





School Vehicular Access and Circulation Study

- Conestoga High School
- T/E Middle School
- Valley Forge Middle School
- Valley Forge Elementary School

For Submission To:

Tredyffrin/Easttown School District

EXECUTIVE SUMMARY

INTRODUCTION

Traffic Planning and Design, Inc. (TPD) has prepared a Vehicular Access and Circulation Study for the following four (4) schools:

- Conestoga High School
- T/E Middle School
- Valley Forge Middle School
- Valley Forge Elementary School

PURPOSE/GOALS

The purpose and goals of the Study were as follows:

- To Conduct an Access and Internal Circulation Assessment to determine any Existing Issues/Issues
- Determine Short-Term/Long-Term Enhancements to Facilitate Traffic Flow
- Obtain Community Input via an Online Survey

FIELD IDENTIFIED ISSUES

The following issues were identified:

- Significant Vehicle Queues (internally and on public roadways)
- Illegal Turning Movements
- Improper Lane Usage
- Use of Improper Drop-Off and Pick-Up Areas
- Bus vs. Parent Vehicle Ratio
- Bus vs. Parent Vehicle Segregation

POTENTIAL PROGRAMMATIC ENHANCEMENTS

The following potential programmatic enhancements were identified:

- Bus Schedule/Ride Time Evaluation
- Student Dismissal Buses vs. Other Vehicles
- Additional Staff in the drop-off/pick-up areas
- Student Dismissal Times (e.g. Conestoga High School and T/E Middle School).
- Additional Crossing Guards
- Municipal Enforcement of Existing Parking Restrictions
- Potential Grant Funding Opportunities

POTENTIAL PHYSICAL ENHANCEMENTS

The following potential physical enhancements were identified:

Conestoga High and T/E Middle Schools

- Bus Turnaround Area for sports team buses
- Additional Bus/Vehicle Queue Lane on Old State Road
- Vehicle Queue Area on Conestoga Road
- EB Conestoga Road Left Turn Lane at Cassatt Road
- Review/Modify Traffic Signal Operations
- T/E Middle School Additional Parking Lot and Queue Lane
- Establish/Expand School Zones and Installation of Flashing Lights at Pedestrian Crossings, where applicable
- Install Covered Drop-Off Areas

Valley Forge Middle School

- Secondary Access to Chesterbrook Boulevard
- EB Walker Road Right Turn Lane
- SB Valley Forge Road Right Turn Lane
- Establish/Expand School Zones and Installation of Flashing Lights at Pedestrian Crossings, where applicable
- Install Covered Drop-Off Areas

Valley Forge Elementary School

- Secondary Driveway
- WB Walker Road Right Turn Lane
- EB Walker Road Left Turn Lane
- Widen Existing Driveway
- Install Covered Drop-Off Areas
- Establish/Expand School Zones and Installation of Flashing Lights at Pedestrian Crossings, where applicable

SCHOOL DISTRICT ONLINE TRAFFIC STUDY SURVEY

A summary of topics/questions contained in the online survey are as follows:

- Adequacy of Parking Lots
- Driveway Access
- Arrival/Dismissal Times
- Bus Traffic
- Non-Bus Traffic
- Pedestrians
- Crossing Guards
- Traffic Control and Enforcement

Page 3 ————— www.TrafficPD.com

Conestoga High School and T/E Middle School

Page 4 ______ www.TrafficPD.com

Data Collection

In order to identify areas of constraint around the schools, TPD conducted field observations of traffic operations. In addition, TPD recorded traffic operations at key locations utilizing MioVision camera technology during the following times:

- **Conestoga High School** Wednesday, February 22, 2017, 6:30 A.M. 8:00 A.M. and 1:30 P.M. 5:30 P.M.
- Tredyffrin/Easttown Middle School Tuesday, March 7, 2017, 6:30 A.M. 8:00 A.M. and 1:30 P.M. 5:30 P.M.

In addition to the field data collected above, TPD also reviewed the results of the surveys conducted by the School District to identify recurring concerns offered by parents and residents.

