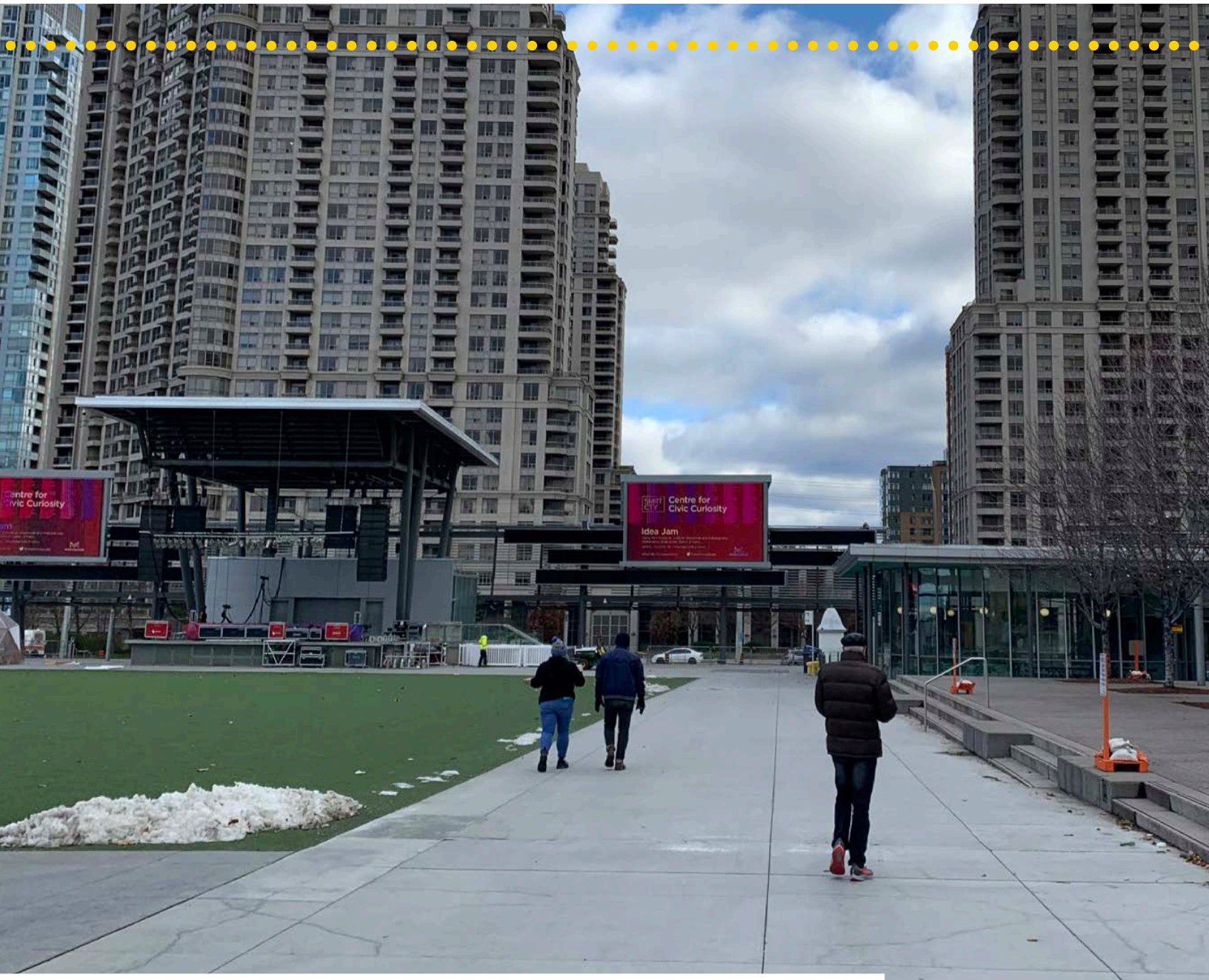
Pedestrian Master Plan

FINAL DOCUMENT
OCTOBER 2021

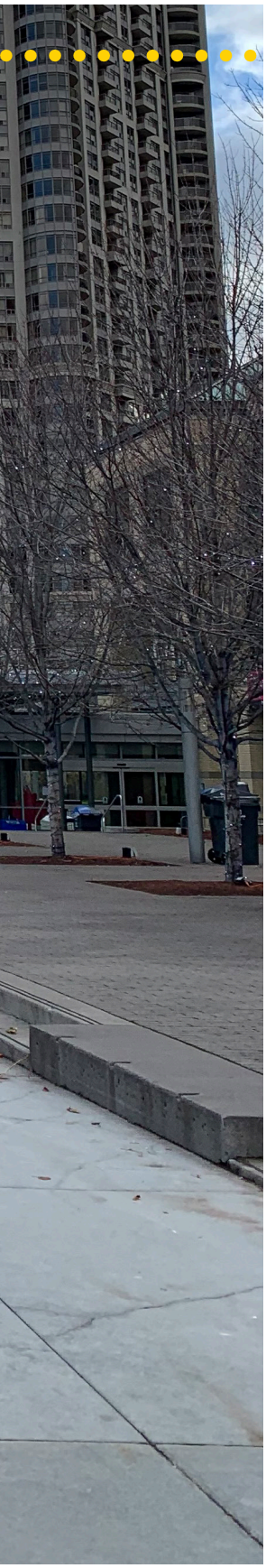
MISSISSAUGA



CONSULTING TEAM

URBAN SYSTEMS

DILLON CONSULTING



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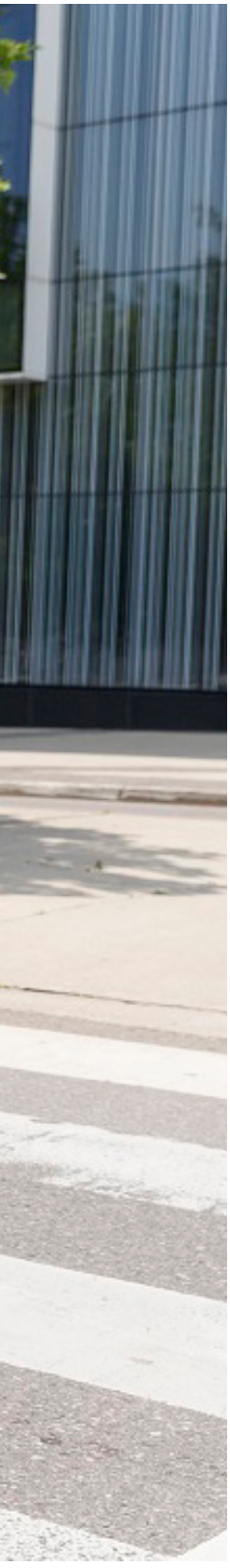


INTRODUCTION

Transportation in Mississauga is at an exciting turning point with a visionary policy that supports a more walkable city. The City's 2019 Transportation Master Plan (TMP) prioritizes a city where "everyone and everything will have the freedom to move safely, easily and efficiently to anywhere at any time." The forefront of this vision is moving away from single-occupancy vehicle use towards more sustainable, equitable and accessible modes of travel. Sustainable modes of travel include transit, cycling, walking and other forms of active transportation. As a Vision Zero City, Mississauga is committed to providing a safe network of pedestrian facilities that prioritizes vulnerable road users.

Our definition of pedestrians and walking includes people walking for a variety of trip purposes, including trips for transportation (travelling to school, work, transit and to run errands). It also includes recreational trips, including people walking dogs, people jogging and getting exercise. It is important to note that our definition of pedestrians and walking includes people using mobility devices such as wheelchairs, walkers and strollers.

Walking is the most fundamental and sustainable form of transportation and nearly every journey begins and ends by foot. Mississauga has a significant opportunity to encourage more walking. There are many plans, policies, services and facilities already in place that support a walkable city. The city is well-positioned to be a walkable community with its relatively high population density, grid street framework (arterials), high transit ridership, and an extensive sidewalk and multi-use trail networks. These factors combine to provide excellent opportunities for residents to incorporate walking into their everyday lives.

The Pedestrian Master Plan aims to improve the pedestrian network, infrastructure, policies, programs and environment so that people of all ages and abilities have the freedom to move easily and comfortably as a pedestrian. The Pedestrian Master Plan is a long-term plan, planning for the next 20 years (2041).

The Pedestrian Master Plan was developed over a four-phase process that spanned a 14-month period beginning in winter 2019. The creation of the Pedestrian Master Plan was an iterative process. It involved exploring options, drafting ideas and speaking with community members and stakeholders to create a final Plan. Mississauga residents were engaged using a range of tools and tactics, including two online surveys and an online community event.

It is important to note that the Pedestrian Master Plan was prepared using Approach #1 for the Municipal Class EA Master Planning process. This means that additional detailed studies will be required to fulfil the Municipal Class Environmental Assessment requirements (Schedule B and C projects identified within the report).

VISION AND GOALS

As part of the Pedestrian Master Plan process, a vision along with supporting goals were developed to shape the overall future direction of the Plan. The vision and goals serve as a basis from which improvements and investments are identified and prioritized. The vision and goals were created based on a combination of Mississauga's existing commitments, as described in several overarching plans and strategies, as well as the input received from residents and stakeholders.

VISION

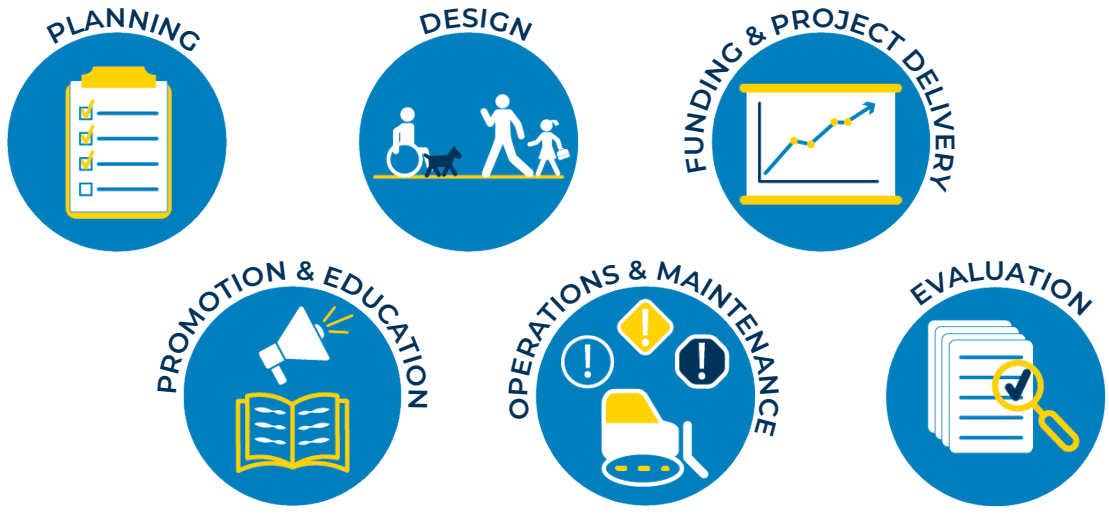
> *"People in Mississauga will walk knowing they have great places to walk and access to sidewalks, trails and crossings that are safe, connected and accessible, enhancing the overall health, vibrancy and quality of life in the city."*

GOALS

- Make walking safer and more comfortable, and work towards achieving Vision Zero.
- Build sidewalks and trails that are connected and accessible.
- Encourage walking as part of an active and healthy lifestyle.
- Increase the number of walking trips in Mississauga.

RECOMMENDATIONS AND ACTIONS

The Pedestrian Master Plan consists of six overarching themes. For each theme, the plan includes several recommendations and more detailed actions. There are 68 actions identified in the Plan. The implementation of these recommendations and actions will help Mississauga work towards achieving the vision and goals of the Plan.



PLANNING builds on the relationship between how Mississauga grows and develops and how people move around the city. This theme also supports working with other departments, agencies and jurisdictions to create great places to walk.

RECOMMENDATIONS

- Co-ordinate with partner agencies to implement the Pedestrian Master Plan.
- Integrate the pedestrian network and supporting facilities into all City planning and capital improvement projects.
- Develop and implement City initiatives that support pedestrians and enhance the pedestrian environment.

DESIGN focuses on creating connected, safe, accessible and comfortable pedestrian facilities that can be used by all residents.

RECOMMENDATIONS

- Develop a connected pedestrian network.
- Develop a pedestrian network that is safe and comfortable for all.

FUNDING AND PROJECT DELIVERY provides direction on how the City will fund and implement the Master Plan.

RECOMMENDATIONS

- Seek the appropriate funds and resources to implement the Pedestrian Master Plan.
- Leverage all available funding opportunities to expedite project delivery.

PROMOTION AND EDUCATION supports educational programs, promotional events and developing materials that make it easier and safer for people to walk.

RECOMMENDATIONS

- Provide and support educational programs to increase walking mode share and safety.
- Encourage walking through promotional events, wayfinding, marketing and communications.

OPERATIONS AND MAINTENANCE focuses on ensuring there are clear, smooth and even sidewalks and trails to support and encourage walking year-round. In addition, pedestrian facilities should be accessible and can be used by everyone.

RECOMMENDATIONS

- Maintain the pedestrian network and infrastructure to ensure they are accessible and free of obstructions.

EVALUATION focuses on monitoring and reviewing how the Pedestrian Master Plan is being implemented, the number of people walking in the community and the health outcomes associated with more walking and physical activity.

RECOMMENDATIONS

- Develop a monitoring program to evaluate the impacts of implementing the Pedestrian Master Plan.
- Produce an annual report summarizing progress made on implementing the Pedestrian Master Plan.

IMPLEMENTATION

The strategies and actions developed as part of the Pedestrian Master Plan are intended to guide Mississauga's capital, operations, maintenance, policy and programming decisions over the next 20 years and beyond. While the Plan has been developed as a long-term plan, it will require financial investment, staff resources, and an implementation strategy to prioritize improvements over the short term (within 5 years), medium term (within 15 years) or long term (15 years and beyond).

The Pedestrian Master Plan is the first step towards the long-term vision for walking in the community. The strategies and actions outlined in the Plan lay the groundwork for implementation. To see them achieved, additional capital and operational investments and resources are required.

Additionally, it is important to note that many of the initiatives in the Plan require more community input and technical work. Mississauga will need to work closely with partners, residents and stakeholder groups to move forward with implementing the priorities in the Plan. The City will need to review the feasibility and desirability of each infrastructure project before implementation.

The City of Mississauga currently funds pedestrian infrastructure through Transportation and Works (within road rights-of-way) and Community Services (within parks). The infrastructure proposed as part of the Pedestrian Master Plan includes sidewalks and multi-use trails. Filling in all the gaps in the pedestrian network would require approximately 1,200 kilometres of new pedestrian infrastructure. As a result, network priorities (high, medium and low) were identified based on an objective and systematic Geographic Information Systems (GIS) based prioritization methodology. The prioritization methodology was developed based on input from community members, stakeholders and municipal staff and includes nine criteria, each with a score.

There are approximately 232 kilometres of high priority pedestrian gaps identified in the Pedestrian Master Plan. These project are estimated to cost approximately $94 million. Additionally, operations and maintenance costs and resources to maintain new and existing pedestrian infrastructure must be considered over the long-term.

Funding Scenarios

Four capital funding scenarios are proposed to implement the high priority gaps in the existing

pedestrian infrastructure. These will be planned, budgeted and constructed by the Roads Service Area. Each scenario, presented in Table E1, would require a different number of years to complete the network depending on the level of annual funding. Scenario B, with an allocation of $3.1 million annually, is being recommended by staff. This cost is for new sidewalks only and does not include upgrades to existing infrastructure. Additionally, with the installation of new sidewalks, there will be an increase in maintenance and operation costs that need to be considered.

Intersection enhancements are also proposed as part of the Pedestrian Master Plan, however the specific treatment at crossing locations is context-specific and will require additional study. Intersection enhancements can range from $5,000 for a marked crosswalk to $200,000 for a

Table E1. High Priority Pedestrian Infrastructure Funding Scenario (Based on 2021 costs)

SCENARIO	LENGTH (KM/ YEAR)	YEARS TO COMPLETE	YEARLY FUNDING ALLOCATION
A (Current)	4	62	$ 1,500,000
B	**8**	**30**	**$ 3,100,000**
C	12	20	$ 4,700,000
D	23	10	$ 9,300,000

full signal (**Table E2**).

The Pedestrian Master Plan is a long-term plan that will be implemented over many years. It is a plan that belongs to Mississauga residents and will continue to be guided by the community. As each pedestrian network project is implemented, community members and other stakeholders

Table E2. Unit Cost for Intersection Enhancements (Based on 2021 costs)

INTERSECTION ENHANCEMENT	COST PER LOCATION
Marked Crosswalk (one crosswalk)	$ 5,000
Rectangular Rapid Flashing Beacon / Pedestrian Crossover	$ 20,000
Full Signal (four way traffic signal)	$ 200,000
Curb extensions (one side of crossing)	$ 10,000
Raised Crosswalk (one crosswalk)	$ 20,000

will have the opportunity to provide input. For the City to achieve the vision of the Pedestrian Master Plan, walking in Mississauga must be safe, accessible, comfortable and convenient. Facilities must be well-connected, continuous and the pedestrian environment must be interesting, exciting and fun. Lastly, walking needs to be encouraged. Completing the pedestrian network is a key priority to meet the City of Mississauga's Official Plan (OCP), Strategic Plan, Vision Zero and Climate Strategy goals.

