

Introducing *J-Turns*

The Missouri Department of Transportation is considering J-turns as a safer alternative for traffic at U.S. 50 and Highway 58/County Road 501 near Centerview in Johnson County. These types of turns have been used successfully in other parts of the state for busy roadways.



What are J-Turns?

The J-turn is an alternative to traditional roadway intersections on a four-lane highway. Instead of motorists crossing fast-moving lanes of traffic to get to the opposing lanes, drivers at a J-turn intersection turn right in the same direction of traffic, merge into the left lane, and then make a left turn in the direction they intend to travel. Although drivers will have to travel slightly further to get where they want to go, using J-turns can take the same or less time than trying to wait for a safe and appropriate gap to cross traffic.

The point of these turns is to greatly reduce – or even eliminate -- a significant number of severe crashes common when drivers must cross-over busy highways to reach another road.

How do J-turns enhance safety?

J-turns allow drivers to safely and easily cross traffic on busy roadways. Motorists must only deal with two lanes of traffic headed in one direction versus crossing a 4-lane divided highway with dozens of potential conflict points or vehicle crash points. They essentially eliminate T-bone crashes at intersections; lessen the severity of vehicle collisions, providing a safer alternative to a cross-over.

Studies done by the National Cooperative Highway Research Program show J-turns provide significant reduction in right-angle, “far” side crashes.

How do you drive a J-turn?

The J-turn eliminates the cross-over between the four-lane divided highway. In the J-turn design, drivers turn right in the same direction of traffic, and merge safely into the left lane to prepare to make a left turn in the direction they intended to travel. This option uses an extended deceleration lane, basically adding a third lane on the highway to allow traffic making a left turn onto opposing lanes to safely pull off the mainline, out of the way of high speed traffic.

Some Statistics about J-turns:

A recent study conducted by the University of Missouri shows that implementing the J-turn design at intersections of high-speed rural expressways and minor roads results in fewer accidents than those that are controlled by two-way stops.

Researchers assessed five different J-turn intersections in Missouri. The J-turn design resulted in a 34.8 percent reduction in crash frequency for all crashes and a 53.7 percent reduction in crash frequency for all injury and fatal crashes. Disabling injury crashes

decreased by 86 percent and minor injury crashes decreased by 50 percent. Since the J-turns have been in place, none of the five study sites had a single fatality accident. One of the most severe crash types, the left turn, right angle crash, was completely eliminated by the J-turn.

One location is the J-turn at Highway 63 and Deer Park Road just south of Columbia. Prior to the J-turn, there was an average of about 13 crashes annually for three consecutive years. Now with this new, innovative design, only six accidents occurred in the year after it was installed. That is half the number of accidents experienced prior to the J-turn.



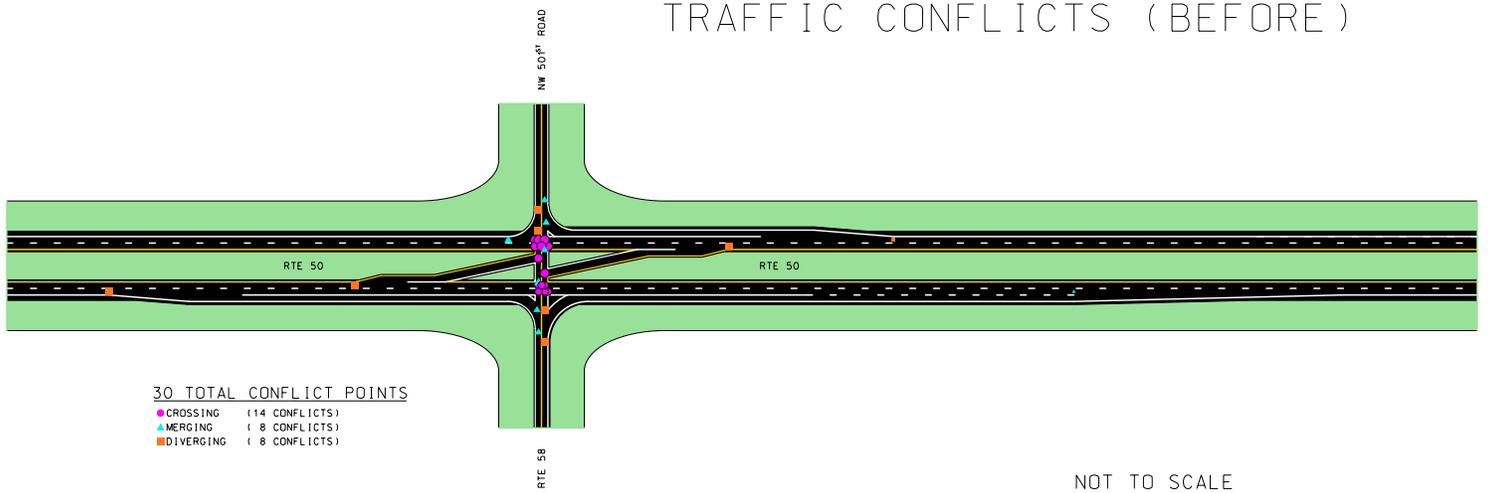
A study completed by the Federal Highway Administration (FHWA) on J-turns shows an overall reduction in all crash types. Evaluations conclude that after installation of a J-turn, there is a 100 percent decrease in cross-path or T-bone crashes, anywhere from a 72 to 84 percent reduction of frontal impact crashes, and an overall intersection reduction of total crashes from 43 to 53 percent. These numbers show that traffic operations improve at intersections where J-turns are installed.

J-turns create a safer intersection for motorists, and move traffic smoother and more efficiently.

How can I learn more?

You may learn more by contacting us toll-free at 1-888-ASK-MoDOT (275-6636) or by visiting us on the Web at www.modot.org/kansascity.

TRAFFIC CONFLICTS (BEFORE)



TRAFFIC CONFLICTS (AFTER)

