

Traffic Signal Confirmation Lights (1 of 2)

INTERSECTIONS

DESCRIPTION AND DEFINITION

A confirmation light is a blue light that can be located on the back of the traffic signal mast arm or super pole, and used by law enforcement agencies to identify vehicles that run red lights. The confirmation light is wired into the red light circuits of the signal and comes on simultaneously with the red indication. It allows one officer to safely observe and pursue red light violators. Minnesota has only recently begun to deploy confirmation lights to help increase efficiency of enforcing red lights.

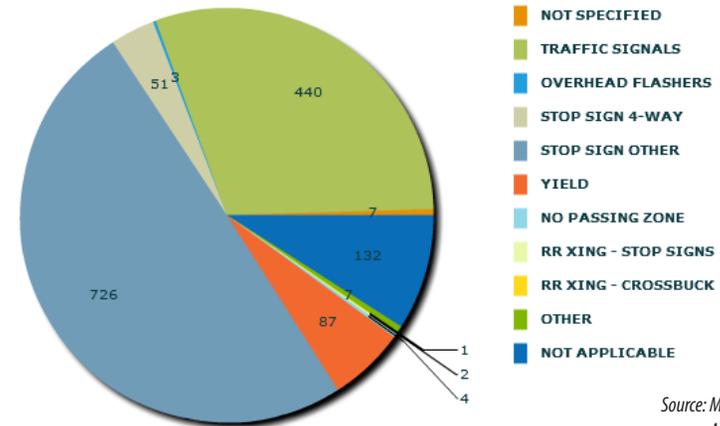


ROADWAY OPERATIONS

The combination of confirmation lights and extra enforcement efforts has reduced the number of red light violators.

SAFETY CHARACTERISTICS

Angle crashes at signalized intersections are the most common type of severe crash in urban areas in Minnesota and accounted for 30 percent of the 1,461 severe right-angle, intersection-related crashes in Minnesota between 2006 and 2010.



Source: Minnesota Crash Mapping and Analysis Tool (MnCMAT)

There is concern in the literature about confirmation lights possibly increasing the number of rear end crashes as a result of drivers making a greater effort to stop. The literature on the subject indicates that some of the tradeoff is associated with red light cameras, but there is no indication, yet, of it being the case with confirmation lights. Also, trading right-angle crashes for rear end crashes may actually be a good outcome given that right-angle crashes are typically more severe.

PROVEN, TRIED, INEFFECTIVE, OR EXPERIMENTAL

- National Cooperative Highway Research Program 500 Series considers confirmation lights a **PROVEN** strategy along with optimizing clearance intervals. Upgrading of hardware to provide better visibility is considered **TRIED**.
- The Federal Highway Administration estimates a 15 percent reduction in crashes.
- At an intersection in Florida, a 3-month evaluation found a 50 percent decrease in red light violations and an 11 percent decrease in crashes, with 519 citations issued.

Traffic Signal Confirmation Lights (2 of 2)

INTERSECTIONS

TYPICAL CHARACTERISTICS OF CANDIDATE LOCATIONS

Before implementation of confirmation lights, a typical candidate intersection would have already addressed unintentional red light running by:

1. **Checking clearance intervals**—Most agencies already have sufficient clearance intervals at their signalized intersections. A signed confirmation from the traffic engineer that the clearance intervals were reviewed should be obtained to assist in any attempted appeal process (violators claiming clearance intervals purposely adjusted by enforcement agencies to encourage more violations).
2. **Updating hardware**—To improve visibility of the signal, signals should be overhead with 12-inch lenses and background shields. (Most agencies have this hardware in place. A review found that of 100 signals in Hennepin County, 90 signals were overhead. Most that were not overhead signals were on one-way streets.)

After the clearance intervals and hardware are addressed, you are left with intentional red light running. Confirmation lights are more effective if the following criteria are met:

- They can be deployed along a corridor at multiple signals so officers have flexibility in location of enforcement.
- They are publicized. Through public announcements, let the public know about the lights and the consequences of running red lights.

Also, before confirmation lights are employed, acceptance from the local traffic court must be confirmed to assure that the citations will be accepted and that enforcement agencies are willing to use the device. Agencies are encouraged to meet with law enforcement officers in the field to discuss where they will be parked so the light can be placed at a location with clear sight views for a parked enforcement vehicle.

SOURCES

www.stopedlightrunning.com

Red-Signal Enforcement Lights, FHWA-SA-09-005, May 2009.

Evaluation of Innovative Safety Strategies, Florida DOT, January 2008.



BEST PRACTICE

It is recommended that confirmation lights be deployed on multiple traffic signals along a corridor to provide enforcement agencies with the ability to change the time and location of enforcement for a broader safety effect on the travelling public.

TYPICAL COSTS

Implementation Costs = \$1,000 per intersection (\$500 per light for mainline approaches)

DESIGN FEATURES

The confirmation light is wired directly into the circuit of the red signal indicator. The red signal and blue confirmation light are powered by the same source.



Traffic Signal Confirmation Lights Policy

INTERSECTIONS

POLICY PURPOSE/INTRODUCTION

The purpose of this policy is to establish uniformity and consistency in the application and installation of red light confirmation lights at signalized intersections on the **<Insert Agency>**'s roadway system.

Red light running is a common safety concern on urban signalized arterials. The safety literature identifies a number of potential strategies to reduce red light running. Most of the strategies deal with signal design features such as 12-inch lenses, background shields, and overhead indications, all of which agencies in Minnesota routinely incorporate into their signal systems. Other strategies include enhancements to enforcement, cameras (which are not allowed in Minnesota), and a relatively new device: red light confirmation lights.

Installation of red light confirmation lights at intersections would allow one law enforcement officer to monitor an intersection for red light running. It should be noted that Minnesota is using a blue light instead of a white light in order to not confuse drivers accustomed to seeing white confirmation at locations with emergency vehicle preemption systems. Increased enforcement should drive down the number of occurrences of red light running.

DEFINITIONS

A confirmation light is a blue light located on the back of the traffic signal mast arm and is used by law enforcement to identify red light-running vehicles. The confirmation light is wired into the red light circuits of the signal and comes on simultaneously with the red indication. The confirmation light allows one officer to safely observe and pursue red light violators instead of the usual two officers needed without the light.

POLICY

It is the policy of **<Insert Agency>** that red light confirmation lights will be installed in the following situations:

- Installation of new signals
- Rehabilitated signals
- Crash history corridor
- Results of a safety study indicate angle crashes at signals are overrepresented.

POLICY CRITERIA

As part of installation of confirmation lights, the following activities will be completed to assist in the effectiveness of the lights:

- **<Insert Agency>** will coordinate with local law enforcement to reach an agreement on the level of enforcement that can be provided for corridors with installed confirmation lights.
- Before enforcing the confirmation lights, coordination will be completed between **<Insert Agency>** and local law enforcement, **<Insert Agency>** attorneys, and judges to develop understanding of the planned enforcement of the confirmation lights and to foster support for their implementation.
- **<Insert Agency>**'s traffic engineer will review clearance intervals and confirm correct (consistent with Institute of Transportation Engineer's [ITE] guidelines) or adjust. The engineer will provide a signed note in the controller cabinet that provides the confirmed clearance interval information for use if enforcement results are challenged.

FINANCIAL CONSIDERATIONS

Confirmation lights are eligible for Highway Safety Improvement Program (HSIP) funding and typically cost \$1,000 for two approaches of an intersection.