

Aquitaine Avenue Safety Improvements Pilot Project

May 16, 2023



MISSISSAUGA

Agenda

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- 02** Project Background
- 03** Challenges & Opportunities
- 04** Road Safety Improvements
- 05** Traffic Analysis
- 06** Public Transportation
- 07** Conclusion & Recommendations
- 08** Project Timeline and Next Steps

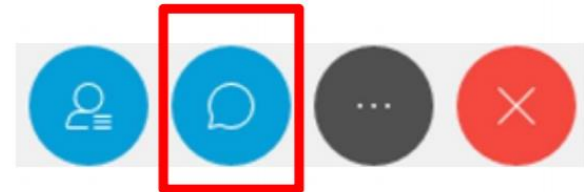
Introduction

01

Participants will be on mute during the session

02

Use the chat bar to ask questions



03

Meeting is being recorded and will be posted online

Introduction

Vision Zero

- *Adopted by Mississauga in 2018*
- *Vision Zero is a strategy to eliminate all traffic related serious and fatal injuries*
- *Prioritize the safety and access of our most vulnerable road users*

Transportation Master Plan

approved in May 2019 and outlines a variety of road safety objectives including:

- *Roads, sidewalks, and trails are designed to prioritize the safety of pedestrians, cyclists, and other vulnerable travellers.*
- *Speeds are well-matched with the types of activity happening in the roadway and along the street.*
- *People feel safe and secure when travelling in Mississauga by any mode.*



Project Background

Project Area



Existing Conditions



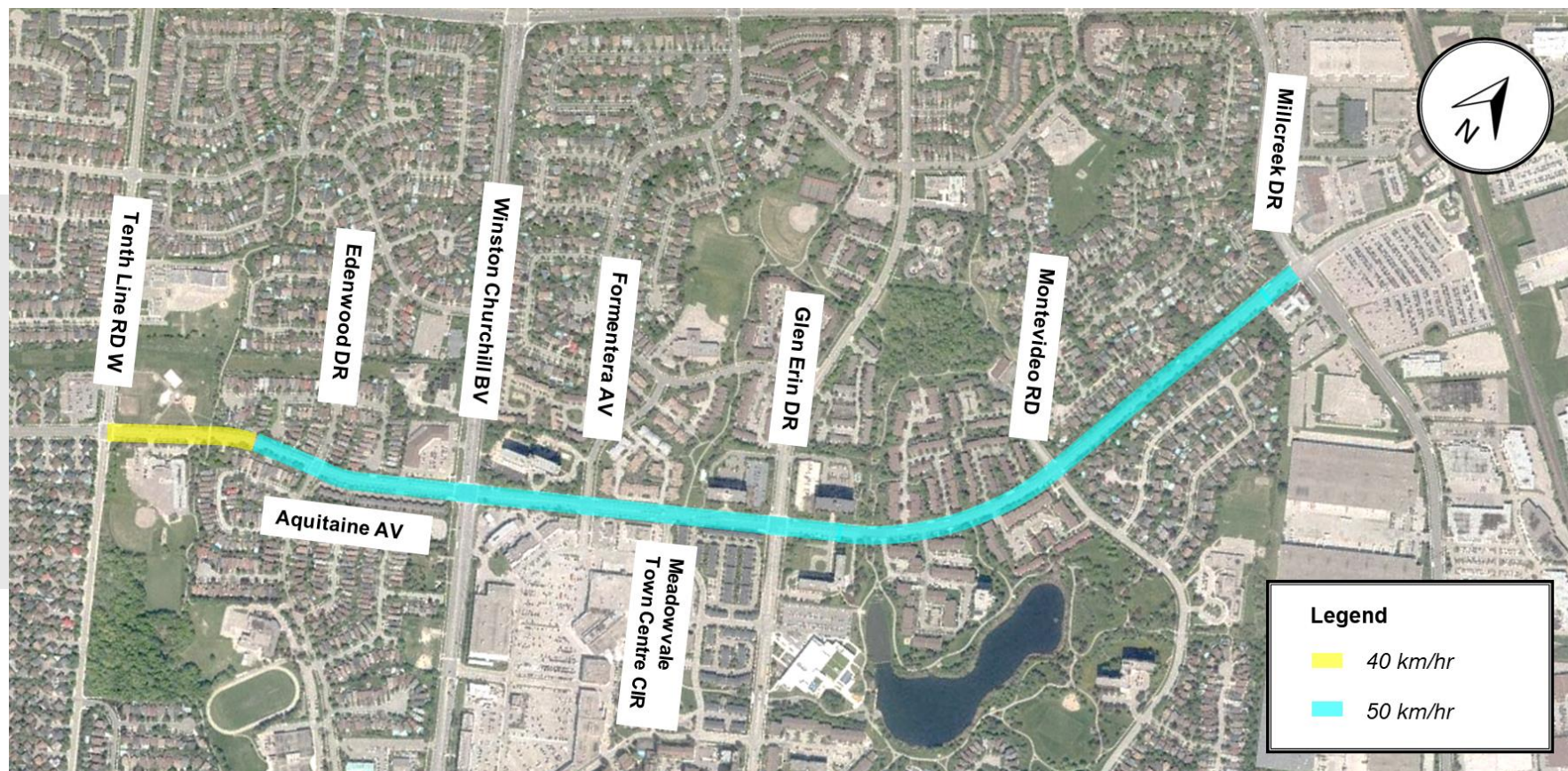
- *Major Collector Roadway*
- *4 travel lanes (2 per direction)*
- *Undivided*
- *Sidewalks*
- *No dedicated cycling facilities*



