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MANITOBA HEAVY CONSTRUCTION ASSOCIATION

Roundabouts a safer, wiser way to get past intersections

Ron Schuler is minister of Manitoba Infrastructure

BY RON SCHULER

Two years ago Manitoba Infrastructure introduced a new intersection treatment to the provincial highway network: a modern roundabout, constructed at the intersection of Provincial Trunk Highway (PTH) 2 and PTH 3 near the community of Oak Bluff.

While roundabouts have rapidly gained favour as a preferred intersection layout across North America, the idea initially was met with hesitation over concerns that Manitoba drivers wouldn't be comfortable with this form of traffic control. That hesitation quickly turned to praise as motorists became familiar with the roundabout and began to see its benefits.

When used at appropriate locations, roundabouts offer several advantages over conventional traffic signals or four-way stops. First and foremost, is an increased level of safety. With its unique geometry, roundabouts reduce the number of places where vehicles try to occupy the same physical space. These are known as conflict points. Roundabouts offer fewer conflict points compared to conventional intersections where most dangerous types of collisions occur (T-Bone and head-on collisions). A collision in a roundabout is more likely to be a side-swipe, which typically results in some damage to the vehicles or property, but no serious or fatal injuries.

Roundabouts use geometry to force vehicles to slow down. While other types of intersections may use signage to encourage good driver behaviour, roundabouts use roadway curvatures to lower vehicle operating speeds through intersections. Ultimately this gives drivers more time to react to any potential danger and reduces the severity of any collisions should one occur.

Manitoba Infrastructure conducted a before-and-after study of the PTH 2 and PTH 3 roundabout near Oak Bluff to review near-miss incidents at the intersection as part of the Intersection Improvement Project. After the roundabout was opened, critical and high-risk events (those involving high speeds that could result in serious or fatal injuries) had been virtually eliminated. Medium risk events (those likely to result in vehicle and property damage) were reduced by 56%.

Another benefit to roundabouts is their increased traffic capacity compared to traffic signals. Roundabouts keep traffic moving at all times, where traffic signals require at least one direction of traffic to be stopped at any given time. A properly designed roundabout will generally keep the intersection moving, reducing the chances of vehicles such as a semi tractor-trailers having to come to complete stops and then re-starting, and waiting for signal lights to work their way through their full cycle when traffic volumes are low.

Roundabouts help improve fuel efficiency and reduce greenhouse gas emissions caused by idling and acceleration. Studies have shown a reduction in fuel consumption of 25-30% at roundabouts when compared to conventional intersections.

After the success of the PTH 2/PTH 3 roundabout, Manitoba Infrastructure will be taking steps to implement more roundabouts in the province. We are planning to start construction this fall on a roundabout at the intersection of Provincial Road 213 (Garven Road) and PR 206, north of Oakbank. The project is anticipated to be completed by next summer. This will alleviate operational issues at the intersection as traffic volumes have grown substantially in recent years.

Manitoba Infrastructure is committed to continuously improve and introduce new intersection treatments across the province that are most beneficial to moving people and goods safely and efficiently. Working with design staff to accommodate road users and different roadway settings, Manitoba Infrastructure's goal is to always ensure everyone's safety on Manitoba's roads.

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> *–Ron Schuler*

Roundabout at PTH 2 and PTH 3 near Oak Bluff