Brampton Transit

2023-2027 Business Plan

Summary Document

March 2023

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ACKNOWLEDGEMENTS

Brampton Transit's 2023-2027 Business Plan was a collaborative effort between Brampton Transit staff and consulting partners Left Turn Right Turn and Optimus SBR. We acknowledge their contribution towards the development of this plan.

List of Tables and Figures

"CONNECTING YOU TO EVERYDAY"

1 INTRODUCTION

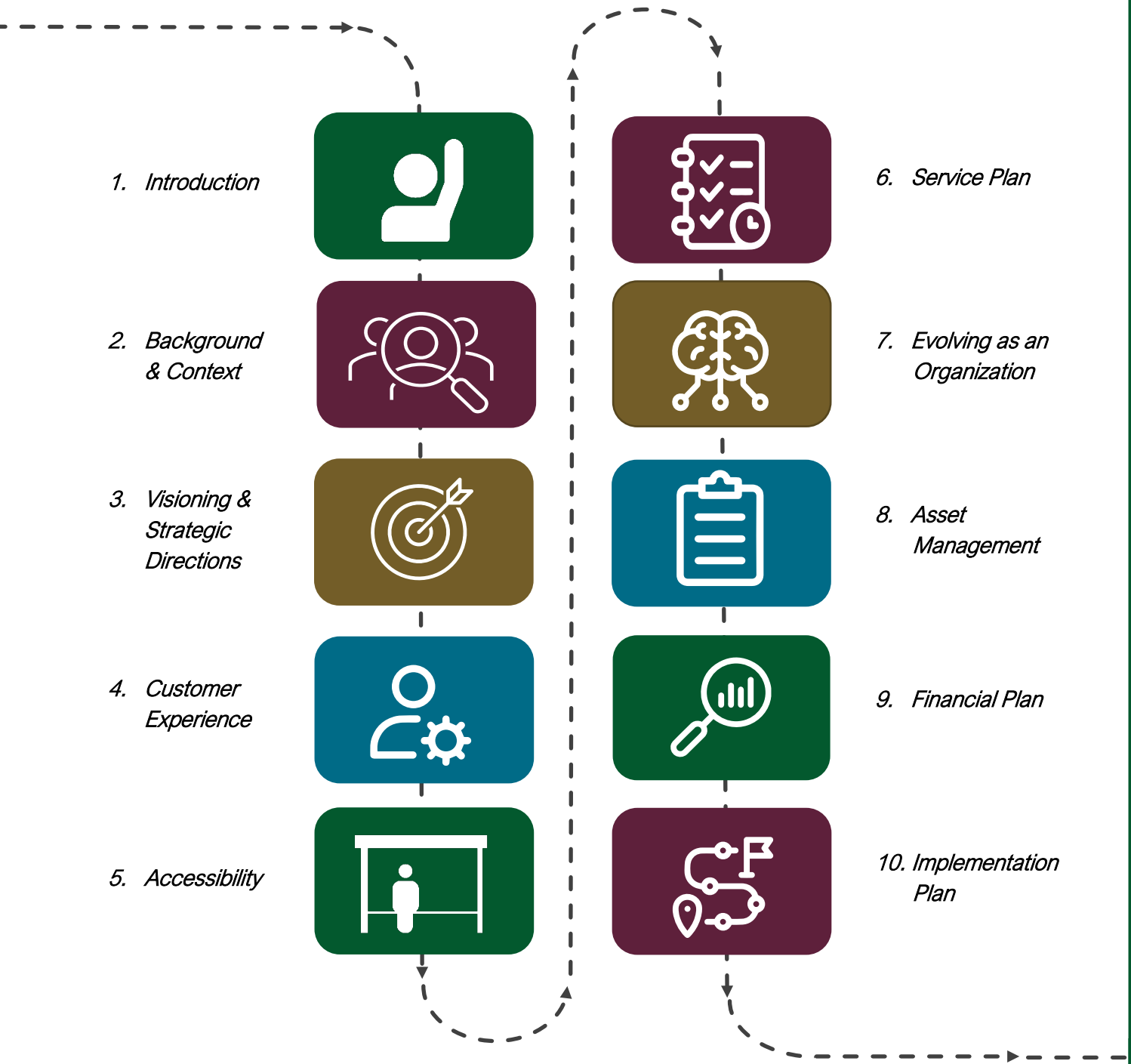
The City of Brampton and Brampton Transit have focused significant effort and capital investment over the past decade to improve transit and implement new ideas. This has included expanding existing service, connecting new routes, implementing new technologies, becoming more accessible, and advancing the transition to a zero-tailpipe emissions bus fleet. The successes of these efforts and investments have led to continually increasing ridership, surpassing all expectations of the 2015 Transportation Master Plan (TMP).

Brampton Transit's Five-Year Business Plan represents the foundation on which these successes are built. Where the TMP is a visionary document that outlines broad, large-scale objectives over more than twenty years, the Business Plan deconstructs these objectives by addressing them in five-year segments to prioritize efforts, set expectations and advance toward the vision.

This document represents a summary of the new 2023-2027 Brampton Transit Business Plan. It strives to direct Brampton Transit over the next five years to not only continue to build on the exemplary successes and growth experienced over the previous decade, but to also respond to – and rebuild from – the COVID-19 pandemic. Key themes that this Business Plan addresses include responding to significant ridership growth, readying for electrification, increasing system efficiency, right-sizing administration, and setting the course for Brampton Transit for the next five years and beyond.

1.1 DOCUMENT STRUCTURE

This report presents a summary of the 2023-2027 Brampton Transit Business Plan, with sections focused on:

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2 BACKGROUND

Brampton Transit produces a Business Plan every five years. This summary document considers the 2023-2027 timeframe. The plan integrates Brampton's 2040 Vision, industry trends, the city's Term of Council Priorities, and customers' expectations.

Notable to this plan, Brampton has recently initiated, or is in the process of planning: the Phase I zero-tailpipe emission battery electric bus trial, the extension of the Hazel McCallion LRT line, a 3rd transit facility, the introduction of the Queen St – Highway 7 BRT, and new Züm routes.

This 2023-2027 Business Plan is designed to be a forward-facing document and responds to societal and technological changes and advancements that transpired over the previous period. The plan explores how the network integrates with neighbouring municipalities.

As well, this plan considers the significant impact that the COVID-19 pandemic has had on transit agencies across the world – decreased ridership, service levels, and revenues – and reflect on Brampton Transit's responsiveness and continued recovery. As such, this Business Plan is the first to be developed in, and also respond to, the COVID-19 era. While the pandemic continues to persist into 2023, the Business Plan considers COVID-19 recovery, the effects of the pandemic on Brampton Transit, and responding to the changing and evolving needs of society in a peri- and post-COVID world. This includes economic impacts that affect Brampton Transit and the provision of services (i.e., the resultant supply issues that have yet to be remediated and increased prices as a result).

Despite heavy impacts to the previous Business Plan's goals and objectives, Brampton's pandemic response is not the only focus of the 2023-2027 Business Plan. As a forward-facing document, it seeks to grow beyond the temporary disruption of COVID-19 to enable efficient growth to meet the City's transit goals and circumstances, including unprecedented ridership growth both before and during the pandemic. This massive ridership growth, coupled with the City's inspirational vision for a more sustainable and vibrant future in which transit plays a more prominent role, requires sound and achievable transit goals and objectives that not only meet current needs, but also anticipated future needs of an evolving community.

2.1 REFLECTING ON THE PREVIOUS BUSINESS PLANS

The 2023-2027 Brampton Transit Business Plan builds on the foundation of the 2018-2022 Business Plan, with redeveloped strategic directions that respond to both external changes and the prior successes of previous Business Plans.

The focus of previous Business Plans has varied. The 2013-2017 Brampton Transit Business Plan was focused on growth, largely due to the expansion of the Züm network and corresponding service increases required to support these corridors and expand to growing areas. The result of this investment was significant ridership growth between 2012 and 2016, which exceeded the rate of population growth. The 2018-2022 Brampton Transit Business Plan responded to and continued this growth as well as focused on implementing a new vision and new strategic directions.

The overarching goals and objectives of the Business Plan are connected and aligned with broader City plans, such as the official Brampton Plan and the Transportation Master Plan, as well as the Brampton Transit strategic directions developed as part of this 2023-2027 Business Plan. This plan builds on the achievements of the previous 2018-2022 Business Plan and adjusts for the changing operating context (e.g., COVID-19 impacts).

The 2018-2022 Business Plan set a good foundation for the 2023-2027 Business Plan, though parts of the plan were impacted and ultimately delayed by the COVID-19 pandemic. In addition to delaying certain projects, COVID-19 also impacted travel patterns and disrupted ridership projections. The 2023-2027 plan therefore leverages the previous Business Plan while acknowledging that not all planned changes and projections are still relevant.

2.2 2018-2022 KEY MILESTONES AND ACHIEVEMENTS

Despite the challenging period for transit agencies across the globe due to the COVID-19 pandemic, Brampton Transit has, over the past five years, been working toward accomplishing the strategies, goals and objectives set out in the previous 2018-2022 Business Plan. While COVID-19 has impeded or temporarily delayed select goals and objectives outlined for the latter half of the plan (2020 onward), Brampton Transit has experienced significant success over the five-year period:

COVID-19 PANDEMIC RESPONSE & RECOVERY

The pandemic affected transit agencies across the globe, with many temporarily suspending service altogether. Brampton Transit has been able to navigate the impacts of the pandemic by providing continued daily service but operating reduced service levels across the network due to multiple factors, including:

- Reduced levels of ridership due to physical distancing limitations, changing work arrangements (i.e., telecommuting), and the public's perception of crowded spaces during this time
- COVID-19 safety measures (i.e., physical distancing, mask protocol, etc.)
- Organizational resource constraints

Despite the challenges, Brampton Transit has recovered its ridership far more quickly than most peer agencies. June 2022 marked the agency's recovery to 100% of pre-pandemic ridership levels despite service levels operating at 90% capacity; and ridership has continued to increase since.

TABLE 1 - ANNUAL RIDERSHIP 2019-2022

RIDERSHIP	2019	2020	2021	2022
TOTAL	31,914,291	18,098,238	19,423,009	31,314,940

EMERGING TECHNOLOGY IMPLEMENTATION

Brampton Transit endeavours to be responsive to the needs of the community. Brampton Transit has continued to invest in new and advanced technologies to improve the customer experience, support better operations, and reduce Brampton Transit's environmental footprint.

For example, in addition to the BEB trial noted above, Brampton Transit has developed a strategy for an on-demand transit trial program.

IMPROVING SERVICE COVERAGE TO NEW GROWTH AREAS

Brampton Transit focused on improving service coverage to new growth areas pre-COVID-19, during the earlier years of the plan (2018-2020). "New growth areas" are just that – areas of new development (residential or commercial).

Service is provided to areas of new residential or commercial development and employment lands as soon as is operationally feasible, in order to provide travel options as the area matures and help encourage transit usage in and to new areas as they continue to develop. Brampton Transit continues to improve service across the city – including new growth areas – despite service levels being temporarily reduced due to the pandemic.

ELECTRIFYING THE FLEET

Brampton Transit is leading the industry through its electric bus trials and maintenance program. In May 2021, Battery Electric Buses (BEBs) went into service as Brampton Transit launched a zero-tailpipe emissions battery electric bus (BEB) trial and continue to use BEBs to provide transit service in 2023. The trial was the first phase of Brampton Transit's broader vision to transition to a zero-tailpipe emission fleet.

In 2022, Brampton secured a significant federal financing arrangement to manage the higher cost of BEBs. As a result, planning for additional electric infrastructure upgrades and battery electric bus fleet plan is already underway (with up to 450 BEBs secured by the end of 2027).

CONTINUED GROWTH OF ZÜM CORRIDORS

Brampton Transit service benefited from steady growth of the Züm network during the 2018-2022 Business Plan which included Züm Airport Road connecting to Malton GO Station in 2018 and to Viscount Station at Pearson Airport in the Fall of 2022. As well, service improvements were implemented on the Chinguacousy Corridor, including on express Route 104 to build corridor capacity and grow ridership in advance of the planned launch of Züm Chinguacousy in 2024.

While the expansion of new Züm network lines was temporarily delayed due to the COVID-19 pandemic, critical infrastructure planning took place during 2018-2022. As a result, Brampton Transit is ready to move forward with new Züm expansions in the early stages of this 2023-2027 service plan.

2.3 REGIONAL CONTEXT

Transportation in and around Brampton is deeply integrated with its neighbours in the Greater Toronto and Hamilton Area. For Brampton Transit this manifests as significant service demand to regional GO Transit stations and routes that run to Mississauga, Toronto, Vaughan, and Caledon.

