

NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C.

ISSUED: November 16, 1977

Forwarded to:

Honorable William M. Cox
Administrator
Federal Highway Administration
400 Seventh Street, SW.
Washington, D.C. 20590

SAFETY RECOMMENDATION(S)

H-77-28

At 5:05 p.m. on July 1, 1976, near Des Moines, Iowa, a westbound Chicago, Rock Island and Pacific Railroad Company freight train struck an automobile that had slowed but did not stop for the flashing signal lights at a grade crossing. All five persons in the automobile were killed. ^{1/}

Even though the sight distance for observing approaching trains was limited on one side for each direction of travel and even though the crossing signals were operating and visible, none of the drivers who approached the crossing without a vehicle preceding them intended to stop in response to the signals alone. These drivers significantly reduced their approach speed from the posted 45-mph speed limit, but they were also searching for an approaching train while they were still moving and distant from the crossing. They decided either to cross the track or to stop as they were approaching the crossing and based their decision on whether or not they thought a train presented an immediate hazard. Research also indicates that even the average driver who stops at these crossings with limited sight distance may be attempting to shorten the time required to stop in order to maximize his opportunity to cross in front of a train. This and other evidence indicates that driver disregard for warning signals at railroad/highway grade crossings is common nationwide.

In March 1972, the Federal Railroad Administration and the National Highway Traffic Safety Administration began a joint effort to determine driver performance and related human factors that contributed to motor vehicle/train accidents and to develop and demonstrate the effectiveness of countermeasures for these factors. A significant effort was made to

^{1/} For more detailed information about this accident read "Railroad/Highway Accident Report - Collision of a Chicago, Rock Island and Pacific Railroad Company Freight Train With An Automobile, Des Moines, Iowa, July 1, 1976" (NTSB-RHR-77-2).

understand driver behavior at railroad crossings, to develop nonaccident measures of behavior (such as driver "looking behavior" and driver attitudes) for evaluating countermeasures, and to predict which countermeasures would increase behavioral safety.

These driver-oriented countermeasures included: (1) driver education to eliminate intolerant attitudes about delays at railroad crossings; (2) enforcement of laws that stipulate grade crossing behavior; and (3) efforts to increase appropriate "looking behavior." As part of the study, drivers were asked to suggest ways to reduce crossing accidents. After increased use of gates and better warning signs and signals, drivers thought improved driver education, stricter law enforcement, and public safety campaigns were useful methods to improve crossing safety.

The National Transportation Safety Board has issued a number of recommendations to improve railroad/highway grade crossing safety. The Safety Board has advocated further development of improved train and crossing equipment, better methods for upgrading crossing protection, and improved driver education and law enforcement.

Congress has mandated that the Federal Highway Administration pursue an aggressive program to develop better crossing equipment and upgrade crossing protection and has provided some specific funds to achieve that objective. Currently, there is no nationwide effort to implement driver-oriented countermeasures or to provide a focal point for combining and enhancing existing education, enforcement, and engineering efforts within the States. However, several States and major railroads, with the assistance of the National Safety Council, have implemented crossing safety programs titled "Operation Lifesaver." These programs seem to provide an appropriate focal point for combining and enhancing existing education, enforcement, and engineering efforts within a State. Initial indications are that these programs have achieved some success, but there is a need to provide additional resources to insure complete development, implementation, and evaluation of this effort. Therefore, the National Transportation Safety Board recommends that the Federal Highway Administration:

Actively participate and support the National Safety Council in the development, implementation, and evaluation of a nationwide "Operation Lifesaver" railroad/highway grade crossing safety program. (Class II, Priority Action) (H-77-28)

McADAMS, HOGUE, and KING, Members, concurred in the above recommendation. BAILEY, Acting Chairman, did not participate.



By: Kay Bailey
Acting Chairman