

**Statement before the  
Virginia House of Delegates  
Militia, Police, and Public Safety  
Committee**

**Red Light Camera Enforcement  
Programs**

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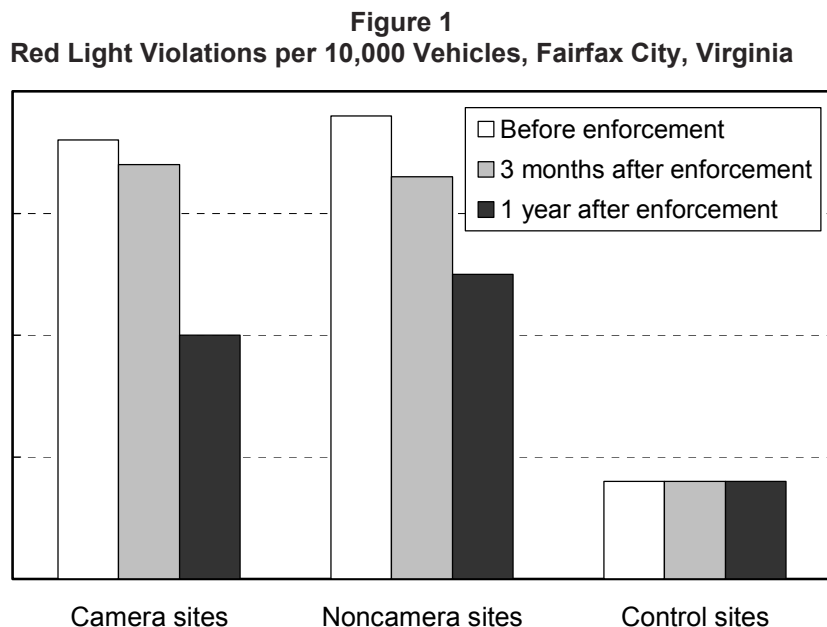
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The Insurance Institute for Highway Safety is a nonprofit research and communications organization that identifies ways to reduce motor vehicle crashes and their losses. We are pleased to provide this subcommittee with information on our research evaluating red light camera enforcement programs.

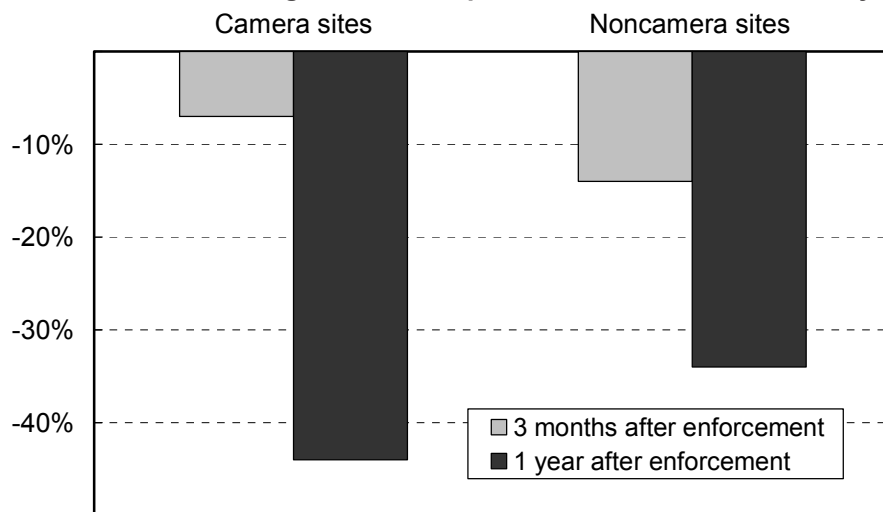
The deliberate running of red lights is a common and serious violation. In 1997-98 the Institute conducted a comprehensive evaluation of red light camera enforcement in Fairfax City, Virginia.<sup>1</sup> The study examined the frequency of red light violations before and after installation of cameras. Observations were conducted at five intersections where cameras were installed ó Fairfax Circle, Main Street at University Avenue, Route 123 at Eaton Place, Route 123 at North Street, and Lee Highway at Route 123. To assess whether any effects of camera enforcement generalized to nonenforced intersections, observations also were conducted at two signalized intersections in Fairfax City where red light cameras were not installed ó Main Street at Burke Station Road and Lee Highway at Eaton Place. Control sites located outside Fairfax City also were studied to ensure a strong experimental design. In total, more than 700 hours of observational data were collected. In addition to examining effects of camera enforcement on violations, the Institute conducted telephone surveys of a random sample of Fairfax City residents to evaluate their awareness and opinions of red light camera enforcement.

