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## **TRANSPORTATION IMPACT STUDY for CHESTNUT HILL COLLEGE**

**Proposed Sugarloaf Campus Access  
Germantown Ave & Hillcrest Ave  
City of Philadelphia  
Philadelphia County, Pennsylvania**



A blue ink signature of "John R. Harter" is written in cursive across a blue-lined rectangular background. The signature is oriented diagonally from the bottom-left towards the top-right.

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## CONTENTS

<b>EXECUTIVE SUMMARY .....</b>	<b>1</b>
<b>INTRODUCTION .....</b>	<b>3</b>
<b>EXISTING CONDITIONS .....</b>	<b>4</b>
SUBJECT PROPERTY .....	4
ROADWAY CHARACTERISTICS.....	4
Table 1   Roadway Characteristics .....	5
MULTIMODAL ACCESS.....	5
EXISTING SIGNALS.....	5
EXISTING PEAK HOUR TRAFFIC VOLUMES .....	6
CRASH ANALYSIS .....	6
<b>PROPOSED CONDITIONS .....</b>	<b>8</b>
ANNUAL BACKGROUND GROWTH .....	8
TRIP GENERATION .....	8
TRIP DISTRIBUTION .....	8
PROPOSED VOLUMES .....	8
<b>ANALYSIS OF EXISTING AND PROPOSED CONDITIONS.....</b>	<b>9</b>
CAPACITY ANALYSIS .....	9
Unsignalized Intersections.....	9
Germantown Avenue and Rogers Drive .....	9
Germantown Avenue and Hillcrest Avenue / Sugarloaf Campus driveway .....	10
Germantown Avenue and Bells Mill Road.....	10
Table 2   Level of Service and Delay (Seconds) Summary.....	10
Table 3   Unsignalized Intersections – Existing 2020 Conditions .....	10
Table 4   Level of Service and Delay (Seconds) Summary .....	11
Table 5   Signalized Intersection Weekday Morning Peak Hour .....	11
Table 6   Level of Service and Delay (Seconds) Summary .....	12
Table 7   Signalized Intersection Weekday Evening Peak Hour .....	12

<b>95TH PERCENTILE QUEUE ANALYSIS .....</b>	<b>12</b>
<b>CLEARANCE CALCULATIONS .....</b>	<b>13</b>
<b>PROPOSED IMPROVEMENTS .....</b>	<b>13</b>
Germanton Avenue and Hillcrest Avenue / Sugarloaf Campus Driveway .....	13
Germantown Avenue and Bells Mill Road.....	13
Table 8   Queue Length (95 <sup>th</sup> Percentile) Summary	
Weekday Morning Peak Hour .....	14
Table 9   Queue Length (95 <sup>th</sup> Percentile) Summary	
Weekday Evening Peak Hour .....	15
<b>CONCLUSIONS .....</b>	<b>16</b>
<b>TECHNICAL APPENDIX .....</b>	<b>I</b>
A   CORRESPONDENCES & MEETING MINUTES.....	II
B   TURNING MOVEMENT COUNT SUMMARY AND COUNT DATA .....	III
C   EXISTING CONDITIONS: AADT, TRANSIT ROUTES, AND INTERSECTION PHOTOS	IV
D   LEVEL OF SERVICE DESCRIPTIONS .....	V
Table 10   Level of Service and Average Delay	
For Unsignalized Intersections .....	V
Table 11   Level of Service and Average Delay	
For Signalized Intersections.....	V
E   SYNCHRO 10 PRINTOUTS .....	VI
F   CHANGE AND CLEARANCE CALCULATIONS .....	VII
G   SIGHT DISTANCE .....	VIII
H   TURN LANE WARRANTS.....	IX
I   CRASH DATA.....	X

## EXECUTIVE SUMMARY

Atlantic Traffic & Design Engineering, LLC (ATDE) prepared the following Transportation Impact Study (TIS) to determine the traffic impacts of the proposed signalized access for the Sugarloaf Campus at Chestnut Hill College in Philadelphia, Pennsylvania. The existing campus is served by 3 unsignalized driveways, 2 from Germantown Avenue and 1 from Bells Mill Road. The proposed driveway will form the fourth leg at the existing signalized intersection of Germantown Avenue and Hillcrest Avenue. At this time, there are no plans to expand or change the existing use of the Sugarloaf Campus.

On January 29, 2020, a Developer Services Meeting was held with the Philadelphia Streets Department. The meeting minutes can be found in [Appendix A](#). A full traffic study shall not be required; alternatively, this study will compare the existing and proposed conditions for the opening year, only.

This study includes an analysis of existing trip generation, roadway and signal operations, sight distances, and crash history. Roadway analysis will include Level of Service and capacity, as well as queue analysis, for the opening year 2021. Three signalized intersections along Germantown Avenue are included in the study. PennDOT provided five-year crash history in the vicinity of the site.

The following summarizes the findings of this study:

- The site is located on the southwestern side of Germantown Avenue, between Bells Mill Road and the Wissahickon Creek. Currently, the site has three unsignalized access driveways; 1 access from Bells Mill Road and 2 access driveways from Germantown Avenue.
- A 5-day count was conducted at each of the existing access points to determine the daily and peak hour volumes. The average weekday volume is determined to be 146 trips, 73 entering and 73 exiting. The peak periods occur at 8:00 am and 3:30 pm.
- **Level of Service (LOS) Analysis Summary:** Under the Build 2021 conditions, the intersection of Germantown Avenue and Hillcrest Avenue / proposed Sugarloaf Campus driveway will operate with an overall LOS D or better during the peak periods. The other signalized intersections, within the study limits, will operate with an overall LOS D or better. Individual movements will continue to operate at the same LOS, as the existing conditions. There are 2 movements that will have a LOS F; both movements have a LOS F in the existing conditions.
- **Delay Analysis Summary:** Under the Build conditions, the overall intersection delay at the intersection of Germantown Avenue and Hillcrest Avenue / proposed Sugarloaf Campus driveway shall increase by less than 13 seconds during the morning peak period and less than 1 seconds during the evening peak period. The overall delay for the other signalized intersections, within the study limits, will slightly decrease in all time periods, due to the revised signal timing.

- **Crash Analysis Summary:** The calculated crash rate on Race Street between North 9<sup>th</sup> Street and North 8<sup>th</sup> Street of 0.28 crashes per million vehicle miles over a 5 year period is lower than the statewide average of 2.35 crashes per million vehicle miles over a 5 year period on urban roadways with similar characteristics.

Based on the Developer's Services Meeting and the findings of this Transportation Impact Study, ATDE makes the following recommendations for improvements, within the study network:

1. **Germantown Avenue and Hillcrest Avenue / proposed Sugarloaf Campus drive:** This intersection will become a 4-leg signalized intersection with pedestrian crosswalks on all approaches. A dedicated left turn lane on the southbound approach of Germantown Avenue will be installed. This improvement will not require Germantown Avenue to be restriped, only. The traffic signal shall be equipped with APS push buttons and ADA compliant curb ramps. This signal shall be interconnected, via fiber optics with the signalized intersection of Germantown Avenue and Bells Mill Road.
2. **Germantown Avenue and Bells Mill Road:** This intersection will be retimed and connected via fiber optics to the intersection of Germantown Avenue and Hillcrest Avenue / proposed Sugarloaf Campus drive. The need for additional improvements will be evaluated and based on the condition of the existing traffic signal. The northbound approach of Germantown Avenue will be restriped to provide a X-foot long right turn lane.

It is ATDE's opinion that the proposed development will not have a significant impact to the roadways within the study network.

## INTRODUCTION

Atlantic Traffic & Design Engineering, LLC (ATDE) prepared the following Transportation Impact Study (TIS) to determine the traffic impacts of the proposed Chestnut Hill College Expansion “Sugarloaf Campus” in the Chestnut Hill section of Philadelphia, near the edge of Montgomery County. The proposed Sugarloaf Campus access is located on Germantown Avenue and Hillcrest Avenue as shown on **Figure 1A**. Access to the Sugarloaf Campus will be provided via a new signalized access on Germantown Avenue opposite of Hillcrest Avenue. Construction is scheduled to begin in 2020 with an opening year date of 2021. The existing site consists of three unsignalized access points, two on Germantown Avenue and another on Bells Mill Road. The unsignalized access points will remain.

The proposed improvement plan, as shown on **Figure 1B**. Two access shall be provided, Access A and Access B. Access A shall be the form from the fourth leg of the existing T-intersection of Germantown Avenue and Hillcrest Avenue. Access B will connect Access A to existing driveway on Bells Mill Road.

This Transportation Impact Study is prepared in accordance with the City of Philadelphia's Traffic Engineering Standards documentation dated 1994 and revised 2018.

This TIS includes a review and analysis of:

- Existing roadway characteristics within the study area;
- A 5-year crash history;
- Traffic conditions for Existing conditions,
- Traffic conditions for future opening year Build conditions;
- Level of Service (LOS) and vehicle delays at the proposed access point and other intersections in the study area; and
- A 95<sup>th</sup> percentile queue analysis.

## EXISTING CONDITIONS

### SUBJECT PROPERTY

The existing site is the Sugarloaf Campus, acquired by Chestnut Hill College. The property is currently zone special-Institutional (SP-INS) with three main buildings. The whole parcel consists of mostly vegetation, landscape, and parking lots.

**Appendix A** compiles documentation of existing conditions which include annual average daily traffic (AADT) information, transit route information, and existing signal plans.

### ROADWAY CHARACTERISTICS

The scope of study is limited to Germantown Avenue, Rogers Drive, Hillcrest Avenue, and Bells Mill Road along the frontage of the property. The following three signalized intersections are included in the traffic analysis:

- Germantown Avenue & Rogers Drive
- Germantown Avenue & Hillcrest Avenue
- Germantown Avenue & Bells Mill Road

Germantown Avenue, Rogers Drive, Hillcrest Avenue, and Bells Mill Road are city owned roadways under the jurisdiction of Philadelphia, as defined by Federal and State functional classification. Per the City's Pedestrian and Bicycle Plan, the roadways are classified as: Germantown Avenue is Urban Arterial, Rogers Drive is Local, Hillcrest Avenue is Lower Density Residential, and Bells Mill Road is Scenic Drive.

The speed limit is 30 mph along the frontage of the site on Germantown Avenue. Germantown Avenue is generally a two-way road with one thru lane in each direction. Between Hillcrest Avenue and Bells Mill Road, Germantown Avenue has two eastbound lanes – one being a right turn only onto Bells Mill Road.

Annual average daily traffic (AADT) information through the Delaware Valley Regional Planning Commission (DVRPC) traffic monitoring program is included in **Appendix C**. Within the study limits, Germantown Avenue experiences high peak hour volumes, particularly between Hillcrest Avenue and Bells Mill Road. Bells Mill Road is a one-way roadway on the eastern side of Germantown Avenue, heading in the eastbound direction. In order to access Germantown Avenue from the east, vehicles must use Hillcrest Avenue. This explains the high volumes of left turns from westbound Hillcrest Avenue onto Germantown Avenue.

**Table 1** summarizes the roadway and traffic characteristics.

**Table 1**  
**Roadway Characteristics**

Roadway	Directional Orientation	Travel Lanes	Annual Average Daily Traffic	Speed Limit	Complete Streets Classification
Germantown Avenue	North/South	2	10,589	30	Urban Arterial
Rogers Drive	East/West	2	N/A	25	Local
Hillcrest Avenue	East/West	2	Unknown	30	Low Density Residential
Bells Mill Road	East/West	2	3,028	30	Scenic Drive

#### MULTIMODAL ACCESS

In the immediate vicinity of the site are two bus operated by SEPTA. Bus 97 & L both functioning along Germantown Avenue with a headway of about 1 bus per hour for bus "97" and 2 bus per hour for bus "L". A bus stop is located on the corner of Germantown Avenue & W Bells Mill Road or Germantown Avenue & Hillcrest Avenue. An overview of a quarter mile radius around the site includes several bus routes operated by the Southeastern Pennsylvania Transportation Authority (SEPTA). Transit maps and schedules are included in [Appendix C](#).

#### EXISTING SIGNALS

The City of Philadelphia Streets Department provided existing signal plans and/or timings for the three signalized intersections within the study limits. The signals appear to operate independently of each other with varying cycle lengths. Existing signal plans and/or timings are included in [Appendix C](#).

The signalized intersection of Germantown Avenue and Rogers Drive operates on a 100 second cycle length and utilizes vehicular signal heads and pedestrian signal heads that are either mast arm mounted or pedestal mounted. The signal appears to operate with actuated timings and has loop detectors on the Rogers Drive approach. Pedestrian crossings are permitted on all three legs of the intersection with painted crosswalks and pedestrian signal heads and push buttons for crossing Germantown Avenue.

The signalized intersection of Germantown Avenue and Hillcrest Avenue operates on a 90 second cycle length and utilizes vehicular signal heads and pedestrian signal heads that are either mast arm mounted or pedestal mounted. The signal appears to operate with fixed pre-timings during all hours of operation. Pedestrian crossings are permitted on the north and east legs (two legs out of three legs) of the intersection with painted crosswalks. Pedestrian signal heads but no push buttons are provided for crossing Hillcrest Avenue.

The signalized intersection of Germantown Avenue and Bells Mill Road operates on a 120 second cycle length and utilizes vehicular signal heads that are either mast arm

mounted or pedestal mounted. The signal appears to operate with fixed pre-timings during all hours of operation. Pedestrian crossings are permitted on the south and west legs (two legs out of four legs) of the intersection with painted crosswalks. However, no pedestrian signal heads nor push buttons are provided.

### EXISTING PEAK HOUR TRAFFIC VOLUMES

The peak periods are determined from manual turning movement counts conducted at the intersections within the study area during the weekday from 7:00 a.m. to 9:00 a.m. and 4:00 p.m. to 6:00 p.m. The morning peak period is from 7:15 a.m. to 8:15 a.m. and the evening peak period is from 4:45 p.m. to 5:45 p.m. A summary of the manual turning counts and the raw collected data are included **Appendix B**.

The intersections within the study network experience significant volume on each approach during the peak periods, particularly at Germantown Avenue and Bells Mill Road. During the evening peak, nearly 800 vehicles were observed making left turns from southbound Germantown Avenue onto Bells Mill Road. Because of the heavy volumes along southbound Germantown Avenue and westbound Bells Mill Road, left turns into the Sugarloaf Campus from either roadway, would be challenging.

### CRASH ANALYSIS

ATDE conducted a crash analysis to determine if there is a history of crashes in the proximity of the site. A copy of the crash data received from PennDOT and a diagram illustrating the location and type of crashes occurring in the proximity of the site is included in the **Appendix I**.

Based on our review of the data, a total of 13 reportable crashes occurred within the study limits between 2014 and 2018 which is the most recent five-year data available. The greatest number of crashes, 4, occurred in 2014; 2 crashes occurred annually from 2015 to 2017; and 3 crashes occurred in 2018. One crashed occurred at the signalized intersection of Germantown Avenue and Rogers Road; 3 crashes occurred in the vicinity of the signalized intersection of Germantown Avenue and Hillcrest Avenue including 1 crash involving a pedestrian; 6 crashes occurred at the signalized intersection of Germantown Avenue and Bells Mill Road including 3 crashes involving red light running; and three crashes occurred mid-block on Germantown Avenue between Rogers Drive and Hillcrest Avenue. Three out of the 13 crashes appear to be related weather due to slippery conditions caused by ice/snow while the remaining 10 crashes appear to be related to improper driving. **Table 2** below provides a summary of the crash data and the collision diagram in the **Appendix I** shows the relative location of the crashes. Mid-block crash locations are approximations only.

**Table 2**  
**2014-2018 Crash Summary**  
**Germantown Avenue between Rogers Drive and Bells Mill Road**

Date	Time	Type of Crash	Injury	Driver Actions/ Environmental Roadway Factors
05/30/2014	8:20 a.m.	Angle	2	Running Red Light
08/28/2014	8:53 a.m.	Pedestrian	1	Unknown (Turning Left)
09/24/2014	7:44 a.m.	Rear-End	2	Too Fast for Conditions
11/03/2014	6:55 a.m.	Angle	0	Unknown (Turning Left)
02/19/2015	6:44 a.m.	Head-On	2	Ice/Snow
06/29/2015	11:55 p.m.	Hit Fixed Object	1	Over/Under Compensate Curve
01/25/2016	3:10 p.m.	Head-On	0	Too Fast for Conditions & Ice/Snow
04/01/2016	12:20 p.m.	Angle	0	Improper/Careless Turn
03/21/2017	3:05 p.m.	Angle	0	Improper/Careless Turn
08/29/2017	6:50 p.m.	Hit Fixed Object	0	Unknown
08/31/2018	11:47 a.m.	Angle	0	Running Red Light & Ice/Snow
10/12/2018	4:50 p.m.	Rear-End	1	Unknown
12/31/2018	---	Angle	0	Running Red Light

The crash rate for Germantown Avenue within the study limits is lower than the PennDOT Statewide average for similar roadways. The crash rate is calculated from the number of reportable crashes per million vehicle miles traveled over five years along the segment of roadway. Based on the latest PennDOT Homogenous Report for State Road Crashes, the Statewide average for an urban undivided roadway with a width between 27-35 feet and over 10,000 ADT is 1.70 crashes per million vehicles miles traveled over five years. The calculated crash rate on Germantown Avenue within the study limits is 1.17 crashes per million vehicle miles traveled over five years based on 10,589 ADT and 0.57 mile study limits.

Based on the available information analyzed by ATDE, it is in our opinion that the existing roadway conditions do not contribute to vehicular crashes in the study area. This is not anticipated to change as a result of the proposed Sugarloaf Campus driveway. No crash mitigation improvements are proposed as part of this project.

## PROPOSED CONDITIONS

Two No-Build conditions are developed for this study based upon the expected opening year of 2021 and a design horizon year of 2026. No-Build conditions include the annual background growth rate for the City of Philadelphia.

### ANNUAL BACKGROUND GROWTH

Annual background growth is the expectation that traffic increases on a regular basis. PennDOT's Bureau of Planning and Research estimates that the annual background growth for the City of Philadelphia is 0.75% annually for interstate routes and 0.0% annually for non-interstate routes per the published 2018-2019 growth rates. For a conservative analysis, this study used a 0.28% annual background growth for non-interstate routes. This rate is consistent with Montgomery County, which is located less than a mile from the campus.

### TRIP GENERATION

Automatic traffic recorders were placed at 3 access points to the Sugarloaf Campus to determine the daily volumes and peak hour periods of the campus. The data was collected from Monday, February 10, 2020 to Friday, February 14, 2020. This was found to be a typical week for the college campus. The middle 3-days, Tuesday through Thursday, were averaged to find the daily trips associated with the Sugarloaf Campus. Raw data and volume summaries can be found in [Appendix B](#).

A comparison of the entire week found that the peak day is a Wednesday, with 162 daily trips. The average over the 3-day period is 146 daily trips, 73 entering and 73 exiting. The peak periods occurred at 8:00 am and 3:30 pm.

### TRIP DISTRIBUTION

While the existing unsignalized access drives will remain, it is expected that vehicles will no longer use them. The existing trips are redistributed to all utilize the proposed signalized access.

### PROPOSED VOLUMES

The existing traffic volumes collected in 2020 as shown in [Figure 2](#) are increased by a growth rate of 0.28% to develop the Proposed 2021 conditions on [Figure 3](#). At this time, the intensity and use of the Sugarloaf Campus will remain. There are no other planned improvements for this development, other than the consolidation of access points.

## ANALYSIS OF EXISTING AND PROPOSED CONDITIONS

### CAPACITY ANALYSIS

Calculations for Level of Service (LOS) are prepared using Synchro Software, Version 10 based on the equations of the Highway Capacity Manual (HCM), 2010 edition. The HCM 2010 default values in the software are updated to the Pennsylvania default values recommended in PennDOT's Publication 46 Traffic Engineering Manual, Chapter 10 based on the land use context. This includes updating the base saturation flow rate, start-up lost time, extension of effective green time, number of left turn sneakers, base critical headway, and base follow-up headway. The delay in seconds per vehicle translate to a LOS grade as outlined **Appendix D** for signalized and unsignalized intersections.

Synchro Report printouts are included in **Appendix E** and the LOS and delay results for the unsignalized intersections are summarized in **Table 3**. **Table 4** summarizes the weekday morning peak period and **Table 5** summarizes the weekday evening peak period, for the signalized intersections.

The anticipated vehicle trips generated and impacts to the roadway network meet the overall LOS requirements outlined in the City of Philadelphia's Traffic Engineering Standards documentation dated 1994 and revised 2018. The capacity analysis is to utilize Synchro Version 8, overall intersection LOS must be D or better. Individual movements may not be LOS F.

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#### Unsignalized Intersections

The existing unsignalized intersections experience low overall delays. The southern access from Germantown Avenue has an approach LOS D with a delay of 25.6 seconds during the morning peak period. In the evening, the access from Bells Mill Road has an approach LOS C with a delay of 16.4 seconds. The eastbound approach of Bells Mill Road, at the existing Sugarloaf Campus access, has a LOS B with a 10.1 second delay.

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#### Germantown Avenue and Rogers Drive

This signalized intersection will experience a LOS and delay in the proposed conditions that is consistent with the existing conditions. During the morning peak period, the intersection has an overall LOS A, with a delay of 5.9 seconds in the proposed conditions. This is a 0.2 improvement from the existing conditions. The Rogers Drive left turning movement will experience a delay of 33.4 seconds or better, in the existing conditions. This movement will improve by 0.4 seconds, in the proposed conditions.

In the existing conditions, the intersection has a cycle length of 90 seconds. ATDE proposes to leave the existing traffic signal timings unchanged in the proposed conditions.

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### Germantown Avenue and Hillcrest Avenue / Sugarloaf Campus driveway

The intersection will experience an overall LOS D or better during the peak periods. Under the proposed conditions, the overall delay will be 40.7 seconds in the morning, a 13 second increase over the existing conditions and 50.5 seconds in the evening, a 10 second increase over the existing conditions.

The driveway for the Sugarloaf Campus shall experience a LOS E or better with the greatest delay being the shared through – right turn lane during the evening. The left turning movement for the westbound approach of Hillcrest Avenue will have LOS F and a delay of 80.4 seconds during the evening peak period in the proposed conditions. Due to the signal timing adjustments, including the extension of the overall signal cycle length, this is a 3 second improvement over the existing conditions.

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### Germantown Avenue and Bells Mill Road

This intersection will experience an overall LOS D or better with a delay of 49.1 seconds, under the proposed conditions. This is consistent with existing conditions. The eastbound approach of Bells Mill Road experiences a LOS F with a delay of 103.7 seconds during the morning peak period. This movement is already a LOS F under the existing conditions. Under the proposed conditions, all the movements shall maintain their existing LOS, as the existing conditions and, the increase in delay is minimal.

**Table 3**  
**Level of Service and Delay (Seconds) Summary**  
**Unsignalized Intersections – Existing 2020 Conditions**

Intersection	App.	Mvmt.	Morning Peak		Evening Peak	
			LOS	Delay	LOS	Delay
Germantown Ave & Campus Access North	EB	L / R	A	0.0	A	0.0
	NB	L / T	A	0.0	A	0.0
	SB	T / R	A	0.0	A	0.0
	Overall Int.		A	0.0	A	0.0
Germantown Ave & Campus Access South	EB	L / R	D	28.2	B	13.1
	NB	L / T	A	0.0	A	0.0
	SB	T / R	A	0.0	A	0.0
	Overall Int.		A	0.1	A	0.0
Bells Mill Rd & Access	EB	L / T	A	0.0	B	11.6
	WB	T / R	A	0.0	A	0.0
	SB	L / R	B	13.1	C	16.2
	Overall Int.		A	0.0	A	0.0

**Table 4**  
**Level of Service and Delay (Seconds) Summary**  
**Signalized Intersection Weekday Morning Peak Hour**

Intersection	App.	Mvmt.	Existing 2020		Proposed 2021	
			LOS	Delay	LOS	Delay
<b>Germantown Ave &amp; Rogers Dr</b>	WB	L	C	33.4	C	33.0
		R	C	33.0	C	32.5
	NB	T / R	A	6.5	A	6.4
	SB	L / T	A	3.7	A	3.6
	<b>Overall Int.</b>		A	6.1	A	5.9
<b>Germantown Ave &amp; Hillcrest Ave</b>	EB	L	-	-	E	58.9
		T/R	-	-	E	59.8
	WB	L	D	35.3	D	41.8
		T/R	D	42.4	D	54.3
	NB	L	-	-	A	0.0
		T / R	B	17.5	D	44.8
	SB	L	C	30.6	C	26.4
		T / R	B	14.4	B	19.0
	<b>Overall Int.</b>		C	27.8	D	40.4
	EB	L / T / R	F	102.4	F	103.7
<b>Germantown Ave &amp; Bells Mill Rd</b>	NB	L	C	29.7	C	25.3
		T / R	C	23.0	C	23.1
	SB	L / T	D	38.6	D	37.6
		R	A	7.4	A	7.4
	<b>Overall Int.</b>		D	49.2	D	49.1

**Table 5**  
**Level of Service and Delay (Seconds) Summary**  
**Signalized Intersection Weekday Evening Peak Hour**

Intersection	App.	Mvmt.	Existing 2020		Proposed 2021	
			LOS	Delay	LOS	Delay
<b>Germantown Ave &amp; Rogers Dr</b>	WB	L	C	31.4	C	30.9
		R	C	30.8	C	30.4
	NB	T/R	A	6.4	A	6.2
	SB	L/T	A	9.9	A	9.5
	<b>Overall Int.</b>		B	10.3	B	10.0
<b>Germantown Ave &amp; Hillcrest Ave</b>	EB	L	-	-	A	0.0
		T/R	-	-	E	61.6
	WB	L	F	83.4	E	79.1
		T/R	C	20.6	C	25.6
	NB	L	-	-	D	36.5
		T/R	B	15.9	D	45.6
	SB	L	D	39.5	D	46.0
		T/R	B	19.6	C	28.5
<b>Overall Int.</b>			D	40.9	D	50.0
<b>Germantown Ave &amp; Bells Mill Rd</b>	EB	L/T/R	D	46.9	D	44.7
	NB	L	C	26.2	C	22.9
		T/R	C	20.3	C	20.3
	SB	L/T	D	40.6	D	39.0
		R	B	12.7	B	12.5
<b>Overall Int.</b>			C	28.6	C	27.5

#### 95TH PERCENTILE QUEUE ANALYSIS

Calculations for queue length are prepared using *Synchro Software*, Version 10 based on the equations of the Highway Capacity Manual (HCM), 2010 edition. The Synchro Report summaries included in [Appendix E](#) show the 95<sup>th</sup> percentile queue as the number of vehicles to the back of the queue. This value is multiplied by 25 feet to calculate the queue length. The results are summarized on the following [Table 6](#) for the weekday morning peak period and [Table 7](#) for the weekday evening peak period.

At the signalized intersections within the study limits:

- Analysis and comparison between the existing conditions and the proposed conditions, at the intersection of Germantown Avenue and Rogers Drive, indicate that the existing 95<sup>th</sup> percentile queue lengths shall either remain constant or improve under the proposed conditions.
- For the intersection of Germantown Avenue and Hillcrest Avenue / Sugarloaf Campus driveway, the queue lengths of the proposed driveway shall be 7.5 feet or less. The Hillcrest Avenue approach will experience higher queues, after the installation of the Sugarloaf Campus driveway, particularly for the left turning movement. This is primarily due to the fact that Bells Mill Road is

one-way in the eastbound direction between Germantown Avenue and Stetson Avenue.

- In the proposed conditions, the 95<sup>th</sup> percentile queues at the intersection of Germantown Avenue and Bells Mill Road, will continue to be similar to the existing conditions. The southbound right turn lane back of queues during the evening peak period, which are significant, will remain unchanged under the proposed conditions, when compared to the existing conditions.

## CLEARANCE CALCULATIONS

Clearance calculations are completed to verify yellow and all red (Y+AR) timings for vehicles and walk and flashing hand (M+FH) timings for pedestrian crossings, at the intersection of Germantown Avenue and Hillcrest Avenue / Sugarloaf Campus driveway. The total Yellow and All Red times for the Hillcrest Avenue / Sugarloaf Campus driveway shall be increased from approximately 4.5 seconds to 5 seconds. Meanwhile, the total Yellow and All Red times for the Germantown Avenue approaches is found to be sufficient and shall remain as 7 seconds. Calculations are included in [Appendix F](#).

## PROPOSED IMPROVEMENTS

Per Chestnut Hill College's Master Plan and in accordance with the Philadelphia Streets Department, ATDE has identified the following improvements necessary for the study network:

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### Germantown Avenue and Hillcrest Avenue / Sugarloaf Campus Driveway

- Installation of a northbound 150-foot left turn lane in place of the existing southbound inner receiving lane on Germantown Avenue
- Fully upgraded traffic signal equipment that may be accessed by the city's Traffic Operations Center, remotely
- Countdown pedestrian traffic signals and APS push buttons for all pedestrian crossings and installation / reconstruction of pedestrian curb ramps, as necessary
- Fiber connection with the traffic signal at Germantown Avenue and Bells Mill Road

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### Germantown Avenue and Bells Mill Road

- Countdown pedestrian traffic signals and APS push button for all pedestrian crossings
- Signal timing adjustments to mitigate existing congestion
- Fiber connection with the traffic signal at Germantown Avenue and Hillcrest Avenue / Sugarloaf Campus driveway
- Upgrades to the traffic signal controller, if necessary

**Table 6**  
**Queue Length (95<sup>th</sup> Percentile) Summary**  
**Weekday Morning Peak Hour**

Intersection	App.	Mvmt.	Storage Length (ft)	Existing 2020		Proposed 2021	
				Cars	Feet	Cars	Feet
<b>Germantown Ave &amp; Rogers Dr</b>	WB	L	-	1.1	27.5	1.1	27.5
		R	-	0.2	5.0	0.2	5.0
	NB	T/R	-	17.7	442.5	17.4	435.0
	SB	L/T	-	8	200.0	7.9	197.5
<b>Germantown Ave &amp; Hillcrest Ave</b>	EB	L	75	-	-	0.2	5.0
		T/R	-	-	-	0.2	5.0
	WB	L	-	18.4	460.0	21.9	547.5
		T/R	100	19.5	487.5	24.7	617.5
	NB	L	150	-	-	0	0.0
		T/R	-	16.1	402.5	28.8	720.0
	SB	L	175	6.4	160.0	5.2	130.0
		T/R	-	10.2	255.0	12.8	320.0
<b>Germantown Ave &amp; Campus Access North</b>	EB	L/R	-	0	0.0	0	0.0
	NB	L/T	-	0	0.0	0	0.0
	SB	T	-	0	0.0	0	0.0
	SB	T/R	-	0	0.0	0	0.0
<b>Germantown Ave &amp; Campus Access South</b>	EB	L/R	-	0.1	0.0	0	0.0
	NB	L/T	-	0	0.0	0	0.0
	SB	T	-	0	0.0	0	0.0
	SB	T/R	-	0	0.0	0	0.0
<b>Germantown Ave &amp; Bells Mill Rd</b>	EB	L/T/R	-	67.9	1697.5	68.5	1712.5
	NB	L	100	9.1	227.5	8.5	212.5
		T/R	-	16.6	415.0	16.7	417.5
	SB	L/T	-	16.6	415.0	15.8	395.0
		R	575	30.6	765.0	30.7	767.5
<b>Bells Mill Rd &amp; Campus Access</b>	EB	L/T	-	0	0.0	0	0.0
	WB	T/R	-	0	0.0	0	0.0
	SB	L/R	-	0	0.0	0	0.0

**Table 7**  
**Queue Length (95<sup>th</sup> Percentile) Summary**  
**Weekday Evening Peak Hour**

Intersection	App.	Mvmt.	Storage Length (ft)	Existing 2020		Proposed 2021	
				Cars	Feet	Cars	Feet
<b>Germantown Ave &amp; Rogers Dr</b>	WB	L	-	2.9	72.5	2.9	72.5
		R	-	1.5	37.5	1.5	37.5
	NB	T/R	-	9.3	232.5	9.2	230.0
	SB	L/T	-	21.1	527.5	20.4	510.0
<b>Germantown Ave &amp; Hillcrest Ave</b>	EB	L	75	-	-	0	0.0
		T/R	-	-	-	0.3	7.5
	WB	L	-	45.3	1132.5	52.6	1315.0
		T/R	100	3.6	90.0	4.6	115.0
	NB	L	150	-	-	0.2	5.0
		T/R	-	13.3	332.5	23.3	582.5
<b>Germantown Ave &amp; Campus Access North</b>	SB	L	175	12.8	320.0	12.6	315.0
		T/R	-	18.1	452.5	24.3	607.5
	EB	L/R	-	0	0.0	0	0.0
	NB	L/T	-	0	0.0	0	0.0
	SB	T	-	0	0.0	0	0.0
		T/R	-	0	0.0	0	0.0
<b>Germantown Ave &amp; Campus Access South</b>	EB	L/R	-	0	0.0	0	0.0
		L/T	-	0	0.0	0	0.0
	NB	T	-	0	0.0	0	0.0
		T/R	-	0	0.0	0	0.0
	SB	L/T/R	-	30.5	762.5	30.1	752.5
		L	100	5.8	145.0	5.3	132.5
<b>Germantown Ave &amp; Bells Mill Rd</b>	NB	T/R	-	11.7	292.5	11.8	295.0
		L/T	-	18	450.0	17.1	427.5
	SB	R	575	46.2	1155.0	46.2	1155.0
		L/R	-	0	0.0	0	0.0
<b>Bells Mill Rd &amp; Campus Access</b>	EB	L/T	-	0	0.0	0	0.0
	WB	T/R	-	0	0.0	0	0.0
	SB	L/R	-	0	0.0	0	0.0

## CONCLUSIONS

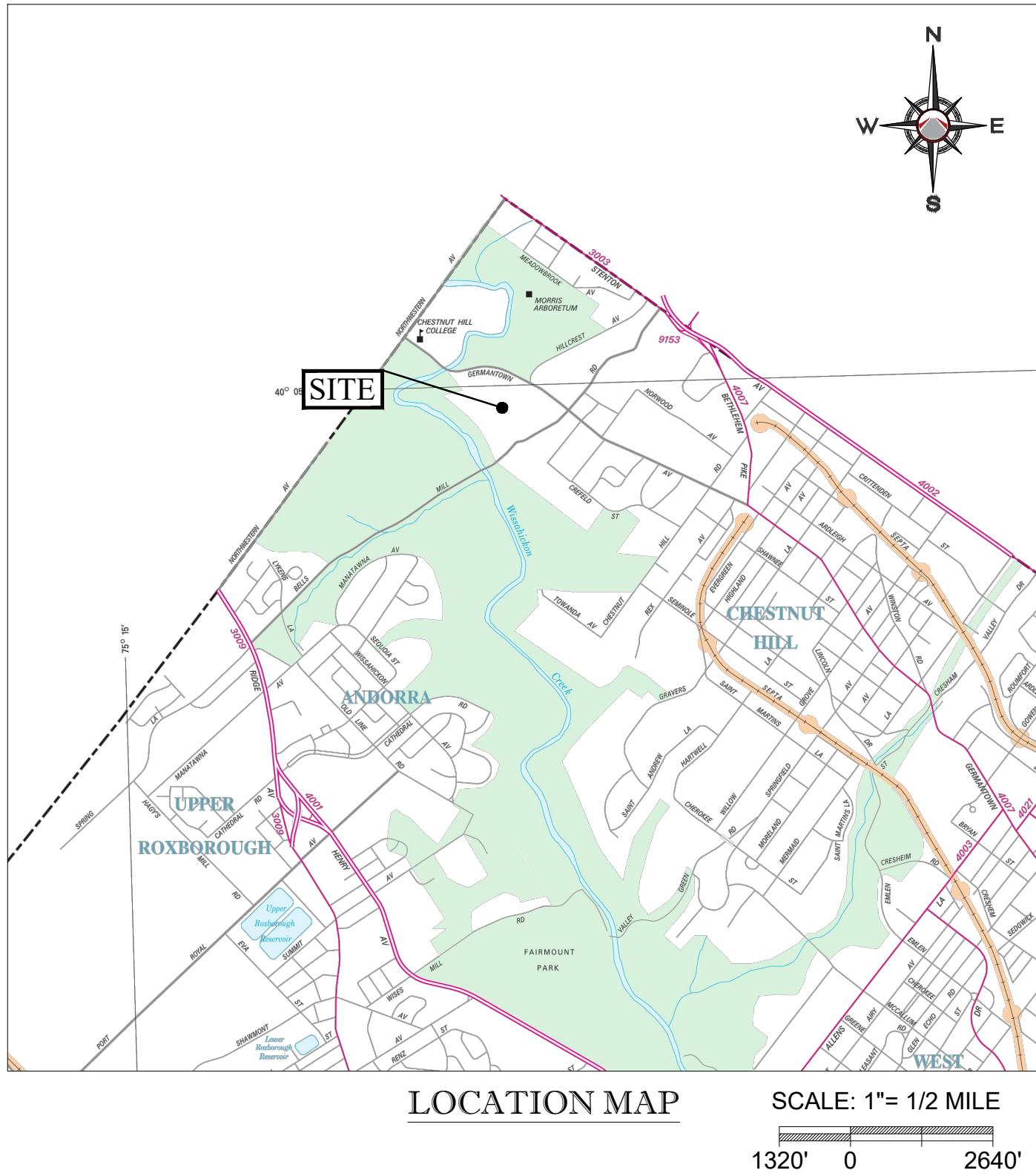
Based on the information collected and analyzed by ATDE, it is our opinion that the proposed Sugarloaf Campus access will not negatively impact the roadway network within the study limits.

The existing unsignalized access points will remain but will no longer be utilized by vehicular traffic. The proposed access will align with Hillcrest Avenue. This signal will be interconnected to the signalized intersection of Germantown Avenue and Bells Mill Road, located about 775 feet, to the south. The existing intensity for the site will remain the same.

The existing traffic signal at Germantown Avenue and Hillcrest Avenue will be upgraded to include ADA compliant pedestrian facilities, including APS pushbuttons and countdown pedestrian signals.

PROPOSED CHESTNUT HILL COLLEGE EXPANSION  
CITY OF PHILADELPHIA  
PHILADELPHIA COUNTY, PENNSYLVANIA

LOCATION MAP

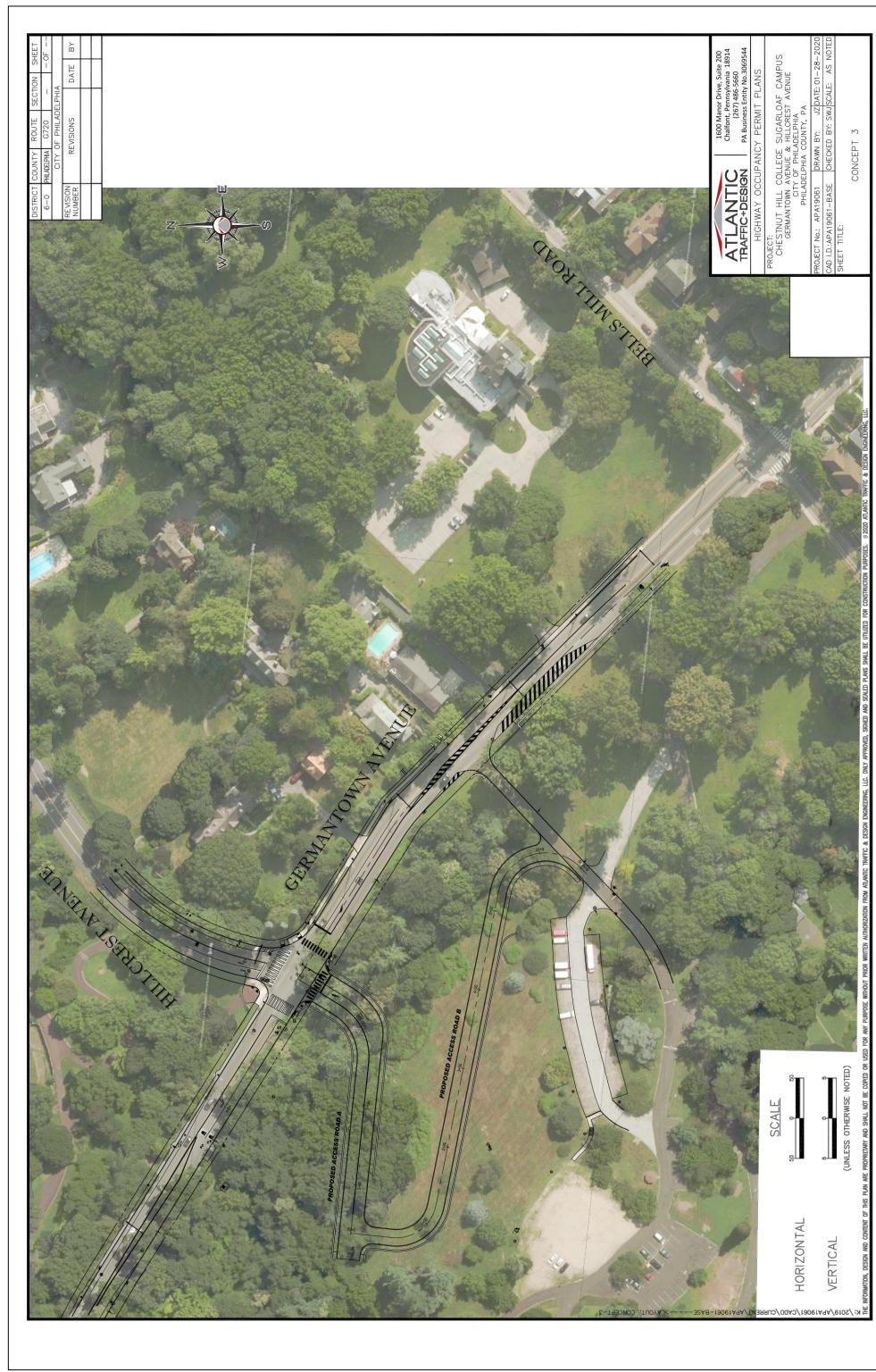


# ATLANTIC TRAFFIC+DESIGN

FIGURE 1B

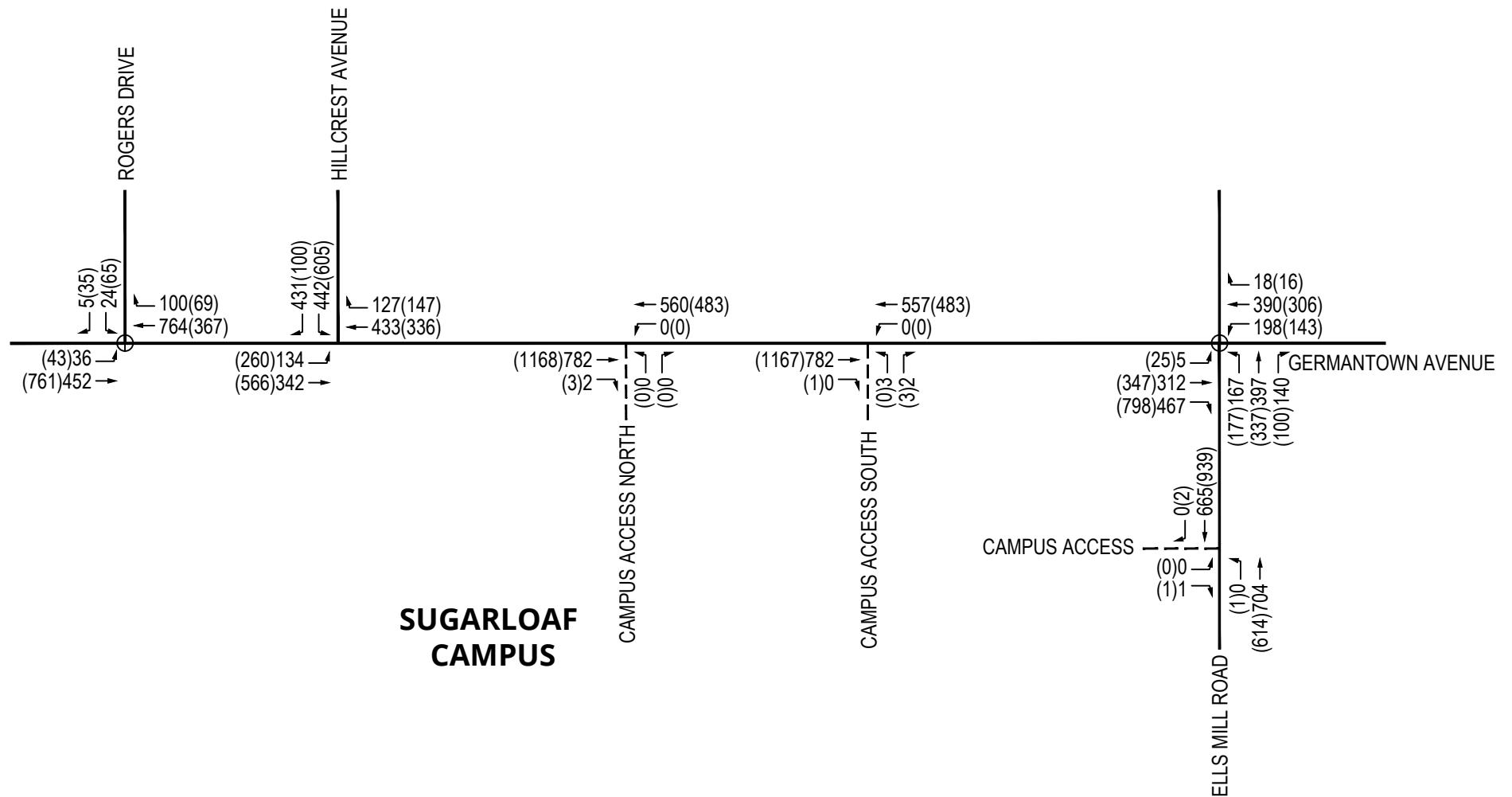
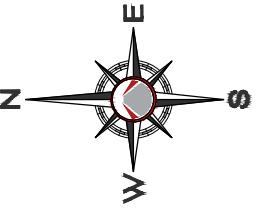
PROPOSED CHESTNUT HILL COLLEGE EXPANSION  
CITY OF PHILADELPHIA  
PHILADELPHIA COUNTY, PENNSYLVANIA

SITE PLAN



PROPOSED SUGARLOAF CAMPUS ACCESS  
CITY OF PHILADELPHIA  
PHILADELPHIA COUNTY, PENNSYLVANIA

EXISTING TRAFFIC VOLUMES

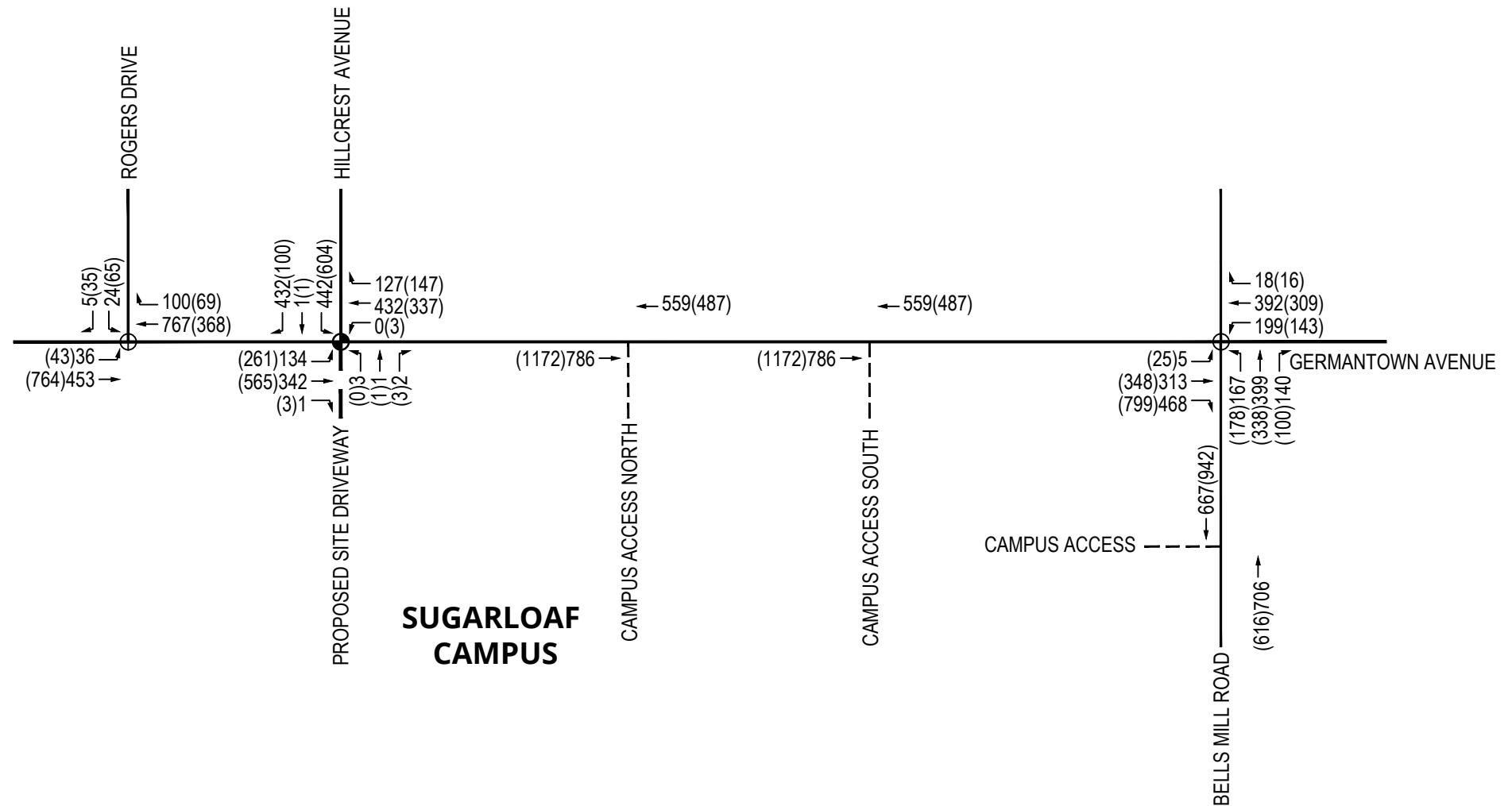
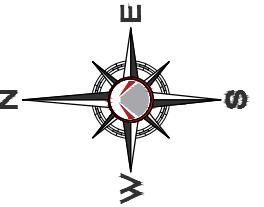


LEGEND

- AA(BB)[CC] AM(PM)[SAT] PEAK HOUR VOLUMES
- EXISTING ROADWAY
- - - EXISTING DRIVEWAY
- ⊕ EXISTING TRAFFIC SIGNAL

PROPOSED SUGARLOAF CAMPUS ACCESS  
CITY OF PHILADELPHIA  
PHILADELPHIA COUNTY, PENNSYLVANIA

PROPOSED TRAFFIC VOLUMES



#### LEGEND

- AA(BB)[CC] AM(PM)[SAT] PEAK HOUR VOLUMES
- EXISTING ROADWAY
- - - EXISTING DRIVEWAY
- ⊕ EXISTING TRAFFIC SIGNAL
- — PROPOSED DRIVEWAY
- PROPOSED TRAFFIC SIGNAL

## TECHNICAL APPENDIX

## A | CORRESPONDENCES & MEETING MINUTES

**City of Philadelphia  
Department of Streets  
Developer Services Meeting  
Wednesday, 1/29/2020**

**Chestnut Hill College Sugarloaf Campus  
9220-50 Germantown Avenue**



1600 Manor Drive, Suite 200  
Chalfont, Pennsylvania 18914  
267-486-5660  
[atde@atlantictraffic.com](mailto:atde@atlantictraffic.com)

## MEETING MINUTES

Attendees: See sign-in sheet

CC: Christopher Renfro, P.E. – City of Philadelphia  
Cornelius Brown, P.E. – Bohler Engineering

FROM: Stacey Jensen

DATE: February 7, 2020

**RE: Proposed Access Renovation  
Sugarloaf Hill at Chestnut Hill College  
Philadelphia, Pennsylvania  
ATDE Project No. APA19061**

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The Developer Services Meeting for the proposed access of the Sugarloaf Campus at Chestnut Hill College took place at the Municipal Services Building on Wednesday, January 29, 2020.

