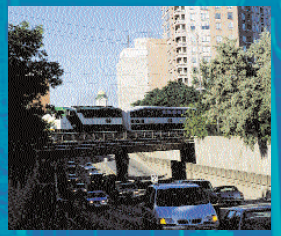
Brampton

Executive Summary



Transportation & Transit Master Plan

June 2004

Marshall Macklin Monaghan
PROJECT MANAGERS • ENGINEERS • SURVEYORS • PLANNERS

in association with

ENTRA CONSULTANTS

CITY OF BRAMPTON
www.city.brampton.on.ca

1. PURPOSE OF THE TTMP

Brampton is a rapidly growing urban municipality, prominently located within the Greater Toronto Area. Because of the City's vitality, congestion is being increasingly experienced by Brampton residents, visitors and businesses. As with the rest of the GTA, this situation is expected to continue into the future.

The Transportation and Transit Master Plan (TTMP) defines a long-term multi-modal transportation strategy to manage the City's growth over the next 30 years, and establishes a framework for all future transportation decisions. The TTMP sets out policies and programs to support the long-term transportation vision for the City, and includes an implementation strategy based on 10-year horizon intervals. The TTMP also set outs a Short-Term Action Plan for the next five years, to address current needs and deficiencies, and to begin to work towards the long-term vision.

The fundamental strategy of the TTMP vision is to plan for a balanced road and transit system. The current system is heavily reliant on the private vehicle, but such a reliance will be increasingly less feasible as Brampton continues to grow. It is not the goal of the TTMP or the long-term vision to eliminate transportation activity/congestion, but rather to provide the tools needed to effectively manage it as the City grows. The TTMP's recommendations have been developed in compliance with the direction of the City's Strategic Plan, which includes a Modern Transportation system as the first of six pillars supporting our great City.

2. PLANNING PROCESS

The TTMP study included a consultation program to involve the public, following the "**Master Planning Process**" set out in Ontario legislation for Municipal Class Environmental Assessments. This process integrates the planning of municipal infrastructure requirements with the principles of Environmental Assessment Planning. The preparation of this TTMP thus meets the requirements of both the Ontario Environmental Assessment (EA) Act and the Planning Act. The TTMP will be used to support future environmental assessments for specific transportation infrastructure improvements.

Three public consultation sessions have been held. At the first, the public defined their concerns. These included challenges such as: traffic congestion and time of travel; public transit deficiencies; and travel on Highway 410 and Bovaird Drive. Needs expressed by the attendees included: roads widenings and extensions; Brampton Transit/GO Transit service improvements; traffic operational improvements (mostly in terms of signal coordination, access and traffic calming); development hold-backs and better relationship between planning of transportation infrastructure and development, and bike lane and carpool/bus lanes.

At the second session, the public were asked for their opinions on strategic choices for the Brampton transportation system, between the status quo (i.e. road-based planning); balanced multi-modal strategy, and a "transit-first" option. The public supported the balanced multi-modal strategy. At the third session, the public were presented with the road and transit network recommendations. The main concern noted was the ability to implement the recommendations given the availability of funding.

As part of the EA process, the final report has been made available for a 30-day review period following the notice of completion.

3. CURRENT TRANSPORTATION SYSTEM AND FUTURE CHALLENGES

The transportation system faces numerous challenges in realizing the balanced vision. A review of existing travel patterns provides the context for understanding these challenges. The existing travel patterns show that:

- The vast majority (80 percent) rely on private vehicles for travel to work and other trips. Interestingly, Brampton has a high percentage of trips made on foot, by bicycle or other (13 percent); this is higher than many municipalities in the Greater Toronto Area, and is an achievement to build on (See **Figure 1**);
- There are heavy tidal traffic flows out of the City during the a.m. peak period and back during the p.m. peak;
- Many Brampton streets exhibit high levels of truck traffic (up to 20 percent or more). While this reflects the importance of goods movement in the City, it also raises unique challenges to managing congestion;