1.0 INTRODUCTION

The City of Mississauga is located in Southern Ontario within the Greater Toronto and Hamilton Area (GTHA) with a rapidly growing population of over 720,000, making it Ontario's third largest city. Mississauga's bustling employment sector has become a commuter destination for many within and beyond the city. With increasing population and employment needs, transportation in Mississauga is at an exciting turning point and is looking for opportunities to meet this demand. The City's Strategic Plan identifies a vision for a vibrant, safe and connected community. There are five pillars for change identified in the document. **Figure 1** helps to illustrate the relationship between the Pedestrian Master Plan and the Strategic Plan. The City's 2019 Transportation Master Plan (TMP) sets direction to provide an efficient multi-modal transportation network that supports people of all ages and abilities with practical sustainable transportation options. The TMP sets targets to have half of trips to, from and within Mississauga taken by sustainable modes, which are identified as walking, cycling, transit, ridesharing and ridehailing by 2041.

The City is approaching this growth in transportation demand with visionary policies and efforts that support the development of a more walkable city. These efforts have led to the development of the Pedestrian Master Plan, the first of its kind in Mississauga. The Pedestrian Master Plan is focused on enhancing the overall health and quality of life in the city. Making walking an integral part of daily transportation can help the City achieve many of the goals identified in other planning documents. The Pedestrian Master Plan will serve as a road map for achieving the vision and goals. It will also play an important role shaping the pedestrian environment and how people move within the city for years to come.

Our definition of pedestrians and walking includes people walking for a variety of trip purposes, including trips for transportation (travelling to school, work, transit and to run errands). It also includes recreational trips, including people walking dogs, people jogging and getting exercise. It is important to note that our definition of pedestrians and walking includes people using mobility devices such as wheelchairs, walkers and strollers.

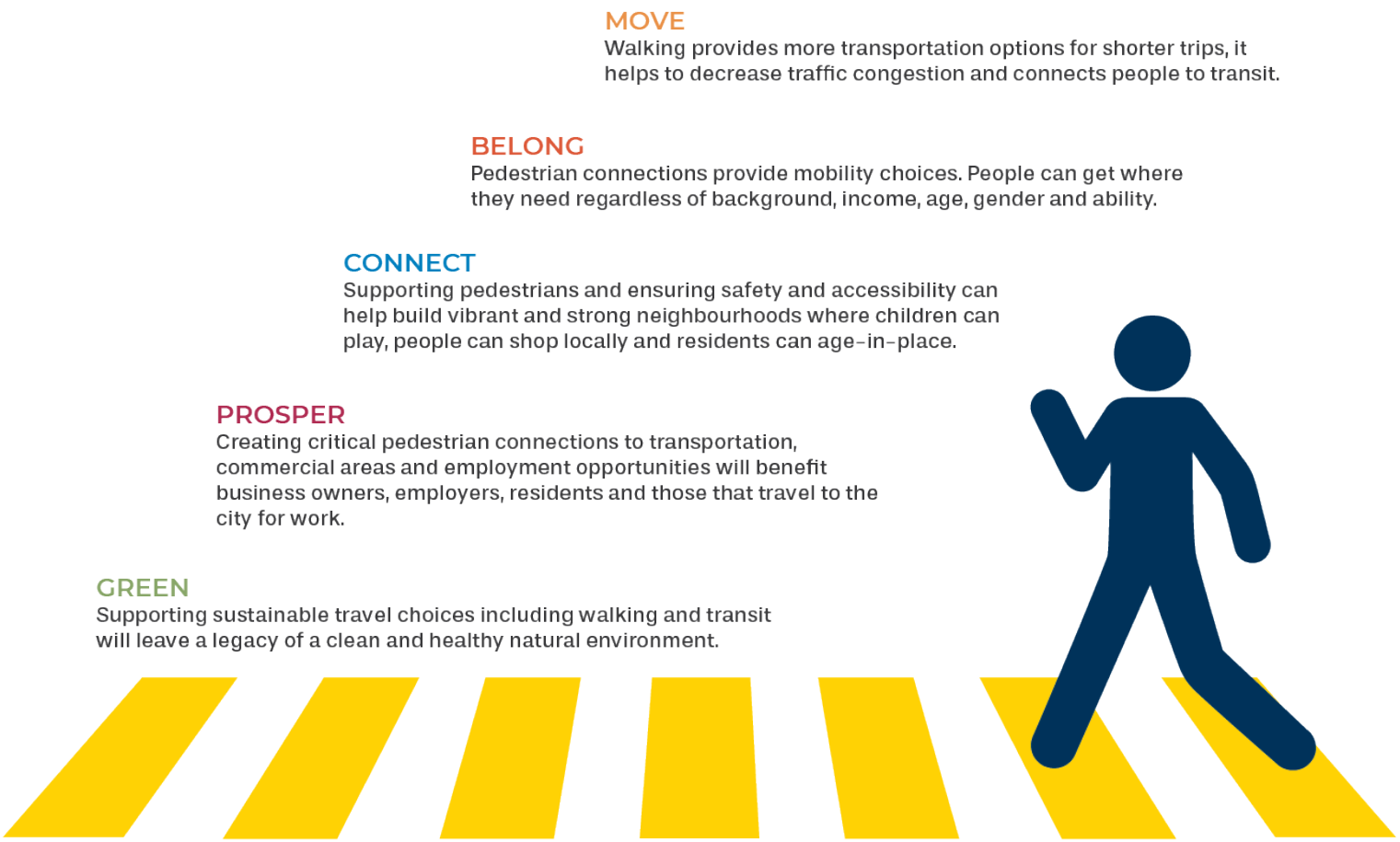


Figure 1. The Pedestrian Plan's Relationship to the Strategic Plan

Walking is the most fundamental and sustainable form of transportation and nearly every journey begins and ends by foot. Mississauga has a significant opportunity to encourage more walking. There are many plans, policies, services and facilities already in place that support a walkable city. Mississauga is well-positioned to be a walkable community, with its relatively high population density, grid street framework (arterials) and high transit ridership. It also has an extensive network of sidewalks and multi-use trails. These features combine to provide excellent opportunities for residents to incorporate walking into their everyday lives.

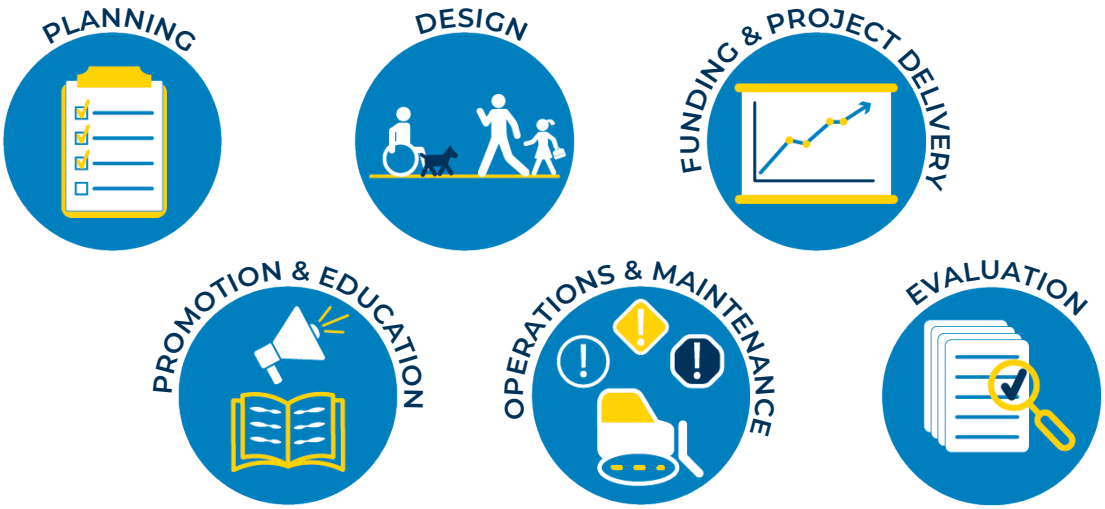
Whether it is a recreational activity, a way to connect to transit as part of a commute or a trip to school – pedestrian infrastructure (sidewalks, trails, intersection crossings etc.) are used by everyone, year-round. The TMP prioritizes a city where "everyone and everything will have the freedom to move safely, easily and efficiently to anywhere at any time." At the forefront of this vision is a move away from single-occupancy vehicle use towards more sustainable, equitable, and accessible modes of travel such as transit, cycling and walking.

The pedestrian network, as defined in the TMP, includes infrastructure elements used by pedestrians, such as sidewalks and crossings (at intersections and elsewhere) walkways and trails.

Pedestrian connections create some of the most critical links required to achieving this vision and Mississauga's broader transportation commitments. These commitments include protecting pedestrians by achieving the City's Vision Zero goal of zero fatalities and serious injuries. Other commitments include providing an integrated and inclusive transportation system, attractive and efficient connectivity between people and places and a system that is healthy for its users and the environment.

With one third of Mississauga's greenhouse gas emissions coming from transportation, the Pedestrian Master Plan will support the City in taking critical steps to achieve its Climate Action Plan targets of reducing emissions by 80% by 2050, to a level below what was recorded in 1990. The Climate Action Plan aligns with the TMP, identifying actions that will ensure that by 2041 over half of trips to, from and within Mississauga are taken by sustainable modes.

The purpose of the Pedestrian Master Plan is to improve the pedestrian network, infrastructure, policies, programs and environment. These improvements will ensure people of all ages and abilities can move easily and comfortably as a pedestrian. The Plan will act as a go-to reference for pedestrian infrastructure projects over the long-term, supporting the City's commitment to Vision Zero and zero traffic related fatalities and serious injuries. The Plan establishes a vision, goals, and a series of recommendations and actions stemming from six overarching themes:



The recommendations and actions within these six theme areas provide guidance regarding improvements to policies, design standards, infrastructure and programming. The recommendations and actions work to ensure the pedestrian network is safe, accessible, comfortable, and convenient for people of all ages and abilities. This relationship is highlighted in the Plan Framework below (**Figure 2**).

Figure 2. Plan Framework

1.1 PLAN STRUCTURE

The Pedestrian Master Plan is divided into the following chapters:

CHAPTER 1: INTRODUCTION highlights the plan's purpose, process and public engagement activities that have taken place to develop the Pedestrian Master Plan.

CHAPTER 2: SETTING THE CONTEXT outlines the analysis and considerations that shaped the development of the Plan. This includes an understanding of conditions for walking in the city, a snapshot of existing pedestrian facilities and highlights key challenges and opportunities that shaped the direction of the Plan.

CHAPTER 3: GOALS AND RECOMMENDATIONS outlines the vision and goals for the Pedestrian Master Plan. This section also outlines the recommendations and actions required to implement the Plan.

CHAPTER 4: PEDESTRIAN NETWORK identifies the existing gaps in the pedestrian network and the potential long-term network.

CHAPTER 5: IMPLEMENTATION AND MONITORING provides a framework for monitoring the Plan's success and outlines key measurement indicators that are tied to specific goals and objectives within the Plan.

In addition to the main report, there are a series of appendices that provide more background information regarding the City's current pedestrian policies, planning strategies, promotion and education initiatives. Additional appendices include a network assessment report and the engagement summary.

1.2 PLAN PURPOSE AND OBJECTIVES

The Pedestrian Master Plan is intended to build off the policy direction from the Strategic Plan, Mississauga's Official Plan (OP), the TMP and other municipal planning documents. The development of the Pedestrian Master Plan is an action that is outlined in the TMP (Action 14). The TMP also recognizes that investments in sidewalks, crossings and walkways needs to be well-planned and consistent with the City's overall aims for transportation. The recommendations of this Plan are in line with the City's Vision Zero goals and when actualized, will help achieve the goal of zero fatalities and serious injuries from collisions.

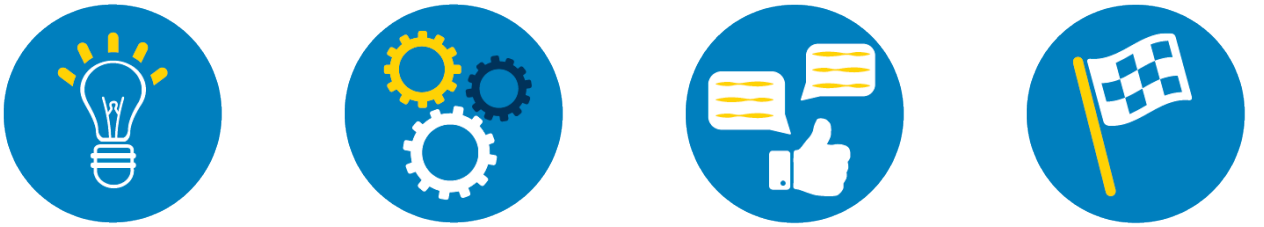
The process of developing a Pedestrian Master Plan presented an opportunity to review all related policies, plans, guidelines and services and to align them with the needs of current and future generations. This comprehensive Pedestrian Master Plan maximizes opportunities to enhance walking within growth and development areas, integrate walking with transit, enhance pedestrian safety and fill in gaps in the pedestrian network. It will also help to ensure that people of all ages and abilities have access to their community and can feel a sense of belonging. The plan identifies and prioritizes infrastructure projects and policies that will provide a connected network of pedestrian infrastructure for all users.

The Pedestrian Master Plan will guide the development of safe and convenient walking options for people of all ages and abilities over the next 20 years. The Plan establishes a vision and goals along with corresponding recommendations and actions for improving pedestrian policies, standards, infrastructure and programs.

1.3 PLAN DEVELOPMENT PROCESS

The Pedestrian Master Plan was developed over a four-phased process that spanned a 14-month period beginning in winter 2019. The creation of the Pedestrian Master Plan was an iterative process that involved exploring options, speaking with community members and stakeholders, drafting the plan, sharing initial results, gathering and reviewing additional community input and refining content to create the final Plan. An overview of the Plan development progress can be seen in **Figure 3**. It is important to note that the Pedestrian Master Plan was prepared using Approach #1 for the Municipal Class EA Master Planning process. This means that additional detailed studies will be required to fulfil the Municipal Class Environment Assessment requirements (Schedule B and C projects identified within the report).

Due to the COVID–19 pandemic, the project had to shift to online engagement to adapt to the changing public health conditions. Also due to COVID–19, as the requirement for physical distancing grew and there was a greater demand for outdoor recreation opportunities, it provided an interesting lens to discuss pedestrian needs within the community.



PROJECT LAUNCHED
Winter 2019

TECHNICAL WORK
Spring 2020

PUBLIC LAUNCH
September 2020

COMMUNITY AND STAKEHOLDER ENGAGEMENT
October / November 2020

REVIEW INPUT & REFINE RECOMMENDATIONS AND DRAFT PLAN
Fall 2020

ADOPT THE FINAL PLAN AND IMPLEMENT
Spring 2021

Figure 3. Project Process

1.4 PUBLIC ENGAGEMENT

Mississauga launched the public engagement process for the Pedestrian Master Plan on September 15, 2020. The Pedestrian Master Plan was completed under the Municipal Class Environmental Assessment process. The public engagement approach focused on collecting input from community members and stakeholders through the following methods:

- Two online surveys hosted on the City's Have Your Say Mississauga page.
- Presentations to Committees of Council.
    - Accessibility Advisory Committee
    - Environmental Action Committee
    - Road Safety Committee
    - Traffic Safety Council
- An Online Public Meeting to present the draft recommendations and recommended improvements to the pedestrian network.
- Posting of the Draft Pedestrian Master Plan for public review (mid 2021).

ONLINE SURVEYS

Two online surveys were launched during the development of the Pedestrian Master Plan, both of which were hosted on the City of Mississauga's Have Your Say (Engagement HQ) portal project page. The surveys were promoted by the City through various methods, including social media posts and information on the City's website.

The project page also provided updates and project documentation, a question–and–answer (Q&A) section, responses to Frequently Asked Questions (FAQs) and contact information for the Project Manager. Feedback from the public engagement has been integrated and referenced throughout the plan, with a full engagement summary included in **Appendix E**.

- **Survey #1 – Awareness Survey:** This survey was available between September 15 to October 23, 2020. There were 554 responses from the community. This survey focused on understanding typical walking habits, common barriers and how the City could encourage residents to walk more.
- **Survey #2 – Engagement Survey:** This survey was available between November 3 to 30, 2020. There were 154 responses from the community. This survey asked participants to provide comments related to the plan vision, the draft themes and the draft prioritization criteria used to identify the implementation plan for pedestrian infrastructure investments.

ONLINE COMMUNITY MEETING

The Community Meeting was held on Thursday November 12, 2020 as an online event hosted on the Webex platform from 6–8 pm. The virtual format was adopted to comply with current public health guidance in place during the COVID–19 pandemic. There were 27 participants.

