Memo

SUBJECT

Mississauga ICIP Funded Infrastructure Pilot Monitoring – Facility Evaluation Summary

TO

Jacqueline Hunter (City of Mississauga)

Matthew Sweet (City of Mississauga)

Fred Sandoval (City of Mississauga)

DATE

April 21, 2026

PROJECT NUMBER

30257734

COPIES TO

Loren Polonsky (Arcadis)

Yang Yang Shi (Arcadis)

1 Introduction

Arcadis was retained by the City of Mississauga to undertake preliminary design for cycling infrastructure on three corridors in the Meadowvale West area of Mississauga. The scope of work includes monitoring pilot cycling lane installations, studying road and traffic characteristics, engaging residents and key stakeholders, developing design alternatives, and creating preliminary designs for the following three corridors:

- Aquitaine Avenue, between Tenth Line West and Millcreek Drive;
- Argentia Road, between the Winston Argentia Centre signalized access to Turner Valley Road; and
- Millcreek Drive, from Derry Road West to Britannia Road West.

This memorandum provides a summary of the analysis and steps undertaken to determine a recommended design for each corridor.

2 Design Criteria Memo Recommendations

Arcadis completed Design Criteria and Facility Options memoranda between August and December 2024 for the study corridors. Each memo outlined the relevant design criteria to adhere to when developing the conceptual design, as well as an initial preferred facility selection based on multiple facility design factors.

The design criteria for each corridor were based on road design guidelines outlined by municipal, provincial, and federal regulatory bodies – notably the City of Mississauga, Ontario Ministry of Transportation (MTO), as well as the Transportation Association of Canada (TAC).

2.1 Aquitaine Avenue

In the Aquitaine Avenue memorandum, facility selection was performed along three separate segments to account for variations in roadway characteristics:

- **Segment 1:** From Tenth Line West to Winston Churchill Boulevard;
- **Segment 2:** From Winston Churchill Boulevard to Glen Erin Drive; and
- **Segment 3:** From Glen Erin Drive to Millcreek Drive.

Within these segments, the following facility options were evaluated:

- **Option 1 –** three-lane configuration with protected cycling lanes, using pinned curbs and bollards – similar to the pilot configuration;
- **Option 2 –** three-lane configuration with cycle tracks, raising the cycling facility to sidewalk level; and
- **Option 3 –** four-lane configuration with an in-boulevard multi-use trail.

Through the analysis carried out in the facility options memo, Arcadis preliminarily recommended Option 2 (three-lane configuration with cycle tracks) along all evaluated segments.

This decision was supported by the following justifications:

- The lane reduction proposed for Aquitaine Avenue from four lanes to three lanes is projected to aid in reducing the 85th percentile operating speed along the corridor, as was observed during the pilot installation;
- The three-lane configuration allows through-traffic to consolidate into one lane, reducing collision risks. In addition, the centre two-way left-turn lane fully separates midblock turning movements from through vehicles, mitigating rear-end collision risks between through and turning traffic, while providing a consistent path for emergency vehicles to travel along the corridor;
- By removing a lane of travel, additional space is redistributed towards the cycling facility, allowing the facility to meet desired widths outlined by provincial guidelines;
- Tree and utility pole impacts are minimized when compared to the multi-use trail option; and
- Access to existing and proposed trails, cycling facilities, and other destinations are maintained in comparison to the multi-use trail option.

2.2 Argentia Road

Similar to the Aquitaine Avenue memorandum, facility selection for Argentia Road was separated by segment to account for variations in roadway characteristics:

- **Segment 1:** Signalized Driveway East of Winston Churchill Boulevard (Winston Argentia Centre Access) to Derry Road; and
- **Segment 2:** Derry Road to Turner Valley Road.

The following facility options were evaluated:

- **Option 1** – three-lane configuration with protected cycling lanes;

- **Option 2** – three-lane configuration with cycle tracks;
- **Option 3** – four-lane configuration with an in-boulevard multi-use trail; and
- **Option 4** – four-lane configuration with the cycle track in the existing boulevard.

