

Hamilton Road and Gore Road Intersection Improvements Environmental Assessment (EA)



Source: City of London, 2021

Public Information Centre – October 2, 2023

Study Area

The intersection of Hamilton Road and Gore Road has been identified as an intersection that no longer meets current standards and is in need of improvement.

The City has initiated the study (Schedule B – Class EA) to evaluate alternatives for improvement at this intersection. Hamilton Road and Gore Road are classified as arterial roads with intersection volumes exceeding 14,000 vehicles per day at the intersection, and usage as a commuter route has grown in recent years.

This study reviews options for modifying the intersection with the objective of determining the most suitable alternative, which can then be carried forward to the detailed design phase.

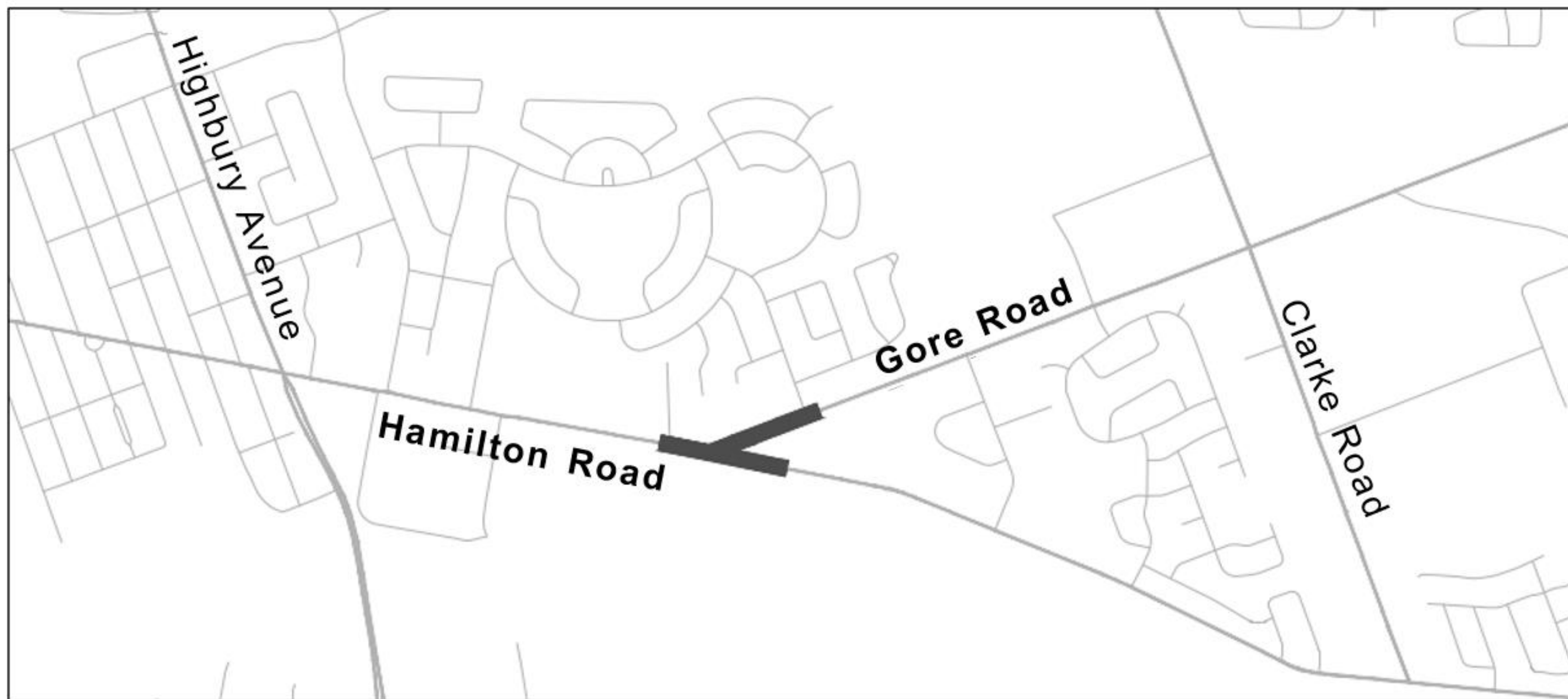


Figure 1: Hamilton Road and Gore Road Intersection & Study Area (City of London)

Problem Statement

- Hamilton Road and Gore Road are arterial roads in the eastern side of London. Gore Road intersects Hamilton Road at a three-legged stop-controlled intersection at a challenging angle. The intersection has seen an increase in traffic volumes, leading to a greater number of incidents and necessitating a review of the current intersection.
- Through the EA process, a review of design alternatives will be conducted to determine a preferred alternative for an improved intersection arrangement and controls while addressing the safety of drivers, cyclists and pedestrians. The study will also consider protection of the environment; minimization of disruption to residents and surrounding areas; engage a broad range of stakeholders; optimize costs; and document the study process in compliance with the Municipal Class Environmental Assessment Schedule “B” process.