- *Major Collector Roadway*
- *4 travel lanes (2 per direction), left turning lane*
- *Center median*
- *Sidewalks*
- *No dedicated cycling facilities*

Speed

Posted Speed Limit along Aquitaine Avenue



Speed

Speed Study Results

Aquitaine Avenue @	Year of Study	Direction	Posted Speed Limit	85 th Percentile Speed	Percent of Speed Compliance
West of Edenwood Drive	2016	Westbound	40 km/hr	50 km/hr	13.0%
West of Edenwood Drive	2016	Eastbound	40 km/hr	55 km/hr	8.0%
West of Montevideo Road	2018	Westbound	50 km/hr	74 km/hr	13.0%
West of Montevideo Road	2018	Eastbound	50 km/hr	73 km/hr	13.0%
West of Montevideo Road	2020	Westbound	50 km/hr	70 km/hr	23.0%
West of Montevideo Road	2020	Eastbound	50 km/hr	73 km/hr	17.0%



14.5%
AVERAGE SPEED
COMPLIANCE



85th PERCENTILE SPEED
AVERAGING

19 KM

ABOVE LEGAL
POSTED SPEED LIMIT

Collision History

Data Limitations

The City of Mississauga obtains collision data from the Peel Regional Police. This data is limited to collisions that have been reported to the police and may contain incorrect or missing information. Collisions that are still under investigation are not accessible for review and therefore not included in the analysis.

Collision History

Five Year (2015 – 2019) Collision History



128

TOTAL COLLISIONS



4

VULNERABLE ROAD
USER COLLISIONS



13%

INJURY PROPORTION

2020 Collision History



12

TOTAL COLLISIONS



1

VULNERABLE ROAD
USER COLLISIONS



17%

INJURY PROPORTION

Cyclist Safety Improvements

According to the 2018 Cycling Master Plan...

61%

OF RESPONDENTS NOTED
THEMSELVES AS

**“INTERESTED, BUT
CONCERNED”**

IN CYCLING AS CHOSEN
TRANSPORTATION MODE.