The regional context will continue to impact Brampton Transit in the form of higher order transit projects and high growth anticipated within and outside of Brampton's boundaries. This includes advancing large transit projects: two Light Rail Transit (LRT) routes (Hazel McCallion and Finch West) and expansion of GO trains to two-way, all-day service along the Kitchener GO corridor. These projects will enhance regional travel for Brampton residents as well as bring in new riders to Brampton Transit. Brampton Transit services will need to respond to these additional higher order regional services through changes to the local network and additional service to meet increased ridership.

Further employment and residential growth is anticipated at or near Brampton boundaries. An important challenge to be addressed in this service plan and the annual service plans is to identify the new demand this will create and how to efficiently provide transit service to those areas, including how to best leverage service and fare integration opportunities with our partner agencies.

Two other key higher order transit projects are in the planning stages and will be vital to meet both Brampton's and the region's long-term goals. This includes the extension of the Hazel McCallion LRT into downtown Brampton and the Queen St – Highway 7 BRT. While Brampton continues to support and advocate for these projects, federal and provincial investment is needed to build these critical pieces of transportation infrastructure. Even though both of these initiatives are presently envisioned to be operationalized beyond the span of the 2023-2027 Business Plan, should one be advanced, the relevant impacts will be incorporated into the annual service plan for that specific year.

2.4 COVID-19 IMPLICATIONS

The operating context for Brampton Transit presently and in the next five years will be different from the previous five years, primarily but not wholly due to the COVID-19 pandemic. When the COVID-19 pandemic first hit, it significantly reduced ridership and altered the operations of transit (e.g., additional cleaning, limited capacity). As society begins to reset itself in a post-pandemic environment, significant and long-lasting changes to travel demand and travel patterns are anticipated. Transit agencies across the country are looking to answer questions as it relates to the pandemic. These include:

- Who is travelling? Is it different now than pre-COVID?
- When are they travelling?
- Have travel patterns changed?
- What kind of trips customers taking (i.e., employment/commuting, pleasure, etc.)?

In employment, for example, not all "9-to-5" employees are expected to return to commuting due to teleworking and hybrid work environments, while industrial shift workers may increase. COVID-19 has also shifted customer perspectives and expectations around traveller information, cleanliness, and crowding levels.

Moving forward, COVID-19 has highlighted the need and desire for previously underutilized technologies. On-demand transit, for example, emerged in the public transit industry as a means of addressing areas with low ridership and dispersed populations. With respect to COVID-19, however, it becomes a tool to address areas experiencing diminished ridership or the desire of customers to limit close-quarter interactions (i.e., fewer people wanting to be in crowded places).

The pandemic has also directly impacted Brampton Transit's organizational capacity and service provision. Front-line resources were directly impacted by COVID-19, exacerbating challenges around absenteeism. Supply chain issues and inflation continue to impact costs and expenditures for numerous sectors and industries across Canada and the globe. The resultant impact on Brampton Transit includes operating in an economically depressed environment that has lingering impact on operational and new capital costs.


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3 VISION & GOALS

"CONNECTING YOU TO EVERYDAY"

3.1 VISION

Based on its continued relevance, the existing Brampton Transit vision of "Connecting you to everyday" remains. This vision reflects the customer-focused responsiveness of Brampton Transit and its everyday importance for residents, employees, and visitors. This especially reflects the constancy of Brampton Transit throughout the COVID-19 pandemic and a changing environment and context.

3.2 NEW STRATEGIC DIRECTIONS

Strategic directions aligned with the vision provide more specific guidance for Brampton Transit over the next five years. These directions are expanded in the following sections, and they are all supported by effective communication of the value of transit (to funding partners, non-transit audiences, and other constituencies). Figure 1, below, relays the strategic directions for the 2023-2027 Business Plan.

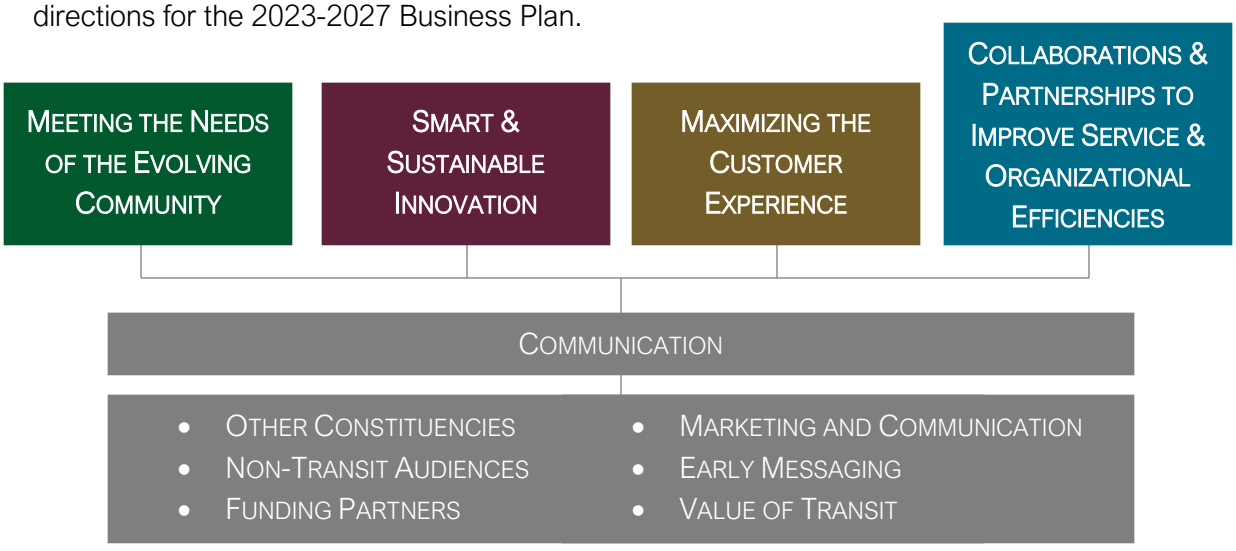

FIGURE 1 - 2023-2027 BUSINESS PLAN STRATEGIC DIRECTIONS

01 MEETING THE NEEDS OF THE EVOLVING COMMUNITY

Meeting the Needs of the Evolving Community focuses on the broader Brampton community and meeting its diverse needs as the city continues to grow and change. As part of this strategic direction, Brampton Transit will:

1. Continue to meet the challenges presented by **COVID-19** and take opportunities to renew and improve transit for the community.
2. Consider how COVID-19 has changed the **employment characteristics** of the city and adjust transit to meet **new commute travel patterns**.
3. Build upon the understanding of Brampton's **population diversity** to better anticipate and respond to changing transportation needs.
4. Continue to **respond to the growth** of the city, while also taking the opportunity to have transit and transportation **shape that growth**. This includes leveraging existing guidance within the Transportation Master Plan and Vision 2040.
5. Plan transit in collaboration with new development in a mutually beneficial way to increase the city's access to transit in **transit-oriented development (TOD).**
6. Be active in the broader community and be known for **community involvement** and **providing value** for Brampton residents.

02 SMART & SUSTAINABLE INNOVATION

Smart and Sustainable Innovation focuses on leveraging technology to support sustainability and growth of Brampton Transit as an organization. As part of this strategic direction, Brampton Transit will:

1. Continue its **electrification** efforts to meet its goal of a fully electric fleet. This includes significant infrastructure planning and implementation work.
2. Launch new **on-demand transit** services to improve service coverage and meet residents' diverse needs.
3. Continue to improve **organizational readiness, flexibility, and efficacy** to maximize the benefit of taking on innovative ideas and technologies.
4. Be selective about new **technology** and better integrate technologies into existing processes.
5. Leverage big data to make **data-informed** decisions that improve the customer experience (e.g., route frequency based on full buses).
6. Review and select **fare technology** that aligns with fare policies and Vision 2040.
7. Consider mobility in a holistic way as **integrated mobility options**. This includes exploring technology solutions (e.g., Mobility as a Service) and better integration with active transit.

03 MAXIMIZING THE CUSTOMER EXPERIENCE

Maximizing the Customer Experience includes various factors that can improve the customer experience. As part of this strategic direction, Brampton Transit will:

1. Work to keep transit **safe and secure** at all times for riders and employees. This includes promoting public perceptions of safety by building off the success of the award-winning public awareness program, See Something, Hear Something, Say Something.
2. Pursue universal **accessibility** by meeting and exceeding all applicable accessibility standards.
3. Maximize **transit reliability** so that riders can confidently rely on Brampton Transit.
4. Maximize rider **comfort.** This includes comfortable amenities like shelters, and improved access to important service information.
5. Plan and deliver **fast and frequent** service so that riders can be assured that transit is a fast transportation option with frequent service.
6. Review and revise **fare policy** that aligns with Vision 2040.
7. Improve riders' **access to information** about transit, including trip planning and real-time service information.

Collaborations and Partnerships to Improve Service and Organizational Effectiveness considers the importance of collaboration and partnership in having a more successful and effective agency. As part of this strategic direction, Brampton Transit will:

1. Continue to collaborate with peer agencies on **fare and service integration** in consideration of Brampton residents that use transit across the GTHA and visitors riding with Brampton Transit.
2. Explore opportunities to partner with an Energy-as-a-Service provider to support Brampton Transit's **electrification** journey.
3. Develop and strengthen the **connection to the city and the region** to integrate transit improvements with land use, planning, and economic development.
4. Continue to foster a **diverse and engaged workforce** so that employees reflect the city's diversity, a passion for transit, and pride for their work and valuable contributions.
5. **Continue to engage the community and stakeholders** to share the value of transit through a variety of engagement initiatives.
6. Enter **non-transit partnerships** (collaboration with local organizations that are not transit-focused) to find mutually beneficial initiatives and collaborations.
7. Explore opportunities for **revenue sharing** through partnerships and collaborations.

04 COLLABORATIONS & PARTNERSHIPS TO IMPROVE SERVICE & ORGANIZATIONAL EFFECTIVENESS

4 CUSTOMER EXPERIENCE

4.1 IMPROVING THE CUSTOMER EXPERIENCE

It is important to recognize the recent advancements Brampton Transit has made towards improving the customer experience and to build momentum as Brampton Transit refocuses its efforts and priorities. Key priorities, actions, and progress from the 2018-2022 Business Plan were:

1. Allowing Passengers to Know What Is Going On
2. Assisting with Communication Link
3. Transit Signal Priority Features
4. Trip Planning in a Multi-lingual Community
5. Enhancing Customer Service for Staff

These five key priorities have been advanced over the five-year life cycle of the previous Business Plan, having leveraged technology to provide real-time service information through the TripLinx app, provide free Wi-Fi at Brampton Transit Terminals, equip new buses with signal priority features (which also helps improve on-time performance), and improve data reliability.

The 2023-2027 Business Plan seeks to build on this platform of priorities where applicable but understands that customer priorities have changed over the last five years due to growth within the City of Brampton, changing travel patterns, and the COVID-19 pandemic. Therefore, opportunities were identified that inform a new Customer Experience Framework for the 2023-2027 Business Plan that responds to the current needs of the community.

The opportunities that inform the Customer Experience Framework are derived from previously identified "pain points" in the customer experience. "Pain points" is an industry term used to denote areas or experiences that hinder or detract from the overall customer experience. The following are the identified key "pain points" which have informed the areas of focus for improving the customer experience at Brampton Transit:

- Customers largely feel that there either aren't enough buses, that the buses are overcrowded, or that service is not frequent enough;
- Hours of service may not align to employment or business needs;
- Availability of real-time schedules and updates; and
- Interactions with customer service agents/call centre agents.

It should be noted that some progress has already been made to address the last two pain points, which should be reflected in a planned upcoming customer satisfaction survey.

4.2 CUSTOMER EXPERIENCE STRATEGY FRAMEWORK

To categorize the recommendations contained in the Customer Experience Strategy, a framework was developed that aligns with the Strategic Direction 'Maximizing the Customer Experience' component, and each component of the framework contains a set of recommendations related to the component. Figure 2, below, depicts the overarching Customer Experience Strategy Framework:

FIGURE 2 - CUSTOMER EXPERIENCE FRAMEWORK

Responsiveness

The "Responsiveness" part of the Customer Experience Strategy Framework focuses on ways that Brampton Transit should continue to use data and customer and community feedback to maximize the customer experience, which is a strategic direction. Recommendations related to responsiveness are focused on the formalization of data and analytic strategies, as well as the implementation of internal technologies in order to better use information to share, anticipate, and respond to user needs.

Access to Information

The "Access to Information" section of the Customer Experience Strategy Framework provides recommendations to guide Brampton Transit's continual dissemination of information and customers' ability to seamlessly access this information, as well as internal stakeholders ease of access to pertinent information. Access to Information recommendations target communication channels (e.g., social media) for the purposes of increasing their presence and streamlining information through dedicated channels for real-time service alerts and general marketing or communications.

