

Knoxdale Road Traffic Calming Study

Existing traffic conditions and recommended measures

May 2025

Transportation Planning Services

Introduction

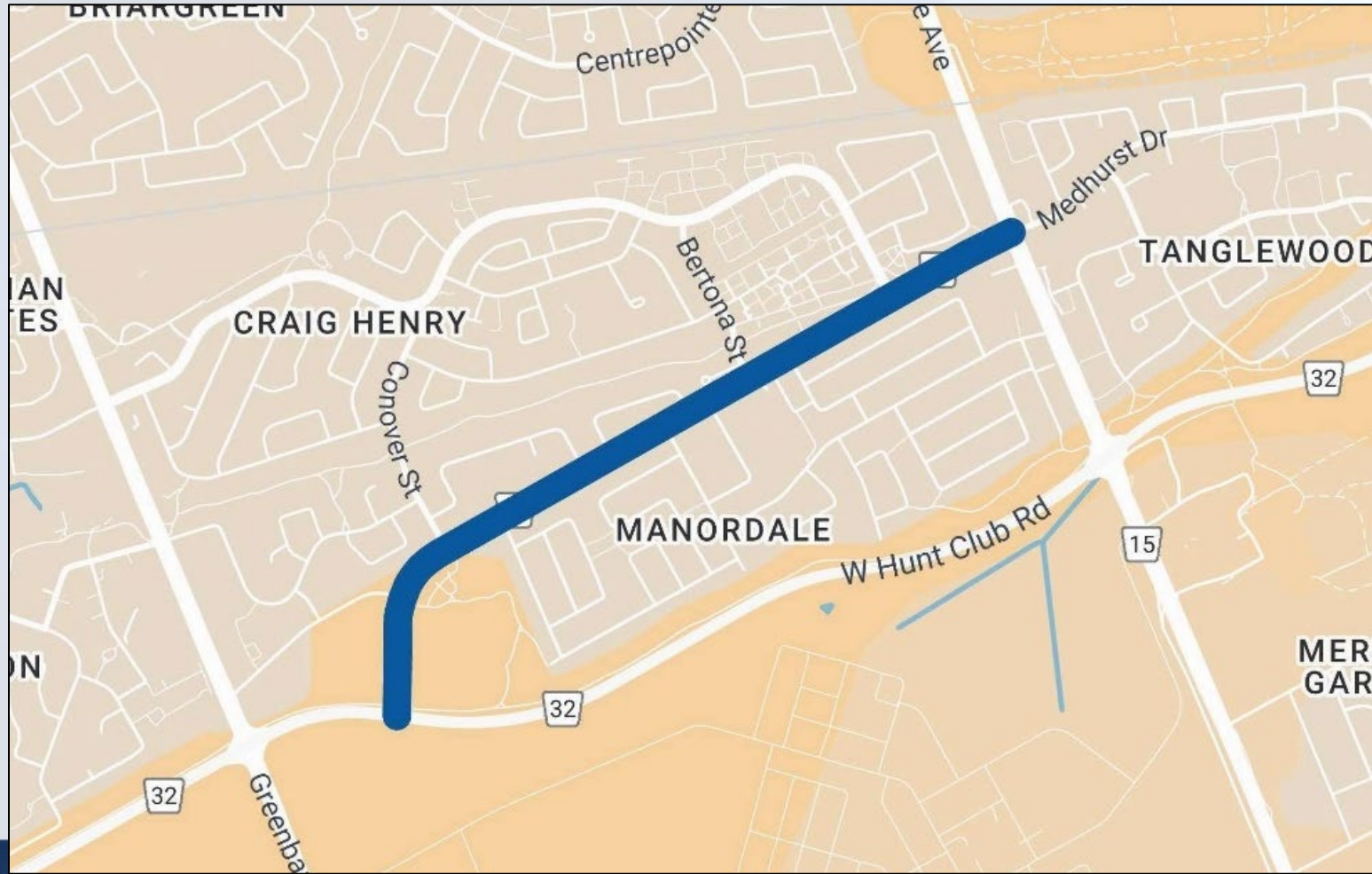
Study purpose

- Address excessive vehicle speeds and improve safety for all road users, including pedestrians, cyclists, and drivers.

Study objectives

- Reduce excessive speed
- Enhance safety for all road users
- Support a livable and walkable environment
- Balance traffic flow and local access needs
- Engage with the community and stakeholders

Study Area



Existing conditions

Roadway characteristics

- Collector road
- Width: 10.9 m – 11.1 m
- Speed limit: 40 km/h
- Land use: Primarily suburban residential
- Sensitive facilities: Ben Franklin Park, St. John XXIII Catholic Elementary School, Manordale Park
- Key emergency response street for Ottawa Fire Services

