

July 14, 2015

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REGION OF YORK
CLERK'S OFFICE

FILE No.

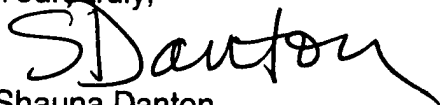
Re: 2015 Transportation Master Plan (File P40 TMP 14 / JB.d)

The following recommendation of the Planning and Infrastructure Services Committee, Meeting of June 22, 2015, was approved by Council on July 8, 2015:

- P&IS156-2015
1. That the report from A. Oliveira, Transportation Policy Planner, Development Engineering Services, dated June 3, 2015, to the Planning and Infrastructure Services Committee Meeting of June 22, 2015, re: **Transportation Master Plan Final Report** (File P40 TMP 14 / JB.d) be received; and,
 2. That the 2015 Transportation Master Plan recommendations (Executive Summary in Appendix A of the report) be endorsed and that the 2015 Transportation Master Plan be approved in principle pending 30-day public review; and,
 3. That a Notice of Study Completion for the Transportation Master Plan be issued to initiate a 30-day review period, in accordance with the requirements for a Municipal Class Environmental Assessment; and,
 4. That the Clerk forward a copy of this report to the Region of Peel, City of Mississauga, Town of Caledon, Region of Halton, Town of Halton Hills, York Region, City of Vaughan, Ministry of Transportation, and Metrolinx for information.
 5. That the presentation by Henrik Zbogor, Manager, Long Range Transportation Planning, and Brett Sears, Marshall Macklin Monaghan, to the Planning and Infrastructure Services Committee Meeting of June 22, 2015, re: **2015 Transportation Master Plan** (File P40 TMP 14 / JB.d) be received.

cont...../

Yours truly,



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(P&IS – E5/ G2)

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BRAMPTON
Flower City

Report
Planning and Infrastructure Services Committee
Committee of the Council of
The Corporation of the City of Brampton

Date: June 3, 2015

File: P40 TMP 14

Subject: **RECOMMENDATION REPORT – Transportation Master Plan Final Report**

Contact: Andria Oliveira, Transportation Policy Planner, Engineering & Development Services, 905-874-2410

Planning and Infrastructure
Services Committee

Date: June 22, 2015

OVERVIEW:

- The City's Transportation Master Plan provides a blueprint for strategic planning and decision-making to achieve a balanced transportation network that addresses the city's growth and development needs over the long term.
- The Transportation Master Plan makes strategic recommendations for a sustainable, safe and efficient multi-modal City-wide network, addressing roads, transit, active transportation, goods movement and transportation demand management.
- The Transportation Master Plan is reviewed every five years in tandem with the preparation of the Development Charges (DC) Background Study, to provide an updated accounting of growth-related transportation costs which factor into the calculation of the DC rates levied against new development.
- The 2015 Transportation Master Plan has followed the Municipal Class Environmental Assessment (EA) process for Master Plans, incorporating a comprehensive public and stakeholder consultation strategy.
- A Notice of Study Commencement for the Transportation Master Plan was issued on October 3, 2013.
- An innovative and extensive public consultation process, using interactive online tools, as well as direct contact, was completed in order to engage the public and receive feedback on plans and programs.
- Key elements of the technical analysis for the Transportation Master Plan were an early deliverable of the work program and informed the DC Background Study in support the DC By-Laws update, approved by Council in August 2014.
- This report seeks Council's endorsement of the Transportation Master Plan recommendations, and direction to issue a Notice of Study Completion in accordance with the Municipal Class Environmental Assessment (EA) process, initiating a 30-day review period.

RECOMMENDATIONS:

1. **THAT** the report from Andria Oliveira, Transportation Policy Planner, Engineering & Development Services, dated June 3, 2015, to the Planning & Infrastructure Services Committee Meeting of June 22, 2015, re: **RECOMMENDATION REPORT – Transportation Master Plan Final Report (File P40TMP 14)** be received;
2. **THAT** the 2015 Transportation Master Plan recommendations (Executive Summary in Appendix A) be endorsed and that the 2015 Transportation Master Plan be approved in principle pending 30-day public review;
3. **THAT** a Notice of Study Completion for the Transportation Master Plan be issued to initiate a 30-day review period, in accordance with the requirements for a Municipal Class Environmental Assessment;
4. **THAT** the Clerk forward a copy of this report to the Region of Peel, City of Mississauga, Town of Caledon, Region of Halton, Town of Halton Hills, York Region, City of Vaughan, Ministry of Transportation, and Metrolinx for information.

BACKGROUND:

The Transportation Master Plan (TMP) is a strategic planning tool, which provides broad strategic goals and policies to guide planning for safe and efficient transportation for people and goods. The TMP is reviewed and updated every five years so that the policies and objectives for an integrated network are made within the context of recent growth, new development, legislative changes, renewed public opinion, best practices, and updated policy directions from all levels of government.

The five year update cycle for the TMP aligns with the five year update of the Development Charges (DC) Background Study. This ensures that the charges levied against new development reflect up-to-date forecasts of transportation infrastructure needs and associated costs. This is critical, given that roads-based infrastructure improvements (new roads, widenings) are 100% recoverable through the DC Background Study. Other transportation infrastructure, such as transit, is only partially recoverable based on historical averages. Potential amendments to the DC Act under Bill 73 may adjust the calculation methodology, in the future.

The City of Brampton's first transportation master plan was approved in 2004. This inaugural plan envisioned the integration of all modes of transportation to support a sustainable and balanced transportation network. A key focus of this plan was a long-term, multi modal vision with an emphasis on public transit. This resulted in the development of a multi-phased rapid transit strategy and implementation of the Züm bus rapid transit (BRT) system along many of the City's key arterial corridors. It also provided for longer term consideration of higher order transit, such as BRT or LRT (light

rail transit) in dedicated running ways along the City's key transit "spines", such as Queen Street, Hurontario-Main Street, and Steeles Avenue.

