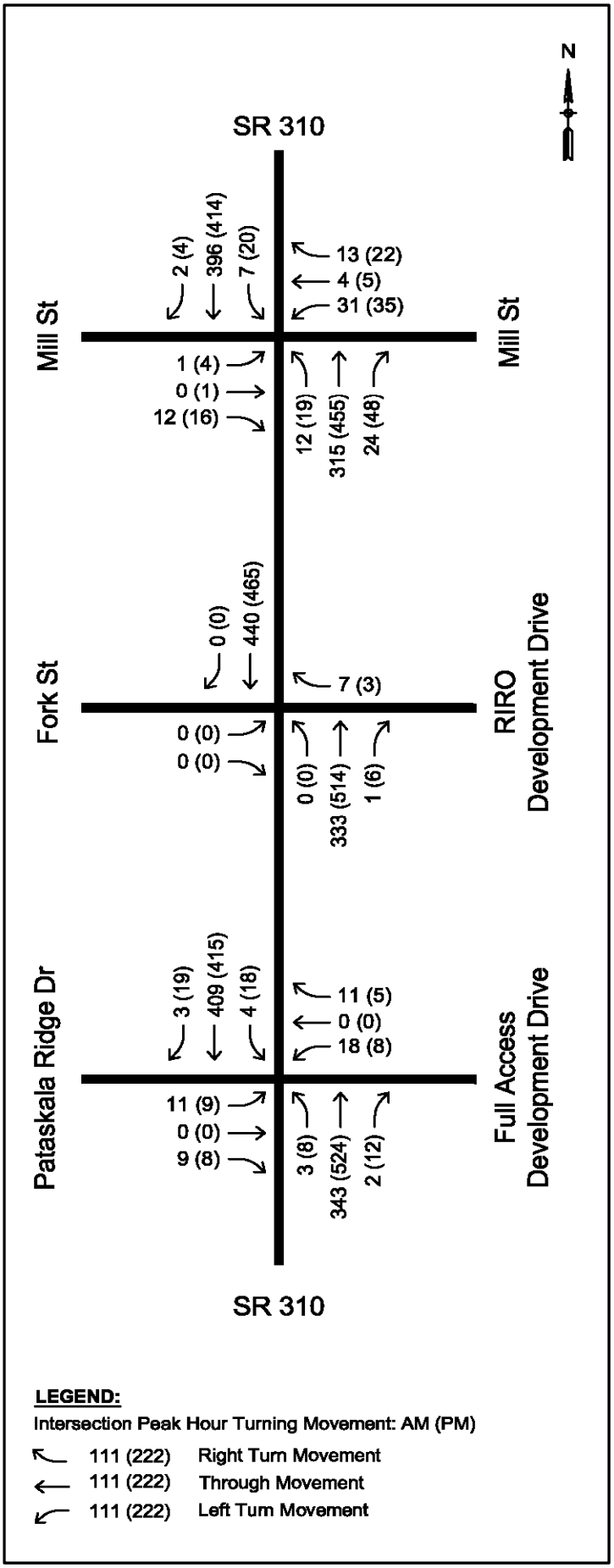
Intersection Peek Hour Turning Movement: AM (PM)