The proposed work includes installing 2 new access roads. Access A shall form the fourth leg of the existing T-intersection of Germantown Avenue and Hillcrest Avenue. Access B will connect Access A to the existing driveway. The two unsignalized access points, 1 on Germantown Avenue and 1 on Bells Mill Road, will remain.

The traffic analysis shall include the following intersections:

1. Germantown Avenue & Rogers Drive
2. Germantown Avenue & Hillcrest Avenue
3. Germantown Avenue & Bells Mills Road

Existing traffic volumes will be collected at the current campus driveways; it is to be assumed that all or almost all the vehicle and pedestrian volume will be redirected to the new signalized access.

Due to the proximity of Bells Mill Road to Hillcrest Avenue, the signals shall be interconnected and managed by the City's Traffic Operations Center (TOC). In order for this to be possible, the controller at the intersection of Germantown Avenue and Bells Mill Road will need to be replaced. *These requests will be coordinated with the City, by the applicant.*



Upon approval of the TIS, ATDE will coordinate with the city for the pole spotting. Pedestrian crossings at all four legs of the intersection will be explored and accommodated, if feasible. APS push buttons are the standard for the City and shall be used for the intersection. Full build out or future projections will not be analyzed for the Traffic Impact Study, at this time. Signal phasing, timing, and turn lane taper lengths will be determined by the study.

Germantown Avenue is a federally funded municipal road; the City of Philadelphia has sole ownership of this roadway. Therefore, approvals are limited to the city. No PennDOT coordination is needed.

K:\2019\APA19061\Correspondence\Meeting Minutes\APA19061 Developer Services Meeting 2020-02-07.docx\\

## **Stacey Jensen**

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**From:** Kasim Ali <Kasim.Ali@phila.gov>  
**Sent:** Friday, February 07, 2020 4:56 PM  
**To:** Stacey Jensen; Hunter Conforti; Kevin McCartney; John Whittaker; David R. Woodford  
(woodford@chc.edu); abbottc@chc.edu; ron.zemnick@shoemakerco.com  
**Cc:** Christopher Renfro; Harry Wilson; Vadim Fleysh; Michael Benko; Jeannette Brugger; Jeanien Wilson  
**Subject:** RE: Developer Services -- 9220-50 Germantown Avenue - Chestnut Hill College Sugarloaf Campus

**EXTERNAL:** Use caution with attachments and links.

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Stacey – Here's what we were trying to address:

1. The intersections of Germantown Ave & Hillcrest/Chestnut Hill College DW shall be fully upgraded to our current standards including APS.
2. The intersections of Germantown Ave & Bells Mill Rd needs to be evaluated for additional upgrades like new traffic signal controller, APS, pedestrian countdown signals & fiber interconnect etc. & possibly run fiber to Germantown & Hillcrest.
3. The intersections of Germantown Ave & Hillcrest/Chestnut Hill College DW to have crosswalks installed along with ADA compliant ramps on either side of Germantown Ave.

All this to be done in lieu of a full blown TIS that is normally required under such cases. Private DW may be named as desired, to raise potential funds for the project.

Thanks.

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**From:** Stacey Jensen <sjensen@atlantictraffic.com>  
**Sent:** Friday, February 7, 2020 4:28 PM  
**To:** Hunter Conforti <Hunter.Conforti@Phila.gov>; Kevin McCartney <kmccartney@bohlereng.com>; John Whittaker <jwhittaker@bohlereng.com>; David R. Woodford (woodford@chc.edu) <woodford@chc.edu>; abbottc@chc.edu; ron.zemnick@shoemakerco.com  
**Cc:** Christopher Renfro <Christopher.Renfro@phila.gov>; Kasim Ali <Kasim.Ali@phila.gov>; Harry Wilson <Harry.Wilson@Phila.gov>; Vadim Fleysh <Vadim.Fleysh@phila.gov>; Michael Benko <Michael.Benko@phila.gov>; Jeannette Brugger <Jeannette.Brugger@Phila.gov>; Jeanien Wilson <Jeanien.Wilson@phila.gov>  
**Subject:** RE: Developer Services -- 9220-50 Germantown Avenue - Chestnut Hill College Sugarloaf Campus

**External Email Notice. This email comes from outside of City government. Do not click on links or open attachments unless you recognize the sender.**

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Hunter,

Please see attached Meeting Minutes. Let me know if City has any corrections.

Have a nice weekend,  
Stacey

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**From:** Hunter Conforti <[Hunter.Conforti@Phila.gov](mailto:Hunter.Conforti@Phila.gov)>  
**Sent:** Friday, January 31, 2020 7:41 AM  
**To:** Kevin McCartney <[kmccartney@bohlereng.com](mailto:kmccartney@bohlereng.com)>; John Whittaker <[jwhittaker@bohlereng.com](mailto:jwhittaker@bohlereng.com)>; Stacey Jensen <[sjensen@atlantictraffic.com](mailto:sjensen@atlantictraffic.com)>; David R. Woodford ([woodford@chc.edu](mailto:woodford@chc.edu)) <[woodford@chc.edu](mailto:woodford@chc.edu)>; [abbottc@chc.edu](mailto:abbottc@chc.edu);

[ron.zemnick@shoemakerco.com](mailto:ron.zemnick@shoemakerco.com)

**Cc:** Christopher Renfro <[Christopher.Renfro@phila.gov](mailto:Christopher.Renfro@phila.gov)>; Kasim Ali <[Kasim.Ali@phila.gov](mailto:Kasim.Ali@phila.gov)>; Harry Wilson <[Harry.Wilson@Phila.gov](mailto:Harry.Wilson@Phila.gov)>; Vadim Fleysh <[Vadim.Fleysh@phila.gov](mailto:Vadim.Fleysh@phila.gov)>; Michael Benko <[Michael.Benko@phila.gov](mailto:Michael.Benko@phila.gov)>; Jeannette Brugger <[Jeannette.Brugger@Phila.gov](mailto:Jeannette.Brugger@Phila.gov)>; Jeanien Wilson <[Jeanien.Wilson@phila.gov](mailto:Jeanien.Wilson@phila.gov)>  
**Subject:** Developer Services -- 9220-50 Germantown Avenue - Chestnut Hill College Sugarloaf Campus

**EXTERNAL:** Use caution with attachments and links.

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Good Morning,

Thank you all for attending the subject meeting on 01/29/2020.

Attached is the sign-in sheet.

Kevin, could you please send over the meeting minutes.

Thanks,

**Hunter Conforti | Graduate Civil Engineer**

**Philadelphia Streets Department — Right-of-Way Unit**

1401 JFK Boulevard, Suite 960 | Philadelphia, PA 19102

Direct: +1 (215) 686-5531

<https://www.philadelphiastreets.com> | [Hunter.Conforti@phila.gov](mailto:Hunter.Conforti@phila.gov)

## **B | TURNING MOVEMENT COUNT SUMMARY AND COUNT DATA**



Proposed Sugarloaf Campus Access  
 City of Philadelphia  
 Philadelphia County, PA  
 ATDE Project No. 19061

Weekday AM Peak Period (7:00 a.m. to 9:00 a.m.)  
 Thursday, October 25, 2018

Germantown Avenue & Rogers Drive				Germantown Avenue & E Hillcrest Avenue				Germantown Avenue & Bells Mill Road				Germantown Avenue & Sugarloaf Campus Access North				Germantown Avenue & Sugarloaf Campus Access South				Bells Mill Road & Sugarloaf Campus Access				15-Min	Hour																
Germantown Ave Eastbound		Germantown Ave Westbound		Rogers Dr Southbound		Germantown Ave Eastbound		Germantown Ave Westbound		E Hillcrest Ave Southbound		Germantown Ave Eastbound		Germantown Ave Westbound		Bells Mill Rd Northbound		Germantown Ave Eastbound		Germantown Ave Westbound		Sugarloaf Access West Northbound		Germantown Ave Eastbound		Germantown Ave Westbound		Sugarloaf Access East Northbound		Sugarloaf Access Eastbound		Bells Mill Rd Northbound		Bells Mill Rd Southbound		15-Min	Hour				
Interval	Start Time	Left	Thru	Thru	Right	Left	Thru	Thru	Right	Left	Thru	Thru	Right	Left	Thru	Thru	Right	Left	Thru	Thru	Right	Left	Thru	Thru	Right	Left	Thru	Thru	Right	Sum	Sum										
1	7:00 AM	2	10	10	10	1	1	38	62	91	38	94	97	1	68	95	33	87	1	43	102	29	177	0	0	127	0	0	177	0	0	125	1	0	0	1	0	167	130	0	2108 9339 ***
2	7:15 AM	5	106	178	13	1	1	38	62	91	38	94	97	1	68	95	33	87	1	43	102	29	177	0	0	127	0	0	177	0	0	125	1	0	0	1	0	167	130	0	2108 9339 ***
3	7:30 AM	12	100	186	29	5	1	29	72	113	33	101	109	1	65	111	54	93	3	56	99	33	173	1	0	151	0	0	167	0	0	155	1	1	0	0	0	182	162	0	2298 9332
4	7:45 AM	14	124	188	36	11	2	29	99	122	28	131	119	1	98	140	64	107	13	38	90	47	233	1	0	141	0	0	242	0	0	136	0	0	0	0	0	179	192	0	2625 8847
5	8:00 AM	4	100	203	20	7	1	32	79	102	26	116	106	2	79	119	47	102	1	30	106	31	191	0	0	130	0	0	195	0	0	141	1	1	0	0	0	163	173	0	2308 8085
6	8:15 AM	6	97	178	15	4	3	30	70	95	29	111	92	0	64	117	43	91	1	36	93	19	176	1	0	123	0	0	180	0	0	117	0	0	0	0	0	153	157	0	2101
7	8:30 AM	7	77	153	18	6	2	39	50	88	29	74	83	1	44	76	37	82	1	37	109	23	125	2	0	119	0	0	129	0	0	122	1	1	0	0	0	167	111	0	1813
8	8:45 AM	3	95	134	23	2	3	38	63	76	25	108	80	3	63	104	33	65	1	33	73	33	167	1	0	95	0	0	172	0	0	93	1	0	0	0	0	139	140	0	1863
Pk. Hr. Total Vol.		35	430	755	98	24	5	128	332	428	125	442	431	5	310	465	198	389	18	167	397	140	774	2	0	549	0	0	781	0	0	557	3	2	0	1	0	691	657	0	
Pk. Hr. Bus/Truck		0	2	1	0	0	0	0	2	2	0	0	0	0	2	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	1	0						
% HV		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
Overall PHF			0.90					0.89								0.95							0.88								0.91										

Weekday PM Peak Period (4:00 p.m. to 6:00 p.m.)  
 Thursday, October 25, 2018

Germantown Avenue & Rogers Drive				Germantown Avenue & E Hillcrest Avenue				Germantown Avenue & Bells Mill Road				Germantown Avenue & Sugarloaf Campus Access North				Germantown Avenue & Sugarloaf Campus Access South				Bells Mill Road & Sugarloaf Campus Access				15-Min	Hour																
Germantown Ave Eastbound		Germantown Ave Westbound		Rogers Dr Southbound		Germantown Ave Eastbound		Germantown Ave Westbound		E Hillcrest Ave Southbound		Germantown Ave Eastbound		Germantown Ave Westbound		Bells Mill Rd Northbound		Germantown Ave Eastbound		Germantown Ave Westbound		Sugarloaf Access West Northbound		Germantown Ave Eastbound		Germantown Ave Westbound		Sugarloaf Access East Northbound		Sugarloaf Access Eastbound		Bells Mill Rd Northbound		Bells Mill Rd Southbound		15-Min	Hour				
Interval	Start Time	Left	Thru	Thru	Right	Left	Thru	Thru	Right	Left	Thru	Thru	Right	Left	Thru	Thru	Right	Left	Thru	Thru	Right	Left	Thru	Thru	Right	Left	Thru	Thru	Right	Left	Thru	Thru	Right	Sum	Sum						
1	4:00 PM	9	147	64	18	15	53	113	67	40	114	27	66	156	37	67	3	37	107	25	226	2	0	108	0	0	223	0	0	108	2	2	0	0	161	187	0	2213 9137 ***			
2	4:15 PM	9	160	94	2	9	13	80	90	65	33	129	28	3	75	138	37	66	1	28	86	23	221	1	0	97	0	0	216	0	0	94	3	0	0	0	0	148	184	1	2134 9342
3	4:30 PM	5	185	88	6	18	10	90	119	67	32	123	21	9	75	163	36	67	1	31	78	28	239	1	0	100	0	0	235	0	0	102	0	1	0	0	1	128	195	0	2254 9971
4	4:45 PM	11	177	102	9	9	1	51	127	94	47	137	21	2	85	173	46	89	4	53	83	27	259	0	0	136	0	0	267	0	0	129	0	0	0	1	1	170	226	0	2536 10369 ***
5	5:00 PM	14	163	92	14	28	15	52	123	81	31	146	28	6	64	188	32	72	4	34	82	24	269	1	0	113	0	0	263	1	0	113	0	1	0	0	0	145	219	0	2418 10151
6	5:15 PM	8	218	94	17	16	12	81	147	91	39	164	28	12	92	203	35	85	3	44	75	26	312	1	0	128	0	0	322	0	0	123	0	1	0	1	0	149	236	0	2763
7	5:30 PM	10	202	64	26	12	7	67	151	70	30	158	23	4	98	207	28	56	5	42	88	21	304	1	0	105	0	0	315	0	0	107	0	1	0	0	0	150	238	2	2592
8	5:45 PM	10	171	84	22	9	3	71	121	86	28	144	20	2	88	180	28	77	0	34	67	26	261	2	0	112	0	0	270	0	0	109	1	1	0	1	0	131	219	0	2378
Pk. Hr. Total Vol.		43	760	352	66	65	35	251	548	336	147	605	100	24	339	771	141	302	16	173	328	98	1144	3	0	482	0	0	1167	1	0	472	0	3	0	1	1	614	919	2	
Pk. Hr. Bus/Truck		0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
% HV		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%							
Overall PHF			0.90					0.90							0.95								0.92								0.97										

# 1. Germantown Avenue and Rogers Drive - TMC

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

Cherry Hill, NJ, 08003, US

Wed Feb 12, 2020

Full Length (7 AM-9 AM, 4 PM-6 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 750114, Location: 40.085093, -75.228874, Site Code: 1

Leg Direction	Germantown Avenue Eastbound					Germantown Avenue Westbound					Rogers Drive Southbound							
Time	L	T	U	App	Ped*	T	R	U	RR	App	Ped*	L	R	U	RR	App	Ped*	Int
2020-02-12 7:00AM	0	87	0	87	0	146	4	0	0	150	0	3	1	0	0	4	0	241
7:15AM	5	110	0	115	1	191	12	0	1	204	0	1	1	0	0	2	0	321
7:30AM	12	113	0	125	0	192	29	0	0	221	0	5	1	0	0	6	0	352
7:45AM	15	132	0	147	0	202	36	0	0	238	0	11	1	0	1	13	0	398
Hourly Total	32	442	0	474	1	731	81	0	1	813	0	20	4	0	1	25	0	1312
8:00AM	4	107	0	111	0	213	18	0	2	233	0	7	0	0	1	8	0	352
8:15AM	6	99	0	105	0	182	15	0	0	197	0	4	0	0	3	7	0	309
8:30AM	8	80	0	88	0	157	19	0	0	176	0	6	0	0	2	8	0	272
8:45AM	3	102	0	105	0	139	23	0	0	162	1	3	1	0	3	7	2	274
Hourly Total	21	388	0	409	0	691	75	0	2	768	1	20	1	0	9	30	2	1207
4:00PM	9	151	0	160	2	89	6	0	0	95	2	18	10	0	5	33	0	288
4:15PM	9	164	0	173	0	97	2	0	0	99	0	9	4	0	9	22	0	294
4:30PM	5	187	0	192	2	92	6	0	0	98	1	18	4	0	6	28	1	318
4:45PM	11	178	0	189	0	107	9	0	0	116	0	9	0	0	1	10	0	315
Hourly Total	34	680	0	714	4	385	23	0	0	408	3	54	18	0	21	93	1	1215
5:00PM	14	165	0	179	0	94	12	0	2	108	2	28	10	0	5	43	0	330
5:15PM	9	219	0	228	1	97	16	0	1	114	1	16	6	0	6	28	0	370
5:30PM	10	204	0	214	0	66	26	0	0	92	0	12	1	0	6	19	0	325
5:45PM	10	174	0	184	0	85	21	0	1	107	0	9	2	0	1	12	3	303
Hourly Total	43	762	0	805	1	342	75	0	4	421	3	65	19	0	18	102	3	1328
Total	130	2272	0	2402	6	2149	254	0	7	2410	7	159	42	0	49	250	6	5062
% Approach	5.4%	94.6%	0%	-	-	89.2%	10.5%	0%	0.3%	-	-	63.6%	16.8%	0%	19.6%	-	-	-
% Total	2.6%	44.9%	0%	47.5%	-	42.5%	5.0%	0%	0.1%	47.6%	-	3.1%	0.8%	0%	1.0%	4.9%	-	-
Lights	127	2207	0	2334	-	2062	253	0	7	2322	-	158	42	0	48	248	-	4904
% Lights	97.7%	97.1%	0%	97.2%	-	96.0%	99.6%	0%	100%	96.3%	-	99.4%	100%	0%	98.0%	99.2%	-	96.9%
Articulated Trucks	0	2	0	2	-	1	0	0	0	1	-	0	0	0	0	0	-	3
% Articulated Trucks	0%	0.1%	0%	0.1%	-	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0.1%
Buses and Single-Unit Trucks	3	63	0	66	-	86	1	0	0	87	-	1	0	0	1	2	-	155
% Buses and Single-Unit Trucks	2.3%	2.8%	0%	2.7%	-	4.0%	0.4%	0%	0%	3.6%	-	0.6%	0%	0%	2.0%	0.8%	-	3.1%
Pedestrians	-	-	-	-	6	-	-	-	-	7	-	-	-	-	-	-	5	
% Pedestrians	-	-	-	-	100%	-	-	-	-	100%	-	-	-	-	-	-	83.3%	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	1	
% Bicycles on Crosswalk	-	-	-	-	0%	-	-	-	-	0%	-	-	-	-	-	-	16.7%	-

\*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, RR: Right on red, T: Thru, U: U-Turn

# 1. Germantown Avenue and Rogers Drive - TMC

Wed Feb 12, 2020

AM Peak (7:15 AM - 8:15 AM) - Overall Peak Hour

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 750114, Location: 40.085093, -75.228874, Site Code: 1

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

Cherry Hill, NJ, 08003, US

Leg Direction	Germantown Avenue Eastbound					Germantown Avenue Westbound					Rogers Drive Southbound							
Time	L	T	U	App	Ped*	T	R	U	RR	App	Ped*	L	R	U	RR	App	Ped*	Int
2020-02-12 7:15AM	5	110	0	115	1	191	12	0	1	204	0	1	1	0	0	2	0	321
7:30AM	12	113	0	125	0	192	29	0	0	221	0	5	1	0	0	6	0	352
7:45AM	15	132	0	147	0	202	36	0	0	238	0	11	1	0	1	13	0	398
8:00AM	4	107	0	111	0	213	18	0	2	233	0	7	0	0	1	8	0	352
<b>Total</b>	36	462	0	498	1	798	95	0	3	896	0	24	3	0	2	29	0	1423
<b>% Approach</b>	7.2%	92.8%	0%	-	-	89.1%	10.6%	0%	0.3%	-	-	82.8%	10.3%	0%	6.9%	-	-	-
<b>% Total</b>	2.5%	32.5%	0%	35.0%	-	56.1%	6.7%	0%	0.2%	63.0%	-	1.7%	0.2%	0%	0.1%	2.0%	-	-
<b>PHF</b>	0.600	0.875	-	0.847	-	0.937	0.660	-	0.375	0.941	-	0.545	0.750	-	0.500	0.558	-	0.894
<b>Lights</b>	35	430	0	465	-	755	95	0	3	853	-	24	3	0	2	29	-	1347
<b>% Lights</b>	97.2%	93.1%	0%	93.4%	-	94.6%	100%	0%	100%	95.2%	-	100%	100%	0%	100%	100%	-	94.7%
<b>Articulated Trucks</b>	0	0	0	0	-	1	0	0	0	1	-	0	0	0	0	0	-	1
<b>% Articulated Trucks</b>	0%	0%	0%	0%	-	0.1%	0%	0%	0%	0.1%	-	0%	0%	0%	0%	0%	-	0.1%
<b>Buses and Single-Unit Trucks</b>	1	32	0	33	-	42	0	0	0	42	-	0	0	0	0	0	-	75
<b>% Buses and Single-Unit Trucks</b>	2.8%	6.9%	0%	6.6%	-	5.3%	0%	0%	0%	4.7%	-	0%	0%	0%	0%	0%	-	5.3%
Pedestrians	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	100%	-	-	-	-	-	-	-	-	-	-	-	-	
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	0%	-	-	-	-	-	-	-	-	-	-	-	-	

\*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, RR: Right on red, T: Thru, U: U-Turn

# 1. Germantown Avenue and Rogers Drive - TMC

Wed Feb 12, 2020

PM Peak (4:45 PM - 5:45 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 750114, Location: 40.085093, -75.228874, Site Code: 1

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

Cherry Hill, NJ, 08003, US

Leg Direction	Germantown Avenue Eastbound					Germantown Avenue Westbound					Rogers Drive Southbound							
Time	L	T	U	App	Ped*	T	R	U	RR	App	Ped*	L	R	U	RR	App	Ped*	Int
2020-02-12 4:45PM	11	178	0	189	0	107	9	0	0	116	0	9	0	0	1	10	0	315
5:00PM	14	165	0	179	0	94	12	0	2	108	2	28	10	0	5	43	0	330
5:15PM	9	219	0	228	1	97	16	0	1	114	1	16	6	0	6	28	0	370
5:30PM	10	204	0	214	0	66	26	0	0	92	0	12	1	0	6	19	0	325
<b>Total</b>	44	766	0	810	1	364	63	0	3	430	3	65	17	0	18	100	0	1340
<b>% Approach</b>	5.4%	94.6%	0%	-	-	84.7%	14.7%	0%	0.7%	-	-	65.0%	17.0%	0%	18.0%	-	-	-
<b>% Total</b>	3.3%	57.2%	0%	60.4%	-	27.2%	4.7%	0%	0.2%	32.1%	-	4.9%	1.3%	0%	1.3%	7.5%	-	-
<b>PHF</b>	0.786	0.874	-	0.888	-	0.850	0.606	-	0.375	0.927	-	0.580	0.425	-	0.750	0.581	-	0.905
<b>Lights</b>	43	760	0	803	-	352	63	0	3	418	-	65	17	0	18	100	-	1321
<b>% Lights</b>	97.7%	99.2%	0%	99.1%	-	96.7%	100%	0%	100%	97.2%	-	100%	100%	0%	100%	100%	-	98.6%
<b>Articulated Trucks</b>	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0
<b>% Articulated Trucks</b>	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%
<b>Buses and Single-Unit Trucks</b>	1	6	0	7	-	12	0	0	0	12	-	0	0	0	0	0	-	19
<b>% Buses and Single-Unit Trucks</b>	2.3%	0.8%	0%	0.9%	-	3.3%	0%	0%	0%	2.8%	-	0%	0%	0%	0%	0%	-	1.4%
Pedestrians	-	-	-	-	-	1	-	-	-	-	-	3	-	-	-	-	-	0
% Pedestrians	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0
% Bicycles on Crosswalk	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	-

\*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, RR: Right on red, T: Thru, U: U-Turn

## 2. Germantown Avenue and E Hillcrest Avenue - TMC

Wed Feb 12, 2020

Full Length (7 AM-9 AM, 4 PM-6 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 750115, Location: 40.083551, -75.222297, Site Code: 2

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

Cherry Hill, NJ, 08003, US

Leg Direction	Germantown Avenue Eastbound				Germantown Avenue Westbound				E Hillcrest Avenue Southbound									
Time	L	T	U	App Ped*	T	R	U	RR	App	Ped*	L	R	U	RR	App	Ped*	Int	
2020-02-12 7:00AM	34	69	0	103	0	63	10	0	13	86	0	41	54	0	39	134	0	323
7:15AM	39	85	0	124	0	99	14	0	25	138	0	94	81	0	19	194	0	456
7:30AM	30	83	0	113	0	116	25	0	8	149	0	103	67	0	46	216	0	478
7:45AM	32	105	0	137	0	134	28	0	0	162	0	133	80	0	39	252	0	551
Hourly Total	135	342	0	477	0	412	77	0	46	535	0	371	282	0	143	796	0	1808
8:00AM	33	83	0	116	0	108	23	0	3	134	0	116	77	0	33	226	0	476
8:15AM	30	72	0	102	0	99	24	0	6	129	0	113	59	0	34	206	0	437
8:30AM	40	51	0	91	0	92	28	0	3	123	0	76	50	0	33	159	0	373
8:45AM	38	70	0	108	0	80	23	0	2	105	0	108	48	0	32	188	1	401
Hourly Total	141	276	0	417	0	379	98	0	14	491	0	413	234	0	132	779	1	1687
9:00AM	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	1	0	2
Hourly Total	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	1	0	2
4:00PM	53	117	0	170	0	70	22	0	18	110	0	114	18	0	11	143	0	423
4:15PM	81	92	0	173	0	69	25	0	8	102	0	130	18	0	10	158	0	433
4:30PM	90	121	0	211	0	70	26	0	7	103	0	123	15	0	7	145	0	459
4:45PM	51	128	0	179	0	97	35	0	12	144	0	137	16	0	5	158	2	481
Hourly Total	275	458	0	733	0	306	108	0	45	459	0	504	67	0	33	604	2	1796
5:00PM	52	125	0	177	0	84	21	0	10	115	0	146	15	0	13	174	0	466
5:15PM	81	148	0	229	0	93	28	0	11	132	0	164	21	0	7	192	1	553
5:30PM	67	152	0	219	0	71	27	0	3	101	0	158	10	0	14	182	0	502
5:45PM	72	124	0	196	0	87	21	0	7	115	0	144	9	0	11	164	0	475
Hourly Total	272	549	0	821	0	335	97	0	31	463	0	612	55	0	45	712	1	1996
Total	824	1625	0	2449	0	1432	380	0	136	1948	0	1900	638	0	354	2892	4	7289
% Approach	33.6%	66.4%	0%	-	-	73.5%	19.5%	0%	7.0%	-	-	65.7%	22.1%	0%	12.2%	-	-	-
% Total	11.3%	22.3%	0%	33.6%	-	19.6%	5.2%	0%	1.9%	26.7%	-	26.1%	8.8%	0%	4.9%	39.7%	-	-
Lights	815	1574	0	2389	-	1366	377	0	134	1877	-	1890	624	0	349	2863	-	7129
% Lights	98.9%	96.9%	0%	97.6%	-	95.4%	99.2%	0%	98.5%	96.4%	-	99.5%	97.8%	0%	98.6%	99.0%	-	97.8%
Articulated Trucks	0	2	0	2	-	3	0	0	0	3	-	0	0	0	0	0	-	5
% Articulated Trucks	0%	0.1%	0%	0.1%	-	0.2%	0%	0%	0%	0.2%	-	0%	0%	0%	0%	0%	-	0.1%
Buses and Single-Unit Trucks	9	49	0	58	-	63	3	0	2	68	-	10	14	0	5	29	-	155
% Buses and Single-Unit Trucks	1.1%	3.0%	0%	2.4%	-	4.4%	0.8%	0%	1.5%	3.5%	-	0.5%	2.2%	0%	1.4%	1.0%	-	2.1%
Pedestrians	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	4	-	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100%	-	
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0%	-	

\*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, RR: Right on red, T: Thru, U: U-Turn

## 2. Germantown Avenue and E Hillcrest Avenue - TMC

Wed Feb 12, 2020

AM Peak (7:15 AM - 8:15 AM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 750115, Location: 40.083551, -75.222297, Site Code: 2

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

Cherry Hill, NJ, 08003, US

Leg Direction	Germantown Avenue Eastbound					Germantown Avenue Westbound					E Hillcrest Avenue Southbound							
Time	L	T	U	App	Ped*	T	R	U	RR	App	Ped*	L	R	U	RR	App	Ped*	Int
2020-02-12 7:15AM	39	85	0	124	0	99	14	0	25	138	0	94	81	0	19	194	0	456
7:30AM	30	83	0	113	0	116	25	0	8	149	0	103	67	0	46	216	0	478
7:45AM	32	105	0	137	0	134	28	0	0	162	0	133	80	0	39	252	0	551
8:00AM	33	83	0	116	0	108	23	0	3	134	0	116	77	0	33	226	0	476
<b>Total</b>	134	356	0	490	0	457	90	0	36	583	0	446	305	0	137	888	0	1961
<b>% Approach</b>	27.3%	72.7%	0%	-	-	78.4%	15.4%	0%	6.2%	-	-	50.2%	34.3%	0%	15.4%	-	-	-
<b>% Total</b>	6.8%	18.2%	0%	25.0%	-	23.3%	4.6%	0%	1.8%	29.7%	-	22.7%	15.6%	0%	7.0%	45.3%	-	-
<b>PHF</b>	0.859	0.848	-	0.894	-	0.853	0.804	-	0.360	0.900	-	0.838	0.941	-	0.745	0.881	-	0.890
<b>Lights</b>	128	332	0	460	-	428	90	0	35	553	-	442	296	0	135	873	-	1886
<b>% Lights</b>	95.5%	93.3%	0%	93.9%	-	93.7%	100%	0%	97.2%	94.9%	-	99.1%	97.0%	0%	98.5%	98.3%	-	96.2%
<b>Articulated Trucks</b>	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0
<b>% Articulated Trucks</b>	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%
<b>Buses and Single-Unit Trucks</b>	6	24	0	30	-	29	0	0	1	30	-	4	9	0	2	15	-	75
<b>% Buses and Single-Unit Trucks</b>	4.5%	6.7%	0%	6.1%	-	6.3%	0%	0%	2.8%	5.1%	-	0.9%	3.0%	0%	1.5%	1.7%	-	3.8%
<b>Pedestrians</b>	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
<b>% Pedestrians</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Bicycles on Crosswalk</b>	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
<b>% Bicycles on Crosswalk</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

\*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, RR: Right on red, T: Thru, U: U-Turn

## 2. Germantown Avenue and E Hillcrest Avenue - TMC

Wed Feb 12, 2020

PM Peak (4:45 PM - 5:45 PM) - Overall Peak Hour

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 750115, Location: 40.083551, -75.222297, Site Code: 2

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

Cherry Hill, NJ, 08003, US

Leg Direction	Germantown Avenue Eastbound					Germantown Avenue Westbound					E Hillcrest Avenue Southbound							
Time	L	T	U	App	Ped*	T	R	U	RR	App	Ped*	L	R	U	RR	App	Ped*	Int
2020-02-12 4:45PM	51	128	0	179	0	97	35	0	12	144	0	137	16	0	5	158	2	481
5:00PM	52	125	0	177	0	84	21	0	10	115	0	146	15	0	13	174	0	466
5:15PM	81	148	0	229	0	93	28	0	11	132	0	164	21	0	7	192	1	553
5:30PM	67	152	0	219	0	71	27	0	3	101	0	158	10	0	14	182	0	502
<b>Total</b>	251	553	0	804	0	345	111	0	36	492	0	605	62	0	39	706	3	2002
<b>% Approach</b>	31.2%	68.8%	0%	-	-	70.1%	22.6%	0%	7.3%	-	-	85.7%	8.8%	0%	5.5%	-	-	-
<b>% Total</b>	12.5%	27.6%	0%	40.2%	-	17.2%	5.5%	0%	1.8%	24.6%	-	30.2%	3.1%	0%	1.9%	35.3%	-	-
<b>PHF</b>	0.775	0.910	-	0.878	-	0.889	0.793	-	0.750	0.854	-	0.922	0.738	-	0.696	0.919	-	0.905
<b>Lights</b>	251	548	0	799	-	336	111	0	36	483	-	605	62	0	38	705	-	1987
<b>% Lights</b>	100%	99.1%	0%	99.4%	-	97.4%	100%	0%	100%	98.2%	-	100%	100%	0%	97.4%	99.9%	-	99.3%
<b>Articulated Trucks</b>	0	0	0	0	-	1	0	0	0	1	-	0	0	0	0	0	-	1
<b>% Articulated Trucks</b>	0%	0%	0%	0%	-	0.3%	0%	0%	0%	0.2%	-	0%	0%	0%	0%	0%	-	0%
<b>Buses and Single-Unit Trucks</b>	0	5	0	5	-	8	0	0	0	8	-	0	0	0	1	1	-	14
<b>% Buses and Single-Unit Trucks</b>	0%	0.9%	0%	0.6%	-	2.3%	0%	0%	0%	1.6%	-	0%	0%	0%	2.6%	0.1%	-	0.7%
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	3	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100%	-	
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0%	-	

\*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, RR: Right on red, T: Thru, U: U-Turn

### 3. Germantown Avenue and Bells Mill Road - TMC

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

Cherry Hill, NJ, 08003, US

Wed Feb 12, 2020

Full Length (7 AM-9 AM, 4 PM-6 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 750116, Location: 40.082117, -75.219812, Site Code: 3

Leg Direction	Germantown Avenue Eastbound							Germantown Avenue Westbound						
Time	L	T	R	U	RR	App	Ped*	L	T	R	U	RR	App	Ped*
2020-02-12 7:00AM	1	36	34	0	44	115	0	32	64	0	0	0	96	0
7:15AM	1	72	49	0	46	168	0	33	95	1	0	0	129	0
7:30AM	1	76	52	0	59	188	0	54	96	3	0	0	153	0
7:45AM	1	105	82	0	60	248	0	65	120	13	0	0	198	0
Hourly Total	4	289	217	0	209	719	0	184	375	17	0	0	576	0
8:00AM	2	83	59	0	60	204	0	47	109	1	0	0	157	0
8:15AM	0	68	64	0	57	189	0	43	96	1	0	0	140	0
8:30AM	1	46	43	0	34	124	0	40	87	0	0	1	128	0
8:45AM	3	71	59	0	45	178	0	33	69	1	0	0	103	0
Hourly Total	6	268	225	0	196	695	0	163	361	3	0	1	528	0
4:00PM	3	69	75	0	81	228	0	37	70	3	0	0	110	0
4:15PM	3	77	87	0	51	218	0	37	70	1	0	0	108	0
4:30PM	9	78	87	0	77	251	0	36	70	1	0	0	107	0
4:45PM	2	86	100	0	73	261	0	46	93	4	0	0	143	0
Hourly Total	17	310	349	0	282	958	0	156	303	9	0	0	468	0
5:00PM	6	66	75	0	114	261	0	34	73	4	0	0	111	0
5:15PM	12	93	89	0	114	308	0	35	87	3	1	0	126	0
5:30PM	4	99	94	0	113	310	0	28	57	5	0	0	90	0
5:45PM	2	91	96	0	84	273	0	28	78	0	0	0	106	0
Hourly Total	24	349	354	0	425	1152	0	125	295	12	1	0	433	0
Total	51	1216	1145	0	1112	3524	0	628	1334	41	1	1	2005	0
% Approach	1.4%	34.5%	32.5%	0%	31.6%	-	-	31.3%	66.5%	2.0%	0%	0%	-	-
% Total	0.6%	15.2%	14.3%	0%	13.9%	44.0%	-	7.8%	16.6%	0.5%	0%	0%	25.0%	-
Lights	51	1159	1137	0	1111	3458	-	622	1265	41	1	1	1930	-
% Lights	100%	95.3%	99.3%	0%	99.9%	98.1%	-	99.0%	94.8%	100%	100%	100%	96.3%	-
Articulated Trucks	0	2	0	0	0	2	-	0	1	0	0	0	1	-
% Articulated Trucks	0%	0.2%	0%	0%	0%	0.1%	-	0%	0.1%	0%	0%	0%	0%	-
Buses and Single-Unit Trucks	0	55	8	0	1	64	-	6	68	0	0	0	74	-
% Buses and Single-Unit Trucks	0%	4.5%	0.7%	0%	0.1%	1.8%	-	1.0%	5.1%	0%	0%	0%	3.7%	-
Pedestrians	-	-	-	-	-	-	0	-	-	-	-	-	-	0
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	-	0	-	-	-	-	-	-	0
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-

\*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, RR: Right on red, T: Thru, U: U-Turn

### 3. Germantown Avenue and Bells Mill Road - TMC

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

Cherry Hill, NJ, 08003, US

Wed Feb 12, 2020

Full Length (7 AM-9 AM, 4 PM-6 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 750116, Location: 40.082117, -75.219812, Site Code: 3

Leg Direction	Bells Mill Road Northbound							Bells Mill Road Southbound							
Time	L	T	R	U	RR	App	Ped*	L	T	R	U	RR	App	Ped*	Int
2020-02-12 7:00AM	29	103	17	0	0	149	0	0	0	0	0	0	0	0	360
7:15AM	44	102	29	0	0	175	0	0	0	0	0	0	0	0	472
7:30AM	56	99	34	0	0	189	0	0	0	0	0	0	0	0	530
7:45AM	38	90	46	0	1	175	0	0	0	0	0	0	0	0	621
Hourly Total	167	394	126	0	1	688	0	0	0	0	0	0	0	0	1983
8:00AM	30	107	31	0	0	168	0	0	0	0	0	0	0	0	529
8:15AM	36	93	18	0	1	148	0	0	0	0	0	0	0	0	477
8:30AM	37	109	24	0	0	170	0	0	0	0	0	0	0	0	422
8:45AM	33	74	33	0	0	140	0	0	0	0	0	0	0	1	421
Hourly Total	136	383	106	0	1	626	0	0	0	0	0	0	0	1	1849
4:00PM	37	107	25	0	0	169	0	0	0	0	0	0	0	1	507
4:15PM	28	86	24	0	0	138	0	0	0	0	0	0	0	2	464
4:30PM	32	79	28	0	0	139	0	0	0	0	0	0	0	1	497
4:45PM	53	83	28	0	0	164	0	0	0	0	0	0	0	1	568
Hourly Total	150	355	105	0	0	610	0	0	0	0	0	0	0	5	2036
5:00PM	34	82	24	0	0	140	0	0	0	0	0	0	0	0	512
5:15PM	44	75	26	0	0	145	0	0	0	1	0	0	1	1	580
5:30PM	42	89	21	0	0	152	0	0	0	0	0	0	0	0	552
5:45PM	34	67	26	0	0	127	0	0	0	0	0	0	0	0	506
Hourly Total	154	313	97	0	0	564	0	0	0	1	0	0	1	1	2150
<b>Total</b>	607	1445	434	0	2	2488	0	0	0	1	0	0	1	7	8018
<b>% Approach</b>	24.4%	58.1%	17.4%	0%	0.1%	-	-	0%	0%	100%	0%	0%	-	-	-
<b>% Total</b>	7.6%	18.0%	5.4%	0%	0%	31.0%	-	0%	0%	0%	0%	0%	0%	-	-
<b>Lights</b>	605	1441	430	0	2	2478	-	0	0	1	0	0	1	-	7867
<b>% Lights</b>	99.7%	99.7%	99.1%	0%	100%	99.6%	-	0%	0%	100%	0%	0%	100%	-	98.1%
<b>Articulated Trucks</b>	0	0	0	0	0	0	-	0	0	0	0	0	0	-	3
<b>% Articulated Trucks</b>	0%	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	0%	-	0%
<b>Buses and Single-Unit Trucks</b>	2	4	4	0	0	10	-	0	0	0	0	0	0	-	148
<b>% Buses and Single-Unit Trucks</b>	0.3%	0.3%	0.9%	0%	0%	0.4 %	-	0%	0%	0%	0%	0%	0%	-	1.8%
Pedestrians	-	-	-	-	-	-	-	0	-	-	-	-	-	-	7
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100%
Bicycles on Crosswalk	-	-	-	-	-	-	-	0	-	-	-	-	-	-	0
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0%

\*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, RR: Right on red, T: Thru, U: U-Turn

### 3. Germantown Avenue and Bells Mill Road - TMC

Wed Feb 12, 2020

AM Peak (7:30 AM - 8:30 AM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 750116, Location: 40.082117, -75.219812, Site Code: 3

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

Cherry Hill, NJ, 08003, US

Leg Direction	Germantown Avenue Eastbound							Germantown Avenue Westbound						
Time	L	T	R	U	RR	App	Ped*	L	T	R	U	RR	App	Ped*
2020-02-12 7:30AM	1	76	52	0	59	188	0	54	96	3	0	0	153	0
7:45AM	1	105	82	0	60	248	0	65	120	13	0	0	198	0
8:00AM	2	83	59	0	60	204	0	47	109	1	0	0	157	0
8:15AM	0	68	64	0	57	189	0	43	96	1	0	0	140	0
<b>Total</b>	4	332	257	0	236	829	0	209	421	18	0	0	648	0
<b>% Approach</b>	0.5%	40.0%	31.0%	0%	28.5%	-	-	32.3%	65.0%	2.8%	0%	0%	-	-
<b>% Total</b>	0.2%	15.4%	11.9%	0%	10.9%	38.4 %	-	9.7%	19.5%	0.8%	0%	0%	30.0 %	-
<b>PHF</b>	0.500	0.790	0.784	-	0.983	0.836	-	0.804	0.877	0.346	-	-	0.818	-
<b>Lights</b>	4	306	251	0	236	797	-	208	393	18	0	0	619	-
<b>% Lights</b>	100%	92.2%	97.7%	0%	100%	96.1%	-	99.5%	93.3%	100%	0%	0%	95.5 %	-
<b>Articulated Trucks</b>	0	1	0	0	0	1	-	0	0	0	0	0	0	-
<b>% Articulated Trucks</b>	0%	0.3%	0%	0%	0%	0.1%	-	0%	0%	0%	0%	0%	0 %	-
<b>Buses and Single-Unit Trucks</b>	0	25	6	0	0	31	-	1	28	0	0	0	29	-
<b>% Buses and Single-Unit Trucks</b>	0%	7.5%	2.3%	0%	0%	3.7%	-	0.5%	6.7%	0%	0%	0%	4.5 %	-
Pedestrians	-	-	-	-	-	-	0	-	-	-	-	-	-	0
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	-	0	-	-	-	-	-	-	0
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-

\*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, RR: Right on red, T: Thru, U: U-Turn

### 3. Germantown Avenue and Bells Mill Road - TMC

Wed Feb 12, 2020

AM Peak (7:30 AM - 8:30 AM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 750116, Location: 40.082117, -75.219812, Site Code: 3

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

Cherry Hill, NJ, 08003, US

Leg Direction	Bells Mill Road Northbound								Bells Mill Road Southbound							
Time	L	T	R	U	RR	App	Ped*	L	T	R	U	RR	App	Ped*	Int	
2020-02-12 7:30AM	56	99	34	0	0	189	0	0	0	0	0	0	0	0	0	530
7:45AM	38	90	46	0	1	175	0	0	0	0	0	0	0	0	0	621
8:00AM	30	107	31	0	0	168	0	0	0	0	0	0	0	0	0	529
8:15AM	36	93	18	0	1	148	0	0	0	0	0	0	0	0	0	477
<b>Total</b>	160	389	129	0	2	680	0	0	0	0	0	0	0	0	0	2157
<b>% Approach</b>	23.5%	57.2%	19.0%	0%	0.3%	-	-	0%	0%	0%	0%	0%	0%	-	-	-
<b>% Total</b>	7.4%	18.0%	6.0%	0%	0.1%	31.5%	-	0%	0%	0%	0%	0%	0%	0%	-	-
<b>PHF</b>	0.714	0.909	0.701	-	0.500	0.899	-	-	-	-	-	-	-	-	-	0.868
<b>Lights</b>	160	388	128	0	2	678	-	0	0	0	0	0	0	0	-	2094
<b>% Lights</b>	100%	99.7%	99.2%	0%	100%	99.7%	-	0%	0%	0%	0%	0%	0%	-	-	97.1%
<b>Articulated Trucks</b>	0	0	0	0	0	0	-	0	0	0	0	0	0	0	-	1
<b>% Articulated Trucks</b>	0%	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	0%	-	-	0%
<b>Buses and Single-Unit Trucks</b>	0	1	1	0	0	2	-	0	0	0	0	0	0	0	-	62
<b>% Buses and Single-Unit Trucks</b>	0%	0.3%	0.8%	0%	0%	0.3%	-	0%	0%	0%	0%	0%	0%	-	-	2.9%
Pedestrians	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	0
<b>% Pedestrians</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	0
<b>% Bicycles on Crosswalk</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

\*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, RR: Right on red, T: Thru, U: U-Turn

### 3. Germantown Avenue and Bells Mill Road - TMC

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

Cherry Hill, NJ, 08003, US

Wed Feb 12, 2020

PM Peak (4:45 PM - 5:45 PM) - Overall Peak Hour

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 750116, Location: 40.082117, -75.219812, Site Code: 3

Leg Direction	Germantown Avenue Eastbound							Germantown Avenue Westbound						
Time	L	T	R	U	RR	App	Ped*	L	T	R	U	RR	App	Ped*
2020-02-12 4:45PM	2	86	100	0	73	261	0	46	93	4	0	0	143	0
5:00PM	6	66	75	0	114	261	0	34	73	4	0	0	111	0
5:15PM	12	93	89	0	114	308	0	35	87	3	1	0	126	0
5:30PM	4	99	94	0	113	310	0	28	57	5	0	0	90	0
<b>Total</b>	24	344	358	0	414	1140	0	143	310	16	1	0	470	0
<b>% Approach</b>	2.1%	30.2%	31.4%	0%	36.3%	-	-	30.4%	66.0%	3.4%	0.2%	0%	-	-
<b>% Total</b>	1.1%	15.6%	16.2%	0%	18.7%	51.5%	-	6.5%	14.0%	0.7%	0%	0%	21.2%	-
<b>PHF</b>	0.500	0.869	0.895	-	0.908	0.919	-	0.777	0.833	0.800	0.250	-	0.822	-
<b>Lights</b>	24	339	358	0	413	1134	-	141	302	16	1	0	460	-
<b>% Lights</b>	100%	98.5%	100%	0%	99.8%	99.5%	-	98.6%	97.4%	100%	100%	0%	97.9%	-
<b>Articulated Trucks</b>	0	0	0	0	0	0	-	0	0	0	0	0	0	-
<b>% Articulated Trucks</b>	0%	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	0%	-
<b>Buses and Single-Unit Trucks</b>	0	5	0	0	1	6	-	2	8	0	0	0	10	-
<b>% Buses and Single-Unit Trucks</b>	0%	1.5%	0%	0%	0.2%	0.5%	-	1.4%	2.6%	0%	0%	0%	2.1%	-
<b>Pedestrians</b>	-	-	-	-	-	-	0	-	-	-	-	-	-	0
<b>% Pedestrians</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Bicycles on Crosswalk</b>	-	-	-	-	-	-	0	-	-	-	-	-	-	0
<b>% Bicycles on Crosswalk</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-

\*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, RR: Right on red, T: Thru, U: U-Turn

### 3. Germantown Avenue and Bells Mill Road - TMC

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

Cherry Hill, NJ, 08003, US

Wed Feb 12, 2020

PM Peak (4:45 PM - 5:45 PM) - Overall Peak Hour

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 750116, Location: 40.082117, -75.219812, Site Code: 3

Leg Direction	Bells Mill Road Northbound							Bells Mill Road Southbound							
Time	L	T	R	U	RR	App	Ped*	L	T	R	U	RR	App	Ped*	Int
2020-02-12 4:45PM	53	83	28	0	0	164	0	0	0	0	0	0	0	1	568
5:00PM	34	82	24	0	0	140	0	0	0	0	0	0	0	0	512
5:15PM	44	75	26	0	0	145	0	0	0	1	0	0	1	1	580
5:30PM	42	89	21	0	0	152	0	0	0	0	0	0	0	0	552
<b>Total</b>	173	329	99	0	0	601	0	0	0	1	0	0	1	2	2212
<b>% Approach</b>	28.8%	54.7%	16.5%	0%	0%	-	-	0%	0%	100%	0%	0%	-	-	-
<b>% Total</b>	7.8%	14.9%	4.5%	0%	0%	27.2%	-	0%	0%	0%	0%	0%	0%	-	-
<b>PHF</b>	0.816	0.924	0.884	-	-	0.916	-	-	-	0.250	-	-	0.250	-	0.953
<b>Lights</b>	173	328	98	0	0	599	-	0	0	1	0	0	1	-	2194
<b>% Lights</b>	100%	99.7%	99.0%	0%	0%	99.7%	-	0%	0%	100%	0%	0%	100%	-	99.2%
<b>Articulated Trucks</b>	0	0	0	0	0	0	-	0	0	0	0	0	0	-	0
<b>% Articulated Trucks</b>	0%	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	0%	-	0%
<b>Buses and Single-Unit Trucks</b>	0	1	1	0	0	2	-	0	0	0	0	0	0	-	18
<b>% Buses and Single-Unit Trucks</b>	0%	0.3%	1.0%	0%	0%	0.3%	-	0%	0%	0%	0%	0%	0%	-	0.8%
Pedestrians	-	-	-	-	-	-	0	-	-	-	-	-	-	2	
<b>% Pedestrians</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	100%	-
Bicycles on Crosswalk	-	-	-	-	-	-	0	-	-	-	-	-	-	0	
<b>% Bicycles on Crosswalk</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	0%	-

\*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, RR: Right on red, T: Thru, U: U-Turn

#### 4. Germantown Avenue and Sugarloaf Campus Ac... - TMC

Wed Feb 12, 2020

Full Length (7 AM-9 AM, 4 PM-6 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 750508, Location: 40.083024, -75.22125, Site Code: 4

