

New Traffic Signals

Traffic signals are valuable and effective devices for the control of vehicle, bicycle, and pedestrian traffic. As traffic volumes increase beyond the capability of other control devices (i.e., all-way stop), it may be necessary to install a traffic signal. However, before a traffic signal is installed, it must be justified by satisfying established minimum criteria (also referred to as warrants).



The City maintains a priority list of all locations meeting the minimum criteria for a signal. The ranking of each location is determined by the results of the most recent signal study. Based upon the signal priority list and the available budget, City staff recommends new signal installations every two years.

Traffic Signal Warrants

Transportation Engineers use State and Federal guidelines as a foundation to determine if a traffic signal is warranted. However, the decision to install a traffic signal is not solely based on satisfying the warrants. Other factors (such as field conditions, tradeoffs, and consideration of other traffic control devices) are also considered by the Transportation Engineering Division before a decision to install a traffic signal is made.

The following is a summary of the 8 warrants contained within the State Traffic Manual:

1. Eight Hour Vehicular Volume
2. Four hour Vehicular Volume
3. Peak hour (Volume and Delay)
4. Pedestrian Volume
5. School Crossing
6. Coordinated Signal System
7. Crash Experience
8. Roadway Network

Advantages of Traffic Signals

Traffic signals offer the most concise control for establishing right-of-way at an intersection. They relay a clear message of what a driver, bicyclist, or pedestrian

can and cannot do as they approach the intersection. The primary function of a traffic signal is to assign right-of-way to conflicting traffic at an intersection.

When effectively timed, a traffic signal increases the traffic handling capacity of an intersection and improves the safety and efficiency of pedestrian, bicycle, and vehicle traffic. Signals also reduce certain types of accidents, especially right-angle collisions.

Disadvantages of Traffic Signals

When traffic signals are installed that are not justified or warranted, they can actually reduce the overall safety at an intersection. While many realize that traffic signals reduce more severe right-angle collisions by effectively assigning right-of-way, many do not realize that less severe rear-end accidents typically tend to increase. Unwarranted traffic signals also cause excessive delays, disregard of the signal, and diversion of traffic to other streets without signals.

If you have any questions regarding the installation of a new traffic signal, please contact the Transportation Engineering Division by completing an [online form](#) or by calling 510-494-4745.