COMFORT AND RELIABILITY

Within the Customer Experience Strategy Framework, "Comfort and Reliability" is geared toward ensuring that customers continue to find Brampton Transit a reliable service, while finding the comforts needed for a friendly trip that meets their needs. Comfort and Reliability recommendations include the need for on-time performance monitoring, expanding the use of technology on and across Brampton Transit's fleet of buses, using data to make informed decisions, and developing partnerships to better disseminate relevant data and information to customers.

SAFETY AND SECURITY

"Safety and Security" represents the last pillar of the Customer Experience Framework. As the name implies, it focuses on perceptions and feelings of safety while using Brampton Transit at all times for both customers and employees, as well as feeling secure on buses, at stops, and in terminals. Safety and Security is similarly focused on universal accessibility. Recommendations under Safety and Security are aimed at inventorying service offerings and programs to inform future decision-making and to increase the awareness of offerings by increasing marketing efforts.


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5 ACCESSIBILITY

Brampton Transit's commitment to provide a fully accessible conventional transit service is driven by its efforts to improve accessibility on multiple elements of the customer experience. Brampton Transit's goal is to provide a service that is accessible and barrier-free. A separate Accessibility working paper was developed that summarizes the Accessibility for Ontarians with Disabilities Act (AODA) and the Integrated Accessibility Standards (IASR) (Ontario Regulation 191/11) (AODA) requirements, transit specific accessibility commitments made by the City of Brampton, current state of transit accessibility and the recommendations towards improving system accessibility going forward.

Brampton Transit, through the City of Brampton has been successful and diligent at achieving and maintaining full AODA compliance. Through an Accessibility Audit conducted by the City in 2021, two key transit-related areas of improvements were identified where the City and Brampton Transit can improve further alignment with AODA requirements:

- Accessibility Advisory Committees (AAC) - Members: A majority of the members of the committee shall be persons with disabilities. (AODA 2005, c. 11, s. 29 (3)).
    - The City of Brampton has plans to address this gap with updated 2023 Terms of Reference for the committee.
- Maintenance of accessible elements: Ensure that multi-year accessibility plans include procedures for preventative and emergency maintenance of the accessible elements in public spaces as required under this Part. AODA IASR Reg. 191/11 s. 80 (44-1).
    - The City of Brampton is in the process of updating its MAP to include preventative and emergency maintenance procedures.

Through the project team's review, one additional area where Brampton Transit can improve its alignment with the AODA was identified:

- Accessibility plans, conventional transportation services: Every conventional transportation service provider shall annually hold at least one public meeting involving persons with disabilities to ensure that they have an opportunity to participate in a review of the accessibility plan and that they are given the opportunity to provide feedback on the accessibility plan. (AODA IASR Reg. 191/11 s. 41(2)).[1]

[1] At present, Brampton Transit provides an annual update to the City's Accessible Advisory Committee which the City has deemed to be in compliance with the AODA. From a best practices perspective, broader engagement is recommended, which could be undertaken in collaboration across City departments.

- Currently, Brampton Transit meets its obligations through the working paper undertaken as part of the Business Planning process. Furthermore, Brampton Transit meets with the AAC on an annual basis to present on accessibility initiatives and updates.
- As part of the next Business Plan, Brampton Transit plans to develop a more comprehensive Multi-Year Accessibility Plan. This would incorporate expanded engagement activities to further understand system barriers faced from a broad cross-section of customers.

Brampton Transit has made strides in improving the accessibility of its services over the years. Key achievements include making the fleet 100% accessible, achieving AODA accessibility at 85% of transit stops, obtaining Rick Hansen Foundation Accessibility Certification for two existing transit facilities and implementing customer communication channels to communicate accessibility features. Brampton Transit can further improve accessibility and provide a barrier-free transit experience by having a better understanding of the needs of its customers with disabilities, and to use that understanding to address system barriers. To achieve this, the following recommendations were made in the working paper:

- Understand customer needs: Design and conduct public consultations and perform assessments to better understand the barriers faced by people with disabilities using transit.
- Continue to prioritize transit stops for improvement: Continue to update the transit stop database, with information on all accessibility features as well as ridership demand at the stops. This will accurately inform staff on which stop improvements to prioritize.
- Continue to improve customer communication: Launch a campaign[2] and leverage social media to broadly communicate system accessibility features.
- Update transit stop infrastructure guidelines: Review and update the accessibility section of the Transit Infrastructure Design guidelines to ensure continued compliance and consistency with universal accessibility design principles and AODA / City of Brampton requirements and include additional accessibility features that address identified customer challenges.

Brampton Transit is committed to making accessibility a key part of its services. Achieving accessibility is an ongoing process that improves with better understanding of barriers as well as innovations in technology. To provide universal accessibility in services, accessibility must continue to be considered into the culture and processes of an organization. The recommendations set forth in the Accessibility working paper will support Brampton Transit to continue to remove barriers and make transit accessible to all.

[2] Campaigns can involve promotions similar to those done for priority seating, where accessibility improvements were advertised on buses and shelters. This can be done through posters or banners on side of buses and shelters, messaging on IVR systems, banner on website and social media posts highlighting accessibility features.


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6 SERVICE PLAN

6.1 BRAMPTON TMP & SERVICE INVESTMENT TARGETS

The City of Brampton's Transportation Master Plan (TMP), last updated in 2015, provides the principal guidance to the Business Plan on service investment targets. For 2031, the TMP sets out a mode share target of 16% for local public transit[3] and recommends delivering 2.9M annual service hours. The Business Plan considered updated projections to account for slower population and employment growth and higher ridership growth, as well as more concentrated development. As a result, the Business Plan accounts for 2.3M annual service hours which is projected to be sufficient to achieve the 16% local transit mode share by 2031.

The 2023-27 Service Plan has been developed to grow sufficiently to achieve these revised measures while also considering current constraints including garage capacity, staffing, administrative capacity and the availability of supporting tools.

The result is that growth in service hours in the next plan, specifically between 2028-2031, will likely need to be a little faster than during the 2023-2027 period to achieve the TMP mode share target. The annual service hour growth target is 5.5% during the 2023-2027 plan and anticipated to be 7-9% after the plan. The 5.5% annual growth target will fluctuate on an annual basis according to immediate needs and the timing of various service requirements and will be subject to the City's annual budget approval process.

6.2 SERVICE OBJECTIVES

Targeted service changes and improvements are directed by Service Objectives (and Service Guidelines, discussed in 6.3). The Service Objectives follow from the Business Plan's Strategic Directions (see Section 3) and are intended to guide decision-making on service provision and the planning process. The objectives are connected to the strategic directions, shown as follows:

[3] The TMP mode share target of 16% for local public transit by 2031 is dependent on the implementation of two higher-order transit projects within the City of Brampton (Hazel McCallion Line LRT and the Queen Street BRT).

MEETING THE TRANSIT NEEDS OF THE EVOLVING COMMUNITY

CONTINUE TMP GUIDANCE AND COLLABORATION FOR NETWORK RESTRUCTURE

- The 2023-2027 Business Plan follows the direction set out in the 2015 TMP
- Inform subsequent updates to the TMP through on-going coordination to ensure strategic alignment

MATCH SERVICE TO DEMAND TO GROW RIDERSHIP MOST EFFECTIVELY

- Targeted changes and adjustments to service levels across the network
- Better grow ridership by matching service levels to levels of demand

UNDERSTAND AND ADAPT TO CHANGING TRAVEL PATTERNS

- COVID-19 significantly changed travel patterns; patterns are expected to evolve
- Adapting service to meet these evolving patterns is important to Brampton Transit's success

ENSURE EQUITABLE SERVICE PROVISION

- Equity-focused service planning is increasingly important and a desired area of focus
- Identify equity-deserving groups, how service changes affect them, and prioritize quality changes

CONDUCT MORE DETAILED TRAVEL MARKET ANALYSIS

- More resources should be directed toward better understanding of customer transit needs
- Enhancing data and analytics capacity will be key to a more efficient Brampton Transit

PROVIDE BETTER CONNECTIONS BETWEEN ORIGINS AND DESTINATIONS

- Door-to-door passenger travel times are an important feature of the customer experience
- Network design should consider minimizing travel times connecting major origins and destinations

ESTABLISH TRANSIT EARLY FOR NEW DEVELOPMENT

- Introducing transit early in new development areas helps establish a viable transportation option
- Where conventional service is not yet viable, alternative service methods should be considered

FOCUS INVESTMENT IN OFF-PEAK PERIODS AND WORK TOWARDS 24/7 SERVICE

- Service demand in off-peak periods have increased as a result of the pandemic
- Focusing service investment in off-peak periods will better service equity-deserving groups

SMART AND SUSTAINABLE INNOVATION

USE ON-DEMAND TRANSIT TO PROVIDE EXPANDED SERVICE SPAN AND COVERAGE

- On-demand transit can complement fixed-route service to expand service span and coverage
- Appropriate contexts should be explored to understand areas where fixed-route service does not work well, such as areas of low or dispersed ridership

MAXIMIZING THE CUSTOMER EXPERIENCE

ADDRESS EXISTING AND EMERGING CUSTOMER EXPERIENCE PRIORITIES

- Better understand, as well as meet, the needs of the customer
- Address current experience priorities such as crowding, reliability, passenger facilities

COLLABORATIONS AND PARTNERSHIPS TO IMPROVE SERVICE AND ORGANIZATIONAL EFFECTIVENESS

ENHANCE REGIONAL CONNECTIVITY

- Over 1/3 of Brampton's routes cross the municipal boundary
- There are opportunities for Brampton to build upon existing cross-boundary services

UNDERSTAND COMMUNITY BENEFITS OF REGIONAL VERSUS LOCAL CONNECTIONS

- Benefits of regional service differs from local services and should be explored
- Clear guidelines should be developed when Brampton will provide cross-boundary service

6.3 SERVICE GUIDELINES

Previous business plans presented "Service Standards" for which Brampton Transit was responsible for achieving and maintaining. Service standards, however, can restrict an organization's ability to adapt, which is particularly critical within current societal context, not to mention the wake of the COVID-19 pandemic. Therefore, this 2023-2027 Business Plan has evolved to using the term "Service Guidelines" to reflect the flexible direction with which they are intended for use.

The Service Guidelines build on the foundation of the previous Service Standards, altering them as appropriate to react to the current and anticipated future context within the City of Brampton. This section highlights all changes made to the previous Service Standards to create the new 2023-2027 Service Guidelines.

These changes relate to Route Class, System Proximity, Service Levels, Stop Amenity Guidelines, Passenger Comfort, System Utilization, and System Reliability. Previous Service Standards that are not listed for change conform to peer and industry standards and do not warrant an update at this time. The following Table 2 is a summary of the anticipated changes and affected Service Guidelines.

TABLE 2 - SERVICE GUIDELINE CHANGES

Affected Service Guidelines	Anticipated Changes

Route Class	• Introduce two new route classes:
	  ○ Night Route class
	  ○ Employer Shuttle class

System Proximity	• Increase two different coverage targets of population and employees within walking distance to:
	  ○ Transit (400m), from 80% to 90%
	  ○ Base grid/Züm stop (800m), from 85% to 90%

Service Levels	• Improve minimum service frequencies for weekday BRTs and develop guidelines for the Night Route class
Introduce Stop Amenities Guidelines	• Introduce guidelines to have more boardings at stops with shelters and be more proactive with stop amenity allocations
Passenger Comfort	• Add guidelines for when passenger load thresholds are consistently being exceeded.

System Utilization	• Introduce criteria that would trigger a review for on-demand service
	• Further introduce changes to:
	  ○ Route performance guidelines
	  ○ Minimum performance guidelines for on-demand transit

Additional details can be found in the 2023-2027 Service Guidelines document (Appendix A).

6.4 2023-2027 RECOMMENDED CHANGES

Over the course of this 2023-2027 Service Plan, Brampton Transit envisions a series of changes that will both reallocate and expand transit service so that Brampton residents will be better served. The changes are largely derived from, and align with, both the Service Objectives and the Service Guidelines introduced above.

