Brampton

TRANSPORTATION & TRANSIT MASTER PLAN

DRAFT Discussion Paper

Options for the Strategic Transportation Direction

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A. INTRODUCTION

A critical component of the Brampton Transportation and Transit Master Plan is the long term transportation strategic direction or "vision" for the City. This vision will set the context for the detailed plan of roads and transit infrastructure and services to be developed.

The City faces many key issues and challenges, and there is a range of strategic directions which it can pursue. The preparation of this discussion paper is a key step in developing the transportation vision. The purpose of the paper is to stimulate discussion on the key issues and challenges that the City faces and subsequently the range of strategic directions that are open to the City.

Through Council and stakeholder reaction to these options, it is intended that a preferred strategic direction will emerge. Putting this in the context of the Class Environmental Assessment Master Plan process, the preferred strategic direction will be analogous to "the undertaking", forming the basis for assessment of alternatives within the transportation and transit plan.

All readers are encouraged to submit comments on this paper to both the City and the Consultant Team by contacting the individuals below:

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B. EXISTING TRANSPORTATION AND TRANSIT

Existing travel patterns show that Brampton is closely tied to adjacent municipalities, including Mississauga, southern York Region and Toronto. Many Bramptonians work outside the City, and Pearson International Airport is a major employment zone. Many Brampton streets also exhibit high levels of truck traffic, reflecting the importance of goods movement in the City. The recent rapid pace of growth in the City has strained the ability of the road system to meet demands. This has been exacerbated by delays in provincial highway projects - specifically the extensions of Highways 410 and 427.

Brampton Transit provides fixed routes throughout the urban area of Brampton as well as connections to Mississauga, Vaughan, and Toronto. Brampton is also served by GO rail, on the Georgetown line, and by GO bus services. Ridership levels have been steadily growing in Brampton since 1994. Comparisons with its peers show that the transit service

is not attracting "choice" riders. The population per bus indicator illustrates that Brampton provides the least number of buses per capita to serve ridership. Brampton Transit also has the lowest passengers per capita in its peer group, and thus, while the system is cost effective, it could attract a higher ridership. The number of GO Transit buses serving Brampton also has an impact on these factors.

C. GROWTH TRENDS AND PROJECTIONS

The City is experiencing high growth in population and employment. Over the next 30 years, population and employment are forecast to double. The 1999 Office of the Greater Toronto Area Population and Employment Forecast provides similar projections. By the year 2031, the population of Brampton is expected to reach 680,000 and employment is expected to approximately double, to 292,000.

Brampton's population is also becoming more urban and cosmopolitan. A slowdown in family formation, a more varied housing mix, increases in the number of single parent families and people living alone, and a greater diversity in the ethnic composition of the population are trends that are expected to continue into the future.

Brampton is well positioned within the Greater Toronto Area to take advantage of future growth opportunities. Key factors that support this view include:

- An excellent transportation network exists that links Brampton with the surrounding municipalities in the GTA;
- A large short and long-term supply of vacant employment lands that support employment opportunities; and
- The servicing capacity to support the increasing numbers of people and jobs expected to locate in Brampton.

It is therefore anticipated that the City will continue to maintain a strong share of the GTA's growth well into the 21st century.

These projections of very high growth, combined with the level of auto dependency and low vehicle occupancy in the City, indicate a high potential for significant growth in travel demand, particularly in the form of single occupant vehicle trips.