Existing conditions

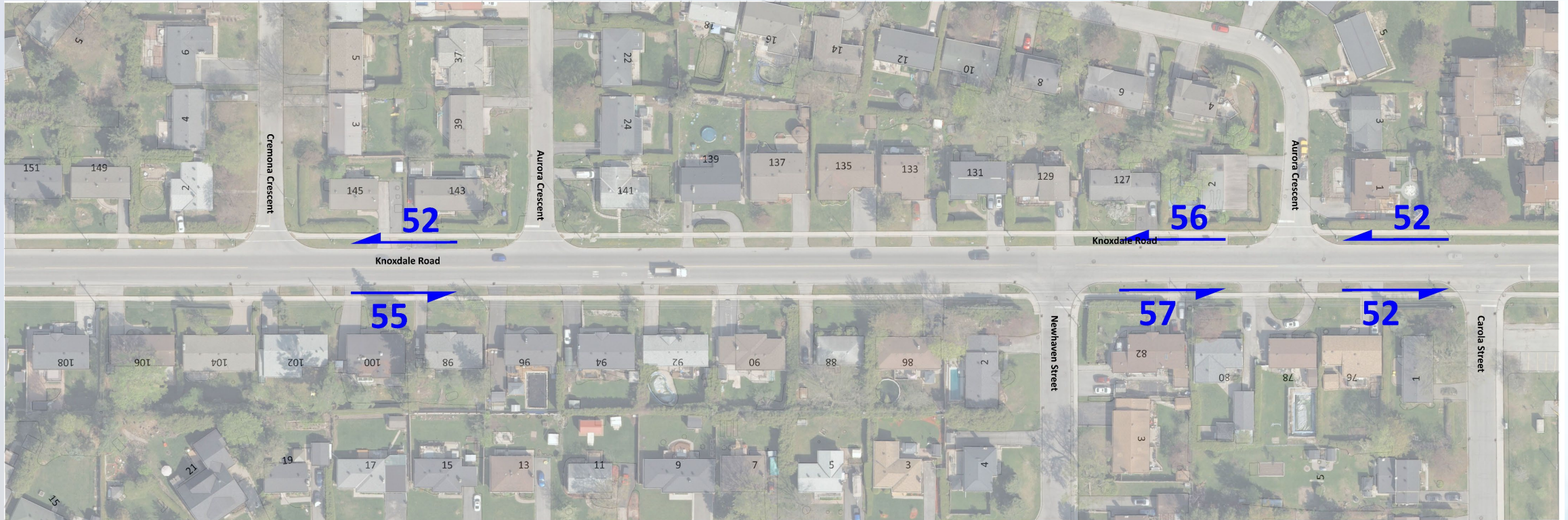
85th percentile speed*



*85th percentile speed: the speed at or below which 85% of vehicles are traveling