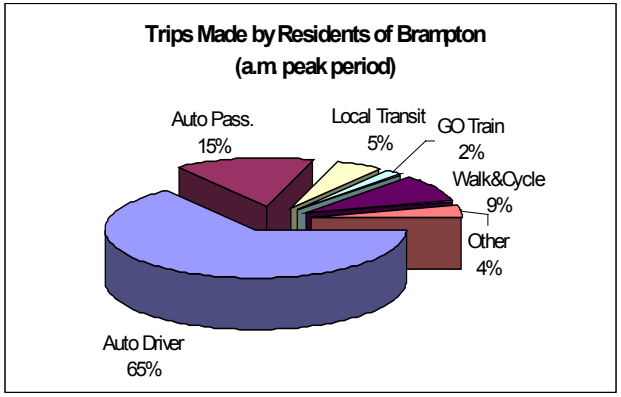
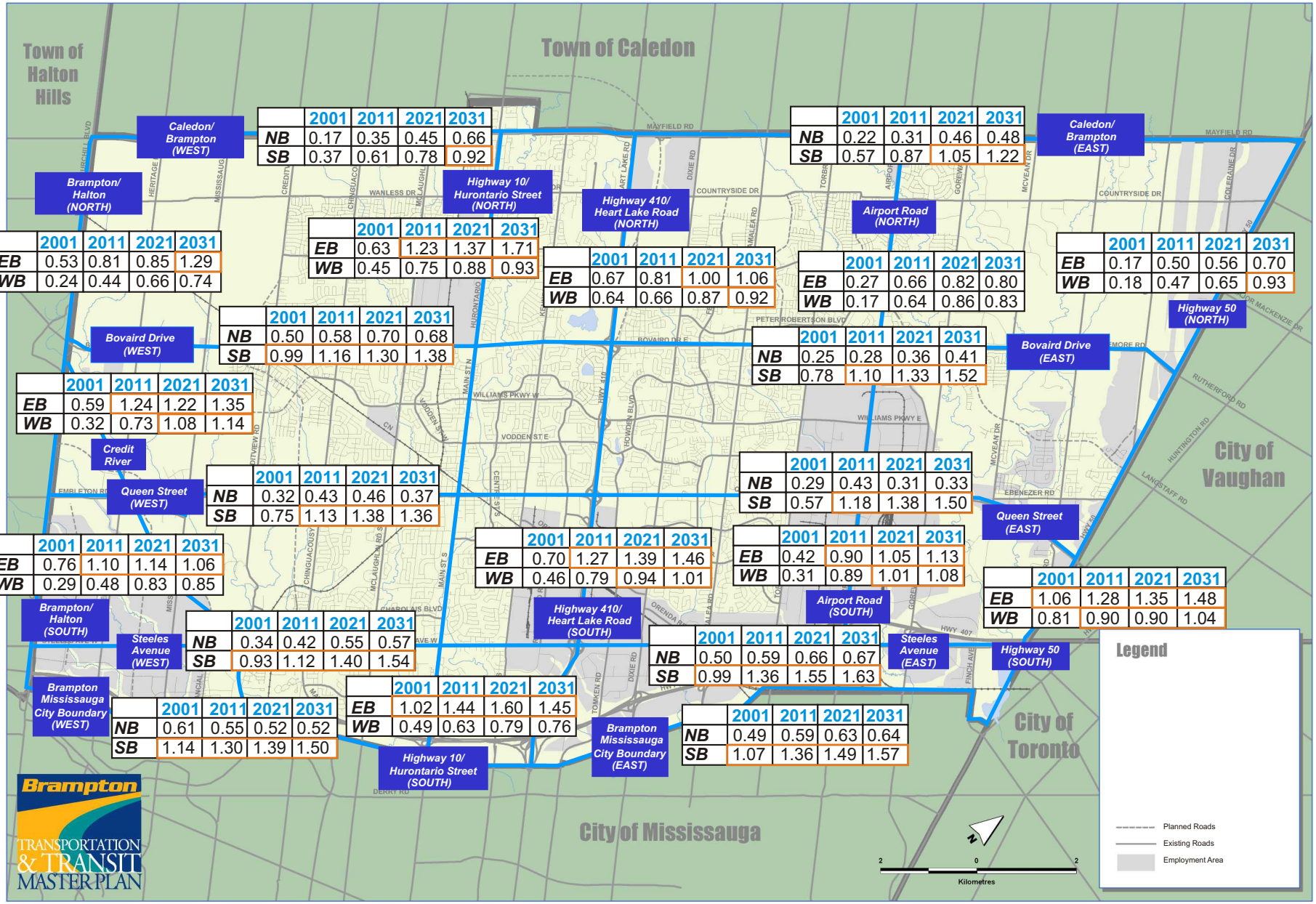


Figure 1: A.M. Modal Split Based On Trips Made by Residents of Brampton

Roads are an issue, for public transit linkages and private vehicle trips:

- The rapid pace of growth in the City has left gaps in road infrastructure in many locations and some provincial highway initiatives previously factored into the City's development have not materialized;
- The Credit River poses a challenge for road network connections on the western side of the City, both north-south and east-west;
- The Claireville Conservation Area and Humber River valley lands pose a major constraint to the eastern section of the network;
- Rail lines and provincial freeway facilities also pose obstacles for municipal transportation linkages;
- Several intersections have major jogs, due to the presence of natural or man-made obstructions: Queen Street West / Mississauga Road / Embleton Road, and Creditview Road / Highway 7.



