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TRAFFIC PLANNING AND DESIGN, INC.

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MEMORANDUM

To: Justin Doty, P.E.
Frederick, Seibert & Associates, Inc.
15 East Main Street,
New Bloomfield, PA 17068

From: Jarred L. Neal, P.E.

Revision Date: June 5, 2023

Re: **Wolf Farm (Keystone FC) – Traffic Impact Evaluation**
South Middleton Township, Cumberland County, PA
TPD# FSAI.00029

The purpose of this Traffic Evaluation is to assess the proposed driveway configurations and determine potential off-site intersection improvements necessary to accommodate Phase 1 and full build-out of the Wolf Farm – (Keystone FC) soccer complex.

INTRODUCTION

The site is located on the southern side of York Road (SR 0074) between E Springville Road and S Ridge Road. Phase 1 of the Wolf Farms Keystone Football Club development will consist of three (3) soccer fields and full build-out will consist of nine (9) soccer fields.

The site will be served by the following access connections:

- The proposed complex will be served by one (1) full-movement driveway to access E Springville Road approximately 755' south of York Road (SR 0074).

EXISTING TRAFFIC CONDITIONS

Manual traffic counts were conducted on 15-minute intervals during the weekday morning (6:00 to 9:00 A.M.), weekday evening (3:00 to 6:00 P.M.), and Saturday midday (11:00 A.M. to 1:00 P.M.) peak periods. Data pertaining to heavy vehicles, pedestrians and transit vehicles were observed during the manual counts. Peak hours and count dates for the study area intersections are identified in **Table 1.**

TABLE 1
MANUAL TRAFFIC COUNT INFORMATION

Intersection	Date of Traffic Counts	Time Period	Intersection Peak Hour[1]
York Road (SR 0074) & E Springville Road	Thursday, June 2, 2022	Weekday A.M.	7:15 to 8:15 A.M.
		Weekday P.M.	3:30 to 4:30 P.M.
	Saturday, June 4, 2022	Saturday Midday	11:45 A.M. to 12:45 P.M.
York Road (SR 0074) & S Middlesex Road/ S. Ridge Road	Thursday, June 2, 2022	Weekday A.M.	7:15 to 8:15 A.M.
		Weekday P.M.	3:15 to 4:15 P.M.
	Saturday, June 4, 2022	Saturday Midday	11:00 A.M. to 12:00 P.M.
York Road (SR 0074) & Shugart Road	Thursday, June 2, 2022	Weekday A.M.	7:15 to 8:15 A.M.
		Weekday P.M.	3:30 to 4:30 P.M.
	Saturday, June 4, 2022	Saturday Midday	11:00 A.M. to 12:00 P.M.

Peak Hour consists of the four consecutive 15-minute intervals where the highest traffic volumes occur.

The existing condition traffic volumes for the weekday A.M., weekday P.M., and Saturday midday peak hours are illustrated in **Figure 3**. Manual traffic count data sheets are provided in **Appendix B**.

BASE (NO-BUILD) CONDITIONS

Base (No-Build) Volumes

In order to develop future base (no-build) traffic volumes, a background growth factor was developed based on growth rates obtained from the PennDOT Bureau of Planning and Research (BPR). A background growth rate of 0.69% per year is recommended for rural non-interstate roadways in Cumberland County. This background growth rate was applied annually to the existing 2022 volumes to yield traffic volumes for the 2025 and 2030 base (no-build) analysis years.

Nearby Planned Developments

Base (no-build) traffic conditions were calculated to include traffic volumes from proposed developments, which, though not operating under existing conditions, may be operating by the full build-out year (2030) of the proposed development. The following nearby planned developments were specifically included in this study:

- **Wheatstone** is a proposed 258-unit senior adult detached housing development located east of and adjacent to Springville Road and south of Lindsey Road. Trip Distributions for the proposed site were taken from the Transportation Impact Study for Wheatstone, dated October 2021. This development is shown in **Appendix C**.

- **Georgetown** is a proposed development located along Ridge Road, south of Lindsey Road. Trip distributions for the proposed development were taken from the Transportation Impact Study for Georgetown Development. This development is shown in **Appendix C**.

TRIP GENERATION

The trip generation rates for the proposed development were obtained from the manual Trip Generation, Eleventh Edition, 2022, an Institute of Transportation Engineers (ITE) Informational Report. The data are

categorized by Land Use Codes, with total vehicular trips for a given land use estimated using an independent variable and statistically generated rates or equations.

For the proposed development, Land Use Code 488 (Soccer Complex) from the Trip Generation Manual was used to calculate the number of vehicular trips the development will generate during the following time periods: (1) Average weekday; (2) Weekday A.M. peak hour; (3) Weekday P.M. peak hour and (4) Saturday Midday peak hour. **Table 2** shows the ITE trip generation data for the analyzed time periods.

TABLE 2
ITE TRIP GENERATION DATA

Land Use	ITE #	Time Period	Equations	Splits	
				Enter %	Exit %
Soccer Complex	488	Average Weekday	T = 71.33(X)	50%	50%
		Weekday A.M. Peak Hour	T = 0.99(X)	61%	39%
		Weekday P.M. Peak Hour	T = 13.92(X) + 35.13	66%	34%
		SAT Midday Peak Hour	T = 26.09(X) + 156.36	48%	52%

T = number of site-generated vehicular trips
X = independent variable (# of fields)

Table 3 summarizes the trip generation of the proposed development for the analyzed time periods.

TABLE 3
TRIP GENERATION SUMMARY

Time Period	Total Trips		
	Total	Enter	Exit
Phase 1 (3 Fields)			
Average Weekday	214	107	107
Weekday A.M. Peak Period	3	2	1
Weekday P.M. Peak Period	77	51	26
SAT Midday Peak Hour	235	113	122
Full Build-Out (9 Fields)			
Average Weekday	642	321	321
Weekday A.M. Peak Period	9	5	4
Weekday P.M. Peak Period	160	106	54
SAT Midday Peak Hour	391	188	203

As shown in **Table 3**, the Phase 1 of the proposed development is anticipated to result in 3 new trips during the weekday A.M. peak hour, 77 new trips during the weekday P.M. peak hour, and 235 new trips during the Saturday peak hour. Upon full build-out the proposed development is anticipated to result in 9 new trips during the weekday A.M. peak hour, 160 new trips during the weekday P.M. peak hour, and 391 new trips during the Saturday peak hour.

TRIP DISTRIBUTION

The distribution of trips generated by the proposed development was based on the local road network, the existing traffic patterns, the proposed uses of the site, and the site driveway locations/configurations.

TABLE 4
TRIP DISTRIBUTION PERCENTAGES – NEW TRIPS

Direction - To/From	Assignment (To/From)	Distribution Percentage
West	Via York Road (SR 0074)	41%
East	Via York Road (SR 0074)	30%
North	Via S Middlesex Road	14%
North	Via Shughart Road	4%
South	Via E Springville Road	11%

The new trips for the proposed development were distributed to the local roadway network based on the percentages shown in **Table 4**.

PROJECTED (BUILD) CONDITION TRAFFIC VOLUMES

The site-generated trips for phase 1 were added to the 2025 base condition traffic volumes to develop 2025 projected condition traffic volumes. The site-generated trips for full build-out were added to the 2030 base condition traffic volumes to develop 2030 projected condition traffic volumes.

SIGHT DISTANCE ANALYSIS

A sight distance analysis was prepared for the proposed access location. In general, recommended safe sight distances depend upon the posted speed limit and roadway grades. The existing sight distances at the proposed driveways were measured in accordance with PennDOT Publication 282 Highway Occupancy Permit Guidelines and compared to PennDOT's Desirable criteria. In addition, measured sight distances at the proposed driveways were compared to PennDOT's safe stopping sight distance standard, which is calculated by the following equation:

$$\mathbf{SSSD = 1.47VT + V^2/[30(f \pm g)]}$$

SSSD = safe stopping sight distance (acceptable sight distance)
V = Vehicle Speed
T = Perception Reaction Time of Driver (2.5 seconds)
f = Coefficient of Friction for Wet Pavements
g = Percent of Roadway Grade Divided by 100

Table 5 shows the desirable (DES), safe stopping (SSSD), and measured sight distances at the proposed local roadway locations for vehicles entering and exiting the site.

TABLE 5
SIGHT DISTANCE ANALYSIS

	Direction	Speed	Grade[1]	Sight Distances (feet)		
				DES	SSSD	EXIST
E Springville Road & Proposed Site Driveway (~755' south of York Road intersection)						
Exiting Movements	To the left	35 mph	+1%	440'	245'	500'
	To the right	35 mph	0%	350'	249'	450'
Entering Left Turns	Approaching same direction	35 mph	0%	N/A	249'	500'
	Approaching opposite direction	35 mph	+1%	300'	245'	500'

DES = PennDOT Desirable Sight Distance
SSSD = PennDOT Safe Stopping Sight Distance
1 = Roadway Grade Approaching Driveway
EXIST = Existing (measured) Sight Distance

As shown in **Table 5** above, the measured sight distances at the proposed driveway location will exceed the applicable sight distance standards.

TURNING LANE WARRANTS

Methodology

TPD evaluated auxiliary turn lane warrants at the site access intersections. The warrant analysis methodology contained within Chapter 11 of PennDOT's *Publication 46*, Section 11.17.

Findings

Table 6 summarizes the results of the auxiliary turn lane analysis at the site access intersections.

TABLE 6
AUXILIARY TURN LANE WARRANT ANALYSIS SUMMARY – FULL BUILD-OUT

Intersection	Time Periods	Auxiliary Lane	Warrant Satisfied?	Required Lane Length	Proposed Lane Length
E Springville Road & Proposed Site Driveway	AM	SB Left Turn Lane	No	--	--
	PM		No	--	--
	SAT		No	--	--
	AM	NB Right Turn Lane	No	--	--
	PM		No	--	--
	SAT		No	--	--

The results of this analysis indicate that auxiliary turn lanes are not warranted approaching the site driveway to E Springville Road with full build-out of the proposed development.

CAPACITY ANALYSIS METHODOLOGY

Capacity analyses was conducted for the weekday A.M., P.M., and Saturday midday peak hours at the study area intersections. These analyses were conducted according to the methodologies contained in the *Highway Capacity Manual, 6th Ed.* (HCM) using *Synchro 11* software, a Trafficware product. The capacity analysis results are summarized in **Table 7-9** for the analyzed peak hours.

The following conditions was analyzed, as applicable:

- 2022 Existing Conditions;
- 2025 Base (No-Build) Conditions;
- 2025 Projected (Opening year with Phase 1 of development);
- 2025 Projected (Opening year with Phase 1 of development) conditions with improvements.
- 2030 Base (No-Build) Conditions;
- 2030 Projected (Design year with full build-out of development);
- 2030 Projected (Design year with full build-out of development) conditions with improvements.

TABLE 7
LEVEL OF SERVICE SUMMARY (DELAY): WEEKDAY A.M. PEAK HOUR

Intersection	Approach/ Movement	Weekday A.M. Peak Hour						
		2022 Existing	Opening Year 2025 (Phase 1)			Design Year 2030 (Full Build-Out)		
			Base	Projected	Projected[1]	Base	Projected	Projected[1]
York Road (SR 0074) & E Springville Road	EB T/R	--	--	--	--	--	--	A
	WB L/T	A	A	A	--	A	A	A
	NB L/R	B	C	C	--	C	C	B
	ILOS	**A (1.6)**	**A (3.0)**	**A (3.1)**	**--**	**A (3.1)**	**A (3.2)**	**A (7.1)**
York Road (SR 0074) & Shughart Road	EB L/T	A	B	B	--	B	B	--
	SB L/R	B	B	B	--	B	B	--
	ILOS	**A (3.9)**	**A (3.8)**	**A (3.8)**	**--**	**A (3.9)**	**A (3.9)**	**--**
York Road (SR 0074) & S Middlesex Road	EB L/T/R	A	A	A	--	A	A	--
	WB L/T/R	A	A	A	--	A	A	--
	NB L/T/R	C	C	C	--	C	C	--
	SB L/T/R	B	C	C	--	C	C	--
	ILOS	**A (1.6)**	**A (3.4)**	**A (3.4)**	**--**	**A (3.5)**	**A (3.5)**	**--**
E Springville Road & Proposed Site Driveway	WB L/R	--	--	A	--	--	A	--
	SB L/T	--	--	A	--	--	A	--
	ILOS	**--**	**--**	**A (0.1)**	**--**	**--**	**A (0.3)**	**--**

Base = No-Build scenario Projected = Build scenario ILOS = Overall Intersection Level of Service
1 = Projected conditions with implementation of recommended improvements

TABLE 8
LEVEL OF SERVICE SUMMARY (DELAY): WEEKDAY P.M. PEAK HOUR

Intersection	Approach/ Movement	Weekday P.M. Peak Hour						
		2022 Existing	Opening Year 2025 (Phase 1)			Design Year 2030 (Full Build-Out)		
			Base	Projected	Projected[1]	Base	Projected	Projected[1]
York Road (SR 0074) & E Springville Road	EB T/R	--	--	--	--	--	--	A
	WB L/T	B	B	B	--	B	B	A
	NB L/R	C	E	F (61.9)	--	E	F (150.5)	C
	ILOS	**A (1.7)**	**A (3.4)**	**A (6.2)**	**--**	**A (3.8)**	**C (16.1)**	**A (9.9)**
York Road (SR 0074) & Shughart Road	EB L/T	A	B	B	--	B	B	--
	SB L/R	B	B	B	--	B	B	--
	ILOS	**A (3.7)**	**A (3.5)**	**A (3.6)**	**--**	**A (3.6)**	**A (3.9)**	**--**
York Road (SR 0074) & S Middlesex Road	EB L/T/R	A	A	A	--	A	A	--
	WB L/T/R	A	A	A	--	A	A	--
	NB L/T/R	C	C	D	--	D	D	--
	SB L/T/R	C	C	C	--	C	D	--
	ILOS	**A (2.1)**	**A (4.1)**	**A (4.2)**	**--**	**A (4.2)**	**A (4.4)**	**--**
E Springville Road & Proposed Site Driveway	WB L/R	--	--	A	--	--	A	--
	SB L/T	--	--	A	--	--	A	--
	ILOS	**--**	**--**	**A (1.8)**	**--**	**--**	**A (3.0)**	**--**

Base = No-Build scenario Projected = Build scenario ILOS = Overall Intersection Level of Service
1 = Projected conditions with implementation of recommended improvements

TABLE 9
LEVEL OF SERVICE SUMMARY (DELAY): SATURDAY MIDDAY PEAK HOUR

Intersection	Approach/ Movement	Saturday Midday Peak Hour						
		2022 Existing	Opening Year 2025 (Phase 1)			Design Year 2030 (Full Build-Out)		
			Base	Projected	Projected[1]	Base	Projected	Projected[1]
York Road (SR 0074) & E Springville Road	EB T/R	--	--	--	A	--	--	A
	WB L/T	A	A	B	A	A	B	C
	NB L/R	B	C	F (76.6)	B	C	F (304.5)	D
	ILOS	**A (2.0)**	**A (3.1)**	**B (14.9)**	**B (10.7)**	**A (3.2)**	**F (66.3)**	**C (21.6)**
York Road (SR 0074) & Shughart Road	EB L/T	A	A	A	--	A	B	--
	SB L/R	B	B	B	--	B	B	--
	ILOS	**A (2.5)**	**A (2.4)**	**A (2.6)**	**--**	**A (2.4)**	**A (2.9)**	**--**
York Road (SR 0074) & S Middlesex Road	EB L/T/R	A	A	A	--	A	A	--
	WB L/T/R	A	A	A	--	A	A	--
	NB L/T/R	C	C	D	--	D	D	--
	SB L/T/R	C	C	C	--	C	C	--
	ILOS	**A (2.0)**	**A (3.8)**	**A (4.0)**	**--**	**A (4.0)**	**A (4.6)**	**--**
E Springville Road & Proposed Site Driveway	WB L/R	--	--	A	--	--	B	--
	SB L/T	--	--	A	--	--	A	--
	ILOS	**--**	**--**	**A (4.3)**	**--**	**--**	**A (5.8)**	**--**

Base = No-Build scenario Projected = Build scenario ILOS = Overall Intersection Level of Service
1 = Projected conditions with implementation of recommended improvements

95th PERCENTILE QUEUE ANALYSIS

Queue analyses were conducted at the study area intersections using *Synchro 11* software. For this analysis, the 95th percentile queue is defined as the queue length that is exceeded in 5% of the signal cycles. As an example, for a signal with a 90-second cycle, this means that the 95th percentile queue length will be exceeded during 2 of the 40 signal cycles that occur during the peak hour. The queue analysis results are summarized in **Table 10-12** for the analyzed peak hours.

TABLE 10
QUEUE ANALYSIS: WEEKDAY A.M. PEAK HOUR

Approach/ Movement	Available/ Proposed Storage	Design Year 2030: No-Build			Design Year 2030: Build			Design Year 2030: Build with Improvements[1]		
		Synchro 50th	Synchro 95th	HCM 95th	Synchro 50th	Synchro 95th	HCM 95th	Synchro 50th	Synchro 95th	HCM 95th
York Road (SR 0074) & E Springville Road										
EB T/R	500+	--	--	--	--	--	--	41	103	13
WB L/T	320	--	--	3	--	--	3	91	225	40
NB L/R	500+	--	--	48	--	--	48	23	78	43
York Road (SR 0074) & Shughart Road										
EB L/T	320	--	--	18	--	--	18	--	--	--
SB L/R	500+	--	--	25	--	--	25	--	--	--
York Road (SR 0074) & S Middlesex Road										
EB L/T/R	500+	--	--	0	--	--	0	--	--	--
WB L/T/R	500+	--	--	0	--	--	0	--	--	--
NB L/T/R	500+	--	--	30	--	--	30	--	--	--
SB L/T/R	500+	--	--	10	--	--	10	--	--	--
E Springville Road & Proposed Site Driveway										
WB L/R	50	--	--	--	--	--	0	--	--	--
SB L/T	500+	--	--	--	--	--	0	--	--	--

1 = Projected (Build) Conditions with recommended improvements

TABLE 11
QUEUE ANALYSIS: WEEKDAY P.M. PEAK HOUR

Approach/ Movement	Available/ Proposed Storage	Design Year 2030: No-Build			Design Year 2030: Build			Design Year 2030: Build with Improvements[1]		
		Synchro 50th	Synchro 95th	HCM 95th	Synchro 50th	Synchro 95th	HCM 95th	Synchro 50th	Synchro 95th	HCM 95th
York Road (SR 0074) & E Springville Road										
EB T/R	500+	--	--	--	--	--	--	183	322	123
WB L/T	320	--	--	8	--	--	18	156	428	88
NB L/R	500+	--	--	75	--	--	210	38	131	98
York Road (SR 0074) & Shughart Road										
EB L/T	320	--	--	23	--	--	25	--	--	--
SB L/R	500+	--	--	28	--	--	35	--	--	--
York Road (SR 0074) & S Middlesex Road										
EB L/T/R	500+	--	--	0	--	--	0	--	--	--
WB L/T/R	500+	--	--	0	--	--	0	--	--	--
NB L/T/R	500+	--	--	30	--	--	35	--	--	--
SB L/T/R	500+	--	--	33	--	--	35	--	--	--
E Springville Road & Proposed Site Driveway										
WB L/R	50	--	--	--	--	--	5	--	--	--
SB L/T	500+	--	--	--	--	--	8	--	--	--

1 = Projected (Build) Conditions with recommended improvements

TABLE 12
QUEUE ANALYSIS: SATURDAY MIDDAY PEAK HOUR

Approach/ Movement	Available/ Proposed Storage	Design Year 2030: No-Build			Design Year 2030: Build			Design Year 2030: Build with Improvements[1]		
		Synchro 50th	Synchro 95th	HCM 95th	Synchro 50th	Synchro 95th	HCM 95th	Synchro 50th	Synchro 95th	HCM 95th
York Road (SR 0074) & E Springville Road										
EB T/R	500+	--	--	--	--	--	--	133	218	175
WB L/T	320	--	--	5	--	--	20	219	474	333
NB L/R	500+	--	--	50	--	--	513	125	279	293
York Road (SR 0074) & Shughart Road										
EB L/T	320	--	--	13	--	--	18	--	--	--
SB L/R	500+	--	--	15	--	--	25	--	--	--
York Road (SR 0074) & S Middlesex Road										
EB L/T/R	500+	--	--	0	--	--	0	--	--	--
WB L/T/R	500+	--	--	0	--	--	0	--	--	--
NB L/T/R	500+	--	--	40	--	--	55	--	--	--
SB L/T/R	500+	--	--	18	--	--	23	--	--	--
E Springville Road & Proposed Site Driveway										
WB L/R	50	--	--	--	--	--	28	--	--	--
SB L/T	500+	--	--	--	--	--	15	--	--	--

1 = Projected (Build) Conditions with recommended improvements

SIGNAL WARRANT ANALYSIS

A preliminary traffic signal warrant analysis was conducted at the intersection of York Road (SR 0074) & E Springville Road in accordance with PennDOT Publication 212, *Official Traffic Control Devices*, Subchapter D, "Highway Traffic Signals". TPD used the 2022 existing condition traffic volumes to determine if any of the following MUTCD signal warrants are satisfied based on existing traffic volumes.

- Warrant 1, Eight-Hour Volume Warrant;
- Warrant 2, Four-Hour Volume Warrant;
- Warrant 3, Peak Hour Volume Warrant.

Based on the analyses performed, the following are the results of the traffic signal warrants:

York Road (SR 0074) & E. Springville Road – 2022 Existing Conditions (without Soccer Complex)

- Warrant 1: exceeds threshold volumes for 8 hours, 8 hours needed **(satisfied)**
- Warrant 2: exceeds threshold volumes for 5 hours, 4 hours needed **(satisfied)**
- Warrant 3: exceeds threshold volumes for 1 hour, 1 hour needed **(satisfied)**

As outlined above, traffic signal warrants are currently satisfied at the intersection of York Road (SR 0074) and E Springville Road under 2022 existing conditions without development of the Soccer Complex. It should be noted that this intersection was identified for improvements within the Townships Active

Transportation Plan 2021 and that several planned developments in the area will contribute to the traffic volumes at this intersection, which were not included in the traffic counts for this warrant analysis.

It is understood the Township has implemented a "fair-share" contribution impact fee to construct the needed improvements at this intersection of York Road (SR 0074) & E. Springville Road. The applicant has agreed to contribute a "fair-share" amount for the improvements. Based on previous discussions with the Township, the total volume of the intersection is not to be considered when calculating the percentage of impact, but rather the development's increase in minor street volumes during the Weekday P.M. peak period. A such, below is a breakdown of the minor street volumes relative to the existing traffic volumes and each nearby proposed development.

TABLE 13
MINOR STREET VOLUMES

Time Period	Total Trips		
	Minor Street Volume	Total Intersection Traffic	Percentage of minor Street Impact[1]
Existing Conditions	171	1135	43%
Wheatstone Res Dev	56	56	14%
Georgetown Res Dev	32	107	8%
Keystone FC Complex	142	142	35%

[1]Percentage of minor Street Impact = minor street volume/total minor street volume

The percentages in **Table 13** reflect the calculations based on minor street impact to the intersection as directed by the Township. Based on documentation provided by Grove Miller Engineering, as part of the Wheatstone Residential Development and Georgetown Residential Development Conditional Use Hearings, the total intersection improvements (traffic signal and roadway realignment) cost "could" be as much as $975,000.

When using the percentage of minor street impact and calculating a pro rata contribution per development, the ""fair-share" contribution impact fee for this project would be **$341,250.00**.

It is also important to note that PennDOT has jurisdiction over all traffic signalization in the state of Pennsylvania; and thus, PennDOT will need to review and approve the traffic signal plans. In addition, in Pennsylvania, municipalities own and maintain the signal equipment; and thus, the municipality must be the Applicant to PennDOT for the signalization.

CONCLUSIONS AND RECOMMENDATIONS

- The measured sight distances at the proposed driveway location will exceed the applicable sight distance standards.

- During the Phase 1 scenario the intersection of York Road (SR 0074) & E Springville Road will experience an overall intersection level of service drop during the Saturday midday peak hour. TPD offers the following for consideration:

  - The peak hour of the manual traffic counts during the weekday p.m. peak hour is 3:30 – 4:30 p.m. Per discussions with the applicant, weekday soccer related events/practices are not anticipated to begin until after this analyzed peak hour. Thus, this analysis conservatively assumes that the weekday p.m. peak soccer events will occur at the same time as the current p.m. peak hour of adjacent street.

  - During the Saturday midday peak hour, while congestion may occur with the occasional event, it will be limited to a brief period of time during the peak arrival/departure times. While the applicant, has agreed to provide a fair-share contribution to the future signalization of this intersection, it is likely that Phase 1 will be operational prior to signalization. Until signalization is implemented, the applicant will provide/utilize a traffic control specialist (flagger) at this intersection to manage event traffic during the peak arrival and departure times.

- During the Full build-out scenario the intersection of York Road (SR 0074) & E Springville Road will experience an overall intersection level of service drop during the weekday p.m. and Saturday midday peak hours. TPD offers the following for consideration:

  - The peak hour of the manual traffic counts during the weekday p.m. peak hour is 3:30 – 4:30 p.m. Per discussions with the applicant, weekday soccer related events/practices are not anticipated to begin until after this analyzed peak hour. Thus, this analysis conservatively assumes that the weekday p.m. peak soccer events will occur at the same time as the current p.m. peak hour of adjacent street.

  - During the Saturday midday peak hour, while congestion may occur with the occasional event, it will be limited to a brief period of time during the peak arrival/departure times. The applicant has agreed to provide a fair-share contribution to the future signalization of this intersection, it is likely that signalization will be implemented by the Township prior to full build-out of the proposed development. Until signalization is implemented, the applicant will provide/utilize a traffic control specialist (flagger) at this intersection to manage event traffic during the peak arrival and departure times.

- Auxiliary turn lanes are not warranted approaching the site driveway of E Springville Road.
- Traffic Planning and Design Inc. (TPD) recommends the following roadway improvements as outlined at the study area intersections:

E. Springville Road & Site Driveway

- Provide a Stop sign (PennDOT designation R1-1) to control exiting traffic on the egress site-driveway approach;
- Provide one entering lane and one exiting lane;
- Provide and perpetually maintain required sight distances.

York Road (SR 0074) & E. Springville Road

- In conjunction with build-out of Phase 1 of the Wolf Farm Soccer Fields the applicant will provide/utilize a traffic control specialist (flagger) at this intersection to manage event traffic during the peak arrival and departure times.
- It is anticipated the Township will implement traffic signalization at this intersection prior to full build-out of the Wolf Farm Soccer Fields, this improvement will be funded by a "fair-share" contribution impact fee.

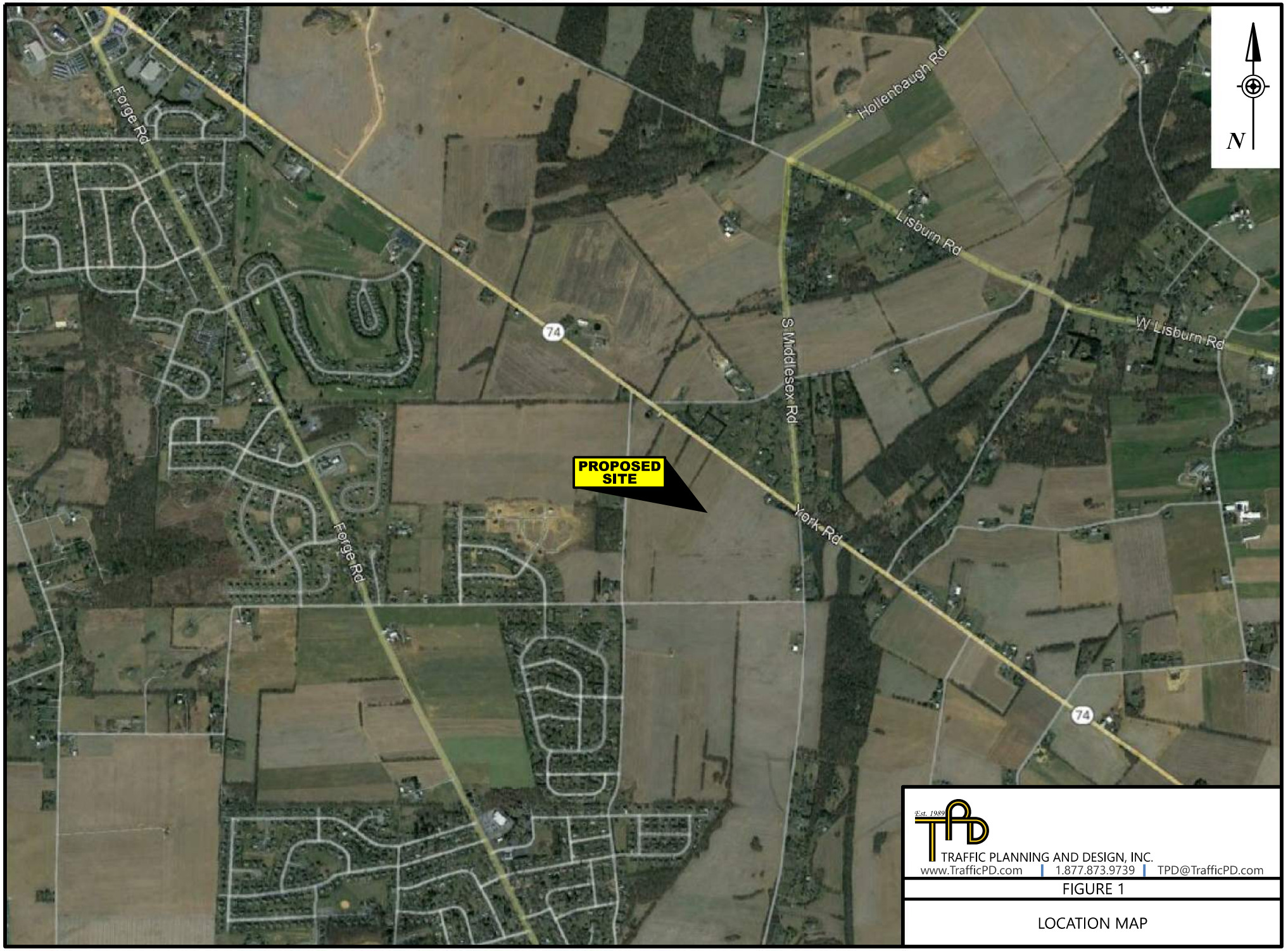

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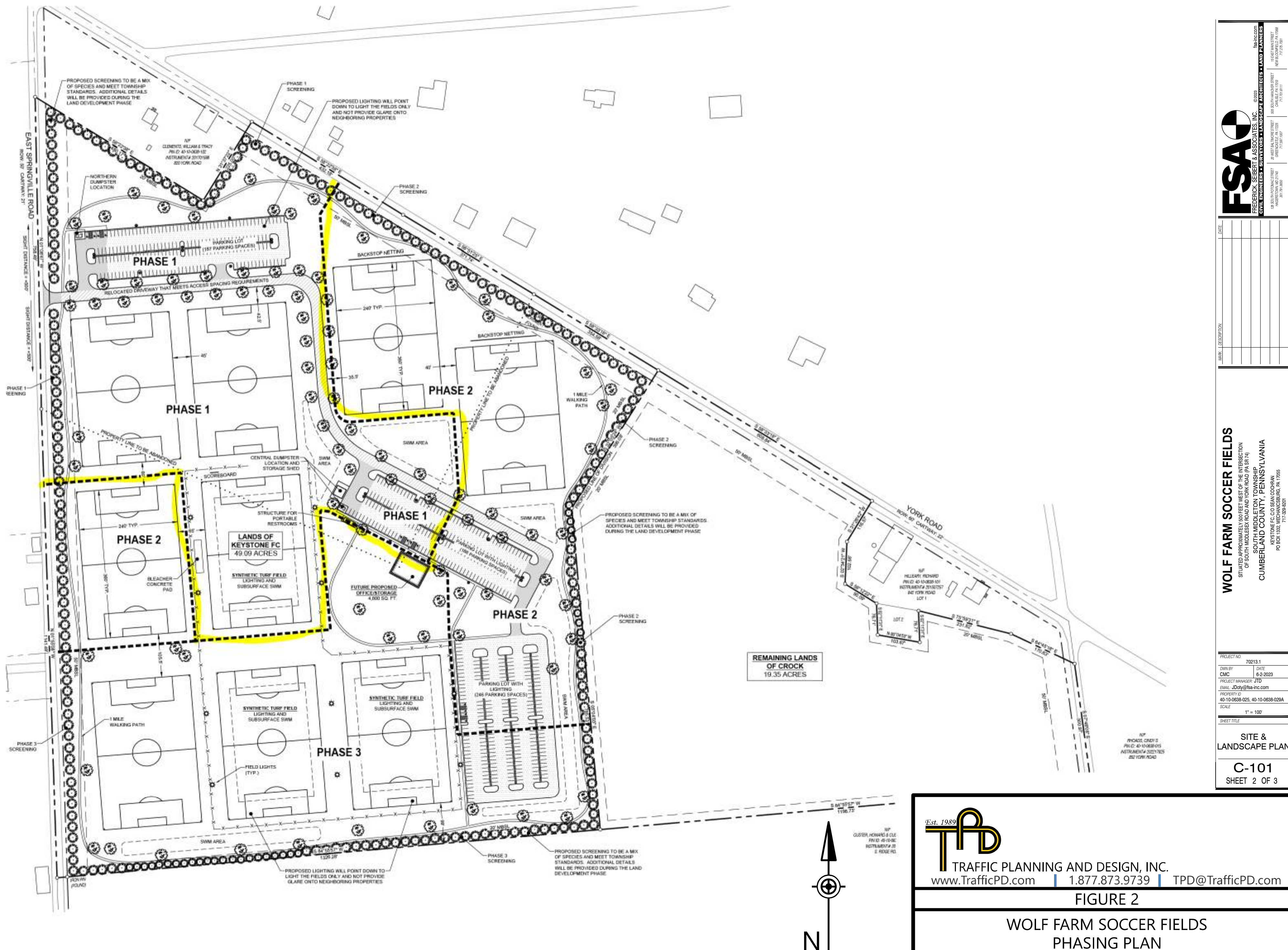
FIGURE 1

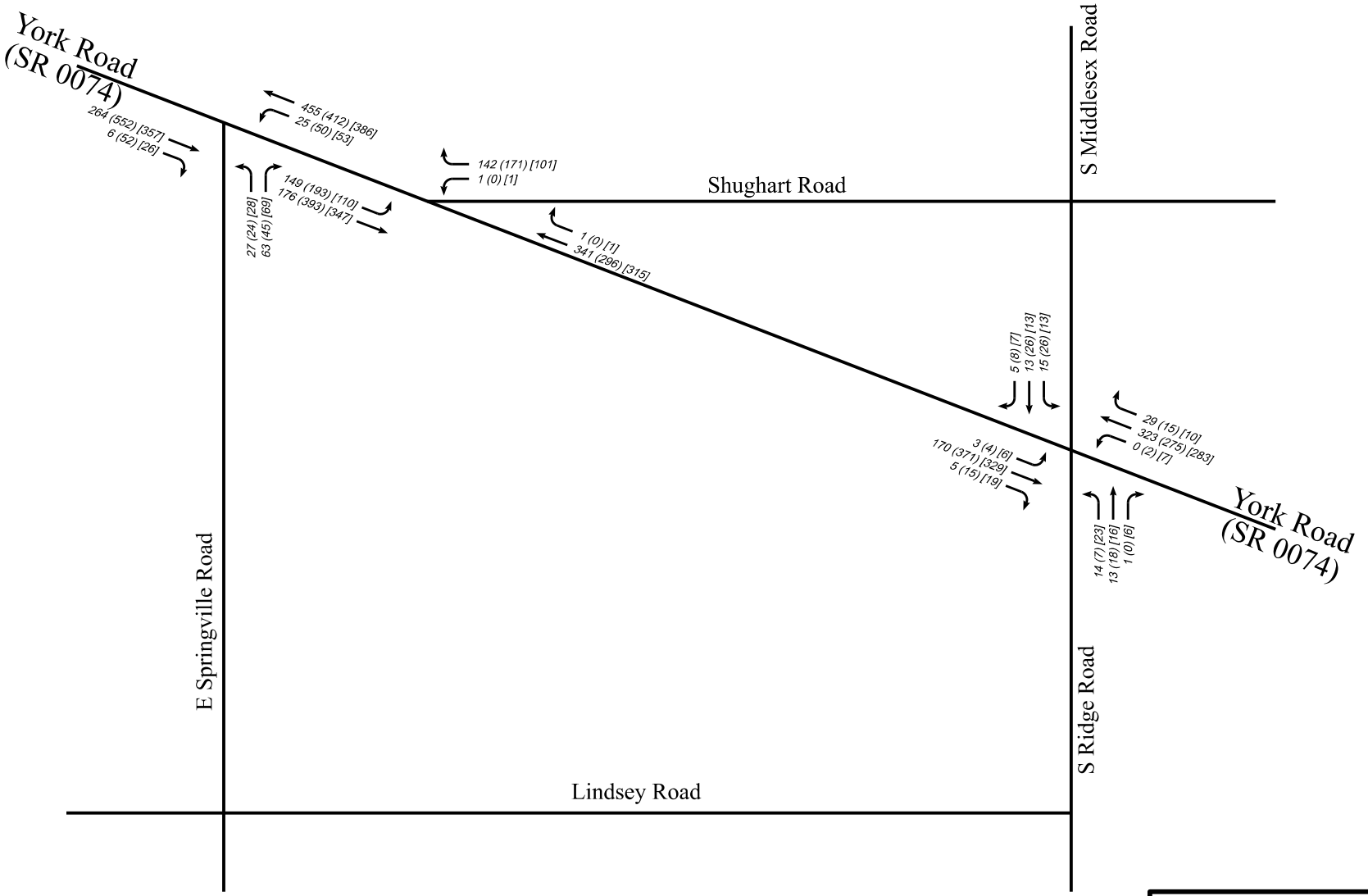
LOCATION MAP



Est. 1989 TPD
TRAFFIC PLANNING AND DESIGN, INC.
www.TrafficPD.com | 1.877.873.9739 | TPD@TrafficPD.com

FIGURE 2

WOLF FARM SOCCER FIELDS
PHASING PLAN



KEY:

SCHEMATIC DRAWING:NOT TO SCALE

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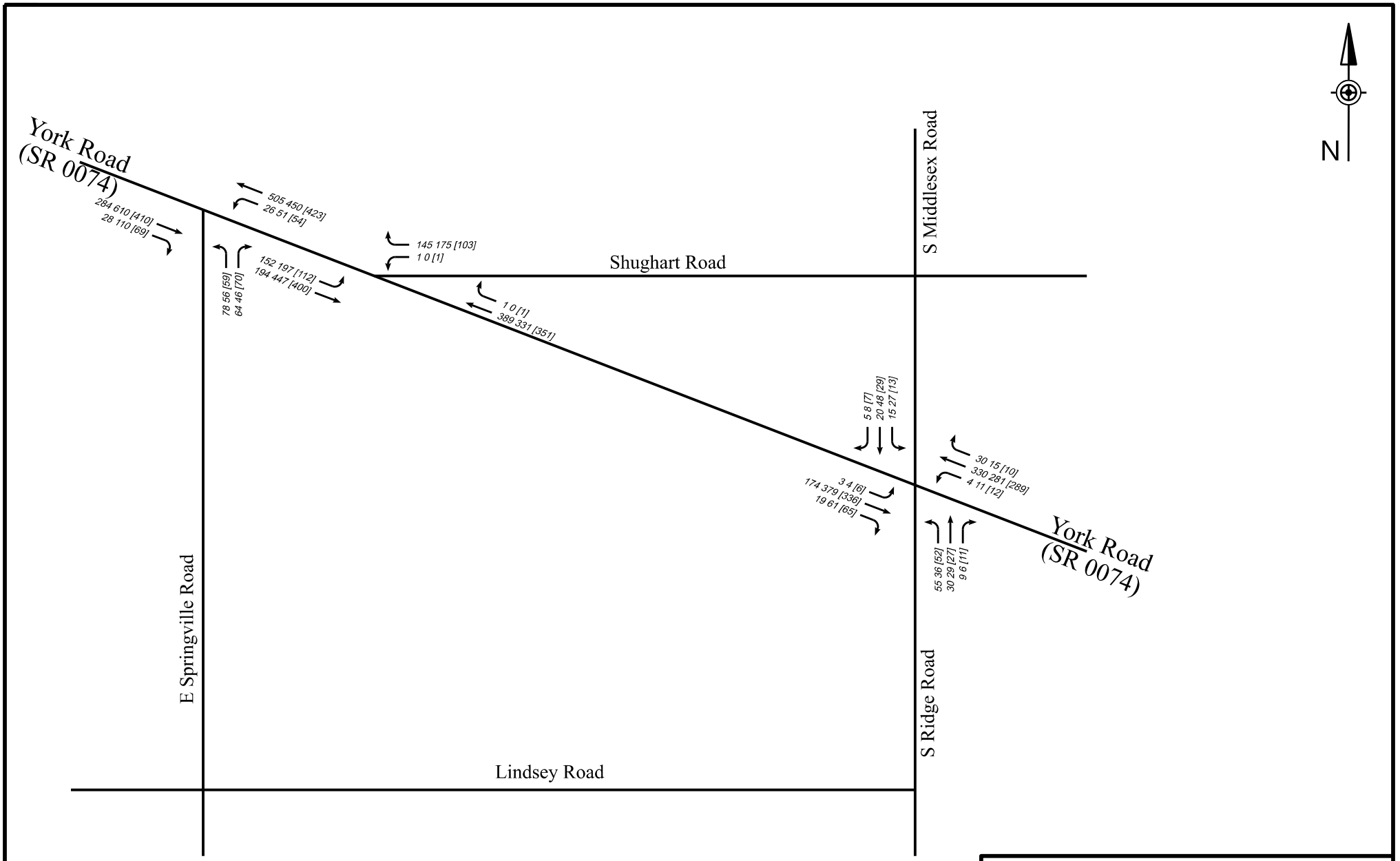
FIGURE 3

2022 EXISTING CONDITIONS
AM (PM) [SAT] PEAK HOUR
TRAFFIC VOLUMES



KEY:

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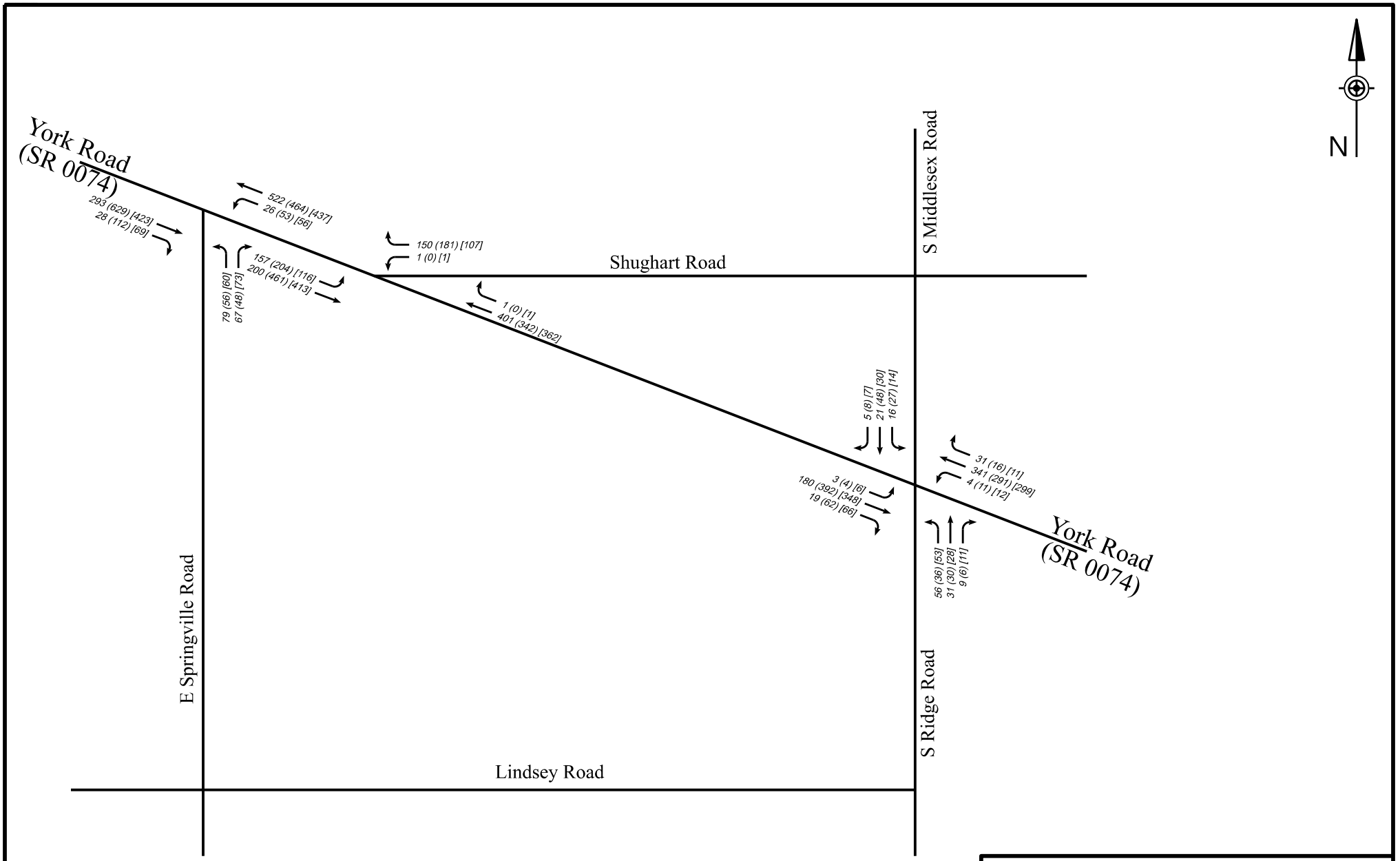
FIGURE 4

2025 BASE (NO-BUILD) CONDITIONS
AM (PM) [SAT] PEAK HOUR
TRAFFIC VOLUMES



KEY:

SCHEMATIC DRAWING:NOT TO SCALE

Est. 1989
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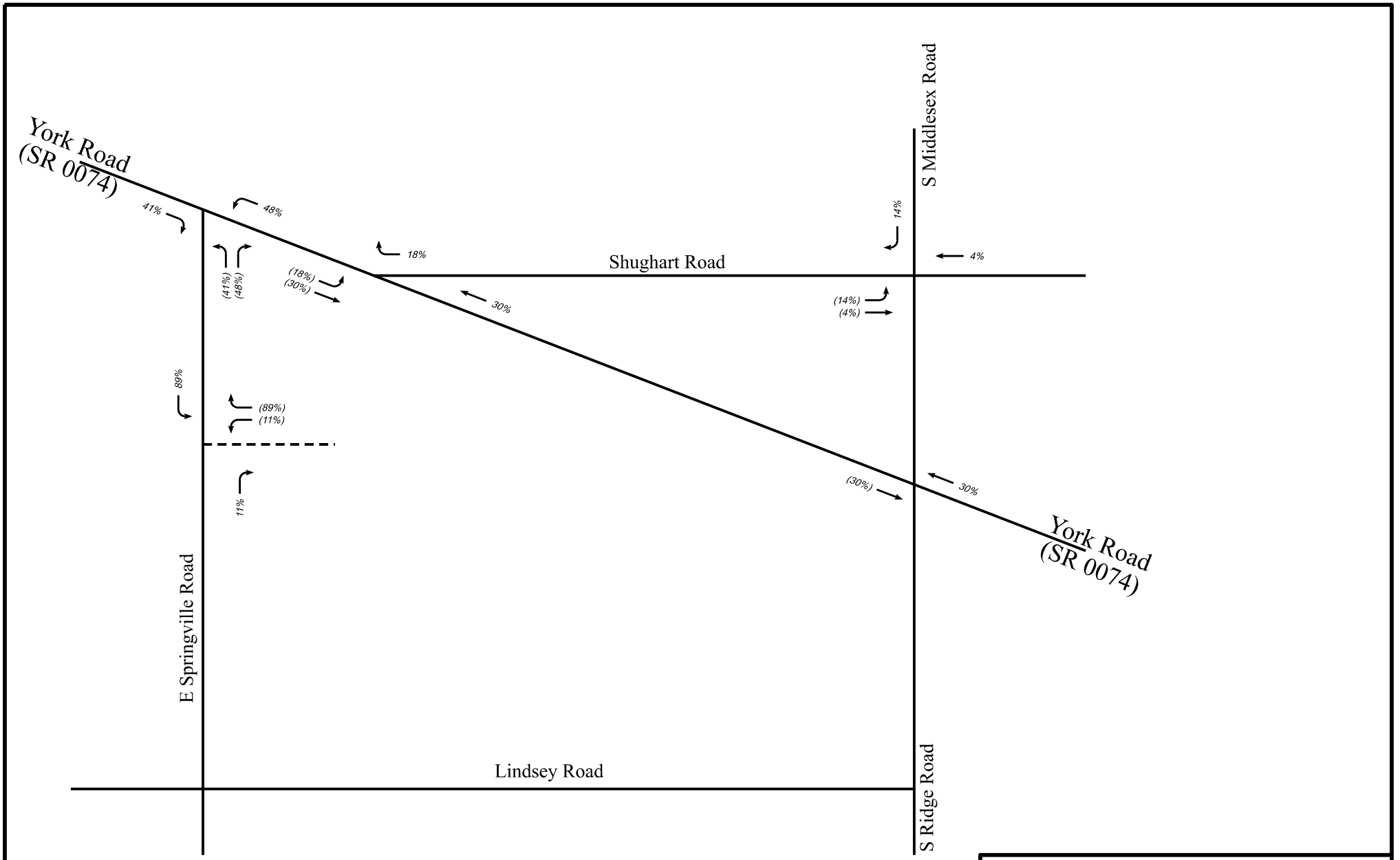
www.TrafficPD.com | 1.877.873.9739 | TPD@TrafficPD.com

FIGURE 5

2030 BASE (NO-BUILD) CONDITIONS
AM (PM) [SAT] PEAK HOUR
TRAFFIC VOLUMES



KEY:

- - - - - PROPOSED DRIVEWAY

SCHEMATIC DRAWING:NOT TO SCALE

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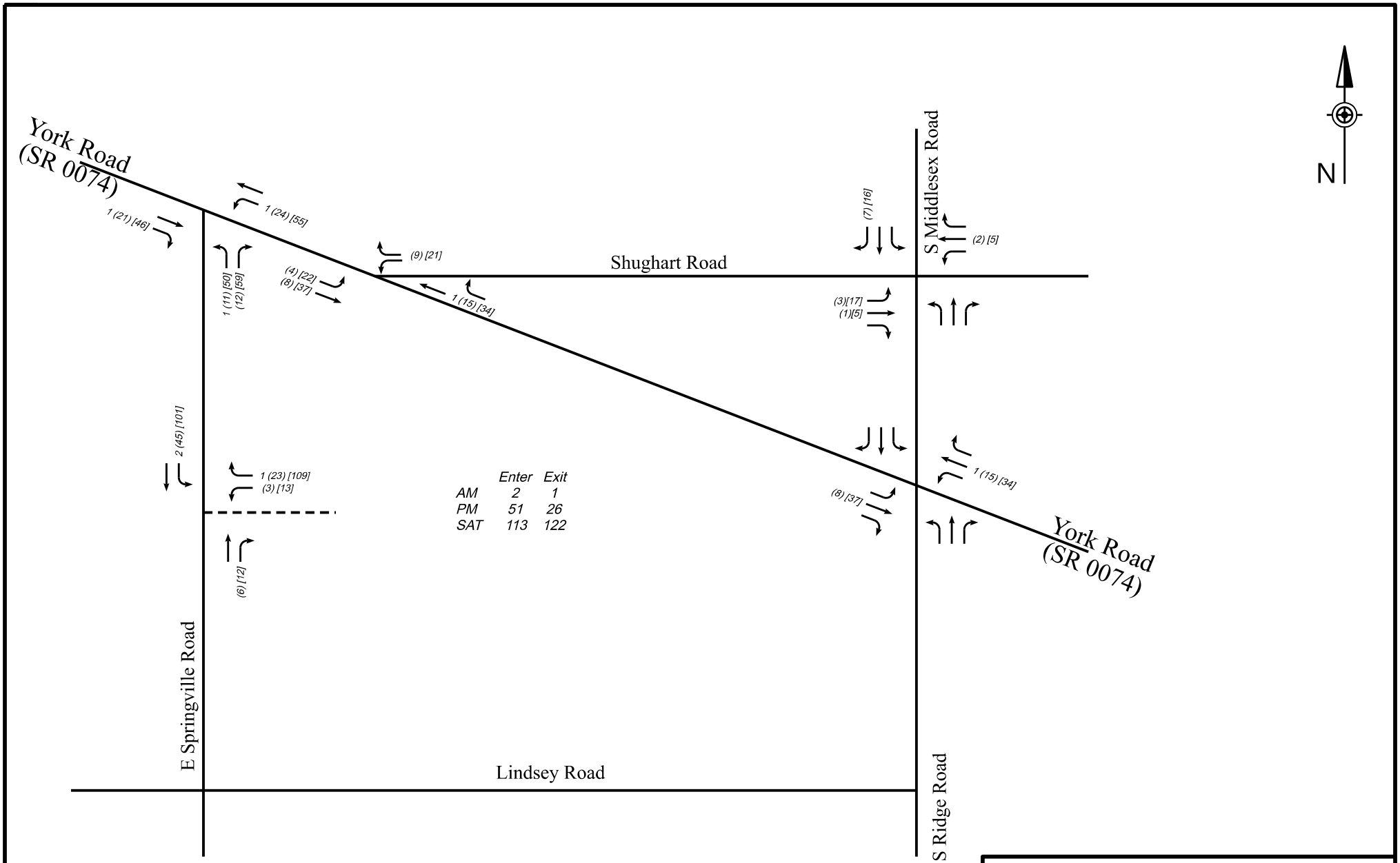
FIGURE 6

WOLF FARM KEYSTONE FC-SOCCER FIELDS
TRIP DISTRIBUTION & ASSIGNMENT PERCENTAGES



KEY:

- - - - - PROPOSED DRIVEWAY

SCHEMATIC DRAWING:NOT TO SCALE

Est. 1989
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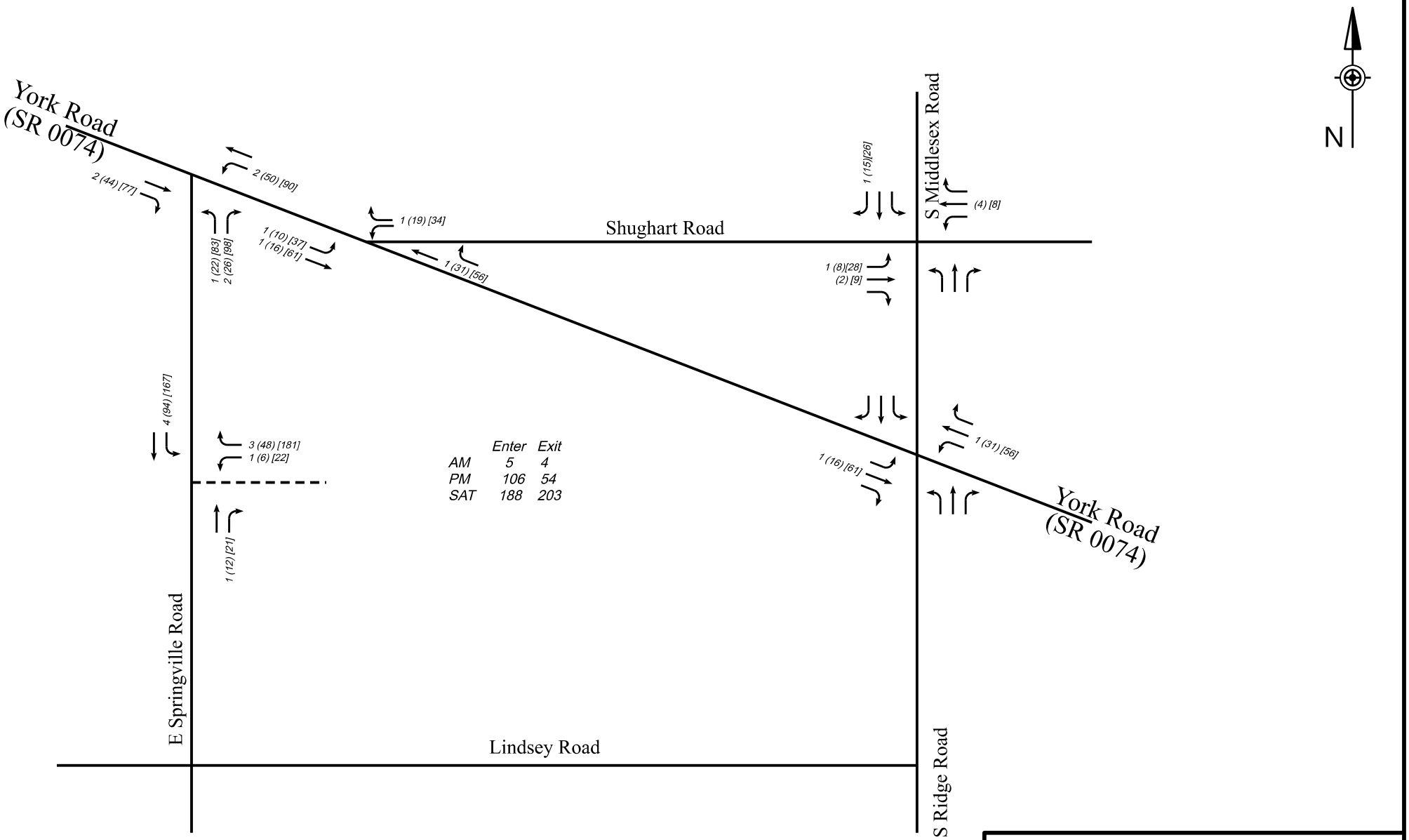
FIGURE 7

WOLF FARM KEYSTONE FC-SOCCER FIELDS
PHASE 1 (3 FIELDS)
AM (PM) [SAT] PEAK HOUR
TRIP DISTRIBUTION & ASSIGNMENT



KEY:

- - - - - PROPOSED DRIVEWAY

SCHEMATIC DRAWING:NOT TO SCALE

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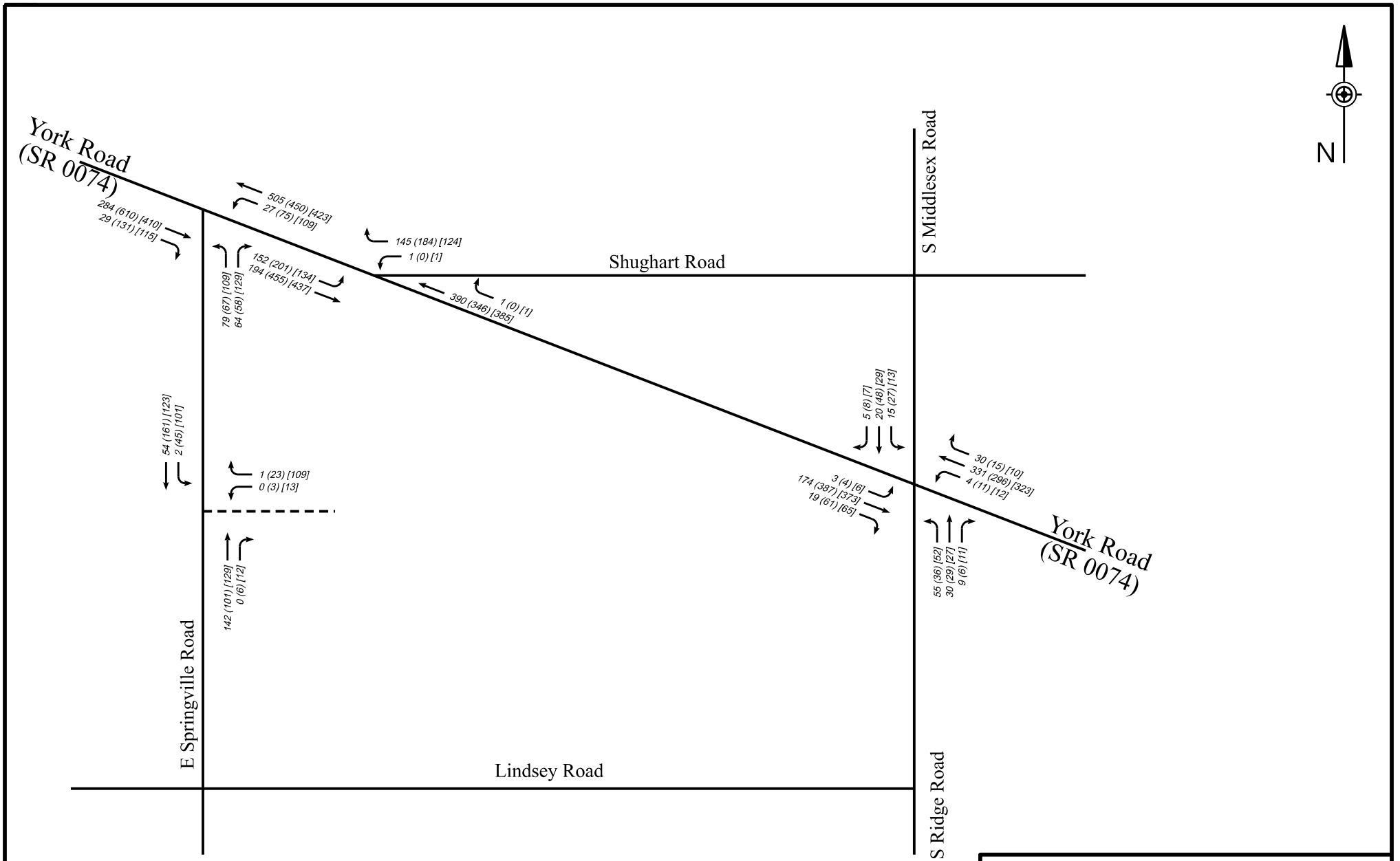
FIGURE 8

WOLF FARM KEYSTONE FC-SOCCER FIELDS
FULL BUILD-OUT (9 FIELDS)
AM (PM) [SAT] PEAK HOUR
TRIP DISTRIBUTION & ASSIGNMENT



KEY:

- - - - - PROPOSED DRIVEWAY

SCHEMATIC DRAWING:NOT TO SCALE

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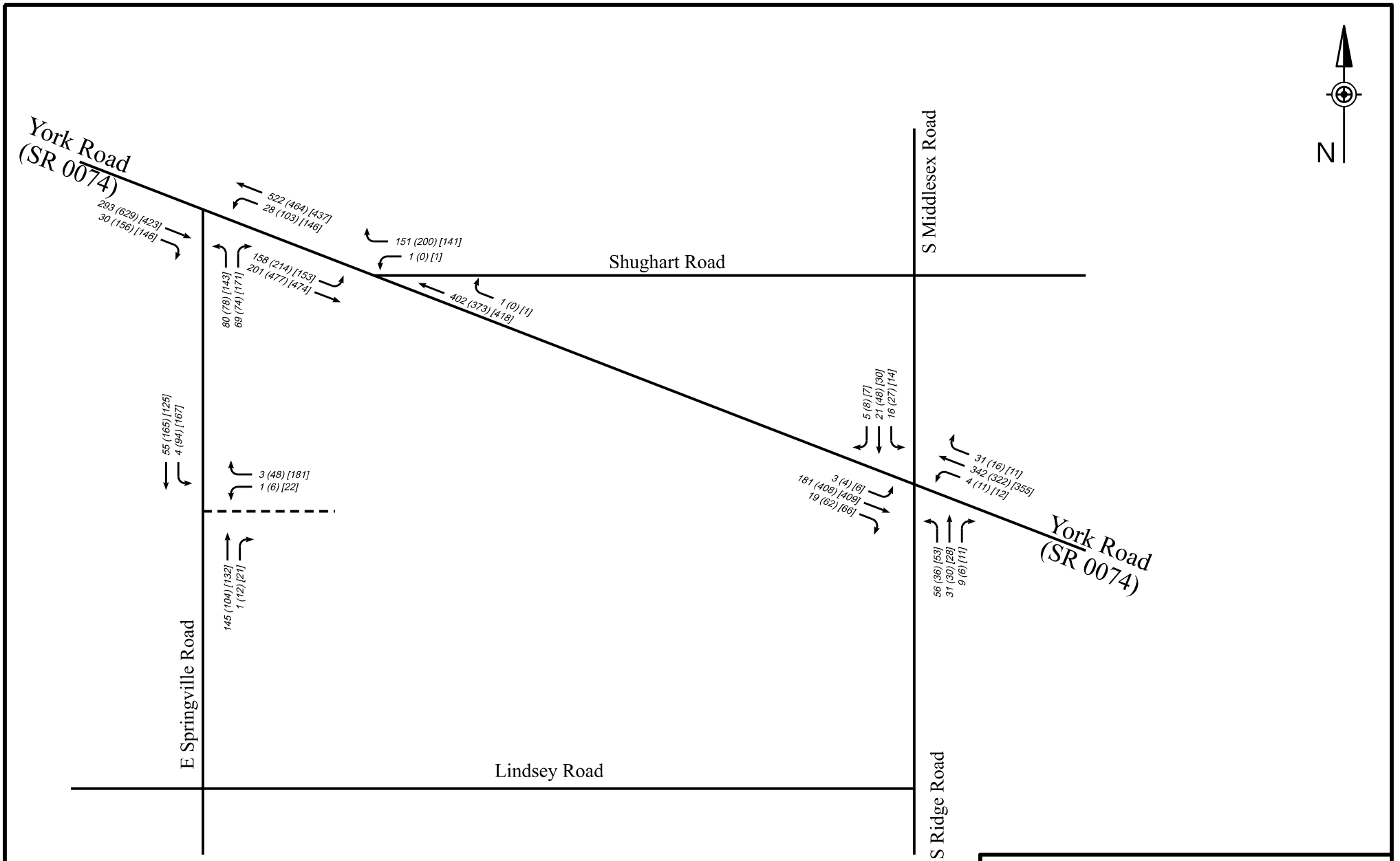
FIGURE 9

2025 PROJECTED (PHASE 1 BUILD) CONDITION
AM (PM) [SAT] PEAK HOUR
TRAFFIC VOLUMES



KEY:

- - - - - PROPOSED DRIVEWAY

SCHEMATIC DRAWING:NOT TO SCALE

Est. 1989
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FIGURE 10

2030 PROJECTED (FULL BUILD-OUT) CONDITION
AM (PM) [SAT] PEAK HOUR
TRAFFIC VOLUMES

APPENDIX A:
Existing Roadway Conditions

Job #: FSAI.00029 *Date Taken:* 06/01/2022 *Intersection Of:* York Road (SR 0074) & E Springville Road

Direction / Road: **EB York Road (SR 0074)**
Approach / Departure: Approaching E Springville Road
Distance: 50 feet

Direction / Road: **EB York Road (SR 0074)**
Approach / Departure: Approaching E Springville Road
Distance: 200 Feet

Job #: FSAI.00029 *Date Taken:* 06/01/2022 *Intersection Of:* York Road (SR 0074) & E Springville Road

Direction / Road: **WB York Road (SR 0074)**
Approach / Departure: Approaching E Springville Road
Distance: 50 feet

Direction / Road: **WB York Road (SR 0074)**
Approach / Departure: Approaching E Springville Road
Distance: 200 Feet

Job #: FSAI.00029 *Date Taken:* 06/01/2022 *Intersection Of:* York Road (SR 0074) & E Springville Road

Direction / Road: **NB E Springville Road**
Approach / Departure: Approaching York Road (SR 0074)
Distance: 50 feet

Direction / Road: **NB E Springville Road**
Approach / Departure: Approaching York Road (SR 0074)
Distance: 200 Feet

Job #: FSAI.00029 *Date Taken:* 06/01/2022 *Intersection Of:* York Road (SR 0074) & Shughart Road

Direction / Road: **EB York Road (SR 0074)**
Approach / Departure: Approaching Shughart Road
Distance: 50 feet

Direction / Road: **EB York Road (SR 0074)**
Approach / Departure: Approaching Shughart Road
Distance: 200 Feet

Job #: FSAI.00029 *Date Taken:* 06/01/2022 *Intersection Of:* York Road (SR 0074) & Shughart Road

Direction / Road: **WB York Road (SR 0074)**
Approach / Departure: Approaching Shughart Road
Distance: 50 feet

Direction / Road: **WB York Road (SR 0074)**
Approach / Departure: Approaching Shughart Road
Distance: 200 Feet

Job #: FSAI.00029 *Date Taken:* 06/01/2022 *Intersection Of:* York Road (SR 0074) & Shughart Road

Direction / Road: **SB Shughart Road**
Approach / Departure: Approaching York Road (SR 0074)
Distance: 50 feet

Direction / Road: **SB Shughart Road**
Approach / Departure: Approaching York Road (SR 0074)
Distance: 200 Feet

Job #: FSAI.00029 *Date Taken:* 06/01/2022 *Intersection Of:* York Road (SR 0074) & S Ridge Road/S Middlesex Road

Direction / Road: **EB York Road (SR 0074)**
Approach / Departure: Approaching S Ridge Road & S Middlesex Road
Distance: 50 feet

Direction / Road: **EB York Road (SR 0074)**
Approach / Departure: Approaching S Ridge Road & S Middlesex Road
Distance: 200 Feet

Job #: FSAI.00029 *Date Taken:* 06/01/2022 *Intersection Of:* York Road (SR 0074) & S Ridge Road/S Middlesex Road

Direction / Road: **WB York Road (SR 0074)**
Approach / Departure: Approaching S Ridge Road & S Middlesex Road
Distance: 50 feet

Direction / Road: **WB York Road (SR 0074)**
Approach / Departure: Approaching S Ridge Road & S Middlesex Road
Distance: 200 Feet

Job #: FSAI.00029 *Date Taken:* 06/01/2022 *Intersection Of:* York Road (SR 0074) & S Ridge Road/S Middlesex Road

Direction / Road: **NB S Ridge Road**
Approach / Departure: Approaching York Road (SR 0074)
Distance: 50 feet

Direction / Road: **NB S Ridge Road**
Approach / Departure: Approaching York Road (SR 0074)
Distance: 200 Feet

Job #: FSAI.00029 *Date Taken:* 06/01/2022 *Intersection Of:* York Road (SR 0074) & S Ridge Road/S Middlesex Road

Direction / Road: **SB S Middlesex Road**
Approach / Departure: Approaching York Road (SR 0074)
Distance: 50 feet

Direction / Road: **SB S Middlesex Road**
Approach / Departure: Approaching York Road (SR 0074)
Distance: 200 Feet

INTERSECTION WORKSHEET

Traffic Planning and Design, Inc.

TPD Project # FSAI.00029
Date 06/1/2022
Analyst TPD

○ Signalized ● Un-signalized ● Two-Way Stop Control ○ All-Way Stop Control ○ Offset ○ Other

Area Type (circle one): Urban (Suburban) Rural CBD

Streets: (N-S) E Springville Road (E-W) York Road (SR 0074)

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1 < 0			0 > 1			0 > 0 < 0					
Lane Width	10'			10'			9'					
Storage Length												
Grade (approaching intersection) +uphill, - downhill	+1%			-1%			+2%					
Channelized Right?												
If so, is lane > 75'?												
Shoulder width	3'			3'			0'					
Pavement condition*	(Good)	Fair	Poor	(Good)	Fair	Poor	(Good)	Fair	Poor	Good	Fair	Poor
Lane marking condition*	(Good)	Fair	Poor None	(Good)	Fair	Poor None	(Good)	Fair	Poor None	Good	Fair	Poor None
Posted speed limit	50 mph			50 mph			35 mph					
Driveways on approach?	Y	(N)		Y	(N)		(Y)	N		Y	N	
Bus Stops?	Y	(N)	Route #: ___	Y	(N)	Route #: ___	Y	(N)	Route #: ___	Y	N	Route #: ___
Parking?	Y	(N)		Y	(N)		Y	(N)		Y	N	
Pedestrian Curb Ramps?	Y	(N)	/ L R	Y	(N)	/ L R	Y	(N)	/ L R	Y	N	/ L R
Sidewalk?	Y	(N)	/ L R	Y	(N)	/ L R	Y	(N)	/ L R	Y	N	/ L R
Crosswalks?	Y	(N)		Y	(N)		Y	(N)		Y	N	

Unsignalized Intersections:

Sign Control (circle)	Stop	Yield	(None)	Stop	Yield	(None)	(Stop)	Yield	None	Stop	Yield	None
Sight Distance* (Stop-Controlled Approach)	(Good)	Fair	Poor	(Good)	Fair	Poor	(Good)	Fair	Poor	Good	Fair	Poor

Signalized Intersections:

No Turn on Red posted?	Y	N		Y	N		Y	N		Y	N	
Ped Button?	Y	N		Y	N		Y	N		Y	N	
Left Turn Phase	Y	N	/ 3 4 5 head	Y	N	/ 3 4 5 head	Y	N	/ 3 4 5 head	Y	N	/ 3 4 5 head
Actuated Lanes	L	T	R	L	T	R	L	T	R	L	T	R

Photos: All approaches (50' & 200'), departures, unusual characteristics, and corners/sidewalks (pedestrian facilities).

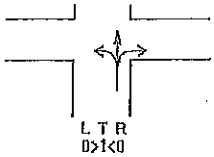
* Good, Fair or Poor. ***If sight distance is Poor, what is limiting the sight distance, and take a picture in that direction. If pavement or lane markings are in Poor condition, take picture of Poor area(s).***

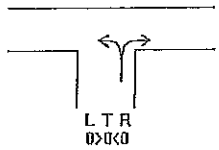
****Pedestrian Accommodations***

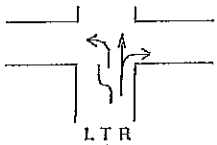
Comments (please be as specific as possible):

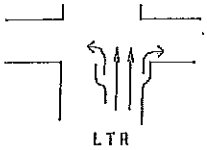
Please Note the location of any **inlets & utility poles** at the intersection. Make notes on next page (intersection diagram)

Please Note Land Uses (Residential, Retail, Commercial, etc.):









INTERSECTION WORKSHEET

Traffic Planning and Design, Inc.

TPD Project # FSAI.00026
Date 06/1/2022
Analyst TPD

○ Signalized ● Un-signalized ● Two-Way Stop Control ○ All-Way Stop Control ○ Offset ○ Other

Area Type (circle one): Urban (Suburban) Rural CBD

Streets: (N-S) Middlesex Road/Ridge Road (E-W) York Road (SR 0074)

	Eastbound	Westbound	Northbound	Southbound
	L T R	L T R	L T R	L T R
No. Lanes	0 > 1 < 0	0 > 1 < 0	0 > 1 < 0	0 > 1 < 0
Lane Width	10'	10'	9'	9'
Storage Length				
Grade (approaching intersection) +uphill, - downhill	-1%	+1%	+4%	+3%
Channelized Right?				
If so, is lane > 75'?				
Shoulder width	3'	3'	0'	0'
Pavement condition*	(Good) Fair Poor	(Good) Fair Poor	(Good) Fair Poor	(Good) Fair Poor
Lane marking condition*	(Good) Fair Poor None	(Good) Fair Poor None	(Good) Fair Poor None	(Good) Fair Poor None
Posted speed limit	50 mph	50 mph	35 mph	35 mph
Driveways on approach?	Y (N)	Y (N)	Y (N)	Y (N)
Bus Stops?	Y (N) Route #: ____	Y (N) Route #: ____	Y (N) Route #: ____	Y (N) Route #: ____
Parking?	Y (N)	Y (N)	Y (N)	Y (N)
Pedestrian Curb Ramps?	Y (N) / L R	Y (N) / L R	Y (N) / L R	Y (N) / L R
Sidewalk?	Y (N) / L R	Y (N) / L R	Y (N) / L R	Y (N) / L R
Crosswalks?	Y (N)	Y (N)	Y (N)	Y (N)
Unsignalized Intersections:				
Sign Control (circle)	Stop Yield (None)	Stop Yield (None)	(Stop) Yield None	(Stop) Yield None
Sight Distance* (Stop-Controlled Approach)	(Good) Fair Poor	(Good) Fair Poor	(Good) Fair Poor	(Good) Fair Poor
Signalized Intersections:				
No Turn on Red posted?	Y N	Y N	Y N	Y N
Ped Button?	Y N	Y N	Y N	Y N
Left Turn Phase	Y N / 3 4 5 head	Y N / 3 4 5 head	Y N / 3 4 5 head	Y N / 3 4 5 head
Actuated Lanes	L T R	L T R	L T R	L T R

Photos: All approaches (50' & 200'), departures, unusual characteristics, and corners/sidewalks (pedestrian facilities).

* Good, Fair or Poor. ***If sight distance is Poor, what is limiting the sight distance, and take a picture in that direction. If pavement or lane markings are in Poor condition, take picture of Poor area(s).***

****Pedestrian Accommodations***

Comments (please be as specific as possible):

Please Note the location of any inlets & utility poles at the intersection. Make notes on next page (intersection diagram)

Please Note Land Uses (Residential, Retail, Commercial, etc.):

INTERSECTION WORKSHEET

Traffic Planning and Design, Inc.

TPD Project # FSAI.00026
Date 06/1/2022
Analyst TPD

○ Signalized ● Un-signalized ● Two-Way Stop Control ○ All-Way Stop Control ○ Offset ○ Other

Area Type (circle one): Urban (Suburban) Rural CBD

Streets: (N-S) Shuhgart Road (E-W) York Road (SR 0074)

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0 >	2			1 <	0					0 > 0 < 0	
Lane Width		10'			10'						9'	
Storage Length												
Grade (approaching intersection) +uphill, - downhill		+1%			-1%						+4%	
Channelized Right?												
If so, is lane > 75'?												
Shoulder width		3'			3'						0'	
Pavement condition*	(Good)	Fair	Poor	(Good)	Fair	Poor	Good	Fair	Poor	(Good)	Fair	Poor
Lane marking condition*	(Good)	Fair	Poor None	(Good)	Fair	Poor None	Good	Fair	Poor None	(Good)	Fair	Poor None
Posted speed limit		50 mph			50 mph						35 mph	
Driveways on approach?		Y (N)			(Y) N			Y N			Y (N)	
Bus Stops?	Y (N)	Route #:		Y (N)	Route #:		Y N	Route #:		Y (N)	Route #:	
Parking?		Y (N)			Y (N)			Y N			Y (N)	
Pedestrian Curb Ramps?	Y (N)	/ L	R	Y (N)	/ L	R	Y N	/ L	R	Y (N)	/ L	R
Sidewalk?	Y (N)	/ L	R	Y (N)	/ L	R	Y N	/ L	R	Y (N)	/ L	R
Crosswalks?		Y (N)			Y (N)			Y N			Y (N)	

Unsignalized Intersections:

Sign Control (circle)	Stop	Yield	(None)	Stop	Yield	(None)	Stop	Yield	None	(Stop)	Yield	None
Sight Distance* (Stop-Controlled Approach)	(Good)	Fair	Poor	(Good)	Fair	Poor	Good	Fair	Poor	(Good)	Fair	Poor

Signalized Intersections:

No Turn on Red posted?		Y N			Y N			Y N			Y N	
Ped Button?		Y N			Y N			Y N			Y N	
Left Turn Phase	Y N /	3	4 5 head	Y N /	3	4 5 head	Y N /	3	4 5 head	Y N /	3	4 5 head
Actuated Lanes	L	T	R	L	T	R	L	T	R	L	T	R

Photos: All approaches (50' & 200'), departures, unusual characteristics, and corners/sidewalks (pedestrian facilities).

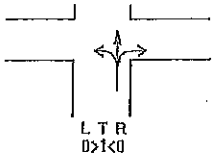
* Good, Fair or Poor. ***If sight distance is Poor, what is limiting the sight distance, and take a picture in that direction. If pavement or lane markings are in Poor condition, take picture of Poor area(s).***

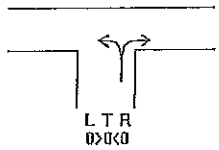
****Pedestrian Accommodations***

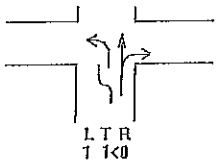
Comments (please be as specific as possible):

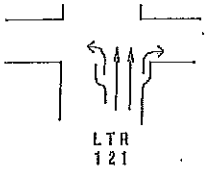
Please Note the location of any inlets & utility poles at the intersection. Make notes on next page (intersection diagram)

Please Note Land Uses (Residential, Retail, Commercial, etc.):









M-950S
(03-04)
PENNDOT

DRIVEWAY SIGHT DISTANCE MEASUREMENTS
(FOR LOCAL ROADS, USE PENNDOT PUB 70)

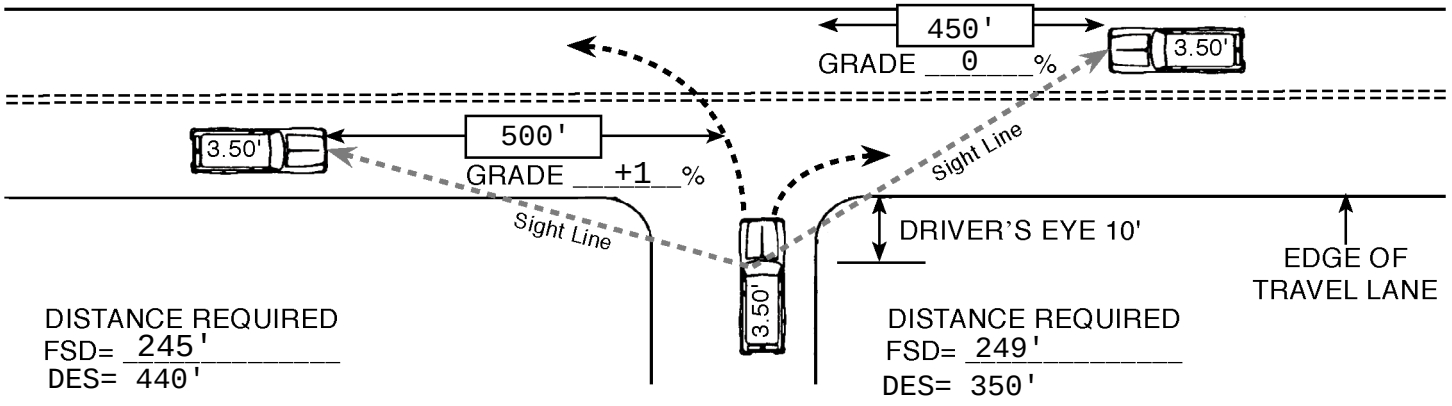
APPLICANT Wolf Farm Soccer Field APPLICATION NO. FSAI.00029

S.R._____SEG._____OFFSET_____ LEGAL SPEED LIMIT 35 mph

MEASURED BY TPD DATE 04/24/2023

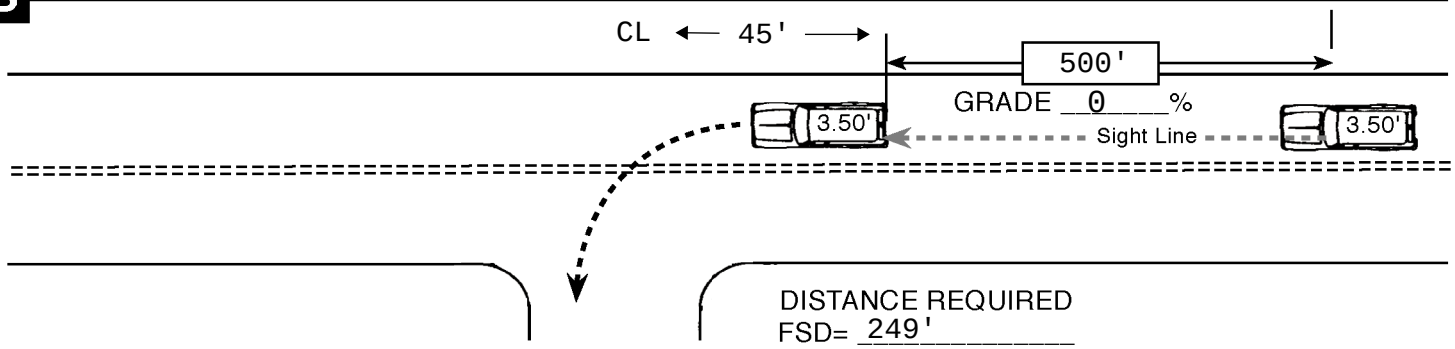
FOR DEPARTMENT USE ONLY: Safe-Running Speed _____ 85th Percentile Speed _____

A E Springville Road & Proposed Site Driveway (~755' south of York Rd)



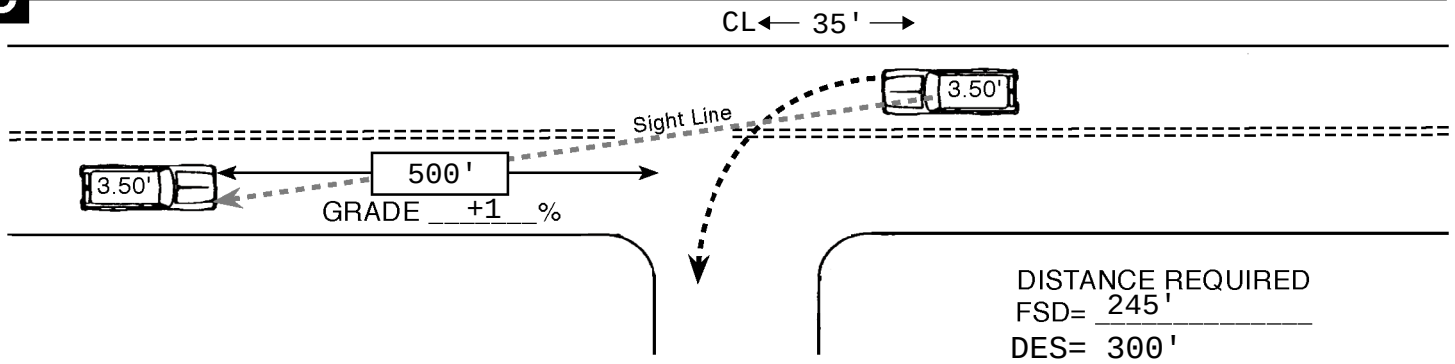
THE MAXIMUM LENGTH OF ROADWAY ALONG WHICH A DRIVER AT A DRIVEWAY LOCATION CAN CONTINUOUSLY SEE ANOTHER VEHICLE APPROACHING ON THE ROADWAY.

B



THE MAXIMUM LENGTH OF ROADWAY ALONG WHICH A DRIVER ON THE ROADWAY CAN CONTINUOUSLY SEE THE REAR OF A VEHICLE WHICH IS LOCATED IN THE DRIVER'S TRAVEL LANE AND WHICH IS POSITIONED TO MAKE A LEFT TURN INTO A DRIVEWAY.

C



THE MAXIMUM LENGTH OF ROADWAY ALONG WHICH A DRIVER OF A VEHICLE INTENDING TO MAKE A LEFT TURN INTO A DRIVEWAY CAN CONTINUOUSLY SEE A VEHICLE APPROACHING FROM THE OPPOSITE DIRECTION.

APPENDIX B:
Manual Traffic Count Data

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100 dzerphey@trafficpd.com

Count Name: AM PM York Road (SR 0074) & E Springville Road
Site Code: York Road (SR 0074) & E Springville Road
Start Date: 06/02/2022

Turning Movement Data

Start Time	York Road (SR 0074) Eastbound				York Road (SR 0074) Westbound				E Springville Road Northbound				
	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Left	Right	Peds	App. Total	Int. Total
6:00 AM	40	1	0	41	2	55	0	57	5	5	0	10	108
6:15 AM	45	1	0	46	1	67	0	68	7	10	0	17	131
6:30 AM	63	1	0	64	3	116	0	119	5	15	0	20	203
6:45 AM	50	0	0	50	7	90	0	97	8	14	0	22	169
Hourly Total	198	3	0	201	13	328	0	341	25	44	0	69	611
7:00 AM	60	4	0	64	3	84	0	87	4	11	0	15	166
7:15 AM	73	4	0	77	3	117	0	120	10	16	0	26	223
7:30 AM	70	1	0	71	8	115	0	123	6	19	0	25	219
7:45 AM	72	0	0	72	8	116	0	124	2	19	0	21	217
Hourly Total	275	9	0	284	22	432	0	454	22	65	0	87	825
8:00 AM	49	1	0	50	6	107	0	113	9	9	0	18	181
8:15 AM	51	5	0	56	4	82	0	86	7	4	0	11	153
8:30 AM	56	3	0	59	5	96	0	101	4	15	0	19	179
8:45 AM	56	3	0	59	0	77	0	77	7	10	0	17	153
Hourly Total	212	12	0	224	15	362	0	377	27	38	0	65	666
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-
3:00 PM	111	9	0	120	17	81	0	98	3	6	0	9	227
3:15 PM	115	9	0	124	13	89	0	102	7	15	0	22	248
3:30 PM	147	11	0	158	9	99	0	108	3	8	0	11	277
3:45 PM	137	17	0	154	15	114	0	129	5	13	0	18	301
Hourly Total	510	46	0	556	54	383	0	437	18	42	0	60	1053
4:00 PM	124	17	0	141	16	112	0	128	8	14	0	22	291
4:15 PM	144	7	0	151	10	87	0	97	8	10	0	18	266
4:30 PM	134	11	0	145	15	88	0	103	6	8	0	14	262
4:45 PM	136	10	0	146	23	94	0	117	3	11	0	14	277
Hourly Total	538	45	0	583	64	381	0	445	25	43	0	68	1096
5:00 PM	118	10	0	128	12	81	0	93	5	8	0	13	234
5:15 PM	128	9	0	137	17	104	0	121	12	13	0	25	283
5:30 PM	88	7	0	95	13	74	0	87	0	10	0	10	192
5:45 PM	92	6	0	98	15	70	0	85	9	8	0	17	200
Hourly Total	426	32	0	458	57	329	0	386	26	39	0	65	909
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-
11:00 AM	102	9	0	111	13	98	0	111	10	17	0	27	249
11:15 AM	94	4	0	98	10	83	0	93	5	16	0	21	212
11:30 AM	94	5	0	99	14	91	0	105	7	10	0	17	221
11:45 AM	101	3	0	104	21	85	0	106	5	15	0	20	230
Hourly Total	391	21	0	412	58	357	0	415	27	58	0	85	912
12:00 PM	90	6	0	96	10	81	0	91	6	15	0	21	208
12:15 PM	84	10	0	94	11	107	0	118	9	22	0	31	243
12:30 PM	82	7	0	89	11	113	0	124	8	17	0	25	238
12:45 PM	90	4	0	94	11	91	0	102	4	20	0	24	220
Hourly Total	346	27	0	373	43	392	0	435	27	74	0	101	909
Grand Total	2896	195	0	3091	326	2964	0	3290	197	403	0	600	6981
Approach %	93.7	6.3	-	-	9.9	90.1	-	-	32.8	67.2	-	-	-
Total %	41.5	2.8	-	44.3	4.7	42.5	-	47.1	2.8	5.8	-	8.6	-
Lights	2806	192	-	2998	319	2868	-	3187	194	396	-	590	6775
% Lights	96.9	98.5	-	97.0	97.9	96.8	-	96.9	98.5	98.3	-	98.3	97.0
Other Vehicles	90	3	-	93	7	96	-	103	3	7	-	10	206
% Other Vehicles	3.1	1.5	-	3.0	2.1	3.2	-	3.1	1.5	1.7	-	1.7	3.0
Pedestrians	-	-	0	-	-	-	0	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-

Traffic Planning and Design, Inc
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610.326.3100 dzerphey@trafficpd.com

Count Name: MID York Road (SR 0074) & E Springville Road
Site Code: York Road (SR 0074) & E Springville Road
Start Date: 06/02/2022

Turning Movement Data

Start Time	York Road (SR 0074) Eastbound					York Road (SR 0074) Westbound				E Springville Road Northbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Left	Right	Peds	App. Total	Int. Total
9:00 AM	0	65	5	0	70	6	90	0	96	4	10	0	14	180
9:15 AM	0	57	3	0	60	3	68	0	71	3	8	0	11	142
9:30 AM	0	79	3	0	82	8	80	0	88	6	5	0	11	181
9:45 AM	0	61	6	0	67	4	89	0	93	3	10	0	13	173
Hourly Total	0	262	17	0	279	21	327	0	348	16	33	0	49	676
10:00 AM	0	70	6	0	76	9	75	0	84	2	2	0	4	164
10:15 AM	0	61	5	0	66	5	75	0	80	3	8	0	11	157
10:30 AM	0	75	4	0	79	3	76	0	79	7	4	0	11	169
10:45 AM	1	76	7	0	84	3	68	0	71	11	7	0	18	173
Hourly Total	1	282	22	0	305	20	294	0	314	23	21	0	44	663
11:00 AM	0	70	4	0	74	5	50	0	55	5	9	0	14	143
11:15 AM	0	78	3	0	81	9	67	0	76	8	4	0	12	169
11:30 AM	0	60	6	0	66	6	71	0	77	7	4	0	11	154
11:45 AM	0	52	6	0	58	5	71	0	76	5	7	0	12	146
Hourly Total	0	260	19	0	279	25	259	0	284	25	24	0	49	612
12:00 PM	0	65	6	0	71	4	75	0	79	14	3	0	17	167
12:15 PM	0	87	7	0	94	1	59	0	60	4	5	0	9	163
12:30 PM	0	59	12	0	71	6	79	0	85	7	2	0	9	165
12:45 PM	0	77	6	0	83	6	62	0	68	3	9	0	12	163
Hourly Total	0	288	31	0	319	17	275	0	292	28	19	0	47	658
1:00 PM	0	85	9	0	94	7	55	0	62	6	9	0	15	171
1:15 PM	0	78	13	0	91	6	85	0	91	2	6	0	8	190
1:30 PM	0	77	6	0	83	5	72	0	77	5	8	0	13	173
1:45 PM	0	70	9	0	79	6	85	0	91	5	9	0	14	184
Hourly Total	0	310	37	0	347	24	297	0	321	18	32	0	50	718
2:00 PM	0	65	7	0	72	10	65	0	75	2	4	0	6	153
2:15 PM	0	92	7	0	99	10	76	0	86	6	6	0	12	197
2:30 PM	0	79	9	0	88	1	87	0	88	6	9	0	15	191
2:45 PM	0	105	7	0	112	13	64	0	77	4	16	0	20	209
Hourly Total	0	341	30	0	371	34	292	0	326	18	35	0	53	750
Grand Total	1	1743	156	0	1900	141	1744	0	1885	128	164	0	292	4077
Approach %	0.1	91.7	8.2	-	-	7.5	92.5	-	-	43.8	56.2	-	-	-
Total %	0.0	42.8	3.8	-	46.6	3.5	42.8	-	46.2	3.1	4.0	-	7.2	-
Lights	1	1580	151	-	1732	134	1640	-	1774	125	154	-	279	3785
% Lights	100.0	90.6	96.8	-	91.2	95.0	94.0	-	94.1	97.7	93.9	-	95.5	92.8
Other Vehicles	0	163	5	-	168	7	104	-	111	3	10	-	13	292
% Other Vehicles	0.0	9.4	3.2	-	8.8	5.0	6.0	-	5.9	2.3	6.1	-	4.5	7.2
Pedestrians	-	-	-	0	-	-	-	0	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Traffic Planning and Design, Inc
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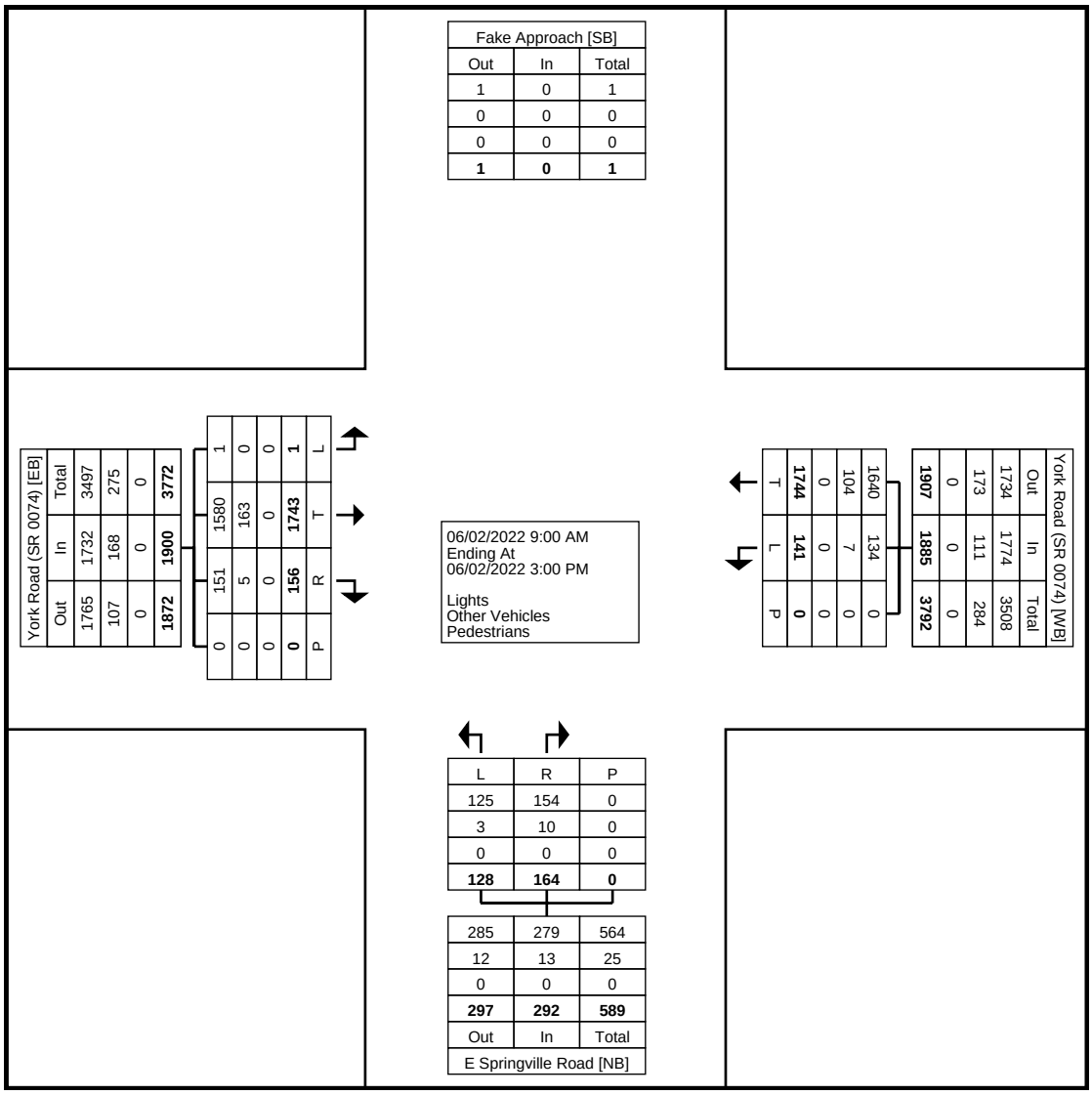

Turning Movement Data Plot

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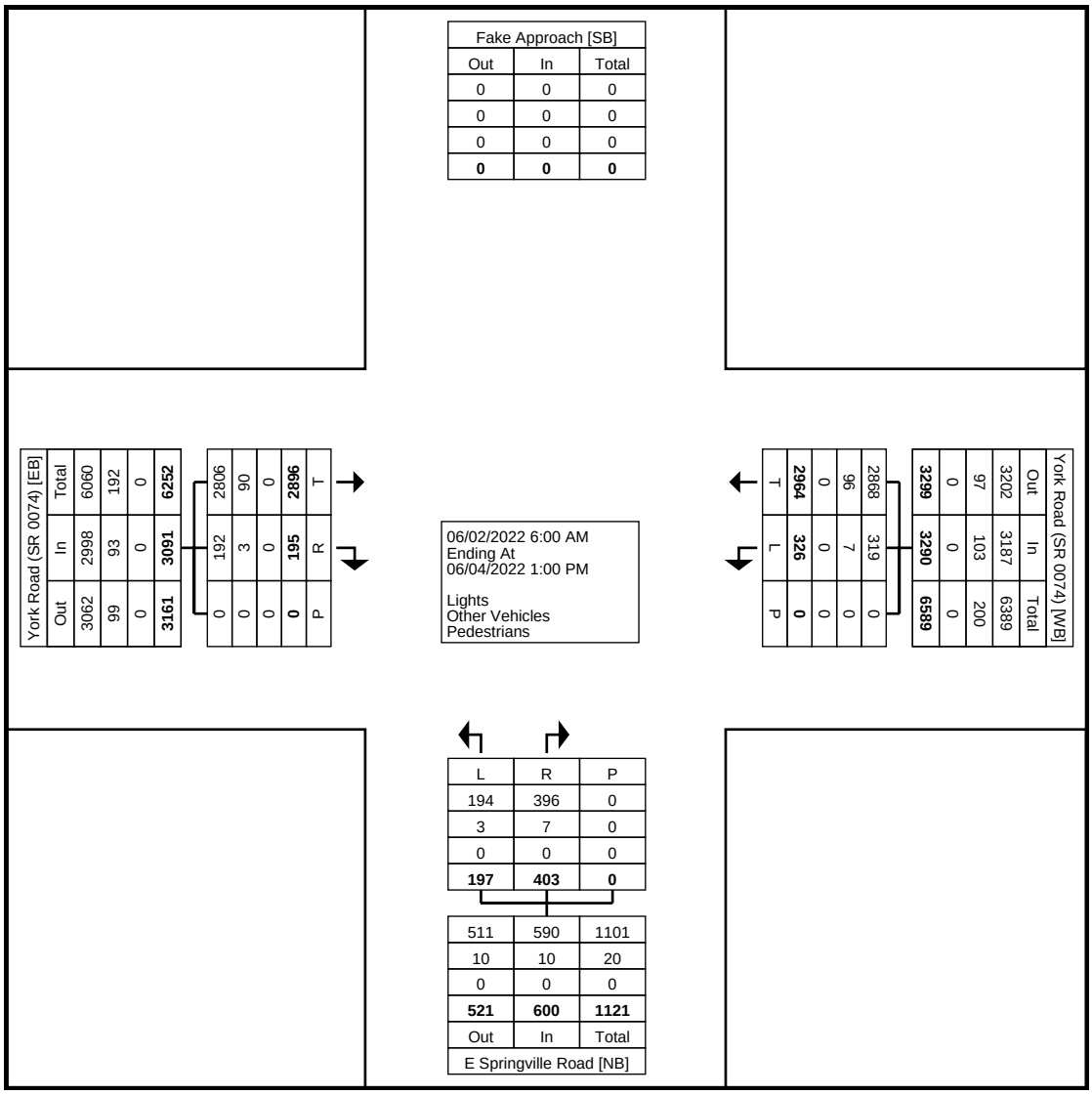
Count Name: AM PM York Road (SR 0074) & E Springville Road
Site Code: York Road (SR 0074) & E Springville Road
Start Date: 06/02/2022



Turning Movement Data Plot

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Count Name: AM PM York Road (SR 0074) & E Springville Road
Site Code: York Road (SR 0074) & E Springville Road
Start Date: 06/02/2022

Turning Movement Peak Hour Data (7:15 AM)

Start Time	York Road (SR 0074) Eastbound				York Road (SR 0074) Westbound				E Springville Road Northbound				
	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Left	Right	Peds	App. Total	Int. Total
7:15 AM	73	4	0	77	3	117	0	120	10	16	0	26	223
7:30 AM	70	1	0	71	8	115	0	123	6	19	0	25	219
7:45 AM	72	0	0	72	8	116	0	124	2	19	0	21	217
8:00 AM	49	1	0	50	6	107	0	113	9	9	0	18	181
Total	264	6	0	270	25	455	0	480	27	63	0	90	840
Approach %	97.8	2.2	-	-	5.2	94.8	-	-	30.0	70.0	-	-	-
Total %	31.4	0.7	-	32.1	3.0	54.2	-	57.1	3.2	7.5	-	10.7	-
PHF	0.904	0.375	-	0.877	0.781	0.972	-	0.968	0.675	0.829	-	0.865	0.942
Lights	248	6	-	254	23	432	-	455	27	62	-	89	798
% Lights	93.9	100.0	-	94.1	92.0	94.9	-	94.8	100.0	98.4	-	98.9	95.0
Other Vehicles	16	0	-	16	2	23	-	25	0	1	-	1	42
% Other Vehicles	6.1	0.0	-	5.9	8.0	5.1	-	5.2	0.0	1.6	-	1.1	5.0
Pedestrians	-	-	0	-	-	-	0	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-

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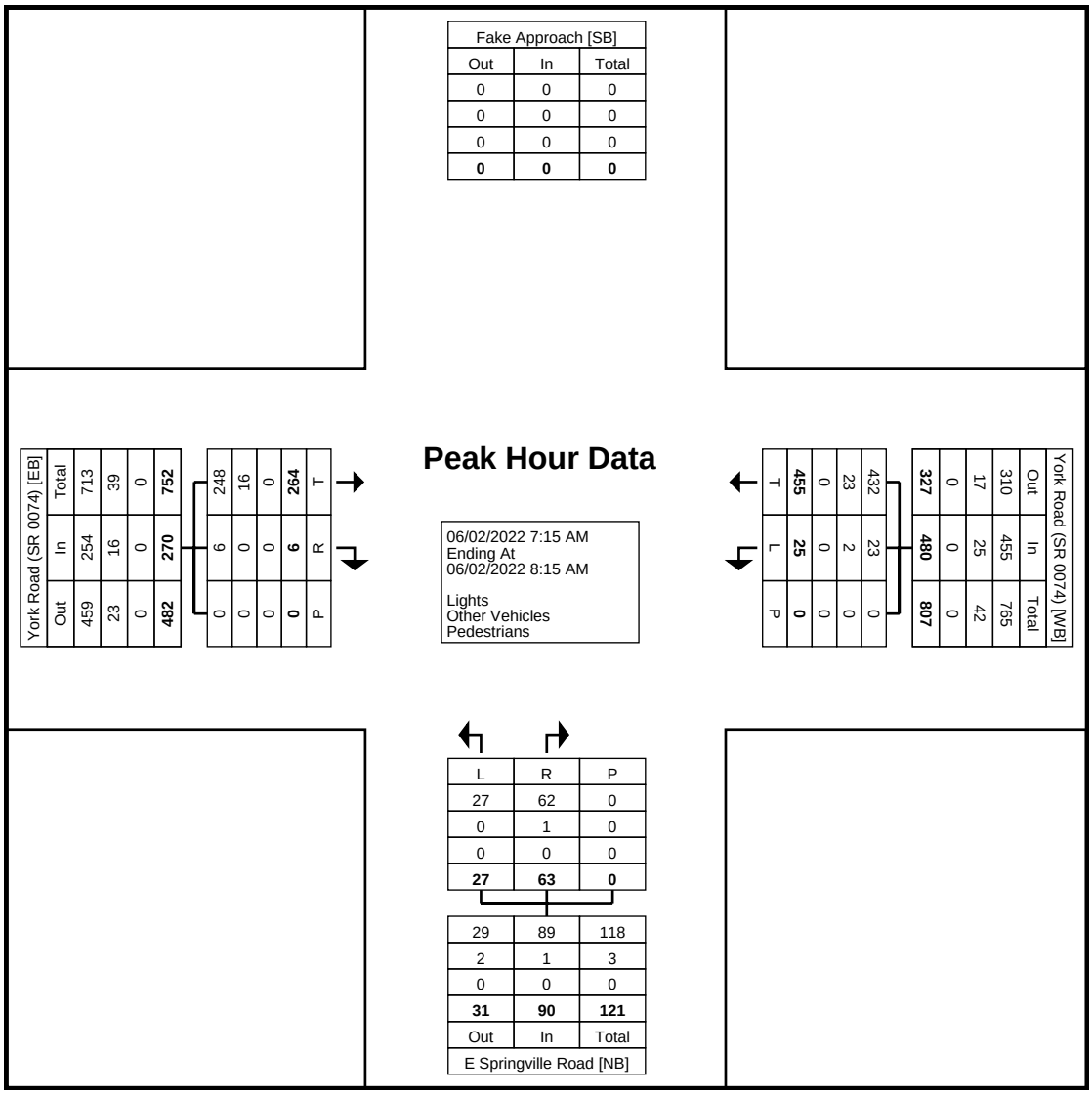
Count Name: AM PM York Road (SR 0074) & E Springville Road
Site Code: York Road (SR 0074) & E Springville Road
Start Date: 06/02/2022



Turning Movement Peak Hour Data Plot (7:15 AM)