MORE THAN

50%

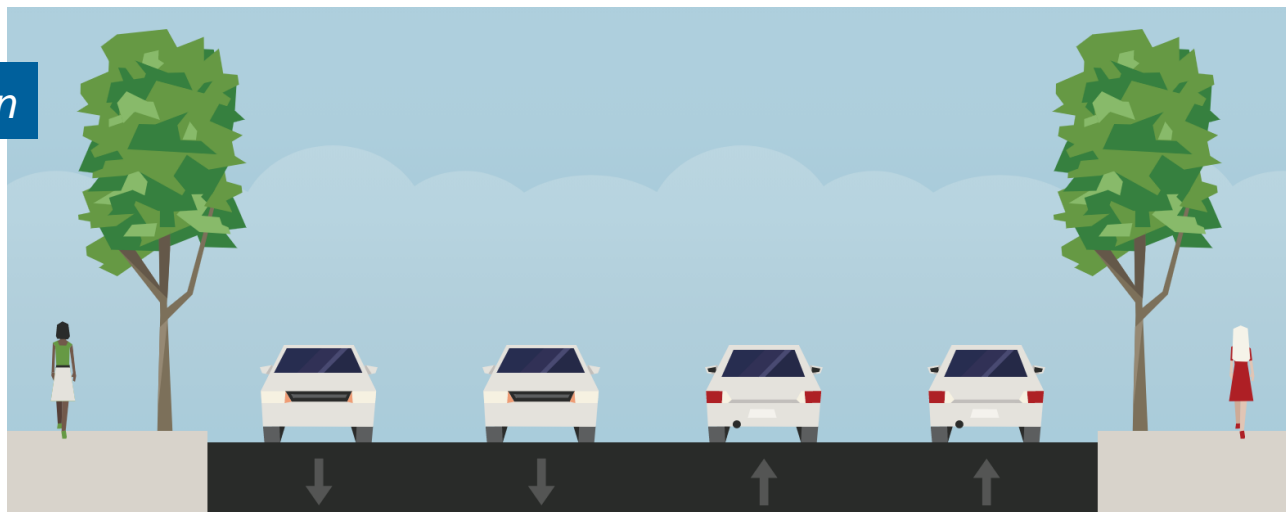
ARE UNCOMFORTABLE
SHARING THE ROAD WITH
MOTOR VEHICLES.

65%

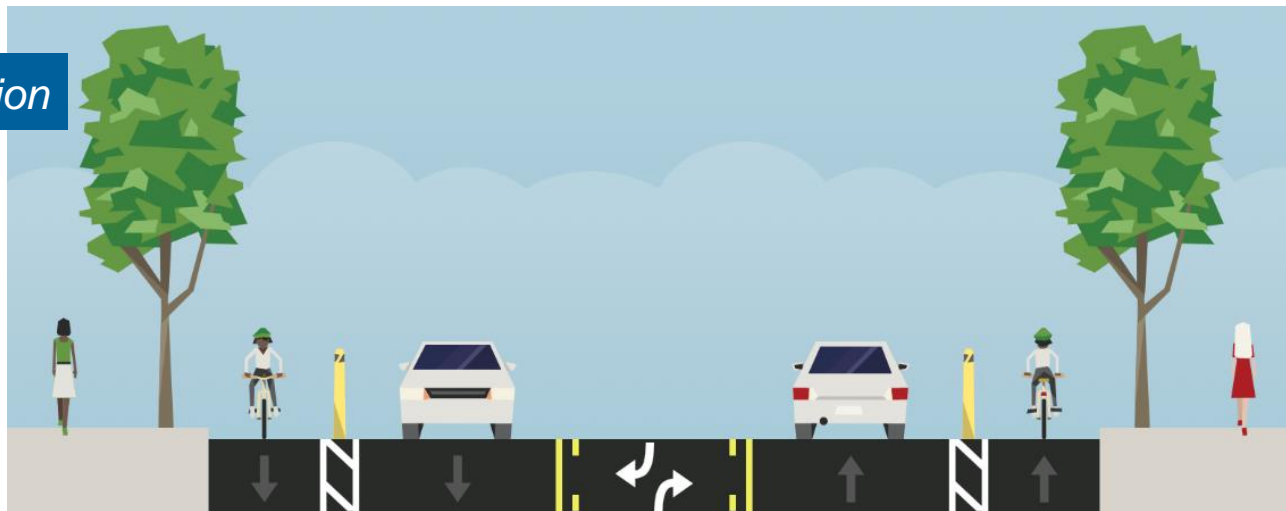
OF CYCLISTS SAID MORE
PROTECTED CYCLING
FACILITIES WOULD
ENCOURAGE THEM TO
CYCLE MORE OFTEN.