111 (222) Right Turn Movement

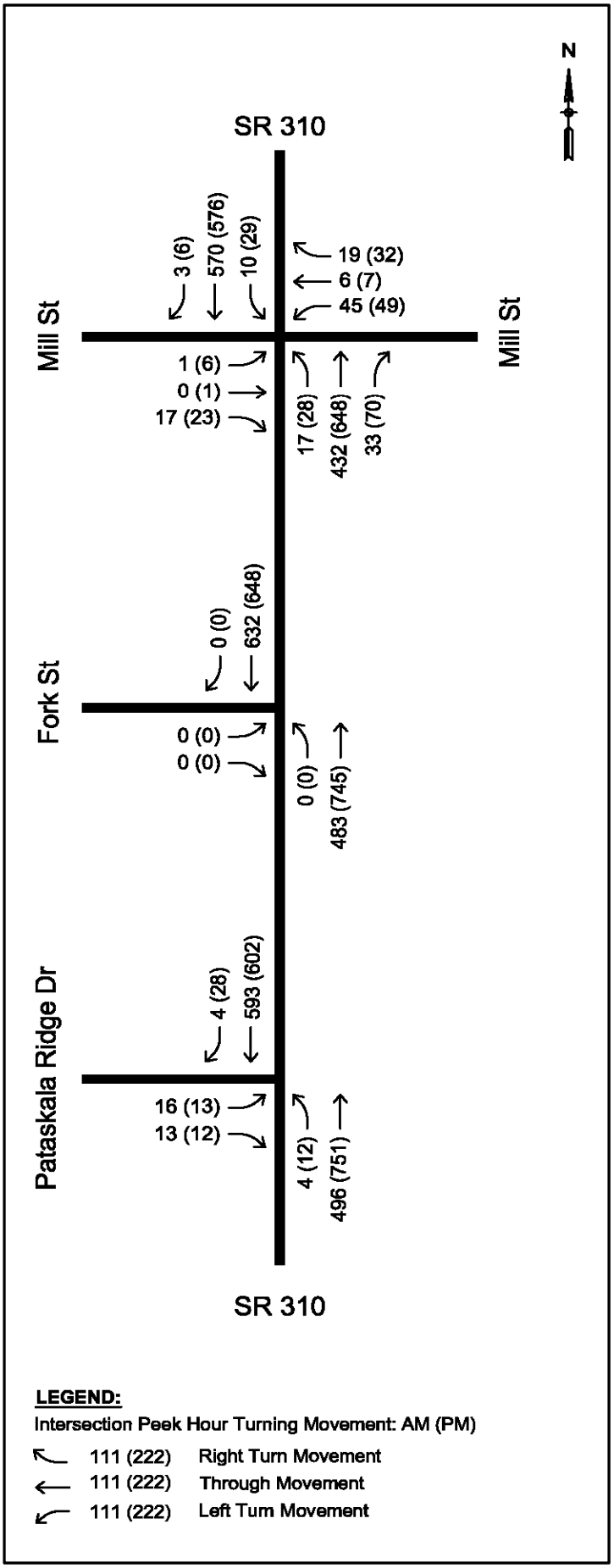
111 (222) Through Movement

111 (222) Left Turn Movement

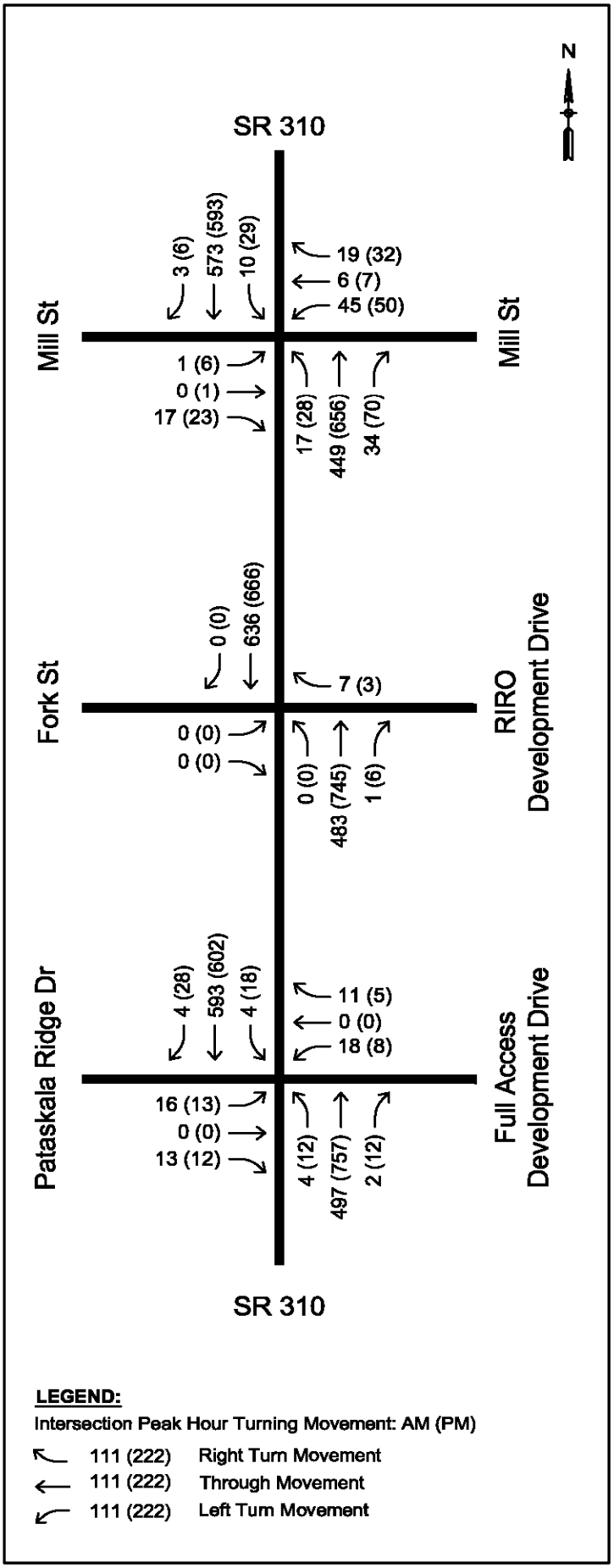
Build – 2014 Traffic Volumes



No-Build – 2034 Traffic Volumes



Build – 2034 Traffic Volumes



Appendix E – Capacity Analysis Output

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	1	0	12	31	4	13	12	298	23	7	393	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	100	0	0	0	0	16	25	6	9	0	3	0
Mvmt Flow	1	0	13	33	4	14	13	317	24	7	418	2

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	798	801	419	795	790	329	420	0	0	341	0	0
Stage 1	434	434	-	355	355	-	-	-	-	-	-	-
Stage 2	364	367	-	440	435	-	-	-	-	-	-	-
Critical Hdwy	8.1	6.5	6.2	7.1	6.5	6.36	4.35	-	-	4.1	-	-
Critical Hdwy Stg 1	7.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	7.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	4.4	4	3.3	3.5	4	3.444	2.425	-	-	2.2	-	-
Pot Cap-1 Maneuver	213	320	638	308	325	681	1026	-	-	1229	-	-
Stage 1	448	585	-	666	633	-	-	-	-	-	-	-
Stage 2	494	626	-	600	584	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	203	313	638	297	318	681	1026	-	-	1229	-	-
Mov Cap-2 Maneuver	203	313	-	297	318	-	-	-	-	-	-	-
Stage 1	441	581	-	655	623	-	-	-	-	-	-	-
Stage 2	473	616	-	584	580	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.7	16.9	0.3	0.1
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1026	-	-	548	353	1229	-	-
HCM Lane V/C Ratio	0.012	-	-	0.025	0.145	0.006	-	-
HCM Control Delay (s)	8.6	0	-	11.7	16.9	7.9	0	-