In Fall of 2009, the City endorsed the Transportation & Transit Master Plan Sustainable Update, which provided support to the 2009 Development Charges By-law Update, and which brought the master plan assumptions into line with the Provincial Growth Plan and with other changes in the provincial and regional planning landscape.

The 2015 TMP Update was initiated in late 2013. Technical work for this update was used as input to the background work in support of the City's Development Charges Background Study, which was approved by Council in August 2014.

The 2015 TMP Update confirms the original vision for a balanced transportation network, and emphasizes the importance of alternative modes – such as active transportation (e.g., walking, cycling), transit, and travel demand management – as key elements in accommodating long-term growth and facilitating the development of complete and sustainable communities.

The TMP Update was undertaken in accordance with the Municipal Class Environmental Assessment Process, which involves public consultation to inform the public, gain feedback and address concerns. The TMP has followed Phases 1 and 2 of the Environmental Assessment process, where Phase 1 identifies the transportation problems and opportunities, and Phase 2 assesses alternative solutions.

One of the key features of the TMP Update was the emphasis on achieving meaningful public engagement. The consultation process for this study included:

- An online tool ("Metroquest") used to engage stakeholders and gather feedback;
- An online Open House from October to December 2013;
- Poster boards and postcards distributed at libraries and recreation centres;
- The establishment of a Senior Management Steering Committee to provide strategic project direction;
- The establishment of a Technical Agencies Committee, with participants from the Province, other municipalities, non-profit organizations and other stakeholders;
- In-person Public Information Centre (PIC) April 2014;
- Online Metroquest outreach from April to June 2014.

The Metroquest online interactive tool provided a new and innovative way to engage the public and gather data. The online tool presented an effective medium for both presenting information and soliciting input.

The website received approximately 3,000 visits, and 2,000 data points were provided as inputs into the transportation study analysis and recommendations. These data points represent direct input from visitors using the interactive tool, responding to questions regarding travel behaviour, selecting priorities, ranking past efforts and

providing feedback on draft recommendations and proposed multi-modal transportation networks.

These results highlight the success of this broader scope of public consultation in reaching and engaging a much wider audience (than is typically the case when only “traditional” public information meetings are employed). The Metroquest tool is being used by other municipalities for similar projects, and will be considered for future City of Brampton planning exercises.

CURRENT SITUATION:

The TMP provides a strategic framework for city-wide, multi-modal transportation including roads, transit, active transportation, goods movement and transportation demand management strategies to the year 2041. This horizon year is consistent with the recent Amendment 2 to the Provincial Growth Plan. The previous 2009 TMP update looked to a 2031 horizon year, based on the Provincial Growth Plan in effect at that time. The current TMP Update also incorporates work undertaken over the last five years by Metrolinx to implement “The Big Move” Regional Transportation Plan – including GO Rail service improvements, and high-order transit on key Greater Toronto and Hamilton Area (GTHA) corridors such as Hurontario-Main Street and Queen Street. The 2041 vision for Brampton’s transportation network includes recommendations for roads, transit, active transportation, goods movement, and transportation demand management.

The TMP Update also provides a series of recommendations to be implemented in the short-term, and that support the longer term multi-modal transportation vision. These recommendations comprise a work plan for staff, moving forward over the next five years.

The TMP recommendations are summarized in the Executive Summary (Appendix A). Key strategic principles (2041) and short-term recommendations (next 5 years) are highlighted below:

Roads

Strategic Principles

The road network will be connected and integrated city-wide, linking new development areas and key destinations in the City to accommodate multi-modal needs in a safe and efficient manner.

A key policy direction is to restrict any future widenings of arterial roads to a maximum of six lanes, including potential transit lanes.

The recommended road network improvement needs to 2041 are depicted in Appendix A, Figure 1.

Short-Term Recommendations

Towards achieving the 2041 recommended road network, the following short-term actions are recommended:

- *Review and update the City of Brampton roadway design standards to ensure that City roads safely and effectively accommodate all road users and transportation modes – pedestrians, cyclists, transit, cars and trucks – following best practices in active transportation and “Complete Streets” planning, design, and implementation;*
- *The study has identified road projects that are needed by 2021, as highlighted in Appendix A, Figure 2. These recommendations will provide strategic guidance on timing and need for improvements through the annual review of the 10 year capital program, in order to align implementation with available funding.*

Transit

Strategic Principles

The TMP Update has identified a city-wide transit modal split target of 20% by 2041 (includes both Brampton Transit and GO Transit), as compared to today’s modal split of 9%. Achieving this target will mean investing in and prioritizing the continued improvement and implementation of transit services towards the recommended 2041 network. The objective is to create a comprehensive and connected system that facilitates comfortable, efficient, and reliable travel for those journeying within, to, and from the City of Brampton, such that transit constitutes a viable alternative to automobile travel where practical.

Critical elements for increasing the modal split include:

- *Two-way all-day GO rail service on the Toronto to Kitchener rail corridor;*
- *Higher order dedicated transit (bus rapid transit or light rail transit) in the City’s primary intensification corridors, including Hurontario-Main Street, Queen Street, and Steeles Avenue.*

The recommended 2041 transit network needs are depicted in Appendix A, Figure 3.

Short-Term Recommendations

Towards achieving the 2041 transit network, the following short term actions are recommended:

- *Work towards implementation of Hurontario-Main LRT, which is a key element for a locally and regionally connected transportation system that provides long-term capacity in the corridor, and that serves City and Provincial planning objectives;*
- *Work with the Province to expedite two-way all-day GO train service through Brampton;*
- *Expand the Züm bus rapid transit network on Steeles West from Main Street to Lisgar GO Station; on Queen Street West from Main Street to Mississauga Road and to Mount Pleasant GO Station; and on Airport Road south from Bovaird Drive.*

Active Transportation

Strategic Principles

The City of Brampton will be a community that fosters and promotes active transportation, where residents and visitors can access important destinations, trails, neighbourhoods and areas of employment by a safe, convenient, and connected network of on-road and off-road active transportation facilities.