Proposed Road Safety Improvements

Existing Cross-section



Proposed Cross-section



Road Safety Improvements

Case studies have shown a reduction of

5

KM / HR

TO

8

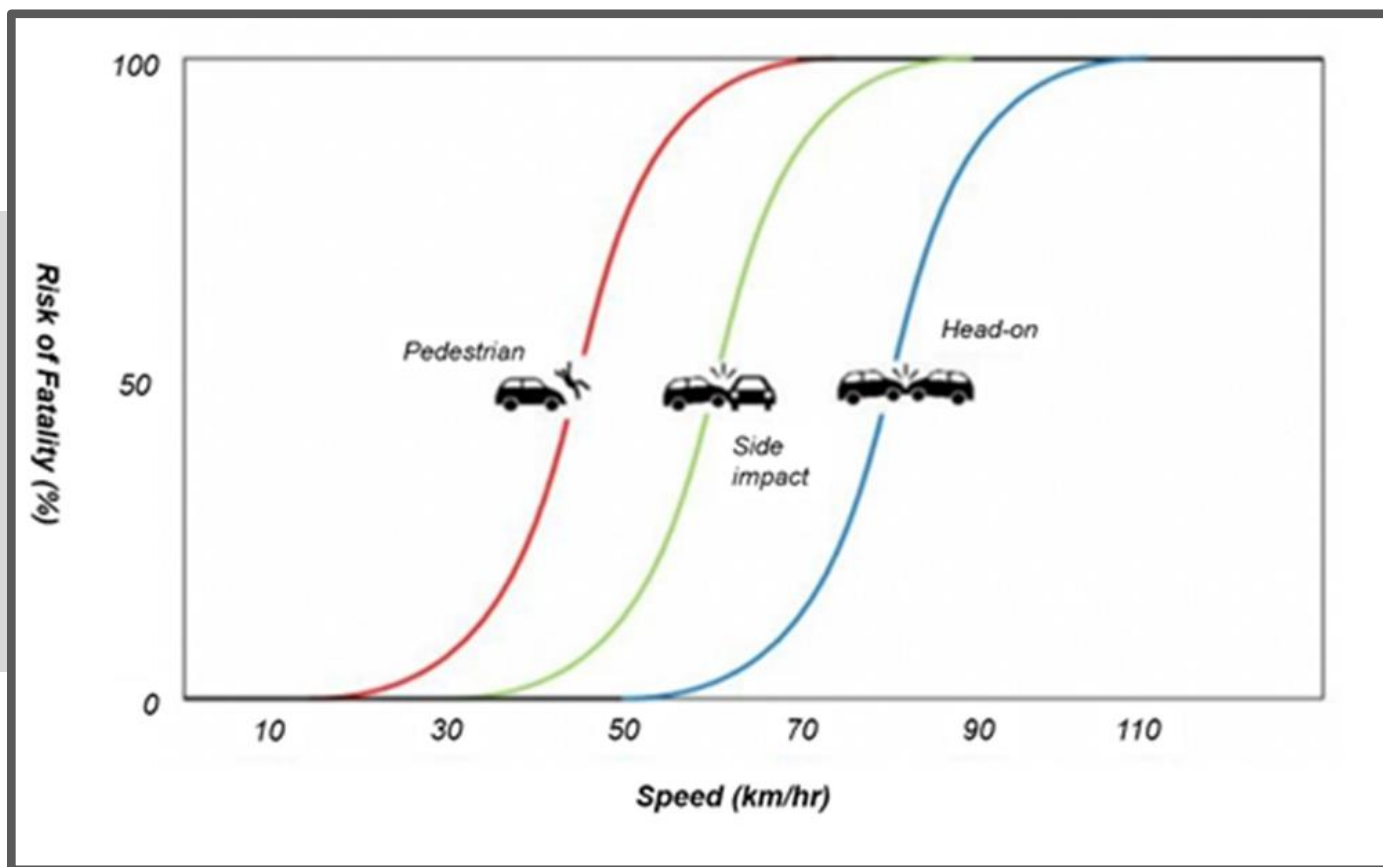
KM / HR

In 85th percentile speed and average speed after implementing a 4-lane to 3-lane road conversion.

