

CITY OF HAMILTON | SUSTAINABLE MOBILITY

Proposed Accelerated Active Transportation Implementation Plan (2024 – 2028)

Technical Background Report



November 2023

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1 An Active Transportation Vision for Hamilton

The Accelerated Active Transportation Implementation Plan (herein referred to as “The Accelerated Plan”) provides a blueprint for completing additional active transportation projects in a shorter time period than previous years, with a focus on cycling projects, including multi-use paths and trails. In the next five years (2024 to 2028), this plan aims to deliver 140 km of new and upgraded cycling, pedestrian and trails projects at a total estimated cost of \$60,000,000 dollars, some of which represents previously committed dollars and some of which will be requested through the capital budget process over the next five years.

The 2018 Transportation Master Plan established a strong vision and policy framework for a multi-modal, connected Hamilton. The vision aims for Hamilton to have a safe, sustainable, and equitable transportation system that allows communities to access the resources they need to thrive. Since its adoption, there has been growing momentum in the programs, policies, services and projects delivered across the organization.

Like many cities in Canada and the US, the bicycle offers Hamilton an opportunity for transformational change. However, the City can only expect more people to cycle and walk with safe, connected and convenient facilities, similar to how cities traditionally provide infrastructure for automobiles. How people choose to travel is informed by the cycling facilities available and the level of safety, reliability, comfort and affordability the network provides. The City has made progress towards this vision as the number of trips made by bike nearly tripled from 2006 to 2016 (according to the Transportation Tomorrow Survey), primarily in the lower city, which was the focus of investment during that time.

This Accelerated Active Transportation Plan is the pre-cursor to the Integrated Active Transportation Plan (ATP) which will consolidate the Cycling Master Plan, Pedestrian Mobility Plan and Recreational Trails Master Plan. The Accelerated Plan provides a roadmap for the next five years, and the Integrated Active Transportation Plan will present a 10 year plan, consolidated with future construction projects. The ATP will include consultation, costing, preliminary designs and more. This document lays the groundwork for the action plan and provides a solid foundation to develop the long-range planning through the ATP.

2 Directions for the Accelerated Plan

At the January 20, 2023 General Issues Committee (Budget), staff were directed to initiate an Integrated Active Transportation Delivery Team comprised of staff from Planning and Economic Development (PED) and Public Works (PW) with the goal of filling connectivity gaps and accelerated implementation of the Cycling Master Plan and report to 2023 operating budget on financial implications of such an accelerated plan.

As outlined in Report PED23042/PW23008, which presented the Annual Cycling Infrastructure Plan, accelerating the implementation of cycling infrastructure will require a multi-pronged approach which includes increasing staff resources, acting on near-term projects, ensuring project funding is available, and re-prioritizing infrastructure projects with a cycling component. This will require a detailed review of existing ten-year capital forecast to identify projects that can be prioritized to be delivered by this new team, focusing on projects that are efficient and timely to implement in the short-term, and working with existing groups to expedite, where possible, other coordinated projects in the medium- and long-term.

2.1 Council Priorities

The Accelerated Plan is in line with the 2022 - 2026 Council approved priorities, specifically:

Priority 2 – Safe and Thriving neighbourhoods; focused on Outcome 2 of this priority area which is: “Make sure people can safely and efficiently move around by foot, bike or transit or car.”

This plan will help achieve the measures of the success associated with this outcome including:

- Expanded and upgraded active transportation networks
- Application of Vision Zero principles to eliminate road injuries and death

2.2 Policy Alignment

The Accelerated Plan aligns with key City transportation policy and builds on the previously developed and approved action plans and direction.

2.2.1 Transportation Master Plan (TMP)

The TMP addresses all aspects of an integrated transportation system and is structured around a sustainable and balanced transportation system, healthy and safe communities, and economic prosperity and growth. The plan sets an aspirational target for 15% of City-wide trips to be made by active modes.

Since the installation of Ontario’s first two-way, separated cycle track on Cannon Street in 2014, and the launch of the first “smart” bike share system in North America, the rate of cycling across the city has steadily increased. This was an intentional increase planned out in the 2007 Transportation Master Plan (TMP) and approved by Council (and updated in 2018); specifically:

- Action 13: Maintain an annual capital budget for the implementation of the updated Cycling Master Plan and associated facilities.
- Action 14: Integrate cycling infrastructure needs into the 10 Year Capital Budget for all road reconstruction, rehabilitation and new roads as guided by the updated Cycling Master Plan, with an emphasis on achieving physical separation.
- Action 34: Adopt a Complete Streets policy for road design, operation and maintenance. The Complete Streets approach emphasizes routine accommodation in order to ensure designs consider the needs of users of all ages and abilities.
- Action 51: Integrate the goals and principles of Vision Zero into the Complete Streets design manual and Engineering Guidelines.

This plan builds upon the work of the Transportation Master Plan and the Cycling Master Plan which were both updated and finalized in 2019 and aims to accelerate the cycling master plan, specifically focused on both new and upgraded infrastructure projects.

2.2.2 Hamilton Strategic Road Safety Program & Vision Zero Action Plan (2019 – 2025)

The Hamilton Vision Zero policy has a clear goal: no more fatalities or serious injuries on local roadways. The Vision Zero Action Plan actions the need to identify and fill in gaps within the active transportation network, as providing dedicated cycling facilities to create a cohesive cycling network will help achieve the goals of Vision Zero. It also actions the need to ensure that cycling and pedestrian network needs are implemented in all roadway projects.

The analysis undertaken as part of the Annual Collision Report is used to identify problem areas for pedestrians and cyclists. The findings inform local active transportation investments and will be incorporated into the upcoming Integrated Active Transportation Master Plan prioritization framework.

2.2.3 Complete Streets Design Manual and Policy

The Complete Streets Design Manual operationalizes the Complete – Livable – Better Streets Policy (CLBS Policy) adopted as part of the Transportation Master Plan Update. The manual is a compendium of design guidance for users and practitioners to understand the principles of complete streets and touches on several elements, including street design, intersection design and implementation. A central pillar of Hamilton's CLBS Policy is prioritizing transit and active transportation in the planning and design of the local transportation network.

Staff are utilizing the new standards established in the manual to inform the design of street projects and implementing them through standalone projects, major street projects, plans and studies, and operations & maintenance. The design manual is being used to inform the desired outcomes of street projects and is helping to direct their design through more human-focused design standards.

2.2.4 Climate Change Action Strategy

The Community Energy and Emissions Plan establishes "changing how we move" as one of five low-carbon transformations that will be pivotal in achieving a low-carbon future. To meet Hamilton's decarbonization goals, it notes that by 2050, 50% of short trips made within the urban area will need to be made using active travel.

The plan calls for expediting the rollout of the Cycling Master Plan and supports updating the plan regularly to align with the net-zero scenario. It also supports establishing local e-mobility services, such as shared e-bikes and e-scooters, to address those trips not suited for transit. Both calls to action inform active transportation investments.

3 Creating a Cyclable Hamilton

To fully realize the Transportation Master Plan vision, Hamilton must continue to invest in a *high-quality* cycling network that is *connected* and *equitable*. The Accelerated Plan is the plan that will help to drive us towards the vision by helping to:

- Implement **high-quality** cycling infrastructure, ranging from concrete-separated bicycle lanes to low-speed, low-volume bicycle boulevards that are safe comfortable and accommodate users of all ages and abilities. Using durable materials can help the City reimagine more streets more quickly as safer places for all road users while bundling the delivery of new and enhanced cycling facilities within the capital program provides opportunities to create a more inviting street environment.
- Form a **connected** cycling facility network that allows people to cycle efficiently and conveniently. A city-wide network linking communities to each other and employment, stores, transit, and social opportunities facilitates longer and more diverse trip types.
- Serving historically disenfranchised communities **equitably** by providing access to safe and convenient places to cycle to provide access to opportunities across the City. This will help address some transportation inequities that have disproportionately impacted communities.

The complex and intertwined challenges of safety, climate and equity require a bold solution. The Accelerated Plan is one step towards tackling this challenge and helps bring Hamilton closer to achieving the vision of the Transportation Master Plan.

3.1 Designing and Growing a Cycling Network

3.1.1 The Evolution of Cycling Facility Design towards All Ages and Abilities

Design standards for cycling facilities have undergone a dramatic evolution since the mid-1990s. There was no uniformly accessible standard in Ontario, so local jurisdictions were left to develop their own if they had the resources. Many of the standards from this era¹ encouraged solutions that focused on shared facilities (e.g. bus-bike lanes, extra wide curb lanes) or where designated facilities like bicycle lanes and shared used paths were identified, calling for widths much narrower than desired today.

The lack of a uniform approach to cycling design in Ontario carried on for much of the next two decades, and emerging design ideas, such as bicycle lanes separated by barriers and traffic lights with a bicycle symbol, were ambiguous concerning their conformity to the Highway Traffic Act. It wasn't until 2012 that the Ministry of Transportation Ontario (MTO) produced the Ontario Traffic Manual | Book 18 – Cycling Facilities, which provided uniform design guidance for cycling facilities that were consistent with the intent of the Highway Traffic Act for municipal roads and infrastructure. Since the release, there has been high growth in cycling in urban communities coupled with the expansion of higher-quality cycling facilities.