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2500 East High Street
Suite 650
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Count Name: AM PM York Road (SR 0074) & E Springville Road
Site Code: York Road (SR 0074) & E Springville Road
Start Date: 06/02/2022

Turning Movement Peak Hour Data (3:30 PM)

Start Time	York Road (SR 0074) Eastbound				York Road (SR 0074) Westbound				E Springville Road Northbound				
	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Left	Right	Peds	App. Total	Int. Total
3:30 PM	147	11	0	158	9	99	0	108	3	8	0	11	277
3:45 PM	137	17	0	154	15	114	0	129	5	13	0	18	301
4:00 PM	124	17	0	141	16	112	0	128	8	14	0	22	291
4:15 PM	144	7	0	151	10	87	0	97	8	10	0	18	266
Total	552	52	0	604	50	412	0	462	24	45	0	69	1135
Approach %	91.4	8.6	-	-	10.8	89.2	-	-	34.8	65.2	-	-	-
Total %	48.6	4.6	-	53.2	4.4	36.3	-	40.7	2.1	4.0	-	6.1	-
PHF	0.939	0.765	-	0.956	0.781	0.904	-	0.895	0.750	0.804	-	0.784	0.943
Lights	537	50	-	587	47	396	-	443	23	43	-	66	1096
% Lights	97.3	96.2	-	97.2	94.0	96.1	-	95.9	95.8	95.6	-	95.7	96.6
Other Vehicles	15	2	-	17	3	16	-	19	1	2	-	3	39
% Other Vehicles	2.7	3.8	-	2.8	6.0	3.9	-	4.1	4.2	4.4	-	4.3	3.4
Pedestrians	-	-	0	-	-	-	0	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-

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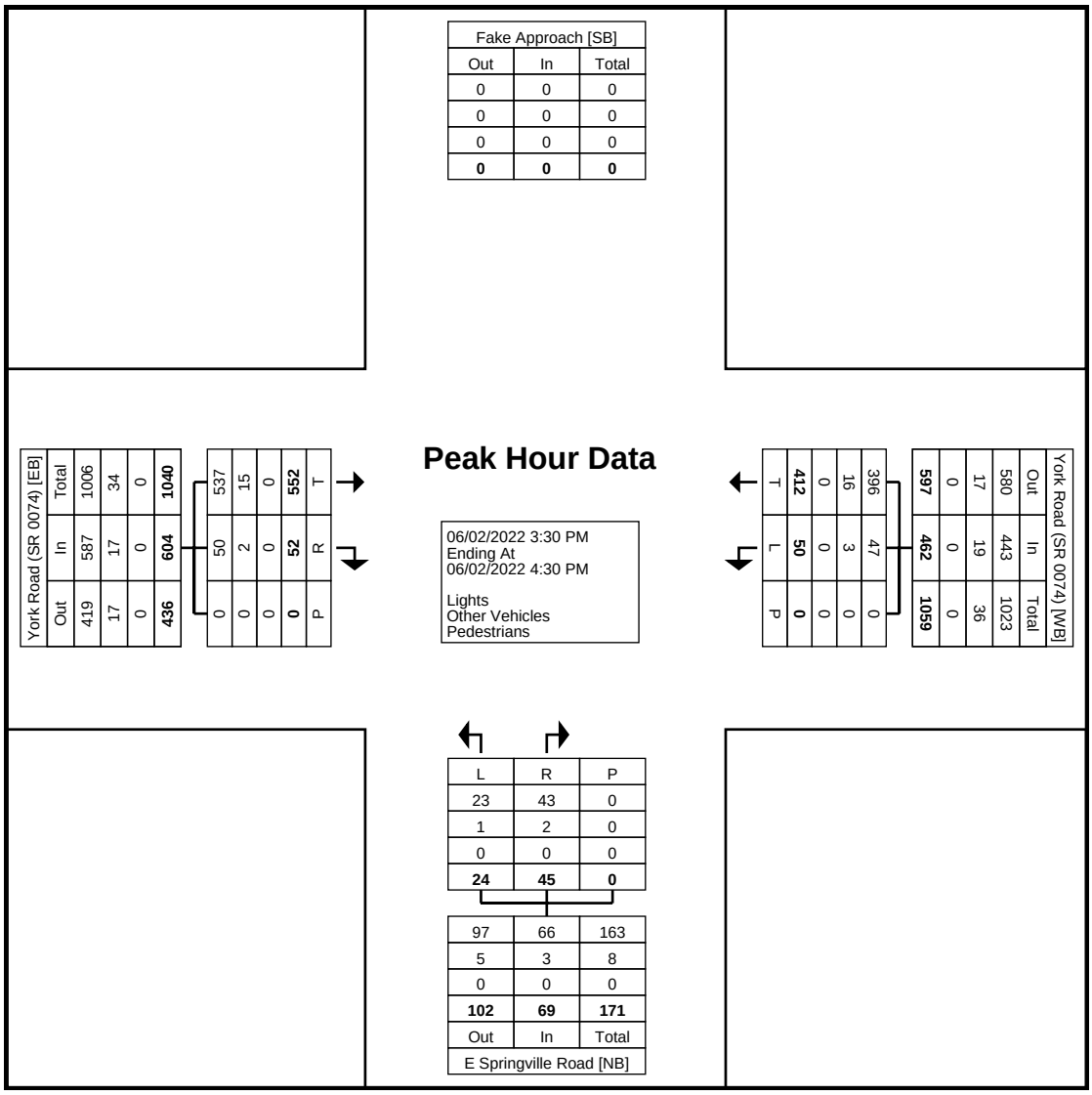

Turning Movement Peak Hour Data Plot (3:30 PM)

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
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Turning Movement Peak Hour Data (11:45 AM)

Start Time	York Road (SR 0074) Eastbound				York Road (SR 0074) Westbound				E Springville Road Northbound				
	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Left	Right	Peds	App. Total	Int. Total
11:45 AM	101	3	0	104	21	85	0	106	5	15	0	20	230
12:00 PM	90	6	0	96	10	81	0	91	6	15	0	21	208
12:15 PM	84	10	0	94	11	107	0	118	9	22	0	31	243
12:30 PM	82	7	0	89	11	113	0	124	8	17	0	25	238
Total	357	26	0	383	53	386	0	439	28	69	0	97	919
Approach %	93.2	6.8	-	-	12.1	87.9	-	-	28.9	71.1	-	-	-
Total %	38.8	2.8	-	41.7	5.8	42.0	-	47.8	3.0	7.5	-	10.6	-
PHF	0.884	0.650	-	0.921	0.631	0.854	-	0.885	0.778	0.784	-	0.782	0.945
Lights	353	26	-	379	53	383	-	436	28	68	-	96	911
% Lights	98.9	100.0	-	99.0	100.0	99.2	-	99.3	100.0	98.6	-	99.0	99.1
Other Vehicles	4	0	-	4	0	3	-	3	0	1	-	1	8
% Other Vehicles	1.1	0.0	-	1.0	0.0	0.8	-	0.7	0.0	1.4	-	1.0	0.9
Pedestrians	-	-	0	-	-	-	0	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-

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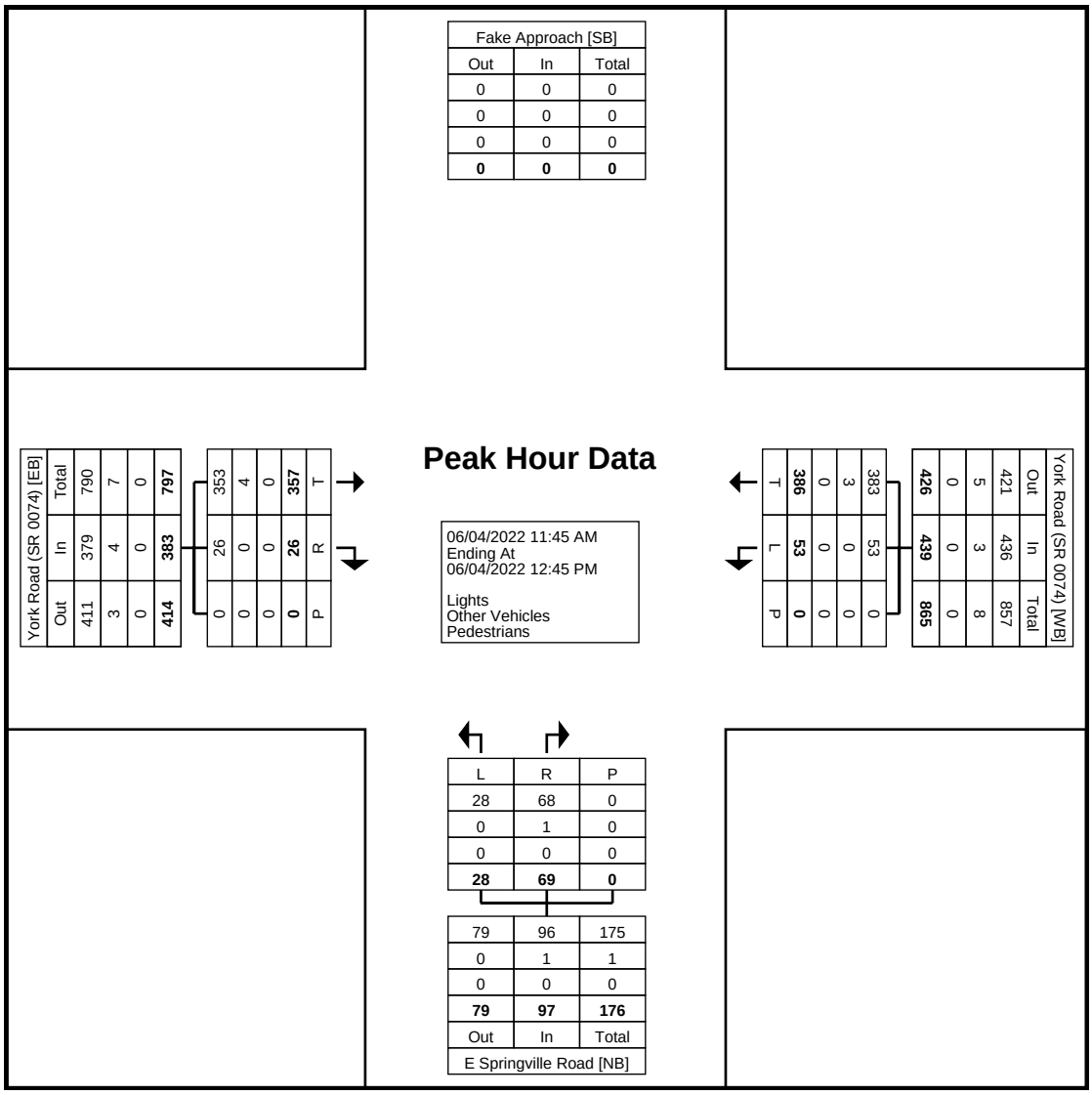
Count Name: AM PM York Road (SR 0074) & E Springville Road
Site Code: York Road (SR 0074) & E Springville Road
Start Date: 06/02/2022



Turning Movement Peak Hour Data Plot (11:45 AM)

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
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610.326.3100 dzerphey@trafficpd.com

Count Name: AM PM York Road (SR 0074) & S Middlesex Road/S Ridge Road
Site Code: York Road (SR 0074) & S Middlesex Road/S Ridge Ro
Start Date: 06/02/2022

Turning Movement Data

Start Time	York Road (SR 0074) Eastbound					York Road (SR 0074) Westbound					S Ridge Road Northbound					S Middlesex Road Southbound					
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
6:00 AM	0	29	0	0	29	0	58	5	0	63	0	2	0	0	2	2	2	0	0	4	98
6:15 AM	0	24	0	0	24	0	45	4	0	49	1	2	0	0	3	2	1	0	0	3	79
6:30 AM	1	39	1	0	41	1	98	5	0	104	1	3	0	0	4	3	2	1	0	6	155
6:45 AM	0	43	0	0	43	2	62	14	0	78	1	4	1	0	6	0	2	0	0	2	129
Hourly Total	1	135	1	0	137	3	263	28	0	294	3	11	1	0	15	7	7	1	0	15	461
7:00 AM	0	38	1	0	39	1	66	11	0	78	0	4	0	0	4	2	2	0	0	4	125
7:15 AM	0	46	2	0	48	0	77	6	0	83	2	3	0	0	5	5	2	0	0	7	143
7:30 AM	2	42	0	0	44	0	88	10	0	98	5	3	0	0	8	4	5	3	0	12	162
7:45 AM	1	47	2	0	50	0	76	10	0	86	4	7	1	0	12	3	4	0	0	7	155
Hourly Total	3	173	5	0	181	1	307	37	0	345	11	17	1	0	29	14	13	3	0	30	585
8:00 AM	0	35	1	0	36	0	82	3	0	85	3	0	0	0	3	3	2	2	0	7	131
8:15 AM	0	29	3	0	32	3	57	3	0	63	0	6	1	0	7	3	3	0	0	6	108
8:30 AM	1	43	0	0	44	0	66	4	0	70	2	0	1	0	3	1	1	0	0	2	119
8:45 AM	0	35	2	0	37	0	50	5	0	55	4	1	0	0	5	2	5	1	0	8	105
Hourly Total	1	142	6	0	149	3	255	15	0	273	9	7	2	0	18	9	11	3	0	23	463
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3:00 PM	0	77	2	0	79	0	58	6	0	64	2	5	1	0	8	3	2	1	0	6	157
3:15 PM	1	92	7	0	100	0	59	6	0	65	0	4	0	0	4	7	6	2	0	15	184
3:30 PM	2	93	4	0	99	0	62	1	0	63	2	10	0	0	12	6	9	1	0	16	190
3:45 PM	1	99	1	0	101	0	74	6	0	80	1	2	0	0	3	7	5	5	0	17	201
Hourly Total	4	361	14	0	379	0	253	19	0	272	5	21	1	0	27	23	22	9	0	54	732
4:00 PM	0	87	3	0	90	2	80	2	0	84	4	2	0	0	6	6	6	0	0	12	192
4:15 PM	2	94	6	0	102	1	63	3	0	67	0	0	0	0	0	6	6	0	0	12	181
4:30 PM	2	92	2	0	96	0	65	2	0	67	0	4	1	0	5	5	7	2	0	14	182
4:45 PM	0	96	1	0	97	1	56	2	0	59	4	1	1	0	6	9	2	0	0	11	173
Hourly Total	4	369	12	0	385	4	264	9	0	277	8	7	2	0	17	26	21	2	0	49	728
5:00 PM	0	88	3	0	91	0	67	3	0	70	0	3	0	0	3	8	5	0	0	13	177
5:15 PM	0	93	5	0	98	0	68	7	0	75	3	0	0	0	3	8	7	0	0	15	191
5:30 PM	1	71	2	0	74	1	45	3	0	49	3	2	0	0	5	7	4	1	0	12	140
5:45 PM	0	70	3	0	73	0	46	2	0	48	3	1	0	0	4	4	1	1	0	6	131
Hourly Total	1	322	13	0	336	1	226	15	0	242	9	6	0	0	15	27	17	2	0	46	639
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11:00 AM	3	87	6	0	96	1	83	1	0	85	5	5	2	0	12	2	1	1	0	4	197
11:15 AM	2	80	2	0	84	3	66	4	0	73	4	2	2	0	8	6	3	4	0	13	178
11:30 AM	1	72	4	0	77	3	68	3	0	74	7	2	2	0	11	3	5	2	0	10	172
11:45 AM	0	90	7	0	97	0	66	2	0	68	7	7	0	0	14	2	4	0	0	6	185
Hourly Total	6	329	19	0	354	7	283	10	0	300	23	16	6	0	45	13	13	7	0	33	732
12:00 PM	2	70	6	0	78	0	49	2	0	51	10	4	2	0	16	2	4	2	0	8	153
12:15 PM	0	66	4	0	70	1	79	4	0	84	6	2	0	0	8	2	2	2	0	6	168
12:30 PM	2	72	1	0	75	1	84	5	0	90	8	1	0	0	9	4	4	0	0	8	182
12:45 PM	0	74	3	0	77	0	76	3	0	79	9	3	0	0	12	1	6	0	0	7	175
Hourly Total	4	282	14	0	300	2	288	14	0	304	33	10	2	0	45	9	16	4	0	29	678
Grand Total	24	2113	84	0	2221	21	2139	147	0	2307	101	95	15	0	211	128	120	31	0	279	5018
Approach %	1.1	95.1	3.8	-	-	0.9	92.7	6.4	-	-	47.9	45.0	7.1	-	-	45.9	43.0	11.1	-	-	-
Total %	0.5	42.1	1.7	-	44.3	0.4	42.6	2.9	-	46.0	2.0	1.9	0.3	-	4.2	2.6	2.4	0.6	-	5.6	-
Lights	23	2036	83	-	2142	21	2066	140	-	2227	100	89	14	-	203	125	117	29	-	271	4843
% Lights	95.8	96.4	98.8	-	96.4	100.0	96.6	95.2	-	96.5	99.0	93.7	93.3	-	96.2	97.7	97.5	93.5	-	97.1	96.5
Other Vehicles	1	77	1	-	79	0	73	7	-	80	1	6	1	-	8	3	3	2	-	8	175
% Other Vehicles	4.2	3.6	1.2	-	3.6	0.0	3.4	4.8	-	3.5	1.0	6.3	6.7	-	3.8	2.3	2.5	6.5	-	2.9	3.5
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Traffic Planning and Design, Inc
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Count Name: MID York Road (SR 0074) & S Ridge Road/Middlesex Road
Site Code: York Road (SR 0074) & S Ridge Road/Middlesex Road
Start Date: 06/02/2022

Turning Movement Data

Start Time	York Road (SR 0074) Eastbound					York Road (SR 0074) Westbound					S Ridge Road Northbound					S Middlesex Road Southbound					
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
9:00 AM	1	42	3	0	46	1	71	2	0	74	1	3	0	0	4	3	4	1	0	8	132
9:15 AM	2	42	3	0	47	1	42	3	0	46	3	1	1	0	5	2	1	0	0	3	101
9:30 AM	0	54	4	0	58	0	68	2	0	70	3	2	0	0	5	2	0	0	0	2	135
9:45 AM	0	58	1	0	59	0	70	1	0	71	0	3	0	0	3	2	1	4	0	7	140
Hourly Total	3	196	11	0	210	2	251	8	0	261	7	9	1	0	17	9	6	5	0	20	508
10:00 AM	1	50	0	0	51	0	60	2	0	62	1	1	0	0	2	0	3	0	0	3	118
10:15 AM	0	47	4	0	51	1	57	0	0	58	1	1	1	0	3	6	1	0	0	7	119
10:30 AM	0	54	3	0	57	0	63	1	0	64	2	3	0	0	5	5	2	0	0	7	133
10:45 AM	1	58	3	0	62	1	43	2	0	46	3	2	0	0	5	4	1	2	0	7	120
Hourly Total	2	209	10	0	221	2	223	5	0	230	7	7	1	0	15	15	7	2	0	24	490
11:00 AM	0	55	2	0	57	0	33	3	0	36	2	3	1	0	6	0	1	0	0	1	100
11:15 AM	0	59	5	0	64	0	47	2	0	49	5	0	0	0	5	1	3	1	0	5	123
11:30 AM	1	39	4	0	44	0	60	1	0	61	1	1	0	0	2	2	1	1	0	4	111
11:45 AM	0	47	0	0	47	2	42	2	0	46	1	2	0	0	3	2	1	0	0	3	99
Hourly Total	1	200	11	0	212	2	182	8	0	192	9	6	1	0	16	5	6	2	0	13	433
12:00 PM	0	43	2	0	45	0	53	1	0	54	2	2	0	0	4	2	3	0	0	5	108
12:15 PM	3	61	5	0	69	2	48	2	0	52	4	2	1	0	7	2	2	0	0	4	132
12:30 PM	1	49	0	0	50	0	53	2	0	55	2	4	0	0	6	3	3	0	0	6	117
12:45 PM	2	55	5	0	62	0	51	1	0	52	2	4	1	0	7	2	1	2	0	5	126
Hourly Total	6	208	12	0	226	2	205	6	0	213	10	12	2	0	24	9	9	2	0	20	483
1:00 PM	1	66	1	0	68	1	36	1	0	38	2	1	1	0	4	0	3	0	0	3	113
1:15 PM	1	64	4	0	69	0	63	0	0	63	7	3	1	0	11	2	5	2	0	9	152
1:30 PM	1	53	3	0	57	1	55	3	0	59	3	1	1	0	5	3	2	1	0	6	127
1:45 PM	1	51	2	0	54	0	67	5	0	72	2	4	0	0	6	3	3	0	0	6	138
Hourly Total	4	234	10	0	248	2	221	9	0	232	14	9	3	0	26	8	13	3	0	24	530
2:00 PM	0	59	3	0	62	0	47	0	0	47	2	4	2	0	8	1	2	1	0	4	121
2:15 PM	0	70	2	0	72	0	47	7	0	54	4	2	0	0	6	3	4	0	0	7	139
2:30 PM	1	63	3	0	67	0	63	3	0	66	3	3	0	0	6	3	5	1	0	9	148
2:45 PM	0	84	7	0	91	1	44	2	0	47	2	3	0	0	5	3	5	0	0	8	151
Hourly Total	1	276	15	0	292	1	201	12	0	214	11	12	2	0	25	10	16	2	0	28	559
Grand Total	17	1323	69	0	1409	11	1283	48	0	1342	58	55	10	0	123	56	57	16	0	129	3003
Approach %	1.2	93.9	4.9	-	-	0.8	95.6	3.6	-	-	47.2	44.7	8.1	-	-	43.4	44.2	12.4	-	-	-
Total %	0.6	44.1	2.3	-	46.9	0.4	42.7	1.6	-	44.7	1.9	1.8	0.3	-	4.1	1.9	1.9	0.5	-	4.3	-
Lights	15	1195	67	-	1277	10	1199	48	-	1257	58	54	10	-	122	53	54	16	-	123	2779
% Lights	88.2	90.3	97.1	-	90.6	90.9	93.5	100.0	-	93.7	100.0	98.2	100.0	-	99.2	94.6	94.7	100.0	-	95.3	92.5
Other Vehicles	2	128	2	-	132	1	84	0	-	85	0	1	0	-	1	3	3	0	-	6	224
% Other Vehicles	11.8	9.7	2.9	-	9.4	9.1	6.5	0.0	-	6.3	0.0	1.8	0.0	-	0.8	5.4	5.3	0.0	-	4.7	7.5
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Traffic Planning and Design, Inc
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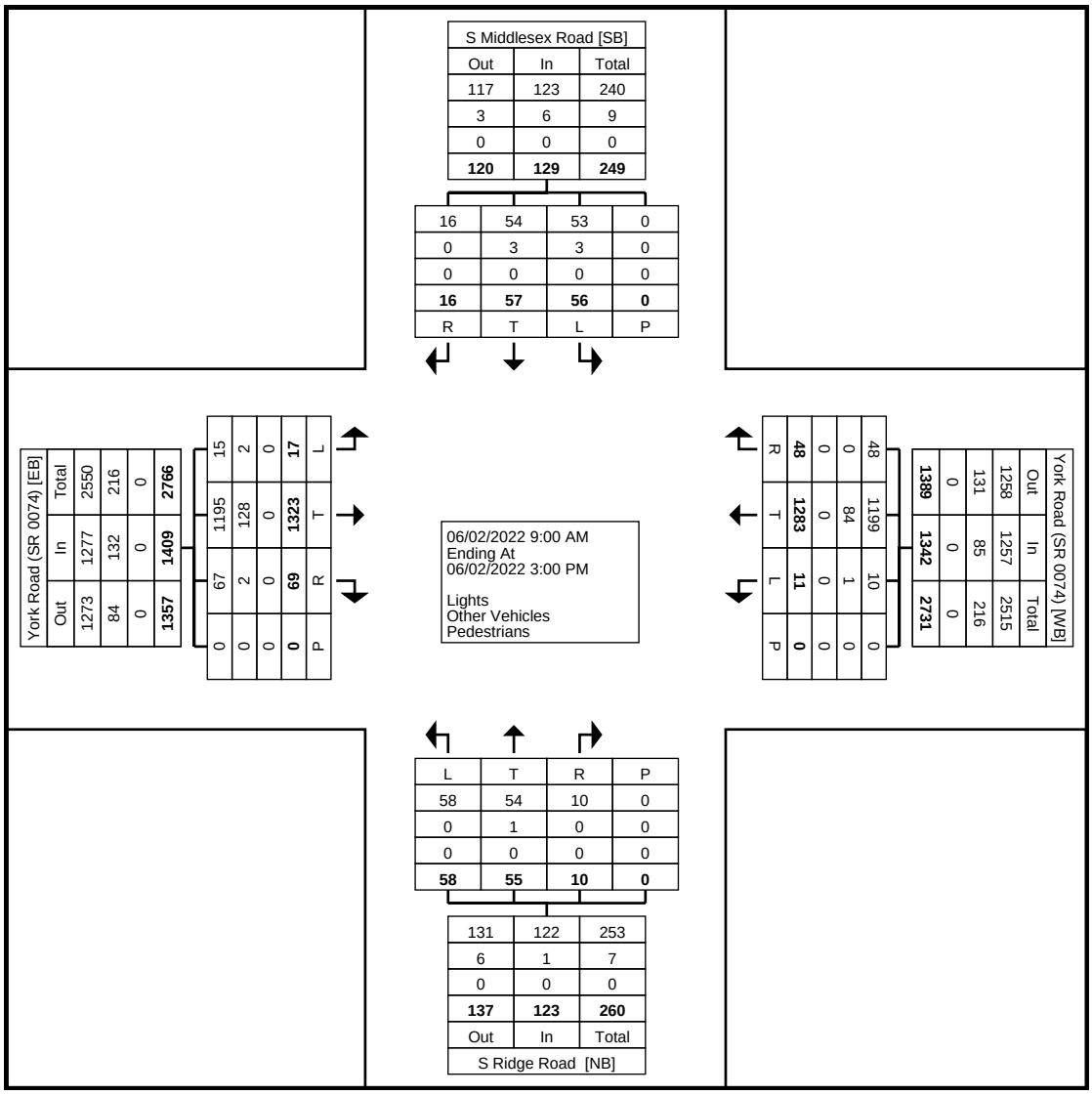
Site Code: York Road (SR 0074) & S Ridge Road/Middlesex Road
Start Date: 06/02/2022



Turning Movement Data Plot

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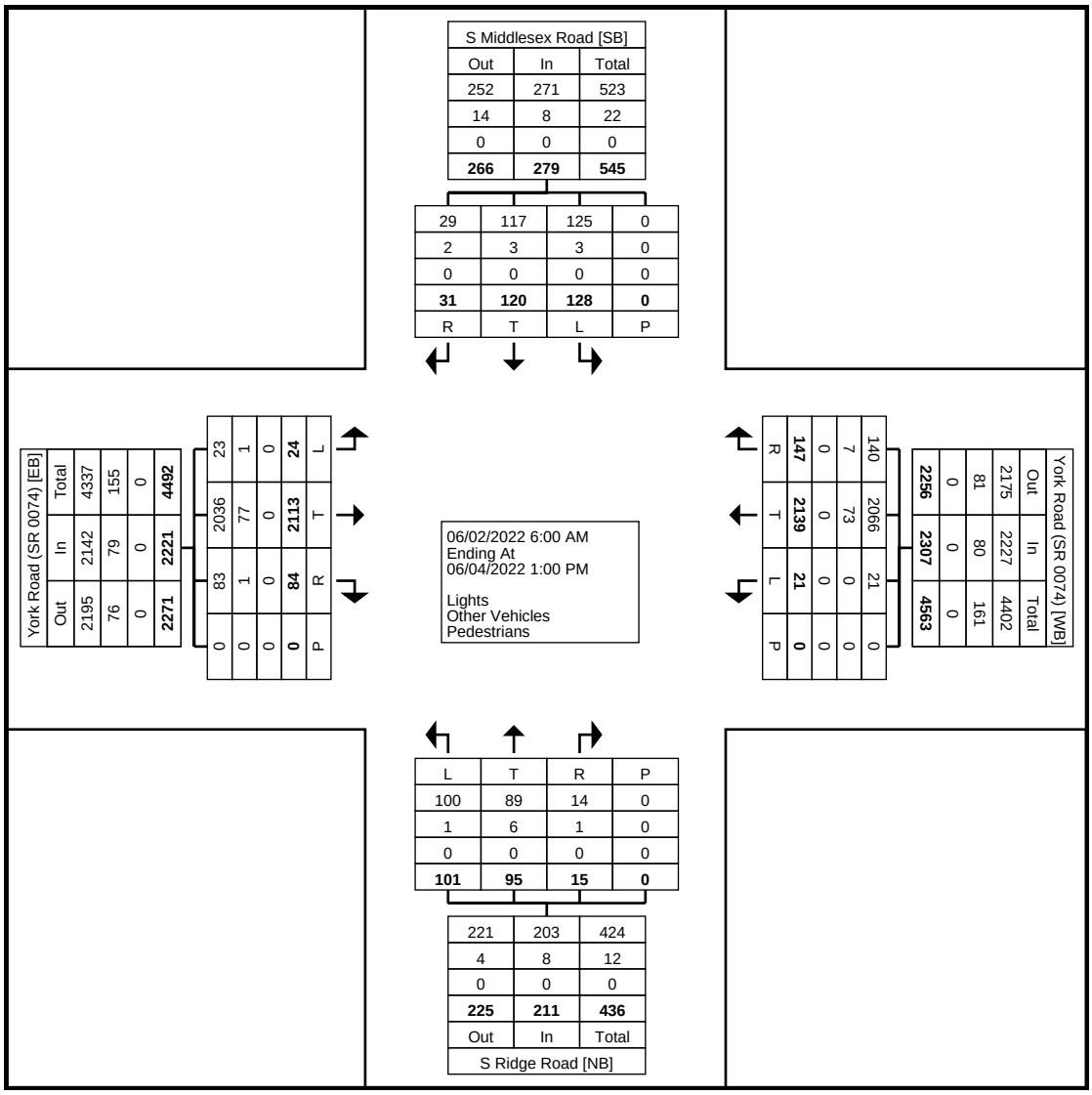
Site Code: York Road (SR 0074) & S Middlesex Road/S Ridge Ro
Start Date: 06/02/2022



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Count Name: AM PM York Road (SR 0074) & S Middlesex Road/S Ridge Road
Site Code: York Road (SR 0074) & S Middlesex Road/S Ridge Ro
Start Date: 06/02/2022

Turning Movement Peak Hour Data (7:15 AM)

Start Time	York Road (SR 0074) Eastbound					York Road (SR 0074) Westbound					S Ridge Road Northbound					S Middlesex Road Southbound					
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
7:15 AM	0	46	2	0	48	0	77	6	0	83	2	3	0	0	5	5	2	0	0	7	143
7:30 AM	2	42	0	0	44	0	88	10	0	98	5	3	0	0	8	4	5	3	0	12	162
7:45 AM	1	47	2	0	50	0	76	10	0	86	4	7	1	0	12	3	4	0	0	7	155
8:00 AM	0	35	1	0	36	0	82	3	0	85	3	0	0	0	3	3	2	2	0	7	131
Total	3	170	5	0	178	0	323	29	0	352	14	13	1	0	28	15	13	5	0	33	591
Approach %	1.7	95.5	2.8	-	-	0.0	91.8	8.2	-	-	50.0	46.4	3.6	-	-	45.5	39.4	15.2	-	-	-
Total %	0.5	28.8	0.8	-	30.1	0.0	54.7	4.9	-	59.6	2.4	2.2	0.2	-	4.7	2.5	2.2	0.8	-	5.6	-
PHF	0.375	0.904	0.625	-	0.890	0.000	0.918	0.725	-	0.898	0.700	0.464	0.250	-	0.583	0.750	0.650	0.417	-	0.688	0.912
Lights	3	152	5	-	160	0	307	29	-	336	14	11	0	-	25	15	12	4	-	31	552
% Lights	100.0	89.4	100.0	-	89.9	-	95.0	100.0	-	95.5	100.0	84.6	0.0	-	89.3	100.0	92.3	80.0	-	93.9	93.4
Other Vehicles	0	18	0	-	18	0	16	0	-	16	0	2	1	-	3	0	1	1	-	2	39
% Other Vehicles	0.0	10.6	0.0	-	10.1	-	5.0	0.0	-	4.5	0.0	15.4	100.0	-	10.7	0.0	7.7	20.0	-	6.1	6.6
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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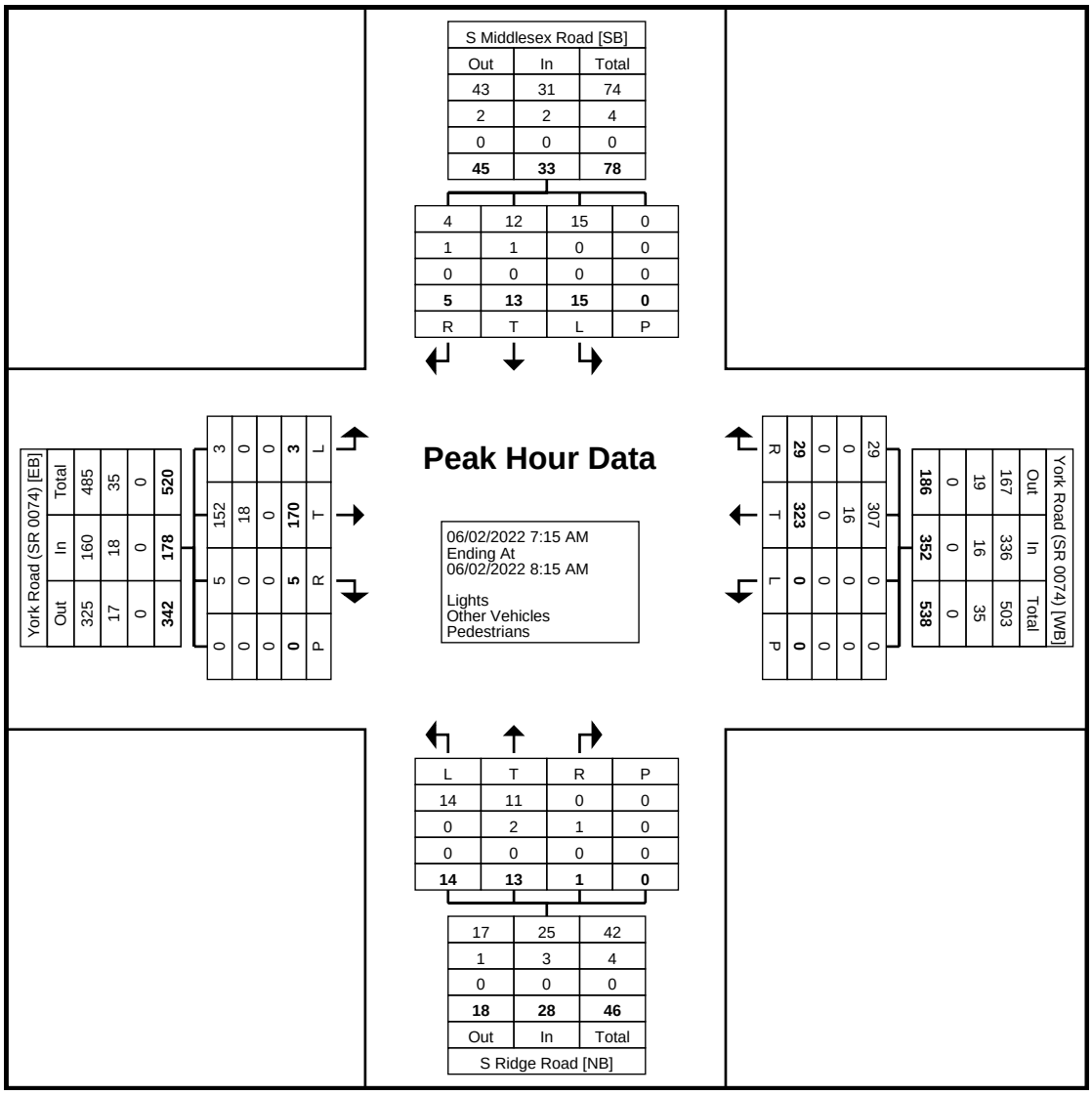
Count Name: AM PM York Road (SR 0074) & S Middlesex Road/S Ridge Road
Site Code: York Road (SR 0074) & S Middlesex Road/S Ridge Ro
Start Date: 06/02/2022



Turning Movement Peak Hour Data Plot (7:15 AM)

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Count Name: AM PM York Road (SR 0074) & S Middlesex Road/S Ridge Road
Site Code: York Road (SR 0074) & S Middlesex Road/S Ridge Ro
Start Date: 06/02/2022

Turning Movement Peak Hour Data (3:15 PM)

Start Time	York Road (SR 0074) Eastbound					York Road (SR 0074) Westbound					S Ridge Road Northbound					S Middlesex Road Southbound					
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
3:15 PM	1	92	7	0	100	0	59	6	0	65	0	4	0	0	4	7	6	2	0	15	184
3:30 PM	2	93	4	0	99	0	62	1	0	63	2	10	0	0	12	6	9	1	0	16	190
3:45 PM	1	99	1	0	101	0	74	6	0	80	1	2	0	0	3	7	5	5	0	17	201
4:00 PM	0	87	3	0	90	2	80	2	0	84	4	2	0	0	6	6	6	0	0	12	192
Total	4	371	15	0	390	2	275	15	0	292	7	18	0	0	25	26	26	8	0	60	767
Approach %	1.0	95.1	3.8	-	-	0.7	94.2	5.1	-	-	28.0	72.0	0.0	-	-	43.3	43.3	13.3	-	-	-
Total %	0.5	48.4	2.0	-	50.8	0.3	35.9	2.0	-	38.1	0.9	2.3	0.0	-	3.3	3.4	3.4	1.0	-	7.8	-
PHF	0.500	0.937	0.536	-	0.965	0.250	0.859	0.625	-	0.869	0.438	0.450	0.000	-	0.521	0.929	0.722	0.400	-	0.882	0.954
Lights	4	358	15	-	377	2	258	13	-	273	7	17	0	-	24	26	26	8	-	60	734
% Lights	100.0	96.5	100.0	-	96.7	100.0	93.8	86.7	-	93.5	100.0	94.4	-	-	96.0	100.0	100.0	100.0	-	100.0	95.7
Other Vehicles	0	13	0	-	13	0	17	2	-	19	0	1	0	-	1	0	0	0	-	0	33
% Other Vehicles	0.0	3.5	0.0	-	3.3	0.0	6.2	13.3	-	6.5	0.0	5.6	-	-	4.0	0.0	0.0	0.0	-	0.0	4.3
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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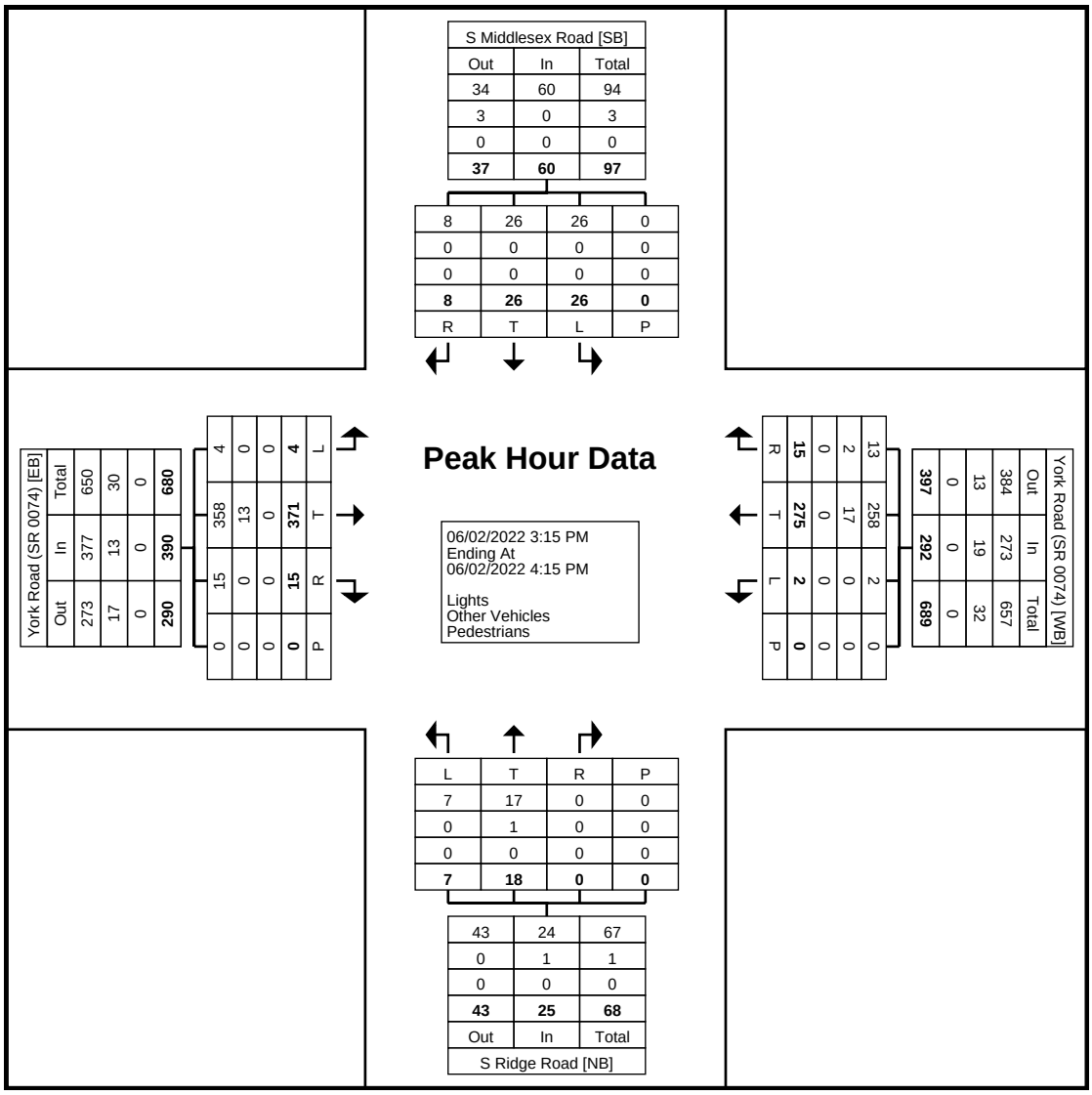
Count Name: AM PM York Road (SR 0074) & S Middlesex Road/S Ridge Road
Site Code: York Road (SR 0074) & S Middlesex Road/S Ridge Ro
Start Date: 06/02/2022



Turning Movement Peak Hour Data Plot (3:15 PM)

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2500 East High Street
Suite 650
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610.326.3100 dzerphey@trafficpd.com

Count Name: AM PM York Road (SR 0074) & S Middlesex Road/S Ridge Road
Site Code: York Road (SR 0074) & S Middlesex Road/S Ridge Ro
Start Date: 06/02/2022

Turning Movement Peak Hour Data (11:00 AM)

Start Time	York Road (SR 0074) Eastbound					York Road (SR 0074) Westbound					S Ridge Road Northbound					S Middlesex Road Southbound					
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
11:00 AM	3	87	6	0	96	1	83	1	0	85	5	5	2	0	12	2	1	1	0	4	197
11:15 AM	2	80	2	0	84	3	66	4	0	73	4	2	2	0	8	6	3	4	0	13	178
11:30 AM	1	72	4	0	77	3	68	3	0	74	7	2	2	0	11	3	5	2	0	10	172
11:45 AM	0	90	7	0	97	0	66	2	0	68	7	7	0	0	14	2	4	0	0	6	185
Total	6	329	19	0	354	7	283	10	0	300	23	16	6	0	45	13	13	7	0	33	732
Approach %	1.7	92.9	5.4	-	-	2.3	94.3	3.3	-	-	51.1	35.6	13.3	-	-	39.4	39.4	21.2	-	-	-
Total %	0.8	44.9	2.6	-	48.4	1.0	38.7	1.4	-	41.0	3.1	2.2	0.8	-	6.1	1.8	1.8	1.0	-	4.5	-
PHF	0.500	0.914	0.679	-	0.912	0.583	0.852	0.625	-	0.882	0.821	0.571	0.750	-	0.804	0.542	0.650	0.438	-	0.635	0.929
Lights	6	326	19	-	351	7	278	10	-	295	22	15	6	-	43	13	13	6	-	32	721
% Lights	100.0	99.1	100.0	-	99.2	100.0	98.2	100.0	-	98.3	95.7	93.8	100.0	-	95.6	100.0	100.0	85.7	-	97.0	98.5
Other Vehicles	0	3	0	-	3	0	5	0	-	5	1	1	0	-	2	0	0	1	-	1	11
% Other Vehicles	0.0	0.9	0.0	-	0.8	0.0	1.8	0.0	-	1.7	4.3	6.3	0.0	-	4.4	0.0	0.0	14.3	-	3.0	1.5
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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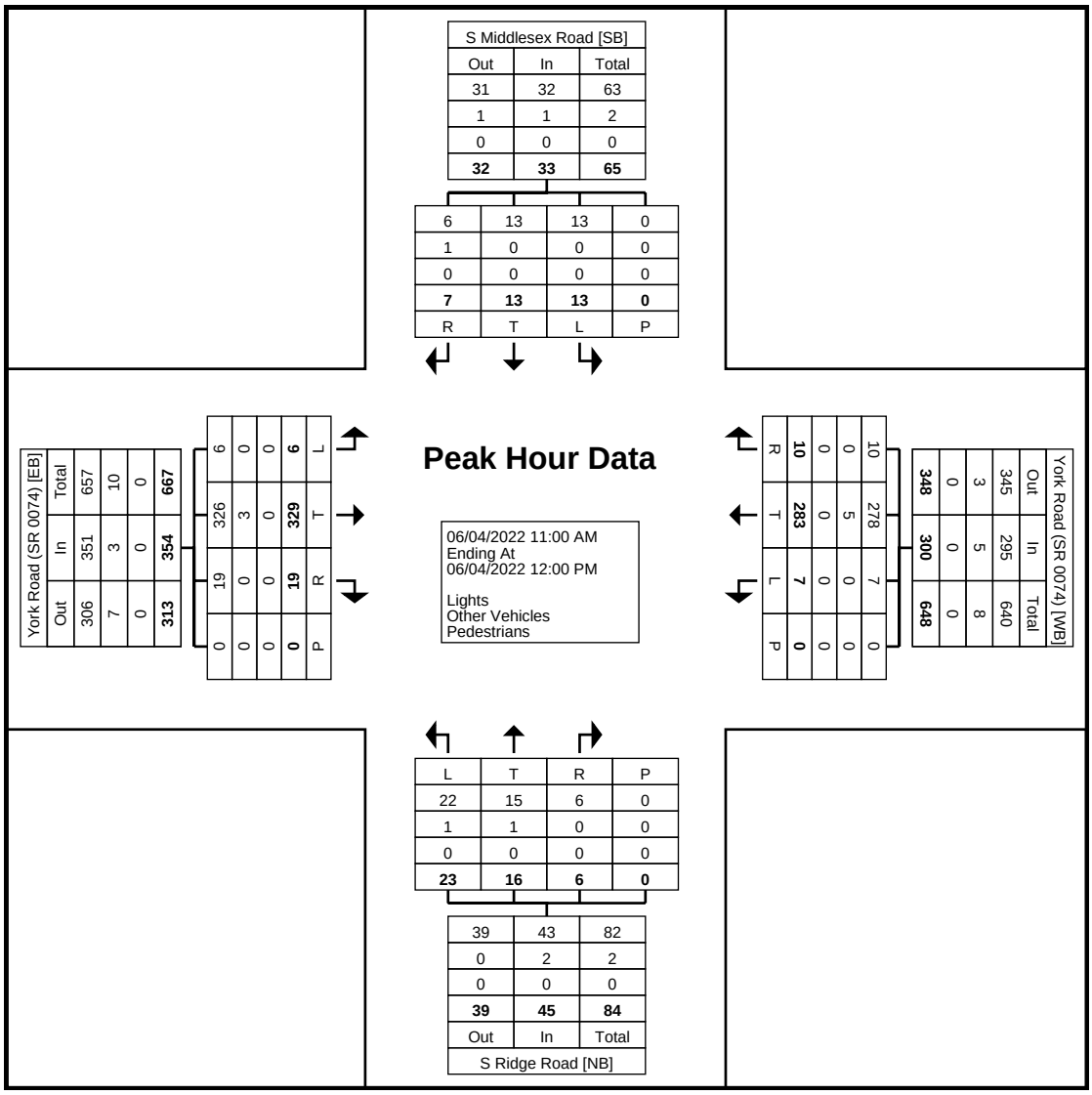

Turning Movement Peak Hour Data Plot (11:00 AM)

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100 jwheeler@trafficpd.com

Count Name: AM PM York Road (SR 0074) & Shughart Road
Site Code: York Road (SR 0074) & Shughart Road
Start Date: 06/02/2022

Turning Movement Data

Start Time	York Road (SR 0074) Eastbound				York Road (SR 0074) Westbound					Shughart Road Southbound				
	Left	Thru	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Right	Peds	App. Total	Int. Total
6:00 AM	16	29	0	45	0	46	0	0	46	0	12	0	12	103
6:15 AM	29	25	0	54	0	54	0	0	54	0	15	0	15	123
6:30 AM	35	42	0	77	0	98	0	0	98	0	18	0	18	193
6:45 AM	24	43	0	67	0	68	0	0	68	1	32	0	33	168
Hourly Total	104	139	0	243	0	266	0	0	266	1	77	0	78	587
7:00 AM	31	40	0	71	0	68	0	0	68	0	21	0	21	160
7:15 AM	35	47	0	82	0	79	0	0	79	0	42	0	42	203
7:30 AM	44	46	0	90	0	92	1	0	93	0	33	0	33	216
7:45 AM	47	48	0	95	0	78	0	0	78	0	43	0	43	216
Hourly Total	157	181	0	338	0	317	1	0	318	0	139	0	139	795
8:00 AM	23	35	0	58	0	92	0	0	92	1	24	0	25	175
8:15 AM	27	31	0	58	0	63	0	0	63	0	25	0	25	146
8:30 AM	29	43	0	72	0	68	0	0	68	0	28	0	28	168
8:45 AM	26	36	0	62	0	56	0	0	56	0	23	0	23	141
Hourly Total	105	145	0	250	0	279	0	0	279	1	100	0	101	630
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3:00 PM	32	80	0	112	0	61	1	0	62	0	38	0	38	212
3:15 PM	36	96	0	132	0	59	0	0	59	0	43	0	43	234
3:30 PM	50	100	0	150	0	60	0	0	60	0	48	0	48	258
3:45 PM	49	101	0	150	0	86	0	0	86	0	44	0	44	280
Hourly Total	167	377	0	544	0	266	1	0	267	0	173	0	173	984
4:00 PM	46	88	0	134	0	85	0	0	85	0	44	0	44	263
4:15 PM	48	104	0	152	0	65	0	0	65	0	35	0	35	252
4:30 PM	42	97	0	139	0	61	2	0	63	1	41	0	42	244
4:45 PM	50	97	0	147	0	64	0	0	64	0	53	0	53	264
Hourly Total	186	386	0	572	0	275	2	0	277	1	173	0	174	1023
5:00 PM	39	91	0	130	0	58	0	0	58	0	33	0	33	221
5:15 PM	42	99	0	141	0	85	1	0	86	0	42	0	42	269
5:30 PM	23	76	0	99	0	49	0	0	49	0	38	0	38	186
5:45 PM	20	73	0	93	0	51	0	0	51	0	33	0	33	177
Hourly Total	124	339	0	463	0	243	1	0	244	0	146	0	146	853
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11:00 AM	30	91	0	121	1	87	0	0	88	1	26	0	27	236
11:15 AM	25	85	0	110	0	77	0	0	77	0	16	0	16	203
11:30 AM	28	79	0	107	0	83	1	0	84	0	24	0	24	215
11:45 AM	27	92	0	119	0	68	0	0	68	0	35	0	35	222
Hourly Total	110	347	0	457	1	315	1	0	317	1	101	0	102	876
12:00 PM	30	76	0	106	0	65	0	0	65	1	27	0	28	199
12:15 PM	33	72	0	105	0	94	0	0	94	0	28	0	28	227
12:30 PM	27	77	0	104	0	88	0	0	88	0	35	0	35	227
12:45 PM	36	79	0	115	0	88	0	0	88	0	17	0	17	220
Hourly Total	126	304	0	430	0	335	0	0	335	1	107	0	108	873
Grand Total	1079	2218	0	3297	1	2296	6	0	2303	5	1016	0	1021	6621
Approach %	32.7	67.3	-	-	0.0	99.7	0.3	-	-	0.5	99.5	-	-	-
Total %	16.3	33.5	-	49.8	0.0	34.7	0.1	-	34.8	0.1	15.3	-	15.4	-
Lights	1050	2145	-	3195	1	2198	6	-	2205	5	986	-	991	6391
% Lights	97.3	96.7	-	96.9	100.0	95.7	100.0	-	95.7	100.0	97.0	-	97.1	96.5
Other Vehicles	29	73	-	102	0	98	0	-	98	0	30	-	30	230
% Other Vehicles	2.7	3.3	-	3.1	0.0	4.3	0.0	-	4.3	0.0	3.0	-	2.9	3.5
Pedestrians	-	-	0	-	-	-	-	0	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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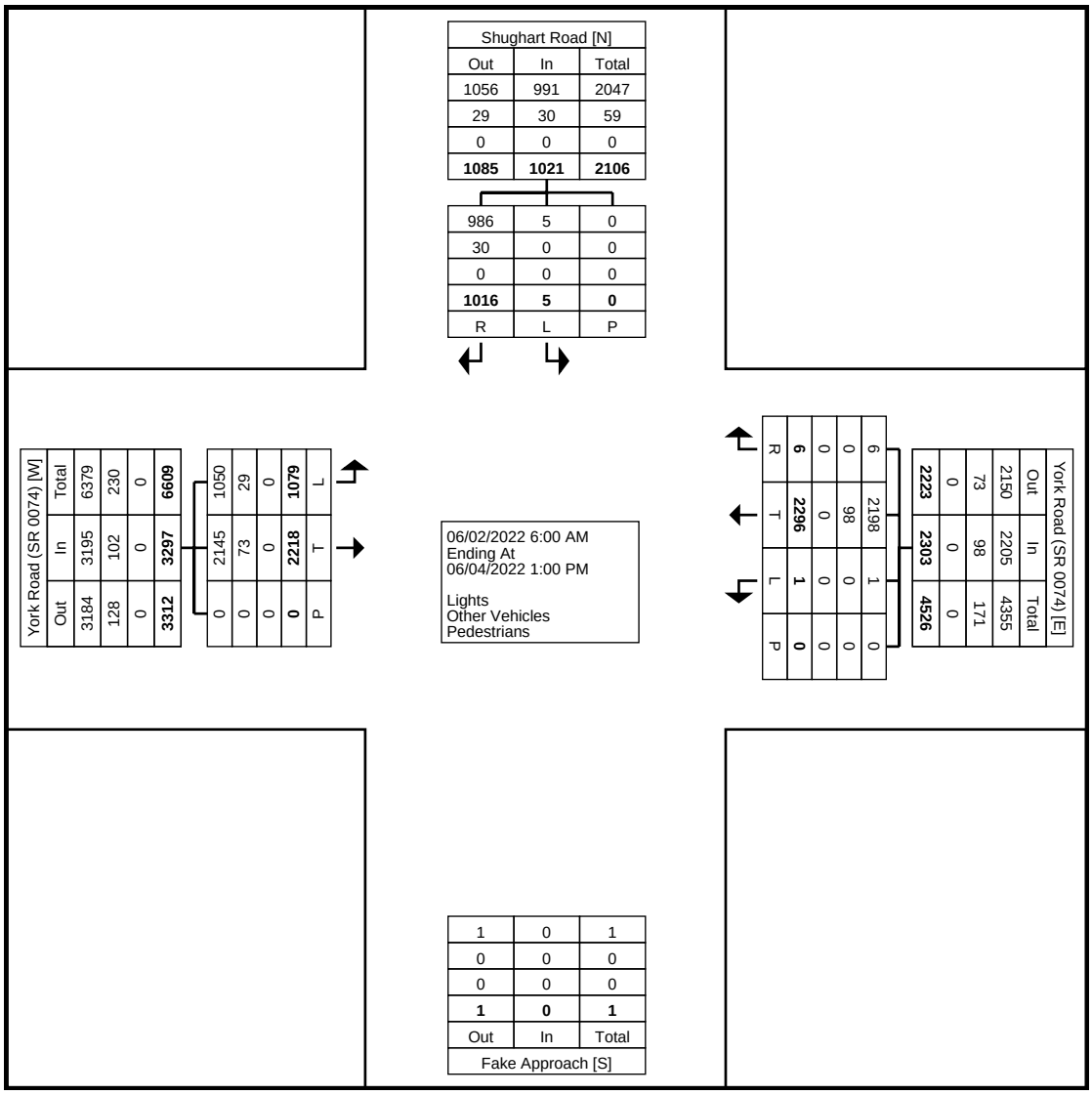
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100 jwheeler@trafficpd.com

