



Reducing the Illegal Passing of School Buses

Video Footage Assists in Documentation, Training, and Raising Public Awareness

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According to TRB Special Report 269, *The Relative Risks of School Travel: A National Perspective and Guidance for Local Community Risk Assessment*,¹ the school bus is the safest mode of school transportation in the United States. Nonetheless, the nation experiences an average of 20 school bus–related fatalities per year. One-third of these fatalities occur when motorists illegally pass a stopped school bus, ignoring the flashing red warning lights and the deployed stop-sign arm.

Problem

North Carolina school districts operate more than 13,000 school buses daily, and illegal passing of school buses takes place an average of 1,900 times each day. In North Carolina, the stop arm violation—passing a stopped school bus while the side-mounted stop sign is deployed—is the only type of traffic violation for which law enforcement relies on citizen reports. The violation also carries the second highest penalty for a moving violation, next to the penalty for driving while intoxicated.

Law enforcement officers, however, have questioned the validity of some violation reports. Occasional stepped-up enforcement efforts often produce few or no observed violations.

The North Carolina Department of Public Instruction and the Institute for Transportation Research and Education at North Carolina State University set out to find ways to reduce the illegal passing of stopped school buses. The study focused on three coastal school districts: Onslow, Pender, and New Hanover counties. In Onslow County, a high level of collaboration among agencies—plus the use of external, bus-mounted video cameras—led to notable success.

Solution

Gathering Stakeholders

At the initial project meeting with stakeholders, law enforcement officers were skeptical about the magnitude of the problem and about the validity of the reported violations. Officers also expressed concerns about the deployment procedures for stop arms, particularly the way that some drivers sometimes activate the stop arm before coming to a stop, in an attempt to control traffic. Because of this, some violation reports filed by bus drivers had been dismissed and were not pursued through the judicial system.

The first step of the project, therefore, was to conduct a question-and-answer session for all stakeholders. The goal was to ensure that the law enforcement officers who issue the citations, the district attorneys who seek the convictions, the bus drivers who file the violation reports, and the bus driver trainers all agree on what constitutes illegal passing of stopped school buses.

Video Cameras

To address questions about the school bus stop arm deployment procedures, the project team conducted a study using video cameras. The Onslow County project team mounted weatherproof video cameras outside the bus near the stop arm of selected school buses operated by drivers who had reported frequent illegal passing. The video cameras recorded the date, the time, the speed of the bus, the activation of the amber warning lights, and the deployment of the stop arm.

The initial use of the video cameras was to perform a time and motion study of how bus drivers were operating the traffic control devices—the amber warning lights, the red warning lights, and the stop arm. The videos showed that bus drivers sometimes failed to come to a complete stop before activating the red warning lights and stop arm.

The daily recordings for each bus also captured at

¹ www.TRB.org/publications/sr/sr269.pdf



Video footage snapshot documents a passing violation while the school bus was stopped (vehicle speed is 0) and the stop arm was deployed (red warning lights were activated).

least one or two vehicles illegally passing while the stopped bus was loading and unloading school children. Because the footage documented that the school bus was stopped and that the stop arm was deployed, the violations were easily verified.

The transportation director for Onslow County Schools shared the findings from the daily footage with local highway troopers. The footage convinced the law enforcement officers of the magnitude of a problem observed only rarely by patrols.

Training Drivers

The focus on stop arm violations and the implementation of the video technology brought the school system transportation staff and law enforcement agencies together to work toward a common goal. The time and motion study revealed that drivers may not have followed consistently the procedures for making passenger stops.

In North Carolina, school bus drivers are trained to activate the vehicle's amber warning lights 300 feet before the stop, stop the bus 15 feet short of the closest waiting passenger, come to a complete stop, check the traffic, and then open the door. Opening the door activates the red warning lights and the stop arm. The time and motion study revealed that drivers did not keep to the 300-foot warning stage and sometimes deployed the stop arm before the bus came to a complete stop.

The video footage pointed out the need for continued education of school bus drivers. A brochure and 6-minute video, "Your School Bus Passenger Stop: Consistency Makes the Difference," were developed

and distributed throughout the state.

The training videotape emphasizes that the school bus drivers' only ways to communicate with motorists are through the vehicle's amber warning lights and red flashing lights. The bus driver must use these warning devices consistently, so that motorists can anticipate when and where the bus will make a stop.

After the reinforcement training in Onslow County, the average daily number of reported violations of the no-passing law filed by the 203 bus drivers dropped. The one-week tally declined from 22.6 to 15 violations per day.

Raising Awareness

Onslow County added more video cameras to the fleet. Working with the district attorney's office, law enforcement agencies issued citations to owners of the vehicles involved in the recorded violations. The locations of the violations also were mapped on a geographic information system, along with the times of the violations, allowing officers to identify high-incident locations for increased enforcement.

Motorists who realize the dangers inherent in the violation will be less likely to pass the stop arm. A key goal of the project, therefore, was to heighten public awareness. Radio advertising, television advertising, press conferences, and educational materials spread the message, along with promotions during School Bus Safety Week and at the North Carolina State Fair.

Television stations in Onslow County incorporated the video footage from the school buses into evening news reports. The result was a further decrease in stop violations.

Frame from school bus driver reinforcement training videotape, produced by the North Carolina Department of Public Instruction and the Institute for Transportation Research and Education, North Carolina State University, with funding from the National Highway Traffic Safety Administration.



Application

The success of Onslow County Schools' experience with video cameras recording school bus stop arm violations spurred great interest from other school districts. Manufacturers of cameras for the school bus industry competed to create more sophisticated units for videotaping inside and outside of school buses.

Laws governing the use of video footage for prosecution may vary from state to state. At the least, however, videos can supply critical evidence to law enforcement agencies that the illegal passing of school buses is a problem.

Benefits

During the 18-month project—which combined cooperation from law enforcement agencies, the reinforced training of school bus drivers, and a public awareness campaign—stop arm violations in Onslow County declined from 22.6 to 7.6 per day, a 67 percent reduction. Other school districts have had similar success using video cameras to document school bus stop arm violations.

Media coverage continues to bring the issue to public attention. The video footage also highlighted the need for continued training of school bus drivers on the proper procedures for making passenger stops.

Since 1997, the North Carolina Department of Public Instruction has maintained a statewide survey of school stop arm violations of all 13,000-plus school buses on a single day—usually a Wednesday—in March. The statewide record indicates that 1,500 to 2,000 times a day a motorist illegally passes a stopped school bus, endangering the lives of students. The

data also show that 3 to 4 percent of the violations occur on the right side of the bus, where students are boarding or off-loading.

School bus drivers, school district transportation staff, law enforcement officers, and motorists have key roles in preventing this risky act. Technology can be a valuable tool, but compliance requires hard work and determination. Onslow County's concerted efforts demonstrate that it is possible to reduce the number of violations and to improve the protection of schoolchildren.

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Suggestions for "Research Pays Off" topics are welcome. Contact G. P. Jayaprakash, Transportation Research Board, 500 Fifth Street, NW, Washington, DC 20001 (telephone 202-334-2952, e-mail gjayaprakash@nas.edu).