Figure 2: Hamilton/Gore Road Intersection

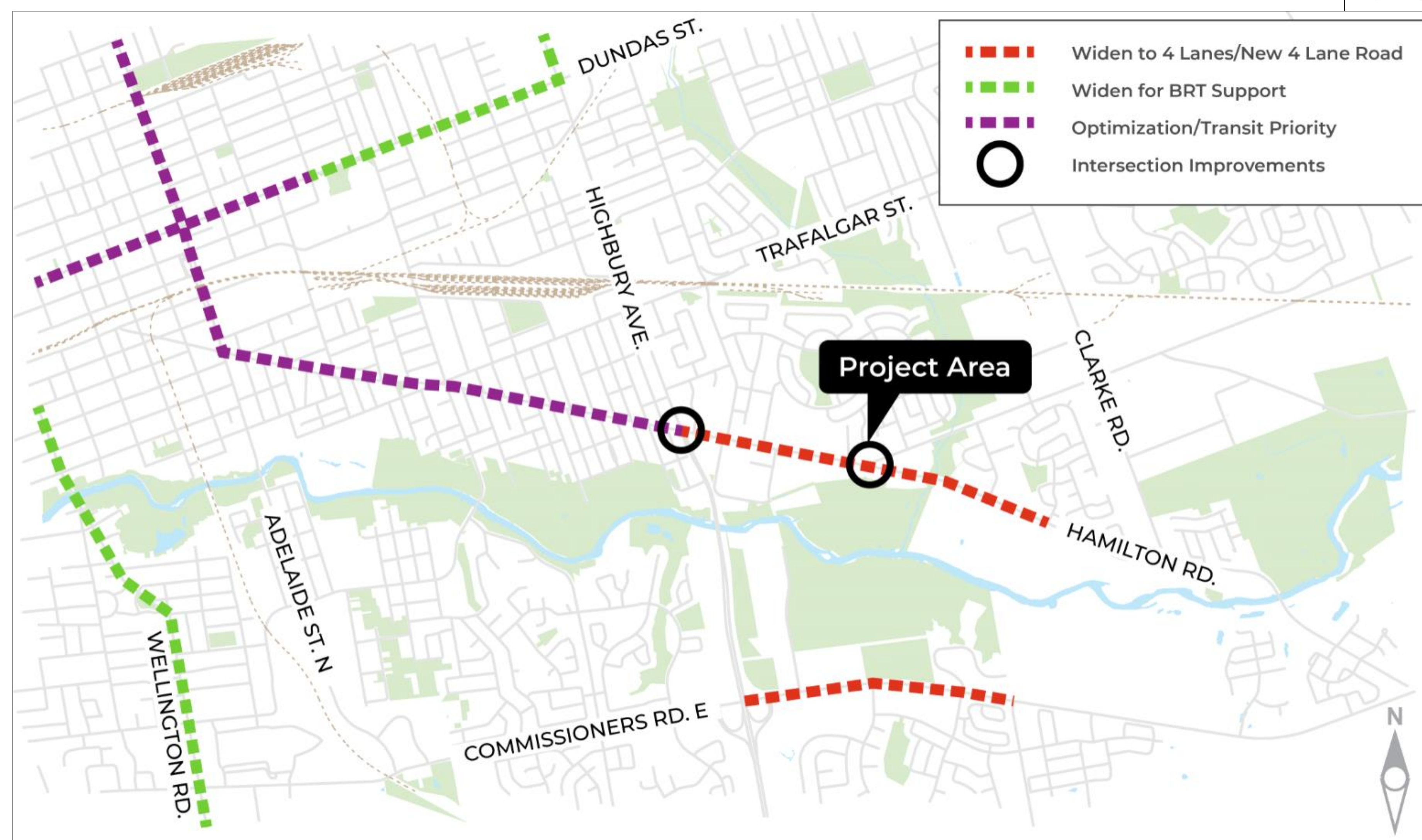
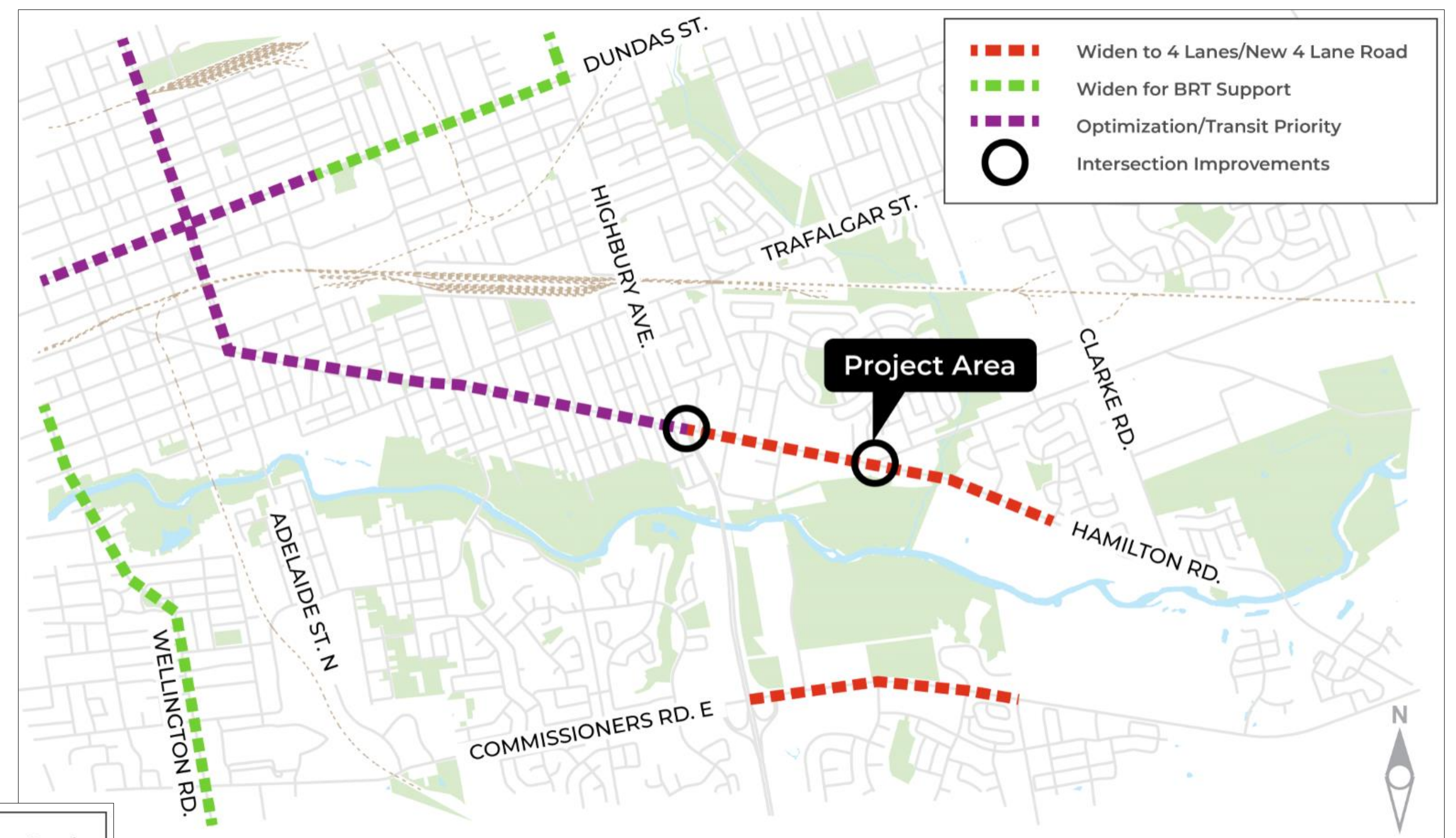
Municipal Class Schedule B EA Planning and Design Process

- 1 Background Studies
- 2 Develop Preferred Alternatives
- 3 PIC#1 – Present Design Alternatives
- 4 Address PIC comments
-  5 PIC#2 – Present Preferred Alternative
- 6 Address PIC#2 comments
- 7 Prepare Project File Report
- 8 Notice of Study Completion
- 9 Project File Report Review Period

City of London Planning Documents

Transportation Master Plan

The current Transportation Master Plan identified the Gore Road and Hamilton Road intersection for improvements as a potential roundabout. The TMP recommends widening Hamilton Road to 4 lanes between Highbury Avenue and River Run Terrace. Will undergo separate Environmental Assessment.