- U.S. DEPARTMENT OF TRANSPORTATION FHA

Road Safety Improvements

Risk of Fatality vs. Speed (km/hr)



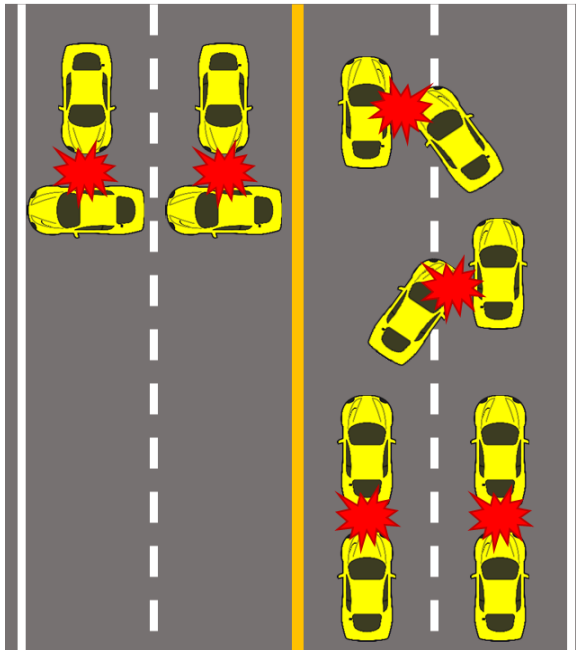
Road Safety Improvements



Multiple case studies have shown a
19% to 47% collision reduction
after implementing a 4-lane to 3-lane road conversion.

