TRAFFIC PLANNING AND DESIGN, INC.

Est. 1989

Ardrossan Farm

Transportation Impact Study

For Submission To:

Radnor Township, Delaware County

June 4, 2014
TPD# ESII.A.00001

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ARDROSSAN FARM
TRANSPORTATION IMPACT STUDY

For Submission to:

Radnor Township, Delaware County, PA

Prepared For:

ESIII LP
Chadds Ford, PA 19317

July 26, 2013
Revised June 4, 2014
TPD # ESII.A.00001

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TABLE OF CONTENTS

EXECUTIVE SUMMARY

The purpose of this study is to examine the potential traffic impact associated with the proposed Ardrossan Farm development on the roadway network in Radnor Township, Delaware County, PA. Based on this evaluation, the following conclusions were reached:

- The project site is located on the southeast corner of the Newtown Road (S.R. 1021)/Darby-Paoli Road (S.R. 1015) intersection.
- The proposed development will consist of 60 new single-family homes to be developed over five (5) phases. Please note, there are currently 10 existing lots with residences.
- The site will be served by multiple driveways to Newtown Road (S.R. 1021) and Darby-Paoli Road (S.R. 1015). Both roads are state-maintained and thus will require a PennDOT HOP. Therefore, the proposed development is subject to PennDOT's review and approval. The site will be served by the following driveways:
  - Six (6) driveways to Newtown Road:
    - New easternmost driveway serving predominately lots on Phases 1 and 2.
    - Existing full-access driveway opposite Abrahams Lane serving predominately lots on Phases 1 and 4.
    - Existing Main House Lot driveway west of Abrahams Lane serving predominately lots on Phases 1 and 4. This driveway currently provides full-access. However, in conjunction with the proposed development will be converted to enter-only.
    - New westernmost driveway serving predominately lots on Phases 5.
    - Two (2) existing driveway serving Lot 2-5.
  - Five (5) driveways to Darby-Paoli Road
    - Existing driveway serving Lot 5-1. An emergency access only connection is proposed to connect Lot 5-1 to the Phase 3 access road terminus.
    - Existing driveway serving Lots 5-2 and 5-3. In conjunction with the proposed development, the driveway will also serve 2 additional lots (Lots 5-4 and 5-5).
    - Existing driveway serving Lot 4-9.
    - Two (2) existing driveways serving Lot 4-10.
- The measured sight distances at the new/modified site driveways exceed PennDOT's sight distance requirements, with the appropriate removal of on-site vegetation and wall.
- The proposed development is expected to generate 52 new vehicle-trips during the weekday A.M. peak hour and 66 new vehicle-trips during the weekday P.M. peak hour.
- Under 2020 projected conditions, all levels of service at the study area intersections will comply with the requirement outlined in PennDOT's TIS Guidelines (i.e. increase by less than the 10-second threshold).

- Traffic Planning and Design Inc. (TPD) recommends the following roadway improvements as outlined at the study area intersections:
  - Coordinate mutually agreed upon potential safety enhancement improvements, if any, with the Township along the roadways in the vicinity of the site.
  - Remove and maintain on-site vegetation in order to provide adequate sight distances at the new/modified site driveways.
  - Design the new/modified site driveways to Newtown Road and Darby-Paoli Road in accordance to the applicable PennDOT standards.
- Levels of Service (LOS) for the study area intersections have been summarized in matrix form. **Table I** details the overall intersection LOS for each study area intersection.

TABLE I
INTERSECTION LEVELS OF SERVICE (DELAY) SUMMARY

Intersection	Weekday A.M. Peak Hour			Weekday P.M. Peak Hour		
	2013 Existing	2020 Build-Out Year		2013 Existing	2020 Build-Out Year	
		Base	Projected		Base	Projected
Radnor Chester Road & Conestoga Road	D (42.0)	C (34.8)	D (35.4)	E (74.2)	E (77.2)	F (84.5)
Newtown Road & Conestoga Road	A (3.9)	A (4.1)	A (4.5)	A (3.8)	A (4.0)	A (4.3)
Newtown Road & Radnor Chester Road[1]	B (14.6)	B (14.0)	A (9.9)	A (5.2)	A (5.1)	A (5.7)
Newtown Road & Abrahams Lane/ Private Driveway	A (2.2)	A (2.3)	A (2.8)	A (2.8)	A (2.8)	A (3.2)
Darby Paoli Road & Newtown Road[1]	A (8.9)	A (9.8)	A (9.8)	E (34.8)	E (43.0)	E (47.8)
Darby-Paoli Road & Brooke Road[1]	A (7.9)	A (7.8)	A (7.9)	A (6.3)	A (7.4)	A (6.7)
Darby-Paoli Road & Sawmill Road	F (127.0)	F (146.3)	F (152.4)	A (8.2)	B (10.0)	B (11.1)
Darby-Paoli Road & Godfrey Road	A (6.2)	A (6.6)	A (6.7)	A (5.7)	A (6.1)	A (6.3)

INTRODUCTION

Traffic Planning and Design, Inc. (TPD) has completed a revised Transportation Impact Study (TIS) for the proposed Ardrossan Farm development in Radnor Township, Delaware County, Pennsylvania. This TIS has been revised per the 8/28/13 Gilmore & Associates, Inc. (Gilmore) review memorandum prepared on behalf of Radnor Township. The 8/28/13 review and TPD responses are included in **Appendix A**.

The project site is located on the southeast corner of the Newtown Road (S.R. 1021)/Darby-Paoli Road (S.R. 1015) intersection, as shown in **Figure 1**. As shown in **Figure 2,** the proposed development will consist of 60 new single-family homes to be developed over five (5) phases. Please note, there are currently 10 existing lots with residences.

The project scope and the extent of the study area were confirmed with representatives of Township staff.

Site Access Locations

The site will be served by multiple driveways to Newtown Road (S.R. 1021) and Darby-Paoli Road (S.R. 1015). Both roads are state-maintained and thus will require a PennDOT HOP. Therefore, the proposed development is subject to PennDOT's review and approval. The site will be served by the following driveways:

- Six (6) driveways to Newtown Road:
  - New easternmost driveway serving predominately lots on Phases 1 and 2.
  - Existing full-access driveway opposite Abrahams Lane serving predominately lots on Phases 1 and 4.
  - Existing Main House Lot driveway west of Abrahams Lane serving predominately lots on Phases 1 and 4. This driveway currently provides full-access. However, in conjunction with the proposed development will be converted to enter-only.
  - New westernmost driveway serving predominately lots on Phases 5.
  - Two (2) existing driveway serving Lot 2-5.
- Five (5) driveways to Darby-Paoli Road
  - Existing driveway serving Lot 5-1. An emergency access only connection is proposed to connect Lot 5-1 to the Phase 3 access road terminus.
  - Existing driveway serving Lots 5-2 and 5-3. In conjunction with the proposed development, the driveway will also serve 2 additional lots (Lots 5-4 and 5-5).
  - Existing driveway serving Lot 4-9.
  - Two (2) existing driveways serving Lot 4-10.

EXISTING ROADWAY NETWORK

A field review of the existing roadway system in the study area was conducted. The existing roadway characteristics within the study area are summarized in **Table 1**. Photographs of the study area intersections and study area geometry data are included in **Appendix B**.

TABLE 1
ROADWAY CHARACTERISTICS WITHIN STUDY AREA

Roadway	Ownership	PennDOT Functional Classification/ Roadway Type	Predominant Directional Orientation	Average Daily Traffic[1]	Posted Speed Limit
Newtown Road	State (S.R. 1021)	Urban Collector	East-West	6,182	35 mph[2]
Darby-Paoli Road	State (S.R. 1015)	Urban Collector/ Urban Minor Arterial	North-South	6,820	35 mph
Conestoga Road	State (S.R. 1019)	Urban Minor Arterial	East-West	12,388	35 mph
Radnor Chester Road	State (S.R. 1021)	Urban Minor Arterial	North-South	6,164	25 mph
Brooke Road	State (S.R. 1046)	Urban Minor Arterial	North-South	3,800	35 mph
Abrahams Lane	Township	N/A	North-South	-	25 mph
Saw Mill Road	Township	Urban Collector	East-West	1,665	25 mph
Godfrey Road	State (S.R. 1036)	Local Road	East-West	1,840	35 mph

1. Based on PennDOT iTMS data.
2. Along the site frontage.

Crash Data Investigation

Crash data were obtained from PennDOT and the Township for the study area intersections. The PennDOT data are for reportable crashes, and the Township data are non-reportable crashes. PennDOT defines a reportable crash as follows, "A reportable (crash) is one in which an injury or fatality occurs or if at least one of the vehicles involved requires towing from the scene." PennDOT considers a crash occurrence of 5 reportable, correctable crashes over a continuous twelve-month period during the past five years to be a threshold value, above which the intersection design should be reviewed to examine if corrective measures can be taken to enhance safety. The PennDOT reportable crashes were tabulated for the five-year time period beginning 1/1/2008 and ending 12/31/2012. The Township non-reportable crash data spans

October 2010 through August 2013. The number of crashes at the study area intersections is shown in **Table 2.**

TABLE 2
CRASH DATA

Study Area Intersection	Number of Crashes - Reportable (Non-Reportable)					
	2008	**2009**	**2010**	**2011**	**2012**	**2013**
Darby-Paoli Road and Newtown Road	1	2	1 (1)	2 (2)	1	(1)
Darby-Paoli Road and Brooke Road	1	2	2 (1)	2 (1)	2 (2)	(2)
Newtown Road and Abrahams Lane	1	0	0	1	1	(1)
Newtown Road and Radnor Chester Road	0	3	1	1 (2)	0	(0)
Conestoga Road and Radnor Chester Road	3	2	0	4 (2)	7 (1)	(1)
Conestoga Road and Newtown Road	1	0	1	3	0	(0)
Darby-Paoli Road and Saw Mill Road	3	0	1	0	1	-
Darby-Paoli Road and Godfrey Road	0	0	1	0	0	-

Based on the PennDOT reportable crash data presented in **Table 2**, none of the study area intersections, with the exception of the Conestoga Road/Radnor Chester Road intersection, has more than 4 reportable crashes over two consecutive calendars years. Therefore, the 5 reportable/correctable threshold is not exceeded at these intersections. The Conestoga Road/Radnor Chester Road intersection has more than 5 reportable crashes over a continuous twelve-month period. However, based on a review of these crashes, the predominant causation factors for the reported crashes were driver-error (e.g., driver was distracted, improper/careless turn, running red light, proceed without clearance, etc.), which typically are not correctable. In addition, the Township recently restricted eastbound left turns from Conestoga Road onto Radnor Chester Road which reduces the conflicts during the peak hours.

EXISTING TRAFFIC CONDITIONS

Manual Turning Movement Counts

Manual traffic counts were conducted on 15-minute intervals during the weekday morning (7:00 to 9:00 A.M.) and weekday evening (4:00 to 6:00 P.M.) peak periods. Peak hours and count dates for the study area intersections are identified in **Table 3**.

TABLE 3
MANUAL TRAFFIC COUNT INFORMATION

Intersection	Date of Traffic Counts	Time Period	Intersection Peak Hour[1]
Conestoga Road & Radnor Chester Road	Wednesday, April 30, 2014	Weekday A.M.	7:30 A.M. – 8:30 A.M.
	Tuesday, April 29, 2014	Weekday P.M.	4:45 P.M. – 5:45 P.M.
Darby-Paoli Road & Newtown Road	Wednesday, April 30, 2014	Weekday A.M.	7:30 A.M. – 8:30 A.M.
	Tuesday, April 29, 2014	Weekday P.M.	5:00 P.M. – 6:00 P.M.
Newtown Road & Radnor Chester Road	Wednesday, April 30, 2014	Weekday A.M.	7:15 A.M. – 8:15 A.M.
	Tuesday, April 29, 2014	Weekday P.M.	5:00 P.M. – 6:00 P.M.
Darby-Paoli Road & Brooke Road	Wednesday, April 30, 2014	Weekday A.M.	7:30 A.M. – 8:30 A.M.
	Tuesday, April 29, 2014	Weekday P.M.	5:00 P.M. – 6:00 P.M.
Darby-Paoli Road & Saw Mill Road	Tuesday May 13, 2014	Weekday A.M.	7:30 A.M. – 8:30 A.M.
	Tuesday, April 29, 2014	Weekday P.M.	5:00 P.M. – 6:00 P.M.
Darby Paoli Road & Godfrey Road	Wednesday, April 30, 2014	Weekday A.M.	7:30 A.M. – 8:30 A.M.
	Tuesday, April 29, 2014	Weekday P.M.	5:00 P.M. – 6:00 P.M.
Newtown Road & Abrahams Lane	Tuesday May 13, 2014	Weekday A.M.	7:30 A.M. – 8:30 A.M.
	Tuesday, April 29, 2014	Weekday P.M.	5:00 P.M. – 6:00 P.M.

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

The peak traffic volumes at the Conestoga Road/Newtown Road intersection were developed by balancing the volumes with the appropriate movements at the adjacent Conestoga Road/Radnor Chester Road intersection and the Radnor Chester Road/Newtown Road intersection.

Please note, Radnor School District and Villanova University were in session on April 29th and 30th when the majority of the traffic counts were completed. Radnor School District was in session on May 13th when the A.M. peak period counts were completed at two (2) intersections. Based on a volume comparison of these two intersections with the adjacent intersection counts completed on April 30th, the traffic volumes on collected on May 13th are consistent with the April volumes.

In addition, in order to account for the existing driveway trips associated with the existing lots/homes, TPD applied 1 exiting trip to each of the lots respective driveway intersection during the A.M. peak hour, and 1 entering trip per lot during the P.M. peak hour. For example, in the A.M. peak hour, 2 exiting trips were added to the Lot 5-2 thru 5-5 driveway with Darby-Paoli Road.

Existing condition traffic volumes for the weekday A.M. and weekday P.M. peak hours are illustrated in **Figures 3 and 4**, respectively. Manual traffic count data sheets are provided in **Appendix C**.

Automatic Traffic Recorder Counts

Automatic Traffic Recorder (ATR) counts were conducted along the following roadways in the vicinity of the proposed site:

- Darby-Paoli Road, between Newtown Road and Saw Mill Road;
- Newtown Road, between Darby-Paoli Road and Abrahams Lane.

The ATR counts were conducted from Monday, July 15, 2013 until Friday, July 19, 2013. The ATR data sheets are provided in **Appendix C**.

BASE (NO-BUILD) CONDITIONS

Annual Background Growth

A background growth factor for the roadways in the study area was developed based on growth factors for September 2012 to July 2013 obtained from the PennDOT Bureau of Planning and Research (BPR). The PennDOT BPR suggests using a background growth trend factor of 0.51% per year in Delaware County for urban non-interstate roadways. As such, the background growth factor was applied annually to yield an overall growth percentage of 3.1% (0.51% per year, compounded over 6 years) for the 2020 build-out.

The additional traffic volumes due to background growth were added to the existing traffic data to produce 2020 base (no-build) condition traffic volumes. The 2020 base condition volumes for the weekday A.M. and weekday P.M. peak hours are illustrated in **Figures 5 and 6**. Volume development spreadsheets are included in **Appendix D**.

SCHEDULED ROADWAY IMPROVEMENTS

Programmed Improvements

Based on a review of the DVRPC Transportation Improvement Program (TIP) there are two (2) bridges on Darby Paoli Road over the Little Darby Creek and Wigwam Run which will either be rehabilitated or replaced.

PROPOSED SITE ACCESS

Sight Distance Analysis

A sight distance analysis was prepared for the new/modified site driveways. 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 sight distance standard, which is identified in 67 PA Code Chapter 441.8(h), "Access to and

Occupancy of Highways by Driveways and Local Roads." 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:

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

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

Tables 4-7 show the measured, desirable, acceptable (SSSD), and required sight distances at the site driveways for vehicles entering and exiting the site. Please note, per discussions with Gilmore, a travel speed of 10 mph over the posted speed was utilized for the SSSD evaluation in lieu of a speed study.

TABLE 4
SIGHT DISTANCE ANALYSIS
NEW EASTERNMOST SITE DRIVEWAY TO NEWTOWN ROAD

	Direction	***Posted Speed***	***Assumed Travel Speed***	***Sight Distances (feet)***			
				Grade[1]	DES[2]	SSSD[3]	**EXIST**
Exiting Movements	*To the left*	35 mph	45 mph	+1%	440	376	**500+**
	To the right	35 mph	45 mph	+1%	350	376	**500+**
Entering Left Turns	*Approaching same direction*	35 mph	45 mph	+1%	300	376	**400+**
	Approaching opposite direction	35 mph	45 mph	+1%	300	376	**400+**

DES = PennDOT Desirable Sight Distance
SSSD = PennDOT Acceptable Sight Distance
EXIST = Existing (measured) Sight Distance
1 = Roadway Grade Approaching Driveway
2 = Based on the posted speed
3 = Based on the assumed travel speed

TABLE 5
SIGHT DISTANCE ANALYSIS
EXISTING DRIVEWAY TO NEWTOWN ROAD OPPOSITE ABRAHAMS LANE

	Direction	***Posted Speed***	***Assumed Travel Speed***	***Sight Distances (feet)***			
				Grade[1]	DES[2]	SSSD[3]	**EXIST**
Exiting Movements	*To the left*	35 mph	45 mph	+3%	440	364	**500+**
	To the right	35 mph	45 mph	-3%	350	406	**500+**

DES = PennDOT Desirable Sight Distance
SSSD = PennDOT Acceptable Sight Distance
EXIST = Existing (measured) Sight Distance
1 = Roadway Grade Approaching Driveway
2 = Based on the posted speed
3 = Based on the assumed travel speed

TABLE 6
SIGHT DISTANCE ANALYSIS
EXISTING DRIVEWAY TO NEWTOWN ROAD, WEST OF ABRAHAMS LANE

	Direction	*Posted Speed*	*Assumed Travel Speed*	*Sight Distances (feet)*			
				Grade[1]	DES[2]	SSSD[3]	**EXIST**
Entering Left Turns	*Approaching same direction*	35 mph	45 mph	-1%	300	390	**400+**
	Approaching opposite direction	35 mph	45 mph	+1%	300	376	**400+**

DES = PennDOT Desirable Sight Distance
SSSD = PennDOT Acceptable Sight Distance
EXIST = Existing (measured) Sight Distance
1 = Roadway Grade Approaching Driveway
2 = Based on the posted speed
3 = Based on the assumed travel speed

TABLE 7
SIGHT DISTANCE ANALYSIS
NEW WESTERNMOST SITE DRIVEWAY TO NEWTOWN ROAD

	Direction	*Posted Speed*	*Assumed Travel Speed*	*Sight Distances (feet)*			
				Grade[1]	DES[2]	SSSD[3]	**EXIST**
Exiting Movements	*To the left*	35 mph	45 mph	+2%	440	370	**500+**[4]
	To the right	35 mph	45 mph	+1%	350	376	**500+**[5]
Entering Left Turns	*Approaching same direction*	35 mph	45 mph	+1%	300	376	**400+**
	Approaching opposite direction	35 mph	45 mph	+2%	300	370	**400+**

DES = PennDOT Desirable Sight Distance
SSSD = PennDOT Acceptable Sight Distance
EXIST = Existing (measured) Sight Distance
1 = Roadway Grade Approaching Driveway
2 = Based on the posted speed
3 = Based on the assumed travel speed
4 = With removal of on-site vegetation
5 = With removal of the on-site wall

As shown in **Tables 4-7** above, with the appropriate removal of on-site vegetation and wall, the measured sight distances at the site driveways exceed PennDOT's sight distance requirements.

TRIP GENERATION

The trip generation rates for the proposed development were obtained from the manual Trip Generation, 9th Edition, 2012, an Institute of Transportation Engineers (ITE) Informational Report. For the proposed development, Land Use Codes 210 (Single-Family Detached Housing) 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; and (3) weekday P.M. peak hour. **Table 8** shows the data for the analyzed time periods.

TABLE 8
ITE TRIP GENERATION DATA

Land Use	ITE #	Time Period	Equations/Rates	Entering %
Single-Family Homes	210	Weekday	Ln(T) = 0.92*Ln(X)+2.72	50%
		Weekday A.M. Peak Hour	T = 0.70*(X)+9.74	25%
		Weekday P.M. Peak Hour	Ln(T) = 0.90*Ln(X)+0.51	63%

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

Table 9 summarizes the site trip generation for the analyzed time periods for the 60 proposed new homes.

TABLE 9
ARDROSSAN FARM
TRIP GENERATION SUMMARY

Time Period	Total	Enter	Exit
Weekday (24-Hour Total)	656	328	328
Weekday A.M. Peak Hour	52	13	39
Weekday P.M. Peak Hour	66	42	24

As shown in **Table 9**, based on the conservative trip generation assessment, the proposed development is expected to generate 52 new vehicle-trips during the weekday A.M. peak hour and 66 new vehicle-trips during the weekday P.M. 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 use of the site, and the site driveway locations. The new trips for the proposed development were distributed to the local roadway network based on the percentages shown in **Table 10**.

TABLE 10
TRIP DISTRIBUTION PERCENTAGES – NEW TRIPS

Direction - To/From	Assignment (To/From)	Distribution Percentage
East	via Conestoga Road	20%
	via Godfrey Road	2%
West	via Darby Paoli Road	15%
	via Conestoga Road	10%
	via Saw Mill Road	15%
North	via Brooke Road	15%
	via Abrahams Lane	
	via Radnor Chester Road	15%
South	via Darby-Paoli Road	8%

The assignment of site-generated trips for the proposed development during the weekday A.M. and P.M. peak hours are shown in **Figures 7 and 8**, respectively.

PROJECTED (BUILD) CONDITION TRAFFIC VOLUMES

The site-generated trips for the proposed development were added to the 2020 base (no-build) condition traffic volumes to develop 2020 projected (build) condition traffic volumes. The 2020 projected condition traffic volumes for the weekday A.M. and P.M. peak hours are shown in **Figures 9 and 10**, respectively.

LEVELS OF SERVICE FOR AN INTERSECTION

For analysis of intersections, level of service is defined in terms of delay, which is a measure of driver discomfort and frustration, fuel consumption, and lost travel time. LOS criteria is stated in terms of control delay per vehicle for a one-hour analysis period. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. The criteria are shown in **Table 11**. Delay, as it relates to level of service, is a complex measure and is dependent upon a number of variables. For signalized intersections, these variables include the quality of vehicle progression, the cycle length, the green time ratio, and the volume/capacity ratio for the lane group in question. For unsignalized intersections, delay is related to the availability of gaps in the flow of traffic on the major street and the driver's discretion in selecting an appropriate gap for a particular movement from the minor street (straight across, left or right turn).

TABLE 11
LEVEL OF SERVICE CRITERIA
UNSIGNALIZED AND SIGNALIZED INTERSECTIONS [1]

Level of Service	Control Delay Per Vehicle (Seconds)	
	Signalized	Unsignalized
A	≤ 10	≤ 10
B	> 10 and ≤ 20	> 10 and ≤ 15
C	> 20 and ≤ 35	> 15 and ≤ 25
D	> 35 and ≤ 55	> 25 and ≤ 35
E	> 55 and ≤ 80	> 35 and ≤ 50
F	> 80	> 50

[1] Obtained from Exhibits 18-4 and 19-1 of the Transportation Research Board's *Highway Capacity Manual 2010*

CAPACITY ANALYSIS METHODOLOGY

Capacity analyses were conducted for the weekday A.M. and weekday P.M. peak hours at the study area intersections. The majority of the study area intersections were analyzed according to the methodologies contained in the 2010 *Highway Capacity Manual* (HCM) using *Synchro 8* software, a Trafficware product. Please note, *SimTraffic* software was used to analyze the Darby-Paoli Road/Brooke Road intersection, the Darby-Paoli Road/Newtown Road intersection, and the Newtown Road/Radnor Chester Road intersection due to the non-traditional STOP-sign configurations at these intersections and the 2010 HCM's limitations to analyze such configurations. The *SimTraffic* analysis results appear consistent with field observations. For the Brooke Road approach to Darby-Paoli Road there is a wide shoulder which based on field observations is utilized as a right turn lane. Therefore, the Brooke Road approach was modeled with 2 lanes approaching Darby-Paoli Road. In addition, for the purpose of the *SimTraffic* analysis, TPD completed five, one-hour simulation runs for each condition and took the average delay of the runs.

The following conditions were analyzed:

- Existing conditions;
- 2020 Base conditions (Build-out year without development);
- 2020 Projected conditions (Build-out year with development).

In addition, capacity analyses were conducted at the site driveway intersections under the 2020 projected conditions. The capacity analysis worksheets are included in **Appendix E**. The PennDOT-approved signal plan is included in **Appendix F**.

PennDOT's Transportation Impact Study Guidelines outlined in Strike-Off Letter 470-09-4, dated February 12, 2009 contain the following criteria regarding levels of service:

- Page 29 of the Guidelines state that if evaluation of the With Development Horizon Year Scenario to the Without Development Horizon Year Scenario indicates that the overall intersection level of service has dropped, the applicant will be required to mitigate the level of service if the increase in overall intersection delay is greater than 10-seconds. If the overall intersection delay increase is less than or equal to 10-seconds, mitigation of the intersection will not be required.
- Page 29 of the Guidelines state that for mitigation scenarios, applicants are expected to mitigate the overall intersection LOS to the original Without Development LOS; the 10-second delay variance is not applied to mitigation scenarios. Applicants may be required to address available storage and queue lengths at critical movements or approaches even if the overall LOS requirements are met.
- Page 31 of the Guidelines state that if signalization is the preferred alternative for mitigation, overall intersection LOS C in rural areas and LOS D in urban areas is acceptable.
- Page 31 of the Guidelines states new signalized or unsignalized intersection established to serve as access to the development shall be designed to operate at minimum LOS C for rural areas, and minimum LOS D for urban areas.

LEVELS OF SERVICE IN THE STUDY AREA

Level of service (LOS) matrices for the study area intersections are shown in **Table 12** for the weekday A.M. and weekday P.M. peak hours. Per PennDOT standards, the signal timings at the signalized study area intersection have been optimized under base conditions and projected conditions.

TABLE 12
LEVEL OF SERVICE (DELAY) SUMMARY

Intersection	Movement	Weekday A.M. Peak Hour			Weekday P.M. Peak Hour		
		2014 Existing	2020 Build-Out Year		2014 Existing	2020 Build-Out Year	
			Base	Projected		Base	Projected
Radnor Chester Road & Conestoga Road	EB L/T/R	A (8.4)	B (11.6)	B (11.6)	B (17.8)	E (55.1)	E (71.4)
	WB L/T/R	B (13.1)	B (19.3)	B (19.3)	B (13.7)	C (21.5)	C (21.5)
	NB L/T/R	C (31.5)	C (25.0)	C (25.5)	C (20.6)	B (15.6)	B (15.7)
	SB L/T/R	F (206.0)	F (136.7)	F (139.9)	F (242.4)	F (195.5)	F (201.5)
	ILOS	**D (42.0)**	**C (34.8)**	**D (35.4)**	**E (74.2)**	**E (77.2)**	**F (84.5)**
Newtown Road & Conestoga Road	EB L/T	-	-	-	-	-	-
	WB L/T	A (1.4)	A (1.4)	A (1.5)	A (2.9)	A (3.0)	A (3.3)
	NB L/R	C (17.2)	C (18.2)	C (19.1)	C (20.1)	C (21.5)	C (22.5)
	ILOS	**A (3.9)**	**A (4.1)**	**A (4.5)**	**A (3.8)**	**A (4.0)**	**A (4.3)**
Newtown Road & Radnor Chester Road[1]	EB L	C (17.3)	C (16.6)	B (10.6)	A (2.9)	A (2.4)	A (3.8)
	WB T/R	B (10.5)	B (10.6)	B (10.6)	A (7.4)	A (7.7)	A (7.7)
	SB L	A (4.8)	A (4.8)	A (4.8)	A (6.6)	B (6.6)	A (6.5)
	ILOS	**B (14.6)**	**B (14.0)**	**A (9.9)**	**A (5.2)**	**A (5.1)**	**A (5.7)**
Newtown Road & Abrahams Lane/ Driveway	EBL	A (8.2)	A (8.2)	A (8.3)	A (8.1)	A (8.2)	A (8.2)
	WBL	A (0.0)	A (0.0)	A (8.9)	A (7.8)	A (7.8)	A (7.8)
	NB L/T/R	C (15.1)	C (15.6)	C (21.7)	B (11.7)	B (11.9)	B (14.5)
	SB L/T/R	C (18.1)	C (19.1)	C (20.7)	B (13.2)	B (13.6)	B (14.2)
	ILOS	**A (2.2)**	**A (2.3)**	**A (2.8)**	**A (2.8)**	**A (2.8)**	**A (3.2)**
Darby Paoli Road & Newtown Road[1]	WB L/R	B (10.6)	B (12.6)	B (11.9)	F (95.2)	F (119.3)	F (130.9)
	NB T	C (15.5)	C (17.5)	C (18.1)	B (13.2)	B (13.3)	B (13.4)
	NB R	A (7.6)	A (7.7)	A (7.7)	A (5.3)	A (5.4)	A (6.2)
	SB L/(T)	A (1.9)	A (2.1)	A (2.0)	A (2.7)	A (2.8)	A (2.8)
	ILOS	**A (8.9)**	**A (9.8)**	**A (9.8)**	**E (34.8)**	**E (43.0)**	**E (47.8)**
Darby-Paoli Road & Brooke Road[1]	EB L	A (2.0)	A (2.1)	A (2.0)	A (1.6)	A (1.7)	A (1.7)
	WB T/R	B (14.2)	C (15.2)	C (14.9)	A (10.3)	B (10.6)	B (10.3)
	SB L	F (64.7)	E (40.9)	E (40.2)	D (28.5)	D (35.1)	D (29.9)
	SB R	A (1.9)	A (5.2)	A (5.6)	A (3.1)	A (3.8)	A (3.4)
	ILOS	**A (7.9)**	**A (7.8)**	**A (7.9)**	**A (6.3)**	**A (7.4)**	**A (6.7)**
Darby-Paoli Road & Saw Mill Road	EB L/R	F (344.5)	F (397.0)	F (416.1)	E (45.7)	F (56.7)	F (62.2)
	NB L/T	A (8.3)	A (8.3)	A (8.4)	B (10.22)	B (10.4)	B (10.4)
	ILOS	**F (127.0)**	**F (146.3)**	**F (152.4)**	**A (8.2)**	**B (10.0)**	**B (11.1)**
Darby-Paoli Road & Godfrey Road	WB L/R	D (25.3)	D (27.8)	D (28.2)	C (24.2)	D (26.3)	D (26.9)
	SB L/T	A (9.2)	B (9.3)	A (9.3)	A (7.8)	A (7.8)	A (7.8)
	ILOS	**A (6.2)**	**A (6.6)**	**A (6.7)**	**A (5.7)**	**A (6.1)**	**A (6.3)**

TABLE 12 (CONTINUED)
LEVEL OF SERVICE (DELAY) SUMMARY

Intersection	Movement	Weekday A.M. Peak Hour			Weekday P.M. Peak Hour		
		2014 Existing	2020 Build-Out Year		2014 Existing	2020 Build-Out Year	
			Base	Projected		Base	Projected
Newtown Road & Eastern Driveway	EB T/R	-	-	-	-	-	-
	WB L/T	-	-	A (8.7)	-	-	A (8.0)
	NB L/R	-	-	C (15.2)	-	-	B (12.7)
	ILOS	**-**	**-**	**A (0.2)**	**-**	**-**	**A (0.2)**
Newtown Road & Lot 2-5 Driveway	EB T/R	-	-	A (0.0)	-	-	A (0.0)
	WB L/T	A (0.0)	A (0.0)	A (0.0)	A (7.9)	A (7.9)	A (8.0)
	NB L/R	B (12.0)	B (12.2	B (12.3)	A (0.0)	A (0.0)	A (0.0)
	ILOS	**A (0.0)**	**A (0.0)**	**A (0.0)**	**A (0.0)**	**A (0.0)**	**A (0.0)**
Newtown Road & Main House Driveway	EB T/R	-	-	-	-	-	-
	WB L/T	-	-	A (0.0)	A (7.9)	A (7.9)	A (7.9)
	NB L/R	-	-	A (0.0)	A (0.0)	A (0.0)	A (0.0)
	ILOS	**-**	**-**	**A (0.0)**	**A (0.1)**	**A (0.0)**	**A (0.0)**
Newtown Road & Western Driveway	EB T/R	-	-	-	-	-	-
	WB L/T	-	-	A (9.0)	-	A (0.0)	A (7.9)
	NB L/R	-	-	C (15.8)	-	A (0.0)	B (11.6)
	ILOS	**-**	**-**	**A (0.1)**	**-**	**A (0.0)**	**A (0.1)**
Darby-Paoli Road & Lot 5-1	WB L/R	C (15.5)	C (15.8)	A (15.9)	A (0.0)	A (0.0)	A (0.0)
	NB T/R	-	-	A (0.0)	-	-	A (0.0)
	SB L/T	A (0.0)	A (0.0)	A (0.0)	A (7.9)	A (7.8)	A (7.8)
	ILOS	**A (0.0)**	**A (0.0)**	**A (0.0)**	**A (0.0)**	**A (0.0)**	**A (0.0)**
Darby-Paoli Road & Lots 5-2 to 5-5	WB L/R	C (19.9)	C (20.6)	C (19.3)	A (0.0)	A (0.0)	A (9.8)
	NB T/R	-	-	-	-	-	-
	SB L/T	A (0.0)	A (0.0)	A (9.8)	A (7.9)	A (7.8)	A (7.8)
	ILOS	**A (0.0)**	**A (0.0)**	**A (0.0)**	**A (0.0)**	**A (0.0)**	**A (0.0)**
Darby-Paoli Road & Lot 4-9	WB L/R	C (17.7)	C (18.3)	C (18.4)	A (0.0)	A (0.0)	A (0.0)
	NB T/R	-	-	A (0.0)	-	-	A (0.0)
	SB L/T	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)
	ILOS	**A (0.0)**	**A (0.0)**	**A (0.0)**	**A (0.0)**	**A (0.0)**	**A (0.0)**
Darby-Paoli Road & Lot 4-10	WB L/R	B (11.9)	B (12.1)	B (12.1)	A (0.0)	A (0.0)	A (0.0)
	NB T/R	-	-	A (0.0)	-	-	A (0.0)
	SB L/T	A (0.0)	A (0.0)	A (0.0)	A (7.7)	A (7.7)	A (7.7)
	ILOS	**A (0.0)**	**A (0.0)**	**A (0.0)**	**A (0.0)**	**A (0.0)**	**A (0.0)**

Base = No-Build scenario; Projected = Build scenario; ILOS = Overall Intersection Level of Service
1 = Non-traditional stop-control, Capacity analyses completed utilizing SimTraffic software

As shown in **Table 12**, under 2020 projected conditions during the weekday A.M. and P.M peak hours, all levels of service at the site driveways will comply with the requirement outlined in PennDOT's TIS Guidelines (i.e. increase by less than the 10-second threshold).

95TH PERCENTILE QUEUE ANALYSIS

Queue analyses were conducted at the study area intersections using *Synchro 8* 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 13** for the analyzed peak hours.

TABLE 13
95TH PERCENTILE QUEUE (FEET) SUMMARY

Intersection	Movement	Existing Storage	Weekday A.M. Peak Hour		Weekday P.M. Peak Hour	
			2020 Build-Out Year		2020 Build-Out Year	
			Base	Projected	Base	Projected
Radnor Chester Road & Conestoga Road	EB L/T/R	500+	225	253	325	310
	WB L/T/R	500	455	528	370	443
	NB L/T/R	140	253	238	78	73
	SB L/T/R	950	550	498	925	755
Newtown Road & Conestoga Road	EB L/T	325	0	0	0	0
	WB L/T	400+	13	13	28	33
	NB L/R	385	85	95	73	83
Newtown Road & Radnor Chester Road[1]	EB L	1100+	349	273	21	81
	WB T/R	300	72	73	71	79
	SB L	145	76	68	103	103
Newtown Road & Abrahams Lane/ Private Driveway	EBL	200+	10	10	3	3
	WBL	200+	0	0	0	0
	NB L/T/R	200+	3	10	0	3
	SB L/T/R	200+	23	25	30	33
Darby Paoli Road & Newtown Road[1]	WB L/R	1500+	109	128	915	1035
	NB T	200+	145	184	74	74
	NB R	260	125	134	65	74
	SB L	200+	3	7	0	0
Darby-Paoli Road & Brooke Road[1]	EB L	300+	5	6	0	0
	WB T/R	300+	265	186	96	88
	SB L	300+	244	136	218	182
	SB R	100	154	131	150	145
Darby-Paoli Road & Sawmill Road	EB L/R	475+	918	940	158	173
	NB L/T	200+	5	5	10	10
	SB T/R	200+	0	0	0	0
Darby-Paoli Road & Godfrey Road	WB L/R	300+	78	78	83	85
	NB T/R	200+	0	0	0	0
	SB L/T	200+	20	20	5	5

TABLE 13 (CONTINUED)
95TH PERCENTILE QUEUE (FEET) SUMMARY

Intersection	Movement	Existing Storage	Weekday A.M. Peak Hour		Weekday P.M. Peak Hour	
			2020 Build-Out Year		2020 Build-Out Year	
			Base	Projected	Base	Projected
Newtown Road & Eastern Driveway	EB T/R	100+	-	0	-	0
	WB L/T	100+	-	0	-	0
	NB L/R	100+	-	3	-	3
Newtown Road & Lot 2-5 Driveway	EB T/R	100+	-	0	-	0
	WB L/T	100+	-	0	-	0
	NB L/R	100+	-	0	-	0
Newtown Road & Main House Driveway	EB T/R	100+	-	0	-	0
	WB L/T	100+	-	0	-	0
	NB L/R	100+	-	0	-	0
Newtown Road & Western Driveway	EB T/R	100+	-	0	-	0
	WB L/T	100+	-	0	-	0
	NB L/R	100+	-	3	-	0
Darby-Paoli Road & Lot 5-1	WB L/R	100+	-	0	-	0
	NB T/R	100+	-	0	-	0
	SB L/T	100+	-	0	-	0
Darby-Paoli Road & Lots 5-2 to 5-5	WB L/R	100+	-	0	-	0
	NB T/R	100+	-	0	-	0
	SB L/T	100+	-	0	-	0
Darby-Paoli Road & Lot 4-8	WB L/R	100+	-	0	-	0
	NB T/R	100+	-	0	-	0
	SB L/T	100+	-	0	-	0
Darby-Paoli Road & Lot 4-10	WB L/R	100+	-	0	-	0
	NB T/R	100+	-	0	-	0
	SB L/T	100+	-	0	-	0

Base = No-Build scenario; Projected = Build scenario

As shown in **Table 13,** adequate queue storage will be provided for the turn lanes in 2020 with construction and full build-out of the Ardrossan Farm Development. Queue analysis worksheets are included with the capacity analysis worksheets provided in **Appendix E**.

ALL-WAY STOP EVALUATION

Per the 8/28/13 Gilmore review and subsequent discussions, a preliminary all-way stop operations evaluation was completed at the following intersections:

- Darby-Paoli Road/Brooke Road;
- Darby-Paoli Road/Newtown Road;
- Darby-Paoli Road/Godfrey Road.

The evaluation was conducted in accordance with the FHWA Publication Manual on Uniform Traffic Control Devices (MUTCD), Part 2, "Signs," Chapter 2B, "Regulatory Signs," Section

2B.07, "Multi-way Stop Applications," and Title 67 of the PA Code, Chapter 212, Official Traffic Control Devices, Subchapter B, "Signs," Section 212.106, "Additional warrants for Stop Signs (R1-1) and Yield Signs (R1-2)" (Chapter 212).

Per the MUTCD, the multi-way stop installation can be useful as a safety measure at some locations. However, a multi-way stop installation may not be used for speed control. The decision to install multi-way stop control should be based on an engineering study. The MUTCD provides guidance pertaining to signal warrants, crash history, and traffic volumes to be considered for a multi-way STOP sign installation.

Other options that may be considered in an engineering study from the MUTCD include:

A. Left-turn conflicts;
B. Vehicle/pedestrian conflicts;
C. Sight distance;
D. Neighborhood collector streets.

For the purpose of this all-way STOP evaluation, the focus was on the neighborhood collector street option which is noted as, "An intersection of two residential neighborhood collector (through) streets of similar design and operating characteristics where multi-way stop control would improve traffic operational characteristics of the intersection."

Table 14 below summarized the existing, base (no-build), projected (build) conditions operations of the intersections with the current STOP-sign configuration, as well as the project condition operations with an All-Way STOP configuration.

TABLE 14
LEVEL OF SERVICE (DELAY) SUMMARY

Intersection	Movement	Weekday A.M. Peak Hour				Weekday P.M. Peak Hour			
		2014 Existing	2020 Build-Out Year			2014 Existing	2020 Build-Out Year		
			Base	Projected	Projected[1]		Base	Projected	Projected[1]
Darby Paoli Road & Newtown Road[2]	WB L/R	B (10.6)	B (12.6)	B (11.9)	A (8.0)	F (95.2)	F (119.3)	F (130.9)	C (19.5)
	NB T	C (15.5)	C (17.5)	C (18.1)	B (11.3)	B (13.2)	B (13.3)	B (13.4)	B (10.4)
	NB R	A (7.6)	A (7.7)	A (7.7)	A (6.1)	A (5.3)	A (5.4)	A (6.2)	A (4.2)
	SB L/T	A (1.9)	A (2.1)	A (2.0)	B (11.5)	A (2.7)	A (2.8)	A (2.8)	F (66.2)
	ILOS	**A (8.9)**	**A (9.8)**	**A (9.8)**	**A (9.6)**	**E (34.8)**	**E (43.0)**	**E (47.8)**	**E (38.8)**
Darby-Paoli Road & Brooke Road[2]	EB L	A (2.0)	A (2.1)	A (2.0)	C (21.2)	A (1.6)	A (1.7)	A (1.7)	C (17.9)
	WB T/R	B (14.2)	C (15.2)	C (14.9)	A (9.9)	A (10.3)	B (10.6)	B (10.3)	A (7.9)
	SB L	F (64.7)	E (40.9)	E (40.2)	F (145.9)	D (28.5)	D (35.1)	D (29.9)	F (49.5)
	SB R	A (1.9)	A (5.2)	A (5.6)	C (15.2)	A (3.1)	A (3.8)	A (3.4)	A (7.0)
	ILOS	**A (7.9)**	**A (7.8)**	**A (7.9)**	**C (19.2)**	**A (6.3)**	**A (7.4)**	**A (6.7)**	**C (16.5)**
Darby-Paoli Road & Godfrey Road[3]	WB L/R	D (25.3)	D (27.8)	D (28.2)	B (11.2)	C (24.2)	D (26.3)	D (26.9)	B (11.6)
	NB T/R	-	-	-	C (18.9)	-	-	-	B (10.2)
	SB L/T	A (9.2)	B (9.3)	A (9.3)	C (15.6)	A (7.8)	A (7.8)	A (7.8)	D (26.4)
	ILOS	**A (6.2)**	**A (6.6)**	**A (6.7)**	**C (16.4)**	**A (5.7)**	**A (6.1)**	**A (6.3)**	**C (20.2)**

1 = With All-Way STOP control.
2 = Analyzed using SimTraffic for all conditions.
3 = Analyzed using HCM methodology for all conditions.

As shown in **Table 14**, with an all-way STOP, the average delay at the Darby-Paoli Road/Brooke Road intersection is higher when compared the existing configuration, with the southbound Brooke Road left turn movement operating with a significantly longer delay during the morning peak hour. Therefore, from a LOS perspective, TPD does not recommend the installation of an all-way STOP at this intersection.

The Darby-Paoli Road/Godfrey Road intersection would operate at LOS C with the installation of an all-way STOP as compared to LOS A under the current configuration. Therefore, from a LOS perspective, TPD does not recommend the installation of an all-way STOP at this intersection.

With an all-way STOP, the Darby-Paoli Road/Newtown Road intersection would operate at similar LOS during the A.M. and P.M. peak hours when compared to the existing configuration. The westbound Newtown Road approach improves with the installation of an all-way STOP, while the delay on the southbound Darby-Paoli Road approach would increase with the installation of an all-way STOP. It is at the discretion of the Township whether to install an all-way STOP at this intersection.

AUXILIARY TURN LANE ANALYSIS

TPD evaluated auxiliary turn lane warrants as summarized below. The warrant analysis was conducted according to the methodologies contained in Chapter 11 of PennDOT's *Publication 46* and Strike-Off Letter 470-08-07. **Table 13** summarizes the results of the auxiliary turn lane analysis.

TABLE 13
AUXILIARY TURN LANE ANALYSIS SUMMARY

Intersection	Auxiliary Lane	Warrant Satisfied?
Newtown Road and (Enter-Only) Main House Lot Driveway	EB Right-Turn Lane	No
	WB Left-Turn Lane	No
Darby-Paoli Road and Lots 5-2 to 5-5 Driveway	NB Right-Turn Lane	No
	SB Left-Turn Lane	No

Please note, TPD evaluated only the above site driveway intersections with Newtown Road and Darby-Paoli Road, as these driveway intersections have the highest traffic volumes on each respective road. Based on the turn lane warrant analysis results at the above intersections, it is TPD's opinion that the turn lane warrants will also not be satisfied at the other site driveway intersections with Newtown Road and Darby-Paoli Road. The calculations for the auxiliary turn lane warrants are included in **Appendix G**.

RECOMMENDATIONS

TPD has made the following recommendations in relation to the proposed Ardrossan Farm development in Radnor Township:

- Coordinate mutually agreed upon potential safety enhancement improvements, if any, with the Township along the roadways in the vicinity of the site.
- Remove and maintain on-site vegetation in order to provide adequate sight distances at the new/modified site driveways.
- Design the new/modified site driveways to Newtown Road and Darby-Paoli Road in accordance to the applicable PennDOT standards.

CONCLUSIONS

Based on the results of the transportation impact study, TPD offers the following conclusions:

- The project site is located on the southeast corner of the Newtown Road (S.R. 1021)/Darby-Paoli Road (S.R. 1015) intersection.
- The proposed development will consist of 60 new single-family homes to be developed over five (5) phases. Please note, there are currently 10 existing lots with residences.
- The site will be served by multiple driveways to Newtown Road (S.R. 1021) and Darby-Paoli Road (S.R. 1015). Both roads are state-maintained and thus will require a PennDOT HOP. Therefore, the proposed development is subject to PennDOT's review and approval. The site will be served by the following driveways:
  - Six (6) driveways to Newtown Road:
    - New easternmost driveway serving predominately lots on Phases 1 and 2.
    - Existing full-access driveway opposite Abrahams Lane serving predominately lots on Phases 1 and 4.
    - Existing Main House Lot driveway west of Abrahams Lane serving predominately lots on Phases 1 and 4. This driveway currently provides full-access. However, in conjunction with the proposed development will be converted to enter-only.
    - New westernmost driveway serving predominately lots on Phases 5.
    - Two (2) existing driveway serving Lot 2-5.
  - Five (5) driveways to Darby-Paoli Road
    - Existing driveway serving Lot 5-1. An emergency access only connection is proposed to connect Lot 5-1 to the Phase 3 access road terminus.
    - Existing driveway serving Lots 5-2 and 5-3. In conjunction with the proposed development, the driveway will also serve 2 additional lots (Lots 5-4 and 5-5).
    - Existing driveway serving Lot 4-9.
    - Two (2) existing driveways serving Lot 4-10.
- The measured sight distances at the new/modified site driveways exceed PennDOT's sight distance requirements, with the appropriate removal of on-site vegetation and wall.
- The proposed development is expected to generate 52 new vehicle-trips during the weekday A.M. peak hour and 66 new vehicle-trips during the weekday P.M. peak hour.
- Under 2020 projected conditions, all levels of service at the study area intersections will comply with the requirement outlined in PennDOT's TIS Guidelines (i.e. increase by less than the 10-second threshold).

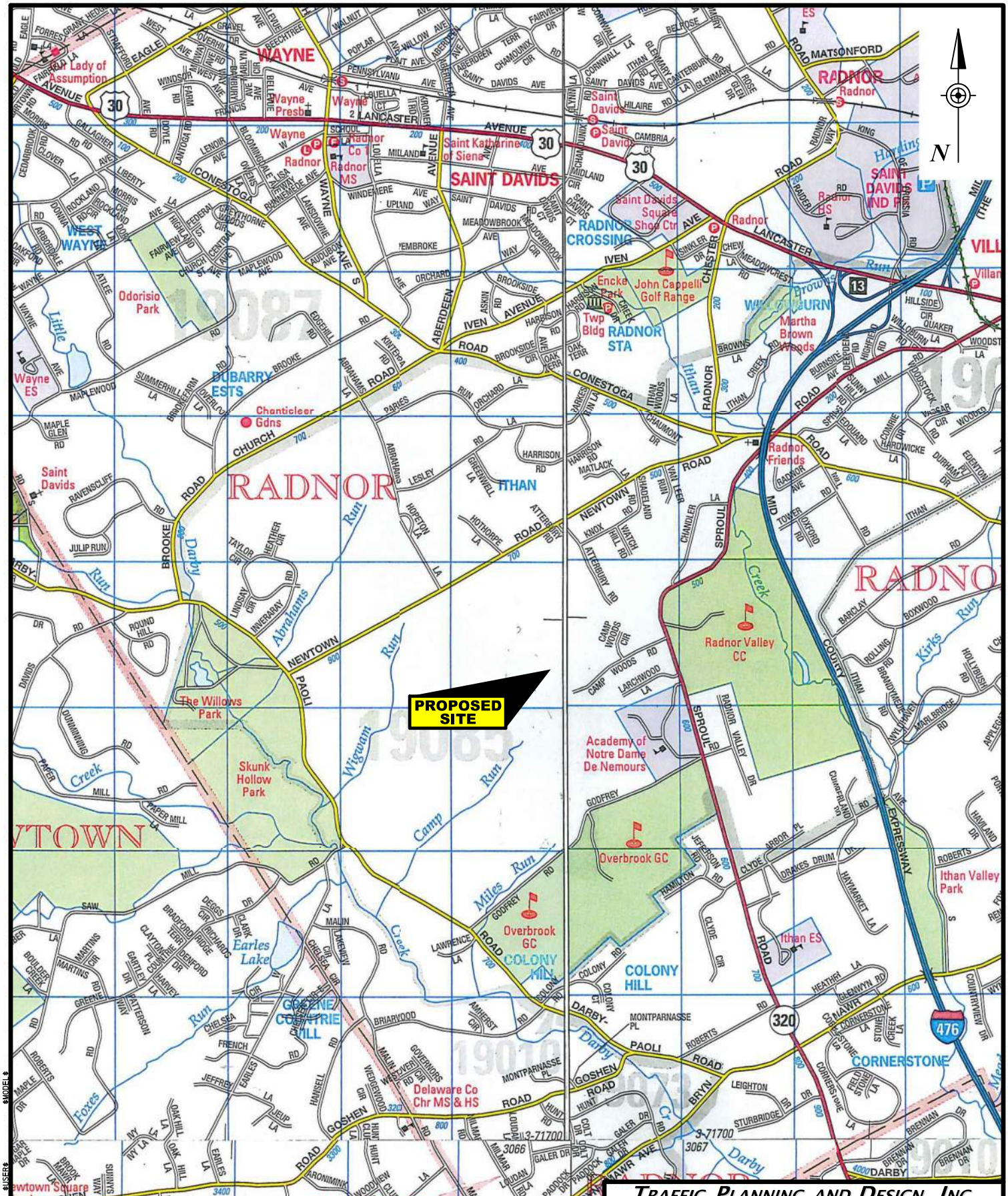

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FIGURE 1

SITE LOCATION

$FILE$ $DATE$ $TIME$ $USER$ $MODEL$

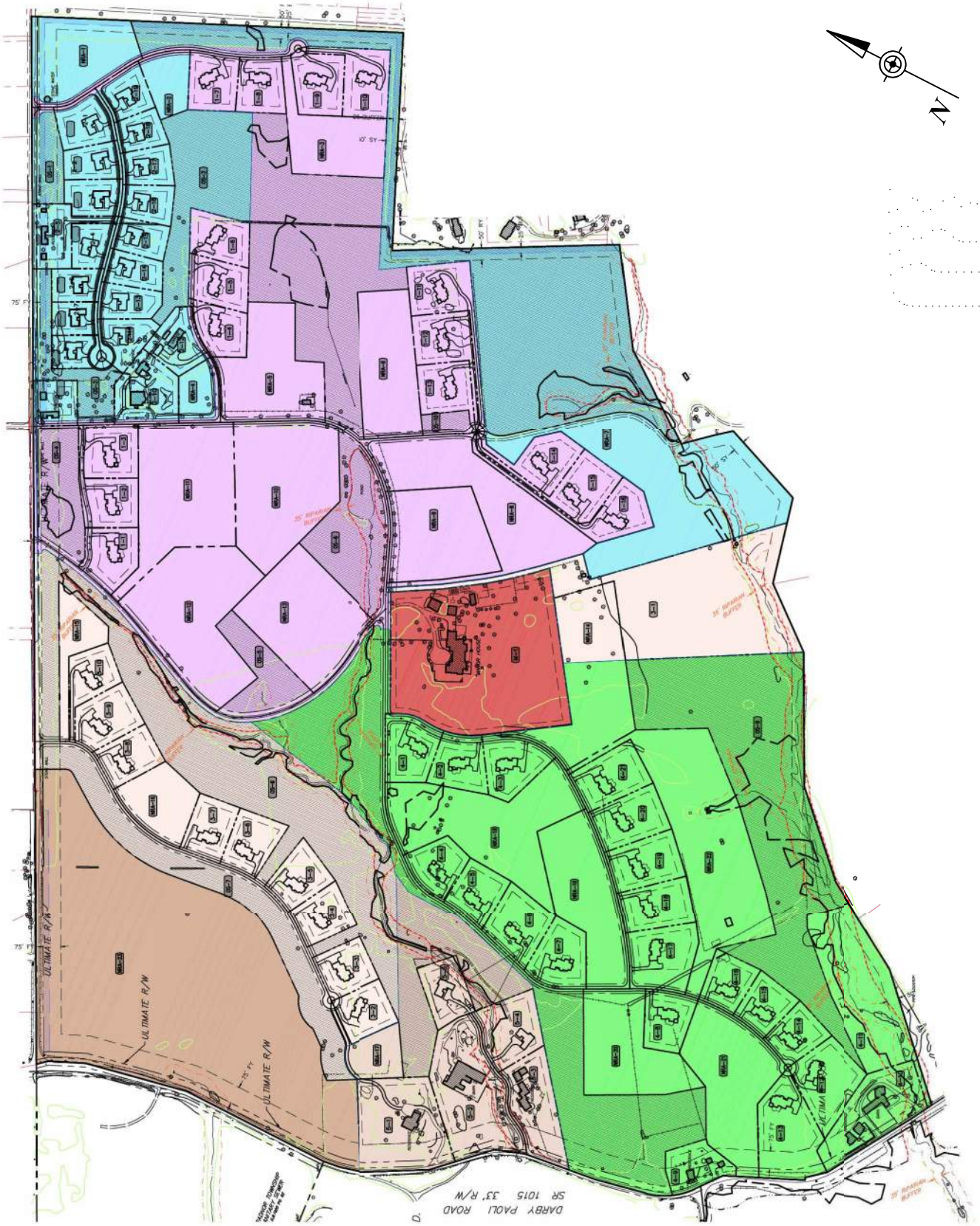

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FIGURE 2

SITE PLAN

$FILE$ $DATE$ $TIME$ $USER$ $MODEL$

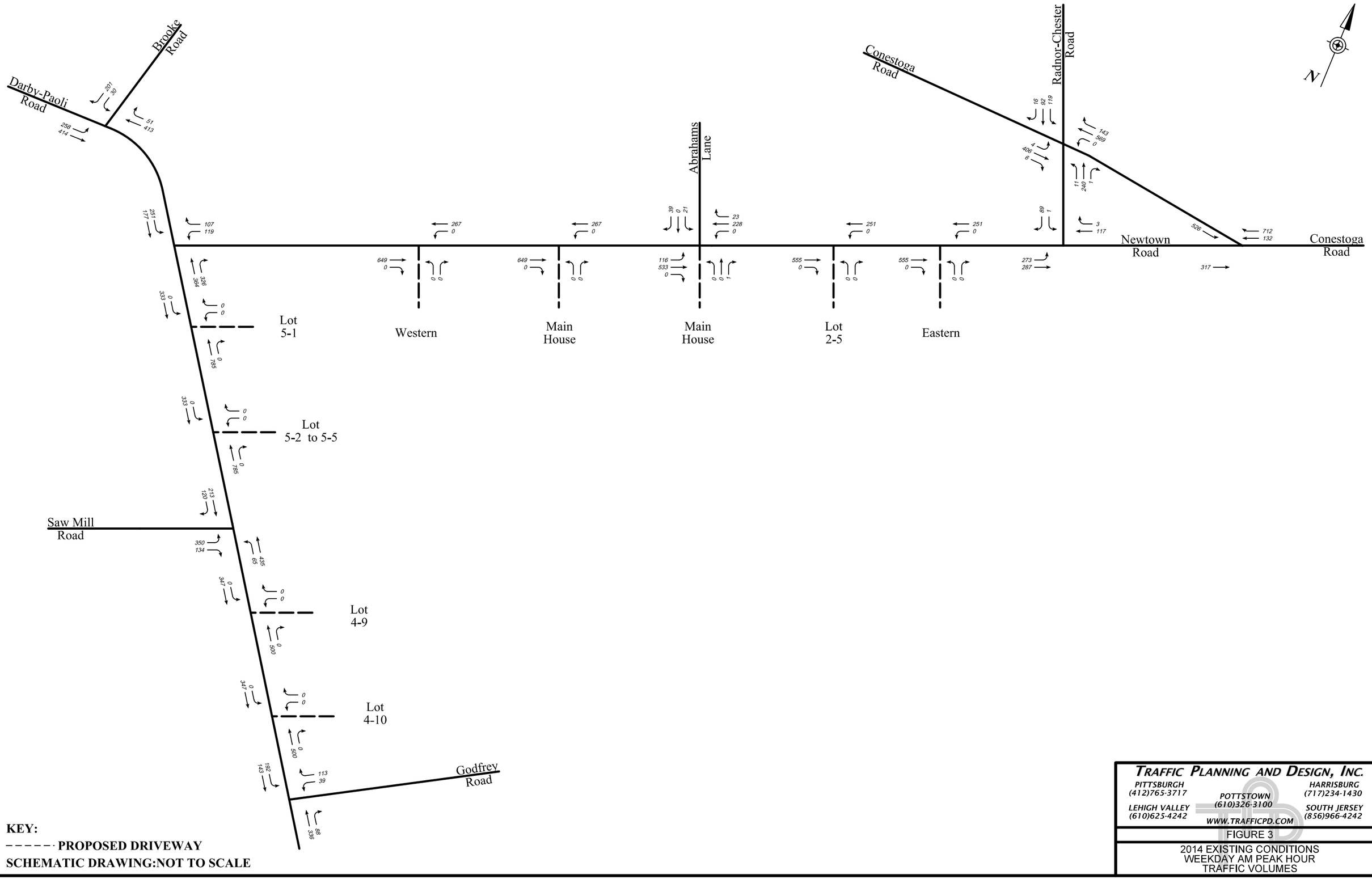

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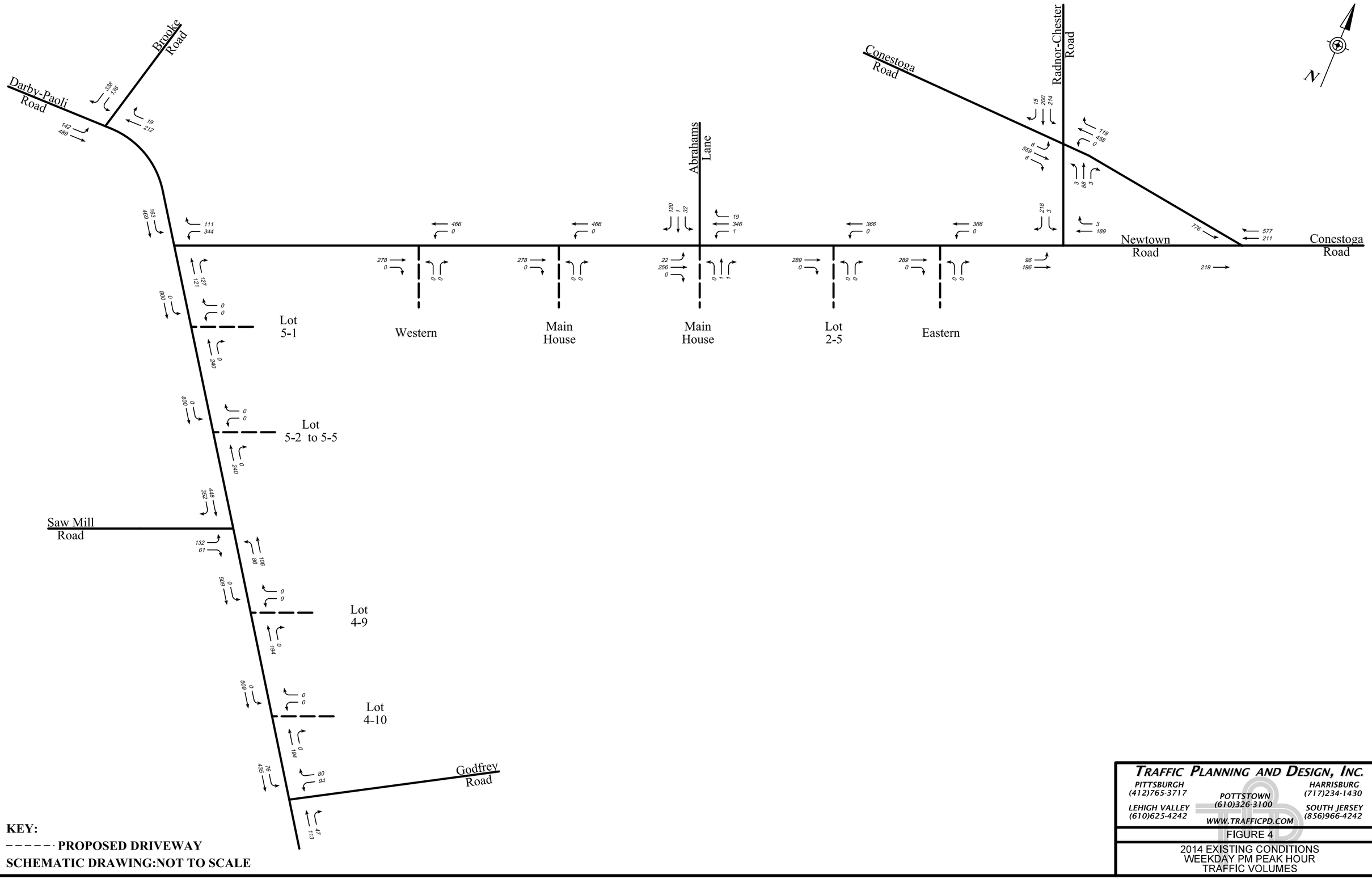
FIGURE 3

