

Frequently asked questions about traffic signals

What does a traffic signal do?

A traffic signal controls the right-of-way for vehicles arriving at an intersection, which can reduce traffic delay and accident-producing conflicts. It also makes an intersection safe by determining whether vehicles or pedestrians should proceed.

Does a traffic signal control speed?

No. In some areas where speeding is a problem, residents believe that a traffic signal is needed to address the speeding problem. In fact, traffic signals sometimes result in greater speeds as drivers accelerate to try to get through the signal before it turns red. Other traffic control measures, such as speed humps, speed limit signs, and traffic enforcement, are more effective in controlling speed.

How many traffic signals are there in Woodbridge Township?

As of January 1, 2022, there are 63 intersections with Traffic Signals Township wide. 19 intersections are under the Township jurisdiction and 44 are either State or County owned. .

How long does it take lights to change?

Signal timing cycle lengths usually fall between 45 and 120 seconds. The timing for each signal is determined based on traffic volume and traffic patterns in each particular area.

A traffic signal's cycle is too long or too short, will the Township change it?

Sometimes the presence of a traffic signal will result in changes in the previous traffic patterns, as some drivers seek alternative routes to avoid the signal. This may mean that the current signal timing is no longer appropriate. If you believe that the timing of a particular signal is incorrect, contact the Municipal Engineer with your request. The Township will conduct a study of traffic patterns to determine if any adjustments are needed.

How does the Township decide whether a traffic signal should be installed at an intersection?

The Township uses a detailed process called an intersection control study to determine if traffic signals or multi-way stop signs are appropriate for a location. The study includes (but is not limited to) these steps:

- The Division of Engineering checks all agency records (e.g. sign orders, pavement marking orders, school maps) for the location.
- The Division of Engineering inspectors conduct a field investigation to create a Condition Diagram of the location. This diagram shows street and sidewalk widths, location geometry,

street directions, location and conditions of Township signs and markings, land use, street furniture, distance to the nearest traffic control device, and other information.

- The Division of Engineering completes a Field Observation Report which has a checklist of conditions at the location. This includes drivers' compliance with existing controls, geometric or sight distance issues, and violations of the speed limit.
- The Division of Engineering conducts manual counts of the number of vehicles and pedestrians, usually during morning and evening rush hours. Counts include the number of turning vehicles, and may also include counts during and after school hours or during off-peak hours.
- The Division of Engineering may install Automatic Traffic Recorders (ATRs) to collect hourly vehicle volumes over a period of several weekdays or weekends.
- At designated school crossings, the Division of Engineering determines the number of safe crossing opportunities for schoolchildren by recording the frequency and adequacy of gaps between vehicles.
- Sometimes The Division of Engineering conducts spot speed studies to determine the 85th percentile speed of vehicles (the speed at which 85% of vehicles are traveling at or below) as they approach the location.
- The Division of Engineering reviews the Police Department Accident Index System, which contains up-to-date summaries of accidents at the location. The Division of Engineering also evaluates individual accident reports (MVA) for the location.
- The Division of Engineering then compares all of the data collected to the warrants outlined in the Federal guidelines to determine if it is appropriate to install a traffic signal or a multi-way stop. If the data does not meet the warrants, The Division of Engineering will not install a traffic signal or multi-way stop sign. In these instances, The Division of Engineering frequently finds other ways to improve traffic conditions.

What are the Federal Guidelines for traffic signals?

The federal standards for traffic control devices can be found in the Manual on Uniform Traffic Control Devices (MUTCD), which is published by the Federal Highway Administration (FHWA). The MUTCD establishes criteria known as "warrants" which are used to determine if a new traffic signal is appropriate.

The latest edition of the MUTCD, published in 2009, sets forth nine warrants, which are summarized below. [Learn more about the MUTCD on the FHWA web site](#)

1. Eight-Hour Vehicular Volume — For each of any 8 hours of an average day, there is a heavy volume of intersecting traffic, or the traffic volume on a major street is so heavy that traffic on a minor intersecting street suffers excessive delay or conflict in entering or crossing the major street.

2. Four-Hour Vehicular Volume For each of any 4 hours of an average day, there is a heavy volume of intersecting traffic.
3. Peak Hour — For a minimum of 1 hour of an average day, the minor-street traffic suffers undue delay when entering or crossing the major street.
4. Pedestrian Volume — The traffic volume on a major street is so heavy that pedestrians experience excessive delay in crossing the major street.
5. School Crossing — The number of adequate gaps in the traffic stream during the period when schoolchildren are using designated school crosswalks on the major street must be less than the number of minutes in the same period.
6. Coordinated Signal System — A signal is necessary as part of a coordinated signal system to maintain proper platooning of vehicles.
7. Crash Experience — The severity and frequency of preventable crashes that have occurred within a 12-month period reduce the thresholds in the vehicle volume warrants.
8. Roadway Network — A signal might be justified to encourage concentration and organization of traffic flow on a roadway network when two or more major routes intersect.
9. Intersection Near a Grade Crossing — There is proximity to the intersection of a grade crossing on an intersection approach controlled by a STOP or YIELD sign and heavy vehicle volumes.