Cycling Master Plan

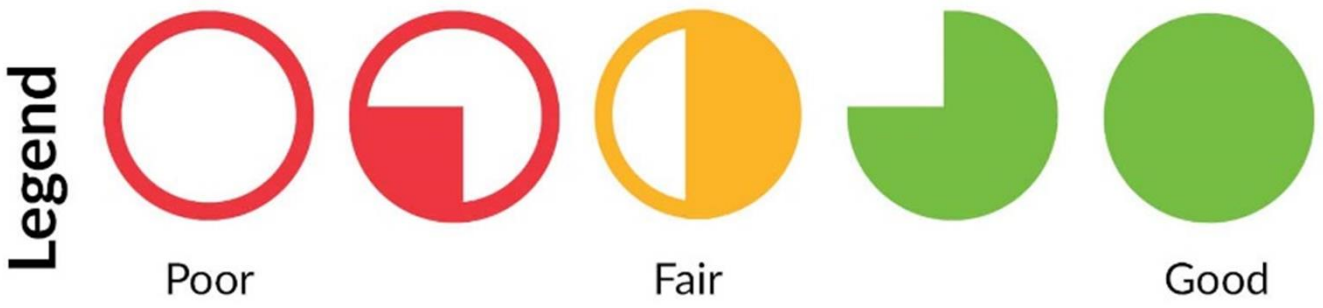
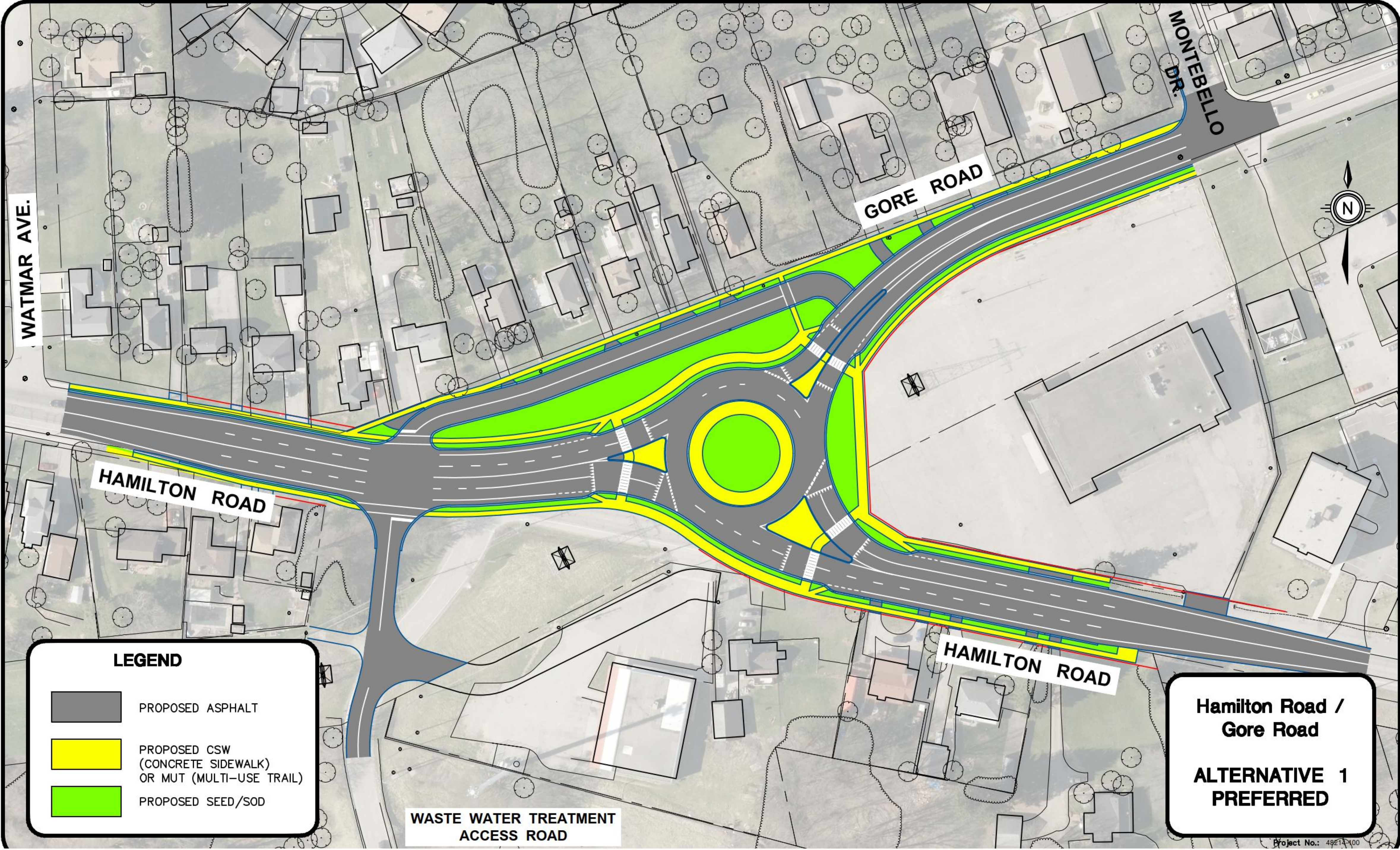
The current Cycling Master Plan indicates that there are proposed future bike lanes on Gore Road and should have bike lane on Hamilton Road up to Gore Road. Proposed paved shoulder east of Gore Road.