Survey Results

Based on a review of the survey responses, TPD identified the following concerns that were mentioned in multiple responses:

- » Athletic buses parking on Irish Road adjacent to Conestoga High School which block one of the traffic lanes;
- » Limited sight distance for vehicles and pedestrians at the Irish Road pedestrian crossing between the High School and the parking lot. Obstacles identified include the fence and vegetation;
- » Change in bus schedules causing parents to let their children get extra sleep by driving them to school rather than taking early buses;
- » Student pedestrians crossing streets without looking, not crossing in groups, and not focusing on crossing the street in a timely manner; and,
- » Eastbound Conestoga Road vehicles waiting to make a left turn onto Cassatt Road blocking other vehicles from continuing along Conestoga Road, resulting in vehicle queues that block the access to Tredyffrin/Easttown Middle School and cause excessive congestion along Conestoga Road.

Field Identified Issues

- » Students utilizing crosswalks do not cross in groups which results in increased delays for vehicles on the surrounding roadways.
- » Large numbers of vehicles park illegally on roadway shoulders and within the travel lanes while waiting to pick up students.
- » Traffic from the drop-off/pick up loop on Irish Road extend out of the loop, onto Irish Road and into the intersection with Conestoga Road. This causes vehicles attempting to travel westbound on Conestoga Road through the intersection with Irish Road to use the opposing travel lane to bypass the stopped vehicles. The stopped vehicles also limit sight distance for those drivers on Conestoga Road which compounds the safety concerns.
- » Vehicles make illegal u-turns to avoid congestion on the roadways which increases vehicle conflicts.
- » Significant vehicle queueing occurs along Conestoga Road, Howellville Road, and Old Lancaster Road due to the signalized intersections in the area.
- » Traffic queues on Conestoga Road travel towards Cassatt Road are increased due to vehicles waiting to turn left onto Cassatt Road.

Page 5 ______www.TrafficPD.com

- » Limited vehicle waiting areas at Tredyffrin/Easttown Middle School cause vehicles to queue back to Conestoga Road which increases congestion on the roadway.
- » The large number of school buses leaving the High School overwhelms roadway and intersection capacity in the area surrounding the school campuses. The problem is exacerbated by the large number of passenger vehicles operating in the same area.

Potential Solutions

Based on a review of existing operations, it appears that a combination of programmatic and physical enhancements may aid in relieving some of the existing traffic congestion in the area of Conestoga High School and Tredyffrin/Easttown Middle School.

Programmatic Enhancements

As a result of field observations and a review of survey responses, TPD recommends the School District consider the following programmatic enhancements to reduce the concentration of vehicles in the vicinity of each school campus:

- » Provide additional crossing guards at key street crossings to ensure students are crossing in platoons rather than attempting to immediately cross the street as they arrive. Platooning pedestrians through the crosswalks will decrease the number and length of traffic stoppages at the crosswalks.
- » Establish/Expand School Zones and Installation of Flashing Lights at Pedestrian Crossings, where applicable.
- » Coordinate with Tredyffrin Township to identify potential grant funding opportunities to provide safe pedestrian access to neighborhoods near the schools. Through an increase in students walking to school, parent drop-offs and pickups should be reduced.
- » Expand the amount of time between school dismissal at Conestoga High School and Tredyffrin/Easttown Middle School. Based on the close proximity of the two schools and the unique roadway configuration in the area, allowing High School related traffic to clear the area before introducing Middle School related traffic will allow the roadway system to function in a more efficient manner.
- » Evaluate the feasibility of dismissing students riding the bus at an earlier time than student drivers or students being picked up. Specifically at Conestoga High School, once the buses leave the school, there is a significant amount of space that could be used by drivers picking up students.
- » Coordinate with Tredyffrin Township on increasing enforcement of existing parking restrictions along area roadways.
- » Further evaluate the impact of bus schedules and identify the number of parents driving their children to school based solely on scheduled bus pickup times. If bus occupancy is increased, passenger vehicles attempting to access the area around the schools will be decreased.
- » Provide additional staff in the drop-off/pick-up loops at the schools to ensure the areas are being fully utilized.

Physical Enhancements

» Evaluate the construction of a turnaround area for High School sports team buses to utilize the existing access drive adjacent to the gym for pickups and drop-offs to prevent them from stopping on Irish Road.

Page 6 ______ www.TrafficPD.com

- » Construct an additional area for bus/vehicle queuing in the open space on the north side of Old State Road.
- » Construct a vehicle queueing area parallel to Conestoga Road between the football stadium and the Middle School access drive.
- » Determine the feasibility of installation of an eastbound Conestoga Road left-turn lane at Cassatt Road.
- » Review traffic signal operations at the signalized intersections in the vicinity of the school campuses to determine if timings and operations can be optimized during school traffic peaks.
- » Construct an additional parking or queuing area along Old Lancaster Road, adjacent to the existing parking lot.
- » Install Covered Drop-Off Areas to improve internal circulation.