The strategic objective is to raise the active transportation modal split from today's 3% to 10% by 2041. Active transportation (walking, cycling, and other non-motorized mobility options) presents one of the greatest untapped opportunities for reducing single-occupant vehicle trips, and for addressing a host of community design and public health issues. Incorporating ideas and global best practices in the areas of "Complete Streets" and sustainable community design need to be guiding principles for the City's planning and engineering efforts moving forward.

The recommended active transportation strategic network is depicted in Appendix A, Figure 4.

Short-Term Recommendations

Towards achieving a comprehensive active transportation network by 2041, the following short term actions are recommended:

- *Develop an Active Transportation Master Plan that builds upon the 2002 PathWays Master Plan and the work completed as part of the TMP Update. The Active Transportation Master Plan work will undertake detailed analysis of the proposed 2041 Network to determine facility types, timing of and budgeting for network development in the shorter and longer terms;*
- *Work with the Region of Peel to coordinate the Region's Active Transportation Plans with the City's initiatives.*

Goods Movement

Strategic Principles

Goods Movement is an economic driver with an important impact on the transportation system in the City of Brampton. The City will work with its municipal and agency partners to plan an integrated goods movement network that balances efficiency and safety for all road users, while minimizing significant negative impacts on communities.

Short-Term Recommendations

To continue to accommodate Goods Movement safely and efficiently to 2041, the following short term actions are recommended:

- *Continue to work with the Region of Peel on the Region's Goods Movement Strategy;*
- *Conduct a more detailed "freight audit" in order understand freight activities within the City, to identify issues affecting local freight movements, and to establish priorities and actions that support the safe and efficient movement of freight in Brampton.*

Transportation Demand Management

Strategic Principles

Brampton will strive to be a leader in the use of sustainable mobility options, and will work with staff, residents, employers and stakeholders to reduce dependence upon the single occupant vehicle for commuting and personal trips.

In order to manage traffic demand and complement the Recommended 2041 Roads, Transit and Active Transportation networks, it is recommended that transportation demand management policies and programs be used to reduce the number of single-occupant vehicle trips on City roads, and increase the number of trips by carpooling, active transportation, and transit, as well as encouraging teleworking in order to eliminate some trips.

Short-Term Recommendations

In the short term, the transportation demand management recommendations include:

- *Designate/hire a staff person to develop a Transportation Demand Management Plan and implement TDM programs;*
- *Work with the Region of Peel to implement the Region's Transportation Demand Management Plan and to coordinate with the City's initiatives;*

- *Work with Smart Commute Brampton-Caledon to further develop a City of Brampton Employee Trip Reduction Program and support other TDM programming and initiatives.*

CORPORATE IMPLICATIONS:

Financial Implications:

The road and transit infrastructure recommendations of the TMP Update were provided as background information for the Roads and Transit component of the City's 2014 Development Charges Background Study.

The roads program timings presented in the TMP Update are "front-ended" compared to overall DC receipt based on timing of road needs, meaning that approximately 33% of the total lane kilometres are recommended in the first 5 years of a 23-year planning horizon, and more than 70% in the first 10 years. Based on a \$1.46B roads program (to 2041), this could potentially result in an additional deficit of \$388 million within 5 years, assuming an average collection of \$100M in DC revenues per annum.

To address this concern, the annual Capital Program for Roads will be monitored in conjunction with TMP and DC Study to align the program recommendations with the available funding and capacity constraints.

The proposed changes to Development Charges Act, 1997 under Bill-73 could potentially result in additional funding becoming available for transit infrastructure. Although, the current DC by-laws expire in 2019, amendments to the DC Act as a result of Bill 73 may necessitate that the City commence an update to its DC Background Study and TMP, sooner than 2019.

Any recommendation addressing additional resource requirements will have to be considered during the annual budget deliberation process and will be subject to Council approval.

STRATEGIC PLAN:

The Transportation Master Plan Update supports the City's strategic priorities of "Growing" (Growth Management), "Preserving" (Environmental Stewardship), and "Engaging" (Community Engagement). By developing, and promoting an active transportation network and policies, as well as transportation demand management strategies to encourage transit, carpooling, walking and cycling, the City will reduce greenhouse gas emissions and auto-dependency, to protect the natural environment.

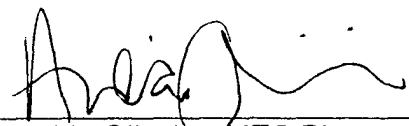
CONCLUSION:

The Transportation Master Plan is intended to serve as a practical guide for implementing transportation investments, policies, and actions in a growing City that is influenced by continually shifting economic, financial, and political conditions. The recommendations in this Transportation Master Plan Update are derived from a number of assumptions in response to demographic, legislative, and policy changes since the previous TMP review in 2009, and the timing and scope of transportation investments may change, subject to availability of funding, growth management requirements, results of Environmental Assessment studies, or other factors.

However, the broad vision for a balanced transportation system remains constant. This vision embraces compact and healthy communities, sustainable development, protection of the natural environment, and economic vitality while providing safe, affordable, and efficient transportation for people and goods.

As our City continues to grow, the Transportation Master Plan seeks to provide direction on policies and actions that can serve to better manage congestion. By making more efficient use of available transportation infrastructure and tapping into the potential of alternative and active modes of transportation, we can begin to reduce the number of single-occupant vehicle trips and develop as people-focused community. While we cannot disregard the ubiquity of the automobile in our lives and the need to accommodate motorized vehicular travel, there needs to be a continued emphasis on the provision of local and regional conventional and higher order public transit, and a concerted effort to accommodate and promote alternative modes of transportation to meet our daily needs, including walking, cycling, and travel demand management measures.