Through the analysis carried out in the facility options memo, Arcadis preliminarily recommended Option 2 (three-lane configuration with cycle tracks) be implemented for Segment 1, based on the following justifications:

- The lane reduction proposed for Argentia Road from four lanes to three lanes is projected to aid in reducing the 85th percentile operating speed along Argentia Road, as was seen during the pilot installation;
- The three-lane configuration allows through-traffic to consolidate into one lane, reducing collision risks. In addition, the centre two-way left-turn lane fully separates midblock turning movements from through vehicles, mitigating rear-end collision risks between through and turning traffic, while providing a consistent path for emergency vehicles to travel along the corridor;
- Meets technical recommendations for desired cycling facility width while maintaining minimum design criteria;
- By removing a lane of travel, additional space is redistributed towards the cycling facility, allowing it to meet desired widths outlined in provincial guidelines;
- Tree and utility pole impacts are minimized when compared to the multi-use trail option; and
- Access to existing and proposed trails, cycling facilities, and other destinations are maintained in comparison to the multi-use trail option.

Arcadis also recommended that Option 1 (three-lane configuration with protected cycling lanes) be implemented for Segment 2 based on the same criteria as Segment 1, with the additional justification that there were no future road works opportunities east of Derry Road that the cycling facility could be bundled with, making the raised cycle track option less feasible.

2.3 Millcreek Drive

In the Millcreek Drive memorandum, facility selection was performed along three separate segments to account for variations in roadway characteristics:

- **Segment 1:** From Derry Road to Erin Mills Parkway; and
- **Segment 2:** From Erin Mills Parkway to Britannia Road.

The following facility options were evaluated:

- **Option 1** – three-lane configuration with protected cycling lanes;
- **Option 2** – three-lane configuration with cycle tracks;
- **Option 3** – four-lane configuration with an in-boulevard multi-use trail; and
- **Option 4** – four-lane configuration with the cycle track in the existing boulevard.

Through the analysis carried out in the facility options memo, Arcadis preliminarily recommended Option 1 (three-lane configuration with protected cycling lanes) be implemented along all evaluated segments.

This decision was supported by the following justifications:

- The lane reduction proposed for Millcreek Drive from four lanes to three lanes is projected to aid in reducing the 85th percentile operating speed along Aquitaine Avenue, as was experienced during the pilot installation;

The three-lane configuration allows through-traffic to consolidate into one lane, reducing collision risks. In addition, the centre two-way left-turn lane fully separates midblock turning movements from through vehicles, mitigating rear-end collision risks between through and turning traffic, while providing a consistent path for emergency vehicles to travel along the corridor:

- By removing a lane of travel, additional space is redistributed towards the cycling facility, allowing the facility to meet desired widths outlined by provincial guidelines;
- Tree and utility pole impacts are minimized when compared to the multi-use trail option;
- Access to existing and proposed trails, cycling facilities, and other destinations are maintained in comparison to the multi-use trail option; and
- There are currently no future road works opportunities that the cycling facility could be bundled with, making the raised cycle track option less feasible.

3 Public Consultation Process

Two Public Information Centres (PICs) – one on October 21, 2024, and another on June 11, 2025 – were held to provide updates to the interim cycling facility installations and elicit input on the cycling facility options.

3.1 Public Information Centre #1

The first PIC primarily provided data from the pilot installations, including:

- Traffic observations
- Safety findings
- Changes in 85th percentile speed
- Peak hour volumes
- Vehicular mode share on each corridor

PIC #1 also presented the preliminary cycling facility options at a high level, noting their potential benefits and disadvantages, while soliciting feedback from attendees.

3.2 Public Information Centre #2

The second PIC presented the recommended conceptual design options for each corridor.

During this event, attendees provided input on the study process and proposed designs during a live Q&A session facilitated by Ward 9 Councillor Martin Reid, while also submitting comments about

design elements on handouts. Online feedback forms were also developed for individuals who were unable to attend the event in-person.

Project team members from the City of Mississauga and Arcadis (engineering consultant) supported the PIC by responding to technical questions on the various alternatives and preliminary recommendations.

3.3 Public Consultation Feedback

Through both on-line and in-person input, the City received a mix of support and opposition to reducing travel lanes to accommodate cycling infrastructure along the three corridors. Those issues raised in support of on-street cycling facilities included:

- The implementation of these projects builds upon the goals of a safe and comprehensive cycling network, providing improved mobility for cyclists that would otherwise be accessed by vehicles; and
- These projects are an investment for the future of Mississauga against rapidly shifting mobility demands – providing safe cycling infrastructure for various demographics, who may not be able to afford a vehicle now, and/or may not be able to afford a vehicle in the future.