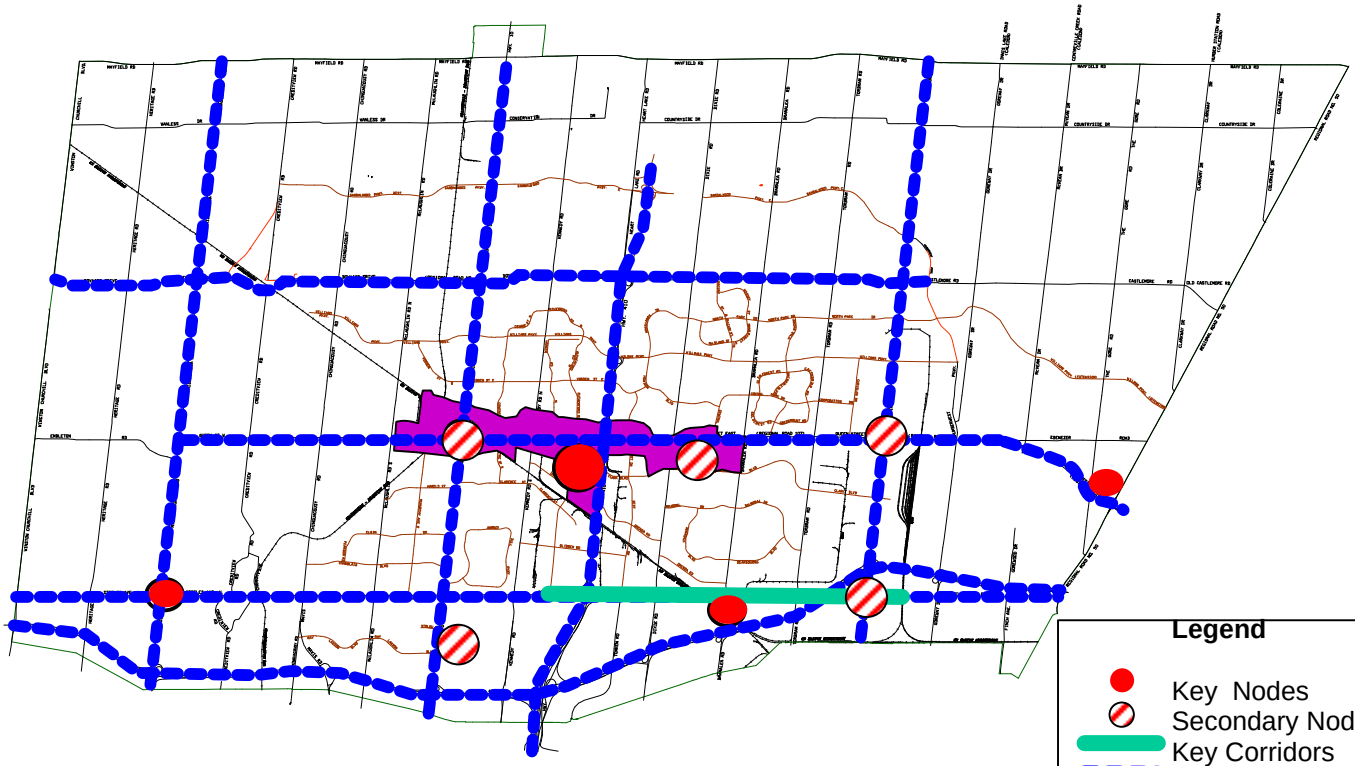
D. CONTEXT OF THE OFFICIAL PLAN AND OTHER PLANNING DOCUMENTS

Policies within Brampton's Official Plan and other planning documents outline a municipal structure and growth management approach that articulates the City's 'vision' for growth. The municipal structure includes the following:

- The Central Area envisaged as the strong core of the City, for employment, entertainment, commercial activity and a significant amount of residential development;

- The identification and protection of a system of Open Space Corridors along watercourses;
- The identification of a system of transportation routes which link the Central Area, Nodes and Districts - these are Queen Street, Hurontario/Main Street, Steeles Avenue, Bovaird Drive, Airport Road, Mississauga Road, Highways 410 and 407, and the proposed major corridor extending north from the current terminus of Highway 427; and
- The identification of Nodes intended to be the focal points for employment and service activities. The role of transportation in developing compact, more intense nodes of development is recognized. Nine Nodes are cited

The key structural elements noted above are shown in Figure 1.



Note: Nodes and Corridors are as described in the Official Plan

Figure 1. Municipal Nodes and Corridors

Growth Management

Rapid growth in Brampton has resulted in community concerns about the pace of growth relative to the provision of necessary services such as transportation. As a result, City staff have been developing a Growth Management Program for the City. Elements of the GMP include this Transportation & Transit Master Plan, annual review of the City's 10 year capital works plan, monitoring the component of the capital works program associated with the Development Charges By-law, improved coordination of supply and timing of residential development, and improved communications with the public and other stakeholders. Steps are now being taken to pursue these new growth management initiatives.

