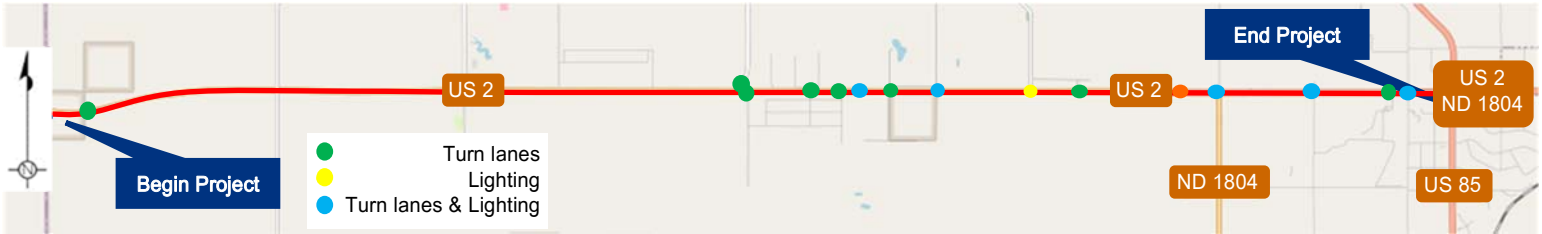


Project Location



General Project Information

The North Dakota department of transportation is proposing a roadway improvement on US 2 between the Montana State Line and US 85 in Williston.

Project Purpose

This project is considered based on the crash history and severity for this corridor. The projects aims to reduce fatalities and incapacitating crashes along US 2 by adding turn lanes and improving shown intersections.

Project Need

Fifty-nine percent of crashes in the corridor within the past 5 years have been rear end or angle crashes. Occurring within the same 5-year span there have been 4 fatal crashes and 14 crashes that resulted in an incapacitating injury. In addition, the intersections of US 2 and ND 1804/143rd Ave NW along with US 2 and 142nd Ave NW are ranked #8 and #9 respectively on the Rural Intersection High Crash Location List.

Project Schedule

Expected Construction:2024 Construction Season

Project Funding

Local:\$0
State:\$533,800
Federal:\$4,804,200

Description of Alternatives

Alternative 1: No Build

This alternative leaves the intersections along US 2 unaltered.

Common Improvements

Both Alternatives 2 & 3 consist of the following:

- Constructing turn lanes
- Installing lighting
- Delineators along the two to four lane transition for westbound traffic

Alternative 2: Revised Geometry

Consists of:

- Constructing offset left turn lanes within the median with a WB right at the intersection of US 2 and 142nd Ave NW,
- Modifying existing left turns by increasing sight distance at intersections of US 2 and ND 1804 as well as Co Rd 4/141st Ave NW.

Alternative 3: Reduced Conflict Intersection

Construct Reduced Conflict Intersections (RCI's) at the intersections of:

- US 2 and ND 1804
- US 2 and 142nd Ave NW
- US 2 and Co Rd 4/ 141st Ave NW

Contact NDDOT

Submit comments to;
James Rath P.E.
Program Manager Design Division
ND Dept. of Transportation
608 East Boulevard Ave
Bismarck, ND 58505-0700





Why an RCI?

The goal of an RCI is to decrease incapacitating injuries and fatalities by reducing or eliminating conflict points where right angle crashes can occur.

Types of Multi-Vehicle Crashes

Right Angle Crashes/T-Bone/Broadside

Typically the most severe crash type. Vehicles traveling perpendicular to each other crash. Due to the sudden change of speed and direction, these crashes often lead to a secondary collision, where passengers have less supplemental safety equipment because the air bag deployed from the first collision.

Rear-end Crashes

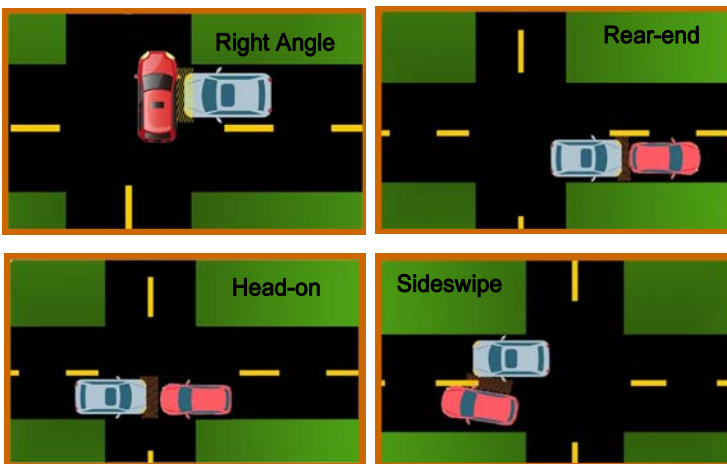
Less severe crash type, occurs when a vehicle crashes into another from behind.