With the approval of this report and endorsement in principle of the Transportation Master Plan recommendations, a Notice of Study Completion will be posted in accordance with the Municipal Class Environmental Assessment Process, initiating a 30-day review period. Staff will report back to Council on any changes to the Transportation Master Plan that may be needed as a result of public or agency comments.



Andria Oliveira, MES Pl.
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Michael Won, P.Eng
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62-10

APPENDICES:

A. Transportation Master Plan Executive Summary

Approval for Submission:		
	Initials	Date
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Department Chief	[Signature]	15/06/10
Chief Administrative Officer	[Signature]	15/06/10

Table of Contents

1.	PURPOSE OF THE TRANSPORTATION MASTER PLAN	1
2.	PLANNING CONTEXT	1
3.	CHALLENGES AND OPPORTUNITIES FOR TRAVEL	2
4.	INPUT FROM THE PUBLIC	2
5.	ROAD NETWORK	3
6.	TRANSIT	3
7.	ACTIVE TRANSPORTATION	4
8.	TRANSPORTATION DEMAND MANAGEMENT	4
9.	GOODS MOVEMENT	5
10.	FINANCING	5
11.	PERFORMANCE MONITORING	5
12.	SUMMARY OF SHORT TERM RECOMMENDATIONS	6
	12.1 Road Network Short-Term Actions	6
	12.2 Transit Short-Term Actions	7
	12.3 Active Transportation Short-Term Actions	7
	12.4 Transportation Demand Management Short-Term Actions	7
	12.5 Goods Movement Short-Term Actions	7

List of Figures

Figure 1: Recommended City Road Network Needs to 2041	8
Figure 2: Recommended Short-term City Road Needs (to 2021)	9
Figure 3: Recommended Transit Network Needs to 2041	10
Figure 4: Recommended Active Transportation Network	11

List of Tables

Table 1: Brampton's Forecast Population and Employment Growth	2
Table 2: Performance Indicators and Measures	6

1. PURPOSE OF THE TRANSPORTATION MASTER PLAN

The City of Brampton's Transportation Master Plan provides a blueprint for strategic planning and decision-making to achieve a balanced transportation network that addresses the City's growth and development needs over the long term, and is reviewed every five years. The City's Transportation Master Plan makes strategic recommendations for a sustainable, safe, and efficient multi-modal City-wide network, addressing roads, transit, active transportation, goods movement and transportation demand management.

This 2015 Transportation Master Plan Update (TMPU) sets a vision for how people and goods will travel within and through the city from now until the year 2041. The Brampton TMPU, which is an update to the City's 2009 Transportation & Transit Master Plan (TTMP), places a strong emphasis on transit, cycling, walking and carpooling. Since all of these travel modes often use the road corridor, roadway extensions, widenings and new road construction projects have also been identified in order to facilitate movement to all parts of the city.

2. PLANNING CONTEXT

Central to this Transportation Master Plan Update (TMPU) is the reflection of strategic policy changes at various levels of government, including Provincial, regional and municipal policy changes. Key plans influencing this TMPU are the Province's *Growth Plan for the Greater Golden Horseshoe* (2006), Amendment 2 to the *Growth Plan* (2013), Metrolinx's *The Big Move Regional Transportation Plan* (2008), the Region of Peel Official Plan and Long Range Transportation Plan, as well the City of Brampton's Strategic Plan, Official Plan and other important plans such as the Hurontario-Main Street Corridor Master Plan.

Central to the vision of the Brampton TMPU is planning for 2041 population and employment forecasts, implementation of the Hurontario-Main Light Rail Transit (LRT) and two-way, all-day GO Rail service to the three train stations in Brampton. Coupled with the expansion of the City's Züm transit network and improvements to the active transportation network, the City is providing viable options to facilitate travel by modes other than the personal automobile.

3. CHALLENGES AND OPPORTUNITIES FOR TRAVEL

The City needs to plan a transportation network that accommodates all modes of travel; which includes planning for roads, transit, active transportation (walking, cycling, etc.), and goods movement. Population and employment forecasts show Brampton continuing to grow rapidly to the year 2041. As shown in **Table 1**, the population is expected to increase by 72% (approximately 375,000 additional people) and employment by 79%, adding 143,000 jobs by the year 2041. Transportation infrastructure needs to be planned and constructed to enable movement within Brampton for both people and goods, to maintain and enhance quality of life and to retain and attract jobs and talent.

Table 1: Brampton's Forecast Population and Employment Growth

	2011	2016	2021	2026	2031	2041
Population	523,900	627,500	701,600	771,300	842,800	899,500
Employment	182,000	207,800	238,100	264,000	291,400	325,200

Source: City of Brampton, TAZ projections (population and employment) and Economic Development

4. INPUT FROM THE PUBLIC

In order to develop the vision for future travel, the general public, private sector and government stakeholders were consulted to help understand existing challenges, hear priorities and generate ideas for potential solutions. An innovative internet-based tool was used to engage the public. Two rounds of consultation were conducted; one in the Fall of 2013 to gauge the public's perception of current conditions, and one in the Spring of 2014 to solicit feedback on draft plans for various modes of travel. The internet tool attracted about 3,000 visitors, of whom over 500 provided feedback. This resulted in over 2,000 data points on maps in addition to comments and ideas on ways to address Brampton's transportation challenges.

Major themes expressed throughout the public consultation process included strong support to improve rail and bus service in Brampton, a desire for alternatives to the private automobile such as active transportation facilities and connections, and increased opportunities for carpooling. It was evident from the feedback that the public recognizes that multi-modal solutions are needed to facilitate travel both now and in the future.