E. KEY TRANSPORTATION ISSUES AND CHALLENGES

E.1 Issues

The analysis completed in the initial phase of the Master Plan study has identified many issues. Key issues are as follows:

a) Can Brampton afford to supply sufficient transportation capacity to match the rapid growth in travel demand?
- population and employment growth is continuing at a rapid pace
- significant amount of growth is expected in Greenfield areas
- Brampton's capital budget has increased recently, but may not be able to keep pace with growth due to other demands and funding limitations

b) Does Brampton want a society increasingly more dependent on the automobile?
- auto ownership is very high (81% of households had 2 or more vehicles in 1996)
- transit modal split declined from 1986 to 1996 (only 7% in 1996)
- air quality is deteriorating partly due to increased emissions from motor vehicles

c) Does Brampton need additional sources of funding to accommodate growth and manage the resultant travel demands?
- municipalities only have access to property taxes and development charges
- no contributions come from the Provincial or Federal governments

d) What can Brampton do to reduce the heavy auto travel orientation to other municipalities?
- Only 38% of home-to-work trips remained in the City during the a.m. peak period
- north-south freeways and arterials are heavily congested in south Brampton
- transit modal split for trips to other municipalities is relatively low

e) Is Brampton’s economic vitality dependent on the efficient movement of goods by truck?

- there is a continuing shift from the rail mode
- high percentages of commercial vehicles in traffic stream throughout the day, including peak periods
- extended peak periods add to commercial vehicle delays

f) Will growth in auto and truck travel result in further deterioration of the City's air quality?
   - deteriorating air quality is linked to increasing vehicle emissions
   - incidence of asthma and other respiratory ailments is increasing
   - implementation of electric and hybrid engines has been slower than expected

E.2 From Issues to Challenges

Once the issues have been formulated, the challenges associated with them become evident. Table 1 lists various challenges related to each issue identified in the previous sub-section. They represent a comprehensive list of transportation related challenges facing the City of Brampton.

The primary challenge, within the project mandate, is moving beyond auto dependency to a balanced road and transit system.

The current high level of auto dependency, low level of vehicle occupancy and low transit ridership, combined with the high growth projection for population and employment, poses a huge potential pressure on the road network. A better balance is needed between auto and transit modes, with a re-focusing on the movement of people (and goods), not just the movement of cars, which are generally occupied by only one person at present.

This is an important issue for all sectors of the Brampton economy: businesses need less congested roads on which to move their goods, and healthy communities from which to draw employees and business activity; residents need a high quality of life in terms of air quality, noise and mobility; and workers need effective, low-cost access to employment.

TABLE 1
KEY ISSUES AND CHALLENGES

ISSUES	CHALLENGES
1. Can Brampton afford to supply sufficient capacity to match rapid growth in travel demand?	• How to achieve growth aspirations with reduced increases in travel demand (i.e. smart growth). • How to accommodate greater portions of travel demand by non-auto modes. • How to secure additional sources of funding.
2. Does Brampton want a society increasingly more dependent on the automobile?	• How to accommodate greater portions of travel demand by non-auto modes. • How to make traveling by auto more difficult and/or expensive. • How to reduce the length of auto trips.
3. Does Brampton need additional sources of funding to accommodate/manage growth and resultant travel demands?	• How to secure additional sources of funding. • How to make best use of existing infrastructure, so as to minimize new capital expenditures. • How to allocate limited funds to most cost-effective projects. • How to maintain our infrastructure in a state of good repair.
4. Should Brampton travel be so heavily oriented to other municipalities?	• How to develop a more self-contained City of Brampton.
5. Is Brampton's economic vitality dependent upon the efficient movement of goods by truck?	• How to reduce dependency on trucks. • How to spread truck traffic to off-peak periods. • How to enhance rail and air modes. • How to support efficient movement of goods by truck.
6. Does Brampton want to improve its air quality?	• How to reduce emissions from autos and trucks.