Page 7 ______ www.TrafficPD.com

Valley Forge Middle School

Data Collection

In order to identify areas of constraint around the schools, TPD conducted field observations of traffic operations. In addition, TPD recorded traffic operations at key locations utilizing MioVision camera technology during the following time periods:

- Thursday, January 12, 2017, 6:00 A.M. 6:00 P.M.
- Tuesday, April 25, 2017, 6:00 A.M. 6:00 P.M.

In addition to the field data collected above, TPD also reviewed the results of the surveys conducted by the School District to identify recurring concerns offered by parents and residents.

Survey Results

Based on a review of the survey responses, TPD identified the following concerns that were mentioned in multiple responses:

- » Widen the eastbound approach of Walker Road in order to improve stacking and internal congestion;
- » Non-segregation of vehicle types and drop-off/pick-up areas creates internal congestion;
- » Potential access to Chesterbrook Boulevard;
- » Consideration of re-configuring the parking lots and drop-off areas;
- » Investigate the need for an advance left turn phase for the northbound approach of Valley Forge Road at its signalized intersection with Walker Road;
- » Provision of additional crossing guards
- » Provision of additional sidewalks;

Field Identified Issues

- » Parents drop-off their children in five (5) separate locations:
 - Eastern Parking Lot
 - Western Parking Lot
 - o Bus Loop
 - Valley Forge Road
 - Chesterbrook Boulevard (24 drop-offs observed between 7:00-8:00am on April 25, 2017)
- » Traffic from the drop-off/pick up areas creates excessive queueing on-site, eastbound Walker Road, and Valley Forge Road.
- » Significant vehicle queueing occurs in the northbound Valley Forge Road left turn at the signalized intersection with Walker Road.
- » Non-segregation of vehicle types (i.e. buses vs. passenger vehicles) creates undue internal congestion and confusion for drivers. This results in excessive queues and spillover onto public streets.

Potential Solutions

Based on a review of existing operations, it appears that a combination of programmatic and physical enhancements may aid in relieving some of the existing traffic congestion in the area of Valley Forge Middle School. The following are our recommendations:

Programmatic Enhancements

As a result of field observations and a review of survey responses, TPD recommends the School District consider the following programmatic enhancements to reduce the concentration of vehicles in the vicinity of the school campus:

- » Further evaluate the impact of bus schedules and identify the number of parents driving their children to school based solely on scheduled bus pickup times. If bus occupancy is increased, passenger vehicles attempting to access the area around the schools will be decreased.
- » Evaluate parent drop-off/pick-up areas in terms of providing improved segregation of vehicle types.
- » Provide additional staff in the drop-off/pick-up loops at the schools to ensure the proper areas are being fully utilized and enforced.
- » Coordinate with Tredyffrin Township to identify potential grant funding opportunities to provide safe pedestrian access to neighborhoods near the schools. Through an increase in students walking to school, parent drop-offs and pickups should be reduced.

Physical Enhancements

Provide/Evaluate the following enhancements (or a combination thereof);

- » Construction of a separate right turn lane on eastbound Walker Road to provide added capacity and reduce excessive on-site queuing of vehicles.
- » Construction of a separate right turn lane on southbound Valley Forge Road to provide added capacity and reduce excessive queuing of vehicles spilling over onto Walker Road.
- » Construction of a secondary driveway to Chesterbrook Boulevard.

A capacity analysis and queue evaluation is presented in Tables 2 and 3. This evaluation provides a comparison of existing traffic conditions and the proposed improvement scenarios listed above.

The need for a left turn advance phase for the northbound approach of Valley Forge Road at its intersection of Walker Road.

A results of a conflict factor analysis are presented in Tables 4 and 5.

- » Establish/Expand School Zones and Installation of Flashing Lights at Pedestrian Crossings, where applicable.
- » Install Covered Drop-Off Areas to improve internal circulation.

