

# Billboards, particularly Electronic, are a Roadside Hazard

(SK editor's note: A recent FHWA study seems to say that LED boards are safe for the motoring public. This study has been questioned both as to its conclusion and how the end result was derived. Actually, the problem should be looked at in a larger context, an international one. Why have others said they are a problem and banned them, when we seem to be allowing them? Below are two studies reprinted with permission of Scenic America that comes to the opposite conclusion from that of the FHWA.)

## A) Swedish Study Shows Digital Billboards Distract Drivers

A new study published in the journal Traffic Injury Prevention concludes that digital billboards attract and hold the gazes of drivers for far longer than a threshold that previous studies have shown to be dangerous.

The study, conducted by researchers at the Swedish National Road and Transport Research Institute and funded by the Swedish Transport Administration, found that drivers looked at digital billboards significantly longer than they did at other signs on the same stretch of road, with the digital signs often taking a driver's eyes off the road for more than two seconds.

A well-regarded 2006 study by Virginia Tech for the National Highway Traffic Safety Administration found that anything that takes a driver's eyes off the road for more than two seconds greatly increases the risk of a crash. The study also found that nearly 80 percent of all crashes involved driver inattention just prior to (within 3 seconds) of the crash.

The Swedish study's authors reasoned that it's not surprising that digital billboards attract greater attention from drivers: the signs are brighter, visible from greater distances, and display a constantly-changing series of advertisements. They concluded that digital billboards "have the potential ability to keep up the driver's curiosity over an extended period of time." Previous human behavior studies have shown that drivers are hardwired to notice bright, changing lights in their peripheral vision and to anticipate additional motion.

The Swedish government had given temporary authorization to erect digital billboards in 2009, but as a result of this and related studies the government ordered the removal of all digital billboards. Meanwhile in the United States these signs continue to go up at a rapid pace despite a growing body of evidence suggesting they pose a threat to traffic safety.

## B) Israel Billboard Safety Study

Presentation of Study from the International Conference on Traffic and Transport Psychology

A study on one of Israel's busiest highways found that the removal of roadside billboards significantly reduced the number of crashes along the roadway, including a more than two-thirds reduction in fatal or injury crashes.

 Results: All Crashes before and after sign removal

Year	Total Crashes	
	Control sites	Treatment sites
2006	849	106
2007	857	95
2008	825	65

The analysis on the Ayalon Highway in Tel Aviv compared the number and types of crashes at treatment sections, where billboards were present along the roadway, with crashes within a control group of road sections where billboards had been removed or covered.

 Results: Injury Crashes before and after sign removal

Year	Injury/Fatal Crashes	
	Control sites	Treatment sites
2006	240	40
2007	262	55
2008	255	17

Statistics are on crashes from 2006 and 2007, when the billboards were visible, and 2008, when they were removed or covered. In 2007, before the billboards were removed or covered, there were a total of 95 crashes within the treatment sections. In 2008, after the billboards were removed or covered, there were 65 crashes, a decrease of more than one-third. The decrease in injury or fatal crashes was even more compelling: from 55 in the 'before' period of 2007 down to 17 in the 'after' period of 2008, a more than two-thirds reduction.

The study's authors said: "The downward trend in accidents in the 'after' period was robust and consistent... particularly for injury crashes. Therefore we can conclude that... there is empirical evidence of a link between the removal of advertising signs and the improvement of road safety on an urban / suburban highway."

The opportunity to perform the study presented itself because of a governmental order to temporarily remove or cover the billboards. This allowed the researchers, working on behalf of Israel's National Road Safety Authority, to look at crashes in the vicinity of these billboards both before and after they were removed or covered.