

NCITE Geometric Design Committee

9/21/2017 Meeting Minutes

8:30 AM – 10:00 AM

Location: Stantec
2335 Highway 36 West
St. Paul, MN 55113

Committee Chair:
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Committee Co-Chair:
(vacant)

Meeting Minutes:

I. Presentation by Will Stein, FHWA Minnesota Division:

- 8 mini-roundabouts have been built so far in Minnesota, and 1 other is programmed for construction in 2020 (at Edgerton and Fairview in Maplewood)
- Rough definition of mini-roundabout:
 - Single-lane with an inscribed diameter of 50' to 90', with traversable center islands and splitter islands
 - Approaches are generally two- to three-lane high volume collectors with speeds of 35 mph or less, but this varies
- (Reviewed the 8 mini-roundabout that have been built and discussed them)
 - ELK RIVER
 - SHAKOPEE
 - Construction cost was \$277,000, but it was bid in late spring and there were only two bidders, plus this project included some approach work, lighting, and utility work
 - Funded partially by MN Safety Money
 - Capacity was measured afterward and reached about 1150 veh/hr, and the volume at which it stops functioning is still unclear
 - It was important to have notable deflection for the higher speed approach
 - Discussed impacts to cost and how to decrease

- Consider if approach work can be minimized, such as leaving most of the existing curb and use something else for deflection
 - A more simple mini-roundabout in Maryland was built for \$185,000
 - Choose a smaller design vehicle if possible
- WINONA
- SAVAGE
- ST. JAMES (2 mini-roundabouts)
 - Live camera at <https://app.oxblue.com/open/srf/signaltoconversion>
 - Lots of grain trucks present that will test the design and construction over the coming years
 - Mini-roundabouts were part of the Complete Streets concept applied here, which was well-implemented and in particular it reduced pedestrian crossing distances significantly
 - This project included \$864,000 of FHWA AID money, which is for “kick-starting” innovative concepts and applications
 - Now open to traffic
- ANOKA
 - Notable as a 5-legged mini-roundabout with low speeds
- Discussion on performance-based design as applied to mini-roundabouts
 - There is a roundabout in Mendota Heights near Visitation High School that could have probably functioned well as a mini-roundabout and saved cost
 - It’s important to use the “right size design” concept with roundabouts, perhaps mini-roundabouts should be considered more as a first alternative than they are
 - The revised Chapter 12 of the MnDOT Design Manual will use a design life of 10 years to encourage this.
 - Multi-lane roundabouts function acceptable with higher volumes but actually function worse with lower volumes
 - FHWA has good videos of semi-trucks, ambulances, buses, etc. maneuvering through roundabouts if anyone needs any for public education purposes
- Other notes:
 - MnDOT State Aid has stopped counting roundabouts in the state, although FHWA requires reporting the intersection type
 - MnDOT shared that the Detail 7102 with Type “R” curb & gutter is now published with consideration for the threshold of the truck apron.
 - MnDOT also just released guidance on DDI’s and RCUT’s.

II. **Next Meeting: TBD.**