Over the past decade, there has been a growing emphasis on designing for 'all ages and abilities,' also commonly referred to as 'AAA facilities' and 'AAA networks.' Organizations have adopted different thresholds for what makes a AAA facility/network on a specific street. The City of Hamilton's practice to date has been to refer to the National Association of City Transportation Officials' (NACTO²) *Designing for All Ages & Abilities* report, which defines who a AAA user is, guidance for selecting a AAA facility in urban areas³ and discusses the sources of stress and design strategies to address them. The direction is primarily aligned with MTO's 2021 update to Book 18, meaning local projects delivered in Hamilton typically meet the NACTO AAA threshold (Table 1).

Table 1: Comparison of NACTO AAA Facilities and OTM Book 18 (2021)

Vehicle Speed	Daily Traffic	Context	NACTO AAA Guideline Suggested Facility	OTM Book 18 Suggested Facility
Any		Any of the following: frequent buses, motor vehicle congestion, turning conflicts	Protected	Typically separated bicycle lane or cycle track
<16 km/h (10 mph)	Less relevant	Pedestrians share the road	Shared street	Shared Space if < 3,000 to 4,000 ADT
<32 km/h (20 mph)	1,000 to 2,000	< 50 motor vehicles per hour in the peak direction at PH	Bike Boulevard	Shared Space (incl. bike boulevard)
<= 40km/h (25 mph)	<= 500 to 1,500			Shared Space (incl. bike boulevard)
	<= 1,500 to 3,000	Low curbside activity or low congestion pressure.	Conventional, Buffered or Protected	Top end of Shared Space to Designated Space
	<= 3,000 to 6,000	Single lane in each direction or one-way.	Buffered or Protected	Top end of Shared Space to Designated Space
	> 6,000		Protected	Separated would start closer to 7,000

¹ This includes standards recommended in plans developed by the Town of Dundas (1994), the Town of Stoney Creek (1995) and the Region of Hamilton-Wentworth (1999).

² NACTO is an organization of 100+ municipalities and transit agencies in Canada and the US. The City of Hamilton is one of seven Canadian member organizations that were accepted through an application process.

³ NACTO's design guidance for urban bikeways does not discuss cycling facilities in rural or exurban areas.

Vehicle Speed	Daily Traffic	Context	NACTO AAA Guideline Suggested Facility	OTM Book 18 Suggested Facility
	Any	Multiple Lanes		Designated or Separated
>40 km/h (26+ mph)	<= 6,000	Low curbside activity or low congestion pressure. Single lane in each direction or single lane one-way.	Protected lane or Reduce Speed	40 to 55 km/h: Designated 55+ km/h: Separated
	> 6,000	Low curbside activity or low congestion pressure. Multiple lanes per direction lane in each direction or one-way.	Protected lane OR Reduce to single lane & Reduce Speed	Separated

3.1.2 The Need to Enhance Legacy Cycling Facilities

Before the release of OTM Book 18, Ontario municipalities continued to build their cycling networks per the Provincial framework and design standards. In the case of Hamilton, this included various local and regional bikeway plans and standards from before amalgamation and then 2009's city-wide Shifting Gears Cycling Master Plan.

These *legacy facilities* reflect the practices of their time but are substandard to what would be designed today. A pillar of the Accelerated Plan is identifying opportunities to enhance legacy facilities that are integral to the cycling network to meet modern standards. However, retrofitting these in the short-term is not always practical due to various reasons such as the availability of space or property, conflicts with utilities of trees, the need for further investigation or permitting (e.g. archaeology, conservation authority permits) or constraints such as bridges and culverts. Overcoming these barriers typically requires solutions over the longer term, such as capital program coordination and collaborative engagement with other entities. In some situations, the best choice may be to remove existing facilities and use an alternative corridor or route where achieving AAA design is possible.

3.2 Quality over Quantity: AAA Network Means More Than Just Length

The Accelerated Plan includes enhancing several existing cycling facilities and routes to make them AAA. For instance, several signed on-street routes could be improved to a bicycle boulevard with vehicle speed and volume management to create a more comfortable environment and establish a principal route within the cycling network. This won't necessarily increase the cycling network length (i.e., the kilometrage) but would increase the AAA network length.

Staff are of the opinion that this supports the spirit of the original Council motion; although enhancing existing facilities may mean the network length is not necessarily increasing. If the ultimate goal is to increase the number of trips made by bike, it is suggested that the City focus on measuring the delivery of the cycling network using three metrics:

- The length of the cycling network in the urban area;
- The length of the cycling network in the rural area; and,
- The total length of the AAA cycling network in the urban area (NACTO's AAA guidelines are limited to urban cycling facilities).

Having a separate measure for the length of the AAA network will better reflect what gets people cycling: safer cycling facilities. Creating a AAA cycling network of principal and secondary will be a core component of the upcoming review of the cycling network.

3.3 AAA Cycling Facilities: Supporting More Than Just Cycling

The Transportation Master Plan and the Complete Streets Design Manual set a bold vision for creating multi-modal streets. On the surface, implementing the Cycling Master Plan projects is often viewed as only supporting one mode. Still, many projects provide more extensive multi-modal benefits that can help all road users.

Expected benefits of cycling projects that benefit other road users include:

- Buffering pedestrians on curb-facing sidewalks, which can provide more separation between pedestrians and vehicle traffic (e.g. Hunter Street);
- Providing raised bus stops or platforms that bring legacy stops to modern accessibility standards (e.g. Victoria);
- Reducing vehicle lane widths to better help support speed management where motorists may feel comfortable going faster than permitted (e.g. Cannon);
- Introducing traffic calming measures that help reduce cut-through traffic and support speed management measures; and,
- Formalizing on-street parking areas to make it easier for motorists to park and consolidating redundant driveways to reduce conflict points and the volume of access points.

These multi-modal benefits are aligned with the City's broader Vision Zero and Climate Emergency policies. Going forward, the more comprehensive multi-modal benefits should be better shared with the community to understand it's not just about "cyclists" and better position these as complete street projects.

3.4 Developing the Accelerated Plan: Programming Framework

The Accelerated Plan takes an updated, data-driven approach that applies equity and vision zero lenses to reflect the local policy framework. The 2018 Cycling Master Plan primarily took a network-building approach. The update aims to expand on that approach to reflect new policies and programs, such as Vision Zero, Climate Emergency declaration and equity goals.

3.4.1 A New Prioritization and Evaluation Framework for a New Hamilton

A transparent and comprehensive development framework was created to guide the plan's development, which aims to create a continuous, safer network for cycling while reflecting the City's broader priorities and policies (**Figure 1**). Staff compiled a long cycling project list based on the Cycling Master Plan, secondary plan, Councillor motions and other sources since the 2018 plan was released. Projects were then reviewed to determine which have been implemented and which are outstanding.

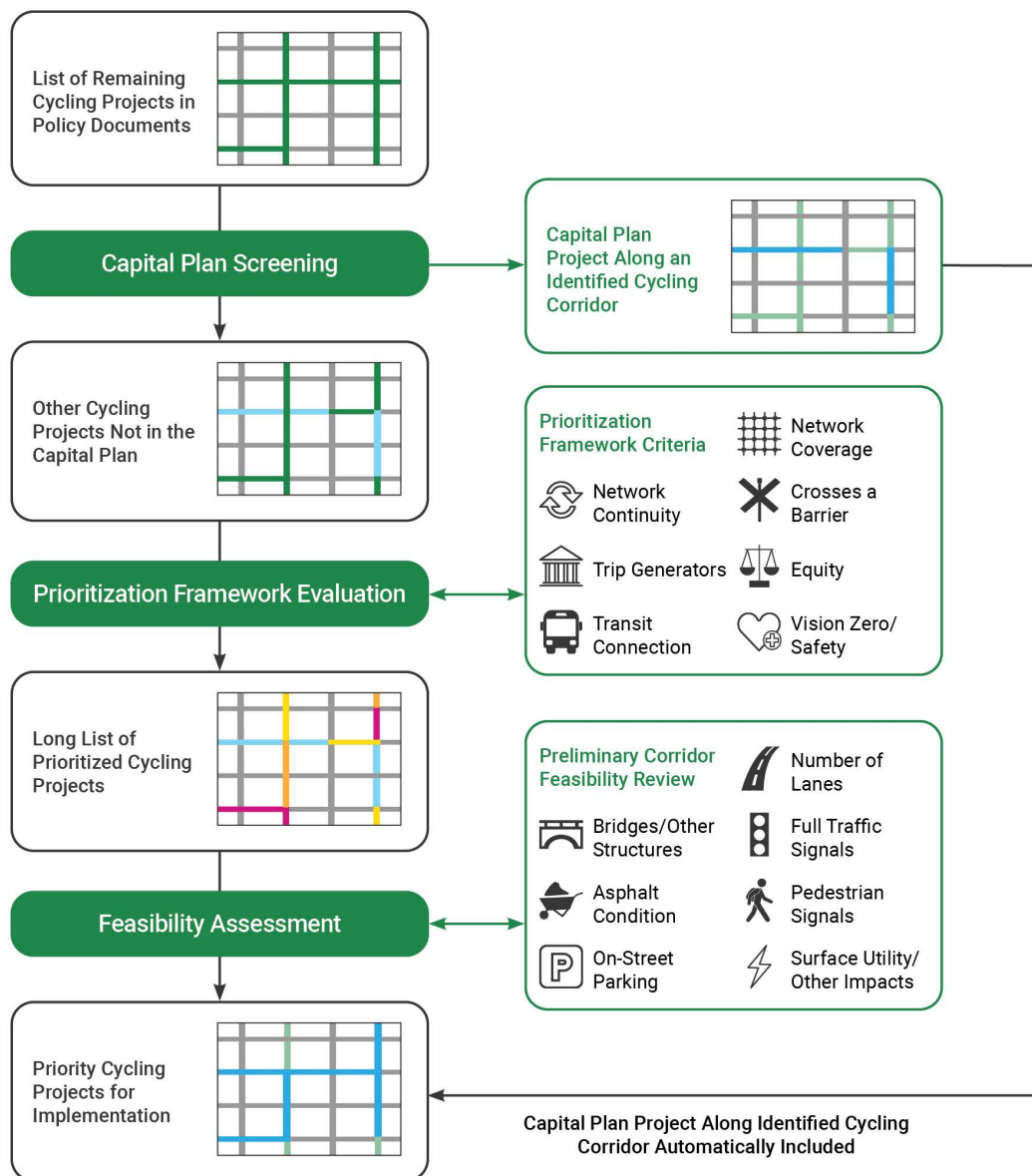
The Accelerated Plan framework then assessed the list through a three-step process.:

- **Capital Plan Screening:** The capital program was reviewed against the list to determine opportunities to bundle delivery through Engineering Services initiatives. Scopes for the cycling projects will be submitted through the Capital Project Management System, and active transportation staff will work with Engineering Services within the design process. These projects were then assigned to the respective delivery year already planned.
- **Prioritization Evaluation:** Each project was assessed against seven criteria. These criteria support building an integrated network, reaching destinations, connecting to transit, crossing barriers, equity and Vision Zero. Further details on the evaluation are available in the following section.

- Preliminary Feasibility Screening:** The top-scoring projects were assessed for initial feasibility to determine if implementing a cycling facility would be achievable within the time. Projects found to be infeasible (e.g. lack of space, utility conflicts, requires new signals to be safe) were removed from consideration and have been flagged for bundling with future capital projects. Projects determined to be feasible were then programmed as part of the Accelerated Active Transportation Plan. Additional information is available below.

The ultimate list of projects is provided in Appendix C - Accelerated Active Transportation Implementation Plan Project List

Figure 1: Accelerated Plan Prioritization and Evaluation Framework



3.4.2 Prioritization Evaluation Framework

Each cycling project was scored against seven measures, and then the scores were summed together (Table 2). The projects that scored higher best reflect the local desired outcomes and should be prioritized.

Table 2: Prioritization Evaluation Framework

Measure	Desired Outcome	Score	Evaluation Score
Continuity	Connect to the greatest number of existing cycling facilities.	30	<ul style="list-style-type: none"> 3+ existing cycling facilities = 30 2 existing cycling facilities = 20 1 existing cycling facility = 10
Trip Generator	Serve major trip destinations and activity centres.	10	<ul style="list-style-type: none"> City-Wide Destination = 10 (e.g. hospital, post-secondary, BIA, city-wide park, high school, identified employment area) Local Destination = 5 (e.g. school, library, rec centres, community park)
Transit Access	Connecting to local and regional transit.	10	<ul style="list-style-type: none"> 15 min or better HSR service during peak. transit terminal/station = 10 Other transit service = 5
Network Coverage	Provide cycling facilities where few or none exist.	10	<ul style="list-style-type: none"> No other on-street parallel facility within 500 m = 10 No other on-street parallel facility within 250 m = 5 Existing facility within 250 m = 0
Barrier Crossing	Provide crossings across major travel barriers.	10	<ul style="list-style-type: none"> Crosses a major barrier (e.g. rail line, valley, provincial highway, escarpment) = 10 Crosses an arterial or along an arterial = 5
Equity	Serves one or more Neighbourhood Development communities	10	<ul style="list-style-type: none"> Passes within an identified community = 10 Adjacent to an identified community = 5
Vision Zero	Prevent fatalities and injuries in problem areas	20	<ul style="list-style-type: none"> Death within 500 m involving a cyclist or pedestrian Injury within 500 m involving a cyclist or pedestrian

3.4.3 Preliminary Feasibility Screening

The top-scoring projects from the Prioritization Evaluation Framework were advanced for feasibility screening (Table 3). For each project, staff complete a desktop review of each project using Google Streetview and internal GIS imaging.

Table 3: Preliminary Corridor Feasibility Review Measures

Measure	Desired Condition	Rationale
Bridge/Culvert/Other Structure	Structure maintains the width of the road surface.	Have enough space to provide a cycling facility at pinch point locations.
Asphalt Condition	Asphalt in fair condition or better.	Provide a more comfortable riding condition; the condition will permit flex posts and/or curbs to be affixed, if needed.
On-Street Parking	Have space to preserve parking where it is needed.	Preserving on-street parking in communities with no other option.
Number of Lanes	Have adequate space to provide a cycling facility without having a negative impact on other modes.	Have necessary space to introduce appropriate cycling facilities while maintaining space for transit, walking, goods movement and automobiles.
Vehicle Signals	Exist at major crossings and may have space to allow cyclist activation.	Enables cyclists to cross a major road/barrier, while avoiding more complicated signal design work and construction.
Pedestrian Crossings	Exist at major crossings and may have space to allow cyclist activation.	Enables cyclists to cross a major road/barrier, while avoiding more complicated signal design work and construction or having to dismount and cross as a pedestrian.
Utility/Other Surface Conflicts	No or few conflicts with stationary objects.	Have space for an off-street cycling facility, like a multi-use path or raised cycle track.
Other Considerations	Varies	Make note of any other conditions or plans that may impact a project.

The review aimed to identify potential fatal flaws along a higher-scoring corridor that would prevent a cycling project from being delivered within the Accelerated Plan's timeframes. Projects that have fatal flaws were removed from consideration and will most likely need a larger capital project to deliver later.

3.5 It's a Floor; Not a Ceiling

The Accelerated Plan provides a blueprint for the delivery of enhance cycling facilities and additional kilometres to the end of 2028. The adoption of the Accelerated Plan should be viewed as foundational step rather than an ultimate destination. Viewing this plan as the floor acknowledges the dynamic nature of urban development and transportation needs. Our city is evolving, and as population growth, environmental concerns and social needs continue to shape the urban landscape, flexibility in planning becomes paramount. By considering the current plan as a baseline, the City remains open to adjusting and expanding cycling facilities to meet future demands and seize unforeseen opportunities.

Future opportunities that may arise over the course of this plan include:

- Any new funding programs from higher levels of government that may support projects related to topics, such as active transportation, sustainability or last-mile connections to transit.
- The capital program. As noted in the Cycling Master Plan, cycling facilities beyond those outlined in the formal network should be considered as part of every capital project. The new Complete Streets Design Manual provides clear guidance on this issue, and in partnership with Engineering Services and other major project delivery projects, Sustainable Mobility continues to work to identify opportunities.
- Future Council initiatives or direction related to specific roadways. Current and future major initiatives that Council chooses to undertake can provide opportunities to incorporate cycling facilities or support them in some other ways. For instance, the two-way conversion plan of Main Street that was present to the public in mid-2023, incorporates cycling facilities in some areas despite them not being identified in the Cycling Master Plan. Similarly, Sustainable Mobility staff continue to work with the City's LRT Office to identify potential active travel crossings of the B-Line corridor that would help protect for future north-south connections and crossings.

Treating the Accelerated Plan as the minimum commitment underscores the commitment to sustainable and equitable mobility options. This Plan is not just about accommodating current demand; it's about expanding the mobility options to all residents and workers by providing safer, efficient and convenient cycling options. By setting this plan as the floor, the City is sending a strong message that it is committed to fostering a culture of cycling and equitable, sustainable responsibility. In essence, by considering this plan as a starting point, Hamilton is setting itself on a trajectory of continuous improvement and urban development in the demands of the future.

4 The Accelerated Active Transportation Implementation Plan: 2024 to 2028

The Accelerated Plan is a blueprint to get more done, faster. Council's approval of the Integrated Active Transportation Delivery Team during the 2023 budget provided additional resources to support designing and implementation of cycling facilities in multiple divisions.

The Accelerated Plan presented in this report offers an opportunity to implement new cycling facilities where there are none today and to enhance existing facilities, like signed routes, to meet the City's new design standards. This Plan is the product of a comprehensive programming framework (Section 3.4), and is a manifestation of this Term of Council's Priorities related to Safe & Thriving Neighbourhoods and Sustainable Economic & Ecological Development.

At its core, the Accelerated Plan will significantly expand the local AAA network, providing safer and more accessible routes for cyclists of all backgrounds. It is designed to connect neighbourhoods, schools, local businesses and recreational/leisure destinations, allowing residents to navigate Hamilton by low/no-carbon means. By prioritizing the development of the Accelerated Plan, Hamilton will be helping to advance our environment, climate change and transportation policies and objectives simultaneously.

Moreover, this network sets the stage for fostering a culture of cycling. It is not just about facilitating the needs for current cyclists but encouraging more people to embrace cycling as practical option to get around. The Accelerated Plan is more than a collection of routes; it is a pivotal step towards creating a more sustainable, accessible and vibrant Hamilton. It signifies a commitment to prioritizing sustainable mobility, while remaining adaptable to future opportunities and growth. Through this network we're laying the foundation for a healthier, more connection, forward-thinking Hamilton for all.