- U.S. DEPARTMENT OF TRANSPORTATION FHWA

*Existing
Cross-section*



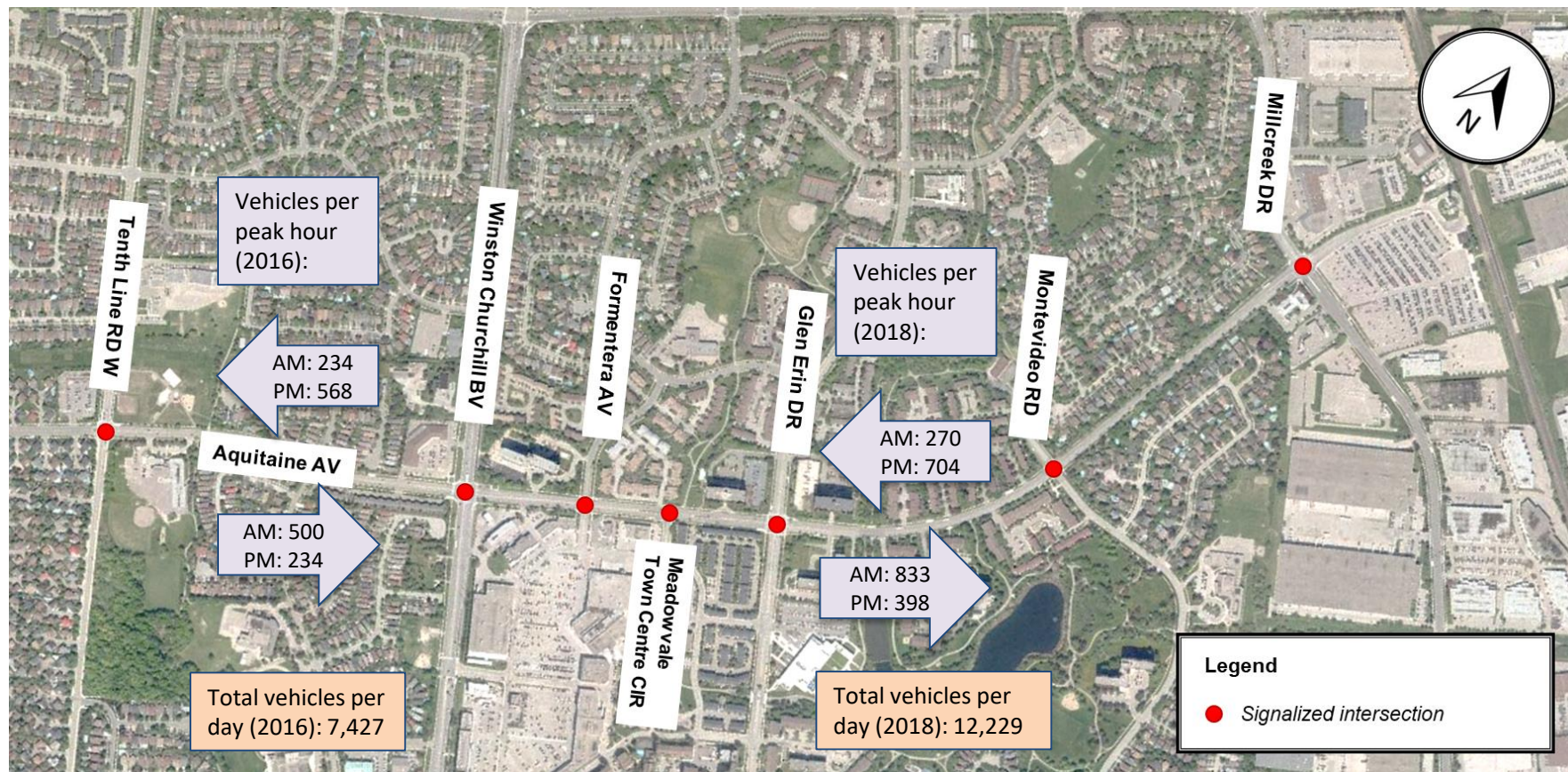
*Proposed
Cross-section*



The proposed cross-section will create fewer opportunities for collisions than the existing cross-section currently does.

Traffic Analysis

Traffic Volumes along Aquitaine Avenue



Traffic Analysis

AADT less than 20,000 vehicles per day show minimal or no increase in traffic congestion with a 4-lane to 3-lane road diet conversion.

A peak hour volume below 750 vehicles per hour per direction (phpd) is likely feasible for a 3-lane road diet. Peak hour volumes between 750 to 875 vehicles phpd should be reviewed cautiously.

- U.S. DEPARTMENT OF TRANSPORTATION FHA

Meadowvale GO Station

Meadowvale GO Station Modal Split

Mode of Transportation	2015	2019	2041 (Forecasted)
<i>Walking</i>	1%	4%	6%
<i>Public Transit</i>	5%	12%	24%
<i>Cycling</i>	1%	0%	2%
<i>Pick up / Drop off</i>	18%	20%	11%
<i>Drive & Park</i>	67%	56%	53%
<i>Carpool Passenger</i>	7%	8%	4%

Transit Considerations

Aquitaine Avenue has multiple MiWay transit stops along the corridor.

The proposed 3-lane cross section may require transit buses to stop within the vehicular travel lane while picking up and dropping off passengers.

Traffic Volumes Along Proposed vs Existing 3-Lane Bus Routes

Location	Year of Study	AADT (Vehicles per Day)
<i>Aquitaine Avenue @ West of Edenwood Drive</i>	<i>2016</i>	<i>7,427</i>
<i>Aquitaine Avenue @ West of Montevideo Road</i>	<i>2018</i>	<i>12,229</i>
<i>Tenth Line Road W @ North of Aquitaine Avenue</i>	<i>2018</i>	<i>10,065</i>
<i>Tenth Line Road W @ North of Derry Road</i>	<i>2018</i>	<i>10,477</i>

Conclusion

The majority of collisions and personal injuries reported within the City of Mississauga occur on arterial and major collector (such as Aquitaine Avenue) roadways. In order to achieve our Vision Zero objectives, we must prioritize safe and sustainable travel within the city.