The purpose of the session was to present an overview of the project and collect feedback on the draft plan and prioritization criteria. This included outlining the challenges and opportunities for walking in Mississauga. The draft vision, goals, themes and actions of the plan were presented. Additionally the proposed criteria for network prioritization was discussed.

The presentation was followed by a Q&A session. A virtual interactive session was then held to review a set of key questions on the draft Pedestrian Master Plan. Attendees provided input via the Webex chat and by speaking to the group. Feedback from this session was used to update the vision and adjust the themes and actions. The feedback received has been integrated throughout this report.

The public and stakeholder engagement strategy developed for the Pedestrian Master Plan focused on ensuring meaningful involvement from a number of different perspectives and diverse voices. This includes people from across the City of different ages, ethnicities/cultures, socioeconomic standings and gender identities/ sexual orientations. Various stakeholders, including Indigenous communities were contacted through email and informed about the project and engagement opportunities over the course of the project.

2.0 SETTING THE CONTEXT

Mississauga is a dynamic and successful city with a growing population. Forecasted growth projects a population increase of 22% and employment growth of 23% by 2041. This will result in a substantial increase in transportation demands over the next decade. Most residents currently using a motor vehicle for their daily trips. As a result, the City is presented with both opportunities and challenges when it comes to responding to increasing transportation demands. As directed by the OP, transit, cycling and pedestrian modes are at the forefront of transportation priorities in planning for future growth. It is important to understand current conditions for pedestrians to identify actions and priorities.

2.1 PROGRAMS AND POLICIES

The Pedestrian Master Plan has been informed by several municipal and regional planning documents and guidelines that contain walking and active transportation related policies, plans and goals. This relationship is highlighted in **Figure 4**. Many of these documents include broader aspirations for growth and transportation. They provide specific directions on how walking can become an integral part of Mississauga's transportation system. The Pedestrian Master Plan appendix documents include a review of the existing policy and design documents that influenced the pedestrian network and the recommendations of the plan. Some of the key documents include:

- **Strategic Plan (2009)**. The City's Strategic Plan identifies a vision for a vibrant, safe, and connected community. There are five pillars for change identified in the document. One of the pillars is Move which focuses specifically on how people travel within Mississauga.
- **Official Plan (OP) (2011)**. The OP defines the vision and strategy for future development and physical change in Mississauga. It also looks at the social, economic, environmental and cultural components of the community. The OP focuses on integrating land use and transportation planning and identifies goals to develop vibrant, walkable and connected neighbourhoods and to provide mobility choices for all residents. The City's OP provides direction on where population and employment growth and densification will occur within the Urban System Framework. This framework identifies locations (character areas and intensification corridors) where walkability will be promoted and pedestrian activity is expected to be higher. The City is currently reviewing the existing OP to ensure it reflects the current needs of Mississauga and incorporates

new and updated plans, policies and current best practices. The recommendations from the Pedestrian Master Plan will be incorporated into the OP.

- **Transportation Master Plan (TMP) (2019)**. The TMP serves as a guideline for the City's transportation policies and planning. It directs the City's investment and stewardship of the transportation system. The TMP outlines high-level policy priorities rather than providing specific standards or design guidance. It is an overarching document that guides the development of the Pedestrian Master Plan. The development of the Pedestrian Master Plan is an action identified in the TMP (Action 14).
- **Cycling Master Plan (CMP) (2018)**. The 2018 CMP identifies a vision and goals for cycling in Mississauga. It also includes infrastructure recommendations for on-street facilities and off-road multi-use trails which are also used by pedestrians. The CMP includes design guidance for multi-use trail facilities. The multi-use trail infrastructure recommendations and guidance outlined in the CMP has been incorporated into the Pedestrian Master Plan.

Building on these planning documents, the City of Mississauga adopted the Vision Zero approach to road safety in 2018. Vision Zero is a city wide initiative based on the fundamental principle that no loss of life on Mississauga roadways is acceptable. Vision Zero prioritizes the safety of vulnerable road users, including pedestrians, over the level of service to automobiles. While human error will always occur on city roads, there are ways to build or reconfigure the road network to minimize the impacts of a collision should they occur.

The TMP outlined a number of Vision Zero action items that can be implemented in the City to help achieve that goal. The Pedestrian Master Plan was developed in line with those recommendations, through a Vision Zero lens to contribute to Mississauga's goal of zero fatalities and serious injuries as a result of a collision. Part of developing a network where people choose to navigate as a pedestrian is creating one where they feel safe. That is a key goal of the Pedestrian Master Plan.

A full list and summary of all the policies, programs and documents reviewed and how they shaped the Pedestrian Master Plan can be found in **Appendix A**.

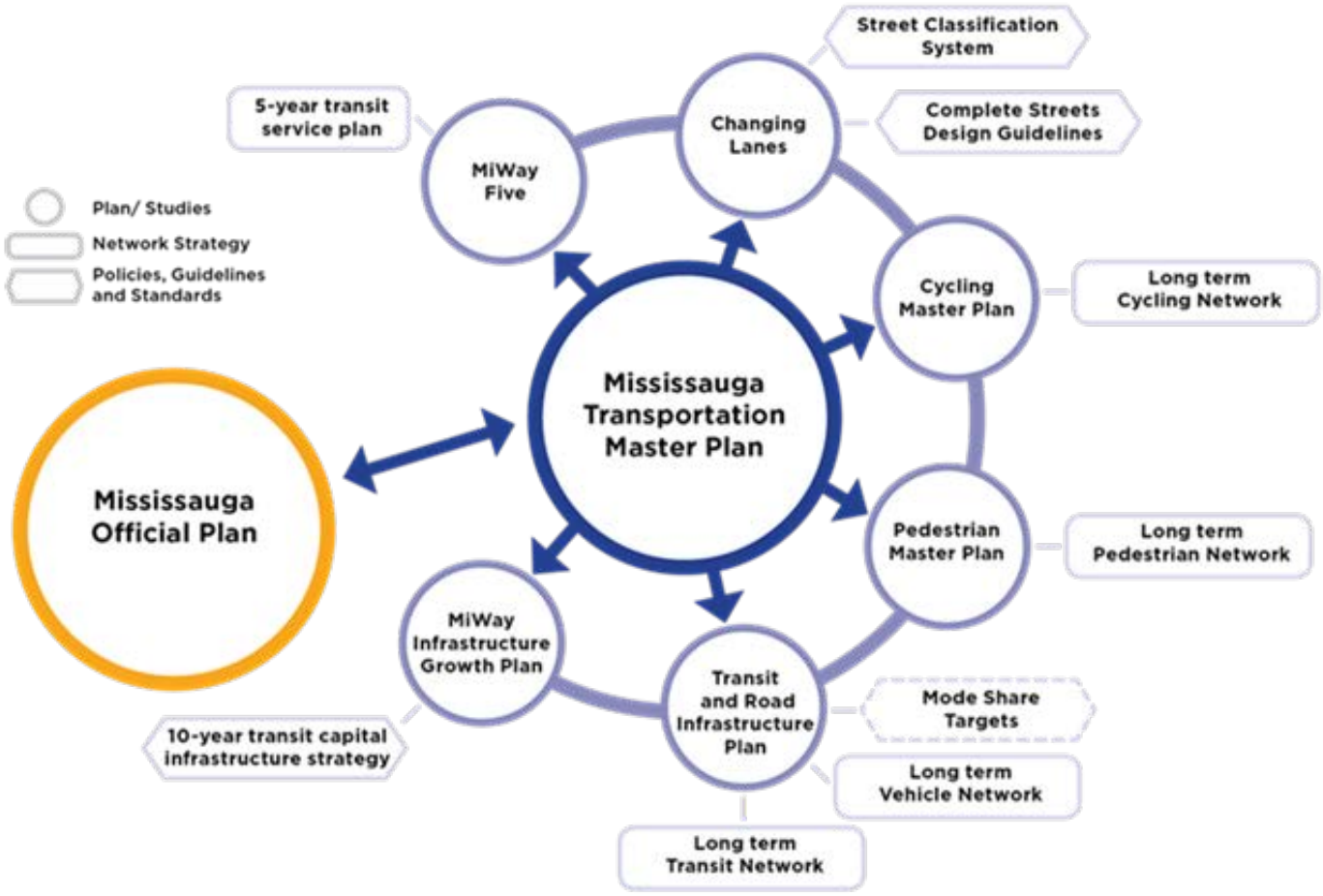
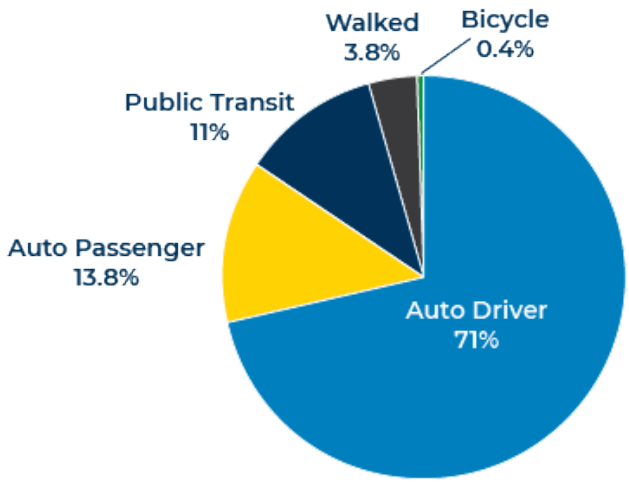


Figure 4. Mississauga Planning Structure

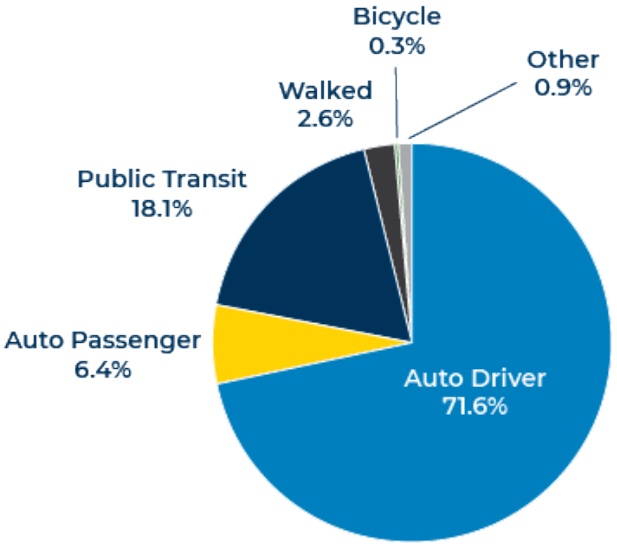
2.2 WALKING IN MISSISSAUGA TODAY

Understanding the existing conditions for walking in the city today sets the context for the direction of the Pedestrian Master Plan. Using data from the Transportation Tomorrow Survey (2016) as well as Canadian Census data (2016) can help explain existing travel patterns of people within Mississauga today. As outlined in the TMP, car trips are the most common form of transportation in the city. Approximately 3% of all trips in the city are walking trips. Out of the 32,000 Mississauga residents that live within 1 kilometre of where they work, only 2,000 choose to walk.

Mode Share for all Trips in Mississauga, 2016*



Mode Share for Commuter Trips in Mississauga, 2016**



*2016 TMP Transportation Tomorrow Survey (this is based on all trips originating within the City of Mississauga),
2016 Journey to Work – Statistics Canada, ***2020 Pedestrian Master Plan Survey #1, ** 2019 Mississauga Transportation Master Plan

59% walking trips are less than 1 km*

97% are less than 3 km*

People walking in Mississauga are often travelling between home or school*

40% of students aged 11+ walk to school*

73% of Pedestrian Master Plan Survey #1 respondents walk or roll at least 30 minutes every day***

In 5 years, MiWay ridership has grown by more than ***15%******

Mississauga has the 2nd highest local transit ridership in the GTHA****

Transportation Tomorrow Survey

The Transportation Tomorrow Survey is a comprehensive travel survey conducted in southern Ontario every five years through a cooperative effort by provincial and local government agencies. The survey is completed voluntarily via telephone and/or an online platform. The 2016 results show that most residents in Mississauga travel by automobile, as a driver or a passenger.

The 2016 results also show that when people walk, they are often travelling to or from home (52%) or school (26%). Trips to work make up 7% of walking trips. Almost all (99%) of walking trips that originate in Mississauga stay in Mississauga. Most walking trips are short; 59% of trips are less than 1 kilometre and 97% of walking trips are less than 3 kilometres. These results are based on trips originating within Mississauga.

Census Data

According to Statistics Canada's 2016 Census, approximately 3% of all commute trips to work or school in Mississauga are made by walking. It should be noted that Census data only includes commute trips, and does not include trips for other purposes, such as exercise, social purposes or to spend time with family or friends. This percentage has remained steady over the past several years. It is also worth noting that 18% of commuting trips are made by transit, this is important as most transit trips involve walking for a portion of the journey.

Pedestrian Master Plan Survey Responses

Based on the survey responses, the top reasons people are walking for exercise, the health benefits, to spend time with friends and family and to enjoy the outdoors. Approximately, 73% of survey respondents walk or roll at least 30 minutes every day.

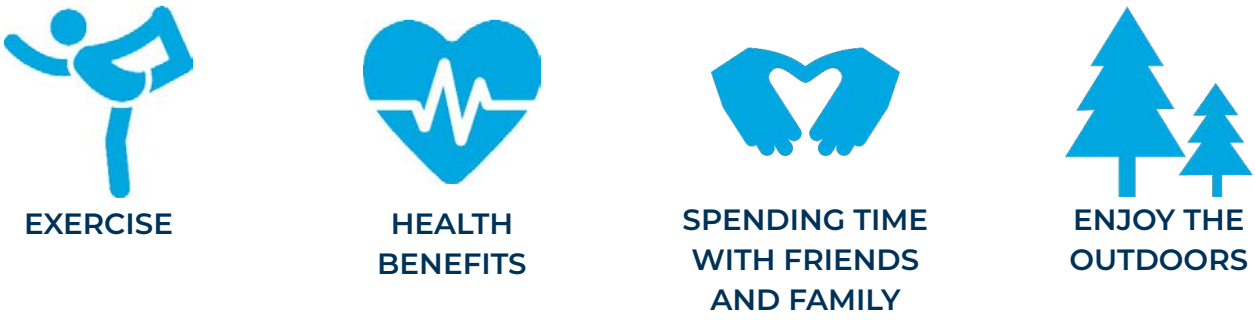


Figure 5. Top Reasons for Walking identified in the Pedestrian Master Plan Survey Responses

2.3 KEY CHALLENGES AND OPPORTUNITIES

A thorough approach was undertaken to understand the main challenges and opportunities to increase walking trips in Mississauga. This included a detailed review of pedestrian infrastructure, demographic and land use data, input from community residents and a review of municipal and regional planning documents. Through this review, several key challenges, and opportunities for

supporting walking in Mississauga were identified. This section provides a summary of the key challenges and opportunities the Pedestrian Master Plan was developed to address. For more detail, see the full Network Assessment Report which can be found in **Appendix D**.

CHALLENGES

Key challenges for walking in Mississauga were identified through discussions with municipal staff, a review of key municipal plans and policies and feedback from the public. Below is a summary of the challenges identified, including the top four identified barriers to walking in Mississauga as identified by survey respondents.

KEY CHALLENGES	WHAT WE HEARD FROM SURVEY RESPONDENTS
The large geographic area of the city and curvy local road networks make for longer trips which inhibit walking.	 ROADWAYS ARE NOT USED PROPERLY (PEOPLE ARE NOT FOLLOWING RULES)
Snow and ice in the winter months can make walking year–round challenging for all residents.	
In some locations there are missing sidewalks, or existing sidewalks may be narrow or in poor condition.	 DANGEROUS INTERSECTIONS
Pedestrian facilities are not always designed to be accessible for all users.	
Funding levels need to match the desire to see a shift in travel patterns and increase travel options.	 YEAR-ROUND MAINTENANCE
The walking environment is not always a pleasant place to be, in some cases walking adjacent to roadways and crossing intersections may feel uncomfortable and unsafe.	
Crossing busy streets can be challenging and there are several locations where a trail comes to a road and there is no designated crossing.	 WEATHER
Collisions involving a motor vehicle driver and a pedestrian occur at locations throughout the city and are concentrated on busy streets.	

OPPORTUNITIES

This section highlights some of the opportunities to enhance the pedestrian environment and encourage more walking in Mississauga.

As mentioned, Mississauga is experiencing significant growth as a city. This growth presents both opportunities and challenges when it comes to responding to increased transportation demands. As directed by the OP, transit, cycling and pedestrian modes are at the forefront of transportation priorities in future growth planning. However, with 78% of residents currently using a motor vehicle to travel to work, significant efforts are integral to shift transportation habits to more sustainable modes that reduce demands on the roadway network and result in positive health outcomes for residents.

The Medical Officers of Health in the GTHA have documented the financial and health implications of these decisions in their 2014 report titled Health by Design in the Greater Toronto–Hamilton Region. These impacts are summarized in the callout box below. The report highlights that transportation mode choice has financial impacts across all levels of government along with social equity and quality of life implications for residents.

