

Yellow-Light Timing



Why Amber Time Matters...

The purpose of the yellow interval is to **warn approaching traffic** of the imminent **right-of-way change**.

Source: Federal Highway Administration (FHWA).

If the amber light is too long, drivers will disregard it and consider it part of the green light cycle.

Source: FHWA. Issue Brief 6. "Engineering Countermeasures to Reduce Red-Light Running." November 2009.

Excessively **long signal lights can encourage red-light running** because **drivers do not want to have to wait** several minutes for the next green interval.

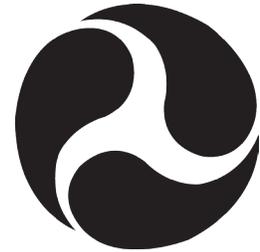
Source: FHWA. Issue Brief 6, "Engineering Countermeasures to Reduce Red-Light Running." November 2009.

Drivers adapt to longer yellow time.

Source: FHWA. Making Intersections Safer: A Toolbox of Engineering Countermeasures to Reduce Red-Light Running. Chapter 3. Pgs. 34-35.

Longer yellow light times do not result in lasting change in driver behavior. "Prior research examining longer term effects of increased yellow timing found that reductions in red-light violations were sustained at least 6 months to 1 year...but that some drivers might adapt to increases in yellow duration and continue to run red lights."

Source: Retting, R. et al. "Reducing Red Light Running through Longer Yellow Signal Timing and Red Light Camera Enforcement: Results of a Field Investigation." January 2007. Page 8.



U.S. Department
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**Federal Highway
Administration**

Myth V. Fact



Myth – Cities shorten the timing of yellow lights to increase revenue from fines.

Fact: Yellow light time is set to **optimize safety and traffic flow**. Federal guidelines recommend yellow lights last from **3 to 6 seconds**. Local authorities set the duration based on many factors including: traffic volume, speed, roadway grade and intersection design.

Source: "Manual on Uniform Traffic Control Devices 2009 Edition." FHWA. Nov. 30, 2010.

Myth – To stop red-light running, just make yellow lights longer.

Fact: Longer yellow lights **do not prevent red-light running** as effectively as red-light safety cameras. This is proven in a Philadelphia study where researchers found one added second of amber time decreased red-light running violations by 36%, but the installation of **red-light safety cameras reduced violations an additional 96%**.

Source: Retting, R. et al. "Reducing Red Light Running through Longer Yellow Signal Timing and Red light Camera Enforcement: Results of a Field Investigation." January 2007.



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Myth – People do not run red lights on purpose. The yellow is just too short.

Fact: **More than 1 in 3 drivers** (37%) admit to running a traffic light that had just turned red **when they could have stopped safely** in the past 30 days.

Source: AAA Traffic Safety Culture Index 2011. Released January 2012.

Fact: **“The yellow interval does not determine the stopping time** of those who choose to stop, because their **deceleration** and **slower average speed** as they stop means they have **longer than the yellow interval to achieve their stop.**”

Source: Hu, W. “Comment on ‘Isaac Newton vs. Red Light Cameras: Derivation of the Yellow Light Interval Equation’ by Brian Ceccarelli” IIHS. August 2010.

Myth – Longer yellow light times will make intersections safer.

Fact: Raising the yellow light time might reduce violations but it **doesn’t change driver behavior**. In fact, it may cause secondary problems when **the driver learns an unsafe behavior** that could cause a crash at other signal locations where yellow intervals may not have been extended arbitrarily.

Fact: Red-light safety cameras **change dangerous driver behavior** and help protect everyone. Traffic studies found **red-light running violations fell by 40% to 96%** after the introduction of red-light cameras, and the reductions occurred not only at camera-equipped sites but also at signalized intersections without cameras, indicating community-wide changes in driver behavior.

Source: Insurance Institute for Highway Safety.

Statistics and Studies

Georgia law **added 1 second to yellow light times** at intersections with red-light cameras in 2009. That year, red-light running fatalities in the state **increased 53%** from 2008. Red-light running fatalities in 2010 and 2011 were **41% and 88% higher** respectively than in 2008.



Note: Georgia witnessed 17 red-light running fatalities in 2008, 26 in 2009, 24 in 2010 and 32 in 2011. Communities with red-light cameras **decreased from 27 in 2008 to 17 in 2011.**

Sources: NCSA office of National Highway Traffic Safety Administration; Georgia House Bill 77; “Experience in Georgia with Photo Enforcement.” ITE 2008 Technical Conference, March 31, 2008; Georgia Department of Transportation.

In Texas, at 275 intersections with red-light running cameras and yellow light times that met established guidelines, **red-light running crashes decreased 23%** one year after red-light cameras were installed, **27% the second year** and **21% the third year.**

Note: Study periods compare time frames before and after camera installation.

Source: “Evaluation of Photographic Traffic Signal Enforcement Systems in Texas.” Texas Transportation Institute. June 2011.



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