



# Roundabouts

## Why Roundabouts?

✓ **One of the Safest Intersection Options**

✓ **High Capacity / Low Travel Delay**

✓ **Good for All Modes of Traffic**

- Motorists
- Pedestrians
- Cyclists



✓ **Geometric Flexibility**

- Diameter typically ranges between 90 - 180 feet
- Designs often include an angled access point to slow entry and maintain speed (typically 15 - 20 MPH )
- Designs can reduce the number of turn lanes, help prevent drivers from traveling in the wrong direction and provide other benefits as compared with a traditional intersection.

✓ **Aesthetics**

- Unique landscaping or other features

✓ **Proven Performance in North Carolina**

- North Carolina has **more than 320** roundabout locations across the state.



# Roundabouts

**Roundabouts provide a newer and improved version of the old traffic circles. Roundabouts increase safety and capacity.**

- ✓ The size is much smaller (you can usually see the entire intersection.)
- ✓ Entering traffic **ALWAYS** yields to the circulating roadway.
- ✓ Speeds are kept low (15-25 MPH), both by signing and by physical (geometric) design features.
- ✓ With lower speeds, traffic needs smaller gaps to enter the circle
- ✓ Smoother entering (not merging) increases capacity, reduces stops, which reduces air emissions.
- ✓ Roundabouts always have a physical splitter island to direct traffic around the center island.
- ✓ Once in the circulating roadway (center) you have no interruptions. You do not have to yield to entering traffic, and there's no conflict with pedestrians, bus stops, or