IF WE:

- **Increase public transit use by 9.8 percentage points (Metrolinx)**
- **Increase Active Transportation (AT) by 5 percentage points to work and 5 percentage points to school**
- **Substitute 5% of current short trips by car with AT**

THEN WE WILL:

- **Prevent 338 premature deaths/year ($2.2 billion)***
- **Prevent over 1,000 cases of diabetes/year***
- **Prevent over 90 hospitalizations from heart and lung conditions/year***
- **Prevent other chronic diseases, improve transportation equity, social connectivity, reduce injuries and create more supportive communities for an aging population**

** The estimates are based on current population levels. Benefits will be much greater because of projected growth of the GTHA population.*

KEY OPPORTUNITIES

The City has committed to prioritizing pedestrian safety through the adoption of Vision Zero.

Mississauga is home to attractive residential and mixed-use areas with an increasing range of amenities that will support more pedestrian trips. This includes employment and commercial destinations, as well as access to the waterfront, river valleys, parks and trails. Additionally, future growth areas as identified in the OP are located within urban areas, along major roads and where it is easy to access transit. These are areas that are conducive to walking and will likely have high levels of pedestrian activity.

There is already a good foundation of pedestrian infrastructure, including sidewalks and trails, throughout the community. Expanding and enhancing existing facilities can create a more complete and connected network.

A review of existing land use, equity and walking potential analysis identifies areas of the community best served by investments in pedestrian infrastructure and amenities (see Profile of Opportunities on the next page and the Network Assessment Report in **Appendix D** for more details).

Strategic development of future residential growth areas (Downtown, Major Nodes, Community Nodes), along major roads and key transit nodes and corridors will support those individuals to walk and use transit to navigate the city.

People are looking for alternative transportation options to avoid congested roadways, especially for short trips.

The City is looking for ways to re-think the transportation network and provide more pedestrian infrastructure, policies and programs that promote walking and other forms of active and sustainable transportation (cycling and transit).

Improving the transportation network is seen as an opportunity to provide people with more travel options and enhance health and well-being.

Projections show a change in demographics that will see a larger proportion of youth and older adult populations. These populations typically rely on motor vehicles less.

WHAT WE HEARD FROM SURVEY RESPONDENTS

YEAR ROUND MAINTENANCE

MORE MULTI-USE TRAILS

MAKE IT EASIER TO CROSS THE STREET

MORE PLACES TO STOP AND REST

OPPORTUNITY: AREAS WITH HIGHEST WALKING POTENTIAL

Description

A Geographic Information Systems (GIS) based spatial analysis was conducted to identify areas with the greatest opportunity to increase the number of walking trips. This analysis was based on several factors including road network connectivity, road network density, land use mix, population and employment density and topography.

Target Areas

The analysis found that the areas with the highest walking potential include:

- Downtown
- Major Nodes and Community Nodes (Meadowvale, Streetsville, South Common, Sheridan, Port Credit, Rathwood–Applewood and Malton) and the Churchill Meadows Neighbourhood.

PROFILE OF OPPORTUNITIES

OPPORTUNITY: FUTURE GROWTH AREAS

Description

The City's OP provides direction on where population and employment growth and densification will occur within the city. As touched on above, the OP recognizes that most future growth in the city will be occurring within urban areas (Downtown, Major Nodes and Community Nodes and Employment Areas), along major roads and where it is easy to access transit.

It is specifically noted in the City's planning documents that these areas are expected to be pedestrian–friendly, recognizing the important relationship between land use and walking. The current OP notes that while arterial roads and roads in employment areas will continue to prioritize motor vehicle travel and goods movement, areas where growth and intensification are planned will prioritize active and sustainable modes, walking, cycling and transit. The current approach to prioritization is excepted to change with the upcoming OP review.

Target Areas

Growth and intensification is planned to occur within:

- Downtown
- Major Nodes and Community Nodes
- Intensification Corridors (Dundas Street, Hurontario Street, Lakeshore Road, Port Credit)
- Within proximity of major transit stops and stations

OPPORTUNITY: AREAS WITH HIGHEST EQUITY NEEDS

Description

Accessible and reliable pedestrian, cycling and public transit networks significantly impact the ability for equity-seeking groups to pursue economic and social opportunities. Unreliable transportation options and a lack of safe and accessible transportation infrastructure within communities disproportionately impacts the health, safety and opportunity for these groups.

A GIS analysis was used to identify neighbourhoods where there is an opportunity to increase the number of trips made on foot and where there are higher concentrations of equity-seeking groups and people who may be more dependant on active transportation. Five indicators were used to examine equity across neighbourhoods, including the percentage of youth, older adults, immigrant populations, Indigenous Peoples and low-income populations.

It is important to note that there are several different methodologies that can be used to look at neighbourhood need. This analysis is not considered a comprehensive assessment of equity need and demographics in Mississauga. For example, the Region of Peel has a Neighbourhood Information Tool (https://www.peelregion.ca/planning-maps/nit/) that looks at neighbourhoods based on wellbeing. The Neighbourhood Information Tool looks at several different indicators, including demographics, economic opportunity, resident engagement & community belonging, safety and health and physical environment. Statistics Canada Census Data from 2016 was used to conduct the equity analysis presented in the Pedestrian Master Plan. Census Data is based on place of residents and does not capture where individuals are travelling. Additionally there are other marginalized groups that have not been included in this analysis, such as the 2SLGBTQ+ community, persons experiencing addiction and persons experiencing homelessness.

Target Areas

The analysis found that the areas with the highest potential to address equity needs include:

- Downtown
- Major Nodes (Uptown)
- Community Nodes (Rathwood-Applewood, Applewood, Mississauga Valleys, South Common, Meadowvale and Malton)

3.0 GOALS AND RECOMMENDATIONS

As part of the Pedestrian Master Plan process, a vision along with supporting goals were developed to shape the overall future direction of the Pedestrian Master Plan. The vision and goals serve as a basis from which improvements and investments are identified and prioritized. The Pedestrian Master Plan was developed based on the principles highlighted in the TMP, including enhancing transportation safety, equity and accessibility for all.

3.1 VISION AND GOALS

The vision and goals were created based on a combination of Mississauga's existing commitments as described in several overarching plans and recommendations and community and stakeholder input. As seen in the results for Online Survey #2, 92% of respondents supported the draft vision. The language of the vision was adapted to reflect the feedback from the community.

VISION

Investments in walking and pedestrian infrastructure result in a more balanced transportation system—one that is more accessible, safe, cost-effective and efficient in terms of infrastructure investments. It is understood that increasing the number of walking trips will help contribute to achieving several of Mississauga's strategic and transportation goals. These themes identified in the vision include connectivity, accessibility, livability and heath.

> *"People in Mississauga will walk knowing they have great places to walk and access to sidewalks, trails and crossings that are safe, connected and accessible, enhancing the overall health, vibrancy and quality of life in the city."*

GOALS

Four supporting goals have been developed to provide direction on how to achieve the vision. These goals are intended to be both achievable and measurable to ensure the successful implementation of the Pedestrian Master Plan.

MAKE WALKING SAFER AND MORE COMFORTABLE, AND WORK TOWARDS ACHIEVING VISION ZERO.

BUILD SIDEWALKS AND TRAILS THAT ARE CONNECTED AND ACCESSIBLE.

ENCOURAGE WALKING AS PART OF AN ACTIVE AND HEALTHY LIFESTYLE.

INCREASE THE NUMBER OF WALKING TRIPS IN MISSISSAUGA.

3.2 RECOMMENDATIONS AND ACTIONS

The Pedestrian Master Plan recommendations and actions are intended to achieve the vision and goals of the Plan. The actions of the plan have been divided into six themes:

- Planning
- Design
- Funding & Project Delivery
- Promotion & Education
- Operations & Maintenance
- Evaluation

This section outlines several recommendations and detailed actions to improve walking and being a pedestrian in Mississauga. As identified through community engagement and technical analysis, the recommendations and actions under each theme address a variety of identified strengths, opportunities, challenges and concerns with pedestrian infrastructure, policies, standards and support programs. The implementation of these recommendations and actions will help Mississauga work towards achieving the vision and goals of the Pedestrian Master Plan. Several of the actions identified in the Pedestrian Master Plan align with actions identified in the City's TMP. These corresponding actions have been highlighted throughout this section and the corresponding TMP action number is referenced. There are several other actions that have been identified that will be delivered through other City plans and initiatives including Vision Zero and the Changing Lanes Complete Streets Guidelines.

The Changing Lanes project is developing a new street classification system and Complete Streets Guidelines for Mississauga. These tools will be used by staff, developers, and other street providers as they design our streets, and will ensure our streets are safe and more convenient for all users, including pedestrians. To implement the guidelines, Changing Lanes will identify high-priority street improvement projects in Mississauga. This prioritization will advance our Vision Zero commitments and the actions of the Pedestrian Master Plan. Once the guidelines have been adopted, the Changing Lanes project will also update our street engineering design standards. This section outlines how the recommendations and actions will be implemented in respect to:

- **Timeframe:** Each action is identified as either a short term (within 5 years), medium term (within 15 years) or long term (15 years and beyond) initiative. Several actions will be implemented on an ongoing basis.
- **Division(s) Responsible for Implementation:** This column identifies the municipal division responsible for implementing the action. In several cases, there may be multiple divisions that will support implementation. In some cases, actions may be supported by external agencies.
- **Goals Addressed:** Each action is categorized based on its relative contribution to each of the Pedestrian Master Plan's four goals. Although some actions may only work to achieve one goal, many actions can help achieve multiple goals.

THEMES AND RECOMMENDATIONS

PLANNING

- Co-ordinate with partner agencies to implement the Pedestrian Master Plan.
- Integrate the pedestrian network and supporting facilities into all City planning and capital improvement projects.
- Develop and implement City initiatives that support pedestrians and enhance the pedestrian environment.

DESIGN

- Develop a connected pedestrian network.
- Develop a pedestrian network that is safe and comfortable for all.

FUNDING AND PROJECT DELIVERY

- Seek the appropriate funds and resources to implement the Pedestrian Master Plan.
- Leverage all available funding opportunities to expedite project delivery.

PROMOTION AND EDUCATION

- Provide and support educational programs to increase walking mode share and safety.
- Encourage walking through promotional events, wayfinding, marketing and communications.

OPERATIONS AND MAINTENANCE

- Maintain the pedestrian network and infrastructure to ensure they are accessible and free of obstructions.

EVALUATION

- Develop a monitoring program to evaluate the impacts of implementing the Pedestrian Master Plan.
- Produce an annual report summarizing progress made on implementing the Pedestrian Master Plan.

ACTION PLAN LEGEND

GOAL(S) ACTIONS ALIGN WITH

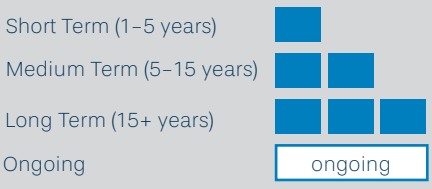
GOAL 1: Make walking safer and more comfortable, and work towards achieving Vision Zero.

GOAL 2: Build sidewalks and trails that are connected and accessible.

GOAL 3: Encourage walking as part of an active and healthy lifestyle.

GOAL 4: Increase the number of walking trips in Mississauga.

TIMEFRAME FOR IMPLEMENTATION



RELATED ACTIONS

Related to TMP Action

Related to the Changing Lanes Project

PLANNING

The actions under this theme focus on the relationship between planning and policy and how people move within Mississauga. It also focuses on co-ordinating with other agencies, jurisdictions and City departments to create great places to walk. There are three recommendations under this theme:

- **Co-ordinate with partner agencies to implement the Pedestrian Master Plan.** This will help to ensure continuous pedestrian facilities across jurisdictional boundaries and on their infrastructure.
- **Integrate the pedestrian network and supporting facilities into all City planning and capital improvement projects.** This will help to ensure that walking and pedestrians are discussed and considered as part of all new City projects.
- **Develop and implement City initiatives that support pedestrians and enhance the pedestrian environment.** This will help to ensure that walking and enhancements to the pedestrian environment are considered in City planning and infrastructure projects.

NO.	ACTIONS		TIMEFRAME	DIVISION(S) RESPONSIBLE FOR IMPLEMENTATION	GOALS ADDRESSED
Recommendation: Co-ordinate with partner agencies to implement the Pedestrian Master Plan					
1	**Multi-agency integration.** Establish protocols to work with MTO, Metrolinx, Peel Transportation Services & Peel Health, Toronto and Region Conservation Authority (TRCA), major landowners, property managers, employers etc. to incorporate their plans and programs into the funding, study, design and construction of Pedestrian Master Plan projects, whenever project scope allows.			**Infrastructure, Planning and Engineering**	
2	**Multi-jurisdictional connections.** Establish protocols to work closely with MTO, Metrolinx, TRCA, Peel Transportation Services and neighbouring communities to ensure pedestrian connections across jurisdictional borders are well integrated.	78		**Infrastructure, Planning and Engineering**	
3	**Highway interchange safety.** Create and implement a strategy to address pedestrian safety issues around highway interchanges, in collaboration with MTO.	27		**Infrastructure, Planning and Engineering**	
4	**Inventory transit stops and stations.** Co-ordinate with MiWay to identify locations of transit stops and/or MiWay terminals/stations not accessible via sidewalk or pedestrian crossings.			**MiWay & Infrastructure, Planning and Engineering**	
5	**Access to transit stops.** Prioritize the implementation of sidewalks and pedestrian crossings to access transit stops throughout the city. Also consider stop design from a personal safety perspective.			**MiWay & Infrastructure, Planning and Engineering**	
6	**Access to GO Stations.** Work with Metrolinx/GO Transit to improve pedestrian access and safety (traffic and personal) at GO stations.			**MiWay & Infrastructure, Planning and Engineering**	

GOAL(S) ACTIONS ALIGN WITH 1 2 3 4

RELATED ACTIONS

Related to TMP Action

Related to the Changing Lanes Project

NO.	ACTIONS	TIMEFRAME	DIVISION(S) RESPONSIBLE FOR IMPLEMENTATION	GOALS ADDRESSED
7	**Transit user amenity deficiencies.** Co-ordinate with MiWay to identify transit user amenity deficiencies at existing MiWay terminals/stations.	18	**MiWay & Infrastructure, Planning and Engineering**	
8	**User amenities at MiWay stations/terminals.** Work with MiWay to improve customer amenities at existing MiWay terminals/stations.	18	**MiWay & Infrastructure, Planning and Engineering**	
9	**User amenities at GO stations.** Work with Metrolinx/GO Transit to improve customer amenities at GO stations.		**MiWay & Infrastructure, Planning and Engineering**	
Recommendation: Integrate the pedestrian network and supporting facilities into all City planning and capital improvement projects.				
10	**Capital-built pedestrian infrastructure.** Co-ordinate the implementation of pedestrian projects with new and retrofit City infrastructure projects. Review construction drawings to ensure pedestrians are accommodated, as per City standards.	1 ongoing	**Infrastructure, Planning and Engineering, City Planning Strategies & Development and Design**	
11	**Developer-built pedestrian infrastructure.** Review and update the studies and requirements for developers submitting development applications and site plans. Ensure requirements and studies focus on enhancing the pedestrian experience and public realm, as per City standards and best practice (e.g. City of Mississauga Healthy by Design Questionnaire and the Regional Healthy Development Assessment).	1 5	**Infrastructure, Planning and Engineering, City Planning Strategies & Development and Design**	
12	**Secure space for pedestrians.** Review right-of-way requirements and secure adequate right-of-way through land dedications or acquisitions. Official Plan policy reviews may explore and promote opportunities in infill and intensification areas to improve the pedestrian network and identify new connections. Pedestrian space should avoid encroaching into buffers of natural features.		**Infrastructure, Planning and Engineering, City Planning Strategies & Development and Design**	
Recommendation: Develop and implement City initiatives that support pedestrians and enhance the pedestrian environment.				
13	**Public amenity guidelines.** Develop guidelines for the installation of public amenities such as seating and washrooms.	1	**Infrastructure, Planning and Engineering, Development and Design and Community Services**	

NO.	ACTIONS		TIMEFRAME	DIVISION(S) RESPONSIBLE FOR IMPLEMENTATION	GOALS ADDRESSED
14	**Street trees and landscape treatments.** Co-ordinate street tree planting locations with sidewalk locations to ensure that trees can be planted clear of utilities.	1	ongoing	**Parks, Forestry and Environment, Infrastructure, Planning and Engineering & Development and Design**	
15	**Public art.** Identify and partner on opportunities to include public art within the pedestrian realm.			**Infrastructure, Planning and Engineering, Culture Division in Community Services & Development and Design**	
16	**Guidelines for pilot projects.** Develop guidelines to test pilot projects, temporary urban features on sidewalks and roadways and make projects permanent where appropriate (e.g. tactical urbanism, pedestrian streets, restaurant patios, etc.).	1 43		**Infrastructure, Planning and Engineering, City Planning Strategies, & Development and Design**	
17	**Other pedestrian related initiatives.** Work with other organizations (e.g. community groups and BIAs) to ensure projects intending to enhance the pedestrian environment are accessible and meet City design standards.			**Policy and Programming**	

GOAL(S) ACTIONS ALIGN WITH 1 2 3 4

RELATED ACTIONS

Related to TMP Action

Related to the Changing Lanes Project

DESIGN

The actions under this theme focus on designing connected, safe, accessible and comfortable places to walk that can be used by all residents and visitors of Mississauga. It is important to note that many of the actions identified under this theme will be supported and implemented through the Changing Lanes Complete Streets Guidelines. There are two recommendations under this theme:

- **Develop a connected pedestrian network.** This recommendation focuses on filling in gaps in the pedestrian network and ensuring that people have continuous pedestrian routes to destinations throughout the community.
- **Develop a pedestrian network that is safe and comfortable for all.** In line with the principles of Vision Zero, this will ensure that walking this will ensure that walking in Mississauga is safe and accessible for all residents and visitors regardless of age and ability. It includes providing accessible crossings, lighting and features that create safe and comfortable places to walk.