Existing conditions

85th percentile speed*



Existing conditions

85th percentile speed*



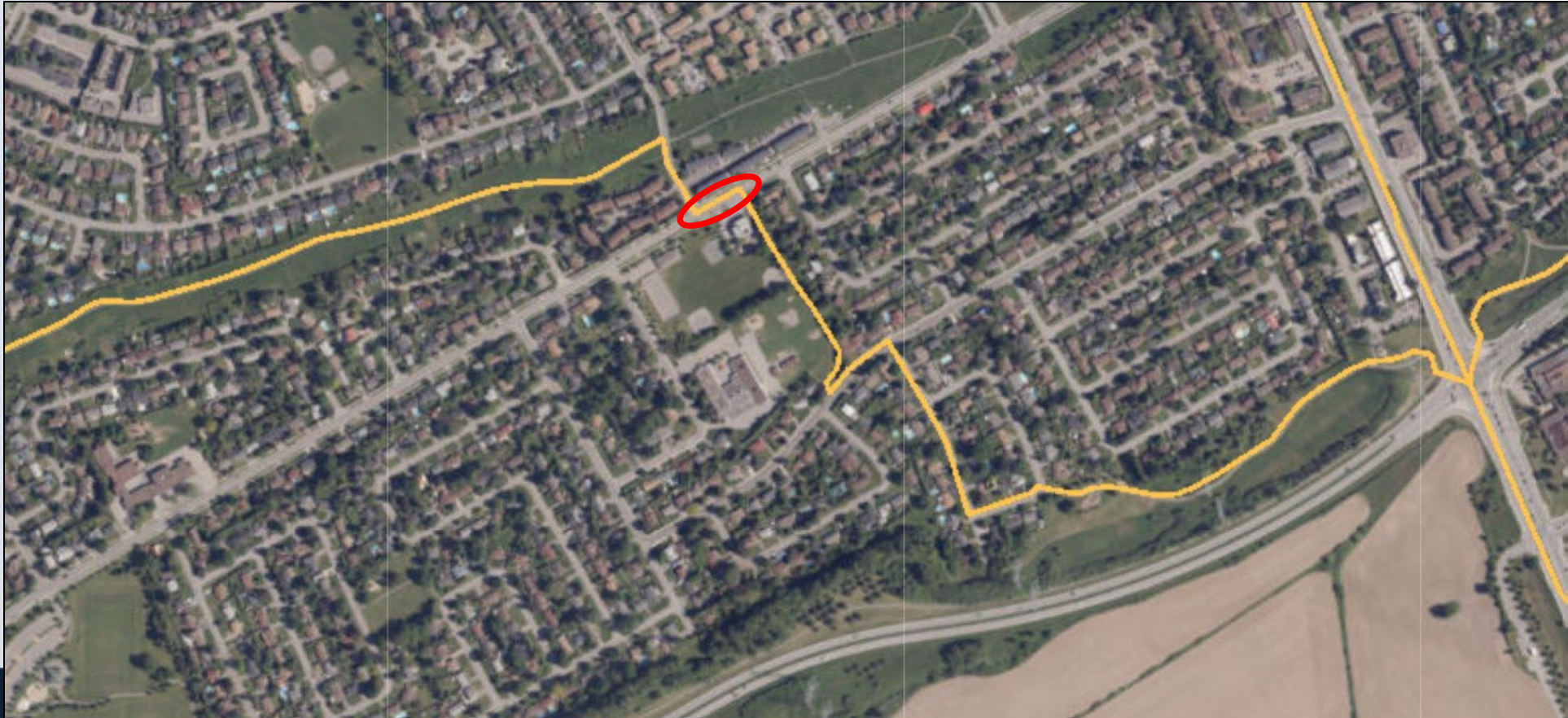
Existing conditions

Parking Survey

Time	Directon	West Hunt Club - Gibbard	Gibbard - Conover	Conover - Skipton	Skipton - Cremona	Cremona - Aurora W	Aurora W - Newhaven	Newhaven - Aurora E	Aurora E - Carola	Carola - Bertona	Bertona - Milford	Milford - Craig Henry	Craig Henry - Woodroffe
8 AM	WB				7		1			1			
8 AM	EB												
9 AM	WB			1			1			1			
9 AM	EB												
10 AM	WB			1			1			1			
10 AM	EB			1									
11 AM	WB			1						1			
11 AM	EB			1									
12 PM	WB			1	1					1			
12 PM	EB			1									
1 PM	WB			1						1			
1 PM	EB			1									
2 PM	WB			1	4					1			
2 PM	EB			1									
3 PM	WB			1						1	1		
3 PM	EB				1								
4 PM	WB			1						2			
4 PM	EB				1								
5 PM	WB			1			1			2	1		
5 PM	EB				1								
6 PM	WB			1	1		1			2	1		
6 PM	EB												
7 PM	WB				1		1			2	1		
7 PM	EB												
8 PM	WB				1		1			1	1	1	
8 PM	EB												

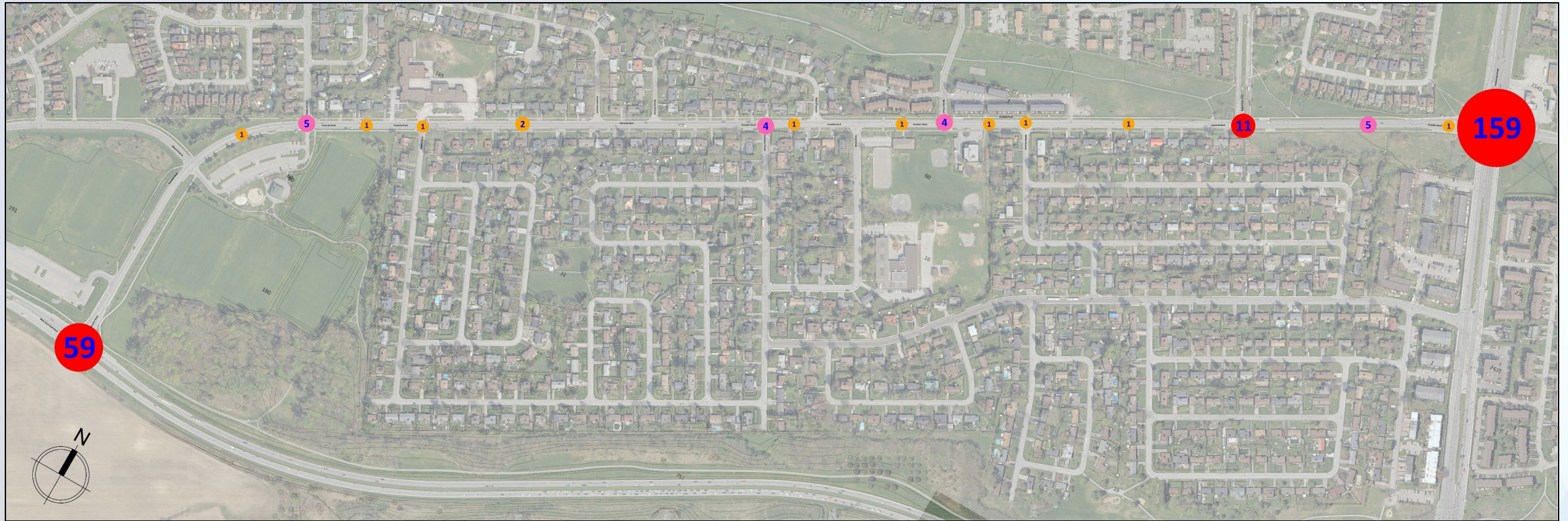
Existing conditions

Crosstown Bikeway Network



Existing conditions

10 Year collisions (2013-2022)



Key Traffic Issues

- Excessive operating speeds that do not align with the abutting land use and posted speed limit.
- Lack of dedicated cycling facilities combined with high vehicle speeds, which may discourage active transportation along Knoxdale Road.
- Pedestrian safety concerns at crossings due to high speeds and long crossing distances.
- Knoxdale Road is a key emergency response route; traffic calming measures must consider potential impacts on emergency response times.

Recommended Measures

- To address key traffic issues identified in the study, the following measures are recommended:
 1. Traffic Calming and Speed Management
 - Three speed cushions
 2. Cycling Facility Improvements
 - Bicycle lanes (reducing the width of travel lanes to 3.5m)
 - Removal of left-turn lane at Gibbard Avenue
 - Super sharrows
 - Four pairs of ride-over, cycle-friendly bulb-outs
 - Precast concrete curbs and cyclo-zone delineators (St. John XXIII Catholic Elementary School)
 - Paved connections to multi-use pathway
 3. Pedestrian Facility Improvement
 - Ladder crosswalk markings at signalized crossings