The issues and challenges in Table 1 have been used to develop five strategic initiatives that should be addressed through the Transportation & Transit Master Plan. These five initiatives are presented in Table 2, together with the major elements within them and the key stakeholders involved in realizing them.

TABLE 2
STRATEGIC INITIATIVES: ELEMENTS AND STAKEHOLDERS

INITIATIVES	MAJOR ELEMENTS	AGENCIES INVOLVED
BALANCING AUTO AND TRANSIT (Issues 1,2, 4 and 6 above)		
1. Developing a balanced auto/transit system	• Developing transit connections that serve travel patterns within and beyond the City boundaries; • Developing appropriate neighbourhood transit services that feed into and support these municipal and regional services; • Funding transit service enhancements; • Avoiding over-supply of road capacity as the network grows and moves towards the balanced state	• City of Brampton • Region of Peel
2. Coordinating transportation planning with land use planning	• Coordination of policies between the two disciplines; • Ongoing application of mechanisms for incorporating transportation concerns into land use planning decisions, and vice versa; • Defining common ground between the business community and the City, Region and MTO in terms of planning objectives	• City of Brampton
3. Coordinating transit operations with traffic operations and road design, to provide the transit priority needed to attract choice riders	• Defining common goals and direction for the Regional road network; • Ongoing application of mechanisms for incorporating transit needs into traffic engineering and road design; • Ongoing cooperation with the Region with respect to signal systems, ITS and traffic progression	• City of Brampton • Region of Peel
FUNDING (Issue 3 above)		
4. Securing/leveraging new sources of funding	• Consider public-private partnerships • Create a share capital corporation to fund infrastructure investment	• City of Brampton • Federal government • Provincial government • Potentially Region of Peel
GOODS MOVEMENT (Issue 5 above)		
5. Developing an effective goods movement system	• Defining overall type of system: pro-active (i.e. a set of truck routes) or reactive (i.e. prohibiting trucks on streets as conflicts arise) • Working with the Region of Peel to develop and maintain truck route system • Maximizing use of rail infrastructure for goods movement • Limiting conflicts with other land uses and transportation needs (e.g. pedestrian and cycling networks)	• City of Brampton • Region of Peel • Industry stakeholders

Need for Coordination with the Region of Peel

Summarizing the key approach elements from Table 2, the majority of the elements can be addressed through the technical process of the TTMP project. One jurisdictional element stands out, however, as an exception. Coordinating transit operations, traffic operations and road design with the Region of Peel will require direction from senior management. This is an important element, relating to the proposed transit "spines" of Queen Street and Main Street. Queen Street is under the jurisdiction of the Region, as are all intersections of Main Street/Hurontario Street with Regional roads. Any differences between the City's and Region's objectives for these roads (and any other Regional roads that are identified as significant transit corridors through the TTMP) need to be reconciled, within the objective of moving the maximum volume of people and goods effectively in these corridors.

F. STRATEGIC OPTIONS

As part of the Master Plan Class Environmental Assessment process, it is important to identify distinct alternatives for Brampton's strategic transportation direction. This is intended to define the available range of options for consideration by Council, stakeholders and the public.

We believe that there are three distinct strategic options that should be thoroughly debated:

- Option 1: Auto Focus (status quo)
- Option 2: Multi-modal Focus
- Option 3: Transit Focus

Each option must address all elements in transportation - namely roads, transit, cyclists and pedestrian facilities, as well as operational strategies, complementary land use strategies, policies and programs, goods movement and funding. A brief description of each option follows below. The options represent distinct alternatives in terms of the degree of pro-activity in management of travel demand and the relative emphasis between the modes.

