



**ROUTE 122 & ROUTE 636
INTERSECTION
SAFETY IMPROVEMENTS
CITIZEN INFORMATION MEETING**

| UPC 109287

January 23, 2020





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





Project Refinement

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



FHWA Roundabout Information

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:



Why consider a roundabout?

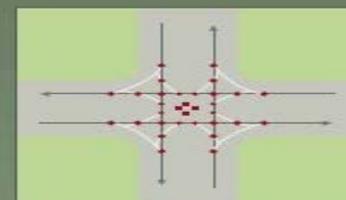
Compared to other types of intersections, roundabouts have demonstrated safety and other benefits.

Roundabouts:

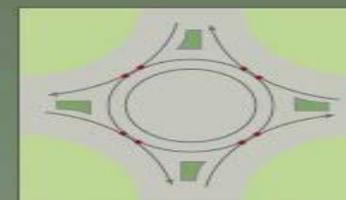
> Improve safety

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

With roundabouts, head-on and high-speed right angle collisions are virtually eliminated.



[Traditional intersection]



[Roundabout]

● Potential vehicle conflict point

Source: *Roundabouts: An Informational Guide*. Federal Highway Administration, Washington, D.C., latest version, except as noted.

* "Safety Effect of Roundabout Conversions in the United States: Empirical Bayes Observational Before-After Study." Transportation Research Record 1751, Transportation Research Board (TRB), National Academy of Sciences (NAS), Washington, D.C., 2001.

** NCHRP Report 572: Roundabouts in the United States. National Cooperative Highway Research Program, TRB, NAS, Washington, D.C., 2007.





**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.**