	2001	2011	2021	2031
NB	0.17	0.35	0.45	0.66
SB	0.37	0.61	0.78	0.92

	2001	2011	2021	2031
NB	0.22	0.31	0.46	0.48
SB	0.57	0.87	1.05	1.22

	2001	2011	2021	2031
EB	0.53	0.81	0.85	1.29
WB	0.24	0.44	0.66	0.74

	2001	2011	2021	2031
EB	0.63	1.23	1.37	1.71
WB	0.45	0.75	0.88	0.93

	2001	2011	2021	2031
EB	0.67	0.81	1.00	1.06
WB	0.64	0.66	0.87	0.92

	2001	2011	2021	2031
EB	0.27	0.66	0.82	0.80
WB	0.17	0.64	0.86	0.83

	2001	2011	2021	2031
EB	0.17	0.50	0.56	0.70
WB	0.18	0.47	0.65	0.93

	2001	2011	2021	2031
NB	0.50	0.58	0.70	0.68
SB	0.99	1.16	1.30	1.38

	2001	2011	2021	2031
NB	0.25	0.28	0.36	0.41
SB	0.78	1.10	1.33	1.52

	2001	2011	2021	2031
EB	0.59	1.24	1.22	1.35
WB	0.32	0.73	1.08	1.14

	2001	2011	2021	2031
NB	0.32	0.43	0.46	0.37
SB	0.75	1.13	1.38	1.36

	2001	2011	2021	2031
NB	0.29	0.43	0.31	0.33
SB	0.57	1.18	1.38	1.50

	2001	2011	2021	2031
EB	0.76	1.10	1.14	1.06
WB	0.29	0.48	0.83	0.85

	2001	2011	2021	2031
EB	0.70	1.27	1.39	1.46
WB	0.46	0.79	0.94	1.01

	2001	2011	2021	2031
EB	0.42	0.90	1.05	1.13
WB	0.31	0.89	1.01	1.08

	2001	2011	2021	2031
EB	1.06	1.28	1.35	1.48
WB	0.81	0.90	0.90	1.04

	2001	2011	2021	2031
NB	0.34	0.42	0.55	0.57
SB	0.93	1.12	1.40	1.54

	2001	2011	2021	2031
NB	0.50	0.59	0.66	0.67
SB	0.99	1.36	1.55	1.63

	2001	2011	2021	2031
NB	0.61	0.55	0.52	0.52
SB	1.14	1.30	1.39	1.50

	2001	2011	2021	2031
EB	1.02	1.44	1.60	1.45
WB	0.49	0.63	0.79	0.76

	2001	2011	2021	2031
NB	0.49	0.59	0.63	0.64
SB	1.07	1.36	1.49	1.57

Brampton TRANSPORTATION & TRANSIT MASTER PLAN

Marshall Macklin Monaghan
PROJECT MANAGERS • ENGINEERS • SURVEYORS • PLANNERS

ENTRA CONSULTANTS

Figure 3: V/C Ratios with 10-Year Capital Plan Improvements Only

Note: includes both the City & Regional roads, based on A.M. peak hour model results

J:\2002jobs\16-02083.jwg\Reports\Executive Summary\Figure 3 - VC Ratios.cdr

Transit

Brampton's local transit system is circuitous to some extent. Also, compared to other similar municipalities, it has been under–funded, and thus there is the issue of catching up before pro-actively planning for the future. Brampton is not well-served by rapid transit; only the GO Georgetown Rail Service links Brampton to Toronto. Brampton Transit operates a variety of surface routes throughout the City, and maintains important links with Mississauga Transit and York Region Transit. Ridership has grown steadily since 1994 (60 percent through 2002) and per capita ridership has also increased (see **Figure 2)**.

The Brampton Transit system is effective and efficient in serving its current customer base, with 68 percent of its routes representing 90 percent of the service hours operating at good or excellent performance levels. Few routes can be categorized as poor performers, and many of these are introductory services in newly developing areas.

The key deficiencies of the existing system lie in service coverage in developing areas, frequency and reliability of service, and directness of routing in meeting the needs of the travelling public.

Frequency and reliability are fundamentals in making the system attractive. During peak periods, many routes are experiencing crowded conditions and service reliability problems as congestion increases. Evening services, reduced in the 1990s in response to budget pressures, are insufficient to promote and attract ridership.

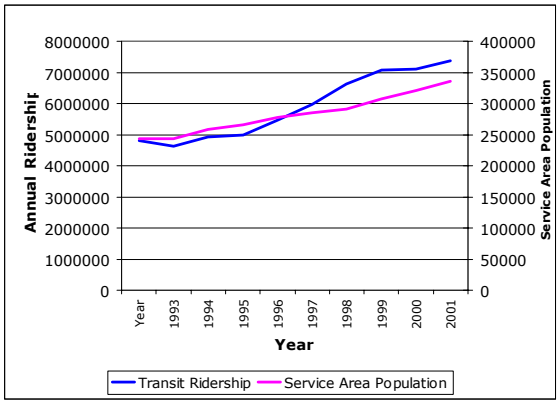


Figure 2 Comparison of Transit Ridership vs. Population Growth

Brampton Transit has historically operated on essentially a radial system increasingly characterized by users and non-users as circuitous and slow. Major corridors have gaps in service, including gaps in key road links, and detours designed to accommodate small pockets of ridership are numerous.