HCM Lane LOS	A	A	-	B	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.5	0	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	0	0	0	333	436	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	6	7	2
Mvmt Flow	0	0	0	370	484	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	854	484	484	0	-	0
Stage 1	484	-	-	-	-	-
Stage 2	370	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	329	583	1079	-	-	-
Stage 1	620	-	-	-	-	-
Stage 2	699	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	329	583	1079	-	-	-
Mov Cap-2 Maneuver	329	-	-	-	-	-
Stage 1	620	-	-	-	-	-
Stage 2	699	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1079	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	11	9	3	342	409	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	9	0	0	6	7	0
Mvmt Flow	11	9	3	356	426	3

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	791	428	429	0	-	0
Stage 1	428	-	-	-	-	-
Stage 2	363	-	-	-	-	-
Critical Hdwy	6.49	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.49	-	-	-	-	-
Critical Hdwy Stg 2	5.49	-	-	-	-	-
Follow-up Hdwy	3.581	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	349	631	1141	-	-	-
Stage 1	643	-	-	-	-	-
Stage 2	689	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	348	631	1141	-	-	-
Mov Cap-2 Maneuver	348	-	-	-	-	-
Stage 1	643	-	-	-	-	-
Stage 2	687	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1141	-	436	-	-
HCM Lane V/C Ratio	0.003	-	0.048	-	-
HCM Control Delay (s)	8.2	0	13.7	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	4	1	16	34	5	22	19	447	48	20	397	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	98	98	98	98	98	98	98	98	98	98	98	98
Heavy Vehicles, %	0	0	0	3	0	0	0	2	4	0	3	0
Mvmt Flow	4	1	16	35	5	22	19	456	49	20	405	4