These planned improvements will see modifications of the network in the western, northern, and southern regions of the city to serve new growth areas; adapt service to regional higher-order transit changes; address full-load capacity issues; meet system utilization guidelines, expand the Züm network; and introduce new services to mitigate gaps in the network including nighttime and on-demand services. Areas under consideration for changes are depicted in Figure 3 below:

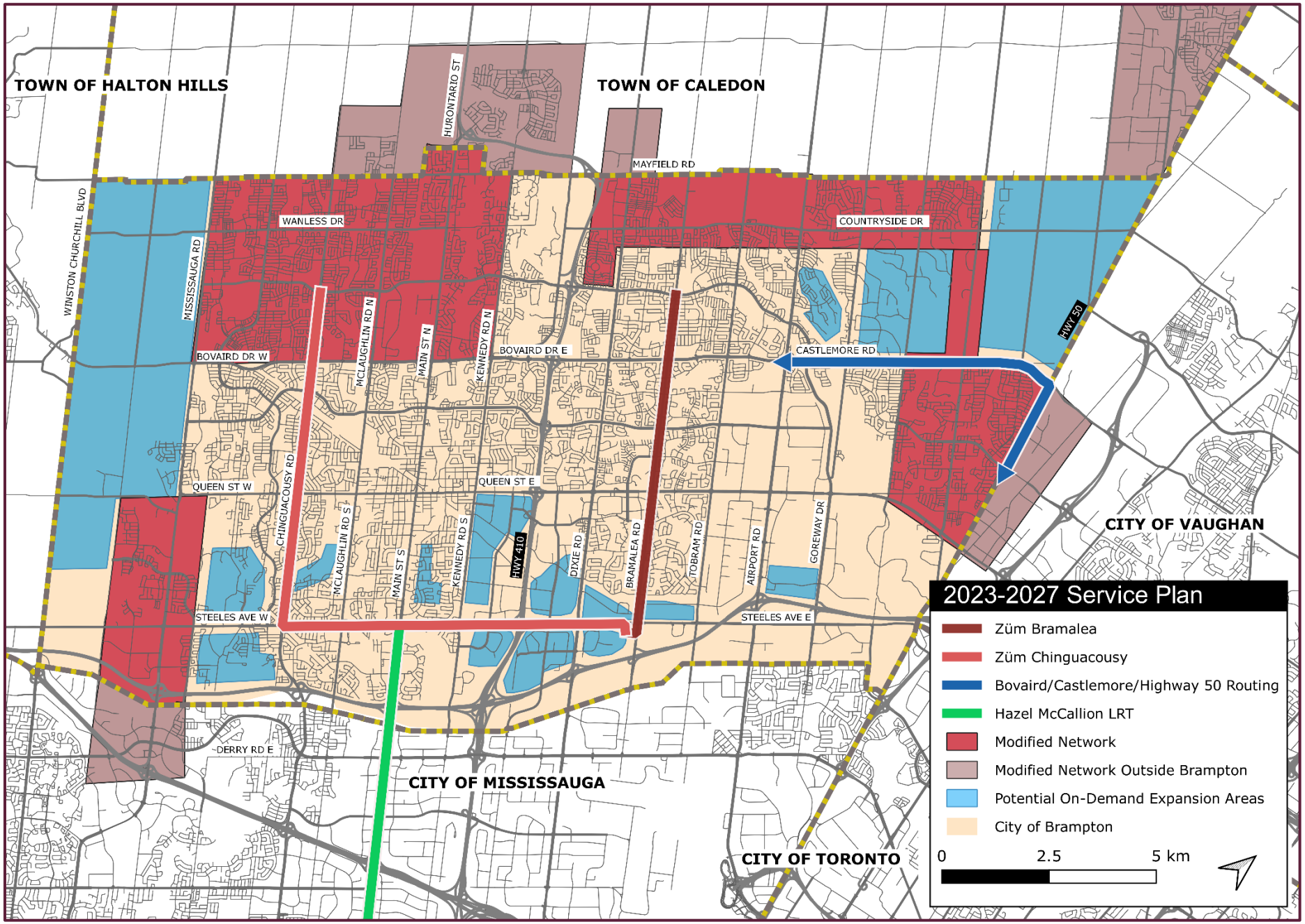


FIGURE 3 - 2023-2027 SERVICE PLAN NETWORK CHANGES

PLANNED IMPROVEMENTS

1. ADDRESS OVERCROWDING

   Reducing the number of overcrowded buses is a key short-term priority for Brampton Transit. Changes in travel patterns and ridership growth without the ability to implement service growth has led to an increasing number of full buses and generally overcrowded conditions further exacerbated due to the ongoing effects of the pandemic on resources.

2. IMPLEMENT ZÜM CHINGUACOUSY

   Züm Chinguacousy (Route 504), planned to be introduced in late 2024 and coinciding with the opening of the Hazel McCallion Line LRT, connecting Sandalwood Parkway to Bramalea GO Station, via Sheridan College and Gateway Terminal.

3. IMPLEMENT ZÜM BRAMALEA

   Planned for a 2026 launch to coincide with the GO service enhancement to effectively capture benefits from the 2-way GO service and to meet the expected growth in ridership. The new Züm route would also play an important part to enhance connectivity to the Kitchener Line from north and northeast Brampton.

4. CONTINUE TO EXPAND ZÜM SERVICE TO PEARSON AIRPORT

   Route 505A service to Pearson Airport will be enhanced through both service span extension and frequency improvements in the 2023-2027 period, based on demand and available resources.

5. ADJUST FREQUENCIES AND EXTEND SERVICE SPANS TO MEET SYSTEM UTILIZATION GUIDELINES

   Service investment will allow Brampton to effectively keep pace with continued growth, grow ridership, adapt to changing travel patterns and provide more equitable service. The specifics of where and how this investment will be implemented will be determined through the annual service plan process.

6. SERVICE MODIFICATIONS IN PREPARATION FOR REGIONAL HIGHER-ORDER TRANSIT PROJECTS

Introduction of two-way all-day GO service, Finch West LRT and Hazel McCallion LRT will increase ridership for Brampton Transit and require changes in the Brampton Transit network to optimize service provision.

7. ADAPT TO CHANGES IN RUNNING TIME

Continued increases in both traffic congestion and ridership will act to increase route running times. On-time performance standards will help maintain service quality. The specific routes impacted will be identified through on-going on-time performance monitoring and associated changes.

8. PROVIDE CONTINGENCY FUNDING FOR DETOURS

Contingency funding has been allocated to maintain service quality impacted by long-term detours and road construction.

9. INTRODUCE NIGHT NETWORK

Brampton Transit will incrementally implement a night network, aiming toward full overnight service. Starting in 2026, the night network will be introduced with a base route structure and level of service. The night network will be gradually implemented, with service spans extended to provide 24/7 service by the end of 2027.

10. EXTEND SERVICE SPANS ON ROUTES WHERE DEMAND WARRANTS

Focusing more investment into off-peak periods, which includes extending service span during days of current operation but also introducing service on select routes during days with no service, such as Saturday or Sunday.

11. EXPAND ON-DEMAND TRANSIT SERVICE TO PROVIDE GREATER COVERAGE DURING ALL TIME PERIODS

An on-demand trial program will be launched in 2023. On-demand service may also be used to fill in coverage gaps within the service area during all time periods. Areas that could be considered for on-demand service area are shown in Figure 3.

12. INTRODUCE EMPLOYER SHUTTLES

Employer shuttles provide Brampton Transit with an opportunity to connect transit users and residents with large employers in harder to serve areas and at time periods with lower demand.

13. MEETING MINIMUM LEVELS OF SERVICE GUIDELINES

Routes connecting to Züm services and other higher-order services require an augmented frequency to establish better all-day service quality that meets updated Service Guidelines.

14. NETWORK MODIFICATIONS

Brampton Transit will review and redesign areas of its network, with a focus on the northwest, southwest, and northeast areas of the city. The majority of these modifications are planned to be implemented in the first half of this Business Plan to better connect to new growth areas and higher-order transit, as shown in Figure 3.

ANTICIPATED NETWORK MODIFICATIONS 2023-2027

Select areas of the city will have their network modified to provide enhanced efficiency and better connection opportunities to new growth areas and higher-order transit. These areas are anticipated to be the northeast, northwest, and southwest areas of the city, as shown in Figure 3.

The specifics of all service changes will be determined through targeted network studies of the area with further study and public engagement being required to determine exact service changes.

Objectives of the network changes are focused on:

- Enhancing connectivity
- Improving matching service to demand
- Extending services where appropriate
- Reducing service duplication
- Minimizing looping, branching, and indirect services
- Utilizing on-demand to better fill service coverage
- Adjusting service for new Züm routes

1. MODIFY NETWORK IN NORTHEAST

The northeast portion of the City of Brampton and bordering area have experienced numerous recent and upcoming developments. This includes all municipal boundary areas between Highway 410 at Mayfield Road in the northwest and Queen Street at Highway 50 in the northeast. These developments require a network review and redesign of the area to optimally provide new service coverage.

2. MODIFY NETWORK IN NORTHWEST

Coinciding with Züm Chinguacousy and the opening of the Hazel McCallion Line LRT (anticipated for late 2024), fixed-route services in the northwest will be modified to better address new growth in the area and provide improved connection to the new Züm route. As with the northeast modifications, further study and public engagement are required to determine exact service changes.

3. MODIFY NETWORK IN SOUTHWEST

Southwest route modifications will be less significant than in the northeast and northwest but are also mainly intended to better integrate the network into new growth areas with focus on employment lands in and around the Steeles Corridor. Further study and public engagement are required to determine exact service changes.

PLANNING CONSIDERATIONS

Several supplementary planning studies could be undertaken to potentially improve service efficiency and the quality of the transit experience for passengers. These planning studies listed below could be undertaken over the next five years and help inform further initiatives and include:

1. PEDESTRIAN ACCESS STUDY
2. TRANSIT PRIORITY STUDY/PLAN
3. HEADWAY MANAGEMENT STUDY
4. ADDITIONAL SERVICE OPTIMIZATION STUDIES

6.5 ANNUAL SERVICE PLAN DEVELOPMENT

The annual service plans highlight service initiatives and their investment implications throughout the 2023-2027 period. Each annual service plan is summarized in chart form that provides a description of the service initiative, the annual service hour implication and the peak vehicle requirement. This chart is followed by further description of the service changes and their rationale. Table 3 presents historical and estimated ridership, service hours and related metrics. Boardings per Revenue Vehicle Hour is a measure of system utilization, roughly measuring the number of trips provided for each hour a vehicle is on the road. Higher figures indicate a more efficient use of the service provided. However, too high of a number could result in a decline in service quality.

TABLE 3 - ANNUAL RIDERSHIP, SERVICE HOURS, AND RELATED METRICS 2019-2027

Year	Annual Ridership	Percent Increase from 2019	Approved Annualized Service Hours	Percent Increase from 2019	Annual Service Hour Increase	Boardings/ Revenue Vehicle Hour
2019	31,900,000		1,315,000*			25
2022	31,300,000	-2%	1,342,600*	2%		23
Projected 2023-2027 Service Plan Figures						
2023	35,600,000	12%	1,427,400	9%	84,800	25
2024	37,500,000	18%	1,500,200	14%	72,800	25
2025	39,200,000	23%	1,575,800	20%	75,600	25
2026	41,200,000	29%	1,654,600	26%	78,800	25
2027	43,200,000	35%	1,745,700	33%	91,100	25

*Approved annualized service hours

The 2023-2027 Service Plan provides guidance for annual service investment, specific service planning studies to be conducted and a high-level strategy for service planning for each year of the span of the plan. The recommendations should be reassessed and refined each year through the annual service planning process and may be adjusted subject to the annual budget approval process, availability of resources (vehicles and front-line staff) and emergent service priorities and service quality issues.

2023 SERVICE PLAN

The 2023 service plan focuses on implementing outstanding and still relevant elements from the previous Business Plan and increasing frequencies to address overcrowding and improve service quality. Annual service hour increases will be higher in this first year to address excessive system utilization caused by rapidly growing ridership and several years of service growth deferred due to the effects of the pandemic. The 2020 budget, which increased service by approximately 2%, was deferred for implementation in 2022 and early 2023. In 2021 and 2022, there were no additional service increases. Meanwhile, ridership has recovered to above pre-pandemic levels, and 2023 ridership is projected to be 12% higher than 2019.

Investments to improve frequencies are needed to allow Brampton Transit to better meet the System Utilization Guidelines. The specific routes and time periods that will improve will be decided in the annual service planning process. For 2023, it is likely that off-peak/shoulder periods will see a significant portion of the investment. The focus on investment in off-peak and shoulder (transition from off-peak to peak) time periods reflects the impact of changing travel patterns and growth in ridership outside of the traditionally defined peak periods. It is expected that the planned frequency investment will bring 60% of the conventional services currently exceeding the guideline to within the defined range as well as all Züm services.

The 2023 Service Plan also includes investments to extend the hours of operation on select routes identified by Brampton Transit staff, as appropriate. This would further the service objective to improve off-peak service. The hours of operation for Route 104 will be extended, which will build ridership on that corridor, setting the stage for the planned launch of Züm Chinguacousy in 2024.

2023 Highlights

Increase frequencies to alleviate overcrowding and grow ridership

Continue to expand Pearson Airport Züm service

Extend hours of operations on select routes

Implement service improvements deferred during the pandemic

2024 SERVICE PLAN

The 2024 plan focuses on providing service to new growth areas and adapting to several higher order regional transit projects that are expected to be implemented. It will see the introduction of a new BRT route, Züm Chinguacousy, as well as a series of route modifications.

Route modifications in the northeast, northwest and southwest are all necessary to adapt to recent developments within the existing service areas and expand into new growth areas. Changes will enhance access to transit, improve connections within and outside these areas, and make service more efficient. Additionally, changes to the western network are required for the introduction of Züm Chinguacousy.

