



**REGION OF WATERLOO
ROUNDAABOUT FEASIBILITY
INITIAL SCREENING TOOL VERSION 2.0**

The intent of this screening tool is to provide a relatively quick assessment of the feasibility of a modern roundabout at a particular intersection in comparison to other appropriate forms of traffic control or road improvements including auxiliary lanes, traffic control signals, four-way stop, etc. The intended outcome of this tool is to provide enough information to assist staff in deciding whether or not to proceed to an Intersection Control Study to further investigate in more detail the feasibility of a roundabout.

- 1) Project Name/Region File No. (completed Screening Tools are to be stored in Docs Public Folder/Roundabout Coordination Committee/Intersection Locations) .:

- 2) Intersection Location
(Street/Road Names, municipality, distance from major intersection, etc.):

- 3) Brief Description of Existing Intersection
(Number of Legs, Lanes on each leg, total existing AADT, existing AADT on each road, etc. Attach or sketch diagram showing existing and horizon-year turning movements.):

- 4) What operational problems are being experienced at this location?



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5) Is it a new intersection or is it a retrofit of an existing intersection? If existing, what is the existing traffic control?

6) Is the intersection in the vicinity of a railroad crossing *or another intersection*? If so, how close and what type of traffic control exists at the adjacent intersection(s)? Will queues be a problem?

7) Would the intersection be located within a coordinated signal system?

8) Is the intersection located within a corridor that is scheduled for improvements in the 10 Year Transportation Capital Program? What is the ultimate cross-section of the approach roads?



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- 9) What is the collision history of the intersection over the past five years? Is there a collision problem that needs to be addressed? What is the current and past ranking of this intersection as identified in the Region's Annual Collision Report?

- 10) What traditional road improvements are warranted for this intersection and what year is it warranted?
(eg. traffic signals, all-way stop, auxiliary lanes, etc. based on Region of Waterloo warrants) Please attach a sketch of the traditional road improvements. A sample sketch is attached (DOCS #529440).

- 11) What size of roundabout is being considered for this intersection? (eg. Single-lane, two-lane entry or three-lane entry?) Please attach a Traffic Flowsheet and lane configuration diagram. Please attach a sketch showing how a roundabout would "fit" into the right-of-way.



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12) 20-Year Life Cycle Cost Estimate

Base Year AADT: _____

10-Year (post construction) AADT: _____

20 YEAR LIFE-CYCLE COST COMPARISON		
Cost Item	Other Traffic Control	Roundabout
Implementation Cost	\$	\$
Injury Collision Cost (Present Value)	\$	\$
Total Life Cycle Cost	X	Y

Notes:

- Please attach copy of completed Region of Waterloo ***HSM 20-year Present Value Collision Costs rev March 2016***
- Implementation Cost = sum of costs for construction, property utility relocations, illumination, engineering (20%), contingency (20%) and maintenance (5%);
- Generally the roundabout is preferred if it is 1.5 times the cost or less than other Traffic Control



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Conclusions and Recommendation