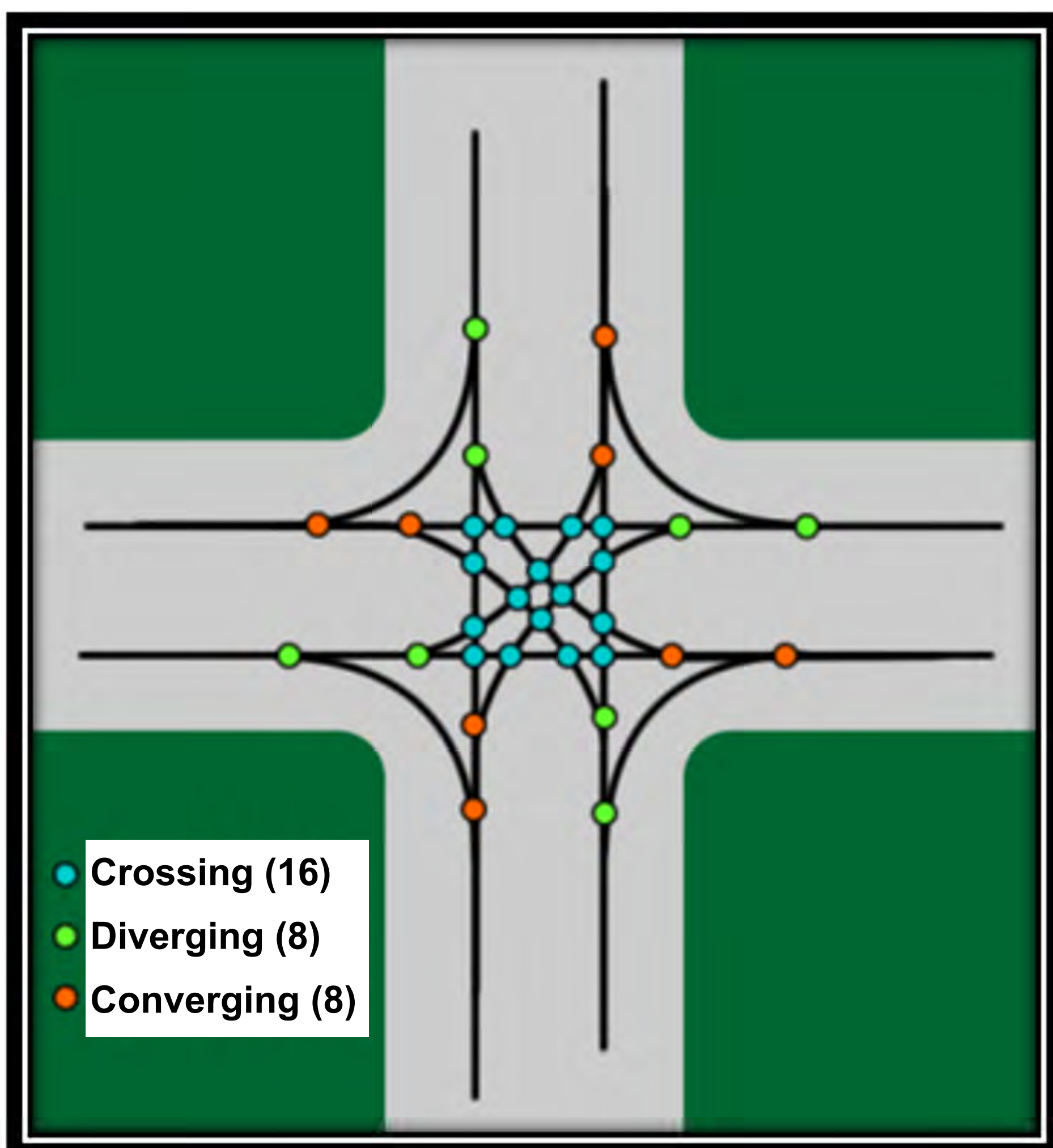


# Roundabouts

## Roundabouts Reduce Crashes

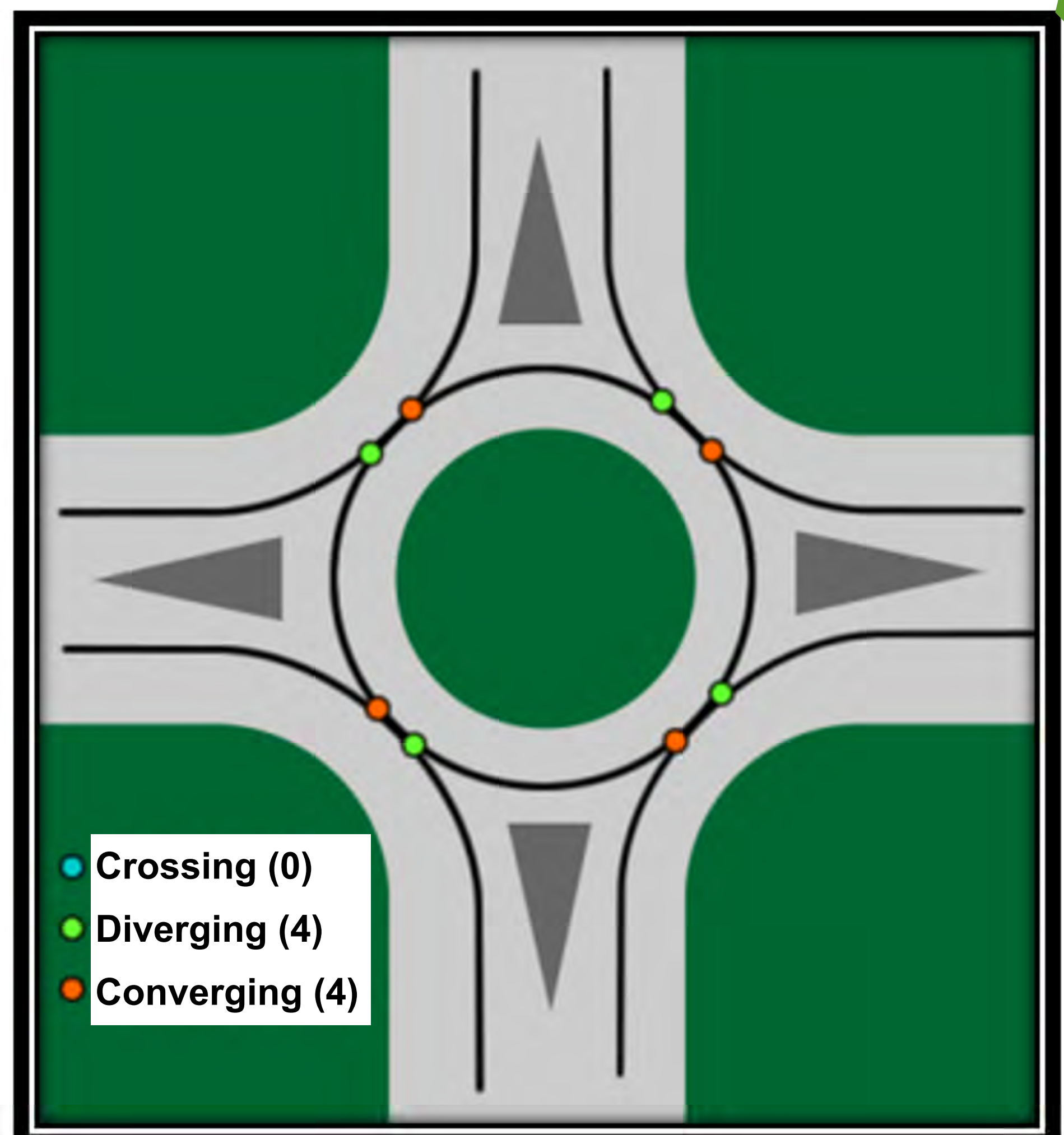
- ✓ Reduced speed in the intersection
- ✓ Reduced number of conflict points

Conventional intersection



There are **32 conflict points** at a conventional intersection.

Roundabout



There are only **8 conflict points** at a modern roundabout.

A **conflict point** is the **point** at which a roadway user crossing, merging with, or diverging from a road or driveway **conflicts** with another roadway user using the same road or driveway.

It is **any point** where the paths of two through or turning vehicles diverge, merge, or cross.



# Roundabouts

## **Crash Reductions** **Following Installation of** **Roundabouts**

### **In the United States**

- Total Crashes, ↓ 48%
- Fatal/Injury Crashes in Rural Areas, ↓ 78%
- Fatal/Injury Crashes in Urban Areas, ↓ 60%

### **In North Carolina**

- Total Crashes, ↓ 46%
- Fatal/Injury Crashes, ↓ 76%
- Frontal Impact Crashes, ↓ 75%

**Roundabouts significantly reduce crashes**  
compared to stop-controlled  
and signalized intersections.



# Roundabouts

## How do you drive in that?

- ✓ Driving rules are consistent. Traffic entering the roundabout always yields to traffic already in the roundabout.
- ✓ With less conflict points and a reduction in crash potential, a roundabout is much simpler to drive through than any other intersection.
- ✓ A driver needs to look to their left when entering the roundabout to select a gap in traffic to access the roundabout. The driver then has a clear, uninterrupted path to their exit. Of course, drivers should always look out for other motorists, bicyclists and pedestrians.
- ✓ A roundabout is designed to accommodate large vehicles (including fire trucks) that require greater turning radii as they travel through the circular portion of the roundabout.
- ✓ Motorists at roundabouts are expected to observe the same laws and courtesies as the do on other roadway facilities.
  - When an emergency vehicle approaches the roundabout, drivers are expected to pull over to provide sufficient room for the emergency vehicle to pass.
  - If there is not enough room for this to occur, the driver is expected to clear the way for the emergency vehicle. This may involve proceeding through the roundabout and then pulling over to the side, or yielding priority to the entering emergency vehicle.

