STATE DOT CASE STUDIES ON SAFETY ADVANCEMENTS

Conducted by AASHTO Transportation Policy Forum | April 2024

MINNESOTA

LANE CONSTRICTOR INTERSECTION STATEWIDE IMPLEMENTATION

Cost: $5,000 for materials, plus design and labor per location. **Project Dates:** 2018-2019

The Issue: Rural intersections can present a serious safety issue, with a large portion of fatal intersection crashes occurring at rural intersections. Often, rural roads have relatively low traffic and high speeds, and drivers on the mainline either do not expect crossing traffic, or they fail to recognize that they are approaching an intersection.

The Solution: Lane constrictor intersections are an intersection design for rural, high-speed intersections with a side-street stop control that narrows the lane width for mainline approaches via a striped median with centerline rumble strips. By narrowing the mainline lane, the goal of this design is to encourage mainline traffic to slow down as it approaches the intersection. The striped median also provides greater separation between mainline directions and draws more attention to the location of the intersection.

Between 2018 and 2019, 66 intersections on Minnesota trunk highways were modified to a lane constrictor design. A 2024 safety evaluation of these lane constrictor intersections in Minnesota found little change in the overall crash numbers, but did find a 20 percent decrease in KABC severity crashes, suggesting there is a decrease in crash severity at these intersections.