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	981	992	407	976	969	481	409	0	0	505	0	0
Stage 1	448	448	-	519	519	-	-	-	-	-	-	-
Stage 2	533	544	-	457	450	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.13	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.13	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.13	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.527	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	231	248	648	229	256	589	1161	-	-	1070	-	-
Stage 1	594	576	-	538	536	-	-	-	-	-	-	-
Stage 2	534	522	-	581	575	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	211	236	648	215	244	589	1161	-	-	1070	-	-
Mov Cap-2 Maneuver	211	236	-	215	244	-	-	-	-	-	-	-
Stage 1	580	562	-	526	524	-	-	-	-	-	-	-
Stage 2	497	510	-	552	561	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	13.6	21.3	0.3	0.4
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1161	-	-	439	282	1070	-	-
HCM Lane V/C Ratio	0.017	-	-	0.049	0.221	0.019	-	-
HCM Control Delay (s)	8.2	0	-	13.6	21.3	8.4	0	-
HCM Lane LOS	A	A	-	B	C	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.2	0.8	0.1	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	0	0	0	514	447	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	1	1	0
Mvmt Flow	0	0	0	571	497	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1068	497	497	0	-	0
Stage 1	497	-	-	-	-	-
Stage 2	571	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	248	577	1077	-	-	-
Stage 1	615	-	-	-	-	-
Stage 2	569	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	248	577	1077	-	-	-
Mov Cap-2 Maneuver	248	-	-	-	-	-
Stage 1	615	-	-	-	-	-
Stage 2	569	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1077	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	9	8	8	518	415	19
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	0	0	0	1	2	0
Mvmt Flow	9	8	8	534	428	20

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	989	438	447	0	-	0
Stage 1	438	-	-	-	-	-
Stage 2	551	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	276	623	1124	-	-	-
Stage 1	655	-	-	-	-	-
Stage 2	581	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	273	623	1124	-	-	-
Mov Cap-2 Maneuver	273	-	-	-	-	-
Stage 1	655	-	-	-	-	-
Stage 2	575	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	15.2	0.1	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1124	-	371	-	-
HCM Lane V/C Ratio	0.007	-	0.047	-	-
HCM Control Delay (s)	8.2	0	15.2	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	1	0	12	31	4	13	12	315	24	7	396	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	100	0	0	0	0	16	25	6	9	0	3	0
Mvmt Flow	1	0	13	33	4	14	13	335	26	7	421	2

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	819	823	422	817	811	348	423	0	0	361	0	0
Stage 1	437	437	-	373	373	-	-	-	-	-	-	-
Stage 2	382	386	-	444	438	-	-	-	-	-	-	-
Critical Hdwy	8.1	6.5	6.2	7.1	6.5	6.36	4.35	-	-	4.1	-	-
Critical Hdwy Stg 1	7.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	7.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	4.4	4	3.3	3.5	4	3.444	2.425	-	-	2.2	-	-
Pot Cap-1 Maneuver	205	311	636	298	316	665	1023	-	-	1209	-	-
Stage 1	446	583	-	652	622	-	-	-	-	-	-	-
Stage 2	482	614	-	597	582	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	195	304	636	287	308	665	1023	-	-	1209	-	-
Mov Cap-2 Maneuver	195	304	-	287	308	-	-	-	-	-	-	-
Stage 1	439	578	-	642	612	-	-	-	-	-	-	-
Stage 2	461	604	-	580	577	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.8	17.4	0.3	0.1
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1023	-	-	542	342	1209	-	-
HCM Lane V/C Ratio	0.012	-	-	0.026	0.149	0.006	-	-
HCM Control Delay (s)	8.6	0	-	11.8	17.4	8	0	-
HCM Lane LOS	A	A	-	B	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.5	0	-	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	0	0	0	0	0	7	0	333	1	0	440	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	6	2	2	7	2
Mvmt Flow	0	0	0	0	0	8	0	370	1	0	489	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	860	860	489	860	860	371	489	0	0	371	0	0
Stage 1	489	489	-	371	371	-	-	-	-	-	-	-
Stage 2	371	371	-	489	489	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	276	294	579	276	294	675	1074	-	-	1188	-	-
Stage 1	561	549	-	649	620	-	-	-	-	-	-	-
Stage 2	649	620	-	561	549	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	273	294	579	276	294	675	1074	-	-	1188	-	-
Mov Cap-2 Maneuver	273	294	-	276	294	-	-	-	-	-	-	-
Stage 1	561	549	-	649	620	-	-	-	-	-	-	-
Stage 2	642	620	-	561	549	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	10.4	0	0
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1074	-	-	-	675	1188	-	-
HCM Lane V/C Ratio	-	-	-	-	0.012	-	-	-
HCM Control Delay (s)	0	-	-	0	10.4	0	-	-
HCM Lane LOS	A	-	-	A	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	0	0	-	-

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	11	0	9	18	0	11	3	343	2	4	409	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	9	0	0	0	0	0	0	6	0	0	7	0
Mvmt Flow	11	0	9	19	0	11	3	357	2	4	426	3