Alternatives Evaluated

Alternative	Description
Do Nothing	•No improvements – do not continue any further with project
Alternative 1: Roundabout	•Convert the Hamilton Road and Gore Road intersection to a 3-leg roundabout •Design will accommodate projected traffic on Hamilton Road
Alternative 2: Signalized Intersection A	•Major realignment of Hamilton Road and Gore Road •Hamilton Road would no longer be straight through road – eastbound drivers would turn left at intersection to stay on Hamilton Road •Introduction of traffic signals
Alternative 3: Signalized Intersection B	•Realignment of Gore Road •Improve skew of Gore Road at Hamilton Road •Introduction of traffic signals •Combine to have 1 single intersection, including driveway to WWTP

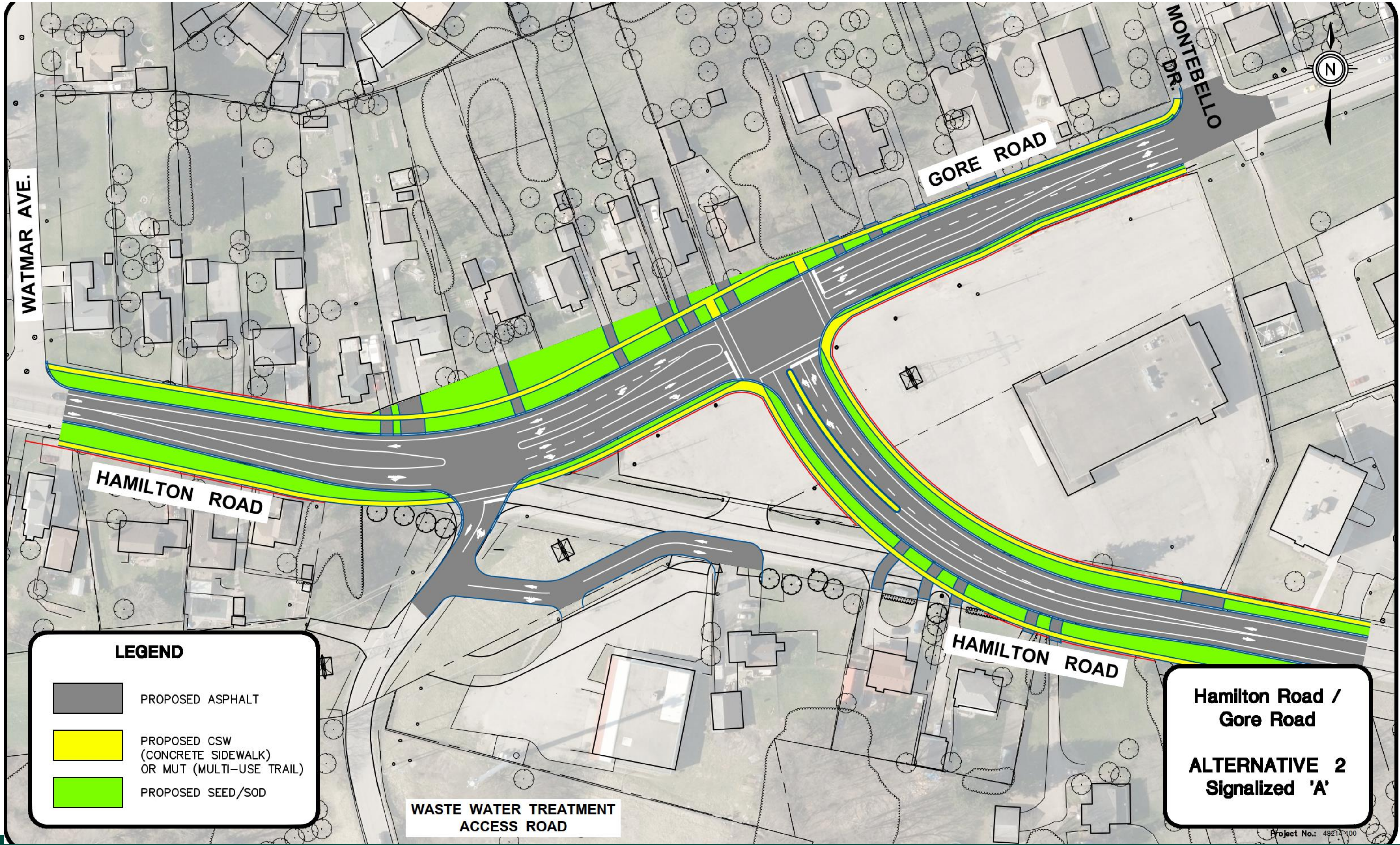
Alternative No. 1 - Roundabout

Evaluation Criteria	Advantages	Disadvantages	
Traffic Capacity and Operations	• Provides capacity for current and future traffic flow • Includes active transportation (accommodates pedestrians and cyclists)	• Significant change to the current operation of the intersection • Drivers need to become used to navigating the roundabout	
Overall Safety of Intersection	• Roundabout provides natural traffic calming • Discourages speeding through intersection • Shorter crossing distances for pedestrians, 2 lane widths • Reduces the chances of severe collisions	• Cyclists must exit the roadway and navigate the roundabout with pedestrians	
Social and Natural Environment	• Minimal environmental impact, urbanized already urbanized • OGS unit to treat stormwater runoff • Residents along Gore Road will have access from new adjacent roadway • Reduced vehicular noise	• Potential for loss of a small number of trees • Some driveways will be close to roundabout	
Climate Change	• Reduces vehicle stopping and idling – less emission • Addition of bike lanes and sidewalk will encourage active transportation	• Increase in stormwater runoff due to additional impervious area	
Utility Impacts	• Does not impact Hydro One infrastructure, no tower relocations	• Requires relocation of London Hydro infrastructure • Watermain replacement	
Cost	• No cost for traffic signals, or ongoing maintenance	• Greater capital cost for installation • Largest impact on Infrastructure Ontario lands, land swapping required	