4-lane to 3-lane conversions provide significant safety benefits for all users including collision reduction and increased visibility. This conversion will also allow the opportunity for enriched, dedicated pedestrian and cyclist accommodations, making our city a comfortable place to walk and ride.

Recommendation and Pilot Evaluation

Staff recommends piloting the 4-lane to 3-lane road conversion along Aquitaine Avenue, from Tenth Line Road W to Millcreek Drive with full monitoring until 2024.

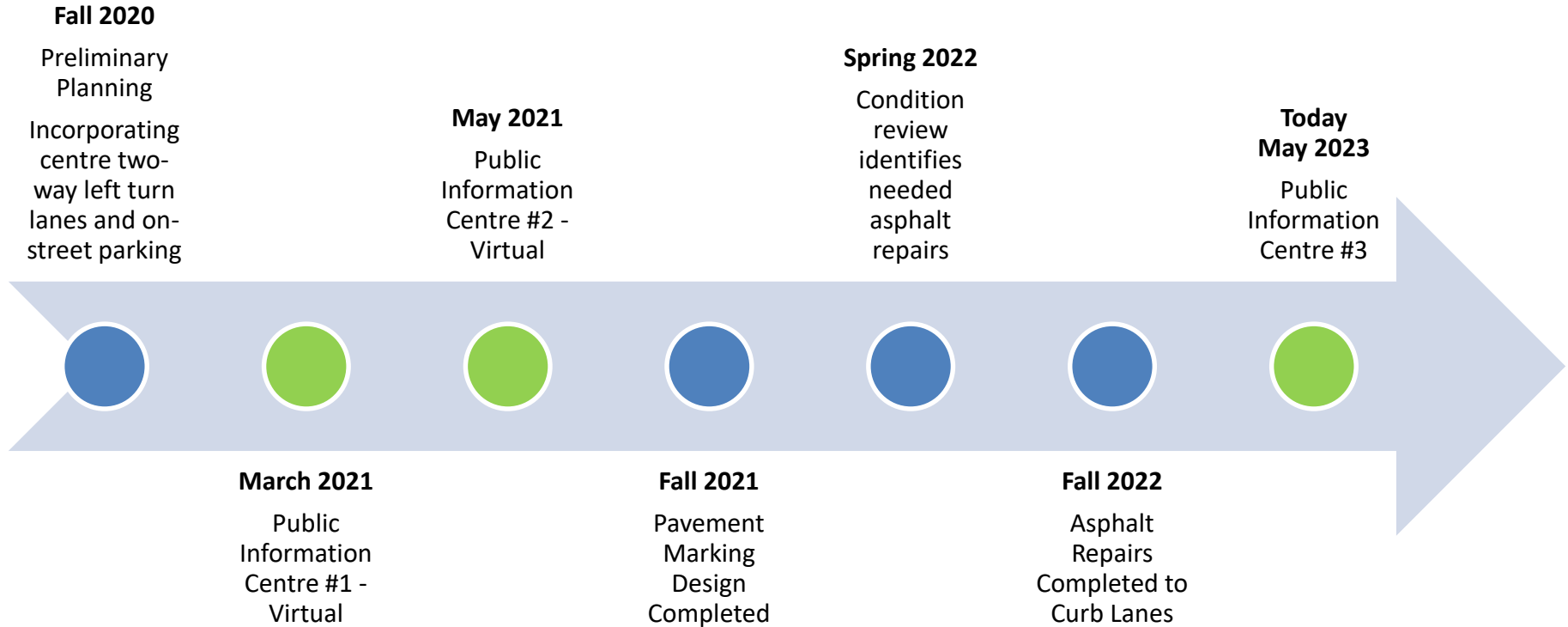
The pilot project will be evaluated by:

- 01.** *Traffic operations including vehicle speeds*
- 02.** *Bike Lane usage (temporary counters)*
- 03.** *Safety Monitoring*
- 04.** *Impact to MiWay services*



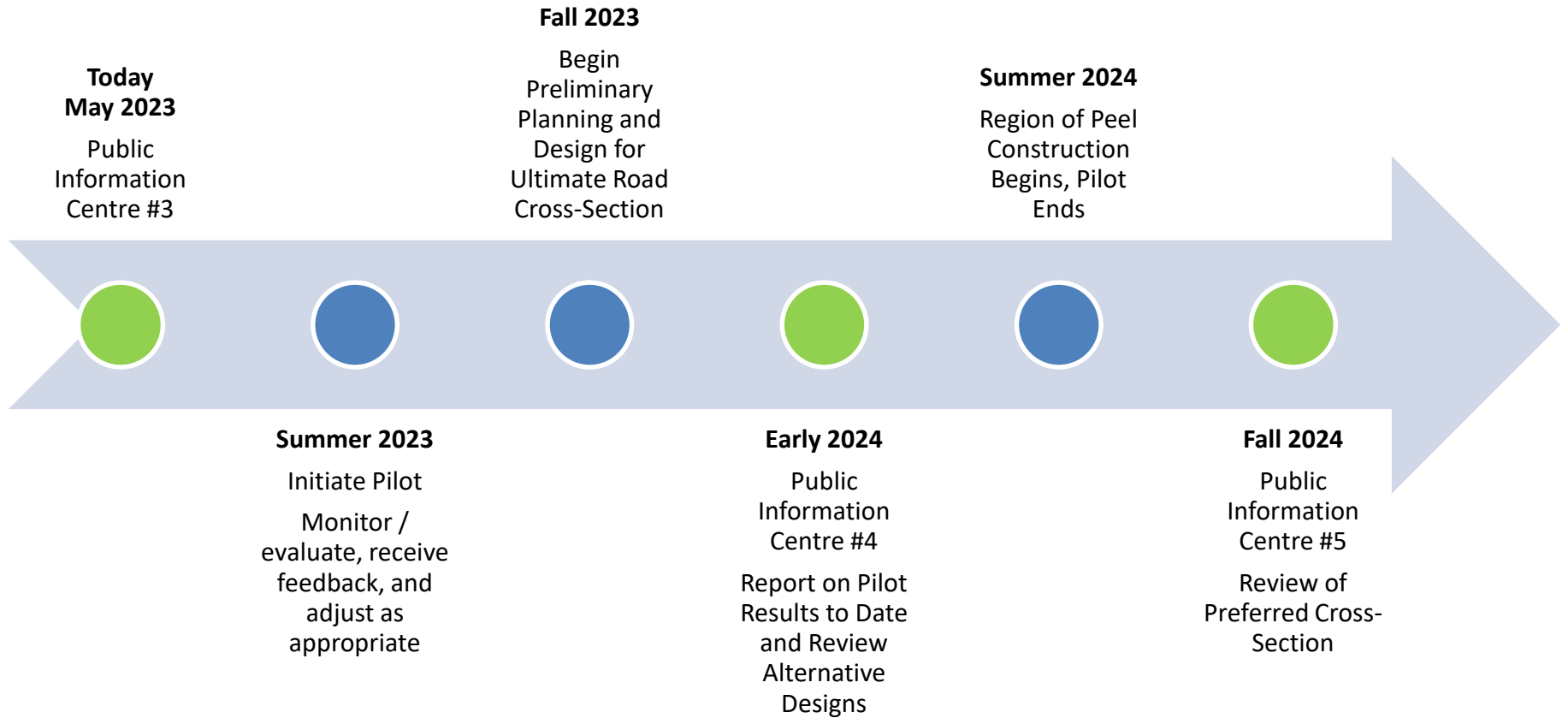
Project Timeline

Milestones to Date



Project Timeline

Through Pilot Phase (tentative timeline)



How to Provide Feedback

For a copy of this presentation, visit:

<http://mississauga.ca/aquitaineroadsafety>

Please provide your feedback to:

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