2014 EXISTING CONDITIONS
WEEKDAY AM PEAK HOUR
TRAFFIC VOLUMES

$FILE$ $DATE$ $TIME$ $USER$ $MODEL$



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LEHIGH VALLEY (610)625-4242
SOUTH JERSEY (856)966-4242
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FIGURE 4

2014 EXISTING CONDITIONS
WEEKDAY PM PEAK HOUR
TRAFFIC VOLUMES

$FILE$ $DATE$ $TIME$ $USER$ $MODEL$

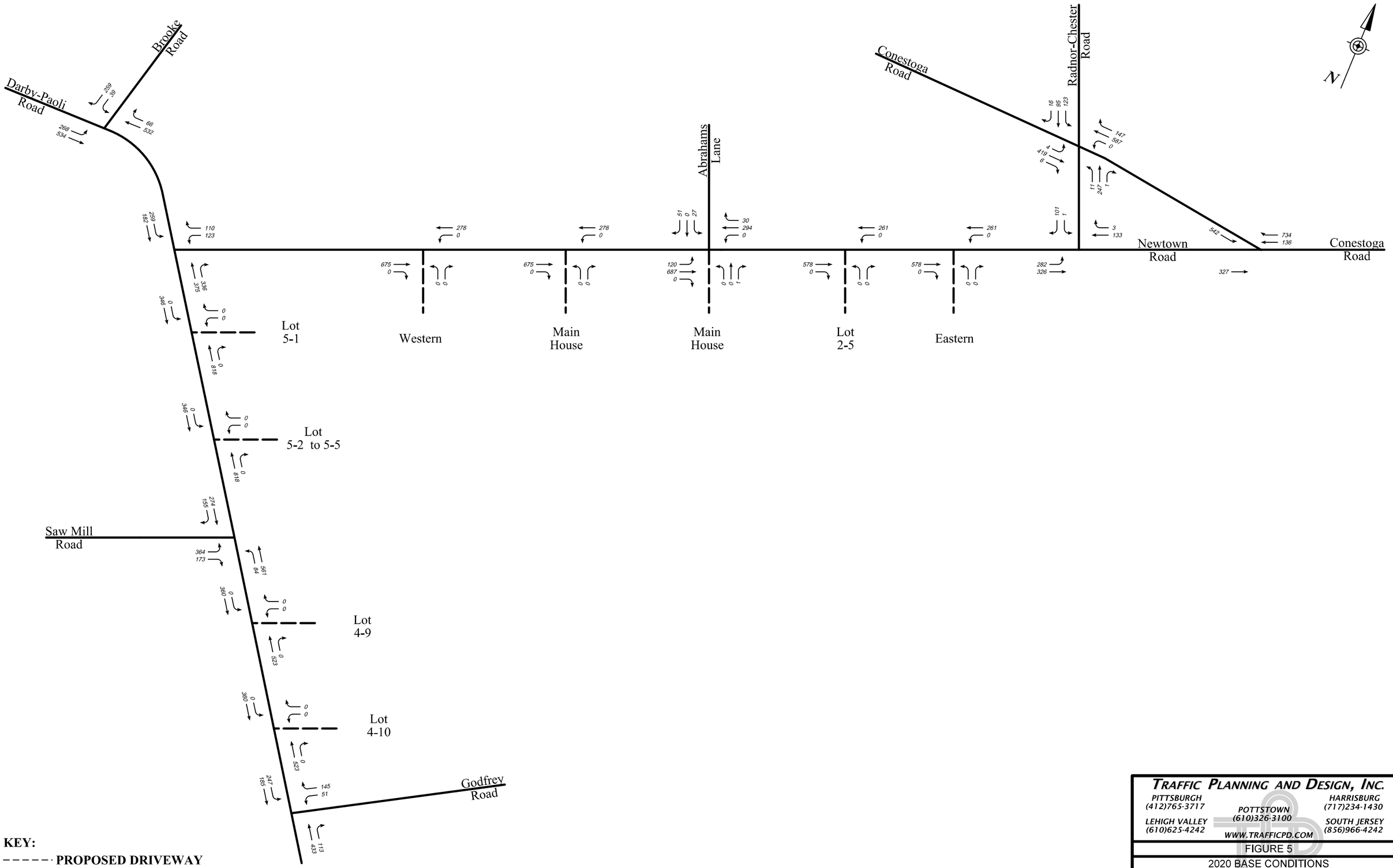

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FIGURE 5

2020 BASE CONDITIONS
WEEKDAY AM PEAK HOUR
TRAFFIC VOLUMES

$MODEL$
$USER$
$TIME$
$FILES
$DATES

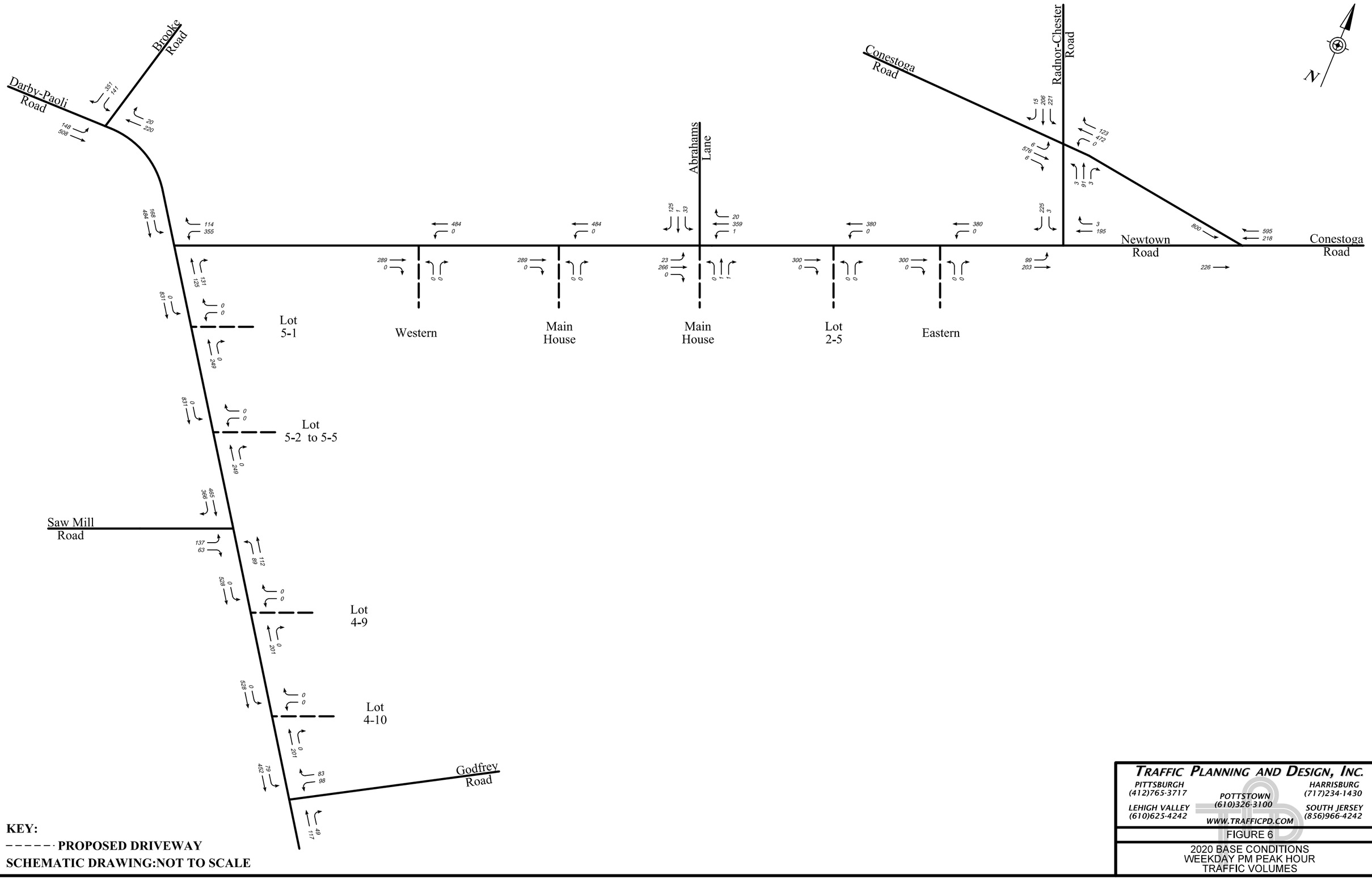

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FIGURE 6

2020 BASE CONDITIONS
WEEKDAY PM PEAK HOUR
TRAFFIC VOLUMES

$FILE$
$DATE$
$TIME$
$USER$
$MODEL$

Brooke Road

Darby-Paoli Road

Abrahams Lane

Radnor-Chester Road

Conestoga Road

Newtown Road

Conestoga Road

N

Lot 5-1

Western

Main House

Main House

Lot 2-5

Eastern

Lot 5-2 to 5-5

Saw Mill Road

Lot 4-9

Lot 4-10

Godfrey Road

Site
Enter = 14
Exit = 38

KEY:

– – – – – **PROPOSED DRIVEWAY**

SCHEMATIC DRAWING:NOT TO SCALE

$MODEL$
$USER$
$TIME$
$FILES
$DATE$

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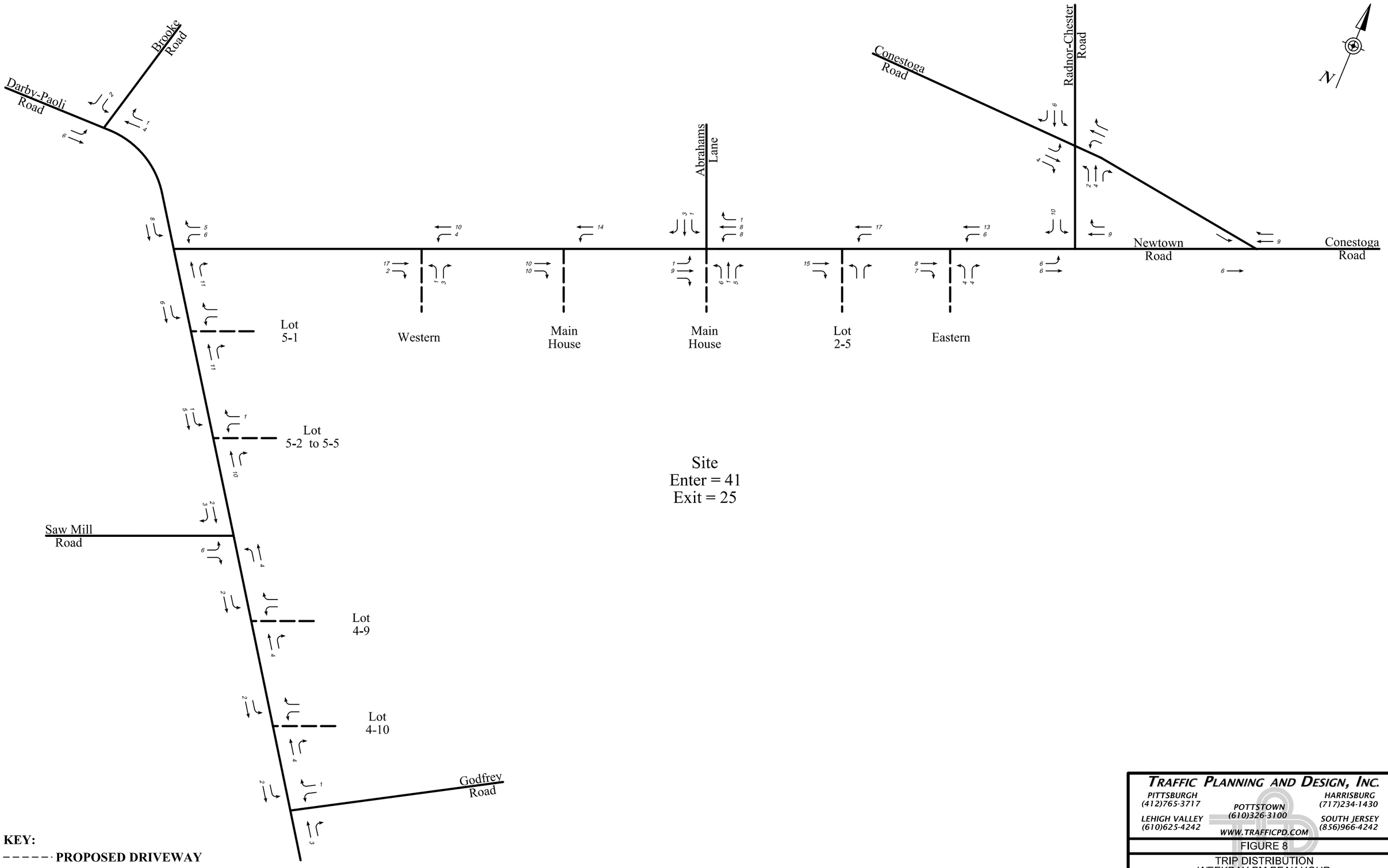
FIGURE 7

TRIP DISTRIBUTION
WEEKDAY AM PEAK HOUR
TRAFFIC VOLUMES



Site
Enter = 41
Exit = 25

KEY:

– – – – – **PROPOSED DRIVEWAY**

SCHEMATIC DRAWING:NOT TO SCALE

$MODEL$
$USER$
$TIME$
$FILES
$DATE$

TRAFFIC PLANNING AND DESIGN, INC.

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HARRISBURG (717)234-1430
POTTSTOWN (610)326-3100
LEHIGH VALLEY (610)625-4242
SOUTH JERSEY (856)966-4242
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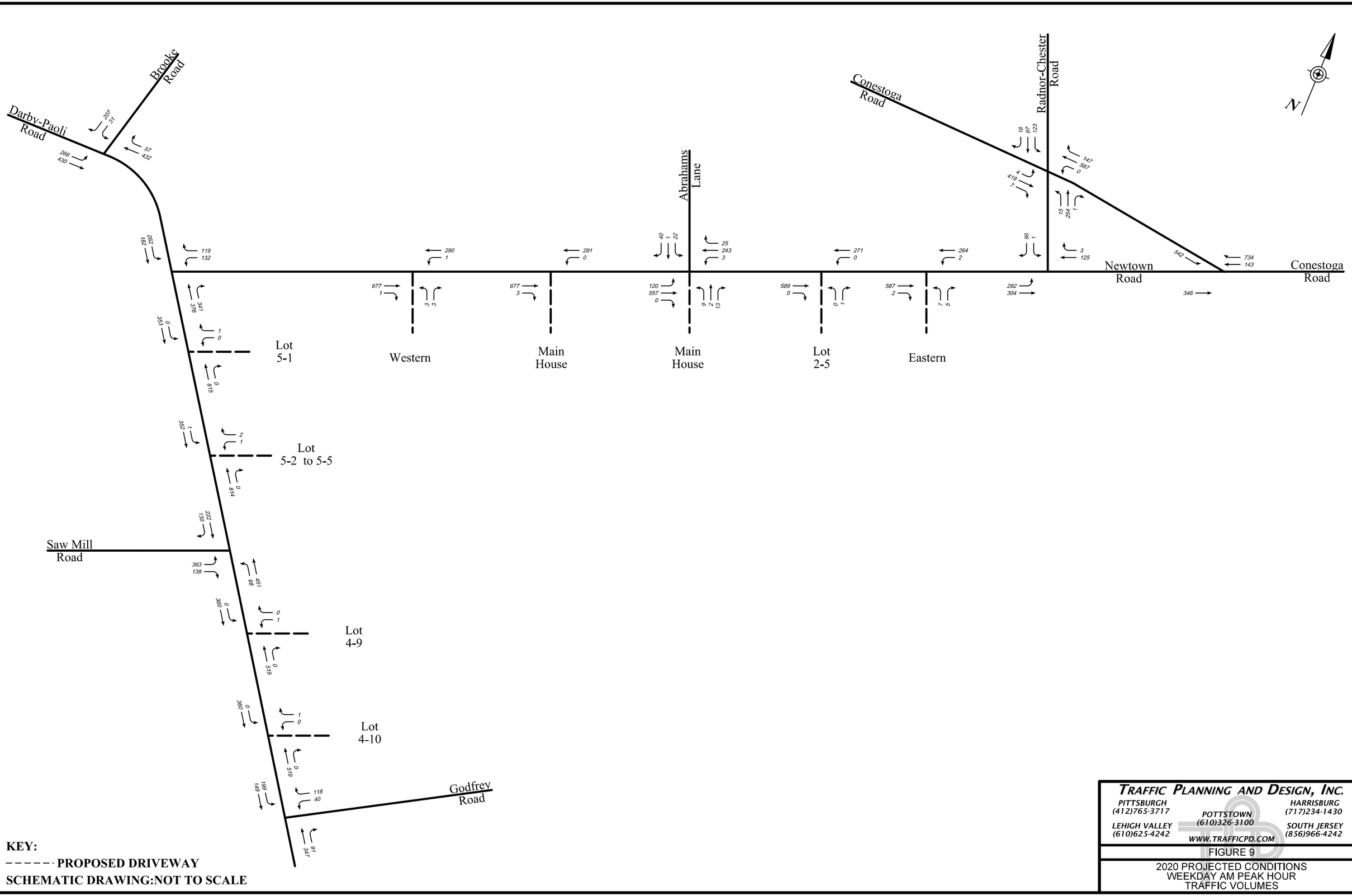
FIGURE 8

TRIP DISTRIBUTION
WEEKDAY PM PEAK HOUR
TRAFFIC VOLUMES



KEY:

– – – – – **PROPOSED DRIVEWAY**

SCHEMATIC DRAWING:NOT TO SCALE

TRAFFIC PLANNING AND DESIGN, INC.

PITTSBURGH (412)765-3717
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FIGURE 9

2020 PROJECTED CONDITIONS
WEEKDAY AM PEAK HOUR
TRAFFIC VOLUMES

$FILE$
$DATE$
$TIME$
$USER$
$MODEL$

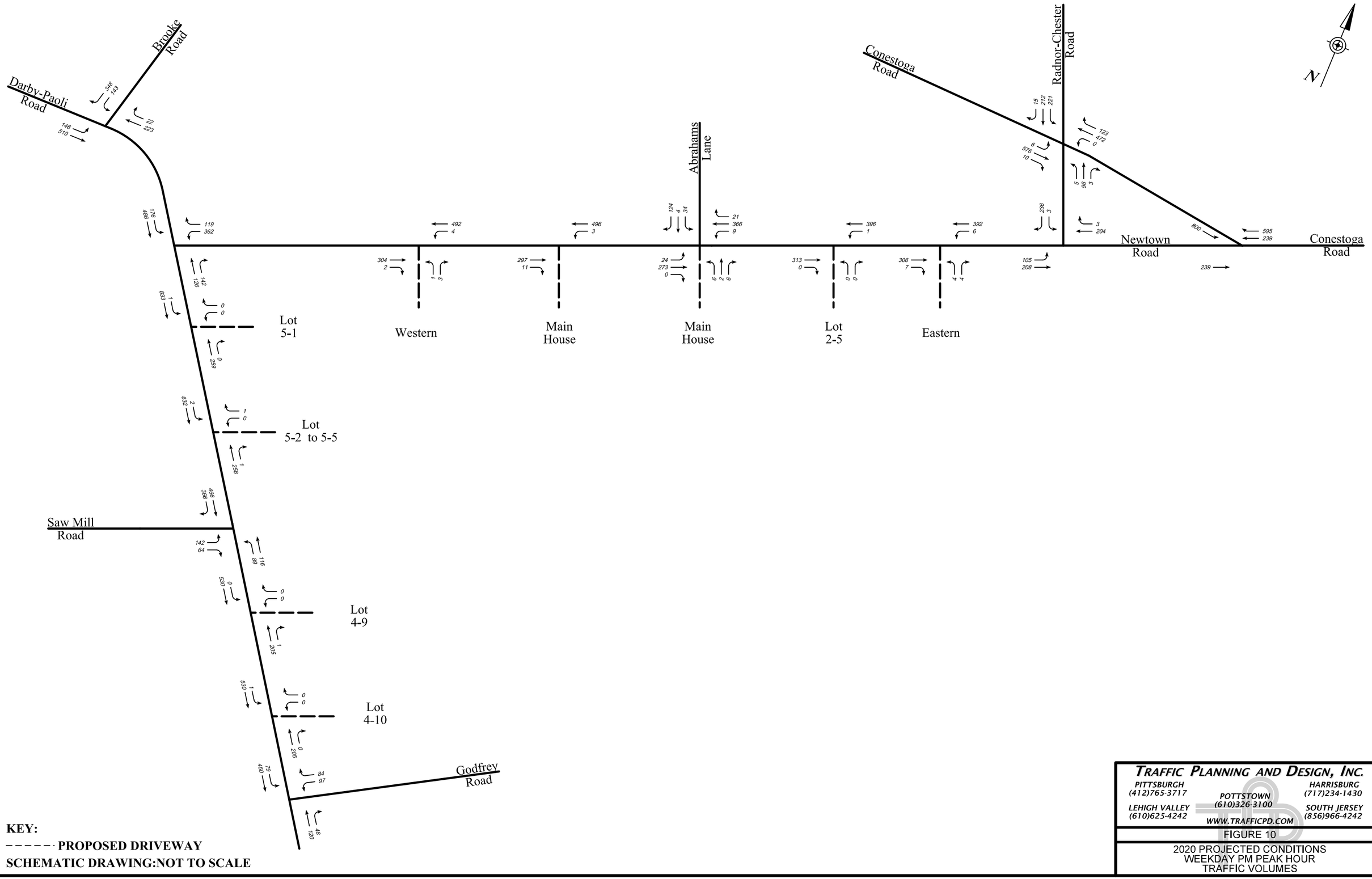

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FIGURE 10

2020 PROJECTED CONDITIONS
WEEKDAY PM PEAK HOUR
TRAFFIC VOLUMES

$FILE$
$DATE$
$TIME$
$USER$
$MODEL$

APPENDIX A

PROJECT CORRESPONDENCE

TRAFFIC PLANNING AND DESIGN, INC.
Est. 1989
2500 E. High Street | Suite 650 | Pottstown, PA | 19464
610.326.3100 | TPD@TrafficPD.com

June 4, 2014

Steve Norcini, P.E., Public Works Director
Radnor Township
301 Iven Avenue
Radnor, PA, 19087

Re: **Response to Gilmore's TIS Comments**
Ardrossan Farm
Radnor Township, Delaware County PA
TPD# ESII.A.00001

Dear Mr. Norcini:

Traffic Planning & Design, Inc. (TPD) has completed its responses to Traffic Impact Study (TIS) comments provided by Gilmore & Associates, Inc. (Gilmore), dated August 28, 2013, regarding the TIS for the Ardrossan Farm East Development. This letter addresses the TIS comments B.1-B.13. For the discussion below, the Gilmore comments are shown in regular type, and the corresponding response is shown in **bold** type.

1. During the scoping discussion with the Township Traffic Engineer, it was unclear that the project involved two separate projects and two transportation impact studies would be prepared. It would be more efficient to provide one transportation impact study and include all information for both land development sites. Much of the below comments are generated because a significant number of trips were not analyzed in the East study area. We recommend the applicant revise the East Ardrossan TIS to include all information from the West Ardrossan (Wheeler Field) in a single submission addressing all comments as indicated in this review letter and the West Wheeler Field review letter. This would provide a comprehensive analysis for both development parcels and provide the quantitative impact to the analyzed intersections.

   Response: A revised TIS for the East Parcel of Adrossan has been prepared, as no development of the Wheeler Field is proposed. This revised TIS includes the additional Darby-Paoli Road intersections with Saw Mill Road and Godfrey Road, which were previously included in the West Parcel TIS.

2. The TIS provides the following roadway improvements:
   a. The TIS was based on traffic counts obtained in mid-July, 2013 outside of the typical school year for public, private and post-secondary schools. The report indicates the traffic counts will be verified with spot counts post-Labor Day.

      Response: Updated traffic counts, when school is in session, have been conducted and the TIS has been revised accordingly.

   b. The report indicates that the applicant should discuss with the Township, potential safety improvements along the roadways in the vicinity of the site.

Response: So noted. This can be coordinated with Township and PennDOT, as appropriate.

c. Elimination of vegetation to provide adequate sight distance at the new/modified accesses.

Response: So noted.

d. Construct new/modified accesses to Newtown Road and Darby-Paoli Road, in accordance with applicable PennDOT standards.

Response: So noted.

3. Scope of Study:
Although the report discusses the studied roadways, information regarding the studied intersections, lane widths and traffic control measures were not included in the discussion. The report should be revised to include this useful information.

Response: The Synchro printouts included in the Appendix D of the 7/25/13 TIS contained this information. In addition to the Synchro printouts of the revised TIS (Appendix E), the information is supplied in tabular format in the Appendix B.

4. Crash Data Investigation:
PennDOT Publication 46 *Traffic Engineering Manual*, requires both reportable and non-reportable incidents in a crash analysis. In addition, the minimum criterion for mitigation is for a continuous 12-month period; the TIS crash analysis excludes non-reportable crashes and quantifies the number of crashes by calendar month as opposed to a 12-month period. In addition, all crash reports must be provided electronically to the Radnor Township engineering staff for verification of the crash analysis.

Response: The revised TIS now includes reportable crash data obtained from PennDOT and non-reportable crash data obtained from the Township. Please note, PennDOT considers a crash occurrence of 5 reportable, correctable crashes over a continuous twelve-month period during the past five years to be a threshold value, above which the intersection design should be reviewed to examine if corrective measures can be taken to enhance safety. Based on the PennDOT reportable crash data presented in Table 2 of the TIS, none of the study area intersections, with the exception of the Conestoga Road/Radnor Chester Road intersection, have more than 4 reportable crashes over two consecutive calendars years. Therefore, the 5 reportable/correctable threshold cannot be exceeded. The revised TIS provides discussion regarding the Conestoga Road/Radnor Chester Road intersection.

In addition, the requested crash data will be provided to Gilmore. However, PennDOT's notes the following pertaining to the data:

"These data are the property of the Commonwealth of Pennsylvania, Department of Transportation. The data and information contained herein are part of a traffic engineering and safety study. This safety study is only provided to those official agencies or persons who have responsibility in the highway transportation system and

may only be used by such agencies or persons for traffic safety-related planning or research. The information is confidential pursuant to 75 Pa. C.S. 3754 and 23 U.S.C. 409 and may not be published, reproduced, released, or discussed without the written permission of the PA Department of Transportation."

5. Sight Distance:
    a. PennDOT Publication 46 Traffic Engineering Manual, Chapter 11 Traffic Studies indicates that if an engineering study has determined that the 85th percentile speed of the roadway is higher than the posted speed limit, the 85th percentile speed may be used at the discretion of the Engineering District. The 85th percentile speed of both Newtown Road and Darby Paoli Road are unknown; therefore is uncertain if the posted speed limit should be utilized for the sight distance calculations. We recommend the applicant obtained the 85th percentile speed of both roadways and verify the existing sight distance is adequate. The presented calculations were based on the posted speed limit.

    Response: Per discussions with Gilmore, it was agreed that an assumed travel speed of 10 mph over the posted speed could be utilized in lieu of a speed study. As such, the sight distance analysis in the TIS has been revised accordingly.

    b. The TIS indicates the sight distance at all driveways/accesses meet or exceed PennDOT required sight distance with removal of on-site vegetation and wall. The record plan must include a note identifying the required and available sight distance for each existing and new access driveway, based on the 85th percentile speed. In addition, we recommend verification of the sight distance following the removal of the on-site vegetation and wall.

    Response: This will be addressed on the record plan.

6. Trip Distribution Discrepancies:
    a. Although the report indicates 20% of the generation trips will enter and exit at Conestoga Road and Newtown Road, no trips were distributed to this location

    Response: This 20% site traffic volume was included in both no-build and build conditions. The TIS has been revised to eliminate the additional site traffic at this intersection under no-build conditions.

    b. The TIS indicates 15% of the generated traffic was distributed to Sawmill Road at Darby-Paoli Road; however, this intersection was not included in the traffic counts, graphics or in the synchro analysis. Please revise the report to include the traffic counts for this intersection and the associated Synchro Analysis.

    Response: Since the Darby-Paoli Road/Saw Mill Road was not included in the original East Parcel, but was included in the West Parcel TIS, the 15% site trip distribution to Saw Mill Road was noted in that manner for ease of review along with the West Parcel TIS at that time. This 15% was previously included in total trip distribution to/from the south on Darby-Paoli Road, south of Newtown Road.

However, the revised East Parcel TIS now includes Darby-Paoli Road/Saw Mill Road intersection and the same 15% trip assignment that was previously utilized.

c. The TIS indicates 2% of the generated traffic was distributed to Godfrey Road at Darby-Paoli Road; however, this intersection was not included in the traffic counts, graphics or in the syncrho analysis. Please revise the report to include the traffic counts for this intersection and the associated Synchro Analysis.

Response: Similar to Response 6.b, since the Darby-Paoli Road/Godfrey Road intersection was not included in the original East Parcel, but was included in the West Parcel TIS, the 2% site trip distribution to Saw Mill Road was noted in that manner for ease of review along with the West Parcel TIS at that time. This 2% was previously included in total trip distribution to/from the south on Darby-Paoli Road, south of Newtown Road. However, the revised East Parcel TIS now includes Darby-Paoli Road/Godfrey Road intersection and the same 2% trip assignment that was previously utilized.

d. Effectively, 37% of the traffic generated by this proposed development was not analyzed in this analysis due to the identified discrepancies.

Response: Please refer to Responses 6.a-c. All (100%) the site traffic, was included in the 7/26/13 East Parcel TIS.

e. The trip distribution must be revised and developed by TOD and movement to provide a distribution that closely reflects the typical AM and PM fluctuations in vehicular movements at intersections.

Response: Per discussions with Gilmore, revisions for time-of-day (TOD) trip distributions were not completed. Please note, given the anticipated site trip generation during the peak hours, a 10% fluctuation would result in approximately 5-6 trips.

7. Conestoga Road and Newtown Road: Although the report indicates 20% of the trips will be assigned to this external link, no trips were assigned for the AM and PM Peak Hours.

Response: As noted in response 6.a, the 20% site traffic volume was included in both no-build and build conditions. The TIS has been revised to eliminate the additional site traffic at this intersection under no-build conditions.

8. Table 12: Level of Service (Delay) Summary does not provide the delay by movement as required by PennDOT Strike-Off Letter (SOL) 470-09-4 *Transportation Impact Study Guidelines*.

Response: The TIS has been revised accordingly.

9. Table 12 includes a footnote regarding the deficient Level of Service (LOS) D for the projected 2020 conditions on the westbound approach at Darby Paoli Road and Newtown Road as "LOS C under the base site plan with lesser units). The explanation provides no guidance as to potential mitigation measure for the full build-out of the site.

   Response: The TIS has been revised for the proposed 60 homes.

10. Conestoga Road and Radnor-Chester Road; During a field visit on Thursday afternoon, August 15, 2013 during the PM peak hour, the intersection was observed to have substantial southbound Radnor-Chester Road queues and delays. However, the TIS analysis indicates and acceptable Level of Service C for this approach, which leads us to conclude the traffic counts may have been based on the number of vehicles served as opposed to vehicular demand. The applicant should visit the intersection again, and conduct a field delay study on each approach to verify base conditions in the study.

    Response: The TIS has been revised to include both updated traffic volumes at this intersections as well as accounting for the "initial queue" in the Synchro analysis models the observed queues. Please note, in the Fall 2013 signage was installed on the eastbound approach of Conestoga Road which restricts left turns onto Radnor Chester Road during 7-9 A.M. and 4-6 P.M.

11. As required by PennDOT Strike-Off Letter (SOL) 470-09-4 *Transportation Impact Study Guidelines*, a queue analysis should be provided in tabular format for all studied intersections.

    Response: A queue analysis in included in the revised TIS.

12. The report identifies two intersection that do not follow conventional traffic control; namely, Darby-Paoli Road & Newtown Road and Darby-Paoli Road & Brooke Road.

    The current operation includes a "T" intersection and requires motorists to observe STOP signs posted on two of the three approaches, with the stem of the "T" always stopped. Such a configuration stops one of the conventionally through movements on Darby-Paoli Road, but allows the opposing approach to continue as a free-flow movement. Motorists on the stem of the "T" have difficulty ascertaining the intersection right-of-way when a motorist on Darby-Paoli Road is stopped, and a motorist is approaching from the opposing free-flowing approach. Such a configuration is not easily conveyed, much less comprehended, by motorists, and even less so by motorists new to the area. As vehicular volumes continue to increase in this area of the township, this unconventional traffic control operation may benefit from an all-way stop control at the two intersections on Darby-Paoli Road, based on PennDOT and MUTCD standards.

    Response: An all-way STOP evaluation at the Darby-Paoli Road/Newtown Road and Darby-Paoli Road/Brooke Road intersections are included in the revised TIS. In addition, based on discussions with Gilmore an all-way STOP was also evaluated at the Darby-Paoli Road/Godfrey Road intersection.

13. The provided Synchro and SimTraffic reports did not furnish the necessary LOS and delay information for the following intersections;
    a. Newtown Road and Radnor Chester Road
    b. Darby-Paoli Road and Newtown Road
    c. Darby-Paoli Road and Brooke Road

    Response: This information was included in the Appendix D of the 7/26/13 TIS. However, this information has been revised per the relevant above comments and is included in Appendix E of the updated TIS.

Respectfully Submitted,

TRAFFIC PLANNING AND DESIGN, INC.

Guido W. DiMartino, P.E
Project Manager

Attachment: 8/28/13 Gilmore review letter

GILMORE & ASSOCIATES, INC.
ENGINEERING & CONSULTING SERVICES

MEMORANDUM

Date: August 28, 2013

To: Steve Norcini, P.E.
Radnor Township Public Works Director

From: Amy Kaminski, P.E., PTOE
G&A Transportation/Traffic Services Manager

cc: Roger Phillips, P.E.
Gannett Fleming, Inc., Senior Project Engineer

Reference: 811 Newtown Road
Ardrossan Farm East Conditional Use Application –
Transportation Impact Study and Land Development Review

G&A : 13-07018.01

Pursuant to your request, Gilmore & Associates, Inc. has completed a transportation review of the referenced Conditional Use application for Ardrossan Farm for the applicant, ESIII LP. The applicant intends to develop a 311.54 acre parcel into eighty (87) residential lots which includes eleven (11) existing residential lots. Gilmore offers the following for Radnor Township consideration:

I. REVIEWED MATERIALS

A. Application of Conditional Use Approval of a Density Modification Development for 311.54 Acres of Ardrossan Farm, dated July 31, 2013, prepared for ESIII LP, prepared by Saul Ewing, LLP

B. Ardrossan Farm-East Parcel Transportation Impact Study, dated July 26, 2013, prepared for ESIII LP, prepared by Traffic Planning and Design, Inc.

C. Conditional Use Plan (35 Sheets), dated July 31,2013, prepared for ESIII LP, prepared by Momenee & Associates, Inc.

II. REVIEW COMMENTS

A. APPLICATION

1. The conditional use application cover letter identifies a total of eighty-seven (87) parcels will be developed; eleven (11) of which are existing residential lots

2. The application does not include the existing Main House and associated 10.022 Acres; total development for the site is 301.4 Acres

3. The application does not generate any transportation comments

B. TRANSPORTATION IMPACT STUDY

1. During the scoping discussion with the Township Traffic Engineer, it was unclear that the project involved two separate projects and two transportation impact studies would be prepared. It would be more efficient to provide one transportation impact study and include all information for both land development sites. Much of the below comments are generated because a significant number of trips were not analyzed in the East study area. We recommend the applicant revise the East Ardrossan TIS to include all information for the West Ardrossan (Wheeler Field) in a single submission addressing all comments as indicated in this review letter and the West Wheeler Field review letter. This would provide a comprehensive analysis for both development parcels and provide the quantitative impact to the analyzed intersections.

2. The TIS provides the following roadway improvements:

   a. The TIS was based on traffic counts obtained in mid-July, 2013 outside of the typical school year for public, private and post-secondary schools. The report indicates the traffic counts will be verified with spot counts post-Labor Day.

   b. The report indicates that the applicant should discuss with the Township, potential safety improvements along the roadways in the vicinity of the site.

   c. Elimination of vegetation to provide adequate sight distance at the new/modified accesses.

   d. Construct new/modified accesses to Newtown Road and Darby-Paoli Road, in accordance with applicable PennDOT standards.

3. Scope of Study:
   Although the report discusses the studied roadways, information regarding the studied intersections, lane widths and traffic control measures were not included in the discussion. The report should be revised to include this useful information.

4. Crash Data Investigation:
   PennDOT Publication 46 *Traffic Engineering Manual*, requires both reportable and non-reportable incidents in a crash analysis. In addition, the minimum criterion for mitigation is for a ***continuous 12-month***

period; the TIS crash analysis excludes non-reportable crashes and quantifies the number of crashes by calendar month as opposed to a 12-month period. The report must be modified to include the required non-reportable records and analyzed for a continuous 12-month period. In addition, all crash reports must be provided electronically to the Radnor Township engineering staff for verification of the crash analysis.

5. Sight Distance:

   a. PennDOT Publication 46 *Traffic Engineering Manual,* Chapter 11 *Traffic Studies* indicates that if an engineering study has determined that the 85th percentile speed of the roadway is higher than the posted speed limit, the 85th percentile speed may be used at the discretion of the Engineering District. The 85th percentile speed of both Newtown Road and Darby Paoli Road are unknown; therefore is uncertain if the posted speed limit should be utilized for the sight distance calculations. We recommend the applicant obtain the 85th percentile speed of both roadways and verify the existing sight distance is adequate. The presented calculations were based on the posted speed limit.

   b. The TIS indicates the sight distance at all driveways/accesses meet or exceed PennDOT required sight distance with removal of on-site vegetation and wall. The record plan must include a note identifying the required and available sight distance for each existing and new access driveway, based on the 85th percentile speed. In addition, we recommend verification of the sight distance following the removal of the on-site vegetation and wall.

6. Trip Distribution Discrepancies:

   a. Although the report indicates 20% of the generated trips will enter and exit at Conestoga Road and Newtown Road, no trips were distributed to this location.

   b. The TIS indicates **15% of the generated traffic was distributed to Sawmill Road at Darby-Paoli Road**; however, this intersection was not included in the traffic counts, graphics or in the Synchro analysis. Please revise the report to include the traffic counts for this intersection and the associated Synchro Analysis.

   c. The TIS indicates **2% of the generated traffic was distributed to Godfrey Road at Darby-Paoli Road**; however, this intersection was not included in the traffic counts, graphics or in the Synchro analysis. Please revise the report to include the traffic counts for this intersection and the associated Synchro Analysis.

   d. Effectively, 37% of the traffic generated by this proposed development was not analyzed in this analysis due to the identified discrepancies.

e. The Trip Distribution must be revised and developed by TOD and movement to provide a distribution that closely reflects the typical AM and PM fluctuations in vehicular movements at intersections.

7. Conestoga Road and Newtown Road: Although the report indicates 20% of the trips will be assigned to this external link, no trips were assigned for the AM and PM Peak Hours.

8. Table 12: *Level of Service (Delay) Summary* does not provide the delay by movement as required by PennDOT Strike-Off Letter (SOL) 470-09-4 *Transportation Impact Study Guidelines*.

9. Table 12 include a footnote regarding the deficient Level of Service (LOS) D for the projected 2020 conditions on the westbound approach at Darby Paoli Road and Newtown Road as "LOS C under the base site plan with lesser units). The explanation provides no guidance as to potential mitigation measures for the full build-out of the site.

10. Conestoga Road and Radnor-Chester Road: During a field visit on Thursday afternoon, August 15, 2013 during the PM Peak Hour, the intersection was observed to have substantial southbound Radnor-Chester Road queues and delays. However, the TIS analysis indicates an acceptable Level of Service C for this approach, which leads us to conclude the traffic counts may have been based on the number of vehicles served as opposed to vehicular demand. The applicant should visit the intersection again, and conduct a field delay study on each approach to verify base conditions in the study.

11. As required by PennDOT Strike-Off Letter (SOL) 470-09-4 *Transportation Impact Study Guidelines*, a queue analysis should be provided in tabular format for all studied intersections.

12. The report identifies two intersections that do not follow conventional traffic control; namely, Darby-Paoli Road & Newtown Road and Darby-Paoli Road & Brooke Road.

    The current operation includes a "T" intersection and requires motorists to observe STOP signs posted on two of the three approaches, with the stem of the "T" always stopped. Such a configuration stops one of the conventionally through movements on Darby-Paoli Road, but allows the opposing approach to continue as a free-flow movement. Motorists on the stem of the "T" have difficulty ascertaining the intersection right-of-way when a motorist on Darby-Paoli Road is stopped, and a motorist is approaching from the opposing free-flowing approach. Such a configuration is not easily conveyed, much less comprehended, by motorists, and even less so by motorists new to the area.

As vehicular volumes continue to increase in this area of the Township, this unconventional traffic control operation may benefit from an all-way stop control at the two intersections on Darby-Paoli Road, based on PennDOT and MUTCD standards.

13. The provided Synchro and SimTraffic reports did not furnish the necessary LOS and delay information for the following intersections; therefore the data could not be verified:

    a. Newtown Road and Radnor Chester Road
    b. Darby-Paoli Road & Newtown Road
    c. Darby-Paoli Road & Brooke Road

C. CONDITIONAL USE PLAN SET (35 Sheets)

1. PennDOT will require a Highway Occupancy Permit (HOP) application for all new and revised accesses to both Darby-Paoli Road (S.R. 1015) and Newtown Road (S.R. 1021). The Township requests the opportunity to review all HOP plan submissions to PennDOT; as well as be given the opportunity to attend all meetings with PennDOT and carbon copied on all correspondence regarding the same. We encourage the applicant begin early discussions (sketch plan phase) with PennDOT to alleviate future costly design revisions.

2. Phase 4 parcel 4-11 does not appear to have any driveway access.

3. §255-27.I: The plan includes as many as ten accesses (both existing and proposed) for this land development project with each access representing an additional conflict point for motorists traveling along both Newtown Road and Darby Paoli Road without benefit of any internal circulation. We recommend the applicant consider an interconnected roadway that would eliminate several of the existing and proposed accesses to Newtown Road and Darby Paoli Road, while maintaining the desired view shed.

4. Many of the parcels are located a significant distance from public roads for emergency service access. As such, we recommend a minimum of two accesses or one access along with an emergency access for each developed parcel. In the event of an emergency with one access blocked, an alternative access must be available.

D. FINDINGS

§280.145.C-E, G, I: The reviewed documents were incomplete as presented, and do not provide sufficient information to conclude the proposed development will not be detrimental to the safety, health, and general welfare of Radnor Township.

If you have any questions regarding the above, please contact this office.

APPENDIX B

STUDY AREA PHOTOGRAPHS

Job #: *ESII.A.00001* *Date Taken:* *07/17/2013* *Intersection Of:* *Radnor–Chester Rd & Conestoga Rd*

Direction / Road:	**EB Conestoga Road**
Approach / Departure:	**Approach**
Distance:	

Direction / Road:	**WB Conestoga Road**
Approach / Departure:	**Approach**
Distance:	

Job #: *ESII.A.00001* *Date Taken:* *07/17/2013* *Intersection Of:* *Radnor–Chester Rd & Conestoga Rd*

Direction / Road:	**SB Radnor Chester Road**
Approach / Departure:	**Approach**
Distance:	

Direction / Road:	**NB Radnor Chester Road**
Approach / Departure:	**Approach**
Distance:	

Job #: *ESII.A.00001* *Date Taken:* *07/17/2013* *Intersection Of:* *Newtown Road & Conestoga Road*

Direction / Road:	**EB Conestoga Road**
Approach / Departure:	**Approach**
Distance:	

Direction / Road:	**WB Conestoga Road**
Approach / Departure:	**Approach**
Distance:	

Job #: *ESII.A.00001* *Date Taken:* *07/17/2013* *Intersection Of:* *Newtown Road & Conestoga Road*

Direction / Road:	**NB Newtown Road**
Approach / Departure:	**Approach**
Distance:	

Direction / Road:	
Approach / Departure:	
Distance:	

Job #: *ESII.A.00001* *Date Taken:* *07/17/2013* *Intersection Of:* *Newtown Road & Radnor-Chester Road*

Direction / Road:	**EB Newtown Road**
Approach / Departure:	**Approach**
Distance:	

Direction / Road:	**WB Newtown Road**
Approach / Departure:	**Approach**
Distance:	

Job #: *ESII.A.00001* *Date Taken:* *07/17/2013* *Intersection Of:* *Newtown Road & Radnor-Chester Road*

Direction / Road:	**SB Radnor Chester Road**
Approach / Departure:	**Approach**
Distance:	

Direction / Road:	
Approach / Departure:	
Distance:	

Job #: *ESII.A.00001* *Date Taken:* *07/17/2013* *Intersection Of:* *Newtown Road & Abrahams Lane*

Direction / Road: **EB Newtown Road**

Approach / Departure: **Approach**

Distance:

Direction / Road: **WB Newtown Road**

Approach / Departure: **Approach**

Distance:

Job #: *ESII.A.00001* *Date Taken:* *07/17/2013* *Intersection Of:* *Newtown Road & Abrahams Lane*

Direction / Road:	**SB Abrahams Lane**
Approach / Departure:	**Approach**
Distance:	

Direction / Road:	
Approach / Departure:	
Distance:	

Job #: *ESII.A.00001* *Date Taken:* *07/17/2013* *Intersection Of:* *Newtown Road & Darby-Paoli Road*

Direction / Road: **WB Newtown Road**

Approach / Departure: **Approach**

Distance:

Direction / Road: **SB Darby-Paoli Road**

Approach / Departure: **Approach**

Distance:

Job #: *ESII.A.00001* *Date Taken:* *07/17/2013* *Intersection Of:* *Newtown Road & Darby-Paoli Road*

Direction / Road:	**NB Darby-Paoli Road**
Approach / Departure:	**Approach**
Distance:	

Direction / Road:	
Approach / Departure:	
Distance:	

Job #: *ESII.A.00001* *Date Taken:* *07/17/2013* *Intersection Of:* *Brooke Road & Darby-Paoli Road*

Direction / Road:	**EB Darby-Paoli Road**
Approach / Departure:	**Approach**
Distance:	

Direction / Road:	**WB Darby-Paoli Road**
Approach / Departure:	**Approach**
Distance:	

Job #: *ESII.A.00001* *Date Taken:* *07/17/2013* *Intersection Of:* *Brooke Road & Darby-Paoli Road*

Direction / Road:	**SB Brooke Road**
Approach / Departure:	**Approach**
Distance:	

Direction / Road:	
Approach / Departure:	
Distance:	

Job #: *ESII.A.00001* *Date Taken:* *07/17/2013* *Intersection Of:* *Saw Mill Road & Darby-Paoli Road*

Direction / Road: **EB Saw Mill Road**

Approach / Departure: **Approach**

Distance:

Direction / Road: **SB Darby-Paoli Road**

Approach / Departure: **Approach**

Distance:

Job #: *ESII.A.00001* *Date Taken:* *07/17/2013* *Intersection Of:* *Saw Mill Road & Darby-Paoli Road*

Direction / Road:	**NB Darby-Paoli Road**
Approach / Departure:	**Approach**
Distance:	

Direction / Road:	
Approach / Departure:	
Distance:	

Job #: *ESII.A.00001* *Date Taken:* *07/17/2013* *Intersection Of:* *Godfrey Road & Darby-Paoli Road*

Direction / Road:	**WB Godfrey Road**
Approach / Departure:	**Approach**
Distance:	

Direction / Road:	**SB Darby-Paoli Road**
Approach / Departure:	**Approach**
Distance:	

Job #: *ESII.A.00001* *Date Taken:* *07/17/2013* *Intersection Of:* *Godfrey Road & Darby-Paoli Road*

Direction / Road:	**NB Darby-Paoli Road**
Approach / Departure:	**Approach**
Distance:	

Direction / Road:	
Approach / Departure:	
Distance:	

Intersection	Approach/ Movement	Lane Width (ft)	Grade (%)	Traffic Control Measure
Radnor Chester Road & Conestoga Road	See signal plan			
Newtown Road & Conestoga Road	EB L/T	10	-8	Stop
	WB T/R	12	6	Free
	SB L/R	12	-2	Free
Newtown Road & Radnor Chester Road	EB L/T	10	-7	Free
	WB T/R	10	11	Stop
	SB L/R	10	14	Stop
Newtown Road & Abrahams Lane/ Private Driveway	EBL/T/R	10	2	Free
	WBL/T/R	10	-2	Free
	NB L/T/R	8	-4	Stop
	SB L/T/R	10	-4	Stop
Darby Paoli Road & Newtown Road	WB L/R	10	-8	Stop
	NB T	10	7	Stop
	NB R	12		
	SB L/T	10	12	Free
Darby-Paoli Road & Brooke Road	EB L/T	9	-6	Free
	WB T/R	10	6	Stop
	SB L	10	-2	Stop
	SB R	12		
Darby-Paoli Road & Sawmill Road	EB L/R	10	0	Stop
	NB L/T	10	-1	Free
	SB T/R	10	0	Free
Darby-Paoli Road & Godfrey Road	WB L/R	10	3	Stop
	NB T/R	10	6	Free
	SB L/T	10	-7	Free

APPENDIX C

TRAFFIC COUNT DATA

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

Counter:: MIOVISION
Counted By:: ACB
Weather:: Overcast

Count Name: Conestoga Road & Radnor-Chester Road - AM & PM
Site Code:
Start Date: 04/29/2014

Turning Movement Data

Start Time	Conestoga Road Eastbound					Conestoga Road Westbound					Radnor-Chester Road Northbound					Radnor-Chester 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
4:00 PM	2	133	3	0	138	0	113	26	0	139	0	20	1	0	21	42	42	5	0	89	387
4:15 PM	2	135	2	0	139	0	110	31	0	141	2	23	0	0	25	54	38	2	0	94	399
4:30 PM	3	129	0	0	132	0	125	34	0	159	0	17	1	0	18	49	50	4	0	103	412
4:45 PM	2	151	2	0	155	0	106	38	0	144	0	25	1	0	26	62	39	3	0	104	429
Hourly Total	9	548	7	0	564	0	454	129	0	583	2	85	3	0	90	207	169	14	0	390	1627
5:00 PM	0	140	2	0	142	0	122	25	0	147	1	26	1	0	28	56	55	2	0	113	430
5:15 PM	2	126	2	0	130	0	107	25	0	132	1	25	1	0	27	43	58	6	0	107	396
5:30 PM	2	142	0	0	144	0	123	31	0	154	1	12	0	0	13	53	48	4	0	105	416
5:45 PM	1	131	1	0	133	0	110	34	0	144	0	31	2	0	33	50	55	2	0	107	417
Hourly Total	5	539	5	0	549	0	462	115	0	577	3	94	4	0	101	202	216	14	0	432	1659
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 AM	1	63	1	0	65	0	98	49	0	147	0	53	0	0	53	11	8	0	0	19	284
7:15 AM	1	83	1	0	85	0	99	56	0	155	0	82	0	0	82	16	19	5	0	40	362
7:30 AM	2	117	0	0	119	0	150	27	0	177	3	50	1	0	54	25	31	5	0	61	411
7:45 AM	1	87	2	0	90	0	147	38	0	185	2	65	0	0	67	41	20	1	0	62	404
Hourly Total	5	350	4	0	359	0	494	170	0	664	5	250	1	0	256	93	78	11	0	182	1461
8:00 AM	0	108	2	0	110	0	132	35	0	167	3	59	0	0	62	39	23	8	0	70	409
8:15 AM	1	94	2	0	97	0	140	43	0	183	3	66	0	0	69	14	18	2	0	34	383
8:30 AM	1	83	0	0	84	0	128	55	0	183	6	49	0	0	55	12	23	1	0	36	358
8:45 AM	2	83	2	0	87	0	149	47	0	196	4	52	0	0	56	20	22	7	0	49	388
Hourly Total	4	368	6	0	378	0	549	180	0	729	16	226	0	0	242	85	86	18	0	189	1538
Grand Total	23	1805	22	0	1850	0	1959	594	0	2553	26	655	8	0	689	587	549	57	0	1193	6285
Approach %	1.2	97.6	1.2	-	-	0.0	76.7	23.3	-	-	3.8	95.1	1.2	-	-	49.2	46.0	4.8	-	-	-
Total %	0.4	28.7	0.4	-	29.4	0.0	31.2	9.5	-	40.6	0.4	10.4	0.1	-	11.0	9.3	8.7	0.9	-	19.0	-
Lights	23	1781	20	-	1824	0	1938	581	-	2519	23	644	8	-	675	579	543	56	-	1178	6196
% Lights	100.0	98.7	90.9	-	98.6	-	98.9	97.8	-	98.7	88.5	98.3	100.0	-	98.0	98.6	98.9	98.2	-	98.7	98.6
Other Vehicles	0	24	2	-	26	0	21	13	-	34	3	11	0	-	14	8	6	1	-	15	89
% Other Vehicles	0.0	1.3	9.1	-	1.4	-	1.1	2.2	-	1.3	11.5	1.7	0.0	-	2.0	1.4	1.1	1.8	-	1.3	1.4
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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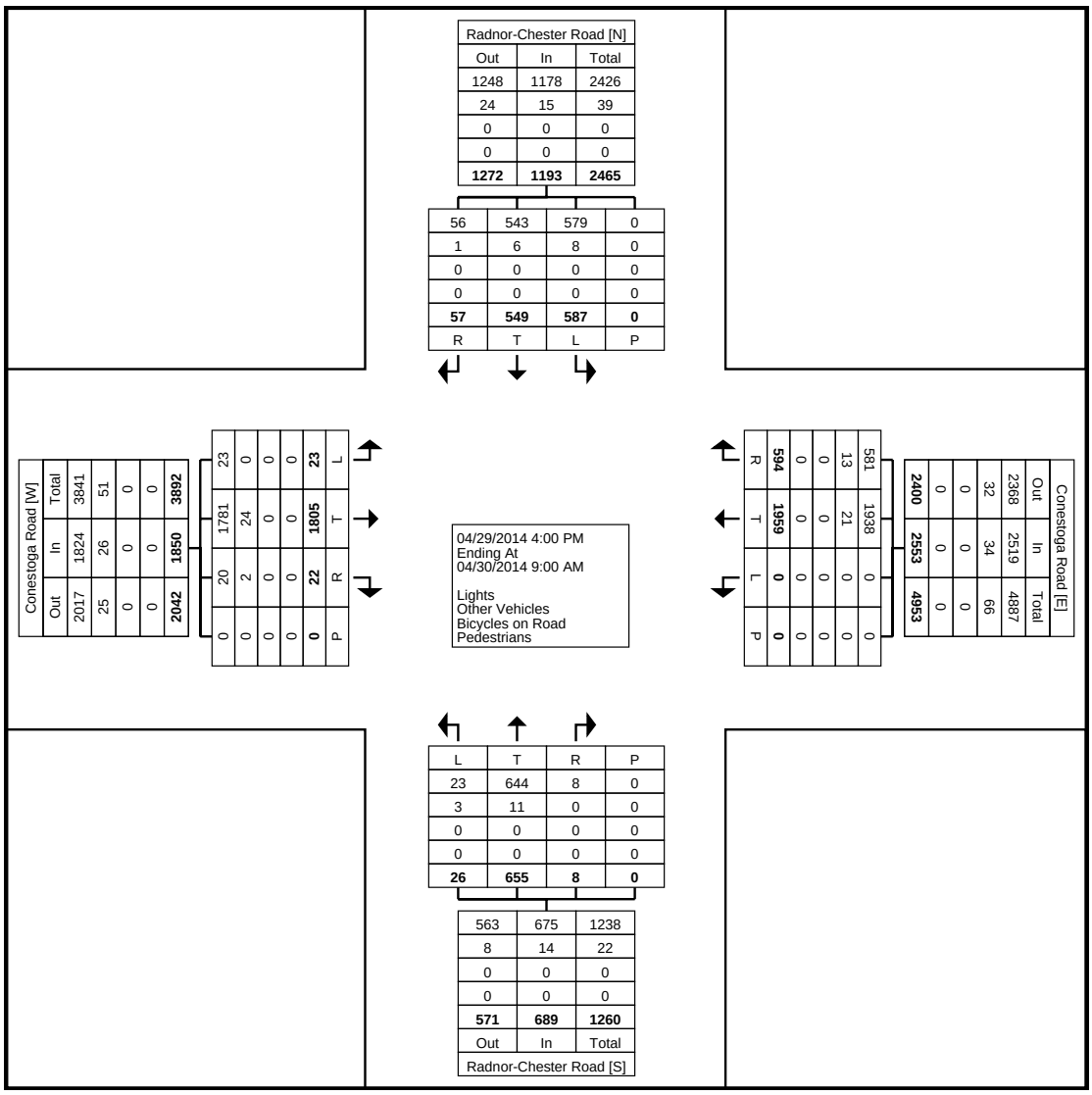
Pottstown, Pennsylvania, United States 19464
610.326.3100 mbressler@trafficpd.com

Counter:: MIOVISION
Counted By:: ACB
Weather:: Overcast

Count Name: Conestoga Road & Radnor-Chester Road - AM & PM
Site Code:
Start Date: 04/29/2014



Turning Movement Data Plot

Traffic Planning and Design, Inc
2500 East High Street
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610.326.3100 mbressler@trafficpd.com

Counter:: MIOVISION
Counted By:: ACB
Weather:: Overcast

Count Name: Conestoga Road & Radnor-Chester Road - AM & PM
Site Code:
Start Date: 04/29/2014

Turning Movement Peak Hour Data (4:45 PM)

