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**MISSISSIPPI DEPARTMENT OF TRANSPORTATION**  
**Inter-Departmental Memorandum**

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**INFORMATION COPY TO:**

**COUNTY:**

**NCHRP SYNTHESIS 339**  
**CENTERLINE RUMBLE STRIPS**

Summary

The primary purpose of Centerline Rumble Strips (CLRS) is to warn drivers whose vehicles are crossing the center lines of two-way two-lane roadways. The types of crashes that CLRS may reduce are head-on and opposite direction sideswipe crashes. At the time of this survey, 22 states and 2 Canadian provinces reported using CLRS. Some states use CLRS continuously, some only on no-passing sections, some only on curves and 2 states reported using CLRS only on specific sections.

According to an Insurance Institute of Highway Safety (IIHS) study, vehicles crossing the centerline of two-lane two-way roads and causing either head-on or sideswiping crashes account for 20% of all fatal crashes on two-lane roadways. This results in approximately 4500 annual fatalities in the United States. After a recent study by IIHS, researchers concluded that CLRS reduced overall motor vehicle crashes at sites treated with CLRS by 14%.

The final findings of this synthesis are the following:

- Use of CLRS produce a reduction in crossover injury and or fatal crashes
- Delaware study of CLRS reported a cost-benefit ratio of 110
- Overall vehicle crashes were reduced by 15%
- Injury crashes reduce by 15%
- Head-on and opposing-direction crashes were reduced by 21%
- Head-on and opposing-direction crashes involving injuries were reduced by 25%

Two concerns of CLRS reported in the survey are external noise and reduced visibility of the centerline striping. Three states in the survey indicated concerns for bicyclists' safety. The concern of bicyclists was that vehicles do not move over or cross the centerline to provide sufficient space when passing bicyclists when CLRS are present. Other concerns reported in survey include effect on motorcycles, drivers reacting to the left, pavement deterioration, increased snow plow wear, effect on emergency vehicles, water, snow and ice accumulation and lack of widely accepted guidelines.

In conclusion, centerline rumble strips are effective in reducing cross-over type crashes. With that stated, much more data is required to answer how effective and to answer the concerns raised. CLRS installation should be considered as experimental at this stage.