

Kariya Drive Extension
Schedule B Municipal Class Environmental Assessment

PROJECT FILE (FINAL)

July 2020

Prepared for: City of Mississauga

Prepared by: WSP

THE PUBLIC RECORD

This Municipal Class Environmental Assessment Project File is available for a review period for a minimum of 45 calendar-days from **July 16, 2020 to August 31, 2020**. The Project File and Appendices may be viewed on the City's website:

<http://www.mississauga.ca/portal/residents/rwek-ea-studies>

The City is keeping the community safe by complying with regional and provincial guidelines, supporting physical distancing, and postponing in person public meetings. Engagement for essential and property projects continues online paired with universally accessible methods.

Should a member of the public request a hard copy of the Project File, the City will assess how this might be prepared and delivered with regional and provincial guidelines, supporting physical distancing.

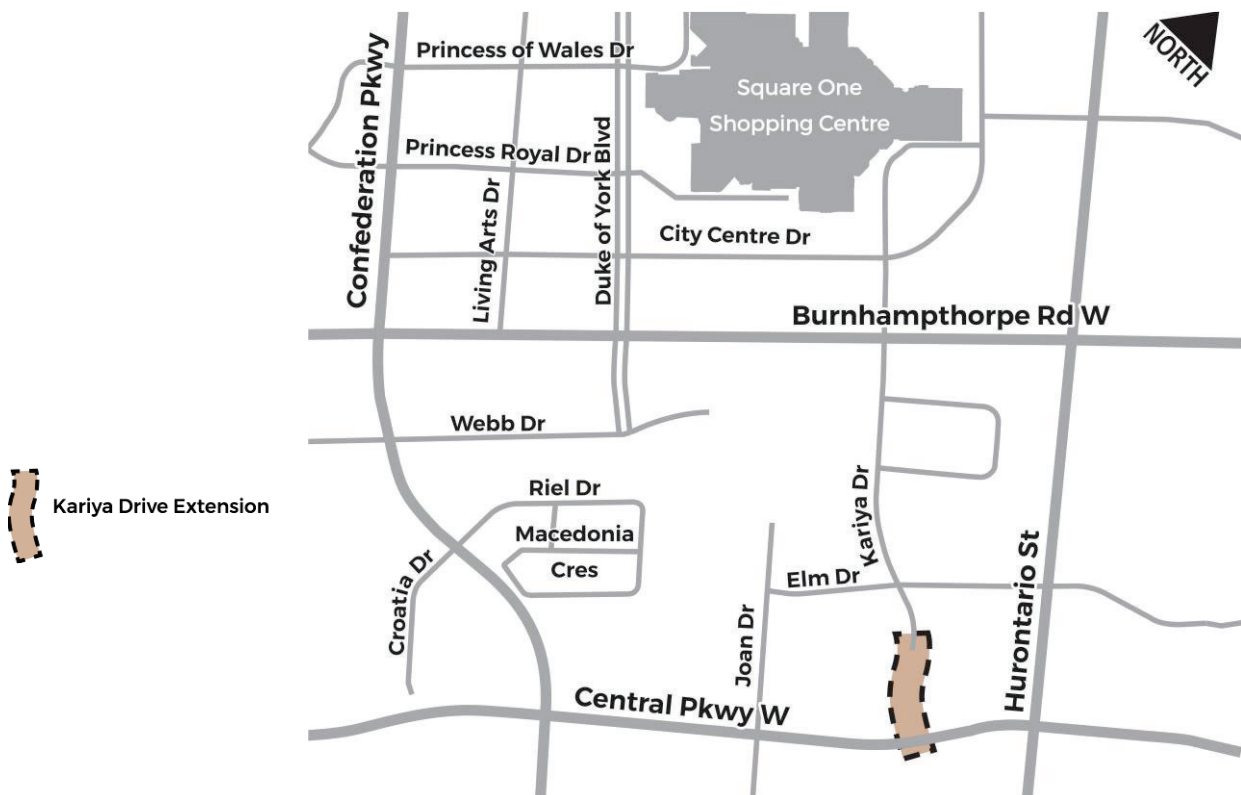
Executive Summary

Introduction

The City of Mississauga has completed a Municipal Class Environmental Assessment (Class EA) Study to evaluate the need to extend Kariya Drive from south of Elm Drive to Central Parkway West, a distance of approximately 150 m. The study was carried out as a Schedule B project in accordance with the Municipal Class EA document (2000, as amended in 2015), as approved under the Ontario Environmental Assessment Act.

The Kariya Drive Class EA study area is generally situated between Hurontario Street to the east and Confederation Parkway to the west (Exhibit ES-1), within the Peel District School Board (PDSB) property that is currently the site of the Adult Education Centre. The City of Mississauga has recently approved the redevelopment of the property to be the site of the future Elm Drive Public School (Site Plan Approval File No. 18-107-W7).

Exhibit ES-1: Kariya Drive Extension Study Area



Planning Context

The planning and policy framework applicable to the Kariya Drive Class EA Study was reviewed. The planning and policy framework guides infrastructure planning, land use planning, and strategic investment decisions to support Provincial, Regional and Local objectives in growth and transportation. Plans and policies reviewed and documented included:

- A Place to Grow - Growth Plan for the Greater Golden Horseshoe (2019)
- Provincial Policy Statement (2014)
- City of Mississauga Strategic Plan
- City of Mississauga Official Plan (2016)
- Mississauga Transportation Master Plan (2019)
- City of Mississauga Cycling Master Plan (2018)
- Peel District School Board Site Plan SP 18-107-W7 (approved 2020)

Existing Conditions

Land Use

The proposed Kariya Drive extension will be entirely situated on lands currently owned by the Peel District School Board (PDSB). Property for the Kariya Drive extension right-of-way will be conveyed by PDSB to the City.

Land use in the surrounding area contains a mix of low density older residential enclaves (e.g. Walford Court, Achill Crescent) and high-density condominium communities primarily along the east side of Kariya Drive and along Elm Drive, east of Kariya Drive. The existing portion of Kariya Drive, south of Elm Drive, provides for access to two condominium communities.

Cultural Heritage

A Cultural Heritage Assessment was conducted in support of the Kariya Drive Class EA Study. Based on this work, there are no built heritage resources or cultural heritage landscapes that will be impacted by the Kariya Drive extension.

A Stage 1 Archeological Assessment was conducted in support of the Kariya Drive Class EA Study (**Appendix A**). The assessment was carried by Archaeological

Research Associates Ltd (ARA) in accordance with the *Ministry of Tourism, Culture and Sport (MTCS) Standards and Guidelines for Consultant Archaeologists* (2011). The findings indicate that a portion of the Kariya Drive Class EA study area may have archaeological potential and should be subject to a Stage 2 Archaeological Assessment.

Natural Environment

A Natural Heritage assessment was conducted in support of the Kariya Drive Class EA Study. The review confirmed that there are no natural environmental features within the Kariya Drive Class EA study area.

Drainage and Stormwater

There are no surface water features or areas regulated under Credit Valley Conservation Authority Regulation 160/06, in the Kariya Drive Class EA study area.

A series of rain gardens are located along the north edge of the PDSB property fronting on to Elm Drive. Rain gardens are one of a variety of Low Impact Development (LID) measures designed to reduce stormwater runoff quantity and flows entering the sewer system and reduce pollutant load of runoff from impervious urban areas.

Storm runoff from the new section of Kariya Drive will likely be conveyed via storm sewer to the existing sewer system. LID measures may be considered during detailed design; however, opportunities may be limited by available property.

Transportation

Existing Transportation Network

Kariya Drive currently exists as a 2-lane north-south roadway between Burnhamthorpe Road (in the north) and just south of Elm Drive (in the south). The existing road links a variety of land uses including commercial/hotel in the north, older low-density residential enclaves and newer condominium communities and provides access to Kariya Park and the PDSB Adult Education Centre.

Other key transportation links in the immediate area include: Hurontario Street, Central Parkway West, Webb Drive, Burnhamthorpe Road West, and City collector roads.

Traffic and Transportation Assessment

An assessment of existing (2018) traffic conditions was undertaken to assess the overall transportation network performance which incorporated the study areas of all four EA studies (Redmond Road, Webb Drive, The Exchange and Kariya Drive). The micro-simulation assessment included an analysis of existing conditions and operational performance for the area bounded by Elora Drive, Webb Drive / Central Parkway West, Hurontario Street, as well as Burnhamthorpe Road West / City Centre Drive.

Results from the future (2031) traffic analysis indicated that without the Kariya Drive extension from south of Elm Drive to Central Parkway West, north-south traffic could only travel along Joan Drive and Hurontario Street, which will result in heavy delays. During AM peak hour, the northbound traffic on both parallel corridors is expected to operate at Level of Service (LOS) F with queues backing up to the upstream intersections (e.g. LOS F for the northbound movements at Elm Drive and Joan Drive intersection, and for the northbound left movements along Burnhamthorpe Road).

Traffic modeling indicates that the proposed Kariya Drive extension would enhance north-south minor collector road access and connectivity within the community, connecting existing neighbourhoods, new condominium communities and the new Elm Drive Public School.

Problems and Opportunities

Based on a review of the planning context and policy, the following problems and opportunities have been identified:

- ▶ There is an opportunity for the City to protect a right-of-way for the future extension of Kariya Drive; i.e. Completion of about 150 m of new road to connect the current terminus south of Elm Drive, with Central Parkway West;
- ▶ The extension of Kariya Drive will contribute to the key objectives of the City's Official Plan related to creating complete communities that have a compact urban form, are walkable and provide convenient access to a variety of land uses and public transit;
- ▶ A new roadway will provide additional routing in the downtown and make for more pedestrian-friendly environment;

- ▶ The extended roadway will integrate with the approved school redevelopment and with the planned community park at Elm Drive;
- ▶ There is an opportunity to expand MiWay service on Kariya Drive;
- ▶ The design will create safe pedestrian and cycling zones for all users, and in special consideration of school children;
- ▶ The design will plan for a smooth transition between the on-road cycling lanes on Kariya Drive to the north of Elm Drive, and the proposed multi-use trail south of Elm Drive.

Problem and Opportunity Statement:

The City has an opportunity to protect a road right-of-way for a future extension of Kariya Drive as part of the Peel District School Board's proposed redevelopment of the Adult Education Centre.

The extension of Kariya Drive allows the City of Mississauga to continue to enhance the downtown collector road system, contributing to a finer-grid street network and expanding opportunities for walking and cycling. A context-sensitive design approach will ensure that the new road fits well with its surroundings including the new school site, existing low-density neighbourhoods and new high-density condominium blocks.

The Kariya Drive extension will support the City's vision for Downtown Mississauga that includes: a high-density, dynamic urban core with smaller block sizes, fine-grained street network with a high-quality public realm and a range of transportation choices.

Alternative Solutions

Phase 1 of the Municipal Class EA process involves the identification of the transportation problems and opportunities to be addressed by the study and Phase 2 involves the identification and evaluation of a range of possible solutions or 'planning alternatives'. The following Alternative Solutions are being considered to address the Problems and Opportunities:

1. Do Nothing: Maintain existing transportation system within the study area.
2. Manage Transportation Demand: Improve access within the downtown by: discouraging single-occupant vehicles and encouraging carpooling; shifting




travel demand to off-peak hours; and encouraging walking, cycling and transit use.

3. Improve Other North-South Routes: Upgrade parallel roads to meet transportation needs.
4. Extend Kariya Drive: Kariya Drive as a 2-lane road from south of Elm Drive to Central Parkway West.

The alternative planning solutions were assessed in their ability to reasonably address the problems and opportunities. Criteria were developed to guide the assessment process so that transportation planning, technical and environmental (socio-economic, community and cultural / heritage) conditions were all factored into the recommendation.

The assessment of alternatives employed a reasoned argument approach which assesses the potential impacts of each alternative and then compares the relative significance of the impacts among the alternatives to select the recommended solution. A summary is provided in Exhibit ES-2.

Exhibit ES-2: Summary of the Evaluation of Alternative Planning Solutions

	Alternative 1	Alternative 2	Alternative 3	Alternative 4
Category	Do Nothing	Manage Transportation Demand	Upgrade Parallel Roads	Extend Kariya Drive
 Transportation & Technical	<ul style="list-style-type: none"> - Does not address Problems and Opportunities - Not consistent with City planning policies to create a finer-grained street network - Does not improve network connectivity 	<ul style="list-style-type: none"> - May result in some shift in travel demand to improve road operations. - Does not address the primary transportation problem of the need for a finer grid collector road network 	<ul style="list-style-type: none"> - Widening Hurontario Street not feasible due to planned high-order transit - Not consistent with City planning policies to create a finer-grained street network - Does not address local transportation needs or improve network connectivity 	<ul style="list-style-type: none"> - Consistent with City planning policies to create a finer-grained street network - Addresses anticipated transportation needs - Improves network connectivity for all users - Improves road operations and safety - Enhances access to transit and downtown walkability
 Socio-Economic Environment	<ul style="list-style-type: none"> - No property required - Does not create access to new community or support mixed-use development - No opportunity to improve walkability and enhance access to transit 	<ul style="list-style-type: none"> - No property required - Although supportive of transit, cycling and pedestrian activities, this does not provide the specific infrastructure needed within the study area to support or enhance these forms of transportation. 	<ul style="list-style-type: none"> - Potentially significant property impacts along other corridors - Does not address the opportunities within the study area - Does not meet the multi-modal mobility needs of the community 	<ul style="list-style-type: none"> - Supports mobility for all modes within local community - Opportunity to provide enhanced access to Peel District School Board proposed redevelopment of the existing Adult Learning Centre - Provides for off-road cycling in school zone - Provides for possible future expansion of MiWay
Natural Environment	<ul style="list-style-type: none"> - Not applicable, no natural environmental features are present. 	<ul style="list-style-type: none"> - Not applicable, no natural environmental features are present. 	<ul style="list-style-type: none"> - Not applicable, no natural environmental features are present. 	<ul style="list-style-type: none"> - Not applicable, no natural environmental features are present. - Provides sustainable transportation choices to reduce vehicle use.
 Cultural Environment	<ul style="list-style-type: none"> - No potential archaeological impacts - No cultural heritage resources identified 	<ul style="list-style-type: none"> - No potential archaeological impacts - No cultural heritage resources identified 	<ul style="list-style-type: none"> - Other corridors would require assessment. 	<ul style="list-style-type: none"> - Some areas will be subject to Stage 2 Archaeological Assessment - No cultural heritage resources identified
Evaluation Result	Not Preferred	Already Being Implemented Through City Policies	Not Preferred	Preferred

Preferred Planning Solution

Based on the results of the evaluation, Alternative 4, Extension of Kariya Drive, is preferred because it fully addresses the Problems and Opportunities by:

- ▶ Supporting the creation of an urban neighbourhood environment that meets planning objectives for multi-modal mobility;
- ▶ Expanding the minor collector road network to provide enhanced connectivity for all modes of travel;
- ▶ Providing redundancy in the road network for all vehicles; and
- ▶ Creating smaller, more walkable blocks that enhance pedestrian access to transit.

Alternative 1 does not address any of the Problems and Opportunities. Alternatives 2 and 3 only partially address the Problems and Opportunities and do not contribute to a fine-grained street network that supports community growth, improved pedestrian options and access to transit.

Future Transportation Conditions

Traffic modeling indicates that the proposed Kariya Drive extension would enhance north-south access and connectivity within the community, considering existing neighbourhoods, new condominium communities and the new school.

It is important to note that the City's objectives of the Official Plan are to prioritize the development of a complete community with a compact urban form that is walkable and convenient to public transit and the cycling network.

MiWay Transit currently operates on the road network around the study area. MiWay will have the flexibility to extend transit service on Kariya Drive and connect with Central Parkway West.

The cycling network will be expanded to include a new multi-use trail on the west side of Kariya Drive between Elm Drive and Central Parkway West.

Road Design Concept

A design concept was developed for the Preferred Planning Solution to extend Kariya Drive by about 150 m, from its existing terminus located south of Elm Drive, to a new intersection at Central Parkway West. The design concept was developed for

illustrative purposes only and is subject to refinement during future preliminary and detailed design phases.

Exhibit ES-3 depicts the proposed typical road cross-section, which is based on the City's Standard City Centre Cross-Section. Exhibit ES-4 depicts the road alignment concept.

The following design aspects will be of particular interest:

- ▶ The use of the City of Mississauga Standard City Centre Road Cross-Section will ensure appropriate space is available for underground utilities, multi-use trail and sidewalk. However, some details of the road cross-section may be subject to minor adjustments during the design phase; and
- ▶ Traffic operations including the new intersection of Central Parkway West and Kariya Drive.

Streetscape depiction on ES-3 is conceptual only. Green areas are identified for future streetscape design and do not imply the presence of sod. Location of streetscape is subject to further design and integration with the school site, utilities and municipal services.

Potential Property Requirements

Based on the concept design, it appears that one residential property at 3470 Omeath Court may be directly impacted. A very small portion of the backyard (~15 m²) may be required for the daylighting triangle for the intersection of Central Parkway West and Kariya Drive. The work would involve regrading and replacement of the fence (replacement as a noise barrier). It may be possible to minimize or avoid the property through the design process. Confirming the potential for property impacts, and the provision and design of a noise barrier, as well as engagement of the property owner will be a priority during the preliminary and detail design phase.