CAPACITY ANALYSES

For analysis of intersections, level of service is defined in terms of delay, which is a measure of driver discomfort and frustration, fuel consumption, and lost travel time. LOS criteria is stated in terms of control delay per vehicle for a one-hour analysis period. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. The criteria are shown in **Table 1**. Delay, as it relates to level of service, is a complex measure and is dependent upon a number of variables. For signalized intersections, these variables include the quality of vehicle progression, the cycle length, the green time ratio, and the volume/capacity ratio for the lane group in question.

Page 10 — www.TrafficPD.com

TABLE 1 LEVEL OF SERVICE CRITERIA UNSIGNALIZED AND SIGNALIZED INTERSECTIONS

Lovel of Comics	Control Delay Per Vehicle (Seconds)				
Level of Service	Signalized	Unsignalized			
А	<u>≤</u> 10	<u><</u> 10			
В	> 10 and <u><</u> 20	> 10 and <u><</u> 15			
С	> 20 and <u><</u> 35	> 15 and <u><</u> 25			
D	> 35 and <u><</u> 55	> 25 and <u><</u> 35			
E	> 55 and <u><</u> 80	> 35 and <u><</u> 50			
F	> 80 or v/c > 1.0	> 50 or v/c > 1.0			

Level of service (LOS) matrices for the intersection of Valley Forge Road and Walker Road are shown in **Table 2**. For each peak hour analyzed, the following scenarios were considered:

- » Existing Conditions (No Enhancements);
- » Provision of a Right Turn Lane on the eastbound approach of Walker Road;
- » Provision of a secondary driveway to Chesterbrook Boulevard;
- » Provision of a Right Turn Lane on the southbound approach of Valley Forge Road;
- Provision of a Right Turn Lane on the eastbound approach of Walker Road <u>and</u> provision of a Right Turn Lane on the southbound approach of Valley Forge Road.

TABLE 2
LEVEL OF SERVICE DELAY (SECONDS) SUMMARY

			Weeko	lay A.M. Pe	ak Hour		Weekday P.M. Peak Hour				
			Enhancement Options						Enhanceme	nt Options	;
Intersection I	Movement	Existing Condition	EB Right Turn Lane	Walker Road Extension		EB & SB Right Turn Lane	Existing Condition	EB Right Turn Lane	Walker Road Extension	SB Right Turn Lane	EB & SB Right Turn Lane
	EB LT	E	D	E	E	D	D	D	_	D -	D
EB R	EB R	Ц	D	_ <u>_</u>	<u> </u>	D		D	D		D
Valley Force	WB LTR	D	D	D	D	D	D	F (112.6)	D	D	F (112.6)
Valley Forge Road	NB L	В	В	В	В	Α	Α	Α	Α	Α	А
&	NB TR	Α	А	Α	А	А	Α	Α	Α	Α	А
Walker Road	SB L	Α	А	А	Α	Α	Α	А	А	Α	А
ROdu	SB T	۸	۸	۸	Α	А	^	۸	۸	Α	А
	SB R	A	A	Α	Α	А	Α	Α	Α	Α	А
	ILOS	C (22.5)	B (17.7)	B (19.3)	C (21.0)	B (16.6)	B (14.9)	C (23.4)	B (13.5)	B (14.9)	C (23.4)

Key

EB=Eastbound WB=Westbound NB=Northbound SB=Southbound

L=Left Turn Movement T=Through Movement R=Right Turn Movement

ILOS=Intersection Level of Service

95TH PERCENTILE QUEUE ANALYSIS

Queue analyses were conducted at the signalized study area intersections using *Synchro 8* software. For this analysis, the 95th percentile queue is defined as the queue length that is exceeded in 5% of the signal cycles. As an example, for a signal with a 90-second cycle, this means that the 95th percentile queue length will be exceeded during 2 of the 40 signal cycles that occur during the peak hour. The queue analysis results are summarized in **Table 3** for the analyzed peak hours.