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	806	802	428	806	803	358	429	0	0	359	0	0
Stage 1	436	436	-	365	365	-	-	-	-	-	-	-
Stage 2	370	366	-	441	438	-	-	-	-	-	-	-
Critical Hdwy	7.19	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.19	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.19	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.581	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	292	320	631	303	319	691	1141	-	-	1211	-	-
Stage 1	585	583	-	658	627	-	-	-	-	-	-	-
Stage 2	636	626	-	599	582	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	286	318	631	297	317	691	1141	-	-	1211	-	-
Mov Cap-2 Maneuver	286	318	-	297	317	-	-	-	-	-	-	-
Stage 1	583	581	-	656	625	-	-	-	-	-	-	-
Stage 2	624	624	-	588	580	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	15.1	15.3	0.1	0.1
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1141	-	-	379	379	1211	-	-
HCM Lane V/C Ratio	0.003	-	-	0.055	0.08	0.003	-	-
HCM Control Delay (s)	8.2	0	-	15.1	15.3	8	0	-
HCM Lane LOS	A	A	-	C	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.3	0	-	-

Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	4	1	16	35	5	22	19	455	48	20	414	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	98	98	98	98	98	98	98	98	98	98	98	98
Heavy Vehicles, %	0	0	0	3	0	0	0	2	4	0	3	0
Mvmt Flow	4	1	16	36	5	22	19	464	49	20	422	4

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1006	1017	424	1002	995	489	427	0	0	513	0	0
Stage 1	465	465	-	528	528	-	-	-	-	-	-	-
Stage 2	541	552	-	474	467	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.13	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.13	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.13	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.527	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	222	239	634	220	247	583	1143	-	-	1063	-	-
Stage 1	581	566	-	532	531	-	-	-	-	-	-	-
Stage 2	529	518	-	569	565	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	202	228	634	206	235	583	1143	-	-	1063	-	-
Mov Cap-2 Maneuver	202	228	-	206	235	-	-	-	-	-	-	-
Stage 1	568	552	-	520	519	-	-	-	-	-	-	-
Stage 2	492	506	-	539	551	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	13.9	22.3	0.3	0.4
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1143	-	-	425	271	1063	-	-
HCM Lane V/C Ratio	0.017	-	-	0.05	0.233	0.019	-	-
HCM Control Delay (s)	8.2	0	-	13.9	22.3	8.5	0	-
HCM Lane LOS	A	A	-	B	C	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.2	0.9	0.1	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	0	0	0	0	0	3	0	514	6	0	465	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0	0	1	0	0	1	0
Mvmt Flow	0	0	0	0	0	3	0	571	7	0	517	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1091	1095	517	1091	1091	574	517	0	0	578	0	0
Stage 1	517	517	-	574	574	-	-	-	-	-	-	-
Stage 2	574	578	-	517	517	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	194	215	562	194	217	522	1059	-	-	1006	-	-
Stage 1	545	537	-	507	506	-	-	-	-	-	-	-
Stage 2	507	504	-	545	537	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	193	215	562	194	217	522	1059	-	-	1006	-	-
Mov Cap-2 Maneuver	193	215	-	194	217	-	-	-	-	-	-	-
Stage 1	545	537	-	507	506	-	-	-	-	-	-	-
Stage 2	504	504	-	545	537	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	11.9	0	0
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1059	-	-	-	522	1006	-	-
HCM Lane V/C Ratio	-	-	-	-	0.006	-	-	-
HCM Control Delay (s)	0	-	-	0	11.9	0	-	-
HCM Lane LOS	A	-	-	A	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	0	0	-	-

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	9	0	8	8	0	5	8	524	12	18	415	19
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	0	0	0	0	0	0	0	1	0	0	2	0
Mvmt Flow	9	0	8	8	0	5	8	540	12	19	428	20

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1040	1044	438	1042	1048	546	447	0	0	553	0	0
Stage 1	475	475	-	563	563	-	-	-	-	-	-	-
Stage 2	565	569	-	479	485	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	210	231	623	210	230	541	1124	-	-	1027	-	-
Stage 1	574	561	-	514	512	-	-	-	-	-	-	-
Stage 2	513	509	-	571	555	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	202	223	623	202	222	541	1124	-	-	1027	-	-
Mov Cap-2 Maneuver	202	223	-	202	222	-	-	-	-	-	-	-
Stage 1	568	547	-	509	507	-	-	-	-	-	-	-
Stage 2	503	504	-	549	541	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	17.9	19.3	0.1	0.3
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1124	-	-	296	266	1027	-	-
HCM Lane V/C Ratio	0.007	-	-	0.059	0.05	0.018	-	-
HCM Control Delay (s)	8.2	0	-	17.9	19.3	8.6	0	-
HCM Lane LOS	A	A	-	C	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.2	0.1	-	-

