

Noise Concerns

While this noise made by tires helps keep drivers alive, this noise can also be disturbing to residents near highways.

The average noise inside of a traveling passenger vehicle with no rumble strips is about 60 decibels (dB). In order to alert a drowsy driver, an increase in interior noise must be between about 6-15 decibels. There is a corresponding larger increase in noise outside the vehicle and proximity is also a factor.

A Minnesota DOT study of rumble noise found the following noise levels near shoulder rumble strips:

50' away = 82 dB

100' away = 75 dB

200' away = 67 dB

300' away = 62 dB

Equivalent sounds:

Motorcycle at 25' = 90 dB

Garbage disposal = 80 dB

Vacuum cleaner = 70 dB

Normal conversation at 3' = 60 dB

By the Numbers

Roadway Departure crashes account for 66 percent of all fatalities in Oregon and crashes occur predominantly in rural areas. A large portion of roadway departure fatalities are in crashes where the vehicle hit a fixed object. Rumble strips are proven to reduce fatal and serious injury run-off-the-road type crashes.

Know Before You Go...

A quick visit to www.TripCheck.com can help you avoid traffic snags, work zone delays, or hazardous road conditions. Before you go, find the best way to get there.

You can also **call 511** for the latest on traffic, weather, and highway conditions by route, major city or mountain pass. Simply speak or press the keys on your touch-tone phone and get the answers you need.

Road Project Hotlines

511 (in-state callers only)

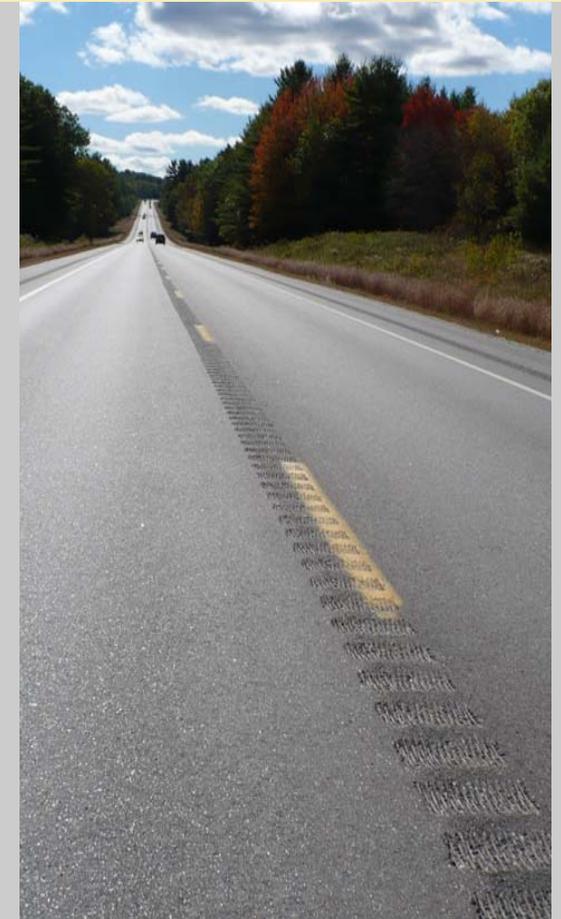
(503) 588-2941 (out-of-state callers)

For questions or comments about ODOT call **(888) ASK-ODOT** (275-6368).

For information about the Oregon Department of Transportation, visit www.oregon.gov/ODOT.

Rumble Strips

A Safety Tool to Prevent Crashes



What is a Roadway Departure Crash?

A roadway departure crash is defined by Federal Highway Administration (FHWA) as a crash where a vehicle crosses an edge line, a center line, or leaves the traveled way. The types of crashes fitting this definition would be if a vehicle crossed the centerline or median, ran-off-the-road (on the right or left), or hit a fixed object.

Our Plan to Reduce Crashes

Roadway Departure crashes account for 66 percent of all fatalities in Oregon. In 2010, Oregon participated with FHWA to develop a Roadway Departure Safety Implementation Plan for reducing these types of crashes.

Data analysis of Oregon crashes was combined with cost effective strategies at specific locations to achieve a goal to reduce 20 percent of roadway departure fatalities. One of these countermeasures to reduce fatalities is rumble strips.

Rumble Strips Warn Drivers

Rumble strips are an effective countermeasure for reducing roadway departure crashes. This relatively low cost engineering treatment alerts drivers of a lane departure through vibration and noise created when a vehicle's tires contact the rumble strip.

What is a Rumble Strip

Rumble strips are grooves or rows of indents in the pavement that cause a vibration and audible rumbling, transmitted through the wheels into the car body. Rumble strips are used to grab a driver's attention through vibration and noise to alert them that they are leaving the travel lane.

Preventing a Tragedy

There are two main applications of rumble strips used to help reduce roadway departure crashes:

Centerline Rumble Strips – reduce head-on, opposite direction side-swipe, and run-off-the-

road left crashes. Primarily placed near (or on) the centerline of the roadway to separate opposing traffic on undivided highways.

Shoulder Rumble Strips – reduce run-off-the-road crashes. These are shoulder installed, placed adjacent to the edge of the travel lane or placed at the edge of the travel lane within the pavement marking, improving the visibility of the marking.

Shoulder Rumble Strips can be installed with gaps so that bicyclists can more easily travel across to the shoulder.

Both types of rumble strips may also have gaps at intersections, interchanges, and sometimes across bridges.

Abide by the Rules of the Road

Driving violations (speeding, alcohol, and unbelted driving) are major factors in roadway departure crashes. Many of these crashes involve multiple driving violations. Rumble strips are effective at addressing:

- Speeding
- Distracted drivers
- Fatigued or drowsy drivers
- Inattentive drivers



Rumble strips daytime (left) and at night in the rain (right). Note the brightness of the rumble strip at night, as compared to the normal pavement marking to the left of the rumble line.

Michigan DOT (by permission)