The Federal Highway Administration is responsible for administering highway safety programs related to the roadway and the road user. These safety programs remove, relocate, or shield roadside obstructions, identify and correct hazardous locations, eliminate or reduce hazards in right-of-way encroachments, and improve signing, pavement markings, and signalization.

The Federal Highway Safety standards and guidelines are used by highway administrators to improve highway safety on Federal-Aid highways and other highways. They help in the identification and analysis of highway accidents; location and highway design, construction, and maintenance. The FHWA also provides highway safety guidance and training for traffic engineering, incident management, pedestrian, and bicycle safety, and safety management systems.

http://www.ohs.fhwa.dot.gov/rumblestrips/
The Problem

Run-of-road crashes cause one-third of all traffic fatalities and two-thirds of those crashes occur in rural areas. The main cause of run-of-road crashes is that we're sleepy. Too many drivers are falling asleep at the wheel. The problem is compounded because we drive too fast. All of these things are making the situation much worse. 

If we think of the road as a tube, then the tube is divided into two lanes by rumble strips. 

The Solution: Rumble Strips

The state of California installed rumble strips on I-80 to prevent drivers from falling asleep. 

The experts say:

Rumble Strips: an innovation that could save lives.
John Watson, New York State DOT makes a single statement on the safety value of rumble strips.

The Costs vs the Benefits of Rumble Strips:

Road-off-road crashes carry a high price tag. The estimated annual cost of this type of crash is $80 billion. In addition to the losses and health care costs of those injured, there is property damage and the untold cost of emotional distress and family disruption.

Several State DOTs have analyzed the benefit/cost ratios of shoulder rumble strips. The analysis involves assumptions based on installation and maintenance costs and the effect of preventing fatalities versus the savings in fatalities, injuries, and property damage from crashes. These values are based on the FHWA's The Cost of Highway Crashes Publication No. FHWA-RD-91-055 available in hardcopy through the FHWA Turner Fairbank Research Center.

Peter Gustafson, New York State Thruway talks about the overall worth of rumble strips as a run-off-road solution.
How effective are rumble strips as a safety enhancement?

Let's do the numbers. Motor vehicles running off the road (ROR) account for one-third of all traffic fatalities nationwide and about two-thirds of these ROR fatalities occur in rural areas. It has been estimated that 40 to 60 percent of these crashes are due to driver fatigue, drowsiness or inattention.

Many studies of the effectiveness of shoulder rumble strips indicate that they can reduce the overall rate of run-off-road crashes by 15 and 70 percent. And there's more. By reducing the number of crashes, shoulder rumble strips also effectively reduce the number of injuries and fatalities.

See what the following States report on the effectiveness of rumble strips:

- California
- Pennsylvania
- Wyoming

John Watson, New York State DOT, tells about driving in a snowstorm and how rumble strips helped guide him back to the roadway.

Chuck Benson, Professional Truck Driver, tells how rumble strips helped him during a snowstorm on I-78 in Pennsylvania.

The Costs vs the Benefits of Rumble Strips

Run-off-road crashes carry a high price tag. The estimated annual cost of this type of crash is $80 billion in addition to the lost lives and medical care costs of those injured. There is property damage and the untold cost of emotional distress and family disruption.

Several State DOTs have analyzed the benefits and costs of shoulder rumble strips. The analysis moves assumptions based on installation and maintenance costs and the effect of crossing a rumble strip on the savings in fatalities, injuries, and property damage crash costs. These values are based on the FHWA's The Cost of Highway Crashes (Publication No. FHWA-PL-96-003) available in hardcopy through the FHWA Turner-Fairbank Research Center.
Peter Gustafson, New York State Thruway talks about the maintenance concerns of rumble strips on the Thruway.
Safety Evaluation of Continuous Shoulder Rumble Strips Installed on Freeways

Michael S. Griffith

Abstract

Single-vehicle run-off-the-road crashes result in approximately one third of all highway fatalities and one half million people injured annually, with a societal cost of $80 billion each year. Continuous shoulder rumble strips (CSR) are one countermeasure used to address this significant safety problem. This study extracted data from two States (California and Illinois) from the Highway Safety Information System (HSIS) to estimate the safety effects of CSR on freeways. Before-after evaluations of CSR protected with the use of different comparison groups were conducted. The results from the evaluations estimate that CSR reduce single-vehicle run-off-the-road crashes by 18.3 percent on all freeways (no regard to urban/rural classification) and 21.1 percent on rural freeways. Two types of potential adverse effects related to safety with CSR were analyzed. The first type pertains to the crash risk that CSR may present due to driver startle/panic responses. The second is the potential for crash migration. The research findings show that these potential adverse effects are insignificant.

Keywords

Continuous shoulder rumble strips, freeways, before-after evaluations, accident analysis, crash migration

Acknowledgments

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Rumble Strips Discussion Group

Rumble Strips and Freezing Conditions

From: Doug Johnson
Date: 1/1/00

Subject: Rumble Strips and Freezing Conditions

To: All Rumble Strips Users and Freezing Condition Recipients

We have heard from many members that they have encountered problems with rumble strips on their roads. We would like to hear from you about your experiences with rumble strips on your roads. We are interested in learning about any problems you may have encountered with rumble strips.

If you have any questions about rumble strips or freezing conditions, please contact us at 555-1234. We are available 24 hours a day, 7 days a week.

Thank you for your assistance.

Doug Johnson

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Thank you for your assistance.

Doug Johnson
The Rumble Strips community is made up of people all over the country. If you have any questions or comments about the development of these strips, feel free to participate in the discussion. Is there anything else you would like to discuss with your colleagues or others in this field?

Would you like to know more about the installation process and how to get started?

The answers to these questions are waiting for you in the Rumble Strips mailing list. To join the mailing list, visit the website and follow the instructions to sign up. You can also send an email with your name, address, and phone number if you would like to receive updates.

1. Send an email to: info@rumblestrips.com with your name, address, and phone number.
2. You will receive an email with instructions on how to join the mailing list.
3. If you have any questions, feel free to reach out via email for more information.

Join the discussion and stay informed about the latest developments in the Rumble Strips community.