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	1	0	17	45	6	19	17	432	33	10	570	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	100	0	0	0	0	16	25	6	9	0	3	0
Mvmt Flow	1	0	18	48	6	20	18	460	35	11	606	3

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1156	1160	608	1151	1144	477	610	0	0	495	0	0
Stage 1	629	629	-	513	513	-	-	-	-	-	-	-
Stage 2	527	531	-	638	631	-	-	-	-	-	-	-
Critical Hdwy	8.1	6.5	6.2	7.1	6.5	6.36	4.35	-	-	4.1	-	-
Critical Hdwy Stg 1	7.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	7.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	4.4	4	3.3	3.5	4	3.444	2.425	-	-	2.2	-	-
Pot Cap-1 Maneuver	113	197	499	177	202	561	866	-	-	1079	-	-
Stage 1	339	478	-	548	539	-	-	-	-	-	-	-
Stage 2	393	529	-	468	477	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	103	188	499	165	193	561	866	-	-	1079	-	-
Mov Cap-2 Maneuver	103	188	-	165	193	-	-	-	-	-	-	-
Stage 1	329	471	-	532	523	-	-	-	-	-	-	-
Stage 2	363	514	-	444	470	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	14.2	31.9	0.3	0.1
HCM LOS	B	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	866	-	-	411	207	1079	-	-
HCM Lane V/C Ratio	0.021	-	-	0.047	0.36	0.01	-	-
HCM Control Delay (s)	9.2	0	-	14.2	31.9	8.4	0	-
HCM Lane LOS	A	A	-	B	D	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.1	1.5	0	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	0	0	0	483	632	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	6	7	2
Mvmt Flow	0	0	0	537	702	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1239	702	702	0	-	0
Stage 1	702	-	-	-	-	-
Stage 2	537	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	194	438	895	-	-	-
Stage 1	491	-	-	-	-	-
Stage 2	586	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	194	438	895	-	-	-
Mov Cap-2 Maneuver	194	-	-	-	-	-
Stage 1	491	-	-	-	-	-
Stage 2	586	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	895	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	16	13	4	496	593	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	9	0	0	6	7	0
Mvmt Flow	17	14	4	517	618	4

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1145	620	622	0	-	0
Stage 1	620	-	-	-	-	-
Stage 2	525	-	-	-	-	-
Critical Hdwy	6.49	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.49	-	-	-	-	-
Critical Hdwy Stg 2	5.49	-	-	-	-	-
Follow-up Hdwy	3.581	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	214	492	969	-	-	-
Stage 1	523	-	-	-	-	-
Stage 2	580	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	213	492	969	-	-	-
Mov Cap-2 Maneuver	213	-	-	-	-	-
Stage 1	523	-	-	-	-	-
Stage 2	577	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	19.1	0.1	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	969	-	286	-	-
HCM Lane V/C Ratio	0.004	-	0.106	-	-
HCM Control Delay (s)	8.7	0	19.1	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	0.4	-	-

Intersection	
Int Delay, s/veh	4.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	6	1	23	49	7	32	28	648	70	29	576	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	98	98	98	98	98	98	98	98	98	98	98	98
Heavy Vehicles, %	0	0	0	3	0	0	0	2	4	0	3	0
Mvmt Flow	6	1	23	50	7	33	29	661	71	30	588	6

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1424	1440	591	1416	1407	697	594	0	0	733	0	0
Stage 1	650	650	-	754	754	-	-	-	-	-	-	-
Stage 2	774	790	-	662	653	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.13	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.13	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.13	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.527	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	115	134	511	114	140	444	992	-	-	881	-	-
Stage 1	461	468	-	400	420	-	-	-	-	-	-	-
Stage 2	394	404	-	449	467	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	94	121	511	100	126	444	992	-	-	881	-	-
Mov Cap-2 Maneuver	94	121	-	100	126	-	-	-	-	-	-	-
Stage 1	438	444	-	380	399	-	-	-	-	-	-	-
Stage 2	341	384	-	406	443	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	21	66.2	0.3	0.4
HCM LOS	C	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	992	-	-	256	142	881	-	-
HCM Lane V/C Ratio	0.029	-	-	0.12	0.632	0.034	-	-
HCM Control Delay (s)	8.7	0	-	21	66.2	9.2	0	-
HCM Lane LOS	A	A	-	C	F	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.4	3.4	0.1	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	0	0	0	745	648	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	1	1	0
Mvmt Flow	0	0	0	828	720	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1548	720	720	0	-	0
Stage 1	720	-	-	-	-	-
Stage 2	828	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	127	431	891	-	-	-
Stage 1	486	-	-	-	-	-
Stage 2	432	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	127	431	891	-	-	-
Mov Cap-2 Maneuver	127	-	-	-	-	-
Stage 1	486	-	-	-	-	-
Stage 2	432	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	891	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	13	12	12	751	602	28
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	0	0	0	1	2	0
Mvmt Flow	13	12	12	774	621	29

