



Automated Enforcement of Red Light Running

This report examines the use of automated enforcement in Iowa in response to red light running violations. Federal, state, and local action regarding automated enforcement is examined, as well as the overall effectiveness of automated enforcement systems.

Red Light Running: Definition

Both “failure to yield right of way making right turn on red signal” and a “ran traffic signal” constitute a driver being involved in red light running.¹ Running red lights account for 21 percent of all collisions at signalized intersections in Iowa and account for 35 percent of the fatal and major injury crashes at signalized intersections.²

Automated Enforcement: Definition

Automated enforcement is the use of cameras and photo radar to detect red light running. These devices are installed at intersections and are connected to sensors synchronized with the traffic lights that detect vehicles running red lights. The camera is triggered to record the day, time and place of the violation. Then, based on the photos, the owner of the vehicle is determined and a citation is mailed.³ Photo radar systems are also used to detect speeding in many communities; this report, however, looks only at red light automated enforcement systems.

¹ Fitzsimmons, Eric. “Effectiveness of Iowa’s Automated Red Light Running Enforcement Programs,” *Center for Transportation Research and Education, 2007 Mid-Continent Transportation Research Symposium*. August 2007. <http://www.ctre.iastate.edu/pubs/midcon2007/FitzRed.pdf>.

² Fitzsimmons, Eric. “An Investigation of the Change in Crash Rates at Automated Red Light Running Enforced and Comparison Intersections in Davenport and Council Bluffs, Iowa Using Descriptive Statistics,” *Center for Transportation Research and Education*. Oct 2007. <http://www.ctre.iastate.edu/mtc/papers/documents/fitzsimmons2007paper.pdf>.

³ Savage, Melissa. “Automated Enforcement,” *National Conference of State Legislatures*. April 2004. <http://www.ncsl.org/programs/transportation/0700trnrvt.htm>.

Federal Action

There is no federal regulation regarding the use of automated enforcement. However, according to the Center for Transportation Research and Education, since 1992 the Federal Highway Administration (FHWA) has awarded grants to various jurisdictions nationwide in order to implement and evaluate the effects of automated enforcement.⁴

State Action

The decision to use of automated enforcement is made by state and local governments. There are three strategies states have pursued: passing laws explicitly permitting the use of automated enforcement statewide, passing laws explicitly prohibiting its use, and passing no laws.

State Laws: Permission

Currently, 15 states and the District of Columbia have laws permitting the use of automated enforcement for red light violations. These laws do not *require* the use of automated enforcement—they simply permit communities to use the systems, as well as provide statewide penalties for red light violations recorded via automated enforcement. The penalties set forth by states can include fines, points toward losing one’s license, or both. These states and their penalties are included in Table 1.

Table 1
*States with Laws Permitting Automated Enforcement*⁵

<i>State</i>	<i>Fines</i>	<i>License Points</i>
Arizona	\$250	Yes
California	\$100	Yes
Colorado	\$39	Yes
Delaware	\$75-\$230	No
D.C.	\$75	Yes
Georgia	\$1000 max	Yes
Illinois	\$500 max	Yes
Maryland	\$500 max	Yes
New York	\$100 max	No
North Carolina	\$100 max	Yes
Oregon	\$300 max	No
Pennsylvania	\$25	Yes
Rhode Island	\$75	No
Utah	\$1000 max	Yes
Virginia	\$200 max	Yes
Washington	\$250 max	\$250 max

⁴ “Red Light Running in Iowa,” *Center for Transportation Research and Education*. January 2001. www.ctre.iastate.edu/reports/rlrsummary.pdf.

⁵ “Automated Enforcement Laws,” *Governors Highway Safety Association*. November 2007. http://www.ghsa.org/html/stateinfo/laws/auto_enforce.html.

State Laws: Prohibition

Six states explicitly prohibit the use of red light automated enforcement: Arkansas, Nevada, New Hampshire, New Jersey, West Virginia, and Wisconsin.⁶

No State Laws

Twenty-nine states have no state law on automated enforcement devices, leaving installment and penalty decisions up to individual communities. Table 2 includes states without laws and the number of communities that have installed automated enforcement in each.