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

Cherry Hill, NJ, 08003, US

Leg Direction	Germantown Avenue Eastbound					Germantown Avenue Westbound					Sugarloaf Campus Access West Northbound					
Time	T	R	U	App	Ped*	L	T	U	App	Ped*	L	R	U	App	Ped*	Int
2020-02-12 7:00AM	122	1	0	123	0	1	92	0	93	0	0	0	0	0	0	216
7:15AM	180	0	0	180	0	0	136	0	136	0	0	0	0	0	0	316
7:30AM	186	1	0	187	0	0	154	0	154	0	0	0	0	0	0	341
7:45AM	243	1	0	244	0	0	155	0	155	0	0	0	0	0	0	399
Hourly Total	731	3	0	734	0	1	537	0	538	0	0	0	0	0	0	1272
8:00AM	199	0	0	199	0	0	136	0	136	0	0	0	0	0	0	335
8:15AM	182	1	0	183	0	0	128	0	128	0	0	0	0	0	0	311
8:30AM	129	2	0	131	0	0	125	0	125	0	0	0	0	0	0	256
8:45AM	175	1	0	176	0	0	100	0	100	0	0	0	0	0	0	276
Hourly Total	685	4	0	689	0	0	489	0	489	0	0	0	0	0	0	1178
4:00PM	231	2	0	233	0	0	113	0	113	0	0	0	0	0	0	346
4:15PM	224	1	0	225	0	0	100	0	100	0	0	0	0	0	0	325
4:30PM	241	1	0	242	0	0	105	0	105	0	0	0	0	0	0	347
4:45PM	260	0	0	260	0	0	140	0	140	0	0	0	0	0	0	400
Hourly Total	956	4	0	960	0	0	458	0	458	0	0	0	0	0	0	1418
5:00PM	273	1	0	274	0	0	116	0	116	0	0	0	0	0	0	390
5:15PM	313	1	0	314	2	0	130	0	130	0	0	0	0	0	0	444
5:30PM	306	1	0	307	0	0	107	0	107	0	0	0	0	0	0	414
5:45PM	264	2	0	266	0	0	113	0	113	0	0	0	0	0	0	379
Hourly Total	1156	5	0	1161	2	0	466	0	466	0	0	0	0	0	0	1627
Total	3528	16	0	3544	2	1	1950	0	1951	0	0	0	0	0	0	5495
% Approach	99.5%	0.5%	0%	-	-	0.1%	99.9%	0%	-	-	0%	0%	0%	-	-	-
% Total	64.2%	0.3%	0%	64.5%	-	0%	35.5%	0%	35.5%	-	0%	0%	0%	0%	-	-
Lights	3453	16	0	3469	-	1	1872	0	1873	-	0	0	0	0	-	5342
% Lights	97.9%	100%	0%	97.9%	-	100%	96.0%	0%	96.0%	-	0%	0%	0%	-	-	97.2%
Articulated Trucks	1	0	0	1	-	0	0	0	0	-	0	0	0	0	-	1
% Articulated Trucks	0%	0%	0%	0%	-	0%	0%	0%	0%	-	0%	0%	0%	-	-	0%
Buses and Single-Unit Trucks	74	0	0	74	-	0	78	0	78	-	0	0	0	0	-	152
% Buses and Single-Unit Trucks	2.1%	0%	0%	2.1%	-	0%	4.0%	0%	4.0%	-	0%	0%	0%	-	-	2.8%
Pedestrians	-	-	-	-	2	-	-	-	-	0	-	-	-	-	0	-
% Pedestrians	-	-	-	-	100%	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-
% Bicycles on Crosswalk	-	-	-	-	0%	-	-	-	-	-	-	-	-	-	-	-

\*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

#### 4. Germantown Avenue and Sugarloaf Campus Ac... - TMC

Wed Feb 12, 2020

AM Peak (7:15 AM - 8:15 AM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 750508, Location: 40.083024, -75.22125, Site Code: 4

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

Cherry Hill, NJ, 08003, US

Leg Direction	Germantown Avenue Eastbound					Germantown Avenue Westbound					Sugarloaf Campus Access West Northbound					
Time	T	R	U	App	Ped*	L	T	U	App	Ped*	L	R	U	App	Ped*	Int
2020-02-12 7:15AM	180	0	0	180	0	0	136	0	136	0	0	0	0	0	0	316
7:30AM	186	1	0	187	0	0	154	0	154	0	0	0	0	0	0	341
7:45AM	243	1	0	244	0	0	155	0	155	0	0	0	0	0	0	399
8:00AM	199	0	0	199	0	0	136	0	136	0	0	0	0	0	0	335
<b>Total</b>	808	2	0	<b>810</b>	0	0	581	0	<b>581</b>	0	0	0	0	<b>0</b>	0	<b>1391</b>
<b>% Approach</b>	99.8%	0.2%	0%	-	-	0%	100%	0%	-	-	0%	0%	0%	-	-	-
<b>% Total</b>	58.1%	0.1%	0%	<b>58.2%</b>	-	0%	41.8%	0%	<b>41.8%</b>	-	0%	0%	0%	<b>0%</b>	-	-
PHF	0.831	0.500	-	<b>0.830</b>	-	-	0.937	-	<b>0.937</b>	-	-	-	-	-	-	0.872
<b>Lights</b>	774	2	0	<b>776</b>	-	0	549	0	<b>549</b>	-	0	0	0	<b>0</b>	-	1325
<b>% Lights</b>	95.8%	100%	0%	<b>95.8%</b>	-	0%	94.5%	0%	<b>94.5%</b>	-	0%	0%	0%	-	-	95.3%
<b>Articulated Trucks</b>	0	0	0	<b>0</b>	-	0	0	0	<b>0</b>	-	0	0	0	<b>0</b>	-	0
<b>% Articulated Trucks</b>	0%	0%	0%	<b>0%</b>	-	0%	0%	0%	<b>0%</b>	-	0%	0%	0%	-	-	0%
<b>Buses and Single-Unit Trucks</b>	34	0	0	<b>34</b>	-	0	32	0	<b>32</b>	-	0	0	0	<b>0</b>	-	66
<b>% Buses and Single-Unit Trucks</b>	4.2%	0%	0%	<b>4.2%</b>	-	0%	5.5%	0%	<b>5.5%</b>	-	0%	0%	0%	-	-	4.7%
Pedestrians	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0
<b>% Pedestrians</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0
<b>% Bicycles on Crosswalk</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

\*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

#### 4. Germantown Avenue and Sugarloaf Campus Ac... - TMC

Wed Feb 12, 2020

PM Peak (4:45 PM - 5:45 PM) - Overall Peak Hour

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 750508, Location: 40.083024, -75.22125, Site Code: 4

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

Cherry Hill, NJ, 08003, US

Leg Direction	Germantown Avenue Eastbound					Germantown Avenue Westbound					Sugarloaf Campus Access West Northbound					
Time	T	R	U	App	Ped*	L	T	U	App	Ped*	L	R	U	App	Ped*	Int
2020-02-12 4:45PM	260	0	0	260	0	0	140	0	140	0	0	0	0	0	0	400
5:00PM	273	1	0	274	0	0	116	0	116	0	0	0	0	0	0	390
5:15PM	313	1	0	314	2	0	130	0	130	0	0	0	0	0	0	444
5:30PM	306	1	0	307	0	0	107	0	107	0	0	0	0	0	0	414
<b>Total</b>	1152	3	0	<b>1155</b>	2	0	493	0	<b>493</b>	0	0	0	0	<b>0</b>	0	<b>1648</b>
<b>% Approach</b>	99.7%	0.3%	0%	-	-	0%	100%	0%	-	-	0%	0%	0%	-	-	-
<b>% Total</b>	69.9%	0.2%	0%	<b>70.1%</b>	-	0%	29.9%	0%	<b>29.9%</b>	-	0%	0%	0%	<b>0%</b>	-	-
PHF	0.920	0.750	-	<b>0.920</b>	-	-	0.880	-	<b>0.880</b>	-	-	-	-	-	-	0.928
Lights	1144	3	0	<b>1147</b>	-	0	482	0	<b>482</b>	-	0	0	0	<b>0</b>	-	1629
% Lights	99.3%	100%	0%	<b>99.3%</b>	-	0%	97.8%	0%	<b>97.8%</b>	-	0%	0%	0%	-	-	98.8%
Articulated Trucks	0	0	0	<b>0</b>	-	0	0	0	<b>0</b>	-	0	0	0	<b>0</b>	-	0
% Articulated Trucks	0%	0%	0%	<b>0%</b>	-	0%	0%	0%	<b>0%</b>	-	0%	0%	0%	-	-	0%
Buses and Single-Unit Trucks	8	0	0	<b>8</b>	-	0	11	0	<b>11</b>	-	0	0	0	<b>0</b>	-	19
% Buses and Single-Unit Trucks	0.7%	0%	0%	<b>0.7%</b>	-	0%	2.2%	0%	<b>2.2%</b>	-	0%	0%	0%	-	-	1.2%
Pedestrians	-	-	-	-	2	-	-	-	-	0	-	-	-	-	-	0
% Pedestrians	-	-	-	-	100%	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0
% Bicycles on Crosswalk	-	-	-	-	0%	-	-	-	-	-	-	-	-	-	-	-

\*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

## 5. Germantown Avenue and Sugarloaf Campus Ac... - TMC

Wed Feb 12, 2020

Full Length (7 AM-9 AM, 4 PM-6 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 750509, Location: 40.082288, -75.220111, Site Code: 5

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

Cherry Hill, NJ, 08003, US

Leg Direction	Germantown Avenue Eastbound					Germantown Avenue Westbound					Sugarloaf Campus Access East Northbound					
Time	T	R	U	App	Ped*	L	T	U	App	Ped*	L	R	U	App	Ped*	Int
2020-02-12 7:00AM	126	0	0	126	0	0	100	0	100	0	0	1	0	1	0	227
7:15AM	180	0	0	180	0	0	134	0	134	0	1	0	0	1	1	315
7:30AM	179	0	0	179	0	0	159	0	159	0	1	1	0	2	0	340
7:45AM	250	0	0	250	0	0	148	0	148	0	0	0	0	0	0	398
Hourly Total	735	0	0	735	0	0	541	0	541	0	2	2	0	4	1	1280
8:00AM	203	0	0	203	0	0	147	0	147	0	1	1	0	2	0	352
8:15AM	184	0	0	184	0	0	122	0	122	0	0	0	0	0	0	306
8:30AM	132	0	0	132	0	0	126	0	126	0	2	1	0	3	0	261
8:45AM	180	0	0	180	0	0	97	0	97	0	1	0	0	1	0	278
Hourly Total	699	0	0	699	0	0	492	0	492	0	4	2	0	6	0	1197
4:00PM	228	0	0	228	0	0	112	0	112	0	2	2	0	4	0	344
4:15PM	220	0	0	220	0	0	97	0	97	0	3	0	0	3	0	320
4:30PM	239	0	0	239	0	0	105	0	105	0	0	1	0	1	0	345
4:45PM	268	0	0	268	0	0	137	0	137	0	0	0	0	0	0	405
Hourly Total	955	0	0	955	0	0	451	0	451	0	5	3	0	8	0	1414
5:00PM	266	1	0	267	0	0	115	0	115	0	0	1	0	1	0	383
5:15PM	323	0	0	323	0	0	125	0	125	0	0	1	0	1	0	449
5:30PM	316	0	0	316	0	0	108	0	108	0	0	1	0	1	0	425
5:45PM	273	0	0	273	0	0	110	0	110	0	1	1	0	2	0	385
Hourly Total	1178	1	0	1179	0	0	458	0	458	0	1	4	0	5	0	1642
Total	3567	1	0	3568	0	0	1942	0	1942	0	12	11	0	23	1	5533
% Approach	100.0%	0%	0%	-	-	0%	100%	0%	-	-	52.2%	47.8%	0%	-	-	-
% Total	64.5%	0%	0%	64.5%	-	0%	35.1%	0%	35.1%	-	0.2%	0.2%	0%	0.4%	-	-
Lights	3497	1	0	3498	-	0	1869	0	1869	-	11	11	0	22	-	5389
% Lights	98.0%	100%	0%	98.0%	-	0%	96.2%	0%	96.2%	-	91.7%	100%	0%	95.7%	-	97.4%
Articulated Trucks	3	0	0	3	-	0	3	0	3	-	0	0	0	0	-	6
% Articulated Trucks	0.1%	0%	0%	0.1%	-	0%	0.2%	0%	0.2%	-	0%	0%	0%	0%	-	0.1%
Buses and Single-Unit Trucks	67	0	0	67	-	0	70	0	70	-	1	0	0	1	-	138
% Buses and Single-Unit Trucks	1.9%	0%	0%	1.9%	-	0%	3.6%	0%	3.6%	-	8.3%	0%	0%	4.3%	-	2.5%
Pedestrians	-	-	-	-	0	-	-	-	-	0	-	-	-	-	1	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100%	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0%	-

\*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

## 5. Germantown Avenue and Sugarloaf Campus Ac... - TMC

Wed Feb 12, 2020

AM Peak (7:15 AM - 8:15 AM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 750509, Location: 40.082288, -75.220111, Site Code: 5

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

Cherry Hill, NJ, 08003, US

Leg Direction	Germantown Avenue Eastbound					Germantown Avenue Westbound					Sugarloaf Campus Access East Northbound					
Time	T	R	U	App	Ped*	L	T	U	App	Ped*	L	R	U	App	Ped*	Int
2020-02-12 7:15AM	180	0	0	<b>180</b>	0	0	134	0	<b>134</b>	0	1	0	0	<b>1</b>	1	<b>315</b>
7:30AM	179	0	0	<b>179</b>	0	0	159	0	<b>159</b>	0	1	1	0	<b>2</b>	0	<b>340</b>
7:45AM	250	0	0	<b>250</b>	0	0	148	0	<b>148</b>	0	0	0	0	<b>0</b>	0	<b>398</b>
8:00AM	203	0	0	<b>203</b>	0	0	147	0	<b>147</b>	0	1	1	0	<b>2</b>	0	<b>352</b>
<b>Total</b>	812	0	0	<b>812</b>	0	0	588	0	<b>588</b>	0	3	2	0	<b>5</b>	1	<b>1405</b>
<b>% Approach</b>	100%	0%	0%	-	-	0%	100%	0%	-	-	60.0%	40.0%	0%	-	-	-
<b>% Total</b>	57.8%	0%	0%	<b>57.8%</b>	-	0%	41.9%	0%	<b>41.9%</b>	-	0.2%	0.1%	0%	<b>0.4%</b>	-	-
<b>PHF</b>	0.812	-	-	<b>0.812</b>	-	-	0.925	-	<b>0.925</b>	-	0.750	0.500	-	<b>0.625</b>	-	0.883
<b>Lights</b>	781	0	0	<b>781</b>	-	0	557	0	<b>557</b>	-	3	2	0	<b>5</b>	-	1343
<b>% Lights</b>	96.2%	0%	0%	<b>96.2%</b>	-	0%	94.7%	0%	<b>94.7%</b>	-	100%	100%	0%	<b>100%</b>	-	95.6%
<b>Articulated Trucks</b>	1	0	0	<b>1</b>	-	0	1	0	<b>1</b>	-	0	0	0	<b>0</b>	-	2
<b>% Articulated Trucks</b>	0.1%	0%	0%	<b>0.1%</b>	-	0%	0.2%	0%	<b>0.2%</b>	-	0%	0%	0%	<b>0%</b>	-	0.1%
<b>Buses and Single-Unit Trucks</b>	30	0	0	<b>30</b>	-	0	30	0	<b>30</b>	-	0	0	0	<b>0</b>	-	60
<b>% Buses and Single-Unit Trucks</b>	3.7%	0%	0%	<b>3.7%</b>	-	0%	5.1%	0%	<b>5.1%</b>	-	0%	0%	0%	<b>0%</b>	-	4.3%
Pedestrians	-	-	-	-	0	-	-	-	-	0	-	-	-	-	1	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100%	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0%	-

\*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

## 5. Germantown Avenue and Sugarloaf Campus Ac... - TMC

Wed Feb 12, 2020

PM Peak (4:45 PM - 5:45 PM) - Overall Peak Hour

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 750509, Location: 40.082288, -75.220111, Site Code: 5

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

Cherry Hill, NJ, 08003, US

Leg Direction	Germantown Avenue Eastbound					Germantown Avenue Westbound					Sugarloaf Campus Access East Northbound					
Time	T	R	U	App	Ped*	L	T	U	App	Ped*	L	R	U	App	Ped*	Int
2020-02-12 4:45PM	268	0	0	<b>268</b>	0	0	137	0	<b>137</b>	0	0	0	0	<b>0</b>	0	<b>405</b>
5:00PM	266	1	0	<b>267</b>	0	0	115	0	<b>115</b>	0	0	1	0	<b>1</b>	0	<b>383</b>
5:15PM	323	0	0	<b>323</b>	0	0	125	0	<b>125</b>	0	0	1	0	<b>1</b>	0	<b>449</b>
5:30PM	316	0	0	<b>316</b>	0	0	108	0	<b>108</b>	0	0	1	0	<b>1</b>	0	<b>425</b>
<b>Total</b>	1173	1	0	<b>1174</b>	0	0	485	0	<b>485</b>	0	0	3	0	<b>3</b>	0	<b>1662</b>
<b>% Approach</b>	99.9%	0.1%	0%	-	-	0%	100%	0%	-	-	0%	100%	0%	-	-	-
<b>% Total</b>	70.6%	0.1%	0%	<b>70.6%</b>	-	0%	29.2%	0%	<b>29.2%</b>	-	0%	0.2%	0%	<b>0.2%</b>	-	-
<b>PHF</b>	0.908	0.250	-	<b>0.909</b>	-	-	0.885	-	<b>0.885</b>	-	-	0.750	-	<b>0.750</b>	-	0.925
<b>Lights</b>	1167	1	0	<b>1168</b>	-	0	472	0	<b>472</b>	-	0	3	0	<b>3</b>	-	1643
<b>% Lights</b>	99.5%	100%	0%	<b>99.5%</b>	-	0%	97.3%	0%	<b>97.3%</b>	-	0%	100%	0%	<b>100%</b>	-	98.9%
<b>Articulated Trucks</b>	0	0	0	<b>0</b>	-	0	1	0	<b>1</b>	-	0	0	0	<b>0</b>	-	1
<b>% Articulated Trucks</b>	0%	0%	0%	<b>0%</b>	-	0%	0.2%	0%	<b>0.2%</b>	-	0%	0%	0%	<b>0%</b>	-	0.1%
<b>Buses and Single-Unit Trucks</b>	6	0	0	<b>6</b>	-	0	12	0	<b>12</b>	-	0	0	0	<b>0</b>	-	18
<b>% Buses and Single-Unit Trucks</b>	0.5%	0%	0%	<b>0.5%</b>	-	0%	2.5%	0%	<b>2.5%</b>	-	0%	0%	0%	<b>0%</b>	-	1.1%
Pedestrians	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

\*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

## 6. Bells Mill Road and Sugarloaf Campus Access - TMC

Wed Feb 12, 2020

Full Length (7 AM-9 AM, 4 PM-6 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 750510, Location: 40.081914, -75.220059, Site Code: 6

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

Cherry Hill, NJ, 08003, US

Leg Direction	Sugarloaf Campus Access Eastbound					Bells Mill Road Northbound					Bells Mill Road Southbound					
Time	L	R	U	App	Ped*	L	T	U	App	Ped*	T	R	U	App	Ped*	Int
2020-02-12 7:00AM	0	1	0	1	0	0	148	0	148	0	108	0	0	108	0	257
7:15AM	0	1	0	1	0	0	168	0	168	0	130	0	0	130	0	299
7:30AM	0	0	0	0	0	0	184	0	184	0	162	0	0	162	0	346
7:45AM	0	0	0	0	0	0	179	0	179	0	197	0	0	197	0	376
Hourly Total	0	2	0	2	0	0	679	0	679	0	597	0	0	597	0	1278
8:00AM	0	0	0	0	0	0	164	0	164	0	173	0	0	173	0	337
8:15AM	0	0	0	0	0	0	153	0	153	0	161	0	0	161	0	314
8:30AM	0	0	0	0	0	0	168	0	168	0	115	0	0	115	0	283
8:45AM	0	0	0	0	0	0	137	0	137	0	140	0	0	140	0	277
Hourly Total	0	0	0	0	0	0	622	0	622	0	589	0	0	589	0	1211
4:00PM	0	0	0	0	0	0	161	0	161	0	187	0	0	187	0	348
4:15PM	0	0	0	0	0	0	149	0	149	0	184	1	0	185	0	334
4:30PM	0	0	0	0	0	1	131	0	132	0	196	0	0	196	0	328
4:45PM	0	0	0	0	0	1	170	0	171	0	226	0	0	226	0	397
Hourly Total	0	0	0	0	0	2	611	0	613	0	793	1	0	794	0	1407
5:00PM	0	0	0	0	0	0	146	0	146	0	222	0	0	222	0	368
5:15PM	0	1	0	1	0	0	149	0	149	0	237	0	0	237	0	387
5:30PM	0	0	0	0	0	0	151	0	151	0	239	2	0	241	0	392
5:45PM	0	1	0	1	0	0	131	0	131	0	220	0	0	220	0	352
Hourly Total	0	2	0	2	0	0	577	0	577	0	918	2	0	920	0	1499
Total	0	4	0	4	0	2	2489	0	2491	0	2897	3	0	2900	0	5395
% Approach	0%	100%	0%	-	-	0.1%	99.9%	0%	-	-	99.9%	0.1%	0%	-	-	-
% Total	0%	0.1%	0%	0.1%	-	0%	46.1%	0%	46.2%	-	53.7%	0.1%	0%	53.8%	-	-
Lights	0	4	0	4	-	2	2477	0	2479	-	2877	3	0	2880	-	5363
% Lights	0%	100%	0%	100%	-	100%	99.5%	0%	99.5%	-	99.3%	100%	0%	99.3%	-	99.4%
Articulated Trucks	0	0	0	0	-	0	1	0	1	-	1	0	0	1	-	2
% Articulated Trucks	0%	0%	0%	0%	-	0%	0%	0%	0%	-	0%	0%	0%	0%	-	0%
Buses and Single-Unit Trucks	0	0	0	0	-	0	11	0	11	-	19	0	0	19	-	30
% Buses and Single-Unit Trucks	0%	0%	0%	0%	-	0%	0.4%	0%	0.4%	-	0.7%	0%	0%	0.7%	-	0.6%
Pedestrians	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

\*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

## 6. Bells Mill Road and Sugarloaf Campus Access - TMC

Wed Feb 12, 2020

AM Peak (7:30 AM - 8:30 AM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 750510, Location: 40.081914, -75.220059, Site Code: 6

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

Cherry Hill, NJ, 08003, US

Leg Direction	Sugarloaf Campus Access Eastbound					Bells Mill Road Northbound					Bells Mill Road Southbound					
	L	R	U	App	Ped*	L	T	U	App	Ped*	T	R	U	App	Ped*	Int
Time																
2020-02-12 7:30AM	0	0	0	0	0	0	184	0	184	0	162	0	0	162	0	346
7:45AM	0	0	0	0	0	0	179	0	179	0	197	0	0	197	0	376
8:00AM	0	0	0	0	0	0	164	0	164	0	173	0	0	173	0	337
8:15AM	0	0	0	0	0	0	153	0	153	0	161	0	0	161	0	314
<b>Total</b>	0	0	0	0	0	0	680	0	680	0	693	0	0	693	0	1373
<b>% Approach</b>	0%	0%	0%	-	-	0%	100%	0%	-	-	100%	0%	0%	-	-	-
<b>% Total</b>	0%	0%	0%	0%	-	0%	49.5%	0%	49.5%	-	50.5%	0%	0%	50.5%	-	-
<b>PHF</b>	-	-	-	-	-	-	0.924	-	0.924	-	0.879	-	-	0.879	-	0.913
<b>Lights</b>	0	0	0	0	-	0	677	0	677	-	684	0	0	684	-	1361
<b>% Lights</b>	0%	0%	0%	-	-	0%	99.6%	0%	99.6%	-	98.7%	0%	0%	98.7%	-	99.1%
<b>Articulated Trucks</b>	0	0	0	0	-	0	0	0	0	-	1	0	0	1	-	1
<b>% Articulated Trucks</b>	0%	0%	0%	-	-	0%	0%	0%	0%	-	0.1%	0%	0%	0.1%	-	0.1%
<b>Buses and Single-Unit Trucks</b>	0	0	0	0	-	0	3	0	3	-	8	0	0	8	-	11
<b>% Buses and Single-Unit Trucks</b>	0%	0%	0%	-	-	0%	0.4%	0%	0.4%	-	1.2%	0%	0%	1.2%	-	0.8%
Pedestrians	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-
<b>% Pedestrians</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-
<b>% Bicycles on Crosswalk</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

\*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

## 6. Bells Mill Road and Sugarloaf Campus Access - TMC

Wed Feb 12, 2020

PM Peak (4:45 PM - 5:45 PM) - Overall Peak Hour

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 750510, Location: 40.081914, -75.220059, Site Code: 6

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

Cherry Hill, NJ, 08003, US

Leg Direction	Sugarloaf Campus Access Eastbound					Bells Mill Road Northbound					Bells Mill Road Southbound					
Time	L	R	U	App	Ped*	L	T	U	App	Ped*	T	R	U	App	Ped*	Int
2020-02-12 4:45PM	0	0	0	<b>0</b>	0	1	170	0	<b>171</b>	0	226	0	0	<b>226</b>	0	<b>397</b>
5:00PM	0	0	0	<b>0</b>	0	0	146	0	<b>146</b>	0	222	0	0	<b>222</b>	0	<b>368</b>
5:15PM	0	1	0	<b>1</b>	0	0	149	0	<b>149</b>	0	237	0	0	<b>237</b>	0	<b>387</b>
5:30PM	0	0	0	<b>0</b>	0	0	151	0	<b>151</b>	0	239	2	0	<b>241</b>	0	<b>392</b>
<b>Total</b>	0	1	0	<b>1</b>	0	1	616	0	<b>617</b>	0	924	2	0	<b>926</b>	0	<b>1544</b>
<b>% Approach</b>	0%	100%	0%	-	-	0.2%	99.8%	0%	-	-	99.8%	0.2%	0%	-	-	-
<b>% Total</b>	0%	0.1%	0%	<b>0.1%</b>	-	0.1%	39.9%	0%	<b>40.0%</b>	-	59.8%	0.1%	0%	<b>60.0%</b>	-	-
<b>PHF</b>	-	0.250	-	<b>0.250</b>	-	0.250	0.906	-	<b>0.902</b>	-	0.967	0.250	-	<b>0.961</b>	-	0.972
<b>Lights</b>	0	1	0	<b>1</b>	-	1	614	0	<b>615</b>	-	919	2	0	<b>921</b>	-	1537
<b>% Lights</b>	0%	100%	0%	<b>100%</b>	-	100%	99.7%	0%	<b>99.7%</b>	-	99.5%	100%	0%	<b>99.5%</b>	-	99.5%
<b>Articulated Trucks</b>	0	0	0	<b>0</b>	-	0	0	0	<b>0</b>	-	0	0	0	<b>0</b>	-	0
<b>% Articulated Trucks</b>	0%	0%	0%	<b>0%</b>	-	0%	0%	0%	<b>0%</b>	-	0%	0%	0%	<b>0%</b>	-	0%
<b>Buses and Single-Unit Trucks</b>	0	0	0	<b>0</b>	-	0	2	0	<b>2</b>	-	5	0	0	<b>5</b>	-	7
<b>% Buses and Single-Unit Trucks</b>	0%	0%	0%	<b>0%</b>	-	0%	0.3%	0%	<b>0.3%</b>	-	0.5%	0%	0%	<b>0.5%</b>	-	0.5%
Pedestrians	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

\*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn



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**Proposed Sugarloaf Campus Access**  
**City of Philadelphia**  
**Philadelphia County, PA**  
**ATDE Project No. 19061**

Time	Entering			Exiting	Site Traffic	60-min sum
	Germantown	Bells Mill	Total			
Start Time	Germantown	Bells Mill	Total	Total	Total	
00:00 AM	0	0	0	0	0	0
00:15	0	0	0	0	0	0
00:30	0	0	0	0	0	0
00:45	0	0	0	0	0	0
01:00	0	0	0	0	0	0
01:15	0	0	0	0	0	0
01:30	0	0	0	0	0	0
01:45	0	0	0	0	0	0
02:00	0	0	0	0	0	0
02:15	0	0	0	0	0	0
02:30	0	0	0	0	0	0
02:45	0	0	0	0	0	0
03:00	0	0	0	0	0	0
03:15	0	0	0	0	0	0
03:30	0	0	0	0	0	0
03:45	0	0	0	0	0	0
04:00	0	0	0	0	0	0
04:15	0	0	0	0	0	0
04:30	0	0	0	0	0	0
04:45	0	0	0	0	0	0
05:00	0	0	0	0	0	0
05:15	0	0	0	0	0	1
05:30	0	0	0	0	0	1
05:45	0	0	0	0	0	1
06:00	1	0	1	0	1	2
06:15	0	0	0	0	0	4

K:\2019\APA19061\Traffic Data\Counts (Data Summary)\APA 19061 - ATR Summary (Bells Mill Rd).xlsx



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**City of Philadelphia**  
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Time	Entering			Exiting	Site Traffic	60-min sum
Start Time	Germantown	Bells Mill	Total	Total	Total	
06:30	0	0	0	0	0	5
06:45	0	0	0	1	1	7
07:00	1	0	1	2	3	7
07:15	0	0	0	1	1	7
07:30	1	0	1	1	2	8
07:45	1	0	1	0	1	8
08:00	1	0	1	2	3	10
08:15	1	0	1	1	2	9
08:30	1	0	1	1	2	9
08:45	1	0	1	2	3	9
09:00	1	0	1	1	2	7
09:15	1	0	1	1	2	6
09:30	1	0	1	1	2	6
09:45	1	0	1	0	1	6
10:00	1	0	1	0	1	6
10:15	1	0	1	1	2	7
10:30	1	0	1	1	2	6
10:45	0	0	0	1	1	7
11:00	1	0	1	1	2	8
11:15	0	0	0	1	1	8
11:30	2	0	2	1	3	10
11:45	1	0	1	1	2	9
12:00 PM	1	0	1	1	2	12
12:15	2	0	2	1	3	12
12:30	1	0	1	1	2	13
12:45	3	0	3	2	5	15



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**Philadelphia County, PA**  
**ATDE Project No. 19061**

Time	Entering			Exiting	Site Traffic	60-min sum
Start Time	Germantown	Bells Mill	Total	Total	Total	
13:00	1	0	1	1	2	13
13:15	2	1	3	1	4	13
13:30	1	0	1	3	4	10
13:45	1	0	1	2	3	9
14:00	1	0	1	1	2	7
14:15	1	0	1	0	1	7
14:30	1	1	2	1	3	8
14:45	0	0	0	1	1	9
15:00	1	0	1	1	2	10
15:15	1	0	1	1	2	11
15:30	1	1	2	2	4	15
15:45	1	0	1	1	2	13
16:00	1	0	1	2	3	13
16:15	2	1	3	3	6	12
16:30	1	0	1	1	2	9
16:45	1	0	1	1	2	11
17:00	1	0	1	1	2	14
17:15	2	0	2	1	3	13
17:30	1	1	2	2	4	11
17:45	2	0	2	3	5	8
18:00	0	0	0	1	1	5
18:15	0	0	0	1	1	6
18:30	1	0	1	0	1	7
18:45	1	0	1	1	2	9
19:00	1	1	2	0	2	10
19:15	1	0	1	1	2	9



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**Proposed Sugarloaf Campus Access**  
**City of Philadelphia**  
**Philadelphia County, PA**  
**ATDE Project No. 19061**

Time	Entering			Exiting	Site Traffic	60-min sum
Start Time	Germantown	Bells Mill	Total	Total	Total	
19:30	1	1	2	1	3	9
19:45	2	0	2	1	3	8
20:00	0	0	0	1	1	9
20:15	1	0	1	1	2	8
20:30	1	0	1	1	2	10
20:45	2	0	2	2	4	10
21:00	0	0	0	0	0	8
21:15	2	0	2	2	4	10
21:30	1	0	1	1	2	6
21:45	0	0	0	2	2	5
22:00	1	0	1	1	2	4
22:15	0	0	0	0	0	2
22:30	1	0	1	0	1	2
22:45	0	0	0	1	1	2
23:00	0	0	0	0	0	1
23:15	0	0	0	0	0	
23:30	0	1	1	0	1	
23:45	0	0	0	0	0	
<b>TOTAL</b>			<b>73</b>	<b>73</b>	<b>146</b>	



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**Proposed Sugarloaf Campus Access**  
**City of Philadelphia**  
**Philadelphia County, PA**  
**ATDE Project No. 19061**

**ATR placed on existing site driveway from Germantown Ave**

Time	Tuesday 2/11/2020	Wednesday 2/12/2020	Thursday 2/13/2020	Typical Weekday Average (Tues. to Thurs.)	15-min sum	60-min sum
Start Time	Enter	Enter	Enter	Enter		
00:00 AM	0	0	0	0	0	0
00:15	0	0	0	0	0	0
00:30	1	0	0	0	0	0
00:45	0	0	0	0	0	0
01:00	0	1	0	0	0	0
01:15	0	0	0	0	0	0
01:30	0	0	0	0	0	0
01:45	0	0	0	0	0	0
02:00	0	0	0	0	0	0
02:15	0	0	0	0	0	0
02:30	0	0	0	0	0	0
02:45	0	0	0	0	0	0
03:00	0	0	0	0	0	0
03:15	0	0	0	0	0	0
03:30	0	0	0	0	0	0
03:45	0	0	0	0	0	0
04:00	0	0	0	0	0	0
04:15	0	0	0	0	0	0
04:30	0	0	1	0	0	0
04:45	0	0	0	0	0	0
05:00	0	0	0	0	0	0
05:15	0	0	0	0	0	1
05:30	0	0	0	0	0	1
05:45	0	0	0	0	0	1
06:00	0	1	1	1	1	1
06:15	0	0	0	0	0	1
06:30	0	0	0	0	0	1
06:45	0	0	0	0	0	2
07:00	1	2	1	1	1	3
07:15	0	0	0	0	0	3



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**Proposed Sugarloaf Campus Access**  
**City of Philadelphia**  
**Philadelphia County, PA**  
**ATDE Project No. 19061**

**ATR placed on existing site driveway from Germantown Ave**

Time	Tuesday 2/11/2020	Wednesday 2/12/2020	Thursday 2/13/2020	Typical Weekday Average (Tues. to Thurs.)	15-min sum	60-min sum
Start Time	Enter	Enter	Enter	Enter		
07:30	1	1	1	1	1	4
07:45	0	1	1	1	1	4
08:00	2	0	0	1	1	4
08:15	0	1	1	1	1	4
08:30	0	2	1	1	1	4
08:45	1	1	1	1	1	4
09:00	0	2	0	1	1	4
09:15	1	0	1	1	1	4
09:30	1	1	0	1	1	4
09:45	0	0	2	1	1	4
10:00	0	1	1	1	1	3
10:15	2	0	0	1	1	3
10:30	1	2	1	1	1	2
10:45	0	0	0	0	0	3
11:00	1	1	1	1	1	4
11:15	0	1	0	0	0	4
11:30	2	2	1	2	2	6
11:45	2	1	1	1	1	5
12:00 PM	2	0	0	1	1	7
12:15	0	2	3	2	2	7
12:30	1	1	0	1	1	7
12:45	6	1	2	3	3	7
13:00	1	1	0	1	1	5
13:15	4	0	1	2	2	5
13:30	1	2	0	1	1	4
13:45	0	1	1	1	1	4
14:00	1	1	0	1	1	3
14:15	0	1	2	1	1	3
14:30	1	1	1	1	1	3
14:45	0	1	0	0	0	3



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**Philadelphia County, PA**  
**ATDE Project No. 19061**

**ATR placed on existing site driveway from Germantown Ave**

Time	Tuesday 2/11/2020	Wednesday 2/12/2020	Thursday 2/13/2020	Typical Weekday Average (Tues. to Thurs.)	15-min sum	60-min sum
Start Time	Enter	Enter	Enter	Enter		
15:00	2	0	1	1	1	4
15:15	1	2	0	1	1	4
15:30	2	0	1	1	1	5
15:45	1	2	0	1	1	5
16:00	0	2	0	1	1	5
16:15	2	1	2	2	2	5
16:30	1	1	1	1	1	5
16:45	0	0	2	1	1	5
17:00	2	1	1	1	1	6
17:15	2	1	3	2	2	5
17:30	2	1	1	1	1	3
17:45	2	2	1	2	2	3
18:00	0	0	1	0	0	2
18:15	0	1	0	0	0	3
18:30	2	0	0	1	1	4
18:45	0	2	2	1	1	4
19:00	0	2	0	1	1	5
19:15	2	1	1	1	1	4
19:30	0	2	1	1	1	4
19:45	2	0	3	2	2	4
20:00	0	1	0	0	0	4
20:15	0	1	1	1	1	4
20:30	2	1	1	1	1	5
20:45	2	2	2	2	2	5
21:00	0	0	0	0	0	3
21:15	1	4	1	2	2	4
21:30	1	1	0	1	1	2
21:45	0	0	1	0	0	2
22:00	1	0	1	1	1	2
22:15	0	0	0	0	0	1



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**Proposed Sugarloaf Campus Access  
City of Philadelphia  
Philadelphia County, PA  
ATDE Project No. 19061**

**ATR placed on existing site driveway from Germantown Ave**

Time	Tuesday 2/11/2020	Wednesday 2/12/2020	Thursday 2/13/2020	Typical Weekday Average (Tues. to Thurs.)	15-min sum	60-min sum
Start Time	Enter	Enter	Enter	Enter		
22:30	1	1	1	1	1	1
22:45	0	0	0	0	0	0
23:00	0	0	0	0	0	0
23:15	0	0	0	0	0	0
23:30	0	1	0	0	0	0
23:45	0	0	0	0	0	0
<b>TOTAL</b>	<b>64</b>	<b>66</b>	<b>55</b>	<b>65</b>		



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**Proposed Sugarloaf Campus Access**  
**City of Philadelphia**  
**Philadelphia County, PA**  
**ATDE Project No. 19061**

**ATR placed on the existing site driveway from Bells Mill Road**

Time	Tuesday 2/11/2020		Wednesday 2/12/2020		Thursday 2/13/2020		Typical Weekday Average (Tues. to Thurs.)		15-min sum	60-min sum
	Start Time	Exit	Enter	Exit	Enter	Exit	Enter	Exit	Enter	
00:00 AM	00:00 AM	0	0	0	0	0	0	0	0	0
00:15	00:15	0	0	0	0	0	0	0	0	0
00:30	00:30	0	0	0	0	0	0	0	0	0
00:45	00:45	0	0	0	0	0	0	0	0	0
01:00	01:00	1	0	0	0	0	0	0	0	0
01:15	01:15	0	0	0	0	0	0	0	0	0
01:30	01:30	0	0	1	0	0	0	0	0	0
01:45	01:45	0	0	0	0	0	0	0	0	0
02:00	02:00	0	0	0	0	0	0	0	0	0
02:15	02:15	0	0	0	0	0	0	0	0	0
02:30	02:30	0	0	0	0	1	0	0	0	0
02:45	02:45	0	0	0	0	0	0	0	0	0
03:00	03:00	0	0	0	0	0	0	0	0	0
03:15	03:15	0	0	0	0	0	0	0	0	0
03:30	03:30	0	0	0	0	0	0	0	0	0
03:45	03:45	0	0	0	0	0	0	0	0	0
04:00	04:00	0	0	0	0	0	0	0	0	0
04:15	04:15	0	0	0	0	0	0	0	0	0
04:30	04:30	0	0	0	0	0	0	0	0	0
04:45	04:45	0	1	0	0	0	0	0	0	0
05:00	05:00	1	0	0	0	0	0	0	0	0
05:15	05:15	0	0	0	0	0	0	0	0	0
05:30	05:30	0	0	0	0	0	0	0	0	0
05:45	05:45	0	0	0	0	0	0	0	0	0
06:00	06:00	0	0	0	0	0	0	0	0	1
06:15	06:15	0	0	0	0	0	0	0	0	3

K:\2019\APA19061\Traffic Data\Counts (Data Summary)\APA 19061 - ATR Summary (Bells Mill Rd).xlsx



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**Proposed Sugarloaf Campus Access**  
**City of Philadelphia**  
**Philadelphia County, PA**  
**ATDE Project No. 19061**

**ATR placed on the existing site driveway from Bells Mill Road**

Time	Tuesday 2/11/2020		Wednesday 2/12/2020		Thursday 2/13/2020		Typical Weekday Average (Tues. to Thurs.)		15-min sum	60-min sum
Start Time	Exit	Enter	Exit	Enter	Exit	Enter	Exit	Enter		
06:30	0	1	1	0	0	0	0	0	0	4
06:45	0	0	1	0	3	0	1	0	1	5
07:00	2	0	2	0	1	0	2	0	2	4
07:15	2	0	2	0	0	0	1	0	1	4
07:30	1	0	2	0	1	0	1	0	1	4
07:45	0	0	0	0	1	0	0	0	0	4
08:00	2	0	2	0	3	0	2	0	2	6
08:15	1	0	0	0	1	0	1	0	1	5
08:30	0	0	3	0	1	0	1	0	1	5
08:45	1	0	1	0	3	1	2	0	2	5
09:00	2	0	1	1	0	0	1	0	1	3
09:15	1	0	1	0	1	0	1	0	1	2
09:30	1	0	1	0	0	0	1	0	1	2
09:45	0	0	0	0	1	0	0	0	0	2
10:00	0	1	1	0	0	0	0	0	0	3
10:15	1	0	1	0	1	0	1	0	1	4
10:30	1	0	2	1	0	0	1	0	1	4
10:45	1	0	0	0	1	0	1	0	1	4
11:00	1	0	2	0	0	0	1	0	1	4
11:15	0	0	1	0	1	1	1	0	1	4
11:30	2	0	2	0	0	0	1	0	1	4
11:45	0	0	2	0	2	0	1	0	1	4
12:00 PM	2	0	0	0	0	1	1	0	1	5
12:15	1	0	1	1	1	0	1	0	1	5
12:30	1	0	2	0	0	0	1	0	1	6
12:45	1	0	1	1	3	0	2	0	2	8

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**City of Philadelphia**  
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**ATR placed on the existing site driveway from Bells Mill Road**

Time	Tuesday 2/11/2020		Wednesday 2/12/2020		Thursday 2/13/2020		Typical Weekday Average (Tues. to Thurs.)		15-min sum	60-min sum
	Exit	Enter	Exit	Enter	Exit	Enter	Exit	Enter		
Start Time										
13:00	1	0	2	0	1	0	1	0	1	8
13:15	1	1	1	2	1	0	1	1	2	8
13:30	5	1	2	0	1	0	3	0	3	6
13:45	3	0	2	1	1	0	2	0	2	5
14:00	2	0	1	0	0	0	1	0	1	4
14:15	0	0	0	0	1	0	0	0	0	4
14:30	1	0	1	1	1	1	1	1	2	5
14:45	0	0	2	0	0	0	1	0	1	6
15:00	1	0	0	0	2	0	1	0	1	6
15:15	2	0	0	0	0	0	1	0	1	7
15:30	0	0	4	1	2	1	2	1	3	10
15:45	2	0	2	1	0	0	1	0	1	8
16:00	1	0	3	0	1	0	2	0	2	8
16:15	1	0	3	1	5	1	3	1	4	7
16:30	1	0	1	1	0	0	1	0	1	4
16:45	1	0	0	1	3	0	1	0	1	6
17:00	1	0	1	0	1	0	1	0	1	8
17:15	1	0	1	0	1	0	1	0	1	8
17:30	4	0	0	1	2	1	2	1	3	8
17:45	2	0	3	0	4	0	3	0	3	5
18:00	1	0	0	0	1	0	1	0	1	3
18:15	0	0	1	0	1	1	1	0	1	3
18:30	0	0	0	0	1	0	0	0	0	3
18:45	2	0	1	0	1	1	1	0	1	5
19:00	0	1	0	0	0	1	0	1	1	5
19:15	1	0	1	0	0	0	1	0	1	5

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**ATR placed on the existing site driveway from Bells Mill Road**

Time	Tuesday 2/11/2020		Wednesday 2/12/2020		Thursday 2/13/2020		Typical Weekday Average (Tues. to Thurs.)		15-min sum	60-min sum
	Start Time	Exit	Enter	Exit	Enter	Exit	Enter	Exit	Enter	
19:30		0	1	1	1	2	1	1	1	2
19:45		1	0	1	0	2	0	1	0	1
20:00		1	0	0	0	1	0	1	0	1
20:15		0	0	2	0	0	0	1	0	1
20:30		1	0	0	0	2	0	1	0	1
20:45		1	0	3	0	2	0	2	0	2
21:00		1	0	0	0	0	0	0	0	5
21:15		2	0	3	0	0	0	2	0	6
21:30		0	0	1	0	1	0	1	0	1
21:45		2	0	2	0	1	0	2	0	3
22:00		2	0	1	0	0	0	1	0	1
22:15		0	0	0	0	1	0	0	0	1
22:30		0	0	0	0	0	0	0	0	1
22:45		1	0	1	0	1	0	1	0	1
23:00		0	0	0	0	0	0	0	0	1
23:15		0	0	0	0	0	0	0	0	0
23:30		0	1	0	1	0	0	0	1	1
23:45		0	0	0	0	0	0	0	0	0
<b>TOTAL</b>		<b>72</b>	<b>8</b>	<b>80</b>	<b>16</b>	<b>70</b>	<b>11</b>	<b>73</b>	<b>8</b>	

**ATR1. Driveway from Bells Mill to Sugarloaf ... - ATR**

Mon Feb 10, 2020

Full Length ()

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)

All Channels

ID: 751112, Location: , , Site Code: ATR 1b

Provided by: Imperial Traffic & Data Collection  
PO Box 4637, Cherry Hill, NJ, 08003, US

Leg Direction	West Eastbound		East Westbound		
Time	T	App	T	App	Int
2020-02-10 7:00AM	2	2	0	0	2
7:15AM	1	1	0	0	1
7:30AM	1	1	0	0	1
7:45AM	0	0	0	0	0
Hourly Total	4	4	0	0	4
8:00AM	1	1	1	1	2
8:15AM	1	1	0	0	1
8:30AM	1	1	0	0	1
8:45AM	1	1	0	0	1
Hourly Total	4	4	1	1	5
9:00AM	0	0	0	0	0
9:15AM	1	1	0	0	1
9:30AM	0	0	0	0	0
9:45AM	3	3	0	0	3
Hourly Total	4	4	0	0	4
10:00AM	0	0	0	0	0
10:15AM	1	1	0	0	1
10:30AM	0	0	0	0	0
10:45AM	1	1	0	0	1
Hourly Total	2	2	0	0	2
11:00AM	0	0	0	0	0
11:15AM	1	1	0	0	1
11:30AM	0	0	0	0	0
11:45AM	1	1	2	2	3
Hourly Total	2	2	2	2	4
12:00PM	1	1	0	0	1
12:15PM	1	1	0	0	1
12:30PM	1	1	0	0	1
12:45PM	2	2	0	0	2
Hourly Total	5	5	0	0	5
1:00PM	1	1	1	1	2
1:15PM	2	2	0	0	2
1:30PM	0	0	0	0	0
1:45PM	3	3	0	0	3
Hourly Total	6	6	1	1	7
2:00PM	1	1	0	0	1
2:15PM	1	1	0	0	1
2:30PM	0	0	0	0	0
2:45PM	1	1	2	2	3
Hourly Total	3	3	2	2	5
3:00PM	0	0	0	0	0
3:15PM	1	1	1	1	2
3:30PM	2	2	1	1	3
3:45PM	3	3	2	2	5
Hourly Total	6	6	4	4	10
4:00PM	1	1	0	0	1
4:15PM	2	2	0	0	2
4:30PM	1	1	0	0	1
4:45PM	0	0	0	0	0
Hourly Total	4	4	0	0	4
5:00PM	1	1	0	0	1
5:15PM	4	4	1	1	5
5:30PM	3	3	0	0	3
5:45PM	3	3	0	0	3

Leg Direction	West Eastbound		East Westbound		
Time	T	App	T	App	Int
Hourly Total	11	11	1	1	12
6:00PM	0	0	0	0	0
6:15PM	1	1	0	0	1
6:30PM	0	0	0	0	0
6:45PM	0	0	0	0	0
Hourly Total	1	1	0	0	1
7:00PM	1	1	0	0	1
7:15PM	1	1	0	0	1
7:30PM	1	1	1	1	2
7:45PM	0	0	0	0	0
Hourly Total	3	3	1	1	4
8:00PM	0	0	0	0	0
8:15PM	0	0	0	0	0
8:30PM	1	1	0	0	1
8:45PM	0	0	0	0	0
Hourly Total	1	1	0	0	1
9:00PM	0	0	0	0	0
9:15PM	1	1	1	1	2
9:30PM	2	2	0	0	2
9:45PM	1	1	0	0	1
Hourly Total	4	4	1	1	5
10:00PM	0	0	0	0	0
10:15PM	0	0	0	0	0
10:30PM	0	0	0	0	0
10:45PM	1	1	0	0	1
Hourly Total	1	1	0	0	1
11:00PM	0	0	0	0	0
11:15PM	0	0	0	0	0
11:30PM	0	0	0	0	0
11:45PM	0	0	0	0	0
Hourly Total	0	0	0	0	0
2020-02-11 12:00AM	0	0	0	0	0
12:15AM	0	0	0	0	0
12:30AM	0	0	0	0	0
12:45AM	0	0	0	0	0
Hourly Total	0	0	0	0	0
1:00AM	1	1	0	0	1
1:15AM	0	0	0	0	0
1:30AM	0	0	0	0	0
1:45AM	0	0	0	0	0
Hourly Total	1	1	0	0	1
2:00AM	0	0	0	0	0
2:15AM	0	0	0	0	0
2:30AM	0	0	0	0	0
2:45AM	0	0	0	0	0
Hourly Total	0	0	0	0	0
3:00AM	0	0	0	0	0
3:15AM	0	0	0	0	0
3:30AM	0	0	0	0	0
3:45AM	0	0	0	0	0
Hourly Total	0	0	0	0	0
4:00AM	0	0	0	0	0
4:15AM	0	0	0	0	0
4:30AM	0	0	0	0	0
4:45AM	0	0	1	1	1
Hourly Total	0	0	1	1	1
5:00AM	1	1	0	0	1
5:15AM	0	0	0	0	0
5:30AM	0	0	0	0	0
5:45AM	0	0	0	0	0

Leg Direction	West Eastbound		East Westbound		
Time	T	App	T	App	Int
Hourly Total	1	1	0	0	1
6:00AM	0	0	0	0	0
6:15AM	0	0	0	0	0
6:30AM	0	0	1	1	1
6:45AM	0	0	0	0	0
Hourly Total	0	0	1	1	1
7:00AM	2	2	0	0	2
7:15AM	2	2	0	0	2
7:30AM	1	1	0	0	1
7:45AM	0	0	0	0	0
Hourly Total	5	5	0	0	5
8:00AM	2	2	0	0	2
8:15AM	1	1	0	0	1
8:30AM	0	0	0	0	0
8:45AM	1	1	0	0	1
Hourly Total	4	4	0	0	4
9:00AM	2	2	0	0	2
9:15AM	1	1	0	0	1
9:30AM	1	1	0	0	1
9:45AM	0	0	0	0	0
Hourly Total	4	4	0	0	4
10:00AM	0	0	1	1	1
10:15AM	1	1	0	0	1
10:30AM	1	1	0	0	1
10:45AM	1	1	0	0	1
Hourly Total	3	3	1	1	4
11:00AM	1	1	0	0	1
11:15AM	0	0	0	0	0
11:30AM	2	2	0	0	2
11:45AM	0	0	0	0	0
Hourly Total	3	3	0	0	3
12:00PM	2	2	0	0	2
12:15PM	1	1	0	0	1
12:30PM	1	1	0	0	1
12:45PM	1	1	0	0	1
Hourly Total	5	5	0	0	5
1:00PM	1	1	0	0	1
1:15PM	1	1	1	1	2
1:30PM	5	5	1	1	6
1:45PM	3	3	0	0	3
Hourly Total	10	10	2	2	12
2:00PM	2	2	0	0	2
2:15PM	0	0	0	0	0
2:30PM	1	1	0	0	1
2:45PM	0	0	0	0	0
Hourly Total	3	3	0	0	3
3:00PM	1	1	0	0	1
3:15PM	2	2	0	0	2
3:30PM	0	0	0	0	0
3:45PM	2	2	0	0	2
Hourly Total	5	5	0	0	5
4:00PM	1	1	0	0	1
4:15PM	1	1	0	0	1
4:30PM	1	1	0	0	1
4:45PM	1	1	0	0	1
Hourly Total	4	4	0	0	4
5:00PM	1	1	0	0	1
5:15PM	1	1	0	0	1
5:30PM	4	4	0	0	4
5:45PM	2	2	0	0	2