Start Time	Conestoga Road Eastbound					Conestoga Road Westbound					Radnor-Chester Road Northbound					Radnor-Chester 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
4:45 PM	2	151	2	0	155	0	106	38	0	144	0	25	1	0	26	62	39	3	0	104	429
5:00 PM	0	140	2	0	142	0	122	25	0	147	1	26	1	0	28	56	55	2	0	113	430
5:15 PM	2	126	2	0	130	0	107	25	0	132	1	25	1	0	27	43	58	6	0	107	396
5:30 PM	2	142	0	0	144	0	123	31	0	154	1	12	0	0	13	53	48	4	0	105	416
Total	6	559	6	0	571	0	458	119	0	577	3	88	3	0	94	214	200	15	0	429	1671
Approach %	1.1	97.9	1.1	-	-	0.0	79.4	20.6	-	-	3.2	93.6	3.2	-	-	49.9	46.6	3.5	-	-	-
Total %	0.4	33.5	0.4	-	34.2	0.0	27.4	7.1	-	34.5	0.2	5.3	0.2	-	5.6	12.8	12.0	0.9	-	25.7	-
PHF	0.750	0.925	0.750	-	0.921	0.000	0.931	0.783	-	0.937	0.750	0.846	0.750	-	0.839	0.863	0.862	0.625	-	0.949	0.972
Lights	6	555	6	-	567	0	457	119	-	576	3	88	3	-	94	214	200	15	-	429	1666
% Lights	100.0	99.3	100.0	-	99.3	-	99.8	100.0	-	99.8	100.0	100.0	100.0	-	100.0	100.0	100.0	100.0	-	100.0	99.7
Other Vehicles	0	4	0	-	4	0	1	0	-	1	0	0	0	-	0	0	0	0	-	0	5
% Other Vehicles	0.0	0.7	0.0	-	0.7	-	0.2	0.0	-	0.2	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.3
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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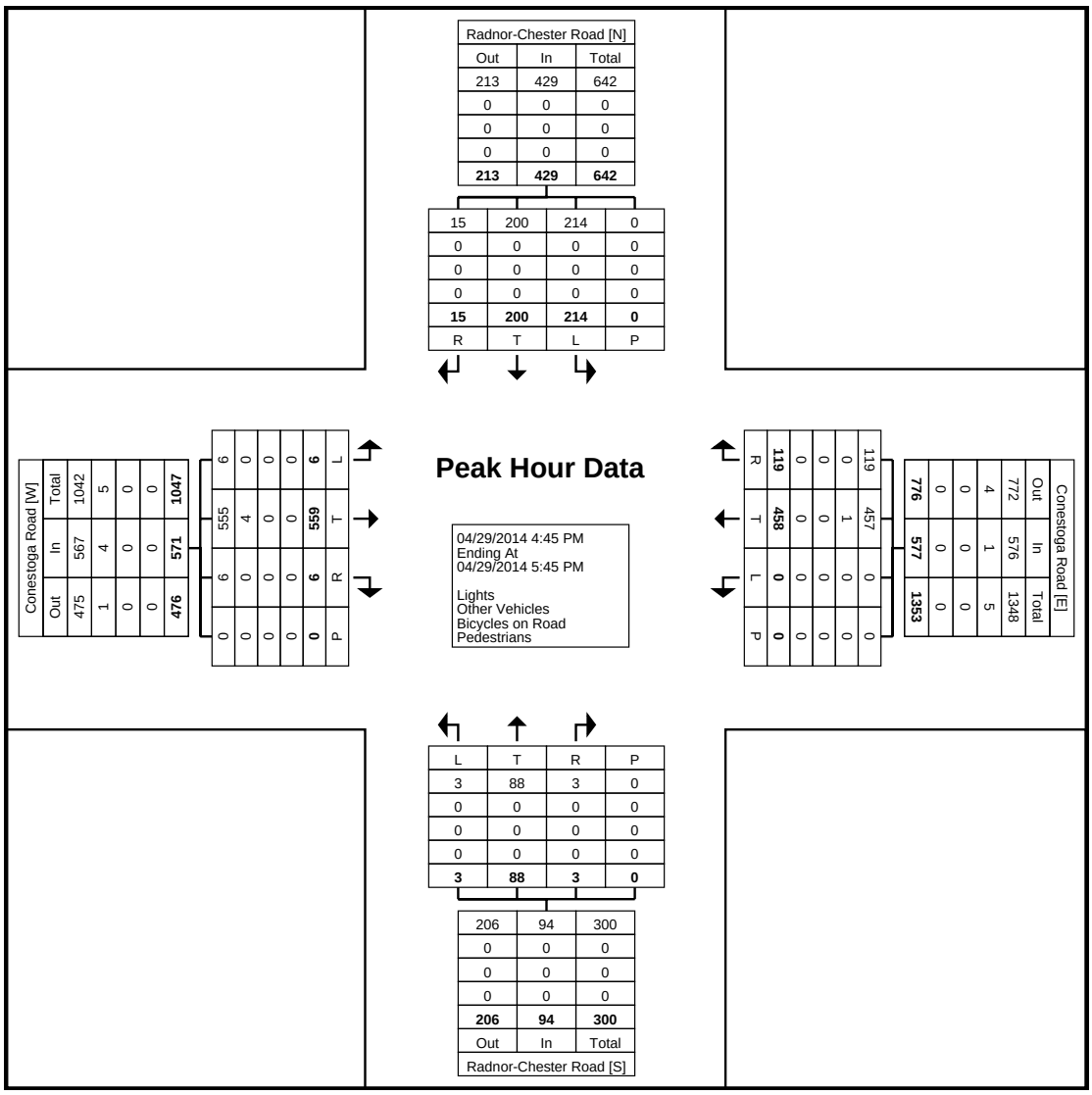
Weather:: Overcast

Count Name: Conestoga Road & Radnor-Chester Road - AM & PM
Site Code:
Start Date: 04/29/2014



Turning Movement Peak Hour Data Plot (4:45 PM)

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

Counter:: MIOVISION
Counted By:: ACB
Weather:: Overcast

Count Name: Conestoga Road & Radnor-Chester Road - AM & PM
Site Code:
Start Date: 04/29/2014

Turning Movement Peak Hour Data (7:30 AM)

Start Time	Conestoga Road Eastbound					Conestoga Road Westbound					Radnor-Chester Road Northbound					Radnor-Chester 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
7:30 AM	2	117	0	0	119	0	150	27	0	177	3	50	1	0	54	25	31	5	0	61	411
7:45 AM	1	87	2	0	90	0	147	38	0	185	2	65	0	0	67	41	20	1	0	62	404
8:00 AM	0	108	2	0	110	0	132	35	0	167	3	59	0	0	62	39	23	8	0	70	409
8:15 AM	1	94	2	0	97	0	140	43	0	183	3	66	0	0	69	14	18	2	0	34	383
Total	4	406	6	0	416	0	569	143	0	712	11	240	1	0	252	119	92	16	0	227	1607
Approach %	1.0	97.6	1.4	-	-	0.0	79.9	20.1	-	-	4.4	95.2	0.4	-	-	52.4	40.5	7.0	-	-	-
Total %	0.2	25.3	0.4	-	25.9	0.0	35.4	8.9	-	44.3	0.7	14.9	0.1	-	15.7	7.4	5.7	1.0	-	14.1	-
PHF	0.500	0.868	0.750	-	0.874	0.000	0.948	0.831	-	0.962	0.917	0.909	0.250	-	0.913	0.726	0.742	0.500	-	0.811	0.977
Lights	4	394	5	-	403	0	558	141	-	699	9	236	1	-	246	116	92	15	-	223	1571
% Lights	100.0	97.0	83.3	-	96.9	-	98.1	98.6	-	98.2	81.8	98.3	100.0	-	97.6	97.5	100.0	93.8	-	98.2	97.8
Other Vehicles	0	12	1	-	13	0	11	2	-	13	2	4	0	-	6	3	0	1	-	4	36
% Other Vehicles	0.0	3.0	16.7	-	3.1	-	1.9	1.4	-	1.8	18.2	1.7	0.0	-	2.4	2.5	0.0	6.3	-	1.8	2.2
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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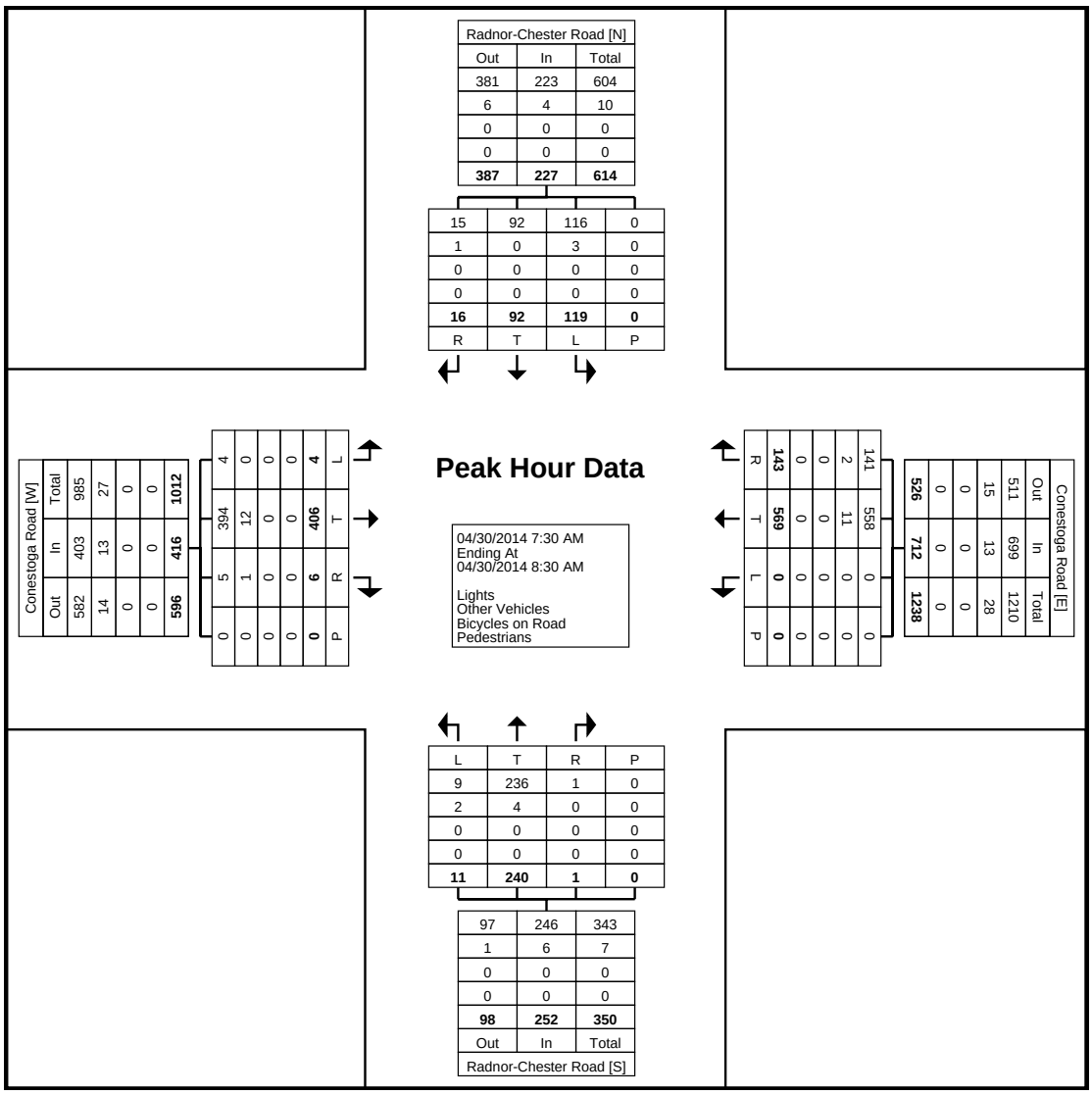
610.326.3100 mbressler@trafficpd.com

Counter:: MIOVISION
Counted By:: ACB
Weather:: Overcast

Count Name: Conestoga Road & Radnor-Chester Road - AM & PM
Site Code:
Start Date: 04/29/2014



Turning Movement Peak Hour Data Plot (7:30 AM)

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

Counter:: MIOVISION
Counted By:: ACB
Weather:: Overcast

Count Name: Darby-Paoli Road & Newtown Road - AM&PM
Site Code:
Start Date: 04/29/2014

Turning Movement Data

Start Time	Newtown Road Westbound				Darby-Paoli Road Northbound				Darby-Paoli Road Southbound				
	Left	Right	Peds	App. Total	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Int. Total
4:00 PM	44	32	0	76	23	19	0	42	30	77	0	107	225
4:15 PM	49	31	0	80	36	34	0	70	36	49	0	85	235
4:30 PM	62	28	0	90	25	33	0	58	36	78	0	114	262
4:45 PM	61	27	0	88	29	25	0	54	23	85	0	108	250
Hourly Total	216	118	0	334	113	111	0	224	125	289	0	414	972
5:00 PM	71	25	0	96	28	31	0	59	41	107	0	148	303
5:15 PM	84	29	0	113	35	32	0	67	39	129	0	168	348
5:30 PM	95	28	0	123	30	26	0	56	39	127	0	166	345
5:45 PM	94	29	0	123	28	38	0	66	44	106	0	150	339
Hourly Total	344	111	0	455	121	127	0	248	163	469	0	632	1335
6:00 PM	1	0	0	1	0	0	0	0	0	0	0	0	1
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	1	0	0	1	0	0	0	0	0	0	0	0	1
7:00 AM	5	10	0	15	44	62	0	106	28	14	0	42	163
7:15 AM	15	34	0	49	61	94	0	155	56	25	0	81	285
7:30 AM	33	35	0	68	73	66	0	139	71	44	0	115	322
7:45 AM	27	18	0	45	87	86	0	173	79	65	0	144	362
Hourly Total	80	97	0	177	265	308	0	573	234	148	0	382	1132
8:00 AM	32	29	0	61	93	85	0	178	54	41	0	95	334
8:15 AM	27	25	0	52	111	89	0	200	47	27	0	74	326
8:30 AM	29	24	0	53	80	63	0	143	44	16	0	60	256
8:45 AM	18	32	0	50	75	62	0	137	43	24	0	67	254
Hourly Total	106	110	0	216	359	299	0	658	188	108	0	296	1170
9:00 AM	0	0	0	0	0	0	0	0	1	0	0	1	1
Grand Total	747	436	0	1183	858	845	0	1703	711	1014	0	1725	4611
Approach %	63.1	36.9	-	-	50.4	49.6	-	-	41.2	58.8	-	-	-
Total %	16.2	9.5	-	25.7	18.6	18.3	-	36.9	15.4	22.0	-	37.4	-
Lights	737	428	-	1165	844	830	-	1674	702	999	-	1701	4540
% Lights	98.7	98.2	-	98.5	98.4	98.2	-	98.3	98.7	98.5	-	98.6	98.5
Other Vehicles	10	8	-	18	14	15	-	29	9	15	-	24	71
% Other Vehicles	1.3	1.8	-	1.5	1.6	1.8	-	1.7	1.3	1.5	-	1.4	1.5
Bicycles on Road	0	0	-	0	0	0	-	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	0	-	-	-	0	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-

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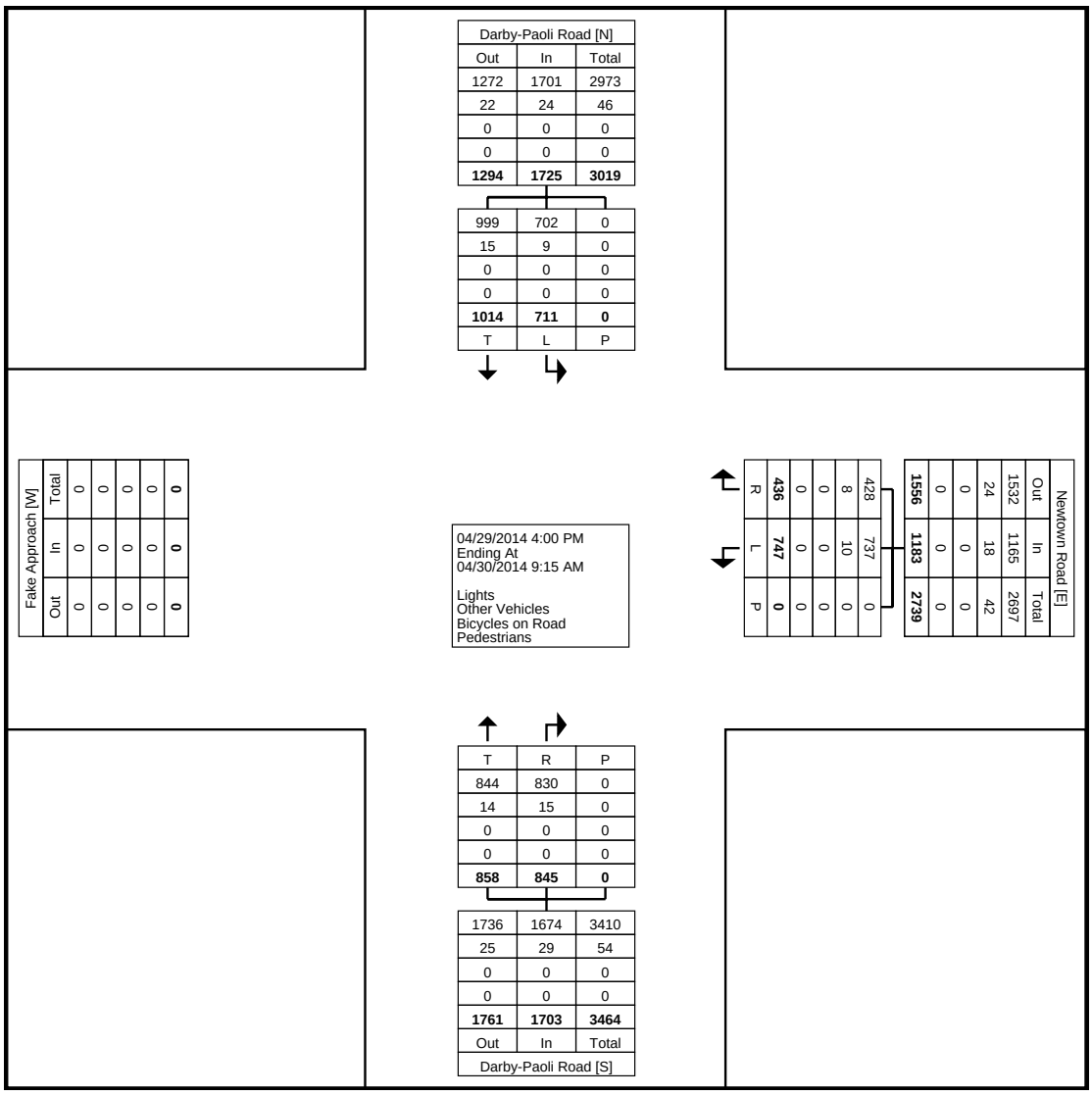
Counter:: MIOVISION
Counted By:: ACB
Weather:: Overcast

Count Name: Darby-Paoli Road & Newtown Road - AM&PM
Site Code:
Start Date: 04/29/2014



Turning Movement Data Plot

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

Counter:: MIOVISION
Counted By:: ACB
Weather:: Overcast

Count Name: Darby-Paoli Road & Newtown Road - AM&PM
Site Code:
Start Date: 04/29/2014

Turning Movement Peak Hour Data (5:00 PM)

Start Time	Newtown Road Westbound				Darby-Paoli Road Northbound				Darby-Paoli Road Southbound				
	Left	Right	Peds	App. Total	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Int. Total
5:00 PM	71	25	0	96	28	31	0	59	41	107	0	148	303
5:15 PM	84	29	0	113	35	32	0	67	39	129	0	168	348
5:30 PM	95	28	0	123	30	26	0	56	39	127	0	166	345
5:45 PM	94	29	0	123	28	38	0	66	44	106	0	150	339
Total	344	111	0	455	121	127	0	248	163	469	0	632	1335
Approach %	75.6	24.4	-	-	48.8	51.2	-	-	25.8	74.2	-	-	-
Total %	25.8	8.3	-	34.1	9.1	9.5	-	18.6	12.2	35.1	-	47.3	-
PHF	0.905	0.957	-	0.925	0.864	0.836	-	0.925	0.926	0.909	-	0.940	0.959
Lights	344	110	-	454	121	126	-	247	163	464	-	627	1328
% Lights	100.0	99.1	-	99.8	100.0	99.2	-	99.6	100.0	98.9	-	99.2	99.5
Other Vehicles	0	1	-	1	0	1	-	1	0	5	-	5	7
% Other Vehicles	0.0	0.9	-	0.2	0.0	0.8	-	0.4	0.0	1.1	-	0.8	0.5
Bicycles on Road	0	0	-	0	0	0	-	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	0	-	-	-	0	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-

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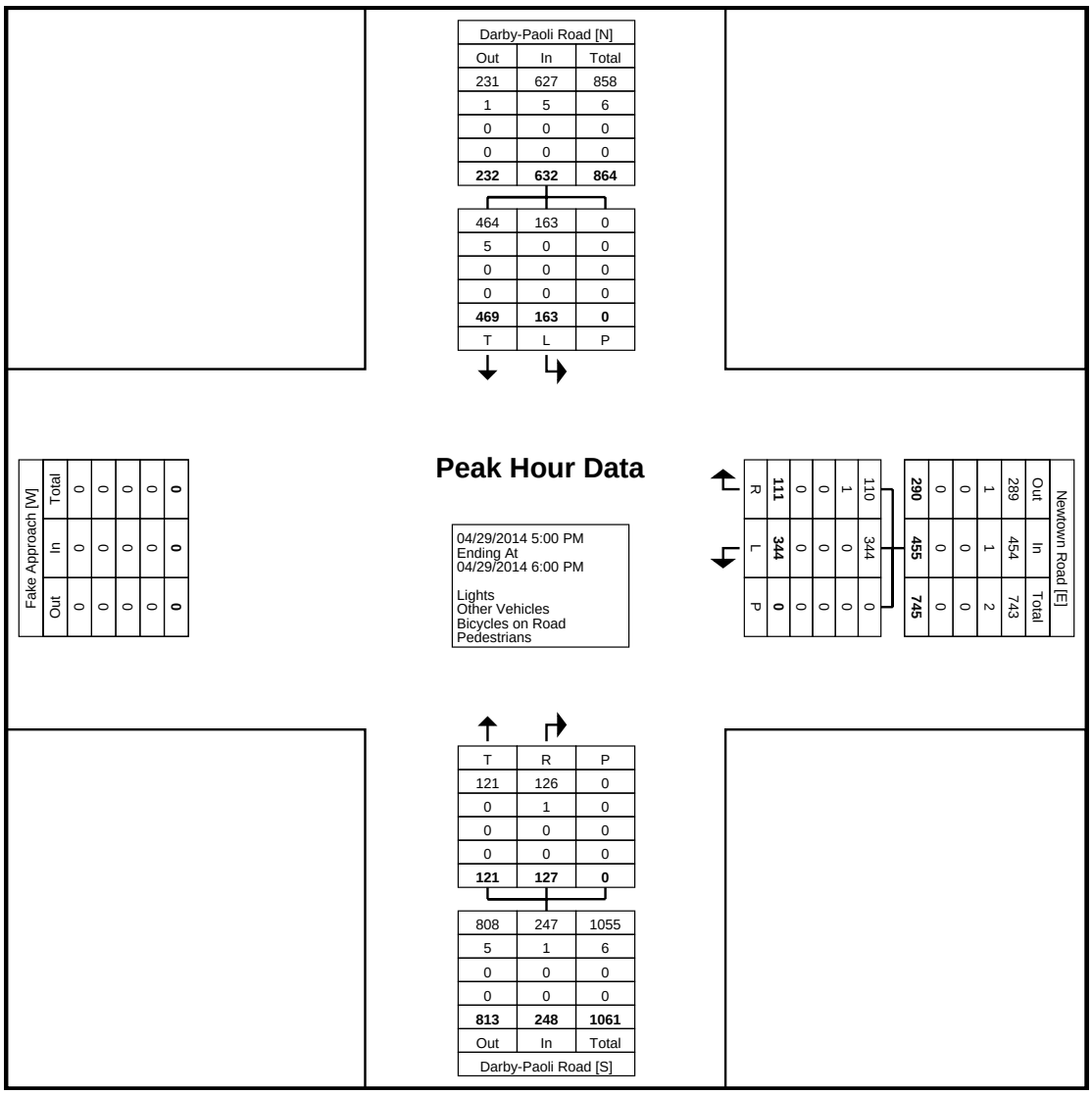
Counter:: MIOVISION
Counted By:: ACB
Weather:: Overcast

Count Name: Darby-Paoli Road & Newtown Road - AM&PM
Site Code:
Start Date: 04/29/2014



Turning Movement Peak Hour Data Plot (5:00 PM)

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

Counter:: MIOVISION
Counted By:: ACB
Weather:: Overcast

Count Name: Darby-Paoli Road & Newtown Road - AM&PM
Site Code:
Start Date: 04/29/2014

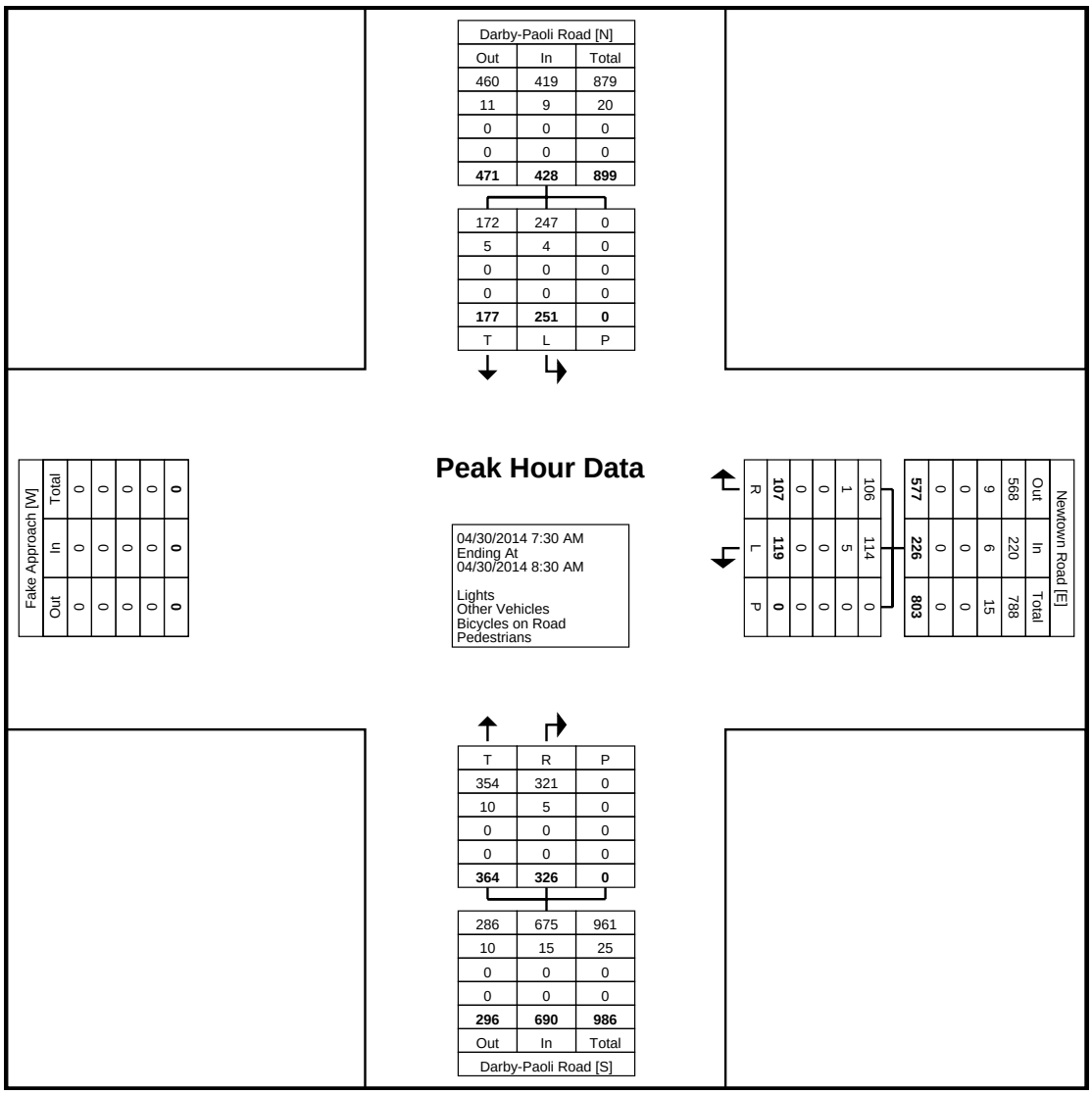
Turning Movement Peak Hour Data (7:30 AM)

Start Time	Newtown Road Westbound				Darby-Paoli Road Northbound				Darby-Paoli Road Southbound				
	Left	Right	Peds	App. Total	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Int. Total
7:30 AM	33	35	0	68	73	66	0	139	71	44	0	115	322
7:45 AM	27	18	0	45	87	86	0	173	79	65	0	144	362
8:00 AM	32	29	0	61	93	85	0	178	54	41	0	95	334
8:15 AM	27	25	0	52	111	89	0	200	47	27	0	74	326
Total	119	107	0	226	364	326	0	690	251	177	0	428	1344
Approach %	52.7	47.3	-	-	52.8	47.2	-	-	58.6	41.4	-	-	-
Total %	8.9	8.0	-	16.8	27.1	24.3	-	51.3	18.7	13.2	-	31.8	-
PHF	0.902	0.764	-	0.831	0.820	0.916	-	0.863	0.794	0.681	-	0.743	0.928
Lights	114	106	-	220	354	321	-	675	247	172	-	419	1314
% Lights	95.8	99.1	-	97.3	97.3	98.5	-	97.8	98.4	97.2	-	97.9	97.8
Other Vehicles	5	1	-	6	10	5	-	15	4	5	-	9	30
% Other Vehicles	4.2	0.9	-	2.7	2.7	1.5	-	2.2	1.6	2.8	-	2.1	2.2
Bicycles on Road	0	0	-	0	0	0	-	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	0	-	-	-	0	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-

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

Counter:: MIOVISION
Counted By:: ACB
Weather:: Overcast

Count Name: Darby-Paoli Road & Newtown Road - AM&PM
Site Code:
Start Date: 04/29/2014



Turning Movement Peak Hour Data Plot (7:30 AM)

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

Counter:: MIOVISION
Counted By:: ACB
Weather:: Overcast

Count Name: Newtown Road & Radnor-Chester Road - AM & PM
Site Code:
Start Date: 04/29/2014

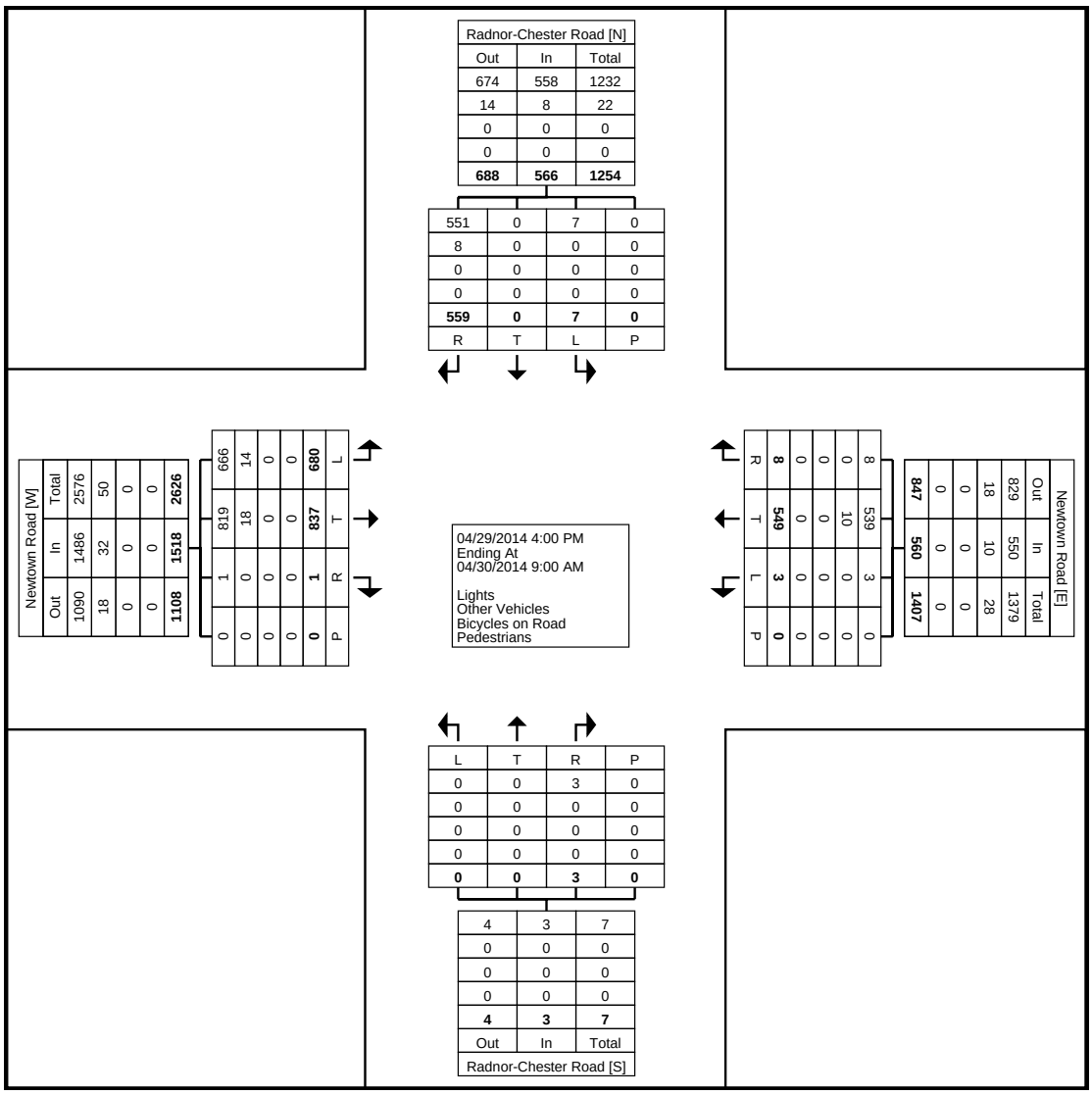
Turning Movement Data

Start Time	Newtown Road Eastbound					Newtown Road Westbound					Radnor-Chester Road Northbound					Radnor-Chester 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
4:00 PM	16	30	1	0	47	0	36	1	0	37	0	0	0	0	0	1	0	39	0	40	124
4:15 PM	28	38	0	0	66	0	38	0	0	38	0	0	1	0	1	0	0	41	0	41	146
4:30 PM	19	48	0	0	67	0	43	0	0	43	0	0	0	0	0	0	0	54	0	54	164
4:45 PM	23	34	0	0	57	0	28	0	0	28	0	0	0	0	0	2	0	36	0	38	123
Hourly Total	86	150	1	0	237	0	145	1	0	146	0	0	1	0	1	3	0	170	0	173	557
5:00 PM	32	34	0	0	66	0	42	0	0	42	0	0	1	0	1	0	0	54	0	54	163
5:15 PM	25	53	0	0	78	0	47	2	0	49	0	0	0	0	0	1	0	61	0	62	189
5:30 PM	13	48	0	0	61	0	60	0	0	60	0	0	0	0	0	1	0	52	0	53	174
5:45 PM	26	61	0	0	87	0	40	1	0	41	0	0	0	0	0	1	0	51	0	52	180
Hourly Total	96	196	0	0	292	0	189	3	0	192	0	0	1	0	1	3	0	218	0	221	706
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 AM	47	37	0	0	84	0	12	0	0	12	0	0	0	0	0	0	0	8	0	8	104
7:15 AM	85	43	0	0	128	1	35	2	0	38	0	0	0	0	0	0	0	17	0	17	183
7:30 AM	61	76	0	0	137	0	30	0	0	30	0	0	1	0	1	0	0	32	0	32	200
7:45 AM	64	90	0	0	154	0	26	1	0	27	0	0	0	0	0	0	0	22	0	22	203
Hourly Total	257	246	0	0	503	1	103	3	0	107	0	0	1	0	1	0	0	79	0	79	690
8:00 AM	63	78	0	0	141	0	26	0	0	26	0	0	0	0	0	1	0	18	0	19	186
8:15 AM	71	52	0	0	123	0	33	1	0	34	0	0	0	0	0	0	0	25	0	25	182
8:30 AM	51	45	0	0	96	0	25	0	0	25	0	0	0	0	0	0	0	24	0	24	145
8:45 AM	56	70	0	0	126	2	28	0	0	30	0	0	0	0	0	0	0	25	0	25	181
Hourly Total	241	245	0	0	486	2	112	1	0	115	0	0	0	0	0	1	0	92	0	93	694
Grand Total	680	837	1	0	1518	3	549	8	0	560	0	0	3	0	3	7	0	559	0	566	2647
Approach %	44.8	55.1	0.1	-	-	0.5	98.0	1.4	-	-	0.0	0.0	100.0	-	-	1.2	0.0	98.8	-	-	-
Total %	25.7	31.6	0.0	-	57.3	0.1	20.7	0.3	-	21.2	0.0	0.0	0.1	-	0.1	0.3	0.0	21.1	-	21.4	-
Lights	666	819	1	-	1486	3	539	8	-	550	0	0	3	-	3	7	0	551	-	558	2597
% Lights	97.9	97.8	100.0	-	97.9	100.0	98.2	100.0	-	98.2	-	-	100.0	-	100.0	100.0	-	98.6	-	98.6	98.1
Other Vehicles	14	18	0	-	32	0	10	0	-	10	0	0	0	-	0	0	0	8	-	8	50
% Other Vehicles	2.1	2.2	0.0	-	2.1	0.0	1.8	0.0	-	1.8	-	-	0.0	-	0.0	0.0	-	1.4	-	1.4	1.9
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	-	-	0.0	-	0.0	0.0	-	0.0	-	0.0	0.0
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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

Counter:: MIOVISION
Counted By:: ACB
Weather:: Overcast

Count Name: Newtown Road & Radnor-Chester Road - AM & PM
Site Code:
Start Date: 04/29/2014



Turning Movement Data Plot

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

Counter:: MIOVISION
Counted By:: ACB
Weather:: Overcast

Count Name: Newtown Road & Radnor-Chester Road - AM & PM
Site Code:
Start Date: 04/29/2014

Turning Movement Peak Hour Data (5:00 PM)

Start Time	Newtown Road Eastbound					Newtown Road Westbound					Radnor-Chester Road Northbound					Radnor-Chester 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
5:00 PM	32	34	0	0	66	0	42	0	0	42	0	0	1	0	1	0	0	54	0	54	163
5:15 PM	25	53	0	0	78	0	47	2	0	49	0	0	0	0	0	1	0	61	0	62	189
5:30 PM	13	48	0	0	61	0	60	0	0	60	0	0	0	0	0	1	0	52	0	53	174
5:45 PM	26	61	0	0	87	0	40	1	0	41	0	0	0	0	0	1	0	51	0	52	180
Total	96	196	0	0	292	0	189	3	0	192	0	0	1	0	1	3	0	218	0	221	706
Approach %	32.9	67.1	0.0	-	-	0.0	98.4	1.6	-	-	0.0	0.0	100.0	-	-	1.4	0.0	98.6	-	-	-
Total %	13.6	27.8	0.0	-	41.4	0.0	26.8	0.4	-	27.2	0.0	0.0	0.1	-	0.1	0.4	0.0	30.9	-	31.3	-
PHF	0.750	0.803	0.000	-	0.839	0.000	0.788	0.375	-	0.800	0.000	0.000	0.250	-	0.250	0.750	0.000	0.893	-	0.891	0.934
Lights	96	193	0	-	289	0	187	3	-	190	0	0	1	-	1	3	0	218	-	221	701
% Lights	100.0	98.5	-	-	99.0	-	98.9	100.0	-	99.0	-	-	100.0	-	100.0	100.0	-	100.0	-	100.0	99.3
Other Vehicles	0	3	0	-	3	0	2	0	-	2	0	0	0	-	0	0	0	0	-	0	5
% Other Vehicles	0.0	1.5	-	-	1.0	-	1.1	0.0	-	1.0	-	-	0.0	-	0.0	0.0	-	0.0	-	0.0	0.7
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	-	-	0.0	-	0.0	0.0	-	0.0	-	-	0.0	-	0.0	0.0	-	0.0	-	0.0	0.0
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Traffic Planning and Design, Inc
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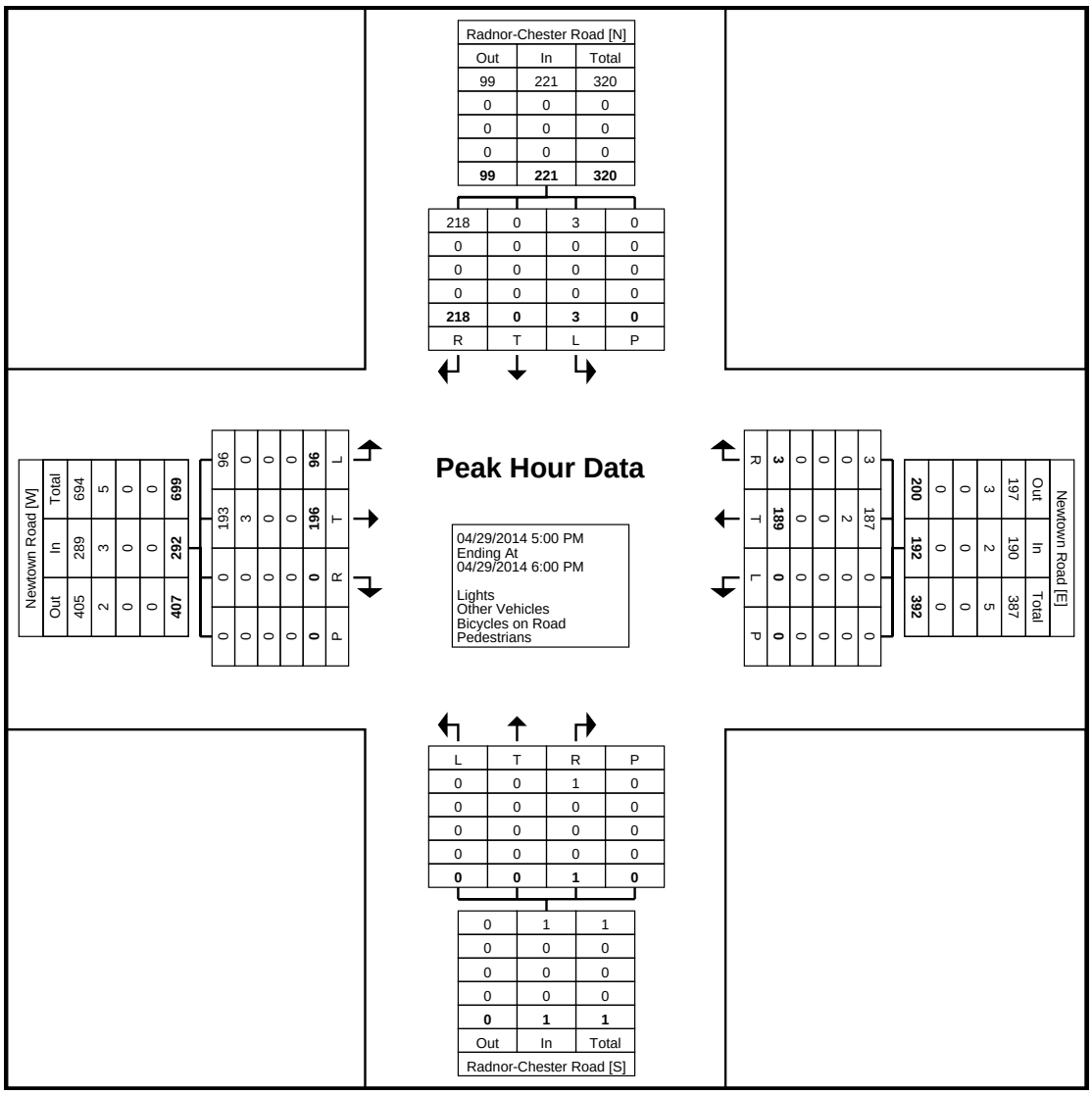
Counter:: MIOVISION
Counted By:: ACB
Weather:: Overcast

Count Name: Newtown Road & Radnor-Chester Road - AM & PM
Site Code:
Start Date: 04/29/2014
Page No: 4



Turning Movement Peak Hour Data Plot (5:00 PM)

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

Counter:: MIOVISION
Counted By:: ACB
Weather:: Overcast

Count Name: Newtown Road & Radnor-Chester Road - AM & PM
Site Code:
Start Date: 04/29/2014

Turning Movement Peak Hour Data (7:15 AM)

Start Time	Newtown Road Eastbound					Newtown Road Westbound					Radnor-Chester Road Northbound					Radnor-Chester 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	85	43	0	0	128	1	35	2	0	38	0	0	0	0	0	0	0	17	0	17	183
7:30 AM	61	76	0	0	137	0	30	0	0	30	0	0	1	0	1	0	0	32	0	32	200
7:45 AM	64	90	0	0	154	0	26	1	0	27	0	0	0	0	0	0	0	22	0	22	203
8:00 AM	63	78	0	0	141	0	26	0	0	26	0	0	0	0	0	1	0	18	0	19	186
Total	273	287	0	0	560	1	117	3	0	121	0	0	1	0	1	1	0	89	0	90	772
Approach %	48.8	51.3	0.0	-	-	0.8	96.7	2.5	-	-	0.0	0.0	100.0	-	-	1.1	0.0	98.9	-	-	-
Total %	35.4	37.2	0.0	-	72.5	0.1	15.2	0.4	-	15.7	0.0	0.0	0.1	-	0.1	0.1	0.0	11.5	-	11.7	-
PHF	0.803	0.797	0.000	-	0.909	0.250	0.836	0.375	-	0.796	0.000	0.000	0.250	-	0.250	0.250	0.000	0.695	-	0.703	0.951
Lights	268	281	0	-	549	1	113	3	-	117	0	0	1	-	1	1	0	87	-	88	755
% Lights	98.2	97.9	-	-	98.0	100.0	96.6	100.0	-	96.7	-	-	100.0	-	100.0	100.0	-	97.8	-	97.8	97.8
Other Vehicles	5	6	0	-	11	0	4	0	-	4	0	0	0	-	0	0	0	2	-	2	17
% Other Vehicles	1.8	2.1	-	-	2.0	0.0	3.4	0.0	-	3.3	-	-	0.0	-	0.0	0.0	-	2.2	-	2.2	2.2
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	0.0	-	-	0.0	-	0.0	0.0	-	0.0	-	0.0	0.0
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Traffic Planning and Design, Inc
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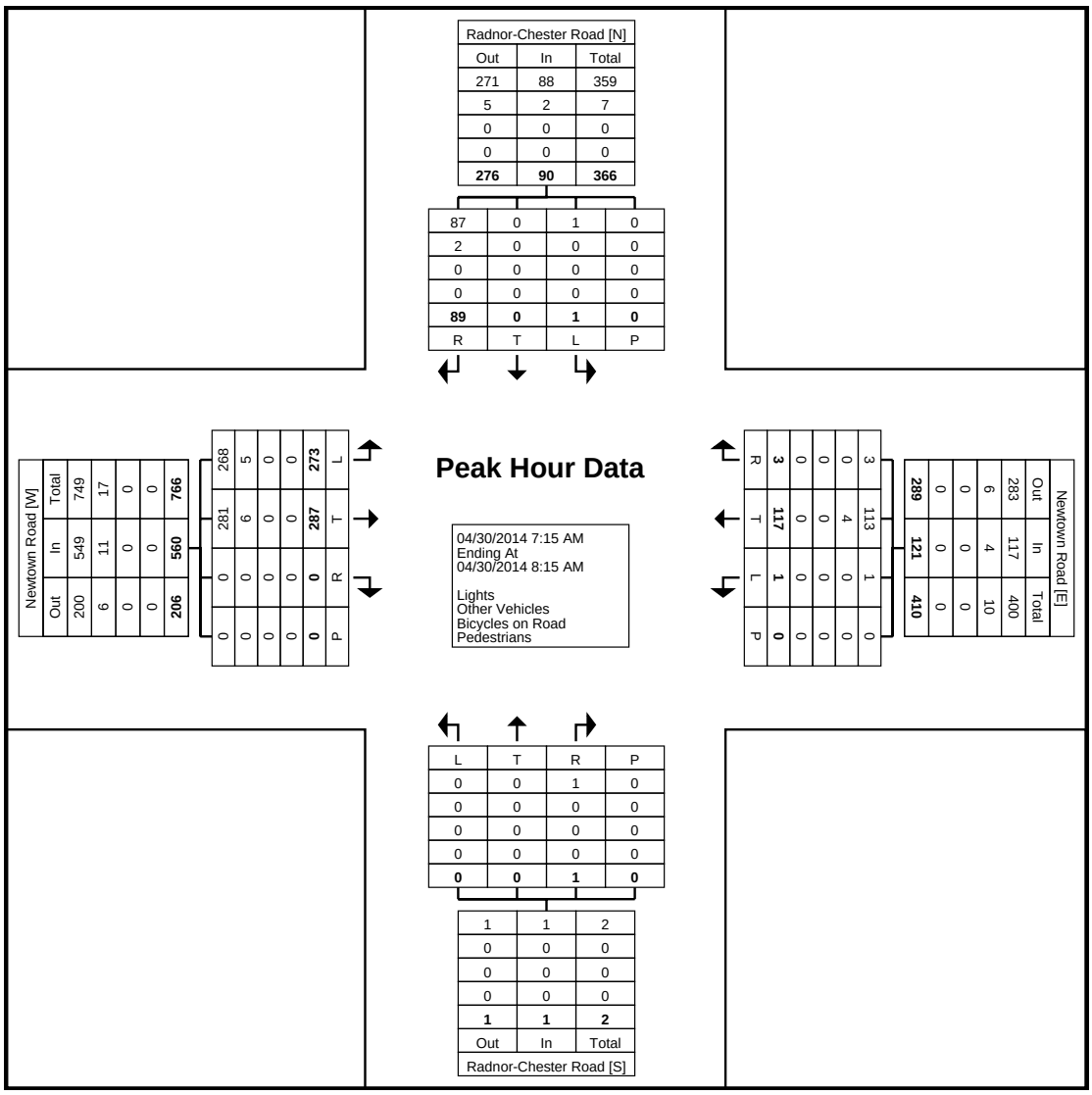
Count Name: Newtown Road & Radnor-Chester Road - AM & PM
Site Code:
Start Date: 04/29/2014



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

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

Counter:: MIOVISION
Counted By:: ACB
Weather:: Overcast

Count Name: Newtown Road & Brooke Road - AM&PM
Site Code:
Start Date: 04/29/2014

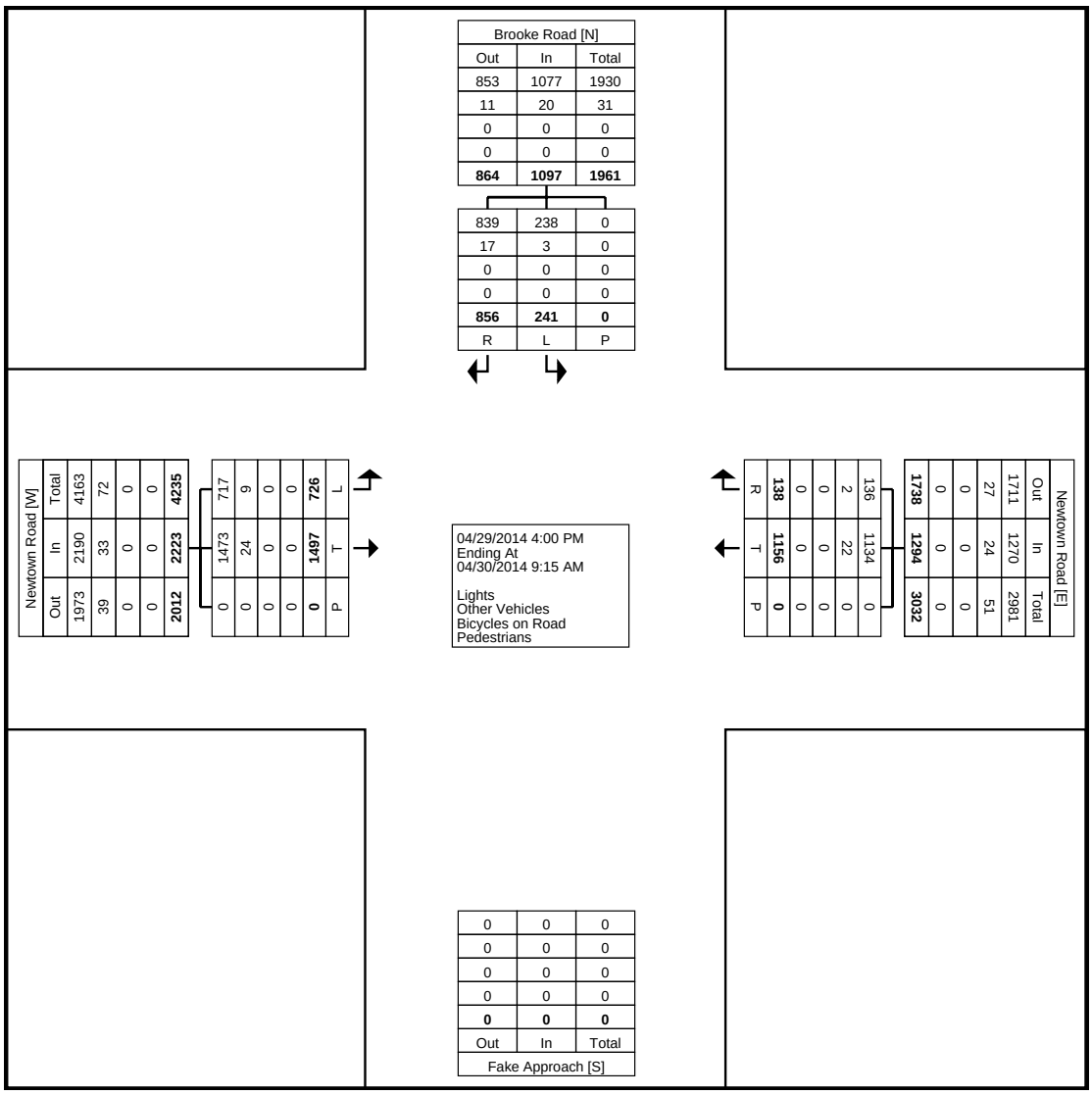
Turning Movement Data

Start Time	Newtown Road Eastbound				Newtown Road Westbound				Brooke Road Southbound				
	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	Left	Right	Peds	App. Total	Int. Total
4:00 PM	35	84	0	119	59	5	0	64	17	41	0	58	241
4:15 PM	35	82	0	117	59	7	0	66	11	44	0	55	238
4:30 PM	31	100	0	131	51	2	0	53	14	52	0	66	250
4:45 PM	36	92	0	128	51	5	0	56	20	53	0	73	257
Hourly Total	137	358	0	495	220	19	0	239	62	190	0	252	986
5:00 PM	33	113	0	146	53	5	0	58	26	85	0	111	315
5:15 PM	39	133	0	172	51	6	0	57	41	79	0	120	349
5:30 PM	33	127	0	160	64	2	0	66	35	82	0	117	343
5:45 PM	37	116	0	153	44	6	0	50	34	92	0	126	329
Hourly Total	142	489	0	631	212	19	0	231	136	338	0	474	1336
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 AM	24	40	0	64	45	3	0	48	2	18	0	20	132
7:15 AM	37	73	0	110	79	12	0	91	2	27	0	29	230
7:30 AM	42	106	0	148	105	11	0	116	8	59	0	67	331
7:45 AM	61	129	0	190	91	13	0	104	12	68	0	80	374
Hourly Total	164	348	0	512	320	39	0	359	24	172	0	196	1067
8:00 AM	83	109	0	192	103	8	0	111	5	40	0	45	348
8:15 AM	72	70	0	142	114	19	0	133	5	34	0	39	314
8:30 AM	57	43	0	100	98	18	0	116	6	37	0	43	259
8:45 AM	71	80	0	151	89	16	0	105	3	45	0	48	304
Hourly Total	283	302	0	585	404	61	0	465	19	156	0	175	1225
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	726	1497	0	2223	1156	138	0	1294	241	856	0	1097	4614
Approach %	32.7	67.3	-	-	89.3	10.7	-	-	22.0	78.0	-	-	-
Total %	15.7	32.4	-	48.2	25.1	3.0	-	28.0	5.2	18.6	-	23.8	-
Lights	717	1473	-	2190	1134	136	-	1270	238	839	-	1077	4537
% Lights	98.8	98.4	-	98.5	98.1	98.6	-	98.1	98.8	98.0	-	98.2	98.3
Other Vehicles	9	24	-	33	22	2	-	24	3	17	-	20	77
% Other Vehicles	1.2	1.6	-	1.5	1.9	1.4	-	1.9	1.2	2.0	-	1.8	1.7
Bicycles on Road	0	0	-	0	0	0	-	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	0	-	-	-	0	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-

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

Counter:: MIOVISION
Counted By:: ACB
Weather:: Overcast

Count Name: Newtown Road & Brooke Road - AM&PM
Site Code:
Start Date: 04/29/2014



Turning Movement Data Plot

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
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Counter:: MIOVISION
Counted By:: ACB
Weather:: Overcast

Count Name: Newtown Road & Brooke Road - AM&PM
Site Code:
Start Date: 04/29/2014

Turning Movement Peak Hour Data (5:00 PM)

Start Time	Newtown Road Eastbound				Newtown Road Westbound				Brooke Road Southbound				
	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	Left	Right	Peds	App. Total	Int. Total
5:00 PM	33	113	0	146	53	5	0	58	26	85	0	111	315
5:15 PM	39	133	0	172	51	6	0	57	41	79	0	120	349
5:30 PM	33	127	0	160	64	2	0	66	35	82	0	117	343
5:45 PM	37	116	0	153	44	6	0	50	34	92	0	126	329
Total	142	489	0	631	212	19	0	231	136	338	0	474	1336
Approach %	22.5	77.5	-	-	91.8	8.2	-	-	28.7	71.3	-	-	-
Total %	10.6	36.6	-	47.2	15.9	1.4	-	17.3	10.2	25.3	-	35.5	-
PHF	0.910	0.919	-	0.917	0.828	0.792	-	0.875	0.829	0.918	-	0.940	0.957
Lights	141	487	-	628	210	19	-	229	136	336	-	472	1329
% Lights	99.3	99.6	-	99.5	99.1	100.0	-	99.1	100.0	99.4	-	99.6	99.5
Other Vehicles	1	2	-	3	2	0	-	2	0	2	-	2	7
% Other Vehicles	0.7	0.4	-	0.5	0.9	0.0	-	0.9	0.0	0.6	-	0.4	0.5
Bicycles on Road	0	0	-	0	0	0	-	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	0	-	-	-	0	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-

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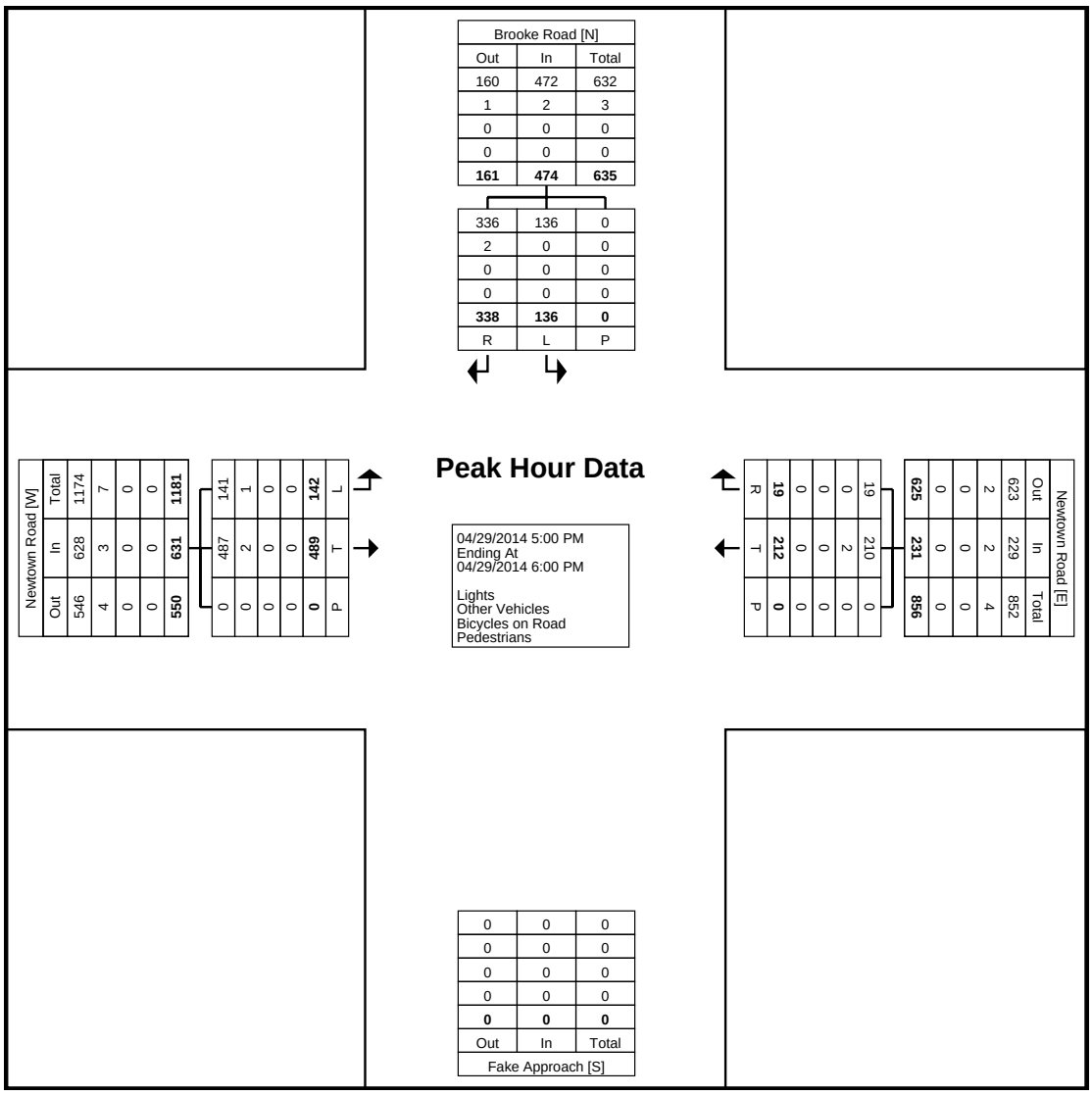
Counter:: MIOVISION
Counted By:: ACB
Weather:: Overcast