5. ROAD NETWORK

The road network is the foundation of the transportation system in the city. Both transit and goods movement activities rely heavily on the road network, and many active transportation facilities are, or can be, within the road right-of-way. As much as this TMPU focuses on alternatives to the single occupant vehicle, the road network will continue to play an integral role in how people travel. The road network will need to be further expanded to accommodate new development and forecasted employment and development to 2041.

Seven alternative future road networks were analyzed in order to determine the preferred transportation network solution, which best accommodates forecasted population and employment growth. The various transportation alternatives were evaluated by MMM's Multiple Accounts Evaluation. This is a holistic approach which uses transportation modeling analysis output, in addition to other criteria to evaluate transportation solutions. The criteria include:

- Recognizing the need for appropriate network connectivity for effective routing choices;
- Supporting congestion relief in a sub-area of the City; and
- Protecting the natural environment by limiting further transportation impacts to natural areas.

The assumptions for the preferred alternative are based on the premise that road widening will be capped at six lanes throughout the City. Through an iterative process, the preferred alternative was identified and the resulting recommended road network needs to the year 2041 are illustrated in **Figure 1**.

6. TRANSIT

The public feedback was supported by a review of recent transit accomplishments since the 2009 TTMP. Annual ridership on Brampton Transit has increased 49% since 2009, whereas the population has increased 20%. The introduction of the first four ZÜM routes on Main Street, Queen Street, Steeles Avenue, and Bovaird Drive has been a great success in terms of attracting more riders to transit.

Public input and increased transit ridership supports the continued emphasis on a robust public transit service in the Brampton. A key element of this strategy is the implementation of the Hurontario-Main LRT and securing two-way, all-day GO Rail service to the stations within the City. Brampton Transit's Züm network is recommended to be expanded with four additional corridors. Regular transit service will

also expand with further development to ensure that service is provided city-wide. The recommended transit network needs to the year 2041 are shown in **Figure 3**.

7. ACTIVE TRANSPORTATION

While active transportation facilities exist in Brampton, there is a need and an opportunity to develop these into a more comprehensive and connected network. This is necessary in order to take advantage of active transportation as a viable transportation mode and a practical alternative to the automobile. The active transportation strategy developed as part of this TMP Update builds upon existing facilities by rationalizing previously proposed routes and by identifying missing linkages in the active transportation network. The result of this process is a network of on- and off-road facilities that connect throughout the city. The strategic active transportation network is illustrated in **Figure 4**.

The next steps for the City to achieve the active transportation strategic vision should be to prepare an Active Transportation Master Plan. Detailed site investigations need to be conducted for the routes identified on **Figure 4** in order to confirm the appropriate facility type. This work would be an essential part of the AT Master Plan, and is the next step in the implementation of additional AT facilities in the city.

The City will also continue to work with the Region of Peel to coordinate their Active Transportation activities with the City's initiatives.

8. TRANSPORTATION DEMAND MANAGEMENT

Transportation Demand Management (TDM) is a multi-faceted approach to reducing and managing travel demand through the use of sustainable modes and the redistribution of trips beyond traditional peak travel periods. Transit and active transportation are forms of TDM.

The work in the Brampton TMPU related to TDM is focused on additional measures such as carpooling, flexible working hours and telecommuting, among others, to help manage traffic during peak periods. The City is already doing considerable work in support of TDM. The Brampton TMPU recommends leveraging these activities by designating a staff person to lead the City's TDM planning and programming. This person would be tasked with developing and implementing a detailed TDM action plan that would build upon programs already in place.

The City will also continue to work with the Region of Peel to advance their 5-year Transportation Demand Management Plan.



9. GOODS MOVEMENT

Goods movement is an important part of the economy and planning for the efficient movement of freight is important to the overall wellbeing of Brampton. The City will continue to work with the Region of Peel to advance the Region's Goods Movement Strategy and to ensure the safe and efficient movement of goods throughout the City of Brampton.

The City can enhance its support of the goods movement industry by preparing a freight audit. This is a planning and economic development tool used to assist municipalities in making informed decisions to enable the safe and efficient movement of goods. The objectives of a freight audit include identifying locations where goods movement are or will be generated or attracted, specifying operating constraints and fostering stakeholder dialogue within the goods movement industry.

10. FINANCING

A Development Charges (DC) Study was prepared in conjunction with the TMPU. The DC Study identifies road improvements that are needed due to development, and provides a mechanism to collect funds to construct these roads. Some aspects of transit projects are eligible for development charges, but there remains a sizable gap between the amount of monies being collected for future transit expansion and the actual funding available for capital and operating costs. Active transportation projects also require funding for construction and maintenance. The City needs to explore multiple avenues for additional funding in order to build and operate the multi-modal transportation network needed to keep Brampton moving into the future.

11. PERFORMANCE MONITORING

Ambitious goals have been set through the TMPU to increase the number of people traveling by modes other than the personal automobile during peak travel periods. The performance goals are listed in **Table 2**. These goals represent more than a 100% increase in the transit mode split, a 300%+ increase in the walking and cycling modal split and a 56% increase in the carpooling modal split by the year 2041, compared to 2011 travel patterns.

The goals have been set for a city-wide average for a three hour period between 3:30 and 6:30pm. Some routes in the city, such as the Hurontario-Main LRT and other routes with higher order transit, are expected to have an even higher percentage of travelers using transit than are shown in these city-wide goals.