Count Name: AM PM York Road (SR 0074) & Shughart Road
Site Code: York Road (SR 0074) & Shughart Road
Start Date: 06/02/2022



Turning Movement Data Plot

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Count Name: AM PM York Road (SR 0074) & Shughart Road
Site Code: York Road (SR 0074) & Shughart Road
Start Date: 06/02/2022

Turning Movement Peak Hour Data (7:15 AM)

Start Time	York Road (SR 0074) Eastbound				York Road (SR 0074) Westbound					Shughart Road Southbound				
	Left	Thru	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Right	Peds	App. Total	Int. Total
7:15 AM	35	47	0	82	0	79	0	0	79	0	42	0	42	203
7:30 AM	44	46	0	90	0	92	1	0	93	0	33	0	33	216
7:45 AM	47	48	0	95	0	78	0	0	78	0	43	0	43	216
8:00 AM	23	35	0	58	0	92	0	0	92	1	24	0	25	175
Total	149	176	0	325	0	341	1	0	342	1	142	0	143	810
Approach %	45.8	54.2	-	-	0.0	99.7	0.3	-	-	0.7	99.3	-	-	-
Total %	18.4	21.7	-	40.1	0.0	42.1	0.1	-	42.2	0.1	17.5	-	17.7	-
PHF	0.793	0.917	-	0.855	0.000	0.927	0.250	-	0.919	0.250	0.826	-	0.831	0.938
Lights	147	160	-	307	0	320	1	-	321	1	135	-	136	764
% Lights	98.7	90.9	-	94.5	-	93.8	100.0	-	93.9	100.0	95.1	-	95.1	94.3
Other Vehicles	2	16	-	18	0	21	0	-	21	0	7	-	7	46
% Other Vehicles	1.3	9.1	-	5.5	-	6.2	0.0	-	6.1	0.0	4.9	-	4.9	5.7
Pedestrians	-	-	0	-	-	-	-	0	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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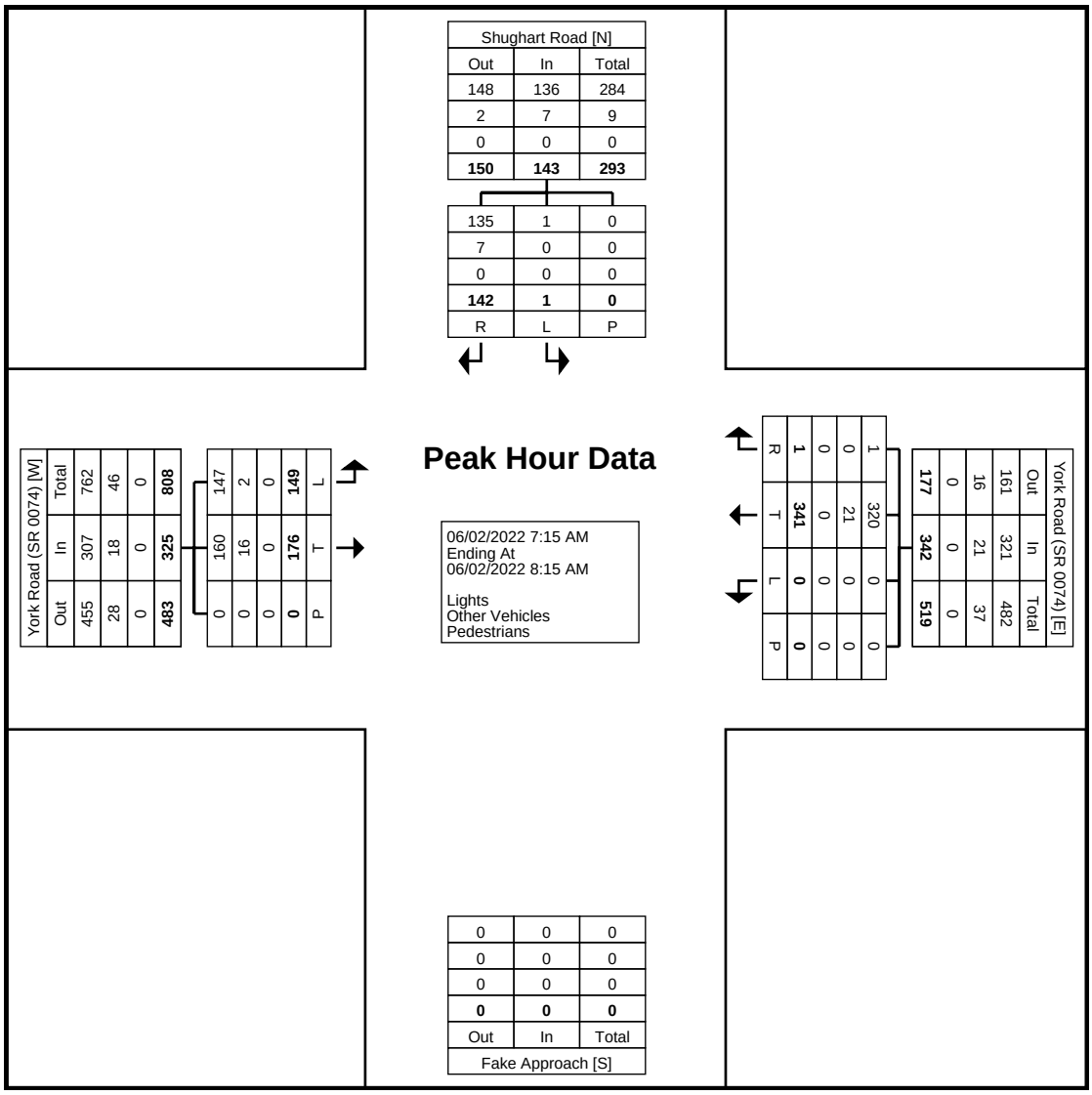

Turning Movement Peak Hour Data Plot (7:15 AM)

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Pottstown, Pennsylvania, United States 19464
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Count Name: AM PM York Road (SR 0074) & Shughart Road
Site Code: York Road (SR 0074) & Shughart Road
Start Date: 06/02/2022

Turning Movement Peak Hour Data (3:30 PM)

Start Time	York Road (SR 0074) Eastbound				York Road (SR 0074) Westbound					Shughart Road Southbound				
	Left	Thru	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Right	Peds	App. Total	Int. Total
3:30 PM	50	100	0	150	0	60	0	0	60	0	48	0	48	258
3:45 PM	49	101	0	150	0	86	0	0	86	0	44	0	44	280
4:00 PM	46	88	0	134	0	85	0	0	85	0	44	0	44	263
4:15 PM	48	104	0	152	0	65	0	0	65	0	35	0	35	252
Total	193	393	0	586	0	296	0	0	296	0	171	0	171	1053
Approach %	32.9	67.1	-	-	0.0	100.0	0.0	-	-	0.0	100.0	-	-	-
Total %	18.3	37.3	-	55.7	0.0	28.1	0.0	-	28.1	0.0	16.2	-	16.2	-
PHF	0.965	0.945	-	0.964	0.000	0.860	0.000	-	0.860	0.000	0.891	-	0.891	0.940
Lights	185	381	-	566	0	275	0	-	275	0	168	-	168	1009
% Lights	95.9	96.9	-	96.6	-	92.9	-	-	92.9	-	98.2	-	98.2	95.8
Other Vehicles	8	12	-	20	0	21	0	-	21	0	3	-	3	44
% Other Vehicles	4.1	3.1	-	3.4	-	7.1	-	-	7.1	-	1.8	-	1.8	4.2
Pedestrians	-	-	0	-	-	-	-	0	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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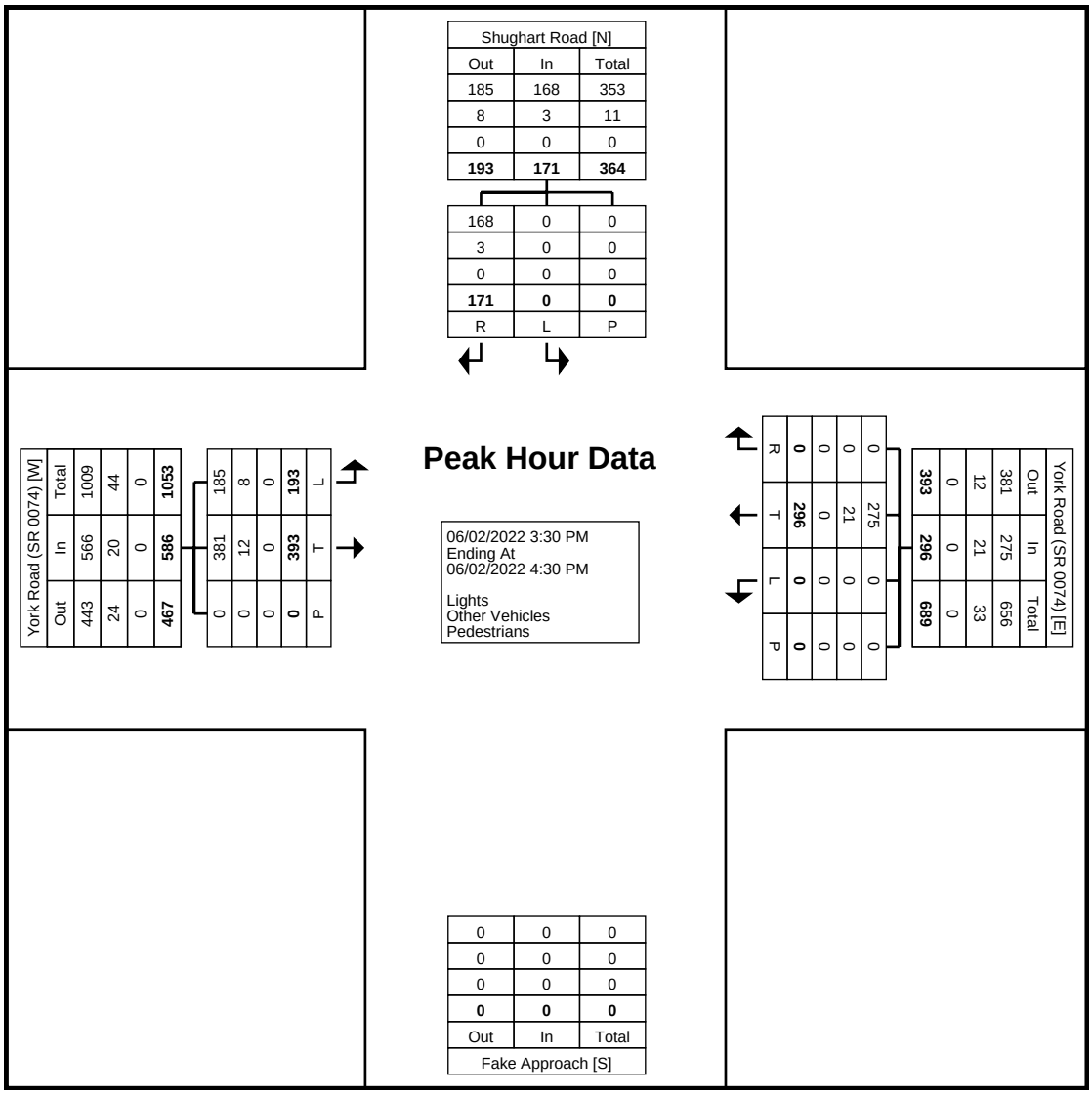

Turning Movement Peak Hour Data Plot (3:30 PM)

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Turning Movement Peak Hour Data (11:00 AM)

Start Time	York Road (SR 0074) Eastbound				York Road (SR 0074) Westbound					Shughart Road Southbound				
	Left	Thru	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Right	Peds	App. Total	Int. Total
11:00 AM	30	91	0	121	1	87	0	0	88	1	26	0	27	236
11:15 AM	25	85	0	110	0	77	0	0	77	0	16	0	16	203
11:30 AM	28	79	0	107	0	83	1	0	84	0	24	0	24	215
11:45 AM	27	92	0	119	0	68	0	0	68	0	35	0	35	222
Total	110	347	0	457	1	315	1	0	317	1	101	0	102	876
Approach %	24.1	75.9	-	-	0.3	99.4	0.3	-	-	1.0	99.0	-	-	-
Total %	12.6	39.6	-	52.2	0.1	36.0	0.1	-	36.2	0.1	11.5	-	11.6	-
PHF	0.917	0.943	-	0.944	0.250	0.905	0.250	-	0.901	0.250	0.721	-	0.729	0.928
Lights	108	344	-	452	1	306	1	-	308	1	98	-	99	859
% Lights	98.2	99.1	-	98.9	100.0	97.1	100.0	-	97.2	100.0	97.0	-	97.1	98.1
Other Vehicles	2	3	-	5	0	9	0	-	9	0	3	-	3	17
% Other Vehicles	1.8	0.9	-	1.1	0.0	2.9	0.0	-	2.8	0.0	3.0	-	2.9	1.9
Pedestrians	-	-	0	-	-	-	-	0	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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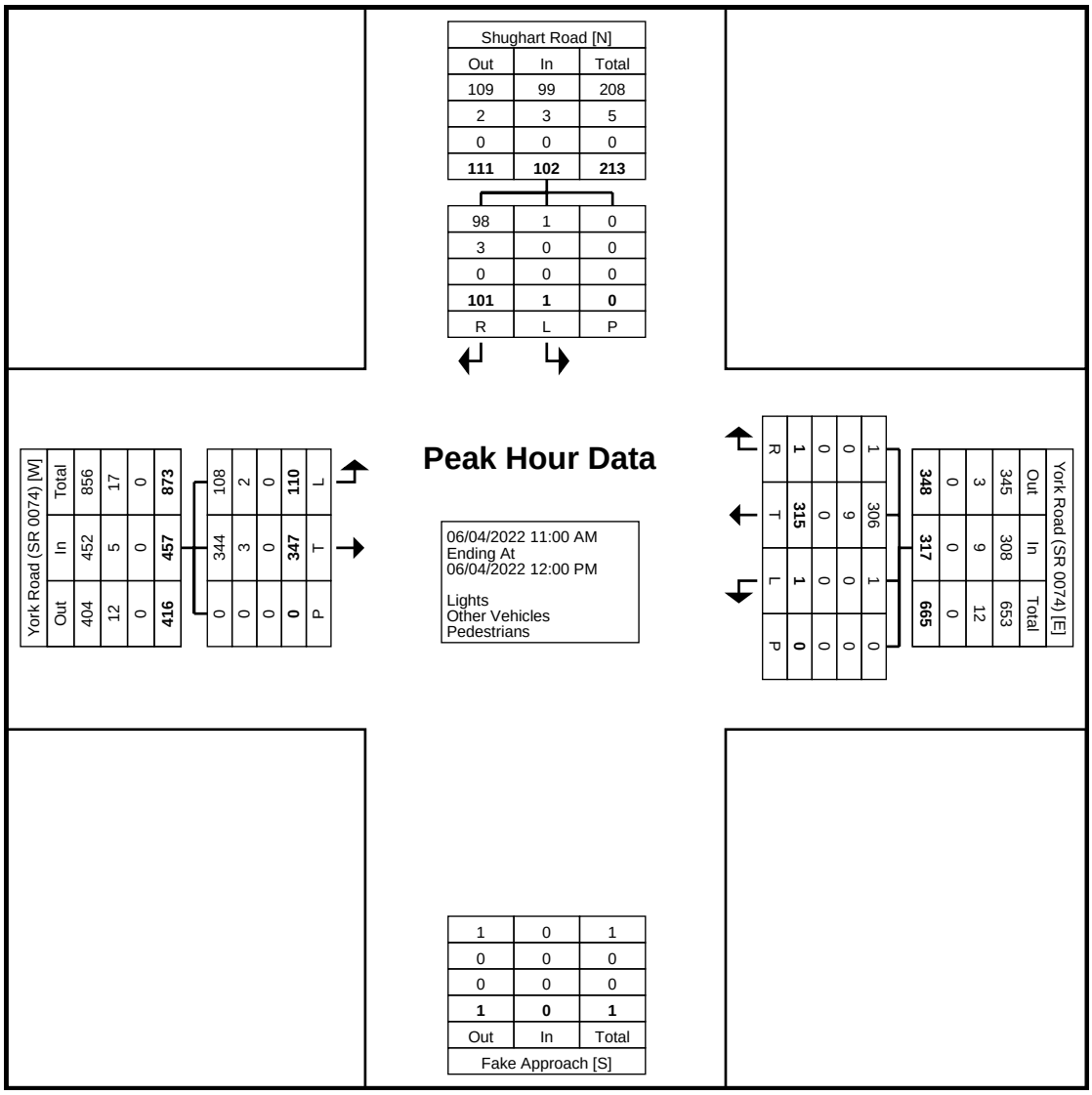
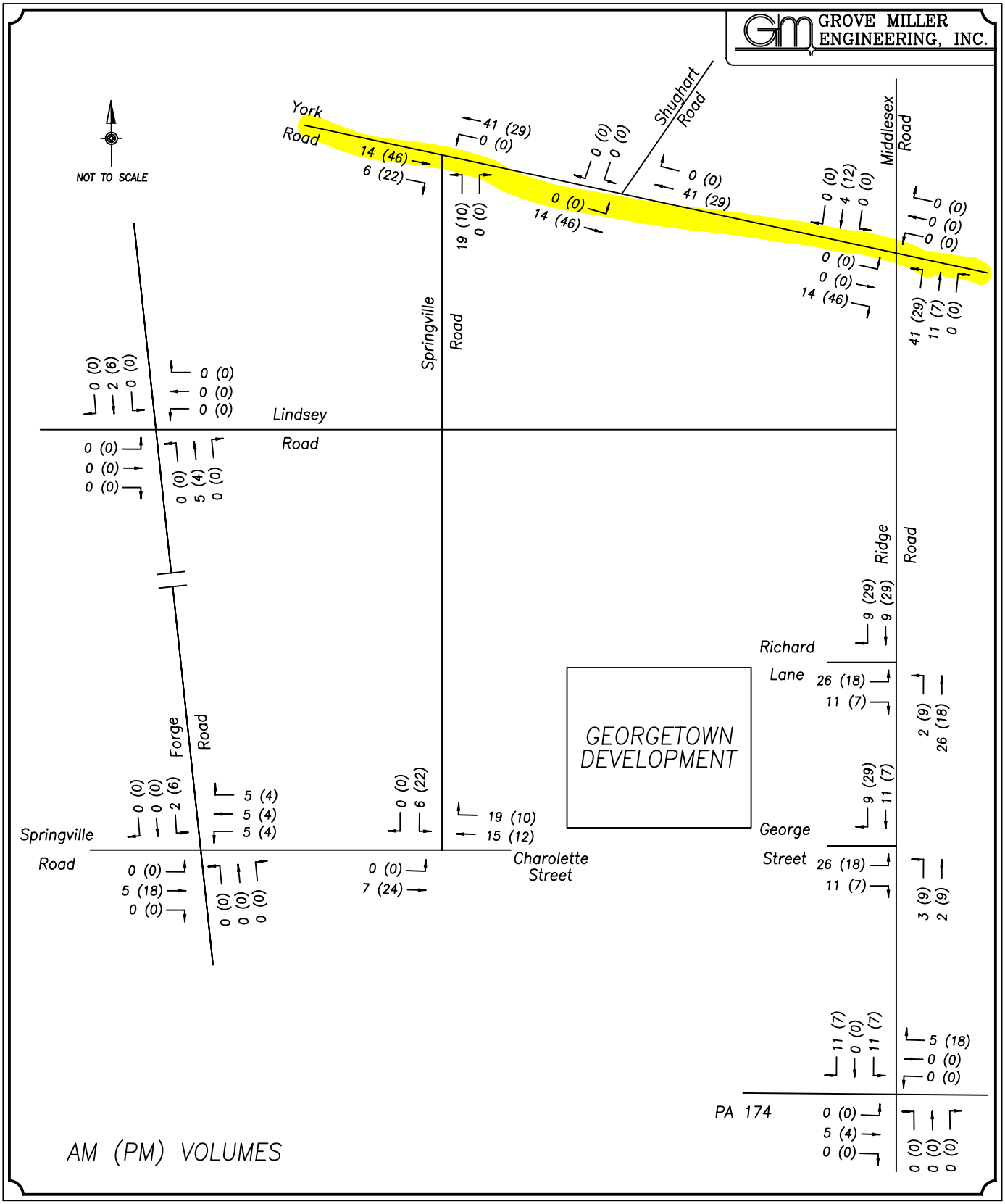


Turning Movement Peak Hour Data Plot (11:00 AM)

APPENDIX C:
Nearby Developments



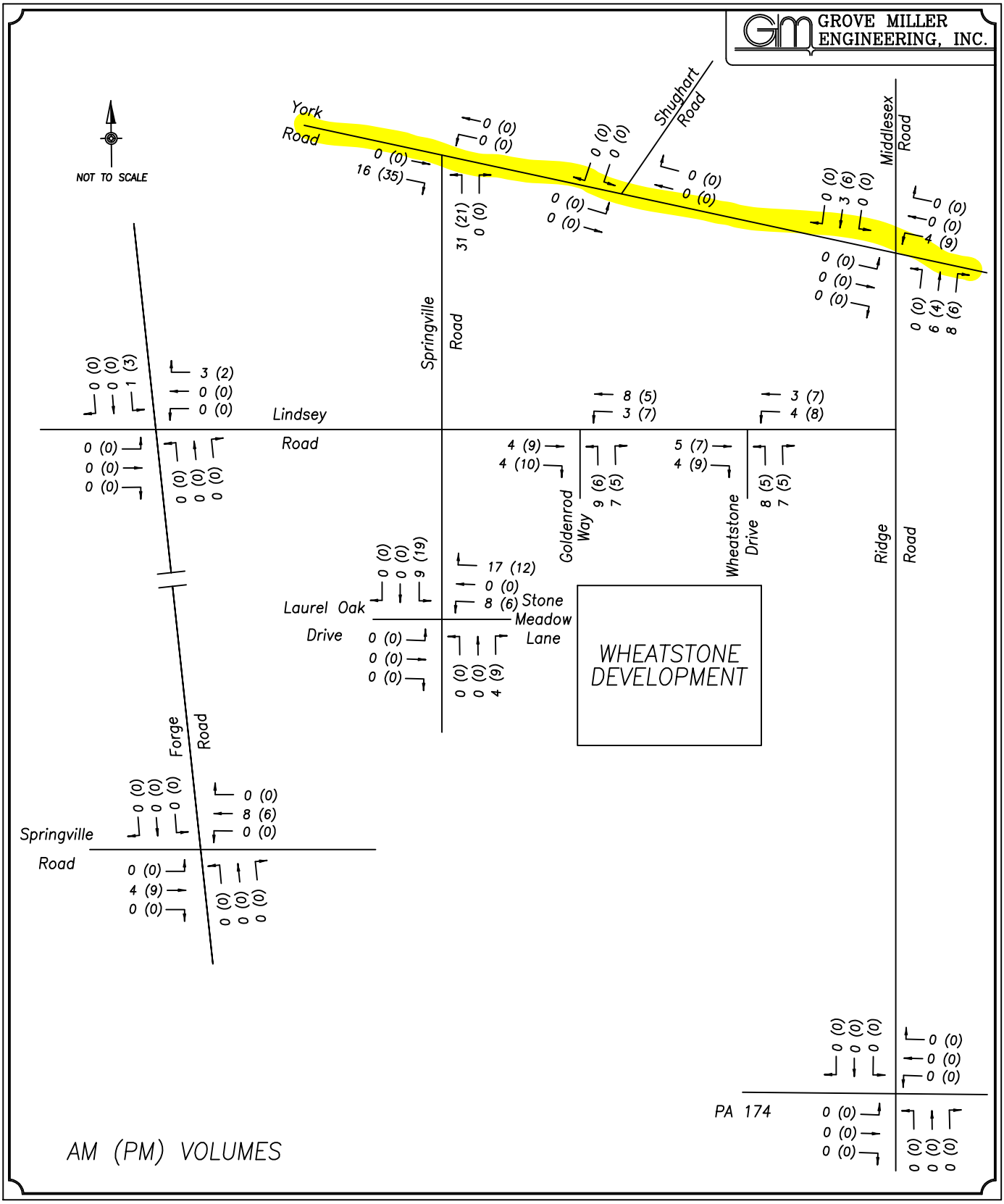
TRANSPORTATION IMPACT STUDY

GEORGETOWN DEVELOPMENT

South Middleton Township, Cumb. County

FIGURE 4

TRIP DISTRIBUTION FOR GEORGETOWN



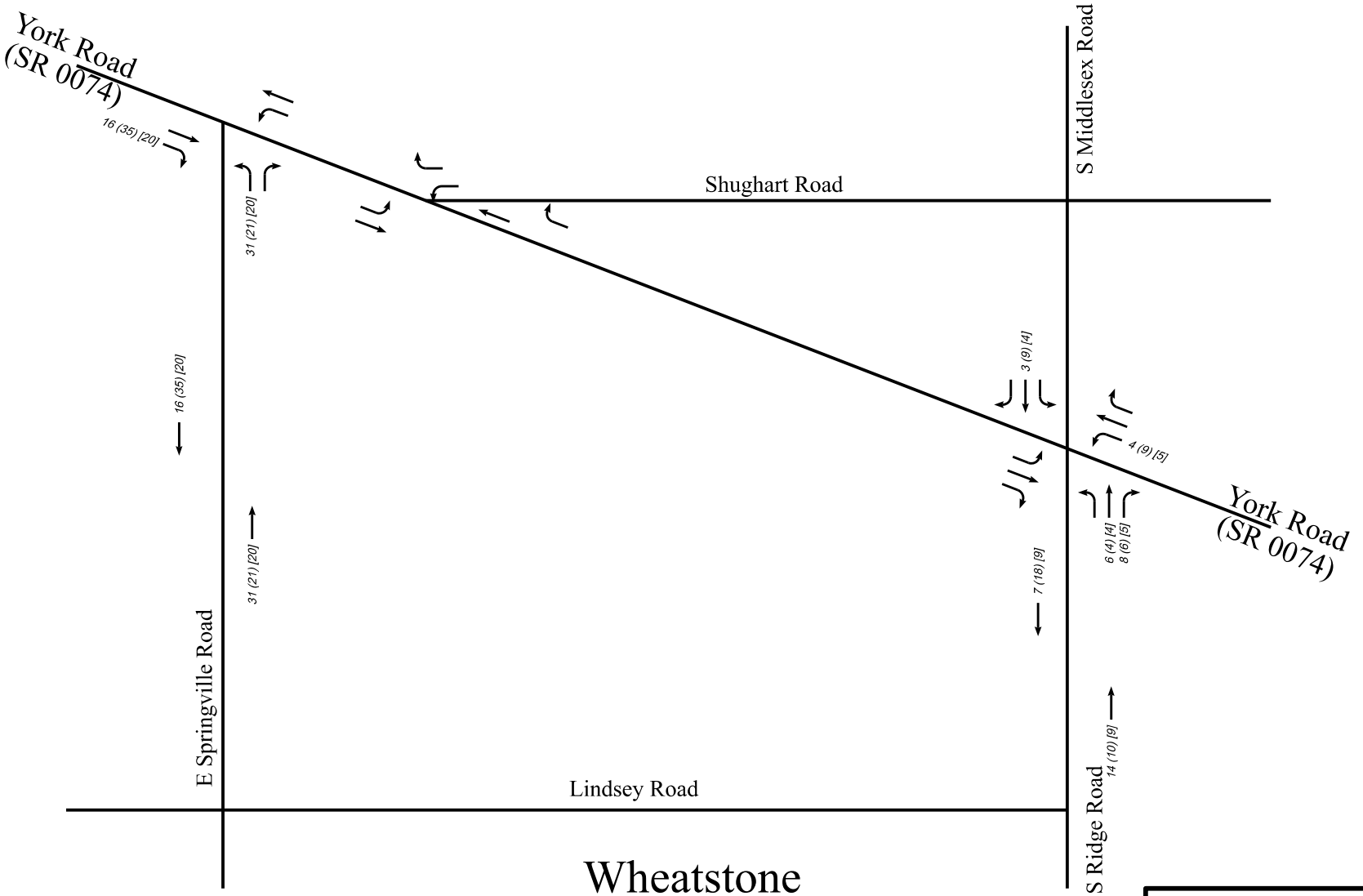
TRANSPORTATION IMPACT STUDY

WHEATSTONE DEVELOPMENT

South Middleton Township, Cumb. County

FIGURE 4

TRIP DISTRIBUTION FOR WHEATSTONE



Wheatstone Development

KEY:

- - - - - PROPOSED DRIVEWAY

SCHEMATIC DRAWING:NOT TO SCALE

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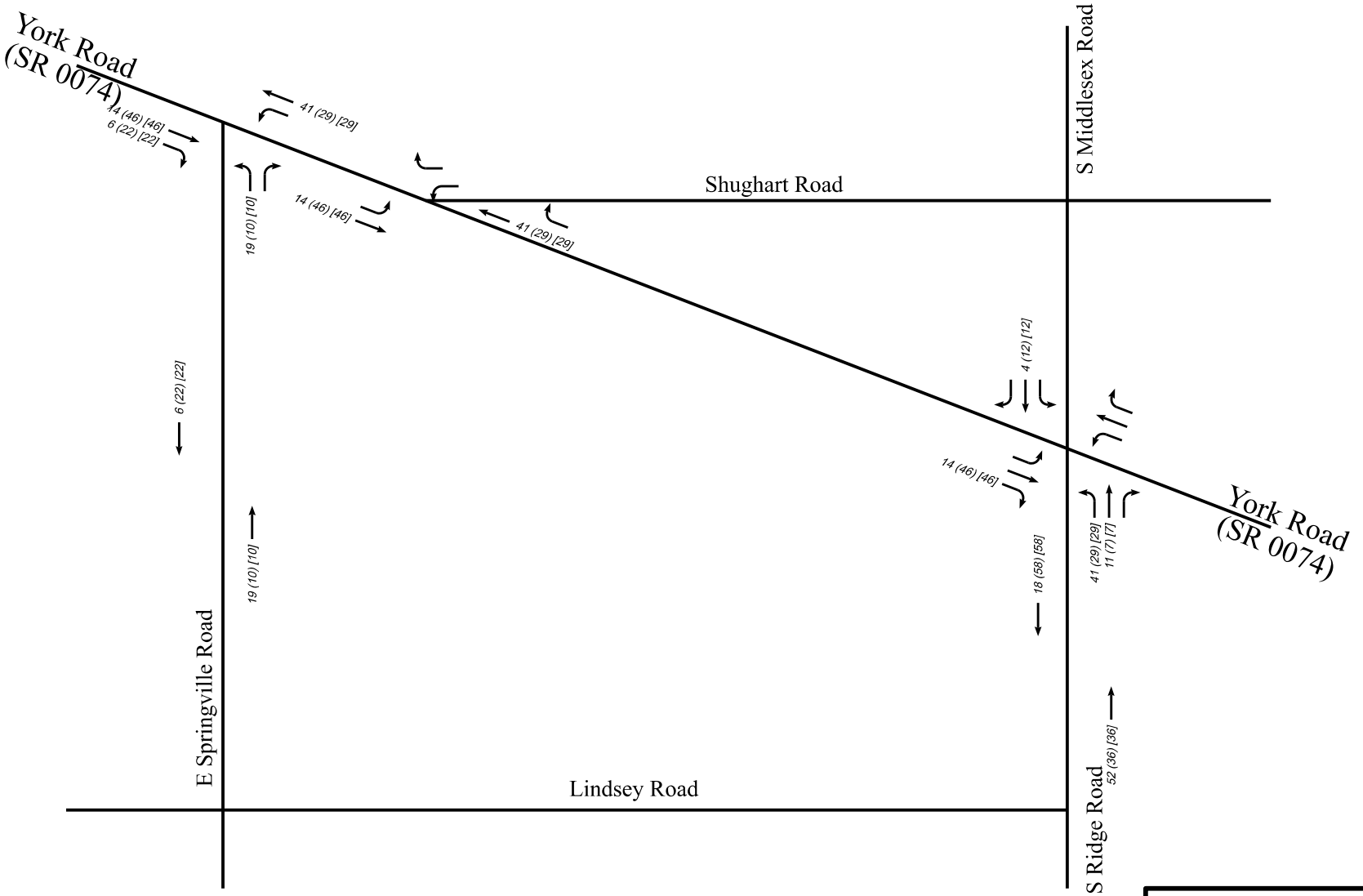
FIGURE ND 1

NEARBY DEVELOPMENT
WHEATSTONE DEVELOPMENT
AM (PM) [SAT] PEAK HOUR
TRAFFIC VOLUMES



Georgetown Development

KEY:

- - - - - PROPOSED DRIVEWAY

SCHEMATIC DRAWING:NOT TO SCALE

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FIGURE ND 2

NEARBY DEVELOPMENT
GEORGETOWN DEVELOPMENT
AM (PM) [SAT] PEAK HOUR
TRAFFIC VOLUMES

APPENDIX D:
Volume Development Worksheets

Phase 1

TPD# FSAI.00029 - Phase 1
6/1/2023
Traffic Volumes Worksheet

Intersection:	**York Road (SR 0074) & Springville Road**									
Synchro Node:	**1**	**Adjacent intersections:**	**West**	**0**	**East**	**0**	**North**	**0**	**South**	**0**

Time Period: Weekday A.M. Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
2022 Existing Counts		**264**	**6**	**25**	**455**		**27**		**63**				**840**
Balancing													0
Existing Volumes (Balanced)	**0**	**264**	**6**	**25**	**455**	**0**	**27**	**0**	**63**	**0**	**0**	**0**	**840**
Base growth (0.69% compounded for 3 yrs)	0	6	0	1	9	0	1	0	1	0	0	0	18
Wheatstone Dev			16				31						47
Georgetown Dev		14	6		41		19						80
2025 Base Volumes	**0**	**284**	**28**	**26**	**505**	**0**	**78**	**0**	**64**	**0**	**0**	**0**	**985**
New Trips			1	1			1						3
Total Trip Distribution	**0**	**0**	**1**	**1**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**3**
2025 Projected Volumes	**0**	**284**	**29**	**27**	**505**	**0**	**79**	**0**	**64**	**0**	**0**	**0**	**988**

Time Period: Weekday P.M. Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
2022 Existing Counts		**552**	**52**	**50**	**412**		**24**		**45**				**1135**
Balancing													0
Existing Volumes (Balanced)	**0**	**552**	**52**	**50**	**412**	**0**	**24**	**0**	**45**	**0**	**0**	**0**	**1135**
Base growth (0.69% compounded for 3 yrs)	0	12	1	1	9	0	1	0	1	0	0	0	25
Wheatstone Dev			35				21						56
Georgetown Dev		46	22		29		10						107
2025 Base Volumes	**0**	**610**	**110**	**51**	**450**	**0**	**56**	**0**	**46**	**0**	**0**	**0**	**1323**
New Trips			21	24			11		12				68
Total Trip Distribution	**0**	**0**	**21**	**24**	**0**	**0**	**11**	**0**	**12**	**0**	**0**	**0**	**68**
2025 Projected Volumes	**0**	**610**	**131**	**75**	**450**	**0**	**67**	**0**	**58**	**0**	**0**	**0**	**1391**

Time Period: Saturday Midday Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
2022 Existing Counts		**357**	**26**	**53**	**386**		**28**		**69**				**919**
Balancing													0
Existing Volumes (Balanced)	**0**	**357**	**26**	**53**	**386**	**0**	**28**	**0**	**69**	**0**	**0**	**0**	**919**
Base growth (0.69% compounded for 3 yrs)	0	7	1	1	8	0	1	0	1	0	0	0	19
Wheatstone Dev			20				20						40
Georgetown Dev		46	22		29		10						107
2025 Base Volumes	**0**	**410**	**69**	**54**	**423**	**0**	**59**	**0**	**70**	**0**	**0**	**0**	**1085**
New Trips			46	55			50		59				210
Total Trip Distribution	**0**	**0**	**46**	**55**	**0**	**0**	**50**	**0**	**59**	**0**	**0**	**0**	**210**
2025 Projected Volumes	**0**	**410**	**115**	**109**	**423**	**0**	**109**	**0**	**129**	**0**	**0**	**0**	**1295**

TPD# FSAI.00029 - Phase 1
6/1/2023
Traffic Volumes Worksheet

Intersection:	**York Road (SR 0074) & Shughart Road**								
Synchro Node:	**2**	**Adjacent intersections:**	**West**	**0**	**East**	**0**	**North**	**0**	**South**	**0**

Time Period: Weekday A.M. Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
2022 Existing Counts	**149**	**176**			**341**	**1**				**1**		**142**	**810**
Balancing													0
Existing Volumes (Balanced)	**149**	**176**	**0**	**0**	**341**	**1**	**0**	**0**	**0**	**1**	**0**	**142**	**810**
Base growth (0.69% compounded for 3 yrs)	3	4	0	0	7	0	0	0	0	0	0	3	17
Wheatstone Dev													0
Georgetown Dev		14			41								55
2025 Base Volumes	**152**	**194**	**0**	**0**	**389**	**1**	**0**	**0**	**0**	**1**	**0**	**145**	**882**
New Trips					1								1
Total Trip Distribution	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**
2025 Projected Volumes	**152**	**194**	**0**	**0**	**390**	**1**	**0**	**0**	**0**	**1**	**0**	**145**	**883**

Time Period: Weekday P.M. Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
2022 Existing Counts	**193**	**393**			**296**							**171**	**1053**
Balancing													0
Existing Volumes (Balanced)	**193**	**393**	**0**	**0**	**296**	**0**	**0**	**0**	**0**	**0**	**0**	**171**	**1053**
Base growth (0.69% compounded for 3 yrs)	4	8	0	0	6	0	0	0	0	0	0	4	22
Wheatstone Dev													0
Georgetown Dev		46			29								75
2025 Base Volumes	**197**	**447**	**0**	**0**	**331**	**0**	**0**	**0**	**0**	**0**	**0**	**175**	**1150**
New Trips	4	8			15							9	36
Total Trip Distribution	**4**	**8**	**0**	**0**	**15**	**0**	**0**	**0**	**0**	**0**	**0**	**9**	**36**
2025 Projected Volumes	**201**	**455**	**0**	**0**	**346**	**0**	**0**	**0**	**0**	**0**	**0**	**184**	**1186**

Time Period: Saturday Midday Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
2022 Existing Counts	**110**	**347**		**1**	**315**	**1**				**1**		**101**	**876**
Balancing													0
Existing Volumes (Balanced)	**110**	**347**	**0**	**1**	**315**	**1**	**0**	**0**	**0**	**1**	**0**	**101**	**876**
Base growth (0.69% compounded for 3 yrs)	2	7	0	0	7	0	0	0	0	0	0	2	18
Wheatstone Dev													0
Georgetown Dev		46			29								75
2025 Base Volumes	**112**	**400**	**0**	**1**	**351**	**1**	**0**	**0**	**0**	**1**	**0**	**103**	**969**
New Trips	22	37			34							21	114
Total Trip Distribution	**22**	**37**	**0**	**0**	**34**	**0**	**0**	**0**	**0**	**0**	**0**	**21**	**114**
2025 Projected Volumes	**134**	**437**	**0**	**0**	**385**	**1**	**0**	**0**	**0**	**1**	**0**	**124**	**1082**

TPD# FSAI.00029 - Phase 1
6/1/2023
Traffic Volumes Worksheet

Intersection:	**York Road (SR 0074) & Middlesex/Ridge Road**									
Synchro Node:	**3**	**Adjacent intersections:**	**West**	**0**	**East**	**0**	**North**	**0**	**South**	**0**

Time Period: Weekday A.M. Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
2022 Existing Counts	**3**	**170**	**5**	**0**	**323**	**29**	**14**	**13**	**1**	**15**	**13**	**5**	**591**
Balancing													0
Existing Volumes (Balanced)	**3**	**170**	**5**	**0**	**323**	**29**	**14**	**13**	**1**	**15**	**13**	**5**	**591**
Base growth (0.69% compounded for 3 yrs)	0	4	0	0	7	1	0	0	0	0	0	0	12
Wheatstone Dev				4				6	8		3		21
Georgetown Dev			14				41	11			4		70
2025 Base Volumes	**3**	**174**	**19**	**4**	**330**	**30**	**55**	**30**	**9**	**15**	**20**	**5**	**694**
New Trips					1								1
Total Trip Distribution	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**
2025 Projected Volumes	**3**	**174**	**19**	**4**	**331**	**30**	**55**	**30**	**9**	**15**	**20**	**5**	**695**

Time Period: Weekday P.M. Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
2022 Existing Counts	**4**	**371**	**15**	**2**	**275**	**15**	**7**	**18**	**0**	**26**	**26**	**8**	**767**
Balancing													0
Existing Volumes (Balanced)	**4**	**371**	**15**	**2**	**275**	**15**	**7**	**18**	**0**	**26**	**26**	**8**	**767**
Base growth (0.69% compounded for 3 yrs)	0	8	0	0	6	0	0	0	0	1	1	0	16
Wheatstone Dev				9				4	6		9		28
Georgetown Dev			46				29	7			12		94
2025 Base Volumes	**4**	**379**	**61**	**11**	**281**	**15**	**36**	**29**	**6**	**27**	**48**	**8**	**905**
New Trips		8			15								23
Total Trip Distribution	**0**	**8**	**0**	**0**	**15**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**23**
2025 Projected Volumes	**4**	**387**	**61**	**11**	**296**	**15**	**36**	**29**	**6**	**27**	**48**	**8**	**928**

Time Period: Saturday Midday Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
2022 Existing Counts	**6**	**329**	**19**	**7**	**283**	**10**	**23**	**16**	**6**	**13**	**13**	**7**	**732**
Balancing													0
Existing Volumes (Balanced)	**6**	**329**	**19**	**7**	**283**	**10**	**23**	**16**	**6**	**13**	**13**	**7**	**732**
Base growth (0.69% compounded for 3 yrs)	0	7	0	0	6	0	0	0	0	0	0	0	13
Wheatstone Dev				5				4	5		4		18
Georgetown Dev			46				29	7			12		94
2025 Base Volumes	**6**	**336**	**65**	**12**	**289**	**10**	**52**	**27**	**11**	**13**	**29**	**7**	**857**
New Trips		37			34								71
Total Trip Distribution	**0**	**37**	**0**	**0**	**34**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**71**
2025 Projected Volumes	**6**	**373**	**65**	**12**	**323**	**10**	**52**	**27**	**11**	**13**	**29**	**7**	**928**

TPD# FSAI.00029 - Phase 1
6/1/2023
Traffic Volumes Worksheet

Intersection:	**E Springville Road & Propsed Site DW**									
Synchro Node:	**4**	**Adjacent intersections:**	**West**	**0**	**East**	**0**	**North**	**0**	**South**	**0**

Time Period: Weekday A.M. Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
2022 Existing Counts								**90**			**31**		**121**
Balancing													0
Existing Volumes (Balanced)	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**90**	**0**	**0**	**31**	**0**	**121**
Base growth (0.69% compounded for 3 yrs)	0	0	0	0	0	0	0	2	0	0	1	0	3
Wheatstone Dev								31			16		47
Georgetown Dev								19			6		25
2025 Base Volumes	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**142**	**0**	**0**	**54**	**0**	**196**
New Trips						1				2			3
Total Trip Distribution	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**2**	**0**	**0**	**3**
2025 Projected Volumes	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**142**	**0**	**2**	**54**	**0**	**199**

Time Period: Weekday P.M. Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
2022 Existing Counts								**69**			**102**		**171**
Balancing													0
Existing Volumes (Balanced)	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**69**	**0**	**0**	**102**	**0**	**171**
Base growth (0.69% compounded for 3 yrs)	0	0	0	0	0	0	0	1	0	0	2	0	3
Wheatstone Dev								21			35		56
Georgetown Dev								10			22		32
2025 Base Volumes	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**101**	**0**	**0**	**161**	**0**	**262**
New Trips				3		23			6	45			77
Total Trip Distribution	**0**	**0**	**0**	**3**	**0**	**23**	**0**	**0**	**6**	**45**	**0**	**0**	**77**
2025 Projected Volumes	**0**	**0**	**0**	**3**	**0**	**23**	**0**	**101**	**6**	**45**	**161**	**0**	**339**

Time Period: Saturday Midday Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
2022 Existing Counts								**97**			**79**		**176**
Balancing													0
Existing Volumes (Balanced)	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**97**	**0**	**0**	**79**	**0**	**176**
Base growth (0.69% compounded for 3 yrs)	0	0	0	0	0	0	0	2	0	0	2	0	4
Wheatstone Dev								20			20		40
Georgetown Dev								10			22		32
2025 Base Volumes	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**129**	**0**	**0**	**123**	**0**	**252**
New Trips				13		109			12	101			235
Total Trip Distribution	**0**	**0**	**0**	**13**	**0**	**109**	**0**	**0**	**12**	**101**	**0**	**0**	**235**
2025 Projected Volumes	**0**	**0**	**0**	**13**	**0**	**109**	**0**	**129**	**12**	**101**	**123**	**0**	**487**

Full Build-Out

TPD# FSAI.00029 - Full Build-Out
6/1/2023
Traffic Volumes Worksheet

Intersection:	**York Road (SR 0074) & Springville Road**									
Synchro Node:	**1**	**Adjacent intersections:**	**West**	**0**	**East**	**0**	**North**	**0**	**South**	**0**

Time Period: Weekday A.M. Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
2022 Existing Counts		**264**	**6**	**25**	**455**		**27**		**63**				**840**
Balancing													0
Existing Volumes (Balanced)	**0**	**264**	**6**	**25**	**455**	**0**	**27**	**0**	**63**	**0**	**0**	**0**	**840**
Base growth (0.69% compounded for 8 yrs)	0	15	0	1	26	0	2	0	4	0	0	0	48
Wheatstone Dev			16				31						47
Georgetown Dev		14	6		41		19						80
2030 Base Volumes	**0**	**293**	**28**	**26**	**522**	**0**	**79**	**0**	**67**	**0**	**0**	**0**	**1015**
New Trips			2	2			1		2				7
Total Trip Distribution	**0**	**0**	**2**	**2**	**0**	**0**	**1**	**0**	**2**	**0**	**0**	**0**	**7**
2030 Projected Volumes	**0**	**293**	**30**	**28**	**522**	**0**	**80**	**0**	**69**	**0**	**0**	**0**	**1022**

Time Period: Weekday P.M. Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
2022 Existing Counts		**552**	**52**	**50**	**412**		**24**		**45**				**1135**
Balancing													0
Existing Volumes (Balanced)	**0**	**552**	**52**	**50**	**412**	**0**	**24**	**0**	**45**	**0**	**0**	**0**	**1135**
Base growth (0.69% compounded for 8 yrs)	0	31	3	3	23	0	1	0	3	0	0	0	64
Wheatstone Dev			35				21						56
Georgetown Dev		46	22		29		10						107
2030 Base Volumes	**0**	**629**	**112**	**53**	**464**	**0**	**56**	**0**	**48**	**0**	**0**	**0**	**1362**
New Trips			44	50			22		26				142
Total Trip Distribution	**0**	**0**	**44**	**50**	**0**	**0**	**22**	**0**	**26**	**0**	**0**	**0**	**142**
2030 Projected Volumes	**0**	**629**	**156**	**103**	**464**	**0**	**78**	**0**	**74**	**0**	**0**	**0**	**1504**

Time Period: Saturday Midday Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
2022 Existing Counts		**357**	**26**	**53**	**386**		**28**		**69**				**919**
Balancing													0
Existing Volumes (Balanced)	**0**	**357**	**26**	**53**	**386**	**0**	**28**	**0**	**69**	**0**	**0**	**0**	**919**
Base growth (0.69% compounded for 8 yrs)	0	20	1	3	22	0	2	0	4	0	0	0	52
Wheatstone Dev			20				20						40
Georgetown Dev		46	22		29		10						107
2030 Base Volumes	**0**	**423**	**69**	**56**	**437**	**0**	**60**	**0**	**73**	**0**	**0**	**0**	**1118**
New Trips			77	90			83		98				348
Total Trip Distribution	**0**	**0**	**77**	**90**	**0**	**0**	**83**	**0**	**98**	**0**	**0**	**0**	**348**
2030 Projected Volumes	**0**	**423**	**146**	**146**	**437**	**0**	**143**	**0**	**171**	**0**	**0**	**0**	**1466**

TPD# FSAI.00029 - Full Build-Out
6/1/2023
Traffic Volumes Worksheet

Intersection:	**York Road (SR 0074) & Shughart Road**									
Synchro Node:	**2**	**Adjacent intersections:**	**West**	**0**	**East**	**0**	**North**	**0**	**South**	**0**

Time Period: Weekday A.M. Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
2022 Existing Counts	**149**	**176**			**341**	**1**				**1**		**142**	**810**
Balancing													0
Existing Volumes (Balanced)	**149**	**176**	**0**	**0**	**341**	**1**	**0**	**0**	**0**	**1**	**0**	**142**	**810**
Base growth (0.69% compounded for 8 yrs)	8	10	0	0	19	0	0	0	0	0	0	8	45
Wheatstone Dev													0
Georgetown Dev		14			41								55
2030 Base Volumes	**157**	**200**	**0**	**0**	**401**	**1**	**0**	**0**	**0**	**1**	**0**	**150**	**910**
New Trips	1	1			1							1	4
Total Trip Distribution	**1**	**1**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**4**
2030 Projected Volumes	**158**	**201**	**0**	**0**	**402**	**1**	**0**	**0**	**0**	**1**	**0**	**151**	**914**

Time Period: Weekday P.M. Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
2022 Existing Counts	**193**	**393**			**296**							**171**	**1053**
Balancing													0
Existing Volumes (Balanced)	**193**	**393**	**0**	**0**	**296**	**0**	**0**	**0**	**0**	**0**	**0**	**171**	**1053**
Base growth (0.69% compounded for 8 yrs)	11	22	0	0	17	0	0	0	0	0	0	10	60
Wheatstone Dev													0
Georgetown Dev		46			29								75
2030 Base Volumes	**204**	**461**	**0**	**0**	**342**	**0**	**0**	**0**	**0**	**0**	**0**	**181**	**1188**
New Trips	10	16			31							19	76
Total Trip Distribution	**10**	**16**	**0**	**0**	**31**	**0**	**0**	**0**	**0**	**0**	**0**	**19**	**76**
2030 Projected Volumes	**214**	**477**	**0**	**0**	**373**	**0**	**0**	**0**	**0**	**0**	**0**	**200**	**1264**

Time Period: Saturday Midday Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
2022 Existing Counts	**110**	**347**		**1**	**315**	**1**				**1**		**101**	**876**
Balancing													0
Existing Volumes (Balanced)	**110**	**347**	**0**	**1**	**315**	**1**	**0**	**0**	**0**	**1**	**0**	**101**	**876**
Base growth (0.69% compounded for 8 yrs)	6	20	0	0	18	0	0	0	0	0	0	6	50
Wheatstone Dev													0
Georgetown Dev		46			29								75
2030 Base Volumes	**116**	**413**	**0**	**1**	**362**	**1**	**0**	**0**	**0**	**1**	**0**	**107**	**1001**
New Trips	37	61			56							34	188
Total Trip Distribution	**37**	**61**	**0**	**0**	**56**	**0**	**0**	**0**	**0**	**0**	**0**	**34**	**188**
2030 Projected Volumes	**153**	**474**	**0**	**0**	**418**	**1**	**0**	**0**	**0**	**1**	**0**	**141**	**1188**

TPD# FSAI.00029 - Full Build-Out
6/1/2023
Traffic Volumes Worksheet

Intersection:	**York Road (SR 0074) & Middlesex/Ridge Road**									
Synchro Node:	**3**	**Adjacent intersections:**	**West**	**0**	**East**	**0**	**North**	**0**	**South**	**0**