NO.	ACTIONS	TIMEFRAME	DIVISION(S) RESPONSIBLE FOR IMPLEMENTATION	GOALS ADDRESSED
Recommendation: Develop a connected pedestrian network.				
18	**Pedestrian network gaps.** Incorporate the recommended priority projects and eliminate gaps in the pedestrian network as outlined in the Pedestrian Master Plan (Section 4).	■■■	**Infrastructure Planning and Engineering**	
19	**Prioritize pedestrian network gaps.** Adopt the criteria identified in the Pedestrian Master Plan (Section 4) to prioritize new sidewalks based on road classification and connections to destinations.	■□□	**Infrastructure Planning and Engineering**	
20	**Location of off-road trails.** Conduct an inventory of off-road trails through parks and green spaces and confirm if they are multi-use or pedestrian only.	■□□	**Parks, Forestry and Environment & Infrastructure Planning and Engineering**	
21	**Prioritize off-road trails.** Establish a prioritized matrix for the implementation of off-road trails that considers pedestrian network connectivity and is co-ordinated with other opportunities. Other opportunities can include initiatives led by other organizations/groups, such as the Toronto and Region Conservation Authority, etc.	■□□	**Parks, Forestry and Environment & Infrastructure Planning and Engineering**	
22	**Public walkways on private land.** Inventory pedestrian walkways and trails that are publicly accessible but not owned by the City.	■□□	**Infrastructure Planning and Engineering**	
23	**Resident and stakeholder input.** Develop a tool to document and prioritize resident and stakeholder city-wide pedestrian concerns and sidewalk requests.	■□□	**Infrastructure Planning and Engineering & Strategic Communications**	

NO.	ACTIONS		TIMEFRAME	DIVISION(S) RESPONSIBLE FOR IMPLEMENTATION	GOALS ADDRESSED
24	**Informal pathways and desire lines.** Record and inventory observations and feedback on the location of informal foot paths and desire lines and identify opportunities to formalize connections.			**Infrastructure Planning and Engineering**	
25	**Spacing for controlled crossings.** Review and establish standards and guidelines for the spacing of controlled crossings on multi-lane arterial roadways.	49		**Traffic Management**	
26	**Closure of walkways.** Avoid closing existing walkways to maintain pedestrian network connectivity, and update the existing Closure of Walkways policy to clarify conditions when a closure could occur.	4		**Infrastructure Planning and Engineering & City Planning Strategies**	
27	**New walkways.** Identify locations where new walkways and pedestrian connections could be implemented where none exist. Some common locations where new connections may be appropriate include cul-de-sacs, between large blocks, window streets with no pedestrian connections to the main road, throughout Downtown and through new developments.			**Infrastructure Planning and Engineering & City Planning Strategies**	
28	**Crossing gaps.** Review crossing gaps, as identified in Section 4 of the Pedestrian Master Plan. Develop a plan to install crossings where multi-use trails and pedestrian trails intersect with streets at intersections and mid-block where appropriate and feasible.	49		**Infrastructure Planning and Engineering & Traffic Management**	
29	**Crossing best practice.** Update the City's Pedestrian Crosswalk Policy to include more pedestrian crossing options, as outlined in the Ontario Traffic Manual Book 15.	49		**Infrastructure Planning and Engineering & Traffic Management**	
30	**Grade separated crossings.** Provide recommended grade separated crossings, as outlined in the Cycling Master Plan, over barriers such as creeks, ravines, highways and rail corridors to fill network gaps over the long-term.			**Infrastructure Planning and Engineering**	
Recommendation: Develop a pedestrian network that is safe and comfortable for all.					
31	**Facility Accessibility Design Standards.** Review and update the City's Facility Accessibility Design Standards to align with best practices and implement actions from the Multi-Year Accessibility Plan.			**Infrastructure, Planning and Engineering, Development and Design & City Planning Strategies**	
32	**Lighting off-road trails.** Review the existing Park Trail Lighting Policy and develop guidelines for illuminating off-road trails and grade separated active transportation bridges.	28		**Infrastructure Planning and Engineering & Parks, Forestry and Environment**	
33	**Trail design and users.** Update design standards to ensure primary boulevard trails and primary off-road trails are designed and constructed with consideration for separating cyclists and pedestrians, or protecting for future separation.	3		**Infrastructure Planning and Engineering & Parks, Forestry and Environment**	

GOAL(S) ACTIONS ALIGN WITH 1 2 3 4

RELATED ACTIONS

Related to TMP Action

Related to the Changing Lanes Project

NO.	ACTIONS	TIMEFRAME	DIVISION(S) RESPONSIBLE FOR IMPLEMENTATION	GOALS ADDRESSED
34	**Sidewalk design requirements.** Update design requirements for new sidewalks and revise the Development Requirements and Standard Drawings based on road classification. To be confirmed through the develop of the Changing Lanes Complete Streets Guidelines.	3	**Infrastructure Planning and Engineering, City Planning Strategies & Development and Design**	
35	**Urban and Streetscape Design Guidelines.** Review and update urban and streetscape design guidelines to ensure they incorporate current best practices in pedestrian infrastructure design.	1	**Infrastructure Planning and Engineering & Development and Design**	
36	**Vulnerable users and equity-seeking groups.** Update standards and practices for the design of pedestrian infrastructure (e.g. sidewalk design requirements, streetscape guidelines, pedestrian network gaps, etc.) to consider vulnerable road users and equity-seeking and marginalized groups (continue to update as required).	1 3	**Infrastructure Planning and Engineering**	
37	**Crossing Times.** Implement a monitoring program to review and update crossing times and signal phasing at intersections, particularly in areas with high pedestrian activity and at schools, community centres, long-term care facilities, health facilities and similar land uses.		**Traffic Management**	
38	**Pedestrian signals.** Develop a program and guidelines for implementing an automatic pedestrian phase, pedestrian leading phases and pedestrian scrambles at signalized intersections.		**Traffic Management**	
39	**Lighting.** Review and develop a strategy to install additional lighting (where required) throughout the pedestrian network. Including pedestrian scale lighting along roadways and at intersections.		**Traffic Management**	
40	**Safe and accessible crossings.** Develop and implement a program to enhance accessibility and safety of intersections and crossings by providing curb ramps with tactile features, crosswalk pavement markings, accessible pedestrian crossings, countdown timers, curb extensions, signal phasing etc.	1 43	**Infrastructure Planning and Engineering**	
41	**Vision Zero.** Plan, develop and improve the pedestrian network in line with the fundamental principles of Vision Zero to eliminate pedestrian fatalities and serious injuries as a result of motor vehicle collisions (continue to update as required).	1 43 ongoing	**Infrastructure Planning and Engineering, Traffic Management & Works Operations and Maintenance**	
42	**Pedestrian collisions.** Develop a monitoring program to review pedestrian collision data (hot spot locations) and implement programs and safety improvements to eliminate pedestrian injuries.	47	**Traffic Management**	

FUNDING & PROJECT DELIVERY

The actions under this theme provide direction on how the City will fund and implement the Pedestrian Master Plan. There are two recommendations under this theme:

- **Seek the appropriate funds and resources to implement the Pedestrian Master Plan.** This includes seeking the capital budget and operations funding required to implement the Pedestrian Master Plan based on the timeframe identified.
- **Leverage all available funding opportunities to expedite project delivery.** City staff can look for grants and other external funding sources that can help fund and deliver the actions and projects outlined in the Pedestrian Master Plan.

NO.	ACTIONS	TIMEFRAME	DIVISION(S) RESPONSIBLE FOR IMPLEMENTATION	GOALS ADDRESSED
Recommendation: Seek the appropriate funds and resources to implement the Pedestrian Master Plan.				
43	**Capital and operations funding.** Seek the appropriate capital and operations funding to implement the recommendations of the Pedestrian Master Plan.	■□□	**Infrastructure Planning and Engineering & Works Operations and Maintenance**	
44	**Human resources.** Develop and execute a long-term staffing plan that includes city staff and consultant support and is sufficient to implement the recommendations of the Pedestrian Master Plan.	■□□	**Infrastructure Planning and Engineering**	
Recommendation: Leverage all available funding opportunities to expedite project delivery.				
45	**Grant funding.** Pursue funding from all available grant sources and use existing City budget to match grant funding as needed. **68**	ongoing	**Infrastructure Planning and Engineering**	

GOAL(S) ACTIONS ALIGN WITH

1  2  3  4 

RELATED ACTIONS

Related to TMP Action

Related to the Changing Lanes Project

PROMOTION & EDUCATION

The actions under this theme focus on supporting educational programs, hosting promotional events and developing materials that promote and support walking. These actions help to ensure it is safe, easy and fun to walk around Mississauga. There are two recommendations under this theme:

- **Provide and support educational programs to increase walking mode share and safety.** Educate drivers, cyclist and pedestrians on how to share the road network safely and understand the rules of the road. This also includes programs that promote walking to school and road safety for all users.
- **Encourage walking through promotional events, wayfinding, marketing and communications.** This includes a range of actions that address support measures that provide a cost-effective approach to make people feel safer and more comfortable walking within their community.

NO.	ACTIONS		TIMEFRAME	DIVISION(S) RESPONSIBLE FOR IMPLEMENTATION	GOALS ADDRESSED
Recommendation: Provide and support educational programs to increase walking mode share and safety.					
46	**School travel.** Promote and support the Region of Peel's School Travel Planning program and the City's School Walking Routes program.	57	■□□	**Infrastructure Planning and Engineering**	
47	**Sidewalk snow clearing awareness.** Develop an education and public awareness campaign to inform residents about sidewalk snow and ice clearing responsibility.		■□□	**Infrastructure Planning and Engineering & Strategic Communications**	
48	**Road safety and regulation awareness.** Collaborate with Peel Regional Police, Road Safety Committee, Traffic Safety Council, the Region of Peel and other agencies to encourage walking and raise awareness of road safety laws for all road users in areas with the greatest pedestrian risk and injury severity.		ongoing	**Infrastructure Planning and Engineering, Enforcement & Strategic Communications**	
49	**Safe transportation practices.** Support campaigns that promote safe travel practices for all road users.		ongoing	**Infrastructure Planning and Engineering, Enforcement & Strategic Communications**	

NO.	ACTIONS	TIMEFRAME	DIVISION(S) RESPONSIBLE FOR IMPLEMENTATION	GOALS ADDRESSED
Recommendation: Encourage walking through promotional events, wayfinding, marketing and communications.				
50	**Walking events.** Support events led by other agencies and partners that raise awareness of walking.	ongoing	**Infrastructure Planning and Engineering & Strategic Communications**	
51	**Targeted communication and engagement.** Develop guidelines and practices to conduct targeted communication and engagement regarding walking and pedestrian projects with equity seeking and under-represented groups to understand their unique needs and issues.		**Strategic Communications & Infrastructure Planning and Engineering**	
52	**Benefits of walking.** Work with Peel Health, health researchers, businesses and other communities to develop and deliver informational materials outlining the benefits of walking.		**Infrastructure Planning and Engineering & Strategic Communications**	
53	**Public communication and information.** Create public communication channels for the Active Transportation Office, including a website, e-mail newsletters and social media.		**Strategic Communications & Infrastructure Planning and Engineering**	
54	**Marketing and promotion.** Actively market and promote walking and active transportation through various forms of media.		**Strategic Communications & Infrastructure Planning and Engineering**	
55	**Transportation Demand Management.** Develop transportation demand management requirements for new developments in line with Action #8 of the Transportation Master Plan and recommendation #4 in City's Transportation Demand Management Strategy and Implementation Plan.	8	**Infrastructure Planning and Engineering**	
56	**Neighbourhood safety programs.** Support, develop and monitor new municipal programs and measures to promote walking and improve neighbourhood safety for pedestrians (including slower residential street speed limits, Crime Prevention Through Environmental Design measures and neighbourhood maps).		**Infrastructure Planning and Engineering & Peel Region Police**	
57	**Pedestrian Wayfinding Strategy.** Develop a plan to consolidate and/or complement local and regional directional signage programs with a comprehensive, city-wide wayfinding system for all modes.	29	**Infrastructure Planning and Engineering, Parks, Forestry and Environment**	

GOAL(S) ACTIONS ALIGN WITH 1 2 3 4

RELATED ACTIONS

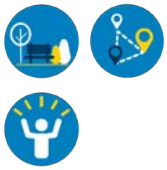
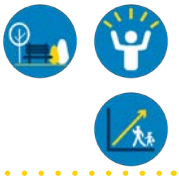
Related to TMP Action

Related to the Changing Lanes Project

OPERATIONS & MAINTENANCE

The actions under this theme will ensure there are clear, smooth and even sidewalks and trails to support and encourage walking year-round. In addition, walking facilities should be accessible and usable by all. There is one recommendation under this theme:

- **Maintain the pedestrian network and infrastructure to ensure they are accessible and free of obstructions.** Ongoing rehabilitation and maintenance of existing infrastructure is necessary to keep pedestrian routes connected, functional and usable over time.

NO.	ACTIONS		TIMEFRAME	DIVISION(S) RESPONSIBLE FOR IMPLEMENTATION	GOALS ADDRESSED
Recommendation: Maintain the pedestrian network and infrastructure to ensure they are accessible and free of obstructions.					
58	**Sidewalk condition assessment.** Complete an inventory and condition assessment of City-owned sidewalk infrastructure, including an assessment of compliance with the Accessibility for Ontarians with Disabilities Act.			**Infrastructure Planning and Engineering**	
59	**Upgrade sidewalks.** Develop and implement a Capital Plan to upgrade sidewalks, trails and walkways to meet current standards and Accessibility for Ontarians with Disabilities Act compliance requirements.			**Infrastructure Planning and Engineering and Parks, Forestry and Environment**	
60	**Maintenance and snow removal.** Review and update standards, procedures and timelines for maintenance and snow removal for sidewalks (including sidewalks on residential streets), walkways and multi-use trails.	62		**Works Operations and Maintenance & Infrastructure Planning and Engineering**	
61	**Maintenance-related feedback.** Promote the Pingstreet mobile app to solicit maintenance-related feedback on the pedestrian network.	30	ongoing	**Works Operations and Maintenance & Infrastructure Planning and Engineering**	
62	**Maintain Amenities.** Complete an inventory and condition assessment of existing pedestrian amenities (crossings, signage, benches, lighting, art, recycling/trash bins etc.) and develop a strategy for ongoing maintenance.			**Infrastructure Planning and Engineering, Parks, Forestry and Environment & works Operations and Maintenance**	
63	**Accessible detours during construction and maintenance.** Review current construction detour policies and develop new guidelines for contractors, developers and City departments to ensure that they represent best practice for accommodating all active transportation users during construction and maintenance.	63		**Works Operations and Maintenance & Infrastructure Planning and Engineering**	

EVALUATION

The actions under this theme focus on monitoring and evaluating how the Pedestrian Master Plan is being implemented, the number of people walking in the community and the health outcomes associated with more walking and physical activity. There are two recommendations under this theme:

- **Develop a monitoring program to evaluate the impacts of implementing the Pedestrian Master Plan.** This includes counting the number of pedestrians using trails and walking routes, monitoring health outcomes of the plan and keeping an inventory of all new and existing pedestrian infrastructure.
- **Produce an annual report summarizing progress made on implementing the Pedestrian Master Plan.** This will allow the City to share how the Pedestrian Master Plan is being implemented and how the City is moving towards achieving the vision and goals of the plan.