Table 2: Performance Indicators and Measures

Indicator	Measure	Data	Existing	Goal
Transit	Modal share of transit trips during the PM peak period	Brampton Transit and GO Transit ridership data, Transportation Tomorrow Survey (TTS)	9%	20%
Walking and Cycling	Modal share of walking and cycling during the PM peak period	TTS, City counts	3%	10%
Carpooling	Modal share of auto passengers during the PM peak period	TTS	18%	28%

12. SUMMARY OF SHORT-TERM RECOMMENDATIONS

Multi-modal recommendations are made throughout the TMPU report. The short-term recommendations have been grouped in the following sub-sections as an action plan for the City over the next five years, until such time as the TMPU is reviewed and updated again. City actions to be undertaken over this time period for the areas of transit, active transportation, transportation demand management, goods movement and the enhancement of the road network are summarized below.

12.1 Road Network Short-Term Actions

Recommended road projects for construction have been grouped into the 2021, 2031 and 2041 horizon years. As part of the short-term action plan for roads, the City should:

- Begin to implement the road projects contained within the short-term horizon (2021), as shown in **Figure 2**. There are 41 road projects recommended in this horizon year. It is recognized that some of these are development-driven and will only proceed concurrent with land development in the area; and
- Review and revise the City's engineering and design standard drawings, as appropriate, to embrace best practices such as "complete streets." This approach ensures that the road network is designed for all types of road users and all modes of transportation.



12.2 Transit Short Term Actions

Building upon the success of the ZÜM network, three additional corridors have been identified for implementation by the year 2021. These include:

- Steeles West ZÜM from Main Street to Lisgar GO (in 2015)
- Queen West ZÜM from Main Street to Mississauga Road and to Mount Pleasant GO (in 2016)
- Airport ZÜM from Steeles Avenue to Bovaird Drive (in 2018)

Additionally, the implementation of the Hurontario-Main LRT and the introduction of two-way, all-day GO train service to the three GO train stations in Brampton are critical to the City's ability to achieve mobility goals set forth in this TMPU. The City should strongly advocate for the prompt implementation of these two important transit projects in Brampton.

12.3 Active Transportation Short Term Actions

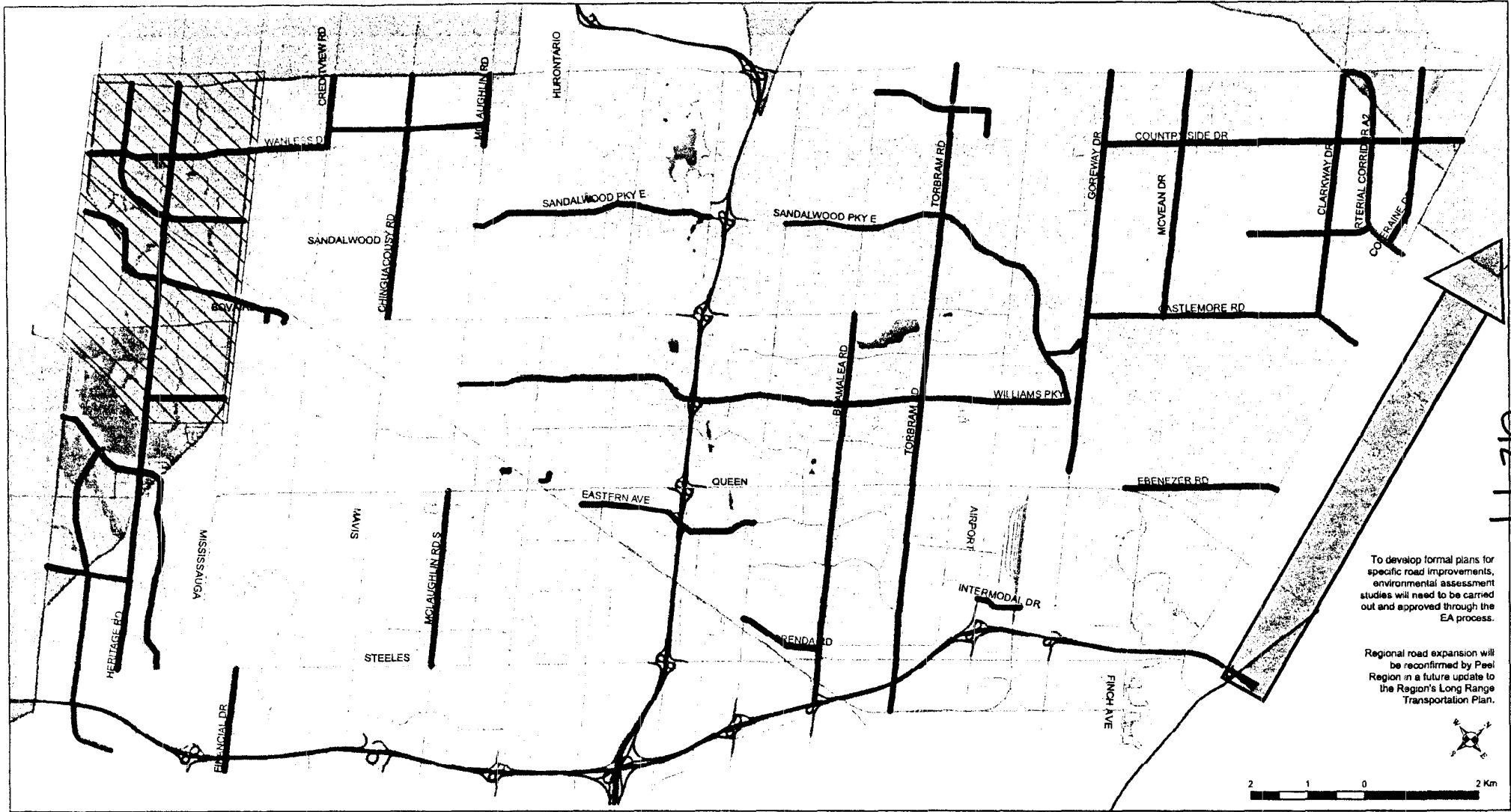
The City of Brampton should prepare its own Active Transportation (AT) Master Plan. The work in this TMPU has laid the foundation for such a plan by identifying candidate AT routes to complement the City's existing network of on- and off-road facilities. The next step in the process is the identification of facility types for these candidate routes. Detailed site investigations are needed to determine the best routes and the most appropriate types of facilities, as well as the phasing and budgeting for implementation.