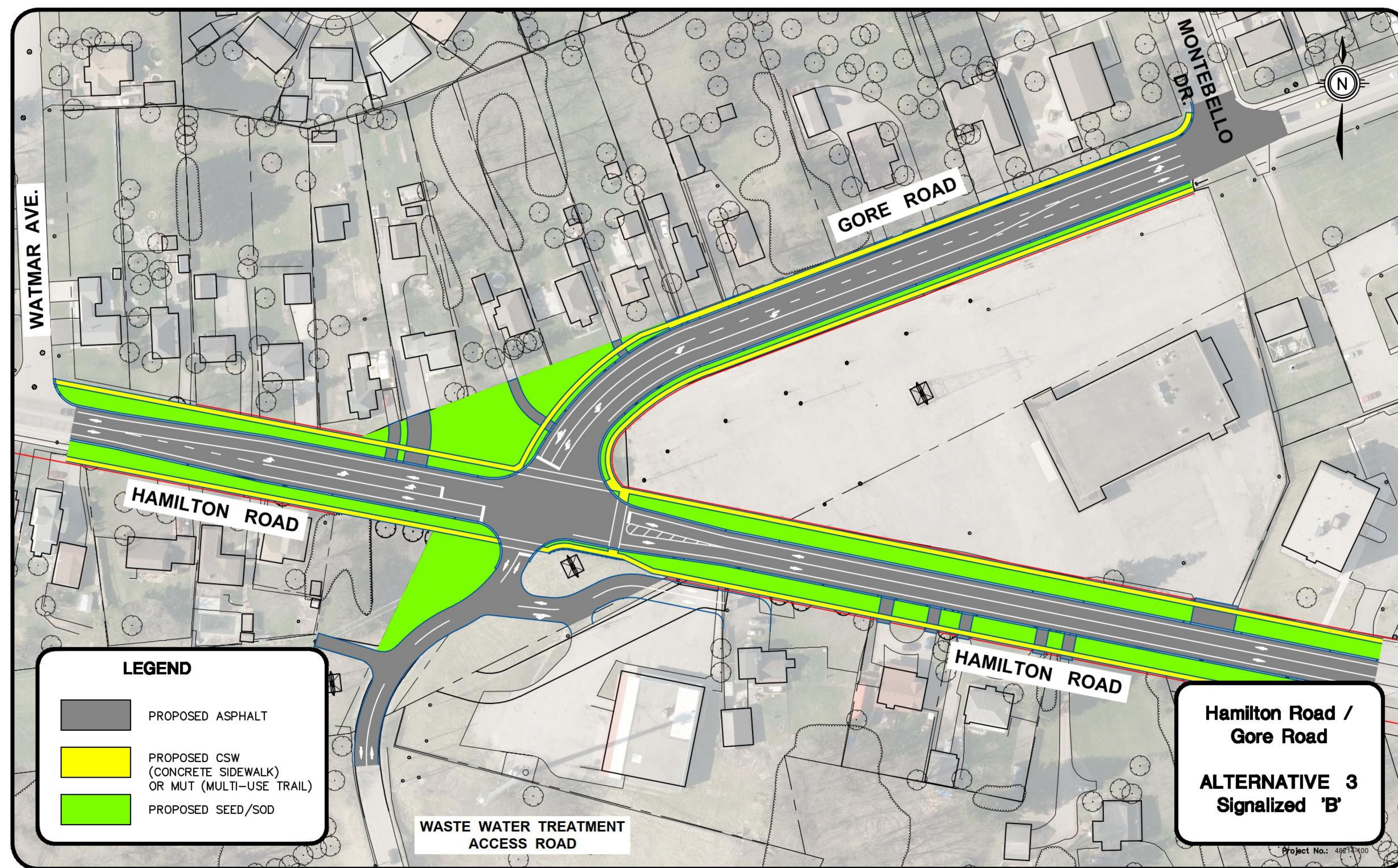


Alternative No. 2 – Signalized Intersection A

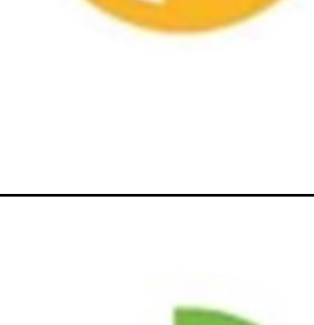
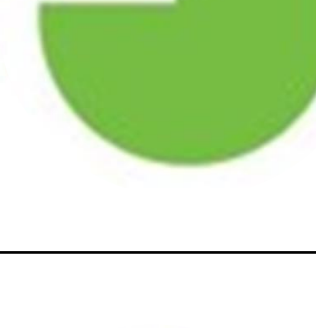
Evaluation Criteria	Advantages	Disadvantages	
Traffic Capacity and Operations	• Left turn movement from Hamilton onto Gore is eliminated with this configuration	• In long term traffic scenario, would require double left turn lanes, and possibly double right turn lanes. • Does not meet long term traffic needs • Space and functionality will be an issue	
Overall Safety of Intersection	• Pedestrian and cycling crossing will be improved to AODA standards	• Crossing distances are long, minimum 4 lanes • Minimal affect on traffic calming	
Social and Natural Environment	• Minimal environmental impact, urbanized already urbanized • OGS unit to treat stormwater runoff	• Change of traffic patterns for drivers • Will require some driveways to be close to signalized intersection	
Climate Change	• Addition of bike lanes and sidewalk will encourage active transportation	• Increased air and noise pollution from starts/stops and vehicle idling	
Utility Impacts	• Reduces the impact on London Hydro and Hydro One, minimal relocation required	• Watermain will need to be relocated to be maintained within the City right of way	
Cost	• Has less Capital cost than the roundabout alternative, but more expensive than Signalized Alternative B	• Some impact to Infrastructure Ontario lands, requires land swapping with Infrastructure Ontario	



Alternative No. 3 – Signalized Intersection B



Evaluation Criteria Matrix

Evaluation Criteria	Do Nothing	Alternative 1: Roundabout	Alternative 2: Signalized A	Alternative 3: Signalized B
Traffic Capacity and Operations				
Safety				
Social and Natural Environment				
Climate Change				
Utility Relocation				
Costs				
Preferred	X	✓	X	X

Nearly infeasible.
Very high risk



Undesirable. High risk



Several mitigation
measures. Several
risks



Feasible. Some
mitigation measures.
Some risks.



Feasible and desirable.
Lowest risk

Changes from PIC#1

At PIC#1 – **Alternative No. 2 - Signalized Intersection A** was evaluated as the Preferred Alternative

What Changed?