Time Period: Weekday A.M. Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
2022 Existing Counts	**3**	**170**	**5**	**0**	**323**	**29**	**14**	**13**	**1**	**15**	**13**	**5**	**591**
Balancing													0
Existing Volumes (Balanced)	**3**	**170**	**5**	**0**	**323**	**29**	**14**	**13**	**1**	**15**	**13**	**5**	**591**
Base growth (0.69% compounded for 8 yrs)	0	10	0	0	18	2	1	1	0	1	1	0	34
Wheatstone Dev				4				6	8		3		21
Georgetown Dev			14				41	11			4		70
2030 Base Volumes	**3**	**180**	**19**	**4**	**341**	**31**	**56**	**31**	**9**	**16**	**21**	**5**	**716**
New Trips		1			1								2
Total Trip Distribution	**0**	**1**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**
2030 Projected Volumes	**3**	**181**	**19**	**4**	**342**	**31**	**56**	**31**	**9**	**16**	**21**	**5**	**718**

Time Period: Weekday P.M. Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
2022 Existing Counts	**4**	**371**	**15**	**2**	**275**	**15**	**7**	**18**	**0**	**26**	**26**	**8**	**767**
Balancing													0
Existing Volumes (Balanced)	**4**	**371**	**15**	**2**	**275**	**15**	**7**	**18**	**0**	**26**	**26**	**8**	**767**
Base growth (0.69% compounded for 8 yrs)	0	21	1	0	16	1	0	1	0	1	1	0	42
Wheatstone Dev				9				4	6		9		28
Georgetown Dev			46				29	7			12		94
2030 Base Volumes	**4**	**392**	**62**	**11**	**291**	**16**	**36**	**30**	**6**	**27**	**48**	**8**	**931**
New Trips		16			31								47
Total Trip Distribution	**0**	**16**	**0**	**0**	**31**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**47**
2030 Projected Volumes	**4**	**408**	**62**	**11**	**322**	**16**	**36**	**30**	**6**	**27**	**48**	**8**	**978**

Time Period: Saturday Midday Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
2022 Existing Counts	**6**	**329**	**19**	**7**	**283**	**10**	**23**	**16**	**6**	**13**	**13**	**7**	**732**
Balancing													0
Existing Volumes (Balanced)	**6**	**329**	**19**	**7**	**283**	**10**	**23**	**16**	**6**	**13**	**13**	**7**	**732**
Base growth (0.69% compounded for 8 yrs)	0	19	1	0	16	1	1	1	0	1	1	0	41
Wheatstone Dev				5				4	5		4		18
Georgetown Dev			46				29	7			12		94
2030 Base Volumes	**6**	**348**	**66**	**12**	**299**	**11**	**53**	**28**	**11**	**14**	**30**	**7**	**885**
New Trips		61			56								117
Total Trip Distribution	**0**	**61**	**0**	**0**	**56**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**117**
2030 Projected Volumes	**6**	**409**	**66**	**12**	**355**	**11**	**53**	**28**	**11**	**14**	**30**	**7**	**1002**

TPD# FSAI.00029 - Full Build-Out
6/1/2023
Traffic Volumes Worksheet

Intersection:	**E Springville Road & Propsed Site DW**									
Synchro Node:	**4**	**Adjacent intersections:**	**West**	**0**	**East**	**0**	**North**	**0**	**South**	**0**

Time Period: Weekday A.M. Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
2022 Existing Counts								**90**			**31**		**121**
Balancing													0
Existing Volumes (Balanced)	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**90**	**0**	**0**	**31**	**0**	**121**
Base growth (0.69% compounded for 8 yrs)	0	0	0	0	0	0	0	5	0	0	2	0	7
Wheatstone Dev								31			16		47
Georgetown Dev								19			6		25
2030 Base Volumes	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**145**	**0**	**0**	**55**	**0**	**200**
New Trips				1		3			1	4			9
Total Trip Distribution	**0**	**0**	**0**	**1**	**0**	**3**	**0**	**0**	**1**	**4**	**0**	**0**	**9**
2030 Projected Volumes	**0**	**0**	**0**	**1**	**0**	**3**	**0**	**145**	**1**	**4**	**55**	**0**	**209**

Time Period: Weekday P.M. Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
2022 Existing Counts								**69**			**102**		**171**
Balancing													0
Existing Volumes (Balanced)	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**69**	**0**	**0**	**102**	**0**	**171**
Base growth (0.69% compounded for 8 yrs)	0	0	0	0	0	0	0	4	0	0	6	0	10
Wheatstone Dev								21			35		56
Georgetown Dev								10			22		32
2030 Base Volumes	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**104**	**0**	**0**	**165**	**0**	**269**
New Trips				6		48			12	94			160
Total Trip Distribution	**0**	**0**	**0**	**6**	**0**	**48**	**0**	**0**	**12**	**94**	**0**	**0**	**160**
2030 Projected Volumes	**0**	**0**	**0**	**6**	**0**	**48**	**0**	**104**	**12**	**94**	**165**	**0**	**429**

Time Period: Saturday Midday Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
2022 Existing Counts								**97**			**79**		**176**
Balancing													0
Existing Volumes (Balanced)	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**97**	**0**	**0**	**79**	**0**	**176**
Base growth (0.69% compounded for 8 yrs)	0	0	0	0	0	0	0	5	0	0	4	0	9
Wheatstone Dev								20			20		40
Georgetown Dev								10			22		32
2030 Base Volumes	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**132**	**0**	**0**	**125**	**0**	**257**
New Trips				22		181			21	167			391
Total Trip Distribution	**0**	**0**	**0**	**22**	**0**	**181**	**0**	**0**	**21**	**167**	**0**	**0**	**391**
2030 Projected Volumes	**0**	**0**	**0**	**22**	**0**	**181**	**0**	**132**	**21**	**167**	**125**	**0**	**648**

APPENDIX E:
Capacity Analysis Worksheets

York Road (SR 0074) & E Springville Road

CRITICAL HEADWAY CALCULATIONS FOR TWSC INTERSECTION WITHIN SUBURBAN LAND USE CONTEXT
BASED ON PENNSYLVANIA DEFAULT VALUES FROM CHAPTER 10 OF PENNDOT PUBLICATION 46

$t_{c,x} = t_{c,\,base} + t_{c,HV} * P_{HV} + t_{c,G} * G - t_{3,LT}$

AM
PM
SAT

where:

$t_{c,x}$ = critical headway for movement x (s)
$t_{c,base}$ = base crtitcal headway from Chapter 10 of PennDOT Publication 46
$t_{c,HV}$ = adjustment factor for heavy vehciles (1.0 for major streets with one lane in each direction; 2.0 for major streets with two or three lanes in each direction) (s)
P_{HV} = proportion of heavy vehciles for movement (expressed as a decimal; e.g., P_{HV}=0.02 for 2% heavy vehciles)
$t_{c,G}$ = adjustment factor for grade (0.1 for Movement 9 and 12; 0.2 for Movements 7,8,10, and 11) (s)
G = percent grade (expressed as an integer; e.g., G= -2 for a 2% downhill grade)
$t_{c,base}$ = adjustment factor for intersction geometry (0.7 for minor street left-turn movement at three-leg intersections; 0.0 otherwise) (s)

LEFT TURN FROM MAJOR ROADWAY - TWO LANES ($t_{c,\,base}$ = 4.3)

GRADE	0	-1	1	-2	2	-3	3	-4	4	-5	5	-6	6	-7	7	-8	8	-9	9	-10	10
HV %																					
0	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
1	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
2	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
4	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
5	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
6	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
7	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
8	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
9	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
10	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4

LEFT TURN FROM MINOR ROADWAY - TWO LANES - 3-LEG INTERSECTION ($t_{c,\,base}$ = 7.1)

GRADE	0	-1	1	-2	2	-3	3	-4	4	-5	5	-6	6	-7	7	-8	8	-9	9	-10	10
HV %																					
0	6.4	6.2	6.6	6.0	6.8	5.8	7.0	5.6	7.2	5.4	7.4	5.2	7.6	5.0	7.8	4.8	8.0	4.6	8.2	4.4	8.4
1	6.4	6.2	6.6	6.0	6.8	5.8	7.0	5.6	7.2	5.4	7.4	5.2	7.6	5.0	7.8	4.8	8.0	4.6	8.2	4.4	8.4
2	6.4	6.2	6.6	6.0	6.8	5.8	7.0	5.6	7.2	5.4	7.4	5.2	7.6	5.0	7.8	4.8	8.0	4.6	8.2	4.4	8.4
3	6.4	6.2	6.6	6.0	6.8	5.8	7.0	5.6	7.2	5.4	7.4	5.2	7.6	5.0	7.8	4.8	8.0	4.6	8.2	4.4	8.4
4	6.4	6.2	6.6	6.0	6.8	5.8	7.0	5.6	7.2	5.4	7.4	5.2	7.6	5.0	7.8	4.8	8.0	4.6	8.2	4.4	8.4
5	6.5	6.3	6.7	6.1	6.9	5.9	7.1	5.7	7.3	5.5	7.5	5.3	7.7	5.1	7.9	4.9	8.1	4.7	8.3	4.5	8.5
6	6.5	6.3	6.7	6.1	6.9	5.9	7.1	5.7	7.3	5.5	7.5	5.3	7.7	5.1	7.9	4.9	8.1	4.7	8.3	4.5	8.5
7	6.5	6.3	6.7	6.1	6.9	5.9	7.1	5.7	7.3	5.5	7.5	5.3	7.7	5.1	7.9	4.9	8.1	4.7	8.3	4.5	8.5
8	6.5	6.3	6.7	6.1	6.9	5.9	7.1	5.7	7.3	5.5	7.5	5.3	7.7	5.1	7.9	4.9	8.1	4.7	8.3	4.5	8.5
9	6.5	6.3	6.7	6.1	6.9	5.9	7.1	5.7	7.3	5.5	7.5	5.3	7.7	5.1	7.9	4.9	8.1	4.7	8.3	4.5	8.5
10	6.5	6.3	6.7	6.1	6.9	5.9	7.1	5.7	7.3	5.5	7.5	5.3	7.7	5.1	7.9	4.9	8.1	4.7	8.3	4.5	8.5

RIGHT TURN FROM MINOR ROADWAY - TWO LANES ($t_{c,\,base}$ = 6.2)

GRADE	0	-1	1	-2	2	-3	3	-4	4	-5	5	-6	6	-7	7	-8	8	-9	9	-10	10
HV %																					
0	6.2	6.1	6.3	6.0	6.4	5.9	6.5	5.8	6.6	5.7	6.7	5.6	6.8	5.5	6.9	5.4	7.0	5.3	7.1	5.2	7.2
1	6.2	6.1	6.3	6.0	6.4	5.9	6.5	5.8	6.6	5.7	6.7	5.6	6.8	5.5	6.9	5.4	7.0	5.3	7.1	5.2	7.2
2	6.2	6.1	6.3	6.0	6.4	5.9	6.5	5.8	6.6	5.7	6.7	5.6	6.8	5.5	6.9	5.4	7.0	5.3	7.1	5.2	7.2
3	6.2	6.1	6.3	6.0	6.4	5.9	6.5	5.8	6.6	5.7	6.7	5.6	6.8	5.5	6.9	5.4	7.0	5.3	7.1	5.2	7.2
4	6.2	6.1	6.3	6.0	6.4	5.9	6.5	5.8	6.6	5.7	6.7	5.6	6.8	5.5	6.9	5.4	7.0	5.3	7.1	5.2	7.2
5	6.3	6.2	6.4	6.1	6.5	6.0	6.6	5.9	6.7	5.8	6.8	5.7	6.9	5.6	7.0	5.5	7.1	5.4	7.2	5.3	7.3
6	6.3	6.2	6.4	6.1	6.5	6.0	6.6	5.9	6.7	5.8	6.8	5.7	6.9	5.6	7.0	5.5	7.1	5.4	7.2	5.3	7.3
7	6.3	6.2	6.4	6.1	6.5	6.0	6.6	5.9	6.7	5.8	6.8	5.7	6.9	5.6	7.0	5.5	7.1	5.4	7.2	5.3	7.3
8	6.3	6.2	6.4	6.1	6.5	6.0	6.6	5.9	6.7	5.8	6.8	5.7	6.9	5.6	7.0	5.5	7.1	5.4	7.2	5.3	7.3
9	6.3	6.2	6.4	6.1	6.5	6.0	6.6	5.9	6.7	5.8	6.8	5.7	6.9	5.6	7.0	5.5	7.1	5.4	7.2	5.3	7.3
10	6.3	6.2	6.4	6.1	6.5	6.0	6.6	5.9	6.7	5.8	6.8	5.7	6.9	5.6	7.0	5.5	7.1	5.4	7.2	5.3	7.3

York Road (SR 0074) & E Springville Road

FOLLOW-UP HEADWAY CALCULATIONS FOR TWSC INTERSECTION WITHIN SUBURBAN LAND USE CONTEXT
BASED ON PENNSYLVANIA DEFAULT VALUES FROM CHAPTER 10 OF PENNDOT PUBLICATION 46

$t_{f,x}$ = $t_{f,\ base}$ + $t_{f,HV}$*P_{HV}

where:

$t_{f,x}$ = follow-up headway for movement x (s)
$t_{f,base}$ = base follow-up headway from Chapter 10 of PennDOT Publication 46
$t_{f,HV}$ = adjustment factor for heavy vehciles (0.9 for major streets with one lane in each direction; 1.0 for major streets with two or three lanes in each direction) (s)
P_{HV} = proportion of heavy vehciles for movement (expressed as a decimal; e.g., P_{HV}=0.02 for 2% heavy vehciles)

LEFT TURN FROM MAJOR ROADWAY - TWO LANES ($t_{f,\ base}$ = 3.0)

GRADE	0	-1	1	-2	2	-3	3	-4	4	-5	5	-6	6	-7	7	-8	8	-9	9	-10	10
HV %																					
0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
1	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
2	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
3	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
4	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
5	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
6	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
7	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
8	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
9	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
10	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1

LEFT TURN FROM MINOR ROADWAY - TWO LANES ($t_{f,\ base}$ = 3.0)

GRADE	0	-1	1	-2	2	-3	3	-4	4	-5	5	-6	6	-7	7	-8	8	-9	9	-10	10
HV %																					
0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
1	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
2	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
3	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
4	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
5	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
6	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
7	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
8	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
9	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
10	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1

THROUGH TRAFFIC ON MINOR ROADWAY - TWO LANES ($t_{f,\ base}$ = 4.0)

GRADE	0	-1	1	-2	2	-3	3	-4	4	-5	5	-6	6	-7	7	-8	8	-9	9	-10	10
HV %																					
0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
1	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
2	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
3	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
4	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
5	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
6	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
7	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
8	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
9	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
10	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1

RIGHT TURN FROM MINOR ROADWAY - TWO LANES ($t_{f,\ base}$ = 3.1)

GRADE	0	-1	1	-2	2	-3	3	-4	4	-5	5	-6	6	-7	7	-8	8	-9	9	-10	10
HV %																					
0	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
2	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
3	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
4	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
5	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
6	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
7	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
8	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
9	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
10	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2

York Road (SR 0074) & S Ridge Road/S Middlesex

CRITICAL HEADWAY CALCULATIONS FOR TWSC INTERSECTION WITHIN SUBURBAN LAND USE CONTEXT
BASED ON PENNSYLVANIA DEFAULT VALUES FROM CHAPTER 10 OF PENNDOT PUBLICATION 46

$t_{c,x} = t_{c,base} + t_{c,HV} * P_{HV} + t_{c,G} * G - t_{3,LT}$

where:

$t_{c,x}$ = critical headway for movement x (s)
$t_{c,base}$ = base crtitcal headway from Chapter 10 of PennDOT Publication 46
$t_{c,HV}$ = adjustment factor for heavy vehciles (1.0 for major streets with one lane in each direction; 2.0 for major streets with two or three lanes in each direction) (s)
P_{HV} = proportion of heavy vehciles for movement (expressed as a decimal; e.g., P_{HV}=0.02 for 2% heavy vehciles)
$t_{c,G}$ = adjustment factor for grade (0.1 for Movement 9 and 12; 0.2 for Movements 7,8,10, and 11) (s)
G = percent grade (expressed as an integer; e.g., G= -2 for a 2% downhill grade)
$t_{c,base}$ = adjustment factor for intersction geometry (0.7 for minor street left-turn movement at three-leg intersections; 0.0 otherwise) (s)

LEFT TURN FROM MAJOR ROADWAY - TWO LANES ($t_{c,base}$ = 4.3)

GRADE	0	-1	1	-2	2	-3	3	-4	4	-5	5	-6	6	-7	7	-8	8	-9	9	-10	10
HV %																					
0	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
1	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
2	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
4	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
5	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
6	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
7	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
8	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
9	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
10	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4

LEFT TURN FROM MINOR ROADWAY - TWO LANES - 4-LEG INTERSECTION ($t_{c,base}$ = 7.1)

GRADE	0	-1	1	-2	2	-3	3	-4	4	-5	5	-6	6	-7	7	-8	8	-9	9	-10	10
HV %																					
0	7.1	6.9	7.3	6.7	7.5	6.5	7.7	6.3	7.9	6.1	8.1	5.9	8.3	5.7	8.5	5.5	8.7	5.3	8.9	5.1	9.1
1	7.1	6.9	7.3	6.7	7.5	6.5	7.7	6.3	7.9	6.1	8.1	5.9	8.3	5.7	8.5	5.5	8.7	5.3	8.9	5.1	9.1
2	7.1	6.9	7.3	6.7	7.5	6.5	7.7	6.3	7.9	6.1	8.1	5.9	8.3	5.7	8.5	5.5	8.7	5.3	8.9	5.1	9.1
3	7.1	6.9	7.3	6.7	7.5	6.5	7.7	6.3	7.9	6.1	8.1	5.9	8.3	5.7	8.5	5.5	8.7	5.3	8.9	5.1	9.1
4	7.1	6.9	7.3	6.7	7.5	6.5	7.7	6.3	7.9	6.1	8.1	5.9	8.3	5.7	8.5	5.5	8.7	5.3	8.9	5.1	9.1
5	7.2	7.0	7.4	6.8	7.6	6.6	7.8	6.4	8.0	6.2	8.2	6.0	8.4	5.8	8.6	5.6	8.8	5.4	9.0	5.2	9.2
6	7.2	7.0	7.4	6.8	7.6	6.6	7.8	6.4	8.0	6.2	8.2	6.0	8.4	5.8	8.6	5.6	8.8	5.4	9.0	5.2	9.2
7	7.2	7.0	7.4	6.8	7.6	6.6	7.8	6.4	8.0	6.2	8.2	6.0	8.4	5.8	8.6	5.6	8.8	5.4	9.0	5.2	9.2
8	7.2	7.0	7.4	6.8	7.6	6.6	7.8	6.4	8.0	6.2	8.2	6.0	8.4	5.8	8.6	5.6	8.8	5.4	9.0	5.2	9.2
9	7.2	7.0	7.4	6.8	7.6	6.6	7.8	6.4	8.0	6.2	8.2	6.0	8.4	5.8	8.6	5.6	8.8	5.4	9.0	5.2	9.2
10	7.2	7.0	7.4	6.8	7.6	6.6	7.8	6.4	8.0	6.2	8.2	6.0	8.4	5.8	8.6	5.6	8.8	5.4	9.0	5.2	9.2

THROUGH TRAFFIC ON MINOR ROADWAY - TWO LANES ($t_{c,base}$ = 6.5)

GRADE	0	-1	1	-2	2	-3	3	-4	4	-5	5	-6	6	-7	7	-8	8	-9	9	-10	10
HV %																					
0	6.5	6.3	6.7	6.1	6.9	5.9	7.1	5.7	7.3	5.5	7.5	5.3	7.7	5.1	7.9	4.9	8.1	4.7	8.3	4.5	8.5
1	6.5	6.3	6.7	6.1	6.9	5.9	7.1	5.7	7.3	5.5	7.5	5.3	7.7	5.1	7.9	4.9	8.1	4.7	8.3	4.5	8.5
2	6.5	6.3	6.7	6.1	6.9	5.9	7.1	5.7	7.3	5.5	7.5	5.3	7.7	5.1	7.9	4.9	8.1	4.7	8.3	4.5	8.5
3	6.5	6.3	6.7	6.1	6.9	5.9	7.1	5.7	7.3	5.5	7.5	5.3	7.7	5.1	7.9	4.9	8.1	4.7	8.3	4.5	8.5
4	6.5	6.3	6.7	6.1	6.9	5.9	7.1	5.7	7.3	5.5	7.5	5.3	7.7	5.1	7.9	4.9	8.1	4.7	8.3	4.5	8.5
5	6.6	6.4	6.8	6.2	7.0	6.0	7.2	5.8	7.4	5.6	7.6	5.4	7.8	5.2	8.0	5.0	8.2	4.8	8.4	4.6	8.6
6	6.6	6.4	6.8	6.2	7.0	6.0	7.2	5.8	7.4	5.6	7.6	5.4	7.8	5.2	8.0	5.0	8.2	4.8	8.4	4.6	8.6
7	6.6	6.4	6.8	6.2	7.0	6.0	7.2	5.8	7.4	5.6	7.6	5.4	7.8	5.2	8.0	5.0	8.2	4.8	8.4	4.6	8.6
8	6.6	6.4	6.8	6.2	7.0	6.0	7.2	5.8	7.4	5.6	7.6	5.4	7.8	5.2	8.0	5.0	8.2	4.8	8.4	4.6	8.6
9	6.6	6.4	6.8	6.2	7.0	6.0	7.2	5.8	7.4	5.6	7.6	5.4	7.8	5.2	8.0	5.0	8.2	4.8	8.4	4.6	8.6
10	6.6	6.4	6.8	6.2	7.0	6.0	7.2	5.8	7.4	5.6	7.6	5.4	7.8	5.2	8.0	5.0	8.2	4.8	8.4	4.6	8.6

RIGHT TURN FROM MINOR ROADWAY - TWO LANES ($t_{c,base}$ = 6.2)

GRADE	0	-1	1	-2	2	-3	3	-4	4	-5	5	-6	6	-7	7	-8	8	-9	9	-10	10
HV %																					
0	6.2	6.1	6.3	6.0	6.4	5.9	6.5	5.8	6.6	5.7	6.7	5.6	6.8	5.5	6.9	5.4	7.0	5.3	7.1	5.2	7.2
1	6.2	6.1	6.3	6.0	6.4	5.9	6.5	5.8	6.6	5.7	6.7	5.6	6.8	5.5	6.9	5.4	7.0	5.3	7.1	5.2	7.2
2	6.2	6.1	6.3	6.0	6.4	5.9	6.5	5.8	6.6	5.7	6.7	5.6	6.8	5.5	6.9	5.4	7.0	5.3	7.1	5.2	7.2
3	6.2	6.1	6.3	6.0	6.4	5.9	6.5	5.8	6.6	5.7	6.7	5.6	6.8	5.5	6.9	5.4	7.0	5.3	7.1	5.2	7.2
4	6.2	6.1	6.3	6.0	6.4	5.9	6.5	5.8	6.6	5.7	6.7	5.6	6.8	5.5	6.9	5.4	7.0	5.3	7.1	5.2	7.2
5	6.3	6.2	6.4	6.1	6.5	6.0	6.6	5.9	6.7	5.8	6.8	5.7	6.9	5.6	7.0	5.5	7.1	5.4	7.2	5.3	7.3
6	6.3	6.2	6.4	6.1	6.5	6.0	6.6	5.9	6.7	5.8	6.8	5.7	6.9	5.6	7.0	5.5	7.1	5.4	7.2	5.3	7.3
7	6.3	6.2	6.4	6.1	6.5	6.0	6.6	5.9	6.7	5.8	6.8	5.7	6.9	5.6	7.0	5.5	7.1	5.4	7.2	5.3	7.3
8	6.3	6.2	6.4	6.1	6.5	6.0	6.6	5.9	6.7	5.8	6.8	5.7	6.9	5.6	7.0	5.5	7.1	5.4	7.2	5.3	7.3
9	6.3	6.2	6.4	6.1	6.5	6.0	6.6	5.9	6.7	5.8	6.8	5.7	6.9	5.6	7.0	5.5	7.1	5.4	7.2	5.3	7.3
10	6.3	6.2	6.4	6.1	6.5	6.0	6.6	5.9	6.7	5.8	6.8	5.7	6.9	5.6	7.0	5.5	7.1	5.4	7.2	5.3	7.3

York Road (SR 0074) & S Ridge Road/S Middlesex

FOLLOW-UP HEADWAY CALCULATIONS FOR TWSC INTERSECTION WITHIN SUBURBAN LAND USE CONTEXT
BASED ON PENNSYLVANIA DEFAULT VALUES FROM CHAPTER 10 OF PENNDOT PUBLICATION 46

$t_{f,x} = t_{f,\,base} + t_{f,HV} * P_{HV}$

where:

$t_{f,x}$ = follow-up headway for movement x (s)
$t_{f,base}$ = base follow-up headway from Chapter 10 of PennDOT Publication 46
$t_{f,HV}$ = adjustment factor for heavy vehciles (0.9 for major streets with one lane in each direction; 1.0 for major streets with two or three lanes in each direction) (s)
P_{HV} = proportion of heavy vehciles for movement (expressed as a decimal; e.g., P_{HV}=0.02 for 2% heavy vehciles)

LEFT TURN FROM MAJOR ROADWAY - TWO LANES ($t_{f,\,base}$ = 3.0)

GRADE	0	-1	1	-2	2	-3	3	-4	4	-5	5	-6	6	-7	7	-8	8	-9	9	-10	10
HV %																					
0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
1	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
2	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
3	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
4	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
5	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
6	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
7	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
8	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
9	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
10	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1

LEFT TURN FROM MINOR ROADWAY - TWO LANES ($t_{f,\,base}$ = 3.0)

GRADE	0	-1	1	-2	2	-3	3	-4	4	-5	5	-6	6	-7	7	-8	8	-9	9	-10	10
HV %																					
0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
1	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
2	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
3	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
4	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
5	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
6	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
7	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
8	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
9	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
10	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1

THROUGH TRAFFIC ON MINOR ROADWAY - TWO LANES ($t_{f,\,base}$ = 4.0)

GRADE	0	-1	1	-2	2	-3	3	-4	4	-5	5	-6	6	-7	7	-8	8	-9	9	-10	10
HV %																					
0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
1	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
2	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
3	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
4	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
5	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
6	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
7	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
8	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
9	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
10	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1

RIGHT TURN FROM MINOR ROADWAY - TWO LANES ($t_{f,\,base}$ = 3.1)

GRADE	0	-1	1	-2	2	-3	3	-4	4	-5	5	-6	6	-7	7	-8	8	-9	9	-10	10
HV %																					
0	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
2	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
3	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
4	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
5	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
6	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
7	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
8	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
9	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
10	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2

York Road (SR 0074) & Shughart Road

CRITICAL HEADWAY CALCULATIONS FOR TWSC INTERSECTION WITHIN SUBURBAN LAND USE CONTEXT
BASED ON PENNSYLVANIA DEFAULT VALUES FROM CHAPTER 10 OF PENNDOT PUBLICATION 46

$t_{c,x} = t_{c,\,base} + t_{c,HV} * P_{HV} + t_{c,G} * G - t_{3,LT}$

where:

$t_{c,x}$ = critical headway for movement x (s)
$t_{c,base}$ = base crtitcal headway from Chapter 10 of PennDOT Publication 46
$t_{c,HV}$ = adjustment factor for heavy vehciles (1.0 for major streets with one lane in each direction; 2.0 for major streets with two or three lanes in each direction) (s)
P_{HV} = proportion of heavy vehciles for movement (expressed as a decimal; e.g., P_{HV}=0.02 for 2% heavy vehciles)
$t_{c,G}$ = adjustment factor for grade (0.1 for Movement 9 and 12; 0.2 for Movements 7,8,10, and 11) (s)
G = percent grade (expressed as an integer; e.g., G= -2 for a 2% downhill grade)
$t_{c,base}$ = adjustment factor for intersction geometry (0.7 for minor street left-turn movement at three-leg intersections; 0.0 otherwise) (s)

LEFT TURN FROM MAJOR ROADWAY - TWO LANES ($t_{c,\,base}$ = 4.3)

GRADE	0	-1	1	-2	2	-3	3	-4	4	-5	5	-6	6	-7	7	-8	8	-9	9	-10	10
HV %																					
0	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
1	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
2	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
4	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
5	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
6	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
7	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
8	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
9	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
10	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4

LEFT TURN FROM MINOR ROADWAY - TWO LANES - 3-LEG INTERSECTION ($t_{c,\,base}$ = 7.1)

GRADE	0	-1	1	-2	2	-3	3	-4	4	-5	5	-6	6	-7	7	-8	8	-9	9	-10	10
HV %																					
0	6.4	6.2	6.6	6.0	6.8	5.8	7.0	5.6	7.2	5.4	7.4	5.2	7.6	5.0	7.8	4.8	8.0	4.6	8.2	4.4	8.4
1	6.4	6.2	6.6	6.0	6.8	5.8	7.0	5.6	7.2	5.4	7.4	5.2	7.6	5.0	7.8	4.8	8.0	4.6	8.2	4.4	8.4
2	6.4	6.2	6.6	6.0	6.8	5.8	7.0	5.6	7.2	5.4	7.4	5.2	7.6	5.0	7.8	4.8	8.0	4.6	8.2	4.4	8.4
3	6.4	6.2	6.6	6.0	6.8	5.8	7.0	5.6	7.2	5.4	7.4	5.2	7.6	5.0	7.8	4.8	8.0	4.6	8.2	4.4	8.4
4	6.4	6.2	6.6	6.0	6.8	5.8	7.0	5.6	7.2	5.4	7.4	5.2	7.6	5.0	7.8	4.8	8.0	4.6	8.2	4.4	8.4
5	6.5	6.3	6.7	6.1	6.9	5.9	7.1	5.7	7.3	5.5	7.5	5.3	7.7	5.1	7.9	4.9	8.1	4.7	8.3	4.5	8.5
6	6.5	6.3	6.7	6.1	6.9	5.9	7.1	5.7	7.3	5.5	7.5	5.3	7.7	5.1	7.9	4.9	8.1	4.7	8.3	4.5	8.5
7	6.5	6.3	6.7	6.1	6.9	5.9	7.1	5.7	7.3	5.5	7.5	5.3	7.7	5.1	7.9	4.9	8.1	4.7	8.3	4.5	8.5
8	6.5	6.3	6.7	6.1	6.9	5.9	7.1	5.7	7.3	5.5	7.5	5.3	7.7	5.1	7.9	4.9	8.1	4.7	8.3	4.5	8.5
9	6.5	6.3	6.7	6.1	6.9	5.9	7.1	5.7	7.3	5.5	7.5	5.3	7.7	5.1	7.9	4.9	8.1	4.7	8.3	4.5	8.5
10	6.5	6.3	6.7	6.1	6.9	5.9	7.1	5.7	7.3	5.5	7.5	5.3	7.7	5.1	7.9	4.9	8.1	4.7	8.3	4.5	8.5

RIGHT TURN FROM MINOR ROADWAY - TWO LANES ($t_{c,\,base}$ = 6.2)

GRADE	0	-1	1	-2	2	-3	3	-4	4	-5	5	-6	6	-7	7	-8	8	-9	9	-10	10
HV %																					
0	6.2	6.1	6.3	6.0	6.4	5.9	6.5	5.8	6.6	5.7	6.7	5.6	6.8	5.5	6.9	5.4	7.0	5.3	7.1	5.2	7.2
1	6.2	6.1	6.3	6.0	6.4	5.9	6.5	5.8	6.6	5.7	6.7	5.6	6.8	5.5	6.9	5.4	7.0	5.3	7.1	5.2	7.2
2	6.2	6.1	6.3	6.0	6.4	5.9	6.5	5.8	6.6	5.7	6.7	5.6	6.8	5.5	6.9	5.4	7.0	5.3	7.1	5.2	7.2
3	6.2	6.1	6.3	6.0	6.4	5.9	6.5	5.8	6.6	5.7	6.7	5.6	6.8	5.5	6.9	5.4	7.0	5.3	7.1	5.2	7.2
4	6.2	6.1	6.3	6.0	6.4	5.9	6.5	5.8	6.6	5.7	6.7	5.6	6.8	5.5	6.9	5.4	7.0	5.3	7.1	5.2	7.2
5	6.3	6.2	6.4	6.1	6.5	6.0	6.6	5.9	6.7	5.8	6.8	5.7	6.9	5.6	7.0	5.5	7.1	5.4	7.2	5.3	7.3
6	6.3	6.2	6.4	6.1	6.5	6.0	6.6	5.9	6.7	5.8	6.8	5.7	6.9	5.6	7.0	5.5	7.1	5.4	7.2	5.3	7.3
7	6.3	6.2	6.4	6.1	6.5	6.0	6.6	5.9	6.7	5.8	6.8	5.7	6.9	5.6	7.0	5.5	7.1	5.4	7.2	5.3	7.3
8	6.3	6.2	6.4	6.1	6.5	6.0	6.6	5.9	6.7	5.8	6.8	5.7	6.9	5.6	7.0	5.5	7.1	5.4	7.2	5.3	7.3
9	6.3	6.2	6.4	6.1	6.5	6.0	6.6	5.9	6.7	5.8	6.8	5.7	6.9	5.6	7.0	5.5	7.1	5.4	7.2	5.3	7.3
10	6.3	6.2	6.4	6.1	6.5	6.0	6.6	5.9	6.7	5.8	6.8	5.7	6.9	5.6	7.0	5.5	7.1	5.4	7.2	5.3	7.3

York Road (SR 0074) & Shughart Road

FOLLOW-UP HEADWAY CALCULATIONS FOR TWSC INTERSECTION WITHIN SUBURBAN LAND USE CONTEXT
BASED ON PENNSYLVANIA DEFAULT VALUES FROM CHAPTER 10 OF PENNDOT PUBLICATION 46

$t_{f,x}$ = $t_{f,\ base}$ + $t_{f,HV}$*P_{HV}

where:

$t_{f,x}$ = follow-up headway for movement x (s)
$t_{f,base}$ = base follow-up headway from Chapter 10 of PennDOT Publication 46
$t_{f,HV}$ = adjustment factor for heavy vehciles (0.9 for major streets with one lane in each direction; 1.0 for major streets with two or three lanes in each direction) (s)
P_{HV} = proportion of heavy vehciles for movement (expressed as a decimal; e.g., P_{HV}=0.02 for 2% heavy vehciles)

LEFT TURN FROM MAJOR ROADWAY - TWO LANES ($t_{f,\ base}$ = 3.0)

GRADE	0	-1	1	-2	2	-3	3	-4	4	-5	5	-6	6	-7	7	-8	8	-9	9	-10	10
HV %																					
0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
1	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
2	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
3	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
4	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
5	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
6	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
7	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
8	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
9	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
10	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1

LEFT TURN FROM MINOR ROADWAY - TWO LANES ($t_{f,\ base}$ = 3.0)

GRADE	0	-1	1	-2	2	-3	3	-4	4	-5	5	-6	6	-7	7	-8	8	-9	9	-10	10
HV %																					
0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
1	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
2	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
3	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
4	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
5	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
6	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
7	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
8	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
9	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
10	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1

THROUGH TRAFFIC ON MINOR ROADWAY - TWO LANES ($t_{f,\ base}$ = 4.0)

GRADE	0	-1	1	-2	2	-3	3	-4	4	-5	5	-6	6	-7	7	-8	8	-9	9	-10	10
HV %																					
0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
1	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
2	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
3	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
4	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
5	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
6	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
7	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
8	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
9	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
10	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1

RIGHT TURN FROM MINOR ROADWAY - TWO LANES ($t_{f,\ base}$ = 3.1)

GRADE	0	-1	1	-2	2	-3	3	-4	4	-5	5	-6	6	-7	7	-8	8	-9	9	-10	10
HV %																					
0	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
2	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
3	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
4	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
5	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
6	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
7	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
8	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
9	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
10	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2

E Springville Road & Propsed Site DW

CRITICAL HEADWAY CALCULATIONS FOR TWSC INTERSECTION WITHIN SUBURBAN LAND USE CONTEXT
BASED ON PENNSYLVANIA DEFAULT VALUES FROM CHAPTER 10 OF PENNDOT PUBLICATION 46

$t_{c,x} = t_{c,\,base} + t_{c,HV}*P_{HV} + t_{c,G}*G - t_{3,LT}$

AM
PM
SAT

where:

$t_{c,x}$ = critical headway for movement x (s)
$t_{c,base}$ = base crtitcal headway from Chapter 10 of PennDOT Publication 46
$t_{c,HV}$ = adjustment factor for heavy vehciles (1.0 for major streets with one lane in each direction; 2.0 for major streets with two or three lanes in each direction) (s)
P_{HV} = proportion of heavy vehciles for movement (expressed as a decimal; e.g., P_{HV}=0.02 for 2% heavy vehciles)
$t_{c,G}$ = adjustment factor for grade (0.1 for Movement 9 and 12; 0.2 for Movements 7,8,10, and 11) (s)
G = percent grade (expressed as an integer; e.g., G= -2 for a 2% downhill grade)
$t_{c,base}$ = adjustment factor for intersction geometry (0.7 for minor street left-turn movement at three-leg intersections; 0.0 otherwise) (s)

LEFT TURN FROM MAJOR ROADWAY - TWO LANES ($t_{c,\,base}$ = 4.3)

GRADE	0	-1	1	-2	2	-3	3	-4	4	-5	5	-6	6	-7	7	-8	8	-9	9	-10	10
HV %																					
0	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
1	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
2	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
4	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
5	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
6	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
7	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
8	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
9	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
10	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4

LEFT TURN FROM MINOR ROADWAY - TWO LANES - 3-LEG INTERSECTION ($t_{c,\,base}$ = 7.1)

GRADE	0	-1	1	-2	2	-3	3	-4	4	-5	5	-6	6	-7	7	-8	8	-9	9	-10	10
HV %																					
0	6.4	6.2	6.6	6.0	6.8	5.8	7.0	5.6	7.2	5.4	7.4	5.2	7.6	5.0	7.8	4.8	8.0	4.6	8.2	4.4	8.4
1	6.4	6.2	6.6	6.0	6.8	5.8	7.0	5.6	7.2	5.4	7.4	5.2	7.6	5.0	7.8	4.8	8.0	4.6	8.2	4.4	8.4
2	6.4	6.2	6.6	6.0	6.8	5.8	7.0	5.6	7.2	5.4	7.4	5.2	7.6	5.0	7.8	4.8	8.0	4.6	8.2	4.4	8.4
3	6.4	6.2	6.6	6.0	6.8	5.8	7.0	5.6	7.2	5.4	7.4	5.2	7.6	5.0	7.8	4.8	8.0	4.6	8.2	4.4	8.4
4	6.4	6.2	6.6	6.0	6.8	5.8	7.0	5.6	7.2	5.4	7.4	5.2	7.6	5.0	7.8	4.8	8.0	4.6	8.2	4.4	8.4
5	6.5	6.3	6.7	6.1	6.9	5.9	7.1	5.7	7.3	5.5	7.5	5.3	7.7	5.1	7.9	4.9	8.1	4.7	8.3	4.5	8.5
6	6.5	6.3	6.7	6.1	6.9	5.9	7.1	5.7	7.3	5.5	7.5	5.3	7.7	5.1	7.9	4.9	8.1	4.7	8.3	4.5	8.5
7	6.5	6.3	6.7	6.1	6.9	5.9	7.1	5.7	7.3	5.5	7.5	5.3	7.7	5.1	7.9	4.9	8.1	4.7	8.3	4.5	8.5
8	6.5	6.3	6.7	6.1	6.9	5.9	7.1	5.7	7.3	5.5	7.5	5.3	7.7	5.1	7.9	4.9	8.1	4.7	8.3	4.5	8.5
9	6.5	6.3	6.7	6.1	6.9	5.9	7.1	5.7	7.3	5.5	7.5	5.3	7.7	5.1	7.9	4.9	8.1	4.7	8.3	4.5	8.5
10	6.5	6.3	6.7	6.1	6.9	5.9	7.1	5.7	7.3	5.5	7.5	5.3	7.7	5.1	7.9	4.9	8.1	4.7	8.3	4.5	8.5

RIGHT TURN FROM MINOR ROADWAY - TWO LANES ($t_{c,\,base}$ = 6.2)

GRADE	0	-1	1	-2	2	-3	3	-4	4	-5	5	-6	6	-7	7	-8	8	-9	9	-10	10
HV %																					
0	6.2	6.1	6.3	6.0	6.4	5.9	6.5	5.8	6.6	5.7	6.7	5.6	6.8	5.5	6.9	5.4	7.0	5.3	7.1	5.2	7.2
1	6.2	6.1	6.3	6.0	6.4	5.9	6.5	5.8	6.6	5.7	6.7	5.6	6.8	5.5	6.9	5.4	7.0	5.3	7.1	5.2	7.2
2	6.2	6.1	6.3	6.0	6.4	5.9	6.5	5.8	6.6	5.7	6.7	5.6	6.8	5.5	6.9	5.4	7.0	5.3	7.1	5.2	7.2
3	6.2	6.1	6.3	6.0	6.4	5.9	6.5	5.8	6.6	5.7	6.7	5.6	6.8	5.5	6.9	5.4	7.0	5.3	7.1	5.2	7.2
4	6.2	6.1	6.3	6.0	6.4	5.9	6.5	5.8	6.6	5.7	6.7	5.6	6.8	5.5	6.9	5.4	7.0	5.3	7.1	5.2	7.2
5	6.3	6.2	6.4	6.1	6.5	6.0	6.6	5.9	6.7	5.8	6.8	5.7	6.9	5.6	7.0	5.5	7.1	5.4	7.2	5.3	7.3
6	6.3	6.2	6.4	6.1	6.5	6.0	6.6	5.9	6.7	5.8	6.8	5.7	6.9	5.6	7.0	5.5	7.1	5.4	7.2	5.3	7.3
7	6.3	6.2	6.4	6.1	6.5	6.0	6.6	5.9	6.7	5.8	6.8	5.7	6.9	5.6	7.0	5.5	7.1	5.4	7.2	5.3	7.3
8	6.3	6.2	6.4	6.1	6.5	6.0	6.6	5.9	6.7	5.8	6.8	5.7	6.9	5.6	7.0	5.5	7.1	5.4	7.2	5.3	7.3
9	6.3	6.2	6.4	6.1	6.5	6.0	6.6	5.9	6.7	5.8	6.8	5.7	6.9	5.6	7.0	5.5	7.1	5.4	7.2	5.3	7.3
10	6.3	6.2	6.4	6.1	6.5	6.0	6.6	5.9	6.7	5.8	6.8	5.7	6.9	5.6	7.0	5.5	7.1	5.4	7.2	5.3	7.3

E Springville Road & Propsed Site DW

FOLLOW-UP HEADWAY CALCULATIONS FOR TWSC INTERSECTION WITHIN SUBURBAN LAND USE CONTEXT
BASED ON PENNSYLVANIA DEFAULT VALUES FROM CHAPTER 10 OF PENNDOT PUBLICATION 46

$t_{f,x}$ = $t_{f,\ base}$ + $t_{f,HV}$*P_{HV}

where:

$t_{f,x}$ = follow-up headway for movement x (s)
$t_{f,base}$ = base follow-up headway from Chapter 10 of PennDOT Publication 46
$t_{f,HV}$ = adjustment factor for heavy vehciles (0.9 for major streets with one lane in each direction; 1.0 for major streets with two or three lanes in each direction) (s)
P_{HV} = proportion of heavy vehciles for movement (expressed as a decimal; e.g., P_{HV}=0.02 for 2% heavy vehciles)

LEFT TURN FROM MAJOR ROADWAY - TWO LANES ($t_{f,\ base}$ = 3.0)

GRADE	0	-1	1	-2	2	-3	3	-4	4	-5	5	-6	6	-7	7	-8	8	-9	9	-10	10
HV %																					
0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
1	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
2	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
3	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
4	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
5	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
6	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
7	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
8	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
9	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
10	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1

LEFT TURN FROM MINOR ROADWAY - TWO LANES ($t_{f,\ base}$ = 3.0)

GRADE	0	-1	1	-2	2	-3	3	-4	4	-5	5	-6	6	-7	7	-8	8	-9	9	-10	10
HV %																					
0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
1	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
2	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
3	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
4	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
5	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
6	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
7	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
8	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
9	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
10	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1

THROUGH TRAFFIC ON MINOR ROADWAY - TWO LANES ($t_{f,\ base}$ = 4.0)

GRADE	0	-1	1	-2	2	-3	3	-4	4	-5	5	-6	6	-7	7	-8	8	-9	9	-10	10
HV %																					
0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
1	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
2	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
3	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
4	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
5	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
6	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
7	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
8	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
9	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
10	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1

RIGHT TURN FROM MINOR ROADWAY - TWO LANES ($t_{f,\ base}$ = 3.1)

GRADE	0	-1	1	-2	2	-3	3	-4	4	-5	5	-6	6	-7	7	-8	8	-9	9	-10	10
HV %																					
0	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
2	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
3	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
4	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
5	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
6	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
7	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
8	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
9	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
10	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	264	6	25	455	27	63
Future Volume (vph)	264	6	25	455	27	63
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	9	9
Grade (%)	1%			-1%	2%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		1	0
Taper Length (ft)			25		25	
Link Speed (mph)	50			50	35	
Link Distance (ft)	353			302	767	
Travel Time (s)	4.8			4.1	14.9	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	6%	0%	8%	5%	0%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	287	0	0	511	96	0
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

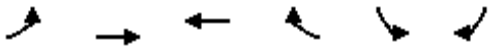
Intersection	
Int Delay, s/veh	1.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	264	6	25	455	27	63
Future Vol, veh/h	264	6	25	455	27	63
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	1	-	-	-1	2	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	6	0	8	5	0	2
Mvmt Flow	281	6	27	484	29	67

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	287	0	822	284
Stage 1	-	-	-	-	284	-
Stage 2	-	-	-	-	538	-
Critical Hdwy	-	-	4.4	-	6.8	6.42
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	3.1	-	3	3.1
Pot Cap-1 Maneuver	-	-	923	-	351	789
Stage 1	-	-	-	-	853	-
Stage 2	-	-	-	-	626	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	923	-	337	789
Mov Cap-2 Maneuver	-	-	-	-	337	-
Stage 1	-	-	-	-	853	-
Stage 2	-	-	-	-	601	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	12.7
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	563	-	-	923	-
HCM Lane V/C Ratio	0.17	-	-	0.029	-
HCM Control Delay (s)	12.7	-	-	9	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.6	-	-	0.1	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	149	176	341	1	1	142
Future Volume (vph)	149	176	341	1	1	142
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	9	9
Grade (%)		1%	-1%		4%	
Storage Length (ft)	0			0	0	0
Storage Lanes	0			0	1	0
Taper Length (ft)	25				25	
Link Speed (mph)		50	50		35	
Link Distance (ft)		302	2637		857	
Travel Time (s)		4.1	36.0		16.7	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	9%	6%	0%	0%	5%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	346	364	0	152	0
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

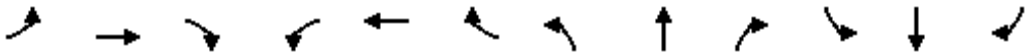
Intersection	
Int Delay, s/veh	3.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	149	176	341	1	1	142
Future Vol, veh/h	149	176	341	1	1	142
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	1	-1	-	4	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	1	9	6	0	0	5
Mvmt Flow	159	187	363	1	1	151

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	364	0	-	0	869	364
Stage 1	-	-	-	-	364	-
Stage 2	-	-	-	-	505	-
Critical Hdwy	4.3	-	-	-	7.2	6.65
Critical Hdwy Stg 1	-	-	-	-	6.2	-
Critical Hdwy Stg 2	-	-	-	-	6.2	-
Follow-up Hdwy	3	-	-	-	3	3.1
Pot Cap-1 Maneuver	901	-	-	-	297	691
Stage 1	-	-	-	-	743	-
Stage 2	-	-	-	-	616	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	901	-	-	-	238	691
Mov Cap-2 Maneuver	-	-	-	-	238	-
Stage 1	-	-	-	-	597	-
Stage 2	-	-	-	-	616	-

Approach	EB	WB	SB
HCM Control Delay, s	4.5	0	11.8
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	901	-	-	-	682
HCM Lane V/C Ratio	0.176	-	-	-	0.223
HCM Control Delay (s)	9.8	0	-	-	11.8
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.6	-	-	-	0.8



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	170	5	0	323	29	14	13	1	15	13	5
Future Volume (vph)	3	170	5	0	323	29	14	13	1	15	13	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10	9	9	9	9	9	9
Grade (%)		-1%			1%			4%			3%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		50			50			35			35	
Link Distance (ft)		2637			680			298			687	
Travel Time (s)		36.0			9.3			5.8			13.4	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	11%	0%	0%	5%	0%	0%	15%	100%	0%	8%	20%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	195	0	0	387	0	0	30	0	0	35	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	3	170	5	0	323	29	14	13	1	15	13	5
Future Vol, veh/h	3	170	5	0	323	29	14	13	1	15	13	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-1	-	-	1	-	-	4	-	-	3	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	0	11	0	0	5	0	0	15	100	0	8	20
Mvmt Flow	3	187	5	0	355	32	15	14	1	16	14	5

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	387	0	0	192	0	0	577	583	190	574	569	371
Stage 1	-	-	-	-	-	-	196	196	-	371	371	-
Stage 2	-	-	-	-	-	-	381	387	-	203	198	-
Critical Hdwy	4.3	-	-	4.3	-	-	7.9	7.45	7.6	7.7	7.18	6.7
Critical Hdwy Stg 1	-	-	-	-	-	-	6.9	6.45	-	6.7	6.18	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.9	6.45	-	6.7	6.18	-
Follow-up Hdwy	3	-	-	3	-	-	3	4.135	3.2	3	4.072	3.2
Pot Cap-1 Maneuver	884	-	-	1032	-	-	426	357	819	442	385	662
Stage 1	-	-	-	-	-	-	893	684	-	699	573	-
Stage 2	-	-	-	-	-	-	675	539	-	894	702	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	884	-	-	1032	-	-	409	356	819	427	383	662
Mov Cap-2 Maneuver	-	-	-	-	-	-	409	356	-	427	383	-
Stage 1	-	-	-	-	-	-	889	681	-	696	573	-
Stage 2	-	-	-	-	-	-	653	539	-	871	699	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0	15	14.1
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	389	884	-	-	1032	-	-	431
HCM Lane V/C Ratio	0.079	0.004	-	-	-	-	-	0.084
HCM Control Delay (s)	15	9.1	0	-	0	-	-	14.1
HCM Lane LOS	C	A	A	-	A	-	-	B
HCM 95th %tile Q(veh)	0.3	0	-	-	0	-	-	0.3

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	552	52	50	412	24	45
Future Volume (vph)	552	52	50	412	24	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	9	9
Grade (%)	1%			-1%	2%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		1	0
Taper Length (ft)			25		25	
Link Speed (mph)	50			50	35	
Link Distance (ft)	353			302	767	
Travel Time (s)	4.8			4.1	14.9	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	4%	6%	4%	4%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	642	0	0	491	74	0
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

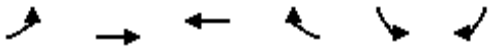
Intersection	
Int Delay, s/veh	1.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	552	52	50	412	24	45
Future Vol, veh/h	552	52	50	412	24	45
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	1	-	-	-1	2	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	3	4	6	4	4	4
Mvmt Flow	587	55	53	438	26	48

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	642	0	1159	615
Stage 1	-	-	-	-	615	-
Stage 2	-	-	-	-	544	-
Critical Hdwy	-	-	4.4	-	6.84	6.44
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	3.1	-	3	3.1
Pot Cap-1 Maneuver	-	-	690	-	207	498
Stage 1	-	-	-	-	566	-
Stage 2	-	-	-	-	618	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	690	-	186	498
Mov Cap-2 Maneuver	-	-	-	-	186	-
Stage 1	-	-	-	-	566	-
Stage 2	-	-	-	-	555	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.2	19.9
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	315	-	-	690	-
HCM Lane V/C Ratio	0.233	-	-	0.077	-
HCM Control Delay (s)	19.9	-	-	10.7	0
HCM Lane LOS	C	-	-	B	A
HCM 95th %tile Q(veh)	0.9	-	-	0.2	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	193	393	296	0	0	171
Future Volume (vph)	193	393	296	0	0	171
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	9	9
Grade (%)		1%	-1%		4%	
Storage Length (ft)	0			0	0	0
Storage Lanes	0			0	1	0
Taper Length (ft)	25				25	
Link Speed (mph)		50	50		35	
Link Distance (ft)		302	2637		857	
Travel Time (s)		4.1	36.0		16.7	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	3%	7%	0%	0%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	623	315	0	182	0
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

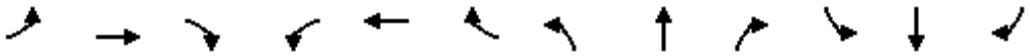
Intersection	
Int Delay, s/veh	3.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	193	393	296	0	0	171
Future Vol, veh/h	193	393	296	0	0	171
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	1	-1	-	4	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	4	3	7	0	0	2
Mvmt Flow	205	418	315	0	0	182

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	315	0	-	0	1143	315
Stage 1	-	-	-	-	315	-
Stage 2	-	-	-	-	828	-
Critical Hdwy	4.3	-	-	-	7.2	6.62
Critical Hdwy Stg 1	-	-	-	-	6.2	-
Critical Hdwy Stg 2	-	-	-	-	6.2	-
Follow-up Hdwy	3	-	-	-	3	3.1
Pot Cap-1 Maneuver	937	-	-	-	189	743
Stage 1	-	-	-	-	793	-
Stage 2	-	-	-	-	399	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	937	-	-	-	135	743
Mov Cap-2 Maneuver	-	-	-	-	135	-
Stage 1	-	-	-	-	567	-
Stage 2	-	-	-	-	399	-

Approach	EB	WB	SB
HCM Control Delay, s	3.3	0	11.4
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	937	-	-	-	743
HCM Lane V/C Ratio	0.219	-	-	-	0.245
HCM Control Delay (s)	9.9	0	-	-	11.4
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.8	-	-	-	1



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	371	15	2	275	15	7	18	0	26	26	8
Future Volume (vph)	4	371	15	2	275	15	7	18	0	26	26	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10	9	9	9	9	9	9
Grade (%)		-1%			1%			4%			3%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		50			50			35			35	
Link Distance (ft)		2637			680			298			687	
Travel Time (s)		36.0			9.3			5.8			13.4	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	4%	0%	0%	6%	13%	0%	6%	0%	0%	0%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	411	0	0	307	0	0	26	0	0	62	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	2.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	4	371	15	2	275	15	7	18	0	26	26	8
Future Vol, veh/h	4	371	15	2	275	15	7	18	0	26	26	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-1	-	-	1	-	-	4	-	-	3	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	4	0	0	6	13	0	6	0	0	0	0
Mvmt Flow	4	391	16	2	289	16	7	19	0	27	27	8