Table 2
*States with No Automated Enforcement Laws*⁷

<i>State</i>	<i>Automated Enforcement Locations</i>
Alabama	
Alaska	
Connecticut	
Florida	2 Municipalities
Hawaii	
Idaho	
Indiana	
Iowa	4 Municipalities
Kansas	
Kentucky	
Louisiana	4 Municipalities
Maine	
Massachusetts	1 Municipalities
Michigan	
Minnesota	
Mississippi	2 Municipalities
Missouri	20 Municipalities
Montana	
Nebraska	
New Mexico	1 Municipality
North Dakota	
Ohio	9 Municipalities
Oklahoma	
South Carolina	
South Dakota	1 Municipality

⁶ *Ibid.*

⁷ *Ibid.*

Tennessee	8 Municipalities
Texas	54 Municipalities
Vermont	
Wyoming	

Iowa

As indicated by Table 2, Iowa has no statute permitting or prohibiting automated enforcement. According to the Insurance Institute for Highway Safety, four Iowa communities currently have automated enforcement to detect red light running: Clive, Council Bluffs, Davenport, and Sioux City.⁸ Council Bluffs, Davenport, and Sioux City have a \$65 penalty for a red light violation captured by automated enforcement cameras, while Clive has a \$75 penalty for violation.⁹

In January 2007, a Davenport Judge ruled the systems were illegal because the Legislature had not explicitly authorized municipalities to approve such systems. Two common arguments used against the systems in Iowa hold that: 1) they are simply profit-generating devices; and 2) that they are replacing the work of police officers. Arguments in favor of the systems revolve around their effectiveness in reducing violations and crashes.¹⁰

In April 2007, the Iowa House and Senate defeated a proposed amendment prohibiting the use of automated traffic enforcement systems that was part of a transportation bill, maintaining that the courts must make a decision first. The matter is before the Iowa Supreme Court, and Iowa communities have put their automated enforcement operations on hold.¹¹

Effectiveness

The effectiveness of automated enforcement is measured in two ways: the change in red light *violations* between the time of installation and a later date, and the change in red light *crashes* before and after installation. In terms of violations, in one New York community red light violations were reduced approximately 70 percent between the time of installment and one year after using the system, while a Virginia community saw a seven percent reduction in violations after three months of using automated enforcement and a 44 percent reduction by the end of the year.¹²

⁸ “Communities Using Red Light/ Speed Cameras,” *Insurance Institute for Highway Safety*. December 2007. http://www.iihs.org/research/topics/auto_enforce_cities.html.

⁹ “Cameras at Red Lights Yield 142 Citations,” *Sioux City Journal*. [n.d.] <http://www.siouxcityjournal.com/articles/2005/08/15/news/iowa/d9890359c3ef5a108625705e00103029.txt>

¹⁰ “Proposed Red Light Camera Ban Fails,” *Quad-City Times*. 18 Apr 2007.

<http://www.qctimes.com/articles/2007/04/18/news/state/doc4625b88a63765342899298.txt>.

¹¹ *Ibid.*

¹² Savage, 2004. <http://www.ncsl.org/programs/transportation/0700trnrvt.htm>.

In terms of collisions, a 2005 study by the Federal Highway Administration in seven cities found that right-angle crashes decreased by 25 percent, while rear-end collisions increased by 15 percent.¹³ These results imply that while automated enforcement may reduce crashes typical of running through a red light, the systems may also cause more drivers to stop abruptly to avoid a citation, therefore producing the unintended effect of increasing rear-end collisions.

Iowa

A December 2007 study funded by the Iowa Department of Transportation and conducted by the Center for Transportation Research and Education examined red light crashes in Davenport and Council Bluffs, and red light violations in Clive. The results revealed a 20 percent reduction in red light collisions after automated enforcement installation in Davenport intersections and a 44 percent reduction in red light collisions after automated enforcement installation in Council Bluffs intersections. The study also compared videotaped “control” intersections with automated enforcement intersections in Clive and found a 25 percent reduction in red light violations in automated enforcement intersections. Additionally, the study failed to find any increase in rear-end crashes as a result of automated enforcement.¹⁴

This report was prepared in December 2007 by the Iowa Civic Analysis Network (I-CAN), a non-partisan public policy undergraduate research group at the University of Iowa. For additional research on this or other issues, please visit our website at <http://www.uiowa.edu/~ican> or contact us at studorg-i-can@uiowa.edu.

¹³ “Red Light Running,” *Insurance Institute for Highway Safety*. 2007.
<http://www.iihs.org/research/topics/rlr.html>.

¹⁴ Fitzsimmons, Eric et al. “The Effectiveness of Iowa’s Automated Red Light Running Enforcement Programs,” *Center for Transportation Research and Education*. December 2007.
<http://www.ctre.iastate.edu/reports/rlr-phase2.pdf>.