

News Release

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Contact: Sue Roe
Office: 651-366-4268
Cell: 651-503-2467
Susan.Roe@state.mn.us

MnDOT study: Roundabouts reduce serious injuries, save lives in Minnesota

ST. PAUL, Minn. – The state’s nearly 200 roundabouts are reducing serious injuries and saving lives, according to a new study released by the Minnesota Department of Transportation.

“Overall, roundabouts in Minnesota are performing well,” said Derek Leuer, traffic safety engineer. “In most cases, modern roundabouts compare favorably in safety and operational performance to conventional intersections with stop control or signalized operation.”

Roundabouts also have comparable initial construction costs and lower life-cycle costs than a traffic signal with similar traffic capacity, he said.

The study, found online at <http://www.mndot.gov/trafficeng/safety/docs/roundaboutstudy.pdf>, examined the safety performance of roundabouts by comparing the before- and after-construction crash rates. It shows there hasn’t been a multi-vehicle fatality in a roundabout in Minnesota. There was an 86 percent reduction in the fatal crash rate at intersections where roundabouts were installed and an 83 percent reduction in the serious injury crash rate.

The report also showed the following data at intersections with single-lane roundabouts, the most common type of roundabout in the state:

- 69 percent reduction in right-angle crash rates
- 83 percent reduction in the left-turn crash rates
- 61 percent reduction in the injury crash rates

For all roundabout types, there was a 42 percent reduction in the injury crash rates.

Design features of roundabouts that help reduce serious crashes and fatalities include yield control of entering traffic and channelized approaches and other geometric elements that control travel speeds, facilitate efficient exchange of traffic flows and minimize the number and severity of vehicle conflicts and crashes.

MnDOT’s roundabout study is the largest conducted in the state to date. Data from 144 individual sites were collected. The data includes detailed information, by county and city, on each roundabout including crash rates and traffic volume. Sites with low traffic volumes and those that only service residential areas, small business

parks or private settings were not studied. The report and detailed site report is online at <http://www.mndot.gov/trafficeng/safety/reportspubl.html>.

Minnesota built its first roundabout in 1995 in Brooklyn Park. Since then, MnDOT, counties and cities have built roundabouts across the state. Roundabout types include single lanes, dual lanes and unbalanced lanes in settings such as rural, urban, suburban, interchange ramp terminals and higher and lower volume locations.

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