Speed cushions

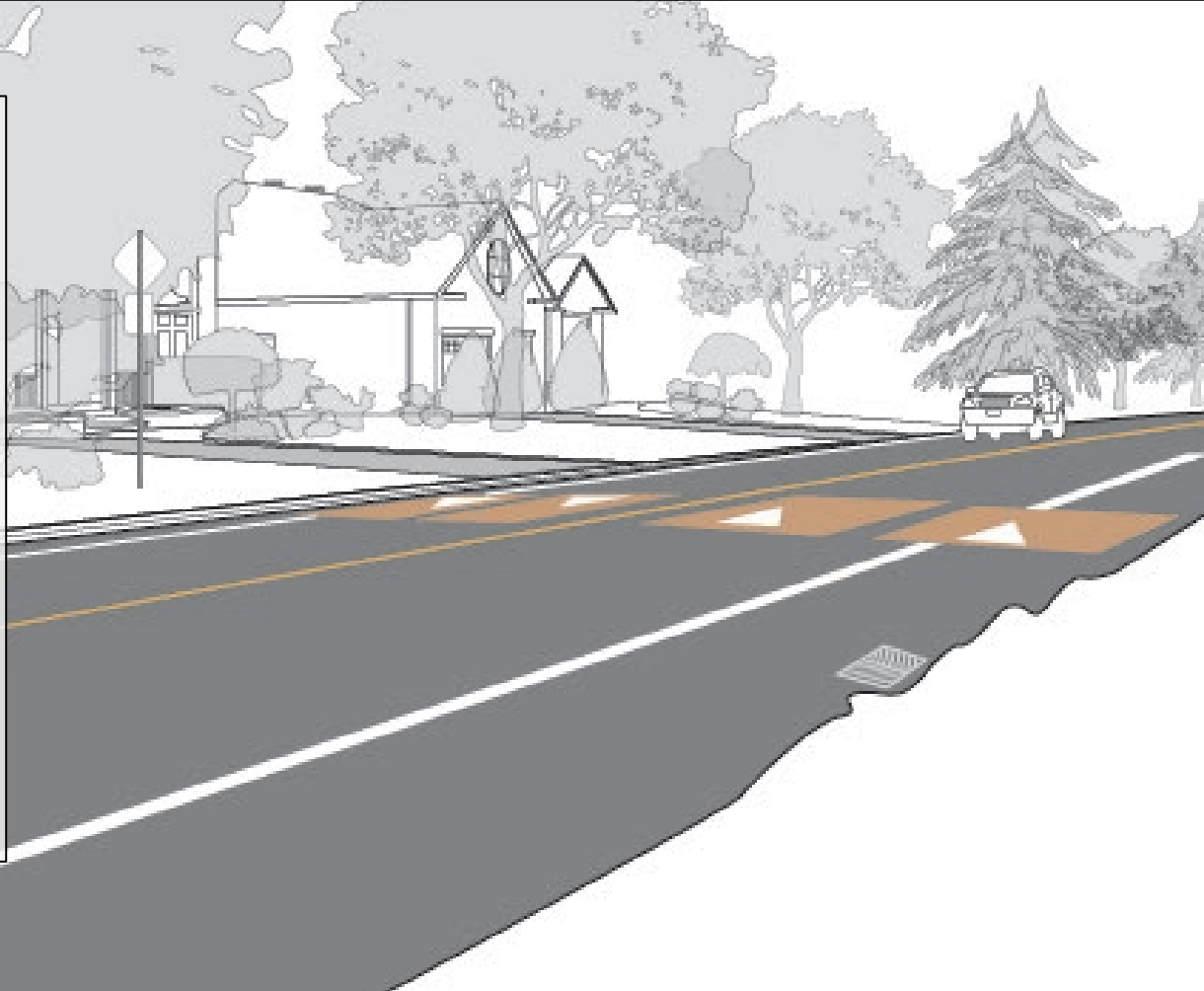
Speed cushions are raised roadway features designed to slow down vehicles while still allowing larger vehicles such as emergency and transit vehicles to pass with minimal impact.

Pros

- Reduce vehicle speeds
- Allow larger vehicles to traverse with less discomfort than standard speed humps
- Helps lower the frequency and severity of collisions

Cons

- Less effective in reducing speed compared to standard speed humps.
- May impact emergency response time.
- Potential for increased noise and vibrations.
- Could cause damage to emergency and transit vehicles.