Current And Projected Road Conditions

To define current conditions, a comparison of demand to capacity has been completed for screenlines within the City. Screenlines represent major cordons of movement (for example, across the Credit River); demand crossing the screenline divided by capacity is an accepted measure of the system's performance. The weekday a.m. peak hour has been the focus of the assessment. Key results of the comparison of volume to capacity (v/c) for each horizon year are shown in **Figure 3.**

The projected demand on numerous screenlines exceeds theoretical capacity. Road capacity deficiencies are generally concentrated in the south end of the City, and are heavily related to travel to/from the adjacent municipalities of Mississauga, Toronto, and York Region; however, internal growth in the north end along Bovaird Drive has created the need to address the road network in that area, as

well. In terms of the overall magnitude of trips and level of congestion, the Highway 50, Mississauga-Brampton boundary and Highway 410/Heart Lake Road screenlines are the most heavily loaded, relative to capacity. Southbound traffic volumes are significantly higher than the northbound volumes crossing all the east-west screenlines during the a.m. peak hour. Screenline volume to capacity ratios of greater than 0.9 represent locations where a congested level of service may occur on come of the corridors that cross that screenline. The TTMP analysis has shown that the 10-Year Capital Works program of road improvements is not sufficient to address these demands. Further enhancements will be needed.

Future Challenges

Future network challenges are projected to be numerous. Key challenge areas are expected to include:

- Coping with projected growth - The City is experiencing high growth in population and employment. Over the next 30 years, population and employment levels are forecasted to double, based on the City's analysis. By the year 2031, the population of Brampton is expected to double to 680,000 and employment is expected to approximately double, to 292,000;
- The Four Corners of downtown Brampton – crossroads for both major auto and transit movements, due to limited lane capacity and the limited ability to increase the number of lanes /add roads;
- Credit River crossings, as development proceeds west;
- North-south links to Mississauga and the Airport. Opportunities for road network expansion are limited, particularly in the highest demand area (Hurontario – Highway 410 – Airport Road). The Highway 407 corridor is a major constraint because of the costs associated with widening grade-separated structures;
- Travel along Steeles Avenue, especially in the vicinity of Highway 410 - challenges of accommodating high truck volumes in an increasingly urban corridor; and
- Accommodation of north-south transportation demands in Bram West and Northwest Brampton.

Future challenges for transit in Brampton are both immediate and long-term. Immediate challenges include:

- Expanding service to newly developing areas;
- Improving service levels on key routes to accommodate peak demands;
- Improving service levels in off-peak service, particularly evening service, to continue to promote ridership growth;
- Improving transit service levels on a road network that is increasingly congested; and

- Ensuring adequate funding and procurement to accomplish these changes.

In the long-term, the key challenge is to improve modal split performance to accommodate anticipated growth. Population and employment forecasts for 2011, 2021 and beyond will tax the existing transportation system, both road and transit, beyond their capabilities. To manage this growth effectively, the City will need to provide adequate transit resources to promote the growth of effective, fast and reliable services. These changes must include more direct corridor routings, supported by transit priority infrastructure, expanded services, with higher levels of service and supportive policies and land uses.

4. BRAMPTON'S TRANSPORTATION VISION: BALANCING ROADS AND TRANSIT

The preferred strategy is a Balanced Road and Transit system. This was confirmed through consultation with the public. The balanced roads and transit approach is preferred, because it maintains needed accessibility for commercial, transit and other essential vehicular trips, while providing enhanced transit accessibility for all residents and workers in Brampton, improved air quality, and a healthier, more active and involved community.