Leg Direction	West Eastbound		East Westbound		
Time	T	App	T	App	Int
Hourly Total	8	8	0	0	8
6:00PM	1	1	0	0	1
6:15PM	0	0	0	0	0
6:30PM	0	0	0	0	0
6:45PM	2	2	0	0	2
Hourly Total	3	3	0	0	3
7:00PM	0	0	1	1	1
7:15PM	1	1	0	0	1
7:30PM	0	0	1	1	1
7:45PM	1	1	0	0	1
Hourly Total	2	2	2	2	4
8:00PM	1	1	0	0	1
8:15PM	0	0	0	0	0
8:30PM	1	1	0	0	1
8:45PM	1	1	0	0	1
Hourly Total	3	3	0	0	3
9:00PM	1	1	0	0	1
9:15PM	2	2	0	0	2
9:30PM	0	0	0	0	0
9:45PM	2	2	0	0	2
Hourly Total	5	5	0	0	5
10:00PM	2	2	0	0	2
10:15PM	0	0	0	0	0
10:30PM	0	0	0	0	0
10:45PM	1	1	0	0	1
Hourly Total	3	3	0	0	3
11:00PM	0	0	0	0	0
11:15PM	0	0	0	0	0
11:30PM	0	0	1	1	1
11:45PM	0	0	0	0	0
Hourly Total	0	0	1	1	1
2020-02-12 12:00AM	0	0	0	0	0
12:15AM	0	0	0	0	0
12:30AM	0	0	0	0	0
12:45AM	0	0	0	0	0
Hourly Total	0	0	0	0	0
1:00AM	0	0	0	0	0
1:15AM	0	0	0	0	0
1:30AM	1	1	0	0	1
1:45AM	0	0	0	0	0
Hourly Total	1	1	0	0	1
2:00AM	0	0	0	0	0
2:15AM	0	0	0	0	0
2:30AM	0	0	0	0	0
2:45AM	0	0	0	0	0
Hourly Total	0	0	0	0	0
3:00AM	0	0	0	0	0
3:15AM	0	0	0	0	0
3:30AM	0	0	0	0	0
3:45AM	0	0	0	0	0
Hourly Total	0	0	0	0	0
4:00AM	0	0	0	0	0
4:15AM	0	0	0	0	0
4:30AM	0	0	0	0	0
4:45AM	0	0	0	0	0
Hourly Total	0	0	0	0	0
5:00AM	0	0	0	0	0
5:15AM	0	0	0	0	0
5:30AM	0	0	0	0	0
5:45AM	0	0	0	0	0

Leg Direction	West Eastbound		East Westbound		
Time	T	App	T	App	Int
Hourly Total	0	0	0	0	0
6:00AM	0	0	0	0	0
6:15AM	0	0	0	0	0
6:30AM	1	1	0	0	1
6:45AM	1	1	0	0	1
Hourly Total	2	2	0	0	2
7:00AM	2	2	0	0	2
7:15AM	2	2	0	0	2
7:30AM	2	2	0	0	2
7:45AM	0	0	0	0	0
Hourly Total	6	6	0	0	6
8:00AM	2	2	0	0	2
8:15AM	0	0	0	0	0
8:30AM	3	3	0	0	3
8:45AM	1	1	0	0	1
Hourly Total	6	6	0	0	6
9:00AM	1	1	1	1	2
9:15AM	1	1	0	0	1
9:30AM	1	1	0	0	1
9:45AM	0	0	0	0	0
Hourly Total	3	3	1	1	4
10:00AM	1	1	0	0	1
10:15AM	1	1	0	0	1
10:30AM	2	2	1	1	3
10:45AM	0	0	0	0	0
Hourly Total	4	4	1	1	5
11:00AM	2	2	0	0	2
11:15AM	1	1	0	0	1
11:30AM	2	2	0	0	2
11:45AM	2	2	0	0	2
Hourly Total	7	7	0	0	7
12:00PM	0	0	0	0	0
12:15PM	1	1	1	1	2
12:30PM	2	2	0	0	2
12:45PM	1	1	1	1	2
Hourly Total	4	4	2	2	6
1:00PM	2	2	0	0	2
1:15PM	1	1	2	2	3
1:30PM	2	2	0	0	2
1:45PM	2	2	1	1	3
Hourly Total	7	7	3	3	10
2:00PM	1	1	0	0	1
2:15PM	0	0	0	0	0
2:30PM	1	1	1	1	2
2:45PM	2	2	0	0	2
Hourly Total	4	4	1	1	5
3:00PM	0	0	0	0	0
3:15PM	0	0	0	0	0
3:30PM	4	4	1	1	5
3:45PM	2	2	1	1	3
Hourly Total	6	6	2	2	8
4:00PM	3	3	0	0	3
4:15PM	3	3	1	1	4
4:30PM	1	1	1	1	2
4:45PM	0	0	1	1	1
Hourly Total	7	7	3	3	10
5:00PM	1	1	0	0	1
5:15PM	1	1	0	0	1
5:30PM	0	0	1	1	1
5:45PM	3	3	0	0	3

Leg Direction	West Eastbound		East Westbound		
Time	T	App	T	App	Int
Hourly Total	5	5	1	1	6
6:00PM	0	0	0	0	0
6:15PM	1	1	0	0	1
6:30PM	0	0	0	0	0
6:45PM	1	1	0	0	1
Hourly Total	2	2	0	0	2
7:00PM	0	0	0	0	0
7:15PM	1	1	0	0	1
7:30PM	1	1	1	1	2
7:45PM	1	1	0	0	1
Hourly Total	3	3	1	1	4
8:00PM	0	0	0	0	0
8:15PM	2	2	0	0	2
8:30PM	0	0	0	0	0
8:45PM	3	3	0	0	3
Hourly Total	5	5	0	0	5
9:00PM	0	0	0	0	0
9:15PM	3	3	0	0	3
9:30PM	1	1	0	0	1
9:45PM	2	2	0	0	2
Hourly Total	6	6	0	0	6
10:00PM	1	1	0	0	1
10:15PM	0	0	0	0	0
10:30PM	0	0	0	0	0
10:45PM	1	1	0	0	1
Hourly Total	2	2	0	0	2
11:00PM	0	0	0	0	0
11:15PM	0	0	0	0	0
11:30PM	0	0	1	1	1
11:45PM	0	0	0	0	0
Hourly Total	0	0	1	1	1
2020-02-13 12:00AM	0	0	0	0	0
12:15AM	0	0	0	0	0
12:30AM	0	0	0	0	0
12:45AM	0	0	0	0	0
Hourly Total	0	0	0	0	0
1:00AM	0	0	0	0	0
1:15AM	0	0	0	0	0
1:30AM	0	0	0	0	0
1:45AM	0	0	0	0	0
Hourly Total	0	0	0	0	0
2:00AM	0	0	0	0	0
2:15AM	0	0	0	0	0
2:30AM	1	1	0	0	1
2:45AM	0	0	0	0	0
Hourly Total	1	1	0	0	1
3:00AM	0	0	0	0	0
3:15AM	0	0	0	0	0
3:30AM	0	0	0	0	0
3:45AM	0	0	0	0	0
Hourly Total	0	0	0	0	0
4:00AM	0	0	0	0	0
4:15AM	0	0	0	0	0
4:30AM	0	0	0	0	0
4:45AM	0	0	0	0	0
Hourly Total	0	0	0	0	0
5:00AM	0	0	0	0	0
5:15AM	0	0	0	0	0
5:30AM	0	0	0	0	0
5:45AM	0	0	0	0	0

Leg Direction	West Eastbound		East Westbound		
Time	T	App	T	App	Int
Hourly Total	0	0	0	0	0
6:00AM	0	0	0	0	0
6:15AM	0	0	0	0	0
6:30AM	0	0	0	0	0
6:45AM	3	3	0	0	3
Hourly Total	3	3	0	0	3
7:00AM	1	1	0	0	1
7:15AM	0	0	0	0	0
7:30AM	1	1	0	0	1
7:45AM	1	1	0	0	1
Hourly Total	3	3	0	0	3
8:00AM	3	3	0	0	3
8:15AM	1	1	0	0	1
8:30AM	1	1	0	0	1
8:45AM	3	3	1	1	4
Hourly Total	8	8	1	1	9
9:00AM	0	0	0	0	0
9:15AM	1	1	0	0	1
9:30AM	0	0	0	0	0
9:45AM	1	1	0	0	1
Hourly Total	2	2	0	0	2
10:00AM	0	0	0	0	0
10:15AM	1	1	0	0	1
10:30AM	0	0	0	0	0
10:45AM	1	1	0	0	1
Hourly Total	2	2	0	0	2
11:00AM	0	0	0	0	0
11:15AM	1	1	1	1	2
11:30AM	0	0	0	0	0
11:45AM	2	2	0	0	2
Hourly Total	3	3	1	1	4
12:00PM	0	0	1	1	1
12:15PM	1	1	0	0	1
12:30PM	0	0	0	0	0
12:45PM	3	3	0	0	3
Hourly Total	4	4	1	1	5
1:00PM	1	1	0	0	1
1:15PM	1	1	0	0	1
1:30PM	1	1	0	0	1
1:45PM	1	1	0	0	1
Hourly Total	4	4	0	0	4
2:00PM	0	0	0	0	0
2:15PM	1	1	0	0	1
2:30PM	1	1	1	1	2
2:45PM	0	0	0	0	0
Hourly Total	2	2	1	1	3
3:00PM	2	2	0	0	2
3:15PM	0	0	0	0	0
3:30PM	2	2	1	1	3
3:45PM	0	0	0	0	0
Hourly Total	4	4	1	1	5
4:00PM	1	1	0	0	1
4:15PM	5	5	1	1	6
4:30PM	0	0	0	0	0
4:45PM	3	3	0	0	3
Hourly Total	9	9	1	1	10
5:00PM	1	1	0	0	1
5:15PM	1	1	0	0	1
5:30PM	2	2	1	1	3
5:45PM	4	4	0	0	4

Leg Direction	West Eastbound		East Westbound		
Time	T	App	T	App	Int
Hourly Total	8	8	1	1	9
6:00PM	1	1	0	0	1
6:15PM	1	1	1	1	2
6:30PM	1	1	0	0	1
6:45PM	1	1	1	1	2
Hourly Total	4	4	2	2	6
7:00PM	0	0	1	1	1
7:15PM	0	0	0	0	0
7:30PM	2	2	1	1	3
7:45PM	2	2	0	0	2
Hourly Total	4	4	2	2	6
8:00PM	1	1	0	0	1
8:15PM	0	0	0	0	0
8:30PM	2	2	0	0	2
8:45PM	2	2	0	0	2
Hourly Total	5	5	0	0	5
9:00PM	0	0	0	0	0
9:15PM	0	0	0	0	0
9:30PM	1	1	0	0	1
9:45PM	1	1	0	0	1
Hourly Total	2	2	0	0	2
10:00PM	0	0	0	0	0
10:15PM	1	1	0	0	1
10:30PM	0	0	0	0	0
10:45PM	1	1	0	0	1
Hourly Total	2	2	0	0	2
11:00PM	0	0	0	0	0
11:15PM	0	0	0	0	0
11:30PM	0	0	0	0	0
11:45PM	0	0	0	0	0
Hourly Total	0	0	0	0	0
2020-02-14 12:00AM	0	0	0	0	0
12:15AM	0	0	0	0	0
12:30AM	0	0	0	0	0
12:45AM	0	0	0	0	0
Hourly Total	0	0	0	0	0
1:00AM	0	0	0	0	0
1:15AM	0	0	0	0	0
1:30AM	0	0	0	0	0
1:45AM	0	0	0	0	0
Hourly Total	0	0	0	0	0
2:00AM	1	1	0	0	1
2:15AM	0	0	0	0	0
2:30AM	0	0	0	0	0
2:45AM	0	0	0	0	0
Hourly Total	1	1	0	0	1
3:00AM	0	0	0	0	0
3:15AM	0	0	0	0	0
3:30AM	0	0	0	0	0
3:45AM	0	0	0	0	0
Hourly Total	0	0	0	0	0
4:00AM	0	0	0	0	0
4:15AM	0	0	0	0	0
4:30AM	0	0	0	0	0
4:45AM	0	0	0	0	0
Hourly Total	0	0	0	0	0
5:00AM	0	0	0	0	0
5:15AM	0	0	0	0	0
5:30AM	0	0	0	0	0
5:45AM	1	1	0	0	1

Leg Direction	West Eastbound		East Westbound		
Time	T	App	T	App	Int
Hourly Total	1	1	0	0	1
6:00AM	1	1	0	0	1
6:15AM	1	1	0	0	1
6:30AM	0	0	0	0	0
6:45AM	2	2	0	0	2
Hourly Total	4	4	0	0	4
7:00AM	1	1	0	0	1
7:15AM	1	1	0	0	1
7:30AM	2	2	0	0	2
7:45AM	1	1	0	0	1
Hourly Total	5	5	0	0	5
8:00AM	2	2	0	0	2
8:15AM	1	1	0	0	1
8:30AM	1	1	0	0	1
8:45AM	0	0	0	0	0
Hourly Total	4	4	0	0	4
9:00AM	2	2	0	0	2
9:15AM	0	0	0	0	0
9:30AM	2	2	0	0	2
9:45AM	0	0	0	0	0
Hourly Total	4	4	0	0	4
10:00AM	2	2	0	0	2
10:15AM	0	0	0	0	0
10:30AM	1	1	0	0	1
10:45AM	1	1	0	0	1
Hourly Total	4	4	0	0	4
11:00AM	2	2	0	0	2
11:15AM	1	1	0	0	1
11:30AM	2	2	0	0	2
11:45AM	2	2	0	0	2
Hourly Total	7	7	0	0	7
12:00PM	1	1	0	0	1
12:15PM	2	2	1	1	3
12:30PM	1	1	0	0	1
12:45PM	1	1	1	1	2
Hourly Total	5	5	2	2	7
1:00PM	2	2	0	0	2
1:15PM	0	0	0	0	0
1:30PM	1	1	0	0	1
1:45PM	2	2	0	0	2
Hourly Total	5	5	0	0	5
2:00PM	1	1	0	0	1
2:15PM	1	1	0	0	1
2:30PM	0	0	0	0	0
2:45PM	3	3	0	0	3
Hourly Total	5	5	0	0	5
3:00PM	1	1	0	0	1
3:15PM	1	1	0	0	1
3:30PM	1	1	0	0	1
3:45PM	1	1	1	1	2
Hourly Total	4	4	1	1	5
4:00PM	3	3	1	1	4
4:15PM	3	3	1	1	4
4:30PM	3	3	0	0	3
4:45PM	0	0	1	1	1
Hourly Total	9	9	3	3	12
5:00PM	1	1	1	1	2
5:15PM	2	2	0	0	2
5:30PM	3	3	0	0	3
5:45PM	1	1	1	1	2

**ATR2. Driveway from Germantown Avenue to Sug... - ATR**

Mon Feb 10, 2020

Full Length ()

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)

All Channels

ID: 751113, Location: , , Site Code: ATR 2b

Provided by: Imperial Traffic & Data Collection  
PO Box 4637, Cherry Hill, NJ, 08003, US

Leg Direction	North Southbound		
Time	T	App	Int
2020-02-10 7:00AM	1	1	1
7:15AM	0	0	0
7:30AM	1	1	1
7:45AM	1	1	1
Hourly Total	3	3	3
8:00AM	0	0	0
8:15AM	0	0	0
8:30AM	2	2	2
8:45AM	0	0	0
Hourly Total	2	2	2
9:00AM	2	2	2
9:15AM	0	0	0
9:30AM	1	1	1
9:45AM	0	0	0
Hourly Total	3	3	3
10:00AM	0	0	0
10:15AM	1	1	1
10:30AM	0	0	0
10:45AM	1	1	1
Hourly Total	2	2	2
11:00AM	0	0	0
11:15AM	1	1	1
11:30AM	0	0	0
11:45AM	2	2	2
Hourly Total	3	3	3
12:00PM	1	1	1
12:15PM	1	1	1
12:30PM	0	0	0
12:45PM	1	1	1
Hourly Total	3	3	3
1:00PM	0	0	0
1:15PM	1	1	1
1:30PM	2	2	2
1:45PM	1	1	1
Hourly Total	4	4	4
2:00PM	2	2	2
2:15PM	1	1	1
2:30PM	2	2	2
2:45PM	0	0	0
Hourly Total	5	5	5
3:00PM	1	1	1
3:15PM	0	0	0
3:30PM	2	2	2
3:45PM	4	4	4
Hourly Total	7	7	7
4:00PM	3	3	3
4:15PM	0	0	0
4:30PM	1	1	1
4:45PM	2	2	2
Hourly Total	6	6	6
5:00PM	0	0	0
5:15PM	1	1	1
5:30PM	0	0	0
5:45PM	1	1	1

Leg Direction	North Southbound	T	App	Int
Time				
	Hourly Total	2	2	2
	6:00PM	1	1	1
	6:15PM	1	1	1
	6:30PM	0	0	0
	6:45PM	0	0	0
	Hourly Total	2	2	2
	7:00PM	2	2	2
	7:15PM	0	0	0
	7:30PM	1	1	1
	7:45PM	0	0	0
	Hourly Total	3	3	3
	8:00PM	0	0	0
	8:15PM	1	1	1
	8:30PM	0	0	0
	8:45PM	1	1	1
	Hourly Total	2	2	2
	9:00PM	0	0	0
	9:15PM	0	0	0
	9:30PM	3	3	3
	9:45PM	0	0	0
	Hourly Total	3	3	3
	10:00PM	1	1	1
	10:15PM	0	0	0
	10:30PM	1	1	1
	10:45PM	0	0	0
	Hourly Total	2	2	2
	11:00PM	0	0	0
	11:15PM	0	0	0
	11:30PM	0	0	0
	11:45PM	0	0	0
	Hourly Total	0	0	0
2020-02-11	12:00AM	0	0	0
	12:15AM	0	0	0
	12:30AM	1	1	1
	12:45AM	0	0	0
	Hourly Total	1	1	1
	1:00AM	0	0	0
	1:15AM	0	0	0
	1:30AM	0	0	0
	1:45AM	0	0	0
	Hourly Total	0	0	0
	2:00AM	0	0	0
	2:15AM	0	0	0
	2:30AM	0	0	0
	2:45AM	0	0	0
	Hourly Total	0	0	0
	3:00AM	0	0	0
	3:15AM	0	0	0
	3:30AM	0	0	0
	3:45AM	0	0	0
	Hourly Total	0	0	0
	4:00AM	0	0	0
	4:15AM	0	0	0
	4:30AM	0	0	0
	4:45AM	0	0	0
	Hourly Total	0	0	0
	5:00AM	0	0	0
	5:15AM	0	0	0
	5:30AM	0	0	0
	5:45AM	0	0	0

Leg Direction	North Southbound		
Time	T	App	Int
Hourly Total	0	0	0
6:00AM	0	0	0
6:15AM	0	0	0
6:30AM	0	0	0
6:45AM	0	0	0
Hourly Total	0	0	0
7:00AM	1	1	1
7:15AM	0	0	0
7:30AM	1	1	1
7:45AM	0	0	0
Hourly Total	2	2	2
8:00AM	2	2	2
8:15AM	0	0	0
8:30AM	0	0	0
8:45AM	1	1	1
Hourly Total	3	3	3
9:00AM	0	0	0
9:15AM	1	1	1
9:30AM	1	1	1
9:45AM	0	0	0
Hourly Total	2	2	2
10:00AM	0	0	0
10:15AM	2	2	2
10:30AM	1	1	1
10:45AM	0	0	0
Hourly Total	3	3	3
11:00AM	1	1	1
11:15AM	0	0	0
11:30AM	2	2	2
11:45AM	2	2	2
Hourly Total	5	5	5
12:00PM	2	2	2
12:15PM	0	0	0
12:30PM	1	1	1
12:45PM	6	6	6
Hourly Total	9	9	9
1:00PM	1	1	1
1:15PM	4	4	4
1:30PM	1	1	1
1:45PM	0	0	0
Hourly Total	6	6	6
2:00PM	1	1	1
2:15PM	0	0	0
2:30PM	1	1	1
2:45PM	0	0	0
Hourly Total	2	2	2
3:00PM	2	2	2
3:15PM	1	1	1
3:30PM	2	2	2
3:45PM	1	1	1
Hourly Total	6	6	6
4:00PM	0	0	0
4:15PM	2	2	2
4:30PM	1	1	1
4:45PM	0	0	0
Hourly Total	3	3	3
5:00PM	2	2	2
5:15PM	2	2	2
5:30PM	2	2	2
5:45PM	2	2	2

Leg Direction	North Southbound		
Time	T	App	Int
Hourly Total	8	8	8
6:00PM	0	0	0
6:15PM	0	0	0
6:30PM	2	2	2
6:45PM	0	0	0
Hourly Total	2	2	2
7:00PM	0	0	0
7:15PM	2	2	2
7:30PM	0	0	0
7:45PM	2	2	2
Hourly Total	4	4	4
8:00PM	0	0	0
8:15PM	0	0	0
8:30PM	1	1	1
8:45PM	2	2	2
Hourly Total	3	3	3
9:00PM	0	0	0
9:15PM	1	1	1
9:30PM	2	2	2
9:45PM	0	0	0
Hourly Total	3	3	3
10:00PM	1	1	1
10:15PM	0	0	0
10:30PM	1	1	1
10:45PM	0	0	0
Hourly Total	2	2	2
11:00PM	0	0	0
11:15PM	0	0	0
11:30PM	0	0	0
11:45PM	0	0	0
Hourly Total	0	0	0
2020-02-12 12:00AM	0	0	0
12:15AM	0	0	0
12:30AM	0	0	0
12:45AM	0	0	0
Hourly Total	0	0	0
1:00AM	1	1	1
1:15AM	0	0	0
1:30AM	0	0	0
1:45AM	0	0	0
Hourly Total	1	1	1
2:00AM	0	0	0
2:15AM	0	0	0
2:30AM	0	0	0
2:45AM	0	0	0
Hourly Total	0	0	0
3:00AM	0	0	0
3:15AM	0	0	0
3:30AM	0	0	0
3:45AM	0	0	0
Hourly Total	0	0	0
4:00AM	0	0	0
4:15AM	0	0	0
4:30AM	0	0	0
4:45AM	0	0	0
Hourly Total	0	0	0
5:00AM	0	0	0
5:15AM	0	0	0
5:30AM	0	0	0
5:45AM	0	0	0

Leg Direction	North Southbound		
Time	T	App	Int
Hourly Total	0	0	0
6:00AM	1	1	1
6:15AM	0	0	0
6:30AM	0	0	0
6:45AM	0	0	0
Hourly Total	1	1	1
7:00AM	2	2	2
7:15AM	0	0	0
7:30AM	1	1	1
7:45AM	1	1	1
Hourly Total	4	4	4
8:00AM	0	0	0
8:15AM	1	1	1
8:30AM	2	2	2
8:45AM	1	1	1
Hourly Total	4	4	4
9:00AM	2	2	2
9:15AM	0	0	0
9:30AM	1	1	1
9:45AM	0	0	0
Hourly Total	3	3	3
10:00AM	1	1	1
10:15AM	0	0	0
10:30AM	2	2	2
10:45AM	0	0	0
Hourly Total	3	3	3
11:00AM	1	1	1
11:15AM	1	1	1
11:30AM	2	2	2
11:45AM	1	1	1
Hourly Total	5	5	5
12:00PM	0	0	0
12:15PM	2	2	2
12:30PM	1	1	1
12:45PM	1	1	1
Hourly Total	4	4	4
1:00PM	1	1	1
1:15PM	0	0	0
1:30PM	2	2	2
1:45PM	1	1	1
Hourly Total	4	4	4
2:00PM	1	1	1
2:15PM	1	1	1
2:30PM	1	1	1
2:45PM	1	1	1
Hourly Total	4	4	4
3:00PM	0	0	0
3:15PM	2	2	2
3:30PM	0	0	0
3:45PM	2	2	2
Hourly Total	4	4	4
4:00PM	2	2	2
4:15PM	1	1	1
4:30PM	1	1	1
4:45PM	0	0	0
Hourly Total	4	4	4
5:00PM	1	1	1
5:15PM	1	1	1
5:30PM	1	1	1
5:45PM	2	2	2

Leg Direction	North Southbound		
Time	T	App	Int
Hourly Total	5	5	5
6:00PM	0	0	0
6:15PM	1	1	1
6:30PM	0	0	0
6:45PM	2	2	2
Hourly Total	3	3	3
7:00PM	2	2	2
7:15PM	1	1	1
7:30PM	2	2	2
7:45PM	0	0	0
Hourly Total	5	5	5
8:00PM	1	1	1
8:15PM	1	1	1
8:30PM	1	1	1
8:45PM	1	1	1
Hourly Total	4	4	4
9:00PM	0	0	0
9:15PM	4	4	4
9:30PM	1	1	1
9:45PM	1	1	1
Hourly Total	6	6	6
10:00PM	0	0	0
10:15PM	0	0	0
10:30PM	1	1	1
10:45PM	0	0	0
Hourly Total	1	1	1
11:00PM	0	0	0
11:15PM	0	0	0
11:30PM	1	1	1
11:45PM	0	0	0
Hourly Total	1	1	1
2020-02-13 12:00AM	0	0	0
12:15AM	0	0	0
12:30AM	0	0	0
12:45AM	0	0	0
Hourly Total	0	0	0
1:00AM	0	0	0
1:15AM	0	0	0
1:30AM	0	0	0
1:45AM	0	0	0
Hourly Total	0	0	0
2:00AM	0	0	0
2:15AM	0	0	0
2:30AM	0	0	0
2:45AM	0	0	0
Hourly Total	0	0	0
3:00AM	0	0	0
3:15AM	0	0	0
3:30AM	0	0	0
3:45AM	0	0	0
Hourly Total	0	0	0
4:00AM	0	0	0
4:15AM	0	0	0
4:30AM	1	1	1
4:45AM	0	0	0
Hourly Total	1	1	1
5:00AM	0	0	0
5:15AM	0	0	0
5:30AM	0	0	0
5:45AM	0	0	0

Leg Direction	North Southbound		
Time	T	App	Int
Hourly Total	0	0	0
6:00AM	1	1	1
6:15AM	0	0	0
6:30AM	0	0	0
6:45AM	0	0	0
Hourly Total	1	1	1
7:00AM	1	1	1
7:15AM	0	0	0
7:30AM	1	1	1
7:45AM	1	1	1
Hourly Total	3	3	3
8:00AM	0	0	0
8:15AM	1	1	1
8:30AM	1	1	1
8:45AM	1	1	1
Hourly Total	3	3	3
9:00AM	0	0	0
9:15AM	1	1	1
9:30AM	0	0	0
9:45AM	2	2	2
Hourly Total	3	3	3
10:00AM	1	1	1
10:15AM	0	0	0
10:30AM	1	1	1
10:45AM	0	0	0
Hourly Total	2	2	2
11:00AM	1	1	1
11:15AM	0	0	0
11:30AM	1	1	1
11:45AM	1	1	1
Hourly Total	3	3	3
12:00PM	0	0	0
12:15PM	3	3	3
12:30PM	0	0	0
12:45PM	2	2	2
Hourly Total	5	5	5
1:00PM	0	0	0
1:15PM	1	1	1
1:30PM	0	0	0
1:45PM	1	1	1
Hourly Total	2	2	2
2:00PM	0	0	0
2:15PM	2	2	2
2:30PM	1	1	1
2:45PM	0	0	0
Hourly Total	3	3	3
3:00PM	1	1	1
3:15PM	0	0	0
3:30PM	1	1	1
3:45PM	0	0	0
Hourly Total	2	2	2
4:00PM	0	0	0
4:15PM	2	2	2
4:30PM	1	1	1
4:45PM	2	2	2
Hourly Total	5	5	5
5:00PM	1	1	1
5:15PM	3	3	3
5:30PM	1	1	1
5:45PM	1	1	1

Leg Direction	North Southbound		
Time	T	App	Int
Hourly Total	6	6	6
6:00PM	1	1	1
6:15PM	0	0	0
6:30PM	0	0	0
6:45PM	2	2	2
Hourly Total	3	3	3
7:00PM	0	0	0
7:15PM	1	1	1
7:30PM	1	1	1
7:45PM	3	3	3
Hourly Total	5	5	5
8:00PM	0	0	0
8:15PM	1	1	1
8:30PM	1	1	1
8:45PM	2	2	2
Hourly Total	4	4	4
9:00PM	0	0	0
9:15PM	1	1	1
9:30PM	0	0	0
9:45PM	1	1	1
Hourly Total	2	2	2
10:00PM	1	1	1
10:15PM	0	0	0
10:30PM	1	1	1
10:45PM	0	0	0
Hourly Total	2	2	2
11:00PM	0	0	0
11:15PM	0	0	0
11:30PM	0	0	0
11:45PM	0	0	0
Hourly Total	0	0	0
2020-02-14 12:00AM	1	1	1
12:15AM	0	0	0
12:30AM	0	0	0
12:45AM	0	0	0
Hourly Total	1	1	1
1:00AM	0	0	0
1:15AM	0	0	0
1:30AM	0	0	0
1:45AM	0	0	0
Hourly Total	0	0	0
2:00AM	1	1	1
2:15AM	0	0	0
2:30AM	0	0	0
2:45AM	0	0	0
Hourly Total	1	1	1
3:00AM	0	0	0
3:15AM	0	0	0
3:30AM	0	0	0
3:45AM	0	0	0
Hourly Total	0	0	0
4:00AM	0	0	0
4:15AM	0	0	0
4:30AM	1	1	1
4:45AM	0	0	0
Hourly Total	1	1	1
5:00AM	0	0	0
5:15AM	0	0	0
5:30AM	0	0	0
5:45AM	0	0	0

Leg Direction	North Southbound		
Time	T	App	Int
Hourly Total	0	0	0
6:00AM	1	1	1
6:15AM	0	0	0
6:30AM	1	1	1
6:45AM	0	0	0
Hourly Total	2	2	2
7:00AM	1	1	1
7:15AM	0	0	0
7:30AM	1	1	1
7:45AM	1	1	1
Hourly Total	3	3	3
8:00AM	1	1	1
8:15AM	1	1	1
8:30AM	1	1	1
8:45AM	1	1	1
Hourly Total	4	4	4
9:00AM	1	1	1
9:15AM	0	0	0
9:30AM	1	1	1
9:45AM	1	1	1
Hourly Total	3	3	3
10:00AM	2	2	2
10:15AM	0	0	0
10:30AM	1	1	1
10:45AM	1	1	1
Hourly Total	4	4	4
11:00AM	0	0	0
11:15AM	1	1	1
11:30AM	0	0	0
11:45AM	3	3	3
Hourly Total	4	4	4
12:00PM	0	0	0
12:15PM	4	4	4
12:30PM	1	1	1
12:45PM	0	0	0
Hourly Total	5	5	5
1:00PM	1	1	1
1:15PM	0	0	0
1:30PM	1	1	1
1:45PM	2	2	2
Hourly Total	4	4	4
2:00PM	0	0	0
2:15PM	2	2	2
2:30PM	1	1	1
2:45PM	0	0	0
Hourly Total	3	3	3
3:00PM	1	1	1
3:15PM	0	0	0
3:30PM	2	2	2
3:45PM	2	2	2
Hourly Total	5	5	5
4:00PM	1	1	1
4:15PM	1	1	1
4:30PM	3	3	3
4:45PM	0	0	0
Hourly Total	5	5	5
5:00PM	2	2	2
5:15PM	3	3	3
5:30PM	1	1	1
5:45PM	0	0	0

**C | EXISTING CONDITIONS: AADT, TRANSIT ROUTES, AND  
INTERSECTION PHOTOS**

# DVRPC - Travel Monitoring

TAKEN BY: PR DATE: 3/23/2016 PROJECT: 16-PAP STATION ID: 30266  
ROAD: GERMANTOWN AVE SR/SEG/OFF: G720/0020/0675  
FROM: CHESTNUT HILL AVE TO: BELLS MILL RD  
STATE: PA COUNTY: PHILADELPHIA MCD: 4210160117 - UPPER NORTHWEST  
COUNT DIR: BOTH TRAFFIC DIR: BOTH SPEED LIMIT: 30 FC: 14  
DVRPC FILE #: 128164 COUNTER #: 1409 WEATHER: FAIR DATA SOURCE: EXTERNAL  
COMMENTS:

---

Hour Beginning	Wednesday 3/23/2016
12 AM	58
1 AM	32
2 AM	21
3 AM	12
4 AM	45
5 AM	119
6 AM	387
7 AM	757
8 AM	799
9 AM	644
10 AM	623
11 AM	696
12 PM	746
1 PM	736
2 PM	785
3 PM	906
4 PM	890
5 PM	935
6 PM	886
7 PM	611
8 PM	555
9 PM	342
10 PM	205
11PM	108
Total	11,898

---

AXLE CORR. FACTOR: 1.000 AADT: 10,589 AM Peak %: 6.7 Hour Beginning: 8:00 AM  
SEASONAL FACTOR: 0.890 PM Peak %: 7.9 Hour Beginning: 5:00 PM

MOVEMENT, PHASING AND SEQUENCE CHART

PHASE INTERVAL										2+6		8		FLASH		
SIGNAL	1	2	3	4	5	6	7	8								
1	G	Y	R	R	R	R	R									Y
2	G	Y	R	R	R	R	R									Y
3,4,9,10	G	Y	R	R	R	R	R									Y
5,6,11,12	H	H	H	M	FH	FH	H									OFF
7,8	R	R	R	G	G	Y	R									R
FIXED	3	2				3	2									
MINIMUM	45					12										
PASSAGE						4										
MAXIMUM I						16										
MAXIMUM II						16										
PED						8	6									
MEMORY																
PROGRAMS																
PROGRAM I	68	3	2		16	6	3	2								100 SEC.
PROGRAM II																

FLASHING

INTERVAL

2+6

8

TIME

06:00

CYCLE

100

OFFSET

FREE

PROGRAM

FREE

REMARKS

FLASH

1

2

3

4

5

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WORK ORDER S21761		Germantown Avenue & Hillcrest Avenue												Traffic Engineering District #2 - ARLE											
		Prepared by				Date		Work Completed By				Date													
SIGNAL														Approved by				Date		Inspected By				Date	
				2+6 Germantown Avenue				8 Hillcrest Road																	
#	Phase Movements		Intervals												Minimums				Maximums						
			1	2	3	4	5	6								Flash	G	M	FH	G	M	FH			
2	NB Germantown Avenue		G	G	Y	R	R	R	R																
5																									
6	SB Germantown Avenue		G	G	Y	R	R	R	R																
1																									
4																									
7																									
8	WB Hillcrest Road		R	R	R	R	G	Y	R									R							
3																									
P2	crossing Hillcrest		M	FH	H	H	H	H	H																
P6																									
P4																									
P8																									
	Program 1		34.2	11.7	4.5	2.7	31.5	3.6	1.8					90	secs										
	Percent		38%	13%	5%	3%	35%	4%	2%					100	%										
	Dial Settings		38	51	56	59	94	98	0																
	Offset (%)		R1 =	51%																					
	Instructions		Work order to coordinate the installation of pedestrian heads. Offset referenced to beginning of green, phase 2 + 6																						

**WORK ORDER**  
**S21858**

## SIGNAL

Prepared by  
JL  
Approved by

## Bells Mill Road & Germantown Avenue

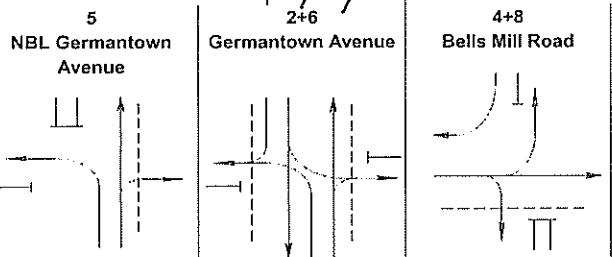
Traffic Engineering District #2 - ARLE

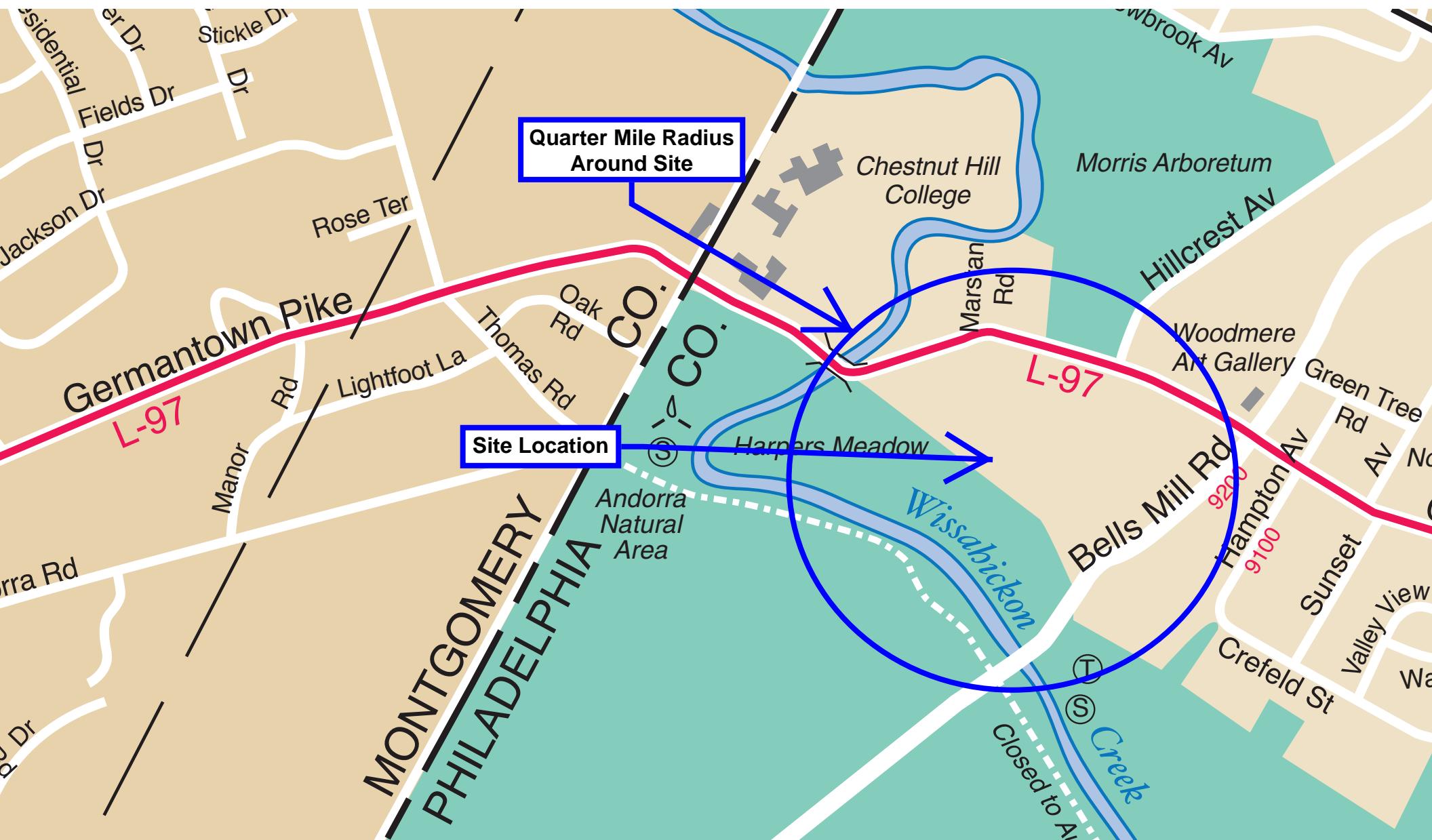
Prepared by	<i>Dal Olney</i>	Date 12/6/16
Approved by	<i>Mrs.</i>	Date 12/7/16

Work Completed By  
M. Dugay  
Inspected By

Date 1-26-17

**Release date**





This Figure an excerpt from "SEPTA Official Transit & Street Map" 2016 Edition

# 91

Effective September 1, 2019



## Chestnut Hill to Norristown Transportation Center



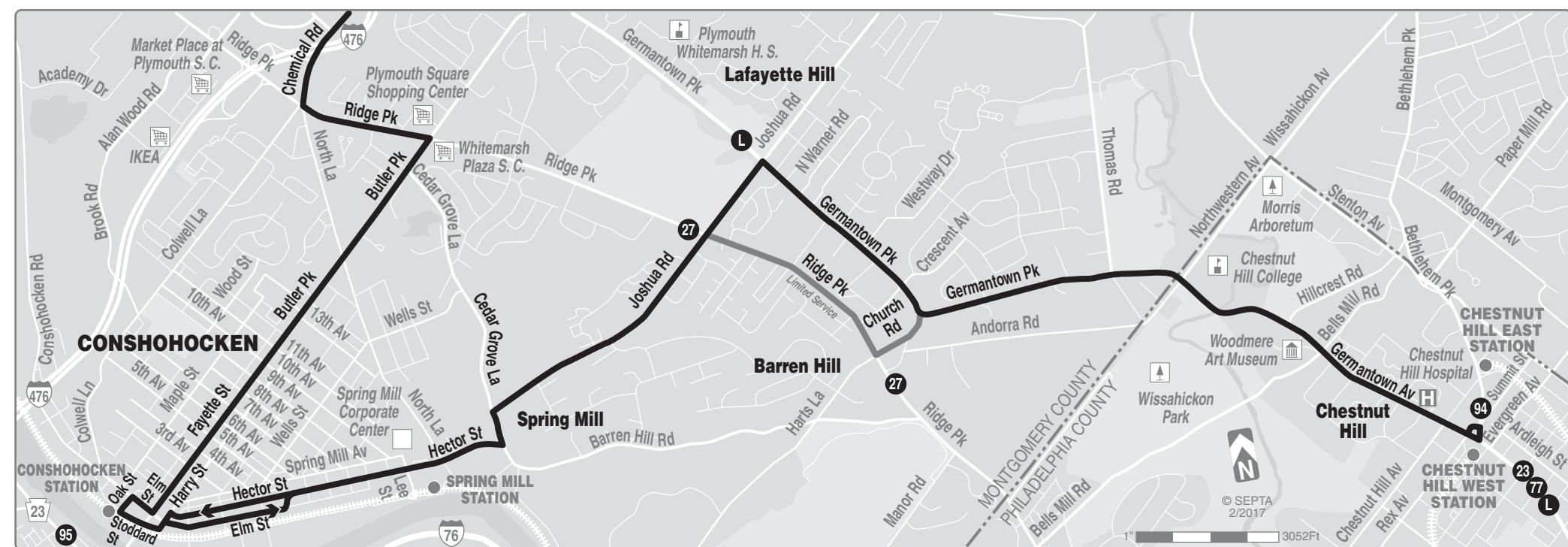
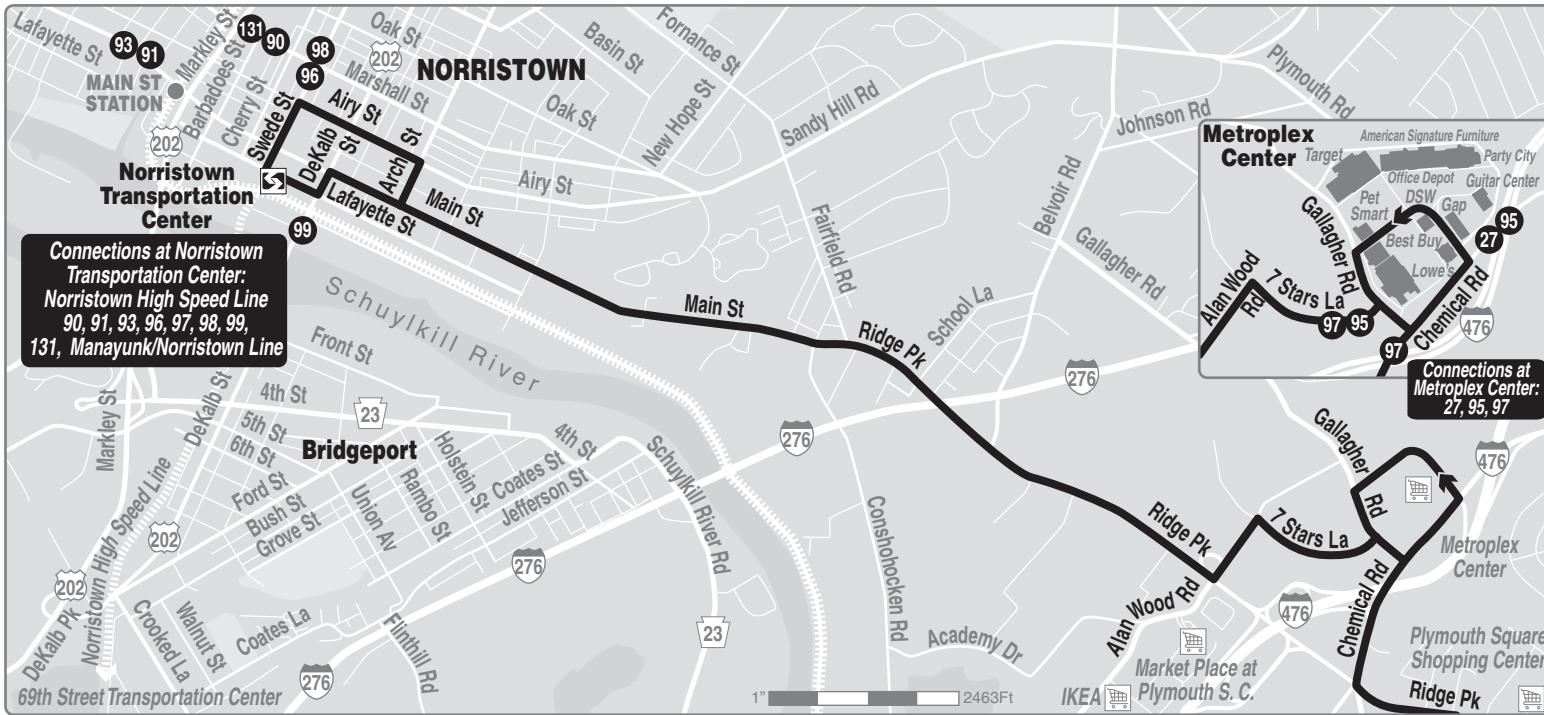
Serving Barren Hill  
and Conshohocken

Customer Service 610-279-8400  
TDD/TTY 215-580-7853  
[www.septa.org](http://www.septa.org)

**TRAVEL WALLET  
\$1.00 MINIMUM  
RELOAD**

Now Available at Fare Kiosks





## MONDAYS THROUGH FRIDAYS

To Chestnut Hill								To Norristown Transportation Center								
Norristown Transportation Center	Ridge Pk and Alan Wood Rd	Metroplex Shopping Center	Conshohocken Station	Hector St and North La (Spring Mill)	Germanstown Pk and Church Rd (Barren Hill)	Chestnut Hill Loop	Chestnut Hill Loop	Germanstown Pk and Church Rd (Barren Hill)	Hector St and North La (Spring Mill)	Conshohocken Station	Metroplex Shopping Center	Ridge Pk and Alan Wood Rd	Norristown Transportation Center			
<b>AM SERVICE</b>								<b>AM SERVICE</b>								
6.00	6.12	6.15	6.28	6.32	6.40	---	---	---	---	---	---	4.43	4.54			
7.00	7.14	7.18	7.33	7.38	7.46	7.56	---	---	5.16	5.21	5.31	5.34	5.45			
8.00	8.15	8.19	8.35	8.40	8.48	8.55	---	---	5.57	6.02	6.16	6.19	6.32			
9.00	9.14	9.17	9.33	9.38	9.46	9.53	---	---	6.59	7.04	7.17	7.20	7.34			
10.00	10.14	10.18	10.33	10.37	10.44	10.51	---	---	8.03	8.09	8.25	8.27	8.42			
11.00	11.14	11.18	11.33	11.37	11.44	11.51	8.53	9.00	9.07	9.13	9.26	9.29	9.43			
<b>PM SERVICE</b>								9.55	10.01	10.08	10.13	10.26	10.29	10.43		
12.00	12.14	12.18	12.32	12.36	12.43	12.51	10.50	10.56	11.03	11.09	11.24	11.27	11.41			
1.00	1.14	1.18	1.32	1.36	1.43	1.51	11.50	11.56	12.02	12.07	12.21	12.24	12.39			
2.00	2.14	2.18	2.32	2.37	2.45	2.53	<b>PM SERVICE</b>									
3.00	3.14	3.18	3.32	3.37	3.45	3.52	12.55	1.03	1.09	1.14	1.28	1.31	1.46			
4.00	4.15	4.19	4.34	4.40	4.47	4.54	1.55	2.01	2.08	2.13	2.27	2.30	2.44			
5.00	5.15	5.19	5.33	5.39	5.47	5.54	2.50	2.59	3.07	3.12	3.27	3.30	3.44			
6.15	6.28	6.31	6.45	6.50	6.57	7.04	3.50	3.58	4.06	4.11	4.26	4.29	4.44			
7.15	7.27	7.30	7.43	7.47	7.54	8.01	4.50	4.58	5.06	5.11	5.27	5.30	5.44			
8.30	8.41	8.44	8.57	9.01	9.08	9.15	6.00	6.06	6.13	6.18	6.31	6.34	6.47			
9.45	9.54	9.58	10.11	10.15	10.23	---	7.15	7.21	7.27	7.32	7.44	7.47	7.59			
10.50	10.59	11.02	11.13	11.17	11.25	---	8.15	8.22	8.29	8.33	8.46	8.48	9.00			
11.35	11.46	---	---	---	---	---	9.34	9.40	9.46	9.50	10.01	10.04	10.15			
<b>AFTER MIDNIGHT SERVICE</b>								---	---	10.41	10.45	10.56	10.58	11.11		
12.18	12.29	---	---	---	---	---	---	---	11.41	11.45	11.56	11.58	12.11			
12.35	12.46	---	---	---	---	---										

**Subject To Change**

## SATURDAYS

To Chestnut Hill							To Norristown Transportation Center								
Norristown Transportation Center		Ridge Pk and Alan Wood Rd	Metroplex Shopping Center	Conshohocken Station	Hector St and North La (Spring Mill)	Germantown Pk and Church Rd (Barren Hill)	Chestnut Hill Loop	Chestnut Hill Loop		Germantown Pk and Church Rd (Barren Hill)	Hector St and North La (Spring Mill)	Conshohocken Station	Metroplex Shopping Center	Ridge Pk and Alan Wood Rd	Norristown Transportation Center
AM SERVICE							AM SERVICE								
6.15	6.25	6.28	6.38	6.41	6.48	6.56	---	---	---	6.19	6.24	6.35	5.50	6.00	
7.15	7.26	7.29	7.39	7.43	7.50	7.56	---	---	---	7.16	7.23	7.28	6.37	6.49	
8.15	8.26	8.29	8.40	8.44	8.51	8.57	7.10	7.16	7.23	8.16	8.23	8.28	7.42	7.54	
9.15	9.26	9.29	9.40	9.44	9.51	9.57	8.10	8.16	8.23	9.16	9.23	9.28	8.42	8.54	
10.15	10.27	10.30	10.44	10.48	10.55	11.01	9.10	9.16	9.23	9.41	9.43	9.45	9.43	9.55	
11.15	11.27	11.30	11.44	11.48	11.55	12.01	10.07	10.14	10.21	10.26	10.40	10.43	10.55		
PM SERVICE							PM SERVICE								
12.15	12.27	12.30	12.44	12.48	12.55	1.01	12.07	12.14	12.21	12.26	12.40	12.43	12.55		
1.15	1.27	1.31	1.47	1.51	1.58	2.06	1.07	1.14	1.21	1.26	1.40	1.43	1.55		
2.15	2.27	2.31	2.47	2.51	2.58	3.06	2.07	2.14	2.21	2.26	2.40	2.43	2.55		
3.15	3.27	3.31	3.47	3.51	3.58	---	3.07	3.14	3.21	3.26	3.40	3.43	3.55		
4.15	4.27	4.31	4.47	4.51	4.58	5.06	4.07	4.14	4.21	4.26	4.40	4.43	4.55		
5.15	5.27	5.30	5.44	5.48	5.55	6.02	5.17	5.24	5.31	5.36	5.50	5.53	6.05		
6.15	6.27	6.30	6.44	6.48	6.55	7.02	6.07	6.14	6.21	6.26	6.40	6.43	6.55		
7.15	7.26	7.29	7.42	---	---	---	7.10	7.17	7.24	7.29	7.42	7.45	7.57		
8.15	8.25	8.28	8.40	---	---	---	---	---	8.42	8.54	8.57	9.08			
9.15	9.25	9.28	9.40	---	---	---	---	---	9.42	9.54	9.57	10.08			
10.15	10.25	10.28	10.40	---	---	---	---	---	10.45	10.57	11.00	11.11			
11.15	11.25	---	---	---	---	---	---	---	---	---	---	---			