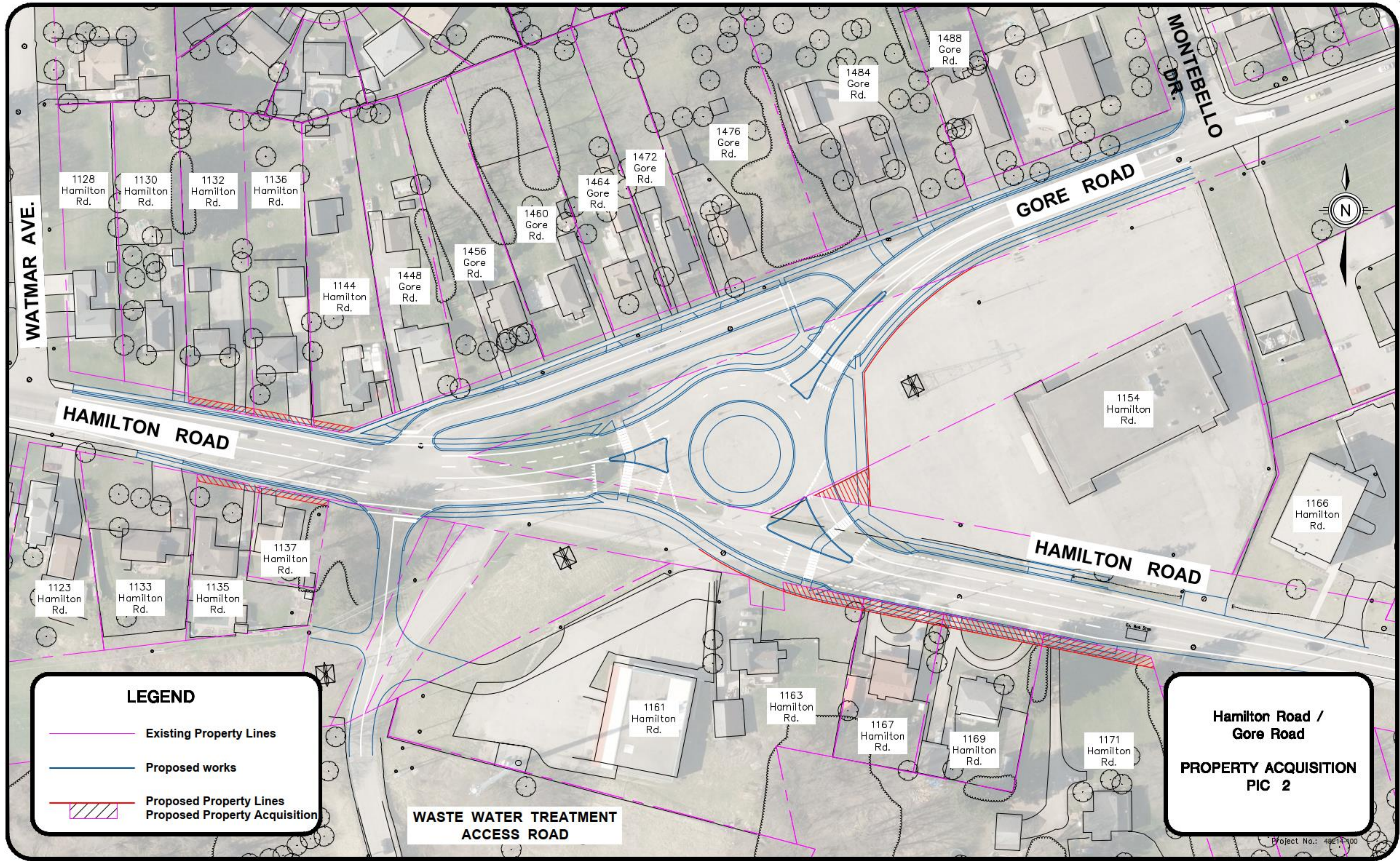
- PIC#1 was held (June 2021) - project team was still in communication with Hydro One regarding the proposed changes to the intersection, and the impact to the Hydro One transmission towers.
- Hydro One preference was minimum encroachment below the transmission lines
- Detailed design was required to satisfy Hydro One requests and for them to conduct its review
- Bringing the design forward to a level that met Hydro One's requirements, followed by a lengthy review process caused the delay between PIC#1 and PIC#2

Why did the Preferred Alternative Change?

?

- Upon Hydro One's review, there was acceptance of the encroachment beneath the Hydro One corridor, provided certain access and spacing requirements were met
- Traffic study indicated challenges with meeting the long-term capacity needs for Alternative 2 – Signalized Intersection A

