

# Centerline Rumble Strips Evaluation Shows Positive Results

**In the interest of improving safety on two-lane rural highways, the Nebraska Department of Roads experimented with centerline rumble strips in 2002, constructing them on 27.66 miles of highway at two locations.**

The selected sites were U.S. Highway 34 from Lincoln to Seward and U.S. Highway 77/Nebraska Highway 92 from Wahoo to Yutan. The two locations were chosen because of the high number of head-on collisions over a five-year period.

Centerline rumble strips, 16-inch strips placed across the centerline of a highway, have a similar intent as shoulder rumble strips. When a driver crosses the centerline of the highway the resulting noise and vibration alert the driver of the pending lane change. It was hoped that the centerline rumble strips would significantly reduce the number of head-on collisions by alerting drivers that strayed from their lane due to inattention, fatigue or other causes.

A recently-issued report examining the cross-centerline crash data for a period of time three years before and after the rumble strips were installed showed some very favorable results, including a 64 percent decrease in total accidents. Data showed there were 23 crashes in the three years before and eight crashes in the three years after the centerline rumble strips were installed.

According to Randy Peters, NDOR Traffic Engineer, "You can say with 95 percent confidence that we got that kind of reduction because the centerline rumble strips were there, so that's very encouraging."

Fatal crashes decreased from three to zero, but these numbers were too small to run a statistical test. A

25.9 percent reduction in injury crashes was not statistically significant. However, there was a 44.4 percent reduction when fatal and injury crashes were combined.

Cross-centerline crash data also showed an 89.6 percent decline in property-damage-only accidents. Both of these had a 95 percent confidence level.

Peters noted, "We have evaluated the results and they are very favorable. These statistics tell us that the centerline rumble strips have been a success. Relatively speaking, it is a low-cost safety improvement that has saved injuries and fatalities."

In addition to the low cost of installing centerline rumble strips, there has been no evidence of any extra maintenance requirements. No pavement deterioration has occurred during the pilot project.

According to Peters, the next step is to meet with fellow members of a safety committee responsible for determining which situations justify centerline rumble strips. They will be looking at longer segments of road with higher volumes of traffic, and stretches of roadway with a higher than average rate of head-on crashes. Committee members will also establish some criteria on when to use a particular strategy - no rumble strips, shoulder rumble strips only,



*Photo by Jay Bailey*

**Centerline rumble strips on U.S. Highway 34, west of Lincoln.**

centerline rumble strips only or various combinations.

"This will be a year of sorting that out. We want to proceed guardedly with a good rationale for placement, but we want to move steadily forward, as fast as good policy-making allows. I believe it is better to err on the side of getting them out there because of the safety results."

Peters concluded, "It's just very rare that you can get a safety project at that low of cost and that wide of applicability that would really save lives and prevent injuries. It's like a breakthrough, with results as good as guardrails or side airbags in vehicles. It's a really good development in highway safety." ♦