

**Borough of Conshohocken
One-Way Avenue Study**



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The Borough of Conshohocken One-Way Avenue Study

I. Introduction

As requested by Conshohocken Borough Council we have conducted a qualitative analysis of potential traffic impacts related to implementation of the proposed One-Way Avenue Plan (hereafter referred to as the plan). The plan itself includes providing necessary traffic controls to render the un-signalized intersections within the Borough one-way for two blocks from Fayette Street in each direction. The streets included in the proposal are 4th Avenue, 5th Avenue, 7th Avenue, 8th Avenue and 10th Avenue. West 2nd Avenue will be included in a separate proposal that includes the potential closing of the travel lanes around the Veteran's War Memorial. Each subject avenue would become one-way away from Fayette Street and have back-in angle parking on one or both sides, depending upon the width of the street.

The purpose of this study is to determine the potential impacts on traffic patterns and parking throughout the Borough. The report will evaluate the following:

- General assessment of the existing and potential traffic patterns before and after the implementation of the plan.
- Specific potential impacts on individual streets, businesses and residential areas.
- A determination of the impacts on parking, circulation traffic patterns related to parking, and the increase/decrease in available parking in the affected portions of the Borough;
- Conclusions as to the positive and negative aspects of the plan, and a recommendation for potential implementation.

II. General Traffic Assessment

Upon implementation of the plan several general traffic patterns will change within the Borough. While drivers will be able to exit Fayette Street onto any Avenue (as

the case is now), drivers will only have access to Fayette Street by way of the signalized intersections at Elm Street, 1st Avenue, 3rd Avenue, 6th Avenue, 9th Avenue and 11th Avenue. Based on feedback received through various Borough Officials and our general knowledge of the Borough as the Borough Engineer for fifteen years, we project this particular impact to be fairly minimal. The majority of vehicles that travel in and around the Borough regularly use the signalized intersections to access Fayette Street. There will be a measurable increase in traffic at the signals due to the fact that the minority vehicles that use the un-signalized intersections currently will no longer have that option.

Any potential impacts to traffic and traffic queues at the signalized intersections are far outweighed by the increase in traffic safety caused by eliminating access to Fayette Street from un-signalized intersections. Currently, drivers attempting to either turn onto or cross Fayette Street are hindered by inadequate sight distance. The only way to increase the sight distance enough to create a more safe condition would be to eliminate needed parking along Fayette Street. We feel the change in traffic pattern improves the safety condition along Fayette Street, while preserving the existing parking spaces.

Another unavoidable impact of the plan is the increase in use of both Maple and Hallowell Streets. Drivers approaching Fayette Street will need to use Maple and Hallowell Streets to adjust their route towards a signalized intersection on Fayette Street. Again, much of this coincides with the existing condition. Maple Street specifically, as it serves as a link between Colwell Lane (by way of 6th Avenue) and Elm Street may experience an increase in volume. This volume would be mostly "Cut Through" traffic, and is an unfortunately reality independent of this proposal. The final general impact is that of vehicle speed. Each of the subject streets will only have one, one-way travel lane with parking on both sides. The driver perception of the congestion on the one-way streets will result in a calming affect, for most drivers. Also, drivers will be required to proceed cautiously to accommodate the use of the back-in angle parking stalls. On the other hand, drivers will now be forced to travel

further to get to some destinations within the Borough. Most drivers, when forced to circle a block or continue one-way away from their destination, will tend to increase speed to compensate for perceived lost time or inconvenience. We feel this impact falls into the realm of unavoidable driver behavior, and is also a reality independent of this proposal.

III. Specific Traffic Assessment

Many Conshohocken businesses and residents will be impacted by the plan. Firstly, on the east side of the town drivers rely on the existing patterns between Fayette Street, each avenue, and Harry Street to access driveways and parking areas for businesses and residences. Residents that approach the Fayette/Harry Street business area from the east will now be forced to access Fayette Street from a signalized intersection, and turn onto the desired one-way avenue in order to access some of these businesses. These locations include, but are not limited to: St. Matthew's Church on 4th, 401 Diner on 4th, Bank of America on 4th, U.S. Post Office on 5th, Gulf Service Station on 5th, The Laundrymat on 7th, The Masonic Lodge on 8th, Susquehanna Bank on 9th, and any residence that has access points on an avenue between Fayette Street and Harry Street.