TABLE 3
95TH PERCENTILE QUEUE (FEET) SUMMARY

		r		Weekda	y A.M. Pea	ak Hour		Weekday P.M. Peak Hour										
		Existing		Enhancement Options						Enhanceme	ent Option	S						
Intersection il vio vement		Storage	Existing	EB Right Turn Lane	Walker Road Extension	SB Right Turn Lane	IKIANT IIIRN		EB Right Turn Lane	Walker Road Extension	SB Right Turn Lane	IKIANT IIIRN						
	EB LT	135¹	1251	1251		155	308	373	155	200	65	163	200	58				
	EB R		373	198	306	3/3	198	200	120	103	200	120						
Valley Forge	WB LTR	200+	160	175	158	160	175	110	185	113	110	85						
Road &	NB L	150	190	160	168	163	138	25	30	23	25	30						
Walker	NB TR	300+	58	50	50	58	50	123	140	110	123	140						
Road	SB L	125	8	8	8	8	8	8	10	8	8	10						
	SB T	300+	300+	300+	300+	300+	300+	300+	202	250	255	180	155	60	60	F2	55	60
	SB R								300+	300+	300+	300+	300+	300+	283	250	255	73

¹ = Distance to adjacent parking lot entrance

<u>Key</u>

EB=Eastbound WB=Westbound NB=Northbound SB=Southbound L=Left Turn Movement T=Through Movement R=Right Turn Movement

CONFLICT FACTOR ANALYSIS

Per the request of the School District, TPD evaluated left-turn signal phasing for the northbound approach of Valley Forge Road (S.R. 0252) at its intersection with Walker Road. The evaluation of left-turn phasing was conducted according to the methodologies contained in Chapter 3 of PennDOT *Publication 149M* traffic volumes for existing traffic volumes obtained in January and April 2017.

PennDOT *Publication 149* states: "Based upon the Department's experience and the data in the Highway Capacity Manual, a minimum approach volume of two left turns for each existing cycle during two or more separate one-hour periods of a normal weekday has been established as the minimum volume necessary before any type of left turn phasing should be considered due to volume parameters. In addition, the following conflict factor thresholds should also be exceeded for two separate one-hour periods during a normal weekday. Opposing right turn movements may be added to the opposing through movement when appropriate and/or specified by the District Traffic Engineer or designee. A conflict factor is the product of the left turn volume and the opposing through/right turn traffic volume for any one-hour period of a normal weekday. Meeting these thresholds only indicates the need for a left turn phase, but the type of operation should be the most safe and efficient operation."

Page 12 — www.TrafficPD.com

TPD evaluated the need for advance phases for left turning vehicles at the intersection of Valley Forge Road (S.R. 0252) and Walker Road based upon the methodology contained within PennDOT Publication 149M, Section 3.1. When a separate turn lane is present, the following guidelines are applied:

» Consider protected/permitted left-turn phasing when the conflict factor is greater than 50,000 for two or more one-hour periods for one lane,

Tables 4 and 5 summarize the results of the auxiliary turn lane analysis at the subject intersection.

TABLE 4 CONFLICT FACTORS VALLEY FORGE ROAD (S.R. 0252) AND WALKER ROAD

(JANUARY 12, 2017)

		Left Turn				Оррс	sing	Calculated	Required
Time	Hour	Direction	Exclusive Lane	Per Cycle	Volume	Volume	# of Lanes	Conflict Factor	Conflict Factor
AM _	6:30- 7:30am	NB	Υ	3.92	141	400	1	56,400	50,000
	7:30- 8:30am	NB	Υ	2.64	95	415	1	39,425	50,000
РМ	2:00- 3:00pm	NB	Υ	2.03	81	201	1	16,281	50,000
	3:00- 4:00pm	NB	Y	1.13	45	165	1	7,425	50,000

TABLE 5 CONFLICT FACTORS VALLEY FORGE ROAD (S.R. 0252) AND WALKER ROAD

(APRIL 25, 2017)

			Left T	urn	, ,	Оррс	sing	Calculated	Required	
Time	Hour	Direction	Exclusive Lane	Per Cycle	Volume	Volume	# of Lanes	Conflict Factor	Conflict Factor	
AM -	6:30- 7:30am	NB	Υ	3.44	124	390	1	48,360	50,000	
	7:30- 8:30am	NB	Υ	2.56	92	479	1	44,068	50,000	
PM	2:00- 3:00pm	NB	Υ	2.25	90	163	1	14,670	50,000	
	3:00- 4:00pm	NB	Y	1.23	49	177	1	8,673	50,000	

Page 14 — www.TrafficPD.com

Valley Forge Elementary School

age 15 — www.TrafficPD.com

Data Collection

In order to identify areas of constraint around the schools, TPD conducted field observations of traffic operations. In addition, TPD recorded traffic operations at key locations utilizing MioVision camera technology during the following time periods:

Tuesday, April 4, 2017: 6:30 A.M. – 9:30 A.M.
 2:30 P.M. – 4:30 P.M.