Count Name: Newtown Road & Brooke Road - AM&PM
Site Code:
Start Date: 04/29/2014



Turning Movement Peak Hour Data Plot (5:00 PM)

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
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Counter:: MIOVISION
Counted By:: ACB
Weather:: Overcast

Count Name: Newtown Road & Brooke Road - AM&PM
Site Code:
Start Date: 04/29/2014

Turning Movement Peak Hour Data (7:30 AM)

Start Time	Newtown Road Eastbound				Newtown Road Westbound				Brooke Road Southbound				
	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	Left	Right	Peds	App. Total	Int. Total
7:30 AM	42	106	0	148	105	11	0	116	8	59	0	67	331
7:45 AM	61	129	0	190	91	13	0	104	12	68	0	80	374
8:00 AM	83	109	0	192	103	8	0	111	5	40	0	45	348
8:15 AM	72	70	0	142	114	19	0	133	5	34	0	39	314
Total	258	414	0	672	413	51	0	464	30	201	0	231	1367
Approach %	38.4	61.6	-	-	89.0	11.0	-	-	13.0	87.0	-	-	-
Total %	18.9	30.3	-	49.2	30.2	3.7	-	33.9	2.2	14.7	-	16.9	-
PHF	0.777	0.802	-	0.875	0.906	0.671	-	0.872	0.625	0.739	-	0.722	0.914
Lights	255	401	-	656	401	51	-	452	29	200	-	229	1337
% Lights	98.8	96.9	-	97.6	97.1	100.0	-	97.4	96.7	99.5	-	99.1	97.8
Other Vehicles	3	13	-	16	12	0	-	12	1	1	-	2	30
% Other Vehicles	1.2	3.1	-	2.4	2.9	0.0	-	2.6	3.3	0.5	-	0.9	2.2
Bicycles on Road	0	0	-	0	0	0	-	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	0	-	-	-	0	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-

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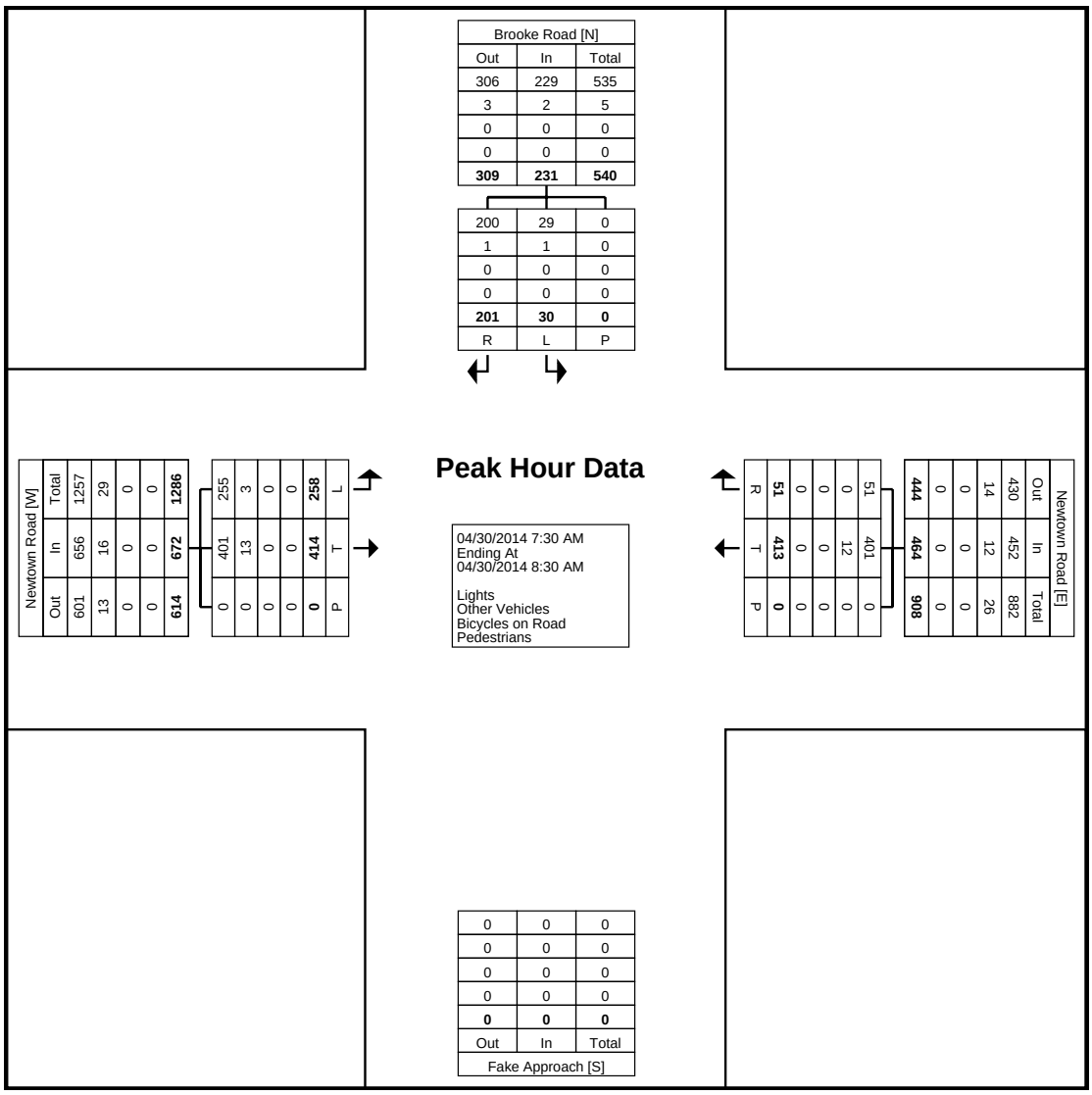
Counter:: MIOVISION
Counted By:: ACB
Weather:: Overcast

Count Name: Newtown Road & Brooke Road - AM&PM
Site Code:
Start Date: 04/29/2014



Turning Movement Peak Hour Data Plot (7:30 AM)

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

Counter:: MIOVISION
Counted By:: ACB
Weather:: Clear

Count Name: Darby-Paoli Road & Sawmill Road - AM (5/13)
Site Code:
Start Date: 05/13/2014

Turning Movement Data

Start Time	Sawmill Road Eastbound				Darby-Paoli Road Northbound				Darby-Paoli Road Southbound				
	Left	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	Int. Total
7:00 AM	46	19	0	65	2	50	0	52	22	14	0	36	153
7:15 AM	86	31	0	117	12	87	0	99	28	20	0	48	264
7:30 AM	80	38	0	118	20	105	0	125	51	27	0	78	321
7:45 AM	92	47	0	139	12	115	0	127	71	34	0	105	371
Hourly Total	304	135	0	439	46	357	0	403	172	95	0	267	1109
8:00 AM	73	37	0	110	20	112	0	132	59	30	0	89	331
8:15 AM	105	12	0	117	13	103	0	116	32	29	0	61	294
8:30 AM	61	19	0	80	10	88	0	98	39	25	0	64	242
8:45 AM	61	21	0	82	12	54	0	66	33	23	0	56	204
Hourly Total	300	89	0	389	55	357	0	412	163	107	0	270	1071
Grand Total	604	224	0	828	101	714	0	815	335	202	0	537	2180
Approach %	72.9	27.1	-	-	12.4	87.6	-	-	62.4	37.6	-	-	-
Total %	27.7	10.3	-	38.0	4.6	32.8	-	37.4	15.4	9.3	-	24.6	-
Lights	596	216	-	812	98	693	-	791	326	193	-	519	2122
% Lights	98.7	96.4	-	98.1	97.0	97.1	-	97.1	97.3	95.5	-	96.6	97.3
Other Vehicles	8	8	-	16	3	21	-	24	9	8	-	17	57
% Other Vehicles	1.3	3.6	-	1.9	3.0	2.9	-	2.9	2.7	4.0	-	3.2	2.6
Bicycles on Road	0	0	-	0	0	0	-	0	0	1	-	1	1
% Bicycles on Road	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0	0.5	-	0.2	0.0
Pedestrians	-	-	0	-	-	-	0	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-

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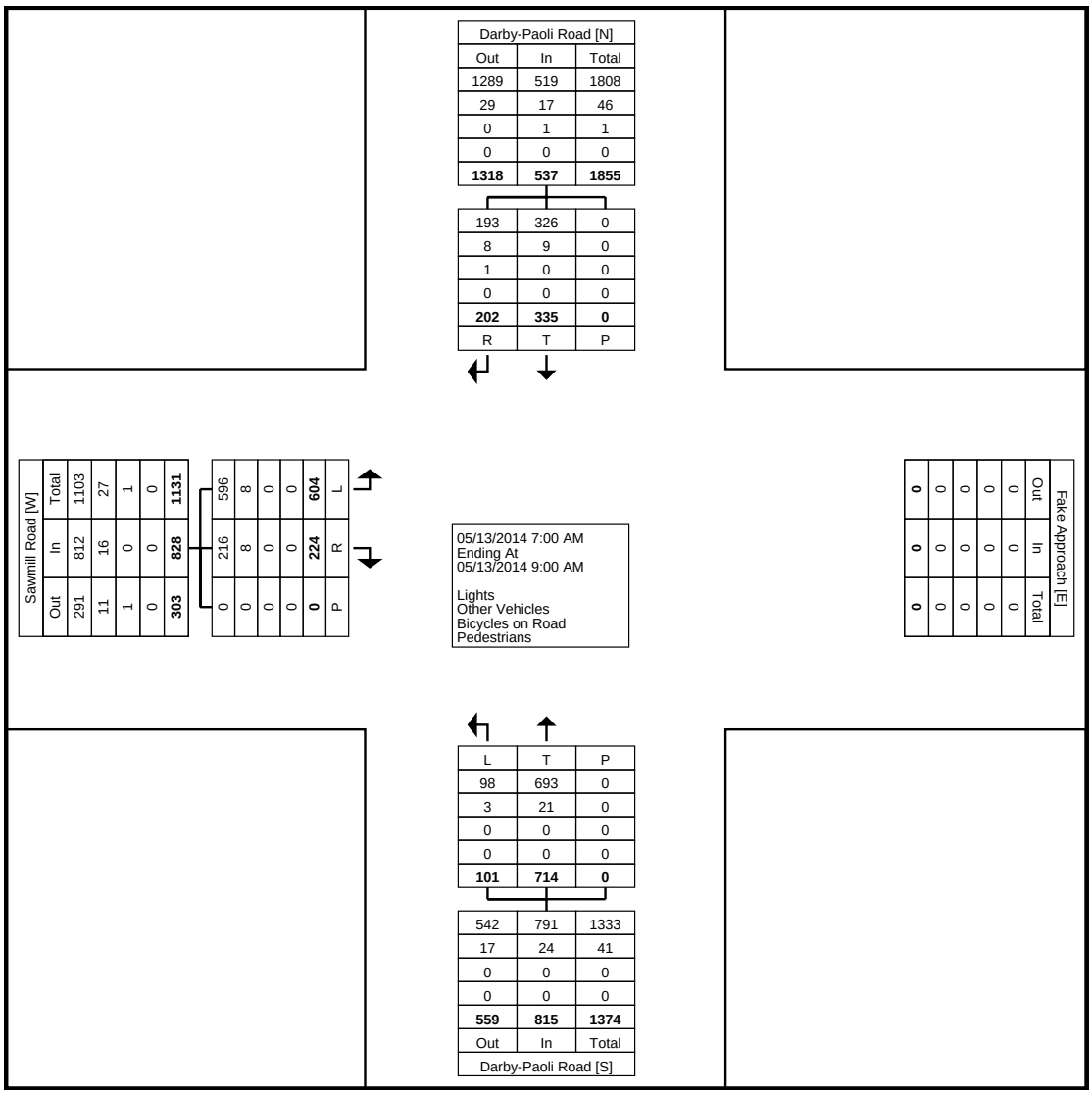
Counter:: MIOVISION
Counted By:: ACB
Weather:: Clear

Count Name: Darby-Paoli Road & Sawmill Road - AM (5/13)
Site Code:
Start Date: 05/13/2014



Turning Movement Data Plot

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

Counter:: MIOVISION
Counted By:: ACB
Weather:: Clear

Count Name: Darby-Paoli Road & Sawmill Road - AM (5/13)
Site Code:
Start Date: 05/13/2014

Turning Movement Peak Hour Data (7:30 AM)

Start Time	Sawmill Road Eastbound				Darby-Paoli Road Northbound				Darby-Paoli Road Southbound				
	Left	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	Int. Total
7:30 AM	80	38	0	118	20	105	0	125	51	27	0	78	321
7:45 AM	92	47	0	139	12	115	0	127	71	34	0	105	371
8:00 AM	73	37	0	110	20	112	0	132	59	30	0	89	331
8:15 AM	105	12	0	117	13	103	0	116	32	29	0	61	294
Total	350	134	0	484	65	435	0	500	213	120	0	333	1317
Approach %	72.3	27.7	-	-	13.0	87.0	-	-	64.0	36.0	-	-	-
Total %	26.6	10.2	-	36.8	4.9	33.0	-	38.0	16.2	9.1	-	25.3	-
PHF	0.833	0.713	-	0.871	0.813	0.946	-	0.947	0.750	0.882	-	0.793	0.887
Lights	347	130	-	477	62	418	-	480	207	114	-	321	1278
% Lights	99.1	97.0	-	98.6	95.4	96.1	-	96.0	97.2	95.0	-	96.4	97.0
Other Vehicles	3	4	-	7	3	17	-	20	6	6	-	12	39
% Other Vehicles	0.9	3.0	-	1.4	4.6	3.9	-	4.0	2.8	5.0	-	3.6	3.0
Bicycles on Road	0	0	-	0	0	0	-	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	0	-	-	-	0	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-

Traffic Planning and Design, Inc
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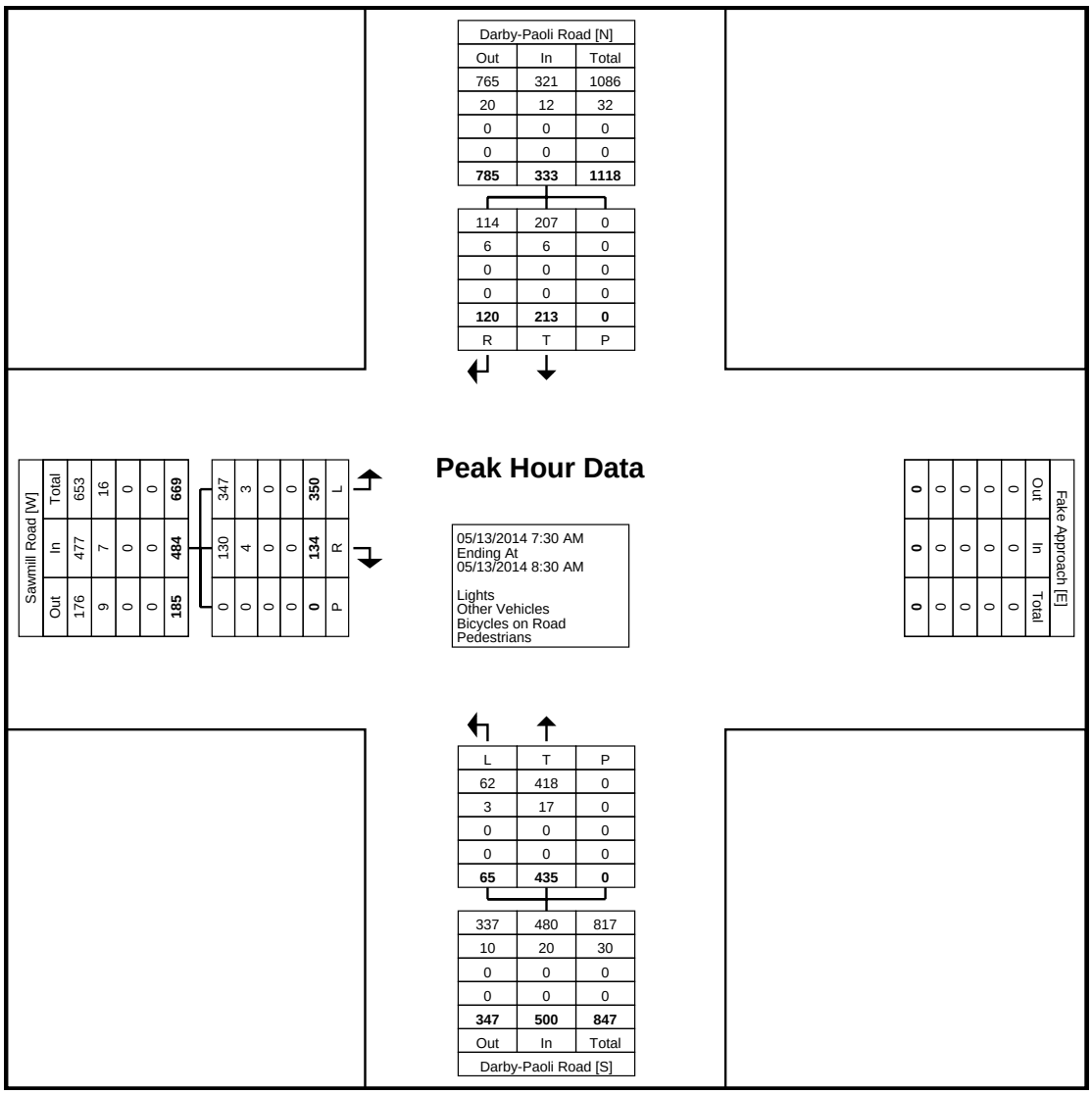
Counter:: MIOVISION
Counted By:: ACB
Weather:: Clear

Count Name: Darby-Paoli Road & Sawmill Road - AM (5/13)
Site Code:
Start Date: 05/13/2014



Turning Movement Peak Hour Data Plot (7:30 AM)

Traffic Planning & Design
2500 East High Street
Pottstown PA 19464

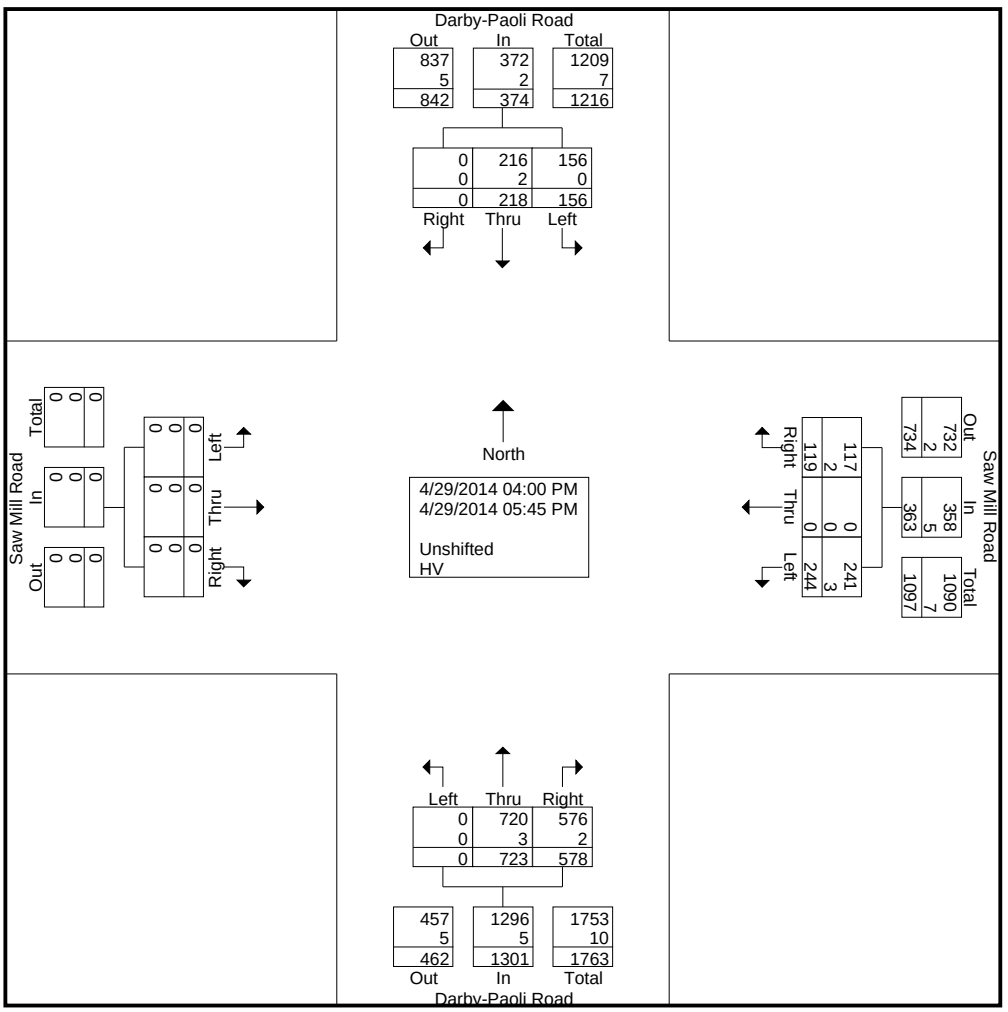
Darby-Paoli Road & Saw Mill Road

Counter: 18
Counted by: S. Lynch
Weather: Rain

File Name : 2014-04-29 DPR_SMR (PM)
Site Code : 00000000
Start Date : 4/29/2014
Page No : 1

Groups Printed- Unshifted - HV

	Saw Mill Road Eastbound					Saw Mill Road Westbound					Darby-Paoli Road Northbound					Darby-Paoli Road Southbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	0	0	0	0	0	14	0	10	0	24	0	59	53	0	112	18	24	0	0	42	0	178	178
04:15 PM	0	0	0	0	0	40	0	23	0	63	0	63	43	0	106	14	31	0	0	45	0	214	214
04:30 PM	0	0	0	0	0	31	0	17	0	48	0	75	55	0	130	22	28	0	0	50	0	228	228
04:45 PM	0	0	0	0	0	27	0	8	0	35	0	78	75	0	153	16	28	0	0	44	0	232	232
Total	0	0	0	0	0	112	0	58	0	170	0	275	226	0	501	70	111	0	0	181	0	852	852
05:00 PM	0	0	0	0	0	29	0	16	0	45	0	82	75	0	157	12	31	0	0	43	0	245	245
05:15 PM	0	0	0	0	0	32	0	12	0	44	0	132	88	0	220	27	29	0	0	56	0	320	320
05:30 PM	0	0	0	0	0	32	0	13	0	45	0	122	98	0	220	31	28	0	0	59	0	324	324
05:45 PM	0	0	0	0	0	39	0	20	0	59	0	112	91	0	203	16	19	0	0	35	0	297	297
Total	0	0	0	0	0	132	0	61	0	193	0	448	352	0	800	86	107	0	0	193	0	1186	1186
Grand Total	0	0	0	0	0	244	0	119	0	363	0	723	578	0	1301	156	218	0	0	374	0	2038	2038
Apprch %	0	0	0			67.2	0	32.8			0	55.6	44.4			41.7	58.3	0					
Total %	0	0	0		0	12	0	5.8		17.8	0	35.5	28.4		63.8	7.7	10.7	0		18.4	0	100	
Unshifted	0	0	0		0	241	0	117		358	0	720	576		1296	156	216	0		372	0	0	2026
% Unshifted	0	0	0	0	0	98.8	0	98.3	0	98.6	0	99.6	99.7	0	99.6	100	99.1	0	0	99.5	0	0	99.4
HV	0	0	0		0	3	0	2		5	0	3	2		5	0	2	0		2	0	0	12
% HV	0	0	0	0	0	1.2	0	1.7	0	1.4	0	0.4	0.3	0	0.4	0	0.9	0	0	0.5	0	0	0.6

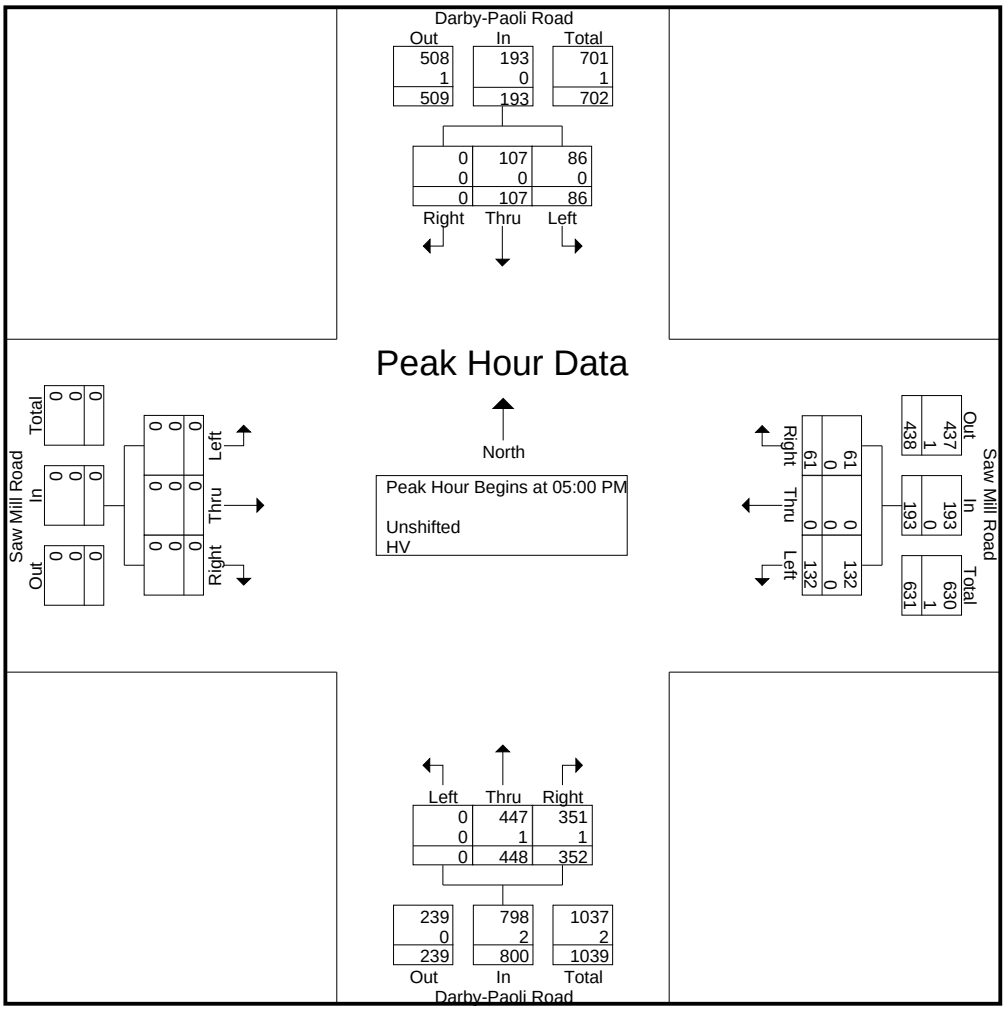


Traffic Planning & Design
2500 East High Street
Pottstown PA 19464

Darby-Paoli Road & Saw Mill Road

File Name : 2014-04-29 DPR_SMR (PM)
Site Code : 00000000
Start Date : 4/29/2014
Page No : 2

	Saw Mill Road Eastbound				Saw Mill Road Westbound				Darby-Paoli Road Northbound				Darby-Paoli Road Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	0	0	0	29	0	16	45	0	82	75	157	12	**31**	0	43	245
05:15 PM	0	0	0	0	32	0	12	44	0	**132**	88	**220**	27	29	0	56	320
05:30 PM	0	0	0	0	32	0	13	45	0	122	**98**	220	**31**	28	0	**59**	**324**
05:45 PM	0	0	0	0	**39**	0	**20**	**59**	0	112	91	203	16	19	0	35	297
Total Volume	0	0	0	0	132	0	61	193	0	448	352	800	86	107	0	193	1186
% App. Total	0	0	0		68.4	0	31.6		0	56	44		44.6	55.4	0		
PHF	.000	.000	.000	.000	.846	.000	.763	.818	.000	.848	.898	.909	.694	.863	.000	.818	.915
Unshifted	0	0	0	0	132	0	61	193	0	447	351	798	86	107	0	193	1184
% Unshifted	0	0	0	0	100	0	100	100	0	99.8	99.7	99.8	100	100	0	100	99.8
HV	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	2
% HV	0	0	0	0	0	0	0	0	0	0.2	0.3	0.3	0	0	0	0	0.2



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Counter:: MIOVISION
Counted By:: ACB
Weather:: Overcast

Count Name: Darby-Paoli Road & Godfrey Road - AM & PM
Site Code:
Start Date: 04/29/2014

Turning Movement Data

Start Time	Godfrey Road Westbound				Darby-Paoli Road Northbound				Darby-Paoli Road Southbound				
	Left	Right	Peds	App. Total	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Int. Total
4:00 PM	13	16	0	29	30	8	0	38	9	63	0	72	139
4:15 PM	8	14	0	22	24	9	0	33	15	74	0	89	144
4:30 PM	19	32	0	51	20	8	0	28	23	70	0	93	172
4:45 PM	12	13	0	25	30	6	0	36	13	75	0	88	149
Hourly Total	52	75	0	127	104	31	0	135	60	282	0	342	604
5:00 PM	13	9	0	22	31	9	0	40	18	80	0	98	160
5:15 PM	32	27	0	59	32	13	0	45	26	120	0	146	250
5:30 PM	29	34	0	63	24	12	0	36	18	117	0	135	234
5:45 PM	20	10	0	30	26	13	0	39	14	118	0	132	201
Hourly Total	94	80	0	174	113	47	0	160	76	435	0	511	845
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-
7:00 AM	1	2	0	3	61	6	0	67	7	27	0	34	104
7:15 AM	1	6	0	7	66	14	0	80	25	16	0	41	128
7:30 AM	4	19	0	23	80	34	0	114	49	37	0	86	223
7:45 AM	13	32	0	45	84	26	0	110	67	36	0	103	258
Hourly Total	19	59	0	78	291	80	0	371	148	116	0	264	713
8:00 AM	17	40	0	57	78	18	0	96	63	50	0	113	266
8:15 AM	5	22	0	27	94	10	0	104	13	20	0	33	164
8:30 AM	1	13	0	14	79	6	0	85	8	22	0	30	129
8:45 AM	2	8	0	10	61	14	0	75	13	34	0	47	132
Hourly Total	25	83	0	108	312	48	0	360	97	126	0	223	691
Grand Total	190	297	0	487	820	206	0	1026	381	959	0	1340	2853
Approach %	39.0	61.0	-	-	79.9	20.1	-	-	28.4	71.6	-	-	-
Total %	6.7	10.4	-	17.1	28.7	7.2	-	36.0	13.4	33.6	-	47.0	-
Lights	187	294	-	481	799	200	-	999	376	941	-	1317	2797
% Lights	98.4	99.0	-	98.8	97.4	97.1	-	97.4	98.7	98.1	-	98.3	98.0
Other Vehicles	3	3	-	6	21	6	-	27	5	18	-	23	56
% Other Vehicles	1.6	1.0	-	1.2	2.6	2.9	-	2.6	1.3	1.9	-	1.7	2.0
Bicycles on Road	0	0	-	0	0	0	-	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	0	-	-	-	0	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-

Traffic Planning and Design, Inc
2500 East High Street
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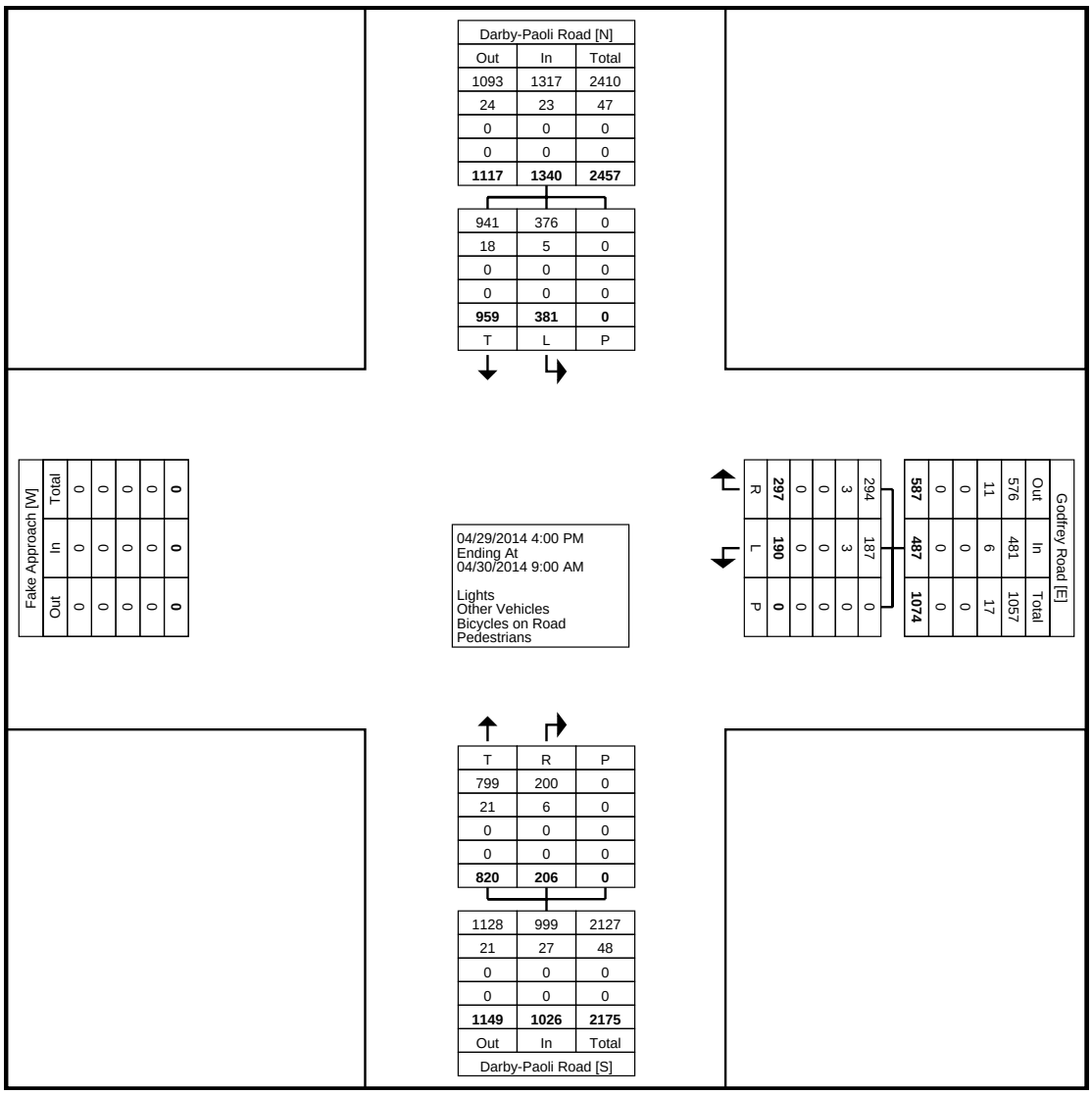
610.326.3100 mbressler@trafficpd.com

Counter:: MIOVISION
Counted By:: ACB
Weather:: Overcast

Count Name: Darby-Paoli Road & Godfrey Road - AM & PM
Site Code:
Start Date: 04/29/2014



Turning Movement Data Plot

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Counter:: MIOVISION
Counted By:: ACB
Weather:: Overcast

Count Name: Darby-Paoli Road & Godfrey Road - AM & PM
Site Code:
Start Date: 04/29/2014

Turning Movement Peak Hour Data (5:00 PM)

Start Time	Godfrey Road Westbound				Darby-Paoli Road Northbound				Darby-Paoli Road Southbound				
	Left	Right	Peds	App. Total	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Int. Total
5:00 PM	13	9	0	22	31	9	0	40	18	80	0	98	160
5:15 PM	32	27	0	59	32	13	0	45	26	120	0	146	250
5:30 PM	29	34	0	63	24	12	0	36	18	117	0	135	234
5:45 PM	20	10	0	30	26	13	0	39	14	118	0	132	201
Total	94	80	0	174	113	47	0	160	76	435	0	511	845
Approach %	54.0	46.0	-	-	70.6	29.4	-	-	14.9	85.1	-	-	-
Total %	11.1	9.5	-	20.6	13.4	5.6	-	18.9	9.0	51.5	-	60.5	-
PHF	0.734	0.588	-	0.690	0.883	0.904	-	0.889	0.731	0.906	-	0.875	0.845
Lights	94	80	-	174	113	46	-	159	76	431	-	507	840
% Lights	100.0	100.0	-	100.0	100.0	97.9	-	99.4	100.0	99.1	-	99.2	99.4
Other Vehicles	0	0	-	0	0	1	-	1	0	4	-	4	5
% Other Vehicles	0.0	0.0	-	0.0	0.0	2.1	-	0.6	0.0	0.9	-	0.8	0.6
Bicycles on Road	0	0	-	0	0	0	-	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	0	-	-	-	0	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-

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Counter:: MIOVISION
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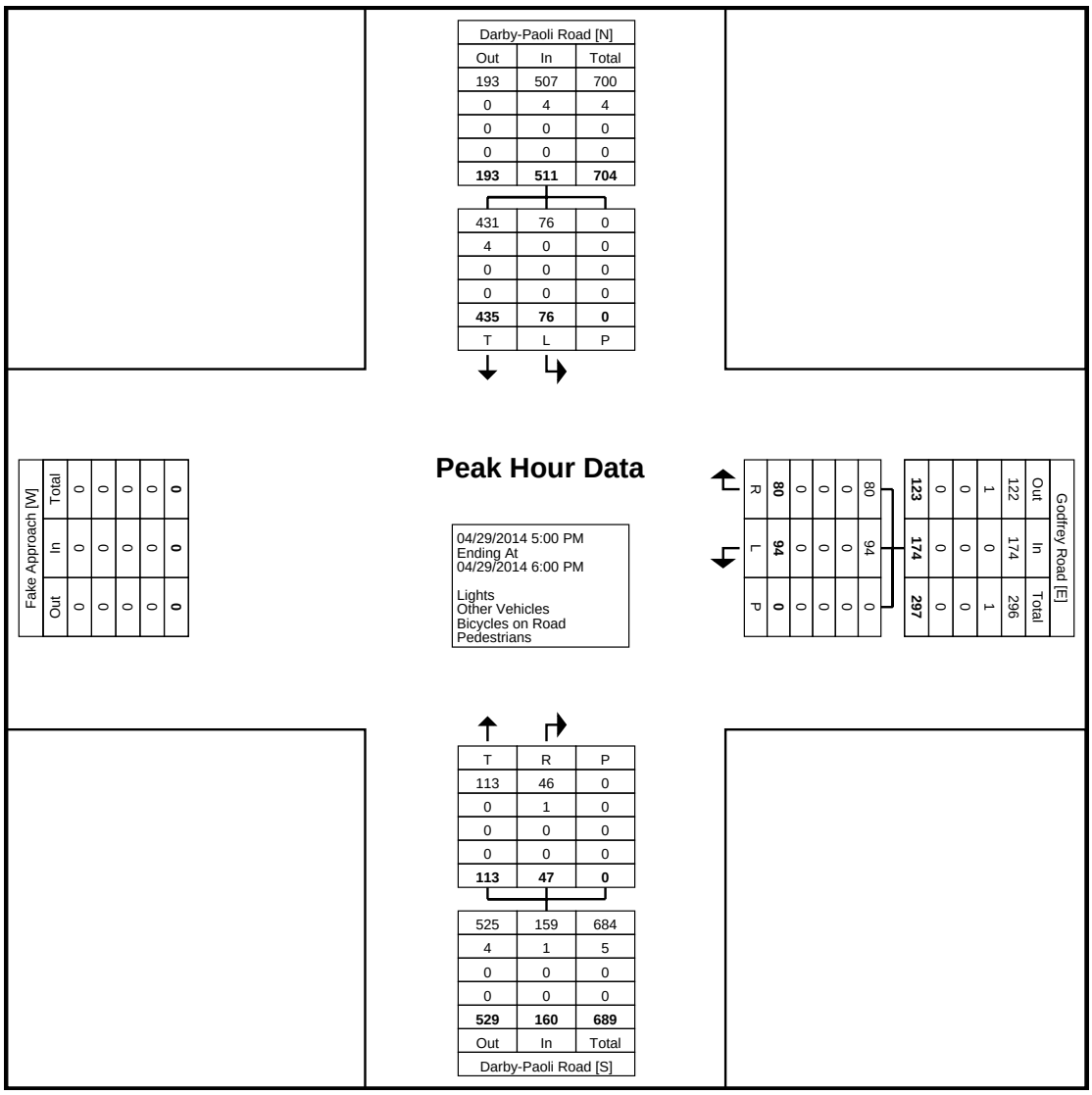
Weather:: Overcast

Count Name: Darby-Paoli Road & Godfrey Road - AM & PM
Site Code:
Start Date: 04/29/2014



Turning Movement Peak Hour Data Plot (5:00 PM)

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2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
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Counter:: MIOVISION
Counted By:: ACB
Weather:: Overcast

Count Name: Darby-Paoli Road & Godfrey Road - AM & PM
Site Code:
Start Date: 04/29/2014

Turning Movement Peak Hour Data (7:30 AM)

Start Time	Godfrey Road Westbound				Darby-Paoli Road Northbound				Darby-Paoli Road Southbound				
	Left	Right	Peds	App. Total	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Int. Total
7:30 AM	4	19	0	23	80	34	0	114	49	37	0	86	223
7:45 AM	13	32	0	45	84	26	0	110	67	36	0	103	258
8:00 AM	17	40	0	57	78	18	0	96	63	50	0	113	266
8:15 AM	5	22	0	27	94	10	0	104	13	20	0	33	164
Total	39	113	0	152	336	88	0	424	192	143	0	335	911
Approach %	25.7	74.3	-	-	79.2	20.8	-	-	57.3	42.7	-	-	-
Total %	4.3	12.4	-	16.7	36.9	9.7	-	46.5	21.1	15.7	-	36.8	-
PHF	0.574	0.706	-	0.667	0.894	0.647	-	0.930	0.716	0.715	-	0.741	0.856
Lights	37	111	-	148	322	86	-	408	190	138	-	328	884
% Lights	94.9	98.2	-	97.4	95.8	97.7	-	96.2	99.0	96.5	-	97.9	97.0
Other Vehicles	2	2	-	4	14	2	-	16	2	5	-	7	27
% Other Vehicles	5.1	1.8	-	2.6	4.2	2.3	-	3.8	1.0	3.5	-	2.1	3.0
Bicycles on Road	0	0	-	0	0	0	-	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	0	-	-	-	0	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-

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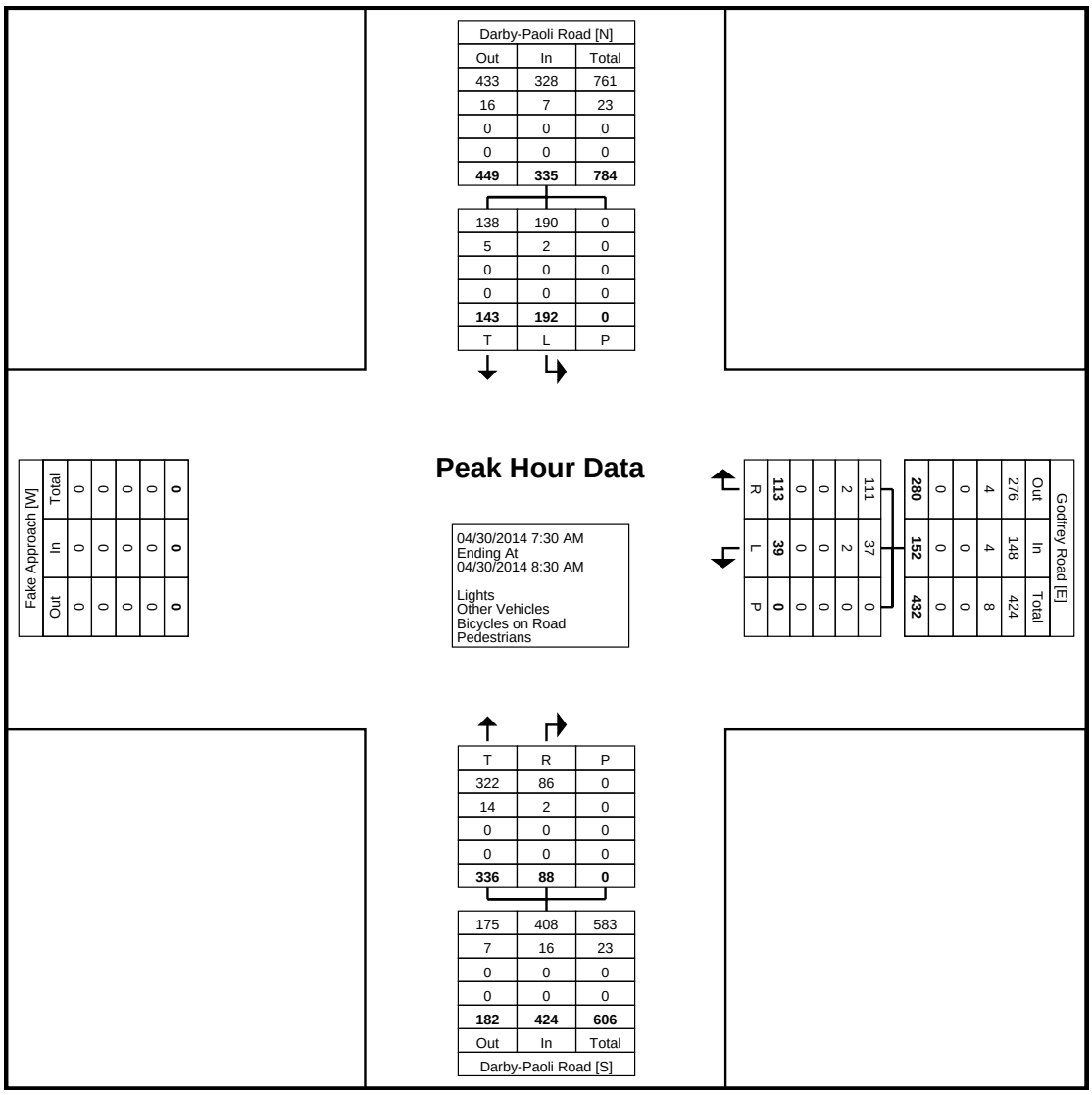
Count Name: Darby-Paoli Road & Godfrey Road - AM & PM
Site Code:
Start Date: 04/29/2014



Turning Movement Peak Hour Data Plot (7:30 AM)

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Counter:: MIOVISION
Counted By:: ACB
Weather:: Clear

Count Name: Newtown Road & Abrahams Lane - AM (5/13)
Site Code:
Start Date: 05/13/2014

Turning Movement Data

Start Time	Newtown Road Eastbound					Newtown Road Westbound					Private Drive Northbound					Abrahams Lane 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
7:00 AM	2	84	0	0	86	0	34	2	0	36	1	0	0	0	1	1	0	3	0	4	127
7:15 AM	12	127	1	0	140	0	45	6	0	51	0	0	0	0	0	2	0	6	0	8	199
7:30 AM	26	126	0	0	152	0	70	6	0	76	0	0	0	0	0	6	0	4	0	10	238
7:45 AM	40	162	0	0	202	0	51	5	0	56	0	0	1	0	1	9	0	23	0	32	291
Hourly Total	80	499	1	0	580	0	200	19	0	219	1	0	1	0	2	18	0	36	0	54	855
8:00 AM	20	123	0	0	143	0	55	5	0	60	0	0	0	0	0	4	0	8	0	12	215
8:15 AM	30	122	0	0	152	0	52	7	0	59	0	0	0	0	0	2	0	4	0	6	217
8:30 AM	13	99	0	0	112	0	42	4	0	46	0	0	0	0	0	2	0	8	0	10	168
8:45 AM	18	80	0	0	98	0	54	2	0	56	0	0	0	0	0	6	0	6	0	12	166
Hourly Total	81	424	0	0	505	0	203	18	0	221	0	0	0	0	0	14	0	26	0	40	766
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	161	923	1	0	1085	0	403	37	0	440	1	0	1	0	2	32	0	62	0	94	1621
Approach %	14.8	85.1	0.1	-	-	0.0	91.6	8.4	-	-	50.0	0.0	50.0	-	-	34.0	0.0	66.0	-	-	-
Total %	9.9	56.9	0.1	-	66.9	0.0	24.9	2.3	-	27.1	0.1	0.0	0.1	-	0.1	2.0	0.0	3.8	-	5.8	-
Lights	160	904	1	-	1065	0	388	36	-	424	1	0	1	-	2	29	0	59	-	88	1579
% Lights	99.4	97.9	100.0	-	98.2	-	96.3	97.3	-	96.4	100.0	-	100.0	-	100.0	90.6	-	95.2	-	93.6	97.4
Other Vehicles	1	19	0	-	20	0	14	1	-	15	0	0	0	-	0	3	0	3	-	6	41
% Other Vehicles	0.6	2.1	0.0	-	1.8	-	3.5	2.7	-	3.4	0.0	-	0.0	-	0.0	9.4	-	4.8	-	6.4	2.5
Bicycles on Road	0	0	0	-	0	0	1	0	-	1	0	0	0	-	0	0	0	0	-	0	1
% Bicycles on Road	0.0	0.0	0.0	-	0.0	-	0.2	0.0	-	0.2	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	0.1
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Counter:: MIOVISION
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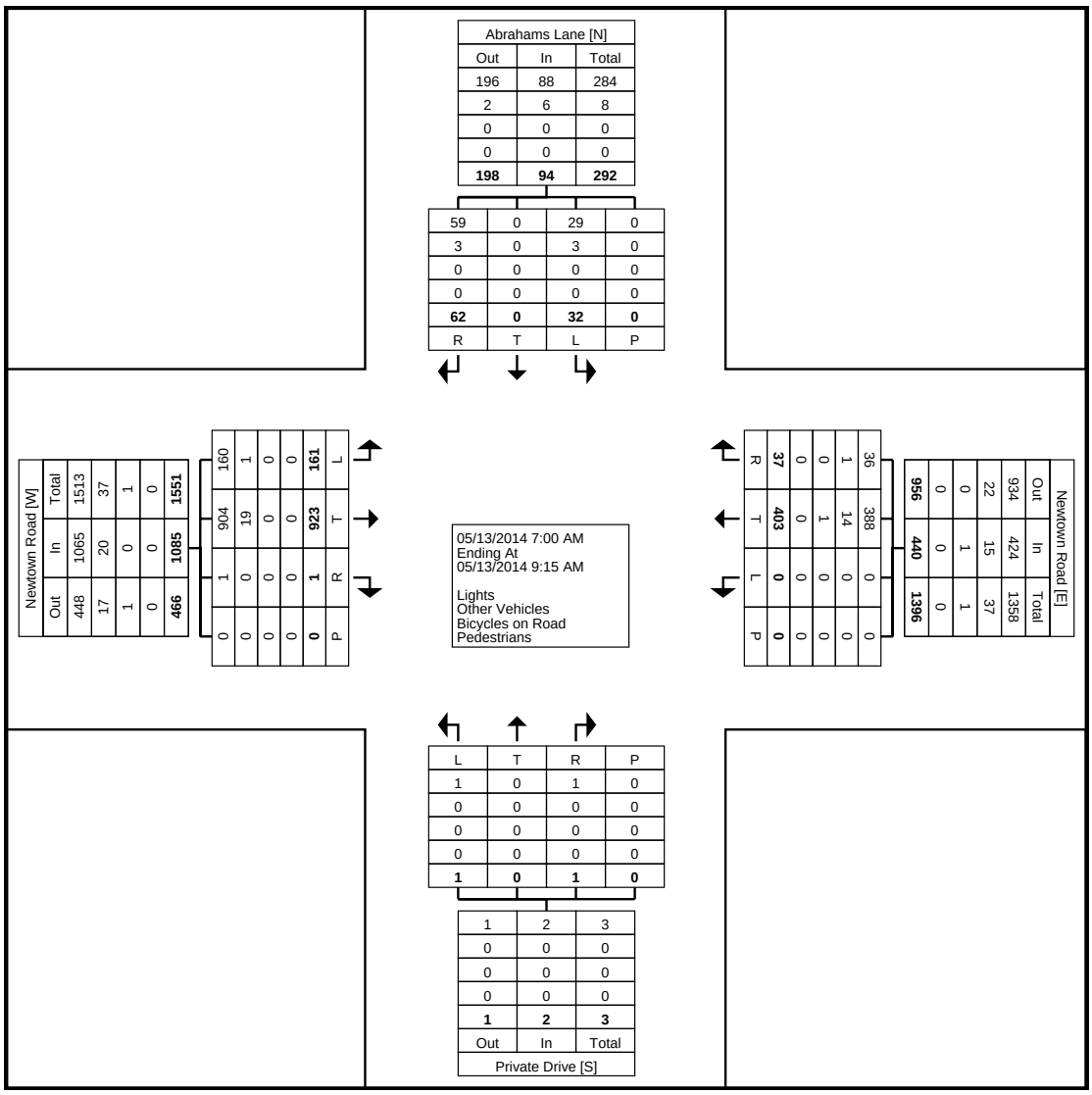
Weather:: Clear

Count Name: Newtown Road & Abrahams Lane - AM (5/13)
Site Code:
Start Date: 05/13/2014



Turning Movement Data Plot

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Weather:: Clear

Count Name: Newtown Road & Abrahams Lane - AM (5/13)
Site Code:
Start Date: 05/13/2014

Turning Movement Peak Hour Data (7:30 AM)

Start Time	Newtown Road Eastbound					Newtown Road Westbound					Private Drive Northbound					Abrahams Lane 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
7:30 AM	26	126	0	0	152	0	70	6	0	76	0	0	0	0	0	6	0	4	0	10	238
7:45 AM	40	162	0	0	202	0	51	5	0	56	0	0	1	0	1	9	0	23	0	32	291
8:00 AM	20	123	0	0	143	0	55	5	0	60	0	0	0	0	0	4	0	8	0	12	215
8:15 AM	30	122	0	0	152	0	52	7	0	59	0	0	0	0	0	2	0	4	0	6	217
Total	116	533	0	0	649	0	228	23	0	251	0	0	1	0	1	21	0	39	0	60	961
Approach %	17.9	82.1	0.0	-	-	0.0	90.8	9.2	-	-	0.0	0.0	100.0	-	-	35.0	0.0	65.0	-	-	-
Total %	12.1	55.5	0.0	-	67.5	0.0	23.7	2.4	-	26.1	0.0	0.0	0.1	-	0.1	2.2	0.0	4.1	-	6.2	-
PHF	0.725	0.823	0.000	-	0.803	0.000	0.814	0.821	-	0.826	0.000	0.000	0.250	-	0.250	0.583	0.000	0.424	-	0.469	0.826
Lights	115	524	0	-	639	0	221	23	-	244	0	0	1	-	1	19	0	37	-	56	940
% Lights	99.1	98.3	-	-	98.5	-	96.9	100.0	-	97.2	-	-	100.0	-	100.0	90.5	-	94.9	-	93.3	97.8
Other Vehicles	1	9	0	-	10	0	7	0	-	7	0	0	0	-	0	2	0	2	-	4	21
% Other Vehicles	0.9	1.7	-	-	1.5	-	3.1	0.0	-	2.8	-	-	0.0	-	0.0	9.5	-	5.1	-	6.7	2.2
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	-	-	0.0	-	0.0	0.0	-	0.0	-	-	0.0	-	0.0	0.0	-	0.0	-	0.0	0.0
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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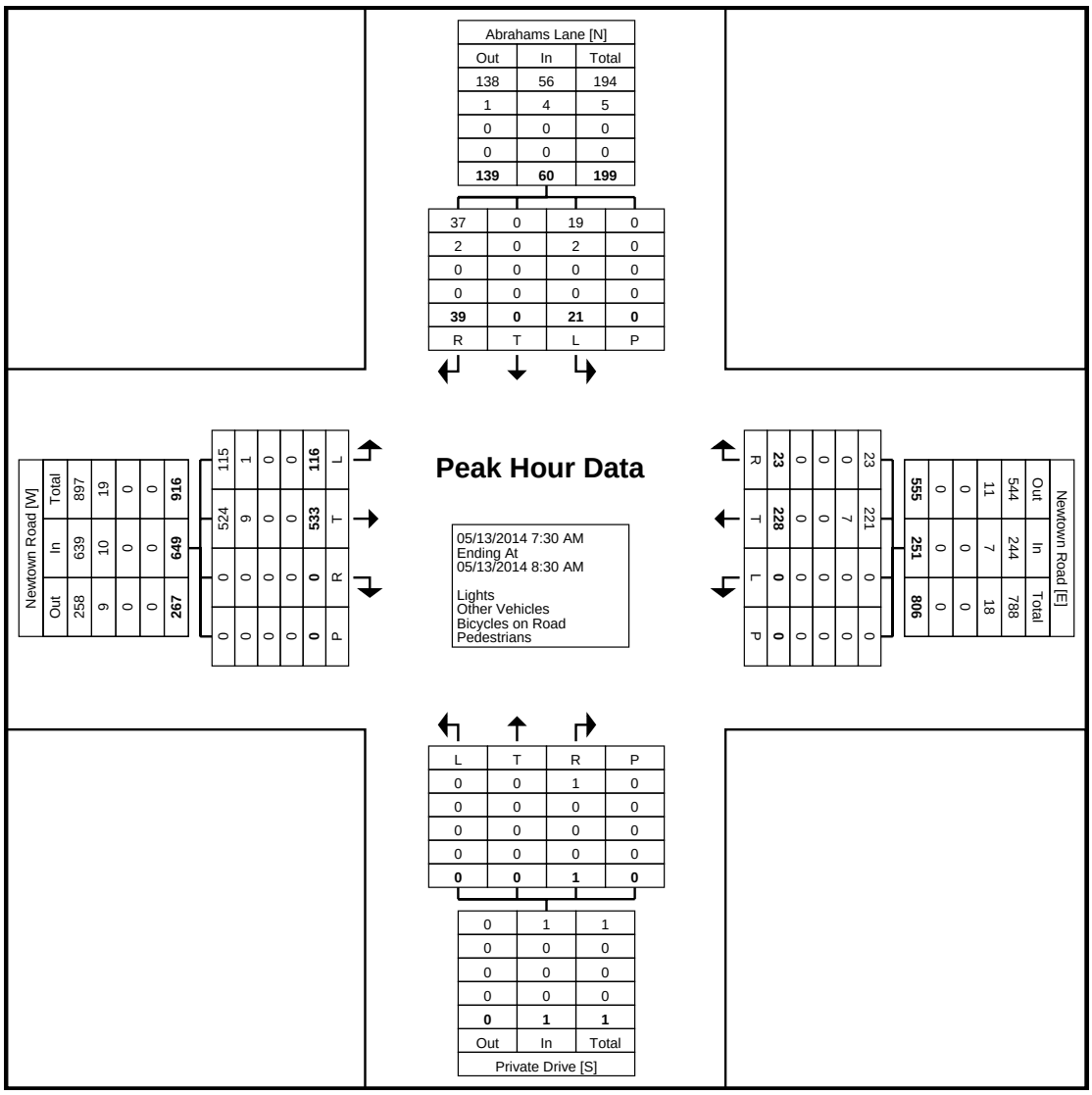


Turning Movement Peak Hour Data Plot (7:30 AM)

Traffic Planning & Design, Inc.
812 W. Hamilton Street, Suite 402
Allentown, PA 18101