12.4 Transportation Demand Management Short Term Actions

There are a series of 14 recommended actions listed in the TDM Strategy Technical Report. These are all focused on enhancing the City's existing TDM efforts. First and foremost among the recommendations is to hire a staff person that would be dedicated to lead the TDM program for the City. This person would work with Peel Region and Smart Commute Brampton – Caledon and would be able to develop and implement a detailed TDM action plan that would build upon the City's existing TDM initiatives.

12.5 Goods Movement Short Term Actions

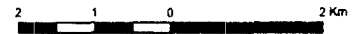
Goods movement is generally directed to Regional roads in the City; however, many industries use City roads to access Regional roads. To further develop and support the freight industry, the City should conduct a freight audit. This is a planning and economic development tool that would assist the City in making informed decisions to enable the safe and efficient movement of goods. The objectives of a freight audit include identifying locations where goods movement activities are or will be generated or attracted, specifying operating constraints, and fostering stakeholder dialogue. It is necessary to conduct a freight audit in order to identify issues affecting local freight movements and help establish priorities to support its safe and efficient movement.



9-7-19

To develop formal plans for specific road improvements, environmental assessment studies will need to be carried out and approved through the EA process.

Regional road expansion will be reconfirmed by Peel Region in a future update to the Region's Long Range Transportation Plan.



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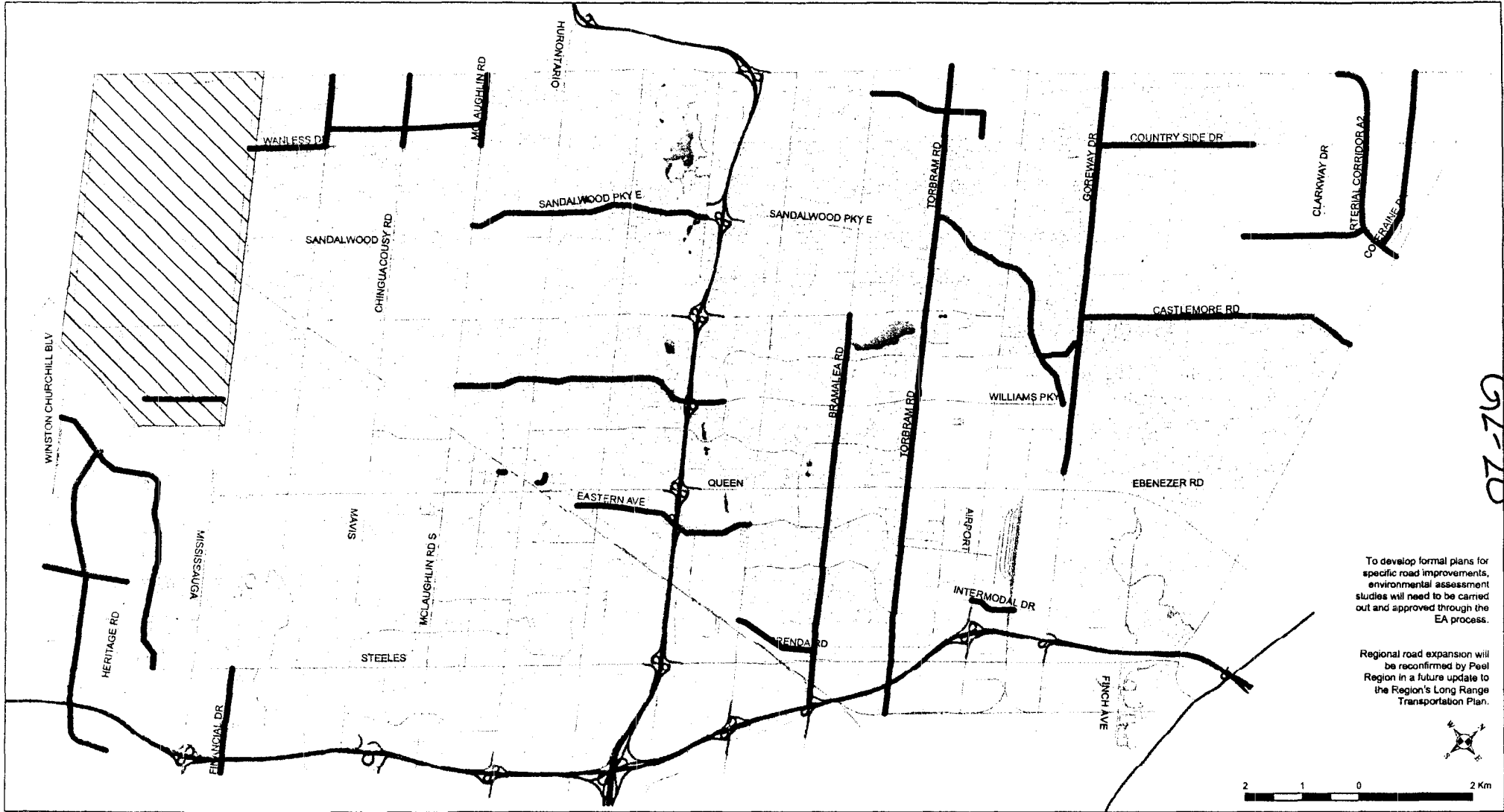
Legend

- City Road Extension by Two Lanes
- City Road Expanded to Four Lanes
- City Road Expanded to Six Lanes

- New Road Construction Six Lanes
- New Road Construction Four Lanes
- Provincial Highway

- GTA West Corridor Study Area
- Highway 427 and Extension
- Conceptual Road Network for use in the Development Charges Background Study

Figure 1
Recommended
City Road Network
Needs to 2041



G2-20

To develop formal plans for specific road improvements, environmental assessments will need to be carried out and approved through the EA process.

