Why is NHDOT Installing Rumble Strips?

Statewide 40842 Rumble Strip project on US Route 2 and NH Route 106.

NHDOT took a few years off from installing rumble strips so we could research to find a quieter, yet effective rumble strip (it has a sinusoidal shape, and is sometimes called a "mumble strip") and revise our Guidelines so installation would be located to reduce nuisance noise caused by errant vehicle rumble strip strikes.

To this end, we published the NHDOT Rumble Strip Guidelines dated 5/22/2019 (Draft). The first few pages of the Guidelines provide a background of why the systemic use of rumble strips is a very effective safety improvement for preventing lane departures, both cross-centerline and run-off-the-road, which are the cause of many of our fatal and injury crashes. Rumble strips are a *preventative* safety improvement, since the location where a drowsy or distracted driver leaves their lane can occur almost anywhere. We have limited the areas where rumble strips will be installed to roadway segments with posted speed limits of 40 mph or greater and pavements widths equal to or greater than 28'. There will be centerline-only or centerline and shoulder rumble strips, depending on the width of the pavement, so as to provide a minimum 4' to 5' clear shoulder width for bicycles. There are also frequent gaps in the shoulder rumble strips, a recognized best practice, so cyclists can leave the shoulder if desired.

To address rumble strip noise concerns, NHDOT has implemented the following strategies:

- Sinusoidal rumble strips will be specified on the centerlines of undivided highways with shoulders of any width in passing zones
- Sinusoidal rumble strips will be specified on the centerlines of undivided highways when one or both shoulder widths is less than 10 feet
- Shoulder rumble strips will be offset 12 inches from the white edge line to reduce the occurrence of errant strikes
- Rectangular corrugated rumble strips will be specified on the centerlines of undivided highways when both shoulder widths are greater than or equal to 10 feet
- Edge line rumble strips will only be considered in special applications

There are many variations of the sinusoidal rumble strip pattern which have been tested for exterior noise level and effectiveness in alerting a driver who has departed their travel lane. NHDOT has selected a sinusoidal pattern which was developed and field-tested by Minnesota DOT due to its reduced exterior noise while still providing adequate driver feedback for passenger cars as well as pickup trucks.

Sinusoidal rumble strips will not be used in all locations since the internal noise generated by the rectangular corrugated rumble strip pattern is more noticeable for pickup trucks and heavy trucks.

Please note that rumble strips on the shoulders of divided highways (interstates and turnpikes) are larger and deeper and therefore cause more vibration and are louder for maximum safety effect for all vehicle classifications, including heavy trucks.