Before presenting the options, it should be noted that they represent points on a spectrum of options. Figure 2 presents this spectrum in a conceptual fashion, in terms of funding for roads and transit, as well as associated major trade-offs. The trade-off factors include:

- Investment requirements for roads and transit
- Impacts on communities and the natural environment
- Need for pro-active policies and programs to manage travel modes and patterns
- Volume of induced traffic (studies have shown that road expansions tend to generate

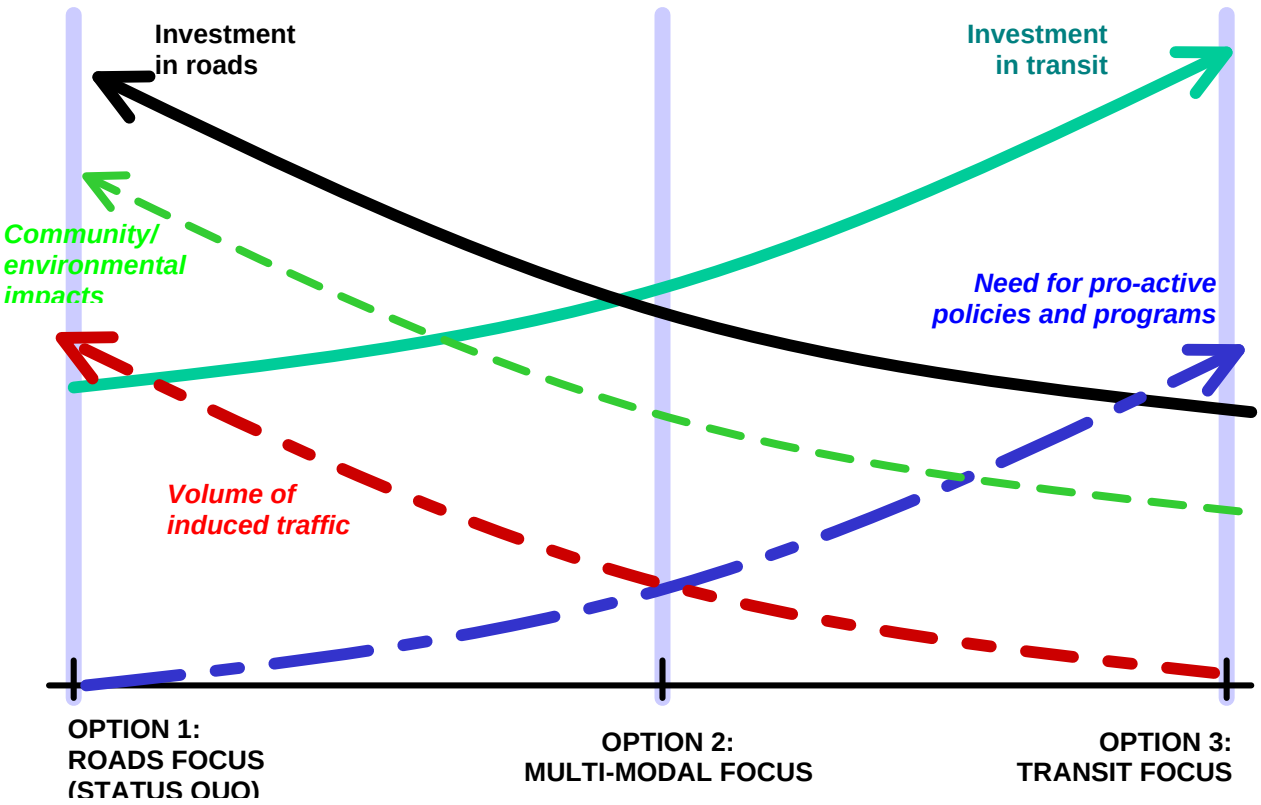


Figure 2. Trade-offs between the Strategic Options

additional demands beyond the base projections originally used to justify the roads)

These factors have been selected to assist the reader in understanding the spectrum of actions and impacts related to the options.

At the end of the TTMP process, the preferred alternative may contain elements of two or more of these three options. The options will also continue to evolve and develop as the study progresses.

In developing the multi-modal and transit-oriented options, the following principles have been reflected, relating to desirable elements of a transit-oriented community:

- Create self-contained urban areas linked by a transit system
- Encourage a better mix of uses; discourage large areas zoned for single uses
- Concentrate higher density, mixed-use development into activity nodes
- Develop major transit routes as medium density, mixed-use activity corridors

- Create a transit-supportive development pattern
- Develop compact, pedestrian-oriented activity nodes

These guidelines can be applied with varying levels of intensity. These varying levels have been reflected in the multi-modal and transit focused options.