## SUNDAYS

To Chestnut Hill							To Norristown Transportation Center								
Norristown Transportation Center		Ridge Pk and Alan Wood Rd	Metroplex Shopping Center	Conshohocken Station	Hector St and North La (Spring Mill)	Germantown Pk and Church Rd (Barren Hill)	Chestnut Hill Loop	Chestnut Hill Loop		Germantown Pk and Church Rd (Barren Hill)	Hector St and North La (Spring Mill)	Conshohocken Station	Metroplex Shopping Center	Ridge Pk and Alan Wood Rd	Norristown Transportation Center
AM SERVICE							AM SERVICE								
7.15	7.24	7.28	7.39	7.43	7.50	7.56	8.15	8.21	8.27	8.32	8.45	8.47	8.58		
8.15	8.25	8.29	8.41	8.45	8.52	8.59	9.15	9.22	9.29	9.34	9.46	9.49	10.00		
9.15	9.26	9.30	9.42	9.46	9.53	10.00	10.15	10.22	10.29	10.34	10.46	10.49	11.00		
10.15	10.26	10.29	10.42	10.47	10.54	11.01	11.15	11.23	11.30	11.35	11.48	11.51	12.02		
PM SERVICE							PM SERVICE								
12.15	12.26	12.30	12.44	12.49	12.56	1.03	12.15	12.23	12.30	12.35	12.48	12.51	1.03		
1.15	1.26	1.30	1.44	1.49	1.56	2.03	2.15	2.23	2.30	2.35	2.48	2.51	3.03		
2.15	2.26	2.29	2.43	2.47	2.55	3.03	3.15	3.23	3.30	3.35	3.48	3.51	4.03		
3.15	3.26	3.29	3.43	3.47	3.54	4.01	4.15	4.23	4.30	4.35	4.47	4.50	5.01		
4.15	4.26	4.29	4.42	4.47	4.54	5.01	5.15	5.23	5.30	5.35	5.47	5.50	6.01		
5.15	5.26	5.30	5.43	5.49	5.56	6.03	6.15	6.23	6.30	6.35	6.48	6.51	7.02		
6.15	6.25	6.28	6.41	6.45	6.52	6.59	7.15	7.23	7.30	7.35	7.48	7.51	8.02		
7.15	7.25	7.29	7.42	7.46	7.53	8.01	8.15	8.23	8.30	8.35	8.47	8.50	9.01		
8.50	8.58	---	---	---	---	---									
9.45	9.53	---	---	---	---	---									

## TRAVEL TIPS

- Sunday schedule will be operated on New Year's, Memorial, Independence, Labor, Thanksgiving, and Christmas days.
- Please consult separate Manayunk/Norristown Line Timetable for additional details relating to service To/From Norristown Transportation Center, Conshohocken or Spring Mill Station. Also, Chestnut Hill East or West Line timetables for connecting times at Chestnut Hill Stations.
- Fare payment options: cash, or SEPTA Key Card with Pass or Travel Wallet Funds. Go to [www.septa.org](http://www.septa.org) or [m.septa.org](http://m.septa.org) for schedules & real time information. Try **Schedules to Go** for next 10 scheduled trips (smart phone users) or **SMS Schedules** for next 4 scheduled trips (by text message); See bus/trolley locations on **TransitView**.
- To **SAVE Money** on Your Commute visit [www.thecommuterschoice.com](http://www.thecommuterschoice.com)

**September 1, 2019**



**Erdenheim or Plymouth  
Meeting Mall to Olney  
Transportation Center**



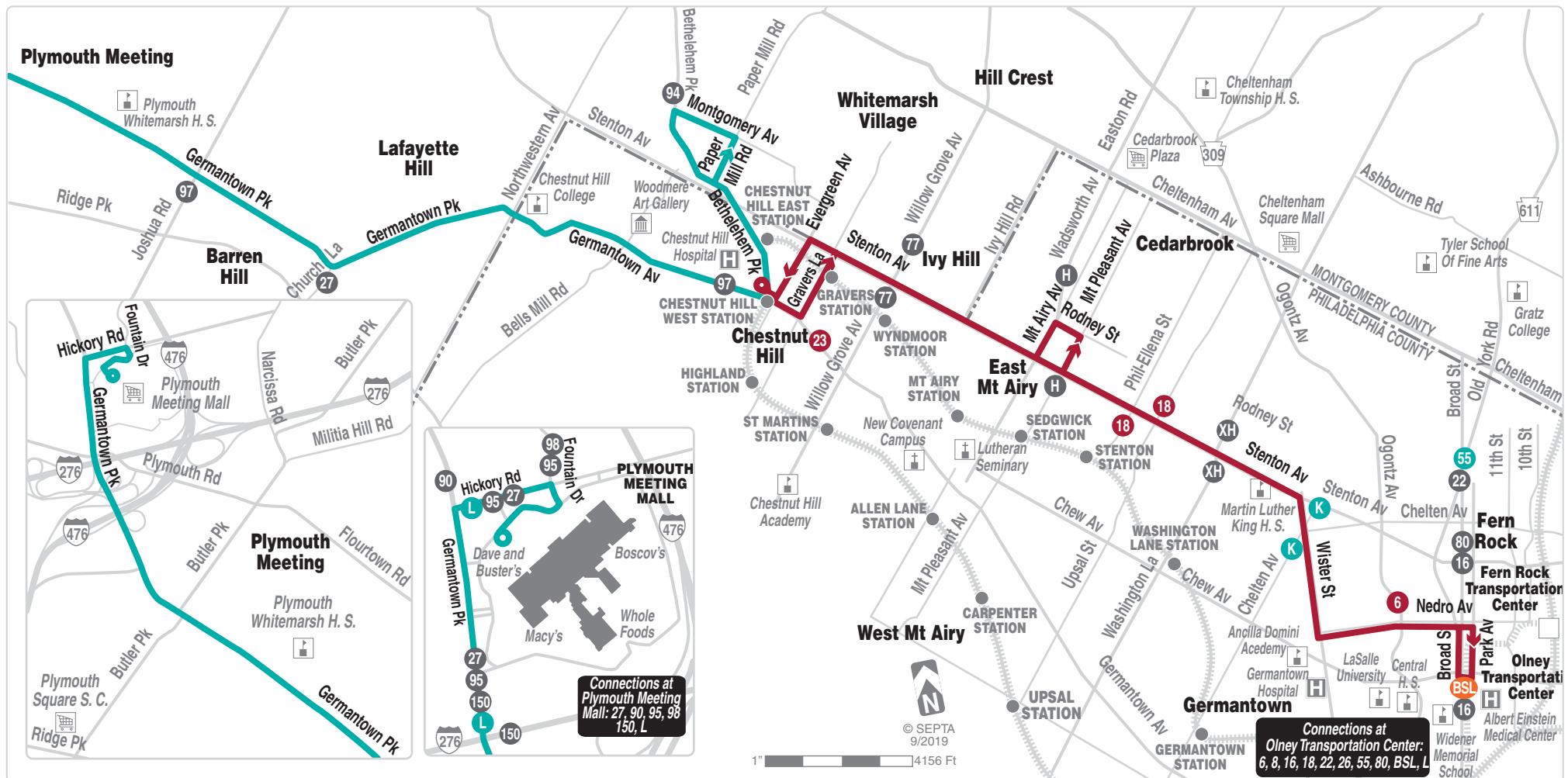
**Serving  
East Mt Airy**

**Operating**

**15** | Every 15 Minutes Max

**15** | 15 Hours / Day  
6:00 A.M. – 9:00 P.M.

**5** | 5 Days / Week  
Monday – Friday



# What the frequency icons mean

## 15-Minute Routes

Service operates every  
15 minutes max,  
15 hours a day  
(6:00 a.m. to 9:00 p.m.),  
5 days per week  
(Monday thru Friday)



Every  
**30 minutes max,**  
15 hours a day,  
5 days a week



Every  
**60 minutes max,**  
15 hours a day,  
5 days a week



## FOR MORE INFORMATION:

Customer Service: 215-580-7800  
TDD/TTY: 215-580-7853  
[www.septa.org/frequency](http://www.septa.org/frequency)



### WEEKDAY SERVICE FREQUENCY

<b>every 15 minutes or less</b> <b>6:00AM</b>	<b>every 8 minutes or less</b> <b>6:30AM</b>	<b>every 15 minutes or less</b> <b>9:30AM</b>	<b>every 8 minutes or less</b> <b>3:00PM</b>	<b>every 15 minutes or less</b> <b>6:30PM</b>	<b>every 15 minutes or less</b> <b>9:00PM</b>
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**between Olney Transportation Center and Germantown Av & Bethlehem Pk**

Weekdays								
To Erdenheim or Plymouth Meeting Mall								
Olney Transportation Center	Wister St and Cheitlen Av	Stenton Av and Washington La	Rodney St and Mt Airy Av	Stenton and Mt Airy Aws	Germantown Av and Bethlehem Pike	Bethlehem Pike & Montgomery Av (Erdenheim)	Germantown Pike at Northwestern Av	Plymouth Meeting Mall
AM SERVICE								
3.49	3.56	4.00	---	4.03	4.10	---	4.14	4.24
4.35	4.42	4.46	---	4.49	4.56	---	5.00	5.11
5.04	5.12	5.16	---	5.20	5.27	---	5.31	5.42
5.21	5.29	5.33	---	5.37	5.44	5.48	---	---
5.34	5.42	5.46	---	5.50	5.57	---	6.01	6.12
5.46	5.54	5.58	---	6.02	6.09	---	6.13	6.24
5.57	6.05	6.09	---	6.13	6.20	6.24	---	---
6.08	6.16	6.20	---	6.24	6.31	---	6.35	6.46
6.17	6.25	6.29	---	6.33	6.40	---	6.44	6.55
6.26	6.34	6.38	---	6.42	6.49	6.53	---	---
6.35	6.43	6.47	---	6.51	6.58	---	7.02	7.15
6.42	6.50	6.54	6.59	---	---	---	---	---
6.47	6.55	7.00	---	7.05	7.13	---	7.18	7.31
6.52	7.01	7.06	---	7.11	7.19	7.23	---	---
7.00 EXPRESS	7.12	---	7.17	7.25	---	7.30	7.43	---
7.04	7.13	7.18	7.23	---	---	---	---	---
7.10	7.19	7.24	---	7.29	7.37	---	7.42	7.55
7.16	7.25	7.30	7.35	---	---	---	---	---
7.22	7.31	7.36	---	7.41	7.49	7.53	---	---
7.29 EXPRESS	7.41	---	7.46	7.54	---	7.59	8.12	---
7.33	7.42	7.47	7.52	---	---	---	---	---
7.39	7.48	7.53	7.58	8.06	---	8.11	8.25	---
7.45	7.54	7.59	8.04	---	---	---	---	---
7.51	8.00	8.05	---	8.10	8.18	8.22	---	---
7.57 EXPRESS	8.10	---	8.15	8.23	---	8.28	8.42	---
8.02	8.11	8.16	8.21	---	---	---	---	---
8.08	8.17	8.22	---	8.27	8.35	---	8.40	8.54
8.14	8.23	8.28	8.33	---	---	---	---	---
8.20	8.29	8.34	---	8.39	8.47	8.51	---	---
8.27 EXPRESS	8.40	---	8.45	8.53	---	8.58	9.12	---
8.32	8.41	8.46	8.51	---	---	---	---	---
8.38	8.47	8.52	---	8.57	9.05	---	9.10	9.23
8.44	8.53	8.58	9.03	---	---	---	---	---
8.50	8.59	9.04	---	9.09	9.17	9.21	---	---
8.56	9.05	9.10	---	9.15	9.23	---	9.28	9.41
9.04	9.13	9.18	---	9.23	9.31	9.35	---	---
9.16	9.25	9.30	---	9.35	9.43	---	9.48	10.01
9.31	9.40	9.45	---	9.50	9.58	10.02	---	---
9.46	9.55	10.00	---	10.05	10.14	---	10.19	10.31
10.01	10.10	10.15	---	10.20	10.29	10.33	---	---
10.16	10.25	10.30	---	10.35	10.44	---	10.49	11.01
10.31	10.40	10.45	---	10.50	10.59	11.03	---	---
10.46	10.55	11.00	---	11.05	11.14	---	11.19	11.31
11.01	11.10	11.15	---	11.20	11.29	11.33	---	---
11.16	11.25	11.30	---	11.35	11.44	---	11.49	12.01
11.31	11.40	11.45	---	11.50	11.59	12.03	---	---
11.46	11.55	12.00	---	12.05	12.13	---	12.18	12.30

Express operates with limited stops at Ogontz Av and Wyncote Av to Stenton Av and Washington Lane

Weekdays								
To Olney Transportation Center								
Plymouth Meeting Mall	Germantown Pike at Northwestern Av	Bethlehem Pike & Montgomery Av (Erdenheim)	Germantown Av and Bethlehem Pike	Rodney St and Mt Airy Av	Stenton and Mt Airy Aws	Stenton Av and Washington La	Wister St and Cheitlen Av	Olney Transportation Center
AM SERVICE								
4.36	4.46	---	4.50	---	4.56	4.59	5.03	5.12
---	---	---	5.21	---	5.26	5.30	5.39	5.39
5.29	5.40	---	5.36	---	5.41	5.45	5.54	5.54
---	---	5.44	---	5.51	5.55	5.59	6.08	6.08
---	---	6.09	6.14	6.04	6.10	6.15	6.24	6.24
6.12	6.25	---	6.29	---	6.35	6.40	6.49	6.49
---	---	6.30	---	6.41	6.47	6.52	7.01	7.01
---	---	6.41	---	6.48	6.52	6.57	7.06	7.06
6.31	6.44	---	6.49	---	6.56	7.01	7.16	7.16
6.42	6.55	---	7.00	---	7.07	7.12	7.22	7.22
---	---	7.12	---	7.13	7.18	7.28	7.34	7.34
7.00	7.13	---	7.18	---	7.26	7.31	7.46	7.46
7.12	7.25	---	7.30	---	7.37	7.42	7.52	7.52
---	---	7.41	---	7.43	7.49	7.54	8.04	8.04
7.30	7.43	---	7.42	---	7.50	7.55	8.00	8.10
7.42	7.55	---	8.00	---	8.08	8.13	8.18	8.28
---	---	8.07	8.12	---	8.20	8.25	8.30	8.40
8.00	8.13	---	8.18	---	8.26	8.31	8.36	8.46
8.12	8.25	---	8.30	---	8.38	8.43	8.48	8.58
---	---	8.43	---	8.49	8.54	8.59	9.04	9.04
8.32	8.45	---	8.50	---	8.58	9.03	9.08	9.18
8.40	8.53	---	8.58	---	9.06	9.11	9.16	9.26
---	9.01	9.06	---	9.14	9.19	9.24	9.34	9.34
8.57	9.10	---	9.15	---	9.23	9.28	9.33	9.43
9.06	9.19	---	9.24	---	9.32	9.37	9.42	9.52
---	9.29	9.34	---	9.42	9.47	9.52	10.02	10.12
9.26	9.39	---	9.44	---	9.52	9.57	10.02	10.12
9.36	9.49	---	9.54	---	10.02	10.07	10.12	10.22
---	9.59	10.04	---	10.12	10.17	10.22	10.32	10.32
9.56	10.09	---	10.14	---	10.22	10.27	10.32	10.42
10.20	10.33	---	10.38	---	10.32	10.37	10.42	10.52
10.50	11.03	---	11.08	---	10.46	10.51	10.56	11.06
11.20	11.33	---	11.18	11.23	---	11.31	11.36	11.41
11.20	11.33	---	11.38	---	11.46	11.51	11.56	12.06
---	---	11.48	---	11.53	---	12.01	12.06	12.11
11.49	12.03	---	12.08	---	12.16	12.21	12.26	12.36

Weekdays										
To Erdenheim or Plymouth Meeting Mall										
Oliney Transportation Center	Wister St and Chelten Av	Stenton Av and Washington La	Rodney St and Mt Airy Av	Stenton and Mt Airy Avs	Germantown Av and Bethlehem Pike	Bethlehem Pike & Montgomery Av (Erdenheim)	Germantown Pike at Northwestern Av	Plymouth Meeting Mall		
<b>PM SERVICE</b>										
12.01	12.10	12.15	---	12.20	12.28	12.32	---	12.48	1.00	---
12.16	12.25	12.30	---	12.35	12.43	---	12.48	1.00	---	---
12.31	12.40	12.45	---	12.50	12.58	1.02	---	1.05	---	---
12.46	12.55	1.00	---	1.05	1.12	---	1.17	1.29	1.29	1.29
1.01	1.10	1.15	---	1.20	1.27	1.31	---	1.47	1.59	1.59
1.16	1.25	1.30	---	1.35	1.42	---	1.47	1.59	1.59	1.59
1.30	1.39	1.44	---	1.49	1.56	2.00	2.12	2.24	2.24	2.24
1.41	1.50	1.55	---	2.00	2.07	---	2.12	2.24	2.24	2.24
1.51	2.00	2.05	---	2.10	2.17	2.21	---	2.24	2.44	2.44
2.01	2.10	2.15	---	2.20	2.27	---	2.32	2.44	2.44	2.44
2.11	2.20	2.25	---	2.30	2.37	2.41	---	2.52	3.04	3.04
2.21	2.30	2.35	---	2.40	2.47	---	2.52	3.04	3.04	3.04
2.31	2.40	2.45	---	2.50	2.57	3.01	---	3.13	3.25	3.25
2.41	2.50	2.55	---	3.00	3.08	---	3.13	3.25	3.25	3.25
2.50	2.59	3.04	3.11	---	---	---	---	---	---	---
2.56	3.05	3.10	---	3.15	3.23	---	3.28	3.40	3.40	3.40
3.02	3.11	3.16	---	3.21	3.29	3.33	---	3.39	3.51	3.51
3.07	3.16	3.21	---	3.26	3.34	---	3.39	3.51	3.51	3.51
3.12	3.21	3.26	3.33	---	---	---	---	---	---	---
3.17	3.26	3.31	---	3.36	3.44	---	3.49	4.01	4.01	4.01
3.22	3.31	3.36	3.43	---	---	---	---	---	---	---
3.27	3.36	3.41	---	3.46	3.54	3.58	---	4.04	4.16	4.16
3.32	3.41	3.46	---	3.51	3.59	---	4.04	4.16	4.16	4.16
3.37	3.46	3.51	3.58	---	---	---	---	---	---	---
3.42	3.51	3.56	4.01	4.09	---	4.14	4.26	4.26	4.26	4.26
3.47	3.56	4.01	4.08	---	4.11	4.19	4.24	---	---	---
3.52	4.01	4.06	---	4.11	4.19	4.24	---	---	---	---
3.57	4.06	4.11	4.18	---	---	---	---	---	---	---
4.02	4.11	4.16	---	4.21	4.29	---	4.34	4.46	4.46	4.46
4.07	4.16	4.21	4.28	---	---	---	---	---	---	---
4.12	4.21	4.26	---	4.31	4.39	---	4.44	4.56	4.56	4.56
4.17	4.26	4.31	4.38	---	---	---	---	---	---	---
4.22	4.31	4.36	4.41	4.49	4.54	---	---	---	---	---
4.27	4.36	4.41	4.48	---	---	---	---	---	---	---
4.32	4.41	4.46	4.51	4.59	---	5.04	5.16	5.16	5.16	5.16
4.37	4.46	4.51	4.58	---	---	---	---	---	---	---
4.42	4.51	4.56	5.01	5.09	---	5.14	5.26	5.26	5.26	5.26
4.47	4.56	5.01	5.06	5.14	5.19	---	---	---	---	---
4.52	5.01	5.06	5.13	---	---	---	---	---	---	---
4.57	5.06	5.11	5.16	5.24	5.29	5.41	5.41	5.41	5.41	5.41
5.02	5.11	5.16	5.23	---	---	---	---	---	---	---
5.07	5.16	5.21	5.26	5.34	---	5.39	5.51	5.51	5.51	5.51
5.12	5.21	5.26	5.33	---	---	---	---	---	---	---
5.17	5.26	5.31	5.36	5.44	5.49	---	5.54	6.06	6.06	6.06
5.22	5.31	5.36	5.41	5.49	---	5.54	6.06	6.06	6.06	6.06
5.27	5.36	5.41	5.48	---	---	---	---	---	---	---
5.32	5.41	5.46	5.51	5.59	---	6.04	6.16	6.16	6.16	6.16
5.37	5.46	5.51	5.58	---	---	---	---	---	---	---
5.42	5.51	5.56	6.01	6.09	6.14	---	---	---	---	---
5.48	5.57	6.02	6.08	---	---	---	---	---	---	---
5.54	6.03	6.08	---	6.13	6.21	---	6.26	6.38	6.38	6.38
6.01	6.10	6.15	6.21	---	---	---	---	---	---	---
6.09	6.18	6.23	6.37	---	6.28	6.36	6.41	---	---	---
6.17	6.26	6.31	6.37	---	---	---	---	---	---	---
6.24	6.33	6.38	6.43	6.51	---	6.56	7.08	7.08	7.08	7.08
6.36	6.45	6.50	6.55	7.03	7.07	---	---	---	---	---
6.50	6.59	7.03	7.08	7.15	7.19	---	---	---	---	---
7.05	7.14	7.18	7.23	7.30	7.34	---	---	---	---	---
7.20	7.29	7.33	7.38	7.45	7.50	8.01	8.01	8.01	8.01	8.01
7.35	7.44	7.48	7.53	8.00	8.04	---	---	---	---	---
7.50	7.59	8.03	8.07	8.14	8.18	---	---	---	---	---
8.05	8.14	8.18	8.22	8.29	8.33	---	---	---	---	---
8.20	8.29	8.33	8.37	8.44	---	8.49	9.00	9.00	9.00	9.00
8.35	8.44	8.48	8.52	8.59	9.03	---	---	---	---	---
8.50	8.59	9.03	9.07	9.14	9.18	9.29	9.29	9.29	9.29	9.29
9.05	9.14	9.18	9.22	9.29	9.33	---	---	---	---	---
9.38	9.47	9.51	9.55	10.02	---	10.06	10.16	10.16	10.16	10.16
10.13	10.22	10.26	10.30	10.37	10.41	---	---	---	---	---
10.48	10.57	11.01	11.05	11.12	11.16	11.26	11.26	11.26	11.26	11.26
11.23	11.32	11.36	11.40	11.47	11.51	---	---	---	---	---
11.57	12.06	12.10	12.13	12.20	12.23	12.33	12.33	12.33	12.33	12.33
<b>AFTER MIDNIGHT SERVICE</b>										
12.32	12.41	12.45	12.48	12.55	---	---	---	---	---	---
1.08	1.16	1.19	1.22	1.28	1.31	1.41	1.41	1.41	1.41	1.41
1.42	1.50	1.53	1.56	2.02	2.05	2.14	2.14	2.14	2.14	2.14
<b>Express operates with limited stops at Ongontz Av and Wyncoate Av to Stenton Av and Washington Lane</b>										

Weekdays										
To Olney Transportation Center										
Oliney Transportation Center	Wister St and Chelten Av	Stenton Av and Washington La	Rodney St and Mt Airy Av	Stenton and Mt Airy Avs	Germantown Av and Bethlehem Pike	Bethlehem Pike & Montgomery Av (Erdenheim)	Germantown Av and Bethlehem Pike	Rodney St and Mt Airy Av	Stenton and Mt Airy Avs	Oliney Transportation Center
<b>M SERVICE</b>										
12.19	12.33	---	12.48	12.53	---	1.08	1.23	1.46	1.51	1.56
12.49	1.03	---	1.18	1.23	---	1.31	1.36	1.41	1.51	1.56
1.19	1.33	---	1.47	1.52	---	2.01	2.06	2.14	2.24	2.34
1.46	2.00	---	2.10	2.15	---	2.24	2.29	2.34	2.44	2.54
---	---	---	---	---	2.33	---	2.39	2.44	2.54	2.54
2.14	2.28	---	2.33	2.47	---	2.48	2.47	2.52	2.59	3.02
---	---	2.42	2.47	2.56	---	3.01	3.06	3.16	3.22	3.22
2.40	2.54	---	2.59	3.05	---	3.14	3.19	3.24	3.34	3.34
---	---	2.59	3.11	3.17	---	3.26	3.30	3.35	3.44	3.44
2.56	3.11	---	3.23	3.29	---	3.38	3.43	3.48	3.58	3.58
3.20	3.35	---	3.41	3.55	---	3.50	3.55	4.00	4.10	4.04
---	---	3.47	3.53	4.02	---	4.07	4.12	4.22	4.22	4.22
3.44	3.59	---	4.05	4.14	---	4.18	4.24	4.34	4.44	4.44
3.55	4.11	---	4.17	4.26	---	4.32	4.37	4.42	4.52	4.52
---	---	4.17	4.23	4.37	---	4.43	4.48	4.58	4.68	4.68
4.13	4.29	---	4.35	4.44	---	4.55	4.56	5.06	5.16	5.04
4.25	4.41	---	4.47	4.56	---	5.01	5.06	5.11	5.16	5.16
---	---	4.51	4.57	5.06	---	5.11	5.17	5.22	5.32	5.32
4.44	5.03	---	5.09	5.15	---	5.24	5.29	5.34	5.44	5.44
4.50	5.09	---	5.16	5.22	---	5.31	5.36	5.41	5.51	5.51
5.05	5.24	---	5.30	5.39	---	5.44	5.49	5.59	5.66	5.66
5.12	5.31	---	5.37	5.45	---	5.54	5.59	6.04	6.13	6.13
5.31	5.50	---	5.56	5.64	---	6.04	6.08	6.12	6.21	6.21
5.40	5.59	---	6.04	6.12	---	6.20	6.24	6.28	6.37	6.37
6.00	6.15	---	6.20	6.28	---	6.36	6.40	6.44	6.53	6.53
6.08	6.23	---	6.30	6.36	---	6.44	6.48	6.52	6.71	6.71
6.24	6.39	---	6.44	6.52	---	6.62	6.66	6.70	7.09	7.09
6.34	6.49	---	6.54	7.02	---	7.06	7.10	7.19	7.19	7.19
7.03	7.17	---	7.31	7.36	---	7.44	7.48	7.52	7.73	7.73
7.32	7.46	---	7.51	7.56	---	7.59	8.03	8.07	8.16	8.16
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## SATURDAYS

To Erdenheim or Plymouth Meeting Mall										To Olney Transportation Center							
Olney Transportation Center	Wister St and Chelten Av	Stenton Av and Washington La	Stenton and Mt Airy Avs	GermanTown Av and Bethlehem Pike	Bethlehem Pike & Montgomery Av (Erdenheim)	GermanTown Pike at Northwestern Av	Plymouth Meeting Mall	Plymouth Meeting Mall	GermanTown Pike at Northwestern Av	Bethlehem Pike & Montgomery Av (Erdenheim)	GermanTown Av and Bethlehem Pike	Stenton and Mt Airy Avs	Stenton Av and Washington La	Wister St and Chelten Av	Olney Transportation Center		
3.51	3.58	4.01	4.05	4.11	---	4.15	4.24	4.36	4.46	---	4.50	4.56	4.59	5.02	5.11		
4.36	4.43	4.46	4.50	4.56	---	5.00	5.10	5.21	5.31	---	5.35	5.41	5.45	5.48	5.57		
5.21	5.28	5.31	5.35	5.41	5.45	---	---	---	---	6.13	6.19	6.25	6.29	6.33	6.42		
6.02	6.09	6.13	6.17	6.24	---	6.28	6.38	6.46	6.56	---	7.00	7.07	7.11	7.16	7.25		
6.28	6.35	6.39	6.43	6.50	6.55	---	---	---	7.24	7.30	7.37	7.41	7.46	7.55			
6.47	6.54	6.58	7.02	7.09	---	7.13	7.23	7.37	7.48	---	7.52	7.59	8.03	8.08	8.17		
7.06	7.13	7.17	7.21	7.28	7.33	---	---	---	8.08	8.14	8.21	8.25	8.30	8.39			
7.26	7.33	7.37	7.41	7.48	---	7.52	8.02	8.18	8.30	8.34	8.41	8.45	8.50	8.59			
7.41	7.48	7.52	7.56	8.03	8.08	---	---	---	8.44	8.50	8.57	9.02	9.07	9.16			
7.56	8.03	8.07	8.11	8.18	---	8.22	8.32	8.50	9.02	---	9.06	9.13	9.18	9.23	9.32		
8.11	8.18	8.22	8.26	8.33	8.38	---	---	---	9.34	9.16	9.22	9.29	9.34	9.39	9.48		
8.26	8.33	8.37	8.41	8.48	---	8.52	9.02	9.22	9.34	---	9.38	9.45	9.50	9.55	10.04		
8.41	8.48	8.52	8.56	9.03	9.08	---	---	---	9.47	9.53	10.00	10.05	10.10	10.19			
8.56	9.03	9.08	9.12	9.19	---	9.23	9.34	9.51	10.03	10.08	10.15	10.20	10.25	10.34			
9.11	9.19	9.24	9.28	9.35	9.40	---	---	---	10.17	10.23	10.30	10.35	10.40	10.49			
9.26	9.34	9.39	9.43	9.50	---	9.54	10.05	10.21	10.33	---	10.38	10.45	10.50	10.55	11.04		
9.41	9.49	9.54	9.58	10.05	10.10	---	---	---	10.46	10.52	11.00	11.05	11.10	11.19			
9.56	10.04	10.09	10.13	10.20	---	10.24	10.36	10.50	11.02	---	11.07	11.15	11.20	11.25	11.34		
10.11	10.19	10.24	10.28	10.35	10.40	---	---	---	11.16	11.22	11.30	11.35	11.40	11.49			
10.26	10.34	10.39	10.43	10.50	---	10.54	11.06	11.20	11.32	---	11.37	11.45	11.50	11.55	12.04		
10.41	10.49	10.54	10.58	11.05	11.10	---	---	---	11.47	11.53	12.01	12.06	12.11	12.20			
10.56	11.04	11.09	11.13	11.21	---	11.25	11.37	11.49	12.02	---	12.08	12.16	12.21	12.26	12.35		
11.11	11.19	11.24	11.28	11.36	11.41	---	---	---	12.17	12.23	12.31	12.36	12.41	12.50			
11.26	11.34	11.39	11.43	11.51	---	11.55	12.07	12.19	12.32	---	12.38	12.46	12.51	12.56	1.05		
11.41	11.49	11.54	11.58	12.06	12.11	---	---	12.49	1.02	---	1.08	1.16	1.21	1.26	1.35		
11.56	12.04	12.09	12.13	12.21	---	12.25	12.37	12.49	1.17	1.23	1.31	1.36	1.41	1.50			
<b>PM SERVICE</b>																	
12.11	12.20	12.25	12.29	12.37	12.42	---	---	1.18	1.31	---	1.37	1.45	1.50	1.55	2.04		
12.26	12.35	12.40	12.44	12.52	---	12.56	1.08	1.48	2.01	---	2.07	2.16	2.21	2.26	2.36		
12.41	12.50	12.55	12.59	1.07	1.12	---	1.27	1.48	2.01	---	2.15	2.22	2.31	2.36	2.41	2.51	
12.56	1.05	1.10	1.15	1.23	---	1.27	1.39	2.18	2.31	---	2.37	2.46	2.51	2.56	3.06		
1.11	1.20	1.25	1.30	1.38	1.43	---	---	---	2.46	2.53	2.60	2.65	2.71	2.76			
1.26	1.35	1.40	1.45	1.53	---	1.57	2.09	2.50	3.03	---	3.08	3.17	3.22	3.26	3.36		
1.41	1.50	1.55	2.00	2.07	2.12	---	---	2.50	3.16	---	3.23	3.32	3.37	3.41	3.51		
1.55	2.04	2.09	2.14	2.21	---	2.25	2.37	3.20	3.33	---	3.38	3.47	3.52	3.56	4.06		
2.10	2.19	2.24	2.29	2.36	2.41	---	---	3.20	3.47	---	3.54	4.02	4.07	4.11	4.21		
2.25	2.34	2.39	2.44	2.51	---	2.55	3.07	3.51	4.04	---	4.09	4.17	4.22	4.26	4.36		
2.40	2.49	2.54	2.59	3.06	3.11	---	---	4.22	4.35	---	4.40	4.48	4.53	4.57	5.07		
2.55	3.04	3.09	3.13	3.20	---	3.24	3.36	4.51	5.04	---	4.47	4.54	5.02	5.07	5.11		
3.10	3.19	3.24	3.28	3.35	3.40	---	---	4.51	5.04	---	5.09	5.17	5.22	5.26	5.35		
3.25	3.34	3.39	3.43	3.50	---	3.54	4.06	5.23	5.34	---	5.38	5.47	5.52	5.56	6.06		
3.40	3.49	3.54	3.58	4.05	4.10	---	---	5.23	5.36	---	5.40	5.47	5.52	5.56	6.06		
3.55	4.04	4.09	4.13	4.20	---	4.24	4.35	5.23	5.34	---	5.41	5.47	5.52	5.56	6.05		
4.10	4.19	4.24	4.28	4.35	4.40	---	---	5.23	5.34	---	5.47	5.52	5.56	5.60			
4.25	4.34	4.39	4.43	4.50	---	4.54	5.05	5.23	5.34	---	5.54	6.02	6.07	6.11	6.20		
4.40	4.49	4.54	4.58	5.05	5.09	---	---	5.23	5.34	---	5.64	6.12	6.22	6.26	6.35		
4.55	5.04	5.09	5.13	5.20	---	5.24	5.35	5.23	5.34	---	5.74	6.24	6.32	6.37	6.41		
5.10	5.19	5.24	5.28	5.35	5.39	---	---	6.21	6.34	---	6.39	6.47	6.52	6.56	7.05		
5.25	5.34	5.39	5.43	5.50	5.55	---	5.54	6.05	6.25	---	6.48	6.55	6.62	6.67	7.20		
5.40	5.49	5.54	5.58	6.05	6.09	---	6.24	6.34	6.52	7.05	---	7.10	7.18	7.22	7.26		
5.55	6.04	6.09	6.13	6.20	6.26	---	6.24	6.34	6.71	7.18	7.25	7.33	7.37	7.41	7.50		
6.10	6.19	6.24	6.28	6.35	6.39	---	6.24	6.34	7.23	7.36	7.41	7.49	7.53	7.57	8.06		
6.25	6.34	6.39	6.43	6.50	---	6.54	7.04	7.23	7.50	7.57	8.05	8.09	8.13	8.22			
6.41	6.50	6.55	6.59	7.06	7.10	---	7.04	7.23	7.55	8.08	8.13	8.21	8.25	8.29	8.38		
6.57	7.06	7.11	7.15	7.22	---	7.26	7.36	7.23	8.24	8.31	8.39	8.43	8.47	8.56			
7.16	7.25	7.30	7.34	7.41	7.45	---	7.16	7.26	8.33	8.46	8.51	8.59	9.03	9.07	9.16		
7.36	7.45	7.50	7.54	8.01	---	8.04	8.14	8.33	9.16	9.22	9.29	9.33	9.37	9.46			
7.56	8.05	8.10	8.14	8.21	8.25	---	---	9.35	9.47	---	9.52	9.59	10.03	10.07	10.16		
8.25	8.34	8.39	8.43	8.50	8.55	---	8.03	9.35	10.17	10.23	10.30	10.34	10.38	10.47			
8.58	9.07	9.12	9.16	9.23	9.26	---	9.03	10.38	10.50	10.54	11.01	11.05	11.08	11.17			
9.33	9.42	9.47	9.51	9.58	---	10.01	10.12	11.23	11.21	11.26	11.33	11.37	11.40	11.49			
10.09	10.18	10.23	10.27	10.33	10.36	---	10.09	11.43	11.55	12.06	12.10	12.13	12.21				
10.44	10.53	10.58	11.02	11.08	---	11.11	11.21	12.27	12.32	12.39	12.43	12.46	12.54				
11.21	11.30	11.34	11.38	11.44	11.47	---	11.21	12.27	12.32	12.39	12.43	12.46	12.54				
11.59	12.08	12.11	12.15	12.21	---	12.24	12.33	12.50	1.00	---	1.03	1.10	1.14	1.17	1.25		
12.34	12.43	12.46	12.50	12.56	---	12.59	1.08	1.23	1.33	---	1.36	1.43	1.47	1.50	1.58		
1.10	1.17	1.20	1.24	1.30	1.33	---	---	2.29	2.39	---	2.40	2.47	2.53	2.56	3.04		
1.45	1.52	1.55	1.59	2.05	---	2.08	2.17	2.42	2.49	2.53	2.56	2.59	2.62	2.65			

**SUNDAYS**

To Erdenheim or Plymouth Meeting Mall								To Olney Transportation Center							
Olney Transportation Center	Wister St and Chelten Av	Stenton Av and Washington La	Stenton and Mt Airy Avs	Germantown Av and Bethlehem Pike	Bethlehem Pike & Montgomery Av (Erdenheim)	Germantown Pike at Northwestern Av	Plymouth Meeting Mall	Plymouth Meeting Mall	Germantown Pike at Northwestern Av	Bethlehem Pike & Montgomery Av (Erdenheim)	Germantown Av and Bethlehem Pike	Stenton and Mt Airy Avs	Stenton Av and Washington La	Wister St and Chelten Av	Olney Transportation Center
<b>AM SERVICE</b>								<b>AM SERVICE</b>							
3.51	3.58	4.01	4.04	4.10	---	4.14	4.23	4.37	4.46	---	4.50	4.56	4.59	5.02	5.11
4.36	4.43	4.46	4.49	4.55	---	4.59	5.08	5.22	5.32	---	5.36	5.42	5.45	5.48	5.57
5.21	5.28	5.31	5.34	5.40	5.44	---	---	---	---	6.13	6.19	6.26	6.29	6.33	6.42
6.05	6.12	6.16	6.20	6.26	---	6.30	6.40	6.50	7.00	---	7.04	7.11	7.14	7.18	7.27
6.35	6.42	6.46	6.50	6.56	7.01	---	---	---	7.28	7.34	7.41	7.44	7.48	7.48	7.57
7.05	7.12	7.16	7.20	7.27	---	7.31	7.41	7.50	8.00	---	8.04	8.11	8.14	8.18	8.27
7.30	7.37	7.41	7.45	7.52	7.57	---	---	8.50	9.00	---	8.28	8.34	8.41	8.48	8.57
7.55	8.02	8.06	8.10	8.17	---	8.21	8.32	9.41	9.51	---	9.04	9.11	9.15	9.19	9.28
8.20	8.28	8.32	8.36	8.43	8.47	---	---	9.41	9.55	---	9.24	9.30	9.37	9.41	9.54
8.45	8.53	8.57	9.01	9.08	---	9.12	9.23	10.29	10.40	---	10.45	10.52	10.56	11.00	11.09
9.09	9.17	9.21	9.25	9.32	9.36	---	---	10.29	10.40	---	10.58	11.04	11.12	11.20	11.29
9.32	9.40	9.44	9.48	9.55	---	9.59	10.10	11.07	11.19	---	11.24	11.32	11.36	11.40	11.49
9.52	10.00	10.04	10.08	10.15	10.19	---	10.39	10.50	11.38	11.44	11.52	11.56	12.00	12.00	12.09
10.12	10.20	10.24	10.28	10.35	---	10.39	10.50	11.47	11.59	---	11.66	11.74	11.78	11.82	11.91
10.32	10.40	10.44	10.48	10.55	10.59	---	---	12.26	12.39	---	12.44	12.52	12.56	13.00	13.09
10.52	11.00	11.04	11.08	11.15	---	11.19	11.30	13.06	13.19	---	13.24	13.32	13.36	13.40	13.49
11.12	11.20	11.24	11.28	11.35	11.39	---	---	14.06	14.19	---	14.24	14.32	14.36	14.40	14.49
11.32	11.40	11.44	11.48	11.55	---	11.59	12.10	14.26	14.39	---	14.44	14.52	14.56	14.60	14.69
11.52	12.00	12.04	12.08	12.15	12.19	---	---	15.06	15.19	---	15.24	15.32	15.36	15.40	15.49
<b>PM SERVICE</b>								<b>PM SERVICE</b>							
12.12	12.21	12.25	12.29	12.36	---	12.40	12.51	13.06	13.19	---	13.24	13.32	13.36	13.40	13.49
12.32	12.41	12.45	12.49	12.56	1.00	---	---	14.06	14.19	---	14.24	14.32	14.36	14.40	14.49
12.52	1.01	1.06	1.10	1.17	---	1.21	1.33	14.26	14.39	---	14.44	14.52	14.56	14.60	14.69
1.12	1.21	1.26	1.30	1.37	1.41	---	---	15.06	15.19	---	15.24	15.32	15.36	15.40	15.49
1.32	1.41	1.46	1.50	1.57	---	2.01	2.13	15.26	15.39	---	15.44	15.52	15.56	15.60	15.69
1.52	2.01	2.06	2.10	2.17	2.21	---	---	16.06	16.19	---	16.24	16.32	16.36	16.40	16.49
2.12	2.21	2.26	2.30	2.37	---	2.41	2.53	17.06	17.19	---	17.24	17.32	17.36	17.40	17.49
2.32	2.41	2.46	2.50	2.57	3.01	---	---	17.26	17.39	---	17.44	17.52	17.56	17.60	17.69
2.52	3.01	3.06	3.10	3.17	---	3.21	3.32	17.46	17.59	---	17.64	17.72	17.76	17.80	17.89
3.12	3.20	3.25	3.29	3.36	3.40	---	---	17.66	17.79	---	17.84	17.92	17.96	18.00	18.09
3.32	3.40	3.45	3.49	3.56	---	4.00	4.11	18.06	18.19	---	18.24	18.32	18.36	18.40	18.49
3.52	4.00	4.05	4.09	4.16	4.21	---	---	18.26	18.39	---	18.44	18.52	18.56	18.60	18.69
4.12	4.20	4.25	4.29	4.36	---	4.40	4.51	18.46	18.59	---	18.64	18.72	18.76	18.80	18.89
4.32	4.40	4.45	4.49	4.56	5.01	---	---	18.66	18.79	---	18.84	18.92	18.96	19.00	19.09
4.52	5.00	5.05	5.09	5.16	---	5.20	5.31	18.86	18.99	---	19.04	19.12	19.16	19.20	19.29
5.12	5.21	5.26	5.30	5.37	5.42	---	---	19.06	19.19	---	19.24	19.32	19.36	19.40	19.49
5.32	5.41	5.46	5.50	5.57	---	6.01	6.11	19.26	19.39	---	19.44	19.52	19.56	19.60	19.69
5.52	6.01	6.06	6.10	6.17	6.21	---	---	19.46	19.59	---	19.64	19.72	19.76	19.80	19.89
6.21	6.30	6.35	6.39	6.46	---	6.50	7.00	19.66	19.79	---	19.84	19.92	19.96	20.00	20.09
6.51	7.00	7.05	7.09	7.16	7.20	---	---	19.86	19.99	---	20.04	20.12	20.16	20.20	20.29
7.21	7.30	7.35	7.39	7.46	---	7.50	8.00	20.06	20.19	---	20.24	20.32	20.36	20.40	20.49
7.51	8.00	8.05	8.09	8.16	8.20	---	---	20.26	20.39	---	20.44	20.52	20.56	20.60	20.69
8.26	8.35	8.40	8.44	8.51	---	8.55	9.05	20.46	20.59	---	20.64	20.72	20.76	20.80	20.89
9.02	9.10	9.15	9.19	9.26	9.30	---	---	20.66	20.79	---	20.84	20.92	20.96	21.00	21.09
9.37	9.45	9.50	9.54	10.01	---	10.05	10.15	20.86	20.99	---	21.04	21.12	21.16	21.20	21.29
10.13	10.21	10.25	10.29	10.36	10.39	---	---	21.06	21.19	---	21.24	21.32	21.36	21.40	21.49
10.48	10.56	11.00	11.03	11.10	---	11.14	11.24	21.26	21.39	---	21.44	21.52	21.56	21.60	21.69
11.23	11.31	11.35	11.38	11.44	11.47	---	---	21.46	21.59	---	21.64	21.72	21.76	21.80	21.89
11.59	12.07	12.10	12.13	12.19	---	12.22	12.32	21.66	21.79	---	21.84	21.92	21.96	22.00	22.09
<b>AFTER MIDNIGHT SERVICE</b>								<b>AFTER MIDNIGHT SERVICE</b>							
12.34	12.42	12.45	12.48	12.54	---	12.57	1.07	12.56	1.00	---	12.64	12.72	12.78	12.84	12.90
1.10	1.17	1.20	1.23	1.29	1.32	---	---	12.76	1.33	---	12.84	1.41	1.48	1.55	1.62
1.45	1.52	1.55	1.58	2.04	---	2.07	2.17	12.96	2.05	2.10	12.94	2.16	2.20	2.27	2.31

## TRAVEL TIPS

- Sunday schedule will be operated on New Year's, Memorial, Independence, Labor, Thanksgiving and Christmas days.
  - Fare payment options: cash, or SEPTA Key Card with Pass or Travel Wallet Funds. Go to [www.septa.org](http://www.septa.org) or [m.septa.org](http://m.septa.org) for schedules & real time information. Try **Schedules to Go** for next 10 scheduled trips (smart phone users) or **SMS Schedules** for next 4 scheduled trips (by text message); See bus/trolley locations on **TransitView**.
  - To SAVE Money on Your Commute visit [www.thecommuterschoice.com](http://www.thecommuterschoice.com)

APA19061 – Chestnut Hill College  
City of Philadelphia  
Philadelphia County

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## Intersection Approach Photos & Driveway Sight Distance Photos

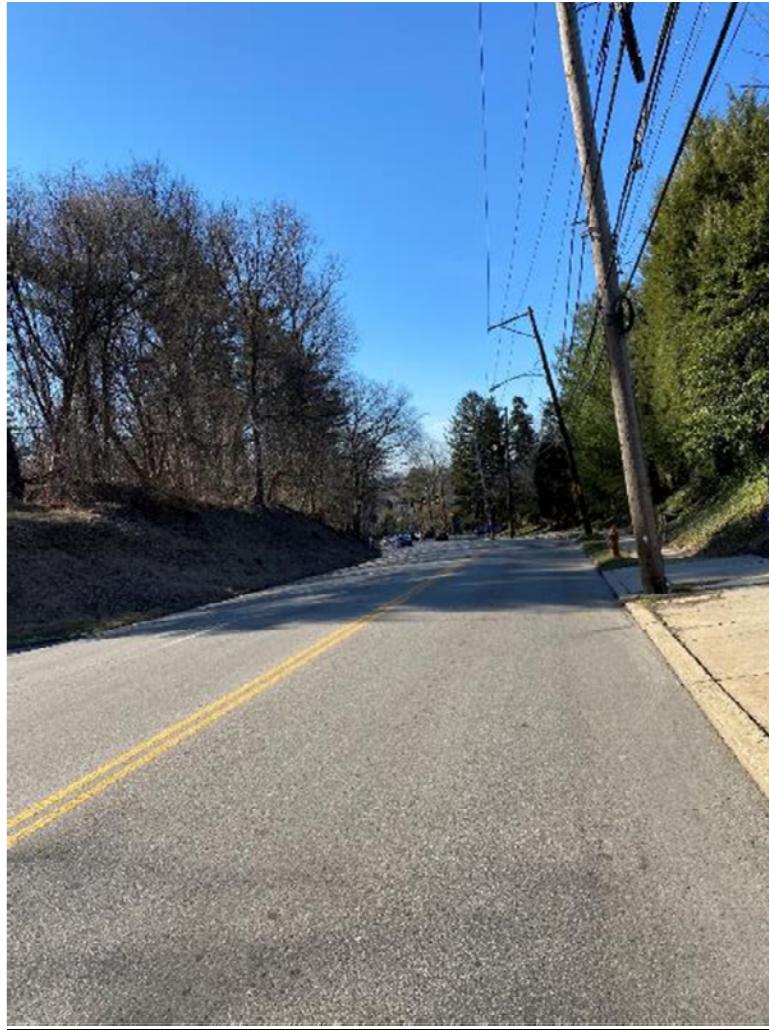
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### **INTERSECTION – GERMANTOWN AVE & HILLCREST AVE/PROPOSED ACCESS**

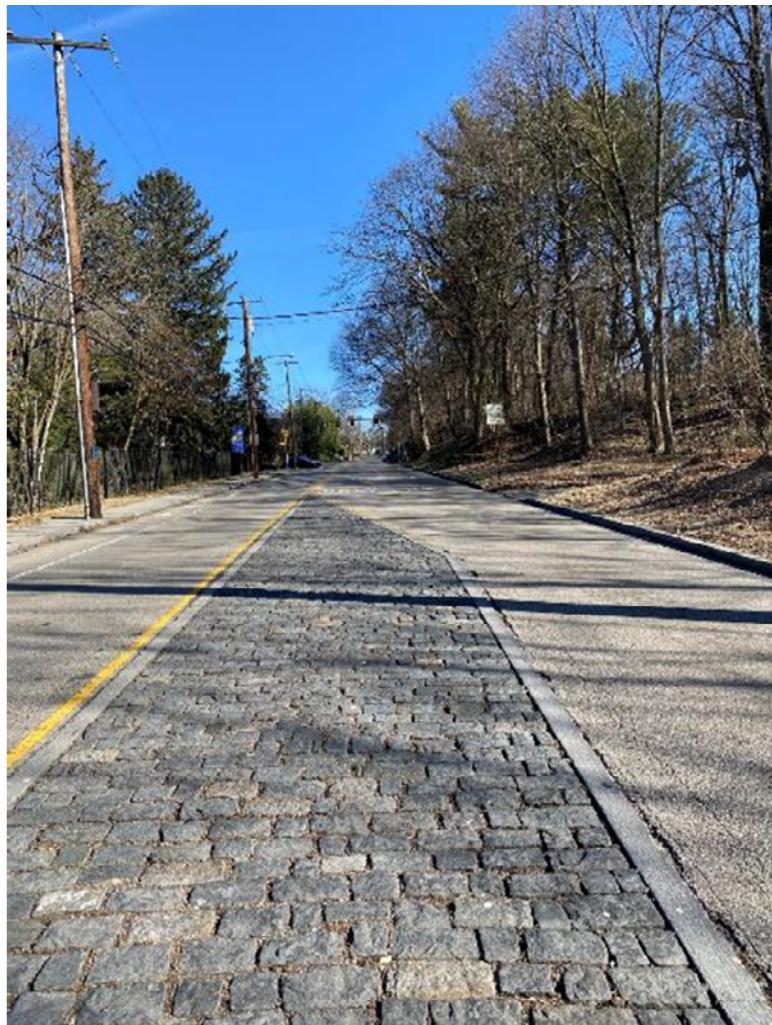




**LOOKING LEFT/RIGHT AT PROPOSED ACCESS**



**NORTHBOUND APPROACH**



**SOUTHBOUND APPROACH**



**WESTBOUND APPROACH**

## D | LEVEL OF SERVICE DESCRIPTIONS

**Table 8**  
**Level of Service and Average Delay**  
**For Unsignalized Intersections**

Level of Service	Average Delay (seconds/vehicle)
A	Up to 10 seconds
B	More than 10 seconds; up to 15 seconds
C	More than 15 seconds; up to 25 seconds
D	More than 25 seconds; up to 35 seconds
E	More than 35 seconds; up to 50 seconds
F	More than 50 seconds

**Table 9**  
**Level of Service and Average Delay**  
**For Signalized Intersections**

Level of Service	Average Delay (seconds/vehicle)	Description
A	Up to 10 seconds	Very short delay, good progression; most vehicles do not stop at intersection.
B	More than 10 seconds Up to 20 seconds	Generally good signal progression and/or short cycle length; more vehicles stop at intersection than Level of Service A.
C	More than 20 seconds Up to 35 seconds	Fair progression and/or longer cycle length; significant number of vehicles stop at intersection.
D	More than 35 seconds Up to 55 seconds	Congestion becomes noticeable; individual cycle failures; longer delays from unfavorable progression, long cycle length; or high volume/capacity ratios; most vehicles stop at intersection.
E	More than 55 seconds Up to 80 seconds	Usually considered limit of acceptable delay indicative of poor progression long cycle length, or high volume/capacity ratio; frequent individual cycle failures.
F	More than 80 seconds	Could be considered excessive delay in some areas, frequently an indication or over-saturation (i.e., arrival flows exceed capacity), or very long cycle lengths with minimal side street green time. Capacity is not necessarily exceeded under this Level of Service.

