

Reduced Conflict Intersections

Over the past several years, the Indiana Department of Transportation (INDOT) has been incorporating Reduced Conflict Intersections (RCIs) as an alternative to traditional intersections on high-speed, four-lane divided highways.

Instead of vehicles crossing fast-moving lanes of mainline traffic to make a left turn, as in traditional intersections, motorists on secondary roads at RCIs turn right in the same direction of traffic, merge into the left lane, and then make a U-turn in the direction they intend to travel.

Although motorists have to travel slightly farther to get where they want to go, navigating an RCI requires the same or less time than waiting at a traditional intersection for a safe gap in traffic.

INDOT policy is to use alternative intersections, including RCIs, where appropriate to support its ongoing commitment to improve safety and service delivery through innovation and cost-effective investments.

Benefits of RCIs

Reduced Conflict Intersections are much safer.

RCIs greatly reduce — or even eliminate — a significant number of severe crashes that occur when vehicles cross over busy traffic lanes to reach other lanes or roads.

Reduced Conflict Intersections are safer alternatives to traditional roadway intersections on four-lane highways because they eliminate or substantially reduce right-angle crashes, the crash most responsible for fatalities and serious injuries at traditional intersections.

RCIs eliminate the need for vehicles on secondary roads to cross high-speed mainline lanes of traffic. National Cooperative Highway Research Program studies show that RCIs provide a significant reduction in right-angle crashes.

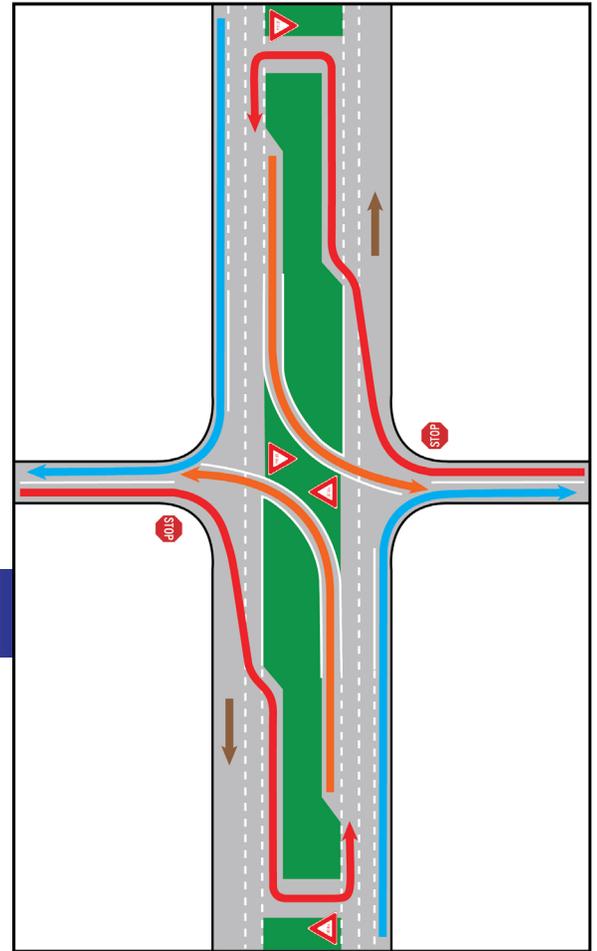
Nationwide statistics show a more than 50% decline in crashes where RCIs are installed. Fatal crashes decline by as much as 85%.

RCIs installed at four-lane highway intersections across Indiana and the nation have shown a substantial decrease in fatal and serious injury crashes.

RCIs reduce the potential for crashes.

In a traditional intersection, there are 42 different conflict points where a vehicle crash can occur. Serious crashes, such as T-bone or right-angle crashes, can occur at 24 of those 42 conflict points. A Reduced Conflict Intersection can have no more than 29 possible conflict points, and some RCIs can be designed so that there are zero crossing conflict points.

Reduced Conflict Intersection



RCIs provide for safer vehicle acceleration and deceleration.

In the RCI design, drivers turn right in the same direction of traffic, and merge safely into the left lane to make a left turn in the direction they intend to travel.