A Prime Component of the Balanced System: Realistic Planning for Transit

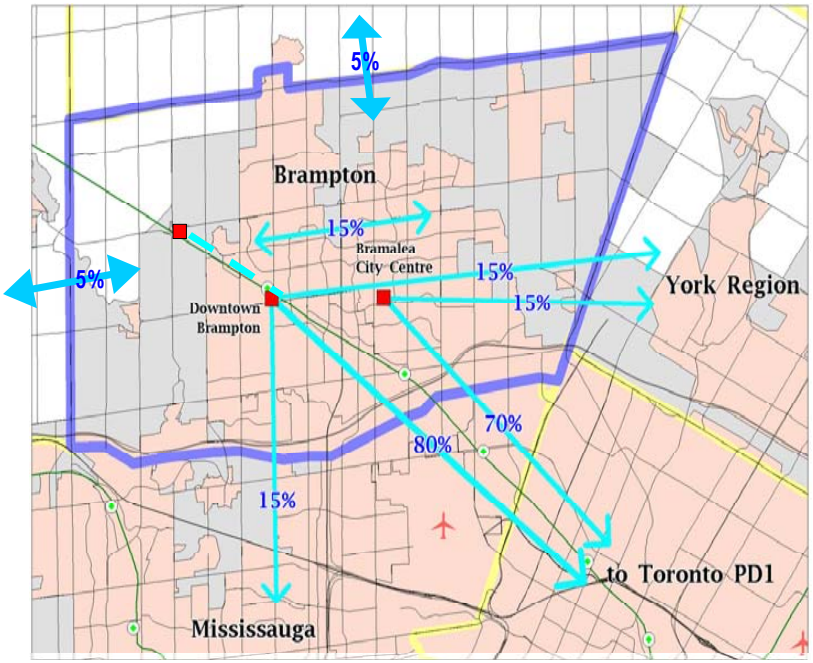


Figure 4: Selected Modal Split Targets for Key O-D Pairs

A core component of the TTMP development has been to define realistically achievable goals for transit networks and loadings within the City. The transit "targets" are based on comparisons with similar, mature origin-destination linkages across the GTA. Expected peak hour transit shares for selected key origin-destination (O-D) pairs are illustrated below.

These discrete targets (as shown on **Figure 4**) are useful in monitoring the system performance and planning for improvements. An overall modal split "target" for the City is not believed to be a very meaningful or useful statistic. The TTMP technical analysis has confirmed that the City's future travel needs cannot be accommodated by road improvements alone. A major increase in the percentage of travel by public transit is essential – a doubling or tripling of the current level, depending on the O-D pair. To achieve this significant shift in modal split, major improvements to transit service will be required, including provision of rapid transit east/west and north/south into Mississauga and York Region, linking into the GTA rapid transit network. Of equal importance are the support systems for transit – re-focusing land use intensity along transit corridors; creation of mixed-use corridors and nodes to generate the all-day, two-way ridership needed for transit to be cost-effective; design of supportive streets and development, and transit-oriented policies and programs.

Key Elements of the Approach: Strategic Framework

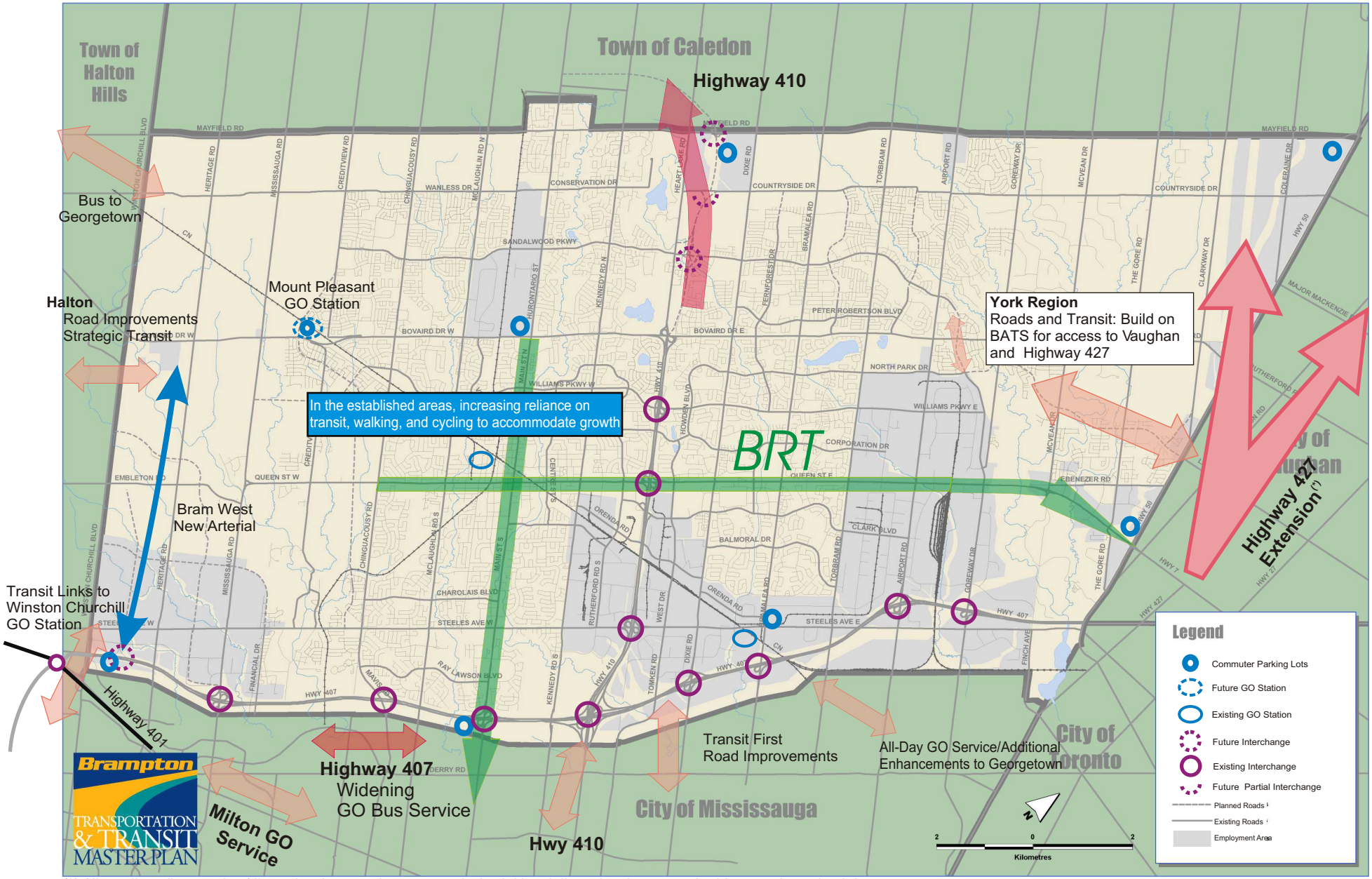
The recommended approach to the Balanced Road and Transit Strategy involves, first and foremost, redressing the imbalance between roads and transit. Continued expansion of the road network will be necessary to accommodate new growth areas, address deficiencies and facilitate reliable and accessible transit service. However, the emphasis must turn to greater investment in the transit network and infrastructure, recognizing the limits for road network expansion. Also, restructuring of the transit concept is needed, to support higher-order transit in a few key corridors or "spines" of the system, and to provide the direct, effective connections needed.