**Reference:** *Highway Capacity Manual, (HCM2010), 2010, Transportation Research Board, Washington, D.C.*

**TABLE 3**  
**LEVEL OF SERVICE AND DELAY (SECONDS) SUMMARY**  
**WEEKDAY MORNING PEAK HOUR**

Intersection	App.	Mvmt.	Existing 2020	
			LOS	Delay
<b>Germantown Ave &amp; Campus Access North</b>	EB	L/R	A	0.0
	NB	L/T	A	0.0
	SB	T	A	0.0
		T/R	A	0.0
	<b>Overall Int.</b>		A	0.0
<b>Germantown Ave &amp; Campus Access South</b>	EB	L/R	D	28.2
	NB	L/T	A	0.0
	SB	T	A	0.0
		T/R	A	0.0
	<b>Overall Int.</b>		A	0.1
<b>Bells Mill Rd &amp; Campus Access</b>	EB	L/T	A	0.0
	WB	T/R	A	0.0
	SB	L/R	B	13.1
	<b>Overall Int.</b>		A	0.0

**TABLE 4**  
**LEVEL OF SERVICE AND DELAY (SECONDS) SUMMARY**  
**WEEKDAY MORNING PEAK HOUR**

Intersection	App.	Mvmt.	Existing 2020		Build 2021	
			LOS	Delay	LOS	Delay
Germantown Ave & Rogers Dr	WB	L	C	33.4	C	33.0
		R	C	33.0	C	32.5
	NB	T/R	A	6.5	A	6.3
	SB	L/T	A	3.7	A	3.5
	Overall Int.		A	6.1	A	5.9
	EB	L	-	-	E	58.9
		T/R	-	-	E	59.8
Germantown Ave & Hillcrest Ave	WB	L	D	35.3	D	41.8
		T/R	D	42.4	D	54.3
	NB	L	-	-	A	0.0
		T/R	B	17.5	D	44.8
	SB	L	C	30.6	C	26.4
		T/R	B	14.4	B	19.0
	Overall Int.		C	27.8	D	40.4
Germantown Ave & Bells Mill Rd	EB	L/T/R	F	102.4	F	103.7
	NB	L	C	29.7	C	25.3
		T/R	C	23.0	C	23.1
	SB	L/T	D	38.6	D	37.6
		R	A	7.4	A	7.4
	Overall Int.		D	49.2	D	49.1

\* Enter only for Existing and No-Build Conditions; Exit only for Build Condition

\*\* Exit only for Existing and No-Build Conditions; Full movement driveway for Westbound and Eastbound for SR XXX Movements  
 Northbound and Southbound for Driveway Movements



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 Chalfont, Pennsylvania 18914  
 267-486-5660  
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**TABLE 3**  
**LEVEL OF SERVICE AND DELAY (SECONDS) SUMMARY**  
**WEEKDAY EVENING PEAK HOUR**

Intersection	App.	Mvmt.	Existing 2020	
			LOS	Delay
<b>Germantown Ave &amp; Campus Access North</b>	EB	L/R	A	0.0
	NB	L/T	A	0.0
	SB	T	A	0.0
		T/R	A	0.0
	<b>Overall Int.</b>		A	0.0
<b>Germantown Ave &amp; Campus Access South</b>	EB	L/R	B	13.1
	NB	L/T	A	0.0
	SB	T	A	0.0
		T/R	A	0.0
	<b>Overall Int.</b>		A	0.0
<b>Bells Mill Rd &amp; Campus Access</b>	EB	L/T	B	11.6
	WB	T/R	A	0.0
	SB	L/R	C	16.2
	<b>Overall Int.</b>		A	0.0

**TABLE 5**  
**LEVEL OF SERVICE AND DELAY (SECONDS) SUMMARY**  
**WEEKDAY EVENING PEAK HOUR**

Intersection	App.	Mvmt.	Existing 2020		Build 2021	
			LOS	Delay	LOS	Delay
Germantown Ave & Rogers Dr	WB	L	C	31.4	C	30.9
		R	C	30.8	C	30.4
	NB	T/R	A	6.4	A	6.2
	SB	L/T	A	9.9	A	9.5
	Overall Int.		B	10.3	B	10.0
Germantown Ave & Hillcrest Ave	EB	L	-	-	A	0.0
		T/R	-	-	E	61.6
	WB	L	F	83.4	E	79.1
		T/R	C	20.6	C	25.6
	NB	L	-	-	D	36.3
		T/R	B	15.9	D	45.6
	SB	L	D	39.5	D	46.0
Germantown Ave & Bells Mill Rd		T/R	B	19.6	C	28.5
	Overall Int.		D	40.9	D	50.0
	EB	L/T/R	D	46.9	D	44.7
	NB	L	C	26.2	C	22.9
		T/R	C	20.3	C	20.3
	SB	L/T	D	40.6	D	39.0
		R	B	12.7	B	12.5
	Overall Int.		C	28.6	C	27.5

\* Enter only for Existing and No-Build Conditions; Exit only for Build Conditions

\*\* Exit only for Existing and No-Build Conditions; Full movement driveway for Build Conditions

Westbound and Eastbound for SR XXX Movements

Northbound and Southbound for Driveway Movements

## **E | SYNCHRO 10 PRINTOUTS**

## 1: Germantown Ave &amp; Rogers Dr



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↖ ↗ ↘ ↖ ↙ ↘					
Traffic Volume (vph)	24	5	764	100	36	452
Future Volume (vph)	24	5	764	100	36	452
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	11	11	12	12
Grade (%)	-6%		0%			-4%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	0.98	1.00			1.00
Frt		0.850	0.984			
Flt Protected	0.950					0.996
Satd. Flow (prot)	1735	1553	1781	0	0	1907
Flt Permitted	0.950					0.895
Satd. Flow (perm)	1731	1518	1781	0	0	1714
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		6	15			
Link Speed (mph)	25		30			30
Link Distance (ft)	419		422			552
Travel Time (s)	11.4		9.6			12.5
Confl. Peds. (#/hr)	1	1		2	2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%
Bus Blockages (#/hr)	0	0	3	0	0	3
Adj. Flow (vph)	27	6	849	111	40	502
Shared Lane Traffic (%)						
Lane Group Flow (vph)	27	6	960	0	0	542
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	10		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.05	1.05	1.06	1.04	0.97	0.99
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	1		1	1
Detector Template			Thru		Left	Thru
Leading Detector (ft)	20	20	100		20	100
Trailing Detector (ft)	-3	-3	0		0	0
Detector 1 Position(ft)	-3	-3	0		0	0
Detector 1 Size(ft)	23	23	100		20	100
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Turn Type	Prot	Perm	NA		Perm	NA
Protected Phases	8		2			6
Permitted Phases		8			6	
Detector Phase	8	8	2		6	6
Switch Phase						

## 1: Germantown Ave &amp; Rogers Dr



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Minimum Initial (s)	22.0	22.0	68.0	68.0	68.0	68.0
Minimum Split (s)	27.0	27.0	73.0	73.0	73.0	73.0
Total Split (s)	27.0	27.0	73.0	73.0	73.0	73.0
Total Split (%)	27.0%	27.0%	73.0%	73.0%	73.0%	73.0%
Maximum Green (s)	22.0	22.0	68.0	68.0	68.0	68.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	4.0	4.0	4.0		4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	Min	Min	Min	Min
Walk Time (s)	16.0	16.0				
Flash Dont Walk (s)	6.0	6.0				
Pedestrian Calls (#/hr)	0	0				
Act Effct Green (s)	23.1	23.1	77.8		77.8	
Actuated g/C Ratio	0.24	0.24	0.81		0.81	
v/c Ratio	0.06	0.02	0.66		0.39	
Control Delay	30.5	18.0	10.5		6.1	
Queue Delay	0.0	0.0	0.0		0.0	
Total Delay	30.5	18.0	10.5		6.1	
LOS	C	B	B		A	
Approach Delay	28.3		10.5		6.1	
Approach LOS	C		B		A	

## Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 95.5

Natural Cycle: 100

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.66

Intersection Signal Delay: 9.4

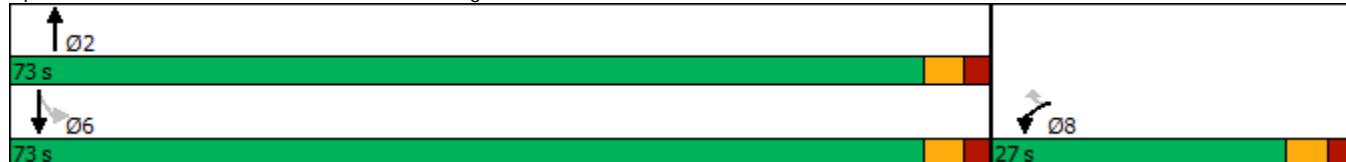
Intersection LOS: A

Intersection Capacity Utilization 81.7%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 1: Germantown Ave &amp; Rogers Dr



## 1: Germantown Ave &amp; Rogers Dr

Movement	WBL	WBR	NBT	NBR	SBL	SBT		
Lane Configurations	↖ ↗ ↘ ↗ ↙ ↘	↖ ↗ ↘ ↗ ↙ ↘	↖ ↗ ↘ ↗ ↙ ↘	↖ ↗ ↘ ↗ ↙ ↘	↖ ↗ ↘ ↗ ↙ ↘	↖ ↗ ↘ ↗ ↙ ↘		
Traffic Volume (veh/h)	24	5	764	100	36	452		
Future Volume (veh/h)	24	5	764	100	36	452		
Number	3	18	2	12	1	6		
Initial Q (Q <sub>b</sub> ), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/in	1957	1957	1900	1900	1938	1938		
Adj Flow Rate, veh/h	27	6	849	111	40	502		
Adj No. of Lanes	1	1	1	0	0	1		
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90		
Percent Heavy Veh, %	0	0	0	0	0	0		
Cap, veh/h	276	246	1257	164	105	1282		
Arrive On Green	0.15	0.15	0.76	0.75	0.75	0.76		
Sat Flow, veh/h	1864	1663	1646	215	81	1679		
Grp Volume(v), veh/h	27	6	0	960	542	0		
Grp Sat Flow(s), veh/h/in	1864	1663	0	1862	1760	0		
Q Serve(g_s), s	1.1	0.3	0.0	22.9	0.0	0.0		
Cycle Q Clear(g_c), s	1.1	0.3	0.0	22.9	8.4	0.0		
Prop In Lane	1.00	1.00		0.12	0.07			
Lane Grp Cap(c), veh/h	276	246	0	1421	1367	0		
V/C Ratio(X)	0.10	0.02	0.00	0.68	0.40	0.00		
Avail Cap(c_a), veh/h	474	423	0	1421	1367	0		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(l)	1.00	1.00	0.00	1.00	1.00	0.00		
Uniform Delay (d), s/veh	33.3	32.9	0.0	5.3	3.5	0.0		
Incr Delay (d2), s/veh	0.2	0.0	0.0	1.3	0.2	0.0		
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(95%), veh/in	1.1	0.2	0.0	17.7	8.0	0.0		
LnGrp Delay(d), s/veh	33.4	33.0	0.0	6.5	3.7	0.0		
LnGrp LOS	C	C		A	A			
Approach Vol, veh/h	33		960		542			
Approach Delay, s/veh	33.3		6.5		3.7			
Approach LOS	C		A		A			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			6		8	
Phs Duration (G+Y+R <sub>c</sub> ), s	73.0				73.0		17.4	
Change Period (Y+R <sub>c</sub> ), s	5.0				5.0		5.0	
Max Green Setting (Gmax), s	68.0				68.0		22.0	
Max Q Clear Time (g_c+l1), s	24.9				10.4		3.6	
Green Ext Time (p_c), s	10.4				4.6		0.0	
<b>Intersection Summary</b>								
HCM 2010 Ctrl Delay			6.1					
HCM 2010 LOS			A					

## 14: Germantown Ave &amp; Hillcrest Ave



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↑ ↗	↗ ↘	↑ ↘		↗ ↘	↑ ↗
Traffic Volume (vph)	442	431	433	127	134	342
Future Volume (vph)	442	431	433	127	134	342
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	11	11
Grade (%)	7%		-8%			8%
Storage Length (ft)	0	0		0	250	
Storage Lanes	1	1		0	1	
Taper Length (ft)	75				75	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor			1.00		1.00	
Fr <sub>t</sub>		0.850	0.969			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1684	1507	1883	0	1675	1725
Flt Permitted	0.950				0.271	
Satd. Flow (perm)	1684	1507	1883	0	478	1725
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		323	25			
Link Speed (mph)	30		30			30
Link Distance (ft)	337		251			746
Travel Time (s)	7.7		5.7			17.0
Confl. Peds. (#/hr)				1	1	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	0%	0%	0%	0%	0%	1%
Bus Blockages (#/hr)	0	0	3	0	0	3
Adj. Flow (vph)	497	484	487	143	151	384
Shared Lane Traffic (%)						
Lane Group Flow (vph)	497	484	630	0	151	384
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	11		11			11
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.09	1.09	0.97	0.95	1.10	1.12
Turning Speed (mph)	15	9		9	15	
Turn Type	Prot	Prot	NA		Perm	NA
Protected Phases	8	8	2			6
Permitted Phases			8		6	
Minimum Split (s)	36.9	36.9	53.1		53.1	
Total Split (s)	36.9	36.9	53.1		53.1	53.1
Total Split (%)	41.0%	41.0%	59.0%		59.0%	59.0%
Maximum Green (s)	31.5	31.5	45.9		45.9	45.9
Yellow Time (s)	3.6	3.6	4.5		4.5	4.5
All-Red Time (s)	1.8	1.8	2.7		2.7	2.7
Lost Time Adjust (s)	-1.0	-1.0	-1.0		-1.0	-1.0
Total Lost Time (s)	4.4	4.4	6.2		6.2	6.2
Lead/Lag						
Lead-Lag Optimize?						

## 14: Germantown Ave &amp; Hillcrest Ave



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Walk Time (s)			34.2	34.2	34.2	
Flash Dont Walk (s)			11.7	11.7	11.7	
Pedestrian Calls (#/hr)			0	0	0	
Act Effct Green (s)	32.5	32.5	46.9	46.9	46.9	
Actuated g/C Ratio	0.36	0.36	0.52	0.52	0.52	
v/c Ratio	0.82	0.65	0.63	0.61	0.43	
Control Delay	39.0	12.2	18.3	27.9	15.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	39.0	12.2	18.3	27.9	15.1	
LOS	D	B	B	C	B	
Approach Delay	25.8		18.3		18.7	
Approach LOS	C		B		B	

## Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 45.9 (51%), Referenced to phase 2:NBT and 6:SBTL, Start of Green

Natural Cycle: 90

Control Type: Pretimed

Maximum v/c Ratio: 0.82

Intersection Signal Delay: 21.8

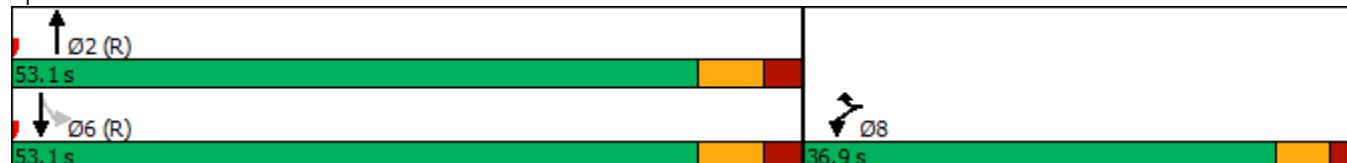
Intersection LOS: C

Intersection Capacity Utilization 116.8%

ICU Level of Service H

Analysis Period (min) 15

Splits and Phases: 14: Germantown Ave &amp; Hillcrest Ave



## 14: Germantown Ave &amp; Hillcrest Ave

Movement	WBL	WBR	NBT	NBR	SBL	SBT		
Lane Configurations	↖ ↗ ↘ ↗ ↙ ↘	↖ ↗ ↘ ↗ ↙ ↘	↖ ↗ ↘ ↗ ↙ ↘	↖ ↗ ↘ ↗ ↙ ↘	↖ ↗ ↘ ↗ ↙ ↘	↖ ↗ ↘ ↗ ↙ ↘		
Traffic Volume (veh/h)	442	431	433	127	134	342		
Future Volume (veh/h)	442	431	433	127	134	342		
Number	3	18	2	12	1	6		
Initial Q (Q <sub>b</sub> ), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1834	1834	1976	1976	1824	1806		
Adj Flow Rate, veh/h	497	484	487	103	151	384		
Adj No. of Lanes	1	1	1	0	1	1		
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89		
Percent Heavy Veh, %	0	0	0	0	0	1		
Cap, veh/h	631	563	824	174	332	941		
Arrive On Green	0.36	0.36	0.52	0.51	0.52	0.52		
Sat Flow, veh/h	1746	1558	1582	335	806	1806		
Grp Volume(v), veh/h	497	484	0	590	151	384		
Grp Sat Flow(s),veh/h/ln	1746	1558	0	1917	806	1806		
Q Serve(g_s), s	22.9	25.9	0.0	19.2	14.3	11.6		
Cycle Q Clear(g_c), s	22.9	25.9	0.0	19.2	33.0	11.6		
Prop In Lane	1.00	1.00		0.17	1.00			
Lane Grp Cap(c), veh/h	631	563	0	999	332	941		
V/C Ratio(X)	0.79	0.86	0.00	0.59	0.45	0.41		
Avail Cap(c_a), veh/h	631	563	0	999	332	941		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	25.7	26.6	0.0	15.0	26.1	13.1		
Incr Delay (d2), s/veh	9.6	15.7	0.0	2.6	4.4	1.3		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(95%),veh/ln	18.4	19.5	0.0	16.1	6.4	10.2		
LnGrp Delay(d),s/veh	35.3	42.4	0.0	17.5	30.6	14.4		
LnGrp LOS	D	D		B	C	B		
Approach Vol, veh/h	981		590			535		
Approach Delay, s/veh	38.8		17.5			19.0		
Approach LOS	D		B			B		
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+R <sub>c</sub> ), s		53.1				53.1		36.9
Change Period (Y+R <sub>c</sub> ), s		* 7.2				* 7.2		5.4
Max Green Setting (Gmax), s		* 46				* 46		31.5
Max Q Clear Time (g_c+l1), s		0.0				0.0		0.0
Green Ext Time (p_c), s		0.0				0.0		0.0
<b>Intersection Summary</b>								
HCM 2010 Ctrl Delay			27.8					
HCM 2010 LOS			C					
Notes								

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\* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

## 10: Germantown Ave &amp; Campus Access North



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	560	782	2
Future Volume (vph)	0	0	0	560	782	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	14	14	11	11	11	11
Grade (%)	10%			6%	7%	
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95
Fr						
Flt Protected						
Satd. Flow (prot)	1925	0	0	1760	3347	0
Flt Permitted						
Satd. Flow (perm)	1925	0	0	1760	3347	0
Link Speed (mph)	10			30	30	
Link Distance (ft)	380			328	88	
Travel Time (s)	25.9			7.5	2.0	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%
Bus Blockages (#/hr)	0	0	0	3	3	0
Adj. Flow (vph)	0	0	0	636	889	2
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	636	891	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	14			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.98	0.98	1.09	1.10	1.10	1.09
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	32.8%			ICU Level of Service A		
Analysis Period (min)	15					

## 10: Germantown Ave &amp; Campus Access North

## Intersection

Int Delay, s/veh 0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
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Lane Configurations						
Traffic Vol, veh/h	0	0	0	560	782	2
Future Vol, veh/h	0	0	0	560	782	2
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, %	10	-	-	6	7	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	0	0	636	889	2

Major/Minor	Minor2	Major1	Major2
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Conflicting Flow All	1526	446	-	0	-	0
Stage 1	890	-	-	-	-	-
Stage 2	636	-	-	-	-	-
Critical Hdwy	7.1	6.2	-	-	-	-
Critical Hdwy Stg 1	7.8	-	-	-	-	-
Critical Hdwy Stg 2	7.4	-	-	-	-	-
Follow-up Hdwy	3	3.1	-	-	-	-
Pot Cap-1 Maneuver	105	649	0	-	-	-
Stage 1	247	-	0	-	-	-
Stage 2	418	-	0	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	105	649	-	-	-	-
Mov Cap-2 Maneuver	105	-	-	-	-	-
Stage 1	247	-	-	-	-	-
Stage 2	418	-	-	-	-	-

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

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

## 12: Germantown Ave &amp; Campus Access South



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	3	2	0	557	782	0
Future Volume (vph)	3	2	0	557	782	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	14	14	11	11	11	11
Grade (%)	0%			-6%	6%	
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95
Ped Bike Factor						
Frt	0.946					
Flt Protected	0.971					
Satd. Flow (prot)	1862	0	0	1869	3365	0
Flt Permitted	0.971					
Satd. Flow (perm)	1862	0	0	1869	3365	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	380			203	328	
Travel Time (s)	8.6			4.6	7.5	
Confl. Peds. (#/hr)				1		1
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%
Bus Blockages (#/hr)	0	0	0	3	3	0
Adj. Flow (vph)	3	2	0	626	879	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	5	0	0	626	879	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	14			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.92	0.92	1.01	1.02	1.09	1.09
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

## Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 39.3% ICU Level of Service A

Analysis Period (min) 15

## 12: Germantown Ave &amp; Campus Access South

## Intersection

Int Delay, s/veh 0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			↑	↑↑	
Traffic Vol, veh/h	3	2	0	557	782	0
Future Vol, veh/h	3	2	0	557	782	0
Conflicting Peds, #/hr	0	0	1	0	0	1
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	6	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	3	2	0	626	879	0

Major/Minor	Minor2	Major1	Major2		
Conflicting Flow All	1506	441	-	0	-
Stage 1	880	-	-	-	-
Stage 2	626	-	-	-	-
Critical Hdwy	7.1	6.9	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-
Follow-up Hdwy	3	3.1	-	-	-
Pot Cap-1 Maneuver	108	599	0	-	-
Stage 1	410	-	0	-	-
Stage 2	602	-	0	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	108	598	-	-	-
Mov Cap-2 Maneuver	108	-	-	-	-
Stage 1	410	-	-	-	-
Stage 2	601	-	-	-	-

Approach	EB	NB	SB
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HCM Control Delay, s 28.2 0 0

HCM LOS D

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	161	-	-
HCM Lane V/C Ratio	-	0.035	-	-
HCM Control Delay (s)	-	28.2	-	-
HCM Lane LOS	-	D	-	-
HCM 95th %tile Q(veh)	-	0.1	-	-

## 6: Germantown Ave &amp; Bells Mill Rd

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Configurations												
Traffic Volume (vph)	167	397	140	0	0	0	198	390	18	5	312	467
Future Volume (vph)	167	397	140	0	0	0	198	390	18	5	312	467
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10	10	10	10	10	10	10
Grade (%)		7%				1%			6%			6%
Storage Length (ft)	0		0	0		0	250		0	0		0
Storage Lanes	0		0	0		0	1		0	0		1
Taper Length (ft)	75			75			75			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor									1.00			1.00
Fr <sub>t</sub>		0.973						0.993				0.850
Flt Protected		0.988					0.950					0.999
Satd. Flow (prot)	0	1645	0	0	0	0	1634	1686	0	0	1681	1462
Flt Permitted		0.988					0.301					0.991
Satd. Flow (perm)	0	1645	0	0	0	0	518	1686	0	0	1668	1462
Right Turn on Red			No			Yes			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		181			447			350			203	
Travel Time (s)		4.9			12.2			8.0			4.6	
Confl. Peds. (#/hr)									1	1		
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	3	0	0	3	0
Adj. Flow (vph)	192	456	161	0	0	0	228	448	21	6	359	537
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	809	0	0	0	0	228	469	0	0	365	537
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			10			10	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.14	1.14	1.14	1.10	1.10	1.10	1.14	1.15	1.14	1.14	1.15	1.14
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA				pm+pt	NA		Perm	NA	pm+ov	
Protected Phases	7	4				5	2			6		7
Permitted Phases						2				6		6
Minimum Split (s)	55.0	55.0				20.0	65.0		45.0	45.0		55.0
Total Split (s)	55.0	55.0				20.0	65.0		45.0	45.0		55.0
Total Split (%)	45.8%	45.8%				16.7%	54.2%		37.5%	37.5%		45.8%
Maximum Green (s)	49.0	49.0				14.0	58.0		38.0	38.0		49.0
Yellow Time (s)	3.6	3.6				3.6	4.8		4.8	4.8		3.6
All-Red Time (s)	2.4	2.4				2.4	2.2		2.2	2.2		2.4
Lost Time Adjust (s)		-1.0				-1.0	-1.0			-1.0		-1.0
Total Lost Time (s)		5.0					5.0	6.0			6.0	5.0
Lead/Lag						Lead			Lag	Lag		
Lead-Lag Optimize?						Yes			Yes	Yes		

## 6: Germantown Ave &amp; Bells Mill Rd



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effct Green (s)		50.0					60.0	59.0			39.0	95.0
Actuated g/C Ratio		0.42					0.50	0.49			0.32	0.79
v/c Ratio		1.18					0.57	0.57			0.67	0.46
Control Delay		128.9					23.6	24.8			42.3	5.6
Queue Delay		0.0					0.0	0.0			0.0	0.0
Total Delay		128.9					23.6	24.8			42.3	5.6
LOS		F					C	C			D	A
Approach Delay		128.9							24.5		20.5	
Approach LOS		F							C		C	

## Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 120

Control Type: Pretimed

Maximum v/c Ratio: 1.18

Intersection Signal Delay: 58.1

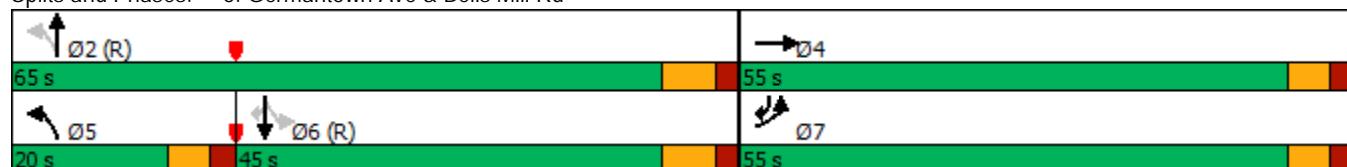
Intersection LOS: E

Intersection Capacity Utilization 135.0%

ICU Level of Service H

Analysis Period (min) 15

Splits and Phases: 6: Germantown Ave &amp; Bells Mill Rd

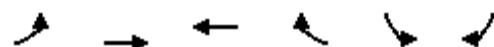


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	167	397	140	0	0	0	198	390	18	5	312	467
Future Volume (veh/h)	167	397	140	0	0	0	198	390	18	5	312	467
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00			1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1834	1834	1834				1843	1843	1843	1843	1825	1843
Adj Flow Rate, veh/h	192	456	161				228	448	21	6	359	537
Adj No. of Lanes	0	1	0				1	1	0	0	1	1
Peak Hour Factor	0.87	0.87	0.87				0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	0	0	0				0	0	0	1	1	0
Cap, veh/h	173	411	145				377	859	40	33	587	1161
Arrive On Green	0.41	0.42	0.41				0.13	0.49	0.48	0.32	0.32	0.32
Sat Flow, veh/h	416	987	349				1755	1747	82	9	1807	1564
Grp Volume(v), veh/h	809	0	0				228	0	469	365	0	537
Grp Sat Flow(s),veh/h/ln	1751	0	0				1755	0	1828	1816	0	1564
Q Serve(g_s), s	50.0	0.0	0.0				9.5	0.0	21.1	0.0	0.0	16.2
Cycle Q Clear(g_c), s	50.0	0.0	0.0				9.5	0.0	21.1	20.4	0.0	16.2
Prop In Lane	0.24		0.20				1.00		0.04	0.02		1.00
Lane Grp Cap(c), veh/h	730	0	0				377	0	899	606	0	1161
V/C Ratio(X)	1.11	0.00	0.00				0.60	0.00	0.52	0.60	0.00	0.46
Avail Cap(c_a), veh/h	730	0	0				377	0	899	606	0	1161
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	0.00				1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	35.2	0.0	0.0				22.6	0.0	20.9	34.2	0.0	6.1
Incr Delay (d2), s/veh	67.2	0.0	0.0				7.0	0.0	2.2	4.4	0.0	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	67.9	0.0	0.0				9.1	0.0	16.6	16.6	0.0	30.6
LnGrp Delay(d),s/veh	102.4	0.0	0.0				29.7	0.0	23.0	38.6	0.0	7.4
LnGrp LOS	F						C		C	D		A
Approach Vol, veh/h	809						697			902		
Approach Delay, s/veh	102.4						25.2			20.1		
Approach LOS	F						C			C		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	2		4	5	6							
Phs Duration (G+Y+Rc), s	65.0		55.0	20.0	45.0							
Change Period (Y+Rc), s	* 7		6.0	6.0	* 7							
Max Green Setting (Gmax), s	* 58		49.0	14.0	* 38							
Max Q Clear Time (g_c+l1), s	0.0		0.0	0.0	0.0							
Green Ext Time (p_c), s	0.0		0.0	0.0	0.0							
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay	49.2											
HCM 2010 LOS	D											
Notes												

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\* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

## 17: Bells Mill Rd &amp; Campus Access



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	704	665	0	0	1
Future Volume (vph)	0	704	665	0	0	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	16	16
Grade (%)		6%	4%		-1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.865	
Flt Protected						
Satd. Flow (prot)	0	1686	1704	0	1835	0
Flt Permitted						
Satd. Flow (perm)	0	1686	1704	0	1835	0
Link Speed (mph)		25	25		10	
Link Distance (ft)		120	181		115	
Travel Time (s)		3.3	4.9		7.8	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	0	774	731	0	0	1
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	774	731	0	1	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		16	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.14	1.14	1.12	1.12	0.84	0.84
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

## Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 47.1%

ICU Level of Service A

Analysis Period (min) 15

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	704	665	0	0	1
Future Vol, veh/h	0	704	665	0	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, %	-	6	4	-	-1	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	774	731	0	0	1
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	731	0	-	0	1505	731
Stage 1	-	-	-	-	731	-
Stage 2	-	-	-	-	774	-
Critical Hdwy	4.3	-	-	-	7.1	6.2
Critical Hdwy Stg 1	-	-	-	-	5.22	-
Critical Hdwy Stg 2	-	-	-	-	5.22	-
Follow-up Hdwy	3	-	-	-	3	3.1
Pot Cap-1 Maneuver	669	-	-	-	108	444
Stage 1	-	-	-	-	555	-
Stage 2	-	-	-	-	530	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	669	-	-	-	108	444
Mov Cap-2 Maneuver	-	-	-	-	108	-
Stage 1	-	-	-	-	555	-
Stage 2	-	-	-	-	530	-
Approach	EB	WB	SB			
HCM Control Delay, s	0	0	13.1			
HCM LOS			B			
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	669	-	-	-	444	
HCM Lane V/C Ratio	-	-	-	-	0.002	
HCM Control Delay (s)	0	-	-	-	13.1	
HCM Lane LOS	A	-	-	-	B	
HCM 95th %tile Q(veh)	0	-	-	-	0	

## 1: Germantown Ave &amp; Rogers Dr



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↑ ↗	↗ ↗	↑ ↘	↗ ↘	↖ ↘	↖ ↘
Traffic Volume (vph)	65	35	367	69	43	761
Future Volume (vph)	65	35	367	69	43	761
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	11	11	12	12
Grade (%)	-6%		0%			-4%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99	0.97	1.00			1.00
Frt		0.850	0.979			
Flt Protected	0.950					0.997
Satd. Flow (prot)	1735	1553	1770	0	0	1909
Flt Permitted	0.950					0.955
Satd. Flow (perm)	1712	1504	1770	0	0	1828
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		39	22			
Link Speed (mph)	25		30			30
Link Distance (ft)	419		422			552
Travel Time (s)	11.4		9.6			12.5
Confl. Peds. (#/hr)	6	5		3	3	
Confl. Bikes (#/hr)			1			
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%
Bus Blockages (#/hr)	0	0	3	0	0	3
Adj. Flow (vph)	72	39	408	77	48	846
Shared Lane Traffic (%)						
Lane Group Flow (vph)	72	39	485	0	0	894
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	10		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.05	1.05	1.06	1.04	0.97	0.99
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	1		1	1
Detector Template			Thru		Left	Thru
Leading Detector (ft)	20	20	100		20	100
Trailing Detector (ft)	-3	-3	0		0	0
Detector 1 Position(ft)	-3	-3	0		0	0
Detector 1 Size(ft)	23	23	100		20	100
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Turn Type	Prot	Perm	NA		Perm	NA
Protected Phases	8		2			6
Permitted Phases		8			6	
Detector Phase	8	8	2		6	6

## 1: Germantown Ave &amp; Rogers Dr



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
<b>Switch Phase</b>						
Minimum Initial (s)	22.0	22.0	68.0		68.0	68.0
Minimum Split (s)	27.0	27.0	73.0		73.0	73.0
Total Split (s)	27.0	27.0	73.0		73.0	73.0
Total Split (%)	27.0%	27.0%	73.0%		73.0%	73.0%
Maximum Green (s)	22.0	22.0	68.0		68.0	68.0
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0		-1.0	
Total Lost Time (s)	4.0	4.0	4.0		4.0	
<b>Lead/Lag</b>						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	None	Min		Min	Min
Walk Time (s)	16.0	16.0				
Flash Dont Walk (s)	6.0	6.0				
Pedestrian Calls (#/hr)	0	0				
Act Effct Green (s)	23.1	23.1	73.4		73.4	
Actuated g/C Ratio	0.24	0.24	0.75		0.75	
v/c Ratio	0.18	0.10	0.36		0.65	
Control Delay	32.4	10.7	6.5		11.3	
Queue Delay	0.0	0.0	0.0		0.0	
Total Delay	32.4	10.7	6.5		11.3	
LOS	C	B	A		B	
Approach Delay	24.8		6.5		11.3	
Approach LOS	C		A		B	

**Intersection Summary**

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 97.6

Natural Cycle: 100

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.65

Intersection Signal Delay: 10.7

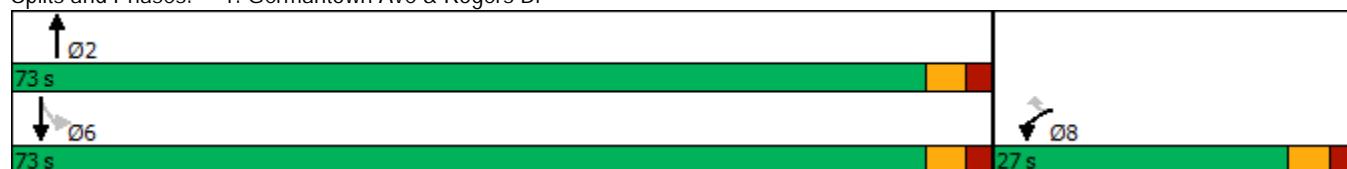
Intersection LOS: B

Intersection Capacity Utilization 100.2%

ICU Level of Service G

Analysis Period (min) 15

Splits and Phases: 1: Germantown Ave &amp; Rogers Dr



## 1: Germantown Ave &amp; Rogers Dr

Movement	WBL	WBR	NBT	NBR	SBL	SBT		
Lane Configurations	↖ ↗ ↘ ↗ ↙ ↘	↖ ↗ ↘ ↗ ↙ ↘	↑ ↗ ↘ ↗ ↙ ↘	↖ ↗ ↘ ↗ ↙ ↘	↖ ↗ ↘ ↗ ↙ ↘	↓ ↗ ↘ ↗ ↙ ↘		
Traffic Volume (veh/h)	65	35	367	69	43	761		
Future Volume (veh/h)	65	35	367	69	43	761		
Number	3	18	2	12	1	6		
Initial Q (Q <sub>b</sub> ), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00		0.98	1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/in	1957	1957	1900	1900	1938	1938		
Adj Flow Rate, veh/h	72	39	408	77	48	846		
Adj No. of Lanes	1	1	1	0	0	1		
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90		
Percent Heavy Veh, %	0	0	0	0	0	0		
Cap, veh/h	414	369	1080	204	84	1257		
Arrive On Green	0.22	0.22	0.70	0.69	0.69	0.70		
Sat Flow, veh/h	1864	1663	1548	292	66	1802		
Grp Volume(v), veh/h	72	39	0	485	894	0		
Grp Sat Flow(s), veh/h/in	1864	1663	0	1840	1868	0		
Q Serve(g_s), s	3.1	1.8	0.0	10.8	4.0	0.0		
Cycle Q Clear(g_c), s	3.1	1.8	0.0	10.8	26.4	0.0		
Prop In Lane	1.00	1.00		0.16	0.05			
Lane Grp Cap(c), veh/h	414	369	0	1283	1322	0		
V/C Ratio(X)	0.17	0.11	0.00	0.38	0.68	0.00		
Avail Cap(c_a), veh/h	433	387	0	1283	1322	0		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(l)	1.00	1.00	0.00	1.00	1.00	0.00		
Uniform Delay (d), s/veh	31.2	30.7	0.0	6.2	8.5	0.0		
Incr Delay (d2), s/veh	0.2	0.1	0.0	0.2	1.4	0.0		
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(95%), veh/in	2.9	1.5	0.0	9.3	21.1	0.0		
LnGrp Delay(d), s/veh	31.4	30.8	0.0	6.4	9.9	0.0		
LnGrp LOS	C	C		A	A			
Approach Vol, veh/h	111		485		894			
Approach Delay, s/veh	31.2		6.4		9.9			
Approach LOS	C		A		A			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			6		8	
Phs Duration (G+Y+R <sub>c</sub> ), s	73.0				73.0		26.0	
Change Period (Y+R <sub>c</sub> ), s	5.0				5.0		5.0	
Max Green Setting (Gmax), s	68.0				68.0		22.0	
Max Q Clear Time (g_c+l1), s	12.8				28.4		5.6	
Green Ext Time (p_c), s	3.6				9.1		0.2	
<b>Intersection Summary</b>								
HCM 2010 Ctrl Delay			10.3					
HCM 2010 LOS			B					

## 14: Germantown Ave &amp; Hillcrest Ave



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↑	↑	↑		↑	↑
Traffic Volume (vph)	605	100	336	147	260	566
Future Volume (vph)	605	100	336	147	260	566
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	11	11
Grade (%)	7%		-8%			8%
Storage Length (ft)	0	0		0	250	
Storage Lanes	1	1		0	1	
Taper Length (ft)	75				75	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor			0.99		1.00	
Fr <sub>t</sub>		0.850	0.959			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1684	1507	1859	0	1675	1725
Flt Permitted	0.950				0.345	
Satd. Flow (perm)	1684	1507	1859	0	608	1725
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		111	37			
Link Speed (mph)	30		30			30
Link Distance (ft)	337		251			746
Travel Time (s)	7.7		5.7			17.0
Confl. Peds. (#/hr)				3	3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	0%	0%	0%	1%
Bus Blockages (#/hr)	0	0	3	0	0	3
Adj. Flow (vph)	672	111	373	163	289	629
Shared Lane Traffic (%)						
Lane Group Flow (vph)	672	111	536	0	289	629
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	11		11			11
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.09	1.09	0.97	0.95	1.10	1.12
Turning Speed (mph)	15	9		9	15	
Turn Type	Prot	Prot	NA		Perm	NA
Protected Phases	8	8	2			6
Permitted Phases		8			6	
Minimum Split (s)	36.9	36.9	53.1		53.1	53.1
Total Split (s)	36.9	36.9	53.1		53.1	53.1
Total Split (%)	41.0%	41.0%	59.0%		59.0%	59.0%
Maximum Green (s)	31.5	31.5	45.9		45.9	45.9
Yellow Time (s)	3.6	3.6	4.5		4.5	4.5
All-Red Time (s)	1.8	1.8	2.7		2.7	2.7
Lost Time Adjust (s)	-1.0	-1.0	-1.0		-1.0	-1.0
Total Lost Time (s)	4.4	4.4	6.2		6.2	6.2
Lead/Lag						
Lead-Lag Optimize?						

## 14: Germantown Ave &amp; Hillcrest Ave



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Walk Time (s)			34.2	34.2	34.2	
Flash Dont Walk (s)			11.7	11.7	11.7	
Pedestrian Calls (#/hr)			0	0	0	
Act Effct Green (s)	32.5	32.5	46.9	46.9	46.9	
Actuated g/C Ratio	0.36	0.36	0.52	0.52	0.52	
v/c Ratio	1.11	0.18	0.54	0.91	0.70	
Control Delay	98.4	4.8	15.8	56.1	21.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	98.4	4.8	15.8	56.1	21.5	
LOS	F	A	B	E	C	
Approach Delay	85.1		15.8		32.4	
Approach LOS	F		B		C	

## Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 45.9 (51%), Referenced to phase 2:NBT and 6:SBTL, Start of Green

Natural Cycle: 100

Control Type: Pretimed

Maximum v/c Ratio: 1.11

Intersection Signal Delay: 46.9

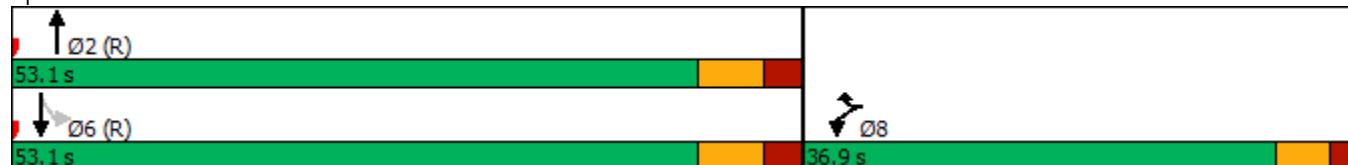
Intersection LOS: D

Intersection Capacity Utilization 124.0%

ICU Level of Service H

Analysis Period (min) 15

Splits and Phases: 14: Germantown Ave &amp; Hillcrest Ave



Movement	WBL	WBR	NBT	NBR	SBL	SBT		
Lane Configurations	↖ ↗ ↘ ↗ ↙ ↘	↖ ↗ ↘ ↗ ↙ ↘	↖ ↗ ↘ ↗ ↙ ↘	↖ ↗ ↘ ↗ ↙ ↘	↖ ↗ ↘ ↗ ↙ ↘	↖ ↗ ↘ ↗ ↙ ↘		
Traffic Volume (veh/h)	605	100	336	147	260	566		
Future Volume (veh/h)	605	100	336	147	260	566		
Number	3	18	2	12	1	6		
Initial Q (Q <sub>b</sub> ), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1834	1834	1976	1976	1824	1806		
Adj Flow Rate, veh/h	672	111	373	123	289	629		
Adj No. of Lanes	1	1	1	0	1	1		
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90		
Percent Heavy Veh, %	0	0	0	0	0	1		
Cap, veh/h	631	563	741	244	392	941		
Arrive On Green	0.36	0.36	0.52	0.51	0.52	0.52		
Sat Flow, veh/h	1746	1558	1423	469	878	1806		
Grp Volume(v), veh/h	672	111	0	496	289	629		
Grp Sat Flow(s),veh/h/ln	1746	1558	0	1892	878	1806		
Q Serve(g_s), s	32.5	4.4	0.0	15.4	28.4	23.0		
Cycle Q Clear(g_c), s	32.5	4.4	0.0	15.4	43.3	23.0		
Prop In Lane	1.00	1.00		0.25	1.00			
Lane Grp Cap(c), veh/h	631	563	0	986	392	941		
V/C Ratio(X)	1.07	0.20	0.00	0.50	0.74	0.67		
Avail Cap(c_a), veh/h	631	563	0	986	392	941		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(l)	1.00	1.00	0.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	28.8	19.8	0.0	14.1	27.8	15.8		
Incr Delay (d2), s/veh	54.6	0.8	0.0	1.8	11.7	3.8		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(95%),veh/ln	45.3	3.6	0.0	13.3	12.8	18.1		
LnGrp Delay(d),s/veh	83.4	20.6	0.0	15.9	39.5	19.6		
LnGrp LOS	F	C		B	D	B		
Approach Vol, veh/h	783		496			918		
Approach Delay, s/veh	74.5		15.9			25.9		
Approach LOS	E		B			C		
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			6		8	
Phs Duration (G+Y+R <sub>c</sub> ), s		53.1			53.1		36.9	
Change Period (Y+R <sub>c</sub> ), s		* 7.2			* 7.2		5.4	
Max Green Setting (Gmax), s		* 46			* 46		31.5	
Max Q Clear Time (g_c+l1), s		0.0			0.0		0.0	
Green Ext Time (p_c), s		0.0			0.0		0.0	
<b>Intersection Summary</b>								
HCM 2010 Ctrl Delay			40.9					
HCM 2010 LOS			D					
Notes								

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\* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

## 10: Germantown Ave &amp; Campus Access North



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	483	1168	3
Future Volume (vph)	0	0	0	483	1168	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	14	14	11	11	11	11
Grade (%)	10%			6%	7%	
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95
Ped Bike Factor						
Frt						
Flt Protected						
Satd. Flow (prot)	1925	0	0	1760	3347	0
Flt Permitted						
Satd. Flow (perm)	1925	0	0	1760	3347	0
Link Speed (mph)	10			30	30	
Link Distance (ft)	380			328	88	
Travel Time (s)	25.9			7.5	2.0	
Confl. Peds. (#/hr)	2					
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%
Bus Blockages (#/hr)	0	0	0	3	3	0
Adj. Flow (vph)	0	0	0	525	1270	3
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	525	1273	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	14			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.98	0.98	1.09	1.10	1.10	1.09
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	35.7%					
Analysis Period (min)	15					
ICU Level of Service	A					

## 10: Germantown Ave &amp; Campus Access North

## Intersection

Int Delay, s/veh 0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
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Lane Configurations						
Traffic Vol, veh/h	0	0	0	483	1168	3
Future Vol, veh/h	0	0	0	483	1168	3
Conflicting Peds, #/hr	2	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, %	10	-	-	6	7	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	0	0	525	1270	3

Major/Minor	Minor2	Major1	Major2
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Conflicting Flow All	1799	637	-	0	-	0
Stage 1	1272	-	-	-	-	-
Stage 2	527	-	-	-	-	-
Critical Hdwy	7.1	6.2	-	-	-	-
Critical Hdwy Stg 1	7.8	-	-	-	-	-
Critical Hdwy Stg 2	7.4	-	-	-	-	-
Follow-up Hdwy	3	3.1	-	-	-	-
Pot Cap-1 Maneuver	67	504	0	-	-	-
Stage 1	124	-	0	-	-	-
Stage 2	502	-	0	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	67	504	-	-	-	-
Mov Cap-2 Maneuver	67	-	-	-	-	-
Stage 1	124	-	-	-	-	-
Stage 2	502	-	-	-	-	-

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

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

## 12: Germantown Ave &amp; Campus Access South



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↔			↑	↑↓	
Traffic Volume (vph)	0	3	0	483	1167	1
Future Volume (vph)	0	3	0	483	1167	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	14	14	11	11	11	11
Grade (%)	0%			-6%	6%	
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95
Ped Bike Factor						
Frt	0.865					
Flt Protected						
Satd. Flow (prot)	1753	0	0	1869	3365	0
Flt Permitted						
Satd. Flow (perm)	1753	0	0	1869	3365	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	380			203	328	
Travel Time (s)	8.6			4.6	7.5	
Confl. Peds. (#/hr)				1		1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%
Bus Blockages (#/hr)	0	0	0	3	3	0
Adj. Flow (vph)	0	3	0	525	1268	1
Shared Lane Traffic (%)						
Lane Group Flow (vph)	3	0	0	525	1269	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	14			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.92	0.92	1.01	1.02	1.09	1.09
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	42.3%				ICU Level of Service A	
Analysis Period (min)	15					

## 12: Germantown Ave &amp; Campus Access South

## Intersection

Int Delay, s/veh 0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
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Lane Configurations						
Traffic Vol, veh/h	0	3	0	483	1167	1
Future Vol, veh/h	0	3	0	483	1167	1
Conflicting Peds, #/hr	0	0	1	0	0	1
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	6	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	3	0	525	1268	1

Major/Minor	Minor2	Major1	Major2
-------------	--------	--------	--------

Conflicting Flow All	1795	636	-	0	-	0
Stage 1	1270	-	-	-	-	-
Stage 2	525	-	-	-	-	-
Critical Hdwy	7.1	6.9	-	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3	3.1	-	-	-	-
Pot Cap-1 Maneuver	67	446	0	-	-	-
Stage 1	251	-	0	-	-	-
Stage 2	674	-	0	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	67	446	-	-	-	-
Mov Cap-2 Maneuver	67	-	-	-	-	-
Stage 1	251	-	-	-	-	-
Stage 2	673	-	-	-	-	-

Approach	EB	NB	SB
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HCM Control Delay, s	13.1	0	0
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HCM LOS	B
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Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
-----------------------	-----	-------	-----	-----

Capacity (veh/h)	-	446	-	-
HCM Lane V/C Ratio	-	0.007	-	-
HCM Control Delay (s)	-	13.1	-	-
HCM Lane LOS	-	B	-	-
HCM 95th %tile Q(veh)	-	0	-	-

## 6: Germantown Ave &amp; Bells Mill Rd

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group												
Lane Configurations												
Traffic Volume (vph)	177	337	100	0	0	0	143	306	16	25	347	798
Future Volume (vph)	177	337	100	0	0	0	143	306	16	25	347	798
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10	10	10	10	10	10	10
Grade (%)		7%			1%			6%			6%	
Storage Length (ft)	0		0	0		0	250		0	0		0
Storage Lanes	0		0	0		0	1		0	0		1
Taper Length (ft)	75			75			75			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor									1.00			1.00
Fr <sub>t</sub>		0.978						0.992				0.850
Fl <sub>t</sub> Protected		0.986					0.950					0.997
Satd. Flow (prot)	0	1650	0	0	0	0	1634	1684	0	0	1679	1462
Fl <sub>t</sub> Permitted		0.986					0.272					0.958
Satd. Flow (perm)	0	1650	0	0	0	0	468	1684	0	0	1612	1462
Right Turn on Red			No			Yes			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25		25			30			30		
Link Distance (ft)		181		447			350			203		
Travel Time (s)		4.9		12.2			8.0			4.6		
Confl. Peds. (#/hr)							6	6				
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	3	0	0	3	0
Adj. Flow (vph)	186	355	105	0	0	0	151	322	17	26	365	840
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	646	0	0	0	0	151	339	0	0	391	840
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			10			10	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16		16			16			16		
Two way Left Turn Lane												
Headway Factor	1.14	1.14	1.14	1.10	1.10	1.10	1.14	1.15	1.14	1.14	1.15	1.14
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA				pm+pt	NA		Perm	NA	pm+ov	
Protected Phases	7	4				5	2			6		7
Permitted Phases						2				6		6
Minimum Split (s)	55.0	55.0				20.0	65.0		45.0	45.0		55.0
Total Split (s)	55.0	55.0				20.0	65.0		45.0	45.0		55.0
Total Split (%)	45.8%	45.8%				16.7%	54.2%		37.5%	37.5%		45.8%
Maximum Green (s)	49.0	49.0				14.0	58.0		38.0	38.0		49.0
Yellow Time (s)	3.6	3.6				3.6	4.8		4.8	4.8		3.6
All-Red Time (s)	2.4	2.4				2.4	2.2		2.2	2.2		2.4
Lost Time Adjust (s)		-1.0				-1.0	-1.0			-1.0		-1.0
Total Lost Time (s)		5.0					5.0	6.0		6.0		5.0
Lead/Lag						Lead			Lag	Lag		
Lead-Lag Optimize?						Yes			Yes	Yes		

