

**Statement before the  
Kentucky Senate  
Transportation Committee**

**On red light violations  
and red light cameras**

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The Insurance Institute for Highway Safety is a nonprofit research and communications organization that identifies ways to reduce motor vehicle crashes and their losses. We are supported by the nation's automobile insurers. At this committee's request, I'm submitting for the record information from the Institute about red light running and technology to reduce this problem.

The purpose of traffic lights is obvious — go on green, stop on red — but this only works to control traffic and prevent intersection crashes if motorists obey the lights. Too often, motorists assume they can step on the accelerator and go through intersections after lights turn red. The fact is, running red lights and other traffic controls is the number one cause of urban crashes.<sup>1</sup> Only a miniscule fraction of offenders are being apprehended. What we need in Kentucky and other states are changes — including legislative changes — to apprehend more red light runners and, better still, to deter potential violators before offenses occur.

### **Red Light Running**

The deliberate running of red lights is a common — and a serious — violation. Institute researchers measuring the frequency of this offense during several months at a busy intersection in Arlington County, Virginia, found a red light runner every 12 minutes on average — every 5 minutes during the peak travel time between 8 and 9 a.m.<sup>2</sup> This adds up to more than 100 chances each day for an unsuspecting motorist or pedestrian to become a crash victim *at just one intersection*.

Such violations may seem trivial to the violators, but the safety consequences are real. An Institute study found that, compared with all other types of urban crashes, those involving signal violations are the most likely to cause injuries. Researchers reviewed police reports of crashes in four urban areas during 1990-91, finding occupant injuries in 45 percent of the crashes involving red light running compared with 30 percent of other types of crashes.<sup>1</sup> The same study found that running red lights and other traffic controls is the most common cause of urban crashes.

On a national basis, Institute research found that drivers who run red lights are responsible for an estimated 260,000 crashes each year. About 750 of these are fatal, and the number is rising.<sup>3</sup> In Kentucky during 1992-96, 53 motorists were killed as a result of red light running.

Louisville had one of the highest rates of fatal red light running crashes per population, exceeding Los Angeles, Chicago, Houston, and most other cities.

### **Red Light Cameras**

Running signal lights is a safety problem that demands attention. Fortunately, technology does exist that can help. Red light cameras automatically photograph the license plates of vehicles driven through red lights. Connected to the traffic signal and to sensors buried in the roadway, these cameras are triggered to photograph vehicles passing over the sensors after a light has been red for a predetermined time, so only unequivocal violations are recorded. The purpose is to detect *deliberate* red light runners — those who pose a threat to pedestrians and traffic in intersections, not drivers who inadvertently enter intersections when the signal is yellow.

Typically, two photographs are taken of vehicles in intersections. The camera records the date, time of day, time elapsed since the light turned red, and speed of a violating vehicle. An electronic flash produces a clear image of the vehicle in virtually all light and weather conditions. Once a photograph is reviewed for accuracy, the license number then is used to identify the vehicle's registered owner so a citation can be sent by mail.

Institute researchers used red light cameras in Arlington, Virginia, for about three years. More than 30,000 violations were recorded, but no citations were issued because the work was conducted for research purposes only.<sup>4</sup> The camera systems have been extremely accurate and reliable. They have required virtually no maintenance. The same equipment subsequently was installed at two intersections in Howard County, Maryland, to help police and traffic engineers evaluate the extent of red light running and the feasibility of using red light cameras to help enforce traffic laws. Results confirmed that violations are frequent and red light cameras function well.

Red light cameras are effective in modifying driver behavior. Institute evaluations of camera programs in two U.S. cities — Oxnard, California, and Fairfax City, Virginia — found that violation rates decreased by about 40 percent during the first year of enforcement.<sup>5,6</sup> Increases in driver compliance were not limited to camera-equipped sites but spread to nonequipped intersections as well.

The key question is, would wide use of such cameras improve the safety of our urban streets? Findings from Australia indicate they would. Officials in Victoria, Australia, began using red light cameras in 1983. Intersections were posted with notices about the presence of the cameras. The Road Traffic Authority evaluated the effectiveness of this program, finding a 32 percent reduction in injuries after the cameras were installed.<sup>7</sup>

### **Privacy Issue**

Photographing vehicles whose drivers run red lights doesn't violate anyone's protected privacy interest. Most red light cameras record only the rears of vehicles, not vehicle occupants. Besides, driving is a regulated activity on public roads. Neither the law nor common sense suggests that drivers shouldn't be observed on the road or that their violations shouldn't be recorded.

### **Public Support**

Like other government policies and programs, red light camera enforcement requires acceptance and support from the public and elected leaders. Although the "big brother" issue is raised by some opponents of automated enforcement technology, public opinion surveys in the United States and abroad consistently reveal wide acceptance and strong public support for red light cameras. Nationwide telephone surveys have found that about two-thirds of U.S. residents support the use of red light cameras, with higher levels of support generally found in urban communities.<sup>2,8</sup> The Institute recently conducted random telephone surveys in 10 cities, 5 with red light cameras and 5 without. The cameras were supported by 80 percent of drivers in cities with red light cameras and by 76 percent elsewhere. Drivers in the 5 cities with camera enforcement perceive a greater risk of being ticketed for red light running than those in cities without cameras.<sup>9</sup> Similar public opinion surveys in Europe and Canada revealed that the majority of drivers support red light cameras.<sup>10,11</sup>

### **Need for Change to Use Red Light Cameras**

Traditional enforcement requires an officer to observe a red light violation and then chase, stop, and cite the violator. This process can endanger motorists, pedestrians, and officers because, in many cases, the officer would have to run the red light *after* the violator. Such safety consequences plus the sheer volume of violations mean police cannot begin to catch a fraction of red light runners. This is where red light cameras would help — they can photo-

graph every violation that occurs at intersections where they're active. More important is the deterrent effect when multiple intersections are equipped for the cameras. Motorists don't know which ones have operating cameras at any given time, so they're less likely to take a chance and run a red light. The goal is no citations at all — the cameras would become such a deterrent that red light running wouldn't be a problem.

Red light cameras already are in use in more than 35 U.S. cities including Charlotte, North Carolina, Denver, San Francisco, and New York and are deployed extensively in other countries including Australia, Belgium, Germany, Israel, the Netherlands, Singapore, South Africa, Switzerland, and the United Kingdom.

The proposed law change would authorize the use of red light cameras in Kentucky communities. The result would be detection and punishment of many more violators. Potential violators would be deterred because they know the presence of the cameras greatly increases the odds of getting a ticket. The safety of Kentucky residents would be enhanced.

## References

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