Head-on Crashes

When the front ends of vehicles collide.

Sideswipe

When two parallel traveling vehicles collide.

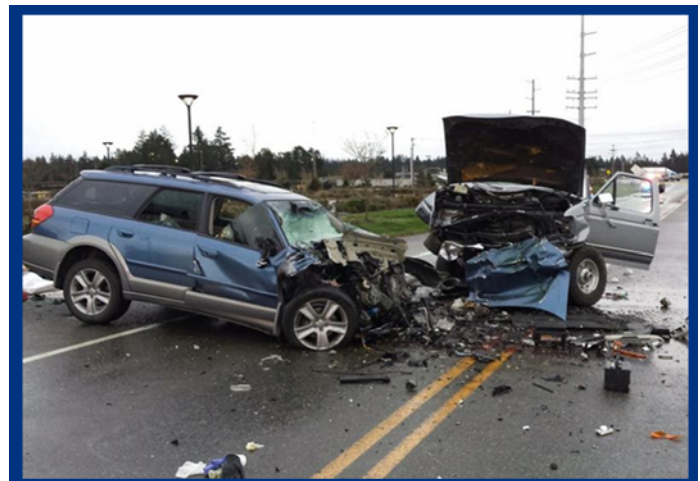


Crash History

In a study of the corridor from 2014 to 2019, 109 crashes occurred. 18 were fatal or incapacitating.

- US 2 and ND 1804 is ranked #8 out of 25 on the 2014-2018 rural intersection high crash location list and reported 21 total crashes, 2 of which resulted in incapacitating injury.
- US 2 and 142nd Ave is ranked #9 out of 25 on the 2014-2018 rural intersection high crash list with 7 total crashes, 4 angle crashes and 3 of which resulted in incapacitating injury.
- US 2 and 141st Ave reported 9 angle crashes involving southbound and westbound vehicles.

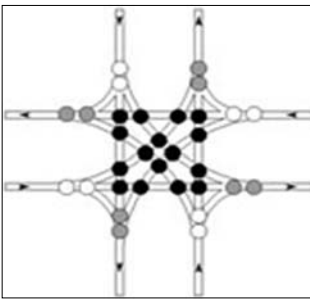
How Severe is a Right Angle Crash?



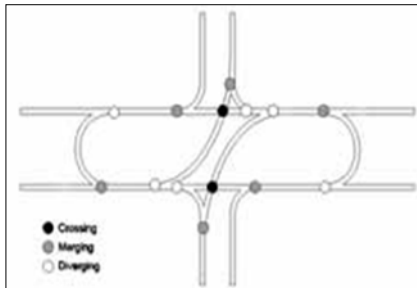
How Does an RCI Work?

An RCI reduces or eliminates right angle crashes by reducing the number of conflict points at an intersection. A conflict point is a location a crash can occur. There are three different types of conflict points: crossing, merging, or diverging. A crossing conflict point is where right angle crashes are most likely to occur. At a typical intersection, there are 32 conflict points. An RCI can reduce this number to as low as 14 conflict points.

Traditional: 16 crossing, 8 merging, 8 diverging



RCI: 2 crossing, 6 merging, 6 diverging



Additional Information Available

NDDOT- <https://www.dot.nd.gov/projects/rci/rci.htm>

MNDOT-<http://www.dot.state.mn.us/roadwork/rci/>

USDOT-<https://safety.fhwa.dot.gov/intersection/innovative/uturn/fhwas18048/>

What is an RCI?

An RCI is a reduced conflict intersection, also referred to as a restricted crossing U-turn (RCUT), J-turn, or superstreet. This type of intersection utilizes indirect through movements & left turns onto mainline by allowing drivers to make a right turn onto mainline then making a U-turn in the median. Left turns off of mainline would not be impacted on this project; however, some RCI's will also utilize indirect left turns off mainline to eliminate all crossing conflict points.

Frequently Asked Questions

Will my vehicle be able to go through a U-turn?

Yes, an RCI is designed to allow large trucks/RV's and other vehicles to execute all movements.

How will my driving be impacted?

Only left turns onto US 2 and through movements from the side street will be affected, approximately 3% of traffic.

How will unfamiliar drivers navigate an RCI?

Additional signing and public information will be utilized.

Implementation

Some noted improvements include:

- 100% reduction in fatal and serious injury right angle crashes
- 77% reduction in all severity right-angle crashes
- 50% reduction in injury crashes