4.1 The Accelerated Plan

The Accelerated Plan consists of 151 kilometres of cycling facilities, that will be implemented from 2024 to 2028. A map of the ultimate network is available in Figure 5 (page 18), while maps of annual projects are available in Appendix D – Proposed Accelerated Active Transportation Plan - Maps. A table listing of all projects is available in Appendix C – Proposed Accelerated Active Transportation Plan - Project Listing.

Table 4: Summary of Accelerated Plan Annual Implementation

Year	Number of Projects	New Cycling Facility Kilometres	Percent of New Facilities	Enhanced Cycling Facility Kilometres	Percent of Enhanced Facilities	Total Kilometres
2024	16	17.4	61%	4.3	15%	28.7
2025	29	29.8	81%	7.1	19%	36.9
2026	24	29.9	83%	6.3	17%	36.2
2027	28	27.9	85%	4.8	15%	32.7
2028	19	14.4	87%	2.2	13%	16.6
Total	116	119.5	79%	24.6	16%	151.1

The plan will see 81 km of new separated facilities (e.g. separated bike lanes, raised cycle tracks, multi-use paths), 17 km of new dedicated facilities (e.g. buffered and painted lanes) and 21 km of new shared facilities (e.g. bike boulevards) implemented over four years. This will significantly improve the accessibility of the network for residents. Improved accessibility means that people can more easily access key destinations such as schools, workplaces, commercial centres, and recreational areas by bike or another small wheeled device.

Table 5: New and Enhanced Facilities by Implementation Year

Year	New Facilities (kilometres)			Enhanced Facilities (kilometres)			Total New and Enhanced Facilities (kilometres)		
	Separated	Dedicated	Shared	Separated	Dedicated	Shared	Separated	Dedicated	Shared
2024	5.1	1.0	11.3	2.8	0	0	7.8	1.0	11.3
2025	16.2	7.3	6.3	4.8	2.3	0	21.0	9.6	6.3
2026	22.3	7.0	0.6	4.5	1.7	0	26.9	8.7	0.6
2027	25.3	1.2	1.4	4.8	0	0	30.1	1.2	1.4
2028	12.0	0.7	1.7	2.2	0	0	14.2	0.7	1.7
Total	81.0	17.2	21.3	19.1	4.0	0	100.1	21.2	21.3

4.2 Tracking Cycling Master Plan Completion

The Accelerated Plan is a game changer. Over the next four years, the plan will create 100 km of new AAA cycling facilities and will enhance 21 km of existing facilities to modern standards (Table 4). This will increase the percentage of the Cycling Master Plan delivered from 58% to 74% and will reduce the outstanding kilometrage of the plan to approximately 256 km, which is primarily in the rural area. The 151 km of facilities that will be delivered is more than double what would be expected over the City's recent trend of approximately 15 km per year recently, or 60 km over four years.

4.3 How Does Hamilton Compare

Across Canada, other municipalities are also making greater efforts to enhance their active transportation networks through Master Plans, increased funding, and more ambitious and protective infrastructure design. Halifax, Edmonton, Winnipeg, Waterloo Region, and Montréal are some noteworthy examples of jurisdictions which are leading the development of Canadian active transportation in their cities alongside Hamilton. Table 6 outlines a summary of comparisons between Hamilton and these municipalities.

Table 6: Comparison of Municipal Active Transportation Funding

City	Population	Active Transportation Investment	Km	Notes
Hamilton	569,000	\$2.5M/yr (standalone projects) 12M/yr (including capital projects)	151km of new and enhanced facilities (30km/yr)	
Halifax	439,000	\$8.16M in 2022-23 (\$8.16M/yr)	Ultimate 57km network	Continues to increase the budget for Integrated Mobility Plan projects year-by-year.
Edmonton	1,100,000	\$100M over 4 years (\$25M/yr)	678km of new and enhanced facilities	
Winnipeg	749,000	\$334M over 20 years (\$16.7M/yr)	-	City Council approved a 20-year plan in 2015 which would spend a total of \$334M. Initial investment has been slow (~\$1.7M/yr)
Waterloo Region	535,000	\$12.8M/yr	200km over 10 years (20km/yr)	Regional Council committed to a 2018-2022 project to create a comprehensive cycling grid across the KW region. Funding has exceeded the initial commitment.
Montréal	1,800,000	\$150M over 5 years (\$30M/yr)	200km of added express cycling facilities (40km/yr)	Vision Vélo 2023-2027 is Montréal's plan for upgrading and installing protected cycling infrastructure over five years.

4.3.1 Halifax

The Halifax Regional Municipality has set aside \$8.16M for Integrated Mobility Plan projects in its 2022-23 budget, an increase from the \$6.5M dedicated in 2021-22. HRM has completed approximately 40% of its planned 57km AAA cycling network. This work is behind schedule, which planned to complete all

facilities by 2022. The municipality continues to see challenges from slow construction, disconnected cycling corridors, and seasonal protections which are removed for snow clearance, compromising the entire network in the winter. These difficulties are the result of the Transportation Committee and City Council delaying projects due to budgetary reasons, resulting in an unfulfilled plan and gaps in the network.

Halifax's Integrated Mobility Plan prioritizes mode share as the main metric of success, rather than kilometres or funding. They look to increase the number of residents choosing sustainable modes more frequently, with staff ultimately aiming for 30% of trips made through cycling or walking. City Council has instead aimed for 12%.

Figure 2: Current State of the Cycling Network in Halifax

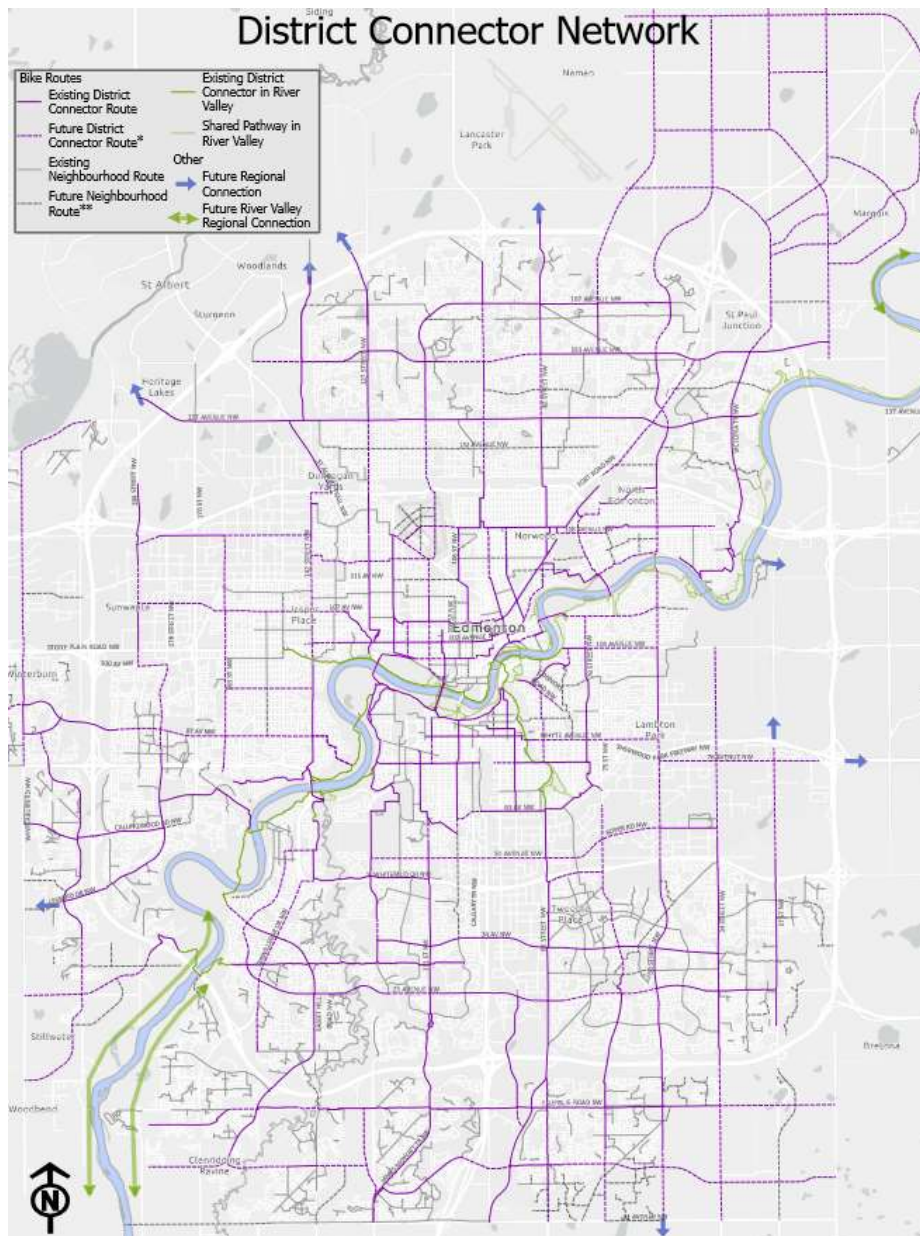


4.3.2 Edmonton

Much like Hamilton's plan, Edmonton's is long-range and seeks to leverage other infrastructure development to install cycling infrastructure. It targets new roads and waits for existing identified routes to have the roads re-built before installing cycling infrastructure, creating more efficiencies in the development. Edmonton anticipates maintenance costs to be \$11M/year once the network is built out, or roughly \$16,000/km.

Edmonton has seen success with protected cycling lanes, seeing cycling increase four times since installing a protected facility network.