In addition to the field data collected above, TPD also reviewed the results of the surveys conducted by the School District to identify recurring concerns offered by parents and residents.

Survey Results

Based on a review of the survey responses, TPD identified the following concerns that were mentioned in multiple responses:

- The parking and on-site stacking for parent vehicles is deficient;
- » Queuing of parent vehicles does not allow buses to enter the school property to access the loop area;
- » Vehicles often queue onto Walker Road;
- » As a result of frustration, non-school vehicles on Walker Road travel at excessive speeds and pass school vehicles:
- » The recent "one-mile" limit for walkers vs. buses is excessive and should be reduced;
- » Extremely long wait-times for drop-offs/pick-ups;
- » The school driveway should be widened to provide more on-site stacking and permit buses to properly enter the school grounds;
- » Increase the number/length of sidewalks and trails to provide safer access for students walking and bicycling from the adjacent neighborhoods.

Field Identified Issues

- » Queuing of parent vehicles does not permit buses to enter the school property to access the loop area. Buses were observed utilizing the driveway egress lane to access the loop area;
- » Limited vehicle waiting areas along the school driveway and internal aisles result in vehicles queuing onto Walker Road, increasing congestion on the roadway.
- » As a result of frustration, non-school vehicles on Walker Road travel at excessive speeds and pass school vehicles. Several of these vehicles were observed crossing the painted centerline, into the opposite lane of traffic;

Potential Solutions

Based on a review of existing operations, it appears that a combination of programmatic and physical enhancements may aid in relieving some of the existing traffic congestion in the area of Valley Forge Elementary School. The following are our recommendations:

Programmatic Enhancements

As a result of field observations and a review of survey responses, TPD recommends the School District consider the following programmatic enhancements to reduce the concentration of vehicles in the vicinity of the school campus:

Page 16 — www.TrafficPD.com

- » Coordinate with Tredyffrin Township to identify potential grant funding opportunities to provide safe pedestrian access to neighborhoods near the schools. Through an increase in students walking to school, parent drop-offs and pickups should be reduced.
- » Further evaluate the impact of bus schedules and identify the number of parents driving their children to school based solely on scheduled bus pickup times. If bus occupancy is increased, passenger vehicles attempting to access the area around the schools will be decreased.
- » Provide additional staff in the drop-off/pick-up loops at the schools to ensure the areas are being fully utilized.

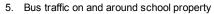
Physical Enhancements

Provide/Evaluate the following enhancements (or a combination thereof):

- » Widening of the existing driveway to provide additional area for passenger vehicle queuing.
- » Construction of a secondary driveway to Walker Road.
- » Eastbound Walker Road Left Turn Lane
- » Westbound Walker Road Right Turn
- » Install Covered Drop-Off Areas to improve internal circulation
- » Establish/Expand School Zones and Installation of Flashing Lights at Pedestrian Crossings, where applicable.

Page 17 ______ www.TrafficPD.com

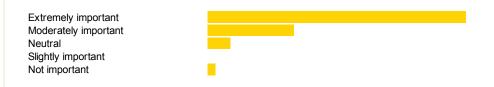
Tredyffrin/Easttown School District Traffic Study Results Overview Respondents: 256 displayed, 695 total Status: Open Launched Date: N/A Closed Date: 11/19/2016 Display: Page 1 **Active Report Filters:** Filter Type: Question; QuestionID: 1536 AnswerID: Manage Filters: 1 filter Share Results: Disabled More 1. School: Response Total Response Percent Conestoga High School 256 100% Tredyffrin/Easttown Middle School 0 0% Valley Forge Middle School 0% 0 Valley Forge Elementary School 0 0% **Total Respondents** 256 Adequacy of school parking lots Response Response Total Percent 48% Extremely important 122 Moderately important 83 33% 38 15% Neutral Slightly important 2% 4 Not important 3% **Total Respondents** 254 (skipped this question) 2 3. Driveway access Response Total Response Percent Extremely important 47% 119 Moderately important 90 36% 24 10% Neutral Slightly important 9 4% Not important 4% **Total Respondents** 251 (skipped this question) 5 4. Arrival/dismissal times Response Response Total Percent Extremely important 133 53% Moderately important 66 27% 37 15% Neutral Slightly important 5 2% Not important 8 3% **Total Respondents** 249 (skipped this question)