This framework represents the "big moves" that the City should undertake to create the balanced transportation system. The big moves will be supported by a comprehensive slate of specific initiatives and programs. Staging of the strategic framework elements is proposed to be as follows.

Short-Term Elements

Strategic initiatives that will form the core of the short-term approach are shown in **Figure 5a.** They include the following, listed in terms of their expected delivery (if already programmed) or their priority based on the expectation of need:

- Reconfiguration of the Brampton Transit network to provide more corridor-based services;
- Implementation of a inter-regional Bus Rapid Transit (BRT) system along Queen Street and Main Street;
- Extension of Highway 410 and Highway 427;
- Improved connections to Mississauga destinations, including Pearson Airport and closer integration with Mississauga Transit;
- Introduction of transit links to the proposed Winston Churchill GO Station from the southwest quadrant of the City as it develops;
- Establishment of improved transit connections to York Region, in conjunction with the recommended road improvements in the York-Peel Boundary Area Transportation Study (BATS);
- Implementation of Bram West Parkway from Embleton Road to Highway 407, together with a new interchange at Highway 407;
- Implementation of a network of commuter parking lots at gateways to the City;
- Introduction of express transit services on Highway 410 (together with widening);
- Provision of all day GO Rail service on the Georgetown GO line;
- A bus service to Georgetown.



(*) Alternative alignments of the extension are shown on a strategicl level; there has been no decision made up to date.

Marshall Macklin Monaghan
PROJECT MANAGERS • ENGINEERS • SURVEYORS • PLANNERS

ENTRA CONSULTANTS

Figure 5a: Balanced Strategy: Short-term Strategic Framework Elements

J:\2002jobs\16-02083.jwg\Reports\Executive Summary\Figure 5a - Strategic Framework: Short-Term.cdr

Long-Term Elements

The longer term strategy will build on the short-term initiatives over the 10-to-20 year horizon, to achieve the ultimate vision. These elements will continue balancing transit and road-based mobility. It is difficult to ascribe relative priorities to these initiatives, because they depend on the results of the shorter term and because they are seen as progressing more or less concurrently. Strategic initiatives that will form the core of the long-term approach are shown in **Figure 5b.** These include:

- Enhanced transit service in numerous priority corridors, together with continued reconfiguration to a grid-based overlay on community services;
- Expansion of the BRT network in other key corridors;
- Transit priority / exclusivity in the Four Corners (discussed further below);
- Increased reliance on transit, walking and cycling for travel in the core areas of Brampton (i.e. Steeles to Bovaird, Kennedy to McLaughlin);
- Introduction of a multi-modal transportation corridor in west Brampton (completion of Bram West Parkway);
- Express bus to Bolton, to provide an alternative to private vehicles for commuting;
- If a Bolton GO Rail service is implemented, bus links to the stations.