NO.	ACTIONS	TIMEFRAME	DIVISION(S) RESPONSIBLE FOR IMPLEMENTATION	GOALS ADDRESSED
Recommendation: Develop a monitoring program to evaluate the impacts of implementing the Pedestrian Master Plan.				
64	**Pedestrian counters.** Install and expand the number pedestrian counters on multi-use trails and along key corridors to evaluate the volume of people walking. Explore other new and emerging count technologies and crowd sourced data to understand how people are travelling in Mississauga.	■■□	**Infrastructure Planning and Engineering**	
65	**Track infrastructure implementation.** Update the inventory of pedestrian infrastructure as new projects are implemented. Pedestrian infrastructure includes, pedestrian crossovers, crosswalks, crossing upgrades, accessible or audible pedestrian signals, curb ramps, wayfinding signage, etc.	■■□	**Infrastructure Planning and Engineering**	
66	**Health outcomes.** Work with Peel Health and health researchers to measure health outcomes as the City implements projects from the Pedestrian Master Plan.	ongoing	**Infrastructure Planning and Engineering**	
Recommendation: Produce an annual report summarizing progress made on implementing the Pedestrian Master Plan.				
67	**Annual reporting.** Prepare an annual report on pedestrian count data and other monitoring indicators and its relation to the goals of the Pedestrian Master Plan.	ongoing	**Strategic Communications & Infrastructure Planning and Engineering**	
68	**Share reports and progress updates.** Prepare and present a report to any applicable Council Committees (Accessibility Advisory Committee, Cycling Advisory Committee, Road Safety Committee, etc.) outlining the progress on implementing the Pedestrian Master Plan.	ongoing	**Infrastructure Planning and Engineering**	

GOAL(S) ACTIONS ALIGN WITH

1  2  3  4 

RELATED ACTIONS

Related to TMP Action

Related to the Changing Lanes Project

4.0 PEDESTRIAN NETWORK

This section of the document summarizes the existing pedestrian network and highlights the different types of infrastructure included in the network. This section also identifies locations were there are gaps in the existing infrastructure and outlines how new infrastructure projects can be prioritized. There are several actions listed in the section above (Action #18, 19, 26, 27, 28 and 34⋆) that reference the maps and infrastructure descriptions included in this section.

4.1 EXISTING PEDESTRIAN NETWORK

The City of Mississauga has an existing network of walking facilities including sidewalks, trails and walkways. When a suitable network exists within a community – such as having a complete and connected sidewalk network, safe crossings and major destinations close to where people live – walking can be a practical and attractive form of transportation for almost all short trips throughout the year. **Table 1** shows the kilometres of existing pedestrian facilities. The full network map can be seen in **Figure 6**.

Table 1. Lengths of Existing Pedestrian Network Facilities

PEDESTRIAN FACILITY TYPE	TOTAL (KM)
Sidewalk	2,400
Multi-use Trails	200
Pedestrian Trails	252
Engineered Walkways	24
TOTAL	**2,876**

The City has been working to expand and improve conditions for walking around Mississauga. The City has been working to provide new sidewalk and trail infrastructure, new curb ramps and crossings and creating inviting pedestrian areas. However, there are still opportunities to fill in network gaps and enhance the environment to encourage more walking trips within the city. For more detailed information about the exiting network of pedestrian facilities please view the full Network Assessment Report in **Appendix D**.

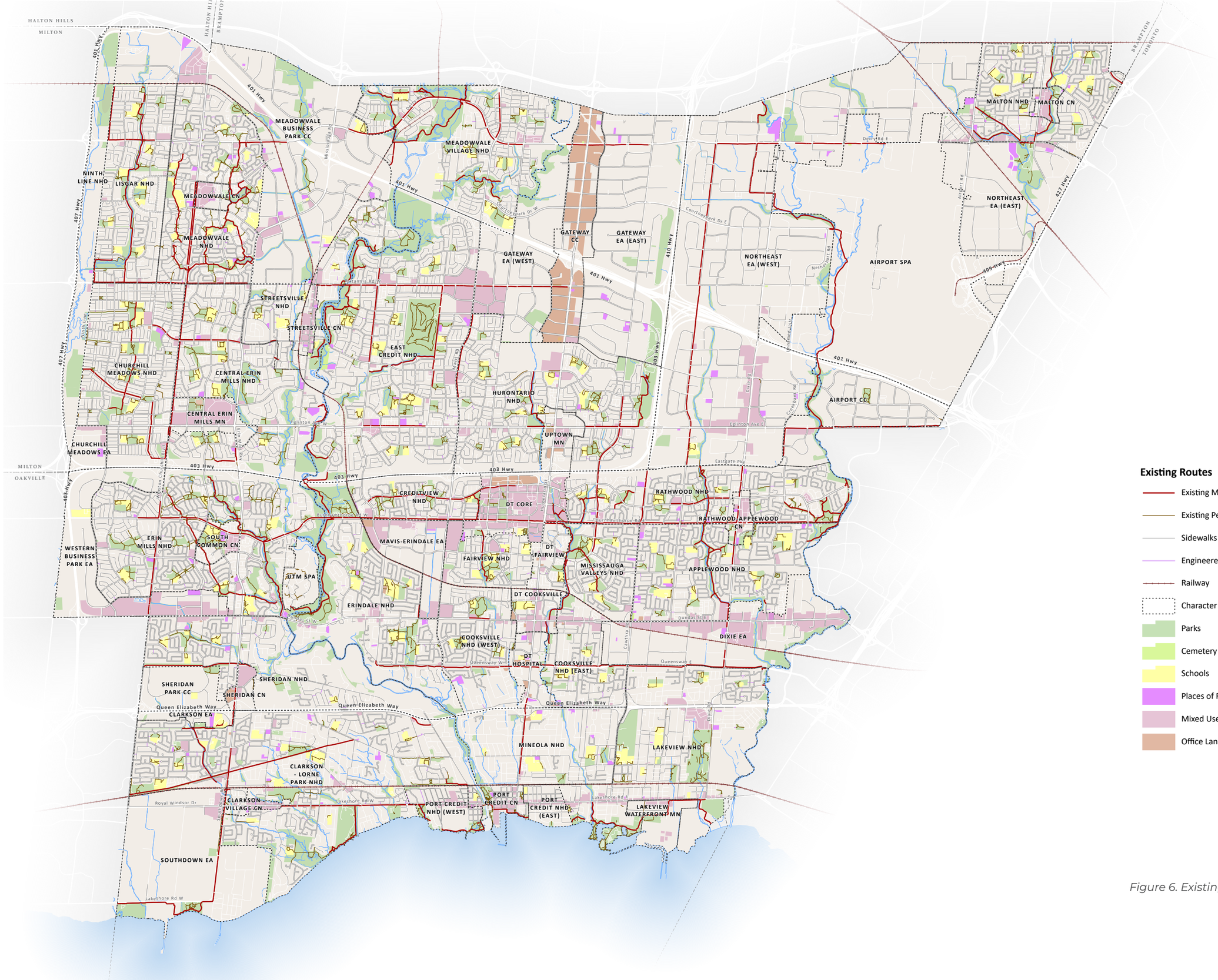


Figure 6. Existing Pedestrian Network

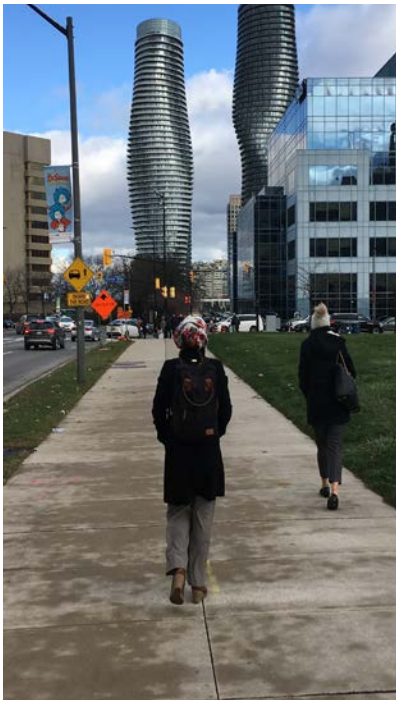
Current Pedestrian Facilities in Mississauga

Sidewalks are typically located parallel to a roadway and form the backbone of a well-connected walking network. Based on current design standards, sidewalks are typically concrete and at least 1.5 to 1.8 metres wide, except in areas where higher pedestrian activity is expected, such as Downtown.

- 94% of arterial and collector streets (by kilometre) have sidewalks on one or both sides.
- 79% of local streets (by kilometre) have sidewalks on one or both sides.
- Several corridors within the city are under the jurisdiction of the Region of Peel. Nearly 60% of these streets (by kilometre) have pedestrian facilities on both sides of the street, while approximately 30% have sidewalks on one side of the street. About 10% have no sidewalk or pedestrian facilities on either side of the street.
- Curb ramps are required at each intersection or pedestrian road crossing.
- Tactile surface indicators must be installed where required in accordance with the Accessibility for Ontarians with Disabilities Act.

Multi-use trails are shared by pedestrians and cyclists. They can be paved or unpaved (gradual based) and may be located parallel to a roadway or through natural areas.

- There are 200 kilometres of multi-use trails throughout the city.
- Multi-use trails are physically separated from the roadway and used for both transportation and recreation purposes.
- Boulevard multi-use trails are located parallel to a roadway but are separated from motor vehicles by a curb or another type of physical separation.
- Off-road multi-use trails are paved facilities that are not located adjacent to a roadway.



Example of a Wide Sidewalk (Mississauga, ON)

Example of Multi-use Trails (Mississauga, ON)

Example of Engineered Walkways (Surrey, BC)

Example of Crossing Treatments (Mississauga, ON)

Pedestrian trails are typically pedestrian-only paved or unpaved trails that are located within parks and school grounds. They are not considered part of the cycling network.

- There are 252 kilometres of pedestrian trails throughout the city.
- Typically, pedestrian trails provide dedicated pedestrian connections between sidewalks and buildings or parks.

Engineered walkways are short segments of paved trails that provide connections and are typically located between roadways, buildings and amenities.

- There are 24 kilometres of engineered walkways throughout the city.
- These walkways provide street-to-street connections and add to the walkability of neighbourhoods by shortening walking distances and providing important connections to destinations.
- Engineered walkways can have lighting and signage. They restrict motor vehicle access through the use of bollards or maze gates.
- Engineered walkways are recommended to be 3 metres wide with curb ramps in accordance with the Accessibility for Ontarians with Disabilities Act.

Crossing treatments – allow people walking to confidently and safely cross streets. They play an important role in creating facilities that are accessible for people of all abilities.

- There are over 750 locations within the city that have signalized crossings (both intersection and mid-block crossings).
- A lack of designated crossings can act as a significant physical barrier to walking within a community.
- There are several bridges and over/underpasses in the city which accommodate pedestrians and other modes of active transportation crossing some of these physical barriers.
- There are several locations where a pedestrian facility will intersect with a roadway and there is no designated pedestrian crossing nearby.

4.2 SIDEWALK REQUIREMENTS

Sidewalk requirements are typically determined based on road classification. The policy titled Sidewalk Requirements (10–07–01) and the Transportation Work Standards provide guidance on where sidewalks should be located and the desirable width.

Action #34 in Section 4 calls for updating the City's design requirements for new sidewalks. The table below (**Table 2**) outlines the proposed sidewalk recommendations for sidewalks based on character area and road classification. These recommendations will be confirmed through the Changing Lanes project.

Table 2. Proposed Sidewalk Standards

	ARTERIAL		COLLECTOR		LOCAL		CUL-DE-SAC	
CHARACTER AREA	# OF SIDES	DESIRED WIDTH	# OF SIDES	DESIRED WIDTH	# OF SIDES	DESIRED WIDTH	# OF SIDES	DESIRED WIDTH
Downtown	2	3–6 m	2	3–6 m	2	1.8–2.4 m	2	1.8 m
Major Nodes	2	3–6 m	2	3–6 m	2	1.8–2.4 m	2	1.8 m
Corporate Centre	2	3–6 m	2	3–6 m	2	1.8–2.4 m	2	1.8 m
Community Node	2	1.8–2.4 m	2	1.8–2.4 m	2	1.8 m	2	1.8 m
Neighbourhood	2	1.8–2.4 m	2	1.8–2.4 m	2	1.8 m	2	1.8 m
Employment Area	2	1.8–2.4 m	2	1.8–2.4 m	2	1.8 m	2	1.8 m
Special Purpose Area	Special Study May Be Required (Context Specific)							

In response to the COVID-19 global pandemic, cities have worked to temporarily reallocate road space to better accommodate people walking and cycling while being physically distant. In July 2020, the City of Mississauga moved forward with an Active Transportation COVID-19 Recovery Framework. The Framework identifies short and longer-term options for walking and cycling within the city. Some of these options included, temporary road closures, limiting traffic on residential streets to local traffic only and reallocating motor vehicle travel and parking lanes for active transportation users.

4.3 MAINTENANCE STANDARDS

The Provincial Minimum Maintenance Standards (MMS) for Municipal Highways (Ontario Regulation 239/02) was updated in May 2018 to include a greater focus on maintenance standards for active transportation facilities, including bicycle facilities and sidewalks (including multi-use trails). The MMS outlines the standard for addressing snow accumulation on a sidewalks and multi-use trails after the snow accumulation has ended or if a significant weather event has been declared.

The MMS also provides guidance on sidewalk inspections. Sidewalks are to be inspected annually, with each inspection taking place not more than 16 months from the previous inspection.

REPAIRS AND UPGRADES

Community members are encouraged to report sidewalk and trail damage through 311 or using the Pingstreet mobile app. The City also collects and records request for new sidewalks or sidewalk upgrades. The Pedestrian Master Plan includes actions to document and prioritize city-wide pedestrian concerns and sidewalk requests. The City is also promoting the use of the Pingstreet mobile app to solicit maintenance-related feedback on the pedestrian network.

Along regional roads,there are opportunities to coordinate State of Good Repair projects with the Region of Peel in an effort to drive opportunities for improvements around walking and cycling facilities.

Actions outlined under the theme Operations and Maintenance in Section 4 include assessing the existing condition of sidewalks, upgrading existing sidewalks, providing accessible detour during construction and maintenance etc.

4.4 NETWORK GAPS

Filling in the network gaps identified in this section are the focus of actions identified in Section 3 (Action #18, 19 and 28⋆).

SIDEWALKS AND TRAILS

Pedestrian network gaps seen in **Figure 7** are locations where there is currently no sidewalk or multi-use trail connection on one or both sides of the roadway. An important action of the Pedestrian Master Plan is to work towards eliminating gaps in the pedestrian network. Additionally, actions regarding updating sidewalk design recommendations and accessibility standards are outlined in the section above.

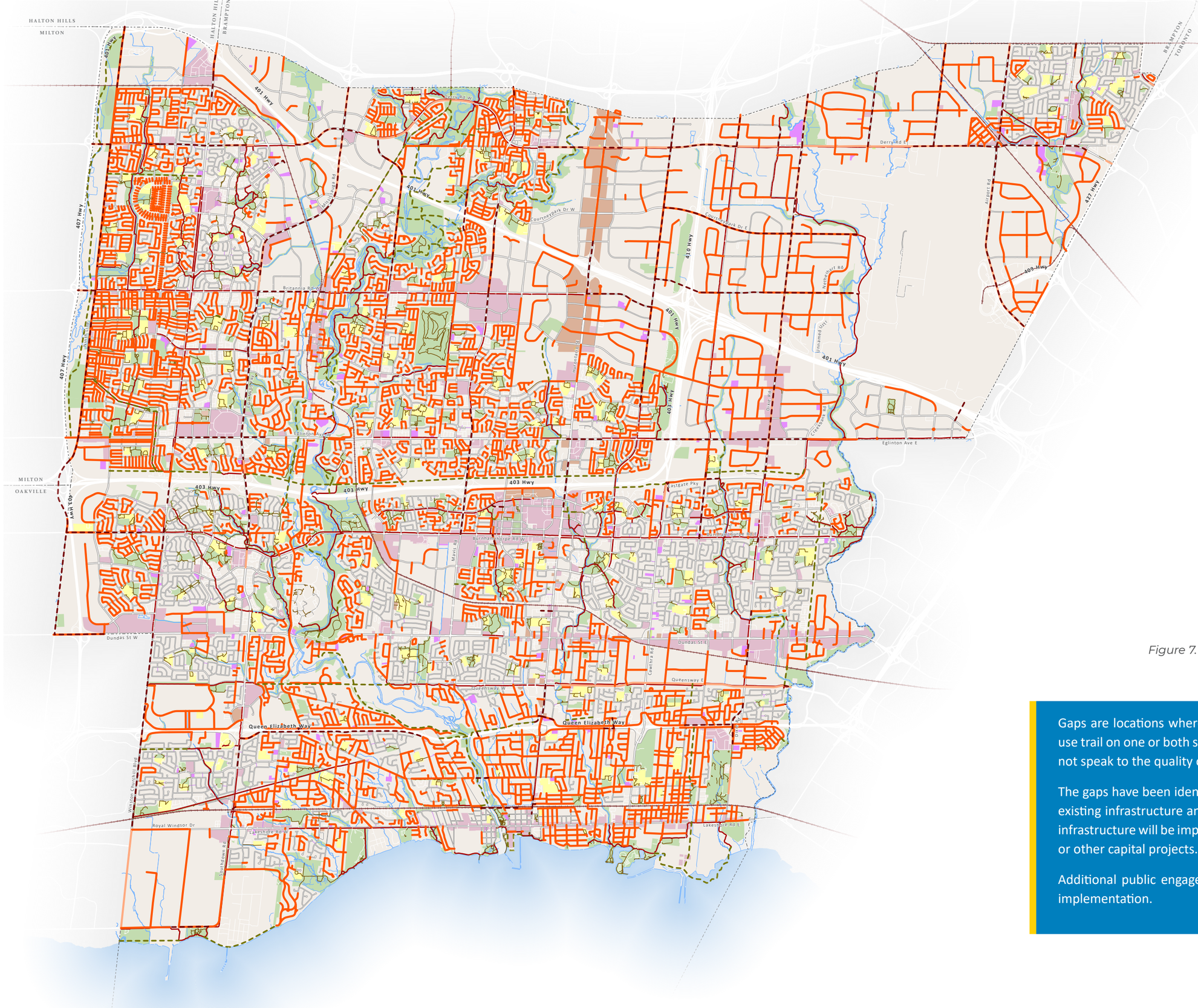
It is important to note that **Figure 7** does not speak to the quality of the existing infrastructure. Improvements to existing infrastructure is addressed under the theme Operations and Maintenance. The gaps in the map have been identified based on a GIS analysis of existing infrastructure and does not distinguish whether infrastructure will be implemented through development or other capital projects. It is also important to note that additional public engagement will be required prior to implementation.