The 2024 Service Plan capitalizes on the planned launch of two LRT lines that will have a major impact on Brampton's transit system, the Hazel McCallion LRT and the Finch West LRT. Frequencies on various routes and time periods connecting into both LRTs will be increased to create sufficient capacity to meet the anticipated ridership growth. Significant frequency increases to select routes will aim to match service levels to the increased demand to connect to the Hazel McCallion LRT and will include an option to extend service north into Caledon. Considerations for enhancing connectivity to the Finch West LRT will be explored as part of the northeast Modified Network changes. If either LRT line is delayed, this could push service changes planned for LRT lines into future years, including the launch of Züm Chinguacousy.

The 2024 Service Plan also includes investments to extend the hours of operation on select routes. This also furthers the service objective to improve off-peak service. Investments to meet the system utilization frequency guidelines are de-emphasized in 2024 as other major changes are prioritized. Still, these investments will bring 10% of the conventional service and 80% of the Züm service above the guidelines which will improve service quality and help grow ridership.

2024 Highlights

Focus on servicing new growth areas and new higher order transit projects (LRTs)

Introduce Züm Chinguacousy

Network modifications in the northeast, northwest, southwest

Extend hours of operation on select routes

2025 SERVICE PLAN

While 2024 focused on new higher order transit projects and growing service into new areas, the 2025 service plan re-focuses investment into frequency increases. Sufficient budget is also available to expand on-demand services beyond the proof of concept launched in 2023.

Frequency increases within the conventional network will bring more routes into alignment with the service utilization guidelines as well as significantly improve passenger comfort, reliability and grow ridership in situations of high demand. Frequency increases are also expected to disproportionately benefit off-peak service. The specific routes and time periods to see improvements will be determined in the annual service planning process.

Investments would also be made to increase mid-day frequencies on select Züm Routes. This would meet the revised level of service guidelines, which will establish better all-day service quality across the Züm network.

The on-demand service expansion will be contingent on the success of the trial program launched in 2023. The 2025 expansion is expected to increase the number of people with access to transit and replace fixed-route areas with low-demand on weekdays between 6am – 7pm. Potential on-demand expansion areas are shown in Figure 3.

2025 Highlights

Focus on frequency increases

Expand on-demand transit services

Improve Züm midday frequencies

2026 SERVICE PLAN

Service improvements in 2026 will introduce Züm Bramalea, adapt to new two-way all-day GO service and introduce a night network. In addition to these elements, investments will continue to be made to increase route frequencies. 2026 is the anticipated launch date for two-way all-day GO service on the Kitchener Line. This enhanced service is a major driver of the 2026 service plan. The changes are expected to boost ridership and improve regional and long-distance travel. To effectively take advantage of this increase in rapid transit and to provide sufficient capacity to handle ridership increases, frequency increases are planned for routes connecting into Brampton GO stations. The specific routes and time periods that will see frequency increases will be established in the annual planning process.

Züm Bramalea will also be launched in 2026 to take advantage of the enhanced GO service. It fulfills rapid transit service planned for the corridor in both the Transportation Master Plan and Official Plan. While further work is required to finalize the service design, the 2026 Service Plan assumes a service between Bramalea GO Station and Sandalwood Parkway along Bramalea Road.

A key service objective of the 2023-2027 Business Plan is to introduce a night network. 2026 will be the first year of service investment dedicated towards this goal. In 2026, night network services are added between 11PM-2AM, complementing existing services. The night network will operate on approximately eight fixed routes, supported by on-demand vehicles.

Frequency improvements to meet system utilization guidelines constitute the majority of the annual service plan investment. Route frequency improvements aim to efficiently improve service quality and provide more equitable service with better off-peak frequencies. The specific routes and time periods to be improved will be determined in the annual service planning process.

2026 Highlights

Introduce Züm Bramalea

Adapt to the new two-way all-day GO service

Introduce a night network

Invest in frequency improvements

2027 SERVICE PLAN

The 2027 annual service plan includes the largest increase in total service hours from 2023-2027 Business Plan. Investment will be directed towards route frequency increases to meet system utilization guidelines, extensions to route operating hours, finalization of the night network, a further expansion to on-demand service as well as the introduction of employer shuttles.

The full night network will be completed in 2027. This expands services from 2AM to 6AM, providing effective 24/7 transit coverage across the City of Brampton. The on-demand service expansion will also expand transit access during off-peak periods. On-demand service areas will be expanded during times when not all routes are in service and into those areas that are outside 400m from a transit stop. The aim of the expansion would be to provide consistent access to transit and efficiently serve low demand areas throughout the day.

Route frequency improvements that aim to enhance service quality and grow ridership are another major investment in the 2027 service plan. 2027 frequency investments are designed to bring all service (conventional and Züm) above the system utilization guidelines to within the range.

Employer Shuttles will be introduced that connect employees with large employers in harder-to-serve areas and at lower-demand time periods. The shuttles would operate similar to School Specials, with direct routing between the employer(s) and major residential areas and/or a transit terminal at a specific shift time and build off the existing employment extras that are already operating within some key corridors.

2027 Highlights

Route frequency increases

Expand night network to create 24/7 service coverage

Expand on-demand transit services

Introduce employer shuttles


ELECTRIC BUS CHARGE STA
CHARGE
STATION
BRAMPTON TRANSIT
2151
Canada
ELECTRI
BramptonTransit
POWERED BY ELECTRI
SIEMENS
Canada
BramptonTransit
2151
POWERED BY ELECTRICITY
sportworks

7 CONSTANTLY EVOLVING

To successfully meet growing demand, transit agencies must evolve their services and have the resources to support the expansion. Brampton Transit has successfully navigated the extraordinary growth in ridership by increasing its service and implementing technology to support day-to-day management of service delivery. As shown in Figures 4 and 5, compared to its peers, Brampton Transit has been able to meet the 160% growth in service without a significant increase in spending on administrative and management resources.

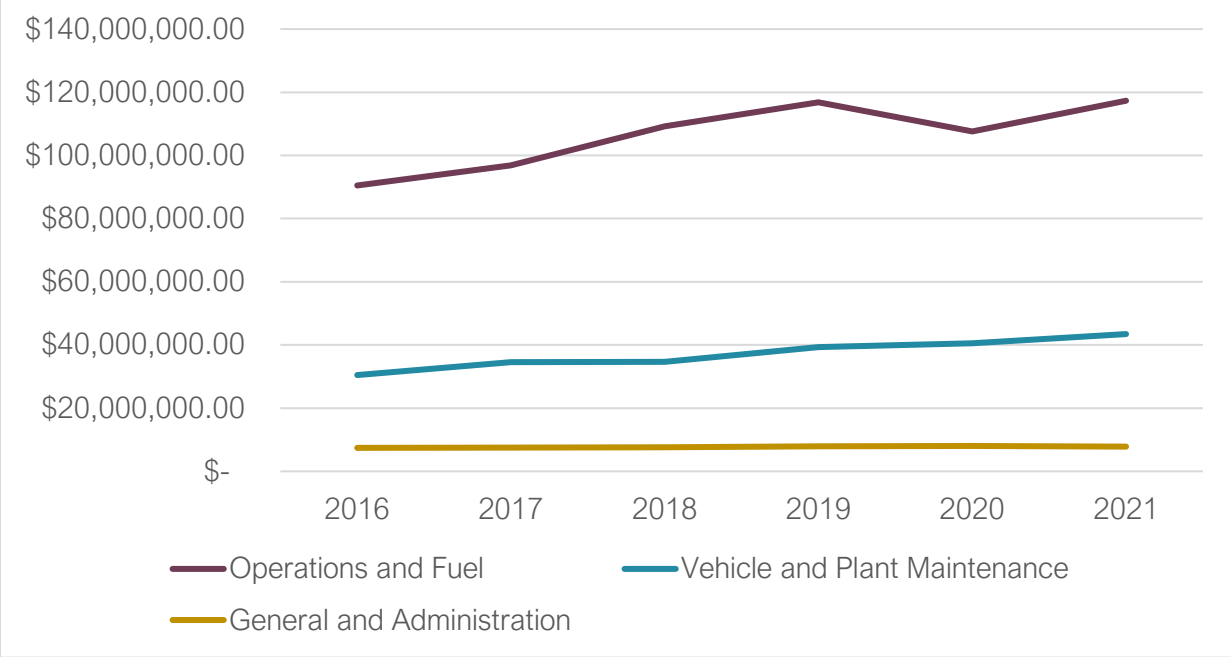


FIGURE 4 - BREAKDOWN OF BRAMPTON TRANSIT'S OPERATING EXPENSES (CUTA DATA)

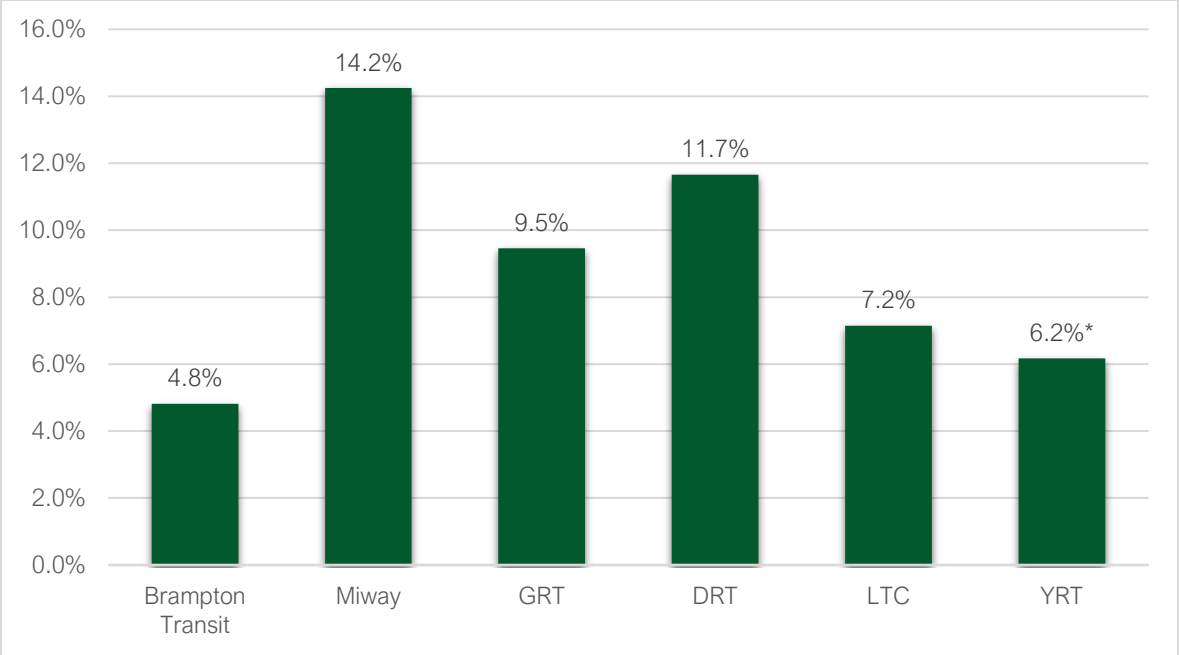


FIGURE 5 - PERCENTAGE OF TOTAL BUDGET SPENT ON GENERAL ADMINISTRATION EXPENSES[4]

* YRT % does not include general and administration expenses incurred through operation by its contractors.

Although it is not necessary to grow administrative staff on par with ridership, it is necessary to ensure sufficient roles and capacity are in place to effectively navigate and meet the needs of a significant increase in ridership and successfully transition the organization to provide service through zero emissions vehicles. Furthermore, with these changes, a growth in administrative staff can help maximize efficiencies and help Brampton Transit proactively plan services based on changing demographic and socio-economic needs. This will provide the unique opportunity for Brampton Transit to reflect on its growth, innovations and the changing needs of the organization and its customers. As Brampton Transit prepares to grow its services to meet the demand in the next five years and beyond, it is crucial to understand how it must evolve as an organization to successfully navigate the changing landscape of transit. The following sections highlight emerging skills and approaches that Brampton Transit may require to deal with opportunities and challenges associated with becoming a larger and more complex operation.