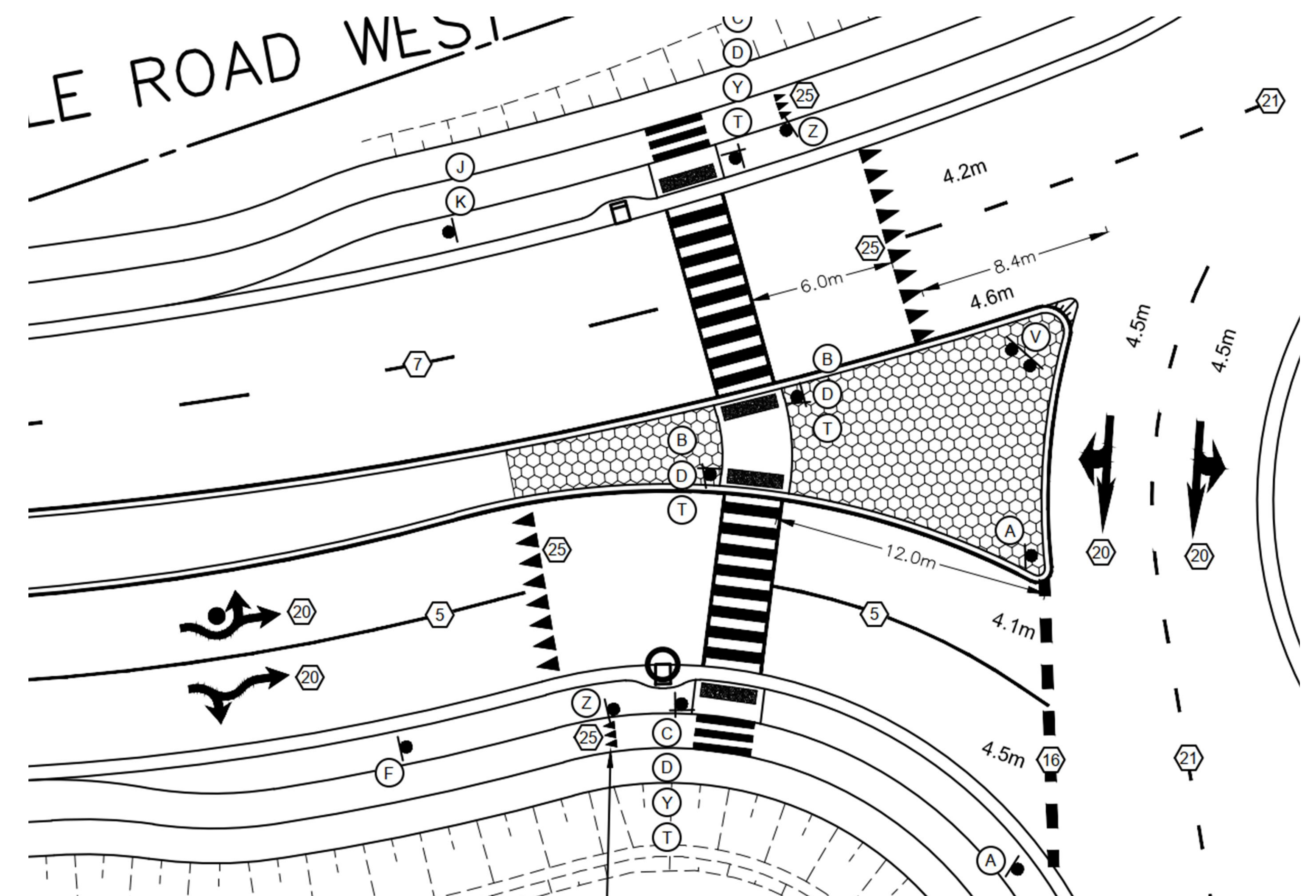
Property Impacts



Roundabout Safety and Active Transportation

Reasons why roundabouts are safe for pedestrians and cyclists:

- Pedestrians only have to address traffic coming from one direction at a time
- Crossing distances are limited to 2 lanes
- Cyclists are provided with safe exit from roadway prior to roundabout, a bike lane will be provided around the roundabout parallel to the sidewalk, cyclists must dismount at crossing
- Vehicular traffic is slowed naturally by the geometry of the roundabout

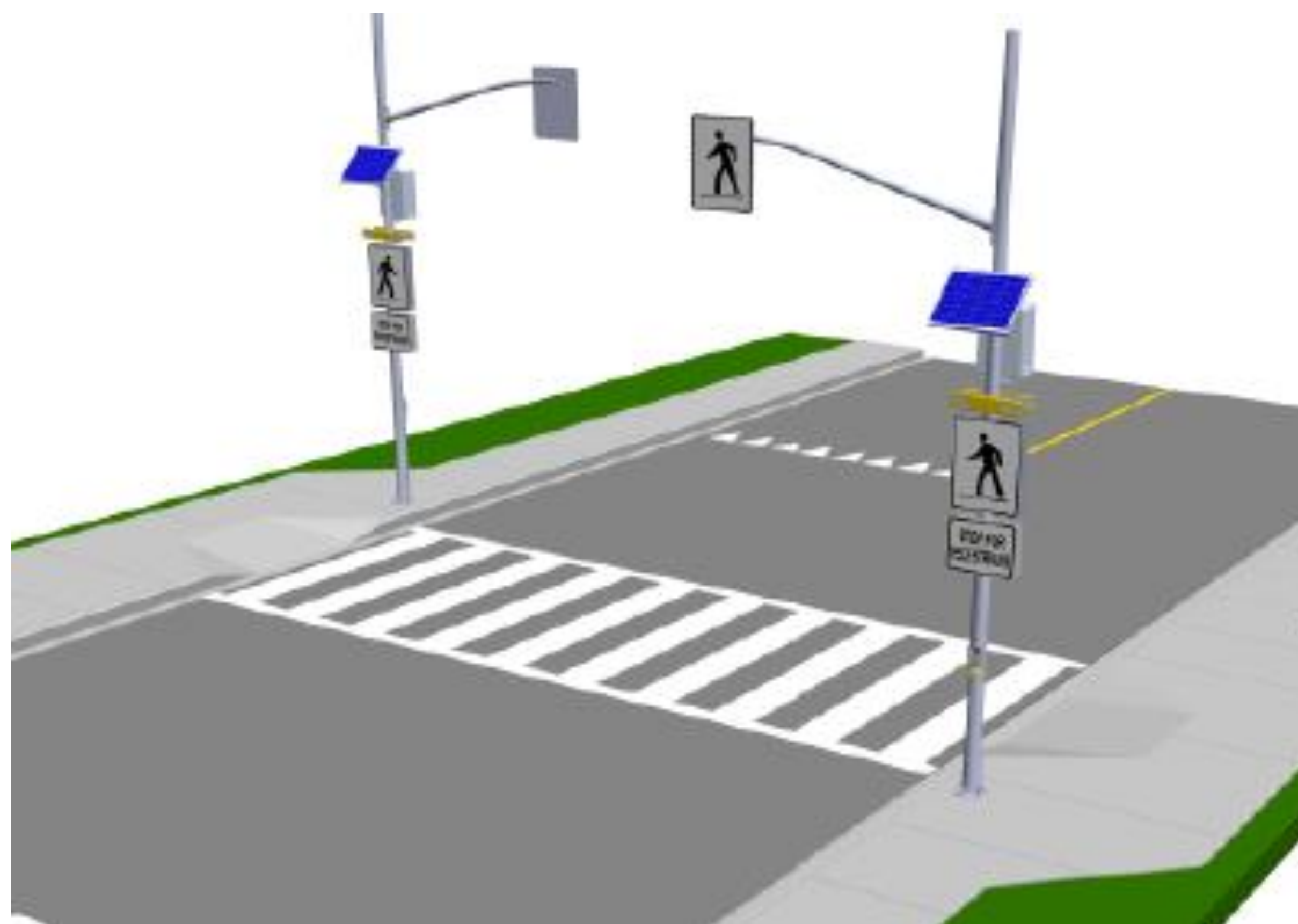


Roundabout Safety and Active Transportation

Examples of crossing types:

- Single stage – good for residential low traffic volumes
- Two stage – ideal for 2 lane crossing, also often used for single lane. Provides refuge
- The type of pedestrian and cycling crossings will be reviewed during the detailed design
- Detailed design will look at feasibility of interim roundabout alternative that reduces roundabout to single lane.
- Current pedestrian traffic does not warrant flashing beacons, can be evaluated in future

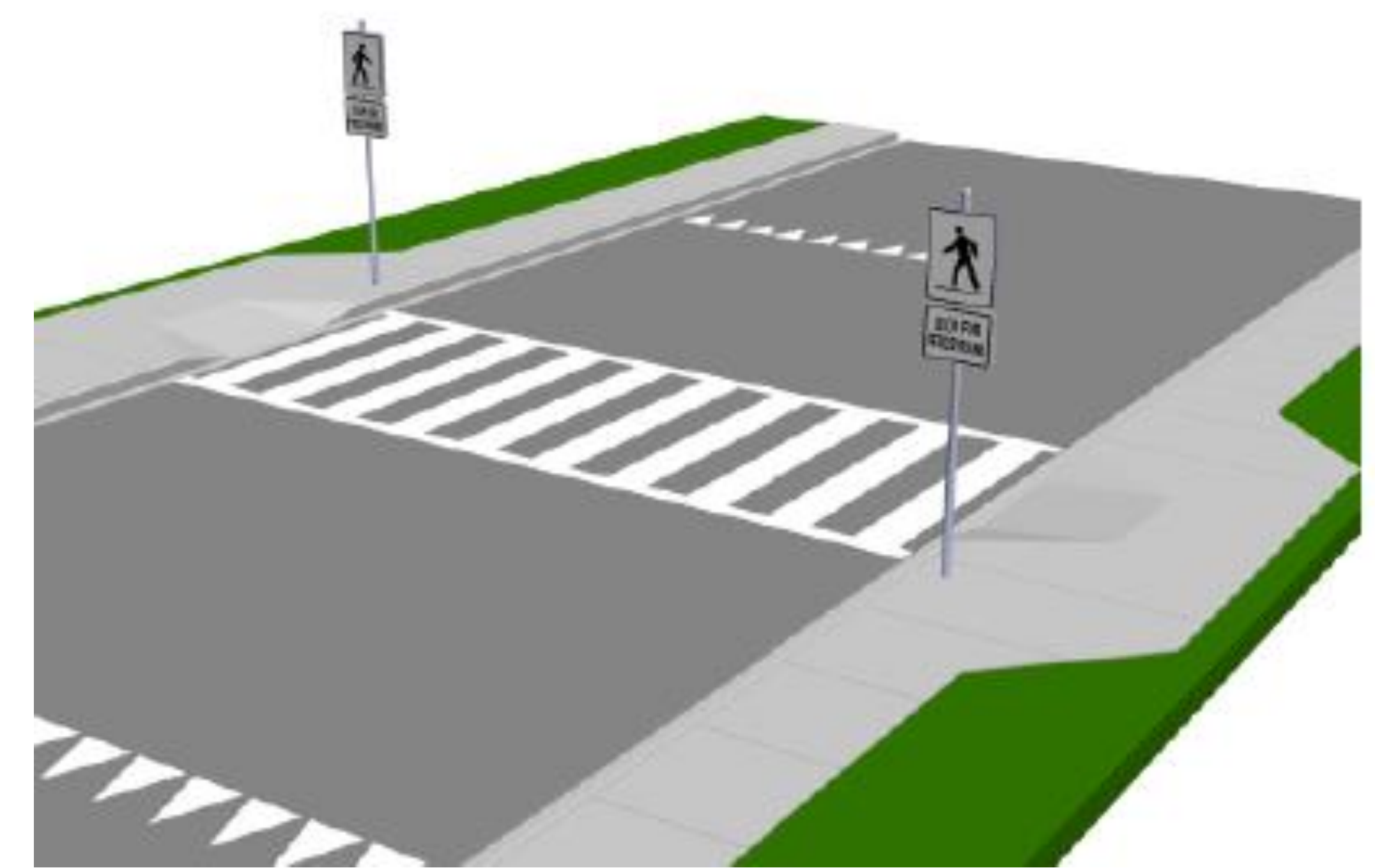
Level 2 Type B



Level 2 Type C



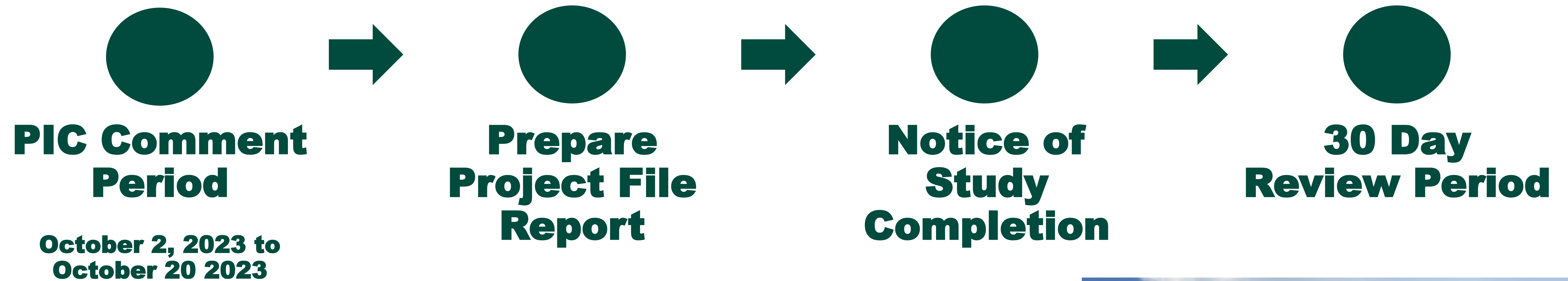
Level 2 Type D



Roundabout Safety and Active Transportation



Next Steps



Comments/Questions

Paul Yanchuk, P.Eng.
Transportation Design Engineer



City of London
300 Dufferin Ave., P.O. Box 5305
London, ON N6A 4L9

519-661-2489 x 2563

pyanchuk@London.ca

Vince Pugliese, P.Eng., MBA, PMP
Consultant Project Manager



MTE Consultants Inc.
520 Bingemans Centre Drive
Kitchener, ON N2B 3X9

519-743-6500 x 1347

VPugliese@mte85.com