Exhibit ES-3: Kariya Drive Cross-Section

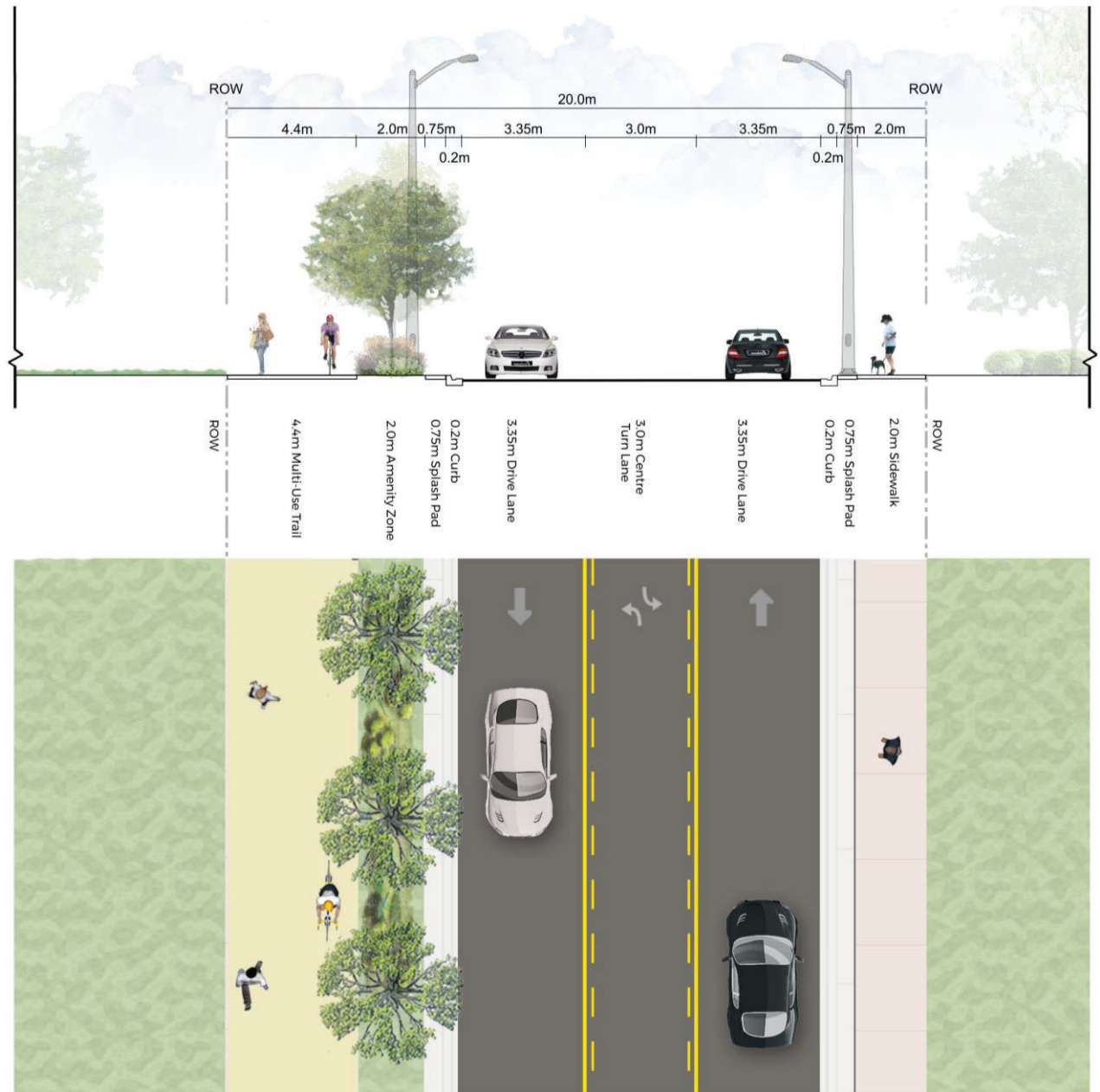
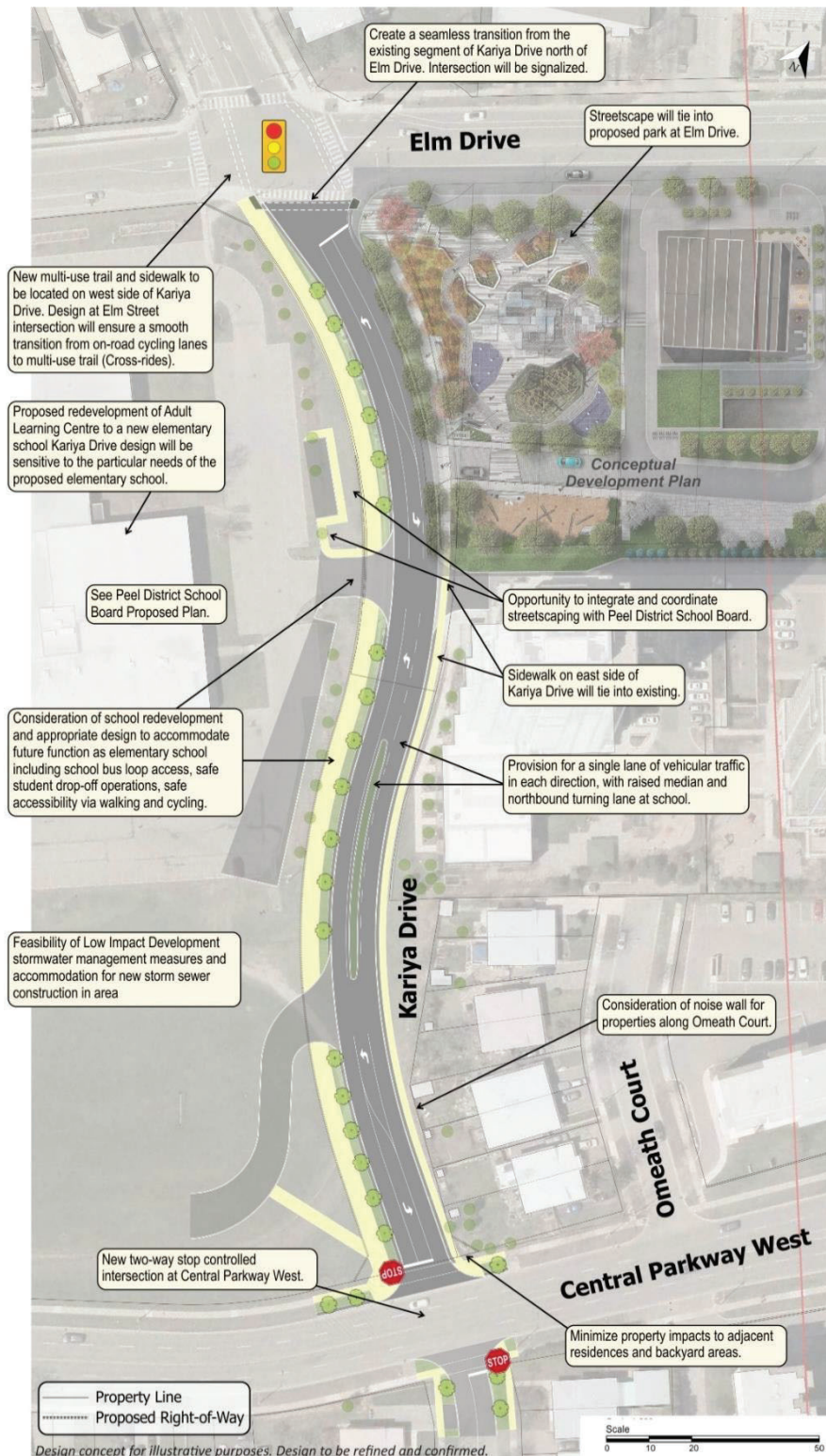


Exhibit ES-4: Kariya Drive Design Concept

Note: Streetscape depiction is conceptual only. Green areas are identified for future streetscape design and do not imply the presence of sod. Location of streetscape is subject to further design and integration with the school site, utilities and municipal services.



Consultation

Key Points of Contact

External agencies, utilities, emergency service providers, and residents and business owners were contacted directly at key points during the study and requested to provide input to the study and feedback on the decision-making process. The key points of contact are listed in Exhibit ES-5.

A direct mailing list of residents and businesses, within the defined catchment area, agencies and utilities was developed at the outset of the study. The catchment area for property owners was defined as approximately 300 m around the proposed Kariya Drive extension. The mailing list continued to be updated based on feedback received through the study.

Members of the general public were made aware of the study through notifications in the local newspapers and invited to contact the project team to join the project mailing list. Members of the public requesting to be on the mailing list received direct notification of subsequent study milestones at the key points of contact.

A dedicated website and email address were established through the City of Mississauga's website at the outset of the study.

<http://www.mississauga.ca/portal/residents/rwek-ea-studies>

Various Public Information Centre (PIC) materials were made available on the website (e.g. Notices, display material and comment sheets). All notices and study materials contained the dedicated project team email address to facilitate direct contact from interested members of the public.

The potential need for formal Indigenous Community engagement was explored with the Ministry of Environment, Conservation and Parks (MECP). In correspondence dated January 18, 2019, MECP confirmed that, given the urban downtown setting, the absence of natural features and watercourses, Indigenous Communities were unlikely to have an interest in the study and direct outreach was not required.

Exhibit ES-5: Key Points of Public Contact

Date	Notification	Purpose
Notice of Study Commencement December 4, 2018	<ul style="list-style-type: none"> - Letters sent to property owners / mailing list – December 4, 2018 - City project website – December 4, 2018 - The Mississauga News – December 6 and December 13, 2018 - Letters and Response Forms sent to agencies and utilities – December 10, 2018 - Letter and Streamlined EA Project Information Form sent to MECP – December 12, 2018 	To introduce and invite participation in the study and to request any preliminary comments or pertinent information.
Public Information Centre June 12, 2019	<ul style="list-style-type: none"> - Postcard notices sent to property owners / mailing list – May 27, 2019 - City project website – May 31, 2019 - City website – June 3, 2019 - The Mississauga News – June 6, 2019 - PIC Display materials posted on City website on June 13, 2019 	To notify and invite interested parties to attend the Public Information Centre on June 12, 2019 to review information and provide input regarding: the problem and opportunities being addressed, the collection of background information, the evaluation of planning alternatives and early design concepts.
Notice of Study Completion July 16, 2020	<ul style="list-style-type: none"> - Notices sent to property owners / mailing list – July 16, 2020 - Notices sent to agencies and utilities – July 16, 2020 - City project website – July 16, 2020 - The Mississauga News – July 16, 2020 	To announce the completion of the Class EA Study and notify interested parties of the 45-calendar-day review period for the Project File.

Agency Consultation

The list of technical agencies was assembled based on previous City of Mississauga Class Environmental Assessment studies and Ministry of the Environment, Conservation and Parks (MECP) Government Review Team (GRT) list. External 'agencies' (including regulatory/review agencies, utilities and emergency service providers) were first notified of this Class EA Study through written correspondence

on December 10, 2018 which included a copy of the Notice of Study Commencement and a Response Form. A summary of agency comments received throughout the study and course of action taken by the Project Team, as appropriate, is provided in Exhibit ES-6.

Exhibit ES-6: Agency Comments

Agency Comment	Course of Action
Ministry of Natural Resources and Forestry Email dated: January 2, 2019 I have received your letter regarding four proposed road extensions in Mississauga. There was no attached notice with a key plan. Please provide.	Notice of Commencement was provided via email.
Ministry of Natural Resources and Forestry Email dated: January 3, 2019 Natural areas to be affected will need to be searched for Butternut trees of all sizes, including seedlings, within 25 metres from proposed works. The woodland areas to be affected will need to be outlined and, if they are at least 0.5 ha averaging at least 30 metres in width with some native oak or maple species, assessed for potential as habitat for endangered bat species (Little Brown Myotis, Northern Myotis, Tri-coloured bat).	An assessment of the natural environment was completed as part of this study.
Ministry of the Environment, Conservation and Parks Letter dated: January 18, 2019 Response to Notice of Commencement providing guidance on consultation with Indigenous Communities.	Given the nature of this project and the existing land uses in the area, separate notification for Indigenous Communities was not required.
Ministry of Natural Resources and Forestry Email dated: June 6, 2019 We have received the Notice of Public Information Centre for this project. If you have any questions regarding natural features/systems or impacts on them, please let us know.	No action required.
Region of Peel Public Health Email dated: June 12, 2019 Thank you for sharing the notice of PIC for the environmental assessment process for Redmond Road, Webb Drive, The Exchange and Kariya Drive. We would like to request digital copies of information being shared at tonight's PIC, including the presentation, so that we may review and provide comments.	PIC materials were provided via email on June 17, 2019.

Public Information Centre

A Public Information Centre (PIC) was held on June 12, 2019 from 5:30 pm to 7:30 pm in the Great Hall at the Mississauga Civic Centre, located at 300 City Centre Drive in Mississauga.

The purpose of the PIC was to provide stakeholders and interested members of the public with an opportunity to view study information including project background, the Municipal Class EA process, planning and policy context, assessment and evaluation of alternative planning solutions and the selection of a preliminary preferred solution. A design concept was presented of the preliminary preferred solution, for illustrative purposes.

Twelve people signed in at the PIC. Attendees included local residents / property owners, stakeholders, and staff from the Peel District School Board and City of Mississauga. The PIC materials were made available on the City's website the day after the PIC.

One comment was received via email the day of the PIC. No additional comments were received during the comment period, ending July 5, 2019. The written comment that was received is provided verbatim below, along with the how the feedback was considered in this study. Sensitive information such as names and contact information have been removed.

Exhibit ES-7: Public Feedback Received at the Public Information Centre

Comments	How the feedback has been considered in this study
We are against the Kariya Drive Extension. We have seen added traffic congestion and congestion on Central Parkway over the past years. Drivers speed through between intersections of Hurontario Street & Central Parkway and Joan Drive and Central Parkway. This makes it extremely dangerous for kids playing or anyone even trying to cross the street to go play or jog in the Britannia field. It is hard to pull out of our driveways or cross into incoming traffic.	The proposed road way extension is consistent with the City of Mississauga Official Plan policies that seek to create a finer-grid street network the improves accessibility and walkability in the downtown, reduces congestion overall, and expands opportunities for active transportation (e.g. cycling), and encourages greater use of transit. These aspects are viewed by the City as complementary to the existing community, proposed Elm Drive Public School, new condominium communities and new parks in the area.

Comments	How the feedback has been considered in this study
<p>Extending Kariya Drive will disrupt our neighbourhood and quality of life. There is already too much crime and drug dealing going on at the &Co bar on Kariya across the Kariya Park. Opening extending this drive will just increase traffic, noise, and crime on a 24-hour basis.</p> <p>I suggest using our tax dollars to at least keep the Britannia High School field clean and brought back to life. Currently the City of Mississauga fails to maintain the field. It is rarely mowed, and if it is it is never raked or cleaned.</p> <p>Making this park clean and creating a walkway from Central Parkway through to Elm Drive, would greatly increase our quality of life. We need the field brought back to it's former glory, in order to allow our children to play in a clean and safe environment, we can walk our dogs peacefully, we can go jogging and cycle, play soccer, sunbathe or skate in the winter, etc.</p> <p>██</p> <p>████████████████████ STAND FIRMLY AGAINST ANY NEW ROAD EXTENSION OF KARIYA DRIVE.</p>	<p>The proposed design of the Kariya Drive extension is being coordinated with the Peel District School Board to ensure a safe streetscape is created. 'Crime Prevention Through Environmental Design' principles will be considered to enhance personal safety through lighting and landscaping. Other aspects of community safety will continue to be led by enforcement organizations including Peel Regional Police and community organizations, such as Safe City Mississauga.</p>

Stakeholder Consultation

The proposed Kariya Drive extension is located adjacent to the approved future Elm Drive Public School site on Kariya Drive. The extension of Kariya Drive has been previously conceptualized as part of the Elm Drive Public School site plan. As such, the Peel District School Board has a direct stake in the planning for Kariya Drive.

A meeting was held with representatives of the Peel District School Board on May 30, 2019. Minutes of the meeting are on file with City staff. A summary of the meeting is provided below:

- ▶ A meeting was held with Peel District School Board representatives on May 30, 2019, at the City of Mississauga, 201 City Centre Drive.

- ▶ The purpose of the meeting was to introduce the study, review early design concepts, discuss stakeholder questions and concerns, and review next steps.
- ▶ During the meeting, it was noted that the design concept was developed to accommodate future function as Elm Drive Public School access, including school bus loop access, safe student drop-off operations, and accessibility via walking and cycling.
- ▶ Following the meeting, the Peel District School Board provided display material for the Public Information Centre (PIC), held on June 12, 2019. The PIC displays included exterior elevations and floor plans for the proposed Elm Drive Public School.

Mitigation and Commitments to Further Work

The Kariya Drive extension will be subject to preliminary and detailed design phases. Construction phasing and potential for coordination with PDSB school construction is not known at this time and will be identified during design.