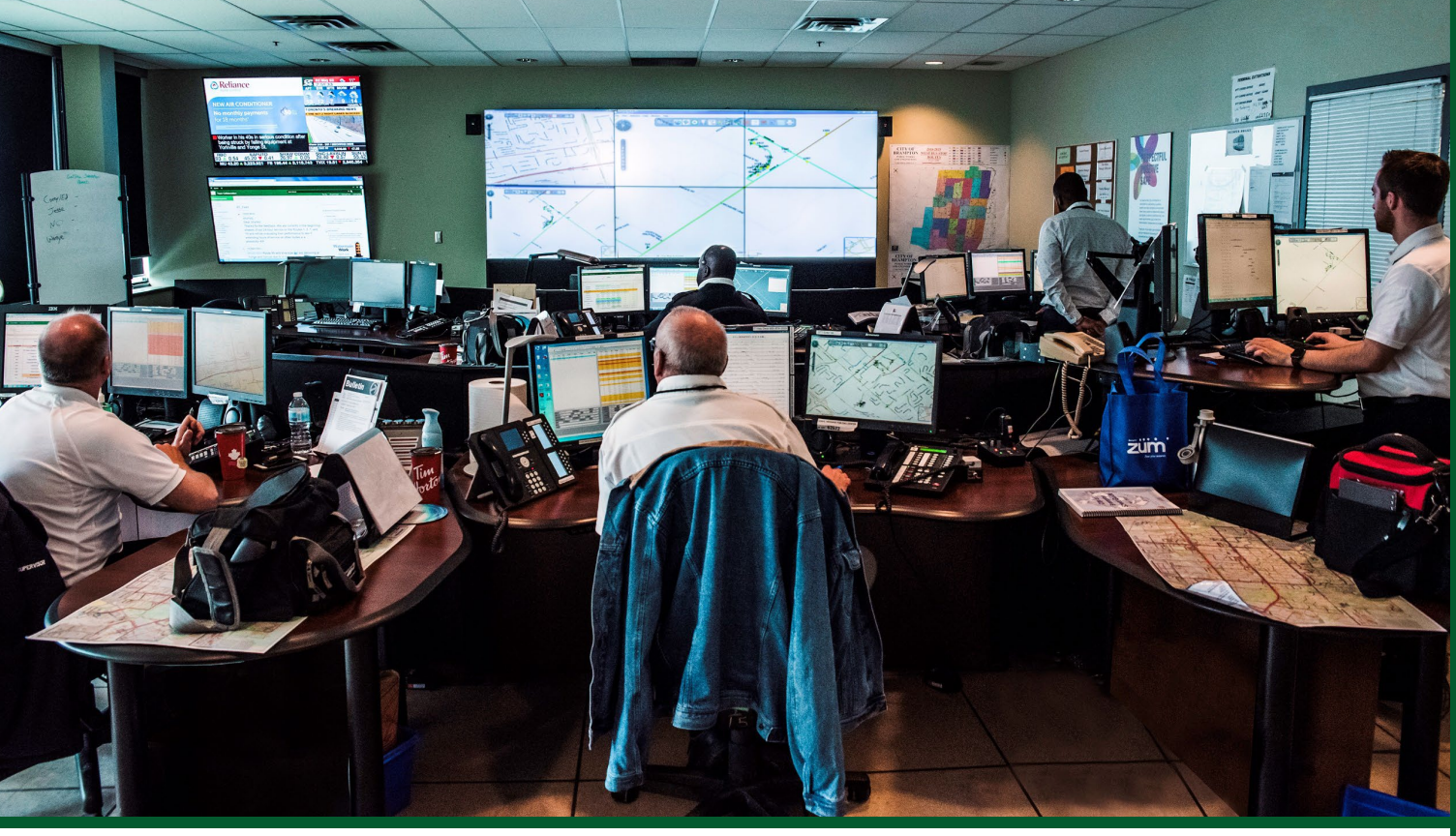
[4] Based on 2019 Canadian Urban Transit Association (CUTA) data

7.1 RESOURCES AND ORGANIZATIONAL READINESS

Employees are the backbone of any organization. As such, organizational readiness to succeed in meeting changing demands and growth is directly impacted by the readiness of staff to adapt to new way of delivering services. As Brampton Transit leads many of its peers into meeting its recovering ridership and advancing the electrification of its fleet, appropriate resources and collaborating strategies must be in place to address challenges and leverage opportunities.

Brampton Transit has experienced tremendous operational growth and demand, but internal capacity has not grown accordingly. This has resulted in staff taking on additional responsibilities to their regular day-to-day duties. Limited resource capacity can have long-standing effects on an organization from knowledge gaps to recruitment and absenteeism challenges to prolonging system improvements as well as organizational readiness to support electrification and cross departmental collaboration. These challenges have an organizational impact on Brampton Transit's ability to provide services meaningfully and efficiently. Addressing these challenges requires an organizational focus and commitment to provide staff with the resources, skills, and tools necessary to efficiently deliver services, continue to meet growth and prepare for electrification.

To proactively address the changing landscape of transit, it is recommended that Brampton Transit address resources and process gaps to achieve a state of readiness towards zero emissions and do its best to meet ridership demands. This will enable staff across Brampton Transit to be equipped with the resources, knowledge and skillset required to navigate and lead the changing landscape of transit.



7.2 TECHNOLOGY AND SYSTEMS

Brampton Transit has a full suite of technologies that support service development, delivery and maintenance. As the organization has grown, it has modernized its technologies to better support growth and other strategic directions. For example, the move towards fleet electrification to ensure transit is provided in a sustainable manner is supported by new technologies like charging infrastructure and state of charge monitoring tools. A new customer safety app and Customer Relationship Management (CRM) system reflect Brampton Transit's dedication to the customer experience. Additionally, on-demand transit, while starting out as a small trial program, could provide customers with new ways to connect to transit that will also require a certain amount of effort for user access control, hardware management, data management and support. Beyond the procurement of new systems, Brampton Transit has also identified the need to upgrade or replace existing core systems such as HASTUS scheduling application, CAD/AVL, and related technologies to continue to support its growing operations.

To successfully manage the maintenance and continual improvements of its various systems, it is critical that Brampton Transit expand the lifecycle planning approach for the full suite of existing and planned technologies. While Brampton Transit Business Systems staff hold deep knowledge on specific systems, a lifecycle planning approach for all technologies is an industry best practice that can help Brampton Transit fully leverage its technology. Good technology lifecycle planning ensures that technology is implemented effectively, meets business needs, and advances organizational and strategic goals.

As technology advances and Brampton Transit continues to grow rapidly it may be a challenge for the organization to ensure its technology planning and adoption is keeping pace appropriately. The large number, breadth and complexity of systems undergoing upgrades and/or replacement over the next few of years will have an impact on resource loading. For example, both the HASTUS and SmartBus projects will require significant System Administration involvement.

Additionally, as the fleet grows, there may be certain technologies and related processes that worked well for 400 buses but may not be as efficient for 600 buses. When combined with CAD/AVL and HASTUS replacements or upgrades, the vast increase in data available for Service Development and other departments to analyze may become challenging within the current business processes and tools. Therefore, there is a need to dedicate more resources to review business processes and document how this changing context is impacting business users and their needs. These two projects would benefit largely from having a dedicated Analyst/Data Scientist to explore the available data and business processes, as well as develop predictive models, KPIs, reports and dashboards.

7.3 INFORMATION AND DATA MANAGEMENT

Business data and analysis helps organizations understand current and past trends and informs future needs. Having a foundation of data to draw from can aid in finding new customers, increase customer retention, improve the customer experience, enhance marketing efforts, predict travel demand, prioritize investment, improve on-time performance, and streamline spending.

With a general business focus on data-based learning and decisioning over the past decade, advancements in machine learning and big data predictive analytics have had the impact of forcing the evolution of operational systems to generate and archive massive volumes of data for the purposes of future mining and analytics. The raw data from these systems is typically unstructured, and thereby not well suited to reporting or general consumption by traditional business units but may be rich in predictive insights under the right analytical environment. For this reason, industry practices are evolving to archive raw unstructured data from multiple systems in large repositories known as data lakes. Data scientists/analysts can then comb through the data using advanced analytical tools. As insights are gained and relevant data identified, the data can be structured into subject-matter-specific data marts, and/or further integrated into highly structured data warehouses to be made available to business intelligence reporting platforms.

Best practices call for the separation of reporting and operational databases to guard against over-taxing operational systems with repeated queries for reporting and analytical purposes. However, repositories and the cleansing management of data typically initiates discussions and decisions regarding the record keeping of various data, as well as it's verification. This results in the need for an overarching data governance strategy within an organization. The upcoming City of Brampton data governance initiative will better identify roles and responsibilities of those responsible for data cleansing and management within Brampton Transit, and may further inform the requirements for data lakes, marts, and warehouses, especially for new business technologies such as Zero Emissions Mobility.

It is critical, from the outset, to evaluate and determine what the organization wants from its data, and who should be responsible for data management. While some organizations establish data departments with representation in the C-suite (Chief Data Officer, etc.), cleansing typically falls to the end departments generating, interpreting and closest to the data. Brampton Transit's active participation in the upcoming data governance initiative should influence the project's governance recommendations.

7.4 MARKETING AND COMMUNICATIONS

As a result of the significant recovery and growth of its ridership base throughout the COVID-19 pandemic, Brampton Transit was not able to undertake significant customer research and experience surveys. Consequently, there is an emerging gap in understanding the new demographics, preferences and ridership patterns among new customers that would inform tailored marketing and communications efforts to these customers. Additionally, ridership patterns for existing or long-term customers may have changed over this timeframe as well, which would need to be determined.

While Brampton Transit has undertaken outreach to the city's largest employers and industries to encourage work trips, there may be an opportunity to further segment this customer group and engage with these businesses and their employees in more meaningful or effective ways. Brampton Transit has also undertaken significant efforts to improve the sustainability of its bus fleet and operations, which could be a key differentiator for Brampton Transit in attracting new riders and moving occasional riders from indifference to preference. Figure 6, below, shows the marketing and communications strategic framework developed for the 2023-2027 Business Plan.

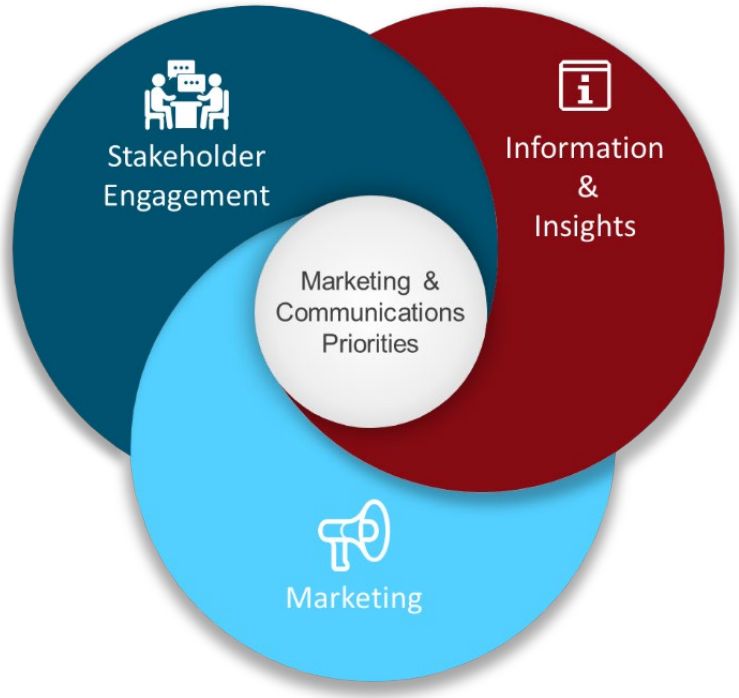


FIGURE 6 - MARKETING AND COMMUNICATIONS STRATEGIC FRAMEWORK

The framework was developed, focusing on three priority areas – Marketing, Information & Insights, and Stakeholder Engagement. Each of the three priority areas have associated "assessment domains" that provide addition focus to better structure recommendations. Table 4 shows the assessment domains as they relate to the three priority areas.

TABLE 4 - ASSESSMENT DOMAINS

Marketing	Information & Insights	Stakeholder Engagement
Multi-Channel Marketing	Marketing Analytics	Community Engagement
Brand Voice	Information Gathering	Business Engagement
Social Media	Service Information	Internal Engagement
	Mobile	

MARKETING

Marketing recommendations relate to the multi-channel marketing, brand voice, and social media for the purposes of growing the brand of Brampton Transit to be homogenous with reliability, safety, and comfort. Increased marketing efforts will allow efforts to ensure customer channels and touch points are available in multiple languages and formats enabling increased access to Brampton Transit and better dissemination of relevant news and updates that may affect day-to-day use and travel.

INFORMATION & INSIGHTS

Information & Insights recommendations relate to marketing analytics, information gathering, service information, and mobile. This series of recommendations are geared internally, to better increase the efficiency and quality of customer engagement and gathering of customer feedback to identify opportunities to improve the service.

STAKEHOLDER ENGAGEMENT

Stakeholder Engagement refers to all parties that rely on, use, or have an interest in Brampton Transit. As such, these recommendations relate to all internal, community, and business stakeholders. They focus on increasing access to engagement opportunities as well as gradually increasing the effectiveness of the activities themselves and exploring how the community could be better engaged.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8 ASSET MANAGEMENT

Brampton Transit maintains an extensive portfolio of assets to provide and maintain efficient transit services across the city. As per new Provincial regulations, Brampton Transit will be part of the City of Brampton's Asset Management Plan for non-core assets. Brampton Transit's assets include transit buses (including diesel, hybrid and electric vehicles), transit support vehicles, two operations facilities, several transit terminals, over three thousand bus stops and on-street assets, and several critical technologies. The following sections summarize the changes and enhancements to these assets over the next five years.