## 6: Germantown Ave &amp; Bells Mill Rd



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effct Green (s)		50.0					60.0	59.0			39.0	95.0
Actuated g/C Ratio		0.42					0.50	0.49			0.32	0.79
v/c Ratio		0.94					0.40	0.41			0.75	0.73
Control Delay		56.9					19.9	21.3			46.4	10.7
Queue Delay		0.0					0.0	0.0			0.0	0.6
Total Delay		56.9					19.9	21.3			46.4	11.3
LOS		E					B	C			D	B
Approach Delay		56.9							20.9		22.4	
Approach LOS		E							C		C	

## Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 120

Control Type: Pretimed

Maximum v/c Ratio: 0.94

Intersection Signal Delay: 31.5

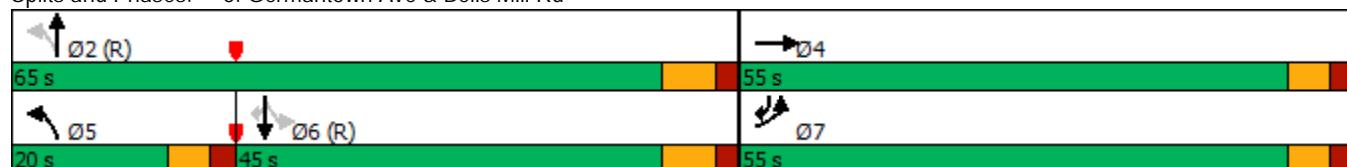
Intersection LOS: C

Intersection Capacity Utilization 135.0%

ICU Level of Service H

Analysis Period (min) 15

Splits and Phases: 6: Germantown Ave &amp; Bells Mill Rd

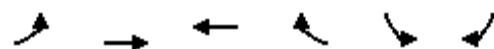


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	177	337	100	0	0	0	143	306	16	25	347	798
Future Volume (veh/h)	177	337	100	0	0	0	143	306	16	25	347	798
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.99	0.99		0.99
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1834	1834	1834				1843	1843	1843	1843	1826	1843
Adj Flow Rate, veh/h	186	355	105				151	322	17	26	365	840
Adj No. of Lanes	0	1	0				1	1	0	0	1	1
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0				0	0	0	1	1	0
Cap, veh/h	211	402	119				343	853	45	55	553	1157
Arrive On Green	0.41	0.42	0.41				0.13	0.49	0.48	0.32	0.32	0.32
Sat Flow, veh/h	506	966	286				1755	1735	92	69	1701	1552
Grp Volume(v), veh/h	646	0	0				151	0	339	391	0	840
Grp Sat Flow(s),veh/h/ln	1758	0	0				1755	0	1826	1770	0	1552
Q Serve(g_s), s	40.7	0.0	0.0				6.0	0.0	13.9	7.6	0.0	36.6
Cycle Q Clear(g_c), s	40.7	0.0	0.0				6.0	0.0	13.9	22.7	0.0	36.6
Prop In Lane	0.29		0.16				1.00		0.05	0.07		1.00
Lane Grp Cap(c), veh/h	732	0	0				343	0	898	593	0	1157
V/C Ratio(X)	0.88	0.00	0.00				0.44	0.00	0.38	0.66	0.00	0.73
Avail Cap(c_a), veh/h	732	0	0				343	0	898	593	0	1157
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	0.00				1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	32.5	0.0	0.0				22.2	0.0	19.1	34.9	0.0	8.7
Incr Delay (d2), s/veh	14.4	0.0	0.0				4.1	0.0	1.2	5.7	0.0	4.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	30.5	0.0	0.0				5.8	0.0	11.7	18.0	0.0	46.2
LnGrp Delay(d),s/veh	46.9	0.0	0.0				26.2	0.0	20.3	40.6	0.0	12.7
LnGrp LOS	D						C		C	D		B
Approach Vol, veh/h	646						490			1231		
Approach Delay, s/veh	46.9						22.1			21.6		
Approach LOS	D						C			C		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	2		4	5	6							
Phs Duration (G+Y+Rc), s	65.0		55.0	20.0	45.0							
Change Period (Y+Rc), s	* 7		6.0	6.0	* 7							
Max Green Setting (Gmax), s	* 58		49.0	14.0	* 38							
Max Q Clear Time (g_c+l1), s	0.0		0.0	0.0	0.0							
Green Ext Time (p_c), s	0.0		0.0	0.0	0.0							
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			28.6									
HCM 2010 LOS			C									
Notes												

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\* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

## 17: Bells Mill Rd &amp; Campus Access



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	1	614	939	2	0	1
Future Volume (vph)	1	614	939	2	0	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	16	16
Grade (%)		6%	4%		-1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.865	
Flt Protected						
Satd. Flow (prot)	0	1686	1704	0	1835	0
Flt Permitted						
Satd. Flow (perm)	0	1686	1704	0	1835	0
Link Speed (mph)		25	25		10	
Link Distance (ft)		120	181		115	
Travel Time (s)		3.3	4.9		7.8	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	1	633	968	2	0	1
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	634	970	0	1	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		16	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.14	1.14	1.12	1.12	0.84	0.84
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

## Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 59.5%

ICU Level of Service B

Analysis Period (min) 15

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	1	614	939	2	0	1
Future Vol, veh/h	1	614	939	2	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, %	-	6	4	-	-1	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	633	968	2	0	1
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	970	0	-	0	1604	969
Stage 1	-	-	-	-	969	-
Stage 2	-	-	-	-	635	-
Critical Hdwy	4.3	-	-	-	7.1	6.2
Critical Hdwy Stg 1	-	-	-	-	5.22	-
Critical Hdwy Stg 2	-	-	-	-	5.22	-
Follow-up Hdwy	3	-	-	-	3	3.1
Pot Cap-1 Maneuver	549	-	-	-	92	323
Stage 1	-	-	-	-	429	-
Stage 2	-	-	-	-	615	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	549	-	-	-	92	323
Mov Cap-2 Maneuver	-	-	-	-	92	-
Stage 1	-	-	-	-	428	-
Stage 2	-	-	-	-	615	-
Approach	EB	WB	SB			
HCM Control Delay, s	0	0	16.2			
HCM LOS			C			
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	549	-	-	-	323	
HCM Lane V/C Ratio	0.002	-	-	-	0.003	
HCM Control Delay (s)	11.6	0	-	-	16.2	
HCM Lane LOS	B	A	-	-	C	
HCM 95th %tile Q(veh)	0	-	-	-	0	

## 1: Germantown Ave &amp; Rogers Dr



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↑ ↗	↑ ↗	↑ ↘	↑ ↘	↓ ↗	↓ ↗
Traffic Volume (vph)	24	5	767	100	36	453
Future Volume (vph)	24	5	767	100	36	453
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	11	11	12	12
Grade (%)	-6%		0%		-4%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	0.98	1.00		1.00	
Frt		0.850	0.984			
Flt Protected	0.950				0.996	
Satd. Flow (prot)	1735	1553	1781	0	0	1907
Flt Permitted	0.950				0.896	
Satd. Flow (perm)	1731	1518	1781	0	0	1716
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		6	15			
Link Speed (mph)	25		30		30	
Link Distance (ft)	419		422		552	
Travel Time (s)	11.4		9.6		12.5	
Confl. Peds. (#/hr)	1	1		2	2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%
Bus Blockages (#/hr)	0	0	3	0	0	3
Adj. Flow (vph)	27	6	852	111	40	503
Shared Lane Traffic (%)						
Lane Group Flow (vph)	27	6	963	0	0	543
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	10		0		0	
Link Offset(ft)	0		0		0	
Crosswalk Width(ft)	16		16		16	
Two way Left Turn Lane						
Headway Factor	1.05	1.05	1.06	1.04	0.97	0.99
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2		1	2
Detector Template	Left	Right	Thru		Left	Thru
Leading Detector (ft)	20	20	100		20	100
Trailing Detector (ft)	0	0	0		0	0
Detector 1 Position(ft)	0	0	0		0	0
Detector 1 Size(ft)	20	20	6		20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)			94		94	
Detector 2 Size(ft)			6		6	
Detector 2 Type			Cl+Ex		Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)			0.0		0.0	

## 1: Germantown Ave &amp; Rogers Dr



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Turn Type	Prot	Perm	NA		Perm	NA
Protected Phases	8		2			6
Permitted Phases	8	8			6	
Detector Phase	8	8	2		6	6
Switch Phase						
Minimum Initial (s)	22.0	22.0	68.0		68.0	68.0
Minimum Split (s)	27.0	27.0	73.0		73.0	73.0
Total Split (s)	27.0	27.0	73.0		73.0	73.0
Total Split (%)	27.0%	27.0%	73.0%		73.0%	73.0%
Maximum Green (s)	22.0	22.0	68.0		68.0	68.0
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0
All-Red Time (s)	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)	3.5	3.5	3.5			3.5
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	None	Min		Min	Min
Walk Time (s)	16.0	16.0				
Flash Dont Walk (s)	6.0	6.0				
Pedestrian Calls (#/hr)	0	0				
Act Effct Green (s)	23.6	23.6	78.1		78.1	
Actuated g/C Ratio	0.25	0.25	0.82		0.82	
v/c Ratio	0.06	0.02	0.66		0.39	
Control Delay	30.1	17.8	10.3		6.0	
Queue Delay	0.0	0.0	0.0		0.0	
Total Delay	30.1	17.8	10.3		6.0	
LOS	C	B	B		A	
Approach Delay	27.9		10.3		6.0	
Approach LOS	C		B		A	

## Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 95.5

Natural Cycle: 100

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.66

Intersection Signal Delay: 9.1

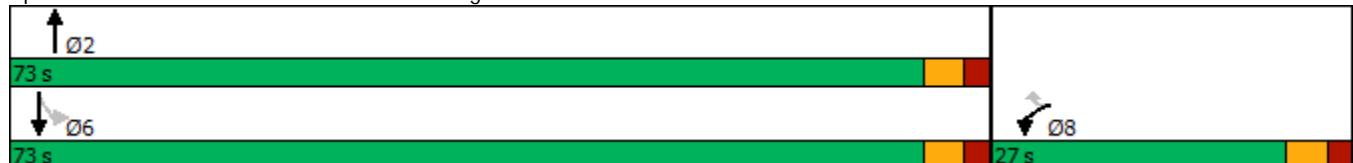
Intersection LOS: A

Intersection Capacity Utilization 81.7%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 1: Germantown Ave &amp; Rogers Dr



## 1: Germantown Ave &amp; Rogers Dr

Movement	WBL	WBR	NBT	NBR	SBL	SBT		
Lane Configurations	↖ ↗ ↘ ↗ ↙ ↘	↖ ↗ ↘ ↗ ↙ ↘	↑ ↗ ↘ ↗ ↙ ↘	↖ ↗ ↘ ↗ ↙ ↘	↖ ↗ ↘ ↗ ↙ ↘	↓ ↗ ↘ ↗ ↙ ↘		
Traffic Volume (veh/h)	24	5	767	100	36	453		
Future Volume (veh/h)	24	5	767	100	36	453		
Number	3	18	2	12	1	6		
Initial Q (Q <sub>b</sub> ), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/in	1957	1957	1900	1900	1938	1938		
Adj Flow Rate, veh/h	27	6	852	111	40	503		
Adj No. of Lanes	1	1	1	0	0	1		
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90		
Percent Heavy Veh, %	0	0	0	0	0	0		
Cap, veh/h	286	256	1266	165	105	1290		
Arrive On Green	0.15	0.15	0.77	0.75	0.76	0.77		
Sat Flow, veh/h	1864	1663	1647	215	81	1677		
Grp Volume(v), veh/h	27	6	0	963	543	0		
Grp Sat Flow(s), veh/h/in	1864	1663	0	1862	1759	0		
Q Serve(g_s), s	1.1	0.3	0.0	22.5	0.0	0.0		
Cycle Q Clear(g_c), s	1.1	0.3	0.0	22.5	8.2	0.0		
Prop In Lane	1.00	1.00		0.12	0.07			
Lane Grp Cap(c), veh/h	286	256	0	1431	1385	0		
V/C Ratio(X)	0.09	0.02	0.00	0.67	0.39	0.00		
Avail Cap(c_a), veh/h	485	432	0	1431	1385	0		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(l)	1.00	1.00	0.00	1.00	1.00	0.00		
Uniform Delay (d), s/veh	32.8	32.5	0.0	5.1	3.4	0.0		
Incr Delay (d2), s/veh	0.1	0.0	0.0	1.2	0.2	0.0		
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(95%), veh/in	1.1	0.2	0.0	17.4	7.9	0.0		
LnGrp Delay(d), s/veh	33.0	32.5	0.0	6.3	3.5	0.0		
LnGrp LOS	C	C		A	A			
Approach Vol, veh/h	33		963		543			
Approach Delay, s/veh	32.9		6.3		3.5			
Approach LOS	C		A		A			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			6		8	
Phs Duration (G+Y+R <sub>c</sub> ), s	73.0				73.0	17.4		
Change Period (Y+R <sub>c</sub> ), s	5.0				5.0	5.0		
Max Green Setting (Gmax), s	68.0				68.0	22.0		
Max Q Clear Time (g_c+l1), s	24.5				10.2	3.6		
Green Ext Time (p_c), s	10.5				4.6	0.0		
<b>Intersection Summary</b>								
HCM 2010 Ctrl Delay			5.9					
HCM 2010 LOS			A					

## 14: Germantown Ave &amp; Proposed Driveway/Hillcrest Ave

	↗	→	↘	↖	←	↙	↑	↗	↘	↓	↖	
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	1	1	2	1	1	1	1	1	1	1	1	1
Traffic Volume (vph)	3	1	2	442	1	432	0	432	127	134	342	1
Future Volume (vph)	3	1	2	442	1	432	0	432	127	134	342	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	11	12	12	12	11	11	12
Grade (%)	-4%				7%			-8%			8%	
Storage Length (ft)	0	0	0		0	0		0	250		0	
Storage Lanes	1	0	1		0	1		0	1		0	
Taper Length (ft)	75		75			75			75			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor							0.99					
Fr <sub>t</sub>		0.900			0.850			0.966				
Flt Protected	0.950			0.950					0.950			
Satd. Flow (prot)	1841	1744	0	1742	1558	0	1976	1876	0	1675	1725	0
Flt Permitted	0.950			0.950					0.109			
Satd. Flow (perm)	1841	1744	0	1742	1558	0	1976	1876	0	192	1725	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)	2			462			12					
Link Speed (mph)	30			30			30			30		
Link Distance (ft)	296			337			251			746		
Travel Time (s)	6.7			7.7			5.7			17.0		
Confl. Peds. (#/hr)							1	1				
Peak Hour Factor	0.92	0.89	0.89	0.92	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	3	0	0	3	0
Adj. Flow (vph)	3	1	2	480	1	485	0	485	143	151	384	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	3	3	0	480	486	0	0	628	0	151	385	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		12			12			12			12	
Link Offset(ft)	0			0			0			0		
Crosswalk Width(ft)	16			16			16			16		
Two way Left Turn Lane												
Headway Factor	0.97	0.97	0.97	1.05	1.05	1.09	0.95	0.97	0.95	1.10	1.12	1.05
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template	Left	Thru										
Leading Detector (ft)	40	40		40	40		40	40		40	40	
Trailing Detector (ft)	-3	-3		-3	-3		-3	-3		-3	-3	
Detector 1 Position(ft)	-3	-3		-3	-3		-3	-3		-3	-3	
Detector 1 Size(ft)	43	43		43	43		43	43		43	43	
Detector 1 Type	Cl+Ex	Cl+Ex										
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Split	NA		Split	NA		Perm	NA		pm+pt	NA	
Protected Phases	4	4		8	8			2		1	6	

## 14: Germantown Ave &amp; Proposed Driveway/Hillcrest Ave



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases							2			6		
Detector Phase	4	4		8	8		2	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		22.0	22.0		22.0	22.0		7.0	22.0	
Minimum Split (s)	12.0	12.0		27.0	27.0		29.0	29.0		14.0	29.0	
Total Split (s)	12.0	12.0		49.0	49.0		40.0	40.0		19.0	59.0	
Total Split (%)	10.0%	10.0%		40.8%	40.8%		33.3%	33.3%		15.8%	49.2%	
Maximum Green (s)	7.0	7.0		44.0	44.0		33.0	33.0		12.0	52.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		4.5	4.5		4.5	4.5	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.5	2.5		2.5	2.5	
Lost Time Adjust (s)	-1.0	-1.0		-1.0	-1.0		-1.0	-1.0		-1.0	-1.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		6.0	6.0		6.0	6.0	
Lead/Lag							Lag	Lag		Lead		
Lead-Lag Optimize?							Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		C-Max	C-Max		None	C-Max	
Walk Time (s)				7.0	7.0		7.0	7.0			7.0	
Flash Dont Walk (s)				15.0	15.0		15.0	15.0			15.0	
Pedestrian Calls (#/hr)				0	0		0	0			0	
Act Effect Green (s)	8.0	8.0		39.5	39.5		50.8			68.1	68.1	
Actuated g/C Ratio	0.07	0.07		0.33	0.33		0.42			0.57	0.57	
v/c Ratio	0.02	0.03		0.84	0.59		0.79			0.61	0.39	
Control Delay	53.0	40.7		50.6	6.3		26.5			27.3	18.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0			0.0	0.0	
Total Delay	53.0	40.7		50.6	6.3		26.5			27.3	18.0	
LOS	D	D		D	A		C			C	B	
Approach Delay		46.8			28.4		26.5				20.6	
Approach LOS		D			C		C				C	

## Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green, Master Intersection

Natural Cycle: 85

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.84

Intersection Signal Delay: 25.9

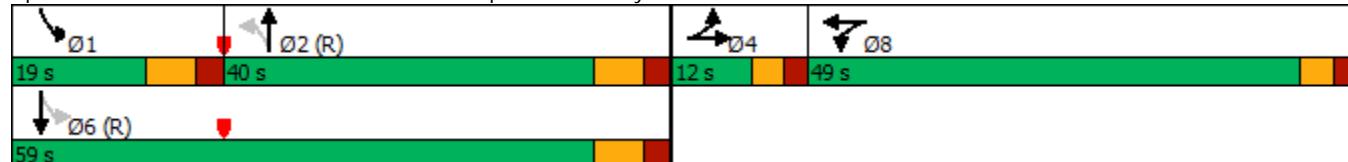
Intersection LOS: C

Intersection Capacity Utilization 82.4%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 14: Germantown Ave &amp; Proposed Driveway/Hillcrest Ave



## 14: Germantown Ave &amp; Proposed Driveway/Hillcrest Ave

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	1	1	2	1	1	1	1	1	1	1	1	1
Traffic Volume (veh/h)	3	1	2	442	1	432	0	432	127	134	342	1
Future Volume (veh/h)	3	1	2	442	1	432	0	432	127	134	342	1
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Q <sub>b</sub> ), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00		1.00	1.00	1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1938	1938	1938	1834	1834	1834	1976	1976	1976	1824	1806	1824
Adj Flow Rate, veh/h	3	1	2	480	1	485	0	485	143	151	384	1
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.89	0.89	0.92	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	1	1
Cap, veh/h	35	11	22	603	1	537	60	573	169	269	935	2
Arrive On Green	0.02	0.02	0.00	0.35	0.35	0.34	0.00	0.39	0.38	0.08	0.52	0.51
Sat Flow, veh/h	1846	578	1156	1746	3	1556	1055	1467	432	1737	1800	5
Grp Volume(v), veh/h	3	0	3	480	0	486	0	0	628	151	0	385
Grp Sat Flow(s),veh/h/ln	1846	0	1734	1746	0	1559	1055	0	1899	1737	0	1805
Q Serve(g_s), s	0.2	0.0	0.2	29.8	0.0	35.6	0.0	0.0	36.1	5.8	0.0	15.6
Cycle Q Clear(g_c), s	0.2	0.0	0.2	29.8	0.0	35.6	0.0	0.0	36.1	5.8	0.0	15.6
Prop In Lane	1.00			0.67	1.00		1.00	1.00	0.23	1.00		0.00
Lane Grp Cap(c), veh/h	35	0	33	603	0	538	60	0	742	269	0	937
V/C Ratio(X)	0.09	0.00	0.09	0.80	0.00	0.90	0.00	0.00	0.85	0.56	0.00	0.41
Avail Cap(c_a), veh/h	123	0	116	655	0	585	60	0	742	321	0	937
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	57.8	0.0	58.6	35.5	0.0	37.6	0.0	0.0	33.4	24.6	0.0	17.6
Incr Delay (d2), s/veh	1.0	0.0	1.2	6.4	0.0	16.6	0.0	0.0	11.4	1.8	0.0	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.2	0.0	0.2	21.9	0.0	24.7	0.0	0.0	28.8	5.2	0.0	12.8
LnGrp Delay(d),s/veh	58.9	0.0	59.8	41.8	0.0	54.3	0.0	0.0	44.8	26.4	0.0	19.0
LnGrp LOS	E		E	D		D			D	C		B
Approach Vol, veh/h		6			966			628			536	
Approach Delay, s/veh		59.3			48.1			44.8			21.1	
Approach LOS		E			D			D			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+R <sub>c</sub> ), s	15.4	52.9		6.3		68.3		45.4				
Change Period (Y+R <sub>c</sub> ), s	7.0	7.0		5.0		7.0		5.0				
Max Green Setting (Gmax), s	12.0	33.0		7.0		52.0		44.0				
Max Q Clear Time (g_c+l1), s	8.3	38.1		2.7		17.6		38.1				
Green Ext Time (p_c), s	0.1	0.0		0.0		1.5		2.3				
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			40.4									
HCM 2010 LOS			D									

## 6: Germantown Ave &amp; Bells Mill Rd

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group												
Lane Configurations												
Traffic Volume (vph)	167	399	140	0	0	0	199	392	18	5	313	468
Future Volume (vph)	167	399	140	0	0	0	199	392	18	5	313	468
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10	10	10	10	10	10	10
Grade (%)		7%				1%			6%			6%
Storage Length (ft)	0		0	0		0	250		0	0		0
Storage Lanes	0		0	0		0	1		0	0		1
Taper Length (ft)	75			75			75			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor									1.00			1.00
Fr <sub>t</sub>		0.973						0.993				0.850
Flt Protected		0.988					0.950				0.999	
Satd. Flow (prot)	0	1645	0	0	0	0	1634	1686	0	0	1681	1462
Flt Permitted		0.988					0.300				0.991	
Satd. Flow (perm)	0	1645	0	0	0	0	516	1686	0	0	1668	1462
Right Turn on Red			No			Yes			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25		25			30			30		
Link Distance (ft)		181		447			350			203		
Travel Time (s)		4.9		12.2			8.0			4.6		
Confl. Peds. (#/hr)									1	1		
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	3	0	0	3	0
Adj. Flow (vph)	192	459	161	0	0	0	229	451	21	6	360	538
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	812	0	0	0	0	229	472	0	0	366	538
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			10			10	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16		16			16			16		
Two way Left Turn Lane												
Headway Factor	1.14	1.14	1.14	1.10	1.10	1.10	1.14	1.15	1.14	1.14	1.15	1.14
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1					1	1		1	1	1
Detector Template	Left	Thru					Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	40					40	40		20	40	40
Trailing Detector (ft)	0	-3					-3	-3		0	-3	-3
Detector 1 Position(ft)	0	-3					-3	-3		0	-3	-3
Detector 1 Size(ft)	20	43					43	43		20	43	43
Detector 1 Type	Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0					0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0					0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0					0.0	0.0		0.0	0.0	0.0
Turn Type	Prot	NA					pm+pt	NA		Perm	NA	pm+ov
Protected Phases	7	4					5	2		6	7	

## 6: Germantown Ave &amp; Bells Mill Rd



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases							2			6		6
Detector Phase	7	4					5	2		6	6	7
Switch Phase												
Minimum Initial (s)	49.0	49.0					14.0	58.0		38.0	38.0	49.0
Minimum Split (s)	55.0	55.0					20.0	65.0		45.0	45.0	55.0
Total Split (s)	55.0	55.0					20.0	65.0		45.0	45.0	55.0
Total Split (%)	45.8%	45.8%					16.7%	54.2%		37.5%	37.5%	45.8%
Maximum Green (s)	49.0	49.0					14.0	58.0		38.0	38.0	49.0
Yellow Time (s)	3.6	3.6					3.6	4.8		4.8	4.8	3.6
All-Red Time (s)	2.4	2.4					2.4	2.2		2.2	2.2	2.4
Lost Time Adjust (s)	-1.0						-1.0	-1.0		-1.0	-1.0	
Total Lost Time (s)	5.0						5.0	6.0		6.0	5.0	
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0					3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None					None	C-Max		C-Max	C-Max	None
Act Effct Green (s)	50.0						60.0	59.0		39.0	95.0	
Actuated g/C Ratio	0.42						0.50	0.49		0.32	0.79	
v/c Ratio	1.19						0.58	0.57		0.68	0.46	
Control Delay	130.6						23.8	24.9		43.5	6.8	
Queue Delay	0.0						0.0	0.0		0.0	0.0	
Total Delay	130.6						23.8	24.9		43.5	6.8	
LOS	F						C	C		D	A	
Approach Delay	130.6							24.6		21.6		
Approach LOS	F						C			C		

## Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 120

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.19

Intersection Signal Delay: 59.1

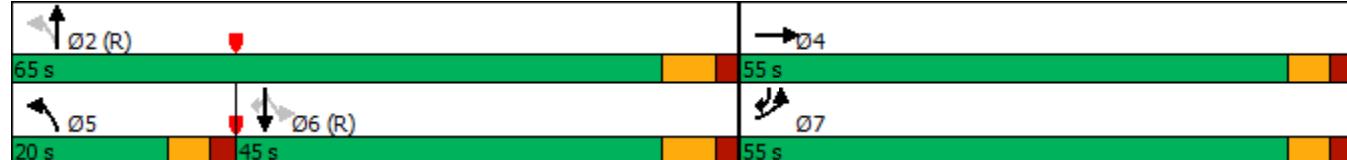
Intersection LOS: E

Intersection Capacity Utilization 135.0%

ICU Level of Service H

Analysis Period (min) 15

Splits and Phases: 6: Germantown Ave &amp; Bells Mill Rd



## 6: Germantown Ave &amp; Bells Mill Rd

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	167	399	140	0	0	0	199	392	18	5	313	468
Future Volume (veh/h)	167	399	140	0	0	0	199	392	18	5	313	468
Number	7	4	14				5	2	12	1	6	16
Initial Q (Q <sub>b</sub> ), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1834	1834	1834				1843	1843	1843	1843	1825	1843
Adj Flow Rate, veh/h	192	459	161				229	451	21	6	360	538
Adj No. of Lanes	0	1	0				1	1	0	0	1	1
Peak Hour Factor	0.87	0.87	0.87				0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	0	0	0				0	0	0	1	1	0
Cap, veh/h	173	413	145				378	859	40	34	587	1161
Arrive On Green	0.43	0.42	0.41				0.12	0.49	0.48	0.34	0.33	0.33
Sat Flow, veh/h	414	990	347				1755	1747	81	10	1804	1564
Grp Volume(v), veh/h	812	0	0				229	0	472	366	0	538
Grp Sat Flow(s),veh/h/ln	1752	0	0				1755	0	1829	1815	0	1564
Q Serve(g_s), s	50.0	0.0	0.0				9.5	0.0	21.2	0.0	0.0	16.2
Cycle Q Clear(g_c), s	50.0	0.0	0.0				9.5	0.0	21.2	20.1	0.0	16.2
Prop In Lane	0.24		0.20				1.00		0.04	0.02		1.00
Lane Grp Cap(c), veh/h	730	0	0				378	0	899	651	0	1161
V/C Ratio(X)	1.11	0.00	0.00				0.61	0.00	0.53	0.56	0.00	0.46
Avail Cap(c_a), veh/h	730	0	0				378	0	899	651	0	1161
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	0.00				1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	35.0	0.0	0.0				22.6	0.0	20.9	34.1	0.0	6.1
Incr Delay (d2), s/veh	68.7	0.0	0.0				2.7	0.0	2.2	3.5	0.0	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	68.5	0.0	0.0				8.5	0.0	16.7	15.8	0.0	30.7
LnGrp Delay(d),s/veh	103.7	0.0	0.0				25.3	0.0	23.1	37.6	0.0	7.4
LnGrp LOS	F						C		C	D		A
Approach Vol, veh/h	812						701					904
Approach Delay, s/veh	103.7						23.8					19.6
Approach LOS	F						C					B
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	2		4	5	6							
Phs Duration (G+Y+R <sub>c</sub> ), s	65.0		55.0	20.0	45.0							
Change Period (Y+R <sub>c</sub> ), s	* 7		6.0	6.0	* 7							
Max Green Setting (Gmax), s	* 58		49.0	14.0	* 38							
Max Q Clear Time (g <sub>c+l1</sub> ), s	23.2		52.0	12.0	22.1							
Green Ext Time (p <sub>c</sub> ), s	1.9		0.0	0.2	3.7							
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay	49.1											
HCM 2010 LOS	D											
Notes												

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\* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

## 1: Germantown Ave &amp; Rogers Dr



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↑ ↗	↑ ↗	↑ ↘		↗ ↘	↖ ↘
Traffic Volume (vph)	65	35	368	69	43	764
Future Volume (vph)	65	35	368	69	43	764
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	11	11	12	12
Grade (%)	-6%		0%			-4%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	0.98	1.00			1.00
Frt		0.850	0.979			
Flt Protected	0.950					0.997
Satd. Flow (prot)	1735	1553	1770	0	0	1909
Flt Permitted	0.950					0.956
Satd. Flow (perm)	1731	1518	1770	0	0	1830
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		39	22			
Link Speed (mph)	25		30			30
Link Distance (ft)	419		422			552
Travel Time (s)	11.4		9.6			12.5
Confl. Peds. (#/hr)	1	1		2	2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%
Bus Blockages (#/hr)	0	0	3	0	0	3
Adj. Flow (vph)	72	39	409	77	48	849
Shared Lane Traffic (%)						
Lane Group Flow (vph)	72	39	486	0	0	897
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	10		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.05	1.05	1.06	1.04	0.97	0.99
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	1		1	1
Detector Template	Left	Right	Thru		Left	Thru
Leading Detector (ft)	20	20	100		20	100
Trailing Detector (ft)	0	0	0		0	0
Detector 1 Position(ft)	0	0	0		0	0
Detector 1 Size(ft)	20	20	100		20	100
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Turn Type	Prot	Perm	NA		Perm	NA
Protected Phases	8		2			6
Permitted Phases	8	8			6	
Detector Phase	8	8	2		6	6
Switch Phase						

## 1: Germantown Ave &amp; Rogers Dr



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Minimum Initial (s)	22.0	22.0	68.0		68.0	68.0
Minimum Split (s)	27.0	27.0	73.0		73.0	73.0
Total Split (s)	27.0	27.0	73.0		73.0	73.0
Total Split (%)	27.0%	27.0%	73.0%		73.0%	73.0%
Maximum Green (s)	22.0	22.0	68.0		68.0	68.0
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0
All-Red Time (s)	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)	3.5	3.5	3.5		3.5	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	None	Min		Min	Min
Walk Time (s)	16.0	16.0				
Flash Dont Walk (s)	6.0	6.0				
Pedestrian Calls (#/hr)	0	0				
Act Effct Green (s)	23.6	23.6	73.8		73.8	
Actuated g/C Ratio	0.24	0.24	0.76		0.76	
v/c Ratio	0.17	0.10	0.36		0.65	
Control Delay	31.9	10.5	6.3		11.0	
Queue Delay	0.0	0.0	0.0		0.0	
Total Delay	31.9	10.5	6.3		11.0	
LOS	C	B	A		B	
Approach Delay	24.4		6.3		11.0	
Approach LOS	C		A		B	

## Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 97.6

Natural Cycle: 100

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.65

Intersection Signal Delay: 10.5

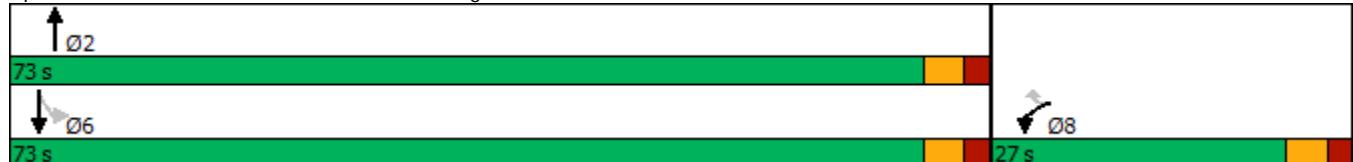
Intersection LOS: B

Intersection Capacity Utilization 100.3%

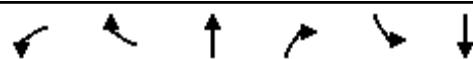
ICU Level of Service G

Analysis Period (min) 15

Splits and Phases: 1: Germantown Ave &amp; Rogers Dr



## 1: Germantown Ave &amp; Rogers Dr



Movement	WBL	WBR	NBT	NBR	SBL	SBT		
Lane Configurations	↖ ↗ ↘ ↖ ↙ ↘							
Traffic Volume (veh/h)	65	35	368	69	43	764		
Future Volume (veh/h)	65	35	368	69	43	764		
Number	3	18	2	12	1	6		
Initial Q (Q <sub>b</sub> ), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1957	1957	1900	1900	1938	1938		
Adj Flow Rate, veh/h	72	39	409	77	48	849		
Adj No. of Lanes	1	1	1	0	0	1		
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90		
Percent Heavy Veh, %	0	0	0	0	0	0		
Cap, veh/h	423	378	1092	206	85	1265		
Arrive On Green	0.23	0.23	0.70	0.69	0.70	0.70		
Sat Flow, veh/h	1864	1663	1555	293	66	1802		
Grp Volume(v), veh/h	72	39	0	486	897	0		
Grp Sat Flow(s),veh/h/ln	1864	1663	0	1848	1868	0		
Q Serve(g_s), s	3.1	1.8	0.0	10.6	3.5	0.0		
Cycle Q Clear(g_c), s	3.1	1.8	0.0	10.6	25.9	0.0		
Prop In Lane	1.00	1.00		0.16	0.05			
Lane Grp Cap(c), veh/h	423	378	0	1298	1341	0		
V/C Ratio(X)	0.17	0.10	0.00	0.37	0.67	0.00		
Avail Cap(c_a), veh/h	443	395	0	1298	1341	0		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(l)	1.00	1.00	0.00	1.00	1.00	0.00		
Uniform Delay (d), s/veh	30.8	30.3	0.0	6.0	8.2	0.0		
Incr Delay (d2), s/veh	0.2	0.1	0.0	0.2	1.3	0.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(95%),veh/ln	2.9	1.5	0.0	9.2	20.4	0.0		
LnGrp Delay(d),s/veh	30.9	30.4	0.0	6.2	9.5	0.0		
LnGrp LOS	C	C		A	A			
Approach Vol, veh/h	111		486		897			
Approach Delay, s/veh	30.8		6.2		9.5			
Approach LOS	C		A		A			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			6		8	
Phs Duration (G+Y+R <sub>c</sub> ), s	73.0				73.0		26.0	
Change Period (Y+R <sub>c</sub> ), s	5.0				5.0		5.0	
Max Green Setting (Gmax), s	68.0				68.0		22.0	
Max Q Clear Time (g_c+l1), s	12.6				27.9		5.6	
Green Ext Time (p_c), s	3.6				9.1		0.2	
<b>Intersection Summary</b>								
HCM 2010 Ctrl Delay			10.0					
HCM 2010 LOS			A					

## 14: Germantown Ave &amp; Proposed Driveway/Hillcrest Ave

	↗	→	↘	↖	←	↙	↑	↗	↘	↓	↖	
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↑		↑	↑		↑	↑		↑	↑	
Traffic Volume (vph)	0	1	3	604	1	100	3	337	147	261	565	3
Future Volume (vph)	0	1	3	604	1	100	3	337	147	261	565	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	12	11	12	12	12	11	11	12
Grade (%)	-4%				7%			-8%			8%	
Storage Length (ft)	0	0	0		0	0		0	250		0	
Storage Lanes	1	0	1		0	1		0	1		0	
Taper Length (ft)	25		25			25			25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor							0.99					
Fr <sub>t</sub>		0.887			0.851			0.954			0.999	
Flt Protected				0.950			0.950			0.950		
Satd. Flow (prot)	1900	1685	0	1684	1560	0	1840	1850	0	1675	1723	0
Flt Permitted				0.950			0.236			0.111		
Satd. Flow (perm)	1900	1685	0	1684	1560	0	457	1850	0	196	1723	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3			111			18				
Link Speed (mph)		25			30			30			30	
Link Distance (ft)		296			337			251			746	
Travel Time (s)		8.1			7.7			5.7			17.0	
Confl. Peds. (#/hr)								1	1			
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	0%	2%	0%	2%	0%	0%	0%	1%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	3	0	0	3	0
Adj. Flow (vph)	0	1	3	671	1	111	3	374	163	290	628	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	4	0	671	112	0	3	537	0	290	631	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.97	0.97	0.97	1.09	1.05	1.09	0.95	0.97	0.95	1.10	1.12	1.05
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template	Left	Thru										
Leading Detector (ft)	40	40		40	40		40	40		40	40	
Trailing Detector (ft)	-3	-3		-3	-3		-3	-3		-3	-3	
Detector 1 Position(ft)	-3	-3		-3	-3		-3	-3		-3	-3	
Detector 1 Size(ft)	43	43		43	43		43	43		43	43	
Detector 1 Type	Cl+Ex	Cl+Ex										
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Split	NA		Split	NA		Perm	NA		pm+pt	NA	
Protected Phases	4	4		8	8			2		1	6	

## 14: Germantown Ave &amp; Proposed Driveway/Hillcrest Ave



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases							2			6		
Detector Phase	4	4		8	8		2	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		22.0	22.0		22.0	22.0		7.0	22.0	
Minimum Split (s)	12.0	12.0		27.0	27.0		29.0	29.0		14.0	29.0	
Total Split (s)	12.0	12.0		49.0	49.0		40.0	40.0		19.0	59.0	
Total Split (%)	10.0%	10.0%		40.8%	40.8%		33.3%	33.3%		15.8%	49.2%	
Maximum Green (s)	7.0	7.0		44.0	44.0		33.0	33.0		12.0	52.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		4.5	4.5		4.5	4.5	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.5	2.5		2.5	2.5	
Lost Time Adjust (s)	-1.0	-1.0		-1.0	-1.0		-1.0	-1.0		-1.0	-1.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		6.0	6.0		6.0	6.0	
Lead/Lag							Lag	Lag		Lead		
Lead-Lag Optimize?							Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		C-Max	C-Max		None	C-Max	
Walk Time (s)				7.0	7.0		7.0	7.0			7.0	
Flash Dont Walk (s)				15.0	15.0		15.0	15.0			15.0	
Pedestrian Calls (#/hr)				0	0		0	0			0	
Act Effect Green (s)	8.0		54.6	54.6		34.0	34.0		53.0	53.0		
Actuated g/C Ratio	0.07		0.46	0.46		0.28	0.28		0.44	0.44		
v/c Ratio	0.03		0.88	0.15		0.02	1.00		1.18	0.83		
Control Delay	38.5		44.5	4.7		23.7	68.4		143.4	40.7		
Queue Delay	0.0		0.0	0.0		0.0	0.0		0.0	0.0		
Total Delay	38.5		44.5	4.7		23.7	68.4		143.4	40.7		
LOS	D		D	A		C	E		F	D		
Approach Delay	38.5			38.8			68.2			73.0		
Approach LOS	D			D			E			E		

## Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green, Master Intersection

Natural Cycle: 145

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.18

Intersection Signal Delay: 59.9

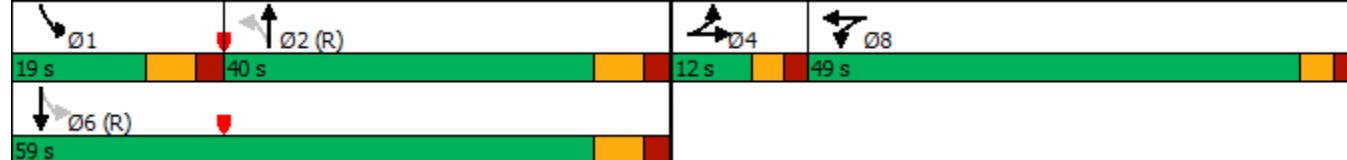
Intersection LOS: E

Intersection Capacity Utilization 101.7%

ICU Level of Service G

Analysis Period (min) 15

Splits and Phases: 14: Germantown Ave &amp; Proposed Driveway/Hillcrest Ave



## 14: Germantown Ave &amp; Proposed Drivway/Hillcrest Ave

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖ ↗ ↘ ↙ ↖ ↗ ↘ ↙ ↖ ↗ ↘ ↙			↖ ↗ ↘ ↙ ↖ ↗ ↘ ↙ ↖ ↗ ↘ ↙			↖ ↗ ↘ ↙ ↖ ↗ ↘ ↙ ↖ ↗ ↘ ↙			↖ ↗ ↘ ↙ ↖ ↗ ↘ ↙ ↖ ↗ ↘ ↙		
Traffic Volume (veh/h)	0	1	3	604	1	100	3	337	147	261	565	3
Future Volume (veh/h)	0	1	3	604	1	100	3	337	147	261	565	3
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Q <sub>b</sub> ), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00		1.00	1.00		1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1938	1834	1833	1834	1937	1976	1976	1824	1806	1824
Adj Flow Rate, veh/h	0	1	3	671	1	111	3	374	123	290	628	3
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	0	2	2	2	0	0	0	1	1
Cap, veh/h	28	7	20	655	5	580	245	476	157	337	885	4
Arrive On Green	0.00	0.02	0.00	0.38	0.38	0.37	0.33	0.33	0.33	0.11	0.49	0.48
Sat Flow, veh/h	1810	419	1258	1746	14	1546	824	1424	468	1737	1796	9
Grp Volume(v), veh/h	0	0	4	671	0	112	3	0	497	290	0	631
Grp Sat Flow(s),veh/h/ln	1810	0	1678	1746	0	1560	824	0	1893	1737	0	1804
Q Serve(g_s), s	0.0	0.0	0.3	45.0	0.0	5.8	0.3	0.0	28.5	12.9	0.0	32.7
Cycle Q Clear(g_c), s	0.0	0.0	0.3	45.0	0.0	5.8	13.6	0.0	28.5	12.9	0.0	32.7
Prop In Lane	1.00			0.75	1.00		0.99	1.00		0.25	1.00	
Lane Grp Cap(c), veh/h	28	0	26	655	0	585	245	0	633	337	0	889
V/C Ratio(X)	0.00	0.00	0.15	1.02	0.00	0.19	0.01	0.00	0.79	0.86	0.00	0.71
Avail Cap(c_a), veh/h	121	0	112	655	0	585	245	0	633	337	0	889
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)	0.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	59.0	37.5	0.0	25.4	36.3	0.0	36.2	26.4	0.0	23.7
Incr Delay (d2), s/veh	0.0	0.0	2.7	41.6	0.0	0.2	0.1	0.0	9.5	19.6	0.0	4.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	0.0	0.3	52.6	0.0	4.6	0.2	0.0	23.3	12.6	0.0	24.3
LnGrp Delay(d),s/veh	0.0	0.0	61.6	79.1	0.0	25.6	36.3	0.0	45.6	46.0	0.0	28.5
LnGrp LOS			E	F		C	D		D	D		C
Approach Vol, veh/h		4			783			500			921	
Approach Delay, s/veh		61.6			71.4			45.6			34.0	
Approach LOS		E			E			D			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+R <sub>c</sub> ), s	19.0	46.1		5.9		65.1		49.0				
Change Period (Y+R <sub>c</sub> ), s	7.0	7.0		5.0		7.0		5.0				
Max Green Setting (Gmax), s	12.0	33.0		7.0		52.0		44.0				
Max Q Clear Time (g_c+l1), s	15.4	30.5		2.5		34.7		47.5				
Green Ext Time (p_c), s	0.0	0.6		0.0		2.4		0.0				
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			50.0									
HCM 2010 LOS			D									

## 6: Germantown Ave &amp; Bells Mill Rd

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group												
Lane Configurations												
Traffic Volume (vph)	178	338	100	0	0	0	143	309	16	25	348	799
Future Volume (vph)	178	338	100	0	0	0	143	309	16	25	348	799
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10	10	10	10	10	10	10
Grade (%)		7%				1%			6%			6%
Storage Length (ft)	0		0	0		0	250		0	0		0
Storage Lanes	0		0	0		0	1		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor									1.00			1.00
Fr <sub>t</sub>		0.978						0.993				0.850
Flt Protected		0.986					0.950					0.997
Satd. Flow (prot)	0	1650	0	0	0	0	1634	1686	0	0	1679	1462
Flt Permitted		0.986					0.271					0.957
Satd. Flow (perm)	0	1650	0	0	0	0	466	1686	0	0	1611	1462
Right Turn on Red			No			Yes			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		181			447			350			203	
Travel Time (s)		4.9			12.2			8.0			4.6	
Confl. Peds. (#/hr)									1	1		
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	3	0	0	3	0
Adj. Flow (vph)	187	356	105	0	0	0	151	325	17	26	366	841
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	648	0	0	0	0	151	342	0	0	392	841
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			10			10	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.14	1.14	1.14	1.10	1.10	1.10	1.14	1.15	1.14	1.14	1.15	1.14
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1					1	1		1	1	1
Detector Template	Left	Thru					Left			Left	Thru	Right
Leading Detector (ft)	20	37					37	37		20	37	37
Trailing Detector (ft)	0	-3					-3	-3		0	-3	-3
Detector 1 Position(ft)	0	-3					-3	-3		0	-3	-3
Detector 1 Size(ft)	20	40					40	40		20	40	40
Detector 1 Type	Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0					0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0					0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0					0.0	0.0		0.0	0.0	0.0
Turn Type	Prot	NA					pm+pt	NA		Perm	NA	pm+ov
Protected Phases	7	4					5	2		6	7	

## 6: Germantown Ave &amp; Bells Mill Rd



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases							2			6		6
Detector Phase	7	4					5	2		6	6	7
Switch Phase												
Minimum Initial (s)	49.0	49.0					14.0	58.0		38.0	38.0	49.0
Minimum Split (s)	55.0	55.0					20.0	65.0		45.0	45.0	55.0
Total Split (s)	55.0	55.0					20.0	65.0		45.0	45.0	55.0
Total Split (%)	45.8%	45.8%					16.7%	54.2%		37.5%	37.5%	45.8%
Maximum Green (s)	49.0	49.0					14.0	58.0		38.0	38.0	49.0
Yellow Time (s)	3.6	3.6					3.6	4.8		4.8	4.8	3.6
All-Red Time (s)	2.4	2.4					2.4	2.2		2.2	2.2	2.4
Lost Time Adjust (s)	-1.0						-1.0	-1.0		-1.0	-1.0	
Total Lost Time (s)	5.0						5.0	6.0		6.0	5.0	
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0					3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None					None	C-Max		C-Max	C-Max	None
Act Effct Green (s)	50.0						60.0	59.0			39.0	95.0
Actuated g/C Ratio	0.42						0.50	0.49			0.32	0.79
v/c Ratio	0.94						0.40	0.41			0.75	0.73
Control Delay	57.4						19.9	21.4			37.5	8.5
Queue Delay	0.0						0.0	0.0			0.0	0.4
Total Delay	57.4						19.9	21.4			37.5	8.9
LOS	E						B	C			D	A
Approach Delay	57.4							20.9			18.0	
Approach LOS	E							C			B	

## Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 120

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.94

Intersection Signal Delay: 29.4

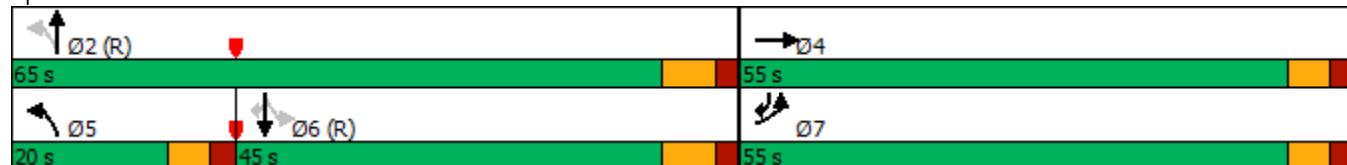
Intersection LOS: C

Intersection Capacity Utilization 135.0%

ICU Level of Service H

Analysis Period (min) 15

Splits and Phases: 6: Germantown Ave &amp; Bells Mill Rd



## 6: Germantown Ave &amp; Bells Mill Rd

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	178	338	100	0	0	0	143	309	16	25	348	799
Future Volume (veh/h)	178	338	100	0	0	0	143	309	16	25	348	799
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1834	1834	1834				1843	1843	1843	1843	1826	1843
Adj Flow Rate, veh/h	187	356	105				151	325	17	26	366	841
Adj No. of Lanes	0	1	0				1	1	0	0	1	1
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0				0	0	0	1	1	0
Cap, veh/h	211	402	119				344	854	45	56	552	1162
Arrive On Green	0.43	0.42	0.41				0.12	0.49	0.48	0.34	0.33	0.33
Sat Flow, veh/h	507	966	285				1755	1736	91	72	1695	1564
Grp Volume(v), veh/h	648	0	0				151	0	342	392	0	841
Grp Sat Flow(s),veh/h/ln	1758	0	0				1755	0	1827	1768	0	1564
Q Serve(g_s), s	40.9	0.0	0.0				6.0	0.0	14.1	7.1	0.0	35.9
Cycle Q Clear(g_c), s	40.9	0.0	0.0				6.0	0.0	14.1	22.3	0.0	35.9
Prop In Lane	0.29		0.16				1.00		0.05	0.07		1.00
Lane Grp Cap(c), veh/h	732	0	0				344	0	898	637	0	1162
V/C Ratio(X)	0.88	0.00	0.00				0.44	0.00	0.38	0.62	0.00	0.72
Avail Cap(c_a), veh/h	732	0	0				345	0	898	637	0	1162
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	0.00				1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	32.3	0.0	0.0				22.0	0.0	19.1	34.6	0.0	8.6
Incr Delay (d2), s/veh	12.5	0.0	0.0				0.9	0.0	1.2	4.4	0.0	3.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	30.1	0.0	0.0				5.3	0.0	11.8	17.1	0.0	46.2
LnGrp Delay(d),s/veh	44.7	0.0	0.0				22.9	0.0	20.3	39.0	0.0	12.5
LnGrp LOS	D						C		C	D		B
Approach Vol, veh/h	648						493			1233		
Approach Delay, s/veh	44.7						21.1			21.0		
Approach LOS	D						C			C		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	2		4	5	6							
Phs Duration (G+Y+Rc), s	65.0		55.0	19.9	45.1							
Change Period (Y+Rc), s	* 7		6.0	6.0	* 7							
Max Green Setting (Gmax), s	* 58		49.0	14.0	* 38							
Max Q Clear Time (g_c+l1), s	16.1		42.9	8.5	38.4							
Green Ext Time (p_c), s	1.3		1.6	0.2	0.0							
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay	27.5											
HCM 2010 LOS	C											
Notes												