Property

Confirming the potential for property impacts and engagement of the property owner of 3470 Omeath Court will be a priority during the preliminary and detailed design phase.

Drainage and Stormwater Management

The stormwater management design will appropriately manage water quality and quantity per applicable City of Mississauga and Credit Valley Conservation design criteria. A new storm sewer system expansion is already being planned for the area. It is expected that Kariya Drive road runoff will be conveyed via the new sewer.

Utilities

The City will engage with utility companies to determine needs and coordinate design and installation. Ideally this will be done in coordination with the school redevelopment.

Noise and Vibration

A noise assessment was conducted in support of the Kariya Drive Class EA Study (**Appendix C**). There are a number of noise sensitive areas (NSAs) located along Omeath Court (i.e. private homes) where the backyards are adjacent to the open field

associated with the Peel District Adult Education Centre (i.e. the proposed Kariya Drive right-of-way). A noise assessment was conducted to evaluate the potential increase in noise level for the NSAs as a result of the proposed Kariya Drive extension. This technical work is based on the Ministry of Transportation (MTO) / Ministry of the Environment, Conservation and Parks (MECP) Noise Protocol, as well as the City of Mississauga's Noise Attenuation Policy (2011).

Noise levels were calculated using STAMSON 5.0 program for the selected receiver locations for the future (2031) with and without roadway extension scenarios. All the representative receivers are warranted for the consideration of noise mitigation, i.e., the increase in noise level as a result of the proposed roadway improvement is 5 dBA or higher, or the absolute noise level is 60 dBA or higher.

The implementation length of noise wall is recommended to protect the representative receiver and extend 2.5 times of the noise wall-receiver distance on both sides of the receiver, as per the Ministry of Transportation (MTO) Technical Areas Manual – Noise, 1992. Therefore, the noise wall may extend from 3470 Omeath Court to 3490 Omeath Court. The provision of a noise barrier is expected to achieve a noise reduction of 5 dBA or more under future conditions with the extension of Kariya Drive. Additional review will need to be carried out prior to the construction to determine the exact limits and design of the noise wall.

The potential for construction noise issues will be further reviewed during detailed design when construction methodology and schedule is fully developed. Construction activities will conform to the City of Mississauga Noise Control By-Laws.

There are no existing land uses that are considered to be highly sensitive to vibration impact (e.g. sensitive equipment such as electron microscopes, or laboratory with sensitive scientific equipment, etc.).

Once constructed, the main source of vibration from Kariya Drive would be from truck traffic. However, vehicles with pneumatic tires generally do not create significant levels of vibration except at very short distances. This road will function as a minor collector road serving only the local community and truck traffic volumes will be low, as such, vibration levels to the community are not expected to be perceptible or significant.

Some construction activities associated with the road building may at times create vibration levels that are perceptible at nearby land uses. However, the vibration levels produced by the anticipated construction activities will not be large enough to cause

structural damage. The potential vibration generated by the building of the road and the surrounding community should be reviewed in detailed design, once construction methodologies and scheduling are developed.

Archaeology

A portion of the proposed Kariya Drive right-of-way that is considered previously undisturbed will require a Stage 2 Archaeological Assessment. Undisturbed areas extend onto areas approved for the new school building. It is recommended that the Stage 2 Archaeological Assessment work be coordinated with PDSB.

The southeastern section of the Kariya Drive extension must be assessed using the test pit survey method. A survey interval of 5 m will be required due to the proximity of the lands to the identified features of archaeological potential. Given the likelihood that the remaining areas of potential have been impacted by past construction activities, a combination of visual inspection and test pit survey should be utilized to confirm the extents of any disturbed areas. This will allow for the empirical evaluation of the integrity of the soils and the depth of any past disturbances.

Air Quality

During construction of the roadway, emissions sources will include construction equipment engines and air borne dust from construction vehicles travelling over exposed soils/unpaved surfaces. These impacts will be temporary, during construction. Due to the temporary nature of construction activities, there are no air quality criteria specific to construction activities. Construction emissions can be mitigated by appropriate maintenance of equipment and proper phasing that minimizes activity on unpaved surfaced.

The Environment Canada “Best Practices for the Reduction of Air Emissions from Construction and Demolition Activities” document provides several mitigation measures for reducing emissions during construction activities. Mitigation techniques discussed in the document include material wetting or use of chemical suppressants to reduce dust, use of wind barriers, and limiting exposed areas which may be a source of dust and equipment washing.

Ministry of Environment, Conservation and Parks (MECP) recommends that non-chloride dust suppressants be applied. MECP also recommends referring to the following publication in developing dust control measures: Cheminfo Services Inc.

Best Practices for the Reduction of Air Emissions from Construction and Demolition Activities. Report prepared for Environment Canada, March 2005.

Sustainability

The City's objective is to create a high quality, pedestrian friendly, human scaled environment in the downtown area. The Kariya Drive extension will contribute to this objective by improving multi-modal connectivity among existing and new communities, the new school, and new/existing area parks. The new road will result in smaller scaled blocks, providing routing options for vehicular, transit, pedestrian and cycling movement. The scale of the street is to be narrower with special attention paid to the adjacent school site.

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1 INTRODUCTION

The City of Mississauga has completed a Municipal Class Environmental Assessment (Class EA) Study to evaluate the need to extend Kariya Drive from just south of Elm Drive to Central Parkway West, a distance of approximately 150 m. The study was carried out as a Schedule B project in accordance with the Municipal Class EA document (2000, as amended in 2015), as approved under the Ontario Environmental Assessment Act.

The Kariya Drive Class EA Study is one of four Class EA studies being undertaken by the City of Mississauga for transportation network improvements in the downtown. The study areas of the four projects are shown on **Figure 1-1**:

- ▶ Project 1 - Redmond Road from Webb Drive to Burnhamthorpe Road West
- ▶ Project 2 - Webb Drive from Duke of York Boulevard to Kariya Drive
- ▶ Project 3 - The Exchange from City Centre Drive to Webb Drive
- ▶ Project 4 - Kariya Drive from south of Elm Drive to Central Parkway West

Figure 1-1: City of Mississauga Downtown Municipal Class Environmental Assessment Study Locations



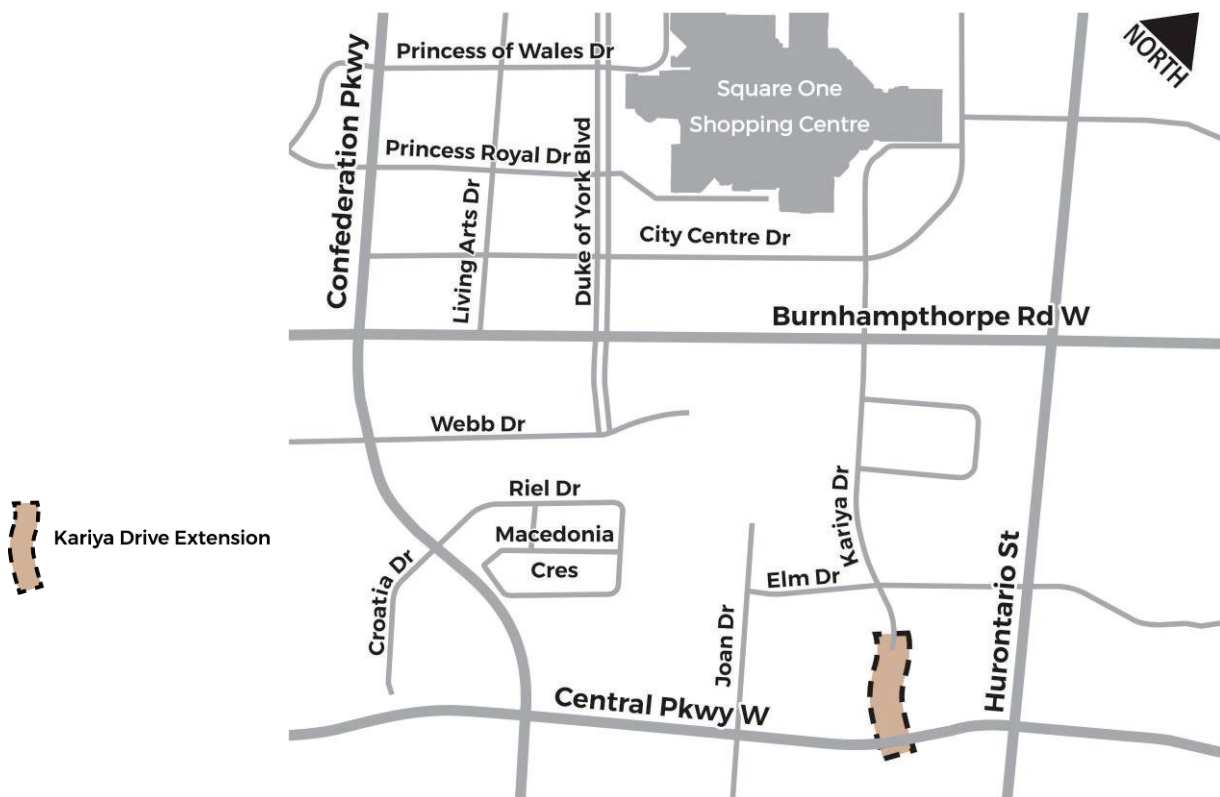
These Class EA studies are being undertaken to support the creation of a pedestrian-scale, fine-grained street grid in downtown Mississauga, and support multi-modal mobility by improving pedestrian connections, and in some cases, expanding the cycling and opportunities for the transit networks.

Each of the four Class EA studies are documented separately. **This Project File documents the planning process used to identify the problem and opportunities, consider of alternative planning solutions and the preferred solution for Kariya Drive from south of Elm Drive to Central Parkway West.**

1.1 Study Area

The Kariya Drive Class EA study area is generally situated between Hurontario Street to the east and Confederation Parkway to the west (**Figure 1-2**), within the Peel District School Board (PDSB) property that is currently the site of the Adult Education Centre. The City of Mississauga has recently approved the redevelopment of the property to be the site of the future Elm Drive Public School (Site Plan Approval File No. 18-107-W7).

Figure 1-2: Kariya Drive Extension Study Area



1.2 Environmental Assessment Process

Municipal infrastructure projects are subject to the Ontario Environmental Assessment Act (EA Act). The Municipal Class EA (Municipal Engineers Association October 2000, as amended in 2015) is an approved self-assessment process under the EA Act that applies to municipal infrastructure projects including roads, water and wastewater.

The Municipal Class EA outlines a planning process to consider the environmental and technical advantages and disadvantages of alternatives in order to determine a preferred solution for addressing problems and opportunities.

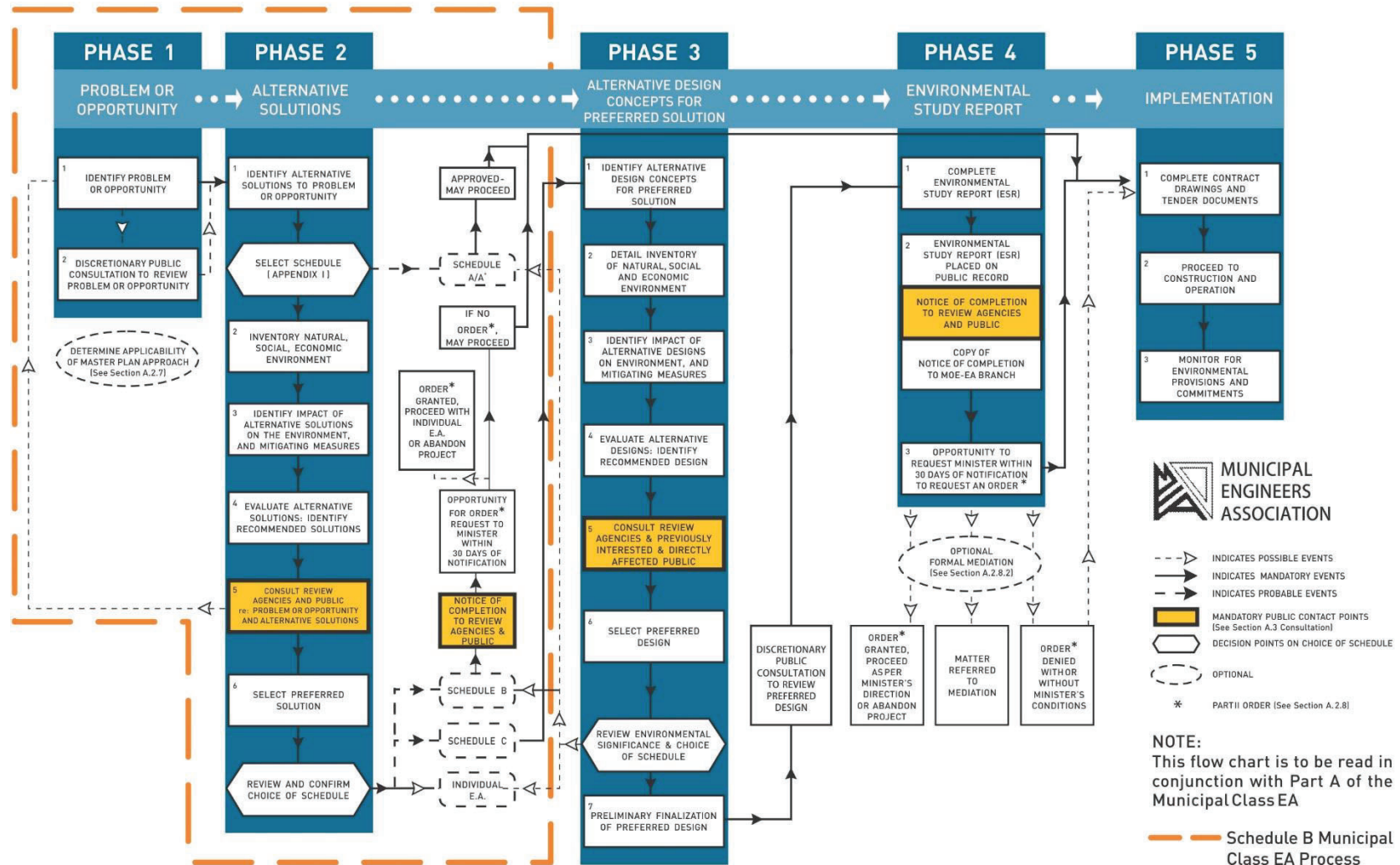
The four types of projects / activities to which the Municipal Class EA applies are:

- ▶ Schedule A: Includes normal or emergency operational and maintenance activities, which are limited in scale and have minimal adverse environmental effects and therefore pre-approved.
- ▶ Schedule A+: These projects are also pre-approved; however, the public is to be advised prior to the implementation of the project.
- ▶ Schedule B: Includes projects that have the potential for adverse environmental effects. This includes improvements and minor expansions of existing facilities. These projects are approved subject to a screening process which includes consulting with stakeholders who may be directly affected and relevant review agencies.
- ▶ Schedule C: Includes the construction of new facilities and major expansions to existing facilities. These undertakings have the potential for significant environmental effects.

The anticipated environmental impacts of an extension of Kariya Drive are minor, considering the short length of roadway (~150 m), the study area setting and development context. Therefore, this study meets the criteria for a Schedule 'B' process.

As illustrated in **Figure 1-3**, the Municipal Class EA document outlines the planning and design process. Schedule B projects are required to follow Phases 1 and 2 of this process.

Figure 1-3: Municipal Class EA Process



1.2.1 Project File

Phases 1 and 2 of the Schedule B process are documented in a Project File (i.e. this report) which includes:

- ▶ Study background and related studies, including planning policies and documents;
- ▶ Description of the existing environment (socio-economic environment, cultural environment, and natural environment);
- ▶ Study area problems and opportunities;
- ▶ Alternative solutions to the undertaking;
- ▶ Evaluation of alternative solutions and identification of the preferred alternative solution;
- ▶ Anticipated impacts and proposed mitigation measures;
- ▶ Public and agency consultation; and
- ▶ Supporting technical reports.

The Project File for this study is available for a 45 calendar-day public review period commencing on **July 16, 2020** and ending on **August 31, 2020**.

A Notice of Study Completion is published to announce the review period.

This Project File has been placed on the public record during the COVID-19 outbreak. At this time, exceptional measures are being employed by the various levels of government to curb the pandemic. The City of Mississauga is making the necessary accommodations, based on the latest guidance from public health agencies, governments and other public bodies, to preserve the health and safety of its employees, residents, business owners and the general public. Due to emergency measures, including the closure of public institutions to visitors (i.e. City Hall, City of Mississauga Libraries etc.), the Project File is not being provided in 'hard copy' for public viewing at centralized locations. Interested members of the public may view the document on the City's website. Should a member of the public request a hard copy of the Project File, the City will assess how this might be prepared and delivered in a manner that is consistent with current public health agency and government direction regarding public protection.

In consideration of these unprecedented circumstances, the Project File is being made available for a period of 45 calendar days. Should unforeseen circumstances arise, modifications to the public record process may be made during this period.

1.2.2 Part II Order Request

The Municipal Class EA process includes an appeal provision to change the status of a project from being subject to the Municipal Class EA process to being subject to an Individual Environmental Assessment, per Part II of the Ontario Environmental Assessment Act.

