



Upper Dublin Township Police Department

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Traffic Complaint Investigations Information

Introduction

The perception of speeding on local roadways is probably the most persistent problem facing residents and government officials alike. Although local or residential roadways carry the lowest traffic volumes and have the fewest vehicle crashes, complaints about traffic on them are the single largest consumer of the Community Response Unit's time and resources. Residents observe vehicles being driven at speeds they perceive are too fast and conclude that the speeds would decrease if stop signs were installed. Speeds considered excessive by residents are considered reasonable by these same persons when they are driving in another neighborhood. Just about every police officer who has taken this type of complaint has heard these same residents announce "if something is not done about the traffic problem on my street, someone is going to be killed." This is usually followed by a demand for various traffic control measures from residents. Officers then must focus their attention on responding to these pressures, often diverting resources that could be dedicated to solving legitimate speeding and traffic crash problems on higher volume roadways.

Residents' complaints are usually accompanied by a proposed solution to the speeding problem, stop signs. Officer's then respond that stop signs installed to control speeding: (a) are not warranted in the Manual on Uniform Traffic Control Devices (MUTCD), (b) don't work, (c) are frequently violated, (d) are detrimental to safety and, (e) actually increase speeds between stop signs. When residents are told that stop signs are not the answer to the speeding problem, they feel they must fight with the Township to get them installed. In some cases a confrontational relationship can form between residents and the Township and the stop sign becomes a "trophy" which is awarded to the winner of the confrontation. Solving the speeding problem becomes secondary to winning the "trophy". The end results of this process are unhappy citizens, continued complaints and requests for more stop signs, increased political pressure and, sometimes, approval of stop sign installations to bring the controversy, temporarily, to an end. However, experience shows the speeding problem is usually not solved. Before and after traffic studies in these areas show that the stop signs usually increase mid-block speeds and create violators of the stop controls.

The Facts about Stop Signs

Purpose of a Stop Sign

Stop signs are a regulatory sign which is used when traffic is required to stop. At multiway stop intersections, where all approaches are controlled by stop signs, an "all way" plaque is required below the stop sign to inform the driver that the intersection is an "all way" stop intersection. Occasionally flashing beacons are used to supplement stop signs, especially in rural areas.

The MUTCD provides information on the design, application and placement of stop signs. The purpose of stop signs is to assign vehicular right of way at an intersection. If installed where warranted, stop signs are very effective. However, stop signs can be an inconvenience to motorists and a potential safety issue and should only be used where warranted. The MUTCD clearly states that stop signs should never be used to control vehicle speeds.

Where Should a Stop Sign Be installed?

Stop signs should be located where vehicles are required to stop, or as near to the point as possible. Where there is a pattern of drivers missing the stop sign on the intersection approach, placement of a supplemental stop sign on the left hand side of the roadway has been shown to reduce the number of crashes. A stop sign should not be installed on the higher volume roadway unless justified by an engineering study.

Under What Conditions Should a Two-Way Stop Sign Control Be Installed?

Intersections should have one or more of the following conditions for a two-way STOP control to be installed:

- At an intersection of a minor and major road, where the application of the normal right-of-way-rule would be inappropriate
- At a street entering a through highway or street
- At an unsignalized intersection in a signalized area
- At locations where high-speed traffic, restricted view, or crash records indicate a need for stop sign control

The advantage of a two-way stop is that the major traffic flows do not have to stop and thus incur almost no delay at the intersection (i.e., the majority of the through traffic does not have to stop).

Under What Conditions Should a Four-Way (Multiway) Stop Control Be Installed?

Four-way stop control is often used at the intersection of two (2) roadways that exhibit approximately equal traffic volumes. As with other traffic-control devices, installation of a multiway stop should be based on an engineering study. The following criteria, as described in the 2003 edition of the MUTCD, should be considered:

- At least five (5) crashes have occurred at the intersection in a 12-month period that are susceptible to correction by stop signs (crash reports should be analyzed to determine the probable cause of each crash).
- Minimum traffic and pedestrian volumes are as follows:
 - The vehicular volume entering the intersection from the major street approaches (total of both approaches) averages at least 300 vehicles per hour for any 8 hours of an average day.
 - The combined vehicular, pedestrian, and bicycle volume entering the intersection from the minor street approaches (total of both approaches) averages at least 200 units per hour for the same 8 hours, with an average delay to minor-street vehicular traffic of at least 30 seconds per vehicle during the highest hour, but if the 85th-percentile approach speed of the major-street traffic exceeds 65 km/h or exceeds 40 mph, the minimum vehicular volume warrants are 70 percent of the above values.
- The need to control vehicle/pedestrian conflicts exists near locations that generate high pedestrian volumes crossing the major street.
- A four-way stop control is needed at locations where a road user, after stopping, cannot see conflicting traffic and is not able to safely negotiate the intersection unless conflicting cross traffic is also required to stop. Sight line issues are to be resolved by trimming trees or moving obstructions first, before considering a four-way stop.
- An intersection of two residential neighborhood collector (through) streets of similar design and/or operating characteristics where multiway stop control would improve traffic operational characteristics of the intersection, and the minimum traffic and pedestrian volume requirements are satisfied.

The Facts about Speed Limits

Why Speed Limits?

The setting of speed limits is fundamentally influenced by basic principles of human behavior. Research and experience has shown that effective speed limits are those that the majority of motorists will naturally and instinctively drive. Traffic laws that reflect the behavior of the majority of motorists are found to be the most successful.