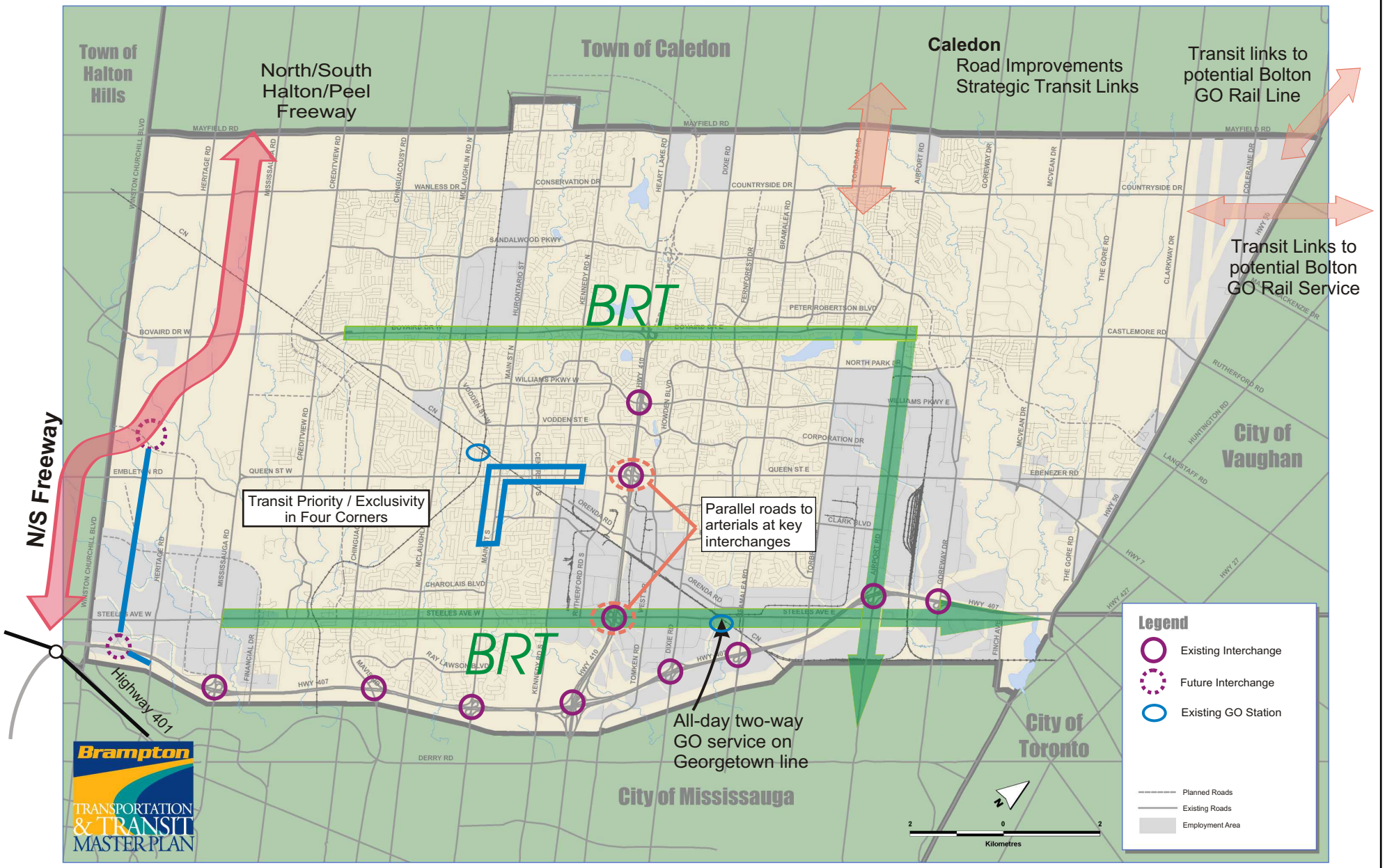
5. EXPANDING THE TRANSPORATATION NETWORK

5.1 Roads

Continued expansion and extension of the road network is essential to provide for new growth areas, intensification of development and accommodation of high-capacity, reliable transit services. At the same time, Brampton Transit should continue to be pro-active in terms of servicing new areas as they develop, in order to build a transit orientation to trip-making.

Road Network and Staging Plans

The road network has been planned based on the strategic framework outlined above, and also taking into account the expected evolution of the network from the current state to the ultimate 2031 proposal. The interim horizons have been modeled in detail as well, as stages towards the ultimate needs in 2031.



Marshall Macklin Monaghan
PROJECT MANAGERS • ENGINEERS • SURVEYORS • PLANNERS

ENTRA CONSULTANTS

Figure 5b: Balanced Strategy: Long-Term Strategic Framework Elements

J:\2002jobs\16-02083.jwg\Reports\Executive Summary\Figure 5b - Strategic Framework Long Term.cdr

In addition to the improvements already planned by the City, the Region, 407ETR and the Ministry of Transportation (MTO), additional road works are needed to cope with growth projected to the 2011 horizon. The City's 10-Year Capital Works Plan improvements are shown in **Figure 6,** together with the Region's improvements for the same horizon. The extension of Highway 427 does not have a definitive associated timeline; the analysis proposes timeframes for implementation. It is understood that the Highway 410 extension is proposed to be completed by 2007.

The following figures show the additional road improvements recommended for implementation on the basis of the detailed computerized travel demand modeling analyses. The dashed lines show additional recommended improvements for each horizon years; 2011, 2021, and 2031.

Figure 7 shows the horizon 2011 additional recommended improvements; **Figure 8** shows the horizon 2021 additional improvements, and **Figure 9** defines the horizon 2031 recommended road improvements. The expansions represent a logical expansion of the road network, reflecting the growth of the City to the north, west and east. These figures also include road/rail grade separations projected to be required as development proceeds.