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1434	635	649	0	-	0
Stage 1	635	-	-	-	-	-
Stage 2	799	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	149	482	947	-	-	-
Stage 1	532	-	-	-	-	-
Stage 2	446	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	146	482	947	-	-	-
Mov Cap-2 Maneuver	146	-	-	-	-	-
Stage 1	532	-	-	-	-	-
Stage 2	436	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	23.6	0.1	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	947	-	219	-	-
HCM Lane V/C Ratio	0.013	-	0.118	-	-
HCM Control Delay (s)	8.9	0	23.6	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	0.4	-	-

Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	1	0	17	45	6	19	17	449	34	10	573	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	100	0	0	0	0	16	25	6	9	0	3	0
Mvmt Flow	1	0	18	48	6	20	18	478	36	11	610	3

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1177	1182	611	1173	1166	496	613	0	0	514	0	0
Stage 1	632	632	-	532	532	-	-	-	-	-	-	-
Stage 2	545	550	-	641	634	-	-	-	-	-	-	-
Critical Hdwy	8.1	6.5	6.2	7.1	6.5	6.36	4.35	-	-	4.1	-	-
Critical Hdwy Stg 1	7.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	7.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	4.4	4	3.3	3.5	4	3.444	2.425	-	-	2.2	-	-
Pot Cap-1 Maneuver	109	191	497	171	196	547	864	-	-	1062	-	-
Stage 1	338	477	-	535	529	-	-	-	-	-	-	-
Stage 2	383	519	-	466	476	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	99	182	497	159	187	547	864	-	-	1062	-	-
Mov Cap-2 Maneuver	99	182	-	159	187	-	-	-	-	-	-	-
Stage 1	328	469	-	519	514	-	-	-	-	-	-	-
Stage 2	354	504	-	442	468	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	14.3	33.3	0.3	0.1
HCM LOS	B	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	864	-	-	406	200	1062	-	-
HCM Lane V/C Ratio	0.021	-	-	0.047	0.372	0.01	-	-
HCM Control Delay (s)	9.3	0	-	14.3	33.3	8.4	0	-
HCM Lane LOS	A	A	-	B	D	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.1	1.6	0	-	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	0	0	0	0	0	7	0	483	1	0	636	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	6	2	2	7	2
Mvmt Flow	0	0	0	0	0	8	0	537	1	0	707	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1244	1245	707	1244	1244	537	707	0	0	538	0	0
Stage 1	707	707	-	537	537	-	-	-	-	-	-	-
Stage 2	537	538	-	707	707	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	151	174	435	151	174	544	891	-	-	1030	-	-
Stage 1	426	438	-	528	523	-	-	-	-	-	-	-
Stage 2	528	522	-	426	438	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	149	174	435	151	174	544	891	-	-	1030	-	-
Mov Cap-2 Maneuver	149	174	-	151	174	-	-	-	-	-	-	-
Stage 1	426	438	-	528	523	-	-	-	-	-	-	-
Stage 2	520	522	-	426	438	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	11.7	0	0
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	891	-	-	-	544	1030	-	-
HCM Lane V/C Ratio	-	-	-	-	0.014	-	-	-
HCM Control Delay (s)	0	-	-	0	11.7	0	-	-
HCM Lane LOS	A	-	-	A	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	0	0	-	-

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	16	0	13	18	0	11	4	497	2	4	593	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	9	0	0	0	0	0	0	6	0	0	7	0
Mvmt Flow	17	0	14	19	0	11	4	518	2	4	618	4