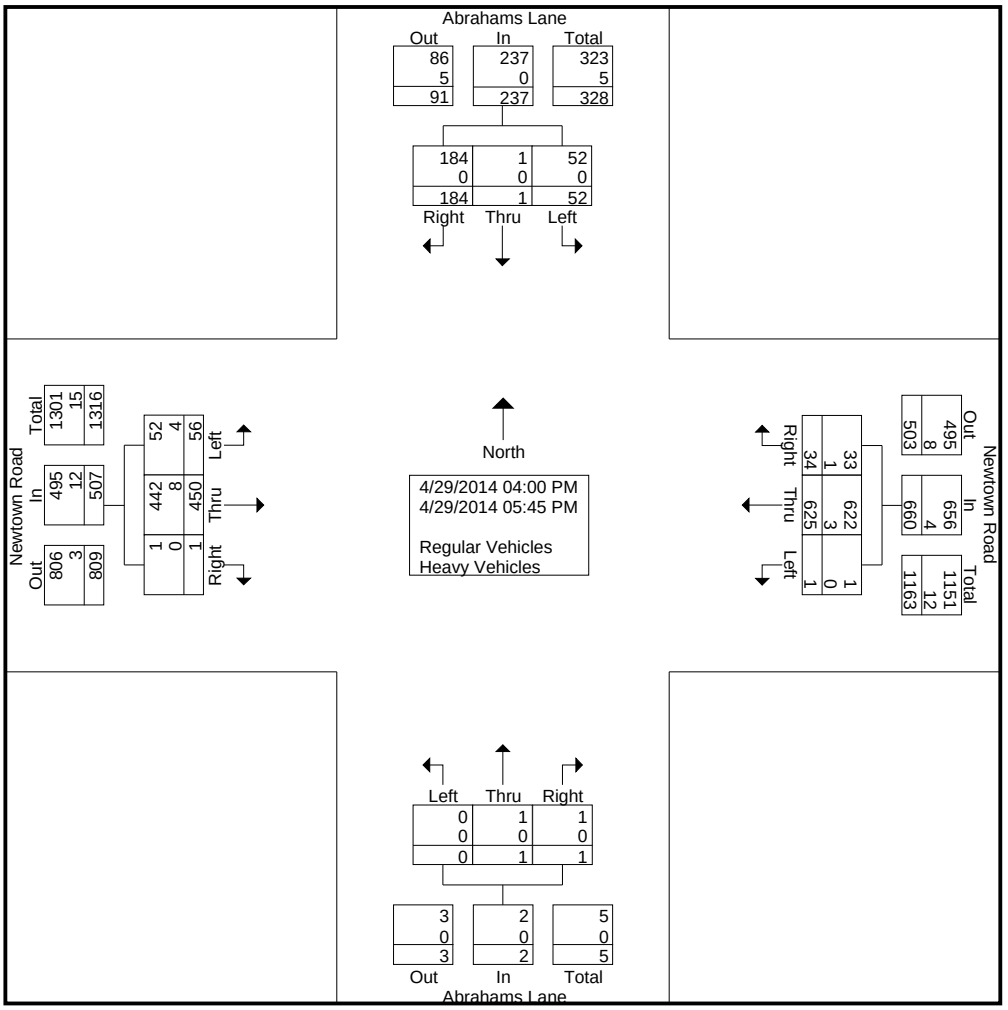
Newtown Road & Abrahams Lane

Counter #: 14
Counted By: Jamie F.
Weather: Rainy

File Name : 2014-04-29, PM_NR_AL
Site Code : 00000426
Start Date : 4/29/2014
Page No : 1

Groups Printed- Regular Vehicles - Heavy Vehicles

	Newtown Road Eastbound					Newtown Road Westbound					Abrahams Lane Northbound					Abrahams Lane Southbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	9	42	1	0	52	0	67	4	0	71	0	0	0	0	0	5	0	15	0	20	0	143	143
04:15 PM	10	54	0	0	64	1	63	3	0	67	0	0	0	0	0	11	0	12	0	23	0	154	154
04:30 PM	12	53	0	0	65	0	82	4	0	86	0	0	0	0	0	3	0	12	0	15	0	166	166
04:45 PM	3	45	0	0	48	0	67	4	0	71	0	0	0	0	0	1	0	25	0	26	0	145	145
Total	34	194	1	0	229	1	279	15	0	295	0	0	0	0	0	20	0	64	0	84	0	608	608
05:00 PM	6	66	0	0	72	0	77	3	0	80	0	0	0	0	0	4	1	19	0	24	0	176	176
05:15 PM	7	62	0	0	69	0	95	3	0	98	0	0	1	0	1	7	0	29	0	36	0	204	204
05:30 PM	6	55	0	0	61	0	93	7	0	100	0	1	0	0	1	7	0	34	0	41	0	203	203
05:45 PM	3	73	0	0	76	0	81	6	0	87	0	0	0	0	0	14	0	38	0	52	0	215	215
Total	22	256	0	0	278	0	346	19	0	365	0	1	1	0	2	32	1	120	0	153	0	798	798
Grand Total	56	450	1	0	507	1	625	34	0	660	0	1	1	0	2	52	1	184	0	237	0	1406	1406
Apprch %	11	88.8	0.2			0.2	94.7	5.2			0	50	50			21.9	0.4	77.6					
Total %	4	32	0.1		36.1	0.1	44.5	2.4		46.9	0	0.1	0.1		0.1	3.7	0.1	13.1		16.9	0	100	
Regular Vehicles	52	442	1		495	1	622	33		656	0	1	1		2	52	1	184		237	0	0	1390
% Regular Vehicles	92.9	98.2	100	0	97.6	100	99.5	97.1	0	99.4	0	100	100	0	100	100	100	100	0	100	0	0	98.9
Heavy Vehicles	4	8	0		12	0	3	1		4	0	0	0		0	0	0	0		0	0	0	16
% Heavy Vehicles	7.1	1.8	0	0	2.4	0	0.5	2.9	0	0.6	0	0	0	0	0	0	0	0	0	0	0	0	1.1



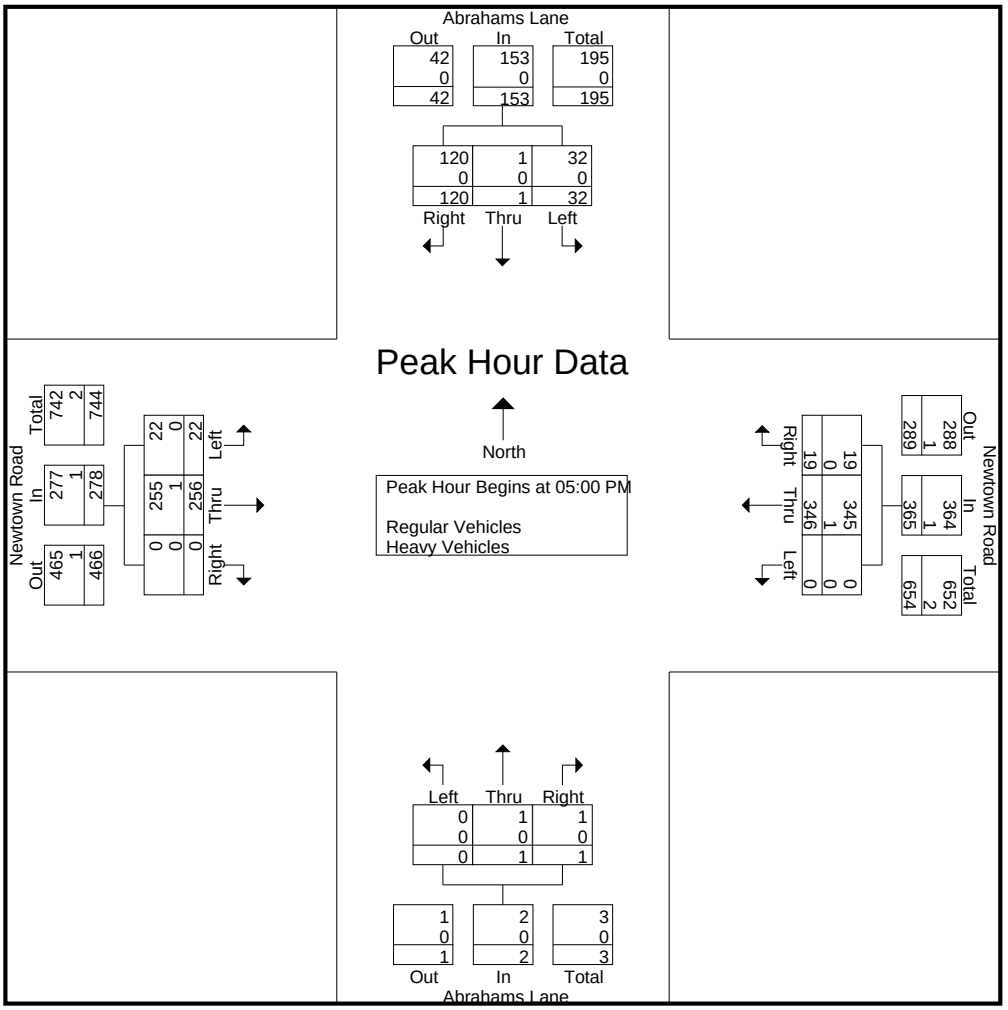
Traffic Planning & Design, Inc.
812 W. Hamilton Street, Suite 402
Allentown, PA 18101

Newtown Road & Abrahams Lane

Counter #: 14
Counted By: Jamie F.
Weather: Rainy

File Name : 2014-04-29, PM_NR_AL
Site Code : 00000426
Start Date : 4/29/2014
Page No : 2

	Newtown Road Eastbound				Newtown Road Westbound				Abrahams Lane Northbound				Abrahams Lane Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	6	66	0	72	0	77	3	80	0	0	0	0	4	1	19	24	176
05:15 PM	7	62	0	69	0	95	3	98	0	0	1	1	7	0	29	36	204
05:30 PM	6	55	0	61	0	93	7	100	0	1	0	1	7	0	34	41	203
05:45 PM	3	73	0	76	0	81	6	87	0	0	0	0	14	0	38	52	215
Total Volume	22	256	0	278	0	346	19	365	0	1	1	2	32	1	120	153	798
% App. Total	7.9	92.1	0		0	94.8	5.2		0	50	50		20.9	0.7	78.4		
PHF	.786	.877	.000	.914	.000	.911	.679	.913	.000	.250	.250	.500	.571	.250	.789	.736	.928
Regular Vehicles	22	255	0	277	0	345	19	364	0	1	1	2	32	1	120	153	796
% Regular Vehicles	100	99.6	0	99.6	0	99.7	100	99.7	0	100	100	100	100	100	100	100	99.7
Heavy Vehicles	0	1	0	1	0	1	0	1	0	0	0	0	0	0	0	0	2
% Heavy Vehicles	0	0.4	0	0.4	0	0.3	0	0.3	0	0	0	0	0	0	0	0	0.3



APPENDIX D

VOLUME DEVELOPMENT WORKSHEETS

TPD# ESII.A.00001
6/6/2014
Traffic Volumes Worksheet

Intersection:	**Radnor Chester Road & Conestoga 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
Existing Counts	**4**	**406**	**6**	**0**	**569**	**143**	**11**	**240**	**1**	**119**	**92**	**16**	**1607**
Growth													0
Existing Volumes (Balanced)	**4**	**406**	**6**	**0**	**569**	**143**	**11**	**240**	**1**	**119**	**92**	**16**	**1607**
Base growth (0.51% compounded for 6 yrs)	0	13	0	0	18	4	0	7	0	4	3	0	49
Ardrossen Farm (West Parcel)								1					1
													0
													0
2020 Base Volumes	**4**	**419**	**6**	**0**	**587**	**147**	**11**	**247**	**1**	**123**	**95**	**16**	**1656**
New Trips- Eastern Lot							1	2			1		4
New Trips- Main House			1				2	3			1		
New Trips- Western Lot							1	1					
New Trips- 5-2 to 5-5													
													0
Total Trip Distribution	**0**	**0**	**1**	**0**	**0**	**0**	**4**	**6**	**0**	**0**	**2**	**0**	**13**
2020 Projected Volumes	**4**	**419**	**7**	**0**	**587**	**147**	**15**	**254**	**1**	**123**	**97**	**16**	**1670**

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
Existing Counts	**6**	**559**	**6**	**0**	**458**	**119**	**3**	**88**	**3**	**214**	**200**	**15**	**1671**
Growth													0
Existing Volumes (Balanced)	**6**	**559**	**6**	**0**	**458**	**119**	**3**	**88**	**3**	**214**	**200**	**15**	**1671**
Base growth (0.51% compounded for 6 yrs)	0	17	0	0	14	4	0	3	0	7	6	0	51
Ardrossen Farm (West Parcel)								1					1
0													0
0													0
2020 Base Volumes	**6**	**576**	**6**	**0**	**472**	**123**	**3**	**91**	**3**	**221**	**206**	**15**	**1722**
New Trips- Eastern Lot			1				1	1			2		5
New Trips- Main House			2				1	2			3		
New Trips- Western Lot			1					1			1		
New Trips- 5-2 to 5-5													
0													0
Total Trip Distribution	**0**	**0**	**4**	**0**	**0**	**0**	**2**	**4**	**0**	**0**	**6**	**0**	**16**
2020 Projected Volumes	**6**	**576**	**10**	**0**	**472**	**123**	**5**	**96**	**3**	**221**	**212**	**15**	**1739**

TPD# ESII.A.00001
6/6/2014
Traffic Volumes Worksheet

Intersection:	**Newtown Road & Conestoga 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
Existing Counts	**0**	**526**	**0**	**132**	**712**		**0**	**0**	**317**		**0**	**0**	**1687**
Growth													0
Existing Volumes (Balanced)	**0**	**526**	**0**	**132**	**712**	**0**	**0**	**0**	**317**	**0**	**0**	**0**	**1687**
Base growth (0.51% compounded for 6 yrs)	0	16	0	4	22	0	0	0	10	0	0	0	52
Ardrossen Farm (West Parcel)				3					11				14
													0
													0
2020 Base Volumes	**0**	**542**	**0**	**136**	**734**	**0**	**0**	**0**	**327**	**0**	**0**	**0**	**1739**
New Trips- Eastern Lot				1					2				3
New Trips- Main House				1					4				
New Trips- Western Lot				1					1				
New Trips- 5-2 to 5-5				1					1				
													0
Total Trip Distribution	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**0**	**8**	**0**	**0**	**0**	**12**
2020 Projected Volumes	**0**	**542**	**0**	**143**	**734**	**0**	**0**	**0**	**346**	**0**	**0**	**0**	**1765**

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
Existing Counts	**0**	**776**		**211**	**577**		**0**	**0**	**219**		**0**	**0**	**1783**
Growth													0
Existing Volumes (Balanced)	**0**	**776**	**0**	**211**	**577**	**0**	**0**	**0**	**219**	**0**	**0**	**0**	**1783**
Base growth (0.51% compounded for 6 yrs)	0	24	0	7	18	0	0	0	7	0	0	0	56
Ardrossen Farm (West Parcel)				12					7				19
0													0
0													0
2020 Base Volumes	**0**	**800**	**0**	**218**	**595**	**0**	**0**	**0**	**226**	**0**	**0**	**0**	**1839**
New Trips- Eastern Lot				3					2				5
New Trips- Main House				4					2				
New Trips- Western Lot				1					1				
New Trips- 5-2 to 5-5				1					1				
0													0
Total Trip Distribution	**0**	**0**	**0**	**9**	**0**	**0**	**0**	**0**	**6**	**0**	**0**	**0**	**15**
2020 Projected Volumes	**0**	**800**	**0**	**239**	**595**	**0**	**0**	**0**	**239**	**0**	**0**	**0**	**1873**

TPD# ESII.A.00001
6/6/2014
Traffic Volumes Worksheet

Intersection:	**Radnor Chester Road & Newtown 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
Existing Counts	**273**	**287**	**0**	**1**	**117**	**3**	**0**	**0**	**1**	**1**	**0**	**89**	**772**
Growth													0
Existing Volumes (Balanced)	**273**	**287**	**0**	**1**	**117**	**3**	**0**	**0**	**1**	**1**	**0**	**89**	**772**
Base growth (0.51% compounded for 6 yrs)	8	9	0	0	4	0	0	0	0	0	0	3	24
Ardrossen Farm (West Parcel)	1												1
													0
													0
2020 Base Volumes	**281**	**296**	**0**	**1**	**121**	**3**	**0**	**0**	**1**	**1**	**0**	**92**	**796**
New Trips- Eastern Lot	3	2			1							1	7
New Trips- Main House	5	4			1							2	
New Trips- Western Lot	2	1			1								
New Trips- 5-2 to 5-5		1			1								
													0
Total Trip Distribution	**10**	**8**	**0**	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**25**
2020 Projected Volumes	**292**	**304**	**0**	**1**	**125**	**3**	**0**	**0**	**1**	**1**	**0**	**95**	**822**

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
Existing Counts	**96**	**196**	**0**	**0**	**189**	**3**	**0**	**0**	**1**	**3**	**0**	**218**	**706**
Growth													0
Existing Volumes (Balanced)	**96**	**196**	**0**	**0**	**189**	**3**	**0**	**0**	**1**	**3**	**0**	**218**	**706**
Base growth (0.51% compounded for 6 yrs)	3	6	0	0	6	0	0	0	0	0	0	7	22
Ardrossen Farm (West Parcel)												1	1
0													0
0													0
2020 Base Volumes	**99**	**202**	**0**	**0**	**195**	**3**	**0**	**0**	**1**	**3**	**0**	**225**	**728**
New Trips- Eastern Lot	2	2			3							3	10
New Trips- Main House	3	2			4							5	
New Trips- Western Lot	1	1			1							2	
New Trips- 5-2 to 5-5		1			1								
0													0
Total Trip Distribution	**6**	**6**	**0**	**0**	**9**	**0**	**0**	**0**	**0**	**0**	**0**	**10**	**31**
2020 Projected Volumes	**105**	**208**	**0**	**0**	**204**	**3**	**0**	**0**	**1**	**3**	**0**	**236**	**760**

TPD# ESII.A.00001
6/6/2014
Traffic Volumes Worksheet

Intersection:	**Newtown Road & Abrahams Lane**									
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
Existing Counts	**116**	**533**	**0**	**0**	**228**	**23**	**0**	**0**	**1**	**21**	**0**	**39**	**961**
Growth							1		3				4
Existing Volumes (Balanced)	**116**	**533**	**0**	**0**	**228**	**23**	**1**	**0**	**4**	**21**	**0**	**39**	**965**
Base growth (0.51% compounded for 6 yrs)	4	17	0	0	7	1	0	0	0	1	0	1	31
Ardrossen Farm (West Parcel)		1											1
													0
													0
2020 Base Volumes	**120**	**550**	**0**	**0**	**235**	**24**	**1**	**0**	**4**	**22**	**0**	**40**	**996**
New Trips- Eastern Lot		2			6	1							9
New Trips- Main House				3			8	2	9		1		
New Trips- Western Lot		3			1								
New Trips- 5-2 to 5-5		1			1								
													0
Total Trip Distribution	**0**	**6**	**0**	**3**	**8**	**1**	**8**	**2**	**9**	**0**	**1**	**0**	**38**
2020 Projected Volumes	**120**	**557**	**0**	**3**	**243**	**25**	**9**	**2**	**13**	**22**	**1**	**40**	**1035**

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
Existing Counts	**22**	**256**	**0**	**1**	**346**	**19**	**0**	**1**	**1**	**32**	**1**	**120**	**799**
Growth													0
Existing Volumes (Balanced)	**22**	**256**	**0**	**1**	**346**	**19**	**0**	**1**	**1**	**32**	**1**	**120**	**799**
Base growth (0.51% compounded for 6 yrs)	1	8	0	0	11	1	0	0	0	1	0	4	26
Ardrossen Farm (West Parcel)					1								1
0													0
0													0
2020 Base Volumes	**23**	**264**	**0**	**1**	**357**	**20**	**0**	**1**	**1**	**33**	**1**	**124**	**825**
New Trips- Eastern Lot		6			3	1				1			11
New Trips- Main House				8	1		6	1	5		3		
New Trips- Western Lot	1	2			3								
New Trips- 5-2 to 5-5		1			1								
0													0
Total Trip Distribution	**1**	**9**	**0**	**8**	**8**	**1**	**6**	**1**	**5**	**1**	**3**	**0**	**43**
2020 Projected Volumes	**24**	**273**	**0**	**9**	**366**	**21**	**6**	**2**	**6**	**34**	**4**	**124**	**869**

TPD# ESII.A.00001
6/6/2014
Traffic Volumes Worksheet

Intersection:	**Newtown Road & Darby-Paoli Road**									
Synchro Node:	**5**	**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
Existing Counts	**0**	**0**	**0**	**119**	**0**	**107**	**0**	**364**	**326**	**251**	**177**	**0**	**1344**
Growth													0
Existing Volumes (Balanced)	**0**	**0**	**0**	**119**	**0**	**107**	**0**	**364**	**326**	**251**	**177**	**0**	**1344**
Base growth (0.51% compounded for 6 yrs)	0	0	0	4	0	3	0	11	10	8	5	0	41
Ardrossen Farm (West Parcel)								1	1				2
													0
													0
2020 Base Volumes	**0**	**0**	**0**	**123**	**0**	**110**	**0**	**375**	**336**	**259**	**182**	**0**	**1385**
New Trips- Eastern Lot				3		3			1	1			8
New Trips- Main House				4		4			2	1			
New Trips- Western Lot				1		2				1			
New Trips- 5-2 to 5-5				1					1				
													0
Total Trip Distribution	**0**	**0**	**0**	**9**	**0**	**9**	**0**	**0**	**4**	**3**	**0**	**0**	**25**
2020 Projected Volumes	**0**	**0**	**0**	**132**	**0**	**119**	**0**	**376**	**341**	**262**	**182**	**0**	**1412**

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
Existing Counts	**0**	**0**	**0**	**344**	**0**	**111**	**0**	**121**	**127**	**163**	**469**	**0**	**1335**
Growth													0
Existing Volumes (Balanced)	**0**	**0**	**0**	**344**	**0**	**111**	**0**	**121**	**127**	**163**	**469**	**0**	**1335**
Base growth (0.51% compounded for 6 yrs)	0	0	0	11	0	3	0	4	4	5	15	0	42
Ardrossen Farm (West Parcel)				1				1			2		4
0													0
0													0
2020 Base Volumes	**0**	**0**	**0**	**355**	**0**	**114**	**0**	**125**	**131**	**168**	**484**	**0**	**1377**
New Trips- Eastern Lot				2		1			3	3			9
New Trips- Main House				3		3			6	4			
New Trips- Western Lot						1			1	1			
New Trips- 5-2 to 5-5				1					1				
0													0
Total Trip Distribution	**0**	**0**	**0**	**6**	**0**	**5**	**0**	**0**	**11**	**8**	**0**	**0**	**30**
2020 Projected Volumes	**0**	**0**	**0**	**362**	**0**	**119**	**0**	**126**	**142**	**176**	**486**	**0**	**1411**

TPD# ESII.A.00001
6/6/2014
Traffic Volumes Worksheet

Intersection:	**Darby-Paoli Road & Brooke Road**									
Synchro Node:	**6**	**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
Existing Counts	**258**	**414**	**0**	**0**	**413**	**51**	**0**	**0**	**0**	**30**	**0**	**201**	**1367**
Growth													0
Existing Volumes (Balanced)	**258**	**414**	**0**	**0**	**413**	**51**	**0**	**0**	**0**	**30**	**0**	**201**	**1367**
Base growth (0.51% compounded for 6 yrs)	8	13	0	0	13	2	0	0	0	1	0	6	43
Ardrossen Farm (West Parcel)						1							1
													0
													0
2020 Base Volumes	**266**	**427**	**0**	**0**	**426**	**53**	**0**	**0**	**0**	**31**	**0**	**207**	**1410**
New Trips- Eastern Lot		1			2	1							4
New Trips- Main House		1			3	1							
New Trips- Western Lot		1			1	1							
New Trips- 5-2 to 5-5													
													0
Total Trip Distribution	**0**	**3**	**0**	**0**	**6**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**12**
2020 Projected Volumes	**266**	**430**	**0**	**0**	**432**	**57**	**0**	**0**	**0**	**31**	**0**	**207**	**1423**

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
Existing Counts	**142**	**489**	**0**	**0**	**212**	**19**	**0**	**0**	**0**	**136**	**0**	**338**	**1336**
Growth													0
Existing Volumes (Balanced)	**142**	**489**	**0**	**0**	**212**	**19**	**0**	**0**	**0**	**136**	**0**	**338**	**1336**
Base growth (0.51% compounded for 6 yrs)	4	15	0	0	7	1	0	0	0	4	0	10	41
Ardrossen Farm (West Parcel)						1				1			2
0													0
0													0
2020 Base Volumes	**146**	**504**	**0**	**0**	**219**	**20**	**0**	**0**	**0**	**140**	**0**	**348**	**1377**
New Trips- Eastern Lot		2			1					1			4
New Trips- Main House		3			2	1				1			
New Trips- Western Lot		1			1								
New Trips- 5-2 to 5-5													
0													0
Total Trip Distribution	**0**	**6**	**0**	**0**	**4**	**1**	**0**	**0**	**0**	**2**	**0**	**0**	**13**
2020 Projected Volumes	**146**	**510**	**0**	**0**	**223**	**22**	**0**	**0**	**0**	**143**	**0**	**348**	**1392**

TPD# ESII.A.00001
6/6/2014
Traffic Volumes Worksheet

Intersection:	**Darby-Paoli Road & Sawmill Road**								
Synchro Node:	**7**	**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
Existing Counts	**350**	**0**	**134**	**0**	**0**	**0**	**65**	**435**	**0**	**0**	**213**	**120**	**1317**
Growth													0
Existing Volumes (Balanced)	**350**	**0**	**134**	**0**	**0**	**0**	**65**	**435**	**0**	**0**	**213**	**120**	**1317**
Base growth (0.51% compounded for 6 yrs)	11	0	4	0	0	0	2	13	0	0	7	4	41
Ardrossen Farm (West Parcel)							1	2					3
													0
													0
2020 Base Volumes	**361**	**0**	**138**	**0**	**0**	**0**	**67**	**448**	**0**	**0**	**220**	**124**	**1358**
New Trips- Eastern Lot	1										1	2	4
New Trips- Main House	1							1			1	3	
New Trips- Western Lot												1	
New Trips- 5-2 to 5-5													
													0
Total Trip Distribution	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**2**	**6**	**11**
2020 Projected Volumes	**363**	**0**	**138**	**0**	**0**	**0**	**68**	**451**	**0**	**0**	**222**	**130**	**1372**

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
Existing Counts	**132**	**0**	**61**	**0**	**0**	**0**	**86**	**108**	**0**	**0**	**448**	**352**	**1187**
Growth													0
Existing Volumes (Balanced)	**132**	**0**	**61**	**0**	**0**	**0**	**86**	**108**	**0**	**0**	**448**	**352**	**1187**
Base growth (0.51% compounded for 6 yrs)	4	0	2	0	0	0	3	3	0	0	14	11	37
Ardrossen Farm (West Parcel)			1					1			2		4
0													0
0													0
2020 Base Volumes	**136**	**0**	**63**	**0**	**0**	**0**	**89**	**111**	**0**	**0**	**462**	**363**	**1224**
New Trips- Eastern Lot	2							1			1	1	5
New Trips- Main House	3							3			1	2	
New Trips- Western Lot	1												
New Trips- 5-2 to 5-5													
0													0
Total Trip Distribution	**6**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**2**	**3**	**15**
2020 Projected Volumes	**142**	**0**	**64**	**0**	**0**	**0**	**89**	**116**	**0**	**0**	**466**	**366**	**1243**

TPD# ESII.A.00001
6/6/2014
Traffic Volumes Worksheet

Intersection:	**Darby-Paoli Road & Godfrey Road**									
Synchro Node:	**8**	**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
Existing Counts	**0**	**0**	**0**	**39**	**0**	**113**	**0**	**336**	**88**	**192**	**143**	**0**	**911**
Growth													0
Existing Volumes (Balanced)	**0**	**0**	**0**	**39**	**0**	**113**	**0**	**336**	**88**	**192**	**143**	**0**	**911**
Base growth (0.51% compounded for 6 yrs)	0	0	0	1	0	4	0	10	3	6	4	0	28
Ardrossen Farm (West Parcel)						1				1			2
													0
													0
2020 Base Volumes	**0**	**0**	**0**	**40**	**0**	**117**	**0**	**346**	**91**	**198**	**147**	**0**	**939**
New Trips- Eastern Lot											1		1
New Trips- Main House								1			1		
New Trips- Western Lot													
New Trips- 5-2 to 5-5													
													0
Total Trip Distribution	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**2**	**0**	**3**
2020 Projected Volumes	**0**	**0**	**0**	**40**	**0**	**118**	**0**	**347**	**91**	**199**	**149**	**0**	**944**

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
Existing Counts	**0**	**0**	**0**	**94**	**0**	**80**	**0**	**113**	**47**	**76**	**435**	**0**	**845**
Growth													0
Existing Volumes (Balanced)	**0**	**0**	**0**	**94**	**0**	**80**	**0**	**113**	**47**	**76**	**435**	**0**	**845**
Base growth (0.51% compounded for 6 yrs)	0	0	0	3	0	2	0	4	1	2	13	0	25
Ardrossen Farm (West Parcel)						1				1			2
0													0
0													0
2020 Base Volumes	**0**	**0**	**0**	**97**	**0**	**82**	**0**	**117**	**48**	**78**	**448**	**0**	**870**
New Trips- Eastern Lot								1			1		2
New Trips- Main House						1		2			1		
New Trips- Western Lot													
New Trips- 5-2 to 5-5													
0													0
Total Trip Distribution	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**3**	**0**	**0**	**2**	**0**	**6**
2020 Projected Volumes	**0**	**0**	**0**	**97**	**0**	**84**	**0**	**120**	**48**	**79**	**450**	**0**	**878**

TPD# ESII.A.00001
6/6/2014
Traffic Volumes Worksheet

Intersection:	**Newtown Road & Easternmost Driveway**									
Synchro Node:	**9**	**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
Existing Counts	**0**	**555**	**0**	**0**	**251**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**806**
Growth													0
Existing Volumes (Balanced)	**0**	**555**	**0**	**0**	**251**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**806**
Base growth (0.51% compounded for 6 yrs)	0	18	0	0	8	0	0	0	0	0	0	0	26
Ardossen Farm (West Parcel)		1											1
													0
													0
2020 Base Volumes	**0**	**573**	**0**	**0**	**259**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**832**
New Trips- Eastern Lot			2	2			7		5				16
New Trips- Main House		9			3								
New Trips- Western Lot		3			1								
New Trips- 5-2 to 5-5		1			1								
													0
Total Trip Distribution	**0**	**13**	**2**	**2**	**5**	**0**	**7**	**0**	**5**	**0**	**0**	**0**	**34**
2020 Projected Volumes	**0**	**587**	**2**	**2**	**264**	**0**	**7**	**0**	**5**	**0**	**0**	**0**	**867**

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
Existing Counts	**0**	**289**	**0**	**0**	**366**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**655**
Growth													0
Existing Volumes (Balanced)	**0**	**289**	**0**	**0**	**366**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**655**
Base growth (0.51% compounded for 6 yrs)	0	9	0	0	12	0	0	0	0	0	0	0	21
Ardossen Farm (West Parcel)					1								1
0													0
0													0
2020 Base Volumes	**0**	**298**	**0**	**0**	**378**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**676**
New Trips- Eastern Lot			7	6			4		4				21
New Trips- Main House		5			9								
New Trips- Western Lot		2			3								
New Trips- 5-2 to 5-5		1			1								
0													0
Total Trip Distribution	**0**	**8**	**7**	**6**	**13**	**0**	**4**	**0**	**4**	**0**	**0**	**0**	**42**
2020 Projected Volumes	**0**	**306**	**7**	**6**	**392**	**0**	**4**	**0**	**4**	**0**	**0**	**0**	**719**

TPD# ESII.A.00001
6/6/2014
Traffic Volumes Worksheet

Intersection:	**Newtown Road & Lot 2-5 Driveway**									
Synchro Node:	**10**	**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
Existing Counts	**0**	**555**	**0**	**0**	**251**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**806**
Growth									1				1
Existing Volumes (Balanced)	**0**	**555**	**0**	**0**	**251**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**807**
Base growth (0.51% compounded for 6 yrs)	0	18	0	0	8	0	0	0	0	0	0	0	26
Ardossen Farm (West Parcel)		1											1
													0
													0
2020 Base Volumes	**0**	**573**	**0**	**0**	**259**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**833**
New Trips- Eastern Lot		2			7								9
New Trips- Main House		9			3								
New Trips- Western Lot		3			1								
New Trips- 5-2 to 5-5		1			1								
													0
Total Trip Distribution	**0**	**15**	**0**	**0**	**12**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**27**
2020 Projected Volumes	**0**	**589**	**0**	**0**	**271**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**861**

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
Existing Counts	**0**	**289**	**0**	**0**	**366**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**655**
Growth				1									1
Existing Volumes (Balanced)	**0**	**289**	**0**	**1**	**366**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**656**
Base growth (0.51% compounded for 6 yrs)	0	9	0	0	12	0	0	0	0	0	0	0	21
Ardossen Farm (West Parcel)					1								1
0													0
0													0
2020 Base Volumes	**0**	**298**	**0**	**1**	**378**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**677**
New Trips- Eastern Lot		7			4								11
New Trips- Main House		5			9								
New Trips- Western Lot		2			3								
New Trips- 5-2 to 5-5		1			1								
0													0
Total Trip Distribution	**0**	**15**	**0**	**0**	**17**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**32**
2020 Projected Volumes	**0**	**313**	**0**	**1**	**396**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**710**

TPD# ESII.A.00001
6/6/2014
Traffic Volumes Worksheet

Intersection:	**Newtown Road & Main House Lot**									
Synchro Node:	**11**	**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
Existing Counts	**0**	**649**	**0**	**0**	**267**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**916**
Growth													0
Existing Volumes (Balanced)	**0**	**649**	**0**	**0**	**267**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**916**
Base growth (0.51% compounded for 6 yrs)	0	21	0	0	8	0	0	0	0	0	0	0	29
Ardossen Farm (West Parcel)		1											1
													0
													0
2020 Base Volumes	**0**	**670**	**0**	**0**	**275**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**945**
New Trips- Eastern Lot		2			6								8
New Trips- Main House			3		8								
New Trips- Western Lot		3			1								
New Trips- 5-2 to 5-5		1			1								
													0
Total Trip Distribution	**0**	**6**	**3**	**0**	**16**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**25**
2020 Projected Volumes	**0**	**677**	**3**	**0**	**291**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**971**

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
Existing Counts	**0**	**278**	**0**	**0**	**466**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**744**
Growth			1	3									4
Existing Volumes (Balanced)	**0**	**278**	**1**	**3**	**466**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**748**
Base growth (0.51% compounded for 6 yrs)	0	9	0	0	15	0	0	0	0	0	0	0	24
Ardossen Farm (West Parcel)					1								1
0													0
0													0
2020 Base Volumes	**0**	**287**	**1**	**3**	**481**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**772**
New Trips- Eastern Lot		6			3								9
New Trips- Main House			10		6								
New Trips- Western Lot		3			4								
New Trips- 5-2 to 5-5		1			1								
0													0
Total Trip Distribution	**0**	**10**	**10**	**0**	**14**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**34**
2020 Projected Volumes	**0**	**297**	**11**	**3**	**496**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**807**

TPD# ESII.A.00001
6/6/2014
Traffic Volumes Worksheet

Intersection:	**Newtown Road & Westernmost Driveway**									
Synchro Node:	**12**	**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
Existing Counts	**0**	**649**	**0**	**0**	**267**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**916**
Growth													0
Existing Volumes (Balanced)	**0**	**649**	**0**	**0**	**267**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**916**
Base growth (0.51% compounded for 6 yrs)	0	21	0	0	8	0	0	0	0	0	0	0	29
Ardossen Farm (West Parcel)		1											1
													0
													0
2020 Base Volumes	**0**	**670**	**0**	**0**	**275**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**945**
New Trips- Eastern Lot		2			6								8
New Trips- Main House		3			8								
New Trips- Western Lot			1	1			3		3				
New Trips- 5-2 to 5-5		1			1								
													0
Total Trip Distribution	**0**	**6**	**1**	**1**	**15**	**0**	**3**	**0**	**3**	**0**	**0**	**0**	**29**
2020 Projected Volumes	**0**	**677**	**1**	**1**	**290**	**0**	**3**	**0**	**3**	**0**	**0**	**0**	**975**

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
Existing Counts	**0**	**278**	**0**	**0**	**466**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**744**
Growth													0
Existing Volumes (Balanced)	**0**	**278**	**0**	**0**	**466**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**744**
Base growth (0.51% compounded for 6 yrs)	0	9	0	0	15	0	0	0	0	0	0	0	24
Ardossen Farm (West Parcel)					1								1
0													0
0													0
2020 Base Volumes	**0**	**287**	**0**	**0**	**481**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**768**
New Trips- Eastern Lot		6			3								9
New Trips- Main House		10			6								
New Trips- Western Lot			2	4			1		3				
New Trips- 5-2 to 5-5		1			1								
0													0
Total Trip Distribution	**0**	**17**	**2**	**4**	**10**	**0**	**1**	**0**	**3**	**0**	**0**	**0**	**37**
2020 Projected Volumes	**0**	**304**	**2**	**4**	**492**	**0**	**1**	**0**	**3**	**0**	**0**	**0**	**806**

TPD# ESII.A.00001
6/6/2014
Traffic Volumes Worksheet

Intersection:	**Darby-Paoli Road & Lot 5-1 Driveway**									
Synchro Node:	**13**	**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
Existing Counts	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**785**	**0**	**0**	**333**	**0**	**1118**
Growth						1							1
Existing Volumes (Balanced)	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**785**	**0**	**0**	**333**	**0**	**1119**
Base growth (0.51% compounded for 6 yrs)	0	0	0	0	0	0	0	24	0	0	11	0	35
Ardossen Farm (West Parcel)								2					2
													0
													0
2020 Base Volumes	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**809**	**0**	**0**	**344**	**0**	**1154**
New Trips- Eastern Lot								1			3		4
New Trips- Main House								2			4		
New Trips- Western Lot											1		
New Trips- 5-2 to 5-5								1			1		
													0
Total Trip Distribution	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**9**	**0**	**13**
2020 Projected Volumes	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**815**	**0**	**0**	**353**	**0**	**1169**

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
Existing Counts	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**240**	**0**	**0**	**800**	**0**	**1040**
Growth										1			1
Existing Volumes (Balanced)	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**240**	**0**	**1**	**800**	**0**	**1041**
Base growth (0.51% compounded for 6 yrs)	0	0	0	0	0	0	0	7	0	0	25	0	32
Ardossen Farm (West Parcel)								1			2		3
0													0
0													0
2020 Base Volumes	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**247**	**0**	**1**	**825**	**0**	**1073**
New Trips- Eastern Lot								3			2		5
New Trips- Main House								6			3		
New Trips- Western Lot								1					
New Trips- 5-2 to 5-5								1			1		
0													0
Total Trip Distribution	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**11**	**0**	**0**	**6**	**0**	**17**
2020 Projected Volumes	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**259**	**0**	**1**	**833**	**0**	**1093**

TPD# ESII.A.00001
6/6/2014
Traffic Volumes Worksheet

Intersection:	**Darby-Paoli Road & Lots 5-2 to 5-5 Driveway**									
Synchro Node:	**14**	**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
Existing Counts	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**785**	**0**	**0**	**333**	**0**	**1118**
Growth				1		1							2
Existing Volumes (Balanced)	**0**	**0**	**0**	**1**	**0**	**1**	**0**	**785**	**0**	**0**	**333**	**0**	**1120**
Base growth (0.51% compounded for 6 yrs)	0	0	0	0	0	0	0	24	0	0	11	0	35
Ardossen Farm (West Parcel)								2					2
													0
													0
2020 Base Volumes	**0**	**0**	**0**	**1**	**0**	**1**	**0**	**809**	**0**	**0**	**344**	**0**	**1155**
New Trips- Eastern Lot								1			3		4
New Trips- Main House								2			4		
New Trips- Western Lot											1		
New Trips- 5-2 to 5-5						1				1			
													0
Total Trip Distribution	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**3**	**0**	**1**	**8**	**0**	**13**
2020 Projected Volumes	**0**	**0**	**0**	**1**	**0**	**2**	**0**	**814**	**0**	**1**	**352**	**0**	**1170**

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
Existing Counts	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**240**	**0**	**0**	**800**	**0**	**1040**
Growth									1	1			2
Existing Volumes (Balanced)	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**240**	**1**	**1**	**800**	**0**	**1042**
Base growth (0.51% compounded for 6 yrs)	0	0	0	0	0	0	0	7	0	0	25	0	32
Ardossen Farm (West Parcel)								1			2		3
0													0
0													0
2020 Base Volumes	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**247**	**1**	**1**	**825**	**0**	**1074**
New Trips- Eastern Lot								3			2		5
New Trips- Main House								6			3		
New Trips- Western Lot								1					
New Trips- 5-2 to 5-5						1				1			
0													0
Total Trip Distribution	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**10**	**0**	**1**	**5**	**0**	**17**
2020 Projected Volumes	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**258**	**1**	**2**	**832**	**0**	**1094**

TPD# ESII.A.00001
6/6/2014
Traffic Volumes Worksheet

Intersection:	**Darby-Paoli Road & Lot 4-9 Driveway**									
Synchro Node:	**15**	**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
Existing Counts	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**500**	**0**	**0**	**347**	**0**	**847**
Growth				1									1
Existing Volumes (Balanced)	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**500**	**0**	**0**	**347**	**0**	**848**
Base growth (0.51% compounded for 6 yrs)	0	0	0	0	0	0	0	15	0	0	11	0	26
Ardossen Farm (West Parcel)								3					3
													0
													0
2020 Base Volumes	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**515**	**0**	**0**	**358**	**0**	**874**
New Trips- Eastern Lot											1		1
New Trips- Main House								1			1		
New Trips- Western Lot													
New Trips- 5-2 to 5-5													
													0
Total Trip Distribution	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**2**	**0**	**3**
2020 Projected Volumes	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**519**	**0**	**0**	**360**	**0**	**880**

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
Existing Counts	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**194**	**0**	**0**	**509**	**0**	**703**
Growth									1				1
Existing Volumes (Balanced)	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**194**	**1**	**0**	**509**	**0**	**704**
Base growth (0.51% compounded for 6 yrs)	0	0	0	0	0	0	0	6	0	0	16	0	22
Ardossen Farm (West Parcel)								1			3		4
0													0
0													0
2020 Base Volumes	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**200**	**1**	**0**	**525**	**0**	**726**
New Trips- Eastern Lot								1			1		2
New Trips- Main House								3			1		
New Trips- Western Lot													
New Trips- 5-2 to 5-5													
0													0
Total Trip Distribution	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**2**	**0**	**6**
2020 Projected Volumes	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**205**	**1**	**0**	**530**	**0**	**736**

TPD# ESII.A.00001
6/6/2014
Traffic Volumes Worksheet

Intersection:	**Darby-Paoli Road & Lot 4-10 Driveway**									
Synchro Node:	**16**	**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
Existing Counts	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**500**	**0**	**0**	**347**	**0**	**847**
Growth						1							1
Existing Volumes (Balanced)	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**500**	**0**	**0**	**347**	**0**	**848**
Base growth (0.51% compounded for 6 yrs)	0	0	0	0	0	0	0	15	0	0	11	0	26
Ardossen Farm (West Parcel)								3					3
													0
													0
2020 Base Volumes	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**515**	**0**	**0**	**358**	**0**	**874**
New Trips- Eastern Lot											1		1
New Trips- Main House								1			1		
New Trips- Western Lot													
New Trips- 5-2 to 5-5													
													0
Total Trip Distribution	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**2**	**0**	**3**
2020 Projected Volumes	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**519**	**0**	**0**	**360**	**0**	**880**

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
Existing Counts	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**194**	**0**	**0**	**509**	**0**	**703**
Growth										1			1
Existing Volumes (Balanced)	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**194**	**0**	**1**	**509**	**0**	**704**
Base growth (0.51% compounded for 6 yrs)	0	0	0	0	0	0	0	6	0	0	16	0	22
Ardossen Farm (West Parcel)								1			3		4
0													0
0													0
2020 Base Volumes	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**200**	**0**	**1**	**525**	**0**	**726**
New Trips- Eastern Lot								1			1		2
New Trips- Main House								3			1		
New Trips- Western Lot													
New Trips- 5-2 to 5-5													
0													0
Total Trip Distribution	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**2**	**0**	**6**
2020 Projected Volumes	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**205**	**0**	**1**	**530**	**0**	**736**

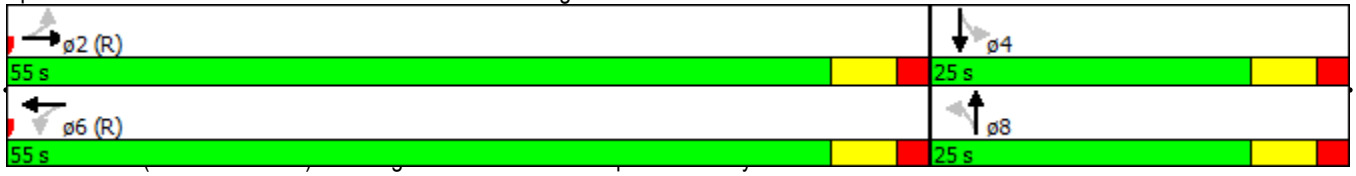
APPENDIX E
CAPACITY ANALYSES

EXISTING CONDITIONS

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	4	406	6	0	569	143	11	240	1	119	92	16
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	11	12	12	13	12	12	11	12	12	12	12
Grade (%)		-1%			1%			5%			-7%	
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		
Right Turn on Red			No			No			No			No
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		1638			378			173			1589	
Travel Time (s)		31.9			7.4			4.7			43.3	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	3%	17%	0%	2%	1%	18%	2%	0%	3%	0%	6%
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 (%)												
Turn Type	Perm	NA			NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	2	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	16.0	16.0		16.0	16.0		16.0	16.0		16.0	16.0	
Total Split (s)	55.0	55.0		55.0	55.0		25.0	25.0		25.0	25.0	
Total Split (%)	68.8%	68.8%		68.8%	68.8%		31.3%	31.3%		31.3%	31.3%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		-1.5			-1.5			-1.5			-1.5	
Total Lost Time (s)		4.5			4.5			4.5			4.5	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	Max	Max		Max	Max		Max	Max		Max	Max	

Intersection Summary	
Area Type:	Other
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 32 (40%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green	
Natural Cycle: 50	
Control Type: Pretimed	

Splits and Phases: 1: Radnor Chester Road & Conestoga Road



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	4	406	6	0	569	143	11	240	1	119	92	16
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	2	0	0	6	0	0	0	0	0	44	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	180.9	175.3	180.9	179.1	183.0	179.1	175.5	170.9	175.5	186.3	182.7	186.3
Adj Flow Rate, veh/h	4	414	6	0	581	146	11	245	1	121	94	16
Adj No. of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	3	3	3	2	2	2	2	2	2	0	0	0
Cap, veh/h	48	1018	12	0	941	216	54	421	2	92	217	15
Arrive On Green	0.61	0.63	0.61	0.00	0.63	0.63	0.24	0.26	0.24	0.24	0.26	0.24
Sat Flow, veh/h	3	1716	25	0	1412	355	29	1656	7	490	541	77
Grp Volume(v), veh/h	424	0	0	0	0	727	257	0	0	231	0	0
Grp Sat Flow(s),veh/h/ln	1744	0	0	0	0	1767	1692	0	0	1107	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	20.6	0.0	0.0	0.0	6.1	0.0	0.0
Cycle Q Clear(g_c), s	9.5	0.0	0.0	0.0	0.0	20.6	10.7	0.0	0.0	16.8	0.0	0.0
Prop In Lane	0.01		0.01	0.00		0.20	0.04		0.00	0.52		0.07
Lane Grp Cap(c), veh/h	1110	0	0	0	0	1117	445	0	0	424	0	0
V/C Ratio(X)	0.38	0.00	0.00	0.00	0.00	0.65	0.58	0.00	0.00	0.55	0.00	0.00
Avail Cap(c_a), veh/h	1114	0	0	0	0	1115	449	0	0	332	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	7.4	0.0	0.0	0.0	0.0	9.6	26.1	0.0	0.0	30.2	0.0	0.0
Incr Delay (d2), s/veh	1.0	0.0	0.0	0.0	0.0	2.9	5.4	0.0	0.0	5.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	170.8	0.0	0.0
%ile BackOfQ(95%),veh/ln	8.6	0.0	0.0	0.0	0.0	17.5	9.7	0.0	0.0	22.7	0.0	0.0
LnGrp Delay(d),s/veh	8.4	0.0	0.0	0.0	0.0	13.1	31.5	0.0	0.0	206.0	0.0	0.0
LnGrp LOS	A					B	C			F		
Approach Vol, veh/h		424			727			257			231	
Approach Delay, s/veh		8.4			13.1			31.5			206.0	
Approach LOS		A			B			C			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		55.0		25.0		55.0		25.0
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0
Max Green Setting (Gmax), s		49.0		19.0		49.0		19.0
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0		0.0
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	42.0
HCM 2010 LOS	D

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	526	0	132	712	0	317
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	10	12
Grade (%)	-2%			6%	-8%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		1	0
Taper Length (ft)			25		25	
Link Speed (mph)	35			35	35	
Link Distance (ft)	378			705	402	
Travel Time (s)	7.4			13.7	7.8	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	6%	0%	3%	3%	0%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

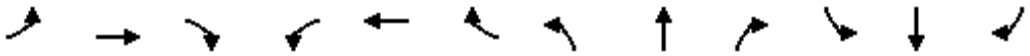
Intersection	
Int Delay, s/veh	3.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	526	0	132	712	0	317
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, %	-2	-	-	6	-8	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	6	0	3	3	0	2
Mvmt Flow	537	0	135	727	0	323

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	537	0	1533	537
Stage 1	-	-	-	-	537	-
Stage 2	-	-	-	-	996	-
Critical Hdwy	-	-	4.13	-	4.8	5.42
Critical Hdwy Stg 1	-	-	-	-	3.8	-
Critical Hdwy Stg 2	-	-	-	-	3.8	-
Follow-up Hdwy	-	-	2.227	-	3.5	3.318
Pot Cap-1 Maneuver	-	-	1026	-	256	613
Stage 1	-	-	-	-	749	-
Stage 2	-	-	-	-	561	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1026	-	199	613
Mov Cap-2 Maneuver	-	-	-	-	199	-
Stage 1	-	-	-	-	749	-
Stage 2	-	-	-	-	437	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.4	17.2
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	613	-	-	1026	-
HCM Lane V/C Ratio	0.528	-	-	0.131	-
HCM Control Delay (s)	17.2	-	-	9	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	3.1	-	-	0.5	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	116	533	0	0	228	23	1	0	4	21	0	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	10	12	12	10	12	12	8	12	12	10	12
Grade (%)		2%			-2%			-4%			-4%	
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)		35			35			25			25	
Link Distance (ft)		462			828			1001			1821	
Travel Time (s)		9.0			16.1			27.3			49.7	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	2%	0%	0%	3%	0%	0%	0%	0%	10%	0%	5%
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 (%)												
Sign Control		Free			Free			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR
Vol, veh/h	116	533	0	0	228	23	1	0	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-
Grade, %	-	2	-	-	-2	-	-	-4	-
Peak Hour Factor	83	83	83	83	83	83	83	83	83
Heavy Vehicles, %	1	2	0	0	3	0	0	0	0
Mvmt Flow	140	642	0	0	275	28	1	0	5

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	302	0	0	642	0	0	1234	1224	642
Stage 1	-	-	-	-	-	-	922	922	-
Stage 2	-	-	-	-	-	-	312	302	-
Critical Hdwy	4.11	-	-	4.1	-	-	6.3	5.7	5.8
Critical Hdwy Stg 1	-	-	-	-	-	-	5.3	4.7	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.3	4.7	-
Follow-up Hdwy	2.209	-	-	2.2	-	-	3.5	4	3.3
Pot Cap-1 Maneuver	1265	-	-	952	-	-	204	237	513
Stage 1	-	-	-	-	-	-	401	432	-
Stage 2	-	-	-	-	-	-	753	714	-
Platoon blocked, %		-	-		-	-			
Mov Cap-1 Maneuver	1265	-	-	952	-	-	166	196	513
Mov Cap-2 Maneuver	-	-	-	-	-	-	166	196	-
Stage 1	-	-	-	-	-	-	332	358	-
Stage 2	-	-	-	-	-	-	707	714	-

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

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	362	1265	-	-	952	-	-	347
HCM Lane V/C Ratio	0.017	0.11	-	-	-	-	-	0.208
HCM Control Delay (s)	15.1	8.2	0	-	0	-	-	18.1
HCM Lane LOS	C	A	A	-	A	-	-	C
HCM 95th %tile Q(veh)	0.1	0.4	-	-	0	-	-	0.8

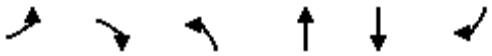
Intersection			
Int Delay, s/veh			

Movement	SBL	SBT	SBR
Vol, veh/h	21	0	39
Conflicting Peds, #/hr	0	0	0
Sign Control	Stop	Stop	Stop
RT Channelized	-	-	None
Storage Length	-	-	-
Veh in Median Storage, #	-	0	-
Grade, %	-	-4	-
Peak Hour Factor	83	83	83
Heavy Vehicles, %	10	0	5
Mvmt Flow	25	0	47

Major/Minor	Minor2		
Conflicting Flow All	1213	1211	289
Stage 1	289	289	-
Stage 2	924	922	-
Critical Hdwy	6.4	5.7	5.85
Critical Hdwy Stg 1	5.4	4.7	-
Critical Hdwy Stg 2	5.4	4.7	-
Follow-up Hdwy	3.59	4	3.345
Pot Cap-1 Maneuver	200	241	767
Stage 1	748	722	-
Stage 2	384	432	-
Platoon blocked, %			
Mov Cap-1 Maneuver	172	200	767
Mov Cap-2 Maneuver	172	200	-
Stage 1	619	722	-
Stage 2	315	358	-

Approach	SB
HCM Control Delay, s	18.1
HCM LOS	C

Minor Lane/Major Mvmt



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	350	134	65	435	213	120
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	12	12	10	10	12
Grade (%)	0%			-1%	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)	649			119	180	
Travel Time (s)	17.7			2.3	3.5	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	3%	5%	4%	3%	5%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	127

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	350	134	65	435	213	120
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	-	-	-1	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	1	3	5	4	3	5
Mvmt Flow	393	151	73	489	239	135

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	942	307	374	0	-	0
Stage 1	307	-	-	-	-	-
Stage 2	635	-	-	-	-	-
Critical Hdwy	6.41	6.23	4.15	-	-	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.327	2.245	-	-	-
Pot Cap-1 Maneuver	~ 293	731	1168	-	-	-
Stage 1	748	-	-	-	-	-
Stage 2	530	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 268	731	1168	-	-	-
Mov Cap-2 Maneuver	~ 268	-	-	-	-	-
Stage 1	748	-	-	-	-	-
Stage 2	484	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	$ 344.5	1.1	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1168	-	325	-	-
HCM Lane V/C Ratio	0.063	-	1.673	-	-
HCM Control Delay (s)	8.3	0	$ 344.5	-	-
HCM Lane LOS	A	A	F	-	-
HCM 95th %tile Q(veh)	0.2	-	33.4	-	-

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

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	39	113	336	88	192	143
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	12	10	12	12	10
Grade (%)	3%		6%			-7%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	0		0	0	
Taper Length (ft)	25				25	
Link Speed (mph)	35		35			35
Link Distance (ft)	1916		1868			763
Travel Time (s)	37.3		36.4			14.9
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	5%	2%	4%	2%	1%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	6.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	39	113	336	88	192	143
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, %	3	-	6	-	-	-7
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	5	2	4	2	1	4
Mvmt Flow	45	131	391	102	223	166

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1055	442	0	0	493	0
Stage 1	442	-	-	-	-	-
Stage 2	613	-	-	-	-	-
Critical Hdwy	7.05	6.52	-	-	4.11	-
Critical Hdwy Stg 1	6.05	-	-	-	-	-
Critical Hdwy Stg 2	6.05	-	-	-	-	-
Follow-up Hdwy	3.545	3.318	-	-	2.209	-
Pot Cap-1 Maneuver	207	593	-	-	1076	-
Stage 1	596	-	-	-	-	-
Stage 2	483	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	160	593	-	-	1076	-
Mov Cap-2 Maneuver	160	-	-	-	-	-
Stage 1	596	-	-	-	-	-
Stage 2	373	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	25.3	0	5.3
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	350	1076	-
HCM Lane V/C Ratio	-	-	0.505	0.207	-
HCM Control Delay (s)	-	-	25.3	9.2	0
HCM Lane LOS	-	-	D	A	A
HCM 95th %tile Q(veh)	-	-	2.7	0.8	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	555	0	0	251	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	12	12	10	12	12
Grade (%)	1%			1%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		1	0
Taper Length (ft)			25		25	
Link Speed (mph)	30			30	25	
Link Distance (ft)	559			2483	996	
Travel Time (s)	12.7			56.4	27.2	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	2%	2%	3%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	555	0	0	251	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	1	-	-	1	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	3	2	2	3	2	2
Mvmt Flow	578	0	0	261	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	578	0	839	578
Stage 1	-	-	-	-	578	-
Stage 2	-	-	-	-	261	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	996	-	336	516
Stage 1	-	-	-	-	561	-
Stage 2	-	-	-	-	783	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	996	-	336	516
Mov Cap-2 Maneuver	-	-	-	-	336	-
Stage 1	-	-	-	-	561	-
Stage 2	-	-	-	-	783	-

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

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	996	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	555	0	0	251	0	1
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (ft)	10	12	12	10	12	12
Grade (%)	1%			1%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		1	0
Taper Length (ft)			25		25	
Link Speed (mph)	30			30	25	
Link Distance (ft)	828			559	529	
Travel Time (s)	18.8			12.7	14.4	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	2%	2%	3%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	555	0	0	251	0	1
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	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	3	2	2	3	2	2
Mvmt Flow	578	0	0	261	0	1

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	578	0	839	578
Stage 1	-	-	-	-	578	-
Stage 2	-	-	-	-	261	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	996	-	336	516
Stage 1	-	-	-	-	561	-
Stage 2	-	-	-	-	783	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	996	-	336	516
Mov Cap-2 Maneuver	-	-	-	-	336	-
Stage 1	-	-	-	-	561	-
Stage 2	-	-	-	-	783	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	12
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	516	-	-	996	-
HCM Lane V/C Ratio	0.002	-	-	-	-
HCM Control Delay (s)	12	-	-	0	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	649	0	0	267	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		1	0
Taper Length (ft)			25		25	
Link Speed (mph)	30			30	30	
Link Distance (ft)	1012			462	720	
Travel Time (s)	23.0			10.5	16.4	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	4%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	649	0	0	267	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	2	2	2	4	2	2
Mvmt Flow	662	0	0	272	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	662	0	934	662
Stage 1	-	-	-	-	662	-
Stage 2	-	-	-	-	272	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	927	-	295	462
Stage 1	-	-	-	-	513	-
Stage 2	-	-	-	-	774	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	927	-	295	462
Mov Cap-2 Maneuver	-	-	-	-	295	-
Stage 1	-	-	-	-	513	-
Stage 2	-	-	-	-	774	-

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

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	927	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	649	0	0	267	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	12	12	10	12	12
Grade (%)	2%			1%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		1	0
Taper Length (ft)			25		25	
Link Speed (mph)	30			30	25	
Link Distance (ft)	1259			1012	553	
Travel Time (s)	28.6			23.0	15.1	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	4%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	649	0	0	267	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	2	-	-	1	0	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	2	2	2	4	2	2
Mvmt Flow	662	0	0	272	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	662	0	934	662
Stage 1	-	-	-	-	662	-
Stage 2	-	-	-	-	272	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	927	-	295	462
Stage 1	-	-	-	-	513	-
Stage 2	-	-	-	-	774	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	927	-	295	462
Mov Cap-2 Maneuver	-	-	-	-	295	-
Stage 1	-	-	-	-	513	-
Stage 2	-	-	-	-	774	-

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

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	927	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	1	785	0	0	333
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	10	12	12	10
Grade (%)	0%		6%			-7%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	0		0	0	
Taper Length (ft)	25				25	
Link Speed (mph)	25		30			30
Link Distance (ft)	290		411			317
Travel Time (s)	7.9		9.3			7.2
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Growth Factor	300%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	0	1	785	0	0	333
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	-	6	-	-	-7
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1	882	0	0	374

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1256	882	0	0	882	0
Stage 1	882	-	-	-	-	-
Stage 2	374	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	189	345	-	-	767	-
Stage 1	405	-	-	-	-	-
Stage 2	696	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	189	345	-	-	767	-
Mov Cap-2 Maneuver	189	-	-	-	-	-
Stage 1	405	-	-	-	-	-
Stage 2	696	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15.5	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	345	767	-
HCM Lane V/C Ratio	-	-	0.003	-	-
HCM Control Delay (s)	-	-	15.5	0	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	1	1	785	0	0	333
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	10	12	12	10
Grade (%)	0%		3%			4%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	0		0	0	
Taper Length (ft)	25				25	
Link Speed (mph)	25		30			30
Link Distance (ft)	377		604			411
Travel Time (s)	10.3		13.7			9.3
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	1	1	785	0	0	333
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	-	3	-	-	4
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	1	882	0	0	374