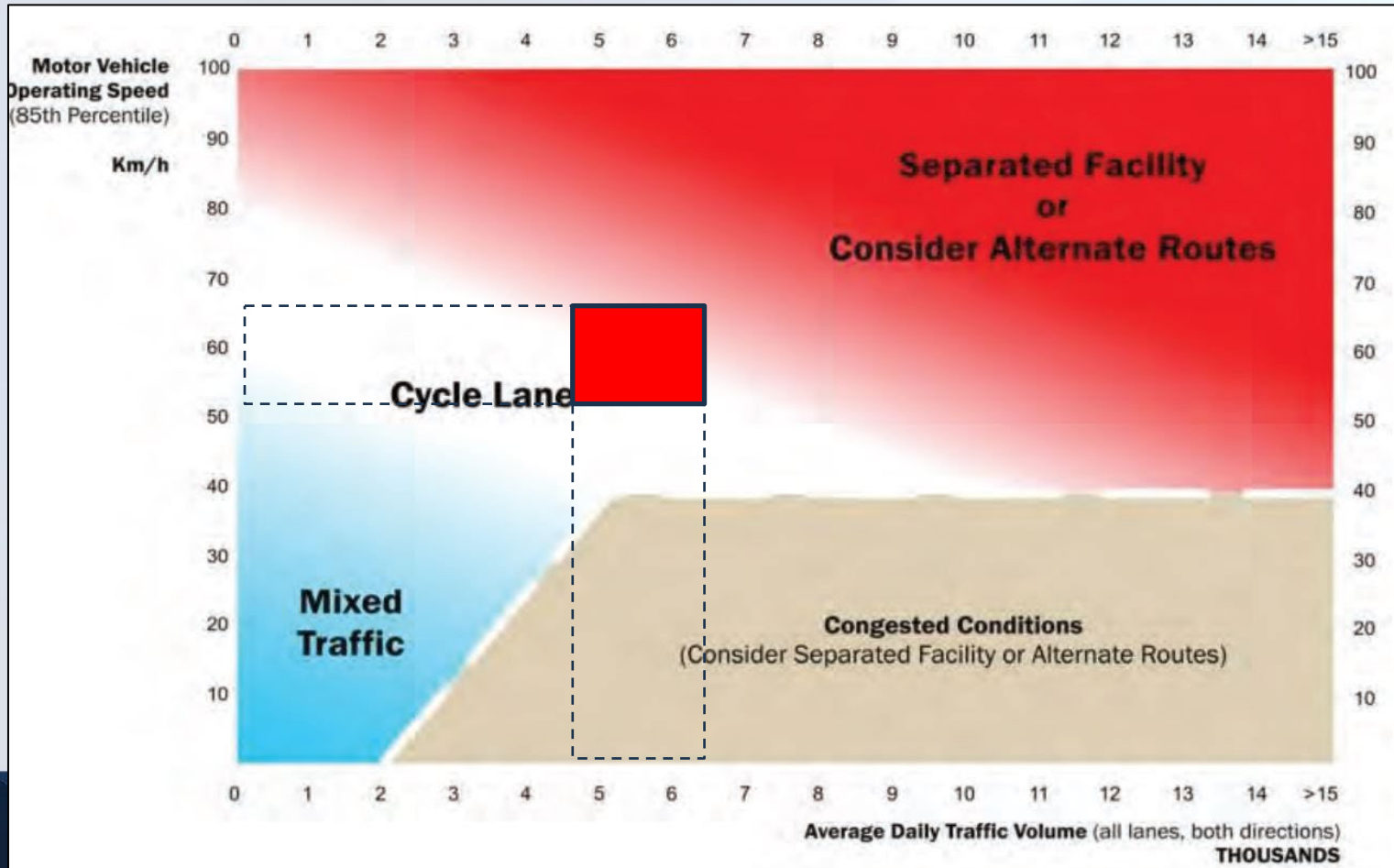
Bicycle lanes

Why bicycle lanes?

- The City's [Transportation Master Plan](#) emphasizes reducing automobile dependence and making walking and cycling more attractive than driving for short trips.
- The [Ottawa Cycling Plan](#) similarly promotes cycling-friendly policies in both urban and suburban environments.
- Knoxdale Road is suggested cycling route. Based on the daily traffic volume and speed along Knoxdale Road, the recommended cycling facility is bicycle lanes or separated facility.
- The proposed bicycle lanes will connect to existing facilities along West Hunt Club Road, Woodroffe Avenue, and the Crosstown Bikeway Network.
- Additionally, the reduction in roadway width from the installation of **bicycle lanes will help discourage speeding.**

Bicycle lanes

Facility pre-selection nomograph (Ottawa Cycling Plan 2013)



Bicycle lanes

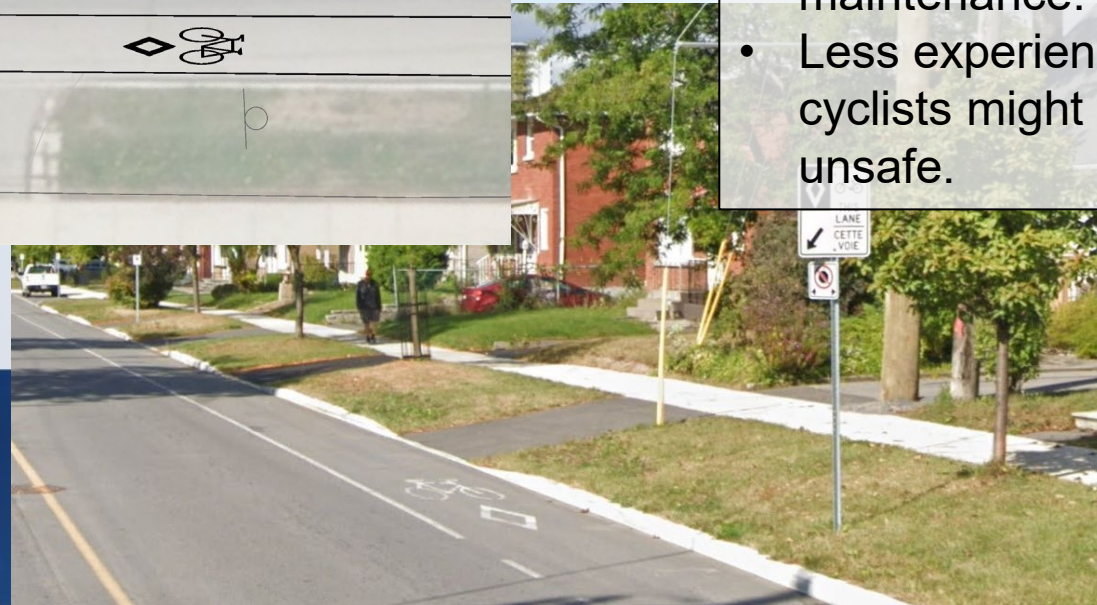
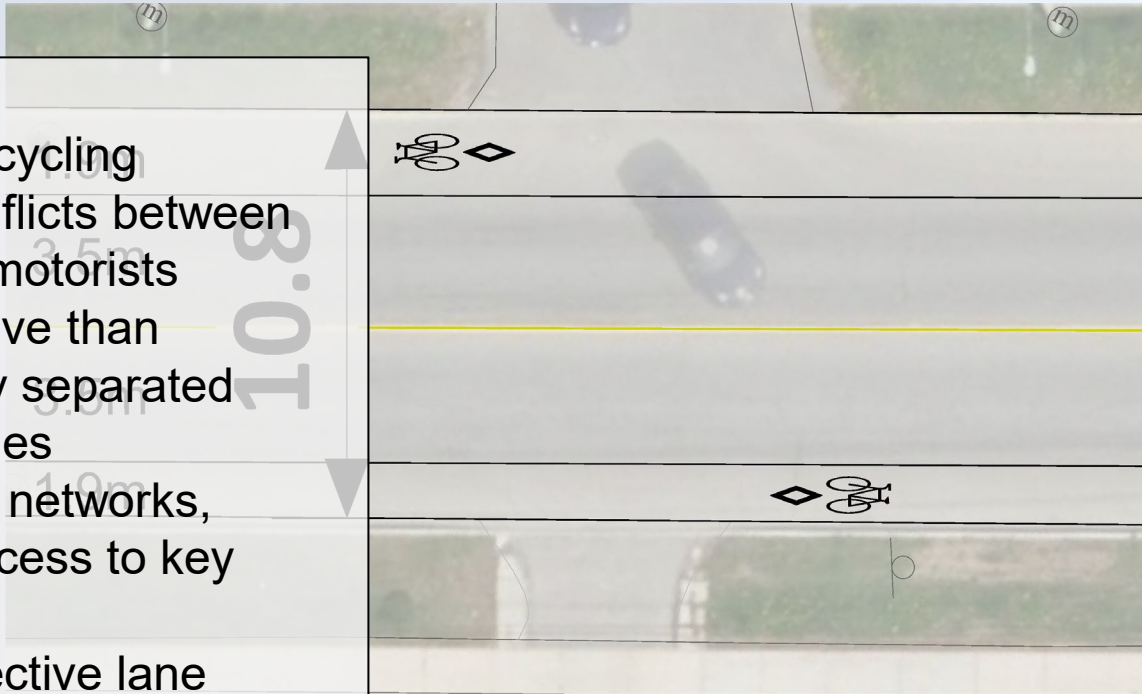
A bicycle lane is a portion of a roadway designated by signage and pavement markings for exclusive use by cyclists. It separates higher speed vehicular traffic from cyclists by providing a dedicated space.