The options are described in Table 3.

TABLE 3
STRATEGIC OPTIONS

OPTION 1: ROADS FOCUS	
Strategic Direction	• Continuation of the status quo, in terms of single occupant auto-based planning. Growth would be accommodated by building more roads • While it represents the "do nothing" option, capital improvements would still be necessary to cope with deficiencies, and other improvements would be made incrementally to remedy local problems • Future improvements would focus on operational strategies to improve vehicular transportation (such as ITS technologies and perhaps high occupancy vehicle lanes)
Management Of Travel Demand	• Continued expansion of roadway networks, planned with little attempt to proactively manage travel patterns or modes
Key Elements	• Major freeway improvements and extensions • A grid network of 4 to 6-lane arterial roads, supported by 4-lane collector roads. Potential need for 8-lane arterials • Status quo design standards and practices with respect to the collector/local road network and transit service expansions
Implications For Land Use	• Development would continue to be auto-focused, and land use would be dispersed and generally of low density
OPTION 2: MULTI-MODAL FOCUS	
Strategic Direction	• Expenditure and investment in roads and transit would be balanced, addressing links within Brampton and connections to adjacent municipalities • Transit oriented development • Transit capital and operating expansion would be supplemented with supporting policies and programs, such as transportation demand management (TDM) and transit priority measures • Growth in travel demand would be accommodated, but through a significant increase in transit modal split.
Management Of Travel Demand	• Moderately pro-active management of demand, through programs and policies designed to encourage transit use while not excessively penalizing auto use

Key Elements	• Inter-regional Bus Rapid Transit service on Queen (“BY Line”), Main ("Main Line") and to Airport Corporate Centre • Increased GO Transit rail and bus service • Grid network of bus services thorough Brampton • Strong grid of transit links to Mississauga • Enhanced transit priority at terminals • Supporting policies and programs • Transit focus in subdivision, land use planning • Limited freeway expansions and extensions, taking HOV/RBL into consideration as possible elements • Grid of 4-lane arterial and collector roads to support transit service
Implications For Land Use	• A significant increase in transit oriented development • Nodes and corridors as focus of higher-density development
OPTION 3: TRANSIT FOCUS	
Strategic Direction	• Focus predominantly on funding and supporting transit to accommodate future growth. Proportional investment in roads will gradually decrease. • More innovative, pro-active measures to maximize transit modal split, by transit-supportive investment focus and planning policies • Auto disincentive policies will be implemented • Planning policies and development allocations will be re-focused to support transit, in terms of grid of local road networks and mixed use areas with smaller parcels
Management Of Travel Demand	• Strong management of demand, through policies intended to discourage use of single occupant vehicles
Key Elements	Elements of Option 2, plus the following. • Future planning of subdivisions based primarily on transit/walking accessibility • Land use allocations strongly re-focused to foster transit use (mixed-use corridors and nodes) • Auto disincentive policies, such as limits on parking, restrictions on development and location of parking • Grid of HOV/RBL lanes throughout the City • Strong grid of transit links to Mississauga • Limited freeway expansions, including tolls and HOV/RBL lanes. Potential conversion of one existing lane per direction to HOV/RBL
Implications For Land Use	• Strong re-orientation of land use to transit supportive forms • Re-focusing of development densities to support nodes and corridors • Transit terminals designated as primary development intensification sites

G. INITIAL ASSESSMENT OF THE STRATEGIC OPTIONS

An initial comparison of the three options is shown in **Table 4**. This comparison is based on key factors reflecting the goals of the Official Plan, Strategic Plan and Growth Management Program.