Figure 3: Current State of the Cycling Network in Edmonton



4.3.3 Winnipeg

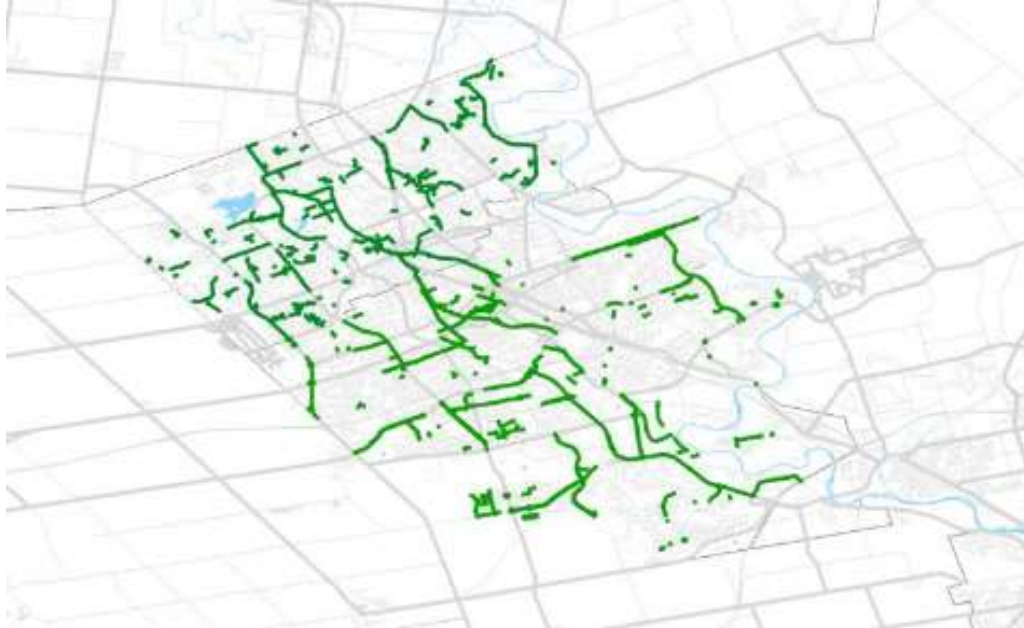
Winnipeg approached cycling infrastructure slowly, now rolling out seasonal protected lanes while they study and design the permanent implementation.

4.3.4 Region of Waterloo

Waterloo Region continues to coordinate between its constituent municipalities and present an overarching connected cycling plan. A pilot project for protected bike lanes saw a 57% increase in cycling. The Region will make the pilot protected lanes permanent and seek to expand the facility further. The constituent municipalities are still responsible, with Regional funding, for developing their own networks independently.

Waterloo Region has the benefit of coordinating across several municipalities to achieve greater active transportation goals. For instance, the Region has secured a shared ebike and scooter network through Neuron Mobility which operates seasonally between April and October, a major step towards increased active transportation mode share in the Region.

Figure 4: Current State of the Cycling Network in Region of Waterloo



4.3.5 Montréal

Vision Vélo is an ambitious attempt at expanding the already-effective cycling network in Montréal. It seeks to add 200km of protected facilities to the existing 184km on the Réseau Express Vélo, high-capacity cycling lanes which are meant for long-distance commuting. Since 2019, cycling infrastructure has been a priority of Montréal City Council and the last year alone has seen a 20% increase in cycling trips.

Alongside more standard facility installation, Vision Vélo also focuses on improving unsafe intersections and creating two véloroutes which will act as long-distance, high-speed, and straight cycling highways.

4.3.6 Lessons Learned

Hamilton has the unique position of being able to learn from the experiences of these other municipalities, whose acceleration, and commitments to cycling infrastructure came slightly earlier.

In general, trends show that building infrastructure has a direct and rapid impact on the number of cycling trips taken within a city. However, this infrastructure has to be safe, thoughtful, and most of all connected in order to effectively replace vehicle trips and entice non-cyclists to try a new mode. With the increasing prevalence of ebikes and scooters, micromobility becomes more appealing to a larger segment of the population – it's more important than ever to ensure that AAA facilities exist to allow people to feel comfortable taking these trips alongside vehicle traffic. Halifax's example shows that building a disconnected network will lead to lower ridership than anticipated and that if projects need to be re-prioritized or delayed, considering their connectivity and the impact on other planned projects is key to maintaining the highest integrity of network possible as the plan continues to be built out.

Likewise, the comparison shows that ambitious plans for expanding cycling infrastructure will build momentum. Montréal is embarking on its second major expansion since 2019 as a direct result of the first project's continuing success. A thoughtfully-planned and successfully-implemented initial network will make it easier to continue to build out effective facilities as the city matures, expands, and densifies.

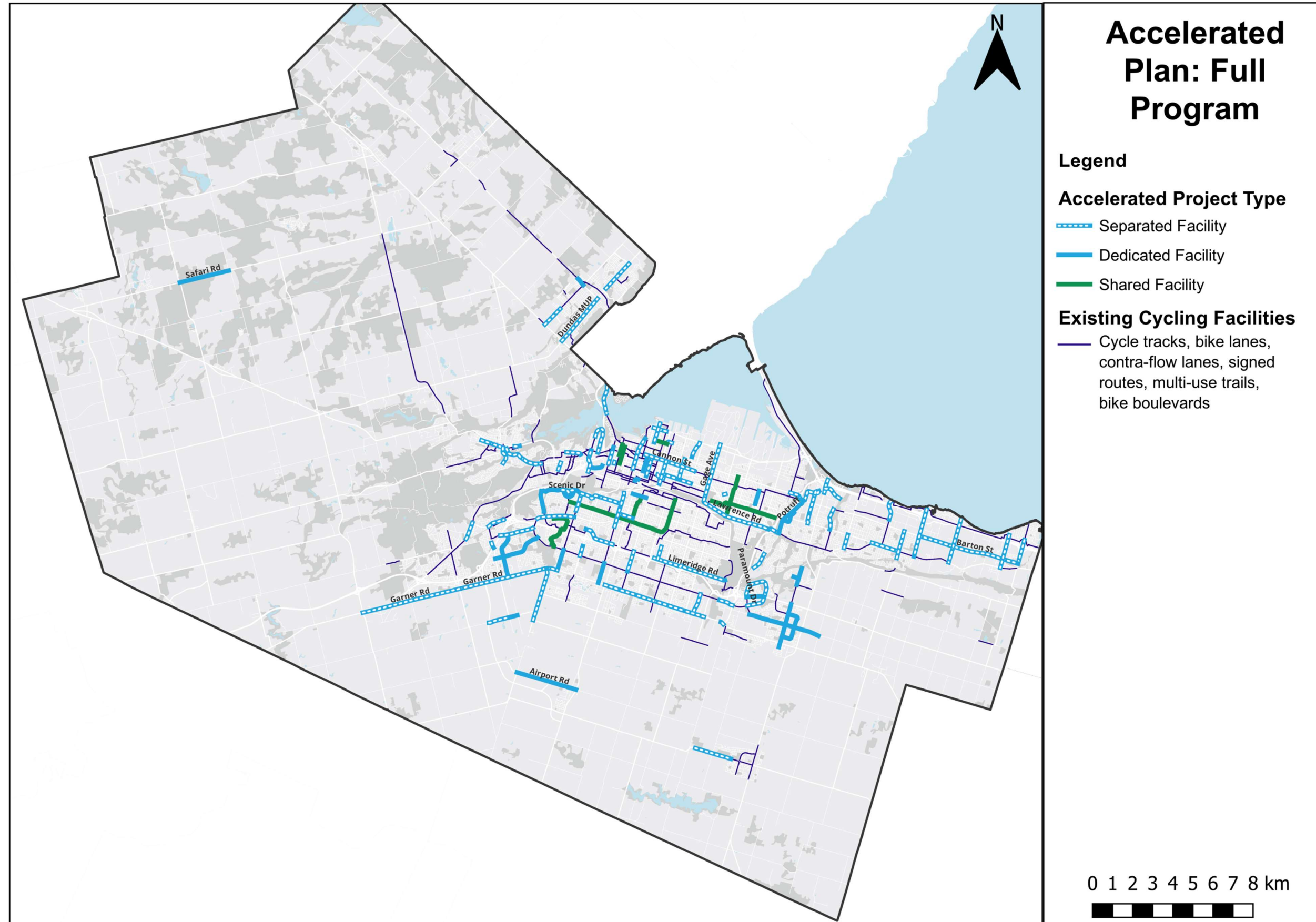
4.4 Filling the Gaps: Pedestrian Facilities

The Accelerated Plan will also deliver broader multi-modal benefits for the community. While projects within this plan are based on existing cycling policies and plans, several projects offer opportunities to address gaps within the pedestrian walking network. Past planning policies, particularly in the outlying pre-amalgamation communities, required no pedestrian accommodations on many streets, meaning that there are gaps within the sidewalk network that forces individuals to walk on the road or use grass. These practices do not reflect the policies, practices, and expectations of the modern-day Hamilton.

Staff have done preliminary work to identify projects where there may be an opportunity to address sidewalk gaps while delivering cycling facilities. For instance, on higher-volume streets where there are no sidewalks, a separated cycling facility may be warranted. Depending on the specific context and attributes of the area, a separated cycling facility like a multi-use path, may be able to address the needs of both pedestrians and cyclists. As individual projects work their way through the Feasibility Plan stage, staff will monitor for opportunities where an Accelerated Active Transportation Plan project may be able to address a pedestrian gap on one or both sides of a particular street.

