

WHAT types of intersections are being installed along this corridor?

This project utilizes what are called Reduced Conflict Intersections (RCI)'s. The RCI 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 RCI 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 drivers will have to travel slightly further to get where they want to go, using RCIs can take the same or less time than trying to wait for a safe and appropriate gap to cross traffic. RCIs also are designed to fully accommodate the wide turning radius of tractor-trailer trucks and other large vehicles, such as school buses and tractor/trailer combinations.

The specific RCI's utilized on this project include the Green T intersection, Restricted Crossing U-Turn (RCUT) intersection, and Median U-Turn (MUT) intersections.

WHY these types of intersections?

Safety! These type of intersections significantly reduce the risk of severe crashes in certain traffic and road conditions, and increase safety by reducing by half or more the number of possible conflicts and the points where two vehicle paths cross.

In a traditional intersection there are 42 different conflict points where an accident can occur. Of those, 24 conflict points can cause serious T-bone or right angle crashes – the crashes most responsible for fatalities and serious injuries at intersections. A MUT intersection can have no more than 29 possible conflict points and some MUT intersections can be designed so that there are zero crossing conflict points.

Reduced conflict intersections eliminate the need for motorists to cross the high-speed lanes of traffic to get to the opposing lanes. Nationwide, statistics show a more than 50% decline in crashes where RCIs are installed. Fatal crashes decline by as much as 85%.

In the RCIs installed in Indiana, INDOT has observed:

- Reduced fatal and injury crashes by an average of 81%.
- Reduced property-damage crashes by an average of 58%.
- Reduced crashes of any severity by an average of 68%.

INDOT's analysis showed a dramatic reduction in fatal and injury vehicle crashes at each RCI:

- Fatal and injury crashes at each intersection declined between 64% and 100%.
- Property-damage crashes at each intersection ranged from No Change to 100% reduction.
- All crashes of any severity at each intersection declined between 38% and 100%.

Efficiency! In the no build scenario in the future design year vehicles have trouble finding adequate gaps in traffic, and long queues will form, backing up upstream intersections. The proposed project provides significant improvement over the no build for all queueing.

For the future design year, the proposed project would cut corridor travel time up to half (peak is PM southbound average).

FHWA research has shown a 20% - 50% improvement in intersection efficiency for various lane configurations as a result of implementing the MUT design.

WHERE are these types of intersections located?

Examples in Indiana are located at the following locations:

- US 30 and IN 101 in Allen Co.
- US 30 and CR S 500 E in Whitley Co.
- US 41 and IN 114 in Newton Co.
- US 231 and SR 68 in Spencer Co.
- US 231 and IN 62 in Spencer Co.
- Green T: IN 11 / IN 46 in Bartholomew Co.
- Green T: I-465 and IN 67 in Marion Co.

Intersections of this type are common and have performed successfully in other states, notably Georgia, Maryland, Michigan, Minnesota, Missouri, and North Carolina:

- SR 44 (N/S) on the east side of Grand Rapids, MI
- Rivertown Parkway (E/W) on the south side of Grandville, MI
- SR 45 (E/W) in Allendale, MI
- US 15 Corridor in Fredrick County, MD
- SR 55 Bypass in Holly Springs, NC
- US 17 Corridor in Wilmington/Leland, NC
- Michigan Ave. at S. Harrison Rd, East Lansing, MI
- Woodward Ave. at E. Maple Road, Birmingham, MI

HOW can I learn more?

Both INDOT and FHWA have several websites with additional information, how to videos, and more!

<https://www.in.gov/indot/traffic-operations/median-u-turns/>

<https://safety.fhwa.dot.gov/intersection/innovative/uturn/>

<https://www.fhwa.dot.gov/publications/research/safety/09057/>

Green T intersection: <https://www.youtube.com/watch?v=bz53KPIbAVw&t=83s>

RCUT Intersection: <https://www.youtube.com/watch?v=nzpdTdXDfRw>