

RAISED MEDIANS

WHAT IS A RAISED MEDIAN?

A raised median is a physical barrier that separates opposing directions of traffic, thus reducing the chance of a vehicle crossing into oncoming traffic. In urban areas, medians are often relatively narrow to limit property impacts.

IMPROVED SAFETY

By creating a barrier between opposing traffic, raised medians prevent most head-on collisions, which can often be severe or fatal. Additionally, raised medians allow left-turns to be consolidated into a handful of well-designed median break locations. These median breaks can also be designed to allow U-turns (see back). Raised medians allow traffic to flow in a more orderly manner, reduce the number of conflict points, and greatly reduce crash severity and frequency.

According to research from the Transportation Research Board, installing a raised median on an undivided highway can reduce crashes by up to 71 percent.¹ Further, replacing a two-way left-turn lane with a raised median has been shown to reduce crashes by 25 percent on average.² Raised medians are particularly beneficial when traffic volumes exceed 24,000 to 28,000 vehicles per day.²

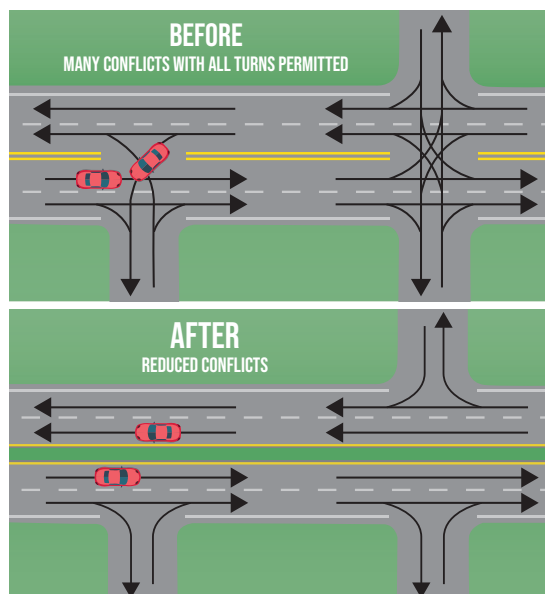
REDUCED DELAYS

By reducing conflict points and improving traffic flow, a roadway is able to carry more traffic. As a result, delays due to traffic congestion also decrease. Raised medians have been determined to reduce motorist delays up to 30 percent.

Diagram: From Gluck, J., H. S. Levinson, and V. Stover. NCHRP Report 420: Impacts of Access Management Techniques, TRB, National Research Council, Washington, D.C., 1999, Figure 30, p. 72. Copyright, National Academy of Sciences. Reproduced with permission of the Transportation Research Board.

¹ NCHRP Research Report 1032, How to Measure and Communicate the Value of Access Management, Transportation Research Board, 2023

² Access Management Manual, 2nd Edition, Transportation Research Board, 2014



ARKANSAS HAS
54
MILES OF
URBAN HIGHWAYS
WITH A
RAISED MEDIAN

INSTALLING A
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REDUCE CRASHES
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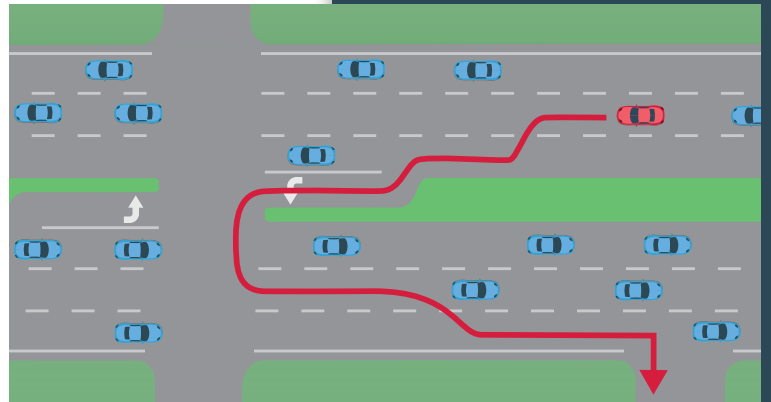


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U-TURNS TO REACH DESTINATION

Raised medians can be designed to allow U-turns to occur at periodic median breaks. U-turns reduce the number of conflict points along a corridor and have been proven to improve safety. Research has shown U-turns can reduce crash rates by 20 percent by removing direct left-turns from driveways. Often, a right turn from an unsignalized driveway followed by a U-turn is easier for drivers. This is because they only have to yield to one direction of traffic at a time rather than crossing two directions of traffic.

Case studies in Texas and Iowa suggest 95 percent of business owners reported no change or an increase in retail sales after the construction of a raised median. Property values studied along the corridor were also reported as either unchanged or increased.³

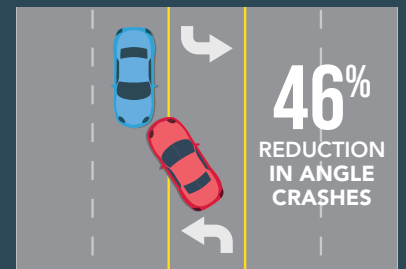


HIGHWAY 412 SILOAM SPRINGS CASE STUDY

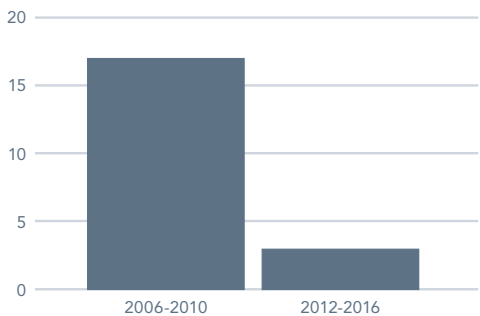
Prior to 2013, Highway 412 in west Siloam Springs was a four-lane highway with a center turn lane. The highway regularly experienced significant congestion and safety issues. Between 2006 and 2010, 415 crashes occurred on a 1.6-mile segment of Highway 412 in west Siloam Springs. Of those crashes, 17 were classified as a fatal or suspected serious injury, equating to a crash rate nearly three times higher than similar roadways across the state.

To improve the roadway's safety and reduce congestion, in 2012, ARDOT widened this segment of Highway 412 to six lanes and replaced the center turn lane with a raised median. As a result, over the next five years, the total number of crashes was reduced by 20 percent, and the number of fatal and serious injuries was reduced by more than 80 percent.

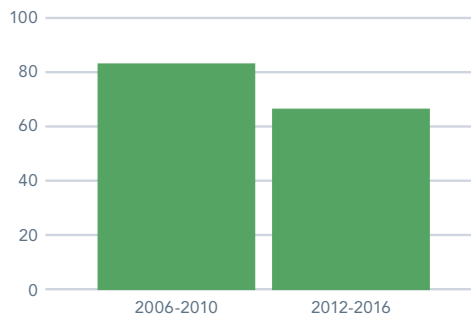
HIGHWAY 412 CASE STUDY



FATAL OR SUSPECTED SERIOUS INJURY CRASHES



TOTAL CRASHES PER YEAR



↓ 82%
REDUCTION IN ALL
FATAL AND SUSPECTED
SERIOUS INJURY CRASHES

³ Access Management Application Guidelines, Companion Volume to the Access Management Manual, Second Edition, Transportation Research Board, 2016