

Impact of Edge Lines on Narrow Rural Highways

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Problem

An important aspect of improving the safety and efficiency of highway systems is the development and use of uniform traffic control devices such as pavement markings, signs, and signals. The Louisiana Department of Transportation and Development (LADOTD) internal policy is to place edge lines on all roadways that are at least 22 feet wide, regardless of average daily travel (ADT). The newest edition of the Manual on Uniform Traffic Control Devices (MUTCD) requires the use of edge lines on rural

arterials with a traveled way width of 20 feet or more and an ADT of 6,000 vehicles per day or greater.

Considering the total mileage (5,096 miles) of existing rural state highways with a traveled way width between 20 and 22 feet, the LADOTD roadway-stripping program may require additional resources to comply with the current edition of the MUTCD.



Narrow rural highway without edge lines



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There is a concern that edge lines on narrow roadways make motorists operate vehicles closer to the centerline. Before the Department implements the new MUTCD requirements, a study is needed to determine if the placement of edge lines will result in an increased risk of head-on and sideswipe crashes.

Objective

The goal of this project is to determine if implementation of the new MUTCD guidelines for edge lines on narrow rural roadways has any negative impact on highway safety.

Description

Initially, the research team will review and document results of past and present research, as well as current practice, on use of edge lines for narrow rural highways.

The research team will investigate the impact of edge lines on vehicle wheel tracks under various roadway alignment and traffic conditions, and examine the potential tort liability arising from edge line implementation on narrow rural highways.

Finally, the research team will develop a recommendation for implementing edge lines on narrow rural highways in Louisiana.

Implementation Potential

This research will demonstrate the impact of edge lines on narrow rural highways and develop a recommended guideline for the application of edge lines on Louisiana highways that are between 20 and 22 feet wide.