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	305	0	0	407	0	0	726	716	399	718	716	297
Stage 1	-	-	-	-	-	-	407	407	-	301	301	-
Stage 2	-	-	-	-	-	-	319	309	-	417	415	-
Critical Hdwy	4.3	-	-	4.3	-	-	7.9	7.36	6.6	7.7	7.1	6.5
Critical Hdwy Stg 1	-	-	-	-	-	-	6.9	6.36	-	6.7	6.1	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.9	6.36	-	6.7	6.1	-
Follow-up Hdwy	3	-	-	3	-	-	3	4.054	3.1	3	4	3.1
Pot Cap-1 Maneuver	944	-	-	870	-	-	325	299	660	343	318	770
Stage 1	-	-	-	-	-	-	649	539	-	775	636	-
Stage 2	-	-	-	-	-	-	741	609	-	654	556	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	944	-	-	870	-	-	298	297	660	324	315	770
Mov Cap-2 Maneuver	-	-	-	-	-	-	298	297	-	324	315	-
Stage 1	-	-	-	-	-	-	646	536	-	771	634	-
Stage 2	-	-	-	-	-	-	699	607	-	628	553	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.1	18.3	17.7
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	297	944	-	-	870	-	-	346
HCM Lane V/C Ratio	0.089	0.004	-	-	0.002	-	-	0.183
HCM Control Delay (s)	18.3	8.8	0	-	9.1	0	-	17.7
HCM Lane LOS	C	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.3	0	-	-	0	-	-	0.7

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	357	26	53	386	28	69
Future Volume (vph)	357	26	53	386	28	69
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	9	9
Grade (%)	1%			-1%	2%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		1	0
Taper Length (ft)			25		25	
Link Speed (mph)	50			50	35	
Link Distance (ft)	353			302	767	
Travel Time (s)	4.8			4.1	14.9	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	0%	0%	1%	0%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	403	0	0	462	102	0
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

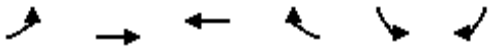
Intersection	
Int Delay, s/veh	2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	357	26	53	386	28	69
Future Vol, veh/h	357	26	53	386	28	69
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	1	-	-	-1	2	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	1	0	0	1	0	1
Mvmt Flow	376	27	56	406	29	73

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	403	0	908	390
Stage 1	-	-	-	-	390	-
Stage 2	-	-	-	-	518	-
Critical Hdwy	-	-	4.3	-	6.8	6.41
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	3	-	3	3.1
Pot Cap-1 Maneuver	-	-	873	-	308	683
Stage 1	-	-	-	-	750	-
Stage 2	-	-	-	-	641	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	873	-	282	683
Mov Cap-2 Maneuver	-	-	-	-	282	-
Stage 1	-	-	-	-	750	-
Stage 2	-	-	-	-	588	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.1	14.4
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	484	-	-	873	-
HCM Lane V/C Ratio	0.211	-	-	0.064	-
HCM Control Delay (s)	14.4	-	-	9.4	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.8	-	-	0.2	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	110	347	315	1	1	101
Future Volume (vph)	110	347	315	1	1	101
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	9	9
Grade (%)		1%	-1%		4%	
Storage Length (ft)	0			0	0	0
Storage Lanes	0			0	1	0
Taper Length (ft)	25				25	
Link Speed (mph)		50	50		35	
Link Distance (ft)		302	2637		857	
Travel Time (s)		4.1	36.0		16.7	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	1%	3%	0%	0%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	491	340	0	110	0
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

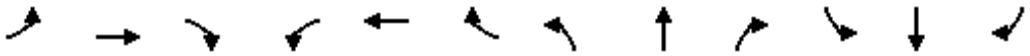
Intersection	
Int Delay, s/veh	2.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	110	347	315	1	1	101
Future Vol, veh/h	110	347	315	1	1	101
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	1	-1	-	4	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	1	3	0	0	3
Mvmt Flow	118	373	339	1	1	109

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	340	0	-	0	949	340
Stage 1	-	-	-	-	340	-
Stage 2	-	-	-	-	609	-
Critical Hdwy	4.3	-	-	-	7.2	6.63
Critical Hdwy Stg 1	-	-	-	-	6.2	-
Critical Hdwy Stg 2	-	-	-	-	6.2	-
Follow-up Hdwy	3	-	-	-	3	3.1
Pot Cap-1 Maneuver	918	-	-	-	260	716
Stage 1	-	-	-	-	767	-
Stage 2	-	-	-	-	536	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	918	-	-	-	218	716
Mov Cap-2 Maneuver	-	-	-	-	218	-
Stage 1	-	-	-	-	643	-
Stage 2	-	-	-	-	536	-

Approach	EB	WB	SB
HCM Control Delay, s	2.3	0	11.1
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	918	-	-	-	700
HCM Lane V/C Ratio	0.129	-	-	-	0.157
HCM Control Delay (s)	9.5	0	-	-	11.1
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.4	-	-	-	0.6



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	329	19	7	283	10	23	16	6	13	13	7
Future Volume (vph)	6	329	19	7	283	10	23	16	6	13	13	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10	9	9	9	9	9	9
Grade (%)		-1%			1%			4%			3%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		50			50			35			35	
Link Distance (ft)		2637			680			298			687	
Travel Time (s)		36.0			9.3			5.8			13.4	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	1%	0%	0%	2%	0%	4%	6%	0%	0%	0%	14%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	380	0	0	323	0	0	48	0	0	36	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	6	329	19	7	283	10	23	16	6	13	13	7
Future Vol, veh/h	6	329	19	7	283	10	23	16	6	13	13	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-1	-	-	1	-	-	4	-	-	3	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	0	1	0	0	2	0	4	6	0	0	0	14
Mvmt Flow	6	354	20	8	304	11	25	17	6	14	14	8

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	315	0	0	374	0	0	713	707	364	714	712	310
Stage 1	-	-	-	-	-	-	376	376	-	326	326	-
Stage 2	-	-	-	-	-	-	337	331	-	388	386	-
Critical Hdwy	4.3	-	-	4.3	-	-	7.94	7.36	6.6	7.7	7.1	6.64
Critical Hdwy Stg 1	-	-	-	-	-	-	6.94	6.36	-	6.7	6.1	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.94	6.36	-	6.7	6.1	-
Follow-up Hdwy	3	-	-	3	-	-	3	4.054	3.1	3	4	3.2
Pot Cap-1 Maneuver	937	-	-	893	-	-	330	303	694	346	320	727
Stage 1	-	-	-	-	-	-	677	561	-	747	617	-
Stage 2	-	-	-	-	-	-	719	593	-	682	575	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	937	-	-	893	-	-	311	297	694	323	314	727
Mov Cap-2 Maneuver	-	-	-	-	-	-	311	297	-	323	314	-
Stage 1	-	-	-	-	-	-	672	557	-	741	610	-
Stage 2	-	-	-	-	-	-	688	586	-	650	570	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0.2	17.8	16
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	330	937	-	-	893	-	-	362
HCM Lane V/C Ratio	0.147	0.007	-	-	0.008	-	-	0.098
HCM Control Delay (s)	17.8	8.9	0	-	9.1	0	-	16
HCM Lane LOS	C	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.5	0	-	-	0	-	-	0.3

Phase 1

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	284	28	26	505	78	64
Future Volume (vph)	284	28	26	505	78	64
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	9	9
Grade (%)	1%			-1%	2%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		1	0
Taper Length (ft)			25		25	
Link Speed (mph)	50			50	35	
Link Distance (ft)	353			302	767	
Travel Time (s)	4.8			4.1	14.9	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	6%	0%	8%	5%	0%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	332	0	0	565	151	0
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

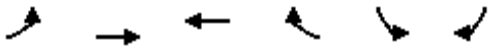
Intersection	
Int Delay, s/veh	3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	284	28	26	505	78	64
Future Vol, veh/h	284	28	26	505	78	64
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	1	-	-	-1	2	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	6	0	8	5	0	2
Mvmt Flow	302	30	28	537	83	68

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	332	0	910	317
Stage 1	-	-	-	-	317	-
Stage 2	-	-	-	-	593	-
Critical Hdwy	-	-	4.4	-	6.8	6.42
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	3.1	-	3	3.1
Pot Cap-1 Maneuver	-	-	890	-	307	754
Stage 1	-	-	-	-	819	-
Stage 2	-	-	-	-	585	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	890	-	293	754
Mov Cap-2 Maneuver	-	-	-	-	293	-
Stage 1	-	-	-	-	819	-
Stage 2	-	-	-	-	559	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	19.1
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	404	-	-	890	-
HCM Lane V/C Ratio	0.374	-	-	0.031	-
HCM Control Delay (s)	19.1	-	-	9.2	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	1.7	-	-	0.1	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	152	194	389	1	1	145
Future Volume (vph)	152	194	389	1	1	145
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	9	9
Grade (%)		1%	-1%		4%	
Storage Length (ft)	0			0	0	0
Storage Lanes	0			0	1	0
Taper Length (ft)	25				25	
Link Speed (mph)		50	50		35	
Link Distance (ft)		302	2637		857	
Travel Time (s)		4.1	36.0		16.7	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	9%	6%	0%	0%	5%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	368	415	0	155	0
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

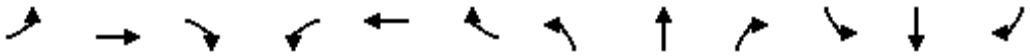
Intersection	
Int Delay, s/veh	3.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	152	194	389	1	1	145
Future Vol, veh/h	152	194	389	1	1	145
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	1	-1	-	4	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	1	9	6	0	0	5
Mvmt Flow	162	206	414	1	1	154

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	415	0	-	0	945	415
Stage 1	-	-	-	-	415	-
Stage 2	-	-	-	-	530	-
Critical Hdwy	4.3	-	-	-	7.2	6.65
Critical Hdwy Stg 1	-	-	-	-	6.2	-
Critical Hdwy Stg 2	-	-	-	-	6.2	-
Follow-up Hdwy	3	-	-	-	3	3.1
Pot Cap-1 Maneuver	865	-	-	-	262	642
Stage 1	-	-	-	-	695	-
Stage 2	-	-	-	-	596	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	865	-	-	-	206	642
Mov Cap-2 Maneuver	-	-	-	-	206	-
Stage 1	-	-	-	-	548	-
Stage 2	-	-	-	-	596	-

Approach	EB	WB	SB
HCM Control Delay, s	4.4	0	12.5
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	865	-	-	-	633
HCM Lane V/C Ratio	0.187	-	-	-	0.245
HCM Control Delay (s)	10.1	0	-	-	12.5
HCM Lane LOS	B	A	-	-	B
HCM 95th %tile Q(veh)	0.7	-	-	-	1



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	174	19	4	330	30	55	30	9	15	20	5
Future Volume (vph)	3	174	19	4	330	30	55	30	9	15	20	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10	9	9	9	9	9	9
Grade (%)		-1%			1%			4%			3%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		50			50			35			35	
Link Distance (ft)		2637			680			298			687	
Travel Time (s)		36.0			9.3			5.8			13.4	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	11%	0%	0%	5%	0%	0%	15%	100%	0%	8%	20%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	215	0	0	400	0	0	103	0	0	43	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	3.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	3	174	19	4	330	30	55	30	9	15	20	5
Future Vol, veh/h	3	174	19	4	330	30	55	30	9	15	20	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-1	-	-	1	-	-	4	-	-	3	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	0	11	0	0	5	0	0	15	100	0	8	20
Mvmt Flow	3	191	21	4	363	33	60	33	10	16	22	5

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	396	0	0	212	0	0	609	612	202	617	606	380
Stage 1	-	-	-	-	-	-	208	208	-	388	388	-
Stage 2	-	-	-	-	-	-	401	404	-	229	218	-
Critical Hdwy	4.3	-	-	4.3	-	-	7.9	7.45	7.6	7.7	7.18	6.7
Critical Hdwy Stg 1	-	-	-	-	-	-	6.9	6.45	-	6.7	6.18	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.9	6.45	-	6.7	6.18	-
Follow-up Hdwy	3	-	-	3	-	-	3	4.135	3.2	3	4.072	3.2
Pot Cap-1 Maneuver	878	-	-	1016	-	-	402	342	802	410	365	654
Stage 1	-	-	-	-	-	-	877	674	-	682	561	-
Stage 2	-	-	-	-	-	-	655	528	-	861	686	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	878	-	-	1016	-	-	377	339	802	372	362	654
Mov Cap-2 Maneuver	-	-	-	-	-	-	377	339	-	372	362	-
Stage 1	-	-	-	-	-	-	873	671	-	679	558	-
Stage 2	-	-	-	-	-	-	621	525	-	805	683	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.1	17.8	15.5
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	383	878	-	-	1016	-	-	388
HCM Lane V/C Ratio	0.27	0.004	-	-	0.004	-	-	0.113
HCM Control Delay (s)	17.8	9.1	0	-	8.6	0	-	15.5
HCM Lane LOS	C	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	1.1	0	-	-	0	-	-	0.4

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	610	110	51	450	56	46
Future Volume (vph)	610	110	51	450	56	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	9	9
Grade (%)	1%			-1%	2%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		1	0
Taper Length (ft)			25		25	
Link Speed (mph)	50			50	35	
Link Distance (ft)	353			302	767	
Travel Time (s)	4.8			4.1	14.9	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	4%	6%	4%	4%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	766	0	0	533	109	0
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

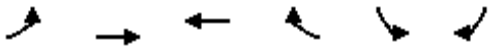
Intersection	
Int Delay, s/veh	3.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	610	110	51	450	56	46
Future Vol, veh/h	610	110	51	450	56	46
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	1	-	-	-1	2	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	3	4	6	4	4	4
Mvmt Flow	649	117	54	479	60	49

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	766	0	1295	708
Stage 1	-	-	-	-	708	-
Stage 2	-	-	-	-	587	-
Critical Hdwy	-	-	4.4	-	6.84	6.44
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	3.1	-	3	3.1
Pot Cap-1 Maneuver	-	-	622	-	168	437
Stage 1	-	-	-	-	504	-
Stage 2	-	-	-	-	585	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	622	-	148	437
Mov Cap-2 Maneuver	-	-	-	-	148	-
Stage 1	-	-	-	-	504	-
Stage 2	-	-	-	-	516	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.2	38.8
HCM LOS			E

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	211	-	-	622	-
HCM Lane V/C Ratio	0.514	-	-	0.087	-
HCM Control Delay (s)	38.8	-	-	11.3	0
HCM Lane LOS	E	-	-	B	A
HCM 95th %tile Q(veh)	2.6	-	-	0.3	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	197	447	331	0	0	175
Future Volume (vph)	197	447	331	0	0	175
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	9	9
Grade (%)		1%	-1%		4%	
Storage Length (ft)	0			0	0	0
Storage Lanes	0			0	1	0
Taper Length (ft)	25				25	
Link Speed (mph)		50	50		35	
Link Distance (ft)		302	2637		857	
Travel Time (s)		4.1	36.0		16.7	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	3%	7%	0%	0%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	686	352	0	186	0
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

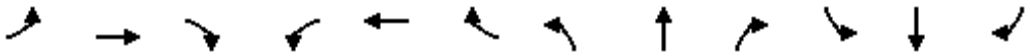
Intersection	
Int Delay, s/veh	3.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	197	447	331	0	0	175
Future Vol, veh/h	197	447	331	0	0	175
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	1	-1	-	4	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	4	3	7	0	0	2
Mvmt Flow	210	476	352	0	0	186

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	352	0	-	0	1248	352
Stage 1	-	-	-	-	352	-
Stage 2	-	-	-	-	896	-
Critical Hdwy	4.3	-	-	-	7.2	6.62
Critical Hdwy Stg 1	-	-	-	-	6.2	-
Critical Hdwy Stg 2	-	-	-	-	6.2	-
Follow-up Hdwy	3	-	-	-	3	3.1
Pot Cap-1 Maneuver	909	-	-	-	159	705
Stage 1	-	-	-	-	755	-
Stage 2	-	-	-	-	364	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	909	-	-	-	109	705
Mov Cap-2 Maneuver	-	-	-	-	109	-
Stage 1	-	-	-	-	518	-
Stage 2	-	-	-	-	364	-

Approach	EB	WB	SB
HCM Control Delay, s	3.1	0	11.9
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	909	-	-	-	705
HCM Lane V/C Ratio	0.231	-	-	-	0.264
HCM Control Delay (s)	10.1	0	-	-	11.9
HCM Lane LOS	B	A	-	-	B
HCM 95th %tile Q(veh)	0.9	-	-	-	1.1



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	379	61	11	281	15	36	29	6	27	48	8
Future Volume (vph)	4	379	61	11	281	15	36	29	6	27	48	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10	9	9	9	9	9	9
Grade (%)		-1%			1%			4%			3%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		50			50			35			35	
Link Distance (ft)		2637			680			298			687	
Travel Time (s)		36.0			9.3			5.8			13.4	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	4%	0%	0%	6%	13%	0%	6%	0%	0%	0%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	467	0	0	324	0	0	75	0	0	87	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	4.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	4	379	61	11	281	15	36	29	6	27	48	8
Future Vol, veh/h	4	379	61	11	281	15	36	29	6	27	48	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-1	-	-	1	-	-	4	-	-	3	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	4	0	0	6	13	0	6	0	0	0	0
Mvmt Flow	4	399	64	12	296	16	38	31	6	28	51	8

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	312	0	0	463	0	0	797	775	431	786	799	304
Stage 1	-	-	-	-	-	-	439	439	-	328	328	-
Stage 2	-	-	-	-	-	-	358	336	-	458	471	-
Critical Hdwy	4.3	-	-	4.3	-	-	7.9	7.36	6.6	7.7	7.1	6.5
Critical Hdwy Stg 1	-	-	-	-	-	-	6.9	6.36	-	6.7	6.1	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.9	6.36	-	6.7	6.1	-
Follow-up Hdwy	3	-	-	3	-	-	3	4.054	3.1	3	4	3.1
Pot Cap-1 Maneuver	939	-	-	832	-	-	286	273	631	304	281	762
Stage 1	-	-	-	-	-	-	618	518	-	745	616	-
Stage 2	-	-	-	-	-	-	699	589	-	616	520	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	939	-	-	832	-	-	239	267	631	270	275	762
Mov Cap-2 Maneuver	-	-	-	-	-	-	239	267	-	270	275	-
Stage 1	-	-	-	-	-	-	614	515	-	741	606	-
Stage 2	-	-	-	-	-	-	623	579	-	570	517	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.3	23.9	22.6
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	264	939	-	-	832	-	-	291
HCM Lane V/C Ratio	0.283	0.004	-	-	0.014	-	-	0.3
HCM Control Delay (s)	23.9	8.9	0	-	9.4	0	-	22.6
HCM Lane LOS	C	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	1.1	0	-	-	0	-	-	1.2

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	410	69	54	423	59	70
Future Volume (vph)	410	69	54	423	59	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	9	9
Grade (%)	1%			-1%	2%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		1	0
Taper Length (ft)			25		25	
Link Speed (mph)	50			50	35	
Link Distance (ft)	353			302	767	
Travel Time (s)	4.8			4.1	14.9	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	0%	0%	1%	0%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	505	0	0	502	136	0
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

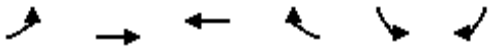
Intersection	
Int Delay, s/veh	3.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	410	69	54	423	59	70
Future Vol, veh/h	410	69	54	423	59	70
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	1	-	-	-1	2	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	1	0	0	1	0	1
Mvmt Flow	432	73	57	445	62	74

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	505	0	1028	469
Stage 1	-	-	-	-	469	-
Stage 2	-	-	-	-	559	-
Critical Hdwy	-	-	4.3	-	6.8	6.41
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	3	-	3	3.1
Pot Cap-1 Maneuver	-	-	804	-	256	612
Stage 1	-	-	-	-	681	-
Stage 2	-	-	-	-	610	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	804	-	232	612
Mov Cap-2 Maneuver	-	-	-	-	232	-
Stage 1	-	-	-	-	681	-
Stage 2	-	-	-	-	553	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.1	21.7
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	350	-	-	804	-
HCM Lane V/C Ratio	0.388	-	-	0.071	-
HCM Control Delay (s)	21.7	-	-	9.8	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	1.8	-	-	0.2	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	112	400	351	1	1	103
Future Volume (vph)	112	400	351	1	1	103
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	9	9
Grade (%)		1%	-1%		4%	
Storage Length (ft)	0			0	0	0
Storage Lanes	0			0	1	0
Taper Length (ft)	25				25	
Link Speed (mph)		50	50		35	
Link Distance (ft)		302	2637		857	
Travel Time (s)		4.1	36.0		16.7	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	1%	3%	0%	0%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	550	378	0	112	0
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

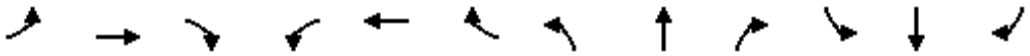
Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	112	400	351	1	1	103
Future Vol, veh/h	112	400	351	1	1	103
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	1	-1	-	4	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	1	3	0	0	3
Mvmt Flow	120	430	377	1	1	111

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	378	0	-	0	1048	378
Stage 1	-	-	-	-	378	-
Stage 2	-	-	-	-	670	-
Critical Hdwy	4.3	-	-	-	7.2	6.63
Critical Hdwy Stg 1	-	-	-	-	6.2	-
Critical Hdwy Stg 2	-	-	-	-	6.2	-
Follow-up Hdwy	3	-	-	-	3	3.1
Pot Cap-1 Maneuver	891	-	-	-	221	678
Stage 1	-	-	-	-	730	-
Stage 2	-	-	-	-	494	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	891	-	-	-	182	678
Mov Cap-2 Maneuver	-	-	-	-	182	-
Stage 1	-	-	-	-	601	-
Stage 2	-	-	-	-	494	-

Approach	EB	WB	SB
HCM Control Delay, s	2.1	0	11.6
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	891	-	-	-	661
HCM Lane V/C Ratio	0.135	-	-	-	0.169
HCM Control Delay (s)	9.7	0	-	-	11.6
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.5	-	-	-	0.6



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	336	65	12	289	10	52	27	11	13	29	7
Future Volume (vph)	6	336	65	12	289	10	52	27	11	13	29	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10	9	9	9	9	9	9
Grade (%)		-1%			1%			4%			3%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		50			50			35			35	
Link Distance (ft)		2637			680			298			687	
Travel Time (s)		36.0			9.3			5.8			13.4	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	1%	0%	0%	2%	0%	4%	6%	0%	0%	0%	14%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	437	0	0	335	0	0	97	0	0	53	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	3.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	6	336	65	12	289	10	52	27	11	13	29	7
Future Vol, veh/h	6	336	65	12	289	10	52	27	11	13	29	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-1	-	-	1	-	-	4	-	-	3	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	0	1	0	0	2	0	4	6	0	0	0	14
Mvmt Flow	6	361	70	13	311	11	56	29	12	14	31	8

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	322	0	0	431	0	0	770	756	396	772	786	317
Stage 1	-	-	-	-	-	-	408	408	-	343	343	-
Stage 2	-	-	-	-	-	-	362	348	-	429	443	-
Critical Hdwy	4.3	-	-	4.3	-	-	7.94	7.36	6.6	7.7	7.1	6.64
Critical Hdwy Stg 1	-	-	-	-	-	-	6.94	6.36	-	6.7	6.1	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.94	6.36	-	6.7	6.1	-
Follow-up Hdwy	3	-	-	3	-	-	3	4.054	3.1	3	4	3.2
Pot Cap-1 Maneuver	931	-	-	854	-	-	298	281	663	312	286	719
Stage 1	-	-	-	-	-	-	645	539	-	729	605	-
Stage 2	-	-	-	-	-	-	692	580	-	642	538	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	931	-	-	854	-	-	264	273	663	275	278	719
Mov Cap-2 Maneuver	-	-	-	-	-	-	264	273	-	275	278	-
Stage 1	-	-	-	-	-	-	639	534	-	722	594	-
Stage 2	-	-	-	-	-	-	636	569	-	591	533	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.4	23.7	19.3
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	288	931	-	-	854	-	-	304
HCM Lane V/C Ratio	0.336	0.007	-	-	0.015	-	-	0.173
HCM Control Delay (s)	23.7	8.9	0	-	9.3	0	-	19.3
HCM Lane LOS	C	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	1.4	0	-	-	0	-	-	0.6

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	284	29	27	505	79	64
Future Volume (vph)	284	29	27	505	79	64
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	9	9
Grade (%)	1%			-1%	2%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		1	0
Taper Length (ft)			25		25	
Link Speed (mph)	50			50	35	
Link Distance (ft)	353			302	767	
Travel Time (s)	4.8			4.1	14.9	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	6%	0%	8%	5%	0%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	333	0	0	566	152	0
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

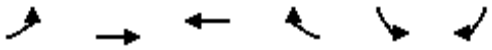
Intersection	
Int Delay, s/veh	3.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	284	29	27	505	79	64
Future Vol, veh/h	284	29	27	505	79	64
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	1	-	-	-1	2	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	6	0	8	5	0	2
Mvmt Flow	302	31	29	537	84	68

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	333	0	913	318
Stage 1	-	-	-	-	318	-
Stage 2	-	-	-	-	595	-
Critical Hdwy	-	-	4.4	-	6.8	6.42
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	3.1	-	3	3.1
Pot Cap-1 Maneuver	-	-	889	-	305	753
Stage 1	-	-	-	-	818	-
Stage 2	-	-	-	-	584	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	889	-	291	753
Mov Cap-2 Maneuver	-	-	-	-	291	-
Stage 1	-	-	-	-	818	-
Stage 2	-	-	-	-	557	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	19.4
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	401	-	-	889	-
HCM Lane V/C Ratio	0.379	-	-	0.032	-
HCM Control Delay (s)	19.4	-	-	9.2	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	1.7	-	-	0.1	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	152	194	390	1	1	145
Future Volume (vph)	152	194	390	1	1	145
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	9	9
Grade (%)		1%	-1%		4%	
Storage Length (ft)	0			0	0	0
Storage Lanes	0			0	1	0
Taper Length (ft)	25				25	
Link Speed (mph)		50	50		35	
Link Distance (ft)		302	2637		857	
Travel Time (s)		4.1	36.0		16.7	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	9%	6%	0%	0%	5%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	368	416	0	155	0
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

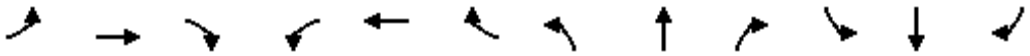
Intersection	
Int Delay, s/veh	3.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	152	194	390	1	1	145
Future Vol, veh/h	152	194	390	1	1	145
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	1	-1	-	4	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	1	9	6	0	0	5
Mvmt Flow	162	206	415	1	1	154

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	416	0	-	0	946	416
Stage 1	-	-	-	-	416	-
Stage 2	-	-	-	-	530	-
Critical Hdwy	4.3	-	-	-	7.2	6.65
Critical Hdwy Stg 1	-	-	-	-	6.2	-
Critical Hdwy Stg 2	-	-	-	-	6.2	-
Follow-up Hdwy	3	-	-	-	3	3.1
Pot Cap-1 Maneuver	864	-	-	-	262	641
Stage 1	-	-	-	-	694	-
Stage 2	-	-	-	-	596	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	864	-	-	-	206	641
Mov Cap-2 Maneuver	-	-	-	-	206	-
Stage 1	-	-	-	-	547	-
Stage 2	-	-	-	-	596	-

Approach	EB	WB	SB
HCM Control Delay, s	4.4	0	12.5
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	864	-	-	-	632
HCM Lane V/C Ratio	0.187	-	-	-	0.246
HCM Control Delay (s)	10.1	0	-	-	12.5
HCM Lane LOS	B	A	-	-	B
HCM 95th %tile Q(veh)	0.7	-	-	-	1



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	174	19	4	331	30	55	30	9	15	20	5
Future Volume (vph)	3	174	19	4	331	30	55	30	9	15	20	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10	9	9	9	9	9	9
Grade (%)		-1%			1%			4%			3%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		50			50			35			35	
Link Distance (ft)		2637			680			298			687	
Travel Time (s)		36.0			9.3			5.8			13.4	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	11%	0%	0%	5%	0%	0%	15%	100%	0%	8%	20%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	215	0	0	401	0	0	103	0	0	43	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	3.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	3	174	19	4	331	30	55	30	9	15	20	5
Future Vol, veh/h	3	174	19	4	331	30	55	30	9	15	20	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-1	-	-	1	-	-	4	-	-	3	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	0	11	0	0	5	0	0	15	100	0	8	20
Mvmt Flow	3	191	21	4	364	33	60	33	10	16	22	5

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	397	0	0	212	0	0	610	613	202	618	607	381
Stage 1	-	-	-	-	-	-	208	208	-	389	389	-
Stage 2	-	-	-	-	-	-	402	405	-	229	218	-
Critical Hdwy	4.3	-	-	4.3	-	-	7.9	7.45	7.6	7.7	7.18	6.7
Critical Hdwy Stg 1	-	-	-	-	-	-	6.9	6.45	-	6.7	6.18	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.9	6.45	-	6.7	6.18	-
Follow-up Hdwy	3	-	-	3	-	-	3	4.135	3.2	3	4.072	3.2
Pot Cap-1 Maneuver	877	-	-	1016	-	-	401	341	802	409	364	653
Stage 1	-	-	-	-	-	-	877	674	-	681	560	-
Stage 2	-	-	-	-	-	-	654	527	-	861	686	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	877	-	-	1016	-	-	377	338	802	371	361	653
Mov Cap-2 Maneuver	-	-	-	-	-	-	377	338	-	371	361	-
Stage 1	-	-	-	-	-	-	873	671	-	678	557	-
Stage 2	-	-	-	-	-	-	620	524	-	805	683	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.1	17.9	15.5
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	382	877	-	-	1016	-	-	387
HCM Lane V/C Ratio	0.27	0.004	-	-	0.004	-	-	0.114
HCM Control Delay (s)	17.9	9.1	0	-	8.6	0	-	15.5
HCM Lane LOS	C	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	1.1	0	-	-	0	-	-	0.4

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	1	142	0	2	54
Future Volume (vph)	0	1	142	0	2	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	10	10	10	10
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	0		0	0	
Taper Length (ft)	25				25	
Link Speed (mph)	25		35			35
Link Distance (ft)	500		353			767
Travel Time (s)	13.6		6.9			14.9
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	1%	2%	2%	6%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1	0	158	0	0	62
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	1	142	0	2	54
Future Vol, veh/h	0	1	142	0	2	54
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	1	2	2	6
Mvmt Flow	0	1	158	0	2	60

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	222	158	0	0	158	0
Stage 1	158	-	-	-	-	-
Stage 2	64	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.3	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3	3.1	-	-	3	-
Pot Cap-1 Maneuver	885	945	-	-	1060	-
Stage 1	1010	-	-	-	-	-
Stage 2	1119	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	883	945	-	-	1060	-
Mov Cap-2 Maneuver	883	-	-	-	-	-
Stage 1	1010	-	-	-	-	-
Stage 2	1117	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.8	0	0.3
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	945	1060	-
HCM Lane V/C Ratio	-	-	0.001	0.002	-
HCM Control Delay (s)	-	-	8.8	8.4	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	610	131	75	450	67	58
Future Volume (vph)	610	131	75	450	67	58
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	9	9
Grade (%)	1%			-1%	2%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		1	0
Taper Length (ft)			25		25	
Link Speed (mph)	50			50	35	
Link Distance (ft)	353			302	767	
Travel Time (s)	4.8			4.1	14.9	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	4%	6%	4%	4%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	788	0	0	559	133	0
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

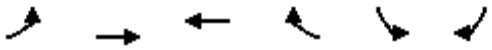
Intersection	
Int Delay, s/veh	6.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	610	131	75	450	67	58
Future Vol, veh/h	610	131	75	450	67	58
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	1	-	-	-1	2	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	3	4	6	4	4	4
Mvmt Flow	649	139	80	479	71	62

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	788	0	1358	719
Stage 1	-	-	-	-	719	-
Stage 2	-	-	-	-	639	-
Critical Hdwy	-	-	4.4	-	6.84	6.44
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	3.1	-	3	3.1
Pot Cap-1 Maneuver	-	-	611	-	152	430
Stage 1	-	-	-	-	497	-
Stage 2	-	-	-	-	549	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	611	-	125	430
Mov Cap-2 Maneuver	-	-	-	-	125	-
Stage 1	-	-	-	-	497	-
Stage 2	-	-	-	-	451	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.7	61.9
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	186	-	-	611	-
HCM Lane V/C Ratio	0.715	-	-	0.131	-
HCM Control Delay (s)	61.9	-	-	11.8	0
HCM Lane LOS	F	-	-	B	A
HCM 95th %tile Q(veh)	4.5	-	-	0.4	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	201	455	346	0	0	184
Future Volume (vph)	201	455	346	0	0	184
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	9	9
Grade (%)		1%	-1%		4%	
Storage Length (ft)	0			0	0	0
Storage Lanes	0			0	1	0
Taper Length (ft)	25				25	
Link Speed (mph)		50	50		35	
Link Distance (ft)		302	2637		857	
Travel Time (s)		4.1	36.0		16.7	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	3%	7%	0%	0%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	698	368	0	196	0
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

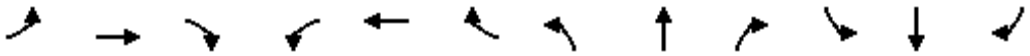
Intersection	
Int Delay, s/veh	3.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	201	455	346	0	0	184
Future Vol, veh/h	201	455	346	0	0	184
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	1	-1	-	4	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	4	3	7	0	0	2
Mvmt Flow	214	484	368	0	0	196

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	368	0	-	0	1280	368
Stage 1	-	-	-	-	368	-
Stage 2	-	-	-	-	912	-
Critical Hdwy	4.3	-	-	-	7.2	6.62
Critical Hdwy Stg 1	-	-	-	-	6.2	-
Critical Hdwy Stg 2	-	-	-	-	6.2	-
Follow-up Hdwy	3	-	-	-	3	3.1
Pot Cap-1 Maneuver	898	-	-	-	151	689
Stage 1	-	-	-	-	739	-
Stage 2	-	-	-	-	356	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	898	-	-	-	102	689
Mov Cap-2 Maneuver	-	-	-	-	102	-
Stage 1	-	-	-	-	498	-
Stage 2	-	-	-	-	356	-

Approach	EB	WB	SB
HCM Control Delay, s	3.1	0	12.3
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	898	-	-	-	689
HCM Lane V/C Ratio	0.238	-	-	-	0.284
HCM Control Delay (s)	10.3	0	-	-	12.3
HCM Lane LOS	B	A	-	-	B
HCM 95th %tile Q(veh)	0.9	-	-	-	1.2



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	387	61	11	296	15	36	29	6	27	48	8
Future Volume (vph)	4	387	61	11	296	15	36	29	6	27	48	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10	9	9	9	9	9	9
Grade (%)		-1%			1%			4%			3%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		50			50			35			35	
Link Distance (ft)		2637			680			298			687	
Travel Time (s)		36.0			9.3			5.8			13.4	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	4%	0%	0%	6%	13%	0%	6%	0%	0%	0%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	475	0	0	340	0	0	75	0	0	87	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	4.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	4	387	61	11	296	15	36	29	6	27	48	8
Future Vol, veh/h	4	387	61	11	296	15	36	29	6	27	48	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-1	-	-	1	-	-	4	-	-	3	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	4	0	0	6	13	0	6	0	0	0	0
Mvmt Flow	4	407	64	12	312	16	38	31	6	28	51	8

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	328	0	0	471	0	0	821	799	439	810	823	320
Stage 1	-	-	-	-	-	-	447	447	-	344	344	-
Stage 2	-	-	-	-	-	-	374	352	-	466	479	-
Critical Hdwy	4.3	-	-	4.3	-	-	7.9	7.36	6.6	7.7	7.1	6.5
Critical Hdwy Stg 1	-	-	-	-	-	-	6.9	6.36	-	6.7	6.1	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.9	6.36	-	6.7	6.1	-
Follow-up Hdwy	3	-	-	3	-	-	3	4.054	3.1	3	4	3.1
Pot Cap-1 Maneuver	927	-	-	827	-	-	273	263	624	292	271	746
Stage 1	-	-	-	-	-	-	610	513	-	728	605	-
Stage 2	-	-	-	-	-	-	682	578	-	608	515	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	927	-	-	827	-	-	226	257	624	258	264	746
Mov Cap-2 Maneuver	-	-	-	-	-	-	226	257	-	258	264	-
Stage 1	-	-	-	-	-	-	606	510	-	724	594	-
Stage 2	-	-	-	-	-	-	606	568	-	562	512	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.3	25.2	23.7
HCM LOS			D	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	252	927	-	-	827	-	-	279
HCM Lane V/C Ratio	0.297	0.005	-	-	0.014	-	-	0.313
HCM Control Delay (s)	25.2	8.9	0	-	9.4	0	-	23.7
HCM Lane LOS	D	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	1.2	0	-	-	0	-	-	1.3

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	3	23	101	6	45	161
Future Volume (vph)	3	23	101	6	45	161
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	10	10	10	10
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	0		0	0	
Taper Length (ft)	25				25	
Link Speed (mph)	25		35			35
Link Distance (ft)	500		353			767
Travel Time (s)	13.6		6.9			14.9
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	4%	2%	2%	5%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	29	0	119	0	0	229
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	1.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	3	23	101	6	45	161
Future Vol, veh/h	3	23	101	6	45	161
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	4	2	2	5
Mvmt Flow	3	26	112	7	50	179

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	395	116	0	0	119	0
Stage 1	116	-	-	-	-	-
Stage 2	279	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.3	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3	3.1	-	-	3	-
Pot Cap-1 Maneuver	696	999	-	-	1093	-
Stage 1	1057	-	-	-	-	-
Stage 2	884	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	661	999	-	-	1093	-
Mov Cap-2 Maneuver	661	-	-	-	-	-
Stage 1	1057	-	-	-	-	-
Stage 2	839	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.9	0	1.8
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	943	1093	-
HCM Lane V/C Ratio	-	-	0.031	0.046	-
HCM Control Delay (s)	-	-	8.9	8.5	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0.1	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	410	115	109	423	109	129
Future Volume (vph)	410	115	109	423	109	129
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	9	9
Grade (%)	1%			-1%	2%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		1	0
Taper Length (ft)			25		25	
Link Speed (mph)	50			50	35	
Link Distance (ft)	353			302	767	
Travel Time (s)	4.8			4.1	14.9	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	0%	0%	1%	0%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	553	0	0	560	251	0
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

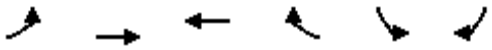
Intersection	
Int Delay, s/veh	14.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	410	115	109	423	109	129
Future Vol, veh/h	410	115	109	423	109	129
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	1	-	-	-1	2	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	1	0	0	1	0	1
Mvmt Flow	432	121	115	445	115	136

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	553	0	1168	493
Stage 1	-	-	-	-	493	-
Stage 2	-	-	-	-	675	-
Critical Hdwy	-	-	4.3	-	6.8	6.41
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	3	-	3	3.1
Pot Cap-1 Maneuver	-	-	774	-	207	592
Stage 1	-	-	-	-	661	-
Stage 2	-	-	-	-	529	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	774	-	166	592
Mov Cap-2 Maneuver	-	-	-	-	166	-
Stage 1	-	-	-	-	661	-
Stage 2	-	-	-	-	425	-

Approach	EB	WB	NB
HCM Control Delay, s	0	2.1	76.6
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	272	-	-	774	-
HCM Lane V/C Ratio	0.921	-	-	0.148	-
HCM Control Delay (s)	76.6	-	-	10.5	0
HCM Lane LOS	F	-	-	B	A
HCM 95th %tile Q(veh)	8.4	-	-	0.5	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	134	437	385	1	1	124
Future Volume (vph)	134	437	385	1	1	124
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	9	9
Grade (%)		1%	-1%		4%	
Storage Length (ft)	0			0	0	0
Storage Lanes	0			0	1	0
Taper Length (ft)	25				25	
Link Speed (mph)		50	50		35	
Link Distance (ft)		302	2637		857	
Travel Time (s)		4.1	36.0		16.7	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	1%	3%	0%	0%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	614	415	0	134	0
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

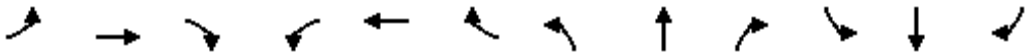
Intersection	
Int Delay, s/veh	2.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	134	437	385	1	1	124
Future Vol, veh/h	134	437	385	1	1	124
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	1	-1	-	4	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	1	3	0	0	3
Mvmt Flow	144	470	414	1	1	133

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	415	0	-	0	1173	415
Stage 1	-	-	-	-	415	-
Stage 2	-	-	-	-	758	-
Critical Hdwy	4.3	-	-	-	7.2	6.63
Critical Hdwy Stg 1	-	-	-	-	6.2	-
Critical Hdwy Stg 2	-	-	-	-	6.2	-
Follow-up Hdwy	3	-	-	-	3	3.1
Pot Cap-1 Maneuver	865	-	-	-	180	643
Stage 1	-	-	-	-	695	-
Stage 2	-	-	-	-	439	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	865	-	-	-	140	643
Mov Cap-2 Maneuver	-	-	-	-	140	-
Stage 1	-	-	-	-	539	-
Stage 2	-	-	-	-	439	-

Approach	EB	WB	SB
HCM Control Delay, s	2.3	0	12.3
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	865	-	-	-	625
HCM Lane V/C Ratio	0.167	-	-	-	0.215
HCM Control Delay (s)	10	0	-	-	12.3
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.6	-	-	-	0.8



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	373	65	12	323	10	52	27	11	13	29	7
Future Volume (vph)	6	373	65	12	323	10	52	27	11	13	29	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10	9	9	9	9	9	9
Grade (%)		-1%			1%			4%			3%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		50			50			35			35	
Link Distance (ft)		2637			680			298			687	
Travel Time (s)		36.0			9.3			5.8			13.4	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	1%	0%	0%	2%	0%	4%	6%	0%	0%	0%	14%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	477	0	0	371	0	0	97	0	0	53	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	6	373	65	12	323	10	52	27	11	13	29	7
Future Vol, veh/h	6	373	65	12	323	10	52	27	11	13	29	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-1	-	-	1	-	-	4	-	-	3	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	0	1	0	0	2	0	4	6	0	0	0	14
Mvmt Flow	6	401	70	13	347	11	56	29	12	14	31	8

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	358	0	0	471	0	0	846	832	436	848	862	353
Stage 1	-	-	-	-	-	-	448	448	-	379	379	-
Stage 2	-	-	-	-	-	-	398	384	-	469	483	-
Critical Hdwy	4.3	-	-	4.3	-	-	7.94	7.36	6.6	7.7	7.1	6.64
Critical Hdwy Stg 1	-	-	-	-	-	-	6.94	6.36	-	6.7	6.1	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.94	6.36	-	6.7	6.1	-
Follow-up Hdwy	3	-	-	3	-	-	3	4.054	3.1	3	4	3.2
Pot Cap-1 Maneuver	905	-	-	827	-	-	259	250	626	273	256	684
Stage 1	-	-	-	-	-	-	606	512	-	691	580	-
Stage 2	-	-	-	-	-	-	655	555	-	606	513	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	905	-	-	827	-	-	227	243	626	238	249	684
Mov Cap-2 Maneuver	-	-	-	-	-	-	227	243	-	238	249	-
Stage 1	-	-	-	-	-	-	601	507	-	685	568	-
Stage 2	-	-	-	-	-	-	600	544	-	555	508	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.3	27.9	21.5
HCM LOS			D	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	252	905	-	-	827	-	-	270
HCM Lane V/C Ratio	0.384	0.007	-	-	0.016	-	-	0.195
HCM Control Delay (s)	27.9	9	0	-	9.4	0	-	21.5
HCM Lane LOS	D	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	1.7	0	-	-	0	-	-	0.7

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	13	109	129	12	101	123
Future Volume (vph)	13	109	129	12	101	123
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	10	10	10	10
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	0		0	0	
Taper Length (ft)	25				25	
Link Speed (mph)	25		35			35
Link Distance (ft)	500		353			767
Travel Time (s)	13.6		6.9			14.9
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	1%	2%	2%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	135	0	156	0	0	249
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	4.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	13	109	129	12	101	123
Future Vol, veh/h	13	109	129	12	101	123
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	1	2	2	0
Mvmt Flow	14	121	143	13	112	137

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	511	150	0	0	156	0
Stage 1	150	-	-	-	-	-
Stage 2	361	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.3	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3	3.1	-	-	3	-
Pot Cap-1 Maneuver	592	955	-	-	1062	-
Stage 1	1019	-	-	-	-	-
Stage 2	807	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	525	955	-	-	1062	-
Mov Cap-2 Maneuver	525	-	-	-	-	-
Stage 1	1019	-	-	-	-	-
Stage 2	715	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.8	0	4
HCM LOS	A		

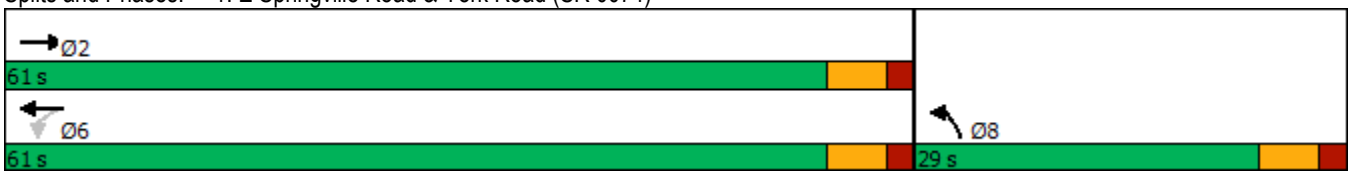
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	878	1062	-
HCM Lane V/C Ratio	-	-	0.154	0.106	-
HCM Control Delay (s)	-	-	9.8	8.8	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.5	0.4	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	410	115	109	423	109	129
Future Volume (vph)	410	115	109	423	109	129
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (ft)	10	10	10	10	9	9
Grade (%)	1%			-1%	2%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		1	0
Taper Length (ft)			25		25	
Right Turn on Red		Yes				Yes
Link Speed (mph)	50			50	35	
Link Distance (ft)	353			302	1148	
Travel Time (s)	4.8			4.1	22.4	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	0%	0%	1%	0%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	553	0	0	560	251	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	2			6	8	
Permitted Phases			6			
Detector Phase	2		6	6	8	
Switch Phase						
Minimum Initial (s)	5.0		5.0	5.0	5.0	
Minimum Split (s)	24.0		24.0	24.0	24.0	
Total Split (s)	61.0		61.0	61.0	29.0	
Total Split (%)	67.8%		67.8%	67.8%	32.2%	
Maximum Green (s)	55.0		55.0	55.0	23.0	
Yellow Time (s)	4.0		4.0	4.0	4.0	
All-Red Time (s)	2.0		2.0	2.0	2.0	
Lost Time Adjust (s)	-1.0			-1.0	-1.0	
Total Lost Time (s)	5.0			5.0	5.0	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Minimum Gap (s)	3.0		3.0	3.0	3.0	
Time Before Reduce (s)	0.0		0.0	0.0	0.0	
Time To Reduce (s)	0.0		0.0	0.0	0.0	
Recall Mode	None		None	None	Min	
Walk Time (s)						
Flash Dont Walk (s)						
Pedestrian Calls (#/hr)						
v/c Ratio	0.62			0.82	0.59	
Control Delay	11.8			22.3	23.3	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Queue Delay	0.0			0.0	0.0	
Total Delay	11.8			22.3	23.3	
Queue Length 50th (ft)	100			130	52	
Queue Length 95th (ft)	240			337	170	
Internal Link Dist (ft)	273			222	1068	
Turn Bay Length (ft)						
Base Capacity (vph)	1421			1099	707	
Starvation Cap Reductn	0			0	0	
Spillback Cap Reductn	0			0	0	
Storage Cap Reductn	0			0	0	
Reduced v/c Ratio	0.39			0.51	0.36	

Intersection Summary	
Area Type:	Other
Cycle Length: 90	
Actuated Cycle Length: 58.6	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	

Splits and Phases: 1: E Springville Road & York Road (SR 0074)



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	410	115	109	423	109	129
Future Volume (veh/h)	410	115	109	423	109	129
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	1780	1794	1837	1823	1707	1693
Adj Flow Rate, veh/h	432	121	115	445	115	136
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	0	0	1	0	1
Cap, veh/h	737	206	189	628	167	197
Arrive On Green	0.55	0.53	0.53	0.55	0.24	0.22
Sat Flow, veh/h	1338	375	179	1141	695	822
Grp Volume(v), veh/h	0	553	560	0	252	0
Grp Sat Flow(s),veh/h/ln	0	1713	1319	0	1524	0
Q Serve(g_s), s	0.0	10.3	7.5	0.0	7.2	0.0
Cycle Q Clear(g_c), s	0.0	10.3	17.8	0.0	7.2	0.0
Prop In Lane		0.22	0.21		0.46	0.54
Lane Grp Cap(c), veh/h	0	943	790	0	365	0
V/C Ratio(X)	0.00	0.59	0.71	0.00	0.69	0.00
Avail Cap(c_a), veh/h	0	2009	1702	0	766	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	7.2	8.6	0.0	16.8	0.0
Incr Delay (d2), s/veh	0.0	0.6	1.2	0.0	2.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	3.5	4.1	0.0	4.3	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	7.8	9.8	0.0	19.1	0.0
LnGrp LOS	A	A	A	A	B	A
Approach Vol, veh/h	553			560	252	
Approach Delay, s/veh	7.8			9.8	19.1	
Approach LOS	A			A	B	

Timer - Assigned Phs	2				6	8
Phs Duration (G+Y+Rc), s	31.3				31.3	16.4
Change Period (Y+Rc), s	6.0				6.0	6.0
Max Green Setting (Gmax), s	55.0				55.0	23.0
Max Q Clear Time (g_c+I1), s	12.3				19.8	9.7
Green Ext Time (p_c), s	5.0				5.5	0.7

Intersection Summary	
HCM 6th Ctrl Delay	10.7
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Full Build-Out

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	293	28	26	522	79	67
Future Volume (vph)	293	28	26	522	79	67
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	9	9
Grade (%)	1%			-1%	2%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		1	0
Taper Length (ft)			25		25	
Link Speed (mph)	50			50	35	
Link Distance (ft)	353			302	767	
Travel Time (s)	4.8			4.1	14.9	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	6%	0%	8%	5%	0%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	342	0	0	583	155	0
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

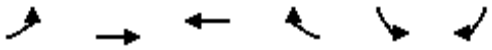
Intersection	
Int Delay, s/veh	3.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	293	28	26	522	79	67
Future Vol, veh/h	293	28	26	522	79	67
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	1	-	-	-1	2	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	6	0	8	5	0	2
Mvmt Flow	312	30	28	555	84	71

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	342	0	938	327
Stage 1	-	-	-	-	327	-
Stage 2	-	-	-	-	611	-
Critical Hdwy	-	-	4.4	-	6.8	6.42
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	3.1	-	3	3.1
Pot Cap-1 Maneuver	-	-	883	-	294	744
Stage 1	-	-	-	-	809	-
Stage 2	-	-	-	-	572	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	883	-	280	744
Mov Cap-2 Maneuver	-	-	-	-	280	-
Stage 1	-	-	-	-	809	-
Stage 2	-	-	-	-	546	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	20.1
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	392	-	-	883	-
HCM Lane V/C Ratio	0.396	-	-	0.031	-
HCM Control Delay (s)	20.1	-	-	9.2	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	1.9	-	-	0.1	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	157	200	401	1	1	150
Future Volume (vph)	157	200	401	1	1	150
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	9	9
Grade (%)		1%	-1%		4%	
Storage Length (ft)	0			0	0	0
Storage Lanes	0			0	1	0
Taper Length (ft)	25				25	
Link Speed (mph)		50	50		35	
Link Distance (ft)		302	2637		857	
Travel Time (s)		4.1	36.0		16.7	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	9%	6%	0%	0%	5%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	380	428	0	161	0
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

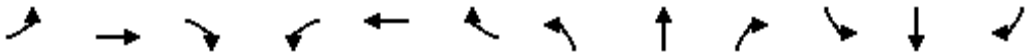
Intersection	
Int Delay, s/veh	3.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	157	200	401	1	1	150
Future Vol, veh/h	157	200	401	1	1	150
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	1	-1	-	4	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	1	9	6	0	0	5
Mvmt Flow	167	213	427	1	1	160

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	428	0	-	0	975	428
Stage 1	-	-	-	-	428	-
Stage 2	-	-	-	-	547	-
Critical Hdwy	4.3	-	-	-	7.2	6.65
Critical Hdwy Stg 1	-	-	-	-	6.2	-
Critical Hdwy Stg 2	-	-	-	-	6.2	-
Follow-up Hdwy	3	-	-	-	3	3.1
Pot Cap-1 Maneuver	856	-	-	-	249	630
Stage 1	-	-	-	-	683	-
Stage 2	-	-	-	-	582	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	856	-	-	-	194	630
Mov Cap-2 Maneuver	-	-	-	-	194	-
Stage 1	-	-	-	-	532	-
Stage 2	-	-	-	-	582	-

Approach	EB	WB	SB
HCM Control Delay, s	4.5	0	12.8
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	856	-	-	-	621
HCM Lane V/C Ratio	0.195	-	-	-	0.259
HCM Control Delay (s)	10.2	0	-	-	12.8
HCM Lane LOS	B	A	-	-	B
HCM 95th %tile Q(veh)	0.7	-	-	-	1



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	180	19	4	341	31	56	31	9	16	21	5
Future Volume (vph)	3	180	19	4	341	31	56	31	9	16	21	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10	9	9	9	9	9	9
Grade (%)		-1%			1%			4%			3%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		50			50			35			35	
Link Distance (ft)		2637			680			298			687	
Travel Time (s)		36.0			9.3			5.8			13.4	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	11%	0%	0%	5%	0%	0%	15%	100%	0%	8%	20%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	222	0	0	413	0	0	106	0	0	46	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	3.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	3	180	19	4	341	31	56	31	9	16	21	5
Future Vol, veh/h	3	180	19	4	341	31	56	31	9	16	21	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-1	-	-	1	-	-	4	-	-	3	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	0	11	0	0	5	0	0	15	100	0	8	20
Mvmt Flow	3	198	21	4	375	34	62	34	10	18	23	5