In lieu of addressing pedestrian and sidewalk gaps via the projects identified within the Accelerated Plan, the Integrated Active Transportation Delivery Team will also work towards filling is gaps within the sidewalk network across the City. As identified within PW13078 (Pedestrian Mobility Plan), an annual workplan will be developed that enables a systematic approach to retrofitting deficient sidewalk locations. Prioritization will be given to filling gaps connecting transit stops, schools, parks, and other key destinations.

Figure 5: Proposed Accelerated Plan: Full Program (2024 - 2028)



5 Delivering the Plan

5.1 Integrated Active Transportation Delivery Team

Accelerating the implementation of cycling infrastructure will require a multi-pronged approach which includes increasing staff resources, acting on quick win projects, ensuring project funding is available, and re-prioritizing infrastructure projects with an active transportation component.

Council has previously approved the development of an Integrated Active Transportation Delivery Team (the Team) which will assist in the delivery of active transportation projects in that all staff resources from planning through design and construction would work together. This Team would be composed of existing Staff from Transportation Planning and Parking, Transportation, Engineering Services and Landscape Architectural Services.

The Integrated Team will work towards delivering on the projects identified within the Accelerated Active Transportation Plan, which is informed by the Core Cycling Network Map, the Cycling Master Plan, Complete Streets design process, and other supporting policies and work. The Team would also oversee the completing of the long range Integrated Active Transportation Plan.

5.1.1 Roles of the Integrated Active Transportation Delivery Team

In order to complete the projects in the Accelerated Plan, the Team will perform the following key tasks:

Jointly Delivery Projects across Planning and Public Works:

- oversee active transportation projects from concept to operations,
- meet regularly to coordinate the implementation of projects, and engage with respective consultation groups
- monitor and report on project progress/status annually to Council
- provide AT scope/input for CPMS projects

Develop Multi-year Plans

- create a detailed implementation plan and cost for the Accelerated Plan and inform the 2024 – 2028 Capital Budget process
- collaborate on the development of the long range Integrated Active Transportation Plan,
- develop a 10 year plan that aligns with existing capital 10 year plan as part of the Integrated Plan

Modify Existing Standard Operating Procedures

- review and modify existing Standard Operating Procedures (Cycling, Sidewalk and Capital Project Management System) to reflect the new delivery of AT projects

Meet Key Performance Indicators and Metrics

- The Team will be working across multiple sections and projects; therefore, it will be important to track project progress and delivery.
- A master project delivery database will be maintained that all team members will use for project coordination.
- The Key Performance Indicators are as follows:
 - Number of projects completed vs. number of projects planned
 - Number of public engagement activities undertaken
 - Length of projects completed for conventional lanes and paved shoulders*
 - Length of projects completed for cycle tracks on-street*

- Length of projects completed for MUPs/Sidewalk level Cycle Tracks*
- Length of projects completed for sidewalks*
- Length of projects completed for Trails*

**It should be noted that each completion category will have different metrics given that there are different implementation challenges associated with each.*

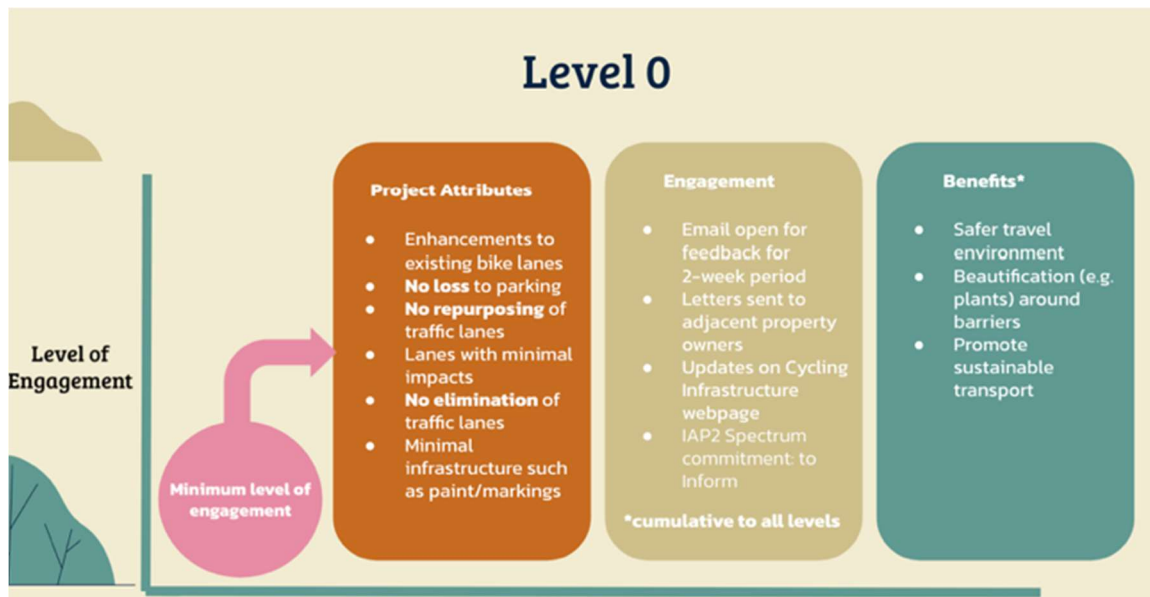
5.2 Public Engagement

All of the projects comprising the Accelerated Plan will have a public engagement component. Depending on the size, complexity and right of way impacts, a customized engagement for each project will be undertaken.

5.2.1 Public Engagement Matrix

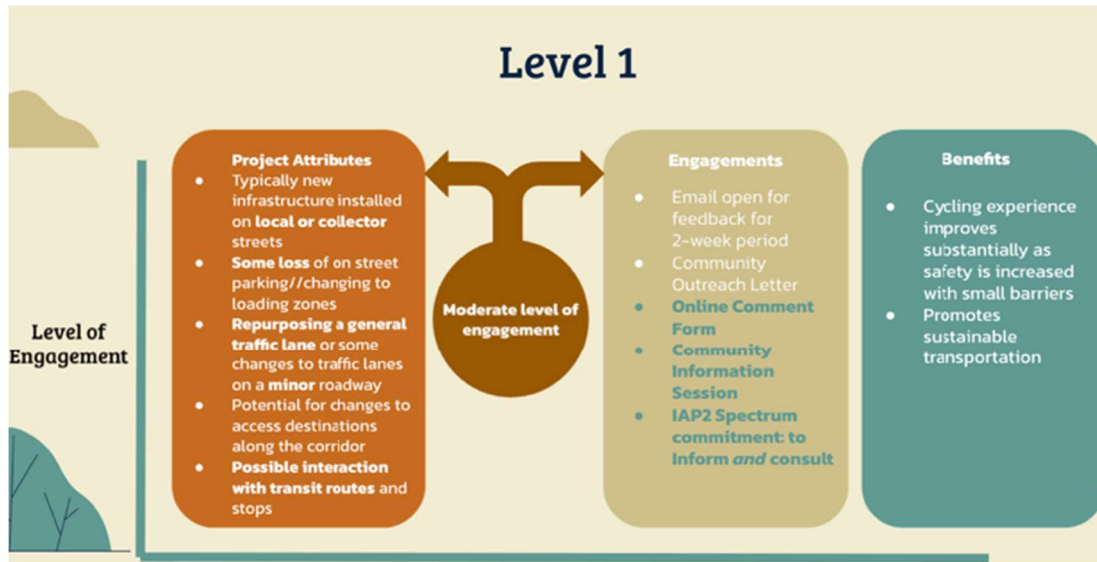
In collaboration with CityLAB the Sustainable Mobility team has explored the creation of a public engagement matrix to apply when creating new projects or advancing existing ones. This matrix includes 3 levels depending on the scale of infrastructure being implemented. This project was developed through engagement of community members and key stakeholders in the Hamilton cycling community in order to better communicate future implementation plans and to provide users with a better concept of what these plans will entail. For early scopes this can also be a platform for encouraging feedback to the design team. The new process is designed around engaging, informing, and consulting the public on future projects in order to best design equitable and accessible infrastructure to support the communities it is installed for.

