

# Intersection–Safety Enforcement

## Intersection Enforcement Challenges

**Traffic congestion.** Increases in traffic volume can decrease the safety and efficiency of an intersection. Additional police enforcement to reduce violations becomes more crucial at congested intersections.

**Intersection signal timing.** One of the key limitations of making intersection traffic control more efficient is the lengthening of vehicle wait times at signals. High traffic volumes, congestion and complicated signal timing and phasing can cause long vehicle queues. When this occurs, impatient drivers and pedestrians often commit traffic control violations.

**Disregard for compliance with traffic control devices.** Even a well-designed intersection with a high volume of vehicles and pedestrians can suffer an increase in traffic control violations and crashes. This has been a growing problem over the last few decades in the United States because of a growing disregard for the messages of signs, pavement markings and other traffic control devices.

**Insufficient staffing for traditional enforcement.** Applying enforcement measures to deter violations and reduce the risk of crashes is an unavoidable task for public authorities. Traditional police enforcement rarely captures all of the violations that occur.

## The Need for Efficient Highway Design and Sound Traffic Planning and Engineering

A basic principle of highway and traffic engineering is to make intersections as efficient as possible. Maximum efficiency implies minimal delay and

minimal hazards for both drivers and pedestrians. If this is accomplished, an intersection should require less emphasis on enforcement to prevent crashes. Sound traffic planning and effective intersection design help to prevent and reduce congestion; in this way, drivers can avoid frustration and commit fewer violations. Traffic infrastructure (e.g., local controller hardware) should be upgraded to make signal operation more efficient.

**Consistent and sustained enforcement of traffic laws and a strong public education campaign are two effective methods of reducing intersection crashes. In addition, sound traffic planning/engineering and roadway design are important elements of an integrated approach to reducing crashes at intersections.**

## Automated Enforcement

Automated means of monitoring driver and pedestrian compliance with traffic control at intersections is one tool that can reduce crashes.





Several studies indicate that red light cameras placed at intersections that have a history of speeding and signal violations create better compliance by drivers not only at red light camera-monitored intersections, but also at intersections without cameras. Red light cameras generally improve the quality of driver compliance with other traffic control devices as well, including stop signs.<sup>1</sup>

The use of advanced technologies can also provide assistance to enforcement efforts.

Such technologies are collectively referred to as Intelligent Transportation Systems (ITS). ITS can be installed in vehicles and on the highways to assist motorists and pedestrians in anticipating and reacting to intersection conflicts.

Photo and radar enforcement should be used along routes where the violation rate is high to reduce speeding, which increases the severity of a crash.

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### More Resources Needed

Intersection enforcement efforts need to be bolstered dramatically to address the fatalities and injuries occurring at intersections. A significant increase in resources devoted to enforcement efforts is necessary to achieve this goal.

<sup>1</sup> Insurance Institute of Highway Safety States Report, April 28, 2001.