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	409	0	0	219	0	0	629	632	209	637	625	392
Stage 1	-	-	-	-	-	-	215	215	-	400	400	-
Stage 2	-	-	-	-	-	-	414	417	-	237	225	-
Critical Hdwy	4.3	-	-	4.3	-	-	7.9	7.45	7.6	7.7	7.18	6.7
Critical Hdwy Stg 1	-	-	-	-	-	-	6.9	6.45	-	6.7	6.18	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.9	6.45	-	6.7	6.18	-
Follow-up Hdwy	3	-	-	3	-	-	3	4.135	3.2	3	4.072	3.2
Pot Cap-1 Maneuver	869	-	-	1011	-	-	388	331	793	396	355	642
Stage 1	-	-	-	-	-	-	868	668	-	670	553	-
Stage 2	-	-	-	-	-	-	642	519	-	851	681	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	869	-	-	1011	-	-	363	328	793	358	352	642
Mov Cap-2 Maneuver	-	-	-	-	-	-	363	328	-	358	352	-
Stage 1	-	-	-	-	-	-	865	665	-	667	550	-
Stage 2	-	-	-	-	-	-	607	516	-	794	678	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.1	18.6	15.9
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	369	869	-	-	1011	-	-	375
HCM Lane V/C Ratio	0.286	0.004	-	-	0.004	-	-	0.123
HCM Control Delay (s)	18.6	9.2	0	-	8.6	0	-	15.9
HCM Lane LOS	C	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	1.2	0	-	-	0	-	-	0.4

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	629	112	53	464	56	48
Future Volume (vph)	629	112	53	464	56	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	9	9
Grade (%)	1%			-1%	2%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		1	0
Taper Length (ft)			25		25	
Link Speed (mph)	50			50	35	
Link Distance (ft)	353			302	767	
Travel Time (s)	4.8			4.1	14.9	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	4%	6%	4%	4%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	788	0	0	550	111	0
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

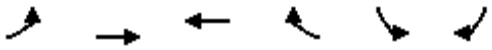
Intersection	
Int Delay, s/veh	3.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	629	112	53	464	56	48
Future Vol, veh/h	629	112	53	464	56	48
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	1	-	-	-1	2	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	3	4	6	4	4	4
Mvmt Flow	669	119	56	494	60	51

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	788	0	1335	729
Stage 1	-	-	-	-	729	-
Stage 2	-	-	-	-	606	-
Critical Hdwy	-	-	4.4	-	6.84	6.44
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	3.1	-	3	3.1
Pot Cap-1 Maneuver	-	-	611	-	157	424
Stage 1	-	-	-	-	491	-
Stage 2	-	-	-	-	572	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	611	-	137	424
Mov Cap-2 Maneuver	-	-	-	-	137	-
Stage 1	-	-	-	-	491	-
Stage 2	-	-	-	-	500	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.2	43.6
HCM LOS			E

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	199	-	-	611	-
HCM Lane V/C Ratio	0.556	-	-	0.092	-
HCM Control Delay (s)	43.6	-	-	11.5	0
HCM Lane LOS	E	-	-	B	A
HCM 95th %tile Q(veh)	3	-	-	0.3	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	204	461	342	0	0	181
Future Volume (vph)	204	461	342	0	0	181
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	9	9
Grade (%)		1%	-1%		4%	
Storage Length (ft)	0			0	0	0
Storage Lanes	0			0	1	0
Taper Length (ft)	25				25	
Link Speed (mph)		50	50		35	
Link Distance (ft)		302	2637		857	
Travel Time (s)		4.1	36.0		16.7	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	3%	7%	0%	0%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	707	364	0	193	0
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

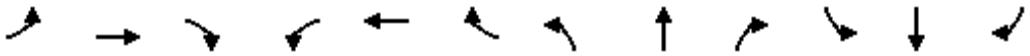
Intersection	
Int Delay, s/veh	3.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	204	461	342	0	0	181
Future Vol, veh/h	204	461	342	0	0	181
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	1	-1	-	4	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	4	3	7	0	0	2
Mvmt Flow	217	490	364	0	0	193

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	364	0	-	0	1288	364
Stage 1	-	-	-	-	364	-
Stage 2	-	-	-	-	924	-
Critical Hdwy	4.3	-	-	-	7.2	6.62
Critical Hdwy Stg 1	-	-	-	-	6.2	-
Critical Hdwy Stg 2	-	-	-	-	6.2	-
Follow-up Hdwy	3	-	-	-	3	3.1
Pot Cap-1 Maneuver	901	-	-	-	149	693
Stage 1	-	-	-	-	743	-
Stage 2	-	-	-	-	350	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	901	-	-	-	100	693
Mov Cap-2 Maneuver	-	-	-	-	100	-
Stage 1	-	-	-	-	497	-
Stage 2	-	-	-	-	350	-

Approach	EB	WB	SB
HCM Control Delay, s	3.1	0	12.2
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	901	-	-	-	693
HCM Lane V/C Ratio	0.241	-	-	-	0.278
HCM Control Delay (s)	10.3	0	-	-	12.2
HCM Lane LOS	B	A	-	-	B
HCM 95th %tile Q(veh)	0.9	-	-	-	1.1



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	392	62	11	291	16	36	30	6	27	48	8
Future Volume (vph)	4	392	62	11	291	16	36	30	6	27	48	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10	9	9	9	9	9	9
Grade (%)		-1%			1%			4%			3%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		50			50			35			35	
Link Distance (ft)		2637			680			298			687	
Travel Time (s)		36.0			9.3			5.8			13.4	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	4%	0%	0%	6%	13%	0%	6%	0%	0%	0%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	482	0	0	335	0	0	76	0	0	87	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	4.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	4	392	62	11	291	16	36	30	6	27	48	8
Future Vol, veh/h	4	392	62	11	291	16	36	30	6	27	48	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-1	-	-	1	-	-	4	-	-	3	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	4	0	0	6	13	0	6	0	0	0	0
Mvmt Flow	4	413	65	12	306	17	38	32	6	28	51	8

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	323	0	0	478	0	0	822	801	446	812	825	315
Stage 1	-	-	-	-	-	-	454	454	-	339	339	-
Stage 2	-	-	-	-	-	-	368	347	-	473	486	-
Critical Hdwy	4.3	-	-	4.3	-	-	7.9	7.36	6.6	7.7	7.1	6.5
Critical Hdwy Stg 1	-	-	-	-	-	-	6.9	6.36	-	6.7	6.1	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.9	6.36	-	6.7	6.1	-
Follow-up Hdwy	3	-	-	3	-	-	3	4.054	3.1	3	4	3.1
Pot Cap-1 Maneuver	931	-	-	822	-	-	273	262	617	291	270	751
Stage 1	-	-	-	-	-	-	604	509	-	733	608	-
Stage 2	-	-	-	-	-	-	688	581	-	602	511	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	931	-	-	822	-	-	226	256	617	256	264	751
Mov Cap-2 Maneuver	-	-	-	-	-	-	226	256	-	256	264	-
Stage 1	-	-	-	-	-	-	600	506	-	729	597	-
Stage 2	-	-	-	-	-	-	612	571	-	555	508	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.3	25.3	23.7
HCM LOS			D	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	252	931	-	-	822	-	-	279
HCM Lane V/C Ratio	0.301	0.005	-	-	0.014	-	-	0.313
HCM Control Delay (s)	25.3	8.9	0	-	9.4	0	-	23.7
HCM Lane LOS	D	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	1.2	0	-	-	0	-	-	1.3

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	423	69	56	437	60	73
Future Volume (vph)	423	69	56	437	60	73
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	9	9
Grade (%)	1%			-1%	2%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		1	0
Taper Length (ft)			25		25	
Link Speed (mph)	50			50	35	
Link Distance (ft)	353			302	767	
Travel Time (s)	4.8			4.1	14.9	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	0%	0%	1%	0%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	518	0	0	519	140	0
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

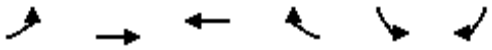
Intersection	
Int Delay, s/veh	3.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	423	69	56	437	60	73
Future Vol, veh/h	423	69	56	437	60	73
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	1	-	-	-1	2	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	1	0	0	1	0	1
Mvmt Flow	445	73	59	460	63	77

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	518	0	1060	482
Stage 1	-	-	-	-	482	-
Stage 2	-	-	-	-	578	-
Critical Hdwy	-	-	4.3	-	6.8	6.41
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	3	-	3	3.1
Pot Cap-1 Maneuver	-	-	796	-	244	601
Stage 1	-	-	-	-	670	-
Stage 2	-	-	-	-	596	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	796	-	220	601
Mov Cap-2 Maneuver	-	-	-	-	220	-
Stage 1	-	-	-	-	670	-
Stage 2	-	-	-	-	536	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.1	23.1
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	337	-	-	796	-
HCM Lane V/C Ratio	0.415	-	-	0.074	-
HCM Control Delay (s)	23.1	-	-	9.9	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	2	-	-	0.2	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	116	413	362	1	1	107
Future Volume (vph)	116	413	362	1	1	107
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	9	9
Grade (%)		1%	-1%		4%	
Storage Length (ft)	0			0	0	0
Storage Lanes	0			0	1	0
Taper Length (ft)	25				25	
Link Speed (mph)		50	50		35	
Link Distance (ft)		302	2637		857	
Travel Time (s)		4.1	36.0		16.7	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	1%	3%	0%	0%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	569	390	0	116	0
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

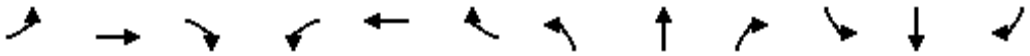
Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	116	413	362	1	1	107
Future Vol, veh/h	116	413	362	1	1	107
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	1	-1	-	4	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	1	3	0	0	3
Mvmt Flow	125	444	389	1	1	115

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	390	0	-	0	1084	390
Stage 1	-	-	-	-	390	-
Stage 2	-	-	-	-	694	-
Critical Hdwy	4.3	-	-	-	7.2	6.63
Critical Hdwy Stg 1	-	-	-	-	6.2	-
Critical Hdwy Stg 2	-	-	-	-	6.2	-
Follow-up Hdwy	3	-	-	-	3	3.1
Pot Cap-1 Maneuver	882	-	-	-	209	667
Stage 1	-	-	-	-	718	-
Stage 2	-	-	-	-	478	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	882	-	-	-	170	667
Mov Cap-2 Maneuver	-	-	-	-	170	-
Stage 1	-	-	-	-	583	-
Stage 2	-	-	-	-	478	-

Approach	EB	WB	SB
HCM Control Delay, s	2.1	0	11.8
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	882	-	-	-	649
HCM Lane V/C Ratio	0.141	-	-	-	0.179
HCM Control Delay (s)	9.8	0	-	-	11.8
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.5	-	-	-	0.6



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	348	66	12	299	11	53	28	11	14	30	7
Future Volume (vph)	6	348	66	12	299	11	53	28	11	14	30	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10	9	9	9	9	9	9
Grade (%)		-1%			1%			4%			3%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		50			50			35			35	
Link Distance (ft)		2637			680			298			687	
Travel Time (s)		36.0			9.3			5.8			13.4	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	1%	0%	0%	2%	0%	4%	6%	0%	0%	0%	14%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	451	0	0	347	0	0	99	0	0	55	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	6	348	66	12	299	11	53	28	11	14	30	7
Future Vol, veh/h	6	348	66	12	299	11	53	28	11	14	30	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-1	-	-	1	-	-	4	-	-	3	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	0	1	0	0	2	0	4	6	0	0	0	14
Mvmt Flow	6	374	71	13	322	12	57	30	12	15	32	8

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	334	0	0	445	0	0	796	782	410	797	811	328
Stage 1	-	-	-	-	-	-	422	422	-	354	354	-
Stage 2	-	-	-	-	-	-	374	360	-	443	457	-
Critical Hdwy	4.3	-	-	4.3	-	-	7.94	7.36	6.6	7.7	7.1	6.64
Critical Hdwy Stg 1	-	-	-	-	-	-	6.94	6.36	-	6.7	6.1	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.94	6.36	-	6.7	6.1	-
Follow-up Hdwy	3	-	-	3	-	-	3	4.054	3.1	3	4	3.2
Pot Cap-1 Maneuver	922	-	-	844	-	-	284	270	650	299	276	708
Stage 1	-	-	-	-	-	-	631	529	-	717	598	-
Stage 2	-	-	-	-	-	-	679	572	-	629	529	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	922	-	-	844	-	-	250	262	650	262	268	708
Mov Cap-2 Maneuver	-	-	-	-	-	-	250	262	-	262	268	-
Stage 1	-	-	-	-	-	-	625	524	-	711	587	-
Stage 2	-	-	-	-	-	-	623	561	-	577	524	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.3	25.4	20.2
HCM LOS			D	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	274	922	-	-	844	-	-	291
HCM Lane V/C Ratio	0.361	0.007	-	-	0.015	-	-	0.188
HCM Control Delay (s)	25.4	8.9	0	-	9.3	0	-	20.2
HCM Lane LOS	D	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	1.6	0	-	-	0	-	-	0.7

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	293	30	28	522	80	69
Future Volume (vph)	293	30	28	522	80	69
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	9	9
Grade (%)	1%			-1%	2%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		1	0
Taper Length (ft)			25		25	
Link Speed (mph)	50			50	35	
Link Distance (ft)	353			302	767	
Travel Time (s)	4.8			4.1	14.9	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	6%	0%	8%	5%	0%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	344	0	0	585	158	0
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

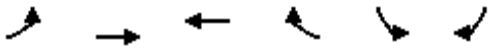
Intersection	
Int Delay, s/veh	3.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	293	30	28	522	80	69
Future Vol, veh/h	293	30	28	522	80	69
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	1	-	-	-1	2	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	6	0	8	5	0	2
Mvmt Flow	312	32	30	555	85	73

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	344	0	943	328
Stage 1	-	-	-	-	328	-
Stage 2	-	-	-	-	615	-
Critical Hdwy	-	-	4.4	-	6.8	6.42
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	3.1	-	3	3.1
Pot Cap-1 Maneuver	-	-	881	-	292	743
Stage 1	-	-	-	-	809	-
Stage 2	-	-	-	-	569	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	881	-	278	743
Mov Cap-2 Maneuver	-	-	-	-	278	-
Stage 1	-	-	-	-	809	-
Stage 2	-	-	-	-	541	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	20.3
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	391	-	-	881	-
HCM Lane V/C Ratio	0.405	-	-	0.034	-
HCM Control Delay (s)	20.3	-	-	9.2	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	1.9	-	-	0.1	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	158	201	402	1	1	151
Future Volume (vph)	158	201	402	1	1	151
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	9	9
Grade (%)		1%	-1%		4%	
Storage Length (ft)	0			0	0	0
Storage Lanes	0			0	1	0
Taper Length (ft)	25				25	
Link Speed (mph)		50	50		35	
Link Distance (ft)		302	2637		857	
Travel Time (s)		4.1	36.0		16.7	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	9%	6%	0%	0%	5%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	382	429	0	162	0
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

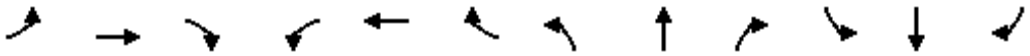
Intersection	
Int Delay, s/veh	3.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	158	201	402	1	1	151
Future Vol, veh/h	158	201	402	1	1	151
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	1	-1	-	4	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	1	9	6	0	0	5
Mvmt Flow	168	214	428	1	1	161

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	429	0	-	0	979	429
Stage 1	-	-	-	-	429	-
Stage 2	-	-	-	-	550	-
Critical Hdwy	4.3	-	-	-	7.2	6.65
Critical Hdwy Stg 1	-	-	-	-	6.2	-
Critical Hdwy Stg 2	-	-	-	-	6.2	-
Follow-up Hdwy	3	-	-	-	3	3.1
Pot Cap-1 Maneuver	855	-	-	-	248	629
Stage 1	-	-	-	-	682	-
Stage 2	-	-	-	-	580	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	855	-	-	-	193	629
Mov Cap-2 Maneuver	-	-	-	-	193	-
Stage 1	-	-	-	-	530	-
Stage 2	-	-	-	-	580	-

Approach	EB	WB	SB
HCM Control Delay, s	4.5	0	12.8
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	855	-	-	-	620
HCM Lane V/C Ratio	0.197	-	-	-	0.261
HCM Control Delay (s)	10.2	0	-	-	12.8
HCM Lane LOS	B	A	-	-	B
HCM 95th %tile Q(veh)	0.7	-	-	-	1



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	181	19	4	342	31	56	31	9	16	21	5
Future Volume (vph)	3	181	19	4	342	31	56	31	9	16	21	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10	9	9	9	9	9	9
Grade (%)		-1%			1%			4%			3%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		50			50			35			35	
Link Distance (ft)		2637			680			298			687	
Travel Time (s)		36.0			9.3			5.8			13.4	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	11%	0%	0%	5%	0%	0%	15%	100%	0%	8%	20%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	223	0	0	414	0	0	106	0	0	46	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	3.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	3	181	19	4	342	31	56	31	9	16	21	5
Future Vol, veh/h	3	181	19	4	342	31	56	31	9	16	21	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-1	-	-	1	-	-	4	-	-	3	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	0	11	0	0	5	0	0	15	100	0	8	20
Mvmt Flow	3	199	21	4	376	34	62	34	10	18	23	5

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	410	0	0	220	0	0	631	634	210	639	627	393
Stage 1	-	-	-	-	-	-	216	216	-	401	401	-
Stage 2	-	-	-	-	-	-	415	418	-	238	226	-
Critical Hdwy	4.3	-	-	4.3	-	-	7.9	7.45	7.6	7.7	7.18	6.7
Critical Hdwy Stg 1	-	-	-	-	-	-	6.9	6.45	-	6.7	6.18	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.9	6.45	-	6.7	6.18	-
Follow-up Hdwy	3	-	-	3	-	-	3	4.135	3.2	3	4.072	3.2
Pot Cap-1 Maneuver	868	-	-	1010	-	-	386	330	792	395	353	641
Stage 1	-	-	-	-	-	-	867	668	-	669	552	-
Stage 2	-	-	-	-	-	-	641	518	-	850	680	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	868	-	-	1010	-	-	361	327	792	357	350	641
Mov Cap-2 Maneuver	-	-	-	-	-	-	361	327	-	357	350	-
Stage 1	-	-	-	-	-	-	864	665	-	666	549	-
Stage 2	-	-	-	-	-	-	606	515	-	793	677	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.1	18.7	16
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	367	868	-	-	1010	-	-	373
HCM Lane V/C Ratio	0.287	0.004	-	-	0.004	-	-	0.124
HCM Control Delay (s)	18.7	9.2	0	-	8.6	0	-	16
HCM Lane LOS	C	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	1.2	0	-	-	0	-	-	0.4

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	1	3	145	1	4	55
Future Volume (vph)	1	3	145	1	4	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	10	10	10	10
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	0		0	0	
Taper Length (ft)	25				25	
Link Speed (mph)	25		35			35
Link Distance (ft)	500		353			767
Travel Time (s)	13.6		6.9			14.9
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	1%	2%	2%	6%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	4	0	162	0	0	65
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	3	145	1	4	55
Future Vol, veh/h	1	3	145	1	4	55
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	1	2	2	6
Mvmt Flow	1	3	161	1	4	61

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	231	162	0	0	162	0
Stage 1	162	-	-	-	-	-
Stage 2	69	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.3	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3	3.1	-	-	3	-
Pot Cap-1 Maneuver	874	940	-	-	1057	-
Stage 1	1005	-	-	-	-	-
Stage 2	1113	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	871	940	-	-	1057	-
Mov Cap-2 Maneuver	871	-	-	-	-	-
Stage 1	1005	-	-	-	-	-
Stage 2	1109	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.9	0	0.6
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	922	1057	-
HCM Lane V/C Ratio	-	-	0.005	0.004	-
HCM Control Delay (s)	-	-	8.9	8.4	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	629	156	103	464	78	74
Future Volume (vph)	629	156	103	464	78	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	9	9
Grade (%)	1%			-1%	2%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		1	0
Taper Length (ft)			25		25	
Link Speed (mph)	50			50	35	
Link Distance (ft)	353			302	767	
Travel Time (s)	4.8			4.1	14.9	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	4%	6%	4%	4%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	835	0	0	604	162	0
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

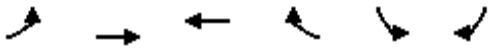
Intersection	
Int Delay, s/veh	16.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	629	156	103	464	78	74
Future Vol, veh/h	629	156	103	464	78	74
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	1	-	-	-1	2	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	3	4	6	4	4	4
Mvmt Flow	669	166	110	494	83	79

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	835	0	1466	752
Stage 1	-	-	-	-	752	-
Stage 2	-	-	-	-	714	-
Critical Hdwy	-	-	4.4	-	6.84	6.44
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	3.1	-	3	3.1
Pot Cap-1 Maneuver	-	-	587	-	128	411
Stage 1	-	-	-	-	477	-
Stage 2	-	-	-	-	500	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	587	-	95	411
Mov Cap-2 Maneuver	-	-	-	-	95	-
Stage 1	-	-	-	-	477	-
Stage 2	-	-	-	-	371	-

Approach	EB	WB	NB
HCM Control Delay, s	0	2.3	150.5
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	152	-	-	587	-
HCM Lane V/C Ratio	1.064	-	-	0.187	-
HCM Control Delay (s)	150.5	-	-	12.5	0
HCM Lane LOS	F	-	-	B	A
HCM 95th %tile Q(veh)	8.4	-	-	0.7	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	214	477	373	0	0	200
Future Volume (vph)	214	477	373	0	0	200
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	9	9
Grade (%)		1%	-1%		4%	
Storage Length (ft)	0			0	0	0
Storage Lanes	0			0	1	0
Taper Length (ft)	25				25	
Link Speed (mph)		50	50		35	
Link Distance (ft)		302	2637		857	
Travel Time (s)		4.1	36.0		16.7	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	3%	7%	0%	0%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	735	397	0	213	0
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

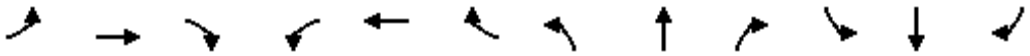
Intersection	
Int Delay, s/veh	3.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	214	477	373	0	0	200
Future Vol, veh/h	214	477	373	0	0	200
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	1	-1	-	4	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	4	3	7	0	0	2
Mvmt Flow	228	507	397	0	0	213

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	397	0	-	0	1360	397
Stage 1	-	-	-	-	397	-
Stage 2	-	-	-	-	963	-
Critical Hdwy	4.3	-	-	-	7.2	6.62
Critical Hdwy Stg 1	-	-	-	-	6.2	-
Critical Hdwy Stg 2	-	-	-	-	6.2	-
Follow-up Hdwy	3	-	-	-	3	3.1
Pot Cap-1 Maneuver	877	-	-	-	132	661
Stage 1	-	-	-	-	711	-
Stage 2	-	-	-	-	332	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	877	-	-	-	84	661
Mov Cap-2 Maneuver	-	-	-	-	84	-
Stage 1	-	-	-	-	454	-
Stage 2	-	-	-	-	332	-

Approach	EB	WB	SB
HCM Control Delay, s	3.3	0	13
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	877	-	-	-	661
HCM Lane V/C Ratio	0.26	-	-	-	0.322
HCM Control Delay (s)	10.5	0	-	-	13
HCM Lane LOS	B	A	-	-	B
HCM 95th %tile Q(veh)	1	-	-	-	1.4



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	408	62	11	322	16	36	30	6	27	48	8
Future Volume (vph)	4	408	62	11	322	16	36	30	6	27	48	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10	9	9	9	9	9	9
Grade (%)		-1%			1%			4%			3%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		50			50			35			35	
Link Distance (ft)		2637			680			298			687	
Travel Time (s)		36.0			9.3			5.8			13.4	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	4%	0%	0%	6%	13%	0%	6%	0%	0%	0%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	498	0	0	368	0	0	76	0	0	87	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	4.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	4	408	62	11	322	16	36	30	6	27	48	8
Future Vol, veh/h	4	408	62	11	322	16	36	30	6	27	48	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-1	-	-	1	-	-	4	-	-	3	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	4	0	0	6	13	0	6	0	0	0	0
Mvmt Flow	4	429	65	12	339	17	38	32	6	28	51	8

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	356	0	0	494	0	0	871	850	462	861	874	348
Stage 1	-	-	-	-	-	-	470	470	-	372	372	-
Stage 2	-	-	-	-	-	-	401	380	-	489	502	-
Critical Hdwy	4.3	-	-	4.3	-	-	7.9	7.36	6.6	7.7	7.1	6.5
Critical Hdwy Stg 1	-	-	-	-	-	-	6.9	6.36	-	6.7	6.1	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.9	6.36	-	6.7	6.1	-
Follow-up Hdwy	3	-	-	3	-	-	3	4.054	3.1	3	4	3.1
Pot Cap-1 Maneuver	906	-	-	811	-	-	250	243	603	267	251	717
Stage 1	-	-	-	-	-	-	589	499	-	698	585	-
Stage 2	-	-	-	-	-	-	655	558	-	588	502	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	906	-	-	811	-	-	204	237	603	233	245	717
Mov Cap-2 Maneuver	-	-	-	-	-	-	204	237	-	233	245	-
Stage 1	-	-	-	-	-	-	585	496	-	694	574	-
Stage 2	-	-	-	-	-	-	580	548	-	542	499	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.3	28.2	26.1
HCM LOS			D	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	230	906	-	-	811	-	-	257
HCM Lane V/C Ratio	0.33	0.005	-	-	0.014	-	-	0.34
HCM Control Delay (s)	28.2	9	0	-	9.5	0	-	26.1
HCM Lane LOS	D	A	A	-	A	A	-	D
HCM 95th %tile Q(veh)	1.4	0	-	-	0	-	-	1.4

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	6	48	104	12	94	165
Future Volume (vph)	6	48	104	12	94	165
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	10	10	10	10
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	0		0	0	
Taper Length (ft)	25				25	
Link Speed (mph)	25		35			35
Link Distance (ft)	500		353			767
Travel Time (s)	13.6		6.9			14.9
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	4%	2%	2%	5%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	60	0	129	0	0	287
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	6	48	104	12	94	165
Future Vol, veh/h	6	48	104	12	94	165
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	4	2	2	5
Mvmt Flow	7	53	116	13	104	183

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	514	123	0	0	129	0
Stage 1	123	-	-	-	-	-
Stage 2	391	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.3	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3	3.1	-	-	3	-
Pot Cap-1 Maneuver	590	990	-	-	1085	-
Stage 1	1049	-	-	-	-	-
Stage 2	780	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	527	990	-	-	1085	-
Mov Cap-2 Maneuver	527	-	-	-	-	-
Stage 1	1049	-	-	-	-	-
Stage 2	697	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.3	0	3.1
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	902	1085	-
HCM Lane V/C Ratio	-	-	0.067	0.096	-
HCM Control Delay (s)	-	-	9.3	8.7	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.3	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	423	146	146	437	143	171
Future Volume (vph)	423	146	146	437	143	171
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	9	9
Grade (%)	1%			-1%	2%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		1	0
Taper Length (ft)			25		25	
Link Speed (mph)	50			50	35	
Link Distance (ft)	353			302	767	
Travel Time (s)	4.8			4.1	14.9	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	0%	0%	1%	0%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	599	0	0	614	331	0
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	66.3

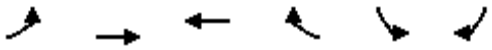
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	423	146	146	437	143	171
Future Vol, veh/h	423	146	146	437	143	171
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	1	-	-	-1	2	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	1	0	0	1	0	1
Mvmt Flow	445	154	154	460	151	180

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	599	0	1290	522
Stage 1	-	-	-	-	522	-
Stage 2	-	-	-	-	768	-
Critical Hdwy	-	-	4.3	-	6.8	6.41
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	3	-	3	3.1
Pot Cap-1 Maneuver	-	-	745	-	171	569
Stage 1	-	-	-	-	638	-
Stage 2	-	-	-	-	471	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	745	-	~ 123	569
Mov Cap-2 Maneuver	-	-	-	-	~ 123	-
Stage 1	-	-	-	-	638	-
Stage 2	-	-	-	-	340	-

Approach	EB	WB	NB
HCM Control Delay, s	0	2.8	$ 304.5
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	215	-	-	745	-
HCM Lane V/C Ratio	1.537	-	-	0.206	-
HCM Control Delay (s)	$ 304.5	-	-	11.1	0
HCM Lane LOS	F	-	-	B	A
HCM 95th %tile Q(veh)	20.5	-	-	0.8	-

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



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	153	474	418	1	1	141
Future Volume (vph)	153	474	418	1	1	141
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	9	9
Grade (%)		1%	-1%		4%	
Storage Length (ft)	0			0	0	0
Storage Lanes	0			0	1	0
Taper Length (ft)	25				25	
Link Speed (mph)		50	50		35	
Link Distance (ft)		302	2637		857	
Travel Time (s)		4.1	36.0		16.7	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	1%	3%	0%	0%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	675	450	0	153	0
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

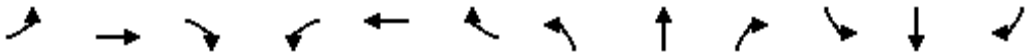
Intersection	
Int Delay, s/veh	2.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	153	474	418	1	1	141
Future Vol, veh/h	153	474	418	1	1	141
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	1	-1	-	4	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	1	3	0	0	3
Mvmt Flow	165	510	449	1	1	152

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	450	0	-	0	1290	450
Stage 1	-	-	-	-	450	-
Stage 2	-	-	-	-	840	-
Critical Hdwy	4.3	-	-	-	7.2	6.63
Critical Hdwy Stg 1	-	-	-	-	6.2	-
Critical Hdwy Stg 2	-	-	-	-	6.2	-
Follow-up Hdwy	3	-	-	-	3	3.1
Pot Cap-1 Maneuver	841	-	-	-	148	612
Stage 1	-	-	-	-	663	-
Stage 2	-	-	-	-	393	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	841	-	-	-	107	612
Mov Cap-2 Maneuver	-	-	-	-	107	-
Stage 1	-	-	-	-	481	-
Stage 2	-	-	-	-	393	-

Approach	EB	WB	SB
HCM Control Delay, s	2.5	0	13.2
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	841	-	-	-	592
HCM Lane V/C Ratio	0.196	-	-	-	0.258
HCM Control Delay (s)	10.3	0	-	-	13.2
HCM Lane LOS	B	A	-	-	B
HCM 95th %tile Q(veh)	0.7	-	-	-	1



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	409	66	12	355	11	53	28	11	14	30	7
Future Volume (vph)	6	409	66	12	355	11	53	28	11	14	30	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10	9	9	9	9	9	9
Grade (%)		-1%			1%			4%			3%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		50			50			35			35	
Link Distance (ft)		2637			680			298			687	
Travel Time (s)		36.0			9.3			5.8			13.4	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	1%	0%	0%	2%	0%	4%	6%	0%	0%	0%	14%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	517	0	0	407	0	0	99	0	0	55	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	4.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	6	409	66	12	355	11	53	28	11	14	30	7
Future Vol, veh/h	6	409	66	12	355	11	53	28	11	14	30	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-1	-	-	1	-	-	4	-	-	3	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	0	1	0	0	2	0	4	6	0	0	0	14
Mvmt Flow	6	440	71	13	382	12	57	30	12	15	32	8

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	394	0	0	511	0	0	922	908	476	923	937	388
Stage 1	-	-	-	-	-	-	488	488	-	414	414	-
Stage 2	-	-	-	-	-	-	434	420	-	509	523	-
Critical Hdwy	4.3	-	-	4.3	-	-	7.94	7.36	6.6	7.7	7.1	6.64
Critical Hdwy Stg 1	-	-	-	-	-	-	6.94	6.36	-	6.7	6.1	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.94	6.36	-	6.7	6.1	-
Follow-up Hdwy	3	-	-	3	-	-	3	4.054	3.1	3	4	3.2
Pot Cap-1 Maneuver	879	-	-	800	-	-	225	222	591	239	228	650
Stage 1	-	-	-	-	-	-	570	487	-	657	557	-
Stage 2	-	-	-	-	-	-	619	531	-	571	489	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	879	-	-	800	-	-	193	215	591	204	221	650
Mov Cap-2 Maneuver	-	-	-	-	-	-	193	215	-	204	221	-
Stage 1	-	-	-	-	-	-	564	482	-	650	545	-
Stage 2	-	-	-	-	-	-	564	520	-	519	484	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.3	34.8	24.7
HCM LOS			D	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	217	879	-	-	800	-	-	237
HCM Lane V/C Ratio	0.456	0.007	-	-	0.016	-	-	0.231
HCM Control Delay (s)	34.8	9.1	0	-	9.6	0	-	24.7
HCM Lane LOS	D	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	2.2	0	-	-	0	-	-	0.9

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	22	181	132	21	167	125
Future Volume (vph)	22	181	132	21	167	125
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	10	10	10	10
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	0		0	0	
Taper Length (ft)	25				25	
Link Speed (mph)	25		35			35
Link Distance (ft)	500		353			767
Travel Time (s)	13.6		6.9			14.9
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	1%	2%	2%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	225	0	170	0	0	325
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	5.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	22	181	132	21	167	125
Future Vol, veh/h	22	181	132	21	167	125
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	1	2	2	0
Mvmt Flow	24	201	147	23	186	139

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	670	159	0	0	170	0
Stage 1	159	-	-	-	-	-
Stage 2	511	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.3	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3	3.1	-	-	3	-
Pot Cap-1 Maneuver	474	944	-	-	1050	-
Stage 1	1008	-	-	-	-	-
Stage 2	683	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	383	944	-	-	1050	-
Mov Cap-2 Maneuver	383	-	-	-	-	-
Stage 1	1008	-	-	-	-	-
Stage 2	552	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.1	0	5.2
HCM LOS	B		

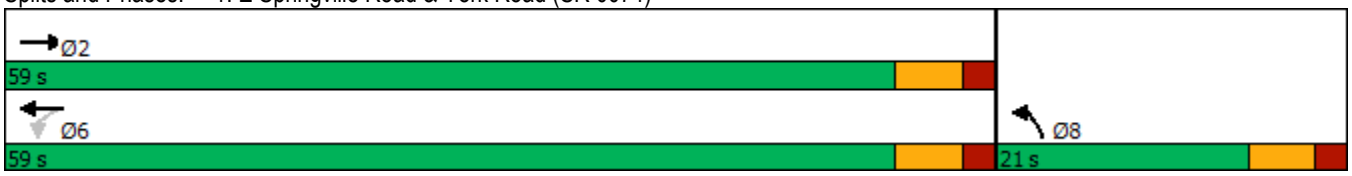
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	815	1050	-
HCM Lane V/C Ratio	-	-	0.277	0.177	-
HCM Control Delay (s)	-	-	11.1	9.2	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	1.1	0.6	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	293	30	28	522	80	69
Future Volume (vph)	293	30	28	522	80	69
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (ft)	10	10	10	10	9	9
Grade (%)	1%			-1%	2%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		1	0
Taper Length (ft)			25		25	
Right Turn on Red		Yes				Yes
Link Speed (mph)	50			50	35	
Link Distance (ft)	353			302	1148	
Travel Time (s)	4.8			4.1	22.4	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	6%	0%	8%	5%	0%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	344	0	0	585	158	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	2			6	8	
Permitted Phases			6			
Detector Phase	2		6	6	8	
Switch Phase						
Minimum Initial (s)	5.0		5.0	5.0	5.0	
Minimum Split (s)	24.0		24.0	24.0	11.0	
Total Split (s)	59.0		59.0	59.0	21.0	
Total Split (%)	73.8%		73.8%	73.8%	26.3%	
Maximum Green (s)	53.0		53.0	53.0	15.0	
Yellow Time (s)	4.0		4.0	4.0	4.0	
All-Red Time (s)	2.0		2.0	2.0	2.0	
Lost Time Adjust (s)	-1.0			-1.0	-1.0	
Total Lost Time (s)	5.0			5.0	5.0	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Minimum Gap (s)	3.0		3.0	3.0	3.0	
Time Before Reduce (s)	0.0		0.0	0.0	0.0	
Time To Reduce (s)	0.0		0.0	0.0	0.0	
Recall Mode	Min		Min	Min	None	
Walk Time (s)						
Flash Dont Walk (s)						
Pedestrian Calls (#/hr)						
v/c Ratio	0.34			0.58	0.43	
Control Delay	6.8			10.2	16.3	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Queue Delay	0.0			0.0	0.0	
Total Delay	6.8			10.2	16.3	
Queue Length 50th (ft)	41			91	23	
Queue Length 95th (ft)	103			225	78	
Internal Link Dist (ft)	273			222	1068	
Turn Bay Length (ft)						
Base Capacity (vph)	1531			1528	563	
Starvation Cap Reductn	0			0	0	
Spillback Cap Reductn	0			0	0	
Storage Cap Reductn	0			0	0	
Reduced v/c Ratio	0.22			0.38	0.28	

Intersection Summary	
Area Type:	Other
Cycle Length: 80	
Actuated Cycle Length: 45.6	
Natural Cycle: 40	
Control Type: Actuated-Uncoordinated	

Splits and Phases: 1: E Springville Road & York Road (SR 0074)



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	293	30	28	522	80	69
Future Volume (veh/h)	293	30	28	522	80	69
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	1710	1794	1724	1766	1707	1680
Adj Flow Rate, veh/h	312	32	30	555	85	73
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	6	0	8	5	0	2
Cap, veh/h	783	80	139	871	141	121
Arrive On Green	0.51	0.48	0.48	0.51	0.17	0.14
Sat Flow, veh/h	1526	156	38	1697	822	706
Grp Volume(v), veh/h	0	344	585	0	159	0
Grp Sat Flow(s),veh/h/ln	0	1682	1735	0	1538	0
Q Serve(g_s), s	0.0	4.0	0.0	0.0	3.1	0.0
Cycle Q Clear(g_c), s	0.0	4.0	7.9	0.0	3.1	0.0
Prop In Lane		0.09	0.05		0.53	0.46
Lane Grp Cap(c), veh/h	0	864	956	0	263	0
V/C Ratio(X)	0.00	0.40	0.61	0.00	0.60	0.00
Avail Cap(c_a), veh/h	0	2866	2975	0	777	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	4.8	5.7	0.0	12.4	0.0
Incr Delay (d2), s/veh	0.0	0.3	0.6	0.0	2.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	0.5	1.6	0.0	1.7	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	5.0	6.3	0.0	14.6	0.0
LnGrp LOS	A	A	A	A	B	A
Approach Vol, veh/h	344			585	159	
Approach Delay, s/veh	5.0			6.3	14.6	
Approach LOS	A			A	B	

Timer - Assigned Phs		2				6	8
Phs Duration (G+Y+Rc), s		21.3				21.3	10.4
Change Period (Y+Rc), s		6.0				6.0	6.0
Max Green Setting (Gmax), s		53.0				53.0	15.0
Max Q Clear Time (g_c+I1), s		6.0				9.9	5.6
Green Ext Time (p_c), s		2.7				5.4	0.3

Intersection Summary	
HCM 6th Ctrl Delay	7.1
HCM 6th LOS	A

Notes

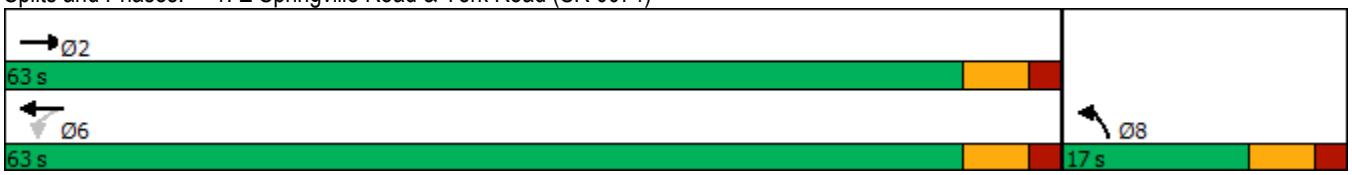
User approved volume balancing among the lanes for turning movement.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	629	156	103	464	78	74
Future Volume (vph)	629	156	103	464	78	74
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (ft)	10	10	10	10	9	9
Grade (%)	1%			-1%	2%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		1	0
Taper Length (ft)			25		25	
Right Turn on Red		Yes				Yes
Link Speed (mph)	50			50	35	
Link Distance (ft)	353			302	1148	
Travel Time (s)	4.8			4.1	22.4	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	4%	6%	4%	4%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	835	0	0	604	162	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	2			6	8	
Permitted Phases			6			
Detector Phase	2		6	6	8	
Switch Phase						
Minimum Initial (s)	5.0		5.0	5.0	5.0	
Minimum Split (s)	11.0		11.0	11.0	11.0	
Total Split (s)	63.0		63.0	63.0	17.0	
Total Split (%)	78.8%		78.8%	78.8%	21.3%	
Maximum Green (s)	57.0		57.0	57.0	11.0	
Yellow Time (s)	4.0		4.0	4.0	4.0	
All-Red Time (s)	2.0		2.0	2.0	2.0	
Lost Time Adjust (s)	-1.0			-1.0	-1.0	
Total Lost Time (s)	5.0			5.0	5.0	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Minimum Gap (s)	3.0		3.0	3.0	3.0	
Time Before Reduce (s)	0.0		0.0	0.0	0.0	
Time To Reduce (s)	0.0		0.0	0.0	0.0	
Recall Mode	Min		Min	Min	None	
Walk Time (s)						
Flash Dont Walk (s)						
Pedestrian Calls (#/hr)						
v/c Ratio	0.78			0.85	0.60	
Control Delay	12.7			21.5	30.4	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Queue Delay	0.0			0.0	0.0	
Total Delay	12.7			21.5	30.4	
Queue Length 50th (ft)	183			156	38	
Queue Length 95th (ft)	322			#428	#131	
Internal Link Dist (ft)	273			222	1068	
Turn Bay Length (ft)						
Base Capacity (vph)	1406			939	311	
Starvation Cap Reductn	0			0	0	
Spillback Cap Reductn	0			0	0	
Storage Cap Reductn	0			0	0	
Reduced v/c Ratio	0.59			0.64	0.52	

Intersection Summary	
Area Type:	Other
Cycle Length: 80	
Actuated Cycle Length: 64.1	
Natural Cycle: 55	
Control Type: Actuated-Uncoordinated	
# 95th percentile volume exceeds capacity, queue may be longer.	
Queue shown is maximum after two cycles.	

Splits and Phases: 1: E Springville Road & York Road (SR 0074)



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	629	156	103	464	78	74
Future Volume (veh/h)	629	156	103	464	78	74
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	1752	1738	1752	1780	1653	1653
Adj Flow Rate, veh/h	669	166	110	494	83	79
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	4	6	4	4	4
Cap, veh/h	904	224	156	644	118	113
Arrive On Green	0.67	0.65	0.65	0.67	0.16	0.14
Sat Flow, veh/h	1355	336	121	966	756	720
Grp Volume(v), veh/h	0	835	604	0	163	0
Grp Sat Flow(s),veh/h/ln	0	1692	1087	0	1485	0
Q Serve(g_s), s	0.0	18.5	10.2	0.0	5.9	0.0
Cycle Q Clear(g_c), s	0.0	18.5	28.7	0.0	5.9	0.0
Prop In Lane		0.20	0.18		0.51	0.48
Lane Grp Cap(c), veh/h	0	1128	781	0	233	0
V/C Ratio(X)	0.00	0.74	0.77	0.00	0.70	0.00
Avail Cap(c_a), veh/h	0	1733	1257	0	315	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	6.3	7.1	0.0	22.9	0.0
Incr Delay (d2), s/veh	0.0	1.0	1.7	0.0	4.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	4.9	3.5	0.0	3.9	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	7.3	8.8	0.0	27.1	0.0
LnGrp LOS	A	A	A	A	C	A
Approach Vol, veh/h	835			604	163	
Approach Delay, s/veh	7.3			8.8	27.1	
Approach LOS	A			A	C	

Timer - Assigned Phs		2				6	8
Phs Duration (G+Y+Rc), s		42.8				42.8	13.9
Change Period (Y+Rc), s		6.0				6.0	6.0
Max Green Setting (Gmax), s		57.0				57.0	11.0
Max Q Clear Time (g_c+I1), s		20.5				30.7	8.4
Green Ext Time (p_c), s		9.1				6.0	0.1

Intersection Summary	
HCM 6th Ctrl Delay	9.9
HCM 6th LOS	A

Notes

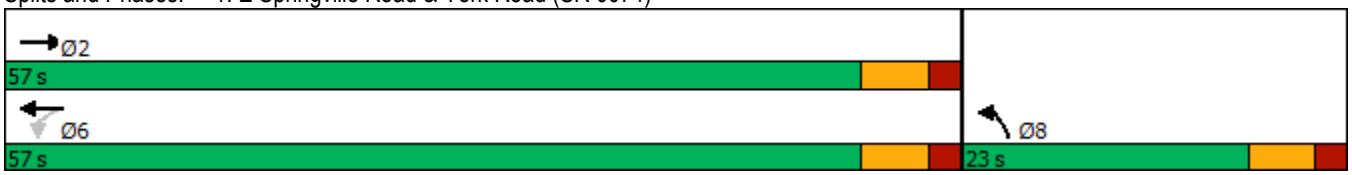
User approved volume balancing among the lanes for turning movement.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	423	146	146	437	143	171
Future Volume (vph)	423	146	146	437	143	171
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (ft)	10	10	10	10	9	9
Grade (%)	1%			-1%	2%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		1	0
Taper Length (ft)			25		25	
Right Turn on Red		Yes				Yes
Link Speed (mph)	50			50	35	
Link Distance (ft)	353			302	1148	
Travel Time (s)	4.8			4.1	22.4	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	0%	0%	1%	0%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	599	0	0	614	331	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	2			6	8	
Permitted Phases			6			
Detector Phase	2		6	6	8	
Switch Phase						
Minimum Initial (s)	5.0		5.0	5.0	5.0	
Minimum Split (s)	24.0		24.0	24.0	11.0	
Total Split (s)	57.0		57.0	57.0	23.0	
Total Split (%)	71.3%		71.3%	71.3%	28.8%	
Maximum Green (s)	51.0		51.0	51.0	17.0	
Yellow Time (s)	4.0		4.0	4.0	4.0	
All-Red Time (s)	2.0		2.0	2.0	2.0	
Lost Time Adjust (s)	-1.0			-1.0	-1.0	
Total Lost Time (s)	5.0			5.0	5.0	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Minimum Gap (s)	3.0		3.0	3.0	3.0	
Time Before Reduce (s)	0.0		0.0	0.0	0.0	
Time To Reduce (s)	0.0		0.0	0.0	0.0	
Recall Mode	Min		Min	Min	None	
Walk Time (s)						
Flash Dont Walk (s)						
Pedestrian Calls (#/hr)						
v/c Ratio	0.60			0.93	0.83	
Control Delay	10.4			36.1	41.9	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Queue Delay	0.0			0.0	0.0	
Total Delay	10.4			36.1	41.9	
Queue Length 50th (ft)	133			219	125	
Queue Length 95th (ft)	218			#474	#279	
Internal Link Dist (ft)	273			222	1068	
Turn Bay Length (ft)						
Base Capacity (vph)	1208			803	428	
Starvation Cap Reductn	0			0	0	
Spillback Cap Reductn	0			0	0	
Storage Cap Reductn	0			0	0	
Reduced v/c Ratio	0.50			0.76	0.77	

Intersection Summary	
Area Type:	Other
Cycle Length: 80	
Actuated Cycle Length: 71.2	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
# 95th percentile volume exceeds capacity, queue may be longer.	
Queue shown is maximum after two cycles.	

Splits and Phases: 1: E Springville Road & York Road (SR 0074)



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	423	146	146	437	143	171
Future Volume (veh/h)	423	146	146	437	143	171
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	1780	1794	1837	1823	1707	1693
Adj Flow Rate, veh/h	445	154	154	460	151	180
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	0	0	1	0	1
Cap, veh/h	776	269	200	554	172	205
Arrive On Green	0.61	0.60	0.60	0.61	0.25	0.23
Sat Flow, veh/h	1264	437	224	902	693	826
Grp Volume(v), veh/h	0	599	614	0	332	0
Grp Sat Flow(s),veh/h/ln	0	1702	1127	0	1523	0
Q Serve(g_s), s	0.0	15.3	22.3	0.0	15.2	0.0
Cycle Q Clear(g_c), s	0.0	15.3	37.6	0.0	15.2	0.0
Prop In Lane		0.26	0.25		0.45	0.54
Lane Grp Cap(c), veh/h	0	1045	739	0	378	0
V/C Ratio(X)	0.00	0.57	0.83	0.00	0.88	0.00
Avail Cap(c_a), veh/h	0	1219	880	0	378	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	8.4	14.4	0.0	26.5	0.0
Incr Delay (d2), s/veh	0.0	0.5	5.9	0.0	20.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	7.0	13.3	0.0	11.7	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	8.9	20.3	0.0	46.8	0.0
LnGrp LOS	A	A	C	A	D	A
Approach Vol, veh/h	599			614	332	
Approach Delay, s/veh	8.9			20.3	46.8	
Approach LOS	A			C	D	

Timer - Assigned Phs	2				6	8
Phs Duration (G+Y+Rc), s	49.6				49.6	23.0
Change Period (Y+Rc), s	6.0				6.0	6.0
Max Green Setting (Gmax), s	51.0				51.0	17.0
Max Q Clear Time (g_c+I1), s	17.3				39.6	17.7
Green Ext Time (p_c), s	5.4				4.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	21.6
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

APPENDIX F:
Auxiliary Turn Lane Warrant Analysis

Turn Lane Warrant and Length Analysis Workbook

STUDY LOCATION AND ANALYSIS INFORMATION

Municipality:	South Middleton Township	**Analysis Date:**	7/1/2022
County:	Cumberland County	**Conducted By:**	DZ
PennDOT Engineering District:	8	**Checked By:**	JW
		Agency/Company Name:	Traffic Planning and Design, Inc.

Intersection & Approach Description: E Springville Road & Proposed Site Driveway - Northbound Right

Analysis Period:	2030 Projected Build	**Number of Approach Lanes:**	1
Design Hour:	AM Peak Hour	**Undivided or Divided Highway:**	Undivided
Intersection Control:	Unsignalized		
Posted Speed Limit (MPH):	35	**Type of Analysis**	
Type of Terrain:	Level	**Left or Right-Turn Lane Analysis?:**	Right Turn Lane

VOLUME CALCULATIONS

Left Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	4	2.0%	N/A
	Through	-	55	6.0%	N/A
	Right	Yes			N/A
Opposing	Left	Yes			N/A
	Through	-	145	1.0%	N/A
	Right	Yes	1	2.0%	N/A

Advancing Volume:	N/A
Opposing Volume:	N/A
Left Turn Volume:	N/A
% Left Turns in Advancing Volume:	N/A

Right Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes			0
	Through	-	145	1.0%	146
	Right	-	1	2.0%	2

Advancing Volume:	148
Right Turn Volume:	2

TURN LANE WARRANT FINDINGS

Left Turn Lane Warrant Findings

Applicable Warrant Figure: N/A

Warrant Met?: N/A

Right Turn Lane Warrant Findings

Applicable Warrant Figure: Figure 9

Warrant Met?: No

TURN LANE LENGTH CALCULATIONS

Intersection Control:	Unsignalized
Design Hour Volume of Turning Lane:	2
Cycles Per Hour (Assumed):	60
Cycles Per Hour (If Known):	

Average # of Vehicles/Cycle: N/A

PennDOT Publication 46, Exhibit 11-6

Type of Traffic Control	Speed (MPH)					
	25-35		40-45		50-60	
	Turn Demand Volume					
	High	Low	High	Low	High	Low
Signalized	A	A	B or C	B or C	B or C	B or C
Unsignalized	A	A	C	B	B or C	B

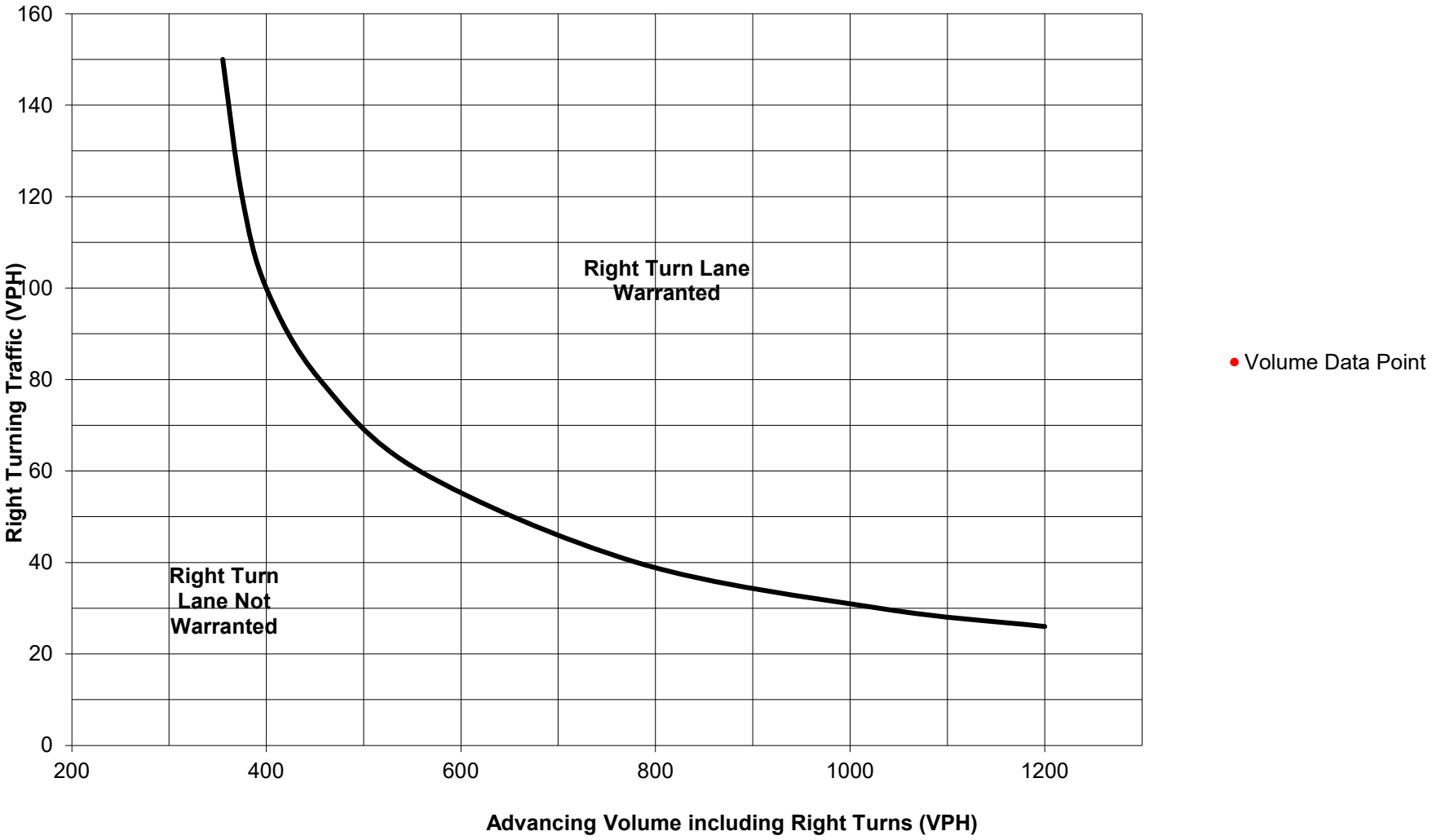
Right Turn Lane Storage Length, Condition A:	N/A	Feet
Condition B:	N/A	Feet
Condition C:	N/A	Feet
Required Right Turn Lane Storage Length:	N/A	Feet

Additional Findings:

N/A

Additional Comments / Justifications:

Figure 9. Warrant for right turn lanes on two-lane roadways
(40 mph or lower speeds, unsignalized and signalized intersections)



Turn Lane Warrant and Length Analysis Workbook

STUDY LOCATION AND ANALYSIS INFORMATION

Municipality:	South Middleton Township	**Analysis Date:**	7/1/2022
County:	Cumberland County	**Conducted By:**	DZ
PennDOT Engineering District:	8	**Checked By:**	JW
		Agency/Company Name:	Traffic Planning and Design, Inc.