RCIs use an extended deceleration left-turn lane, which enables vehicles making a left turn to safely pull off the mainline, out of the way of high-speed through traffic. RCIs also may include acceleration lanes, which enable turning vehicles to gain speed before merging into high-speed through traffic lanes.



Indiana Department of Transportation
100 North Senate Avenue, Room N755
Indianapolis, IN 46204
www.in.gov/indot



RCIs Can Accommodate Large Vehicles

Reduced Conflict Intersections are designed to fully accommodate the wide-turning radius of semitrailer trucks and other large vehicles, such as school buses or farm equipment.

Where road and median width is not sufficient to accommodate larger vehicles, an additional pavement area is added. Special provisions are also made for police, fire trucks, and other emergency vehicles to cross the intersection without making U-turns.

RCIs maintain full service to pedestrians and bicyclists.

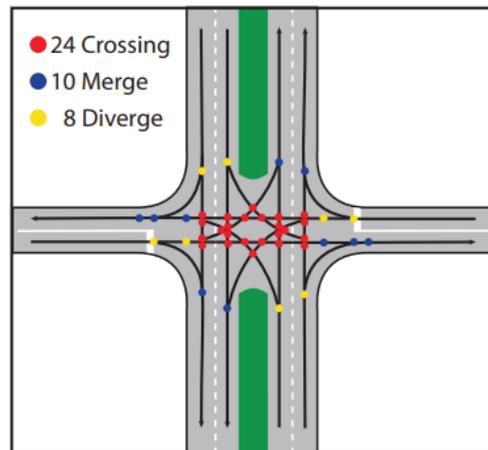
Indiana's RCI Experience

RCIs installed at four-lane highway intersections in Indiana have shown a substantial decrease in fatal and serious injury crashes.

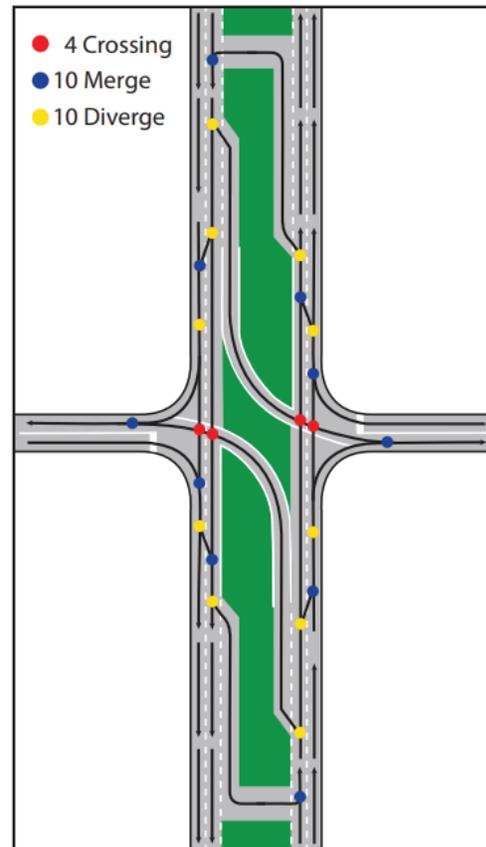
INDOT opened its first RCI at U.S. 41 and S.R. 114 in June 2015 in Newton County. In the four years prior to the RCI, this intersection had 22 crashes. In the four years following the RCI installation, the intersection had just seven — a 68% reduction in total crashes and an 89% reduction in crashes involving personal injury or fatalities.

In June 2016, INDOT opened RCIs at the U.S 231 intersections with State Road 62/68 and S.R. 62/Washington Street in Spencer County. In the three years prior to the RCI installations, there were 21 crashes at these intersections, including 11 involving injuries or fatalities. In the three years after the RCIs were installed, there were only seven crashes and just three involved injuries or fatalities. This represents a 67% reduction in total crashes and a 73% reduction in personal injury or fatal crashes.

Conventional Intersection Conflict Points



RCI Conflict Points



Thanks to Gov. Eric Holcomb's Next Level Roads program, INDOT is repairing and improving Indiana roads at record levels. Visit www.nextlevelroads.com to see an interactive map of all current and planned INDOT projects.



Indiana Department of Transportation
100 North Senate Avenue, Room N755
Indianapolis, IN 46204
www.in.gov/indot