Regional road expansion will be reconfirmed by Peel Region in a future update to the Region's Long Range Transportation Plan.

Figure 2
 Recommended Short-Term City Road Network Needs (to 2021)



G2-21

Legend

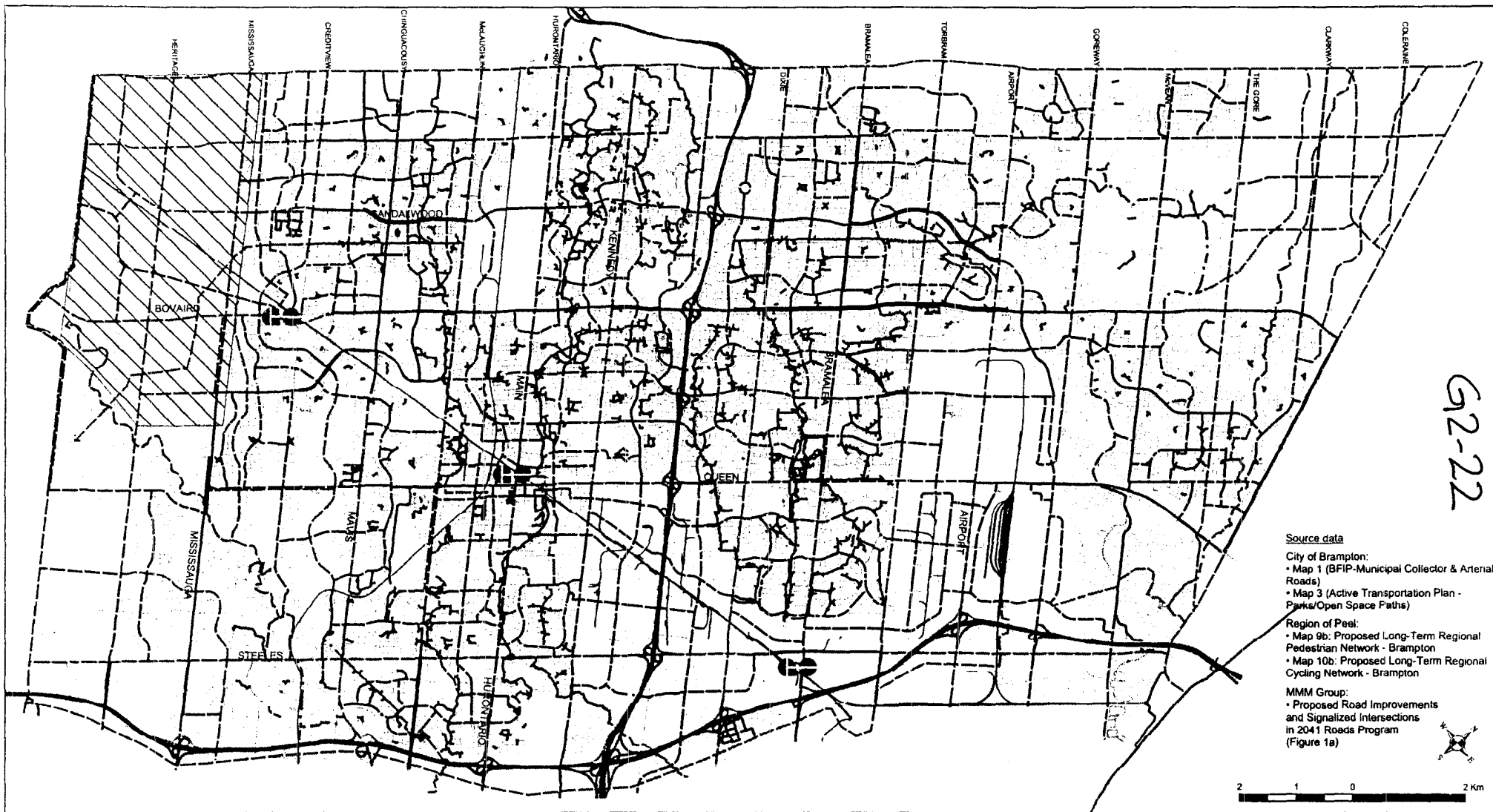
- Higher Order Rapid Transit
- ZUM
- Hurontario / Main LRT
- GO Rail
- Support Corridor
- GO Train Station
- Conceptual Road Network for use in the Development Charges Background Study

Notes:

1. All routes running outside of the City of Brampton will be determined through additional detailed service planning on strategic corridors.
2. Transit services will be provided to new growth areas in Bram West, Northwest Brampton, and Northeast Brampton. Determination of corridor types will be established through the Secondary Planning Process. Connections to key future transit routes outside of Brampton should be provided as required.
3. "Higher Order Transit" are projects identified by Metrolinx in the Big Move.

Figure 3
Recommended Transit
Network Needs to 2041

G12-22



Source data
 City of Brampton:
 • Map 1 (BFIP-Municipal Collector & Arterial Roads)
 • Map 3 (Active Transportation Plan - Parks/Open Space Paths)
 Region of Peel:
 • Map 9b: Proposed Long-Term Regional Pedestrian Network - Brampton
 • Map 10b: Proposed Long-Term Regional Cycling Network - Brampton
 MMM Group:
 • Proposed Road Improvements and Signalized Intersections in 2041 Roads Program (Figure 1a)



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MMM GROUP

Legend

Existing Routes

- On-road
- Off-road

Future Routes

- On-road
- Off-road



GO Train Station



Conceptual Road Network for use in the Development Charges Background Study

Note:
 Future Proposed Routes are subject to further detailed planning.

F
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 Transportation Netv.