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1256	882	0	0	882	0
Stage 1	882	-	-	-	-	-
Stage 2	374	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	189	345	-	-	767	-
Stage 1	405	-	-	-	-	-
Stage 2	696	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	189	345	-	-	767	-
Mov Cap-2 Maneuver	189	-	-	-	-	-
Stage 1	405	-	-	-	-	-
Stage 2	696	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	244	767	-
HCM Lane V/C Ratio	-	-	0.009	-	-
HCM Control Delay (s)	-	-	19.9	0	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	1	0	500	0	0	347
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	10	12	12	10
Grade (%)	0%		2%			3%
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)	321		356			119
Travel Time (s)	8.8		6.9			2.3
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	3%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	1	0	500	0	0	347
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	-	2	-	-	3
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	2	3	2	2	2
Mvmt Flow	1	0	568	0	0	394

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	962	568	0	0	568	0
Stage 1	568	-	-	-	-	-
Stage 2	394	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	284	522	-	-	1004	-
Stage 1	567	-	-	-	-	-
Stage 2	681	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	284	522	-	-	1004	-
Mov Cap-2 Maneuver	284	-	-	-	-	-
Stage 1	567	-	-	-	-	-
Stage 2	681	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	17.7	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	284	1004	-
HCM Lane V/C Ratio	-	-	0.004	-	-
HCM Control Delay (s)	-	-	17.7	0	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	1	500	0	0	347
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	10	12	12	10
Grade (%)	0%		-1%			-2%
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)	338		712			365
Travel Time (s)	9.2		13.9			7.1
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	3%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

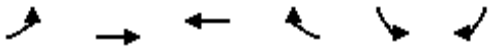
Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	0	1	500	0	0	347
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	-	-1	-	-	-2
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	2	3	2	2	2
Mvmt Flow	0	1	568	0	0	394

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	962	568	0	0	568	0
Stage 1	568	-	-	-	-	-
Stage 2	394	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	284	522	-	-	1004	-
Stage 1	567	-	-	-	-	-
Stage 2	681	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	284	522	-	-	1004	-
Mov Cap-2 Maneuver	284	-	-	-	-	-
Stage 1	567	-	-	-	-	-
Stage 2	681	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	522	1004	-
HCM Lane V/C Ratio	-	-	0.002	-	-
HCM Control Delay (s)	-	-	11.9	0	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

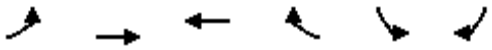


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	273	287	117	3	1	89
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	10	10	12	10	12
Grade (%)		-7%	11%		14%	
Storage Length (ft)	0			0	0	0
Storage Lanes	0			0	1	0
Taper Length (ft)	25				25	
Link Speed (mph)		30	30		25	
Link Distance (ft)		874	402		173	
Travel Time (s)		19.9	9.1		4.7	
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 (%)	2%	2%	3%	0%	0%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Shared Lane Traffic (%)						
Sign Control		Free	Stop		Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	119	107	364	326	251	177
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	12	10	12	12	10
Grade (%)	-8%		7%			12%
Storage Length (ft)	0	0		260	0	
Storage Lanes	1	0		1	0	
Taper Length (ft)	25				25	
Link Speed (mph)	35		35			35
Link Distance (ft)	1259		622			1047
Travel Time (s)	24.5		12.1			20.4
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 (%)	4%	1%	3%	2%	2%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Shared Lane Traffic (%)						
Sign Control	Stop		Stop			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	258	414	413	51	30	201
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	9	10	12	10	12
Grade (%)		-6%	6%		-2%	
Storage Length (ft)	0			0	0	100
Storage Lanes	0			0	1	1
Taper Length (ft)	25				25	
Link Speed (mph)		35	35		35	
Link Distance (ft)		803	330		1290	
Travel Time (s)		15.6	6.4		25.1	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	3%	3%	0%	3%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Shared Lane Traffic (%)						
Sign Control		Free	Stop		Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Summary of All Intervals

Run Number	1	2	3	4	5		Avg
Start Time	6:50	6:50	6:50	6:50	6:50	6:50	6:50
End Time	8:00	8:00	8:00	8:00	8:00	8:00	8:00
Total Time (min)	70	70	70	70	70	70	70
Time Recorded (min)	60	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1	1
Vehs Entered	3792	3837	3708	3748	3827	3811	3788
Vehs Exited	3782	3821	3689	3695	3801	3780	3761
Starting Vehs	184	191	188	183	200	190	188
Ending Vehs	194	207	207	236	226	221	215
Travel Distance (mi)	4063	4188	4030	3993	4175	4211	4110
Travel Time (hr)	206.0	249.3	221.6	202.2	216.3	249.4	224.1
Total Delay (hr)	66.9	106.8	84.4	66.4	73.3	106.0	84.0
Total Stops	4162	4144	3700	3789	4084	4210	4009
Fuel Used (gal)	141.9	154.9	144.6	139.4	146.3	154.8	147.0

Interval #0 Information Seeding

Start Time	6:50
End Time	7:00
Total Time (min)	10

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	7:00
End Time	8:00
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5		Avg
Vehs Entered	3792	3837	3708	3748	3827	3811	3788
Vehs Exited	3782	3821	3689	3695	3801	3780	3761
Starting Vehs	184	191	188	183	200	190	188
Ending Vehs	194	207	207	236	226	221	215
Travel Distance (mi)	4063	4188	4030	3993	4175	4211	4110
Travel Time (hr)	206.0	249.3	221.6	202.2	216.3	249.4	224.1
Total Delay (hr)	66.9	106.8	84.4	66.4	73.3	106.0	84.0
Total Stops	4162	4144	3700	3789	4084	4210	4009
Fuel Used (gal)	141.9	154.9	144.6	139.4	146.3	154.8	147.0

3: Newtown Road & Radnor Chester Road Performance by lane

Lane	EB	WB	SB	All
Movements Served	LT	TR	LR	
Denied Del/Veh (s)				0.0
Total Del/Veh (s)	17.3	10.5	4.8	14.6

5: Darby-Paoli Road & Newtown Road Performance by lane

Lane	WB	NB	NB	SB	All
Movements Served	LR	T	R	LT	
Denied Del/Veh (s)					0.0
Total Del/Veh (s)	10.6	15.5	7.6	1.9	8.9

6: Darby-Paoli Road & Brooke Road Performance by lane

Lane	EB	WB	SB	SB	All
Movements Served	LT	TR	L	R	
Denied Del/Veh (s)					0.8
Total Del/Veh (s)	2.0	14.2	64.7	5.7	7.9

Total Zone Performance

Denied Del/Veh (s)	1.2
Total Del/Veh (s)	162.9

Intersection: 3: Newtown Road & Radnor Chester Road

Movement	EB	WB	SB
Directions Served	LT	TR	LR
Maximum Queue (ft)	402	80	82
Average Queue (ft)	140	41	38
95th Queue (ft)	372	68	72
Link Distance (ft)	829	299	102
Upstream Blk Time (%)			0
Queuing Penalty (veh)			0
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 5: Darby-Paoli Road & Newtown Road

Movement	WB	NB	NB	SB
Directions Served	LR	T	R	LT
Maximum Queue (ft)	139	210	206	13
Average Queue (ft)	66	92	77	1
95th Queue (ft)	116	161	138	7
Link Distance (ft)	1186	562		1001
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)			260	
Storage Blk Time (%)		0	0	
Queuing Penalty (veh)		1	0	

Intersection: 6: Darby-Paoli Road & Brooke Road

Movement	EB	WB	B33	SB	SB
Directions Served	LT	TR	T	L	R
Maximum Queue (ft)	20	262	6	250	125
Average Queue (ft)	1	103	0	45	52
95th Queue (ft)	9	181	4	169	126
Link Distance (ft)	781	278	571	1261	
Upstream Blk Time (%)		0			
Queuing Penalty (veh)		2			
Storage Bay Dist (ft)					100
Storage Blk Time (%)					10
Queuing Penalty (veh)					3

Zone Summary

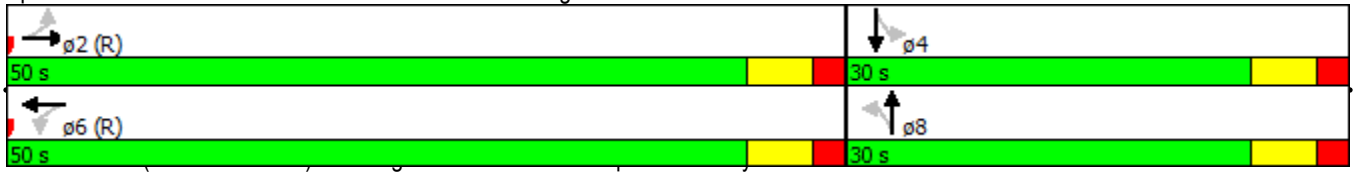
Zone wide Queuing Penalty: 6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	6	559	6	0	458	119	3	88	3	214	200	15
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	11	12	12	13	12	12	11	12	12	12	12
Grade (%)		-1%			1%			5%			-7%	
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		
Right Turn on Red			No			No			No			No
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		1638			378			173			1589	
Travel Time (s)		31.9			7.4			4.7			43.3	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	1%	0%	0%	0%	0%	0%	0%	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 (%)												
Turn Type	Perm	NA			NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	2	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	16.0	16.0		16.0	16.0		16.0	16.0		16.0	16.0	
Total Split (s)	50.0	50.0		50.0	50.0		30.0	30.0		30.0	30.0	
Total Split (%)	62.5%	62.5%		62.5%	62.5%		37.5%	37.5%		37.5%	37.5%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		-1.5			-1.5			-1.5			-1.5	
Total Lost Time (s)		4.5			4.5			4.5			4.5	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	Max	Max		Max	Max		Max	Max		Max	Max	

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 32 (40%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 55
Control Type: Pretimed

Splits and Phases: 1: Radnor Chester Road & Conestoga Road



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	6	559	6	0	458	119	3	88	3	214	200	15
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	10	0	0	2	0	0	2	0	0	1	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	180.9	179.1	180.9	179.1	186.3	179.1	175.5	175.5	175.5	186.3	186.3	186.3
Adj Flow Rate, veh/h	6	576	6	0	472	123	3	91	3	221	206	15
Adj No. of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	1	1	1	0	0	0	0	0	0	0	0	0
Cap, veh/h	47	923	8	0	864	209	50	541	12	79	240	12
Arrive On Green	0.55	0.57	0.55	0.00	0.57	0.57	0.30	0.32	0.30	0.30	0.32	0.30
Sat Flow, veh/h	5	1760	18	0	1426	371	12	1675	54	772	743	53
Grp Volume(v), veh/h	588	0	0	0	0	595	97	0	0	442	0	0
Grp Sat Flow(s),veh/h/ln	1783	0	0	0	0	1797	1741	0	0	1568	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	17.1	0.0	0.0	0.0	18.7	0.0	0.0
Cycle Q Clear(g_c), s	17.2	0.0	0.0	0.0	0.0	17.1	3.2	0.0	0.0	22.0	0.0	0.0
Prop In Lane	0.01		0.01	0.00		0.21	0.03		0.03	0.50		0.03
Lane Grp Cap(c), veh/h	971	0	0	0	0	1023	569	0	0	312	0	0
V/C Ratio(X)	0.61	0.00	0.00	0.00	0.00	0.58	0.17	0.00	0.00	1.42	0.00	0.00
Avail Cap(c_a), veh/h	1026	0	0	0	0	1022	569	0	0	538	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	13.0	0.0	0.0	0.0	0.0	11.2	19.8	0.0	0.0	28.6	0.0	0.0
Incr Delay (d2), s/veh	2.8	0.0	0.0	0.0	0.0	2.4	0.6	0.0	0.0	205.7	0.0	0.0
Initial Q Delay(d3),s/veh	1.9	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	8.1	0.0	0.0
%ile BackOfQ(95%),veh/ln	17.8	0.0	0.0	0.0	0.0	14.4	3.0	0.0	0.0	45.6	0.0	0.0
LnGrp Delay(d),s/veh	17.8	0.0	0.0	0.0	0.0	13.7	20.6	0.0	0.0	242.4	0.0	0.0
LnGrp LOS	B					B	C			F		
Approach Vol, veh/h		588			595			97			442	
Approach Delay, s/veh		17.8			13.7			20.6			242.4	
Approach LOS		B			B			C			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		50.0		30.0		50.0		30.0
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0
Max Green Setting (Gmax), s		44.0		24.0		44.0		24.0
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0		0.0
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	74.2
HCM 2010 LOS	E

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	776	0	211	577	0	219
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	10	12
Grade (%)	-2%			6%	-8%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		1	0
Taper Length (ft)			25		25	
Link Speed (mph)	35			35	35	
Link Distance (ft)	378			705	402	
Travel Time (s)	7.4			13.7	7.8	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	1%	0%	0%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

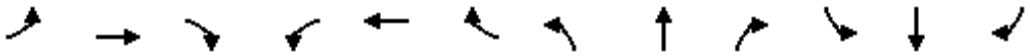
Intersection	
Int Delay, s/veh	3.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	776	0	211	577	0	219
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, %	-2	-	-	6	-8	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	0	0	1	0	0	2
Mvmt Flow	800	0	218	595	0	226

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	800	0	1830	800
Stage 1	-	-	-	-	800	-
Stage 2	-	-	-	-	1030	-
Critical Hdwy	-	-	4.11	-	4.8	5.42
Critical Hdwy Stg 1	-	-	-	-	3.8	-
Critical Hdwy Stg 2	-	-	-	-	3.8	-
Follow-up Hdwy	-	-	2.209	-	3.5	3.318
Pot Cap-1 Maneuver	-	-	827	-	192	460
Stage 1	-	-	-	-	636	-
Stage 2	-	-	-	-	549	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	827	-	116	460
Mov Cap-2 Maneuver	-	-	-	-	116	-
Stage 1	-	-	-	-	636	-
Stage 2	-	-	-	-	333	-

Approach	EB	WB	NB
HCM Control Delay, s	0	2.9	20.1
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	460	-	-	827	-
HCM Lane V/C Ratio	0.491	-	-	0.263	-
HCM Control Delay (s)	20.1	-	-	10.9	0
HCM Lane LOS	C	-	-	B	A
HCM 95th %tile Q(veh)	2.7	-	-	1.1	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	22	256	0	1	346	19	0	1	1	32	1	120
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	10	12	12	10	12	12	8	12	12	10	12
Grade (%)		2%			-2%			-4%			-4%	
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)		35			35			25			25	
Link Distance (ft)		462			828			1001			1821	
Travel Time (s)		9.0			16.1			27.3			49.7	
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%	0%	0%	0%	0%	0%	0%	0%	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 (%)												
Sign Control		Free			Free			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	2.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR
Vol, veh/h	22	256	0	1	346	19	0	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-
Grade, %	-	2	-	-	-2	-	-	-4	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0
Mvmt Flow	24	275	0	1	372	20	0	1	1

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	392	0	0	275	0	0	772	718	275
Stage 1	-	-	-	-	-	-	323	323	-
Stage 2	-	-	-	-	-	-	449	395	-
Critical Hdwy	4.1	-	-	4.1	-	-	6.3	5.7	5.8
Critical Hdwy Stg 1	-	-	-	-	-	-	5.3	4.7	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.3	4.7	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3
Pot Cap-1 Maneuver	1178	-	-	1300	-	-	379	419	792
Stage 1	-	-	-	-	-	-	745	703	-
Stage 2	-	-	-	-	-	-	655	664	-
Platoon blocked, %		-	-		-	-			
Mov Cap-1 Maneuver	1178	-	-	1300	-	-	303	409	792
Mov Cap-2 Maneuver	-	-	-	-	-	-	303	409	-
Stage 1	-	-	-	-	-	-	727	686	-
Stage 2	-	-	-	-	-	-	533	663	-

Approach	EB	WB	NB
HCM Control Delay, s	0.6	0	11.7
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	539	1178	-	-	1300	-	-	604
HCM Lane V/C Ratio	0.004	0.02	-	-	0.001	-	-	0.272
HCM Control Delay (s)	11.7	8.1	0	-	7.8	0	-	13.2
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0	0.1	-	-	0	-	-	1.1

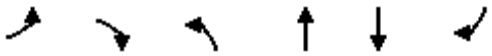
Intersection	
Int Delay, s/veh	

Movement	SBL	SBT	SBR
Vol, veh/h	32	1	120
Conflicting Peds, #/hr	0	0	0
Sign Control	Stop	Stop	Stop
RT Channelized	-	-	None
Storage Length	-	-	-
Veh in Median Storage, #	-	0	-
Grade, %	-	-4	-
Peak Hour Factor	93	93	93
Heavy Vehicles, %	0	0	0
Mvmt Flow	34	1	129

Major/Minor	Minor2		
Conflicting Flow All	708	707	382
Stage 1	384	384	-
Stage 2	324	323	-
Critical Hdwy	6.3	5.7	5.8
Critical Hdwy Stg 1	5.3	4.7	-
Critical Hdwy Stg 2	5.3	4.7	-
Follow-up Hdwy	3.5	4	3.3
Pot Cap-1 Maneuver	412	424	699
Stage 1	700	670	-
Stage 2	744	703	-
Platoon blocked, %			
Mov Cap-1 Maneuver	403	413	699
Mov Cap-2 Maneuver	403	413	-
Stage 1	683	669	-
Stage 2	724	686	-

Approach	SB
HCM Control Delay, s	13.2
HCM LOS	B

Minor Lane/Major Mvmt



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	132	61	86	108	448	352
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	12	12	10	10	12
Grade (%)	0%			-1%	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)	649			119	180	
Travel Time (s)	17.7			2.3	3.5	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	8.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	132	61	86	108	448	352
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	-	-	-1	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	143	66	93	117	487	383

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	982	678	870	0	-	0
Stage 1	678	-	-	-	-	-
Stage 2	304	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	279	456	783	-	-	-
Stage 1	508	-	-	-	-	-
Stage 2	753	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	244	456	783	-	-	-
Mov Cap-2 Maneuver	244	-	-	-	-	-
Stage 1	508	-	-	-	-	-
Stage 2	657	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	45.7	4.5	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	783	-	286	-	-
HCM Lane V/C Ratio	0.119	-	0.734	-	-
HCM Control Delay (s)	10.2	0	45.7	-	-
HCM Lane LOS	B	A	E	-	-
HCM 95th %tile Q(veh)	0.4	-	5.3	-	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	94	80	113	47	76	435
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	12	10	12	12	10
Grade (%)	3%		6%			-7%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	0		0	0	
Taper Length (ft)	25				25	
Link Speed (mph)	35		35			35
Link Distance (ft)	1916		1868			763
Travel Time (s)	37.3		36.4			14.9
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	0%	2%	0%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	5.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	94	80	113	47	76	435
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, %	3	-	6	-	-	-7
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	0	0	0	2	0	1
Mvmt Flow	111	94	133	55	89	512

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	852	161	0	0	188	0
Stage 1	161	-	-	-	-	-
Stage 2	691	-	-	-	-	-
Critical Hdwy	7	6.5	-	-	4.1	-
Critical Hdwy Stg 1	6	-	-	-	-	-
Critical Hdwy Stg 2	6	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	289	877	-	-	1398	-
Stage 1	850	-	-	-	-	-
Stage 2	446	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	263	877	-	-	1398	-
Mov Cap-2 Maneuver	263	-	-	-	-	-
Stage 1	850	-	-	-	-	-
Stage 2	406	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	24.2	0	1.2
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	388	1398	-
HCM Lane V/C Ratio	-	-	0.528	0.064	-
HCM Control Delay (s)	-	-	24.2	7.8	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	3	0.2	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	289	0	0	366	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	12	12	10	12	12
Grade (%)	1%			1%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		1	0
Taper Length (ft)			25		25	
Link Speed (mph)	30			30	25	
Link Distance (ft)	559			2483	996	
Travel Time (s)	12.7			56.4	27.2	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	2%	2%	1%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	289	0	0	366	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	1	-	-	1	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	1	2	2	1	2	2
Mvmt Flow	314	0	0	398	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	314	0	712	314
Stage 1	-	-	-	-	314	-
Stage 2	-	-	-	-	398	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1246	-	399	726
Stage 1	-	-	-	-	741	-
Stage 2	-	-	-	-	678	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1246	-	399	726
Mov Cap-2 Maneuver	-	-	-	-	399	-
Stage 1	-	-	-	-	741	-
Stage 2	-	-	-	-	678	-

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

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1246	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	289	0	1	366	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (ft)	10	12	12	10	12	12
Grade (%)	1%			1%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		1	0
Taper Length (ft)			25		25	
Link Speed (mph)	30			30	25	
Link Distance (ft)	828			559	529	
Travel Time (s)	18.8			12.7	14.4	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	2%	2%	1%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	289	0	1	366	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	1	-	-	1	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	1	2	2	1	2	2
Mvmt Flow	314	0	1	398	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	314	0	714	314
Stage 1	-	-	-	-	314	-
Stage 2	-	-	-	-	400	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1246	-	398	726
Stage 1	-	-	-	-	741	-
Stage 2	-	-	-	-	677	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1246	-	398	726
Mov Cap-2 Maneuver	-	-	-	-	398	-
Stage 1	-	-	-	-	741	-
Stage 2	-	-	-	-	676	-

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

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1246	-
HCM Lane V/C Ratio	-	-	-	0.001	-
HCM Control Delay (s)	0	-	-	7.9	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	-	-	-	0	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	278	1	3	466	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		1	0
Taper Length (ft)			25		25	
Link Speed (mph)	30			30	30	
Link Distance (ft)	1012			462	720	
Travel Time (s)	23.0			10.5	16.4	
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 (%)	1%	2%	2%	1%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	278	1	3	466	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	1	2	2	1	2	2
Mvmt Flow	296	1	3	496	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	297	0	798	296
Stage 1	-	-	-	-	296	-
Stage 2	-	-	-	-	502	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1264	-	355	743
Stage 1	-	-	-	-	755	-
Stage 2	-	-	-	-	608	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1264	-	354	743
Mov Cap-2 Maneuver	-	-	-	-	354	-
Stage 1	-	-	-	-	755	-
Stage 2	-	-	-	-	606	-

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

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1264	-
HCM Lane V/C Ratio	-	-	-	0.003	-
HCM Control Delay (s)	0	-	-	7.9	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	-	-	-	0	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	278	0	0	466	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	12	12	10	12	12
Grade (%)	2%			1%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		1	0
Taper Length (ft)			25		25	
Link Speed (mph)	30			30	25	
Link Distance (ft)	1259			1012	553	
Travel Time (s)	28.6			23.0	15.1	
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%	2%	2%	1%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	278	0	0	466	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	2	-	-	1	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	1	2	2	1	2	2
Mvmt Flow	296	0	0	496	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	296	0	792	296
Stage 1	-	-	-	-	296	-
Stage 2	-	-	-	-	496	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1265	-	358	743
Stage 1	-	-	-	-	755	-
Stage 2	-	-	-	-	612	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1265	-	358	743
Mov Cap-2 Maneuver	-	-	-	-	358	-
Stage 1	-	-	-	-	755	-
Stage 2	-	-	-	-	612	-

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

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1265	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	0	240	0	1	800
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	10	12	12	10
Grade (%)	0%		6%			-7%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	0		0	0	
Taper Length (ft)	25				25	
Link Speed (mph)	25		30			30
Link Distance (ft)	290		411			317
Travel Time (s)	7.9		9.3			7.2
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	1%	2%	2%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	0	0	240	0	1	800
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	-	6	-	-	-7
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	2	2	1	2	2	1
Mvmt Flow	0	0	270	0	1	899

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1171	270	0	0	270	0
Stage 1	270	-	-	-	-	-
Stage 2	901	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	213	769	-	-	1293	-
Stage 1	775	-	-	-	-	-
Stage 2	396	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	213	769	-	-	1293	-
Mov Cap-2 Maneuver	213	-	-	-	-	-
Stage 1	775	-	-	-	-	-
Stage 2	395	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1293	-
HCM Lane V/C Ratio	-	-	-	0.001	-
HCM Control Delay (s)	-	-	0	7.8	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	-	0	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	0	240	1	1	800
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	10	12	12	10
Grade (%)	0%		3%			4%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	0		0	0	
Taper Length (ft)	25				25	
Link Speed (mph)	25		30			30
Link Distance (ft)	377		604			411
Travel Time (s)	10.3		13.7			9.3
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	1%	2%	2%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	0	0	240	1	1	800
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	-	3	-	-	4
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	2	2	1	2	2	1
Mvmt Flow	0	0	270	1	1	899

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1171	270	0	0	271	0
Stage 1	270	-	-	-	-	-
Stage 2	901	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	213	769	-	-	1292	-
Stage 1	775	-	-	-	-	-
Stage 2	396	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	213	769	-	-	1292	-
Mov Cap-2 Maneuver	213	-	-	-	-	-
Stage 1	775	-	-	-	-	-
Stage 2	395	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1292	-
HCM Lane V/C Ratio	-	-	-	0.001	-
HCM Control Delay (s)	-	-	0	7.8	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	-	0	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	0	194	1	0	509
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	10	12	12	10
Grade (%)	0%		2%			3%
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)	321		356			119
Travel Time (s)	8.8		6.9			2.3
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	1%	2%	2%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	0	0	194	1	0	509
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	-	2	-	-	3
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	2	2	1	2	2	1
Mvmt Flow	0	0	213	1	0	559

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	773	214	0	0	214	0
Stage 1	214	-	-	-	-	-
Stage 2	559	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	367	826	-	-	1356	-
Stage 1	822	-	-	-	-	-
Stage 2	572	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	367	826	-	-	1356	-
Mov Cap-2 Maneuver	367	-	-	-	-	-
Stage 1	822	-	-	-	-	-
Stage 2	572	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1356	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	0	194	0	1	509
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	10	12	12	10
Grade (%)	0%		-1%			-2%
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)	338		712			365
Travel Time (s)	9.2		13.9			7.1
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	1%	2%	2%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

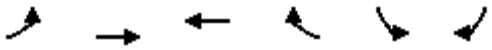
Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	0	0	194	0	1	509
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	-	-1	-	-	-2
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	2	2	1	2	2	1
Mvmt Flow	0	0	213	0	1	559

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	775	213	0	0	213	0
Stage 1	213	-	-	-	-	-
Stage 2	562	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	366	827	-	-	1357	-
Stage 1	823	-	-	-	-	-
Stage 2	571	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	366	827	-	-	1357	-
Mov Cap-2 Maneuver	366	-	-	-	-	-
Stage 1	823	-	-	-	-	-
Stage 2	570	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1357	-
HCM Lane V/C Ratio	-	-	-	0.001	-
HCM Control Delay (s)	-	-	0	7.7	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	-	0	-

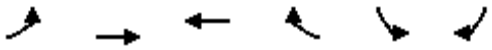


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	96	196	189	3	3	218
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	10	10	12	10	12
Grade (%)		-7%	11%		14%	
Storage Length (ft)	0			0	0	0
Storage Lanes	0			0	1	0
Taper Length (ft)	25				25	
Link Speed (mph)		30	30		25	
Link Distance (ft)		874	402		173	
Travel Time (s)		19.9	9.1		4.7	
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 (%)	0%	2%	1%	0%	0%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Shared Lane Traffic (%)						
Sign Control		Free	Stop		Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	344	111	121	127	163	469
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	12	10	12	12	10
Grade (%)	-8%		7%			12%
Storage Length (ft)	0	0		260	0	
Storage Lanes	1	0		1	0	
Taper Length (ft)	25				25	
Link Speed (mph)	35		35			35
Link Distance (ft)	1259		622			1047
Travel Time (s)	24.5		12.1			20.4
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	1%	0%	1%	0%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Shared Lane Traffic (%)						
Sign Control	Stop		Stop			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	142	489	212	19	136	338
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	9	10	12	10	12
Grade (%)		-6%	6%		-2%	
Storage Length (ft)	0			0	0	100
Storage Lanes	0			0	1	1
Taper Length (ft)	25				25	
Link Speed (mph)		35	35		35	
Link Distance (ft)		803	330		1290	
Travel Time (s)		15.6	6.4		25.1	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	0%	1%	0%	0%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Shared Lane Traffic (%)						
Sign Control		Free	Stop		Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Summary of All Intervals

Run Number	1	2	3	4	5		Avg
Start Time	4:50	4:50	4:50	4:50	4:50	4:50	4:50
End Time	6:00	6:00	6:00	6:00	6:00	6:00	6:00
Total Time (min)	70	70	70	70	70	70	70
Time Recorded (min)	60	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1	1
Vehs Entered	3607	3520	3510	3520	3505	3585	3539
Vehs Exited	3598	3495	3523	3496	3488	3559	3526
Starting Vehs	187	192	192	184	181	179	183
Ending Vehs	196	217	179	208	198	205	204
Travel Distance (mi)	3872	3788	3648	3706	3747	3824	3764
Travel Time (hr)	277.4	324.3	282.4	254.7	207.8	232.7	263.2
Total Delay (hr)	146.1	195.8	159.1	128.9	80.6	103.5	135.7
Total Stops	4205	4091	3725	3914	4208	4224	4061
Fuel Used (gal)	153.5	161.6	149.8	144.9	135.6	142.1	147.9

Interval #0 Information Seeding

Start Time	4:50
End Time	5:00
Total Time (min)	10

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	5:00
End Time	6:00
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5		Avg
Vehs Entered	3607	3520	3510	3520	3505	3585	3539
Vehs Exited	3598	3495	3523	3496	3488	3559	3526
Starting Vehs	187	192	192	184	181	179	183
Ending Vehs	196	217	179	208	198	205	204
Travel Distance (mi)	3872	3788	3648	3706	3747	3824	3764
Travel Time (hr)	277.4	324.3	282.4	254.7	207.8	232.7	263.2
Total Delay (hr)	146.1	195.8	159.1	128.9	80.6	103.5	135.7
Total Stops	4205	4091	3725	3914	4208	4224	4061
Fuel Used (gal)	153.5	161.6	149.8	144.9	135.6	142.1	147.9

3: Newtown Road & Radnor Chester Road Performance by lane

Lane	EB	WB	SB	All
Movements Served	LT	TR	LR	
Denied Del/Veh (s)				0.0
Total Del/Veh (s)	2.9	7.4	6.6	5.2

5: Darby-Paoli Road & Newtown Road Performance by lane

Lane	WB	NB	NB	SB	All
Movements Served	LR	T	R	LT	
Denied Del/Veh (s)					0.0
Total Del/Veh (s)	95.2	13.2	5.3	2.7	34.8

6: Darby-Paoli Road & Brooke Road Performance by lane

Lane	EB	WB	SB	SB	All
Movements Served	LT	TR	L	R	
Denied Del/Veh (s)					1.1
Total Del/Veh (s)	1.6	10.3	28.5	3.1	6.3

Total Zone Performance

Denied Del/Veh (s)	1.3
Total Del/Veh (s)	896.6

Intersection: 3: Newtown Road & Radnor Chester Road

Movement	EB	WB	SB
Directions Served	LT	TR	LR
Maximum Queue (ft)	102	93	111
Average Queue (ft)	6	46	62
95th Queue (ft)	50	74	103
Link Distance (ft)	829	277	101
Upstream Blk Time (%)			0
Queuing Penalty (veh)			1
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 5: Darby-Paoli Road & Newtown Road

Movement	WB	NB	NB
Directions Served	LR	T	R
Maximum Queue (ft)	723	89	86
Average Queue (ft)	358	47	42
95th Queue (ft)	704	75	68
Link Distance (ft)	1186	562	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			260
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 6: Darby-Paoli Road & Brooke Road

Movement	WB	SB	SB
Directions Served	TR	L	R
Maximum Queue (ft)	123	293	125
Average Queue (ft)	59	77	72
95th Queue (ft)	94	201	139
Link Distance (ft)	278	1261	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			100
Storage Blk Time (%)		1	7
Queuing Penalty (veh)		2	9

Zone Summary

Zone wide Queuing Penalty: 13

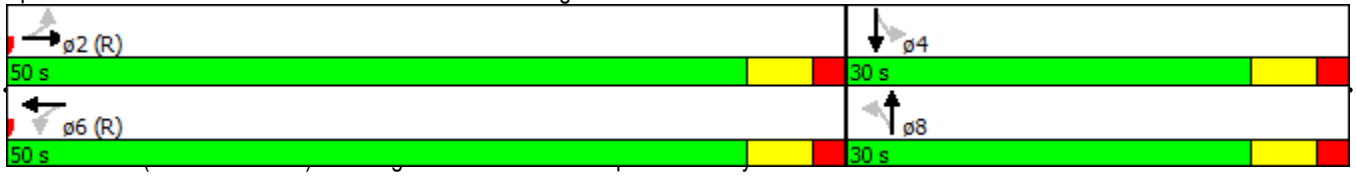
2020 BASE CONDITIONS

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	4	419	6	0	587	147	11	247	1	123	95	16
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	11	12	12	13	12	12	11	12	12	12	12
Grade (%)		-1%			1%			5%			-7%	
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		
Right Turn on Red			No			No			No			No
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		1638			378			173			1589	
Travel Time (s)		31.9			7.4			4.7			43.3	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	3%	17%	0%	2%	1%	18%	2%	0%	3%	0%	6%
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 (%)												
Turn Type	Perm	NA			NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	2	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	16.0	16.0		16.0	16.0		16.0	16.0		16.0	16.0	
Total Split (s)	50.0	50.0		50.0	50.0		30.0	30.0		30.0	30.0	
Total Split (%)	62.5%	62.5%		62.5%	62.5%		37.5%	37.5%		37.5%	37.5%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		-1.5			-1.5			-1.5			-1.5	
Total Lost Time (s)		4.5			4.5			4.5			4.5	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	Max	Max		Max	Max		Max	Max		Max	Max	

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 32 (40%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 50
Control Type: Pretimed

Splits and Phases: 1: Radnor Chester Road & Conestoga Road



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	4	419	6	0	587	147	11	247	1	123	95	16
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	2	0	0	6	0	0	0	0	0	44	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	180.9	175.4	180.9	179.1	183.0	179.1	175.5	171.0	175.5	186.3	182.7	186.3
Adj Flow Rate, veh/h	4	428	6	0	599	150	11	252	1	126	97	16
Adj No. of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	3	3	3	2	2	2	2	2	2	0	0	0
Cap, veh/h	47	933	11	0	835	191	55	527	2	155	249	21
Arrive On Green	0.55	0.57	0.55	0.00	0.57	0.57	0.30	0.32	0.30	0.30	0.32	0.30
Sat Flow, veh/h	3	1717	24	0	1413	354	27	1666	6	557	555	80
Grp Volume(v), veh/h	438	0	0	0	0	749	264	0	0	239	0	0
Grp Sat Flow(s),veh/h/ln	1744	0	0	0	0	1767	1699	0	0	1192	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	25.4	0.0	0.0	0.0	5.6	0.0	0.0
Cycle Q Clear(g_c), s	11.7	0.0	0.0	0.0	0.0	25.4	10.1	0.0	0.0	15.7	0.0	0.0
Prop In Lane	0.01		0.01	0.00		0.20	0.04		0.00	0.53		0.07
Lane Grp Cap(c), veh/h	1000	0	0	0	0	1007	552	0	0	500	0	0
V/C Ratio(X)	0.44	0.00	0.00	0.00	0.00	0.74	0.48	0.00	0.00	0.48	0.00	0.00
Avail Cap(c_a), veh/h	1005	0	0	0	0	1005	557	0	0	426	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	10.2	0.0	0.0	0.0	0.0	13.3	22.0	0.0	0.0	26.4	0.0	0.0
Incr Delay (d2), s/veh	1.4	0.0	0.0	0.0	0.0	5.0	2.9	0.0	0.0	3.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.1	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	107.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	10.6	0.0	0.0	0.0	0.0	21.1	9.1	0.0	0.0	29.4	0.0	0.0
LnGrp Delay(d),s/veh	11.6	0.0	0.0	0.0	0.0	19.3	25.0	0.0	0.0	136.7	0.0	0.0
LnGrp LOS	B					B	C			F		
Approach Vol, veh/h		438			749			264			239	
Approach Delay, s/veh		11.6			19.3			25.0			136.7	
Approach LOS		B			B			C			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		50.0		30.0		50.0		30.0
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0
Max Green Setting (Gmax), s		44.0		24.0		44.0		24.0
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0		0.0
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	34.8
HCM 2010 LOS	C

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	542	0	136	734	0	327
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	10	12
Grade (%)	-2%			6%	-8%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		1	0
Taper Length (ft)			25		25	
Link Speed (mph)	35			35	35	
Link Distance (ft)	378			705	402	
Travel Time (s)	7.4			13.7	7.8	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	6%	0%	3%	3%	0%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

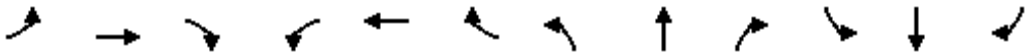
Intersection	
Int Delay, s/veh	4.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	542	0	136	734	0	327
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, %	-2	-	-	6	-8	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	6	0	3	3	0	2
Mvmt Flow	553	0	139	749	0	334

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	553	0	1580	553
Stage 1	-	-	-	-	553	-
Stage 2	-	-	-	-	1027	-
Critical Hdwy	-	-	4.13	-	4.8	5.42
Critical Hdwy Stg 1	-	-	-	-	3.8	-
Critical Hdwy Stg 2	-	-	-	-	3.8	-
Follow-up Hdwy	-	-	2.227	-	3.5	3.318
Pot Cap-1 Maneuver	-	-	1012	-	245	602
Stage 1	-	-	-	-	742	-
Stage 2	-	-	-	-	550	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1012	-	187	602
Mov Cap-2 Maneuver	-	-	-	-	187	-
Stage 1	-	-	-	-	742	-
Stage 2	-	-	-	-	421	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.4	18.2
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	602	-	-	1012	-
HCM Lane V/C Ratio	0.554	-	-	0.137	-
HCM Control Delay (s)	18.2	-	-	9.1	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	3.4	-	-	0.5	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	120	550	0	0	235	24	1	0	4	22	0	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	10	12	12	10	12	12	8	12	12	10	12
Grade (%)		2%			-2%			-4%			-4%	
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)		35			35			25			25	
Link Distance (ft)		462			828			1001			1821	
Travel Time (s)		9.0			16.1			27.3			49.7	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	2%	0%	0%	3%	0%	0%	0%	0%	10%	0%	5%
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 (%)												
Sign Control		Free			Free			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR
Vol, veh/h	120	550	0	0	235	24	1	0	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-
Grade, %	-	2	-	-	-2	-	-	-4	-
Peak Hour Factor	83	83	83	83	83	83	83	83	83
Heavy Vehicles, %	1	2	0	0	3	0	0	0	0
Mvmt Flow	145	663	0	0	283	29	1	0	5

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	312	0	0	663	0	0	1274	1264	663
Stage 1	-	-	-	-	-	-	952	952	-
Stage 2	-	-	-	-	-	-	322	312	-
Critical Hdwy	4.11	-	-	4.1	-	-	6.3	5.7	5.8
Critical Hdwy Stg 1	-	-	-	-	-	-	5.3	4.7	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.3	4.7	-
Follow-up Hdwy	2.209	-	-	2.2	-	-	3.5	4	3.3
Pot Cap-1 Maneuver	1254	-	-	935	-	-	193	226	500
Stage 1	-	-	-	-	-	-	388	421	-
Stage 2	-	-	-	-	-	-	746	709	-
Platoon blocked, %		-	-		-	-			
Mov Cap-1 Maneuver	1254	-	-	935	-	-	155	185	500
Mov Cap-2 Maneuver	-	-	-	-	-	-	155	185	-
Stage 1	-	-	-	-	-	-	317	344	-
Stage 2	-	-	-	-	-	-	699	709	-

Approach	EB	WB	NB
HCM Control Delay, s	1.5	0	15.6
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	346	1254	-	-	935	-	-	329
HCM Lane V/C Ratio	0.017	0.115	-	-	-	-	-	0.227
HCM Control Delay (s)	15.6	8.2	0	-	0	-	-	19.1
HCM Lane LOS	C	A	A	-	A	-	-	C
HCM 95th %tile Q(veh)	0.1	0.4	-	-	0	-	-	0.9

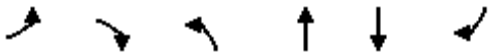
Intersection	
Int Delay, s/veh	

Movement	SBL	SBT	SBR
Vol, veh/h	22	0	40
Conflicting Peds, #/hr	0	0	0
Sign Control	Stop	Stop	Stop
RT Channelized	-	-	None
Storage Length	-	-	-
Veh in Median Storage, #	-	0	-
Grade, %	-	-4	-
Peak Hour Factor	83	83	83
Heavy Vehicles, %	10	0	5
Mvmt Flow	27	0	48

Major/Minor	Minor2		
Conflicting Flow All	1252	1250	298
Stage 1	298	298	-
Stage 2	954	952	-
Critical Hdwy	6.4	5.7	5.85
Critical Hdwy Stg 1	5.4	4.7	-
Critical Hdwy Stg 2	5.4	4.7	-
Follow-up Hdwy	3.59	4	3.345
Pot Cap-1 Maneuver	190	230	759
Stage 1	741	716	-
Stage 2	372	421	-
Platoon blocked, %			
Mov Cap-1 Maneuver	162	188	759
Mov Cap-2 Maneuver	162	188	-
Stage 1	605	716	-
Stage 2	301	344	-

Approach	SB
HCM Control Delay, s	19.1
HCM LOS	C

Minor Lane/Major Mvmt



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	361	138	67	448	220	124
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	12	12	10	10	12
Grade (%)	0%			-1%	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)	649			119	180	
Travel Time (s)	17.7			2.3	3.5	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	3%	5%	4%	3%	5%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	146.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	361	138	67	448	220	124
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	-	-	-1	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	1	3	5	4	3	5
Mvmt Flow	406	155	75	503	247	139

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	971	317	387	0	-	0
Stage 1	317	-	-	-	-	-
Stage 2	654	-	-	-	-	-
Critical Hdwy	6.41	6.23	4.15	-	-	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.327	2.245	-	-	-
Pot Cap-1 Maneuver	~ 282	721	1155	-	-	-
Stage 1	741	-	-	-	-	-
Stage 2	519	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 257	721	1155	-	-	-
Mov Cap-2 Maneuver	~ 257	-	-	-	-	-
Stage 1	741	-	-	-	-	-
Stage 2	472	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	$ 397	1.1	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1155	-	313	-	-
HCM Lane V/C Ratio	0.065	-	1.791	-	-
HCM Control Delay (s)	8.3	0	$ 397	-	-
HCM Lane LOS	A	A	F	-	-
HCM 95th %tile Q(veh)	0.2	-	36.7	-	-

Notes

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

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	40	117	346	91	198	147
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	12	10	12	12	10
Grade (%)	3%		6%			-7%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	0		0	0	
Taper Length (ft)	25				25	
Link Speed (mph)	35		35			35
Link Distance (ft)	1916		1868			763
Travel Time (s)	37.3		36.4			14.9
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	5%	2%	4%	2%	1%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	6.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	40	117	346	91	198	147
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, %	3	-	6	-	-	-7
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	5	2	4	2	1	4
Mvmt Flow	47	136	402	106	230	171

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1086	455	0	0	508	0
Stage 1	455	-	-	-	-	-
Stage 2	631	-	-	-	-	-
Critical Hdwy	7.05	6.52	-	-	4.11	-
Critical Hdwy Stg 1	6.05	-	-	-	-	-
Critical Hdwy Stg 2	6.05	-	-	-	-	-
Follow-up Hdwy	3.545	3.318	-	-	2.209	-
Pot Cap-1 Maneuver	197	583	-	-	1062	-
Stage 1	586	-	-	-	-	-
Stage 2	472	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	150	583	-	-	1062	-
Mov Cap-2 Maneuver	150	-	-	-	-	-
Stage 1	586	-	-	-	-	-
Stage 2	359	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	27.8	0	5.4
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	336	1062	-
HCM Lane V/C Ratio	-	-	0.543	0.217	-
HCM Control Delay (s)	-	-	27.8	9.3	0
HCM Lane LOS	-	-	D	A	A
HCM 95th %tile Q(veh)	-	-	3.1	0.8	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	573	0	0	259	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	12	12	10	12	12
Grade (%)	1%			1%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		1	0
Taper Length (ft)			25		25	
Link Speed (mph)	30			30	25	
Link Distance (ft)	559			2483	996	
Travel Time (s)	12.7			56.4	27.2	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	2%	2%	3%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	573	0	0	259	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	1	-	-	1	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	3	2	2	3	2	2
Mvmt Flow	597	0	0	270	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	597	0	867	597
Stage 1	-	-	-	-	597	-
Stage 2	-	-	-	-	270	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	980	-	323	503
Stage 1	-	-	-	-	550	-
Stage 2	-	-	-	-	775	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	980	-	323	503
Mov Cap-2 Maneuver	-	-	-	-	323	-
Stage 1	-	-	-	-	550	-
Stage 2	-	-	-	-	775	-

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

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	980	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	573	0	0	259	0	1
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (ft)	10	12	12	10	12	12
Grade (%)	1%			1%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		1	0
Taper Length (ft)			25		25	
Link Speed (mph)	30			30	25	
Link Distance (ft)	828			559	529	
Travel Time (s)	18.8			12.7	14.4	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	2%	2%	3%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	573	0	0	259	0	1
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	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	3	2	2	3	2	2
Mvmt Flow	597	0	0	270	0	1

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	597	0	867	597
Stage 1	-	-	-	-	597	-
Stage 2	-	-	-	-	270	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	980	-	323	503
Stage 1	-	-	-	-	550	-
Stage 2	-	-	-	-	775	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	980	-	323	503
Mov Cap-2 Maneuver	-	-	-	-	323	-
Stage 1	-	-	-	-	550	-
Stage 2	-	-	-	-	775	-

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

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	503	-	-	980	-
HCM Lane V/C Ratio	0.002	-	-	-	-
HCM Control Delay (s)	12.2	-	-	0	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	670	0	0	275	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		1	0
Taper Length (ft)			25		25	
Link Speed (mph)	30			30	30	
Link Distance (ft)	1012			462	720	
Travel Time (s)	23.0			10.5	16.4	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	4%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	670	0	0	275	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	2	2	2	4	2	2
Mvmt Flow	684	0	0	281	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	684	0	965	684
Stage 1	-	-	-	-	684	-
Stage 2	-	-	-	-	281	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	909	-	283	449
Stage 1	-	-	-	-	501	-
Stage 2	-	-	-	-	767	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	909	-	283	449
Mov Cap-2 Maneuver	-	-	-	-	283	-
Stage 1	-	-	-	-	501	-
Stage 2	-	-	-	-	767	-

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

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	909	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	670	0	0	275	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	12	12	10	12	12
Grade (%)	2%			1%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		1	0
Taper Length (ft)			25		25	
Link Speed (mph)	30			30	25	
Link Distance (ft)	1259			1012	553	
Travel Time (s)	28.6			23.0	15.1	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	4%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	670	0	0	275	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	2	-	-	1	0	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	2	2	2	4	2	2
Mvmt Flow	684	0	0	281	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	684	0	965	684
Stage 1	-	-	-	-	684	-
Stage 2	-	-	-	-	281	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	909	-	283	449
Stage 1	-	-	-	-	501	-
Stage 2	-	-	-	-	767	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	909	-	283	449
Mov Cap-2 Maneuver	-	-	-	-	283	-
Stage 1	-	-	-	-	501	-
Stage 2	-	-	-	-	767	-

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

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	909	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	1	809	0	0	344
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	10	12	12	10
Grade (%)	0%		6%			-7%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	0		0	0	
Taper Length (ft)	25				25	
Link Speed (mph)	25		30			30
Link Distance (ft)	290		411			317
Travel Time (s)	7.9		9.3			7.2
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Growth Factor	300%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	0	1	809	0	0	344
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	-	6	-	-	-7
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1	909	0	0	387

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1296	909	0	0	909	0
Stage 1	909	-	-	-	-	-
Stage 2	387	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	179	333	-	-	749	-
Stage 1	393	-	-	-	-	-
Stage 2	686	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	179	333	-	-	749	-
Mov Cap-2 Maneuver	179	-	-	-	-	-
Stage 1	393	-	-	-	-	-
Stage 2	686	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15.8	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	333	749	-
HCM Lane V/C Ratio	-	-	0.003	-	-
HCM Control Delay (s)	-	-	15.8	0	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	1	1	809	0	0	344
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	10	12	12	10
Grade (%)	0%		3%			4%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	0		0	0	
Taper Length (ft)	25				25	
Link Speed (mph)	25		30			30
Link Distance (ft)	377		604			411
Travel Time (s)	10.3		13.7			9.3
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	1	1	809	0	0	344
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	-	3	-	-	4
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	1	909	0	0	387

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1296	909	0	0	909	0
Stage 1	909	-	-	-	-	-
Stage 2	387	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	179	333	-	-	749	-
Stage 1	393	-	-	-	-	-
Stage 2	686	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	179	333	-	-	749	-
Mov Cap-2 Maneuver	179	-	-	-	-	-
Stage 1	393	-	-	-	-	-
Stage 2	686	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	20.6	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	233	749	-
HCM Lane V/C Ratio	-	-	0.01	-	-
HCM Control Delay (s)	-	-	20.6	0	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	1	0	515	0	0	358
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	10	12	12	10
Grade (%)	0%		2%			3%
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)	321		356			119
Travel Time (s)	8.8		6.9			2.3
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	3%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	1	0	515	0	0	358
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	-	2	-	-	3
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	2	3	2	2	2
Mvmt Flow	1	0	585	0	0	407

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	992	585	0	0	585	0
Stage 1	585	-	-	-	-	-
Stage 2	407	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	272	511	-	-	990	-
Stage 1	557	-	-	-	-	-
Stage 2	672	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	272	511	-	-	990	-
Mov Cap-2 Maneuver	272	-	-	-	-	-
Stage 1	557	-	-	-	-	-
Stage 2	672	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	18.3	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	272	990	-
HCM Lane V/C Ratio	-	-	0.004	-	-
HCM Control Delay (s)	-	-	18.3	0	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	1	515	0	0	358
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	10	12	12	10
Grade (%)	0%		-1%			-2%
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)	338		712			365
Travel Time (s)	9.2		13.9			7.1
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	3%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

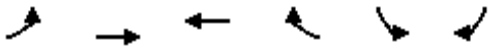
Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	0	1	515	0	0	358
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	-	-1	-	-	-2
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	2	3	2	2	2
Mvmt Flow	0	1	585	0	0	407

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	992	585	0	0	585	0
Stage 1	585	-	-	-	-	-
Stage 2	407	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	272	511	-	-	990	-
Stage 1	557	-	-	-	-	-
Stage 2	672	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	272	511	-	-	990	-
Mov Cap-2 Maneuver	272	-	-	-	-	-
Stage 1	557	-	-	-	-	-
Stage 2	672	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	511	990	-
HCM Lane V/C Ratio	-	-	0.002	-	-
HCM Control Delay (s)	-	-	12.1	0	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

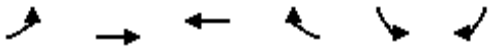


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	281	296	121	3	1	92
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	10	10	12	10	12
Grade (%)		-7%	11%		14%	
Storage Length (ft)	0			0	0	0
Storage Lanes	0			0	1	0
Taper Length (ft)	25				25	
Link Speed (mph)		30	30		25	
Link Distance (ft)		874	402		173	
Travel Time (s)		19.9	9.1		4.7	
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 (%)	2%	2%	3%	0%	0%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Shared Lane Traffic (%)						
Sign Control		Free	Stop		Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	123	110	375	336	259	182
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	12	10	12	12	10
Grade (%)	-8%		7%			12%
Storage Length (ft)	0	0		260	0	
Storage Lanes	1	0		1	0	
Taper Length (ft)	25				25	
Link Speed (mph)	35		35			35
Link Distance (ft)	1259		622			1047
Travel Time (s)	24.5		12.1			20.4
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 (%)	4%	1%	3%	2%	2%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Shared Lane Traffic (%)						
Sign Control	Stop		Stop			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	266	427	426	53	31	207
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	9	10	12	10	12
Grade (%)		-6%	6%		-2%	
Storage Length (ft)	0			0	0	100
Storage Lanes	0			0	1	1
Taper Length (ft)	25				25	
Link Speed (mph)		35	35		35	
Link Distance (ft)		803	330		1290	
Travel Time (s)		15.6	6.4		25.1	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	3%	3%	0%	3%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Shared Lane Traffic (%)						
Sign Control		Free	Stop		Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Summary of All Intervals

Run Number	1	2	3	4	5		Avg
Start Time	6:50	6:50	6:50	6:50	6:50	6:50	6:50
End Time	8:00	8:00	8:00	8:00	8:00	8:00	8:00
Total Time (min)	70	70	70	70	70	70	70
Time Recorded (min)	60	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1	1
Vehs Entered	3843	3890	3838	3825	3838	3877	3852
Vehs Exited	3852	3857	3809	3782	3866	3868	3839
Starting Vehs	243	178	198	184	220	179	198
Ending Vehs	234	211	227	227	192	188	212
Travel Distance (mi)	4288	4261	4144	4192	4246	4160	4215
Travel Time (hr)	265.7	242.8	249.8	213.3	224.4	230.7	237.8
Total Delay (hr)	119.7	97.6	107.8	70.3	79.5	89.4	94.1
Total Stops	4317	4252	4023	4045	4252	3994	4147
Fuel Used (gal)	160.0	154.3	152.3	146.8	150.7	149.4	152.3

Interval #0 Information Seeding

Start Time	6:50
End Time	7:00
Total Time (min)	10

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	7:00
End Time	8:00
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5		Avg
Vehs Entered	3843	3890	3838	3825	3838	3877	3852
Vehs Exited	3852	3857	3809	3782	3866	3868	3839
Starting Vehs	243	178	198	184	220	179	198
Ending Vehs	234	211	227	227	192	188	212
Travel Distance (mi)	4288	4261	4144	4192	4246	4160	4215
Travel Time (hr)	265.7	242.8	249.8	213.3	224.4	230.7	237.8
Total Delay (hr)	119.7	97.6	107.8	70.3	79.5	89.4	94.1
Total Stops	4317	4252	4023	4045	4252	3994	4147
Fuel Used (gal)	160.0	154.3	152.3	146.8	150.7	149.4	152.3

3: Newtown Road & Radnor Chester Road Performance by lane

Lane	EB	WB	SB	All
Movements Served	LT	TR	LR	
Denied Del/Veh (s)				0.0
Total Del/Veh (s)	16.6	10.6	4.8	14.0

5: Darby-Paoli Road & Newtown Road Performance by lane

Lane	WB	NB	NB	SB	All
Movements Served	LR	T	R	LT	
Denied Del/Veh (s)					0.0
Total Del/Veh (s)	12.6	17.5	7.7	2.1	9.8

6: Darby-Paoli Road & Brooke Road Performance by lane

Lane	EB	WB	SB	SB	All
Movements Served	LT	TR	L	R	
Denied Del/Veh (s)					0.8
Total Del/Veh (s)	2.1	15.2	40.9	5.2	7.8

Total Zone Performance

Denied Del/Veh (s)	1.2
Total Del/Veh (s)	165.9

Intersection: 3: Newtown Road & Radnor Chester Road

Movement	EB	B18	WB	SB
Directions Served	LT	T	TR	LR
Maximum Queue (ft)	447	42	101	76
Average Queue (ft)	121	4	43	36
95th Queue (ft)	428	53	75	69
Link Distance (ft)	829	2433	299	102
Upstream Blk Time (%)	2			0
Queuing Penalty (veh)	10			0
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 5: Darby-Paoli Road & Newtown Road

Movement	WB	NB	NB	SB
Directions Served	LR	T	R	LT
Maximum Queue (ft)	173	236	168	14
Average Queue (ft)	74	100	74	1
95th Queue (ft)	133	189	131	7
Link Distance (ft)	1186	562		1001
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)			260	
Storage Blk Time (%)		1	0	
Queuing Penalty (veh)		2	0	

Intersection: 6: Darby-Paoli Road & Brooke Road

Movement	EB	WB	SB	SB
Directions Served	LT	TR	L	R
Maximum Queue (ft)	16	215	190	124
Average Queue (ft)	1	106	41	64
95th Queue (ft)	9	179	133	133
Link Distance (ft)	781	278	1261	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				100
Storage Blk Time (%)			0	10
Queuing Penalty (veh)			0	3

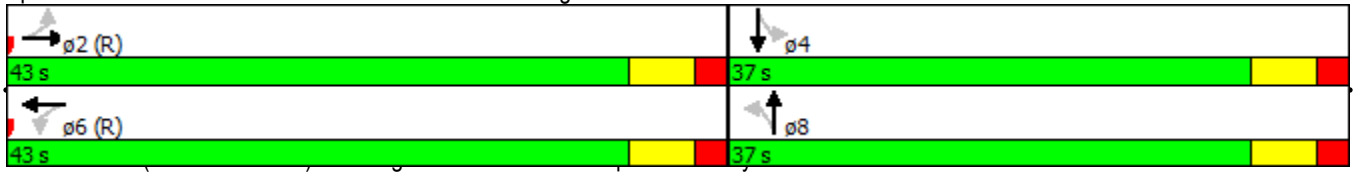
Zone Summary

Zone wide Queuing Penalty: 15

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	6	576	6	0	472	123	3	91	3	221	206	15
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	11	12	12	13	12	12	11	12	12	12	12
Grade (%)		-1%			1%			5%			-7%	
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		
Right Turn on Red			No			No			No			No
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		1638			378			173			1589	
Travel Time (s)		31.9			7.4			4.7			43.3	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	1%	0%	0%	0%	0%	0%	0%	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 (%)												
Turn Type	Perm	NA			NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	2	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	16.0	16.0		16.0	16.0		16.0	16.0		16.0	16.0	
Total Split (s)	43.0	43.0		43.0	43.0		37.0	37.0		37.0	37.0	
Total Split (%)	53.8%	53.8%		53.8%	53.8%		46.3%	46.3%		46.3%	46.3%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		-1.5			-1.5			-1.5			-1.5	
Total Lost Time (s)		4.5			4.5			4.5			4.5	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	Max	Max		Max	Max		Max	Max		Max	Max	

Intersection Summary	
Area Type:	Other
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 32 (40%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green	
Natural Cycle: 60	
Control Type: Pretimed	

Splits and Phases: 1: Radnor Chester Road & Conestoga Road



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	6	576	6	0	472	123	3	91	3	221	206	15
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	10	0	0	2	0	0	2	0	0	1	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	180.9	179.1	180.9	179.1	186.3	179.1	175.5	175.5	175.5	186.3	186.3	186.3
Adj Flow Rate, veh/h	6	594	6	0	487	127	3	94	3	228	212	15
Adj No. of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	1	1	1	0	0	0	0	0	0	0	0	0
Cap, veh/h	45	740	5	0	755	175	51	696	11	82	294	12
Arrive On Green	0.46	0.48	0.46	0.00	0.48	0.48	0.39	0.41	0.39	0.39	0.41	0.39
Sat Flow, veh/h	5	1760	18	0	1425	372	11	1677	52	773	768	53
Grp Volume(v), veh/h	606	0	0	0	0	614	100	0	0	455	0	0
Grp Sat Flow(s),veh/h/ln	1783	0	0	0	0	1797	1740	0	0	1593	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	21.5	0.0	0.0	0.0	16.3	0.0	0.0
Cycle Q Clear(g_c), s	21.7	0.0	0.0	0.0	0.0	21.5	2.9	0.0	0.0	19.2	0.0	0.0
Prop In Lane	0.01		0.01	0.00		0.21	0.03		0.03	0.50		0.03
Lane Grp Cap(c), veh/h	672	0	0	0	0	865	721	0	0	345	0	0
V/C Ratio(X)	0.90	0.00	0.00	0.00	0.00	0.71	0.14	0.00	0.00	1.32	0.00	0.00
Avail Cap(c_a), veh/h	870	0	0	0	0	865	721	0	0	685	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	21.2	0.0	0.0	0.0	0.0	16.5	15.1	0.0	0.0	25.1	0.0	0.0
Incr Delay (d2), s/veh	17.6	0.0	0.0	0.0	0.0	4.9	0.4	0.0	0.0	162.5	0.0	0.0
Initial Q Delay(d3),s/veh	16.2	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	7.9	0.0	0.0
%ile BackOfQ(95%),veh/ln	28.3	0.0	0.0	0.0	0.0	17.7	2.7	0.0	0.0	42.9	0.0	0.0
LnGrp Delay(d),s/veh	55.1	0.0	0.0	0.0	0.0	21.5	15.6	0.0	0.0	195.5	0.0	0.0
LnGrp LOS	E					C	B			F		
Approach Vol, veh/h		606			614			100			455	
Approach Delay, s/veh		55.1			21.5			15.6			195.5	
Approach LOS		E			C			B			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		43.0		37.0		43.0		37.0
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0
Max Green Setting (Gmax), s		37.0		31.0		37.0		31.0
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0		0.0
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	77.2
HCM 2010 LOS	E

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	800	0	218	595	0	226
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	10	12
Grade (%)	-2%			6%	-8%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		1	0
Taper Length (ft)			25		25	
Link Speed (mph)	35			35	35	
Link Distance (ft)	378			705	402	
Travel Time (s)	7.4			13.7	7.8	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	1%	0%	0%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