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\* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

## **F | CHANGE AND CLEARANCE CALCULATIONS**

## **STUDY LOCATION AND ANALYSIS INFORMATION**

<b>Municipality:</b>	City of Philadelphia	<b>Analysis Date:</b>	3/2/2020
<b>County:</b>	Philadelphia County	<b>Conducted By:</b>	PT
<b>PennDOT Engineering District:</b>	6	<b>Checked By:</b>	SWJ
		<b>Agency/Company Name:</b>	ATDE

**Intersection Description:** Germantown Ave / Hillcrest Ave / Proposed Driveway

## VEHICLE AND PEDESTRIAN INTERVAL FINDINGS

#### **Vehicle Change and Clearance Interval Findings**

Approach Description	Direction	Calculated Yellow Change Interval, Y	User Defined Yellow Change Interval, Y	Calculated All-Red Clearance Interval, AR	User Defined All-Red Clearance Interval, AR	To Be Implemented	
						Y (s)	AR (s)
Germantown Ave (Phase 2)	NB	4	4.5	2.5	2.5	4.5	2.5
Germantown Ave (Phase 6)	SB	2.8	4.5	2.5	2.5	4.5	2.5
Proposed Drwy (Phase 4)	EB	3.2	3.2	1.8	2	3.2	2
Hillcrest Rd (Phase 8)	WB	2.8	3	1.5	2	3	2
Germantown (Phase 1 Left)	SB	2.5		2.4		2.5	2.4
Germantown (Phase 5 Left)	NB	3.4		2.4		3.4	2.4

**Additional Comments/Justifications:**

USE 3+2 for Phase 4

## Pedestrian Interval Findings

## **WITHOUT PEDESTRIAN SIGNALS**

WITHOUT PEDESTRIAN SIGNALS	Calculated Min. Green Interval, $T_p$
Description of Pedestrian Crossing	

**Additional Comments/Justifications:**

## VEHICLE CHANGE AND CLEARANCE INTERVALS

### Assumptions and Calibration Inputs

#### Change and Clearance Intervals (CCI, seconds)

$$CCI = Y + AR$$

##### Yellow Change Interval (Y, seconds)

$$Y = t + \frac{1.47V}{2a \pm 64.4(g/100)} \quad (\text{typ. 3-6 seconds})$$

$t$  = Perception-reaction time, s (1 second)

← 1

$V$  = Approach speed, MPH

← 10

$a$  = Deceleration rate (10 ft/s<sup>2</sup>)

$g$  = Grade of approach, %

##### All-Red Clearance Interval (AR, seconds)

$$AR = \frac{(W + L)}{1.47V}$$

$W$  = Width of the intersection, ft

(from the stop bar to the end of the farthest traveled lane)

$L$  = Length of Vehicle (20 ft) ← 20

$V$  = Approach speed, MPH

### Calculations

#### Through Movement Phases

Approach Description	Direction	V	g (%)	W	Y	AR	CCI	Comments
Germantown Ave (Phase 2)	NB	30	-8	90	4.0	2.5	6.5	
Germantown Ave (Phase 6)	SB	30	8	90	2.8	2.5	5.3	
Proposed Drwy (Phase 4)	EB	25	-4	45	3.2	1.8	5.0	
Hillcrest Rd (Phase 8)	WB	30	7	45	2.8	1.5	4.3	

#### Left-Turn Movement Phases

Approach Description	Direction	V	g (%)	W	Y	AR	CCI	Comments
Germantown (Phase 1 Left)	SB	25	7	65	2.5	2.4	4.9	
Germantown (Phase 5 Left)	NB	25	-6.5	65	3.4	2.4	5.8	VOID

PEDESTRIAN INTERVALS														
Assumptions and Calibration Inputs														
<b>Walk Interval<sup>1</sup></b> (T <sub>w</sub> , seconds)	$T_w = \left( \frac{\frac{1}{2} L}{S_w} \right) + 3$				<b>Pedestrian Interval Variables</b>									
<b>Pedestrian Change Interval</b> (T <sub>pc</sub> , seconds)	$T_{pc} = \frac{L}{S_w}$				$L = \text{Pedestrian walking distance from the curb or edge of shoulder to the far edge of the traveled way, ft}$									
<b>Minimum Duration</b> ((T <sub>w</sub> +T <sub>pc</sub> ) <sub>min</sub> , seconds)	$(T_w + T_{pc})_{min} = \frac{(L+6)}{3}$				$S_w = \text{Walking Speed, ft/s (3.5 ft/s)}$									
<p>1) The walk interval should be at least 7 seconds, but where justified, a minimum 4 second interval may be used.</p> <p>2) Minimum green interval when no pedestrian signals are present or proposed</p>														
Calculations														
Description of Pedestrian Crossing	Ped Signal	L	T <sub>w</sub>	T <sub>pc</sub>	(T <sub>w</sub> +T <sub>pc</sub> ) <sub>min</sub>	T <sub>p</sub>	Comments							
Crossing South Leg	Yes	40	8.8	11.5	15.4	N/A								
Crossing North Leg	Yes	50	10.2	14.3	18.7	N/A								
Crossing West Leg	Yes	30	7.3	8.6	12.0	N/A								
Crossing East Leg	Yes	50	10.2	14.3	18.7	N/A								

## **G | SIGHT DISTANCE**

# DRIVeway SIGHT DISTANCE MEASUREMENTS

(FOR LOCAL ROADS, USE PENNDOT PUB 70)

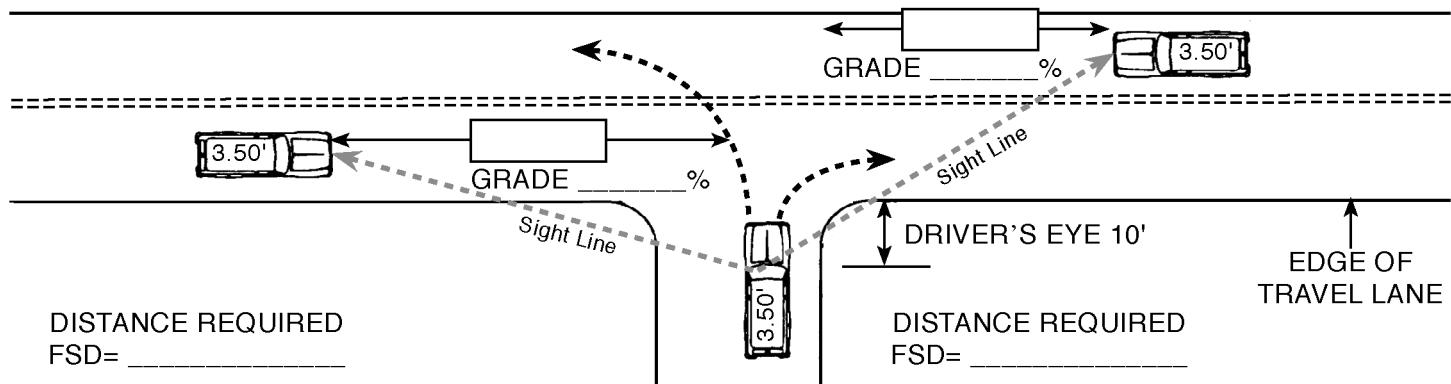
APPLICANT \_\_\_\_\_ APPLICATION NO. \_\_\_\_\_

S.R. \_\_\_\_\_ SEG. \_\_\_\_\_ OFFSET \_\_\_\_\_ LEGAL SPEED LIMIT \_\_\_\_\_

MEASURED BY \_\_\_\_\_ DATE \_\_\_\_\_

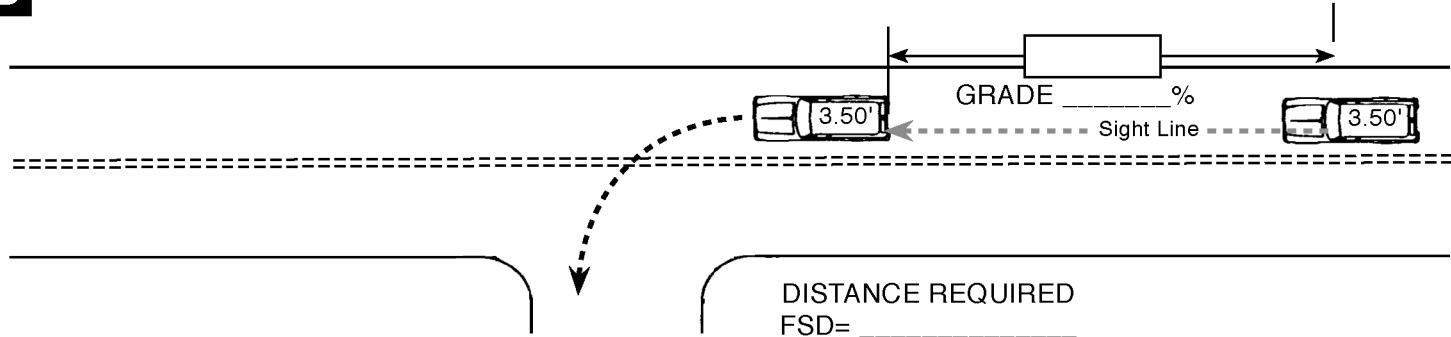
FOR DEPARTMENT USE ONLY: Safe-Running Speed \_\_\_\_\_ 85th Percentile Speed \_\_\_\_\_

A



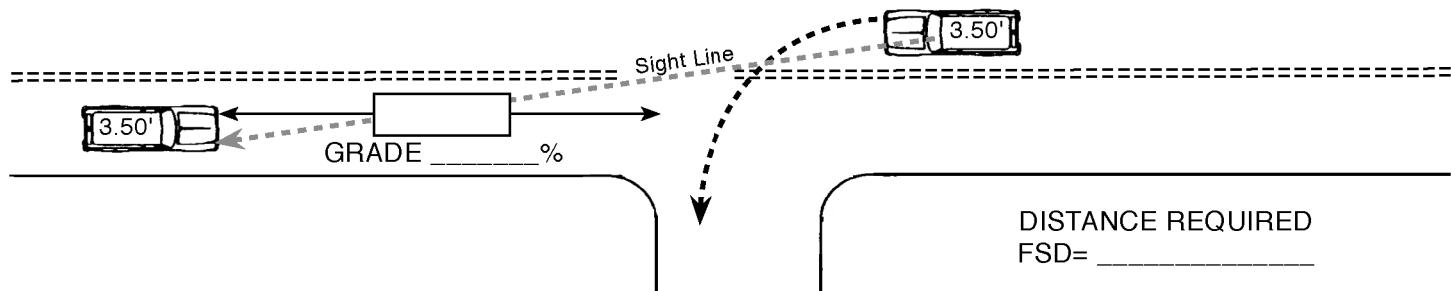
THE MAXIMUM LENGTH OF ROADWAY ALONG WHICH A DRIVER AT A DRIVEWAY LOCATION CAN CONTINUOUSLY SEE ANOTHER VEHICLE APPROACHING ON THE ROADWAY.

B



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

C



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

# FORMULA SIGHT DISTANCE TABLE

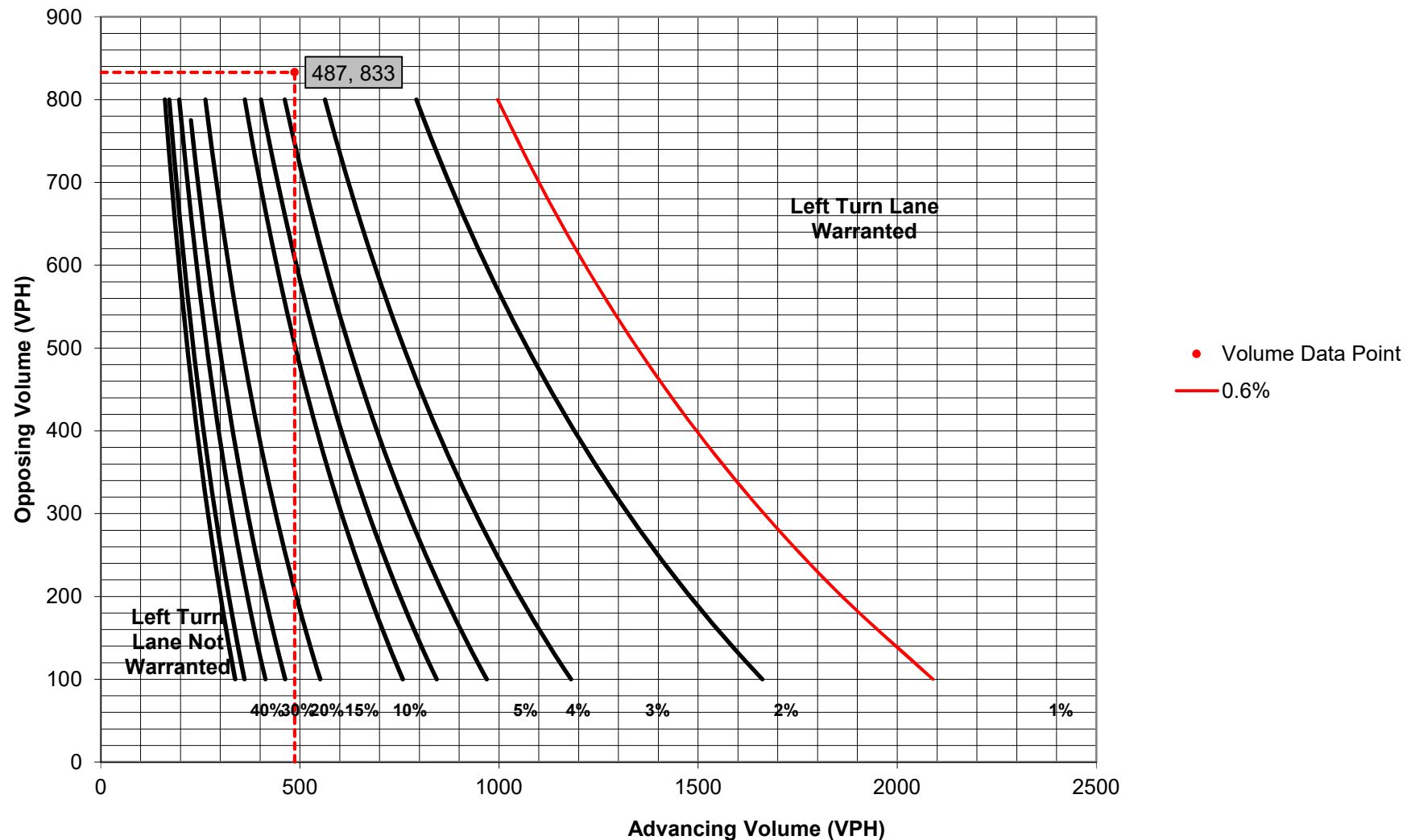
Speed (V) (Miles Per Hour)	Average Grade (G) (Percent)											
	Use plus grades when approaching vehicle is travelling upgrade.											
	0.0	+1.0	+2.0	+3.0	+4.0	+5.0	+6.0	+7.0	+8.0	+9.0	+10.0	
25	147	145	144	143	142	140	139	138	137	136	135	
30	196	194	191	189	187	185	183	182	180	178	177	
35	249	245	242	239	236	233	231	228	226	224	221	
40	314	309	304	299	295	291	287	284	280	277	274	
45	383	376	370	364	358	353	348	343	339	334	330	
50	462	453	444	436	429	422	415	409	403	397	392	
55	538	527	517	508	499	490	482	475	468	461	454	
Use negative grades when approaching vehicle is travelling downgrade.												
	0.0	-1.0	-2.0	-3.0	-4.0	-5.0	-6.0	-7.0	-8.0	-9.0	-10.0	
25	147	148	150	151	153	155	157	159	161	164	166	
30	196	199	201	204	207	210	214	217	221	226	230	
35	249	252	256	260	265	269	275	280	286	292	299	
40	314	319	325	331	338	345	352	360	369	379	389	
45	383	390	398	406	415	425	435	447	459	472	487	
50	462	471	481	492	504	517	531	546	563	581	600	
55	538	550	562	576	590	606	622	641	661	682	706	

## H | TURN LANE WARRANTS

# Turn Lane Warrant and Length Analysis Workbook

STUDY LOCATION AND ANALYSIS INFORMATION						
Municipality:	City of Philadelphia		Analysis Date:	2/25/2020		
County:	Philadelphia County		Conducted By:	PT		
PennDOT Engineering District:	6		Checked By:	SWJ		
			Agency/Company Name:	ATDE		
Intersection & Approach Description:	Germantown Avenue & Hillcrest Avenue					
Analysis Period:	2021 Build		Number of Approach Lanes:	1		
Design Hour:	PM Peak Hour		Undivided or Divided Highway:	Undivided		
Intersection Control:	Signalized		Type of Analysis			
Posted Speed Limit (MPH):	30		Left or Right-Turn Lane Analysis?:	Left Turn Lane		
Type of Terrain:	Rolling					
VOLUME CALCULATIONS						
Left Turn Lane Volume Calculations						
Movement	Include?	Volume	% Trucks	PCEV		
Advancing	Left	Yes	3	0.0%	3	
	Through	-	337	0.0%	337	
	Right	Yes	147	0.0%	147	
Opposing	Left	Yes	262	0.0%	262	
	Through	-	569	0.0%	569	
	Right	Yes	2	0.0%	2	
Advancing Volume:	487					
Opposing Volume:	833					
Left Turn Volume:	3					
% Left Turns in Advancing Volume:	0.62%					
Right Turn Lane Volume Calculations						
Movement	Include?	Volume	% Trucks	PCEV		
Advancing	Left	Yes	262	0.0%	N/A	
	Through	-	569	0.0%	N/A	
	Right	-	2	0.0%	N/A	
Advancing Volume:	N/A					
Right Turn Volume:	N/A					
TURN LANE WARRANT FINDINGS						
Left Turn Lane Warrant Findings			Right Turn Lane Warrant Findings			
Applicable Warrant Figure:	Figure 1		Applicable Warrant Figure:	N/A		
Warrant Met?:	No		Warrant Met?:	N/A		
TURN LANE LENGTH CALCULATIONS						
Intersection Control:	Signalized					
Design Hour Volume of Turning Lane:	3					
Cycles Per Hour (Assumed):	Known					
Cycles Per Hour (If Known):	40		Average # of Vehicles/Cycle:	N/A		
PennDOT Publication 46, Exhibit 11-6						
Type of Traffic Control	Speed (MPH)					
	25-35		40-45		50-60	
	Turn Demand Volume					
	High	Low	High	Low	High	Low
Signalized	A	A	B or C	B or C	B or C	
Unsignalized	A	A	C	B	B or C	
Left Turn Lane Storage Length, Condition A: N/A Feet						
Condition B: N/A Feet						
Condition C: N/A Feet						
Required Left Turn Lane Storage Length: N/A Feet						
Additional Findings: N/A						
Additional Comments / Justifications:						

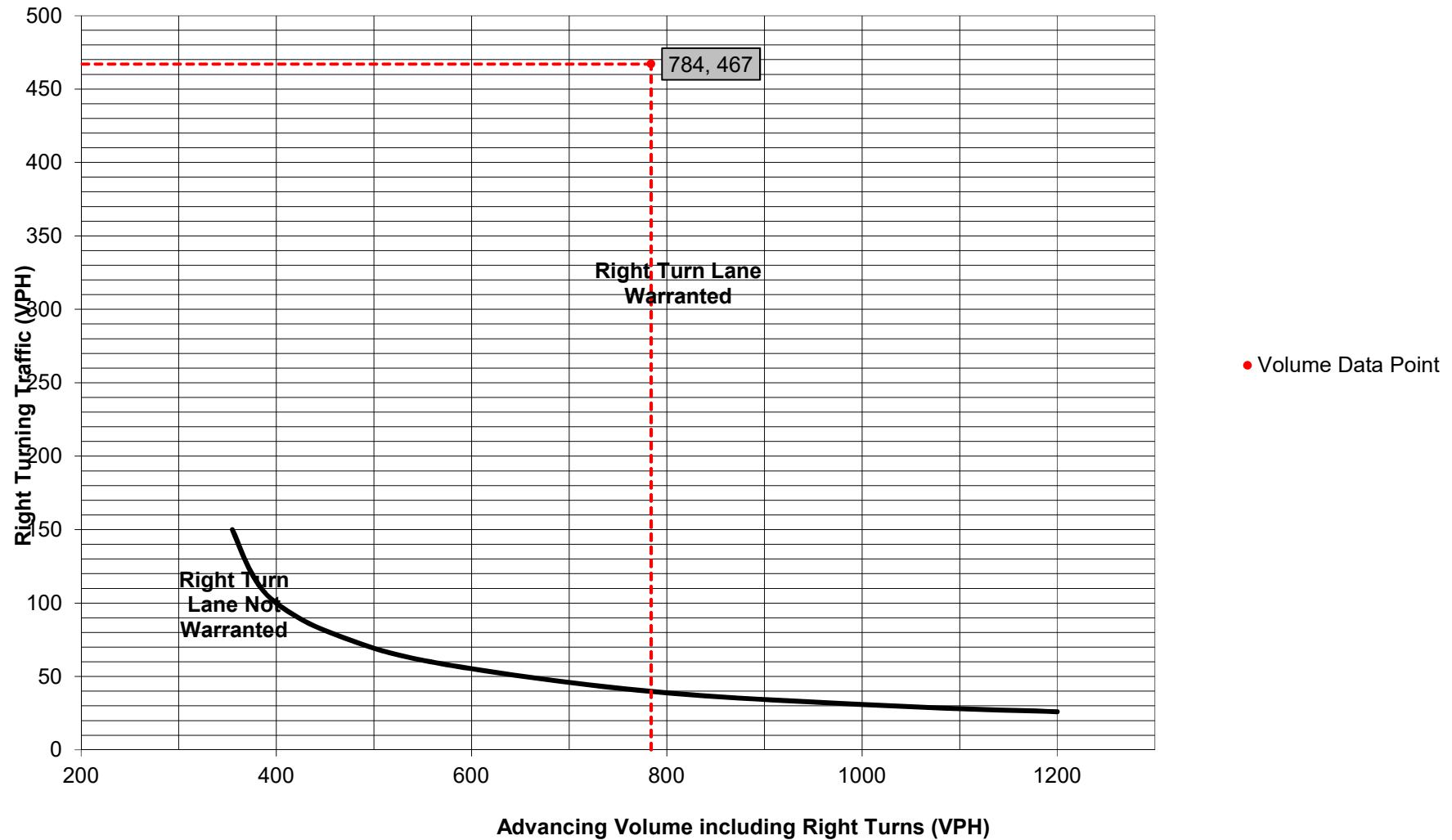
**Figure 1. Warrant for left turn lanes on two-lane roadways  
(speeds to 35 mph, unsignalized and signalized intersections)**  
(L = % Left Turns in Advancing Volume)



# Turn Lane Warrant and Length Analysis Workbook

STUDY LOCATION AND ANALYSIS INFORMATION						
Municipality:	City of Philadelphia		Analysis Date:	2/25/2020		
County:	Philadelphia County		Conducted By:	PT		
PennDOT Engineering District:	6		Checked By:	SWJ		
			Agency/Company Name:	ATDE		
Intersection & Approach Description:	Germantown Avenue & Bells Mill Road					
Analysis Period:	2021 Build		Number of Approach Lanes:	1		
Design Hour:	AM Peak Hour		Undivided or Divided Highway:	Undivided		
Intersection Control:	Signalized		Type of Analysis			
Posted Speed Limit (MPH):	30		Left or Right-Turn Lane Analysis?:	Right Turn Lane		
Type of Terrain:	Rolling					
VOLUME CALCULATIONS						
Left Turn Lane Volume Calculations						
Movement	Include?	Volume	% Trucks	PCEV		
Advancing	Left	Yes	198	0.0%	N/A	
	Through	-	390	0.0%	N/A	
	Right	Yes	18	0.0%	N/A	
Opposing	Left	Yes	5	0.0%	N/A	
	Through	-	312	1.0%	N/A	
	Right	Yes	467	0.0%	N/A	
Advancing Volume:	N/A		Opposing Volume:	N/A		
Left Turn Volume:	N/A		% Left Turns in Advancing Volume:	N/A		
Right Turn Lane Volume Calculations						
Movement	Include?	Volume	% Trucks	PCEV		
Advancing	Left	Yes	5	0.0%	5	
	Through	-	312	0.0%	312	
	Right	-	467	0.0%	467	
Advancing Volume:	784		Right Turn Volume:	467		
TURN LANE WARRANT FINDINGS						
Left Turn Lane Warrant Findings			Right Turn Lane Warrant Findings			
Applicable Warrant Figure:	N/A		Applicable Warrant Figure:	Figure 9		
Warrant Met?:	N/A		Warrant Met?:	Yes		
TURN LANE LENGTH CALCULATIONS						
Intersection Control:	Signalized					
Design Hour Volume of Turning Lane:	467					
Cycles Per Hour (Assumed):	Known					
Cycles Per Hour (If Known):	40		Average # of Vehicles/Cycle:	12.0		
PennDOT Publication 46, Exhibit 11-6						
Type of Traffic Control	Speed (MPH)					
	25-35		40-45		50-60	
	Turn Demand Volume					
	High	Low	High	Low	High	Low
Signalized	A	A	B or C	B or C	B or C	
Unsignalized	A	A	C	B	B or C	
Right Turn Lane Storage Length, Condition A: <span style="border: 1px solid black; padding: 2px;">450</span> Feet						
Condition B: <span style="border: 1px solid black; padding: 2px;">N/A</span> Feet						
Condition C: <span style="border: 1px solid black; padding: 2px;">N/A</span> Feet						
Required Right Turn Lane Storage Length: <span style="border: 1px solid black; padding: 2px;">450</span> Feet						
Additional Findings: <span style="border: 1px solid black; padding: 2px;">N/A</span>						
Additional Comments / Justifications:  <span style="border: 1px solid black; width: 800px; height: 40px;"></span>						

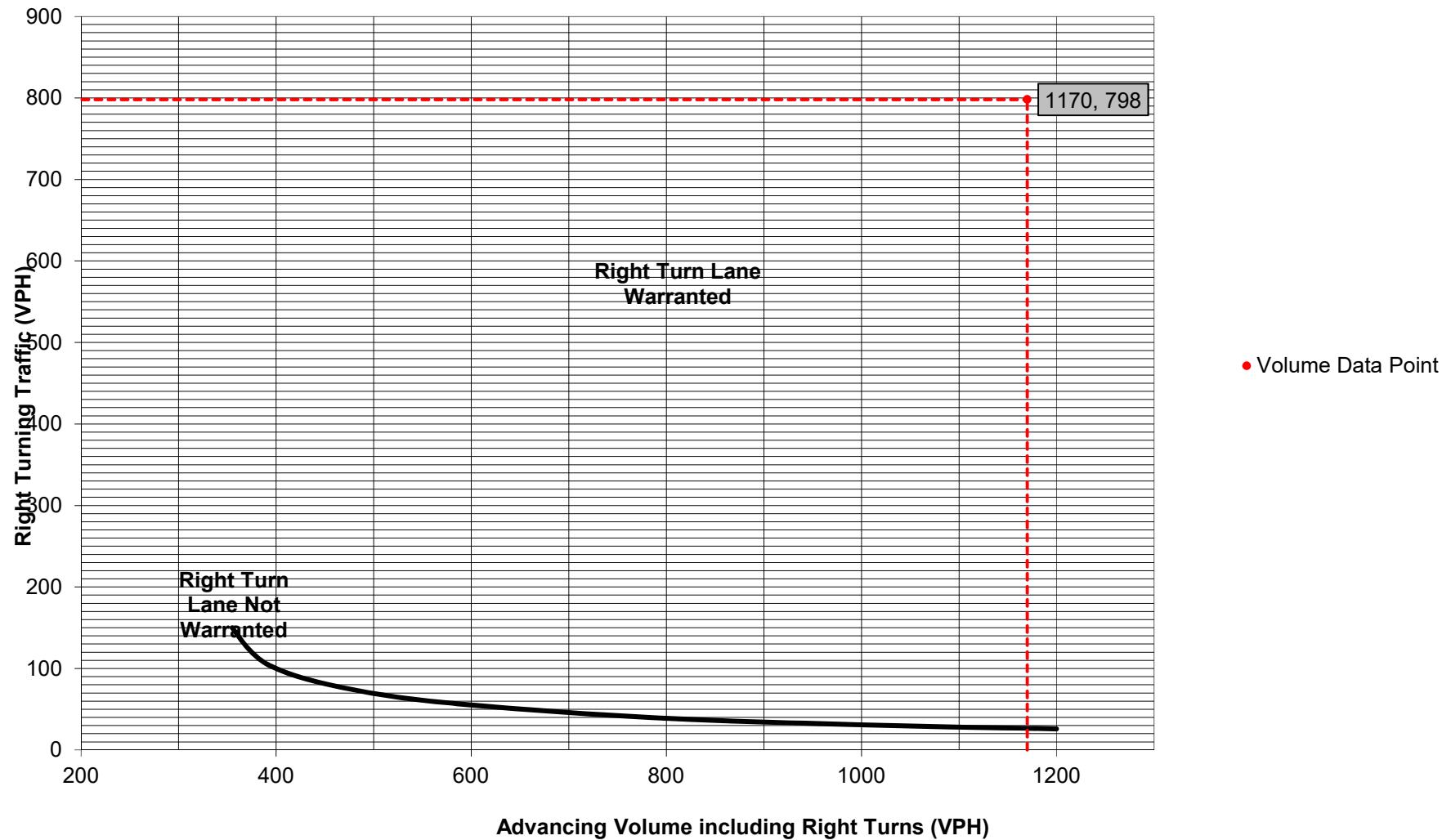
**Figure 9. Warrant for right turn lanes on two-lane roadways  
(40 mph or lower speeds, unsignalized and signalized intersections)**



# Turn Lane Warrant and Length Analysis Workbook

STUDY LOCATION AND ANALYSIS INFORMATION																																											
Municipality:	City of Philadelphia		Analysis Date:	2/25/2020																																							
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VOLUME CALCULATIONS																																											
Left Turn Lane Volume Calculations																																											
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Movement</th> <th>Include?</th> <th>Volume</th> <th>% Trucks</th> <th>PCEV</th> <th></th> </tr> </thead> <tbody> <tr> <td rowspan="3">Advancing</td> <td>Left</td> <td>Yes</td> <td>143</td> <td>0.0%</td> <td>N/A</td> </tr> <tr> <td>Through</td> <td>-</td> <td>306</td> <td>0.0%</td> <td>N/A</td> </tr> <tr> <td>Right</td> <td>Yes</td> <td>16</td> <td>0.0%</td> <td>N/A</td> </tr> <tr> <td rowspan="3">Opposing</td> <td>Left</td> <td>Yes</td> <td>25</td> <td>0.0%</td> <td>N/A</td> </tr> <tr> <td>Through</td> <td>-</td> <td>347</td> <td>0.0%</td> <td>N/A</td> </tr> <tr> <td>Right</td> <td>Yes</td> <td>798</td> <td>0.0%</td> <td>N/A</td> </tr> </tbody> </table>						Movement	Include?	Volume	% Trucks	PCEV		Advancing	Left	Yes	143	0.0%	N/A	Through	-	306	0.0%	N/A	Right	Yes	16	0.0%	N/A	Opposing	Left	Yes	25	0.0%	N/A	Through	-	347	0.0%	N/A	Right	Yes	798	0.0%	N/A
Movement	Include?	Volume	% Trucks	PCEV																																							
Advancing	Left	Yes	143	0.0%	N/A																																						
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	Through	-	347	0.0%	347																																						
	Right	-	798	0.0%	798																																						
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TURN LANE WARRANT FINDINGS																																											
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	Turn Demand Volume																																										
Signalized	High	Low	High	Low	High	Low																																					
Unsignalized	A	A	B or C	B or C	B or C	B or C																																					
Right Turn Lane Storage Length, Condition A: 675 Feet																																											
Condition B: N/A Feet																																											
Condition C: N/A Feet																																											
Required Right Turn Lane Storage Length: 675 Feet																																											
Additional Findings: N/A																																											
Additional Comments / Justifications:																																											

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

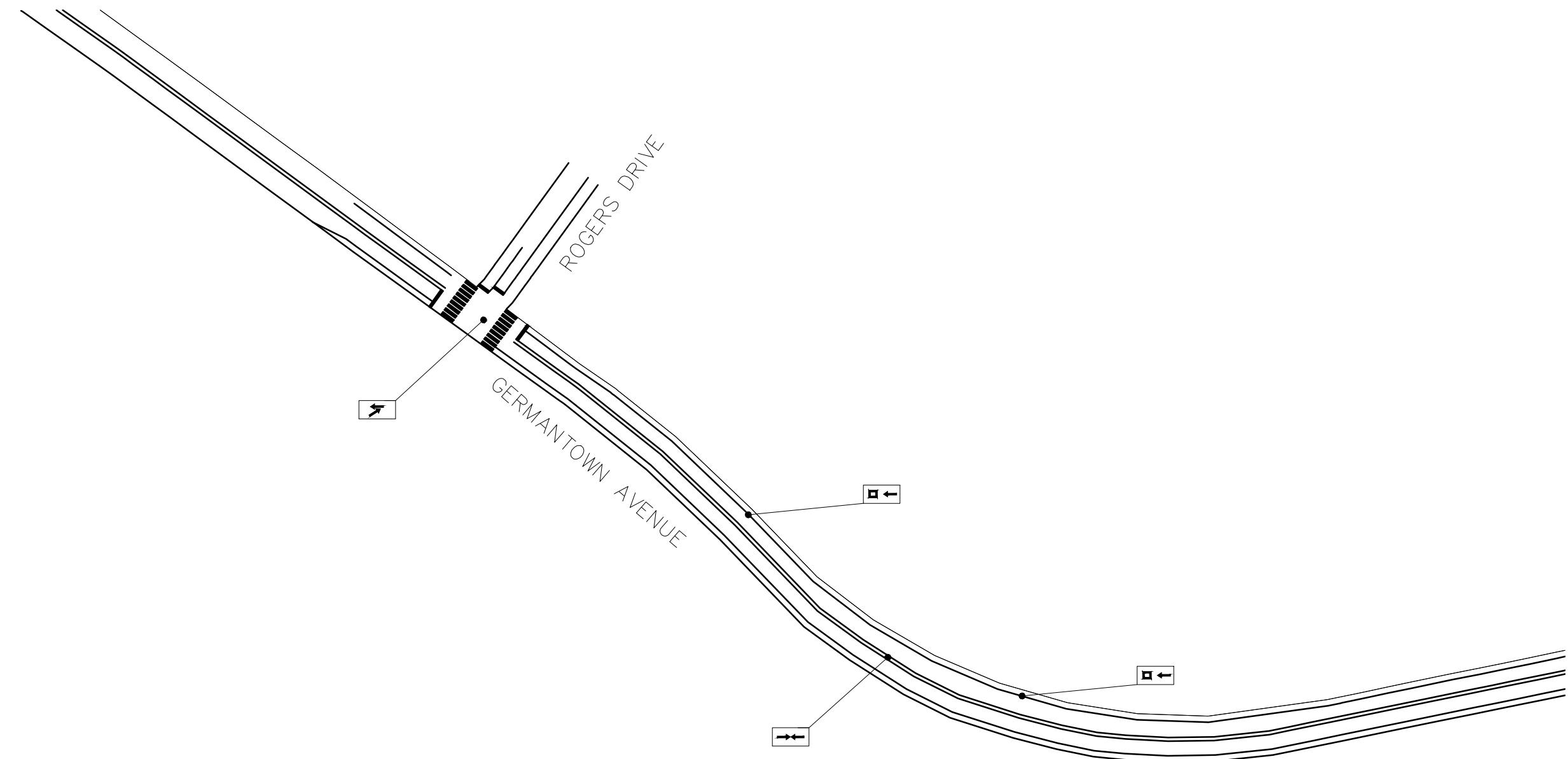


## I | CRASH DATA

Confidential -This document is 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. This document and information are 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 Pennsylvania Department of Transportation.

PROPOSED SUGARLOAF CAMPUS ACCESS  
 CITY OF PHILADELPHIA  
 PHILADELPHIA COUNTY, PENNSYLVANIA

Germantown Ave & Rogers Dr to Bells Mill Road

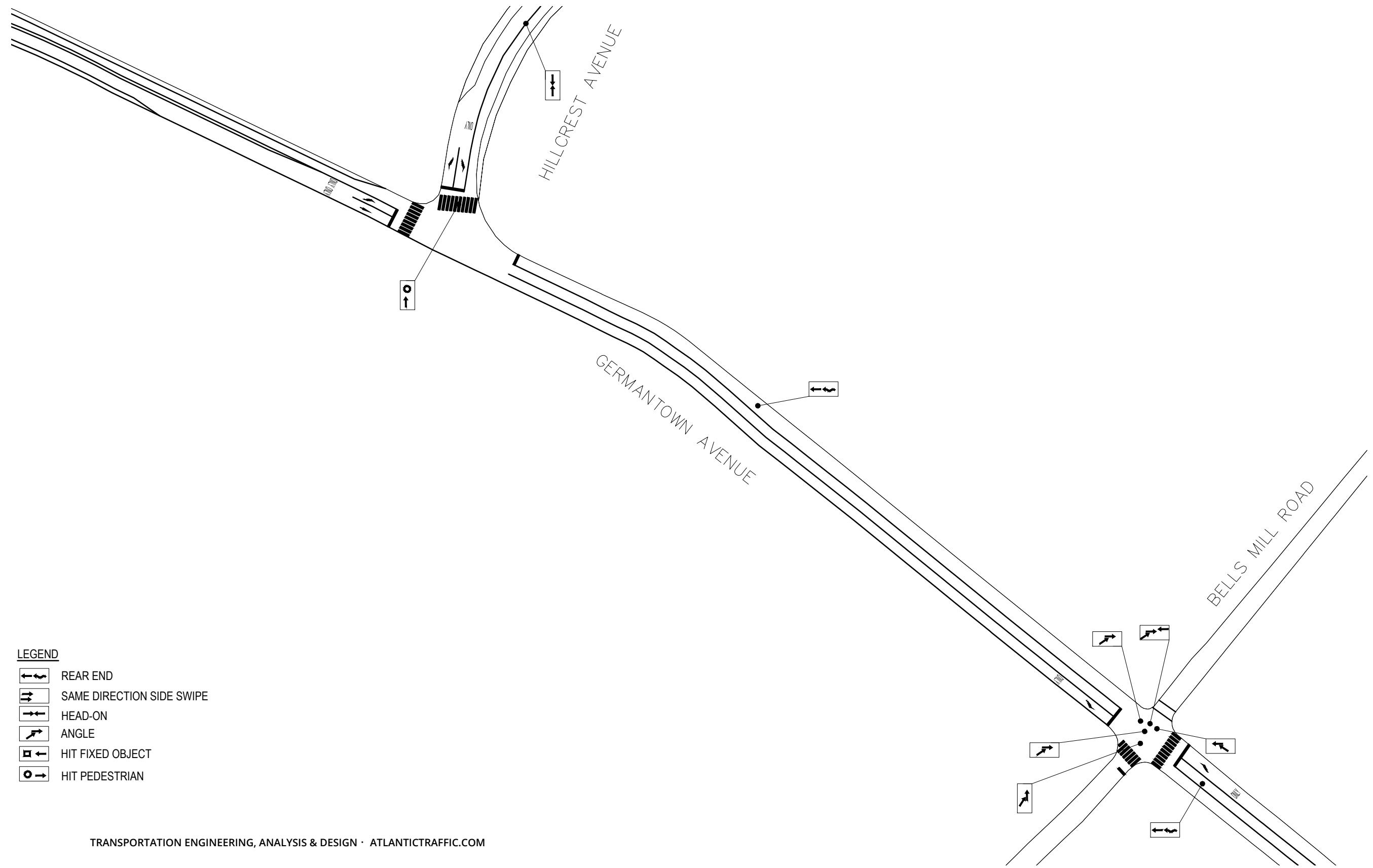


LEGEND

- |  |                           |
|--|---------------------------|
|  | REAR END                  |
|  | SAME DIRECTION SIDE SWIPE |
|  | HEAD-ON                   |
|  | ANGLE                     |
|  | HIT FIXED OBJECT          |
|  | HIT PEDESTRIAN            |

PROPOSED SUGARLOAF CAMPUS ACCESS  
 CITY OF PHILADELPHIA  
 PHILADELPHIA COUNTY, PENNSYLVANIA

Germantown Ave & Rogers Dr to Bells Mill Road



# CR20014 Philadelphia Germantown Avenue: Rogers Drive to Bells Mills Road

Date Range: 1/1/2014 to 12/31/2018

Area of Interest: Spatial: Line - 2919.849 Feet - Buffer (50 Feet)

USER ID/QUERY ID:  
rfrancisco/ [0620200218005](#)



## MONTH OF YEAR

	JAN	FEB	MAR	APR	MAY	JUN	AUG	SEP	OCT	NOV	DEC	
CRASHES	1	1	1	1	1	1	3	1	1	1	1	13
PCT	8%	8%	8%	8%	8%	8%	23%	8%	8%	8%	8%	100%

## DAY OF WEEK

	MON	TUE	WED	THR	FRI	SAT	SUN
CRASHES	4	2	1	2	4	13	
PCT	31%	15%	8%	15%	31%	100%	

## HOUR OF DAY

	06	07	08	11	12	15	16	18	23	99	
CRASHES	2	1	2	1	1	2	1	1	1	1	13
PCT	15%	8%	15%	8%	8%	15%	8%	8%	8%	8%	100%

## YEAR

	CRASHES	PCT
2014	4	31%
2015	2	15%
2016	2	15%
2017	2	15%
2018	3	23%
<b>TOTAL</b>	<b>13</b>	<b>100%</b>

	CRASHES	PCT
ANGLE	6	46%
HEAD ON	2	15%
HIT FIX OBJ	2	15%
REAR END	2	15%
PEDESTRIAN	1	8%
<b>TOTAL</b>	<b>13</b>	<b>100%</b>

	CRASHES	PCT
SUSP MINOR	1	8%
POSSIBLE INJURY	3	23%
UNK SEVERITY	2	15%
PDO	7	54%
<b>TOTAL</b>	<b>13</b>	<b>100%</b>

	PERSONS
FATALITIES	0
SUSPECTED SERIOUS	0
SUSPECTED MINOR	1
POSSIBLE INJURY	4
UNK SEVERITY	4
UNK IF INJURED	0

	ACTIONS	PCT
UNKNOWN	9	
NO CONTRIBUTING ACTION	6	
RUNNING RED LIGHT	3	
IMPROPER/CARELESS TURN	2	
TOO FAST FOR CONDITION	2	
DRIVER INEXPERIENCED	1	
ILLEGAL STOPPED ON RD	1	
OVER/UNDER COMP CURVE	1	
<b>TOTAL</b>	<b>25</b>	<b>100%</b>

## VEHICLE TYPE

	VEHICLES	PCT
SUV	11	
AUTOMOBILE	9	
VAN	2	
SMALL TRUCK	1	
LARGE TRUCK	1	
<b>TOTAL</b>	<b>24</b>	<b>100%</b>

	CRASHES	PCT
DRY	8	62%
WET	3	23%
ICE	1	8%
SNOW	1	8%
<b>TOTAL</b>	<b>13</b>	<b>100%</b>

	CRASHES	PCT
DAYLIGHT	11	85%
STREET LIGHTS	2	15%
<b>TOTAL</b>	<b>13</b>	<b>100%</b>

	CRASHES	PCT
CLEAR	8	62%
RAIN	3	23%
OTHER	1	8%
SNOW	1	8%
<b>TOTAL</b>	<b>13</b>	<b>100%</b>

	FACTORS	PCT
NONE	8	57%
SLIPPERY ICE/SNOW	3	21%
OTHER WEATHER COND	2	14%
UNKNOWN	1	7%
<b>TOTAL</b>	<b>14</b>	<b>100%</b>

CDART - CRASH SUMMARY REPORT (09-06)

**NOTES:**

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- 3 Complete data years  
Complete records of reportable crashes are available in CDART for the following years : 1999 - 2018

**REPORT PARAMETERS:**

Query ID: [0620200218005](#)

User ID: rfrancisco

Area of Interest: Spatial:  
Line - 2919.849 Feet - Buffer (50 Feet)

Date Range: 1/1/2014 to 12/31/2018

Criteria:

## **CR20014 Philadelphia Germantown Avenue: Rogers Drive to Bells Mills Road**

*Sorted by County, Route, Segment, Offset*

Date Range: 1/1/2014 to 12/31/2018

USER ID/QUERY ID:

rfrancisco/ [0620200218005](#)

Area of Spatial: Line - 2919.849 Feet - Buffer (50 Feet)

### Interest:

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Page 1 of 4

Print Date: 2/18/2020

## CR20014 Philadelphia Germantown Avenue: Rogers Drive to Bells Mills Road



Sorted by County, Route, Segment, Offset

Date Range: 1/1/2014 to 12/31/2018

USER\_ID/QUERY ID:

rfrancisco/ 0620200218005

Area of Interest: Spatial: Line - 2919.849 Feet - Buffer (50 Feet)

Interest:

CRN	CO	DATE	DAY	TIME	LIGHTING	ROAD SURF	WEATHER	FAT	INJ	PED	VEH	MAX SEVERITY
6	<a href="#">2015073692</a>	67	06/29/2015	MON	23:55	STREET LT	DRY	CLEAR	0	1	0	1
						ENV RDWY FACTORS: UNKNOWN						HIT FIXED OBJ
						MIDB GERMANTOWN AV						
						VEH: 1 SUV TRAVELING NORTH IN RIGHT LANE NEGOTIATING CURVE - LEFT						
						VEH EVENTS: HIT TREE OR SHRUBBERY						
						DVR ACTIONS: OVER/UNDER COMPENSATE CURVE						
7	<a href="#">2016017056</a>	67	01/25/2016	MON	15:10	DAYLIGHT	SNOW	SNOW	0	0	0	2
						ENV RDWY FACTORS: SLIPPERY ROAD (ICE/SNOW)						HEAD-ON
						MIDB HILLCREST AV						
						VEH: 1 SUV TRAVELING WEST IN RIGHT LANE GOING STRAIGHT						
						VEH EVENTS: HIT UNIT 02						
						DVR ACTIONS: TOO FAST FOR CONDITIONS						
						VEH: 2 AUTOMOBILE TRAVELING EAST IN ONCOMING TRAFFIC LANE PARKED						
						VEH EVENTS: STRUCK BY UNIT 01						
						DVR ACTIONS: ILLEGALLY STOPPED ON ROAD						
8	<a href="#">2016040974</a>	67	04/01/2016	FRI	12:20	DAYLIGHT	DRY	CLEAR	0	0	0	2
						ENV RDWY FACTORS: NONE						ANGLE
						T-INT GERMANTOWN AV ROGERS DR						
						VEH: 1 SUV TRAVELING NORTH IN RIGHT LANE GOING STRAIGHT						
						VEH EVENTS: HIT UNIT 02						
						DVR ACTIONS: NO CONTRIBUTING ACTION						
						VEH: 2 AUTOMOBILE TRAVELING SOUTH IN RIGHT LANE TURNING LEFT						
						VEH EVENTS: STRUCK BY UNIT 01						
						DVR ACTIONS: IMPROPER/CARELESS TURN DRIVER INEXPERIENCED						
9	<a href="#">2017037477</a>	67	03/21/2017	TUE	15:05	DAYLIGHT	DRY	CLEAR	0	0	0	2
						ENV RDWY FACTORS: NONE						ANGLE
						4WAY BELLS MILL AV GERMANTOWN AV						
						VEH: 1 AUTOMOBILE TRAVELING NORTH IN RIGHT LANE TURNING LEFT						
						VEH EVENTS: HIT UNIT 02						
						DVR ACTIONS: IMPROPER/CARELESS TURN						
						VEH: 2 AUTOMOBILE TRAVELING WEST IN RIGHT LANE TURNING RIGHT						
						VEH EVENTS: STRUCK BY UNIT 01						
						DVR ACTIONS: UNKNOWN						
10	<a href="#">2017108000</a>	67	08/29/2017	TUE	18:50	DAYLIGHT	WET	RAIN	0	0	0	1
						ENV RDWY FACTORS: NONE						HIT FIXED OBJ
						MIDB GERMANTOWN AV						
						VEH: 1 AUTOMOBILE TRAVELING NORTH IN RIGHT LANE GOING STRAIGHT						
						VEH EVENTS: HIT UTILITY POLE						
						DVR ACTIONS: UNKNOWN						
11	<a href="#">2018098530</a>	67	08/31/2018	FRI	11:47	DAYLIGHT	WET	RAIN	0	0	0	2
						ENV RDWY FACTORS: OTHER WEATHER CONDITIONS						ANGLE
						4WAY BELLS MILL RD GERMANTOWN AV						
						VEH: 1 SUV TRAVELING SOUTH IN RIGHT LANE GOING STRAIGHT						
						VEH EVENTS: HIT UNIT 02						
						DVR ACTIONS: RUNNING RED LIGHT						
						VEH: 2 AUTOMOBILE TRAVELING EAST IN RIGHT LANE GOING STRAIGHT						
						VEH EVENTS: STRUCK BY UNIT 01						
						DVR ACTIONS: NO CONTRIBUTING ACTION						

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Page 2 of 4

Print Date: 2/18/2020

## CR20014 Philadelphia Germantown Avenue: Rogers Drive to Bells Mills Road



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USER\_ID/QUERY ID:

rfrancisco/ 0620200218005

Area of Spatial: Line - 2919.849 Feet - Buffer (50 Feet)

Interest:

CRN	CO	DATE	DAY	TIME	LIGHTING	ROAD SURF	WEATHER	FAT	INJ	PED	VEH	MAX SEVERITY
12	<a href="#">2018108094</a>	67	10/12/2018	FRI	16:50	DAYLIGHT	DRY	CLEAR	0	1	0	2
			ENV RDWY FACTORS:	NONE								REAR-END
			MIDB	GERMANTOWN AV								
			VEH:	1	SUV TRAVELING NORTH IN RIGHT LANE GOING STRAIGHT							
			VEH EVENTS:	HIT UNIT 02								
			DVR ACTIONS:	UNKNOWN								
			VEH:	2	SUV TRAVELING NORTH IN RIGHT LANE STOPPED IN TRAFFIC LANE							
			VEH EVENTS:	STRUCK BY UNIT 01								
			DVR ACTIONS:	UNKNOWN								
13	<a href="#">2019017106</a>	67	12/31/2018	MON	99:99	STREET LT	WET	RAIN	0	0	0	3
			ENV RDWY FACTORS:	OTHER WEATHER CONDITIONS								ANGLE
			4WAY	BELLS MILL RD GERMANTOWN AV								
			VEH:	1	SUV TRAVELING EAST IN RIGHT LANE GOING STRAIGHT							
			VEH EVENTS:	HIT UNIT 02								
			DVR ACTIONS:	RUNNING RED LIGHT								
			VEH:	2	SUV TRAVELING SOUTH IN ONE LANE ROAD GOING STRAIGHT							
			VEH EVENTS:	STRUCK BY UNIT 01		HIT UNIT 03						
			DVR ACTIONS:	NO CONTRIBUTING ACTION								
			VEH:	3	VAN TRAVELING NORTH IN LEFT TURN LANE STOPPED IN TRAFFIC LANE							
			VEH EVENTS:	STRUCK BY UNIT 02								
			DVR ACTIONS:	NO CONTRIBUTING ACTION								

---

## **CR20014 Philadelphia Germantown Avenue: Rogers Drive to Bells Mills Road**

Sorted by County, Route, Segment, Offset

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Line - 2919.849 Feet - Buffer (50 Feet)

Date Range: 1/1/2014 to 12/31/2018

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