CROSSINGS

In addition to trails and sidewalks, crossings can act as significant physical barriers to walking within a community. Despite the number of signalized and grade-separated crossings in the city, there are several locations where there is a pedestrian facility, such as a multi-use trail or a pedestrian trail, intersects with a roadway and there is no designated road crossing. The locations where a multi-use trail or a pedestrian trail intersect a roadway with no traffic signal, stop control for motor vehicles, or a pedestrian crossover (PXO) can be seen in **Figure 8**. The Pedestrian Master Plan outlines an action for the City to review identified crossing gaps and develop a plan to install crossings where multi-use trails and pedestrian trails intersect with streets at intersections and mid-block. Some of the other actions intended to enhance pedestrian crossings include:

- Updating the City's Pedestrian Crosswalk Policy to include more pedestrian crossing options.
- Providing recommended grade-separated crossings, as outlined in the CMP, over barriers such as creeks, ravines, highways and rail corridors to fill network gaps over the long-term.
- Developing and implementing a program to enhance accessibility and safety of intersections and crossings by providing curb ramps with tactile features, crosswalk pavement markings, accessible pedestrian crossings, countdown timers, curb extensions, signal phasing and/or other treatments.

The CMP identifies future grade-separated crossing locations.



Proposed Routes

- Boulevard Multi-Use Trail
- Off Road Trail
- City of Mississauga Pedestrian Network Gap
- Region of Peel Pedestrian Network Gap

Existing Routes

- Existing Multi-use Trails
- Existing Pedestrian Trails
- Sidewalks
- Engineered Walkways
- Railway
- Parks
- Cemetery
- Schools
- Places of Religious Assembly
- Mixed Use and Commercial
- Office Land Use

Figure 7. Gaps in the Pedestrian Network

Gaps are locations where there is no sidewalk or multi-use trail on one or both sides of the street. The map does not speak to the quality of the existing infrastructure.

The gaps have been identified based on a GIS analysis of existing infrastructure and does not distinguish whether infrastructure will be implemented through development or other capital projects.

Additional public engagement will be required prior to implementation.

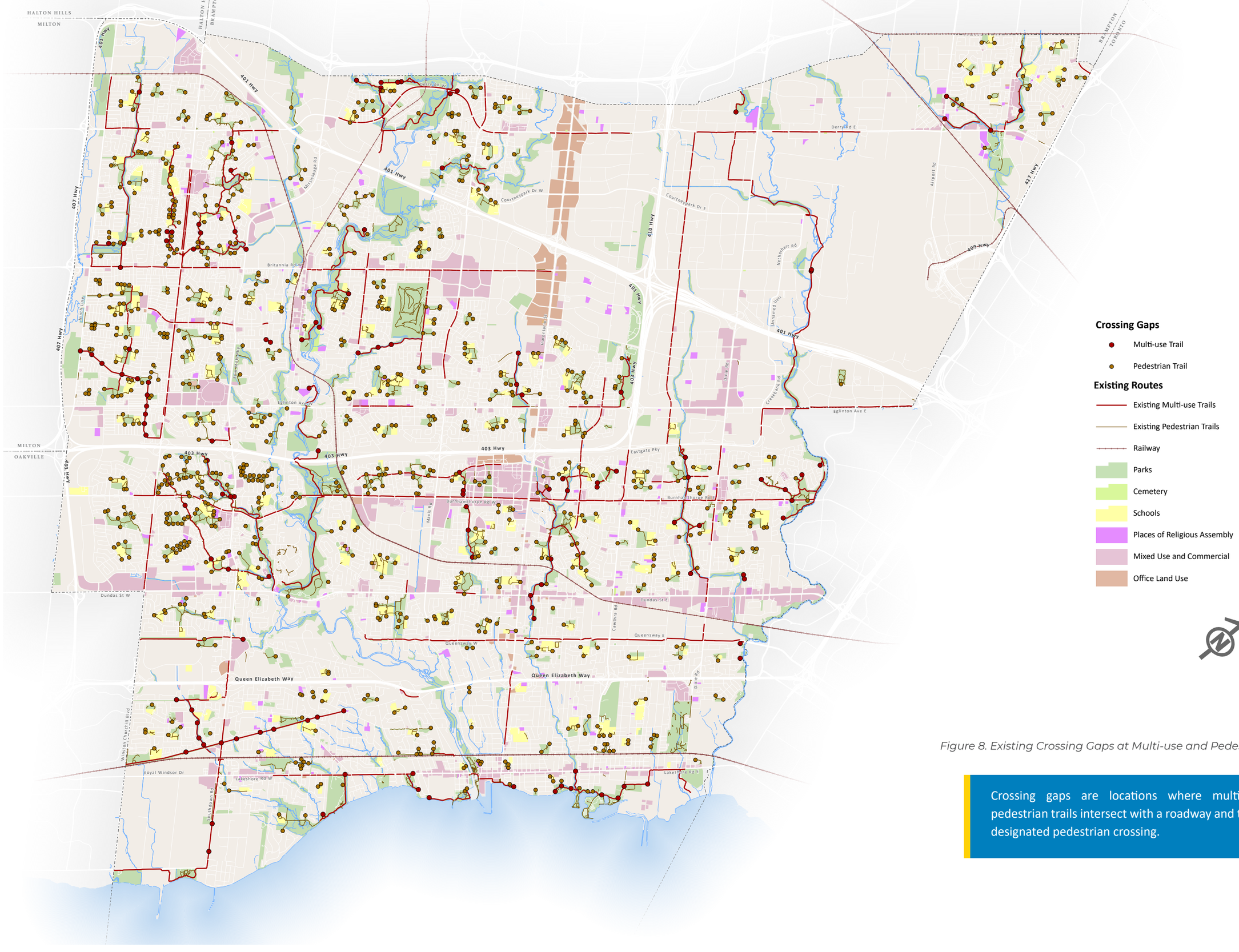


Figure 8. Existing Crossing Gaps at Multi-use and Pedestrian Trails

Crossing gaps are locations where multi-use and pedestrian trails intersect with a roadway and there is no designated pedestrian crossing.

4.5 NETWORK PRIORITIZATION

Mississauga has an existing network of sidewalks and trails and by making strategic improvements, people of all ages and abilities will have a safe, accessible and connected places to walk. Several types of analysis were conducted to identify areas with the greatest need and opportunity to increase the number of walking trips. Additionally, the feedback was collected through public engagement to understand how infrastructure investments should be prioritized. The purpose of this section is to outline the methodology used to identify priorities to fill gaps in the pedestrian network over the short term (within 5 years), medium term (within 15 years) or long term (15 years and beyond).

An objective, GIS-based prioritization methodology was used to identify priority locations based on a list of variables. Criteria for the prioritization of pedestrian infrastructure was developed in collaboration with municipal staff and feedback from public engagement. Each variable contains scoreable information and the results were combined to generate an overall score for the network gaps identified. A prioritized network gap map can be seen in **Figure 10**. Each of the variables is described in more detail below.

PRIORITIZATION CRITERIA

- Road Classification
- Transit
- Schools
- Character Areas
- Pedestrian Generators
- Network Connectivity
- Network Need
- Equity (Based on Equity Analysis)

Figure 9. Pedestrian Infrastructure Prioritization Criteria

- **Road Classification** – For pedestrians in particular, the need for sidewalks and trails is closely related to traffic volumes and speeds on the adjacent street. On busier streets, there is a greater need for pedestrian facilities. The existing road classification system provides a proxy for traffic volumes and speeds. Proposed sidewalk improvements on arterial streets received the highest score, followed by collector streets and local streets.
- **Transit** – One of the key directions of the Pedestrian Master Plan is to improve walking connections with transit. This criterion measures the degree to which the proposed improvement increases access to transit facilities. Improvements located on bus routes and within the closest proximity to transit stops received the highest score.
- **Schools** – Schools are an important destination for people walking particularly as it is expected that children and youth will be making the trip to and from school daily. This criterion examined whether proposed pedestrian network gaps are located adjacent and within proximity to schools. The closer the proximity, the higher the score.
- **Character Areas** – Mississauga consists of different character areas as outlined in the

OP. Several character areas (Downtown, Major Nodes, Community Nodes, Intensification Corridors, Corporate Centres and Employment Areas) are important destinations for people walking. This criterion examined whether proposed pedestrian gaps are located within proximity to the different character areas.

- **Pedestrian Generators** – Community facilities such as libraries, parks, cemeteries, senior facilities, places of religious assembly, trails and community centres are also important destinations for people walking. This criterion examined whether proposed pedestrian facilities were located within 500 metres of these destinations and gave them a higher score accordingly.
- **Network Connectivity** – This criterion measures the degree to which the proposed improvement addresses a gap in the network. There is often a greater need for providing a sidewalk or multi-use trail when it forms part of a network, as opposed to sidewalks or trails that do not provide broader network connections. Proposed sidewalks that connect to existing sidewalks score higher in this criterion than those that do not connect to any sidewalks or trails.
- **Network Need** – Similar to network connectivity, this criterion assesses the degree to which a proposed improvement completes the network. Proposed improvements where there is currently no sidewalk on either side of the street scored higher than cases where a sidewalk is already provided on one side of the street.
- **Equity** – The Pedestrian Master Plan focuses on strategic investments in areas with traditionally underserved populations. This criterion assesses the greatest potential to improve access to equity-seeking and underserved populations with a high equity need, including areas with a high concentration of lower-income residents, children, seniors, Indigenous People and new immigrants. Areas with the greatest equity need were given the highest score.

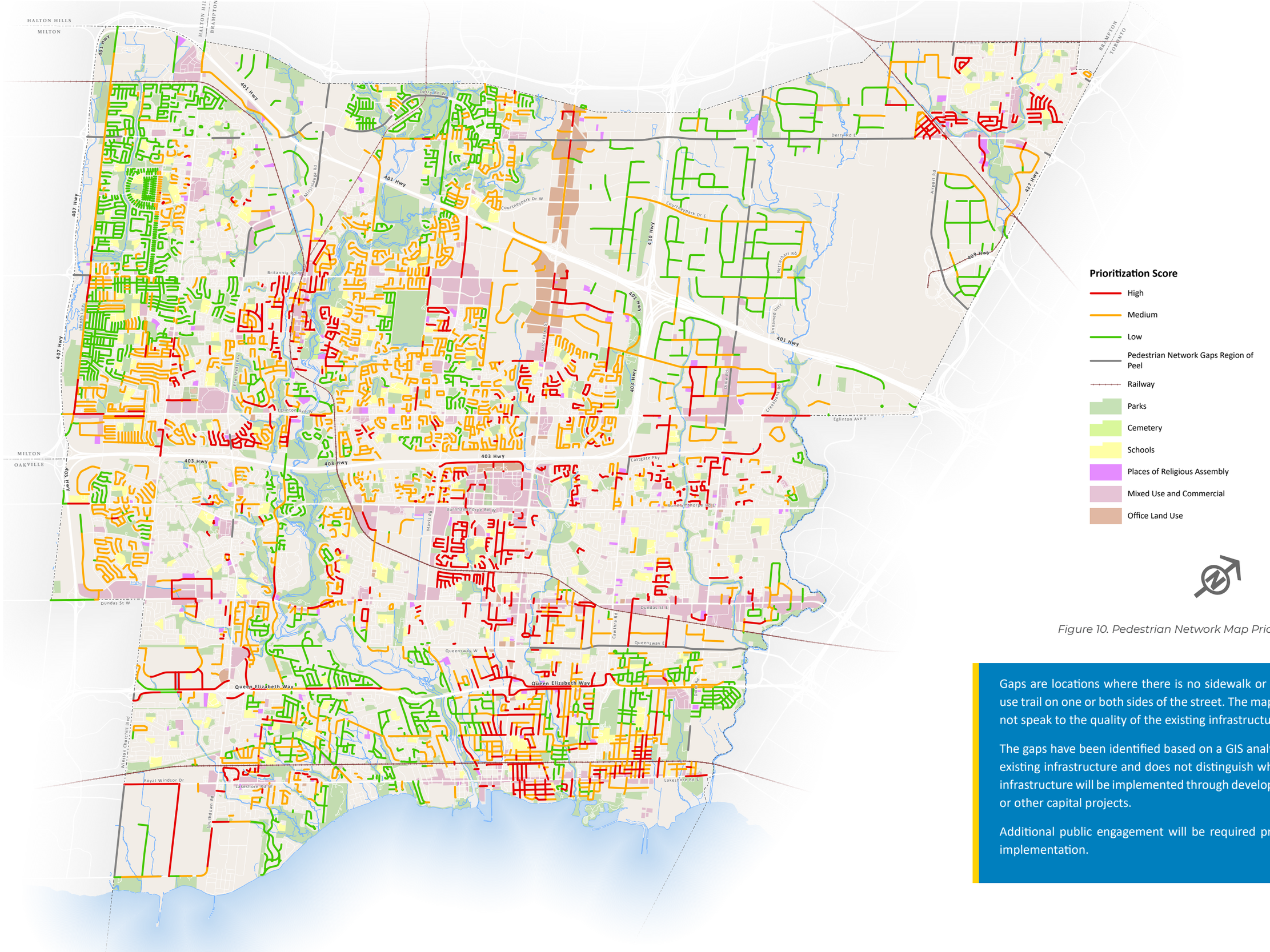


Figure 10. Pedestrian Network Map Priorities

Gaps are locations where there is no sidewalk or multi-use trail on one or both sides of the street. The map does not speak to the quality of the existing infrastructure.

The gaps have been identified based on a GIS analysis of existing infrastructure and does not distinguish whether infrastructure will be implemented through development or other capital projects.

Additional public engagement will be required prior to implementation.

5.0 IMPLEMENTATION AND MONITORING

The recommendations and actions developed as part of the Pedestrian Master Plan are intended to guide the City's policy, planning, programming and capital investment decisions as well as on-going public engagement, operations and maintenance activities in support of walking over the next 20 years and beyond. While the Pedestrian Master Plan has been developed as a long-term plan, it will require financial investment, staff resources and an implementation strategy to prioritize improvements over the short term, medium term, and long term. This section presents the implementation strategy and monitoring plan and provides a summary of the capital costs estimated to implement the proposed infrastructure projects.

5.1 IMPLEMENTATION

The Pedestrian Master Plan implementation strategy is based on several principles that need to be considered as the City moves forward with implementation.

The Pedestrian Master Plan is the first step towards achieving the long-term vision for walking in the community, not the last. The directions and actions in the Pedestrian Master Plan are intended to lay the groundwork for implementing the Pedestrian Master Plan over the long-term. However, it is important to recognize that implementation will require significant investment and resources. This includes significant investments in new infrastructure, ongoing maintenance of existing and new pedestrian facilities, resources for the development of new standards and policies, funding for new programming and public education and staff resources. Achieving the vision and goals will require the ongoing support of the City and its partners, along with sustained investment in walking.

Public engagement will be conducted prior to implementing many of the recommendations of the Pedestrian Master Plan. Many of the actions and potential infrastructure projects identified in the Pedestrian Master Plan require more detailed input and technical work. The City should work closely with partners, residents and stakeholder groups to move forward with priorities in the Pedestrian Master Plan.

The Pedestrian Master Plan is a flexible and living document. While the City is working towards eliminating gaps in the pedestrian network, there is some level of flexibility regarding the specific locations that are identified as gaps. The Plan presents recommendations and suggestions based on the engagement process

and technical analysis; however, Mississauga will need to review the feasibility and desirability of each pedestrian infrastructure project. The implementation of the Plan will also require ongoing public engagement as new projects are considered.

The implementation strategy focuses on implementing infrastructure in high priority areas over the next 20 years. The Pedestrian Master Plan is intended to be an action-oriented document, with the emphasis on implementing the high priority infrastructure projects and the short term, medium term, and long term actions. After the first 10 years, the City should conduct a comprehensive review and update of the Plan to monitor progress and revisit its priorities.