If concerns are raised during the public review period that cannot be resolved through discussions with the City, then stakeholders, agencies, Indigenous Communities or members of the public may request the Minister of the Environment, Conservation and Parks to issue a Part II Order for the project, thereby requiring an elevated scope of study.

A Part II Order request requires submission of a formal request prior to the end of the 45 calendar-day review period, outlining the unresolved issue and requesting the Minister to review the matter.

Please refer to the following website for further information and specific instruction regarding Part II Order requests:

<https://www.ontario.ca/page/class-environmental-assessments-part-ii-order>

If no Part II Order requests are outstanding by the end of the 45 calendar-day review period, the project is considered to have met the requirements of the Class EA, and the City of Mississauga may proceed to detailed design and construction.

2 PLANNING CONTEXT

This section reviews the planning and policy framework applicable to the Kariya Drive Class EA Study. The planning and policy framework guides infrastructure planning, land use planning, and strategic investment decisions to support Provincial, Regional and Local objectives in growth and transportation.

The identification of the study area problems and opportunities was in consideration of the policy framework, to ensure that the final recommendations are consistent with Provincial, Regional and Local policies and objectives.

2.1 A Place to Grow - Growth Plan for the Greater Golden Horseshoe (2019)

A Place to Grow: Growth Plan for the Greater Golden Horseshoe (“Growth Plan”), 2019, was prepared and approved under the Places to Grow Act (2005) as a legal framework to implement the Province’s vision for managing growth within the Greater Golden Horseshoe (GGH).

The GGH is a dynamic and diverse area, and one of the fastest growing regions in North America. By 2041, this area is forecast to grow to 13.5 million people and 6.3 million jobs. The magnitude and pace of this growth necessitates a plan for building healthy and balanced communities and maintaining and improving our quality of life while adapting to the demographic shift underway.

To better co-ordinate planning for growth across the region, this Plan provides population and employment forecasts for all upper- and single-tier municipalities in the GGH. This Plan is about accommodating forecasted growth in complete communities by providing guidance on transportation, infrastructure planning, land-use planning, urban form, housing, natural heritage and resource protection. Complete communities support quality of life and human health by encouraging the use of active transportation and providing high quality public open space, adequate parkland, opportunities for recreation, and access to local and healthy food.

Policy 3.2.2 of the Growth Plan provides direction on General Transportation Planning. The following excerpted policies are applicable to this Class EA Study:

The transportation system within the GGH will be planned and managed to:

- a. provide connectivity among transportation modes for moving people and, for moving goods;*
- b. offer a balance of transportation choices that reduces reliance upon the automobile and promotes transit and active transportation;*
- c. provide connectivity among transportation modes for moving people and, for moving goods;*
- d. be sustainable and reduce greenhouse gas emissions by encouraging the most financially and environmentally appropriate mode for trip-making and supporting the use of zero- and low-emission vehicles;*
- e. offer multimodal access to jobs, housing, schools, cultural, and recreational opportunities, and goods and services;*
- f. provide for the safety of system users.*

In the design, refurbishment, or reconstruction of the existing and planned street network, a complete streets approach will be adopted that ensures the needs and safety of all road users are considered and appropriately accommodated.

Policy 3.2.3 of the Growth Plan provides direction on Moving People. The following excerpted policies are applicable to this Class EA Study:

Public transit will be the first priority for transportation infrastructure planning and major transportation investments.

Municipalities will ensure that active transportation networks are comprehensive and integrated into transportation planning to provide:

- a. safe, comfortable travel for pedestrians, bicyclists, and other users of active transportation; and*
- b. continuous linkages between strategic growth areas, adjacent neighbourhoods, major trip generators, and transit stations, including dedicated lane space for bicyclists on the major street network, or other safe and convenient alternatives.*

Planning for the extension of Kariya Drive is consistent with the policy direction of the Growth Plan by contributing to the creation of a compact, mixed-use urban community that prioritizes walkability and creates linkages within the community, into the downtown core and to public transit.

2.2 Provincial Policy Statement (2014)

The Provincial Policy Statement (PPS) (2014) provides overall policy directions on matters of provincial interest related to land use and development in Ontario. The PPS was prepared under the authority of the Planning Act but may be considered in the planning and policy context of infrastructure planning completed under the Ontario Environmental Assessment Act (OEAA). The PPS is based on three fundamental planning themes: “Building Strong Communities”, “Wise Use and Management of Resources”, and “Protecting Public Health and Safety”. The PPS guidance for Transportation Planning systems within the GGH, as highlighted in the following excerpted policies, are applicable to this Class EA Study:

- ▶ *Section 1.6.7.1 Transportation systems should be provided which are safe, energy efficient, facilitate the movement of people and goods, and are appropriate to address projected needs.*
- ▶ *Section 1.6.7.3 As part of a multimodal transportation system, connectivity within and among transportation systems and modes should be maintained and, where possible, improved including connections which cross jurisdictional boundaries.*
- ▶ *Section 1.6.7.5 Transportation and land use considerations shall be integrated at all stages of the planning process.*

The Kariya Drive extension will contribute to the creation of a compact, mixed-use urban community that prioritizes walkability and creates linkages within the community, into the downtown core and to public transit.

2.3 City of Mississauga Strategic Plan

The City of Mississauga Strategic Plan (“Strategic Plan”) directs strategic decision-making based on the five “Strategic Pillars for Change: Move, Belong, Connect, Prosper, and Green.” The Kariya Drive Class EA Study supports the following strategic strategies as excerpted from the Strategic Plan:

- ▶ *Develop Environmental Responsibility – to contribute to environmental responsibility by reducing private automobile use and developing compact mixed-use development.*
- ▶ *Increase Transportation Capacity – to add capacity to the transportation system through strategic investments in transit, additional links in the street network and active mobility choices.*
- ▶ *Develop Walkable, Connected, compact, mixed-use Neighbourhoods that will give residents the ability to engage safely in all aspects of their everyday lives, within walking distance and easy access through evaluating development and infrastructure projects against a test of “pedestrian-first”.*
- ▶ *Build Vibrant Communities – to link urban areas and neighbourhoods that offer commercial, social, artistic, cultural, civic and recreational experiences accessible to all.*
- ▶ *Provide Mobility Choices – to provide all with the choice to walk, cycle and use transit or active modes of transportation in all seasons, because it is convenient, connected, desirable and healthy.*

2.4 City of Mississauga Official Plan (2016)

The current City of Mississauga Official Plan (OP) guides all aspects of the City’s growth and development to 2031. **Figure 2-1** depicts the OP land use designations around the Kariya Drive study area and the study areas for the three other downtown road extensions being contemplated by the City.

Downtown Mississauga and the Hurontario Street corridor is designated as an Intensification Area (**Figure 2-2**), and per Chapter 5 of the City’s OP, most of the City’s future growth will be directed to Intensification Areas. Although not within the Intensification Area, Kariya Drive contributes to the mobility in areas bordering the Intensification Area and provides important transportation routing options.

Transportation policies in Chapter 8 of the OP support the City’s intent to balance the needs of transit, cyclists, pedestrians, goods movement and motorists and recognize that the creation of new roads will be required to support more compact development.

Kariya Drive is designated as a Minor Collector road in the City’s long-term road network, designed to accommodate low levels of traffic and access to private property. The proposed Kariya Drive extension will enhance access to the collector

road network as well as the Regional arterial road network. Specific transportation policies pertinent to this study include the following:

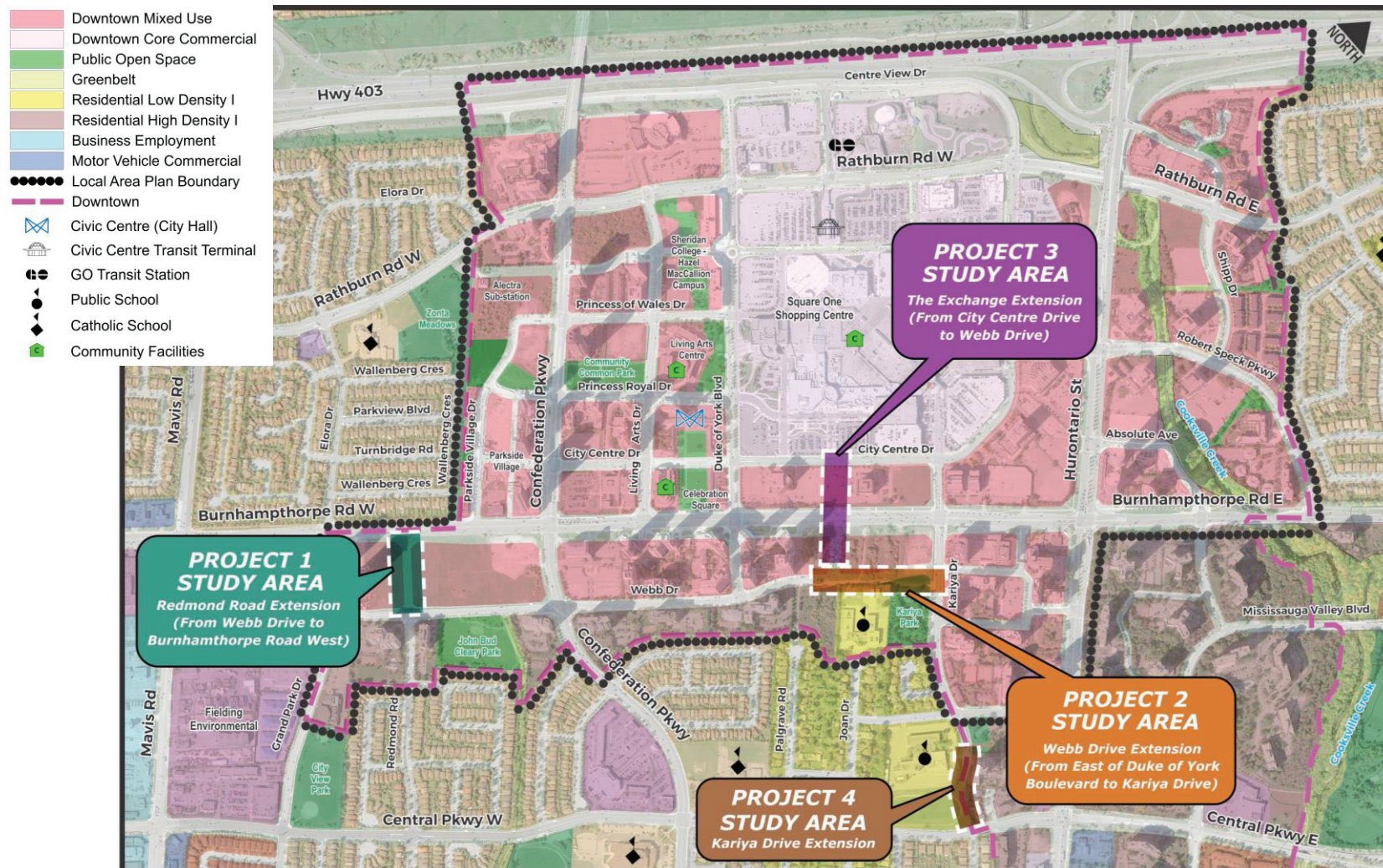
- ▶ *Mississauga will strive to create a fine-grained system of roads that seeks to increase the number of road intersections and overall connectivity throughout the City.*
- ▶ *Sidewalks or multi-use trails will be provided on all new roads.*
- ▶ *Mississauga will create a multi-modal road network through providing mobility and accessibility to all users, and through creating pedestrian and cycling access routes. The multi-modal network includes road, transit, cycling and pedestrian facilities. In some locations, transportation modes may, to ensure the efficiency and safety of the transportation network and its users, use separate facilities.*
- ▶ *Through the creation of a multi-modal transportation system, Mississauga will provide transportation choices that encourage a shift in lifestyle toward more sustainable transportation modes, such as transit and active transportation.*
- ▶ *The City of Mississauga will ensure that the transportation system will provide connectivity among transportation modes for the efficient movement of people and goods and may identify additional roads during the review of development applications, and may require new road connections.*
- ▶ *Street designs will consider opportunities to maximize on-street parking, where appropriate, and will planned to be balanced with the needs of other modes of transportation sharing the right-of-way.*
- ▶ *Transit will be a priority for transportation infrastructure planning and major transportation initiatives.*
- ▶ *Section 8.3.1.1 The City will design its roads in a manner that:*
 - a. *has regard for the safe movement of all road users, including transit, cyclists, pedestrians and motorists;*
 - b. *is context sensitive having regard for existing and planned land uses, urban design, community needs and funding availability;*
 - c. *minimizes the disruption to the Natural Heritage System and preserves, where appropriate, existing tree canopies.*

- ▶ *Section 8.3.1.2 Within Intensification Areas and Neighbourhoods, the design of roads and streetscapes will create a safe, comfortable and attractive environment for pedestrians, cyclists and motorists by:*
 - a. reducing lane width, where appropriate;*
 - b. providing streetscaping to reduce the apparent width of the rights-of-way;*
 - c. locating sidewalks and cycling facilities where conflicts with motorized traffic are minimized; and*
 - d. creating safe road crossings for pedestrians and cyclists.*

Chapter 9 of the OP directs desirable urban form and growth and directs existing large blocks to be reconfigured to incorporate a fine-grained block structure with public roads and on-street parking to support at grade uses.

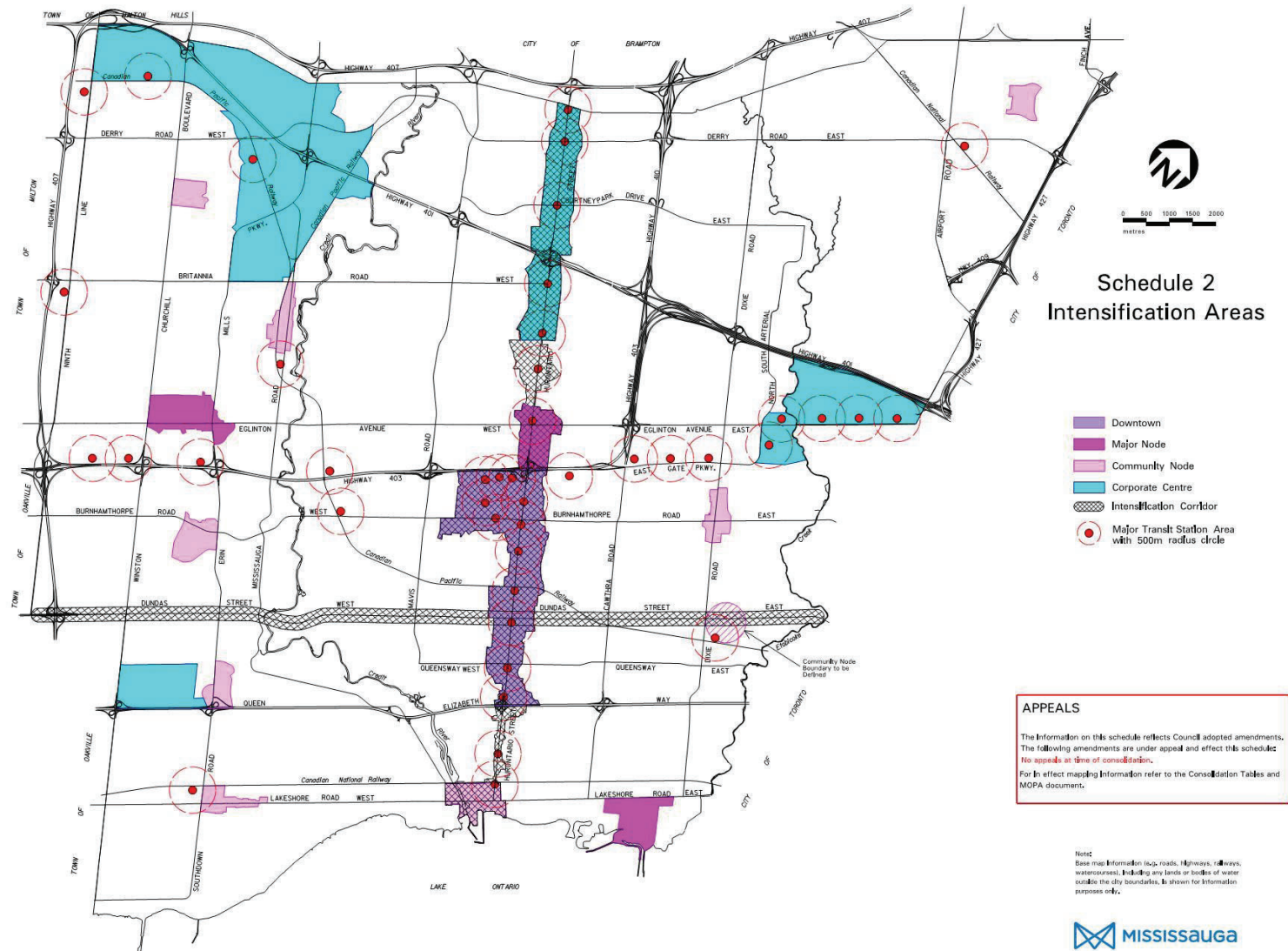
The proposed Kariya Drive extension is being planned to directly support the OP policies highlighted in the above discussion. The planned road extension will expand upon the fine-grained road network improving the connectivity among transportation modes and serving a community that is transition from primarily low density residential, to higher density condominium communities and the new Elm Drive Public School.