Prior to installation of red light cameras in Fairfax City, red light violations per 10,000 vehicles averaged 36 at the 5 camera sites and 38 at the noncamera sites (Figure 1). One year after enforcement began, violation rates were lower at all camera and noncamera sites. Overall

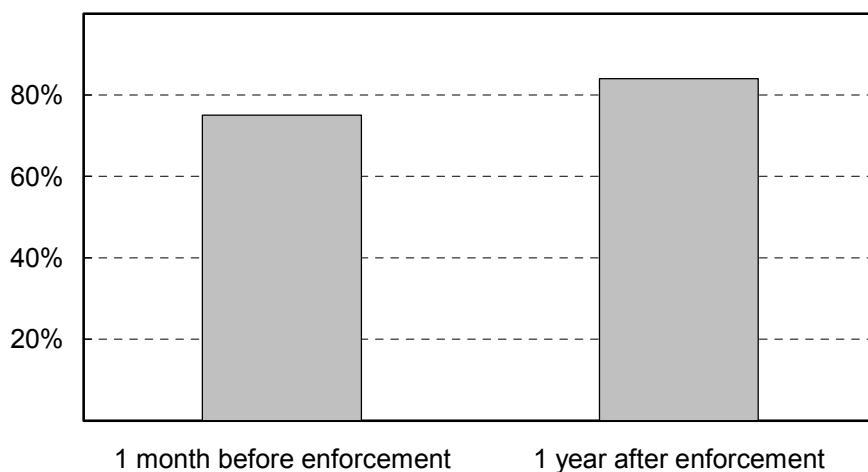


reductions in violation rates at the 5 camera sites were 7 percent 3 months after enforcement began and 44 percent 1 year after. Overall reductions at noncamera sites were 14 percent 3 months after enforcement began and 34 percent 1 year after (Figure 2). Violation rates at the control sites located outside Fairfax City essentially were unchanged 3 months after enforcement began and 1 year after. These results indicate large and highly significant reductions in red light violations 1 year after implementation of red light cameras. Public opinion surveys revealed that 84 percent of Fairfax City residents favored red light cameras 1 year after enforcement began, up from 75 percent before cameras were installed (Figure 3).

**Figure 2**  
**Percent Reductions in Red Light Violations per 10,000 Vehicles, Fairfax City, Virginia**



**Figure 3**  
**Public Opinion Regarding Red Light Cameras, Fairfax City, Virginia**  
**Percent of Drivers Who Favor Red Light Cameras**



The findings in Fairfax City are consistent with reported effects of red light camera enforcement in other communities. A recent Institute review of international red light camera studies concluded that cameras reduce red light violations by 40 to 50 percent.<sup>2</sup> An Institute survey in 10 cities ó 5 with and 5 without cameras ó found that more than 75 percent of drivers support red light camera enforcement.<sup>3</sup>

The Fairfax study did not evaluate crash effects of red light camera enforcement. However, crashes were the subject of two more recent Institute studies. A study in Oxnard, California, reported significant citywide crash reductions following introduction of red light cameras.<sup>4</sup> Injury crashes at intersections with traffic signals in Oxnard were reduced 29 percent after the camera program began. Front-into-side collisions ó the crash type most closely associated with red light running ó were reduced 32 percent overall, and front-into-side crashes involving injuries were reduced 68 percent. Crashes declined throughout Oxnard even though only 11 of the city's 125 intersections with traffic signals were equipped with cameras. These results attest to the strong deterrent value of red light cameras and their ability to change driver behavior. A second Institute study, a review of international red light camera studies, concluded that cameras reduce injury crashes by 25 to 30 percent.<sup>3</sup>

In summary, it is apparent from the scientific evaluation of red light cameras that they reduce red light violations and prevent thousands of crashes that occur from such violations. The public overwhelmingly supports camera use. Thank you for the opportunity to provide this testimony.

## References

1. Retting, R.A.; Williams, A.F.; Farmer, C.M.; and Feldman, A.F. 1999. Evaluation of red light camera enforcement in Fairfax, VA, USA. *ITE Journal* 69:30-34.
2. Retting, R.A.; Ferguson, S.A.; and Hakkert, A.S. 2003. Effects of red light cameras on violations and crashes: a review of the international literature. *Traffic Injury Prevention* 4:17-23.
3. Retting, R.A. and Williams, A.F. 2000. Red light cameras and the perceived risk of being ticketed. *Traffic Engineering and Control* 41:224-25,227.
4. Retting, R.A. and Kyrychenko, S.Y. 2002. Reductions in injury crashes associated with red light camera enforcement in Oxnard, California. *American Journal of Public Health* 92:1822-25.