8.1 VEHICLES

Brampton Transit has a total fleet of 475 buses comprised of diesel, hybrid and electric vehicles. To date, Brampton Transit has made a significant investment to make one hundred percent (100%) of its buses accessible. All vehicles in service are low-floor models equipped with kneeling features, deployable ramps, audio and visual announcements and designated priority seating.

Table 5, below, illustrates the number of vehicles by vehicle type, highlighting their average age and assigned services.

TABLE 5 - REVENUE VEHICLE SUMMARY

Fleet Type	No. of Vehicles	Average Age	Service Assignment
Diesel 40'	334	10	Conventional Service
Hybrid 40'	43	11.5	Züm Service
Hybrid 60'	90	6.5	Züm Service
Battery Electric Bus	8	1	Conventional Service
Total	475		

Over the next five years, Brampton Transit is anticipating growth and replacement of their fleet. This includes an additional 125 vehicles for new and expanded services as well as 106 vehicles to replace vehicles at the end of their lifecycle. The following Table 6 outlines the annual growth and replacement vehicles by vehicle-type. Note that only conventional 40-foot vehicles are planned for replacement, and no additional hybrid 40-foot vehicles are planned for Züm services.

TABLE 6 - FIVE-YEAR VEHICLE GROWTH AND REPLACEMENT PLAN

Fleet Type	2023	2024	2025	2026	2027
Conventional 40ft (*Replacement*)	22 (*0*)	1 (*38*)	15 (*15*)	13 (*27*)	11 (*26*)
Züm Hybrid 40ft	0	0	0	0	0
Züm Hybrid 60ft[5]	8	16	3	10	7
Battery Electric Bus 40ft[6]	0	10	0	0	0
Fuel Cell Electric Bus 40ft	0	2	0	0	0
On-demand vehicles	0	0	5	2	0
Total Growth	**30**	**29**	**23**	**25**	**18**
Total Growth & Replacement	**30**	**67**	**38**	**52**	**44**

In addition to revenue vehicles, Brampton Transit has 20 transit support vehicles to support operations and facilities, seven trailers and three steel spreaders. The transit support vehicles largely include maintenance trucks and operations minivans. The useful life of these support vehicles ranges from 8-15 years and trailers range from 15-30 years. Although most of the existing support vehicles are aging, Brampton Transit has not been able to replace these vehicles due to supply chain challenges.

[5] Due to anticipated challenges with engine and parts availability, 60' hybrid buses may not be available and alternative vehicles will need to be purchased to serve the Züm lines.

[6] Brampton Transit is in the process of developing a ZEB Implementation Strategy & Rollout Plan. The Plan will determine how many battery-electric buses (BEB) will be purchased year-over-year. Once the plan is completed and there is additional infrastructure in place to support this transition, part or all of the 40' conventional growth vehicles will be allocated as BEB growth vehicles.

INNOVATIONS AND FUTURE GROWTH

Brampton Transit's first Battery Electric Buses (BEBs) went into service in May 2021. As part of Brampton Transit's zero-tailpipe emissions BEB Trial, eight buses went into operation serving Route 26 (Mount Pleasant Village) and Route 23 (Sandalwood). This zero-tailpipe emissions BEB trial is a first step into Brampton Transit's broader vision to transition to a zero-tailpipe emission fleet. Today, Brampton Transit operates eight BEBs and anticipates purchasing an additional ten for in-service 2024. Additionally, Brampton Transit plans to purchase and operate two Fuel Cell Electric Buses in the upcoming years to understand the impacts of this technology as part of the next five-year plan. In 2022, Brampton secured the largest municipal transit financing arrangement with Canada Infrastructure Bank (to date), that will be used to finance the higher cost of battery electric buses (up to $400M for up to 450 BEBs by the end of 2027).

To facilitate the anticipated future expansion of on-demand transit service following the current trial program, Brampton Transit will explore investing in a new fleet of vehicles dedicated to expand this service. The first five dedicated on-demand vehicles will come into service in 2025 with an additional two vehicles arriving in 2026.

In addition to new zero-tailpipe emissions vehicles and dedicated fleet for the on-demand transit service trial program, Brampton Transit continues to invest in additional conventional vehicles to support expanded transit services. Over the next five years, an additional 62 40-foot transit buses are planned to support expansion of conventional services and an additional 44 60-foot articulated transit buses are planned to support Züm service improvements and expanded Züm services along Chinguacousy Rd and Bramalea Rd. Brampton Transit is fully committed to fleet electrification and will continue to add electric buses through these additions as appropriate and feasible.

REFURBISHMENTS AND REPLACEMENTS

Brampton Transit's diesel and hybrid vehicles have an 18-year lifecycle and the battery-electric buses are expected to have a 15-year lifecycle. Given that the hybrid vehicles were recently refurbished (2021 and 2022) and the young age of the electric vehicles, Brampton Transit has planned to replace 106 40-foot diesel buses over the next five years.

Significant plans for refurbishment of the fleet are accounted for over the next five years. These refurbishments include major midlife overhauls, battery and articulated joint replacements, engine and transmission refurbishments, and several critical component refurbishments. Of these activities, major midlife overhauls, battery replacements and articulated joint replacements are undertaken at 12-, 6- and 7-year intervals, respectively. Remaining maintenance activities are conducted at an "as required" basis. Over the next five years, Brampton Transit has planned for 167 major overhauls of its conventional and hybrid vehicles.

8.2 FACILITIES

Brampton Transit currently operates from two locations, the Clark Transit Facility located at 185 Clark Boulevard and the Sandalwood Transit Facility located at 130 Sandalwood Parkway West. The 2018-2022 Business Plan expected capacity issues at the current facilities in its five-year period. However, Brampton Transit deferred the expansion of its fleet when ridership fell due to the COVID-19 pandemic. As a direct result of the service expansion planned over the next five years, it is anticipated that capacity pressures at these two facilities will return and expansion plans will be necessary.

Brampton Transit has prepared for three significant improvements to their operational facilities, including the construction of a new third maintenance and storage facility. Details of the new third facility and planned improvements to existing facilities are summarized below:

- A new third transit facility is planned near the Highway 50 and Cadetta Road intersection in the northeast quadrant of Brampton to address projected fleet growth and electrification. Substantial completion for construction of phase one is currently anticipated by late 2026 and includes electrification and building capacity for approximately 250 buses. Phase Two of the facility will expand the capacity to a maximum of 440 buses. Subject to the City receiving the required funding this facility will be designed to support a fully electric bus fleet.
- Retrofitting the existing Sandalwood Facility (325 bus capacity) and Clark Facility (148 bus capacity) to support transition to a fully electric zero emission fleet will be required. Initial implementation planning is underway with CUTRIC as part of the ZEB Implementation Strategy & Rollout Plan, and capital applications for this work are envisioned to be submitted under the federal Zero Emission Transit Fund (ZETF). This will include the necessary electric vehicle charging equipment and allied infrastructure requirements.
- Additional renovations to Sandalwood Facility include significant safety and equipment improvements, supporting civil works to support upgrades, and improved staff wellness facilities.
- Planned upgrades to the Clark Facility include the expansion and renovation of operator lounge/dispatch areas, gasoline fueling system, maintenance washroom upgrades and an additional diesel fuel dispenser.

8.3 ON-STREET INFRASTRUCTURE

Brampton Transit maintains a variety of on-street infrastructure to support passengers waiting, boarding and alighting at over three thousand stops and several transit terminals. Additionally, Brampton Transit recently installed bicycle shelters at several locations throughout the city to improve active transportation connections to its services.

Over the next five-year plan, Brampton Transit hopes to achieve the following:

- Install an additional 125 shelters at bus stops throughout the city, ensuring that 90% of boardings happen at stops with a shelter;
- Invest over $4 million dollars in the addition, replacement or refurbishment of conventional and Züm shelters, subject to budget approvals; and
- Ensure that 90% of all transit stops have an accessible landing pad by 2027, with a target of 95% by 2032, through continued investment in the Pad Program.

Many stop locations throughout the Brampton Transit network include passenger information and other transit technology systems. Several of these systems are slated for replacement and refurbishment, including real-time departure information screens at select Züm stations, NextRide application and real-time departure displays at select transit terminals.

8.4 TECHNOLOGY

Transit technology systems play a vital role in Brampton Transit operations and their ability to communicate to the public. Brampton Transit has a full suite of technologies that supports service development, delivery and maintenance. As the organization has grown, it has modernized its technologies to better support growth and other strategic directions. Several of these recent innovations include:

- Investing in charging infrastructure, electric vehicle monitoring tools, and an integrated energy management system to support the transition to a zero-tailpipe emissions fleet; and
- Deploying a new customer safety app and Customer Relationship Management system.

As part of this five-year plan, several strategic investments are planned to upgrade and modernize operational and customer-facing technologies.

PLANNED TECHNOLOGY PROJECTS

Brampton Transit is actively working to acquire, replace or upgrade many core technology systems. These systems include:

- On-demand transit management platform: includes dynamic scheduling and routing technology, driver interface and a customer-facing app and booking portal;
- SmartBus Computer Aided Dispatch / Automatic Vehicle Location, or CAD/AVL System Replacement: includes operational systems to monitor operations in real-time both on-street and within transit operations facilities, operator communications systems and automatic passenger counting technology;
- SmartBus Passenger Information systems: includes on-street signage, Interactive Voice Response (IVR) and customer service call routing systems;
- Evaluation and strategy to replace existing aging fareboxes;
- Transit scheduling system (HASTUS) upgrade;
- Expansion of electric chargers to support growth in electric fleet; and
- Modernization of Business Intelligence applications to provide streamlined data to better inform reporting, planning and decision making.

ADDITIONAL TECHNOLOGIES

In addition to the planned technology projects, Brampton Transit has identified the following technologies being of strategic importance, either as enhancements or as replacements for existing technologies that are coming upon the end of their useful life within the next five years:

- Conventional transit scheduling system (HASTUS) enhancements required support advanced optimization analysis including zero-emissions fleet planning and scheduling;
- Fuel management system replacement;
- Implementation of a comprehensive transit-specific data warehouse to support reporting and business intelligence; and
- Creation of a data lake to store all raw data generated by various Brampton Transit systems.


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9 FINANCIAL PLAN

The Financial Plan details the fare strategy, projected operating budget and capital plan for the 2023-2027 Business Plan. The revenues and costs presented in the Financial Plan detail the funding, resources and assets required to support Brampton Transit to meet its changing and growing demands while maintaining fiscal responsibility to the taxpayers of Brampton. The section also describes steps the organization should explore to meet its fare-free goal by 2040.

9.1 FARE STRATEGY

Brampton Transit's primary source of operating revenue stems from fares. In 2018, the Brampton 2040 Vision was endorsed by council. The Brampton 2040 Vision established free transit as a city goal to promote equity and to better establish transit as a preferred transportation option within the community.

Achieving free fares as outlined in the 2040 Vision will require the City of Brampton to find alternative funding sources that are equivalent to the portion of revenue generated by fares today. This revenue shortfall is significant and will require support from other levels of government and potentially new funding tools to compensate. As such, until a sustainable source of additional funding is identified, it is recommended that Brampton Transit continue with its current fare structure, wherein fares are adjusted to align with inflation. Ensuring that fare increases do not exceed inflation will help keep fares affordable to customers while maintaining a stable revenue source that will help fund transit expansion in the city. While this approach will sustain ridership growth, it will not help advance the organization toward the fare-free goal established by the city.

However, Brampton Transit and the City of Brampton can take the following measures to work towards promoting equity and to better establish transit as a preferred transportation option within the community:

- Expand the Peel Affordable Transit Program: Brampton Transit should advocate to increase the discount offered by the program or for it to provide free fares and/or expand the program eligibility. The City of Brampton could also help to initiate changes to the program by offering funding, if an appropriate funding source becomes available.

- Advocate for regional fare integration: Brampton Transit should continue to be a strong advocate for fare integration, particularly with the TTC, given current double fare barrier between the two systems and the large travel flows between Brampton and the City of Toronto.

- Explore alternative funding: Over the course of this Business Plan, Brampton should explore alternative funding sources and advocate to higher levels of government for increased operational funding. Alternative funding sources could include elements such as real estate development, land value capture road tolls/cordon charge, parking fees or partnerships/donations and may require support from the provincial government to implement.

- Improve youth discounts: Brampton Transit can continue to explore U-Pass (multi-transit agency post-secondary pass) for Sheridan College, in collaboration with Oakville Transit and Mississauga Transit.