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1161	1156	620	1162	1157	519	622	0	0	520	0	0
Stage 1	628	628	-	527	527	-	-	-	-	-	-	-
Stage 2	533	528	-	635	630	-	-	-	-	-	-	-
Critical Hdwy	7.19	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.19	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.19	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.581	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	167	198	492	174	198	561	969	-	-	1056	-	-
Stage 1	459	479	-	538	532	-	-	-	-	-	-	-
Stage 2	518	531	-	470	478	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	162	196	492	168	196	561	969	-	-	1056	-	-
Mov Cap-2 Maneuver	162	196	-	168	196	-	-	-	-	-	-	-
Stage 1	456	476	-	535	529	-	-	-	-	-	-	-
Stage 2	504	528	-	454	475	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	22.8	23.1	0.1	0.1
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	969	-	-	232	229	1056	-	-
HCM Lane V/C Ratio	0.004	-	-	0.13	0.132	0.004	-	-
HCM Control Delay (s)	8.7	0	-	22.8	23.1	8.4	0	-
HCM Lane LOS	A	A	-	C	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.4	0.4	0	-	-

Intersection	
Int Delay, s/veh	5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	6	1	23	50	7	32	28	656	70	29	593	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	98	98	98	98	98	98	98	98	98	98	98	98
Heavy Vehicles, %	0	0	0	3	0	0	0	2	4	0	3	0
Mvmt Flow	6	1	23	51	7	33	29	669	71	30	605	6

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1449	1465	608	1442	1432	705	611	0	0	741	0	0
Stage 1	667	667	-	762	762	-	-	-	-	-	-	-
Stage 2	782	798	-	680	670	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.13	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.13	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.13	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.527	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	110	129	499	110	136	440	978	-	-	875	-	-
Stage 1	451	460	-	396	416	-	-	-	-	-	-	-
Stage 2	390	401	-	439	459	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	90	116	499	96	122	440	978	-	-	875	-	-
Mov Cap-2 Maneuver	90	116	-	96	122	-	-	-	-	-	-	-
Stage 1	428	436	-	376	395	-	-	-	-	-	-	-
Stage 2	336	381	-	396	435	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	21.6	72	0.3	0.4
HCM LOS	C	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	978	-	-	247	137	875	-	-
HCM Lane V/C Ratio	0.029	-	-	0.124	0.663	0.034	-	-
HCM Control Delay (s)	8.8	0	-	21.6	72	9.3	0	-
HCM Lane LOS	A	A	-	C	F	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.4	3.6	0.1	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	0	0	0	0	0	3	0	745	6	0	666	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0	0	1	0	0	1	0
Mvmt Flow	0	0	0	0	0	3	0	828	7	0	740	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1571	1574	740	1571	1571	831	740	0	0	834	0	0
Stage 1	740	740	-	831	831	-	-	-	-	-	-	-
Stage 2	831	834	-	740	740	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	91	111	420	91	112	373	876	-	-	808	-	-
Stage 1	412	426	-	367	387	-	-	-	-	-	-	-
Stage 2	367	386	-	412	426	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	90	111	420	91	112	373	876	-	-	808	-	-
Mov Cap-2 Maneuver	90	111	-	91	112	-	-	-	-	-	-	-
Stage 1	412	426	-	367	387	-	-	-	-	-	-	-
Stage 2	364	386	-	412	426	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	14.7	0	0
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	876	-	-	-	373	808	-	-
HCM Lane V/C Ratio	-	-	-	-	0.009	-	-	-
HCM Control Delay (s)	0	-	-	0	14.7	0	-	-
HCM Lane LOS	A	-	-	A	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	0	0	-	-

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	13	0	12	8	0	5	12	757	12	18	602	28
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	0	0	0	0	0	0	0	1	0	0	2	0
Mvmt Flow	13	0	12	8	0	5	12	780	12	19	621	29

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1486	1490	635	1489	1498	787	649	0	0	793	0	0
Stage 1	672	672	-	811	811	-	-	-	-	-	-	-
Stage 2	814	818	-	678	687	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	104	125	482	103	124	395	947	-	-	837	-	-
Stage 1	449	458	-	376	396	-	-	-	-	-	-	-
Stage 2	375	393	-	445	450	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	98	118	482	96	117	395	947	-	-	837	-	-
Mov Cap-2 Maneuver	98	118	-	96	117	-	-	-	-	-	-	-
Stage 1	439	442	-	367	387	-	-	-	-	-	-	-
Stage 2	362	384	-	418	434	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	32	34.6	0.1	0.3
HCM LOS	D	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	947	-	-	159	135	837	-	-
HCM Lane V/C Ratio	0.013	-	-	0.162	0.099	0.022	-	-
HCM Control Delay (s)	8.9	0	-	32	34.6	9.4	0	-
HCM Lane LOS	A	A	-	D	D	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.6	0.3	0.1	-	-