Pros

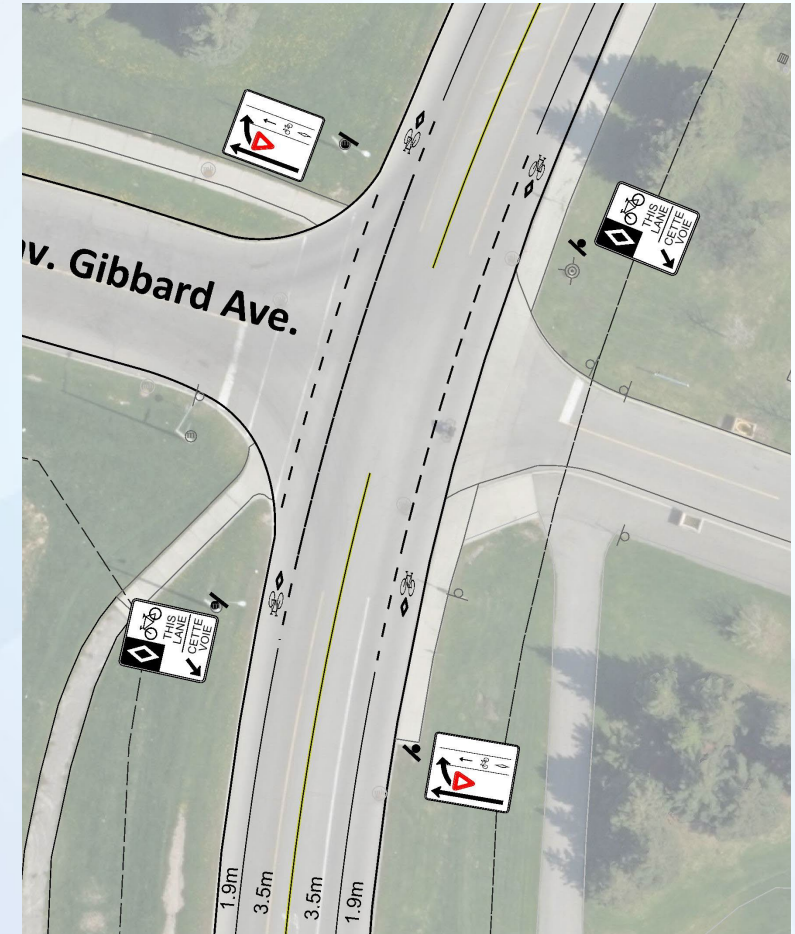
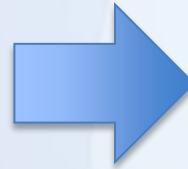
- Encourages cycling
- Reduces conflicts between cyclists and motorists
- Less expensive than installing fully separated cycling facilities
- Links cycling networks, improving access to key destinations
- Reduces effective lane widths, helping lower vehicle speeds.

Cons

- Limited physical protection compared to separated facilities
- May require additional maintenance.
- Less experienced cyclists might feel unsafe.



