



State Transportation Innovation Council (STIC)

2015 Fact Sheet

Roundabouts

Improved Safety, Reduced Traffic Delays

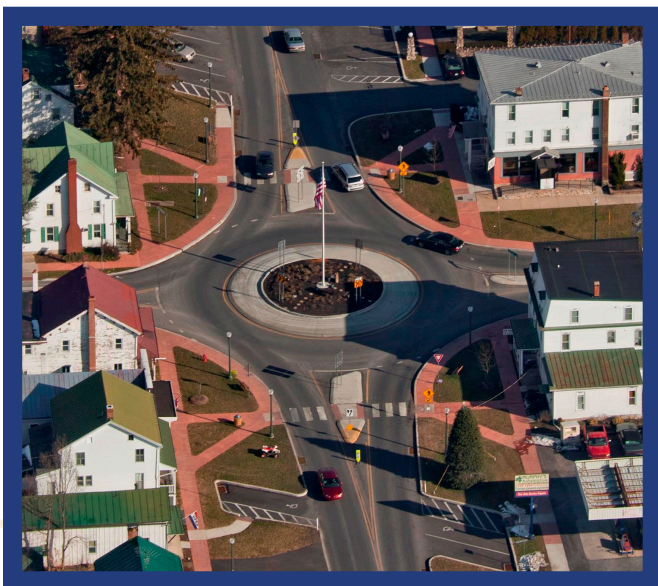
A roundabout is a type of circular intersection or junction in which road traffic flows continuously in a counterclockwise direction around a central island. Roundabouts have been widely used in other countries for decades, and since the mid-1990s roundabouts have received increased attention in the United States by both transportation professionals and the public. Roundabouts offer improved safety over other forms of at-grade intersections because roundabouts have fewer conflict points, encourage slower speeds, and offer easier decision making for drivers. Roundabouts reduce crashes at intersections by eliminating most head-on, left-turning across oncoming traffic, and right-angle crashes. Roundabouts also improve pedestrian safety by allowing pedestrians to cross a lane or lanes of slow one-way traffic at a time.

How do roundabouts work?

Roundabouts provide for increased capacity of vehicles through an intersection because they allow traffic to continuously flow, yielding only until a gap in traffic is available. As a result, roundabouts typically carry about 30 percent more vehicles than similarly sized signalized intersections during peak flow conditions. During off-peak hours, roundabouts cause almost no delay to drivers compared to traffic signals, which require drivers to stop and wait at a red light, thus resulting in delays to side-street and left-turning traffic from a major street.

What are the benefits?

- Reduces injury crashes at intersections. Studies comparing single-lane roundabouts to signalized intersections show that roundabouts experience a 90 percent reduction in fatal crashes and 75 percent fewer injury-causing crashes.
- Improves pedestrian and bicyclist safety. Studies comparing single-lane roundabouts to signalized intersections reveal a 30 to 40 percent reduction in pedestrian-related crashes and a 10 percent reduction in crashes involving bicycles.
- Reduces traffic delays since roundabouts typically carry more vehicles than signalized intersections.



Pennsylvania's State Transportation Innovation Council (STIC) has selected roundabouts as an innovative technique for improving vehicular, pedestrian, and bicyclist safety and reducing traffic delays at intersections. Because of roundabouts' proven safety and operational benefits, the Federal Highway Administration (FHWA) recommends that roundabouts be considered as options at intersections on federal, state, and local roads.

Roundabouts in Pennsylvania

Pennsylvania has embraced the use of roundabouts in recent years. Currently, 21 roundabouts have been built with five more under construction and another 30 under design. PennDOT requests that roundabouts be considered as options at all moderately complex and major intersection, interchange, and corridor projects and at any intersection project that would otherwise require the addition of left-turn lanes.