Intersection & Approach Description: E Springville Road & Proposed Site Driveway - Southbound Left

Analysis Period:	2030 Projected Build	**Number of Approach Lanes:**	1
Design Hour:	AM Peak Hour	**Undivided or Divided Highway:**	Undivided
Intersection Control:	Unsignalized		
Posted Speed Limit (MPH):	35	**Type of Analysis**	
Type of Terrain:	Level	**Left or Right-Turn Lane Analysis?:**	Left Turn Lane

VOLUME CALCULATIONS

Left Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	4	2.0%	5
	Through	-	55	6.0%	57
	Right	Yes			0
Opposing	Left	Yes			0
	Through	-	145	1.0%	146
	Right	Yes	1	2.0%	2

Advancing Volume:	62
Opposing Volume:	148
Left Turn Volume:	5
% Left Turns in Advancing Volume:	8.06%

Right Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes			N/A
	Through	-	145	1.0%	N/A
	Right	-	1	2.0%	N/A

Advancing Volume:	N/A
Right Turn Volume:	N/A

TURN LANE WARRANT FINDINGS

Left Turn Lane Warrant Findings

Applicable Warrant Figure: Figure 1

Warrant Met?: No

Right Turn Lane Warrant Findings

Applicable Warrant Figure: N/A

Warrant Met?: N/A

TURN LANE LENGTH CALCULATIONS

Intersection Control:	Unsignalized
Design Hour Volume of Turning Lane:	5
Cycles Per Hour (Assumed):	60
Cycles Per Hour (If Known):	

Average # of Vehicles/Cycle: N/A

PennDOT Publication 46, Exhibit 11-6

Type of Traffic Control	Speed (MPH)					
	25-35		40-45		50-60	
	Turn Demand Volume					
	High	Low	High	Low	High	Low
Signalized	A	A	B or C	B or C	B or C	B or C
Unsignalized	A	A	C	B	B or C	B

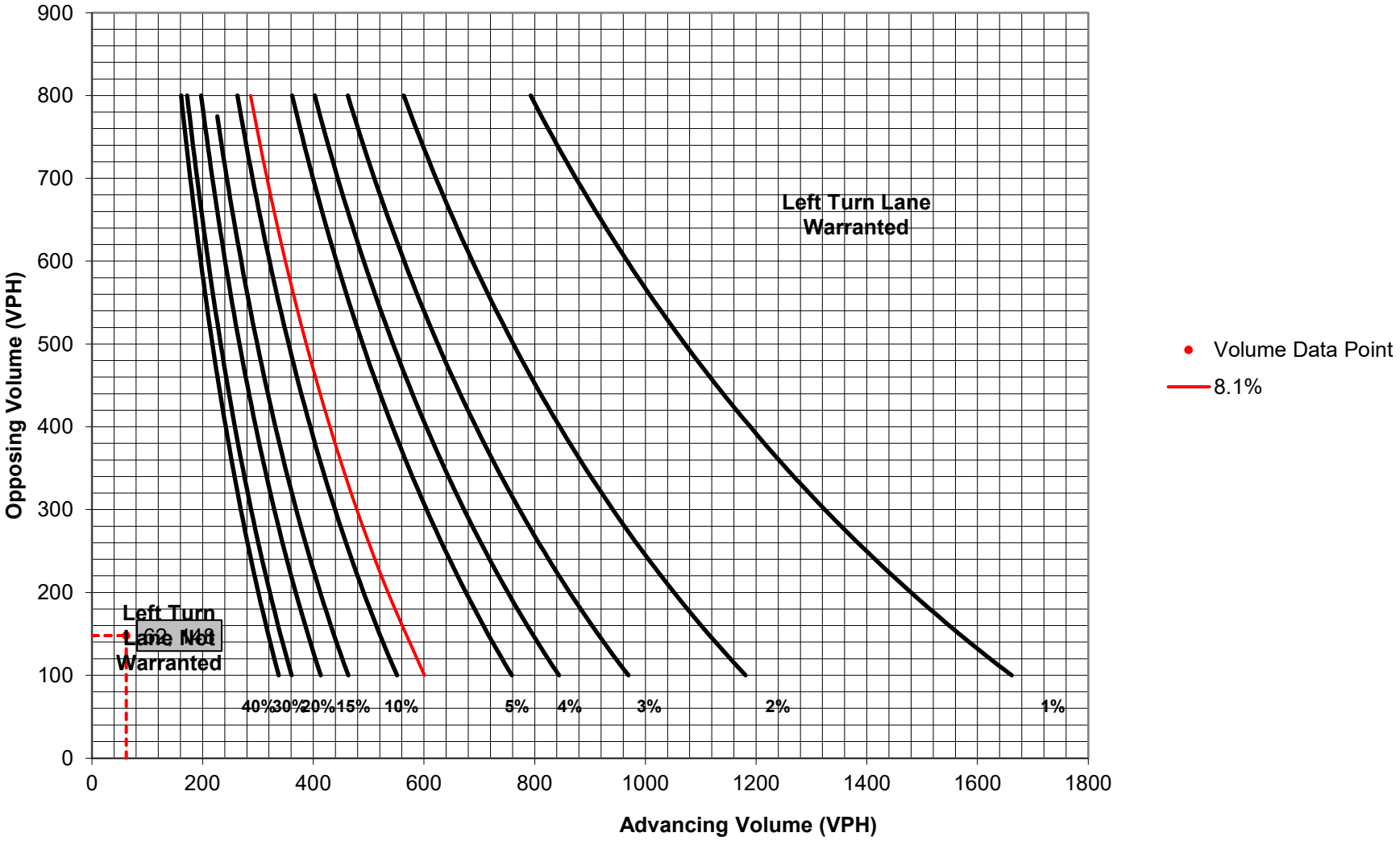
Left Turn Lane Storage Length, Condition A:	N/A	Feet
Condition B:	N/A	Feet
Condition C:	N/A	Feet
Required Left Turn Lane Storage Length:	N/A	Feet

Additional Findings:

N/A

Additional Comments / Justifications:

Figure 1. Warrant for left turn lanes on two-lane roadways
(speeds to 35 mph, unsignalized and signalized intersections)
(L = % Left Turns in Advancing Volume)



Turn Lane Warrant and Length Analysis Workbook

STUDY LOCATION AND ANALYSIS INFORMATION

Municipality:	South Middleton Township	**Analysis Date:**	7/1/2022
County:	Cumberland County	**Conducted By:**	DZ
PennDOT Engineering District:	8	**Checked By:**	JW
		Agency/Company Name:	Traffic Planning and Design, Inc.

Intersection & Approach Description: E Springville Road & Proposed Site Driveway - Northbound Right

Analysis Period:	2030 Projected Build	**Number of Approach Lanes:**	1
Design Hour:	PM Peak Hour	**Undivided or Divided Highway:**	Undivided
Intersection Control:	Unsignalized		
Posted Speed Limit (MPH):	35	**Type of Analysis**	
Type of Terrain:	Level	**Left or Right-Turn Lane Analysis?:**	Right Turn Lane

VOLUME CALCULATIONS

Left Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	94	2.0%	N/A
	Through	-	165	5.0%	N/A
	Right	Yes			N/A
Opposing	Left	Yes			N/A
	Through	-	104	4.0%	N/A
	Right	Yes	12	2.0%	N/A

Advancing Volume:	N/A
Opposing Volume:	N/A
Left Turn Volume:	N/A
% Left Turns in Advancing Volume:	N/A

Right Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes			0
	Through	-	104	4.0%	107
	Right	-	12	2.0%	13

Advancing Volume:	120
Right Turn Volume:	13

TURN LANE WARRANT FINDINGS

Left Turn Lane Warrant Findings

Applicable Warrant Figure: N/A

Warrant Met?: N/A

Right Turn Lane Warrant Findings

Applicable Warrant Figure: Figure 9

Warrant Met?: No

TURN LANE LENGTH CALCULATIONS

Intersection Control:	Unsignalized
Design Hour Volume of Turning Lane:	13
Cycles Per Hour (Assumed):	60
Cycles Per Hour (If Known):	

Average # of Vehicles/Cycle: N/A

PennDOT Publication 46, Exhibit 11-6

Type of Traffic Control	Speed (MPH)					
	25-35		40-45		50-60	
	Turn Demand Volume					
	High	Low	High	Low	High	Low
Signalized	A	A	B or C	B or C	B or C	B or C
Unsignalized	A	A	C	B	B or C	B

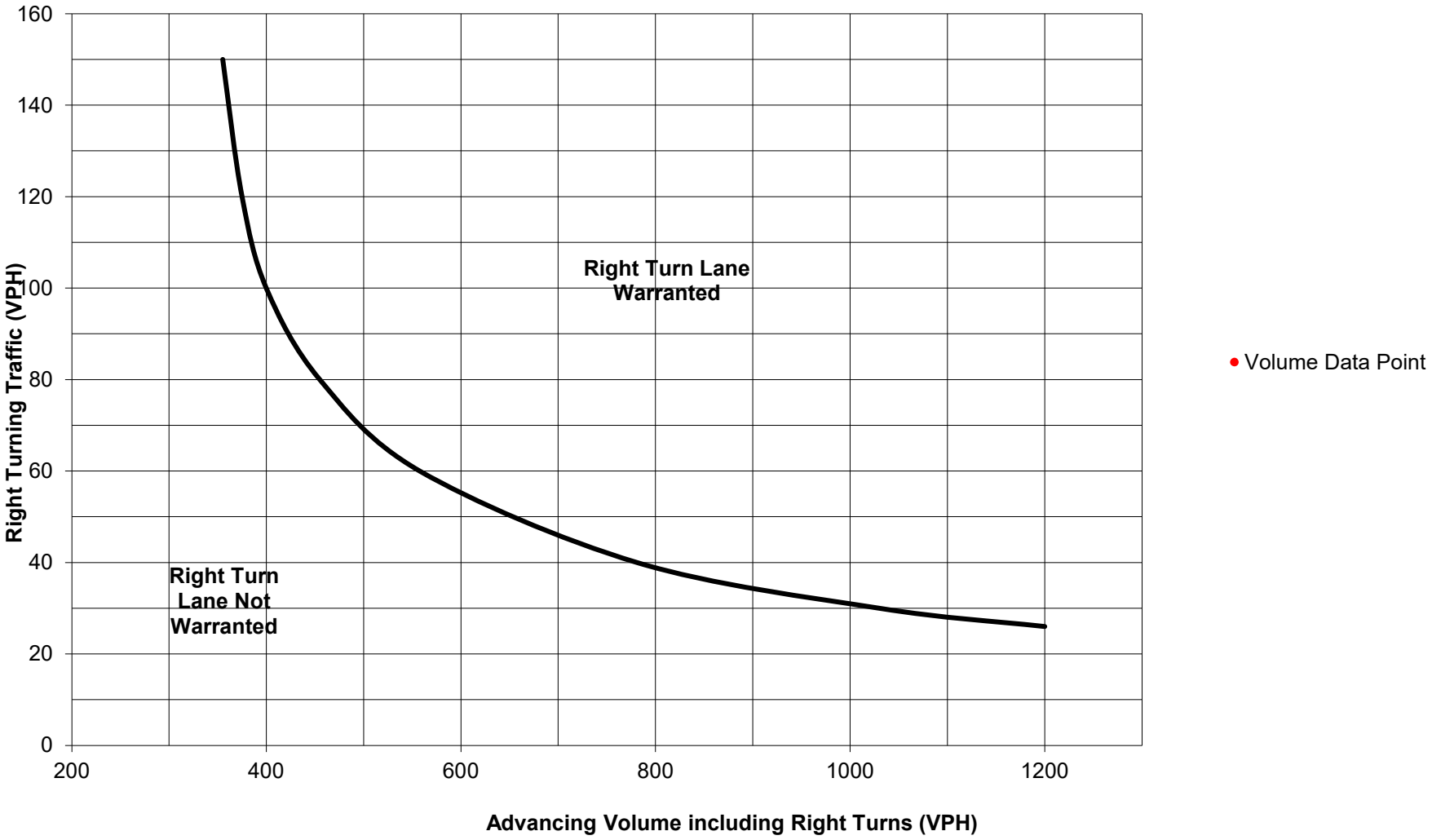
Right Turn Lane Storage Length, Condition A:	N/A	Feet
Condition B:	N/A	Feet
Condition C:	N/A	Feet
Required Right Turn Lane Storage Length:	N/A	Feet

Additional Findings:

N/A

Additional Comments / Justifications:

Figure 9. Warrant for right turn lanes on two-lane roadways
(40 mph or lower speeds, unsignalized and signalized intersections)



Turn Lane Warrant and Length Analysis Workbook

STUDY LOCATION AND ANALYSIS INFORMATION

Municipality:	South Middleton Township	**Analysis Date:**	7/1/2022
County:	Cumberland County	**Conducted By:**	DZ
PennDOT Engineering District:	8	**Checked By:**	JW
		Agency/Company Name:	Traffic Planning and Design, Inc.

Intersection & Approach Description: E Springville Road & Proposed Site Driveway - Southbound Left

Analysis Period:	2030 Projected Build	**Number of Approach Lanes:**	1
Design Hour:	PM Peak Hour	**Undivided or Divided Highway:**	Undivided
Intersection Control:	Unsignalized		
Posted Speed Limit (MPH):	35	**Type of Analysis**	
Type of Terrain:	Level	**Left or Right-Turn Lane Analysis?:**	Left Turn Lane

VOLUME CALCULATIONS

Left Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	94	2.0%	95
	Through	-	165	5.0%	170
	Right	Yes			0
Opposing	Left	Yes			0
	Through	-	104	4.0%	107
	Right	Yes	12	2.0%	13

Advancing Volume:	265
Opposing Volume:	120
Left Turn Volume:	95
% Left Turns in Advancing Volume:	35.85%

Right Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes			N/A
	Through	-	104	4.0%	N/A
	Right	-	12	2.0%	N/A

Advancing Volume:	N/A
Right Turn Volume:	N/A

TURN LANE WARRANT FINDINGS

Left Turn Lane Warrant Findings

Applicable Warrant Figure: Figure 1

Warrant Met?: No

Right Turn Lane Warrant Findings

Applicable Warrant Figure: N/A

Warrant Met?: N/A

TURN LANE LENGTH CALCULATIONS

Intersection Control:	Unsignalized
Design Hour Volume of Turning Lane:	95
Cycles Per Hour (Assumed):	60
Cycles Per Hour (If Known):	

Average # of Vehicles/Cycle: N/A

PennDOT Publication 46, Exhibit 11-6

Type of Traffic Control	Speed (MPH)					
	25-35		40-45		50-60	
	Turn Demand Volume					
	High	Low	High	Low	High	Low
Signalized	A	A	B or C	B or C	B or C	B or C
Unsignalized	A	A	C	B	B or C	B

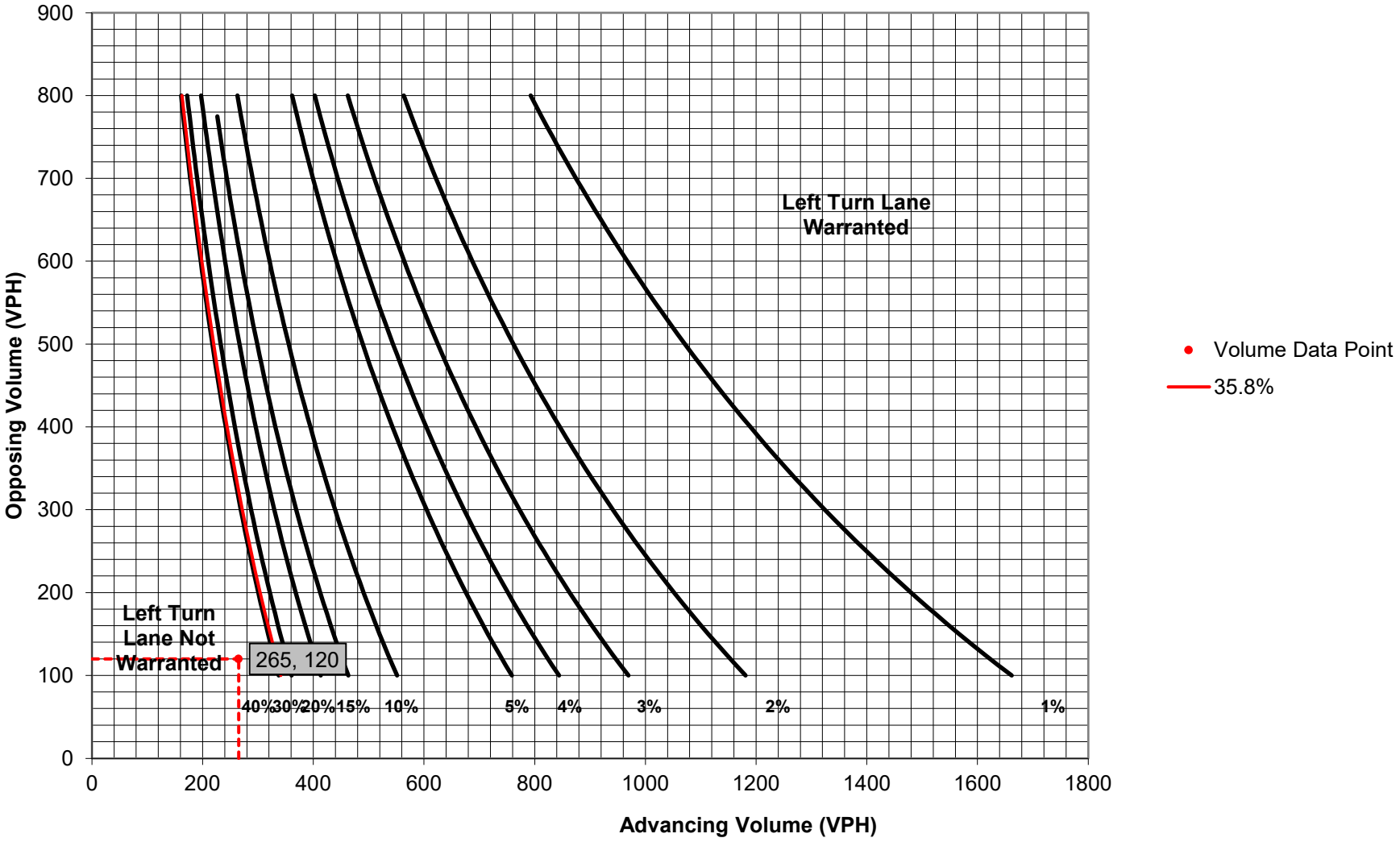
Left Turn Lane Storage Length, Condition A:	N/A	Feet
Condition B:	N/A	Feet
Condition C:	N/A	Feet
Required Left Turn Lane Storage Length:	N/A	Feet

Additional Findings:

N/A

Additional Comments / Justifications:

Figure 1. Warrant for left turn lanes on two-lane roadways
(speeds to 35 mph, unsignalized and signalized intersections)
(L = % Left Turns in Advancing Volume)



Turn Lane Warrant and Length Analysis Workbook

STUDY LOCATION AND ANALYSIS INFORMATION

Municipality:	South Middleton Township	**Analysis Date:**	7/1/2022
County:	Cumberland County	**Conducted By:**	DZ
PennDOT Engineering District:	8	**Checked By:**	JW
		Agency/Company Name:	Traffic Planning and Design, Inc.

Intersection & Approach Description: E Springville Road & Proposed Site Driveway - Northbound Right

Analysis Period:	2030 Projected Build	**Number of Approach Lanes:**	1
Design Hour:	SAT Peak Hour	**Undivided or Divided Highway:**	Undivided
Intersection Control:	Unsignalized		
Posted Speed Limit (MPH):	35	**Type of Analysis**	
Type of Terrain:	Level	**Left or Right-Turn Lane Analysis?:**	Right Turn Lane

VOLUME CALCULATIONS

Left Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	167	2.0%	N/A
	Through	-	125	0.0%	N/A
	Right	Yes			N/A
Opposing	Left	Yes			N/A
	Through	-	132	1.0%	N/A
	Right	Yes	21	2.0%	N/A

Advancing Volume:	N/A
Opposing Volume:	N/A
Left Turn Volume:	N/A
% Left Turns in Advancing Volume:	N/A

Right Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes			0
	Through	-	132	1.0%	133
	Right	-	21	2.0%	22

Advancing Volume:	155
Right Turn Volume:	22

TURN LANE WARRANT FINDINGS

Left Turn Lane Warrant Findings

Applicable Warrant Figure: N/A

Warrant Met?: N/A

Right Turn Lane Warrant Findings

Applicable Warrant Figure: Figure 9

Warrant Met?: No

TURN LANE LENGTH CALCULATIONS

Intersection Control:	Unsignalized
Design Hour Volume of Turning Lane:	22
Cycles Per Hour (Assumed):	60
Cycles Per Hour (If Known):	

Average # of Vehicles/Cycle: N/A

PennDOT Publication 46, Exhibit 11-6

Type of Traffic Control	Speed (MPH)					
	25-35		40-45		50-60	
	Turn Demand Volume					
	High	Low	High	Low	High	Low
Signalized	A	A	B or C	B or C	B or C	B or C
Unsignalized	A	A	C	B	B or C	B

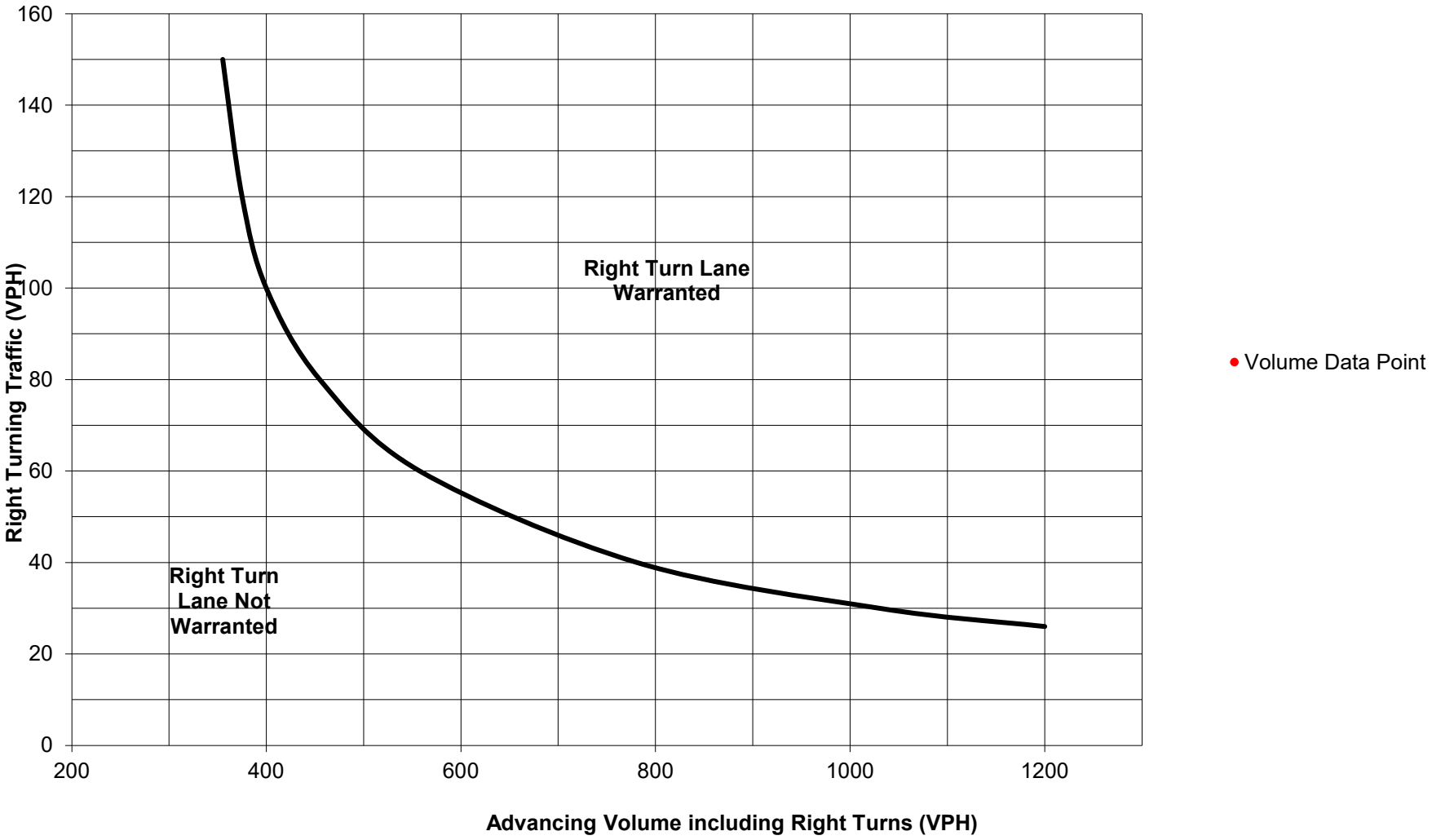
Right Turn Lane Storage Length, Condition A:	N/A	Feet
Condition B:	N/A	Feet
Condition C:	N/A	Feet
Required Right Turn Lane Storage Length:	N/A	Feet

Additional Findings:

N/A

Additional Comments / Justifications:

Figure 9. Warrant for right turn lanes on two-lane roadways
(40 mph or lower speeds, unsignalized and signalized intersections)



Turn Lane Warrant and Length Analysis Workbook

STUDY LOCATION AND ANALYSIS INFORMATION

Municipality:	South Middleton Township	**Analysis Date:**	7/1/2022
County:	Cumberland County	**Conducted By:**	DZ
PennDOT Engineering District:	8	**Checked By:**	JW
		Agency/Company Name:	Traffic Planning and Design, Inc.

Intersection & Approach Description: E Springville Road & Proposed Site Driveway - Southbound Left

Analysis Period:	2030 Projected Build	**Number of Approach Lanes:**	1
Design Hour:	SAT Peak Hour	**Undivided or Divided Highway:**	Undivided
Intersection Control:	Unsignalized		
Posted Speed Limit (MPH):	35	**Type of Analysis**	
Type of Terrain:	Level	**Left or Right-Turn Lane Analysis?:**	Left Turn Lane

VOLUME CALCULATIONS

Left Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	167	2.0%	169
	Through	-	125	0.0%	125
	Right	Yes			0
Opposing	Left	Yes			0
	Through	-	132	1.0%	133
	Right	Yes	21	2.0%	22

Advancing Volume:	294
Opposing Volume:	155
Left Turn Volume:	169
% Left Turns in Advancing Volume:	57.48%

Right Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes			N/A
	Through	-	132	1.0%	N/A
	Right	-	21	2.0%	N/A

Advancing Volume:	N/A
Right Turn Volume:	N/A

TURN LANE WARRANT FINDINGS

Left Turn Lane Warrant Findings

Applicable Warrant Figure: Figure 1

Warrant Met?: No

Right Turn Lane Warrant Findings

Applicable Warrant Figure: N/A

Warrant Met?: N/A

TURN LANE LENGTH CALCULATIONS

Intersection Control:	Unsignalized
Design Hour Volume of Turning Lane:	169
Cycles Per Hour (Assumed):	60
Cycles Per Hour (If Known):	

Average # of Vehicles/Cycle: N/A

PennDOT Publication 46, Exhibit 11-6

Type of Traffic Control	Speed (MPH)					
	25-35		40-45		50-60	
	Turn Demand Volume					
	High	Low	High	Low	High	Low
Signalized	A	A	B or C	B or C	B or C	B or C
Unsignalized	A	A	C	B	B or C	B

Left Turn Lane Storage Length, Condition A:	N/A	Feet
Condition B:	N/A	Feet
Condition C:	N/A	Feet
Required Left Turn Lane Storage Length:	N/A	Feet

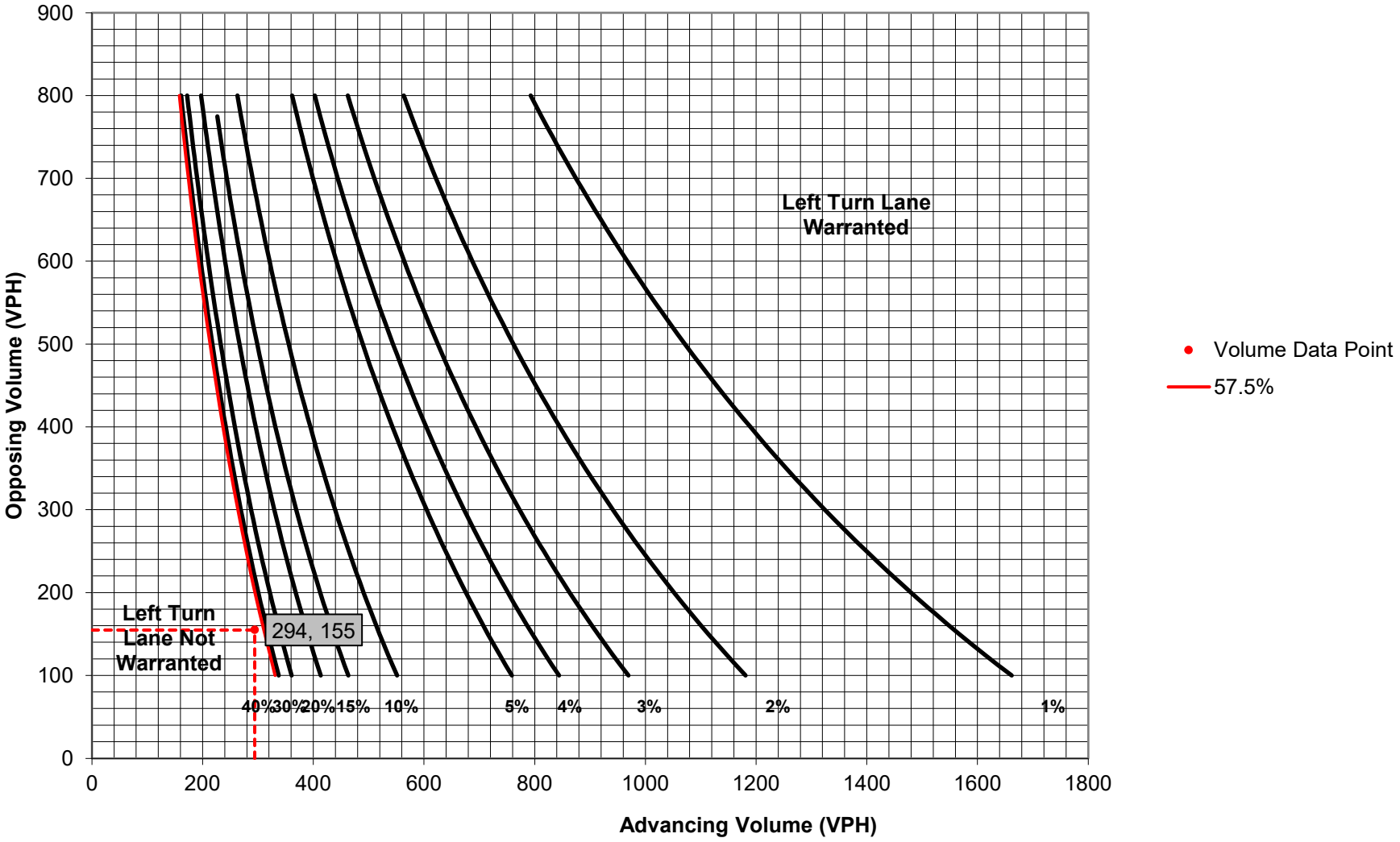
Additional Findings:

N/A

Additional Comments / Justifications:

Figure 1. Warrant for left turn lanes on two-lane roadways (speeds to 35 mph, unsignalized and signalized intersections)

(L = % Left Turns in Advancing Volume)



APPENDIX G:
Traffic Signal Warrant Analysis

Traffic Signal Warrant Analysis Workbook

2022 Existing Conditions

STUDY AND ANALYSIS INFORMATION

Municipality:	S. Middleton Twp	**Analysis Date:**	4/3/2023
County:	Cumberland County	**Conducted By:**	JTW
PennDOT Engineering District:	8	**Agency/Company Name:**	TPD

Analysis Information

Data Collection Date:	6/2/2022
Day of the Week:	Thursday

Is the intersection in a built-up area of an isolated community of <10,000 population? No

Major Street Information

Major Street Name and Route Number:	York Rd (SR 0074)
Major Street Approach #1 Direction:	E-Bound
Major Street Approach #2 Direction:	W-Bound

Number of Lanes for Moving Traffic on Each Major Street Approach:	1	**LANE(S)**
Speed Limit or 85th Percentile Speed on the Major Street:	50	**MPH**

Minor Street Information

Minor Street Name and Route Number:	E Springville Road
Minor Street Approach #1 Direction:	N-Bound
Minor Street Approach #2 Direction:	

Number of Lanes for Moving Traffic on Each Minor Street Approach:	1	**LANE(S)**

TRAFFIC SIGNAL WARRANT ANALYSIS FINDINGS

	Applicable?	Warrant Met?
Warrant 1, Eight-Hour Vehicular Volume	**Yes**	**Yes**
Warrant 2, Four-Hour Vehicular Volume	**Yes**	**Yes**
Warrant 3, Peak Hour	**Yes**	**Yes**
Warrant 4, Pedestrian Volume	**No**	**N/A**
Warrant 5, School Crossing	**No**	**N/A**
Warrant 6, Coordinated Signal System	**No**	**N/A**
Warrant 7, Crash Experience	**No**	**N/A**
Warrant 8, Roadway Network	**No**	**N/A**
Warrant 9, Intersection Near a Grade Crossing	**No**	**N/A**
Warrant PA-1, ADT Volume Warrant	**No**	**N/A**
Warrant PA-2, Midblock and Trail Crossings	**No**	**N/A**

Traffic Signal Warrant Analysis Workbook

2022 Existing Conditions

ENTER VOLUME DATA PER 15 MINUTE INTERVAL, PER APPROACH

Time Interval		Major Street Approach #1 (E-Bound)	Major Street Approach #2 (W-Bound)	Major Street Combined	Minor Street Approach #1 (N-Bound)	Minor Street Approach #2 ()
Begin At	End Of	Volume	Volume	Total Volume	Volume	Volume
12:00 AM	12:14 AM			0		
12:15 AM	12:29 AM			0		
12:30 AM	12:44 AM			0		
12:45 AM	12:59 AM			0		
1:00 AM	1:14 AM			0		
1:15 AM	1:29 AM			0		
1:30 AM	1:44 AM			0		
1:45 AM	1:59 AM			0		
2:00 AM	2:14 AM			0		
2:15 AM	2:29 AM			0		
2:30 AM	2:44 AM			0		
2:45 AM	2:59 AM			0		
3:00 AM	3:14 AM			0		
3:15 AM	3:29 AM			0		
3:30 AM	3:44 AM			0		
3:45 AM	3:59 AM			0		
4:00 AM	4:14 AM			0		
4:15 AM	4:29 AM			0		
4:30 AM	4:44 AM			0		
4:45 AM	4:59 AM			0		
5:00 AM	5:14 AM			0		
5:15 AM	5:29 AM			0		
5:30 AM	5:44 AM			0		
5:45 AM	5:59 AM			0		
6:00 AM	6:14 AM	41	57	98	10	
6:15 AM	6:29 AM	46	68	114	17	
6:30 AM	6:44 AM	64	119	183	20	
6:45 AM	6:59 AM	50	97	147	22	
7:00 AM	7:14 AM	64	87	151	15	
7:15 AM	7:29 AM	77	120	197	26	
7:30 AM	7:44 AM	71	123	194	25	
7:45 AM	7:59 AM	72	124	196	21	
8:00 AM	8:14 AM	50	113	163	18	
8:15 AM	8:29 AM	56	86	142	11	
8:30 AM	8:44 AM	59	101	160	19	
8:45 AM	8:59 AM	59	77	136	17	
9:00 AM	9:14 AM	70	96	166	14	
9:15 AM	9:29 AM	60	71	131	11	
9:30 AM	9:44 AM	82	88	170	11	
9:45 AM	9:59 AM	67	93	160	13	
10:00 AM	10:14 AM	76	84	160	4	
10:15 AM	10:29 AM	66	80	146	11	
10:30 AM	10:44 AM	79	79	158	11	
10:45 AM	10:59 AM	84	71	155	18	
11:00 AM	11:14 AM	74	55	129	14	
11:15 AM	11:29 AM	81	76	157	12	
11:30 AM	11:44 AM	66	77	143	11	
11:45 AM	11:59 AM	58	76	134	12	

ENTER VOLUME DATA PER 15 MINUTE INTERVAL, PER APPROACH

Time Interval		Major Street Approach #1 (E-Bound)	Major Street Approach #2 (W-Bound)	Major Street Combined	Minor Street Approach #1 (N-Bound)	Minor Street Approach #2 ()
Begin At	End Of	Volume	Volume	Total Volume	Volume	Volume
12:00 PM	12:14 PM	71	79	150	17	
12:15 PM	12:29 PM	94	60	154	9	
12:30 PM	12:44 PM	71	85	156	9	
12:45 PM	12:59 PM	83	68	151	12	
1:00 PM	1:14 PM	94	62	156	15	
1:15 PM	1:29 PM	91	91	182	8	
1:30 PM	1:44 PM	83	77	160	13	
1:45 PM	1:59 PM	79	91	170	14	
2:00 PM	2:14 PM	72	75	147	6	
2:15 PM	2:29 PM	99	86	185	12	
2:30 PM	2:44 PM	88	88	176	15	
2:45 PM	2:59 PM	112	77	189	20	
3:00 PM	3:14 PM	120	98	218	9	
3:15 PM	3:29 PM	124	102	226	22	
3:30 PM	3:44 PM	158	108	266	11	
3:45 PM	3:59 PM	154	129	283	18	
4:00 PM	4:14 PM	141	128	269	22	
4:15 PM	4:29 PM	151	97	248	18	
4:30 PM	4:44 PM	145	103	248	14	
4:45 PM	4:59 PM	146	117	263	14	
5:00 PM	5:14 PM	128	93	221	13	
5:15 PM	5:29 PM	137	121	258	25	
5:30 PM	5:44 PM	95	87	182	10	
5:45 PM	5:59 PM	98	85	183	17	
6:00 PM	6:14 PM			0		
6:15 PM	6:29 PM			0		
6:30 PM	6:44 PM			0		
6:45 PM	6:59 PM			0		
7:00 PM	7:14 PM			0		
7:15 PM	7:29 PM			0		
7:30 PM	7:44 PM			0		
7:45 PM	7:59 PM			0		
8:00 PM	8:14 PM			0		
8:15 PM	8:29 PM			0		
8:30 PM	8:44 PM			0		
8:45 PM	8:59 PM			0		
9:00 PM	9:14 PM			0		
9:15 PM	9:29 PM			0		
9:30 PM	9:44 PM			0		
9:45 PM	9:59 PM			0		
10:00 PM	10:14 PM			0		
10:15 PM	10:29 PM			0		
10:30 PM	10:44 PM			0		
10:45 PM	10:59 PM			0		
11:00 PM	11:14 PM			0		
11:15 PM	11:29 PM			0		
11:30 PM	11:44 PM			0		
11:45 PM	11:59 PM			0		
Approach Totals:		4206	4325	8531	706	0

2022 Existing Conditions

MUTCD WARRANT 1, EIGHT-HOUR VEHICULAR VOLUME

Number of Lanes for Moving Traffic on Each Approach	
Major Street:	1 Lane
Minor Street:	1 Lane

Built-up Isolated Community With Less Than 10,000 Population or Above 40 MPH on Major Street?	Yes

Combination of Conditions A and B Necessary?*: No

**Only applicable for Warrant 1 if after an adequate trial of other alternatives that could cause less delay and inconvenience to traffic has failed to solve the traffic problems. See Section 4C.02 of the 2009 MUTCD for application.*

Condition A - Minimum Vehicular Volume

Number of lanes for moving traffic on each approach		Vehicles per hour on major street (total of both approaches)				Vehicles per hour on higher-volume minor street approach (one direction only)			
Major Street	Minor Street	100%	80%	70%	56%	100%	80%	70%	56%
1	1	500	400	350	280	150	120	105	84
2 or More	1	600	480	420	336	150	120	105	84
2 or More	2 or More	600	480	420	336	200	160	140	112
1	2 or More	500	400	350	280	200	160	140	112

Condition B - Interruption of Continuous Traffic

Number of lanes for moving traffic on each approach		Vehicles per hour on major street (total of both approaches)				Vehicles per hour on higher-volume minor street approach (one direction only)			
Major Street	Minor Street	100%	80%	70%	56%	100%	80%	70%	56%
1	1	750	600	525	420	75	60	53	42
2 or More	1	900	720	630	504	75	60	53	42
2 or More	2 or More	900	720	630	504	100	80	70	56
1	2 or More	750	600	525	420	100	80	70	56

Condition A Evaluation

Number of Unique Hours Met: 0 **Condition A Satisfied?** No

Condition B Evaluation

Number of Unique Hours Met: 8 **Condition B Satisfied?** Yes

Combination of Condition A and Condition B Evaluation

Number of Unique Hours Met for Condition A: N/A

Number of Unique Hours Met for Condition B: N/A

Combination of Condition A and Condition B Satisfied? N/A

2022 Existing Conditions

MUTCD WARRANT 2, FOUR-HOUR VEHICULAR VOLUME

Number of Lanes for Moving Traffic on Each Approach	
Major Street:	1 Lane
Minor Street:	1 Lane

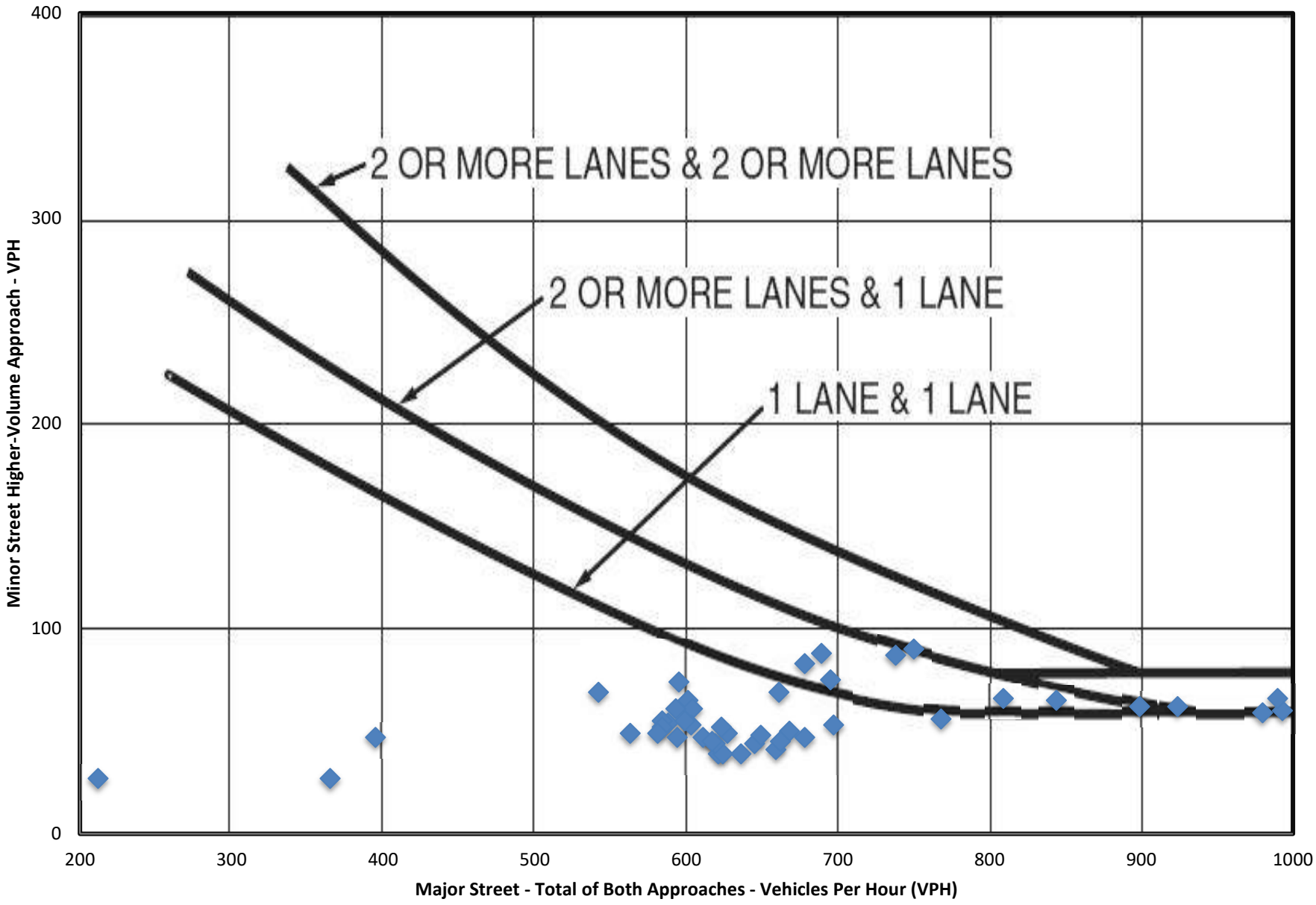
Total Number of Unique Hours Met On Figure 4C-2
5

Built-up Isolated Community With Less Than 10,000 Population or Above 40 MPH on Major Street?	Yes

Hourly Vehicular Volume			
Hour Interval Beginning At	Major Street Combined Vehicles Per Hour (VPH)	Highest Minor Street Approach Vehicles Per Hour (VPH)	Hour Met?
12:00 AM	0	0	
12:15 AM	0	0	
12:30 AM	0	0	
12:45 AM	0	0	
1:00 AM	0	0	
1:15 AM	0	0	
1:30 AM	0	0	
1:45 AM	0	0	
2:00 AM	0	0	
2:15 AM	0	0	
2:30 AM	0	0	
2:45 AM	0	0	
3:00 AM	0	0	
3:15 AM	0	0	
3:30 AM	0	0	
3:45 AM	0	0	
4:00 AM	0	0	
4:15 AM	0	0	
4:30 AM	0	0	
4:45 AM	0	0	
5:00 AM	0	0	
5:15 AM	98	10	
5:30 AM	212	27	
5:45 AM	395	47	
6:00 AM	542	69	
6:15 AM	595	74	
6:30 AM	678	83	Met
6:45 AM	689	88	Met
7:00 AM	738	87	Met
7:15 AM	750	90	Met
7:30 AM	695	75	Met
7:45 AM	661	69	
8:00 AM	601	65	
8:15 AM	604	61	
8:30 AM	593	61	
8:45 AM	603	53	
9:00 AM	627	49	
9:15 AM	621	39	
9:30 AM	636	39	
9:45 AM	624	39	
10:00 AM	619	44	
10:15 AM	588	54	
10:30 AM	599	55	
10:45 AM	584	55	
11:00 AM	563	49	
11:15 AM	584	52	
11:30 AM	581	49	
11:45 AM	594	47	

Hourly Vehicular Volume			
Hour Interval Beginning At	Major Street Combined Vehicles Per Hour (VPH)	Highest Minor Street Approach Vehicles Per Hour (VPH)	Hour Met?
12:00 PM	611	47	
12:15 PM	617	45	
12:30 PM	645	44	
12:45 PM	649	48	
1:00 PM	668	50	
1:15 PM	659	41	
1:30 PM	662	45	
1:45 PM	678	47	
2:00 PM	697	53	
2:15 PM	768	56	
2:30 PM	809	66	Met
2:45 PM	899	62	Met
3:00 PM	993	60	Met
3:15 PM	1044	73	Met
3:30 PM	1066	69	Met
3:45 PM	1048	72	Met
4:00 PM	1028	68	Met
4:15 PM	980	59	
4:30 PM	990	66	Met
4:45 PM	924	62	Met
5:00 PM	844	65	Met
5:15 PM	623	52	
5:30 PM	365	27	
5:45 PM	183	17	
6:00 PM	0	0	
6:15 PM	0	0	
6:30 PM	0	0	
6:45 PM	0	0	
7:00 PM	0	0	
7:15 PM	0	0	
7:30 PM	0	0	
7:45 PM	0	0	
8:00 PM	0	0	
8:15 PM	0	0	
8:30 PM	0	0	
8:45 PM	0	0	
9:00 PM	0	0	
9:15 PM	0	0	
9:30 PM	0	0	
9:45 PM	0	0	
10:00 PM	0	0	
10:15 PM	0	0	
10:30 PM	0	0	
10:45 PM	0	0	
11:00 PM	0	0	

MUTCD Figure 4C-2. Warrant 2, Four-Hour Vehicular Volume (70% Factor)



2022 Existing Conditions

MUTCD WARRANT 3, PEAK HOUR

Number of Lanes for Moving Traffic on Each Approach	
Major Street:	1 Lane
Minor Street:	1 Lane

Built-up Isolated Community With Less Than 10,000 Population or Above 40 MPH on Major Street?	Yes
Is this signal warrant being applied for an unusual case, such as office complexes, manufacturing plants, industrial complexes, or high-occupancy vehicle facilities that attract or discharge large numbers of vehicles over a short time?	Yes

Indicate whether all three of the following conditions for the same 1 hour (any four consecutive 15-minute periods) of an average day are present*	
Does the total stopped time delay experienced by the traffic on one minor-street approach (one direction only) controlled by a STOP sign equal or exceed 4 vehicle-hours for a one-lane approach or 5 vehicle-hours for a two-lane approach?	N/A
Does the volume on the same minor-street approach (one direction only) equal or exceed 100 vehicles per hour for one moving lane of traffic or 150 vehicles per hour for two moving lanes?	N/A
Does the total entering volume serviced during the hour equal or exceed 650 vehicles per hour for intersection with three approaches or 800 vehicles per hour for intersections with four or more approaches?	N/A
**If applicable, attach all supporting calculations and documentation.*	

Total Number of Unique Hours Met On Figure 4C-4
1

Hourly Vehicular Volume			
Hour Interval Beginning At	Major Street Combined Vehicles Per Hour (VPH)	Highest Minor Street Approach Vehicles Per Hour (VPH)	Hour Met?
12:00 AM	0	0	
12:15 AM	0	0	
12:30 AM	0	0	
12:45 AM	0	0	
1:00 AM	0	0	
1:15 AM	0	0	
1:30 AM	0	0	
1:45 AM	0	0	
2:00 AM	0	0	
2:15 AM	0	0	
2:30 AM	0	0	
2:45 AM	0	0	
3:00 AM	0	0	
3:15 AM	0	0	
3:30 AM	0	0	
3:45 AM	0	0	
4:00 AM	0	0	
4:15 AM	0	0	
4:30 AM	0	0	
4:45 AM	0	0	
5:00 AM	0	0	
5:15 AM	98	10	
5:30 AM	212	27	
5:45 AM	395	47	
6:00 AM	542	69	
6:15 AM	595	74	
6:30 AM	678	83	
6:45 AM	689	88	
7:00 AM	738	87	
7:15 AM	750	90	
7:30 AM	695	75	
7:45 AM	661	69	
8:00 AM	601	65	
8:15 AM	604	61	

Hourly Vehicular Volume			
Hour Interval Beginning At	Major Street Combined Vehicles Per Hour (VPH)	Highest Minor Street Approach Vehicles Per Hour (VPH)	Hour Met?
8:30 AM	593	61	
8:45 AM	603	53	
9:00 AM	627	49	
9:15 AM	621	39	
9:30 AM	636	39	
9:45 AM	624	39	
10:00 AM	619	44	
10:15 AM	588	54	
10:30 AM	599	55	
10:45 AM	584	55	
11:00 AM	563	49	
11:15 AM	584	52	
11:30 AM	581	49	
11:45 AM	594	47	
12:00 PM	611	47	
12:15 PM	617	45	
12:30 PM	645	44	
12:45 PM	649	48	
1:00 PM	668	50	
1:15 PM	659	41	
1:30 PM	662	45	
1:45 PM	678	47	
2:00 PM	697	53	
2:15 PM	768	56	
2:30 PM	809	66	
2:45 PM	899	62	
3:00 PM	993	60	
3:15 PM	1044	73	Met
3:30 PM	1066	69	Met
3:45 PM	1048	72	Met
4:00 PM	1028	68	
4:15 PM	980	59	
4:30 PM	990	66	
4:45 PM	924	62	
5:00 PM	844	65	
5:15 PM	623	52	
5:30 PM	365	27	
5:45 PM	183	17	
6:00 PM	0	0	
6:15 PM	0	0	
6:30 PM	0	0	
6:45 PM	0	0	
7:00 PM	0	0	
7:15 PM	0	0	
7:30 PM	0	0	
7:45 PM	0	0	
8:00 PM	0	0	
8:15 PM	0	0	
8:30 PM	0	0	
8:45 PM	0	0	
9:00 PM	0	0	
9:15 PM	0	0	
9:30 PM	0	0	
9:45 PM	0	0	
10:00 PM	0	0	
10:15 PM	0	0	
10:30 PM	0	0	
10:45 PM	0	0	
11:00 PM	0	0	

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