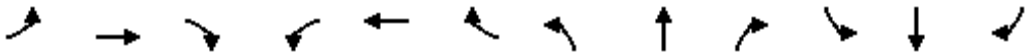
Intersection	
Int Delay, s/veh	4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	800	0	218	595	0	226
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, %	-2	-	-	6	-8	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	0	0	1	0	0	2
Mvmt Flow	825	0	225	613	0	233

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	825	0	1888	825
Stage 1	-	-	-	-	825	-
Stage 2	-	-	-	-	1063	-
Critical Hdwy	-	-	4.11	-	4.8	5.42
Critical Hdwy Stg 1	-	-	-	-	3.8	-
Critical Hdwy Stg 2	-	-	-	-	3.8	-
Follow-up Hdwy	-	-	2.209	-	3.5	3.318
Pot Cap-1 Maneuver	-	-	810	-	181	447
Stage 1	-	-	-	-	626	-
Stage 2	-	-	-	-	537	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	810	-	105	447
Mov Cap-2 Maneuver	-	-	-	-	105	-
Stage 1	-	-	-	-	626	-
Stage 2	-	-	-	-	311	-

Approach	EB	WB	NB
HCM Control Delay, s	0	3	21.5
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	447	-	-	810	-
HCM Lane V/C Ratio	0.521	-	-	0.277	-
HCM Control Delay (s)	21.5	-	-	11.1	0
HCM Lane LOS	C	-	-	B	A
HCM 95th %tile Q(veh)	2.9	-	-	1.1	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	23	264	0	1	357	20	0	1	1	33	1	124
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	10	12	12	10	12	12	8	12	12	10	12
Grade (%)		2%			-2%			-4%			-4%	
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)		35			35			25			25	
Link Distance (ft)		462			828			1001			1821	
Travel Time (s)		9.0			16.1			27.3			49.7	
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%	0%	0%	0%	0%	0%	0%	0%	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 (%)												
Sign Control		Free			Free			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	2.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR
Vol, veh/h	23	264	0	1	357	20	0	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-
Grade, %	-	2	-	-	-2	-	-	-4	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0
Mvmt Flow	25	284	0	1	384	22	0	1	1

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	405	0	0	284	0	0	797	741	284
Stage 1	-	-	-	-	-	-	333	333	-
Stage 2	-	-	-	-	-	-	464	408	-
Critical Hdwy	4.1	-	-	4.1	-	-	6.3	5.7	5.8
Critical Hdwy Stg 1	-	-	-	-	-	-	5.3	4.7	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.3	4.7	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3
Pot Cap-1 Maneuver	1165	-	-	1290	-	-	366	409	784
Stage 1	-	-	-	-	-	-	737	697	-
Stage 2	-	-	-	-	-	-	645	657	-
Platoon blocked, %		-	-		-	-			
Mov Cap-1 Maneuver	1165	-	-	1290	-	-	289	398	784
Mov Cap-2 Maneuver	-	-	-	-	-	-	289	398	-
Stage 1	-	-	-	-	-	-	719	680	-
Stage 2	-	-	-	-	-	-	519	656	-

Approach	EB	WB	NB
HCM Control Delay, s	0.7	0	11.8
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	528	1165	-	-	1290	-	-	592
HCM Lane V/C Ratio	0.004	0.021	-	-	0.001	-	-	0.287
HCM Control Delay (s)	11.8	8.2	0	-	7.8	0	-	13.5
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0	0.1	-	-	0	-	-	1.2

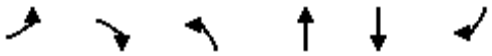
Intersection	
Int Delay, s/veh	

Movement	SBL	SBT	SBR
Vol, veh/h	33	1	124
Conflicting Peds, #/hr	0	0	0
Sign Control	Stop	Stop	Stop
RT Channelized	-	-	None
Storage Length	-	-	-
Veh in Median Storage, #	-	0	-
Grade, %	-	-4	-
Peak Hour Factor	93	93	93
Heavy Vehicles, %	0	0	0
Mvmt Flow	35	1	133

Major/Minor	Minor2		
Conflicting Flow All	731	730	395
Stage 1	397	397	-
Stage 2	334	333	-
Critical Hdwy	6.3	5.7	5.8
Critical Hdwy Stg 1	5.3	4.7	-
Critical Hdwy Stg 2	5.3	4.7	-
Follow-up Hdwy	3.5	4	3.3
Pot Cap-1 Maneuver	400	414	688
Stage 1	691	663	-
Stage 2	737	697	-
Platoon blocked, %			
Mov Cap-1 Maneuver	391	403	688
Mov Cap-2 Maneuver	391	403	-
Stage 1	674	662	-
Stage 2	716	680	-

Approach	SB
HCM Control Delay, s	13.5
HCM LOS	B

Minor Lane/Major Mvmt



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	136	63	89	111	462	363
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	12	12	10	10	12
Grade (%)	0%			-1%	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)	649			119	180	
Travel Time (s)	17.7			2.3	3.5	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	9.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	136	63	89	111	462	363
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	-	-	-1	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	148	68	97	121	502	395

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1013	699	897	0	-	0
Stage 1	699	-	-	-	-	-
Stage 2	314	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	267	443	765	-	-	-
Stage 1	497	-	-	-	-	-
Stage 2	745	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	231	443	765	-	-	-
Mov Cap-2 Maneuver	231	-	-	-	-	-
Stage 1	497	-	-	-	-	-
Stage 2	644	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	55	4.6	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	765	-	272	-	-
HCM Lane V/C Ratio	0.126	-	0.795	-	-
HCM Control Delay (s)	10.4	0	55	-	-
HCM Lane LOS	B	A	F	-	-
HCM 95th %tile Q(veh)	0.4	-	6.2	-	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	97	82	117	48	78	448
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	12	10	12	12	10
Grade (%)	3%		6%			-7%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	0		0	0	
Taper Length (ft)	25				25	
Link Speed (mph)	35		35			35
Link Distance (ft)	1916		1868			763
Travel Time (s)	37.3		36.4			14.9
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	0%	2%	0%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	6.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	97	82	117	48	78	448
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, %	3	-	6	-	-	-7
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	0	0	0	2	0	1
Mvmt Flow	114	96	138	56	92	527

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	877	166	0	0	194	0
Stage 1	166	-	-	-	-	-
Stage 2	711	-	-	-	-	-
Critical Hdwy	7	6.5	-	-	4.1	-
Critical Hdwy Stg 1	6	-	-	-	-	-
Critical Hdwy Stg 2	6	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	278	871	-	-	1391	-
Stage 1	845	-	-	-	-	-
Stage 2	436	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	252	871	-	-	1391	-
Mov Cap-2 Maneuver	252	-	-	-	-	-
Stage 1	845	-	-	-	-	-
Stage 2	395	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	26.3	0	1.2
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	374	1391	-
HCM Lane V/C Ratio	-	-	0.563	0.066	-
HCM Control Delay (s)	-	-	26.3	7.8	0
HCM Lane LOS	-	-	D	A	A
HCM 95th %tile Q(veh)	-	-	3.3	0.2	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	298	0	0	378	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	12	12	10	12	12
Grade (%)	1%			1%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		1	0
Taper Length (ft)			25		25	
Link Speed (mph)	30			30	25	
Link Distance (ft)	559			2483	996	
Travel Time (s)	12.7			56.4	27.2	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	2%	2%	1%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	298	0	0	378	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	1	-	-	1	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	1	2	2	1	2	2
Mvmt Flow	324	0	0	411	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	324	0	735	324
Stage 1	-	-	-	-	324	-
Stage 2	-	-	-	-	411	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1236	-	387	717
Stage 1	-	-	-	-	733	-
Stage 2	-	-	-	-	669	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1236	-	387	717
Mov Cap-2 Maneuver	-	-	-	-	387	-
Stage 1	-	-	-	-	733	-
Stage 2	-	-	-	-	669	-

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

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1236	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	298	0	1	378	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (ft)	10	12	12	10	12	12
Grade (%)	1%			1%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		1	0
Taper Length (ft)			25		25	
Link Speed (mph)	30			30	25	
Link Distance (ft)	828			559	529	
Travel Time (s)	18.8			12.7	14.4	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	2%	2%	1%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	298	0	1	378	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	1	-	-	1	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	1	2	2	1	2	2
Mvmt Flow	324	0	1	411	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	324	0	737	324
Stage 1	-	-	-	-	324	-
Stage 2	-	-	-	-	413	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1236	-	386	717
Stage 1	-	-	-	-	733	-
Stage 2	-	-	-	-	668	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1236	-	386	717
Mov Cap-2 Maneuver	-	-	-	-	386	-
Stage 1	-	-	-	-	733	-
Stage 2	-	-	-	-	667	-

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

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1236	-
HCM Lane V/C Ratio	-	-	-	0.001	-
HCM Control Delay (s)	0	-	-	7.9	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	-	-	-	0	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	287	1	3	481	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		1	0
Taper Length (ft)			25		25	
Link Speed (mph)	30			30	30	
Link Distance (ft)	1012			462	720	
Travel Time (s)	23.0			10.5	16.4	
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 (%)	1%	2%	2%	1%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	287	1	3	481	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	1	2	2	1	2	2
Mvmt Flow	305	1	3	512	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	306	0	824	306
Stage 1	-	-	-	-	306	-
Stage 2	-	-	-	-	518	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1255	-	343	734
Stage 1	-	-	-	-	747	-
Stage 2	-	-	-	-	598	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1255	-	342	734
Mov Cap-2 Maneuver	-	-	-	-	342	-
Stage 1	-	-	-	-	747	-
Stage 2	-	-	-	-	596	-

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

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1255	-
HCM Lane V/C Ratio	-	-	-	0.003	-
HCM Control Delay (s)	0	-	-	7.9	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	-	-	-	0	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	287	0	0	481	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	12	12	10	12	12
Grade (%)	2%			1%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		1	0
Taper Length (ft)			25		25	
Link Speed (mph)	30			30	25	
Link Distance (ft)	1259			1012	553	
Travel Time (s)	28.6			23.0	15.1	
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%	2%	2%	1%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	287	0	0	481	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	2	-	-	1	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	1	2	2	1	2	2
Mvmt Flow	305	0	0	512	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	305	0	817	305
Stage 1	-	-	-	-	305	-
Stage 2	-	-	-	-	512	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1256	-	346	735
Stage 1	-	-	-	-	748	-
Stage 2	-	-	-	-	602	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1256	-	346	735
Mov Cap-2 Maneuver	-	-	-	-	346	-
Stage 1	-	-	-	-	748	-
Stage 2	-	-	-	-	602	-

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

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1256	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	0	247	0	1	825
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	10	12	12	10
Grade (%)	0%		6%			-7%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	0		0	0	
Taper Length (ft)	25				25	
Link Speed (mph)	25		30			30
Link Distance (ft)	290		411			317
Travel Time (s)	7.9		9.3			7.2
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	1%	2%	2%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	0	0	247	0	1	825
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	-	6	-	-	-7
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	2	2	1	2	2	1
Mvmt Flow	0	0	278	0	1	927

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1207	278	0	0	278	0
Stage 1	278	-	-	-	-	-
Stage 2	929	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	203	761	-	-	1285	-
Stage 1	769	-	-	-	-	-
Stage 2	385	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	203	761	-	-	1285	-
Mov Cap-2 Maneuver	203	-	-	-	-	-
Stage 1	769	-	-	-	-	-
Stage 2	384	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1285	-
HCM Lane V/C Ratio	-	-	-	0.001	-
HCM Control Delay (s)	-	-	0	7.8	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	-	0	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	0	247	1	1	825
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	10	12	12	10
Grade (%)	0%		3%			4%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	0		0	0	
Taper Length (ft)	25				25	
Link Speed (mph)	25		30			30
Link Distance (ft)	377		604			411
Travel Time (s)	10.3		13.7			9.3
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	1%	2%	2%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	0	0	247	1	1	825
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	-	3	-	-	4
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	2	2	1	2	2	1
Mvmt Flow	0	0	278	1	1	927

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1207	278	0	0	279	0
Stage 1	278	-	-	-	-	-
Stage 2	929	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	203	761	-	-	1284	-
Stage 1	769	-	-	-	-	-
Stage 2	385	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	203	761	-	-	1284	-
Mov Cap-2 Maneuver	203	-	-	-	-	-
Stage 1	769	-	-	-	-	-
Stage 2	384	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1284	-
HCM Lane V/C Ratio	-	-	-	0.001	-
HCM Control Delay (s)	-	-	0	7.8	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	-	0	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	0	200	1	0	525
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	10	12	12	10
Grade (%)	0%		2%			3%
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)	321		356			119
Travel Time (s)	8.8		6.9			2.3
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	1%	2%	2%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	0	0	200	1	0	525
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	-	2	-	-	3
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	2	2	1	2	2	1
Mvmt Flow	0	0	220	1	0	577

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	797	220	0	0	221	0
Stage 1	220	-	-	-	-	-
Stage 2	577	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	356	820	-	-	1348	-
Stage 1	817	-	-	-	-	-
Stage 2	562	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	356	820	-	-	1348	-
Mov Cap-2 Maneuver	356	-	-	-	-	-
Stage 1	817	-	-	-	-	-
Stage 2	562	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1348	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	0	200	0	1	525
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	10	12	12	10
Grade (%)	0%		-1%			-2%
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)	338		712			365
Travel Time (s)	9.2		13.9			7.1
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	1%	2%	2%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

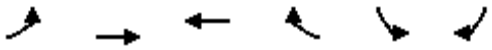
Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	0	0	200	0	1	525
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	-	-1	-	-	-2
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	2	2	1	2	2	1
Mvmt Flow	0	0	220	0	1	577

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	799	220	0	0	220	0
Stage 1	220	-	-	-	-	-
Stage 2	579	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	355	820	-	-	1349	-
Stage 1	817	-	-	-	-	-
Stage 2	560	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	355	820	-	-	1349	-
Mov Cap-2 Maneuver	355	-	-	-	-	-
Stage 1	817	-	-	-	-	-
Stage 2	559	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1349	-
HCM Lane V/C Ratio	-	-	-	0.001	-
HCM Control Delay (s)	-	-	0	7.7	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	-	0	-

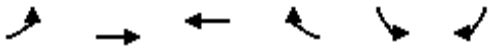


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	99	202	195	3	3	225
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	10	10	12	10	12
Grade (%)		-7%	11%		14%	
Storage Length (ft)	0			0	0	0
Storage Lanes	0			0	1	0
Taper Length (ft)	25				25	
Link Speed (mph)		30	30		25	
Link Distance (ft)		874	402		173	
Travel Time (s)		19.9	9.1		4.7	
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 (%)	0%	2%	1%	0%	0%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Shared Lane Traffic (%)						
Sign Control		Free	Stop		Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	355	114	125	131	168	484
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	12	10	12	12	10
Grade (%)	-8%		7%			12%
Storage Length (ft)	0	0		260	0	
Storage Lanes	1	0		1	0	
Taper Length (ft)	25				25	
Link Speed (mph)	35		35			35
Link Distance (ft)	1259		622			1047
Travel Time (s)	24.5		12.1			20.4
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	1%	0%	1%	0%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Shared Lane Traffic (%)						
Sign Control	Stop		Stop			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	146	504	219	20	140	348
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	9	10	12	10	12
Grade (%)		-6%	6%		-2%	
Storage Length (ft)	0			0	0	100
Storage Lanes	0			0	1	1
Taper Length (ft)	25				25	
Link Speed (mph)		35	35		35	
Link Distance (ft)		803	330		1290	
Travel Time (s)		15.6	6.4		25.1	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	0%	1%	0%	0%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Shared Lane Traffic (%)						
Sign Control		Free	Stop		Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Summary of All Intervals

Run Number	1	2	3	4	5		Avg
Start Time	4:50	4:50	4:50	4:50	4:50	4:50	4:50
End Time	6:00	6:00	6:00	6:00	6:00	6:00	6:00
Total Time (min)	70	70	70	70	70	70	70
Time Recorded (min)	60	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1	1
Vehs Entered	3591	3691	3660	3629	3688	3691	3656
Vehs Exited	3567	3619	3603	3613	3622	3637	3611
Starting Vehs	208	179	181	188	164	185	179
Ending Vehs	232	251	238	204	230	239	233
Travel Distance (mi)	3832	3918	3844	3889	3918	3949	3892
Travel Time (hr)	269.3	292.5	270.8	324.1	245.5	264.3	277.7
Total Delay (hr)	139.4	160.1	141.1	192.8	113.0	130.7	146.2
Total Stops	4147	4324	4063	3993	4395	4221	4191
Fuel Used (gal)	151.2	157.9	151.9	164.4	147.9	152.8	154.4

Interval #0 Information Seeding

Start Time	4:50
End Time	5:00
Total Time (min)	10

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	5:00
End Time	6:00
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5		Avg
Vehs Entered	3591	3691	3660	3629	3688	3691	3656
Vehs Exited	3567	3619	3603	3613	3622	3637	3611
Starting Vehs	208	179	181	188	164	185	179
Ending Vehs	232	251	238	204	230	239	233
Travel Distance (mi)	3832	3918	3844	3889	3918	3949	3892
Travel Time (hr)	269.3	292.5	270.8	324.1	245.5	264.3	277.7
Total Delay (hr)	139.4	160.1	141.1	192.8	113.0	130.7	146.2
Total Stops	4147	4324	4063	3993	4395	4221	4191
Fuel Used (gal)	151.2	157.9	151.9	164.4	147.9	152.8	154.4

3: Newtown Road & Radnor Chester Road Performance by lane

Lane	EB	WB	SB	All
Movements Served	LT	TR	LR	
Denied Del/Veh (s)				0.0
Total Del/Veh (s)	2.4	7.7	6.6	5.1

5: Darby-Paoli Road & Newtown Road Performance by lane

Lane	WB	NB	NB	SB	All
Movements Served	LR	T	R	LT	
Denied Del/Veh (s)					0.0
Total Del/Veh (s)	119.3	13.3	5.4	2.8	43.0

6: Darby-Paoli Road & Brooke Road Performance by lane

Lane	EB	WB	SB	SB	All
Movements Served	LT	TR	L	R	
Denied Del/Veh (s)					1.1
Total Del/Veh (s)	1.7	10.6	35.1	3.8	7.4

Total Zone Performance

Denied Del/Veh (s)	1.3
Total Del/Veh (s)	856.7

Intersection: 3: Newtown Road & Radnor Chester Road

Movement	EB	WB	SB
Directions Served	LT	TR	LR
Maximum Queue (ft)	38	86	112
Average Queue (ft)	2	46	63
95th Queue (ft)	21	71	103
Link Distance (ft)	829	277	101
Upstream Blk Time (%)			1
Queuing Penalty (veh)			1
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 5: Darby-Paoli Road & Newtown Road

Movement	WB	NB	NB
Directions Served	LR	T	R
Maximum Queue (ft)	879	87	72
Average Queue (ft)	445	47	42
95th Queue (ft)	915	74	65
Link Distance (ft)	1186	562	
Upstream Blk Time (%)	2		
Queuing Penalty (veh)	11		
Storage Bay Dist (ft)			260
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 6: Darby-Paoli Road & Brooke Road

Movement	WB	SB	SB
Directions Served	TR	L	R
Maximum Queue (ft)	116	311	125
Average Queue (ft)	58	91	81
95th Queue (ft)	96	218	150
Link Distance (ft)	278	1261	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			100
Storage Blk Time (%)		4	10
Queuing Penalty (veh)		15	14

Zone Summary

Zone wide Queuing Penalty: 42

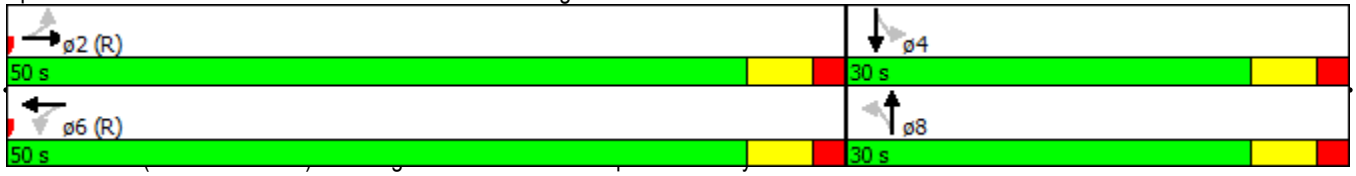
2020 PROJECTED CONDITIONS

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	4	419	7	0	587	147	15	254	1	123	97	16
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	11	12	12	13	12	12	11	12	12	12	12
Grade (%)		-1%			1%			5%			-7%	
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		
Right Turn on Red			No			No			No			No
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		1638			378			173			1589	
Travel Time (s)		31.9			7.4			4.7			43.3	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	3%	17%	0%	2%	1%	18%	2%	0%	3%	0%	6%
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 (%)												
Turn Type	Perm	NA			NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	2	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	16.0	16.0		16.0	16.0		16.0	16.0		16.0	16.0	
Total Split (s)	50.0	50.0		50.0	50.0		30.0	30.0		30.0	30.0	
Total Split (%)	62.5%	62.5%		62.5%	62.5%		37.5%	37.5%		37.5%	37.5%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		-1.5			-1.5			-1.5			-1.5	
Total Lost Time (s)		4.5			4.5			4.5			4.5	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	Max	Max		Max	Max		Max	Max		Max	Max	

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 32 (40%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 50
Control Type: Pretimed

Splits and Phases: 1: Radnor Chester Road & Conestoga Road



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	4	419	7	0	587	147	15	254	1	123	97	16
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	2	0	0	6	0	0	0	0	0	44	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	180.9	175.3	180.9	179.1	183.0	179.1	175.5	170.6	175.5	186.3	182.7	186.3
Adj Flow Rate, veh/h	4	428	7	0	599	150	15	259	1	126	99	16
Adj No. of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	3	3	3	2	2	2	2	2	2	0	0	0
Cap, veh/h	47	930	13	0	836	191	60	518	2	151	249	20
Arrive On Green	0.55	0.57	0.55	0.00	0.57	0.57	0.30	0.32	0.30	0.30	0.32	0.30
Sat Flow, veh/h	3	1712	28	0	1413	354	40	1646	6	541	553	78
Grp Volume(v), veh/h	439	0	0	0	0	749	275	0	0	241	0	0
Grp Sat Flow(s),veh/h/ln	1743	0	0	0	0	1767	1692	0	0	1171	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	25.4	0.0	0.0	0.0	5.6	0.0	0.0
Cycle Q Clear(g_c), s	11.7	0.0	0.0	0.0	0.0	25.4	10.6	0.0	0.0	16.3	0.0	0.0
Prop In Lane	0.01		0.02	0.00		0.20	0.05		0.00	0.52		0.07
Lane Grp Cap(c), veh/h	1000	0	0	0	0	1007	548	0	0	496	0	0
V/C Ratio(X)	0.44	0.00	0.00	0.00	0.00	0.74	0.50	0.00	0.00	0.49	0.00	0.00
Avail Cap(c_a), veh/h	1004	0	0	0	0	1005	555	0	0	420	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	10.2	0.0	0.0	0.0	0.0	13.3	22.2	0.0	0.0	26.6	0.0	0.0
Incr Delay (d2), s/veh	1.4	0.0	0.0	0.0	0.0	5.0	3.3	0.0	0.0	3.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.1	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	109.9	0.0	0.0
%ile BackOfQ(95%),veh/ln	10.1	0.0	0.0	0.0	0.0	21.1	9.5	0.0	0.0	19.9	0.0	0.0
LnGrp Delay(d),s/veh	11.6	0.0	0.0	0.0	0.0	19.3	25.5	0.0	0.0	139.9	0.0	0.0
LnGrp LOS	B					B	C			F		
Approach Vol, veh/h		439			749			275			241	
Approach Delay, s/veh		11.6			19.3			25.5			139.9	
Approach LOS		B			B			C			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		50.0		30.0		50.0		30.0
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0
Max Green Setting (Gmax), s		44.0		24.0		44.0		24.0
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0		0.0
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	35.4
HCM 2010 LOS	D

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	542	0	143	734	0	346
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	10	12
Grade (%)	-2%			6%	-8%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		1	0
Taper Length (ft)			25		25	
Link Speed (mph)	35			35	35	
Link Distance (ft)	378			705	402	
Travel Time (s)	7.4			13.7	7.8	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	6%	0%	3%	3%	0%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	4.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	542	0	143	734	0	346
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, %	-2	-	-	6	-8	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	6	0	3	3	0	2
Mvmt Flow	553	0	146	749	0	353

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	553	0	1594	553
Stage 1	-	-	-	-	553	-
Stage 2	-	-	-	-	1041	-
Critical Hdwy	-	-	4.13	-	4.8	5.42
Critical Hdwy Stg 1	-	-	-	-	3.8	-
Critical Hdwy Stg 2	-	-	-	-	3.8	-
Follow-up Hdwy	-	-	2.227	-	3.5	3.318
Pot Cap-1 Maneuver	-	-	1012	-	242	602
Stage 1	-	-	-	-	742	-
Stage 2	-	-	-	-	545	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1012	-	182	602
Mov Cap-2 Maneuver	-	-	-	-	182	-
Stage 1	-	-	-	-	742	-
Stage 2	-	-	-	-	410	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.5	19.1
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	602	-	-	1012	-
HCM Lane V/C Ratio	0.586	-	-	0.144	-
HCM Control Delay (s)	19.1	-	-	9.2	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	3.8	-	-	0.5	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	120	557	0	3	243	25	9	2	13	22	1	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	10	12	12	10	12	12	8	12	12	10	12
Grade (%)		2%			-2%			-4%			-4%	
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)		35			35			25			25	
Link Distance (ft)		462			828			1001			1821	
Travel Time (s)		9.0			16.1			27.3			49.7	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	2%	0%	0%	3%	0%	0%	0%	0%	10%	0%	5%
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 (%)												
Sign Control		Free			Free			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	2.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR
Vol, veh/h	120	557	0	3	243	25	9	2	13
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-
Grade, %	-	2	-	-	-2	-	-	-4	-
Peak Hour Factor	83	83	83	83	83	83	83	83	83
Heavy Vehicles, %	1	2	0	0	3	0	0	0	0
Mvmt Flow	145	671	0	4	293	30	11	2	16

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	323	0	0	671	0	0	1300	1290	671
Stage 1	-	-	-	-	-	-	960	960	-
Stage 2	-	-	-	-	-	-	340	330	-
Critical Hdwy	4.11	-	-	4.1	-	-	6.3	5.7	5.8
Critical Hdwy Stg 1	-	-	-	-	-	-	5.3	4.7	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.3	4.7	-
Follow-up Hdwy	2.209	-	-	2.2	-	-	3.5	4	3.3
Pot Cap-1 Maneuver	1242	-	-	929	-	-	186	220	495
Stage 1	-	-	-	-	-	-	385	418	-
Stage 2	-	-	-	-	-	-	732	699	-
Platoon blocked, %		-	-		-	-			
Mov Cap-1 Maneuver	1242	-	-	929	-	-	148	178	495
Mov Cap-2 Maneuver	-	-	-	-	-	-	148	178	-
Stage 1	-	-	-	-	-	-	313	340	-
Stage 2	-	-	-	-	-	-	680	696	-

Approach	EB	WB	NB
HCM Control Delay, s	1.5	0.1	21.7
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	244	1242	-	-	929	-	-	304
HCM Lane V/C Ratio	0.119	0.116	-	-	0.004	-	-	0.25
HCM Control Delay (s)	21.7	8.3	0	-	8.9	0	-	20.7
HCM Lane LOS	C	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.4	0.4	-	-	0	-	-	1

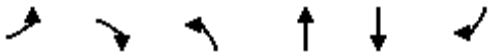
Intersection	
Int Delay, s/veh	

Movement	SBL	SBT	SBR
Vol, veh/h	22	1	40
Conflicting Peds, #/hr	0	0	0
Sign Control	Stop	Stop	Stop
RT Channelized	-	-	None
Storage Length	-	-	-
Veh in Median Storage, #	-	0	-
Grade, %	-	-4	-
Peak Hour Factor	83	83	83
Heavy Vehicles, %	10	0	5
Mvmt Flow	27	1	48

Major/Minor	Minor2		
Conflicting Flow All	1284	1275	308
Stage 1	315	315	-
Stage 2	969	960	-
Critical Hdwy	6.4	5.7	5.85
Critical Hdwy Stg 1	5.4	4.7	-
Critical Hdwy Stg 2	5.4	4.7	-
Follow-up Hdwy	3.59	4	3.345
Pot Cap-1 Maneuver	181	224	750
Stage 1	729	707	-
Stage 2	366	418	-
Platoon blocked, %			
Mov Cap-1 Maneuver	148	181	750
Mov Cap-2 Maneuver	148	181	-
Stage 1	593	703	-
Stage 2	286	340	-

Approach	SB
HCM Control Delay, s	20.7
HCM LOS	C

Minor Lane/Major Mvmt



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	363	138	68	451	222	130
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	12	12	10	10	12
Grade (%)	0%			-1%	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)	649			119	180	
Travel Time (s)	17.7			2.3	3.5	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	3%	5%	4%	3%	5%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	152.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	363	138	68	451	222	130
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	-	-	-1	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	1	3	5	4	3	5
Mvmt Flow	408	155	76	507	249	146

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	982	322	396	0	-	0
Stage 1	322	-	-	-	-	-
Stage 2	660	-	-	-	-	-
Critical Hdwy	6.41	6.23	4.15	-	-	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.327	2.245	-	-	-
Pot Cap-1 Maneuver	~ 277	717	1146	-	-	-
Stage 1	737	-	-	-	-	-
Stage 2	516	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 252	717	1146	-	-	-
Mov Cap-2 Maneuver	~ 252	-	-	-	-	-
Stage 1	737	-	-	-	-	-
Stage 2	469	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	$ 416.1	1.1	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1146	-	307	-	-
HCM Lane V/C Ratio	0.067	-	1.834	-	-
HCM Control Delay (s)	8.4	0	$ 416.1	-	-
HCM Lane LOS	A	A	F	-	-
HCM 95th %tile Q(veh)	0.2	-	37.6	-	-

Notes

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

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	40	118	347	91	199	149
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	12	10	12	12	10
Grade (%)	3%		6%			-7%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	0		0	0	
Taper Length (ft)	25				25	
Link Speed (mph)	35		35			35
Link Distance (ft)	1916		1868			763
Travel Time (s)	37.3		36.4			14.9
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	5%	2%	4%	2%	1%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	6.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	40	118	347	91	199	149
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, %	3	-	6	-	-	-7
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	5	2	4	2	1	4
Mvmt Flow	47	137	403	106	231	173

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1092	456	0	0	509	0
Stage 1	456	-	-	-	-	-
Stage 2	636	-	-	-	-	-
Critical Hdwy	7.05	6.52	-	-	4.11	-
Critical Hdwy Stg 1	6.05	-	-	-	-	-
Critical Hdwy Stg 2	6.05	-	-	-	-	-
Follow-up Hdwy	3.545	3.318	-	-	2.209	-
Pot Cap-1 Maneuver	195	582	-	-	1061	-
Stage 1	586	-	-	-	-	-
Stage 2	469	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	148	582	-	-	1061	-
Mov Cap-2 Maneuver	148	-	-	-	-	-
Stage 1	586	-	-	-	-	-
Stage 2	356	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	28.2	0	5.3
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	334	1061	-
HCM Lane V/C Ratio	-	-	0.55	0.218	-
HCM Control Delay (s)	-	-	28.2	9.3	0
HCM Lane LOS	-	-	D	A	A
HCM 95th %tile Q(veh)	-	-	3.1	0.8	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	587	2	2	264	7	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	12	12	10	12	12
Grade (%)	1%			1%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		1	0
Taper Length (ft)			25		25	
Link Speed (mph)	30			30	25	
Link Distance (ft)	559			2483	996	
Travel Time (s)	12.7			56.4	27.2	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	2%	2%	3%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	587	2	2	264	7	5
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	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	3	2	2	3	2	2
Mvmt Flow	611	2	2	275	7	5

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	614	0	892	613
Stage 1	-	-	-	-	613	-
Stage 2	-	-	-	-	279	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	965	-	312	492
Stage 1	-	-	-	-	541	-
Stage 2	-	-	-	-	768	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	965	-	311	492
Mov Cap-2 Maneuver	-	-	-	-	311	-
Stage 1	-	-	-	-	541	-
Stage 2	-	-	-	-	766	-

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

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	367	-	-	965	-
HCM Lane V/C Ratio	0.034	-	-	0.002	-
HCM Control Delay (s)	15.2	-	-	8.7	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	589	0	0	271	0	1
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (ft)	10	12	12	10	12	12
Grade (%)	1%			1%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		1	0
Taper Length (ft)			25		25	
Link Speed (mph)	30			30	25	
Link Distance (ft)	828			559	529	
Travel Time (s)	18.8			12.7	14.4	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	2%	2%	3%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	589	0	0	271	0	1
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	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	3	2	2	3	2	2
Mvmt Flow	614	0	0	282	0	1

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	614	0	896	614
Stage 1	-	-	-	-	614	-
Stage 2	-	-	-	-	282	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	965	-	311	492
Stage 1	-	-	-	-	540	-
Stage 2	-	-	-	-	766	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	965	-	311	492
Mov Cap-2 Maneuver	-	-	-	-	311	-
Stage 1	-	-	-	-	540	-
Stage 2	-	-	-	-	766	-

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

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	492	-	-	965	-
HCM Lane V/C Ratio	0.002	-	-	-	-
HCM Control Delay (s)	12.3	-	-	0	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	677	3	0	291	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		1	0
Taper Length (ft)			25		25	
Link Speed (mph)	30			30	30	
Link Distance (ft)	1012			462	720	
Travel Time (s)	23.0			10.5	16.4	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	4%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	677	3	0	291	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	2	2	2	4	2	2
Mvmt Flow	691	3	0	297	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	694	0	989	692
Stage 1	-	-	-	-	692	-
Stage 2	-	-	-	-	297	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	901	-	274	444
Stage 1	-	-	-	-	497	-
Stage 2	-	-	-	-	754	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	901	-	274	444
Mov Cap-2 Maneuver	-	-	-	-	274	-
Stage 1	-	-	-	-	497	-
Stage 2	-	-	-	-	754	-

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

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	901	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	677	1	1	290	3	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	12	12	10	12	12
Grade (%)	2%			1%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		1	0
Taper Length (ft)			25		25	
Link Speed (mph)	30			30	25	
Link Distance (ft)	1259			1012	553	
Travel Time (s)	28.6			23.0	15.1	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	4%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	677	1	1	290	3	3
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, %	2	-	-	1	0	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	2	2	2	4	2	2
Mvmt Flow	691	1	1	296	3	3

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	692	0	989	691
Stage 1	-	-	-	-	691	-
Stage 2	-	-	-	-	298	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	903	-	274	445
Stage 1	-	-	-	-	497	-
Stage 2	-	-	-	-	753	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	903	-	274	445
Mov Cap-2 Maneuver	-	-	-	-	274	-
Stage 1	-	-	-	-	497	-
Stage 2	-	-	-	-	752	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	15.8
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	339	-	-	903	-
HCM Lane V/C Ratio	0.018	-	-	0.001	-
HCM Control Delay (s)	15.8	-	-	9	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	1	815	0	0	353
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	10	12	12	10
Grade (%)	0%		6%			-7%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	0		0	0	
Taper Length (ft)	25				25	
Link Speed (mph)	25		30			30
Link Distance (ft)	290		411			317
Travel Time (s)	7.9		9.3			7.2
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Growth Factor	300%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	0	1	815	0	0	353
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	-	6	-	-	-7
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1	916	0	0	397

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1313	916	0	0	916	0
Stage 1	916	-	-	-	-	-
Stage 2	397	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	175	330	-	-	745	-
Stage 1	390	-	-	-	-	-
Stage 2	679	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	175	330	-	-	745	-
Mov Cap-2 Maneuver	175	-	-	-	-	-
Stage 1	390	-	-	-	-	-
Stage 2	679	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	330	745	-
HCM Lane V/C Ratio	-	-	0.003	-	-
HCM Control Delay (s)	-	-	15.9	0	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	1	2	814	0	1	352
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	10	12	12	10
Grade (%)	0%		3%			4%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	0		0	0	
Taper Length (ft)	25				25	
Link Speed (mph)	25		30			30
Link Distance (ft)	377		604			411
Travel Time (s)	10.3		13.7			9.3
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	1	2	814	0	1	352
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	-	3	-	-	4
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	2	915	0	1	396

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1313	915	0	0	915	0
Stage 1	915	-	-	-	-	-
Stage 2	398	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	175	331	-	-	745	-
Stage 1	390	-	-	-	-	-
Stage 2	678	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	175	331	-	-	745	-
Mov Cap-2 Maneuver	175	-	-	-	-	-
Stage 1	390	-	-	-	-	-
Stage 2	677	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	19.3	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	255	745	-
HCM Lane V/C Ratio	-	-	0.013	0.002	-
HCM Control Delay (s)	-	-	19.3	9.8	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	1	0	519	0	0	360
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	10	12	12	10
Grade (%)	0%		2%			3%
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)	321		356			119
Travel Time (s)	8.8		6.9			2.3
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	3%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	1	0	519	0	0	360
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	-	2	-	-	3
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	2	3	2	2	2
Mvmt Flow	1	0	590	0	0	409

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	999	590	0	0	590	0
Stage 1	590	-	-	-	-	-
Stage 2	409	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	270	508	-	-	985	-
Stage 1	554	-	-	-	-	-
Stage 2	671	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	270	508	-	-	985	-
Mov Cap-2 Maneuver	270	-	-	-	-	-
Stage 1	554	-	-	-	-	-
Stage 2	671	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	18.4	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	270	985	-
HCM Lane V/C Ratio	-	-	0.004	-	-
HCM Control Delay (s)	-	-	18.4	0	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	1	519	0	0	360
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	10	12	12	10
Grade (%)	0%		-1%			-2%
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)	338		712			365
Travel Time (s)	9.2		13.9			7.1
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	3%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

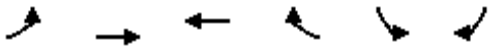
Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	0	1	519	0	0	360
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	-	-1	-	-	-2
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	2	3	2	2	2
Mvmt Flow	0	1	590	0	0	409

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	999	590	0	0	590	0
Stage 1	590	-	-	-	-	-
Stage 2	409	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	270	508	-	-	985	-
Stage 1	554	-	-	-	-	-
Stage 2	671	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	270	508	-	-	985	-
Mov Cap-2 Maneuver	270	-	-	-	-	-
Stage 1	554	-	-	-	-	-
Stage 2	671	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	508	985	-
HCM Lane V/C Ratio	-	-	0.002	-	-
HCM Control Delay (s)	-	-	12.1	0	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

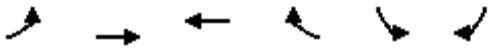


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	292	304	125	3	1	95
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	10	10	12	10	12
Grade (%)		-7%	11%		14%	
Storage Length (ft)	0			0	0	0
Storage Lanes	0			0	1	0
Taper Length (ft)	25				25	
Link Speed (mph)		30	30		25	
Link Distance (ft)		874	402		173	
Travel Time (s)		19.9	9.1		4.7	
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 (%)	2%	2%	3%	0%	0%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Shared Lane Traffic (%)						
Sign Control		Free	Stop		Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	132	119	376	341	262	182
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	12	10	12	12	10
Grade (%)	-8%		7%			12%
Storage Length (ft)	0	0		260	0	
Storage Lanes	1	0		1	0	
Taper Length (ft)	25				25	
Link Speed (mph)	35		35			35
Link Distance (ft)	1259		622			1047
Travel Time (s)	24.5		12.1			20.4
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 (%)	4%	1%	3%	2%	2%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Shared Lane Traffic (%)						
Sign Control	Stop		Stop			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	266	430	432	57	31	207
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	9	10	12	10	12
Grade (%)		-6%	6%		-2%	
Storage Length (ft)	0			0	0	100
Storage Lanes	0			0	1	1
Taper Length (ft)	25				25	
Link Speed (mph)		35	35		35	
Link Distance (ft)		803	330		1290	
Travel Time (s)		15.6	6.4		25.1	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	3%	3%	0%	3%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Shared Lane Traffic (%)						
Sign Control		Free	Stop		Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Summary of All Intervals

Run Number	2	3	4	5	6		Avg
Start Time	6:50	6:50	6:50	6:50	6:50	6:50	6:50
End Time	8:00	8:00	8:00	8:00	8:00	8:00	8:00
Total Time (min)	70	70	70	70	70	70	70
Time Recorded (min)	60	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1	1
Vehs Entered	3893	3826	3964	3939	4023	4020	3941
Vehs Exited	3903	3815	3975	3947	3960	3972	3930
Starting Vehs	198	200	217	221	155	195	201
Ending Vehs	188	211	206	213	218	243	211
Travel Distance (mi)	4206	4325	4264	4315	4333	4228	4278
Travel Time (hr)	199.0	269.4	246.8	261.0	236.8	218.1	238.5
Total Delay (hr)	55.4	122.3	101.2	113.3	88.5	73.3	92.3
Total Stops	4491	4184	4416	4203	4547	4441	4380
Fuel Used (gal)	143.8	161.3	155.7	160.4	154.9	148.7	154.1

Interval #0 Information Seeding

Start Time	6:50
End Time	7:00
Total Time (min)	10

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	7:00
End Time	8:00
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	2	3	4	5	6		Avg
Vehs Entered	3893	3826	3964	3939	4023	4020	3941
Vehs Exited	3903	3815	3975	3947	3960	3972	3930
Starting Vehs	198	200	217	221	155	195	201
Ending Vehs	188	211	206	213	218	243	211
Travel Distance (mi)	4206	4325	4264	4315	4333	4228	4278
Travel Time (hr)	199.0	269.4	246.8	261.0	236.8	218.1	238.5
Total Delay (hr)	55.4	122.3	101.2	113.3	88.5	73.3	92.3
Total Stops	4491	4184	4416	4203	4547	4441	4380
Fuel Used (gal)	143.8	161.3	155.7	160.4	154.9	148.7	154.1

3: Newtown Road & Radnor Chester Road Performance by lane

Lane	EB	WB	SB	All
Movements Served	LT	TR	LR	
Denied Del/Veh (s)				0.0
Total Del/Veh (s)	10.6	10.6	4.8	9.9

5: Darby-Paoli Road & Newtown Road Performance by lane

Lane	WB	NB	NB	SB	All
Movements Served	LR	T	R	LT	
Denied Del/Veh (s)					0.0
Total Del/Veh (s)	11.9	18.1	7.7	2.0	9.8

6: Darby-Paoli Road & Brooke Road Performance by lane

Lane	EB	WB	SB	SB	All
Movements Served	LT	TR	L	R	
Denied Del/Veh (s)					0.8
Total Del/Veh (s)	2.0	14.9	40.2	5.6	7.9

Total Zone Performance

Denied Del/Veh (s)	1.2
Total Del/Veh (s)	152.1

Intersection: 3: Newtown Road & Radnor Chester Road

Movement	EB	WB	SB
Directions Served	LT	TR	LR
Maximum Queue (ft)	345	86	78
Average Queue (ft)	102	44	37
95th Queue (ft)	276	73	68
Link Distance (ft)	829	299	102
Upstream Blk Time (%)			0
Queuing Penalty (veh)			0
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 5: Darby-Paoli Road & Newtown Road

Movement	WB	NB	NB	SB
Directions Served	LR	T	R	LT
Maximum Queue (ft)	160	224	166	12
Average Queue (ft)	74	104	77	1
95th Queue (ft)	128	184	134	7
Link Distance (ft)	1186	562		1001
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)			260	
Storage Blk Time (%)		0		
Queuing Penalty (veh)		1		

Intersection: 6: Darby-Paoli Road & Brooke Road

Movement	EB	WB	SB	SB
Directions Served	LT	TR	L	R
Maximum Queue (ft)	8	224	220	124
Average Queue (ft)	0	108	43	60
95th Queue (ft)	6	186	136	131
Link Distance (ft)	781	278	1261	
Upstream Blk Time (%)		0		
Queuing Penalty (veh)		0		
Storage Bay Dist (ft)				100
Storage Blk Time (%)			0	10
Queuing Penalty (veh)			0	3

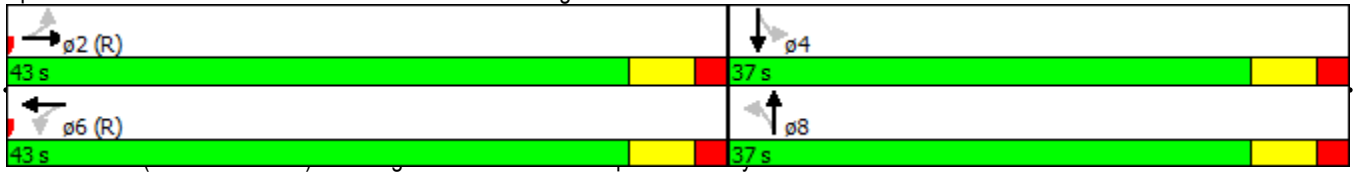
Zone Summary

Zone wide Queuing Penalty: 4

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	6	576	10	0	472	123	5	96	3	221	212	15
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	11	12	12	13	12	12	11	12	12	12	12
Grade (%)		-1%			1%			5%			-7%	
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		
Right Turn on Red			No			No			No			No
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		1638			378			173			1589	
Travel Time (s)		31.9			7.4			4.7			43.3	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	1%	0%	0%	0%	0%	0%	0%	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 (%)												
Turn Type	Perm	NA			NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	2	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	16.0	16.0		16.0	16.0		16.0	16.0		16.0	16.0	
Total Split (s)	43.0	43.0		43.0	43.0		37.0	37.0		37.0	37.0	
Total Split (%)	53.8%	53.8%		53.8%	53.8%		46.3%	46.3%		46.3%	46.3%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		-1.5			-1.5			-1.5			-1.5	
Total Lost Time (s)		4.5			4.5			4.5			4.5	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	Max	Max		Max	Max		Max	Max		Max	Max	

Intersection Summary	
Area Type:	Other
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 32 (40%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green	
Natural Cycle: 60	
Control Type: Pretimed	

Splits and Phases: 1: Radnor Chester Road & Conestoga Road



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	6	576	10	0	472	123	5	96	3	221	212	15
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	10	0	0	2	0	0	2	0	0	1	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	180.9	179.2	180.9	179.1	186.3	179.1	175.5	175.5	175.5	186.3	186.3	186.3
Adj Flow Rate, veh/h	6	594	10	0	487	127	5	99	3	228	219	15
Adj No. of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	1	1	1	0	0	0	0	0	0	0	0	0
Cap, veh/h	45	731	9	0	758	175	57	692	10	82	296	11
Arrive On Green	0.46	0.48	0.46	0.00	0.48	0.48	0.39	0.41	0.39	0.39	0.41	0.39
Sat Flow, veh/h	5	1747	29	0	1425	372	25	1660	49	759	778	52
Grp Volume(v), veh/h	610	0	0	0	0	614	107	0	0	462	0	0
Grp Sat Flow(s),veh/h/ln	1781	0	0	0	0	1797	1733	0	0	1588	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	21.5	0.0	0.0	0.0	16.7	0.0	0.0
Cycle Q Clear(g_c), s	22.0	0.0	0.0	0.0	0.0	21.5	3.1	0.0	0.0	19.8	0.0	0.0
Prop In Lane	0.01		0.02	0.00		0.21	0.05		0.03	0.49		0.03
Lane Grp Cap(c), veh/h	651	0	0	0	0	865	719	0	0	346	0	0
V/C Ratio(X)	0.94	0.00	0.00	0.00	0.00	0.71	0.15	0.00	0.00	1.33	0.00	0.00
Avail Cap(c_a), veh/h	869	0	0	0	0	865	719	0	0	683	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	21.7	0.0	0.0	0.0	0.0	16.5	15.2	0.0	0.0	25.1	0.0	0.0
Incr Delay (d2), s/veh	22.8	0.0	0.0	0.0	0.0	4.9	0.4	0.0	0.0	168.7	0.0	0.0
Initial Q Delay(d3),s/veh	26.9	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	7.7	0.0	0.0
%ile BackOfQ(95%),veh/ln	12.4	0.0	0.0	0.0	0.0	17.7	2.9	0.0	0.0	30.2	0.0	0.0
LnGrp Delay(d),s/veh	71.4	0.0	0.0	0.0	0.0	21.5	15.7	0.0	0.0	201.5	0.0	0.0
LnGrp LOS	E					C	B			F		
Approach Vol, veh/h		610			614			107			462	
Approach Delay, s/veh		71.4			21.5			15.7			201.5	
Approach LOS		E			C			B			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		43.0		37.0		43.0		37.0
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0
Max Green Setting (Gmax), s		37.0		31.0		37.0		31.0
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0		0.0
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	84.5
HCM 2010 LOS	F

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	800	0	239	595	0	239
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	10	12
Grade (%)	-2%			6%	-8%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		1	0
Taper Length (ft)			25		25	
Link Speed (mph)	35			35	35	
Link Distance (ft)	378			705	402	
Travel Time (s)	7.4			13.7	7.8	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	1%	0%	0%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	4.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	800	0	239	595	0	239
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, %	-2	-	-	6	-8	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	0	0	1	0	0	2
Mvmt Flow	825	0	246	613	0	246

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	825	0	1931	825
Stage 1	-	-	-	-	825	-
Stage 2	-	-	-	-	1106	-
Critical Hdwy	-	-	4.11	-	4.8	5.42
Critical Hdwy Stg 1	-	-	-	-	3.8	-
Critical Hdwy Stg 2	-	-	-	-	3.8	-
Follow-up Hdwy	-	-	2.209	-	3.5	3.318
Pot Cap-1 Maneuver	-	-	810	-	174	447
Stage 1	-	-	-	-	626	-
Stage 2	-	-	-	-	522	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	810	-	94	447
Mov Cap-2 Maneuver	-	-	-	-	94	-
Stage 1	-	-	-	-	626	-
Stage 2	-	-	-	-	281	-

Approach	EB	WB	NB
HCM Control Delay, s	0	3.3	22.5
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	447	-	-	810	-
HCM Lane V/C Ratio	0.551	-	-	0.304	-
HCM Control Delay (s)	22.5	-	-	11.4	0
HCM Lane LOS	C	-	-	B	A
HCM 95th %tile Q(veh)	3.3	-	-	1.3	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	24	273	0	0	375	21	6	2	6	34	0	128
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	10	12	12	10	12	12	8	12	12	10	12
Grade (%)		2%			-2%			-4%			-4%	
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)		35			35			25			25	
Link Distance (ft)		462			828			1001			1821	
Travel Time (s)		9.0			16.1			27.3			49.7	
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%	0%	0%	0%	0%	0%	0%	0%	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 (%)												
Sign Control		Free			Free			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	3.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR
Vol, veh/h	24	273	0	0	375	21	6	2	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-
Grade, %	-	2	-	-	-2	-	-	-4	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0
Mvmt Flow	26	294	0	0	403	23	6	2	6

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	426	0	0	294	0	0	828	771	294
Stage 1	-	-	-	-	-	-	345	345	-
Stage 2	-	-	-	-	-	-	483	426	-
Critical Hdwy	4.1	-	-	4.1	-	-	6.3	5.7	5.8
Critical Hdwy Stg 1	-	-	-	-	-	-	5.3	4.7	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.3	4.7	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3
Pot Cap-1 Maneuver	1144	-	-	1279	-	-	352	395	775
Stage 1	-	-	-	-	-	-	729	691	-
Stage 2	-	-	-	-	-	-	633	648	-
Platoon blocked, %		-	-		-	-			
Mov Cap-1 Maneuver	1144	-	-	1279	-	-	274	384	775
Mov Cap-2 Maneuver	-	-	-	-	-	-	274	384	-
Stage 1	-	-	-	-	-	-	709	672	-
Stage 2	-	-	-	-	-	-	503	648	-

Approach	EB	WB	NB
HCM Control Delay, s	0.7	0	14.3
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	402	1144	-	-	1279	-	-	574
HCM Lane V/C Ratio	0.037	0.023	-	-	-	-	-	0.303
HCM Control Delay (s)	14.3	8.2	0	-	0	-	-	14
HCM Lane LOS	B	A	A	-	A	-	-	B
HCM 95th %tile Q(veh)	0.1	0.1	-	-	0	-	-	1.3

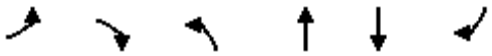
Intersection	
Int Delay, s/veh	

Movement	SBL	SBT	SBR
Vol, veh/h	34	0	128
Conflicting Peds, #/hr	0	0	0
Sign Control	Stop	Stop	Stop
RT Channelized	-	-	None
Storage Length	-	-	-
Veh in Median Storage, #	-	0	-
Grade, %	-	-4	-
Peak Hour Factor	93	93	93
Heavy Vehicles, %	0	0	0
Mvmt Flow	37	0	138

Major/Minor	Minor2		
Conflicting Flow All	764	760	415
Stage 1	415	415	-
Stage 2	349	345	-
Critical Hdwy	6.3	5.7	5.8
Critical Hdwy Stg 1	5.3	4.7	-
Critical Hdwy Stg 2	5.3	4.7	-
Follow-up Hdwy	3.5	4	3.3
Pot Cap-1 Maneuver	383	400	672
Stage 1	679	653	-
Stage 2	726	691	-
Platoon blocked, %			
Mov Cap-1 Maneuver	370	389	672
Mov Cap-2 Maneuver	370	389	-
Stage 1	661	653	-
Stage 2	698	672	-

Approach	SB
HCM Control Delay, s	14
HCM LOS	B

Minor Lane/Major Mvmt



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	142	64	89	116	466	366
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	12	12	10	10	12
Grade (%)	0%			-1%	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)	649			119	180	
Travel Time (s)	17.7			2.3	3.5	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	11.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	142	64	89	116	466	366
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	-	-	-1	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	154	70	97	126	507	398

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1025	705	904	0	-	0
Stage 1	705	-	-	-	-	-
Stage 2	320	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	263	440	761	-	-	-
Stage 1	494	-	-	-	-	-
Stage 2	741	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	227	440	761	-	-	-
Mov Cap-2 Maneuver	227	-	-	-	-	-
Stage 1	494	-	-	-	-	-
Stage 2	639	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	62.2	4.5	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	761	-	267	-	-
HCM Lane V/C Ratio	0.127	-	0.839	-	-
HCM Control Delay (s)	10.4	0	62.2	-	-
HCM Lane LOS	B	A	F	-	-
HCM 95th %tile Q(veh)	0.4	-	6.9	-	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	97	84	120	48	79	450
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	12	10	12	12	10
Grade (%)	3%		6%			-7%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	0		0	0	
Taper Length (ft)	25				25	
Link Speed (mph)	35		35			35
Link Distance (ft)	1916		1868			763
Travel Time (s)	37.3		36.4			14.9
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	0%	2%	0%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	6.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	97	84	120	48	79	450
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, %	3	-	6	-	-	-7
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	0	0	0	2	0	1
Mvmt Flow	114	99	141	56	93	529

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	884	169	0	0	198	0
Stage 1	169	-	-	-	-	-
Stage 2	715	-	-	-	-	-
Critical Hdwy	7	6.5	-	-	4.1	-
Critical Hdwy Stg 1	6	-	-	-	-	-
Critical Hdwy Stg 2	6	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	275	868	-	-	1387	-
Stage 1	842	-	-	-	-	-
Stage 2	433	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	249	868	-	-	1387	-
Mov Cap-2 Maneuver	249	-	-	-	-	-
Stage 1	842	-	-	-	-	-
Stage 2	392	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	26.9	0	1.2
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	372	1387	-
HCM Lane V/C Ratio	-	-	0.572	0.067	-
HCM Control Delay (s)	-	-	26.9	7.8	0
HCM Lane LOS	-	-	D	A	A
HCM 95th %tile Q(veh)	-	-	3.4	0.2	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	306	7	6	392	4	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	12	12	10	12	12
Grade (%)	1%			1%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		1	0
Taper Length (ft)			25		25	
Link Speed (mph)	30			30	25	
Link Distance (ft)	559			2483	996	
Travel Time (s)	12.7			56.4	27.2	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	2%	2%	1%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	306	7	6	392	4	4
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	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	1	2	2	1	2	2
Mvmt Flow	333	8	7	426	4	4

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	340	0	775	336
Stage 1	-	-	-	-	336	-
Stage 2	-	-	-	-	439	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1219	-	366	706
Stage 1	-	-	-	-	724	-
Stage 2	-	-	-	-	650	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1219	-	363	706
Mov Cap-2 Maneuver	-	-	-	-	363	-
Stage 1	-	-	-	-	724	-
Stage 2	-	-	-	-	645	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	12.7
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	479	-	-	1219	-
HCM Lane V/C Ratio	0.018	-	-	0.005	-
HCM Control Delay (s)	12.7	-	-	8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	313	0	1	396	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (ft)	10	12	12	10	12	12
Grade (%)	1%			1%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		1	0
Taper Length (ft)			25		25	
Link Speed (mph)	30			30	25	
Link Distance (ft)	828			559	529	
Travel Time (s)	18.8			12.7	14.4	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	2%	2%	1%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	313	0	1	396	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	1	-	-	1	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	1	2	2	1	2	2
Mvmt Flow	340	0	1	430	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	340	0	773	340
Stage 1	-	-	-	-	340	-
Stage 2	-	-	-	-	433	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1219	-	367	702
Stage 1	-	-	-	-	721	-
Stage 2	-	-	-	-	654	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1219	-	367	702
Mov Cap-2 Maneuver	-	-	-	-	367	-
Stage 1	-	-	-	-	721	-
Stage 2	-	-	-	-	653	-

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

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1219	-
HCM Lane V/C Ratio	-	-	-	0.001	-
HCM Control Delay (s)	0	-	-	8	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	-	-	-	0	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	297	11	16	496	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		1	0
Taper Length (ft)			25		25	
Link Speed (mph)	30			30	30	
Link Distance (ft)	1012			462	720	
Travel Time (s)	23.0			10.5	16.4	
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 (%)	1%	2%	2%	1%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	297	11	16	496	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	1	2	2	1	2	2
Mvmt Flow	316	12	17	528	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	328	0	884	322
Stage 1	-	-	-	-	322	-
Stage 2	-	-	-	-	562	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1232	-	316	719
Stage 1	-	-	-	-	735	-
Stage 2	-	-	-	-	571	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1232	-	310	719
Mov Cap-2 Maneuver	-	-	-	-	310	-
Stage 1	-	-	-	-	735	-
Stage 2	-	-	-	-	560	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1232	-
HCM Lane V/C Ratio	-	-	-	0.014	-
HCM Control Delay (s)	0	-	-	8	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	-	-	-	0	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	304	2	4	492	1	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	12	12	10	12	12
Grade (%)	2%			1%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		1	0
Taper Length (ft)			25		25	
Link Speed (mph)	30			30	25	
Link Distance (ft)	1259			1012	553	
Travel Time (s)	28.6			23.0	15.1	
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%	2%	2%	1%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	304	2	4	492	1	3
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, %	2	-	-	1	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	1	2	2	1	2	2
Mvmt Flow	323	2	4	523	1	3

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	326	0	856	324
Stage 1	-	-	-	-	324	-
Stage 2	-	-	-	-	532	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1234	-	328	717
Stage 1	-	-	-	-	733	-
Stage 2	-	-	-	-	589	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1234	-	326	717
Mov Cap-2 Maneuver	-	-	-	-	326	-
Stage 1	-	-	-	-	733	-
Stage 2	-	-	-	-	586	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	11.6
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	552	-	-	1234	-
HCM Lane V/C Ratio	0.008	-	-	0.003	-
HCM Control Delay (s)	11.6	-	-	7.9	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	0	259	0	1	833
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	10	12	12	10
Grade (%)	0%		6%			-7%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	0		0	0	
Taper Length (ft)	25				25	
Link Speed (mph)	25		30			30
Link Distance (ft)	290		411			317
Travel Time (s)	7.9		9.3			7.2
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	1%	2%	2%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	0	0	259	0	1	833
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	-	6	-	-	-7
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	2	2	1	2	2	1
Mvmt Flow	0	0	291	0	1	936

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1229	291	0	0	291	0
Stage 1	291	-	-	-	-	-
Stage 2	938	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	196	748	-	-	1271	-
Stage 1	759	-	-	-	-	-
Stage 2	381	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	196	748	-	-	1271	-
Mov Cap-2 Maneuver	196	-	-	-	-	-
Stage 1	759	-	-	-	-	-
Stage 2	380	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1271	-
HCM Lane V/C Ratio	-	-	-	0.001	-
HCM Control Delay (s)	-	-	0	7.8	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	-	0	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	1	258	1	2	832
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	10	12	12	10
Grade (%)	0%		3%			4%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	0		0	0	
Taper Length (ft)	25				25	
Link Speed (mph)	25		30			30
Link Distance (ft)	377		604			411
Travel Time (s)	10.3		13.7			9.3
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	1%	2%	2%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	0	1	258	1	2	832
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	-	3	-	-	4
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	2	2	1	2	2	1
Mvmt Flow	0	1	290	1	2	935