Once external funding alternatives are implemented, Brampton Transit can begin to apply some of the fare structures that support the move towards the 2040 fare free vision. To understand what these fare structures may entail, a modelling exercise was conducted to assess the variations in three general areas of fare structure. These areas are inflation, new fare-free products and changes in concession fare ratios. Based on the assessment, the move towards a fare free strategy would likely involve the following first steps:

- Expand fare-free products:
    - Expand fare-free to 12 and under
    - Fare-free pilot on one route
    - Expand fare-free to 19 and under

- Improve youth discounts:
    - Reduce youth-to-adult fare ratio from 82% to 50%, which would reduce the current youth PRESTO single-trip fares.
    - Increase non-resident seniors-to-adult fare ratio from 52% to 55%, which would increase the current senior PRESTO single-trip fares.

9.2 REVENUE PROJECTIONS

The majority of operating revenue comes from fare revenue. In addition to fare revenue, other revenue (such as those from advertisements) and government contributions support Brampton Transit in meeting its operational expenses.

Provincial funding through gas tax revenue have historically contributed about 8% of operating expenses. Municipal contributions have been a key source of funding to support transit agencies as they cover the difference between operating expenses and revenue and provincial funding. Historically, municipal funding has supported about 40% of operating expenses. Table 7 summarizes the expected revenues and revenue to cost ratios for the 2023-2027 Business Plan timeline. These projections assume the Business-as-Usual fare structure where fares will be adjusted based on inflation.

TABLE 7 - PROJECTED REVENUE AND R/C RATIOS

	2023	2024	2025	2026	2027
Fare Revenue	$98,700,000	$108,300,000	$116,100,000	$124,100,000	$132,700,000
Revenue-Cost Ratio	49%	51%	50%	50%	49%

The transition to free fares from the current relatively high revenue to cost ratio of Brampton Transit will require new funding sources to support the forgone revenue as well as additional service increase costs. Without significant changes to council spending priorities, increased provincial/federal operating funds or new and substantial funding sources, the move to fare free transit will place an oversized burden on property taxes.

9.3 OPERATING COSTS

Operating costs are driven by various expenses that are necessary to operate and maintain Brampton Transit's fleet and facilities. These expenses include transportation operations[7], fuel and energy, vehicle maintenance[8], premises and plant maintenance and general and administration[9]. Projected operating costs for the 2023-2027 Business Plan are summarized in Table 8 below.

TABLE 8 - SUMMARY OF OPERATING COSTS*

Operating Costs	2023	2024	2025	2026	2027
Transportation Operations	$127,000,000	$136,000,000	$148,000,000	$158,000,000	$169,000,000
Fuel and Energy	$25,000,000	$23,000,000	$25,000,000	$27,000,000	$29,000,000
Vehicle Maintenance	$37,000,000	$40,000,000	$43,000,000	$47,000,000	$51,000,000
Plant & Premises Maintenance	$6,000,000	$6,000,000	$7,000,000	$7,000,000	$7,000,000
General and Administration	$10,000,000	$11,000,000	$13,000,000	$14,000,000	$16,000,000
Total Operating Expenses	**$205,000,000**	**$216,000,000**	**$236,000,000**	**$253,000,000**	**$272,000,000**

*Expense projections account for both service and inflationary increases

[7] Transportation operations expenses are informed by projected growth in number of operators and supervisors, staff salaries and inflationary increases in licences and automatic vehicle monitoring costs for new vehicle purchases.
[8] Various factors are evaluated to determine vehicle maintenance costs, including growth in staff and their salaries, vehicle repairs and cost of key parts.
[9] Includes a 10% annual increase in costs to support the recommended increase in general administration resources.

9.4 CAPITAL COSTS

Capital costs pertain to the growth, replacement and major refurbishment of fleet, upgrades and construction of new facilities and shelters, installation of new infrastructure for Brampton's Züm route expansions and implementation of new technologies. Over the course of the 2023-2027 Business Plan, Brampton Transit will make a number of these investments to meet growth as well as deliver service more efficiently and with better quality. Table 9 summarizes the key capital projects planned to be implemented over the next five years.

TABLE 9 - SUMMARY OF CAPITAL COSTS

Capital Costs	2023	2024	2025	2026	2027
Revenue fleet growth and replacement	$30,200,000	$111,300,000	$72,600,000	$76,400,000	$96,700,000
Revenue fleet refurbishment and maintenance	$16,300,000	$18,800,000	$7,800,000	$14,100,000	$16,600,000
Non-revenue fleet	$300,000	$600,000	$1,400,000	$100,000	$700,000
On-street infrastructure	$900,000	$800,000	$1,100,000	$1,000,000	$1,000,000
Facilities[10]	$210,000,000	-	$3,000,000	-	$60,000,000
Technology [11]	$200,000	$1,000,000	$5,300,000	$2,000,000	-
High order transit[12]	$16,200,000	$5,000,000	$22,100,000	$1,300,000	$23,400,000
Other capital projects[13]	$1,700,000	$1,800,000	$2,300,000	$2,400,000	$2,300,000
Total Budgeted	**$275,800,000**	**$139,300,000**	**$115,600,000**	**$97,300,000**	**$200,700,000**
Total capital projects awaiting funding[14]	-	$7,000,000	$6,000,000	$73,100,000	$2,210,700,000

[10] Includes costs for construction and electrification of third transit facility, improvements and electrification of existing facilities and terminals.
[11] Includes already planned projects (SmartBus systems, farebox replacement, HASTUS upgrades).
[12] Includes Züm line expansions, Queen street BRT projects.
[13] Includes minor capital projects and technology maintenance and support.
[14] Includes additional facility and terminal renovations, autonomous vehicle project, recommended technology projects (data warehouse/lake implementation, fuel management and videowall upgrades)

Some capital costs are currently funded and financed through the Investing in Canada Infrastructure Program (ICIP), Canada Infrastructure Bank Financing (CIB) and the Zero Emissions Transit Fund (ZETF). ICIP funding has already been committed to projects approved in past budget years, such as the Phase 1 base build of the third transit facility, growth and replacement buses, bus refurbishments, the Transit Hub and SmartBus technology projects. ICIP funding is also allocated to bus purchase and refurbishment projects in 2023 and 2024. CIB financing and ZETF funding will be utilized to invest in electric buses and chargers, as well as the electrification of the third facility and electrification retrofit of Transit's existing Sandalwood and Clark facilities. There is no further funding committed for additional capital projects (including the Hazel McCallion LRT extension, Queen Street BRT, among others) which will be required to achieve the City's long term transportation goals. However, Infrastructure Canada has recently announced the creation of a Permanent Public Transit Fund of $3 billion per year, nationally, beginning in 2026-2027. The availability of this fund should be able to partially support Brampton Transit with its capital projects that are currently unfunded. However, given this funding may not be available until 2026, projects between now and then may need to be deferred to 2026 or beyond unless other funding becomes available.

Capital Costs for Future Higher Order Transit Projects

As noted in section 2.3, two other key higher order transit projects are in the planning stages and will be vital to meet both Brampton's and the region's long-term goals. These projects include:

- The extension of the Hazel McCallion LRT into downtown Brampton, and
- The Queen St – Highway 7 BRT.

While both of these initiatives are presently envisioned to be operationalized beyond the span of the 2023-2027 Business Plan, the design and construction phases are expected to begin before 2027.

In the GTHA, projects of this nature are typically funded from other levels of government and therefore, the costs have not been incorporated into the capital costs for Brampton Transit in the next five years. Brampton continues to advocate to both the federal and provincial governments for the funding of these projects. Recent estimates to construct the LRT extension into downtown Brampton is between $933M (surface alignment) and $2.804B (tunnel alignment) and the

previous estimates (from 2020) to construct the Queen St – Highway 7 BRT is approximately $500M.

While significant, the costs of these two projects combined are in line with the funding levels for other Higher Order Transit projects in the GTHA. Table 10, on the following page, compares recent investments from the federal and provincial governments for similar projects in Toronto and Hamilton. The combined federal and provincial funding per capita for these projects compares favourably to what would be required to build the LRT extension (tunnel alignment) and the Queen St – Highway 7 BRT. It is also important to note that the transit ridership gains in Brampton for the period both before and after the pandemic far outpace the change in demand in Toronto and Hamilton, further strengthening the need for this funding.

TABLE 10 – TRANSIT INVESTMENT COMPARISON OF HIGHER ORDER TRANSIT PROJECTS IN THE GTHA

GTHA Rapid Transit Projects	Municipal Population (2021 Census)	Total Cost of Project(s)	Provincial Funding	Federal Funding	Provincial & Federal funding per capita	Change in transit demand between 2009 and 2019	COVID Ridership Recovery (Dec. 2022)
City of Toronto* Scarborough Subway Extension Ontario Line Finch West LRT Eglington Crosstown	2,794,356	$39.8 B	$31.32 B	$8.48 B	$14,240	12%	-31%
City of Hamilton Hamilton LRT	569,353	$3.4 B	$1.7 B	$1.7 B	$5,970	3%	-18%
City of Brampton Brampton LRT Extension (Tunnel) Queen St – Highway 7 BRT	656,480	$3.3 B	$1.65 B	$1.65 B	$5,030	160%	+16%

*City of Toronto projects does not include Yonge Subway Extension as it is primarily a York Region Project


26 MOUNT PLEASANT
TO MAYFIELD ROAD
2152
ELECTRIC
2152
BramptonTransit
POWERED BY ELECTRICITY
ONTARIO
503 18L

10 IMPLEMENTATION

Brampton Transit will be undertaking multiple projects throughout 2023-2027 to enhance service provision, organizational capacity, customer service and experience, technology capabilities, and fleet management.

A significant project that Brampton Transit is working on is the electrification of their fleet. Significant funding has been acquired and will be used to invest in electric buses and chargers, as well as the electrification of the third facility and electrification retrofit of Transit's existing Sandalwood and Clark facilities. As a result, planning for additional electric infrastructure upgrades and battery electric bus fleet plan is already underway (with up to 450 BEBs secured by the end of 2027). Advancing to an electrified fleet takes time and will gradually happen over the course of this plan.

The implementation roadmap, Figures 7 and 8 on the following pages, summarizes all other key projects and actions for Brampton Transit from 2023 to 2027.

2023

Service Plan

- Launch on-demand service
- Restore service to pre-pandemic levels
- Investigate network modifications in the Northwest, Northeast and Southwest

Technology

- Implement Customer Relationship Management (CRM) software
- On-demand software goes live
- Develop farebox strategy

Transit Electrification

- Complete the Electrification Rollout Strategy
- Complete Phase 1 of Battery Electric Trial

Marketing

- Review marketing opportunities to highlight employees and their impact on the community

Customer Experience and Service

- Develop CRM-related processes
- Make a passenger safety inventory
- Review social media channels and evaluate need for a second channel for service alerts

Management Plan

- Support Maintenance and Service Development for electrification
- Investigate operator absenteeism and impact on service delivery

2024

Finch West LRT

Service Plan

- Evaluate on-demand service
- Change service in response to new Finch West LRT
- Assess need for and if warranted, conduct headway management study
- Implement network modifications in the Northwest, Northeast and Southwest

Technology

- Implement new CAD/AVL and supporting systems implementation

Transit Electrification

- Begin Sandalwood Facility Electrification Retrofit Project
- Introduce 10 new BEBs into service as part of Phase 2 Trial

Marketing

- Enhance bi-annual customer survey
- Increase multi-language, multi-channel touchpoints

Customer Experience and Service

- Develop campaign to enhance safety awareness
- Develop campaign to increase social media awareness
- Conduct customer journey mapping and heatmap

FIGURE 7 - IMPLEMENTATION ROADMAP 2023-24

2025 — Hazel McCallion LRT

Service Plan

- Expand on-demand service
- Change service in response to new Hazel McCallion LRT
- Implement Züm Chinguacousy
- Assess need for and if warranted, conduct Transit Priority Study
- Implement network modifications in the Northwest, Northeast and Southwest

Transit Electrification

- Introduce additional BEBs into service

Marketing

- Create alternative engagement processes/tools

2026 — Enhanced GO Service

Service Plan

- Implement Züm Bramalea
- Increase frequencies in response to enhanced GO service on the Kitchener Line
- Night network implementation Phase 1
- Assess need for and if warranted, conduct pedestrian access study
- Implement network modifications in the Northwest, Northeast and Southwest

Transit Electrification

- Complete Phase 1 of Sandalwood Facility Electrification Retrofit Project
- Introduce additional BEBs into service

Customer Experience and Service

- Use Automatic Passengers Counters (APCs) for real-time crowding info

2027

Service Plan

- Night network implementation Phase 2
- Assess need for and if warranted, conduct additional optimization studies
- Expand on-demand service
- Implement network modifications in the Northwest, Northeast and Southwest

Transit Electrification

- New Third Transit Facility opens
- Introduce additional BEBs into service

FIGURE 8 - IMPLEMENTATION ROADMAP 2025-27


transit


CHARGE
STATION
NO BOARDING
HILE BUS IS CHARGING
ampton Transit
VERED BY ELECTRICITY
SIEMENS
Canada