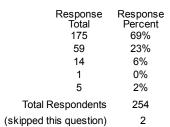




	sponse Fotal 98	Response Percent 39%
	81	32%
	50	20%
	9	4%
	12	5%
Total Resp	ondents	250
(skipped this q	uestion)	6

6. Non-bus traffic on and around school property





7. Pedestrian traffic on and around school property



Response	Response
Total	Percent
146	58%
62	25%
33	13%
3	1%
9	4%
Total Respondents	253
(skipped this question)	3

8. Crossing guards

Extremely important Moderately important	
Neutral	
Slightly important Not important	

Response	Response
Total	Percent
79	32%
79	32%
61	25%
9	4%
20	8%
Total Respondents	248
(skipped this question)	8

9. Law enforcement traffic control

Extremely important	
Moderately important	
Neutral	
Slightly important	
Not important	

Response	Response
Total	Percent
74	29%
75	30%
67	27%
9	4%
27	11%
Total Respondents	252
(skinned this question)	4

10. Please expand on any of the topics above or enter additional traffic study comments regarding the school you selected for the survey.

Total Respondents	117	
(skipped this question)	139	

Back

Tredyffrin/Easttown School District Traffic Study Results Overview Respondents: 143 displayed, 695 total Status: Open Launched Date: N/A Closed Date: 11/19/2016 Display: Page 1 **Active Report Filters:** Filter Type: Question; QuestionID: 1536 AnswerID: Manage Filters: 1 filter Share Results: Disabled More 1. School: Response Response Total Percent Conestoga High School 0 0% Tredyffrin/Easttown Middle School 100% 143 Valley Forge Middle School 0 0% Valley Forge Elementary School 0 0% **Total Respondents** 143 2. Adequacy of school parking lots Response Response Total Percent Extremely important 56 39% Moderately important 54 38% 19 13% Neutral Slightly important 4 3% Not important 9 6% 142 Total Respondents (skipped this question) 1 3. Driveway access Response Response Total Percent Extremely important 88 62% Moderately important 35 24% Neutral 14 10% 2 Slightly important 1% Not important 4 3% **Total Respondents** 143 4. Arrival/dismissal times Response Response Total Percent Extremely important 74 52% Moderately important 44 31% Neutral 19 13% Slightly important 1 1% 3% Not important **Total Respondents** 142

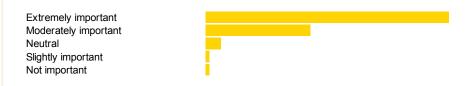
(skipped this question)

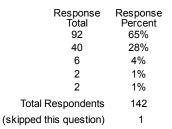
5. Bus traffic on and around school property



Response	Response
Total	Percent
66	47%
43	30%
24	17%
3	2%
5	4%
Total Respondents	141
(skipped this question)	2

6. Non-bus traffic on and around school property





7. Pedestrian traffic on and around school property



	Response	Response
	Total	Percent
	78	55%
	35	25%
	24	17%
	1	1%
	3	2%
Total R	espondents	141
(skipped th	nis question)	2

8. Crossing guards

Extremely important Moderately important	
Neutral Slightly important Not important	

Response	Response
Total	Percent
84	60%
30	22%
22	16%
2	1%
1	1%
Total Respondents	139
(skipped this question)	4

9. Law enforcement traffic control

Extremely important	
Moderately important Neutral	
Slightly important	
Not important	

Response Total	Response Percent
46	33%
51	36%
30	21%
4	3%
9	6%
Total Respondents	140
(skipped this question)	3

10. Please expand on any of the topics above or enter additional traffic study comments regarding the school you selected for the survey.