Figure 2-1: Official Plan Land Use Designations



Sources: Schedule 10 – Land Use, Mississauga Official Plan (2019); Downtown Core Local Area Plan (2015)

Figure 2-2: City of Mississauga Official Plan Schedule 2, Intensification Areas



V - 6.004

2.5 Mississauga Transportation Master Plan (2019)

The Mississauga Transportation Master Plan (TMP) directs Mississauga's transportation system to provide people with the freedom to move safely, easily and efficiently to anywhere at any time.

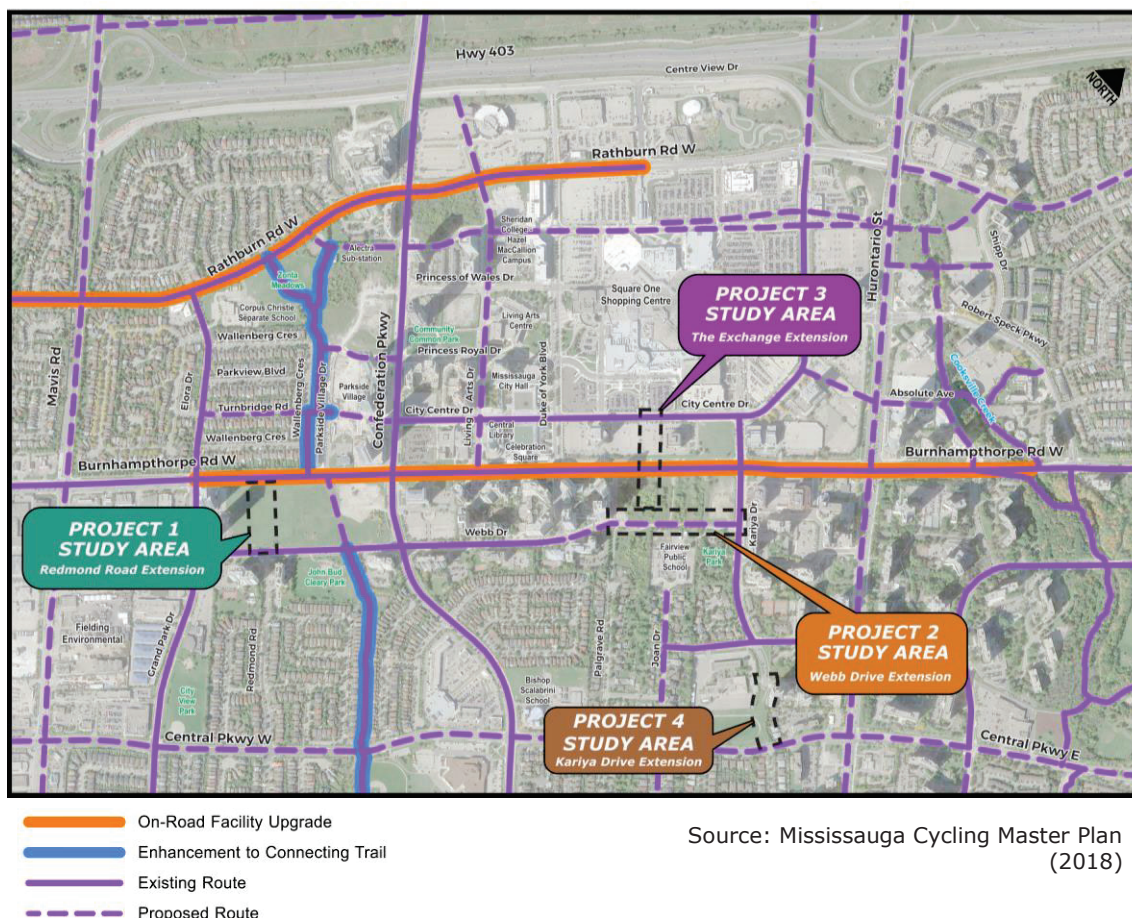
Chapter 2 of the TMP considers the modal split within the City of Mississauga. Currently, the surface parking available in the downtown implies that driving is still a popular choice for travelling to the downtown. The TMP sets a vision for Mississauga's downtown core in 2041; the downtown is envisioned to have a population of 70,000, and to act as a regional centre for employment and businesses. Further, the downtown is envisioned to have streets designed for the safety of pedestrians in both old and new neighbourhoods, and new connections will be made to improved and shorter trips for pedestrians.

2.6 City of Mississauga Cycling Master Plan (2018)

The City of Mississauga Cycling Master Plan ("Cycling Master Plan") guides the vision of cycling within the City of Mississauga through the four following goals: Improve safety for cycling; Build a connected, convenient and comfortable bicycle network; Increase the number of cycling trips in Mississauga; and Foster a culture of cycling. The Cycling Master Plan envisions the City as a place where people choose to cycle for recreation, fitness and daily transportation needs. Cycling is envisioned to become a way of life that supports vibrant, safe and connected communities and enhances the overall health and quality of life of residents and visitors. When implemented, the plan will provide an integrated multi-modal approach to transportation throughout the City.

The City's Cycling Master Plan recommended cycling network was reviewed during the Kariya Drive Class EA Study. The local existing and proposed network is depicted in **Figure 2-3**. The extension of Kariya Drive provides an important opportunity to expand the cycling network. The existing cycling facility on Kariya Drive, north of Elm Drive, will be continued on the extension to connect with both the approved Elm Drive Public School and with a proposed route on Central Parkway West.

Figure 2-3: Existing and Proposed Cycling Network



2.7 Natural Heritage Policy Documents

City of Mississauga Natural Heritage and Urban Forest Strategy, 2014 & City of Mississauga Urban Forest Management Plan, 2014

The City of Mississauga Natural Heritage and Urban Forestry Strategy (“NHUFS”), 2014, guides the management of Mississauga’s Natural Heritage System and Urban Forest within a 20-year framework up to the year 2033. The NHUFS directs natural heritage systems and urban forests within the City of Mississauga to be protected, enhanced, restored and expanded for future generations. The Plan includes the following applicable objectives for municipal operations and capital projects:

- Increase effectiveness of tree preservation and establishment practices;

- ▶ Creation of improved 'plant-able' areas;
- ▶ Avoid last minute retrofitting of designs to try and accommodate trees; and
- ▶ Trees and natural areas in urban settings must, by their very nature, be considered from various perspectives if they are to be successfully integrated into an urban setting.

The Kariya Drive Class EA Study has considered the strategies as outlined in the UFMP. Streetscape design and planting will be detailed during future design phases and will consider urban forestry principles and design criteria. Streetscape design will be integrated with the approved school redevelopment, subject to review and approval by the City of Mississauga.

City of Mississauga Natural Area Survey, 2014

The Natural Areas Survey (NAS) identifies the natural areas system, which includes 144 sites representing the best remaining natural features in the City. The intent of the NAS is to provide the current status of natural areas and updated information on flora, fauna, impacts, boundary changes and management needs.

The study area of the Kariya Drive Class EA Study is not within or adjacent to any identified Natural Area survey.

2.8 Approved Development

The proposed Kariya Drive extension will be entirely situated on Peel District School Board (PDSB) lands currently occupied by an Adult Education Center and recently approved for redevelopment to Elm Drive Public School (SP 18-107-W7). Lands for the Kariya Drive extension right-of-way will be conveyed to the City of Mississauga by PDSB.

3 EXISTING CONDITIONS

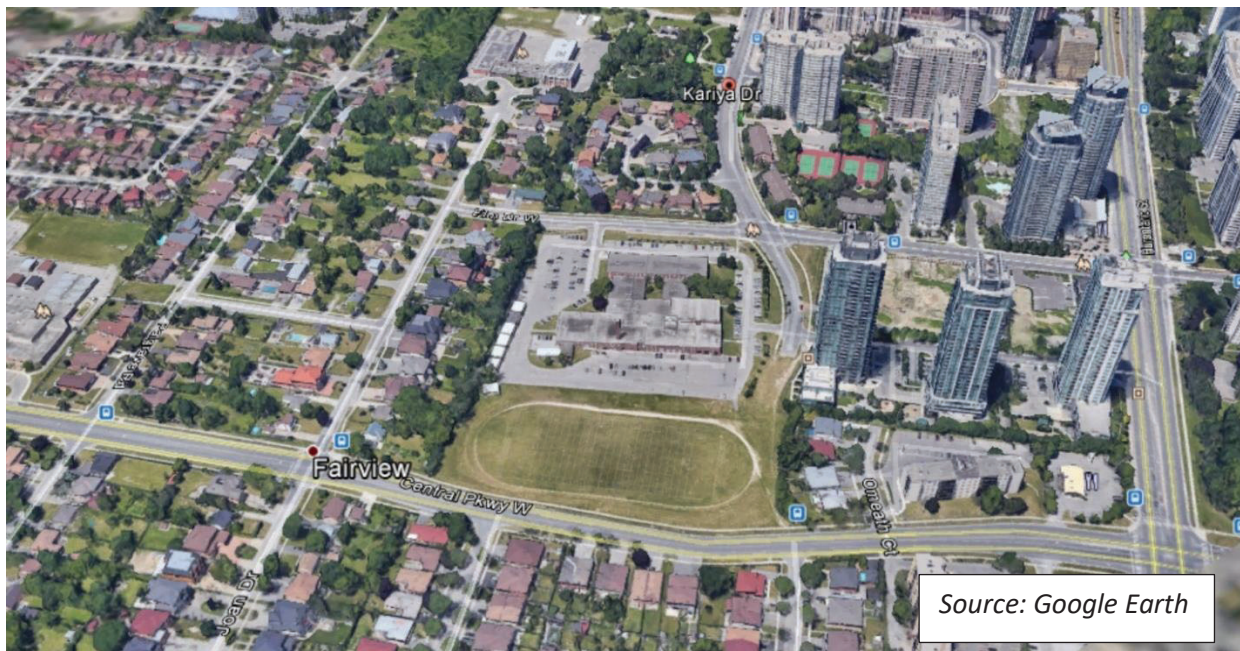
3.1 Land Use

The proposed Kariya Drive extension will be entirely situated on lands currently owned by the Peel District School Board (PDSB). Property for the Kariya Drive extension right-of-way will be conveyed by PDSB to the City.

Land use in the surrounding area contains a mix of low density older residential enclaves (e.g. Walford Court, Achill Crescent) and high-density condominium communities primarily along the east side of Kariya Drive and along Elm Drive, east of Kariya Drive. The existing portion of Kariya Drive, south of Elm Drive, provides for access to two condominium communities.

Figure 3-1 is a Google Earth image depicting the study area. **Figure 3-2** excerpts the approved PDSB Site Plan for the new Elm Drive Public School – it is noted that this excerpt is only provided to illustrate the general layout of the new school site.

Figure 3-1: Kariya Drive Study Area Existing Conditions



3.2 Cultural Heritage Resources

3.2.1 Built Cultural Heritage

A Cultural Heritage Assessment was conducted as part of the four road Class EA studies that the City has undertaken concurrently in the City Centre (Redmond Road, Webb Drive, The Exchange and Kariya Drive), and is on file with the City. The assessment, undertaken by Unterman McPhail and Associates, identified potential built heritage and cultural heritage landscapes within or adjacent to the each of the four study areas.

Based on this work, there are no built heritage resources or cultural heritage landscapes within or adjacent to the Kariya Drive study area.

3.2.2 Archaeology

A Stage 1 Archeological Assessment was conducted as part of the four road Class EA studies that the City has undertaken concurrently in the City Centre (Redmond Road, Webb Drive, The Exchange and Kariya Drive). A copy of the report is provided in **Appendix A** and is on file with the City. The assessment was carried out by Archaeological Research Associates Ltd (ARA) in accordance with the *Ministry of Tourism, Culture and Sport (MTCS) Standards and Guidelines for Consultant Archaeologists* (2011) to:

- ▶ Provide information concerning the geography, history and current land condition of the study area;
- ▶ Determine the presence of known archaeological sites in the study area;
- ▶ Present strategies to mitigate project impacts to such sites, if they are located;
- ▶ Evaluate in detail the archaeological potential of the study area; and
- ▶ Recommend appropriate strategies for Stage 2 archaeological assessment, if some or all of the study area has archaeological potential.

The findings indicate that a portion of the Kariya Drive Class EA study area may have archaeological potential and should be subject to a Stage 2 Archaeological Assessment.

A copy of the Stage 1 Archeological Assessment Report was submitted in October 2019 to the MTCS (now the Ministry of Heritage, Sport, Tourism and Culture Industries), for registration into the Ontario Public Register of Archaeological Reports.

3.3 Natural Environment

A Natural Heritage assessment was conducted as part of the four road Class EA studies that the City has undertaken concurrently in the City Centre (Redmond Road, Webb Drive, The Exchange and Kariya Drive), and is on file with the City. The natural environmental assessment included background review and field studies to characterize existing natural heritage features and functions. For any natural areas present, the assessment included: delineating existing vegetation communities, a botanical survey, general wildlife habitat survey, identification of potential Species at Risk (SAR) habitat, documentation of all incidental wildlife observations including bird calls, and confirmation of no surface drainage features in the four project areas. Field surveys were carried out in July 2019.

The review confirmed that there are no natural environmental features within the Kariya Drive Class EA study area.

3.4 Tree Inventory and Assessment

A Tree Inventory and Assessment was completed as part of the four road Class EA studies that the City has undertaken concurrently in the City Centre (Redmond Road, Webb Drive, The Exchange and Kariya Drive), and is on file with the City. The purpose of the assessment was to identify individual trees that may be impacted by each of the proposed road extensions and document existing health, condition and diameter at breast height (DBH).

The review confirmed that there are no trees within the area proposed for the Kariya Drive extension.

3.5 Source Water Protection

Ministry of Environment, Conservation and Parks' Source Protection Information Atlas was queried to identify any potential sensitivities of the Kariya Drive study area with respect source water protection and potential for drinking water threats. The results are summarized in **Table 3-1**. It is noted that the water supply for the area is from

Lake Ontario and that study area sensitivities and risks are low/none. Therefore, specific Source Water Protection policies are not elaborated upon here.

Table 3-1: Source Water Protection Areas

Vulnerable Areas	Definition	Within Study Area?	Notes
Wellhead Protection Area	Land area around a well where contaminants from land activities can reach and pollute the well water supply.	No	-
Wellhead Protection Area E GUDI)	The area around a well where water quality could be impacted by surface water.	No	-
Intake Protection Zone	The area around an intake pipe in a lake or river that draws in the surface water used to supply the municipal drinking water system. Three zones, from the closest to the farthest from the intake, rate the vulnerability threat.	No	-
Issue Contributing Area	An area where land-based activities contribute to the presence of an unwanted substance in the water source. Activities producing the substance may be prohibited or need to be managed more effectively.	No	-
Significant Groundwater Recharge Area	The areas where precipitation recharges the groundwater source or aquifer.	No	-
Highly Vulnerable Aquifer	An underground water supply, or aquifer, that can easily be contaminated because overlaying soil layers are thin or permeable.	Yes	HVA, Score = 6 (high). Runoff from the proposed Kariya Road will be conveyed via the storm sewer system to an appropriate outlet and therefore will

Vulnerable Areas	Definition	Within Study Area?	Notes
			not permeate to aquifer.
Event Based Area	An area within a watershed where a spill could pollute the drinking water supply because of sanitary sewers, sewage treatment plants or pipelines that are close to rivers, streams or other water bodies.	No	-
Wellhead Protection Area Q1	The WHPA-Q1 was delineated as the combined area that is the cone of influence of a well and the whole of the cones of influence of all other wells that intersect that area	No	-
Wellhead Protection Area Q2	The WHPA-Q2 is defined by the Technical Rules as the WHPA-Q1 area plus any area where a future reduction in recharge may have a measurable effect on the wells inside the WHPA-Q1.	No	-
Intake Protection Zone Q	Corresponds to the drainage area that contributes surface water to an intake, and the area that provides recharge to an aquifer that contributes groundwater discharge to the drainage area. Part VI.7 of the Technical Rules specifies the rules with respect to the delineation of IPZ-Q (Matrix, 2016).	No	-

3.6 Drainage and Stormwater

The study area falls within the Cooksville Creek watershed and is under the jurisdiction of the Credit Valley Conservation Authority.

There are no surface water features or areas regulated under Credit Valley Conservation Authority Regulation 160/06, in the Kariya Drive study area.

A series of rain gardens are located along the north edge of the PDSB property fronting on to Elm Drive. Rain gardens are one of a variety of Low Impact Development (LID) measures designed to reduce stormwater runoff quantity and

flows entering the sewer system and reduce pollutant load of runoff from impervious urban areas.