Common Misconceptions

- Lowering the posted speed limit will slow down traffic
- Lowering the posted speed limit will increase safety and decrease the number of crashes
- Raising the posted speed limit will increase the speed of traffic
- Drivers will always travel at 5 mph over the speed limit which is posted

What factors are considered when setting a speed limit?

Nationally, the most recognized practice is to post the speed limit as near as practical to the speed at which 85% of the drivers are traveling. Most people choose a reasonable speed in which they feel comfortable and safe driving. Traffic engineers consider the 85th percentile speed to help determine the posted speed limit. This may be adjusted to account for the following factors:

- Crash history
- Roadway geometry
- Parking
- Pedestrian traffic and pedestrian crossings
- Traffic engineering judgment

What a rational speed limit does:

- Encourage compliance from the majority of drivers
- Provide a clear reminder of the maximum reasonable speed under ideal conditions. When conditions change, drivers must reduce their speed accordingly.
- Serve as an effective tool for law enforcement
- Minimize public antagonism toward law enforcement agencies which results from enforcement of artificially low speed limits
- Provide a smooth and orderly flow of traffic to prevent crashes

What is the relationship between vehicle speed and crashes?

Roadways are the safest when the majority of vehicles are traveling at or about the same speed. Studies have shown that crash rates are at their lowest when traffic is travelling at or near the 85th percentile speed. Injury and fatality crashes are highest for motorists traveling at speeds much higher or lower than the 85th percentile speed or current flow of traffic. Variation of speed within the traffic stream creates more conflict and passing maneuvers, which in turn leads to more crashes.

Why not post a lower speed limit and have the police enforce it?

This theory is only effective when law enforcement is present. The availability of police officers for speed enforcement on a consistent basis is limited. If unreasonably low speed limits are posted and not vigorously enforced, there will be varying speeds of traffic which will increase the potential for crashes. In general, setting unreasonable speed limits will also lead to an increased disregard to speed limits.

How do police enforce the speed limit?

Currently Pennsylvania is the only state in the United States of America that does not allow its municipal police to utilize RADAR for speed enforcement. Municipal police in Pennsylvania are limited to the use of mechanical timing devices (stopwatch) or electronic timing devices (ENRADD) which are more primitive methods of enforcement. These devices measure the elapsed time of a vehicle traveling between two measured road surface points or electronic sensors and then calculate the average speed of the vehicle over that distance. Because we are required to use this less accurate technology, municipal police utilizing these methods for speed enforcement may not cite a driver unless the speed they are traveling is in excess of ten or more miles per hour of the legal posted speed limit as dictated by the Pennsylvania Motor Vehicle Code.

Restrictions on Truck Traffic

PennDOT Publication 212 “Official Traffic Control Devices” outlines restrictions on truck traffic in regard to several different safety factors. Traffic on a bridge or roadway may be prohibited or restricted by weight of vehicle, number of vehicles, or kinds or classes of vehicles when an engineering evaluation conducted by a professional engineer establishes the need. Engineering evaluation of a bridge or bridge component may be based on structural analysis and rating computations, testing, engineering judgment or a combination thereof. Engineering evaluation of a roadway will determine if there are inadequate turning radii, horizontal width or other physical issues on a roadway. *Outside of these safety conditions, truck traffic may not be restricted on a roadway.*

What are State Routes and how does this affect Upper Dublin Township?

More than two-thirds of PennDOT’s annual budget is invested in Pennsylvania’s total of 119,000 miles of State and local highways and 55,000 State and local bridges. PennDOT is directly responsible for about 40,000 miles of highway and roughly 25,000 bridges, a system first established in 1911.

PennDOT is also responsible for the establishment and classification of a state highway network which includes interstate highways, U.S. highways, and state routes. On these roads, traffic control devices, signs, traffic signals and speed limits are designed by PennDOT and may not be changed without PennDOT permission. We are able to work with the township engineer under certain circumstances to obtain authorization to change traffic controls on state roads.

State Routes in Upper Dublin Township		
Bethlehem Pike	Camphill Road (Dreshertown Road to Gay Way)	Dreshertown Road
Fitzwatertown Road	Fort Washington Avenue (South of Limekiln Pike)	Jenkintown Road
Limekiln Pike	Morris Road	Norristown Road
Pennsylvania Avenue	Susquehanna Road	Tennis Avenue
Welsh Road	Route 309 Expressway	Pennsylvania Turnpike

Resources available through the Police Department’s Community Response Unit (CRU)

What tools does the CRU have available to help resolve traffic problems?

- Variable Message Boards
- Mobile Radar Speed Trailers
- Movable Radar Speed Signs
- LED Illuminated Signs (Stop and Speed Limit)
- Traffic Survey Equipment, utilized to measure the volume of cars and their speeds
- Officer presence, in the form of observations and directed patrols for enforcement

How does the CRU work to resolve traffic problems?

- Discuss the problem with the stakeholders (in person or by phone)
- Gather data on the problem, by officer observation or by traffic survey device
- Coordinate enforcement efforts if this is an appropriate part of the response plan
- Work with the Upper Dublin Township Public Works Department to modify signs and roadway markings
- Collaborate with the Upper Dublin Township Engineer when changes involve state highways
- Conduct follow-up studies where needed to check the level of success
- Provide feedback to stakeholders

How do you contact the CRU?

If you have questions, comments, or concerns, please contact the Community Response Unit Supervisor, Sergeant Andrew Sanborn @ andrew.sanborn@udpd.us.