Total Respondents	78
(skipped this question)	65

Back

Tredyffrin/Easttown School District Traffic Study Results Overview Respondents: 169 displayed, 695 total Status: Open Launched Date: N/A Closed Date: 11/19/2016 Display: Page 1 **Active Report Filters:** Filter Type: Question; QuestionID: 1536 AnswerID: 4384 Manage Filters: 1 filter Share Results: Disabled More 1. School: Response Total Response Percent Conestoga High School 0 0% Tredyffrin/Easttown Middle School 0% O Valley Forge Middle School 169 100% Valley Forge Elementary School 0% **Total Respondents** 169 2. Adequacy of school parking lots Response Response Total Percent Extremely important 44 27% 68 Moderately important 41% 42 25% Neutral Slightly important 6 4% Not important 6 4% 166 Total Respondents (skipped this question) 3 3. Driveway access Response Response Total Percent Extremely important 119 71% Moderately important 37 22% Neutral 7 4% 2 Slightly important 1% 2 Not important 1% **Total Respondents** 167 2 (skipped this question) Arrival/dismissal times Response Total Response Percent 48% Extremely important 79 Moderately important 54 33% Neutral 22 13% 2 Slightly important 1% Not important 8 5% **Total Respondents** 165

(skipped this question) 5. Bus traffic on and around school property Response Response Total Percent Extremely important 73 44% 62 Moderately important 37% Neutral 25 15% Slightly important 2 1% Not important 4 2% 166 **Total Respondents** (skipped this question) 3 6. Non-bus traffic on and around school property Response Response Total Percent Extremely important 121 72% Moderately important 33 20% Neutral 12 7% Slightly important 0 0% 2 Not important 1% 168 Total Respondents (skipped this question) 1 7. Pedestrian traffic on and around school property Response Percent Response Total Extremely important 81 49% 39 24% Moderately important Neutral 33 20% Slightly important 4 2% Not important 8 5% **Total Respondents** 165 (skipped this question) 4 Crossing guards Response Total Response Percent 61% Extremely important 102 Moderately important 38 23% Neutral 24 14% 2 1% Slightly important Not important 1% **Total Respondents** 167 (skipped this question) 2 9. Law enforcement traffic control Response Response Total Percent Extremely important 44 26% Moderately important 60 36% 48 29% Neutral 7 4% Slightly important Not important 9 5% Total Respondents 168 (skipped this question) 1 10. Please expand on any of the topics above or enter additional traffic study comments regarding the school you selected for the survey. **Total Respondents** 109 60 (skipped this question)

Back

Tredyffrin/Easttown School District Traffic Study Results Overview Respondents: 127 displayed, 695 total Status: Open Launched Date: N/A Closed Date: 11/19/2016 Display: Page 1 **Active Report Filters:** Filter Type: Question; QuestionID: 1536 AnswerID: Manage Filters: 1 filter Share Results: Disabled More 1. School: Response Total Response Percent Conestoga High School 0 0% Tredyffrin/Easttown Middle School 0 0% Valley Forge Middle School 0 0% Valley Forge Elementary School 127 100% **Total Respondents** 127 2. Adequacy of school parking lots Response Response Total Percent Extremely important 27 22% Moderately important 57 46% 25 20% Neutral Slightly important 11 9% Not important 5 4% 125 Total Respondents (skipped this question) 2 3. Driveway access Response Response Total Percent Extremely important 66 53% Moderately important 36 29% Neutral 15 12% Slightly important 7 6% 1% Not important **Total Respondents** 125 2 (skipped this question) Arrival/dismissal times Response Total Response Percent 56 44% Extremely important Moderately important 37 29% Neutral 29 23% 4 Slightly important 3% Not important 1% **Total Respondents** 127

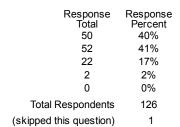
5. Bus traffic on and around school property

Extremely important	
Moderately important	
Neutral	
Slightly important	
Not important	

Response Total 42	Response Percent 34%
41	33%
34	27%
5	4%
2	2%
Total Respondents	124
(skipped this question)	3

6. Non-bus traffic on and around school property





7. Pedestrian traffic on and around school property

Extremely important	
Moderately important	
Neutral	
Slightly important	
Not important	

Response Total	Response Percent
47	37%
37	29%
30	24%
5	4%
8	6%
Total Respondents	127

8. Crossing guards

Extremely important	
Moderately important	
Neutral	
Slightly important	
Not important	

Response	Response
Total	Percent
62	49%
37	29%
16	13%
5	4%
6	5%
Total Respondents	126
(skipped this question)	1

9. Law enforcement traffic control

Extremely important Moderately important	
Neutral	
Slightly important Not important	

Response	Response
Total	Percent
33	26%
38	30%
31	24%
8	6%
17	13%
Total Respondents	127

10. Please expand on any of the topics above or enter additional traffic study comments regarding the school you selected for the survey.

Total Respondents	57
(skipped this question)	70