Those who opposed accommodating on-street cycling facilities expressed that:

- The projects would not be an effective way of spending funds, noting that current ridership does not support further investment and/or that Bill 212 may result in the infrastructure getting reverted anyways; and
- Road user education should be prioritized over infrastructure.

4 Regulatory Screenings

During the study, the Government of Ontario passed two pieces of legislation that would impact the recommended designs proposed for the bikeways on each corridor:

- **Bill 212, Reducing Gridlock, Saving You Time Act, 2024**, which received royal assent on November 25, 2024, requiring municipalities to seek provincial approval for the implementation of any cycling facility not already approved, which removes an existing lane of traffic; and
- **Bill 60, the Fighting Delays, Building Faster Act, 2025**, which received royal assent on November 27, 2025, prohibiting all Ontario municipalities from reducing motor vehicle lanes when installing, implementing, or marking new bicycle lanes.

The implications of Bill 60 are significant to this study. All of the recommended alternatives would be unable to be installed in their entirety across each corridor, with the exception being on Millcreek Drive, from a location 100 m east of Southfield Road to Britannia Road, due to its existing three-lane cross-section.

5 Final Facility Selection Outcome

In lieu of the provincial legislation and in consideration of the input received during the study, the City re-examined the alternatives and modified its recommendations. As a result, the recommended design for Aquitaine Avenue and Argentia Road is a four-lane configuration that includes an in-boulevard multi-use trail.

On Aquitaine Avenue, the multi-use trail is proposed to be located on the south side of the road to minimize tree impacts within the boulevard, while on Argentia Road, the multi-use trail is proposed to be located on the north side where a sidewalk is currently absent.

On Millcreek Drive, the recommended option is to remain pending due to:

- The absence of future roadworks projects that this cycling facility can be bundled with; and
- The potential for relevant provincial legislation to be amended or rescinded in the future, which would permit the removal of vehicular travel lanes as part of the implementation of a cycling facility.

The final recommended designs for Aquitaine Avenue and Argentia Road are to be advanced towards 30% design through the remainder of the project.

6 Road Safety Mitigation Measures

The following section outlines potential mitigation measures proposed to assist in reducing speeding and other aggressive driving behaviour within the recommended designs for Aquitaine Avenue and Argentia Road.

6.1 Lane Width Reductions

The City of Mississauga's *Draft Complete Streets Guide* (2022) recommends that lanes be narrowed in cases where speeding or other safety concerns are prominent, as well as where the current width exceeds the guideline recommended widths.

Consistent with the recommendations of this guide, vehicular lane widths are to be narrowed to a target width of 3.5 metres (inclusive of the gutter in the curb lane) in each corridor design where feasible, utilizing methods such as moving the curbline inwards, and providing a centreline buffer.

6.2 Curb Radius Reductions

In conjunction with potential reductions of lane widths, curb radii reductions consistent with the City's *Draft Complete Streets Guide* (2022) will be employed. By reducing the curb radii, vehicle cornering speeds will be subsequently lowered, potentially reducing the severity of vulnerable road user collisions.

The degree of curb radius reduction will be dependent on the functional road classifications of Aquitaine Avenue, Argentia Road, and their side streets. Curb radii reductions will be reviewed with a swept path analysis as the design advances, while truck aprons will likely be employed, as needed.

6.3 Smart Channels

Several municipalities in Ontario have recently implemented “smart” channels at several intersections, which modifies existing channels with a sharper angle of entry and potentially, a raised crosswalk. At locations with an existing channel, curb radii reductions will be considered to normalize the entry to the intersecting road closer to 90 degrees, potentially improving turning sightlines and encouraging lower motor vehicle entry speeds in-and-out of the channel.

7 Summary and Next Steps

Arcadis was retained by the City of Mississauga to undertake a preliminary design for cycling infrastructure on three corridors in the Meadowvale West area of Mississauga. The scope of work includes monitoring pilot cycling lane installations, studying road and traffic characteristics, engaging the public and key stakeholders, developing design alternatives, and recommending designs for sections of Aquitaine Avenue, Argentia Road and Millcreek Drive.

In lieu of the provincial legislation and in consideration of the input received during the study, the City re-examined the alternatives along each corridor and modified its recommendations. As a result, the recommended design for Aquitaine Avenue and Argentia Road is a four-lane configuration that includes an in-boulevard multi-use trail, while design changes to Millcreek Drive will be postponed.

The road safety measures proposed for each corridor will be explored further and incorporated into the permanent design.