Project History

Smart Scale Project - $2.8 Million

- Application by Franklin County Fall 2015
- Approved by CTB June 2016
- Predominant crash pattern
  - Rear-end crashes on Route 122

Original Project Purpose – Improve Safety

- Construct left turn lane on NB Route 122 to reduce rear-end crashes
- Other features included:
  - Lengthen the right turn lane onto Hardy Road
  - Relocate existing entrances to commercial business
  - Widen roadway shoulders on Route 122
What changed after project approval?

- Predominant crash pattern changed from rear-end to angle crashes
  - Angle crashes increased for vehicles turning from and onto Hardy Road
  - Severe injury crashes increased
  - Fatal crashes increased

- In response, VDOT re-evaluated the planned improvements
  - Considered a traffic signal and a roundabout to reduce angle crashes
  - Roundabout selected – better safety performance at comparable cost
Why a Roundabout?

Improved safety
• Reduces number of points where vehicles can cross paths
• Eliminates potential for right-angle and head-on crashes
• Converts all turning movement to right turns which are safer

Safer speeds
• Promotes lower speeds on intersection approach
• Gives drivers more time to react

Increased efficiency
• Means fewer stops, less delays, and shorter queues
• Improves efficiency as compared to traffic signals

Long-term, cost-effective solution
• Reduces long-term costs for operations and maintenance
Intersection Layout
**What is a roundabout?**

A roundabout is a type of circular intersection with yield control of entering traffic, islands on the approaches, and appropriate roadway curvature to reduce vehicle speeds.

Modern roundabouts are different from rotaries and other traffic circles. For example, roundabouts are typically smaller than the large, high-speed rotaries still in use in some parts of the country. In addition, roundabouts are typically larger than neighborhood traffic circles used to calm traffic.

A roundabout has these characteristics:

- Generally Circular Shape
- Counterclockwise circulation
- No need to change lanes to exit
- Yield signs at entries
- Can have more than one lane
- Geometry that forces slow speeds

---

**Why consider a roundabout?**

Compared to other types of intersections, roundabouts have demonstrated safety and other benefits.

Roundabouts:

- **Improve safety**
  - More than 90% reduction in fatalities*
  - 76% reduction in injuries**
  - 35% reduction in all crashes**
  - Slower speeds are generally safer for pedestrians

---


* 2001-2005 Data on fatal crashes from Fatality Analysis Reporting System (FARS)
** Average of 82 roundabouts and 15 signalized intersections (AFD) from 2000-2009
Thank you for attending tonight’s meeting. For more information, please visit the displays available and discuss your questions and concerns with VDOT staff at tonight’s meeting.