PDSB has prepared a Stormwater Management Plan for their site plan application that plans for appropriate drainage from the school redevelopment site but does not incorporate the increased impervious area from the proposed Kariya Road extension. Therefore, the City will develop a Stormwater Management Plan for the extension of Kariya Drive during the design phase. Storm runoff from the new section of Kariya Drive will likely be conveyed via catch basin to the existing sewer system. LID measures may be considered during detailed design however, opportunities may be limited by the constrained right-of-way.

3.7 Transportation

3.7.1 Existing Transportation Network

Kariya Drive currently exists as a 2-lane north-south roadway between Burnhamthorpe Road (in the north) and just south of Elm Drive (in the South). The existing road links a variety of land uses including commercial / hotel in the north, older low-density residential enclaves and newer condominium communities and provides access to Kariya Park and the PDSB Adult Education Centre.

Other key transportation links in the immediate area include: Hurontario Street, Central Parkway West, Webb Drive, City collector roads, and Burnhamthorpe Road West.

3.7.2 Traffic and Transportation Assessment

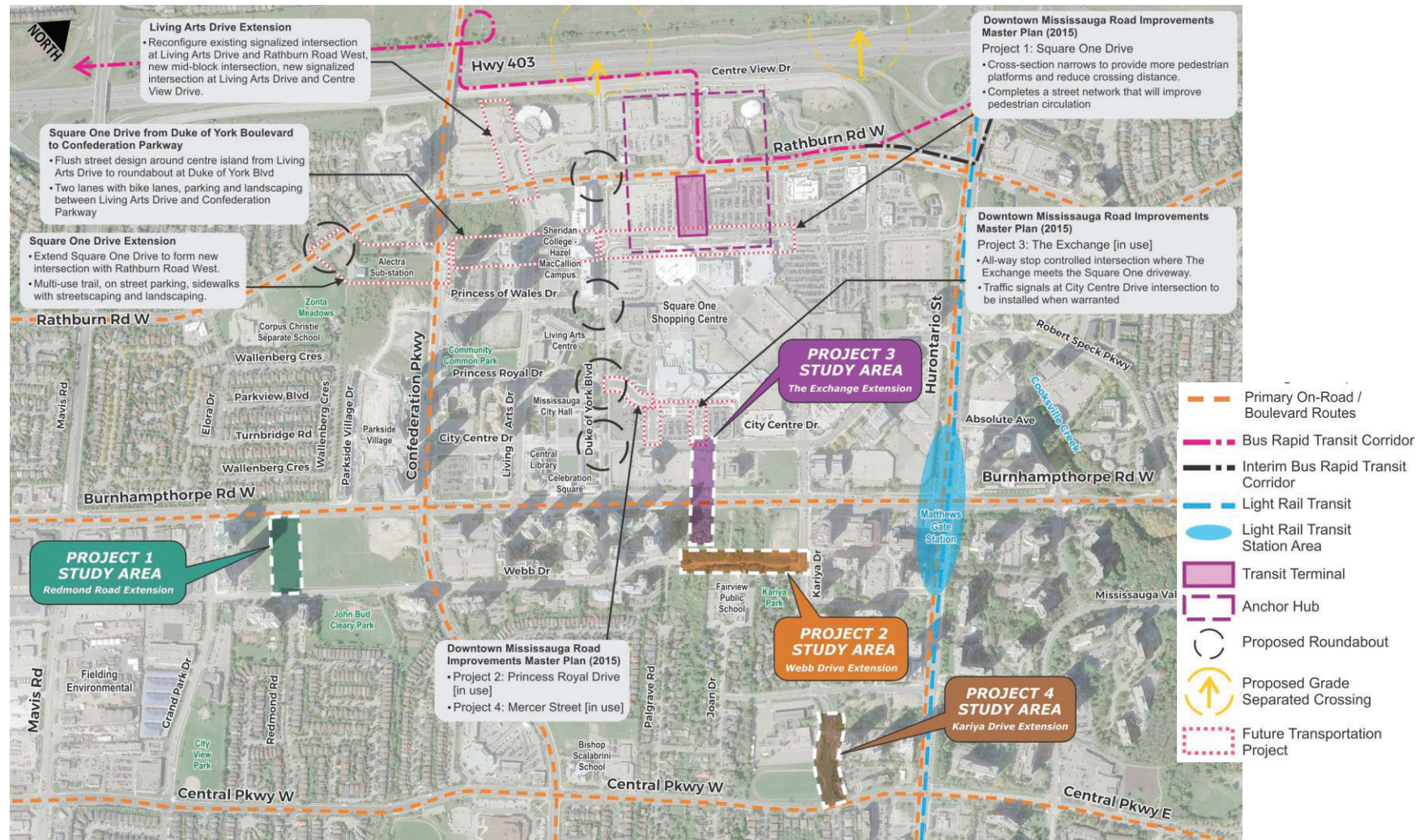
An assessment of existing (2018) traffic conditions was undertaken to assess the overall transportation network performance which incorporated the study areas of all four EA studies (Redmond Road, Webb Drive, The Exchange and Kariya Drive). The micro-simulation assessment included an analysis of existing conditions and operational performance for the area bounded by Elora Drive, Webb Drive / Central Parkway West, Hurontario Street, as well as Burnhamthorpe Road West / City Centre Drive.

Results from the future (2031) traffic analysis indicated that without the Kariya Drive extension from south of Elm Drive to Central Parkway West, north-south traffic could only travel along Joan Drive and Hurontario Street, which will result in heavy delays.

During AM peak hour, the northbound traffic on both parallel corridors is expected to operate at Level of Service (LOS) F with queues backing up to the upstream intersections (e.g. LOS F for the northbound movements at Elm Drive and Joan Drive intersection, and for the northbound left movements along Burnhamthorpe Road).

Traffic modeling indicates that the proposed Kariya Drive extension would enhance north-south minor collector road access and connectivity within the community, considering existing neighbourhoods, new condominium communities and the new Elm Drive Public School.

Figure 3-3: Transportation Network



Sources: Schedule 6 – Long Term Transit Network, Schedule 7 – Long Term Cycling Routes, Mississauga Official Plan (2019)

3.8 Problems and Opportunities

Based on a review of the planning context and policy framework and the existing traffic conditions, safety issues and multi-modal transportation deficiencies, the following problems and opportunities have been identified:

- ▶ There is an opportunity for the City to protect a right-of-way for the future at extension of Kariya Drive i.e. Completion of about 150 m of new road to connect the current terminus south of Elm Drive, with Central Parkway West;
- ▶ The extension of Kariya Drive will contribute to the key objectives of the City's Official Plan related to creating complete communities that have a compact urban form, are walkable and provide convenient access to a variety of land uses and public transit;
- ▶ A new roadway will provide additional routing in the downtown and make for more pedestrian-friendly environment;
- ▶ The extended roadway will integrate with the approved school redevelopment and with the planned community park at Elm Drive;
- ▶ There is an opportunity to expand MiWay service on Kariya Drive;
- ▶ The design will create safe pedestrian and cycling zones for all users, and in special consideration of school children; and
- ▶ The design will plan for a smooth transition between the on-road cycling lanes to the north of Elm Drive, and the proposed multi-use trail south of Elm Drive.

Problem and Opportunity Statement:

The City has an opportunity to protect a road right-of-way for a future extension of Kariya Drive as part of the Peel District School Board's proposed redevelopment of the Adult Education Centre.

The extension of Kariya Drive allows the City of Mississauga to continue to enhance the downtown collector road system, contributing to a finer-grid street network and expanding opportunities for walking and cycling. A context-sensitive design approach will ensure that the new road fits well with its surroundings including the new school site, existing low-density neighbourhoods and new high-density condominium blocks.

The Kariya Drive extension will support the City's vision for Downtown Mississauga that includes: a high-density, dynamic urban core with smaller block sizes, fine-

grained street network with a high-quality public realm and a range of transportation choices.

4 PLANNING ALTERNATIVES

Phase 1 of the Municipal Class EA process involves the identification of the transportation problems and opportunities to be addressed by the study and Phase 2 involves the identification and evaluation of a range of possible solutions or 'planning alternatives'.

4.1 Alternative Planning Solutions

The following Alternative Solutions are being considered to address the Problems and Opportunities:

1. Do Nothing: Maintain existing transportation system within the study area i.e. new development would require an internal road network to connect with other collector or arterial roads.
2. Manage Transportation Demand: Improve access within the downtown by: discouraging single-occupant vehicles and encouraging carpooling; shifting travel demand to off-peak hours; and encouraging walking, cycling and transit use.
3. Improve Other North-South Routes: Upgrade parallel roads to meet transportation needs.
4. Extend Kariya Drive: Extend Kariya Drive as a 2-lane road a distance of approximately 150 m, from its existing terminus south of Elm Drive to a new intersection at Central Parkway West.

4.2 Evaluation of Planning Solutions

The alternative planning solutions were assessed in their ability to reasonably address the problems and opportunities. Criteria were developed to guide the assessment process so that transportation planning, technical and environmental (socio-economic, community and cultural / heritage) conditions were all factored into the recommendation.

The assessment of alternatives employed a reasoned argument approach which assesses the potential impacts of each alternative and then compares the relative significance of the impacts among the alternatives to select the recommended

solution. A detailed assessment of alternatives is provided in **Table 4-1**. A summary is provided in **Table 4-2**.

4.3 Preferred Planning Solution

Based on the results of the evaluation, Alternative 4, Extension of Kariya Drive, is preferred because it fully addresses the Problems and Opportunities by:

- ▶ Supporting the creation of an urban neighbourhood environment that meets planning objectives for multi-modal mobility;
- ▶ Expanding the minor collector road network to provide enhanced connectivity for all modes of travel;
- ▶ Providing redundancy in the road network for all vehicles; and
- ▶ Creating smaller, more walkable blocks that enhance pedestrian access to transit.

Table 4-1 illustrates that Alternative 1 does not address any of the Problems and Opportunities. Alternatives 2 and 3 only partially address the Problems and Opportunities and do not contribute to a fine-grained street network that supports community growth, improved pedestrian options and access to transit.

Table 4-1: Assessment of Alternative Planning Solutions


Evaluation Criteria	Alternative 1 Do Nothing	Alternative 2 Manage Transportation Demand	Alternative 3 Upgrade Parallel Roads	Alternative 4 Extend Kariya Drive
Planning and Transportation				
Provincial and Municipal Planning Objectives <ul style="list-style-type: none">- Consistent with Growth Plan for the Greater Golden Horseshoe- Satisfies the goals and objectives of the City’s Official Plan- Supports planned / approved development	<ul style="list-style-type: none">- Does not reflect Provincial policies to develop compact and multi-modal communities- Does not reflect City Official Plan policies for a fine-grained multi-modal transportation network- Does not support the growing community and new Elm Drive Public School	<ul style="list-style-type: none">- Consistent with Provincial policies to promote active transportation and transit but does not support compact community development- Currently being implemented through City policies- Does not address problems and opportunities within the study area	<ul style="list-style-type: none">- Would provide additional north-south traffic capacity in other corridors- Does not reflect City Official Plan policies for a fine-grained multi-modal transportation network- Does not address local transportation needs or improve network connectivity- Widening other roads may not be consistent with City collector road policies or Regional arterial road policies.	<ul style="list-style-type: none">- Directly supports development of compact, multi-modal communities and new Elm Drive Public School- Creates smaller urban blocks that encourage walking to access local transit network- Fully addresses City’ objectives for the study area- Fully integrates with approved PDSB development
Pedestrian and Cycling Accommodation <ul style="list-style-type: none">- Provides safe and comfortable pedestrian access to area amenities.- Supports active transportation (walking and cycling).	<ul style="list-style-type: none">- Does not provide an opportunity to enhance pedestrian environment within the study area- Does not support development of multi-modal transportation system for future land uses	<ul style="list-style-type: none">- Does not provide an opportunity to enhance pedestrian environment within the study area- Somewhat supports development of multi-modal transportation system for future land uses	<ul style="list-style-type: none">- Does not provide an opportunity to enhance pedestrian environment within the study area- Supports development of multi-modal transportation system for future land uses, but not within the study area	<ul style="list-style-type: none">- Provides opportunity to enhance the pedestrian environment within the study area- Provides safe and comfortable pedestrian environment within planned mixed-use community- Creates new pedestrian connections
Transit <ul style="list-style-type: none">- Facilitates improved integration of transit services into the existing and planned system.	<ul style="list-style-type: none">- Does not enhance access to transit services in the downtown	<ul style="list-style-type: none">- Facilitates overall improved integration of transit services-	<ul style="list-style-type: none">- Potential for limited improvements to the integration of transit serviced in the overall transportation system	<ul style="list-style-type: none">- Improves pedestrian access to transit network from community- Transit service is expected to incorporate new segment of Kariya Drive
Network Connectivity <ul style="list-style-type: none">- Facilitates improved access to, from and within downtown Mississauga	<ul style="list-style-type: none">- Does not provide improved multi-modal access in the downtown	<ul style="list-style-type: none">- May result in some shift in travel demand to improve road operations.- Does not address the primary transportation problem of the need for a finer grid collector road network- Does not provide alternative multi-modal routing and access in the downtown	<ul style="list-style-type: none">- May provide modest improvement in network capacity in short-term- Does not address the primary transportation opportunity for a finer grid collector road network within the study area- Does not provide alternative multi-modal routing and access in the downtown	<ul style="list-style-type: none">- Provides alternative multi-modal routing and access in the downtown- Offers redundancy in the road network to improve access for pedestrians and vehicles

Evaluation Criteria	Alternative 1 Do Nothing	Alternative 2 Manage Transportation Demand	Alternative 3 Upgrade Parallel Roads	Alternative 4 Extend Kariya Drive
Emergency Response <ul style="list-style-type: none">- Provides opportunity to improve response time and / or emergency service vehicle access	<ul style="list-style-type: none">- Does not provide opportunity to improve emergency vehicle access and / or response time	<ul style="list-style-type: none">- If TDM achieves a slight reduction in auto use, there may be some improvements to network operations and associated emergency vehicle response time in the short-term- No change to existing vehicle access – no opportunity to improve access	<ul style="list-style-type: none">- No change to existing vehicle access – no opportunity to improve access in the study area	<ul style="list-style-type: none">- Offers improved access and routing for emergency response vehicles
Socio-Economic Environment				
Public Realm <ul style="list-style-type: none">- Provides streetscape enhancement opportunities- Creates smaller urban blocks- Supports a more dynamic urban core	<ul style="list-style-type: none">- No opportunity to create new public space	<ul style="list-style-type: none">- Improvements to transit ridership and other modes of transportation assist in supporting a dynamic downtown core however, does not address needs and opportunities within the study area	<ul style="list-style-type: none">- Does not provide opportunity to enhance the existing public realm, create smaller urban blocks and/or support a dynamic urban environment within the study area	<ul style="list-style-type: none">- Consistent with City planning policies to create a finer-grained street network- Addresses anticipated transportation needs- Improves network connectivity for all users- Improves road operations and safety- Enhances access to transit and downtown walkability
Residential / Business Property / Operations <ul style="list-style-type: none">- Requires acquisition of private property- Changes in access- Supports local commerce	<ul style="list-style-type: none">- No property required.- Does not support local commerce, does not provide opportunity to improve local access / businesses	<ul style="list-style-type: none">- No property required.- Limited opportunity to support local commerce, does not provide opportunity to improve local access/businesses	<ul style="list-style-type: none">- Potentially significant property impacts along other corridors- Does not address problems and opportunities within the study area- Does not meet the multi-modal mobility needs of the community	<ul style="list-style-type: none">- Potential for very minor rear yard impacts to one property.
Accessibility <ul style="list-style-type: none">- Provides opportunity to improve accessibility and reduce barriers in the built environment- Facilitates implementation of AODA / City accessibility design guidelines	<ul style="list-style-type: none">- No opportunity to improve accessibility and accommodate AODA / City Guidelines	<ul style="list-style-type: none">- Limited opportunity to improve accessibility: measures are policy based rather than actual implementation within the study area	<ul style="list-style-type: none">- Does not provide opportunities for improvements within the study area. Does not address study area accessibility needs	<ul style="list-style-type: none">- Improves accessibility within the community- All facilities will be developed to meet AODA / City Guidelines