Second, the west side of town features existing circulation between Fayette Street, each avenue, and Forrest Street that will be affected by the plan. Locations affected on the west side include, but are not limited to: The Deli on 4th, Conshohocken Catholic School on 5th, Conshohocken Family Practice on 7th, Preston-Patterson Co., Inc. on 10th, and any residence that has access points on an avenue between Fayette Street and Forrest Street.

IV. Parking Assessment

This proposal, while controlling traffic circulation and improving safety, is designed to increase parking within the Borough. 4th Avenue is the only one of the subject

streets that currently employs angled parking. Each of the others has parallel parking where available between curb cuts and fire hydrants. Many of the subject areas will experience a dramatic increase in parking. For the purposes of this study, 22 angled parking spaces can be installed for every 14 parallel spaces currently available. We have used aerial photography of the existing conditions to produce estimates of both the existing available parking, and the potential available parking using the dimensions from with the study ratio is based. The following information is a tabulation of estimated existing and proposed parking spaces for each side of each subject avenue:

		EXISTING CONDITIONS				PROPOSED CONDITIONS			
		E. 4th R	E. 4th L	W. 4th R	W. 4th L	E. 4th R	E. 4th L	W. 4th R	W. 4th L
Parallel			30	30	9				
Angled		52			36	52	43	60	50
		E. 5th R	E. 5th L	W. 5th R	W. 5th L	E. 5th R	E. 5th L	W. 5th R	W. 5th L
Parallel		27	26	24	20	27		24	
Angled							35		28
		E. 7th R	E. 7th L	W. 7th R	W. 7th L	E. 7th R	E. 7th L	W. 7th R	W. 7th L
Parallel		33	22	28	28			28	
Angled						47	24		53
		E. 8th R	E. 8th L	W. 8th R	W. 8th L	E. 8th R	E. 8th L	W. 8th R	W. 8th L
Parallel		22	32	22	26	22		22	
Angled							46		48
		E. 10th R	E. 10th L	W. 10th R	W. 10th L	E. 10th R	E. 10th L	W. 10th R	W. 10th L
Parallel		29	28	29	28	29		29	
Angled							33		51
		Total Estimated Existing Parking Spaces				Total Estimated Proposed Parking Spaces			
		581				751			

The plan proposes an estimated increase of one hundred seventy (170) parking spaces within the study area, or approximately thirty (30) percent.

V. Conclusion

The One-Way Avenue Plan is a radical alteration to the Borough's traffic patterns and parking layout. The plan is feasible, and if implemented will have both positive and negative effects. The most notable positive impacts are:

- A positive impact on safety in vehicular access to Fayette Street.
- Increased structure to the Borough's traffic patterns.
- Increase the number of available parking spaces.

Conversely, the plan will have the following negative impacts:

- Increases in traffic volume on Fayette Street, Maple Street and Hallowell Street.
- Increase traffic queues at the signalized intersections.
- Inconvenience to drivers attempting to reach presently direct route destinations.

The following table has been derived to quantify the positive and negative impacts based on our assessment of the degree of impact (1: low; 2: moderate; 3: high):

	Pros			Cons		
	Safety	Structure	Parking	Volume Increases	Traffic Queues	Inconvenience
4th Avenue	2	2	3	1	1	1
5th Avenue	3	2	2	2	2	2
7th Avenue	2	2	3	2	2	2
8th Avenue	3	2	3	1	1	1
10th Avenue	3	2	3	1	1	1
Sub Totals	13	10	14	7	7	7
Totals	37			21		

The nature of the negative impacts is such that they will dissipate as drivers become accustomed to the new traffic patterns and parking layout. Our assessment of the plan is such that the potential positive impacts outweigh the potential negative impacts.