DEPARTMENT OF LAND USE AND TRANSPORTATION
Engineering and Construction Services Division
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River Road/Scholls Ferry Road Roundabout Fact Sheet

During the course of constructing this project, several concerns have arisen regarding the project's safety and its functionality for trucks and farm equipment. The concerns are summarized below:

> ***Smaller than Verboort roundabouts:*** *This roundabout is smaller than the existing roundabouts in Verboort.*
>
> ***Narrow roadway:*** *Navigating larger trucks through the intersection will be difficult. Long/wide vehicles are expected to ride up on the sidewalk that will have pedestrian and bicycle traffic as well. This will require driving over a low curb, which could jolt equipment, damage smaller vehicles, or contribute to 'tipping' trucks.*
>
> ***Tipping:*** *Trucks entering the roundabout going too fast could tip over (this has occurred in a few instances at Verboort), and the curbs could add to this concern.*
>
> ***Traffic Flow:*** *The effort to slow traffic entering the intersection is likely to create significant backups.*
>
> ***Not Designed for Long-Term Needs:*** *The project is a short-term solution and is expected to have to be fixed periodically because vehicles going up on the sidewalk will damage the curb.*

We certainly appreciate these concerns, but believe the project's design addresses each of them. The FAQs (Frequently Asked Questions) below address these concerns.

Why a Roundabout?
The design being constructed was presented at the January 20, 2011 open house at Groner School and the September 15, 2011 meeting of CPO 10. Prior to proceeding with detailed project designs, our project team evaluated both a signalized "T" intersection and a roundabout. The roundabout proved to have several significant advantages:

- The roundabout designed for this specific location and for the current and projected future traffic volumes is safer than a signal system. Due to slower vehicle speeds, crash severity tends to be much lower with roundabouts than with signalized intersections. The roundabout design takes into account tested and proven engineering principles, which will ensure the safest and most efficient traffic control possible (more design information provided below).
- Reduced delays during peak AM and PM hours, which will result in less back up than currently exists. This has been demonstrated locally at Verboort and Wanker's Corner (Clackamas County) and at roundabouts worldwide.

- Initial construction costs are similar, and ongoing maintenance costs are lower for a roundabout than for a signalized intersection.

Is it different from the Verboort roundabouts?
The Verboort roundabouts were constructed in the early 2000s. While there are some differences in the design of this project and the Verboort roundabouts, the configuration of the existing roads, the existing and projected traffic volumes, and the basic roundabout configuration at River/Scholls Ferry is very similar to Verboort. Design enhancements incorporated into this project were specifically meant to maximize safety by minimizing speeding and potential rollover (tipping) incidents, and to minimize the project's impact to adjacent farmland while still facilitating large trucks and farm equipment. Some of these design enhancements resulted from 'lessons learned' with the Verboort roundabouts and changes in roundabout design best practices since those projects were built.

Is it a short-term fix?
No. The new facility was warranted and is designed to address existing safety deficiencies at the intersection, which it will do for now and years to come. Current and projected traffic volumes were used to design a 20+ year facility. The construction materials specified also took into account a 20+ year design life.

Will it be safe and functional for all vehicles?
Yes. It must be emphasized that truck turning radius templates for large freight trucks and farm equipment were used to design this roundabout. These turning templates are nationally recognized and were used to produce a computer model indicating that even very large trucks will be able to navigate through the roundabout without incident. The design also accommodates oversized farm equipment.

What are the project's design features?
Following is a brief explanation of the River/Scholls Ferry project's key design elements and how they maximize safety and functionality for all users:

Center Radius: The radius of the River/Scholls roundabout is approximately 85 feet (versus 99 feet at Verboort). The reasoning behind tightening up the radius was twofold:

- Speeds inside the Verboort roundabouts are greater than we would like, due in part to the larger radius. Speed has been a significant contributing factor in the limited number of tipping incidents that have occurred there. To reduce speeds through this roundabout, the radius was reduced. To facilitate the tighter radius, a 10' truck apron (with a 3" mountable curb) is provided in the center of the roundabout. The Verboort roundabout does NOT have a truck apron, but does have a barrier to keep vehicles from cutting illegally across the roundabout.
- The smaller radius has the added benefit of reducing the amount of farm land required to construct the facility.

Roundabout Pavement Width: Though this project's center radius is smaller, the effective pavement width around the center island at River/Scholls is equal to or greater than at the Verboort roundabouts. The widest point in the River/Scholls roundabout is 40 feet (including the 10' truck apron). The narrowest width is 32 feet (including the 10' truck apron), the same as the widest part of the Verboort roundabouts.

Approach Lane Width: The approach and exit lanes are16 feet wide at their narrowest point (slightly wider than those at Verboort). This is significantly wider than the lane widths of the existing roads coming into the roundabout (approximately 11-12 feet). The approach lanes have been designed with standard curbs to give the appearance that the lane is narrowing. This, combined with the curves in the approach lanes, will slow down entering and exiting traffic. Although there are no local designs of this nature, this concept has been utilized in many parts of the United States.

Splitter Islands: These islands between the approach and exit lanes are designed to transition vehicles into and out of the roundabout smoothly while reducing and controlling vehicle speeds. The effective roundabout pavement width adjacent to the islands is 32 feet (including 10' truck apron), which is the narrowest width within the roundabout. The minimum River/Scholls travel way width is the same as the maximum interior pavement width at Verboort, so there is no reduction in effective pavement width in the new roundabout. However, staff has researched the possibility of increasing the roundabout pavement width by up to 6 feet by adding a 'truck apron' to the islands. This concept will be pursued *only* if the results of an upcoming field test indicate that trucks need the additional width. The field test is not expected to show a need for the additional width at the splitter islands as long as design speeds are adhered to.

Sidewalks: The sidewalks will serve the same function as a rural roadway shoulder – they provide space for cyclists and pedestrians outside of the travel lanes and also accommodate over-width farm equipment when necessary. Like a rural road shoulder, the sidewalks will be designed to handle the weight of large trucks and farm equipment. Low-profile mountable curbs have been strategically placed to ensure a smooth transition on and off of the reinforced sidewalks when necessary. It must be emphasized that *only* equipment over 16 feet in width would possibly need to use the sidewalk to maneuver through the roundabout approach or exit lanes. The roundabout has been designed to accommodate the largest freeway freight vehicle without having to drive on the sidewalk.