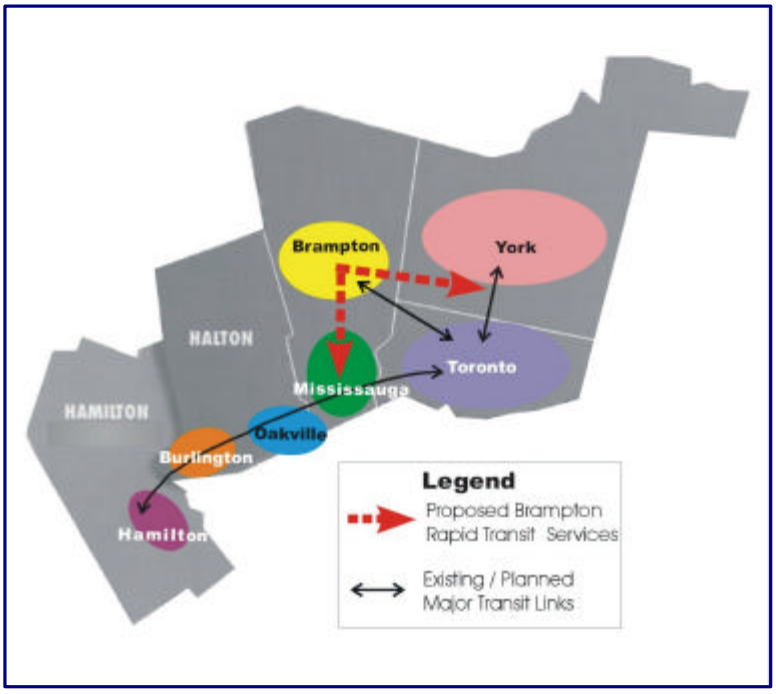
TABLE 4
PRELIMINARY EVALUATION OF STRATEGIC OPTIONS

	Option 1 Auto Focus (status quo)	Option 2 Multi-modal Focus	Option 3 Transit Focus
Compatibility with Strategic Plan and Growth Management Program	Low	Moderate to high	High
Effect on transit share	Decrease	Increase	Significant increase
Support for alternate modes	Decrease	Increase	Significant increase
Environmental impacts	Increase	Decrease	Significant decrease

H. MOVING FORWARD ON TRANSIT: *Accele*RIDE RAPID TRANSIT INTIATIVES

In addition to the step-by-step work on the TTMP long term options, there is a second parallel stream of activity under way to move ahead with the enhancement of the Brampton Transit network connections to adjacent municipalities. It is important to move ahead now with these rapid transit initiatives, to take advantage of funding opportunities from the Provincial and Federal governments.

The graphic at right illustrates Brampton's situation relative to existing and currently proposed transit initiatives (in a highly conceptual way). Brampton needs to connect into the regional transit network, to adequately serve the transportation needs of its growing population and workforce. Brampton's needs have not been adequately addressed by the current thinking on rapid transit networks.



The City is developing a program for implementation of rapid transit services, to be called ***Accele*RIDE**. The primary focus of this program is to develop a plan for implementation of Bus Rapid Transit on two corridors:

1. Queen Street (from Main Street east, linking into York Region and the Toronto Transit Commission network); and
2. Main Street/Hurontario Street, linking into the City of Mississauga and the Mississauga City Centre Transit Terminal.

Bus Rapid Transit (BRT) involves a combination of measures intended to give buses priority over other vehicles in terms of travel time, through traffic signal priority and/or geometric design features of the roadway (or in some cases, provision of a separate busway). It also typically involves provision of enhanced passenger facilities, information and vehicles. Examples of BRT systems are shown at right.

BRT's key advantages are its flexibility, low initial capital investment requirements, and potential for incremental expansion.

BRT may be an initial stage towards implementation of a higher order rapid transit system, like Light Rail Transit (LRT) in the longer term. This will depend on the outcome of the TTMP analysis.

The City of Brampton is moving ahead with the ***Accele*RIDE** program on a number of fronts. These include working cooperatively with:

- The Region of Peel, to implement BRT on Queen Street
- The City of Mississauga, to implement BRT on Main Street/Hurontario Street
- The Region of York, to implement the BRT connection across Queen Street/Highway 7 to Yonge Street and beyond
- GO Transit, to ensure coordination of efforts

The City is also proceeding with an application for Provincial funding under the Golden Horseshoe Transit Investment Program (GTIP).

How does this relate to the TTMP?