Evaluation Criteria	Alternative 1 Do Nothing	Alternative 2 Manage Transportation Demand	Alternative 3 Upgrade Parallel Roads	Alternative 4 Extend Kariya Drive
Cultural Heritage				
Archaeology <ul style="list-style-type: none">- Impacts areas identified as having archaeological potential	<ul style="list-style-type: none">- No potential archaeological impacts	<ul style="list-style-type: none">- No potential archaeological impacts	<ul style="list-style-type: none">- Potential heritage impacts, depending on road and features present	<ul style="list-style-type: none">- Stage 2 Archaeological Assessment is required to address archaeological potential
Built Cultural Heritage <ul style="list-style-type: none">- Impacts to designated / listed heritage resources- Impacts to potential heritage resources	<ul style="list-style-type: none">- No Built Heritage features identified	<ul style="list-style-type: none">- No Built Heritage features identified	<ul style="list-style-type: none">- No Built Heritage features identified	<ul style="list-style-type: none">- No Built Heritage features identified
Natural Environment				
Climate Change / Sustainability <ul style="list-style-type: none">- Ability to increase resilience to climate change within study area- Supportive of sustainable transportation modes	<ul style="list-style-type: none">- No change	<ul style="list-style-type: none">- Supports sustainable growth through policies that encourage behavioural shifts in reducing single occupant vehicle use	<ul style="list-style-type: none">- Does not address opportunities within the study area- No opportunity to provide sustainable modes of transportation in the study area	<ul style="list-style-type: none">- Opportunity to improve resilience of the study area through appropriate stormwater management measures- Pedestrian facilities to encourage walking for access nearby transit
Vegetation / Trees <ul style="list-style-type: none">- Potential impact to vegetation communities- Potential impacts to individual trees	<ul style="list-style-type: none">- None	<ul style="list-style-type: none">- No natural environmental features are present.- No trees are present	<ul style="list-style-type: none">- Low potential for impacts, depending on road and features present	<ul style="list-style-type: none">- No natural environmental features are present.- No trees are present
Wildlife <ul style="list-style-type: none">- Potential impact to wildlife and habitat.		<ul style="list-style-type: none">- None	<ul style="list-style-type: none">- Low potential for impacts, depending on road and features present	<ul style="list-style-type: none">- No sensitive wildlife habitat present
Technical				
Construction <ul style="list-style-type: none">- Disruption to existing traffic and property access- Potential to coordinate with other initiatives	<ul style="list-style-type: none">- No disruption	<ul style="list-style-type: none">- No disruption	<ul style="list-style-type: none">- Likely temporary disruption to traffic, private property and businesses during construction	<ul style="list-style-type: none">- Minimal impacts since the road will be integrated with the PDSB school site- Detailed design should be coordinated with PDSB

Evaluation Criteria	Alternative 1 Do Nothing	Alternative 2 Manage Transportation Demand	Alternative 3 Upgrade Parallel Roads	Alternative 4 Extend Kariya Drive
Utilities - Potential impacts to utilities	- No impacts to existing utilities	- No impacts to existing utilities	- Anticipated impacts to utilities on other corridors, if they are widened	- Opportunity to integrates with planned utilities within PDSB Site Plan
Costs - Relative costs for comparison purposes	No direct cost	\$	\$\$\$	\$\$
Addresses Project Problem and Opportunity Statement	No	No	No	Yes
Evaluation Result	Not Carried Forward	Already Being Implemented Through City Policies	Not Carried Forward	Carried Forward

Table 4-2: Alternative Solutions Evaluation Summary

	Alternative 1	Alternative 2	Alternative 3	Alternative 4
Category	Do Nothing	Manage Transportation Demand	Upgrade Parallel Roads	Extend Kariya Drive
 Transportation & Technical	<ul style="list-style-type: none"> - Does not address Problems and Opportunities - Not consistent with City planning policies to create a finer-grained street network - Does not improve network connectivity 	<ul style="list-style-type: none"> - May result in some shift in travel demand to improve road operations. - Does not address the primary transportation problem of the need for a finer grid collector road network 	<ul style="list-style-type: none"> - Widening Hurontario Street not feasible due to planned high-order transit - Not consistent with City planning policies to create a finer-grained street network - Does not address local transportation needs or improve network connectivity 	<ul style="list-style-type: none"> - Consistent with City planning policies to create a finer-grained street network - Addresses anticipated transportation needs - Improves network connectivity for all users - Improves road operations and safety - Enhances access to transit and downtown walkability
 Socio-Economic Environment	<ul style="list-style-type: none"> - No property required - Does not create access to new community or support mixed-use development - No opportunity to improve walkability and enhance access to transit 	<ul style="list-style-type: none"> - No property required - Although supportive of transit, cycling and pedestrian activities, this does not provide the specific infrastructure needed within the study area to support or enhance these forms of transportation. 	<ul style="list-style-type: none"> - Potentially significant property impacts along other corridors - Does not address the opportunities within the study area - Does not meet the multi-modal mobility needs of the community 	<ul style="list-style-type: none"> - Supports mobility for all modes within local community - Opportunity to provide enhanced access to Peel District School Board proposed redevelopment of the existing Adult Learning Centre - Provides for off-road cycling in school zone - Provides for possible future expansion of MiWay
Natural Environment	<ul style="list-style-type: none"> - Not applicable, no natural environmental features are present. 	<ul style="list-style-type: none"> - Not applicable, no natural environmental features are present. 	<ul style="list-style-type: none"> - Not applicable, no natural environmental features are present. 	<ul style="list-style-type: none"> - Not applicable, no natural environmental features are present. - Provides sustainable transportation choices to reduce vehicle use.
 Cultural Environment	<ul style="list-style-type: none"> - No potential archaeological impacts - No cultural heritage resources identified 	<ul style="list-style-type: none"> - No potential archaeological impacts - No cultural heritage resources identified 	<ul style="list-style-type: none"> - Other corridors would require assessment. 	<ul style="list-style-type: none"> - Some areas will be subject to Stage 2 Archaeological Assessment - No cultural heritage resources identified
Evaluation Result	Not Preferred	Already Being Implemented Through City Policies	Not Preferred	Preferred

4.4 Future Transportation Conditions

Traffic modeling indicates that the proposed Kariya Drive extension would enhance north-south access and connectivity within the community, considering existing neighbourhoods, new condominium communities and the new school.

MiWay Transit currently operates on the road network around the study area. MiWay will have the flexibility to extend transit service on Kariya Drive and connect with Central Parkway West.

The extension of Kariya Drive provides an important opportunity to expand the cycling network. The existing cycling facility on Kariya Drive, north of Elm Drive, will be continued on the new section of road to connect with both the new Elm Drive Public School and with a proposed route on Central Parkway West.

4.5 Road Design Concept

A design concept was developed for the Preferred Planning Solution to extend Kariya Drive by about 150 m, from its existing terminus located south of Elm Drive, to a new intersection at Central Parkway West. The design concept was developed for illustrative purposes only and is subject to refinement during future preliminary and detailed design phases.

Figure 4-1 depicts the proposed typical road cross-section, which is based on the City's Standard City Centre Cross-Section. **Figure 4-4** depicts the road alignment concept.

The following design aspects will be of particular interest:

- ▶ The use of the City of Mississauga Standard City Centre Road Cross-Section will ensure appropriate space is available for underground utilities, multi-use trail and sidewalk. However, some details of the road cross-section may be subject to minor adjustments during the design phase; and
- ▶ Traffic operations including the new intersection of Central Parkway West and Kariya Drive.

Streetscape is conceptual only. Green areas are identified for future streetscape design and do not imply the presence of sod. Location of streetscape is subject to further design and integration with the school site, utilities and municipal services.

4.5.1 Potential Property Requirements

Based on the concept design, it appears that one residential property at 3470 Omeath Court may be directly impacted. A very small portion of the backyard (~15 m²) may be required for the daylighting triangle for the intersection of Central Parkway West and Kariya Drive. The work would involve regrading and replacement of the fence (replacement as a noise barrier). It may be possible to minimize or avoid the property through the design process. Confirming the potential for property impacts, and the provision and design of a noise barrier, as well as engagement of the property owner will be a priority during the preliminary design phase.

Figure 4-1: Kariya Drive Typical Cross-Section

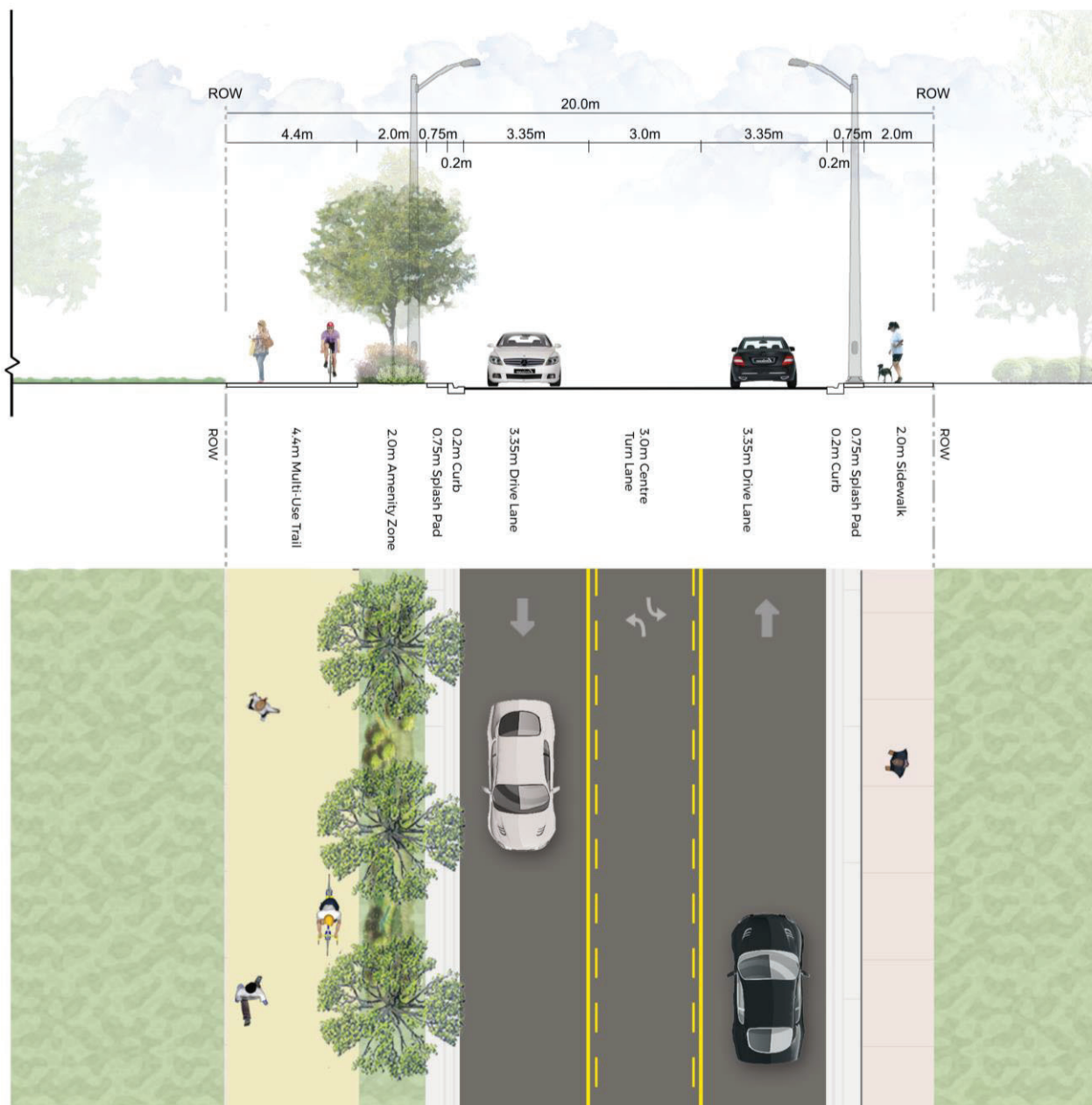
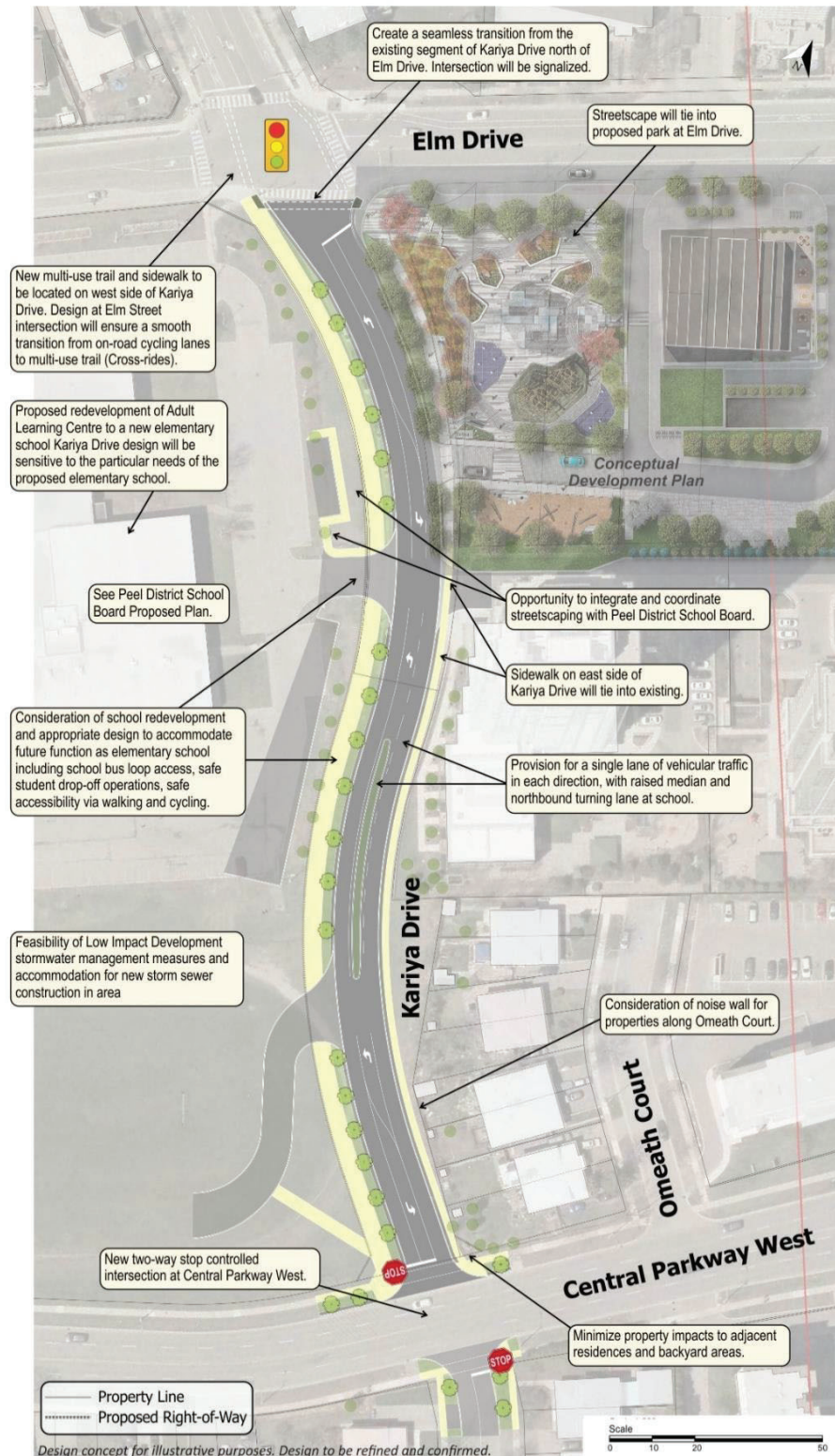


Figure 4-2: Kariya Drive Design Concept

Note: Streetscape depiction is conceptual only. Green areas are identified for future streetscape design and do not imply the presence of sod. Location of streetscape is subject to further design and integration with the school site, utilities and municipal services.



5 CONSULTATION

5.1 Key Points of Contact

External agencies, utilities, emergency service providers, and residents and business owners were contacted directly at key points during the study and requested to provide input to the study and feedback on the decision-making process. The key points of contact are listed in **Table 5-1**.

A direct mailing list of residents and businesses, within the defined catchment area, agencies and utilities was developed at the outset of the study. The catchment area for property owners was defined as approximately 300 m on either side of Kariya Drive within the study area.

Project notices for all four downtown Mississauga road extension Class EA studies (i.e. Redmond Road, Kariya Drive, Webb Drive and The Exchange) were coordinated and sent concurrently. As such the catchment areas overlapped and the mailing list consolidated, as appropriate. The mailing list continued to be updated based on feedback received through the study.

Members of the general public were made aware of the study through notifications in the local newspapers and invited to contact the project team to join the project mailing list. Members of the public requesting to be on the mailing list received direct notification of subsequent study milestones at the key points of contact listed in **Table 5-1**.

A dedicated website and email address were established through the City of Mississauga's website at the outset of the study:

<http://www.mississauga.ca/portal/residents/rwek-ea-studies>

Information about Kariya Drive and the other three downtown Class EA studies was posted to this website and updated through the study with Notices of Study Commencement, Public Information Centre and Study Completion.

Various Public Information Centre (PIC) materials were made available on the website (e.g. Notices, display material and comment sheets). All notices and study materials contained the dedicated project team email address to facilitate direct contact from interested members of the public.

The potential need for formal Indigenous Community engagement was explored with the Ministry of Environment, Conservation and Parks (MECP). In correspondence dated January 18, 2019, MECP confirmed that, given the urban downtown setting, the absence of natural features and watercourses, Indigenous Communities were unlikely to have an interest in the study and direct outreach was not required.

