

UNSIGNALIZED INTERSECTION SAFETY STRATEGIES



Call Attention to the Intersection by Installing Rumble Strips on Intersection Approaches

WHERE TO USE

Approaches to unsignalized intersections with traffic control devices that are not currently being recognized by some approaching motorists. Locations should be identified by patterns of crashes related to lack of driver recognition of the traffic control device (e.g., right-angle crashes related to stop sign violations). Rumble strips should be considered only after an adequate trial of less intrusive treatments.

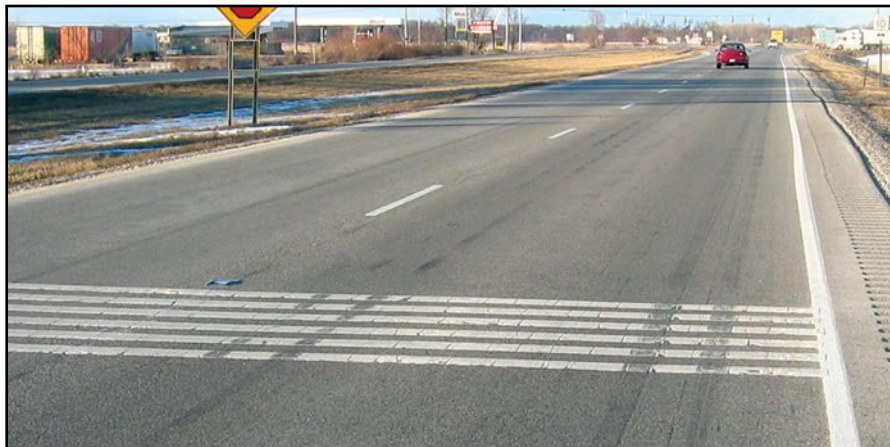


Photo by: FHWA

DETAILS

Rumble strips can be installed on intersection approaches to call attention to the presence of the intersection and to the traffic control in use at the intersection. Rumble strips should be used sparingly. Their effectiveness is dependent on being unusual. Rumble strips are normally applied when less intrusive measures—such as pavement markings like “STOP AHEAD” signs, markings, or flashers—have been tried and have failed to correct the crash pattern. Rumble strips can be used to supplement such traffic control devices. For example, a rumble strip can be located so that when the driver crosses the rumble strip, a key traffic control device such as a “STOP AHEAD” sign is directly in view. Rumble strips in the traveled way can also be used on a temporary basis to call attention to changes in traffic control devices, such as installation of a stop sign where none was present before. *NCHRP Synthesis of Highway Practice 191* reviews the state of the art of rumble strip usage.

KEY TO SUCCESS

Use rumble strips sparingly so that they retain their surprise value in gaining the driver’s attention.



ISSUES

Rumble strips in the traveled way have several potential pitfalls that should be considered carefully in any decision to implement them. They include (1) noise that may disturb nearby residents; (2) potential loss-of-control problems for motorcyclists and bicyclists; (3) difficulties created for snowplow operations; and (4) inappropriate driver responses, such as using the opposing travel lanes to drive around the rumble strips.

TIME FRAME ●○○○

Rumble strips typically can be implemented in 3 months or less.

COSTS ●○○○

Costs to implement rumble strips would normally be nominal.

EFFECTIVENESS

TRIED: Rumble strips are generally perceived to be effective in reducing intersection crashes when used appropriately, but there is no consensus on their effectiveness. One study concluded that transverse rumble strips may decrease overall crashes by up to 28% and rear-end crashes by up to 90%. Another study indicated that rumble strips installed in rural locations can decrease overall crashes up to 35%.

COMPATIBILITY

This strategy can be used in conjunction with most other strategies for improving safety at unsignalized intersections, except that it would not be compatible with strategies involving removal or relocation of an intersection.

For more details on this and other countermeasures: <http://safety.transportation.org>

For more information contact:

FHWA Office of Safety Design
E71, 1200 New Jersey Avenue SE
Washington, D.C. 20590
(202) 366-9064
<http://safety.fhwa.dot.gov>

FHWA Resource Center - Safety and Design Team
19900 Governor's Drive, Suite 301
Olympia Fields, IL 60461
(708) 283-3545
<http://www.fhwa.dot.gov/resourcecenter>



U.S. Department of Transportation
Federal Highway Administration



Safe Roads for a Safer Future
Investment in roadway safety saves lives