Removal of left-turn lane at Gibbard Avenue

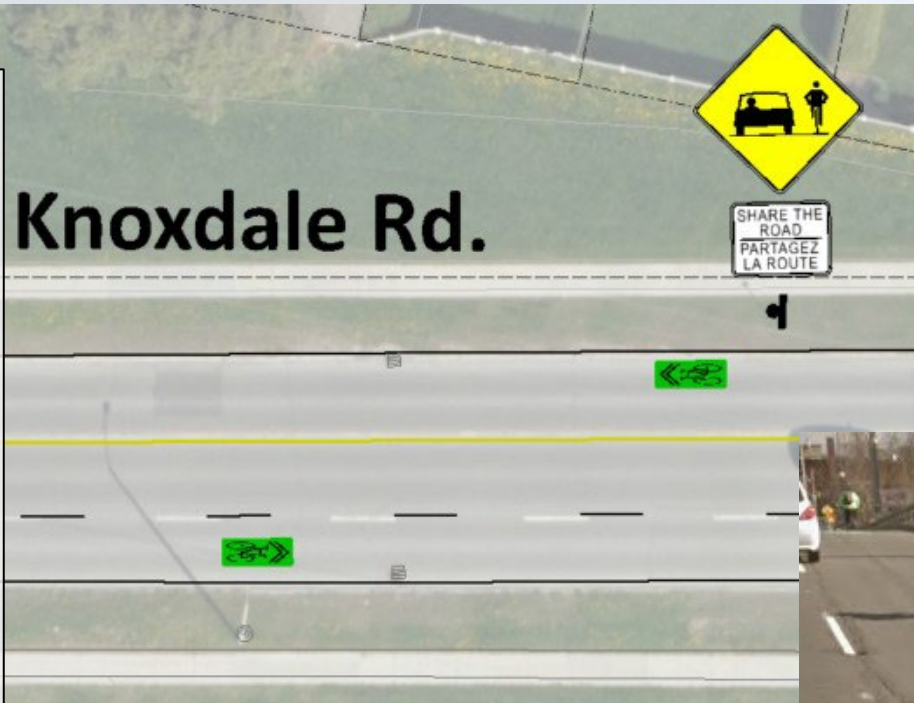


Super sharrows

Super sharrows are enhanced, high-visibility shared lane markings that indicate where cyclists should ride on roadways shared with motor vehicles.

Pros

- Enhanced visibility for both cyclists and drivers
- Encourage proper cyclist positioning
- Low cost
- Maintains existing roadway capacity
- Can be implemented quickly



Cons

- Lack physical separation
- Rely on driver compliance
- May be ignored by some drivers and cyclists.



Ride-over cycle-friendly bulb-outs

Ride-over cycle-friendly bulb-outs are raised roadway features designed to narrow the travel lane, reduce vehicle speeds, and provide a smooth surface for cyclists to ride over.

Pros

- Shortens pedestrian crossing distances
- Encourages drivers to slow down
- Allows cyclists to ride over the feature without interruption
- Offers a cost-effective alternative to more extensive cycle tracks
- Supports both pedestrian and cycling needs while calming traffic.

Cons

- Requires a higher level of maintenance
- Provides limited physical separation between motor vehicles and cyclists



Precast concrete curbs and cyclo-zone delineators

Precast concrete curbs are raised physical barriers placed between a bicycle lane and a vehicle travel lane. Cyclo-zone delineators are vertical, flexible posts installed alongside precast curbs to further emphasize the cycling facility.

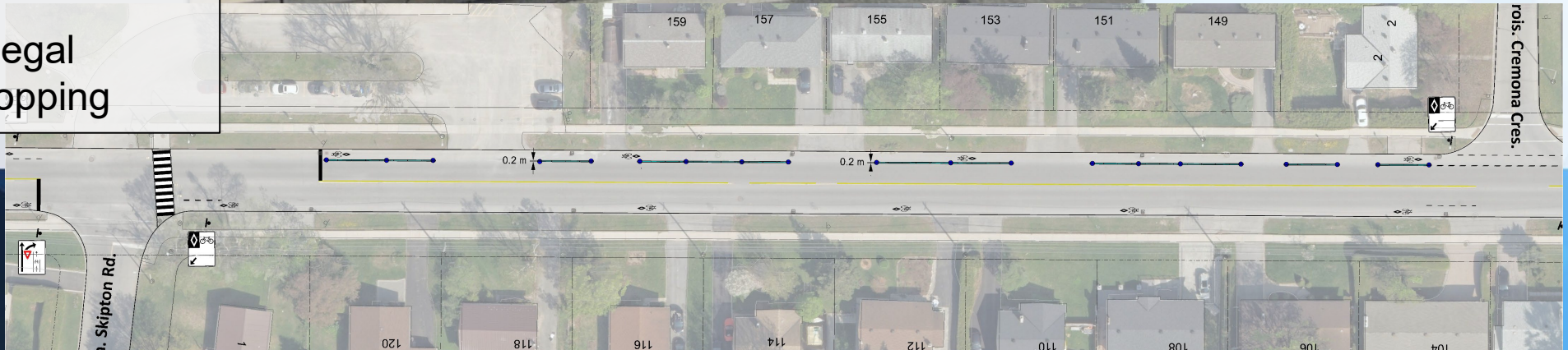
Pros

- Provides physical separation from motor vehicles
- Improves cyclist comfort
- Offers long-lasting protection
- Increases awareness for both cyclists and motorists
- Discourages illegal parking and stopping



Cons

- More expensive than painted bicycle lanes
- May require a higher level of maintenance

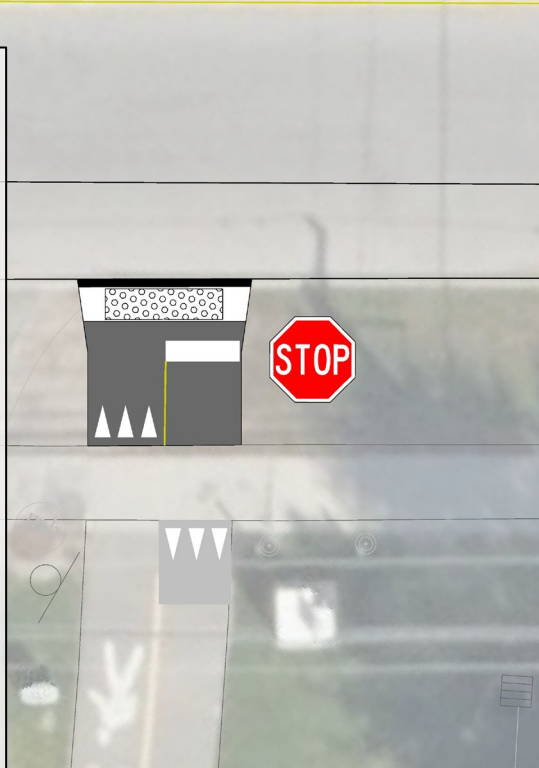


Paved connections to multi-use pathways

Connect the multi-use pathway east of Fire Station 25 to Knoxdale Road.

