Dear Mayor Cooper:

Thank you for your latest questions regarding the 92nd Avenue Northeast interchange. As you noted, we have previously provided information, studies, and data supporting the safety of roundabouts in general, and the planned 92nd Avenue Northeast roundabout specifically, in our responses to Yarrow Point resolutions 300, 301 and 302, as well as in other email correspondence. In short, we have been building roundabouts in Washington since 1997. Not only are they increasing in number in this state, they are also popping up all across the United States, and for good reason. We build them because they are safe and efficient for all users.

In your latest email, you ask that we again address the incorrect assertions that 1) the 92nd Avenue Northeast Roundabout will be unsafe for bicyclists, 2) Federal Highway Administration (FHWA) recommendations support this claim, and 3) the roundabout is inappropriate for a highway off-ramp in a residential neighborhood.

In our response to Yarrow Point resolution 300, dated Sept. 13, 2011, we provided data to support the fact that single-lane roundabouts, like the one planned at 92nd Avenue Northeast, are safe for all users; we described the options bicyclists have when navigating roundabouts; and we noted some of the specific safety measures that we will implement at the 92nd Avenue Northeast roundabout. The following is an excerpt from that response:

> *Concerns are sometimes raised about the safety of roundabouts for pedestrians and bicycles. There are now 150 single-lane roundabouts in Washington and a review of eleven years of crash data (2000 through 2010) showed a total of twelve crashes involving pedestrians or bicycles, none of which were serious or fatal. That equates to slightly more than one per year for all of the roundabout locations combined – a very low rate of occurrence.*
>
> *Modern roundabouts are designed to be safer for pedestrians than traditional at-grade intersections. Vehicles are moving at a slower rate of speed in roundabouts – typically between 15 and 20 miles per hour. Crosswalks are also set farther back from traffic, allowing drivers more time to react to pedestrians before merging into or out of the roundabout. Triangular islands between traffic lanes give pedestrians a safe place to wait if they choose to cross only one direction of traffic at a time.*
>
> *Experienced bicyclists can choose to ride through the roundabout with traffic or recreational cyclists may choose to walk their bicycles through the pedestrian crosswalks – much like they would in a traditional intersection. Like vehicles, cyclists must obey the rules of the roundabout as they proceed through the intersection.*
>
> *Specific pedestrian safety elements in the 92nd Avenue Northeast design include curb extensions and safety islands between lanes (also called pedestrian medians) to reduce crossing distances; striping changes so that vehicles stop farther from pedestrian crossings than in a traditional intersection; and signage alerting motorists to the presence of pedestrians and cyclists.*
>
> *The design of the 92nd Avenue Northeast roundabout is based on WSDOT's design manual guidance for modern roundabouts. This guidance is based on state, federal, national and international guidance and polices to ensure that our facilities are safe for all users.*

FHWA recommendations have been cited by some who would have you believe that roundabouts are not safe for bicyclists. Those recommendations, they say, refer to European studies published in the 1980s that showed subject roundabouts introduced certain risks for bicyclists. To the contrary, the European studies were used to update design guidelines here in the United States. In other words, we have learned from these studies by implementing new best practices that improve upon roundabouts designed in an earlier era.

Upon review of the European data several design recommendations were made by FHWA to improve safety, including the following:

1. Avoid bike lanes on the outer edge of the circulatory roadway (i.e. inside the roundabout).
2. Allow cyclists to mix with traffic without any separate facility in the circulatory roadway when traffic volumes are low, on single-lane roundabouts operating at lower speeds.
3. Introduce separated bicycle facilities outside the circulatory roadway when vehicular and bicycle volumes are high. These bicycle facilities cross the roundabout exits and entries at least one car length from the edge of the circulatory roadway lane, adjacent to the pedestrian crossings.
4. Use tightened entry curvature, narrow entry width, and radial alignment of legs to slow vehicle speeds to more closely match bicycles.

The 92nd Avenue Northeast roundabout reflects the recommendations found in the FHWA guidelines in the following ways:

1. No bike lanes are striped within the circulatory roadway (i.e. inside the roundabout).
2. Commuter cyclists can mix with traffic through the low volume, slow speed, single-lane roundabout.
3. Recreational cyclists and children may choose to dismount and use the pedestrian path along the outside of the roundabout.
4. Crosswalks are located away from the intersection, allowing drivers to first slow for pedestrians (or cyclists who are walking their bikes) before entering the roundabout.
5. The entry roadways are aligned to reduce vehicle entry speeds.

For your reference, attached to this email is a graphic that we sent to the Town with our Oct. 21, 2011, response to Yarrow Point resolutions 301 and 302, depicting pedestrian and bicycle routes through the roundabout.

We have heard the claim from those opposed to the 92nd Avenue Northeast roundabout that the roundabout is not appropriate for a highway off-ramp in a residential neighborhood. It is not unusual for WSDOT and other state transportation departments to build roundabouts at highway off ramps – we have built more than 20 of them along major highways in the past 15 years since we started building roundabouts in Washington. Again, they are safe and they are efficient for all users.

The 92nd Avenue Northeast roundabout design is aligned with state design guidelines. It accounts for and balances the various needs of drivers, bicyclists and pedestrians approaching from each of the five legs. Roadway grades through the roundabout comply with design guidelines, and curves at the roundabout approaches will require drivers, including those approaching from the highway off-ramp, to slow down to speeds of 15 miles per hour or less before entering the roundabout. At these low speeds, and with the advance signing and crosswalk safety features described above, drivers will be able to see and react to bicyclists and pedestrians before they enter the roundabout.

I hope that this information helps answer these questions. As always, I am happy to address any further questions on this matter.

Sincerely,

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