Table 5-1: Key Points of Contact

Date	Notification	Purpose
Notice of Study Commencement December 4, 2018	<ul style="list-style-type: none"> - Letters sent to property owners / mailing list – December 4, 2018 - City project website – December 4, 2018 - The Mississauga News – December 6 and December 13, 2018 - Letters and Response Forms sent to agencies and utilities – December 10, 2018 - Letter and Streamlined EA Project Information Form sent to MECP – December 12, 2018 	To introduce and invite participation in the study and to request any preliminary comments or pertinent information.
Public Information Centre June 12, 2019	<ul style="list-style-type: none"> - Postcard notices sent to property owners / mailing list – May 27, 2019 - City project website – May 31, 2019 - City website – June 3, 2019 - The Mississauga News – June 6, 2019 - PIC Display materials posted on City website on June 13, 2019 	To notify and invite interested parties to attend the Public Information Centre on June 12, 2019 to review information and provide input regarding: the problem and opportunities being addressed, the collection of background information, the evaluation of planning alternatives and early design concepts.
Notice of Study Completion July 16, 2020	<ul style="list-style-type: none"> - Notices sent to property owners / mailing list – July 16, 2020 - Notices sent to agencies and utilities – July 16, 2020 - City project website – July 16, 2020 - The Mississauga News – July 16, 2020 	To announce the completion of the Class EA Study and notify interested parties of the 45 calendar-day review period for the Project File.

5.2 Agency Consultation

The list of technical agencies was assembled based on previous City of Mississauga Class Environmental Assessment studies and Ministry of the Environment, Conservation and Parks (MECP) Government Review Team (GRT) list.

External ‘agencies’ (including regulatory / review agencies, utilities and emergency service providers) were first notified of this Class EA Study through written correspondence on December 10, 2018 which included a copy of the Notice of Study Commencement and a Response Form (a copy of the Notice and letter are provided in **Appendix B**). These agencies were:

- ▶ Provincial
 - Ministry of the Environment, Conservation and Parks
 - Ministry of Natural Resources and Forestry
 - Ministry of Heritage, Sport, Tourism and Culture Industries (formerly Ministry of Tourism, Culture and Sport)
 - Ministry of Municipal Affairs and Housing
 - Ontario Heritage Trust
 - Metrolinx
 - Credit Valley Conservation (CVC)
- ▶ Municipal
 - Mississauga Accessibility Advisory Committee
 - Mississauga Cycling Advisory Committee
 - Mississauga Board of Trade
 - Dufferin-Peel District Catholic School Board
 - Region of Peel District School Board
 - Region of Peel Student Transportation
 - Region of Peel Public Works
 - Region of Peel Public Health
 - Region of Peel Paramedic Services
 - Region of Peel Police - Road Safety Services
 - Mississauga Fire and Emergency Services

- ▶ Elected Officials
 - Member of Provincial Parliament – Mississauga Centre
 - Member of Provincial Parliament – Mississauga East Cooksville
- ▶ Utilities
 - Hydro One Networks Inc.
 - Enbridge Gas Distribution Inc.
 - Rogers Communication Inc.
 - Alectra Utilities
 - Bell Canada

A summary of agency comments received throughout the study and course of action taken by the Project Team, as appropriate, is provided in **Table 5-2**. Copies of correspondence with agencies are included in **Appendix B**.

Table 5-2: Agency Comments

Agency Comment	Course of Action
Ministry of Natural Resources and Forestry Email dated: January 2, 2019 I have received your letter regarding four proposed road extensions in Mississauga. There was no attached notice with a key plan. Please provide.	Notice of Commencement was provided via email.
Ministry of Natural Resources and Forestry Email dated: January 3, 2019 Natural areas to be affected will need to be searched for Butternut trees of all sizes, including seedlings, within 25 metres from proposed works. The woodland areas to be affected will need to be outlined and, if they are at least 0.5 ha averaging at least 30 metres in width with some native oak or maple species, assessed for potential as habitat for endangered bat species (Little Brown Myotis, Northern Myotis, Tri-coloured bat).	An assessment of the natural environment was completed as part of this study.

Agency Comment	Course of Action
Ministry of the Environment, Conservation and Parks Letter dated: January 18, 2019 Response to Notice of Commencement providing guidance on consultation with Indigenous Communities.	Given the nature of this project and the existing land uses in the area, separate notification for Indigenous Communities was not required.
Ministry of Natural Resources and Forestry Emailed dated: June 6, 2019 We have received the Notice of Public Information Centre for this project. If you have any questions regarding natural features / systems or impacts on them, please let us know.	No action required.
Region of Peel Public Health Email dated: June 12, 2019 Thank you for sharing the notice of PIC for the environmental assessment process for Redmond Road, Webb Drive, The Exchange and Kariya Drive. We would like to request digital copies of information being shared at tonight's PIC, including the presentation, so that we may review and provide comments.	PIC materials were provided via email on June 17, 2019.

5.3 Public Information Centre

A Public Information Centre (PIC) was held on June 12, 2019 from 5:30 pm to 7:30 pm in the Great Hall at the Mississauga Civic Centre, located at 300 City Centre Drive in Mississauga.

The PIC was an open house format. A presentation to introduce the study was scheduled from 5:30 pm to 5:45 pm, however, due to low attendance at 5:30 pm, the presentation was cancelled.

The purpose of the PIC was to provide stakeholders and interested members of the public with an opportunity to view study information including project background, the Municipal Class EA process, planning and policy context, assessment and evaluation of alternative planning solutions and the selection of a preliminary preferred solution. A design concept was presented of the preliminary preferred solution, for illustrative purposes.

Twelve people signed in at the PIC. Attendees included local residents / property owners, stakeholders, and staff from the Peel District School Board and City of Mississauga. The PIC was not attended by any Elected Officials or City staff outside of the Project Team. The PIC materials were made available on the City's website the day after the PIC.

One comment was received via email the day of the PIC. No additional comments were received during the comment period, ending July 5, 2019. The written comment that was received is provided verbatim in **Table 5-3**, along with the how the feedback was considered in this study. Sensitive information such as names and contact information have been removed.

Table 5-3: Public Feedback Received at the Public Information Centre

Comments	How the feedback has been considered in this study
<p>We are against the Kariya Drive Extension. We have seen added traffic congestion and congestion on Central Parkway over the past years. Drivers speed through between intersections of Hurontario Street & Central Parkway and Joan Drive and Central Parkway. This makes it extremely dangerous for kids playing or anyone even trying to cross the street to go play or jog in the Britannia field. It is hard to pull out of our driveways or cross into incoming traffic.</p> <p>Extending Kariya Drive will disrupt our neighbourhood and quality of life. There is already too much crime and drug dealing going on at the &Co bar on Kariya across the Kariya Park. Opening extending this drive will just increase traffic, noise, and crime on a 24-hour basis.</p> <p>I suggest using our tax dollars to at least keep the Britannia High School field clean and brought back to life. Currently the City of Mississauga fails to maintain the field. It is rarely mowed, and if it is it is never raked or cleaned.</p>	<p>The proposed road way extension is consistent with the City of Mississauga Official Plan policies that seek to create a finer-grid street network that improves accessibility and walkability in the downtown, reduces congestion overall, and expands opportunities for active transportation (e.g. cycling), and encourages greater use of transit. These aspects are viewed by the City as complementary to the existing community, proposed Elm Drive Public School, new condominium communities and new parks in the area.</p> <p>The proposed design of the Kariya Drive extension is being coordinated with the Peel District School Board to ensure a safe streetscape is created. 'Crime Prevention Through Environmental Design' principles will be considered to enhance personal safety through lighting and landscaping. Other aspects of community safety will continue to be led by enforcement organizations including Peel Regional Police and community organizations, such as Safe City Mississauga.</p>

Comments	How the feedback has been considered in this study
<p>Making this park clean and creating a walkway from Central Parkway through to Elm Drive, would greatly increase our quality of life. We need the field brought back to it's former glory, in order to allow our children to play in a clean and safe environment, we can walk our dogs peacefully, we can go jogging and cycle, play soccer, sunbathe or skate in the winter, etc.</p> <p>[REDACTED]</p> <p>[REDACTED] STAND FIRMLY AGAINST ANY ROAD EXTENSION OF KARIYA DRIVE.</p>	

5.4 Stakeholder Consultation

The proposed Kariya Drive extension is located adjacent to the approved future Elm Drive Public School on Kariya Drive. The extension of Kariya Drive has been previously conceptualized as part of the Elm Drive Public School site plan. As such, the Peel District School Board has a direct stake in the planning for Kariya Drive.

A meeting was held with representatives of the Peel District School Board on May 30, 2019. Minutes of the meeting are on file with City staff. A summary of the meeting is provided below:

- ▶ A meeting was held with Peel District School Board representatives on May 30, 2019, at the City of Mississauga, 201 City Centre Drive.
- ▶ The purpose of the meeting was to introduce the study, review early design concepts, discuss stakeholder questions and concerns, and review next steps.
- ▶ During the meeting, it was noted that the design concept was developed to accommodate future function as Elm Drive Public School access, including school bus loop access, safe student drop-off operations, and accessibility via walking and cycling.
- ▶ Following the meeting, the Peel District School Board provided display material for the Public Information Centre (PIC), held on June 12, 2019. The PIC displays included exterior elevations and floor plans for the proposed Elm Drive Public School.

- ▶ The Stormwater Management Report for the Elm Drive Public School was also provided to the City to inform future design decisions. No additional comments about the study process or design concept were received.

5.5 Directly Affected Property Owner

The City of Mississauga has undertaken direct outreach with the potentially affected property owner on Omeath Court and will continue correspondence during the design phase.

6 POTENTIAL IMPACTS, MITIGATION MEASURES AND COMMITMENTS TO FURTHER WORK

6.1 Integration with Peel District School Board Development

Consideration will be given for the Peel District School Board design and construction of the new Elm Drive Public School and the City of Mississauga detailed design and construction of Kariya Drive. At this time, it is not known to what extent these activities may be coordinated.

Property conveyance for the Kariya Drive right-of-way will be finalized following the completion of Kariya Drive Class EA Study.

Opportunities for streetscape design within the narrow Kariya Drive right-of-way are limited. It is recommended that the landscape plan for the Elm Drive Public School include some consideration of the relationship of the school site to the street, including the multi-use trail planned for the west side of Kariya Drive.

6.2 Drainage and Stormwater Management

The stormwater management design will appropriately manage water quality and quantity per applicable City of Mississauga and Credit Valley Conservation design criteria. A new storm sewer system expansion is already being planned for the area. It is expected that Kariya Drive road runoff will be conveyed via catch basin to the new sewer.

6.3 Utilities

The City will engage with utility companies to determine needs and coordinate design and installation. Ideally this will be done in coordination with the school redevelopment.

6.4 Archaeology

A portion of the proposed Kariya Drive right-of-way that is considered previously undisturbed will require a Stage 2 Archaeological Assessment. Undisturbed areas extend onto areas approved for the new school building. It is recommended that the Stage 2 Archaeological Assessment work be coordinated with PDSB.

The southeastern section of the Kariya Drive extension must be assessed using the test pit survey method. A survey interval of 5 m will be required due to the proximity of the lands to the identified features of archaeological potential. Given the likelihood that the remaining areas of potential have been impacted by past construction activities, a combination of visual inspection and test pit survey should be utilized to confirm the extents of any disturbed areas. This will allow for the empirical evaluation of the integrity of the soils and the depth of any past disturbances.

6.5 Noise

A noise assessment was conducted in support of the Kariya Drive Class EA Study (**Appendix C**). There are a number of noise sensitive areas (NSAs) located along Omeath Court (i.e. private homes) where the backyards are adjacent to the open field associated with the Peel District Adult Education Centre the proposed Kariya Drive right-of-way. A noise assessment was conducted to evaluate the potential increase in noise level for the NSAs as a result of the proposed Kariya Drive extension. This technical work is based on the Ministry of Transportation (MTO) / Ministry of the Environment, Conservation and Parks (MECP) Noise Protocol, as well as the City of Mississauga's Noise Attenuation Policy (2011).

Noise levels were calculated using STAMSON 5.0 program for the selected receiver locations for the future (2031) with and without roadway extension scenarios. All the representative receivers are warranted for the consideration of noise mitigation, i.e., the increase in noise level as a result of the proposed roadway improvement is 5 dBA or higher, or the absolute noise level is 60 dBA or higher.

The implementation length of noise wall is recommended to protect the representative receiver and extend 2.5 times of the noise wall-receiver distance on both side of the receiver, as per the Ministry of Transportation (MTO) Technical Areas Manual – Noise, 1992. Therefore, the noise wall may extend from 3470 Omeath Court to 3490 Omeath Court. The provision of a noise barrier is expected to achieve a noise reduction of 5 dBA or more under future conditions with the Kariya Drive extension. Additional review will need to be carried out prior to the construction to determine the exact limits and design of the noise wall.

The potential for construction noise issues will be further reviewed during detailed design when construction methodology and schedule is fully developed. Construction activities will conform to the City of Mississauga Noise Control By-Laws.

There are no existing land uses that are considered to be highly sensitive to vibration impact (e.g. sensitive equipment such as electron microscopes, or laboratory with sensitive scientific equipment, etc.).

Once constructed, the main source of vibration from Kariya Drive would be from truck traffic. However, vehicles with pneumatic tires generally do not create significant levels of vibration except at very short distances. This road will function as a minor collector road serving only the local community and truck traffic volumes will be low, as such, vibration levels to the community are not expected to be perceptible or significant.

Some construction activities associated with the road building may at times create vibration levels that are perceptible at nearby land uses. However, the vibration levels produced by the anticipated construction activities will not be large enough to cause structural damage. The potential vibration generated by the building of the road and the surrounding community should be reviewed in detailed design, once construction methodologies and scheduling are developed.

6.5.1 Noise During Construction

The potential for construction noise issues will be further reviewed during detailed design when construction methodology and schedule is fully developed. Construction activities will conform to the City of Mississauga Noise Control By-Laws.

All equipment shall be properly maintained to limit noise emissions. As such, all construction equipment will be operated with effective muffling devices that are in good working order.

Through contract / agreements the developer, the City may include a noise complaint system. In the presence of persistent complaints and subject to the results of a field investigation, alternative noise control measured during construction may be required, where reasonably available. In selecting appropriate noise control and mitigation measures, consideration will be given to the technical, administrative and economic feasibility of the various alternatives.

6.6 Vibration

The potential of vibration impacts is described qualitatively in this section as there are no current City of Mississauga, provincial or federal guidelines, standards or protocols for assessing vibration.

Within the study area, lands on either side of the proposed Kariya Drive extension consist of condominium community / medium density residential (east) and the new Elm Drive Public School (to be constructed to the west).

There are no existing land uses which are considered to be highly sensitive to vibration impact (e.g. sensitive equipment such as electron microscopes, or laboratory with sensitive scientific equipment, etc.).

Once constructed, the main source of vibration from Kariya Drive would be from truck traffic. However, vehicles with pneumatic tires generally do not create significant levels of vibration except at very short distances. This road will function as a minor collector road serving only the local community and truck traffic volumes will be low, as such, vibration levels to the community are not expected to be perceptible or significant.

6.6.1 Construction Vibration

Some construction activities associated with the road building may at times create vibration levels that are perceptible at nearby land uses. However, the vibration levels produced by the anticipated construction activities will not be large enough to cause structural damage. The potential vibration generated by the building of the road and the surrounding community should be reviewed in detailed design, once construction methodologies and scheduling are developed.

6.7 Air Quality

6.7.1 Air Quality Assessment

An air quality assessment was undertaken to evaluate the potential change in air quality associated with the extension of four downtown roads, including Kariya Drive. The Air Quality Assessment Technical Memorandum is provided in **Appendix D**

Based on the findings, background air quality levels for the primary contaminants were below the air quality thresholds, indicating that the ambient air quality in the

vicinity of the study area is good. Benzo(a)Pyrene exceeds the threshold, a condition which is common in southern Ontario and not unique to the study area.

The project involves extending Kariya Drive by approximately 150 m and includes considerations of improved traffic access and routing options and enhanced access to transit and downtown walkability. As such, no substantial change in road traffic emissions or in existing air quality is expected.

6.7.2 Air Quality During Construction

During construction of the roadway, emissions sources will include construction equipment engines and air borne dust from construction vehicles travelling over exposed soils / unpaved surfaces. These impacts will be temporary, during construction. Due to the temporary nature of construction activities, there are no air quality criteria specific to construction activities. Construction emissions can be mitigated by appropriate maintenance of equipment and proper phasing that minimizes activity on unpaved surfaced.

The Environment Canada “Best Practices for the Reduction of Air Emissions from Construction and Demolition Activities” document provides several mitigation measures for reducing emissions during construction activities. Mitigation techniques discussed in the document include material wetting or use of chemical suppressants to reduce dust, use of wind barriers, and limiting exposed areas which may be a source of dust and equipment washing.

Ministry of Environment, Conservation and Parks (MECP) recommends that non-chloride dust suppressants be applied. MECP also recommends referring to the following publication in developing dust control measures: Cheminfo Services Inc. Best Practices for the Reduction of Air Emissions from Construction and Demolition Activities. Report prepared for Environment Canada, March 2005.

6.7.3 Sustainability

The City’s objective is to create a high quality, pedestrian friendly, human scaled environment in the downtown area. The Kariya Drive extension will contribute to this objective by improving multi-modal connectivity among existing and new communities, the new school, and new / existing area parks. The new road will result in smaller scaled blocks, providing routing options for vehicular, transit, pedestrian

and cycling movement. The scale of the street is to be narrower with special attention paid to the adjacent school site.