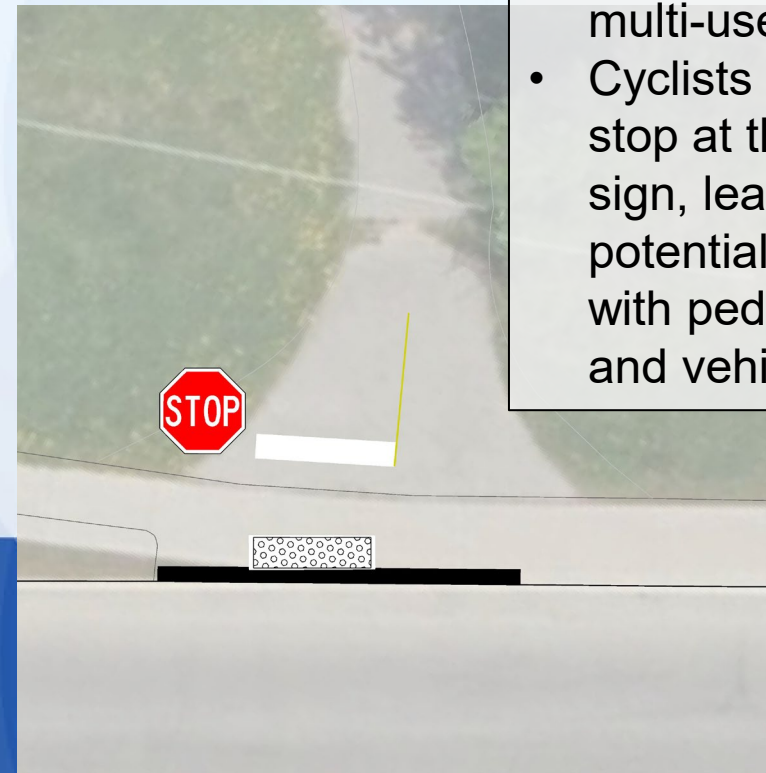
Pros

- Discourages sidewalk riding by eliminating the need for cyclists to detour onto sidewalk
- Reduces conflicts between cyclists and pedestrians
- Enhances cyclist comfort by allowing a smooth transition
- Improves network continuity by ensuring a direct and seamless link to the Crosstown Bikeway Network.



Cons

- Drivers may not anticipate cyclists entering the roadway from the multi-use pathway.
- Cyclists may not stop at the stop sign, leading to potential conflicts with pedestrians and vehicles.



Ladder markings at signalized pedestrian crossings

Ladder markings are a series of parallel, painted lines that guide pedestrians and enhance overall visibility at crossings.

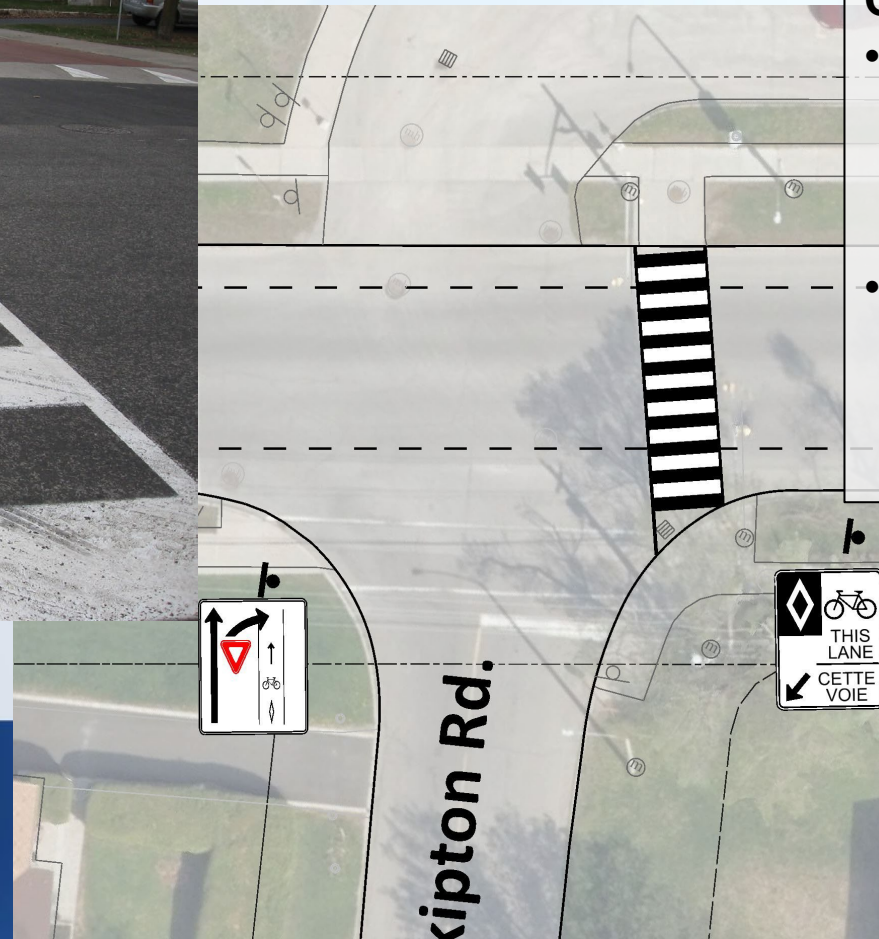
Pros

- Improves visibility for pedestrians and drivers
- Clearly indicates safe crossing areas
- Cost-effective



Cons

- Does not provide physical protection
- Markings may fade and require repainting



Thank you for your participation and feedback.

For more information, please contact:

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