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1229	290	0	0	291	0
Stage 1	290	-	-	-	-	-
Stage 2	939	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	196	749	-	-	1271	-
Stage 1	759	-	-	-	-	-
Stage 2	380	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	195	749	-	-	1271	-
Mov Cap-2 Maneuver	195	-	-	-	-	-
Stage 1	759	-	-	-	-	-
Stage 2	379	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	749	1271	-
HCM Lane V/C Ratio	-	-	0.002	0.002	-
HCM Control Delay (s)	-	-	9.8	7.8	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	0	205	1	0	530
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	10	12	12	10
Grade (%)	0%		2%			3%
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)	321		356			119
Travel Time (s)	8.8		6.9			2.3
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	1%	2%	2%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	0	0	205	1	0	530
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	-	2	-	-	3
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	2	2	1	2	2	1
Mvmt Flow	0	0	225	1	0	582

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	808	226	0	0	226	0
Stage 1	226	-	-	-	-	-
Stage 2	582	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	350	813	-	-	1342	-
Stage 1	812	-	-	-	-	-
Stage 2	559	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	350	813	-	-	1342	-
Mov Cap-2 Maneuver	350	-	-	-	-	-
Stage 1	812	-	-	-	-	-
Stage 2	559	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1342	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	0	205	0	1	530
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	10	12	12	10
Grade (%)	0%		-1%			-2%
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)	338		712			365
Travel Time (s)	9.2		13.9			7.1
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	1%	2%	2%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

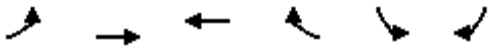
Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	0	0	205	0	1	530
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	-	-1	-	-	-2
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	2	2	1	2	2	1
Mvmt Flow	0	0	225	0	1	582

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	810	225	0	0	225	0
Stage 1	225	-	-	-	-	-
Stage 2	585	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	349	814	-	-	1344	-
Stage 1	812	-	-	-	-	-
Stage 2	557	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	349	814	-	-	1344	-
Mov Cap-2 Maneuver	349	-	-	-	-	-
Stage 1	812	-	-	-	-	-
Stage 2	556	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1344	-
HCM Lane V/C Ratio	-	-	-	0.001	-
HCM Control Delay (s)	-	-	0	7.7	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	-	0	-

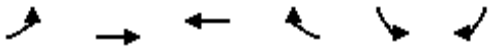


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	105	208	204	3	3	236
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	10	10	12	10	12
Grade (%)		-7%	11%		14%	
Storage Length (ft)	0			0	0	0
Storage Lanes	0			0	1	0
Taper Length (ft)	25				25	
Link Speed (mph)		30	30		25	
Link Distance (ft)		874	402		173	
Travel Time (s)		19.9	9.1		4.7	
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 (%)	0%	2%	1%	0%	0%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Shared Lane Traffic (%)						
Sign Control		Free	Stop		Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	362	119	126	141	176	486
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	12	10	12	12	10
Grade (%)	-8%		7%			12%
Storage Length (ft)	0	0		260	0	
Storage Lanes	1	0		1	0	
Taper Length (ft)	25				25	
Link Speed (mph)	35		35			35
Link Distance (ft)	1259		622			1047
Travel Time (s)	24.5		12.1			20.4
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	1%	0%	1%	0%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Shared Lane Traffic (%)						
Sign Control	Stop		Stop			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	146	510	223	23	143	348
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	9	10	12	10	12
Grade (%)		-6%	6%		-2%	
Storage Length (ft)	0			0	0	100
Storage Lanes	0			0	1	1
Taper Length (ft)	25				25	
Link Speed (mph)		35	35		35	
Link Distance (ft)		803	330		1290	
Travel Time (s)		15.6	6.4		25.1	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	0%	1%	0%	0%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Shared Lane Traffic (%)						
Sign Control		Free	Stop		Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Summary of All Intervals

Run Number	1	2	3	4	5		Avg
Start Time	4:50	4:50	4:50	4:50	4:50	4:50	4:50
End Time	6:00	6:00	6:00	6:00	6:00	6:00	6:00
Total Time (min)	70	70	70	70	70	70	70
Time Recorded (min)	60	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1	1
Vehs Entered	3669	3646	3583	3686	3655	3733	3660
Vehs Exited	3636	3574	3575	3616	3653	3684	3625
Starting Vehs	199	181	179	182	191	181	181
Ending Vehs	232	253	187	252	193	230	219
Travel Distance (mi)	3970	3903	3826	3904	3818	3975	3899
Travel Time (hr)	362.6	400.1	339.7	312.1	297.8	247.9	326.7
Total Delay (hr)	227.8	268.0	209.9	179.4	168.5	113.1	194.5
Total Stops	4573	4345	4039	4193	4186	4326	4272
Fuel Used (gal)	175.1	182.5	166.4	162.2	157.6	149.2	165.5

Interval #0 Information Seeding

Start Time	4:50
End Time	5:00
Total Time (min)	10

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	5:00
End Time	6:00
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5		Avg
Vehs Entered	3669	3646	3583	3686	3655	3733	3660
Vehs Exited	3636	3574	3575	3616	3653	3684	3625
Starting Vehs	199	181	179	182	191	181	181
Ending Vehs	232	253	187	252	193	230	219
Travel Distance (mi)	3970	3903	3826	3904	3818	3975	3899
Travel Time (hr)	362.6	400.1	339.7	312.1	297.8	247.9	326.7
Total Delay (hr)	227.8	268.0	209.9	179.4	168.5	113.1	194.5
Total Stops	4573	4345	4039	4193	4186	4326	4272
Fuel Used (gal)	175.1	182.5	166.4	162.2	157.6	149.2	165.5

3: Newtown Road & Radnor Chester Road Performance by lane

Lane	EB	WB	SB	All
Movements Served	LT	TR	LR	
Denied Del/Veh (s)				0.0
Total Del/Veh (s)	3.8	7.7	6.5	5.7

5: Darby-Paoli Road & Newtown Road Performance by lane

Lane	WB	NB	NB	SB	All
Movements Served	LR	T	R	LT	
Denied Del/Veh (s)					0.0
Total Del/Veh (s)	130.9	13.4	6.2	2.8	47.8

6: Darby-Paoli Road & Brooke Road Performance by lane

Lane	EB	WB	SB	SB	All
Movements Served	LT	TR	L	R	
Denied Del/Veh (s)					1.1
Total Del/Veh (s)	1.7	10.3	29.9	3.4	6.7

Total Zone Performance

Denied Del/Veh (s)	1.3
Total Del/Veh (s)	863.8

Intersection: 3: Newtown Road & Radnor Chester Road

Movement	EB	WB	SB
Directions Served	LT	TR	LR
Maximum Queue (ft)	75	99	110
Average Queue (ft)	9	48	64
95th Queue (ft)	81	79	103
Link Distance (ft)	829	277	101
Upstream Blk Time (%)			1
Queuing Penalty (veh)			2
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 5: Darby-Paoli Road & Newtown Road

Movement	WB	NB	NB
Directions Served	LR	T	R
Maximum Queue (ft)	1018	88	87
Average Queue (ft)	488	46	45
95th Queue (ft)	1035	74	74
Link Distance (ft)	1186	562	
Upstream Blk Time (%)	3		
Queuing Penalty (veh)	14		
Storage Bay Dist (ft)			260
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 6: Darby-Paoli Road & Brooke Road

Movement	WB	SB	SB
Directions Served	TR	L	R
Maximum Queue (ft)	106	247	125
Average Queue (ft)	57	81	79
95th Queue (ft)	88	182	145
Link Distance (ft)	278	1261	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			100
Storage Blk Time (%)		3	8
Queuing Penalty (veh)		9	12

Zone Summary

Zone wide Queuing Penalty: 36

ALL WAY STOP CONTROL ANALYSIS

Summary of All Intervals

Run Number	1	2	3	4	5		Avg
Start Time	6:50	6:50	6:50	6:50	6:50	6:50	6:50
End Time	8:00	8:00	8:00	8:00	8:00	8:00	8:00
Total Time (min)	70	70	70	70	70	70	70
Time Recorded (min)	60	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1	1
Vehs Entered	3892	3848	3926	3901	3899	4030	3912
Vehs Exited	3897	3890	3888	3913	3847	3997	3906
Starting Vehs	226	226	177	221	200	188	205
Ending Vehs	221	184	215	209	252	221	218
Travel Distance (mi)	4197	4277	4250	4263	4330	4279	4266
Travel Time (hr)	211.0	269.3	242.0	277.7	258.6	293.0	258.6
Total Delay (hr)	67.8	123.3	97.1	132.1	110.3	146.8	112.9
Total Stops	6681	6423	6434	6301	6481	6760	6511
Fuel Used (gal)	147.2	162.4	155.9	164.1	161.3	167.9	159.8

Interval #0 Information Seeding

Start Time	6:50
End Time	7:00
Total Time (min)	10

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	7:00
End Time	8:00
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5		Avg
Vehs Entered	3892	3848	3926	3901	3899	4030	3912
Vehs Exited	3897	3890	3888	3913	3847	3997	3906
Starting Vehs	226	226	177	221	200	188	205
Ending Vehs	221	184	215	209	252	221	218
Travel Distance (mi)	4197	4277	4250	4263	4330	4279	4266
Travel Time (hr)	211.0	269.3	242.0	277.7	258.6	293.0	258.6
Total Delay (hr)	67.8	123.3	97.1	132.1	110.3	146.8	112.9
Total Stops	6681	6423	6434	6301	6481	6760	6511
Fuel Used (gal)	147.2	162.4	155.9	164.1	161.3	167.9	159.8

5: Darby-Paoli Road & Newtown Road Performance by lane

Lane	WB	NB	NB	SB	All
Movements Served	LR	T	R	LT	
Denied Del/Veh (s)					0.0
Total Del/Veh (s)	8.0	11.3	6.1	11.5	9.6

6: Darby-Paoli Road & Brooke Road Performance by lane

Lane	EB	WB	SB	SB	All
Movements Served	LT	TR	L	R	
Denied Del/Veh (s)					0.8
Total Del/Veh (s)	21.2	9.9	145.9	15.2	19.2

Total Zone Performance

Denied Del/Veh (s)	1.2
Total Del/Veh (s)	230.7

Intersection: 5: Darby-Paoli Road & Newtown Road

Movement	WB	NB	NB	SB
Directions Served	LR	T	R	LT
Maximum Queue (ft)	121	131	118	146
Average Queue (ft)	62	73	64	82
95th Queue (ft)	104	111	100	127
Link Distance (ft)	1186	562		1001
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)			260	
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 6: Darby-Paoli Road & Brooke Road

Movement	EB	WB	SB	SB
Directions Served	LT	TR	L	R
Maximum Queue (ft)	438	161	347	125
Average Queue (ft)	168	80	100	84
95th Queue (ft)	333	127	296	156
Link Distance (ft)	781	278	1261	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				100
Storage Blk Time (%)			0	31
Queuing Penalty (veh)			0	10

Zone Summary

Zone wide Queuing Penalty: 10

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	40	118	347	91	199	149
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	12	10	12	12	10
Grade (%)	3%		6%			-7%
Link Speed (mph)	35		35			35
Link Distance (ft)	1916		1868			763
Travel Time (s)	37.3		36.4			14.9
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	5%	2%	4%	2%	1%	4%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	184	0	509	0	0	404
Sign Control	Stop		Stop			Stop

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Intersection Delay, s/veh	16.4
Intersection LOS	C

Movement	WBU	WBL	WBR	NBU	NBT	NBR	SBU	SBL	SBT
Vol, veh/h	0	40	118	0	347	91	0	199	149
Peak Hour Factor	0.92	0.86	0.86	0.92	0.86	0.86	0.92	0.86	0.86
Heavy Vehicles, %	2	5	2	2	4	2	2	1	4
Mvmt Flow	0	47	137	0	403	106	0	231	173
Number of Lanes	0	1	0	0	1	0	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay	11.2	18.9	15.6
HCM LOS	B	C	C

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	0%	25%	57%
Vol Thru, %	79%	0%	43%
Vol Right, %	21%	75%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	438	158	348
LT Vol	347	0	149
Through Vol	91	118	0
RT Vol	0	40	199
Lane Flow Rate	509	184	405
Geometry Grp	1	1	1
Degree of Util (X)	0.702	0.295	0.591
Departure Headway (Hd)	4.963	5.781	5.257
Convergence, Y/N	Yes	Yes	Yes
Cap	728	621	688
Service Time	2.991	3.823	3.288
HCM Lane V/C Ratio	0.699	0.296	0.589
HCM Control Delay	18.9	11.2	15.6
HCM Lane LOS	C	B	C
HCM 95th-tile Q	5.8	1.2	3.9

Summary of All Intervals

Run Number	1	2	3	4	5		Avg
Start Time	4:50	4:50	4:50	4:50	4:50	4:50	4:50
End Time	6:00	6:00	6:00	6:00	6:00	6:00	6:00
Total Time (min)	70	70	70	70	70	70	70
Time Recorded (min)	60	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1	1
Vehs Entered	3877	3841	3883	3849	3853	3880	3864
Vehs Exited	3811	3754	3782	3799	3684	3787	3769
Starting Vehs	208	175	210	225	164	200	193
Ending Vehs	274	262	311	275	333	293	289
Travel Distance (mi)	4082	4091	4129	3997	4029	4104	4072
Travel Time (hr)	278.4	288.4	251.4	228.2	276.7	260.4	263.9
Total Delay (hr)	138.7	148.0	109.7	91.5	138.4	119.8	124.3
Total Stops	7522	7229	7264	7231	7399	7391	7339
Fuel Used (gal)	159.8	162.5	152.8	146.4	157.4	157.0	156.0

Interval #0 Information Seeding

Start Time	4:50
End Time	5:00
Total Time (min)	10

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	5:00
End Time	6:00
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5		Avg
Vehs Entered	3877	3841	3883	3849	3853	3880	3864
Vehs Exited	3811	3754	3782	3799	3684	3787	3769
Starting Vehs	208	175	210	225	164	200	193
Ending Vehs	274	262	311	275	333	293	289
Travel Distance (mi)	4082	4091	4129	3997	4029	4104	4072
Travel Time (hr)	278.4	288.4	251.4	228.2	276.7	260.4	263.9
Total Delay (hr)	138.7	148.0	109.7	91.5	138.4	119.8	124.3
Total Stops	7522	7229	7264	7231	7399	7391	7339
Fuel Used (gal)	159.8	162.5	152.8	146.4	157.4	157.0	156.0

5: Darby-Paoli Road & Newtown Road Performance by lane

Lane	WB	NB	NB	SB	All
Movements Served	LR	T	R	LT	
Denied Del/Veh (s)					1.4
Total Del/Veh (s)	19.5	10.4	4.2	66.2	38.8

6: Darby-Paoli Road & Brooke Road Performance by lane

Lane	EB	WB	SB	SB	All
Movements Served	LT	TR	L	R	
Denied Del/Veh (s)					1.1
Total Del/Veh (s)	17.9	7.9	49.5	7.0	16.5

Total Zone Performance

Denied Del/Veh (s)	3.0
Total Del/Veh (s)	1484.1

Intersection: 5: Darby-Paoli Road & Newtown Road

Movement	WB	NB	NB	SB	B30
Directions Served	LR	T	R	LT	T
Maximum Queue (ft)	279	77	70	689	63
Average Queue (ft)	129	43	41	372	18
95th Queue (ft)	227	69	63	854	132
Link Distance (ft)	1186	562		1001	571
Upstream Blk Time (%)				9	
Queuing Penalty (veh)				59	
Storage Bay Dist (ft)			260		
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 6: Darby-Paoli Road & Brooke Road

Movement	EB	WB	SB	SB
Directions Served	LT	TR	L	R
Maximum Queue (ft)	340	91	485	125
Average Queue (ft)	136	52	132	93
95th Queue (ft)	271	77	375	156
Link Distance (ft)	781	278	1261	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				100
Storage Blk Time (%)			0	23
Queuing Penalty (veh)			0	33

Zone Summary

Zone wide Queuing Penalty: 93

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	97	84	120	48	79	450
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	12	10	12	12	10
Grade (%)	3%		6%			-7%
Link Speed (mph)	35		35			35
Link Distance (ft)	1916		1868			763
Travel Time (s)	37.3		36.4			14.9
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	0%	0%	0%	2%	0%	1%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	213	0	197	0	0	622
Sign Control	Stop		Stop			Stop

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Intersection Delay, s/veh	20.2
Intersection LOS	C

Movement	WBU	WBL	WBR	NBU	NBT	NBR	SBU	SBL	SBT
Vol, veh/h	0	97	84	0	120	48	0	79	450
Peak Hour Factor	0.92	0.85	0.85	0.92	0.85	0.85	0.92	0.85	0.85
Heavy Vehicles, %	2	0	0	2	0	2	2	0	1
Mvmt Flow	0	114	99	0	141	56	0	93	529
Number of Lanes	0	1	0	0	1	0	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay	11.6	10.2	26.4
HCM LOS	B	B	D

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	0%	54%	15%
Vol Thru, %	71%	0%	85%
Vol Right, %	29%	46%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	168	181	529
LT Vol	120	0	450
Through Vol	48	84	0
RT Vol	0	97	79
Lane Flow Rate	198	213	622
Geometry Grp	1	1	1
Degree of Util (X)	0.284	0.338	0.824
Departure Headway (Hd)	5.181	5.721	4.874
Convergence, Y/N	Yes	Yes	Yes
Cap	696	632	747
Service Time	3.197	3.73	2.874
HCM Lane V/C Ratio	0.284	0.337	0.833
HCM Control Delay	10.2	11.6	26.4
HCM Lane LOS	B	B	D
HCM 95th-tile Q	1.2	1.5	9

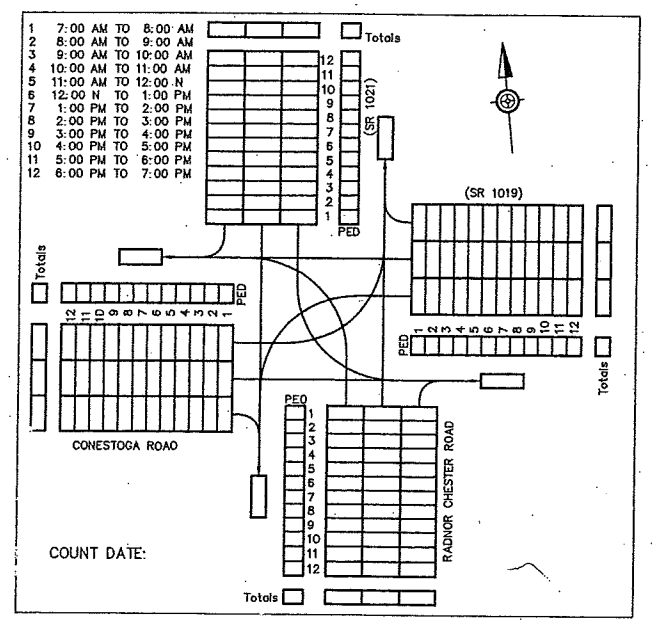
APPENDIX F

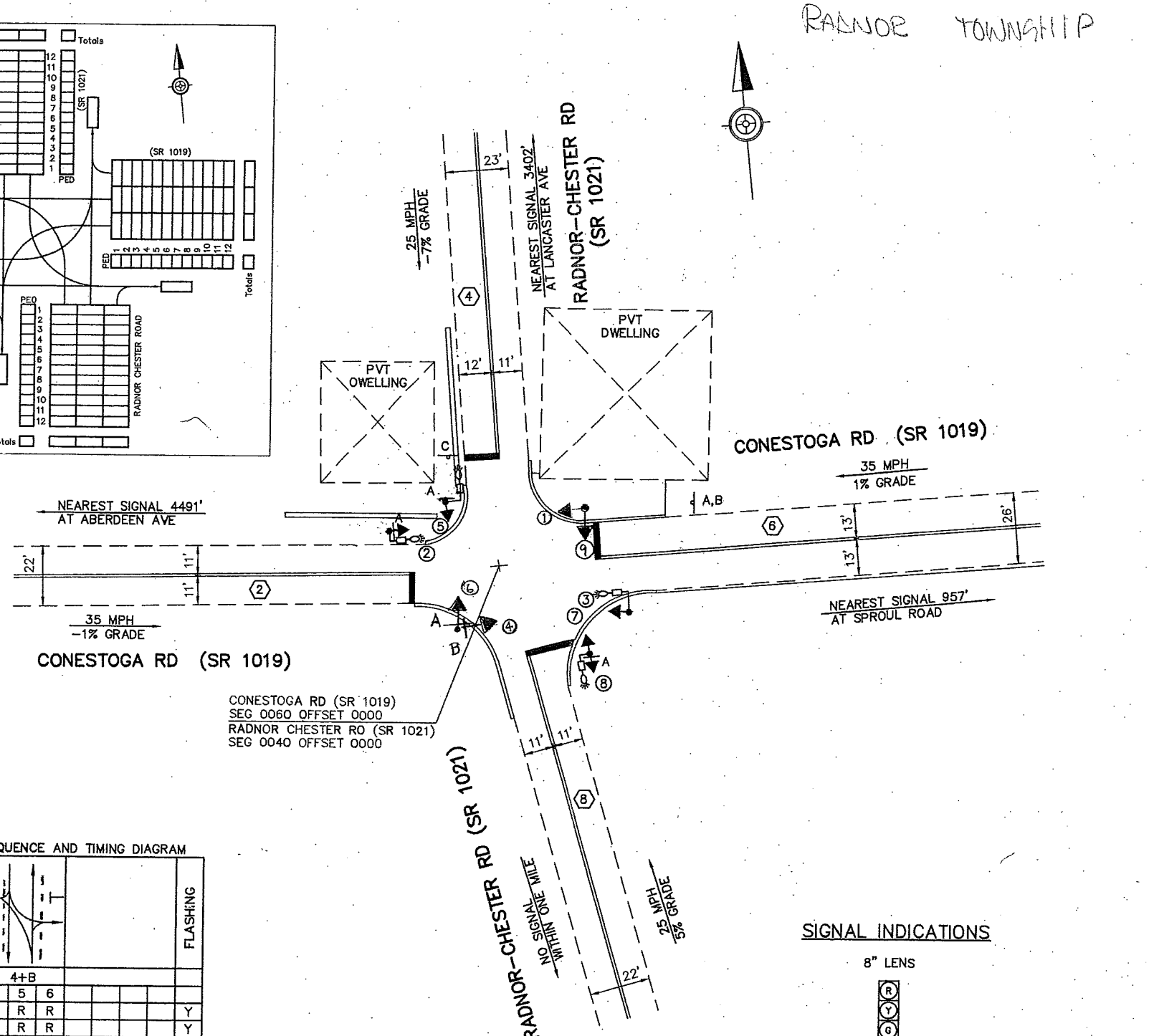
TRAFFIC SIGNAL DIAGRAM

U885

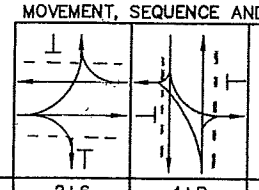
RADNOR TOWNSHIP

1	7:00 AM TO 8:00 AM	
2	8:00 AM TO 9:00 AM	
3	9:00 AM TO 10:00 AM	
4	10:00 AM TO 11:00 AM	
5	11:00 AM TO 12:00 N	
6	12:00 N TO 1:00 PM	
7	1:00 PM TO 2:00 PM	
8	2:00 PM TO 3:00 PM	
9	3:00 PM TO 4:00 PM	
10	4:00 PM TO 5:00 PM	
11	5:00 PM TO 6:00 PM	
12	6:00 PM TO 7:00 PM	





MOVEMENT, SEQUENCE AND TIMING DIAGRAM



PHASE	2+6			4+8								FLASHING
SIGNALS \ INTERVAL	1	2	3	4	5	6						
1	G	Y	R	R	R	R						Y
2	G	Y	R	R	R	R						Y
3	G	Y	R	R	R	R						Y
4	G	Y	R	R	R	R						Y
5	R	R	R	G	Y	R						R
6	R	R	R	G	Y	R						R
7	R	R	R	G	Y	R						R
8,9	R	R	R	G	Y	R						R

FIXED		4	2		4	2					
MINIMUM	10			10							
MAXIMUM	37			23							
MEMORY	MaR			MaR							
PROGRAM 1	36	4	2	22	4	2					
PROGRAM 2	42	4	2	26	4	2					
PROGRAM 3	42	4	2	26	4	2					

WEEKLY PROGRAM CHART

EVENT	DAY*	TIME	CYCLE	OFFSET**	PROGRAM	REMARKS
1	1-7	07D0	80	0	2	
2	1-7	D900	70	0	1	
3	1-7	16D0	80	D	3	
4	1-7	19D0				FREE

* DAY 1 = MONDAY
** REFERENCED TO START OF INTERVAL 1.

SIGNAL INDICATIONS

8" LENS

1,2,3,4, 5,6,7,B,9

SIGNALS TO BE EQUIPPED WITH TUNNEL VISORS AND LOUVERS

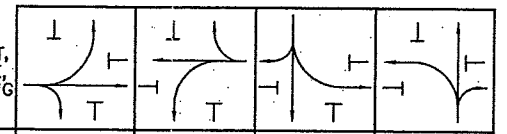
SCALE 1"=25'

SIGN TABULATION

PLAN SYMBOL	SERIES NUMBER	SIZE	REMARKS
A	R10-11	24"x30"	NO TURN ON RED
B	R3-2	24"X24"	NO LEFT TURN
C	R10-6L	24"X30"	STOP HERE ON RED

EMERGENCY PRE-EMPTION:

MOVEMENT, SEQUENCE, AND TIMING DIAGRAM



	2			6			4			8		
SIGNAL \ INTERVAL	7	8	9	10	11	12	13	14	15	16	17	18
1,3	G	Y◎	R◎	R	R	R	R	R	R	R	R	R
2,4	R	R	R	G	Y◎	R◎	R	R	R	R	R	R
6,7	R	R	R	R	R	R	G	Y	R	R	R	R
5,8,9	R	R	R	R	R	R	R	R	R	G	Y	R
FIXED TIME	*	4	2	*	4	2	*	4	2	*	4	2

◎ G IF FOLLOWED BY PHASE 2+6 INTERVAL 1

* FOR DURATION OF OPTICAL PRE-EMPTION

NOTE: IF PRE-EMPTION EQUIPMENT HAS ENCOOING CAPABILITIES FOR VEHICLE IDENTIFICATION, IT IS RECOMMENDED TO HAVE THE ZERO "OD" FEATURE ON, TO GIVE UNCODED EMITTERS THE ABILITY TO ACTIVATE THE EMERGENCY PRE-EMPTION.

EMERGENCY PRE-EMPTION NOTES:

- CONTROLLER TO BE EQUIPPED WITH EMERGENCY PRE-EMPTION FOR THE NORTHBOUND & SOUTHBOUND APPROACHES OF MANOR ROAD AND THE EASTBOUND & WESTBOUND APPROACHES OF KINGS HIGHWAY WITH A FAIL SAFE DEVICE FOR EACH DIRECTION OF OPERATION.
  THIS THIS EMERGENCY BEACON SHALL CONSIST OF A FLASHING WHITE FLOOD LIGHT, AND SHALL FLASH WHEN THE EMERGENCY VEHICLE HAS CONTROL OF THE INTERSECTION FOR THE APPROPRIATE APPROACH.
  LOCATION OF EMERGENCY VEHICLE DETECTORS ARE TO BE FIELD AOJUSTED TO ACHIEVE MAXIMUM OPERATION.
- THE SIGNALS, WHEN ACTIVATED BY EMERGENCY VEHICLES, SHALL TERMINATE ALL GREEN INDICATIONS IMMEDIATELY, FOLLOWED BY THE COMPLETE YELLOW AND RED CLEARANCE INTERVALS, ACCORDINGLY. THEN THE GREEN INTERVAL FOR THE PRE-EMPTED PHASE SHALL FOLLOW.
- IF THE SIGNALS, WHEN ACTIVATED BY AN EMERGENCY VEHICLE SHALL TIME OUT ALL YELLOW AND RED INDICATIONS, FOLLOWED BY THE GREEN INTERVAL OF THE PRE-EMPTION PHASE GOVERNED BY THE APPROACHING EMERGENCY VEHICLE.
- IF THE SIGNALS HAVE BEEN ACTUATED BY PEDESTRIAN PUSH BUTTON AND THE SIGNAL IS PRE-EMPTED, THE PEOESTRIAN TIME SHALL BE SPLIT BETWEEN PED "WALK (MAN)" AND PED "CLEAR (HAND)". THE PED "WALK (MAN)" INTERVAL SHALL TERMINATE IMMEDIATELY, FOLLOWED BY THE PED "CLEAR (HAND)" INTERVAL. THIS INTERVAL SHALL TIME OUT, FOLLOWED BY THE APPROPRIATE SELECTIVE CLEARANCES, BEFORE GOING INTO EMERGENCY PRE-EMPTION.
- IF THE SIGNALS, WHEN ACTIVATED BY AN EMERGENCY VEHICLE ARE FLASHING ALL SIGNALS SHALL REMAIN FLASHING.
- IF ADDITIONAL PRE-EMPTION PHASES ARE ACTIVATED WHILE IN PRE-EMPTION, THE ORIGINAL PRE-EMPTION PHASE SHALL TIME OUT BEFORE PROCEEDING TO THE NEXT PRE-EMPTION PHASE.
- UPON COMPLETION OF PRE-EMPTION PHASE, 2,4,6 OR 8 IN RETURNING TO NORMAL OPERATION, PHASE 2 + 6 INTERVAL 1 SHALL FOLLOW.
- IN EMERGENCY PRE-EMPTION, NO PRIORITY SHALL BE ESTABLISHED. PRE-EMPTION SHALL BE A "FIRST COME, FIRST SERVE" OPERATION.

LEGEND

- 20' — MAST ARM/ IDENTIFYING LENGTH
- (2) — VEHICULAR SIGNAL HEAD/ BACKPLATE/VISORS/ DIRECTIONAL ARROW/ IDENTIFYING NUMBER
- (2) — PEDESTRIAN SIGNAL HEAD/ IDENTIFYING NUMBER
- PEDESTRIAN PUSHBUTTON/ SIGN
- A — SIGN/IDENTIFYING LETTER
- 12'x6' — LOOP SENSOR/SIZE
- MICROWAVE DETECTOR
- EMERGENCY PREEMPTION FLASHING BEACON
- EMERGENCY PREEMPTION OETECTOR
- CURB CUT RAMP
- (6) — PHASE NUMBER
- PEDESTAL

GENERAL NOTES

NO MODIFICATIONS OF THIS INSTALLATION ARE PERM UNLESS PRIOR APPROVAL IS GRANTED IN WRITING BY REPRESENTATIVE OF THE DEPARTMENT OF TRANSPORT

ALL MAINTENANCE WORK INCLUDING TRIMMING OF TF NECESSARY FOR PROPER VISIBILITY OF THE SIGNALS I RESPONSIBILITY OF THE PERMITTEE.

ALL SIGNS AND PAVEMENT MARKINGS INDICATED ON DRAWING ARE CONSIDERED PART OF THE PERMIT AND BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH PUBLICATION NO. 6B.

POST MOUNTED SIGNALS SHALL BE INSTALLED WITH SIGNAL HEADS A MINIMUM OF 2 FEET BEHIND THE FA CURB OR THE EDGE OF THE SHOULDER. SUPPORT PC FOR OVERHEAD SIGNALS SHALL ALSO HAVE A MINIMU CLEARANCE HORIZONTALLY OF 2 FEET.

SIGNALS ERECTEO OVER THE ROADWAY SHALL HAVE MINIMUM VERTICAL CLEARANCE OF 16 FT, ABOVE THE ROADWAY. POST MOUNTED SIGNALS SHALL BE A MINI OF 8 FT. ABOVE THE SIDEWALK OR PAVEMENT.

ALL OVERHEAD SIGNALS MUST BE RIGIDLY MOUNTED AND BOTTOM, AND EQUIPPED WITH BACKPLATES.

THE MINIMUM HORIZONTAL DISTANCE BETWEEN SIGN/ MEASURED AT RIGHT ANGLES TO THE APPROACH SHAL 8 FEET.

EXACT LOCATION OF DETECTORS SHALL BE DETERMI PRIOR TO INSTALLATION BY A REPRESENTATIVE OF PE

CURBING TO BE INSTALLED BY MUNICIPALITY AND W NOTED, SHALL BE PLAIN CEMENT CONCRETE OR GRANI CURB, INSTALLED IN ACCORDANCE WITH DEPARTMENT SPECIFICATIONS FORM 408.

PRIOR TO INSTALLATION THE CONTRACTOR SHALL C WITH THE LOCAL OFFICIALS AND UTILITY COMPANIES T RESOLVE ANY PROBLEMS WHICH MAY BE CREATED DUE THE LOCATION OF UTILITIES.

THIS DRAWING CANNOT BE USED AS A CONSTRUCTI DRAWING UNLESS THE PERMITTEE COMPLIES WITH THE PROVISIONS OF ACT 187, PREVENTION OF DAMAGE TO UNDERGROUND UTILITIES, EFFECTIVE DATE DECEMBER 1 1996.

WHEN LIQUID FUELS MONEY IS USED, SIGNAL INSTAL MUST CONFORM TO FORM 408 AND A COPY OF THE PROPOSED SPECIFICATIONS MUST BE SUBMITTED TO TH DISTRICT TRAFFIC UNIT, FOR REVIEW, PRIOR TO BIDDIN

PERMITTEE SHALL BE OBTAIN A HIGHWAY OCCUPANC PERMIT FOR ANY CHANGES IN INTERSECTION GEOMETR REGARDING EXCAVATION.

CONDUIT INSTALLED IN BITUMINOUS ROADWAY LESS 5 YEARS OLD, OR CONCRETE ROADWAY REGARDLESS C MUST BE BOREO OR JACKED UNDER THE ROADWAY. I IN ACCORDANCE WITH TRAFFIC SIGNAL STANDARDS TC- SERIES.

PENNSYLVANIA DEPARTMENT OF TRANSPORTA
ENGINEERING DISTRICT 6-0

COUNTY: DELAWARE
MUNICIPALITY: RADNOR TOWNSHIP
INTERSECTION: CONESTOGA RD (SR 1019) & RADNOR CHESTER RD (SR

REVIEWED: DA
MUNICIPAL DFFICIAL DA
RECOMMENDED: MJH 7/2
MUNICIPAL SIGNALS ENGINEER DA
DISTRICT TRAFFIC ENGINEER DA

NO.	REVISION	DES. REVW.	DATE	REVW.	DATE	RECOM
1	TBC OPERATION					WJE
2	EMERGENCY PRE-EMPTION	CEC	8/2/04	MLK	9/15	
3						
4						
5						
6						
7						
8						

SHEET 2 OF 2 | PERMIT # 63-0885 | FILE # 088

APPENDIX G

AUXILIARY TURN LANE WARRANT ANALYSES

Left-Turn Lane Warrant Analysis

Two-Lane Highways

Based on PennDOT Publication 46 (October 2010 Edition), Section 11.17,

PROJECT INFORMATION

Project Number:	ESII.A.00001
Intersection:	Newtown Road & Eastern Main House Lot Driveway
Movement:	Left Turns to Main House Lot Driveway
Analysis Period:	2020 Projected (Build) Conditions - AM Peak Hour
Analyst:	SL

INPUTS

	Volume	Truck %	Terrain Type	T	PCE Volume
Advancing Volume (V_A) =	271	4%	Rolling	1.06	287
Opposing Volume (V_O) =	677	2%	Rolling	1.03	697
Number of Left Turns =	3	2%	Rolling	1.03	3
Speed Limit =	35		Type of Control:	Unsignalized	
Proportion of Left Turns =	1%		Cycle Length:	60	sec.

WARRANT CALCULATION

t_w = 3.43 sec — Limiting advancing volume = 868

t_A = 12.54 sec

t_{median} = 8.36 sec — Left turn lane warrants are for ρ > than

λ = 1.81 veh/hr — 0.0225 for 35 mph

μ = 736 veh/hr — ρ = 0.0025 **not satisfied**

STORAGE LENGTH CALCULATION

Turn Demand Volume:

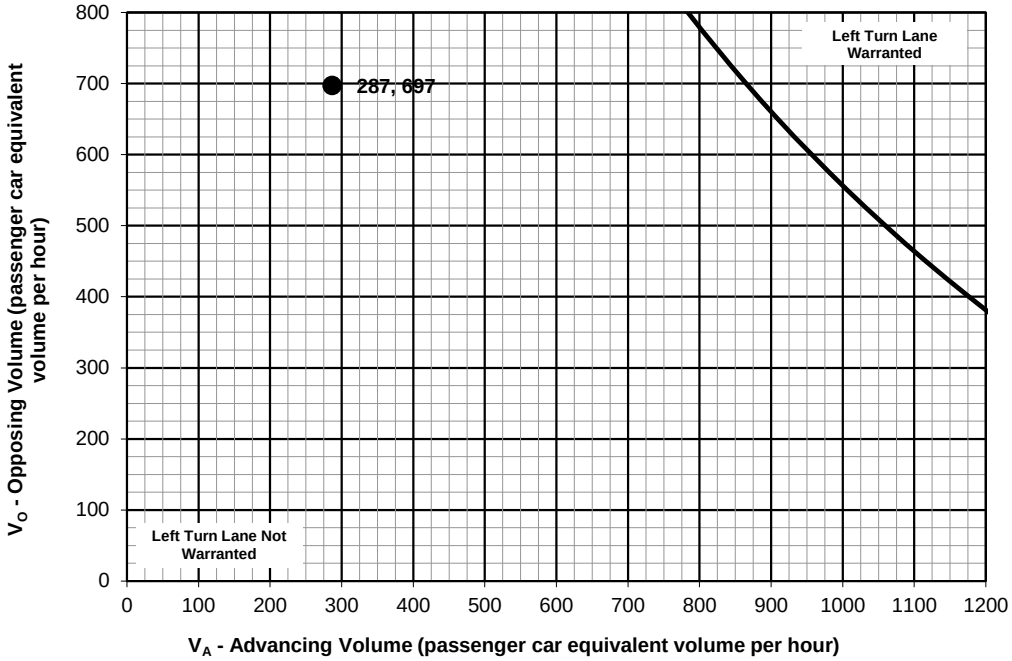
Table 1 Condition:

Avg # of veh/cycle:

Storage Length: feet

RESULTS

A left turn lane is not required.



Left-Turn Lane Warrant Analysis

Two-Lane Highways

Based on PennDOT Publication 46 (October 2010 Edition), Section 11.17,

PROJECT INFORMATION

Project Number:	ESII.A.0000
Intersection:	Newtown Road & Eastern Main House Lot Driveway
Movement:	Left Turns to Main House Lot Driveway
Analysis Period:	2020 Projected (Build) Conditions - PM Peak Hour
Analyst:	SL

INPUTS

	Volume	Truck %	Terrain Type	T	PCE Volume
Advancing Volume (V_A) =	396	1%	Rolling	1.015	402
Opposing Volume (V_O) =	297	1%	Rolling	1.015	301
Number of Left Turns =	9	2%	Rolling	1.03	9
Speed Limit =	35		Type of Control:	Unsignalized	
Proportion of Left Turns =	2%		Cycle Length:	60	sec.

WARRANT CALCULATION

t_w = 1.21 sec

t_A = 8.96 sec

t_{median} = 5.97 sec

λ = 4.10 veh/hr

μ = 975 veh/hr

Limiting advancing volume = 930

Left turn lane warrants are for ρ > than

0.0225 for 35 mph

ρ = 0.0042 **not satisfied**

STORAGE LENGTH CALCULATION

Turn Demand Volume:

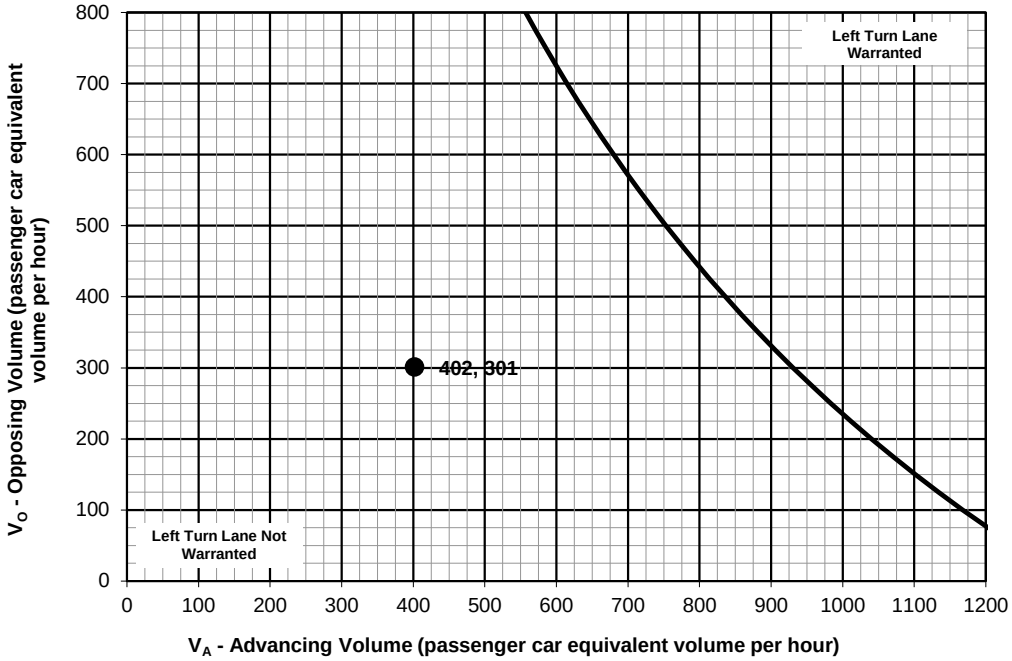
Table 1 Condition:

Avg # of veh/cycle:

Storage Length: feet

RESULTS

A left turn lane is not required.



Right-Turn Lane Warrant Analysis

Two-Lane Highways

Based on PennDOT Publication 46 (October 2010 Edition), Section 11.17

PROJECT INFORMATION

Project Number:	ESII.A.00001
Intersection:	Newtown Road & Western Main House Lot Driveway
Movement:	Right-Turns into the Main House Lot Driveway
Analysis Period:	2020 Projected (Build) Conditions - AM Peak Hour
Analyst:	SL

INPUTS

	Volume	Truck %	Terrain Type	T	PCE Volume
Advancing Volume (V_A) =	680	2%	Rolling	1.03	700
Number of Right Turns =	3	2%	Rolling	1.03	3
Speed Limit =	35		Type of Control:	Unsignalized	
Proportion of Right Turns =	0%		Cycle Length:	60	sec.

STORAGE LENGTH CALCULATION

Turn Demand Volume:		
Table 1 Condition:		
Avg # of veh/cycle:		
Storage Length:		feet

RESULTS

A right-turn lane is not required.

Right-Turn Lane Warrant Analysis

Two-Lane Highways

Based on PennDOT Publication 46 (October 2010 Edition), Section 11.17

PROJECT INFORMATION

Project Number:	ESII.A.00001
Intersection:	Newtown Road & Western Main House Lot Driveway
Movement:	Right-Turns into the Western Main House Lot Driveway
Analysis Period:	2020 Projected (Build) Conditions - PM Peak Hour
Analyst:	SL

INPUTS

	Volume	Truck %	Terrain Type	T	PCE Volume
Advancing Volume (V_A) =	308	1%	Rolling	1.015	313
Number of Right Turns =	11	2%	Rolling	1.03	11
Speed Limit =	35		Type of Control:	Unsignalized	
Proportion of Right Turns =	4%		Cycle Length:	60	sec.

STORAGE LENGTH CALCULATION

Turn Demand Volume:		
Table 1 Condition:		
Avg # of veh/cycle:		
Storage Length:		feet

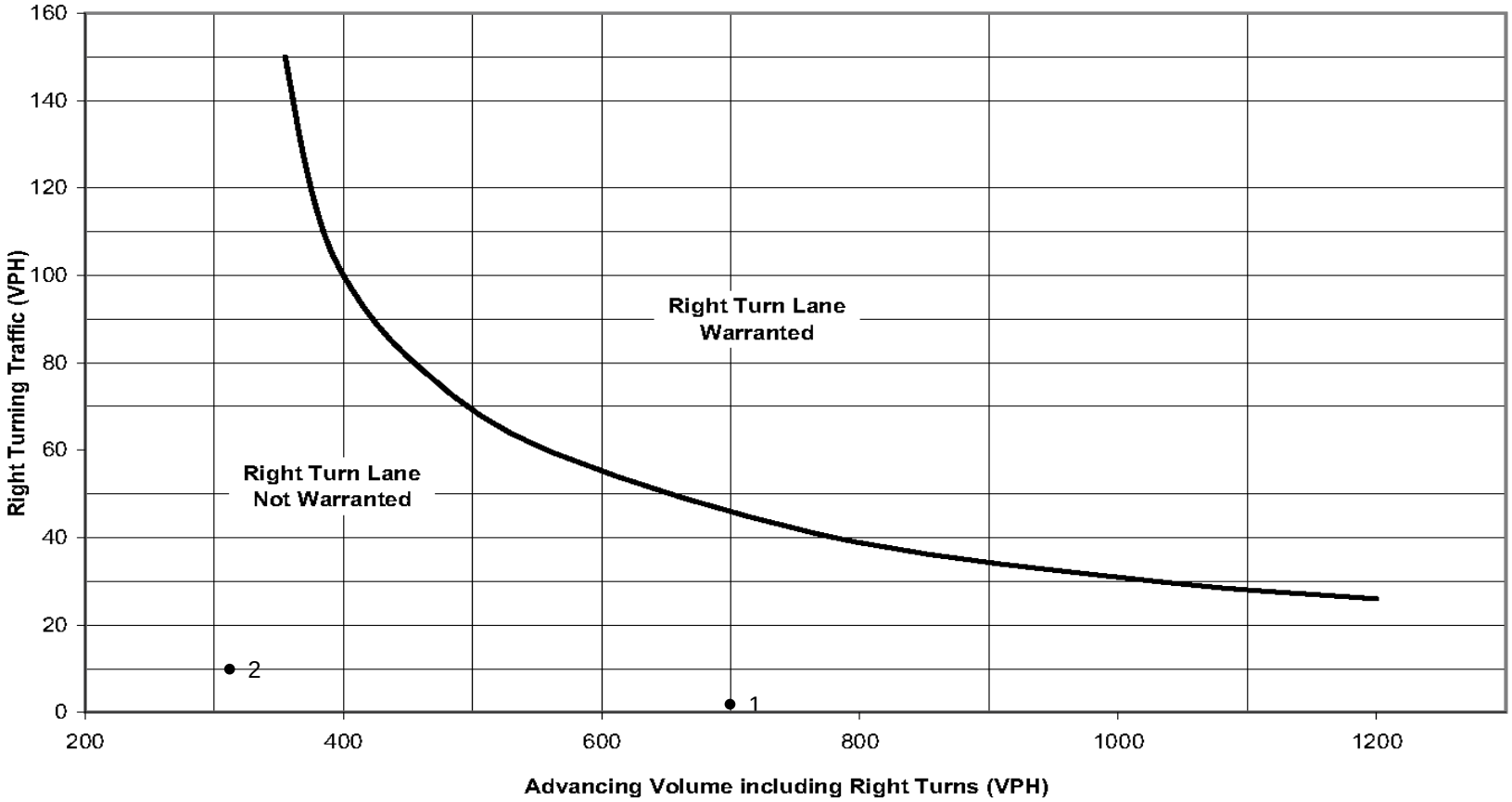
RESULTS

A right-turn lane is not required.

Newtown Road & Western Main House Lot Driveway

Right-Turns into the Main House Lot Driveway

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



1. 2020 Projected AM - 700 approach total, 3 right turns - NOT MET
2. 2020 Projected PM - 313 approach total, 11 right turns - NOT MET

Left-Turn Lane Warrant Analysis

Two-Lane Highways

Based on PennDOT Publication 46 (October 2010 Edition), Section 11.17,

PROJECT INFORMATION

Project Number:	ESII.A.00001
Intersection:	Darby-Paoli Road & Lots 5-2 to 5-5 Driveway
Movement:	Left Turns to Lots 5-2 to 5-5 Driveway
Analysis Period:	2020 Projected (Build) Conditions - AM Peak Hour
Analyst:	SL

INPUTS

	Volume	Truck %	Terrain Type	T	PCE Volume
Advancing Volume (V_A) =	353	2%	Rolling	1.03	364
Opposing Volume (V_O) =	814	2%	Rolling	1.03	838
Number of Left Turns =	1	2%	Rolling	1.03	1
Speed Limit =	35		Type of Control:	Unsignalized	
Proportion of Left Turns =	0.3%		Cycle Length:	60	sec.

WARRANT CALCULATION

t_w = 4.46 sec — Limiting advancing volume = 1374

t_A = 9.89 sec

t_{median} = 6.59 sec — Left turn lane warrants are for ρ > than

λ = 1.05 veh/hr — 0.0225 for 35 mph

μ = 665 veh/hr — ρ = 0.0016 **not satisfied**

STORAGE LENGTH CALCULATION

Turn Demand Volume:

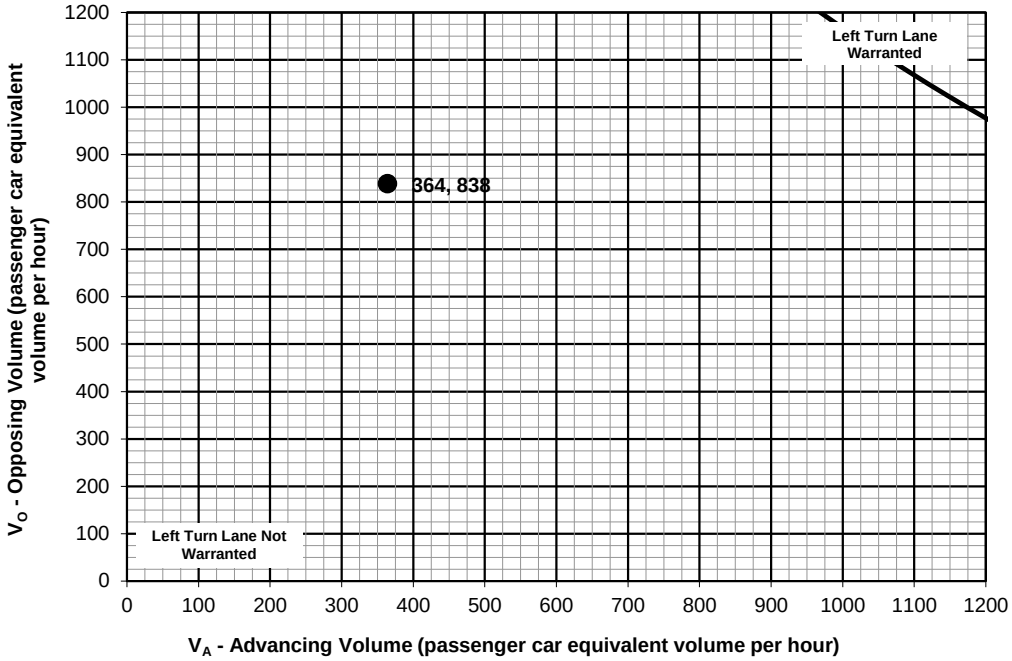
Table 1 Condition:

Avg # of veh/cycle:

Storage Length: feet

RESULTS

A left turn lane is not required.



Left-Turn Lane Warrant Analysis

Two-Lane Highways

Based on PennDOT Publication 46 (October 2010 Edition), Section 11.17,

PROJECT INFORMATION

Project Number:	ESII.A.00001
Intersection:	Darby-Paoli Road & Lots 5-2 to 5-5 Driveway
Movement:	Left Turns to Lots 5-2 to 5-5 Driveway
Analysis Period:	2020 Projected (Build) Conditions - PM Peak Hour
Analyst:	SL

INPUTS

	Volume	Truck %	Terrain Type	T	PCE Volume
Advancing Volume (V_A) =	834	1%	Rolling	1.015	847
Opposing Volume (V_O) =	259	1%	Rolling	1.015	263
Number of Left Turns =	2	2%	Rolling	1.03	2
Speed Limit =	35		Type of Control:	Unsignalized	
Proportion of Left Turns =	0.2%		Cycle Length:	60	sec.

WARRANT CALCULATION

t_w = 1.04 sec

t_A = 4.25 sec

t_{median} = 2.83 sec

λ = 1.75 veh/hr

μ = 1001 veh/hr

Limiting advancing volume = 3038

Left turn lane warrants are for ρ > than

0.0225 for 35 mph

ρ = 0.0017 **not satisfied**

STORAGE LENGTH CALCULATION

Turn Demand Volume:

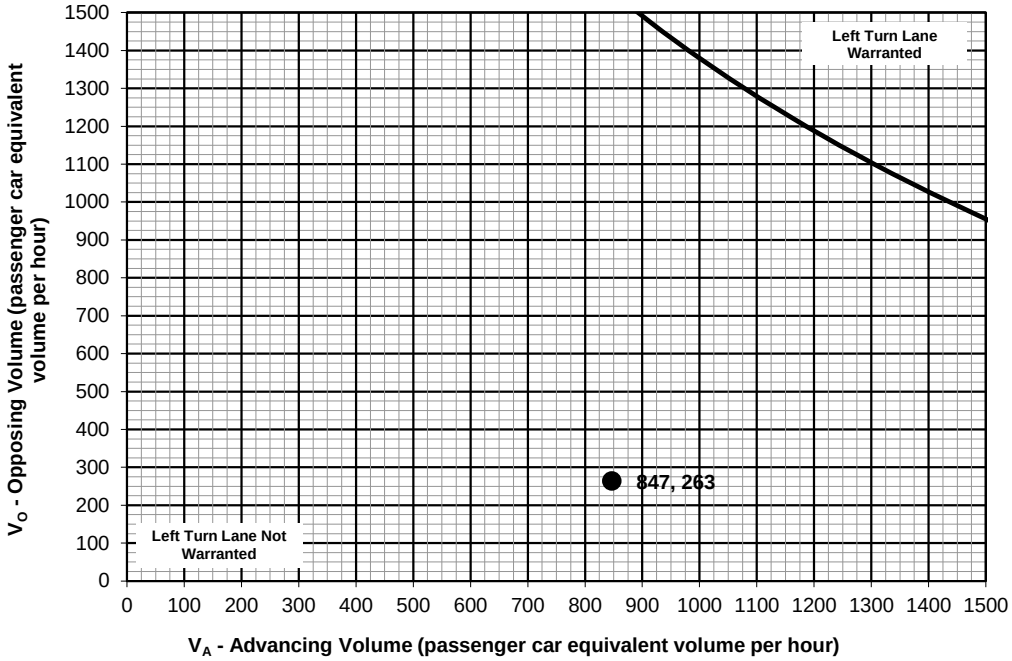
Table 1 Condition:

Avg # of veh/cycle:

Storage Length: feet

RESULTS

A left turn lane is not required.



Right-Turn Lane Warrant Analysis

Two-Lane Highways

Based on PennDOT Publication 46 (October 2010 Edition), Section 11.17

PROJECT INFORMATION

Project Number:	ESII.A.00001
Intersection:	Darby-Paoli Road & Lots 5-2 to 5-5 Driveway
Movement:	Right-Turns into the Lots 5-2 to 5-5 Driveway
Analysis Period:	2020 Projected (Build) Conditions - AM Peak Hour
Analyst:	SL

INPUTS

	Volume	Truck %	Terrain Type	T	PCE Volume
Advancing Volume (V_A) =	814	2%	Rolling	1.03	838
Number of Right Turns =	0	2%	Rolling	1.03	0
Speed Limit =	35		Type of Control:	Unsignalized	
Proportion of Right Turns =	0%		Cycle Length:	60	sec.

STORAGE LENGTH CALCULATION

Turn Demand Volume:	
Table 1 Condition:	
Avg # of veh/cycle:	
Storage Length:	feet

RESULTS

A right-turn lane is not required.

Right-Turn Lane Warrant Analysis

Two-Lane Highways

Based on PennDOT Publication 46 (October 2010 Edition), Section 11.17

PROJECT INFORMATION

Project Number:	ESII.A.00001
Intersection:	Darby-Paoli Road & Lots 5-2 to 5-5 Driveway
Movement:	Right-Turns into the Lots 5-2 to 5-5 Driveway
Analysis Period:	2020 Projected (Build) Conditions - PM Peak Hour
Analyst:	SL

INPUTS

	Volume	Truck %	Terrain Type	T	PCE Volume
Advancing Volume (V_A) =	259	1%	Rolling	1.015	263
Number of Right Turns =	1	2%	Rolling	1.03	1
Speed Limit =	35		Type of Control:	Unsignalized	
Proportion of Right Turns =	0%		Cycle Length:	60	sec.

STORAGE LENGTH CALCULATION

Turn Demand Volume:	
Table 1 Condition:	
Avg # of veh/cycle:	
Storage Length:	feet

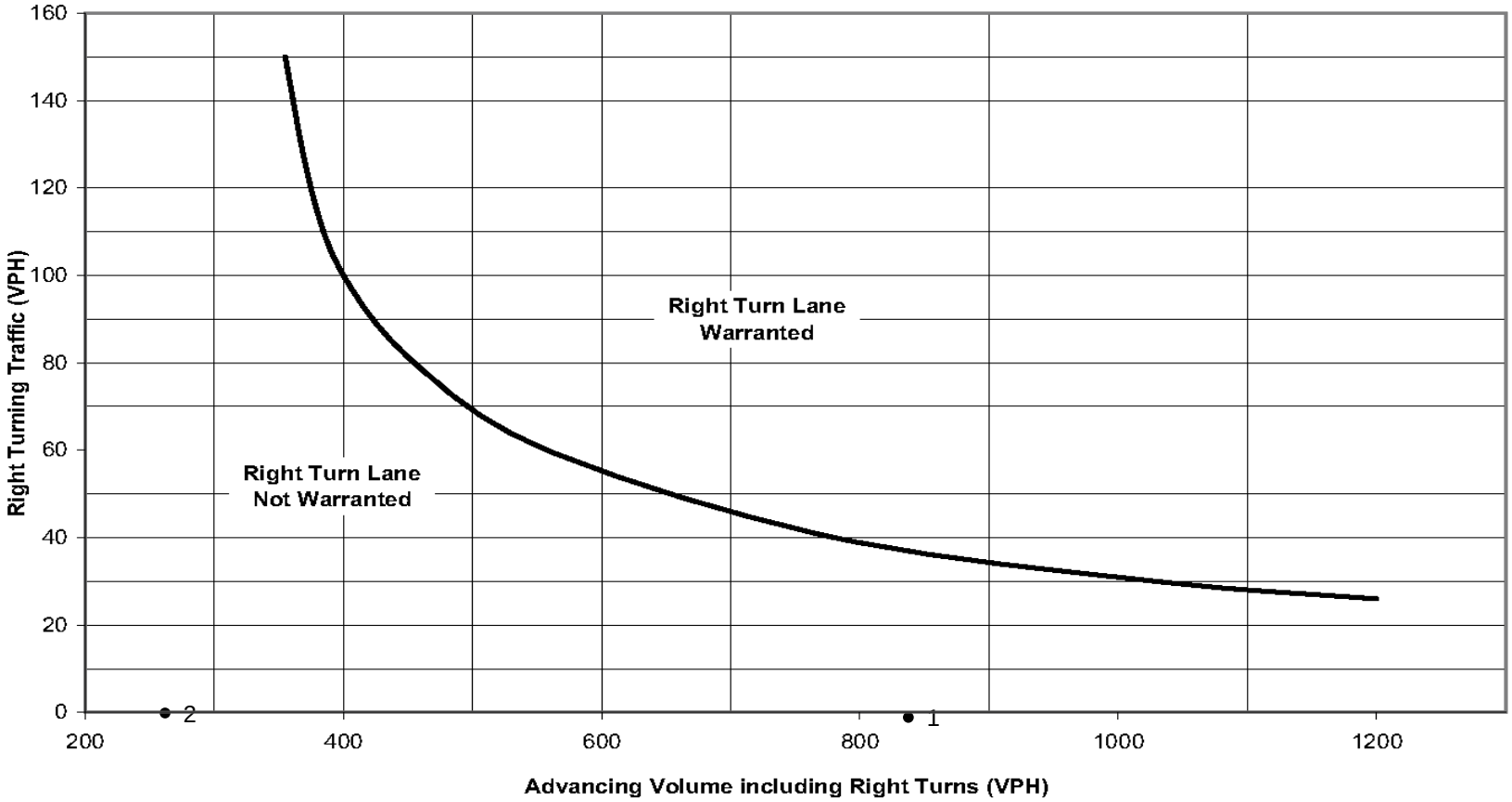
RESULTS

A right-turn lane is not required.

Darby-Paoli Road & Lots 5-2 to 5-5 Driveway

Right-Turns into the Lots 5-2 to 5-5 Driveway

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



1. 2020 Projected AM - 838 approach total, 0 right turns - NOT MET
2. 2020 Projected PM - 263 approach total, 1 right turns - NOT MET