The City will monitor, review and update the Pedestrian Master Plan on a regular basis, as needed. As the City begins implementing the strategies and actions of the Plan, a monitoring plan will be needed to measure and communicate progress towards achieving the vision and goals. Reporting back on the metrics of success identified as part of the monitoring plan below is one of the ways Mississauga will report on progress made in implementing the Plan. The City is already reporting back on the implementation of the TMP and the CMP. The City will coordinate reporting of the Pedestrian Master Plan with the TMP, CMP and TDM Strategy. As Mississauga moves forward with implementing the Pedestrian Master Plan, the document will need to be updated to reflect the changing priorities and conditions over time.

CAPITAL COST ESTIMATES

The City of Mississauga currently funds pedestrian infrastructure through Transportation and Works (within road rights-of-way) and Community Services (within parks). The infrastructure proposed as part of the Pedestrian Master Plan includes sidewalks and multi-use trails. The cost for the proposed multi-use trails are outlined in the CMP and are not included in the Pedestrian Master Plan. Filling in all the gaps in the pedestrian network and providing pedestrian facilities on both sides of all streets would require approximately 1,200 kilometres of new pedestrian infrastructure. As a result, network priorities (high, medium and low) were identified based on an objective and systematic GIS-based prioritization methodology that was developed for the Plan. The prioritization methodology was developed based on input from community members, stakeholders and municipal staff and includes nine criteria each with a score. The results of this analysis were presented in Section 4.

Approximately 232 kilometres of new sidewalks have been identified as a high priority. This is estimated to cost approximately $94 million (based on 2021 cost estimates of $400 dollars a metre).

It is important to note that operations and maintenance costs and resources to maintain new and existing pedestrian infrastructure must be considered over the long-term and as new infrastructure projects are approved and implemented. These costs, along with the cost to replace existing substandard sidewalks, have not been included in the cost estimates outlined in the Pedestrian Master Plan.

FUNDING SCENARIOS

Four capital funding scenarios are proposed to implement the high priority gaps in the existing pedestrian infrastructure (**Table 3**). Each scenario would require a different number of years to complete the network depending on the level of annual funding. Scenario B, with an allocation of $3.1 million annually, is being recommended by staff. Based on this level of investment, the priority network gaps will be completed in 30 years.

Intersection enhancements are also proposed as part of the Pedestrian Master Plan, however

Table 3. High Priority Pedestrian Infrastructure Funding Scenarios
(Based on 2021 costs and exclude ongoing operations and maintenance costs)

SCENARIO	LENGTH (KM/YEAR)	YEARS TO COMPLETE	YEARLY FUNDING ALLOCATION
A (Current)	4	62	$ 1,500,000
B	**8**	**30**	**$ 3,100,000**
C	12	20	$ 4,700,000
D	23	10	$ 9,300,000

the specific treatment at crossing locations is context specific and will require additional study. Intersection enhancements can range from $5,000 for a marked crosswalk to $200,000 for a full signal (**Table 4**).

Table 4. Unit Cost for Intersection Enhancements
(Based on 2021 costs and exclude ongoing operations and maintenance costs)

INTERSECTION ENHANCEMENT	COST PER LOCATION
Marked Crosswalk (one crosswalk)	$ 5,000
Rectangular Rapid Flashing Beacon / Pedestrian Crossover	$ 20,000
Full Signal (four way traffic signal)	$ 200,000
Curb extensions (one side of crossing)	$ 10,000
Raised Crosswalk (one crosswalk)	$ 20,000

FUNDING STRATEGIES

Although the Pedestrian Master Plan is estimated to cost approximately $94 million to address high priority network gaps, these costs can be shared by pursuing external funding from other levels of governments, partnerships with other organizations and the development industry and integration of pedestrian and trails projects with other plans and projects. This section describes several strategies that the City may consider to leverage its investments and to maximize its ability to implement pedestrian and trail network improvements.

Capital Planning

The City should incorporate the Pedestrian Master Plan recommendations into its capital and operating budgets to ensure that projects are accounted for in the City's capital planning process. In this regard, the City should seek changes to its Operating and Capital Budget for 2022 and beyond to fund implementation of the Pedestrian Master Plan.

Integration

The City should integrate pedestrian and trail network improvements with other plans and capital projects, where possible. There are pedestrian and trail components associated with many upcoming and planned road renewal programs, development projects and major capital projects which have been identified as a part of the City's pedestrian and trail network. The best opportunity to provide safe and convenient pedestrian routes is during the initial planning and design of projects. Wherever possible, the City should seek out opportunities to integrate pedestrian routes and trails with new infrastructure or renewal and rehabilitation projects, such as major road resurfacing and servicing upgrades. The City may also need to make necessary amendments to existing policies and standards to ensure there are opportunities to integrate sidewalks and pedestrian facilities as new developments occur.

External Funding Sources

The costs of implementing the improvements identified in the Pedestrian Master Plan can be significantly reduced by pursuing external funding sources and partnership opportunities for the infrastructure projects. This section describes funding strategies and potential funding sources that the City may want to consider to assist in leveraging its investments and maximize its ability to implement pedestrian network improvements. The City should continue to regularly check for grant funding opportunities. The City should also pursue all available sources of funding for transportation infrastructure and programs, including the programs identified below (Note: as funding opportunities change regularly, the information in this section is subject to change):

- **Provincial Programs and Initiatives.** Provincial grants and funding should be explored; however, grants are not often recognized as a predictable or reliable source of funding. In fact, grant programs often favour shovel ready projects. There are often provincial grant intakes for multi-use pathway and cycling infrastructure (CycleON Action Plan 2.0). There are also programs that fund accessible infrastructure and connectivity to transit infrastructure.
- **Federal Funding.** There are several programs that provide funding for environmental

and local transportation infrastructure projects in municipalities across Canada. Typically, the federal government contributes one-third of the cost of municipal infrastructure projects. Provincial and municipal governments contribute the remaining funds and in some instances, there may be private sector investment as well. One current example of a federal funding opportunity is the Green Municipal Funds. The Federation of Canadian Municipalities manages the Green Municipal Fund, with a total allocation of $550 million. This fund supports municipal efforts to reduce pollution, reduce greenhouse gas emissions and improve quality of life. The expectation is that knowledge and experience gained in best practices and innovative environmental projects will be applied to national infrastructure projects.

- **Developers.** The City should explore opportunities for pedestrian infrastructure to be constructed as development occurs within Mississauga. This process could be formalized through an update to the City's OP or through individual negotiations.
- **Private Sector.** Many corporations wish to be good corporate neighbours — to be active in the community and to promote environmentally-beneficial causes. Multi-use trails and pedestrian facilities are well-suited to corporate sponsorship and have attracted significant sponsorship both at the local level and throughout North America.
- **Service Clubs.** In many communities, service clubs (such as the Rotary Club) have been involved in funding and building trail and pedestrian facilities and amenities, such as benches.

IMPLEMENTATION TECHNIQUES AND STRATEGIES

As communities throughout North America and internationally implement their pedestrian and active transportation networks, they often face significant challenges technically, politically and financially. Some of the challenges and questions that arise when implementing pedestrian networks include:

- Funding limitations and capital resources can make implementing new infrastructure a challenge.
- Some residents and stakeholders may not be supportive of implementing new infrastructure.
- Standard pedestrian infrastructure may not always be feasible, appropriate, or desirable in all contexts.

As a result, it can be important and helpful to find flexible alternative designs that still provide adequate pedestrian comfort, accessibility and safety. These common challenges have resulted in communities looking for ways to implement facilities in a timely and cost-effective manner through innovative techniques and strategies. This includes:

- **Demonstration Projects** are typically considered short term (one or multi-day) temporary installations that help to show new opportunities to enhance a street for

Examples of Non-Traditional Pedestrian Network Treatments (Tofino, BC)

active transportation. They are a great way to engage with the public and illustrate the impacts of a potential project. They may include but are not limited to demonstrations of protected pathways adjacent to a roadway, improved crossings, plazas and woonerf or shared streets.

- **Pilot Projects** often refer to a project that is used as a test case to evaluate factors such as feasibility, cost, safety and improve upon the design before implementing the full-scale project or making it a permanent feature.
- **Interim Designs** are permanent features that have been implemented quickly usually with low-cost materials that can be adjusted and/or replaced easily. This allows for design flexibility and opportunities to adjust as needed. An interim design can be used to build more infrastructure at a lower cost.
- **Permanent Installations** require more time for planning, public engagement and construction time. They include higher cost materials that are less flexible and intended for long-term durability.

Pilot projects and interim designs offer ways to make significant strides in network implementation while respecting financial constraints. These strategies include the use of low-cost materials such as adjustable curbs, ongoing monitoring of project success and the understanding that the project can be changed if it is failing to meet the intended needs. Some of the benefits of interim design options include:

- Faster implementation and more flexible design;
- Ability to make design changes based on feedback received from users and other stakeholders;
- If the project is introduced as a pilot project, it can ease tensions of those with opposition as they know the project is not being forced upon them; and
- Relatively low financial risk if the facility does not perform well or reverted to its previous design.

5.2 MONITORING

Measuring the success of the Pedestrian Master Plan means

monitoring how well the City is working towards achieving the vision and goals of the Plan. Monitoring walking trips, patterns and trends allows for evaluation to take place end enables the City to appropriately allocate monetary and staff resources to implement and prioritize initiatives. Monitoring also provides a means of identifying changing conditions which would require changes to the Pedestrian Master Plan.

The approach to measuring success must include a monitoring plan that is:

- **Meaningful.** Monitoring should yield meaningful results and point to the success in achieving the vision and goals of the Pedestrian Master Plan.
- **Measurable.** Monitoring needs to establish criteria that are measurable and for which data or information can be readily obtained.
- **Manageable.** Monitoring implementation needs to consider resource limitations and identify measures where information is accessible, or data is simple to collect.

Monitoring trips on pedestrian routes and trails, investments and initiatives can help to tell stories of change and progress of walking in the city.

METRICS OF SUCCESS

The City's monitoring program should contain 'metrics of success' for two components: first, the degree of progress in implementing the Pedestrian Master Plan and secondly, the outcomes of implementing the Pedestrian Master Plan. Potential metrics of success are described in the table below. The metrics are broken down to measure the progress towards achieving the four goals.

Table 5. Metrics of Success by Goal

GOAL	METRIC	DATA
Make walking safer and more comfortable, and work towards achieving Vision Zero	Rates of pedestrian collisions (overall).	Ontario Road Safety Annual Report, Peel Region Police data if that report is unavailable.
	Rates of pedestrian collisions resulting in severe injury.	
	Rates of pedestrian collisions resulting in fatality.	

GOAL	METRIC	DATA
Build sidewalks and trails that are connected and accessible	Level of satisfaction as reported through the City's Citizen Satisfaction Survey.	Mississauga's bi-annual Citizenship Satisfaction Survey.
	City's inventory of kilometres of new infrastructure installed, new crossing locations and accessibility improvements implemented will help track connectivity and accessibility.	City's infrastructure spatial data set.
Encourage walking as part of an active and healthy lifestyle	Percentage of trips made by walking (based on trip length – 3km or less).	Transportation Tomorrow Survey.
	Self-rated health for the City and by neighbourhood, it may be beneficial to track results overtime.	Region of Peel's Neighbourhood Information Tool (https://www.peelregion.ca/planning-maps/nit/).
Increase the number of walking trips in Mississauga	Percentage of people walking on a typical day in Mississauga as a proportion of total trip.	Transportation Tomorrow Survey.
		Statistics Canada Census Data.
	Proportion of school aged children walking to/from school.	Transportation Tomorrow Survey.

5.3 NEXT STEPS

The Pedestrian Master Plan provides a comprehensive approach to guide Mississauga's investments in pedestrian infrastructure, programs and policy over the long-term. The Pedestrian Master Plan will contribute to increased transportation options by improving the accessibility, comfort, convenience and safety of walking in the city. The Pedestrian Master Plan has been developed based on extensive technical work and engagement with Mississauga residents over a 15-month period.

As each pedestrian network project is implemented, community members and other stakeholders will have the opportunity to provide input. For the City to achieve the vision of the Pedestrian Master Plan, walking in Mississauga must be safe, comfortable and convenient. Facilities must be well-connected and continuous and the pedestrian environment must be interesting, exciting and fun. Lastly, walking needs to be encouraged. Completing the pedestrian network is a key priority to meet the City of Mississauga's OP, Strategic Plan and Climate Strategy goals.

MISSISSAUGA

Pedestrian Master Plan

3.2 BUILDING ON THE PILLARS OF CHANGE

To guide growth in the city, the Mississauga Strategic Plan (2009) identifies five pillars of change. The Pedestrian Master Plan advances efforts towards these key goals:

PILLARS OF CHANGE		HOW THE PEDESTRIAN MASTER PLAN WILL ADVANCE THESE STRATEGIC PLAN AND ITS GOALS
MOVE **Developing a transit-oriented city**	Freedom from automobile dependence, transit is the most desirable choice, and will directly influence the shape and form of the city	**Build a reliable and convenient transit system** – Improving pedestrian access to transit stations and stops while investing in a faster and more affordable transit system will make it a practical alternative to the automobile. **Develop environmental responsibility** – Improving access to more transportation choices and compact mixed-use development will provide more residents an opportunity to live sustainably. **Connect the city** – Connecting areas in the city with high walking potential, high equity needs, and future growth areas will connect communities within Mississauga and the broader region. **Increase transportation capacity** – Strategic investments in pedestrian connections and transit will provide practical mobility choices for more residents. **Direct growth** – Directing future residential growth in areas along major roads and key transit nodes will support individuals to walk and use transit to navigate the city.
BELONG **Ensuring youth, older adults and new immigrants thrive**	A socially and culturally diverse city where people of all ages and backgrounds can thrive their and age in place gracefully.	**Ensure Affordability and Accessibility** – Providing critical pedestrian connections in areas of high equity need and updating design standards and practices to enhance accessibility and safety of intersections and crossings. **Support Aging in Place** – Updating design standards and infrastructure to meet the needs of vulnerable road users including pedestrian improvements in line with Vision Zero principles. **Attract and Retain Youth** – Making active travel practical for youth, through all ages and stages. Supporting the Region of Peel's School Travel Planning Program and the Mississauga's School Walking Routes Program, as well as key pedestrian connections and transit amenities to support trips to post-secondary institutions.

PILLARS OF CHANGE	HOW THE PEDESTRIAN MASTER PLAN WILL ADVANCE THESE STRATEGIC PLAN AND ITS GOALS	
CONNECT **Completing our neighbourhoods**	Development of vibrant and strong neighbourhoods where people can live, work, and prosper. Where children can play, walk to meet friends, fall in love, raise a family, and age-in-place.	**Build Vibrant Communities** – Prioritizing pedestrian network connectivity will create better transportation connections between urban areas and neighbourhoods, improving access to commercial, social, artistic, cultural, civic, and recreational experiences for all. **Create a Vibrant Downtown** – Enhancing transportation connections, and pedestrian amenities and public realm improvements Downtown will ensure it represents the civic and cultural soul of the city. **Nurture Villages** – Improving pedestrian connections and amenities, including public art will enhance the "village" main street as a local destination. **Help Develop Walkable, Connected Neighbourhoods** – Completing neighbourhood sidewalk networks, and addressing crossing gaps into trails will support neighbourhood connections where people want to walk. **Provide Mobility Choices** – Providing residents with a complete and well-connected sidewalk network will enhance integration of multiple modes of transportation throughout the city giving residents more mobility choices. **Support Great Public Spaces** – Improving pedestrian connections to and within parks, plazas, and public places will enhance enjoyment and accessibility within these unique local environments.
PROSPER **Cultivating creative and innovative businesses**	A city with a strong, prosperous, and sustainable economy that attracts and grows talent. Effective and affordable transportation options will entice employees and employers to move to or work in Mississauga.	**Meet Employment Needs** – Creating critical pedestrian connections to transportation and employment opportunities will benefit employers, residents and those that travel to the city for work. Supportive Transportation Demand Management Programs will promote, support, and provide incentives to encourage sustainable commuting options. **Attract Innovative Businesses** – Pedestrian connections and amenity improvements as well as enhanced transit connections will help respond to the transportation needs of new businesses by enhancing access to customers, and employees.

PILLARS OF CHANGE	HOW THE PEDESTRIAN MASTER PLAN WILL ADVANCE THESE STRATEGIC PLAN AND ITS GOALS	
GREEN **Living green**	Transportation represents one third of Mississauga's greenhouse gas emissions. Supporting more sustainable travel choices including walking, cycling, and transit will leave a legacy of a clean and healthy natural environment.	**Lead and encourage environmentally responsible approaches & conserve, enhance, and connect natural environments** – Providing pedestrian connections throughout the city will support sustainable transportation habits, improve air quality, and reduce emissions. Increasing pedestrian connections within natural environments will enhance connection and stewardship these spaces for future generations. **Promote a green culture** – Promoting and educating residents of all ages about healthy, practical and sustainable transportation options will lead to behaviour change that will limit the impact transportation has on the environment and the way the city contributes to climate change.