Figure 6: Public Engagement Matrix - Level 0



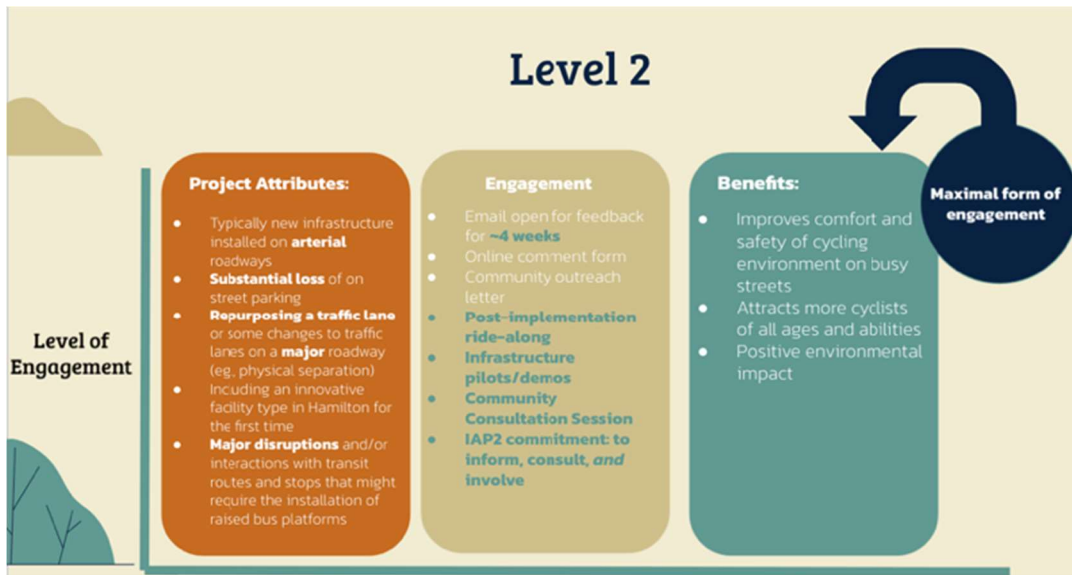
Level 0 engagements do not impact the existing roadways with their implementation; all traffic and parking lanes will be maintained and minimal pieces such as paint will be added. Level 0 engagements will provide residents and others to provide feedback on the plans via email for a 2 week period (this can be extended if deemed necessary), letters delivered to adjacent property owners, and updates posted to the cycling infrastructure page. It recognizes there is a public need to report on all new infrastructure being installed, regardless of the scale.

Figure 7: Public Engagement Matrix - Level 1



Level 1 engagements are for typically new infrastructure projects that are installed on local or collector streets. These projects may include a loss of on-street parking or a travel lane, or potential changing of access to some side streets (ie. New route planning options may be required). Level 1 engagement will include the standard email feedback form open for 2 weeks, in addition to online comment forums, community outreach letters sent to property owners along and adjacent to the proposed corridor, and a community information session. Level 1 projects will significantly improve the cycling experience along their routes, and increase safety typically with small barrier separation. This level recognizes the need to report and consult on all new infrastructure.

Figure 8: Public Engagement Matrix - Level 2



Level 2 engagements are typically new infrastructure being installed on arterial roadways. Due to the nature of these projects they can lead to substantial losses of parking, loss of a travel lane(s), and can create disruptions/interactions with traffic or transit movements at intersections. Level 2 will have a longer email feedback form open for 4 weeks, in addition to an online comment form and community outreach letter. Community consultation sessions will directly engage and give a platform for community members to engage in person regarding the project scope. Consulting, informing, and involving property owners and other stakeholders is key for large disruptive projects. After completion of the project a ride-along will be scheduled to explore the new infrastructure and talk further about it. Ride-alongs have been determined as an important strategy to develop relationships between stakeholders and the City, to encourage people to get out and use new infrastructure, and as a way of improving quality feedback.

5.2.2 Additional Public Engagement Activities

Each project, regardless of scope will get a full feasibility plan which would include, but not limited to road type, traffic statistics, Complete Street elements, stakeholders and recommended infrastructure types of upgrades. Feasibility plans can be found on the City of Hamilton website (hamilton.ca/newlanes), where members of the public can review the details of the project. Feasibility plans will also be presented and/or discussed with the Hamilton Cycling Committee as well as the Mobility Lab - Cycling Network, for their review and comments. Feasibility studies will also include rough sketches of what future infrastructure will look like on the ground.

Figure 9: Screen Capture of Cycling Infrastructure Website

2023 IMPLEMENTATION PROJECTS			
ROADWAY	INFRASTRUCTURE TYPE	PROJECT STAGE	ADDITIONAL INFO
Baldwin St/Cootes Dr - York St to Court St, Baldwin St to Dundas St	Bicycle Boulevard Multi-use Path	Design	Cootes Dr Feasibility Plan (PDF, 560.13 KB)
Barton St - Woodward Ave to Redhill Valley Parkway	Multi-use Path	Construction	Capital Project
Bay St - Cannon St to Hunter St	Barrier Enhancements	Planning	
Breadalbane/Jones/Woodbine - Breadalbane/Jones/Woodbine Bike Boulevard, King St. to York Blvd.	Bicycle Boulevard	Tender	Video: Breadalbane Info Session ↗
Centennial Pkwy - Confederation Dr to Goderich Rd	Multi-use Path	Design	Centennial Pkwy Feasibility Plan (PDF, 379.29 KB)
Charlton Ave/MacNab St	Connection Enhancements	Design	Charlton Ave/MacNab St Feasibility Plan (PDF, 386.67 KB)

The Hamilton Cycling Committee is an Advisory Committee of Council and is made up of citizen member who have apply for consideration when forming the committee. The Hamilton Cycling Committee advises City Council on:

- a. all matters related to cycling and micro-mobility
- b. monitors the implementation of the Hamilton Cycling Master Plan
- c. encourages and participates in planning for bicycling and micro-mobility facilities
- d. encourages citizens to cycle instead of drive
- e. educates the public about the benefits and necessities of cycling
- f. integrates the work of area municipal bicycle and active transportation committees

The Mobility Lab is a team consisting of community members who can provide feedback on cycling infrastructure projects that represent the diverse experiences of Hamiltonians. Building on the previous work from the Mobility Lab, the Mobility Lab – Cycling Network was created to focus on the rapidly expanding bicycle network . The group is involved in the design process by attending public information centres, community bike rides and reviewing feasibility studies. These champions are expected to share information between the City and their respective communities and represent the interests of all Hamiltonians impacted by these changes. This includes bringing examples from other cities, and ideas for how to improve and increase cycling in Hamilton.



5.3 Types of Infrastructure Projects




The projects in Appendix A represent a variety of active transportation facility types, that are suited to the street typology as per the Complete Streets Design Manual. These include:



Separated Facilities

Separated facilities are facilities that are physically separated from vehicular traffic while remaining within the road right-of-way (R.O.W.). There are three types of separated facilities: Multi-Use Path, Cycle Track (raised uni-directional & street level bi-directional) and Barrier Bicycle Lanes (mini jersey barrier, pre-cast barrier, poured concrete barrier & parking barrier). These are listed in the table below:

Table 7: Separated Facility Type Descriptions

Facility Type	Example
Multi-Use Path:	
<p>Provides two-way travel and is shared between people riding bikes, pedestrians, and other micro mobility users.</p>	<p>Cootes Drive</p> 
Raised Uni-Directional Cycle Track:	
<p>A bikeway that is horizontally and vertically separated from the travelled portion of the roadway by a curb and/or a horizontal buffer. Cycle tracks often travel parallel to the sidewalk but are designated exclusively for use by people riding bikes.</p>	<p>Region of Waterloo:</p> 





<p>Street Level Bi-Directional Cycle Track:</p>	
<p>A bikeway that is street level with vertical barriers from the travelled portion of the roadway, typically consolidated to one side of the roadway.</p>	<p>Bay Street:</p> 
<p>Mini-Jersey Barrier Bicycle Lane:</p>	
<p>Buffered bicycle lanes that include mini jersey barriers that serve as a physical separation to vehicular traffic.</p>	<p>Wilson Street (Ancaster):</p> 
<p>Poured Concrete Barrier Bicycle Lane:</p>	
<p>Bicycle lanes with a poured concrete curb barrier that serves as a permanent physical separation to vehicular traffic.</p>	<p>Hunter Street</p> 

Pre-cast Concrete Curb Barrier Bicycle Lane:	
<p>Buffered bicycle lanes that include pre-cast concrete curbs that serve as a physical separation to vehicular traffic.</p>	<p>Upper Paradise Road</p> 
Parking Barrier Bicycle Lane:	
<p>Bicycle lanes with parking lanes utilized as barriers that serve as a physical separation to vehicular traffic.</p>	<p>Herkimer Street:</p> 

Dedicated Facilities

Dedicated facilities are cycling facilities that are within the roadway and have a delineation between bicycle lanes and vehicular traffic, creating a dedicated space within the roadway. There are three types of dedicated facilities: Painted Buffer Bicycle Lanes, Painted Bicycle Lanes (may/could include flexposts) and Bicycle Lanes with a Planter. These are listed in Table 8:



Table 8: Dedicated Facility Type Descriptions

Facility Type	Example
Painted Buffer Bicycle Lane:	
<p>Bicycle lanes that consist of a painted buffer that serve as a separation to vehicular traffic.</p>	<p>Paramount Drive</p> 
Painted Bicycle Lane:	
<p>Bicycle lanes that consist of a painted line to delineate the separation between vehicular traffic and a bicycle lane. Could also include flexposts as a temporary form of physical separation.</p>	<p>Delaware Avenue:</p> 
Painted Bicycle Lane with Planter:	
<p>Planters are used as a temporary physical separation between vehicular traffic and a bicycle lane. Concrete planters provide year-round physical separation.</p>	<p>Locke Street:</p>  <p>Herkimer Street</p> 

Shared Facilities

Shared facilities are cycling facilities that are shared with vehicular traffic within the roadway while alerting drivers that the road is a shared cycling route. There are two types of shared facilities: Bicycle Boulevards & Signed Bike Route. These are listed in the table below:

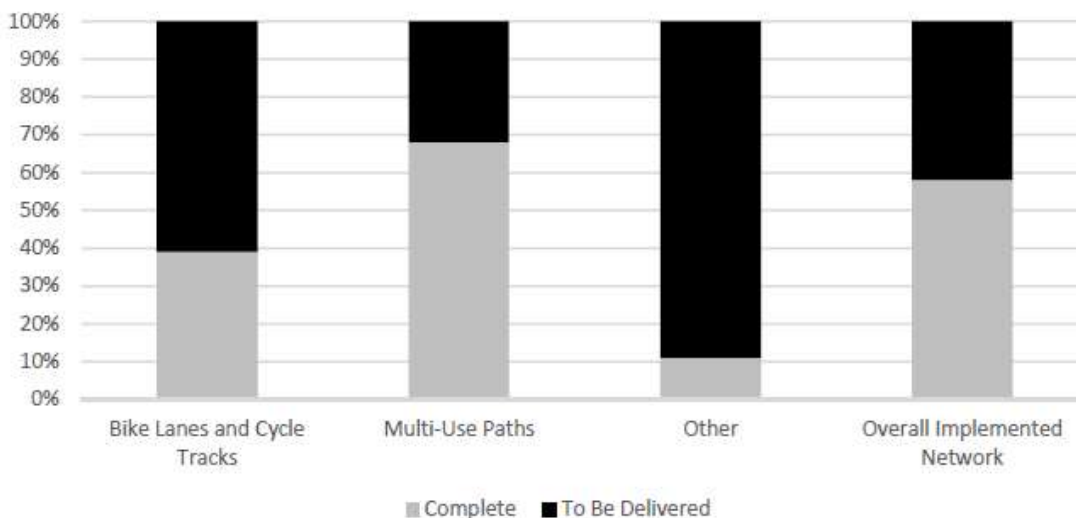
Table 9: Shared Facility Type Descriptions

Facility Type	Example
<p>Bicycle Boulevard</p> <p>Consist of painted wayfinding pavement markings on the road to let road users know that the road is a cycling route and is shared with vehicular traffic.</p>	<p>Breadalbane Street</p> 
<p>Signed Bike Route</p> <p>Consists of signage to let road users know that the road is a cycling route and is shared with vehicular traffic</p>	<p>Bendamere Avenue</p> 

5.4 Paved Shoulders

Paved shoulders are visually separated areas at the edge of a roadway and are located to the right of motor vehicle lanes. OTM Book 18 recommends that the desired width of a paved shoulder is 1.5 m or more. However, in situations where there is a need for a paved shoulder within a constrained corridor, practitioners may consider providing a minimum paved shoulder width of 1.2 m. They are not reserved for any specific use, but commonly provide space for people walking and cycling along a road, typically in a rural environment.

City staff presented Report PED23042/PW23008 - Cycling Infrastructure 2023 to General Issues Committee on January 20, 2023. The report included Figure 10, which identifies the implementation of the Cycling Master Plan by facility type as of the end of 2022. The category "Other" is made up bicycle boulevards and paved shoulders and is the least implemented facility type, with approximately 10% implemented.

Figure 10: Cycling Master Plan Implementation by Facility Type

Paved shoulders are typically considered during capital works projects such as roadway resurfacing, rehabilitation, reconstruction or new road construction. Outside of capital works, it is challenging to implement paved shoulders exclusively due to several potential constraints, which impact the overall cost of construction:

- Land Acquisition
- Culvert extension/replacement
- Utility relocation
- Ditch regarding
- Street light/traffic sign relocation
- Guiderail modifications

Recognizing that paved shoulders can benefit all road users by providing dedicated space for bicyclists, pedestrians and motor vehicles, it is imperative that paved shoulders play a more focal consideration in the overall active transportation network. In addition to the proposed Accelerated Active Transportation Plan and funding requirement for implementation, additional funding should be considered that is exclusively intended to implement paved shoulders within rural environments.

As part of the Integrated Active Transportation Plan, consideration should be given to completing a study that examines the potential and feasibility of implementing paved shoulders on City owned roads as identified within the existing Cycling Master Plan. The study would prioritize which segments of roads are highest priority for the implementation of paved shoulders based on the variables of active transportation priority, construction feasibility, and capital and life cycle costs.

5.5 Maintaining the Network

Facilities are only comfortable and useful if they are in good condition. Maintaining active transportation routes/corridors, is an important component of ensuring that walking, rolling, and cycling is a viable and accessible transportation option for people of all ages and abilities year-round. Maintenance activities such as, seasonal sweeping (including paved shoulders) to remove debris, vegetation impeding operating space, roadway surface quality and pavement markings, all contribute to users choosing to use a specific facility/corridor.

While the installation of new active transportation infrastructure is often seen as the top priority to promote more trips by active modes, ongoing maintenance of existing infrastructure is equally, if not more important, than installing new infrastructure. The ongoing maintenance and operations of infrastructure needs to be considered at all stages of the planning and design process, as well as when considering to accelerate the implementation of active transportation infrastructure. It is often challenging in maintaining existing active transportation infrastructure due to:

- tight operating budgets
- competing maintenance needs
- a lack of appropriate equipment
- changing maintenance best practices
- an insufficient inventory of maintenance issues.

The Accelerated Plan identifies capital funding to implement additional infrastructure. However, it does not identify additional funding requirements to maintain these additional facilities, while still maintaining existing facilities. As a result, additional funding and/or resources will be required within the Operating budget, to ensure both existing and future infrastructure is adequately maintained.

5.6 Data Collection and Monitoring

Data collection will be used to measure the success of the Accelerated Plan. A successful monitoring plan should be meaningful, measurable and manageable. Monitoring should yield meaningful results, establish criteria that are measurable and for which information can be readily obtained, consider resource limitations and identify measures where information is accessible or data is simple to collect.

Data will be collected both before and after project implementation, analysed, and ultimately published for Council's and the public's information. Key metrics that will be captured and reported:

- Volume, Speed and Classification Counts
- Safety (including collision data)
- Parking impacts

Major projects which anticipate high volume or are on arterial streets will likely use counters and cameras, which may already exist, in order to measure the large volume of data. Smaller projects with low anticipated volumes or on side streets will rely on in-person counts by staff. Monitoring will continue along existing active transportation spines in order to measure any impact on current active transportation volumes. Working with our Micromobility data partners (eg. Hamilton Bike Share Inc.) will help assess impact on shared micromobility uptake as a result of infrastructure improvements, where applicable.

Pre-implementation data will be used as a benchmark to measure future success, and ongoing measurement will be gauged against milestones. Data from previous cycling infrastructure upgrade programs will be used to set milestones and expectations for these projects. Use is expected to increase as time goes on.

In areas where parking will be impacted, a parking study may be undertaken to determine overall parking impacts and how they can be mitigated. After implementation, parking impacts will continue to be analysed in areas where major changes to parking have occurred.

6 Towards an Integrated Future

The goal of the Accelerated Plan is to develop a path forward in the next five years to accelerate the implementation of AT infrastructure. This plan, as presented in section 4 is on par with other Canadian municipalities and is consistent with the Transportation Master Plan.

Further to this, a more long-range planning exercise is planned that will help develop the next ten years of projects beyond the Accelerated Plan, and it will consolidate the Cycling Master Plan, Pedestrian Mobility Plan and the Recreational Trails Master Plan. This plan is called the Integrated Active Transportation Plan (herein referred to as the "Integrated Plan") and will be completed in 2025.

6.1 Working on the next plan

The purpose of the long range Integrated Plan is to develop a comprehensive integrated active transportation master plan that includes:

- Bringing together the on-street, off-street and pedestrian-only networks;
- Supporting policy papers to improve certain special topic areas;
- Create a 10-year delivery plan that identifies the projects by implementation year; and,
- Develop functional designs for major key projects.

The City's Transportation Master Plan aims to improve active travel rates to 15%, while supporting goals of equity, climate change and Vision Zero also encourage the increase of folks getting around in non-motorized ways. This plan will help to advance these goals.

6.2 An Integrated Future

From 2006 to 2016, the number of trips made by active modes (walking and cycling) by Hamilton residents on the typical weekday grew by 26.9% (252% for cycling trips, 1% for walking trips). Today, planning and implementation of active transportation facilities are guided by three plans, the Cycling Master Plan, the Pedestrian Mobility Master Plan and the Recreational Trails Master Plan, each of which are due for a review and update. The timing presents an opportunity to undertake a comprehensive review of the network, policies and programs contained in these plans through an integrated approach. The integrated approach will help ensure consistency, connectivity and efficiency across Hamilton's on-street walking and cycling network and off-road trails networks.

This integrated approach underscores the importance of taking a wholistic view of Active Transportation to include the following: trails, on-street infrastructure, off-street infrastructure, paved shoulders, park paths, e-bikes, transit, first-last mile infrastructure (including the mountain climber program), complete streets, end of trip facilities, micromobility and shared-use mobility (bike share, e-scooters and carshare) and supporting programming through transportation demand management, events and promotion. By engaging in a planning process that considers all of these modes and programs and their interactions, the City will benefit from a more sustainable, less carbon intensive, more active, safer and convenient transportation network.

6.3 Next Steps

In order to achieve the goals of the Accelerated Plan for 2024 to 2028 the following is planned:

- Present the 2024 to 2028 Accelerated Plan to Council;
- Plan and complete projects through existing or new capital works, coordinated through the capital budget submission process;
- Completing a study that examines the potential and feasibility of implementing paved shoulders in order to meet Cycling Master Plan targets in the long term;
- Work through the Operating Budget to identify additional funding and/or resources that are required to ensure both existing and future infrastructure is adequately maintained; and,
- Continue to hire previously approved positions to finalize the Integrated Active Transportation Delivery Team and begin reporting on the team's activities.