Figure 3 illustrates the relationship between the various outcomes from the TTMP, including the ***Accele*RIDE** program. While the streams must continue in parallel to some extent (due to the GTIP funding deadlines), the ***Accele*RIDE** program and the other TTMP analyses will continually interact as the project progresses, sharing data and analysis results.

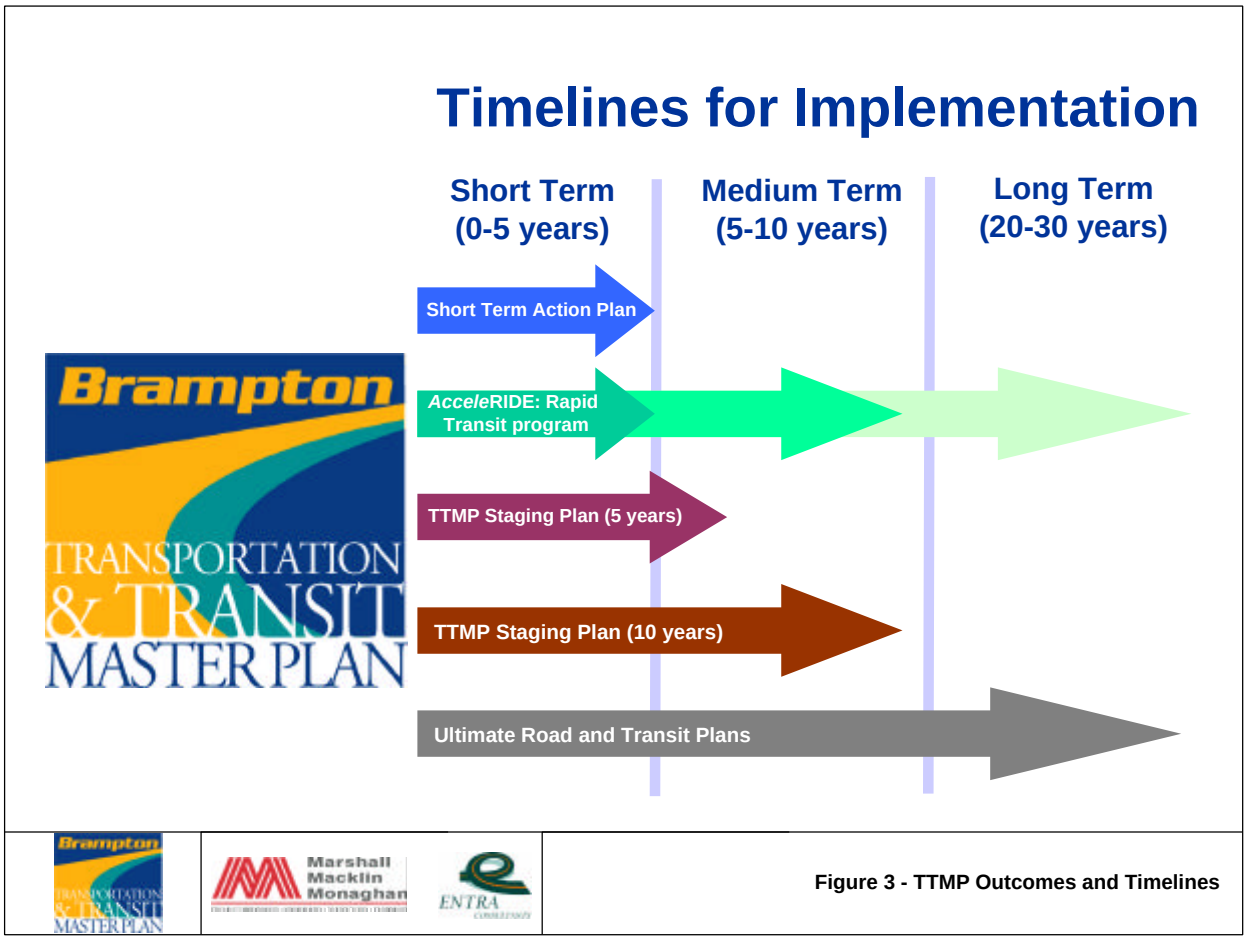


Figure 3 - TTMP Outcomes and Timelines

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