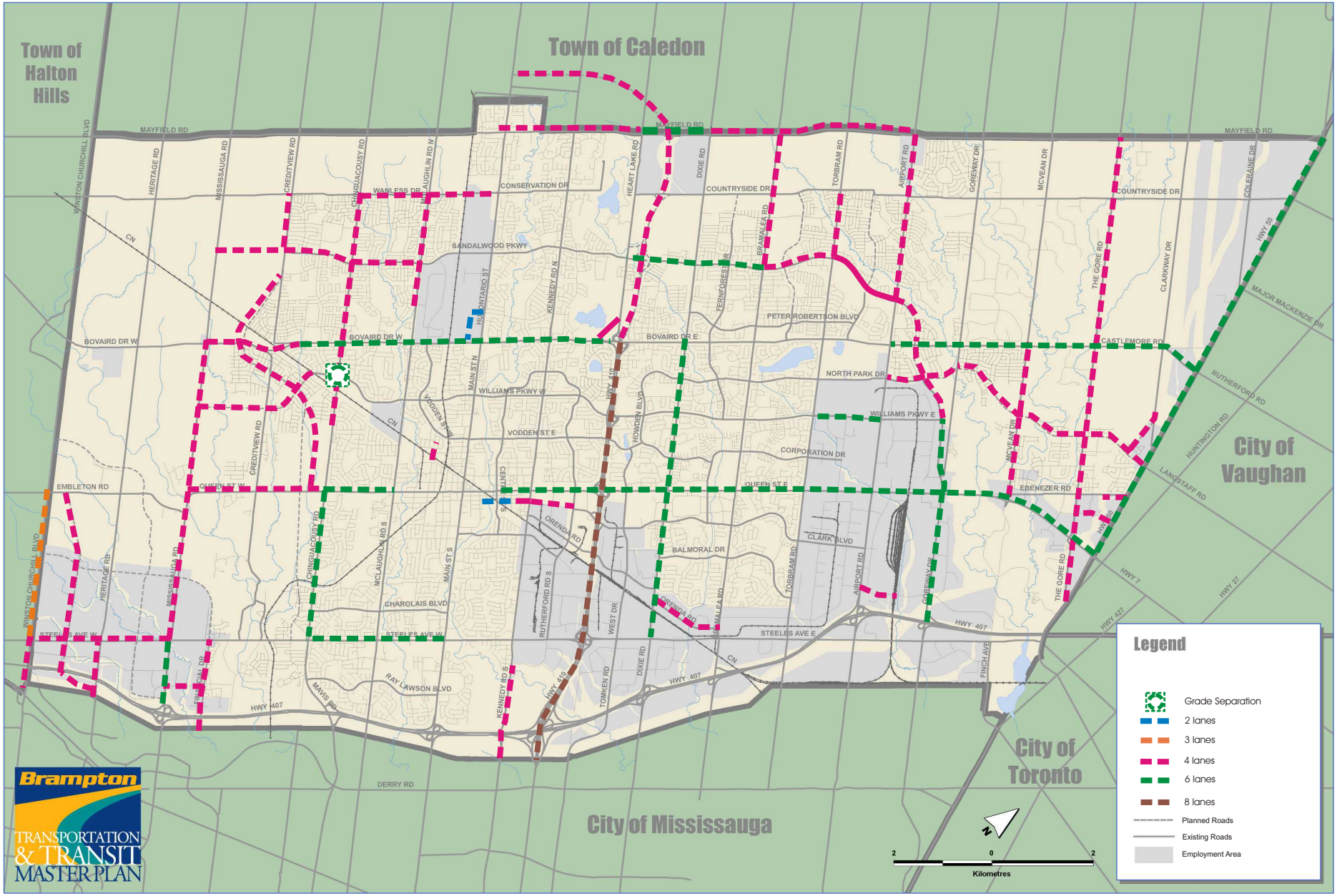
The planning the road network, a maximum cross-section of six lanes has been assumed. Cross-sections beyond six lanes are not conducive to pedestrian crossings or good urban design, they tend to divide communities adjacent to the roadway, and they are not transit-supportive in an environment such as Brampton's. This is an important principle to adopt within the TTMP. Six-lane mid-block cross-sections tend to expand to 8-lane or larger cross-sections at intersections. To avoid these problematic designs, principles are outlined in the TTMP for road spacing.

5.2 Transit

Objectives for the System

The key to transit's success in managing Brampton's growth is providing fast, reliable service directly to key destinations. Brampton Transit must provide a real and attractive alternative to the auto for trips within Brampton and linking to external destinations, by:

- Creating strategic links to adjacent municipalities (and working effectively to share costs of these services) as shown on **Figure 10**;
- Establishing grid-based services in Brampton corridors to provide direct and effective access within the City; and
- Enhancing these grid services by local feeder routes to ensure good local access. Network growth into new development areas in the north and west areas of the city will continue based on these principles.

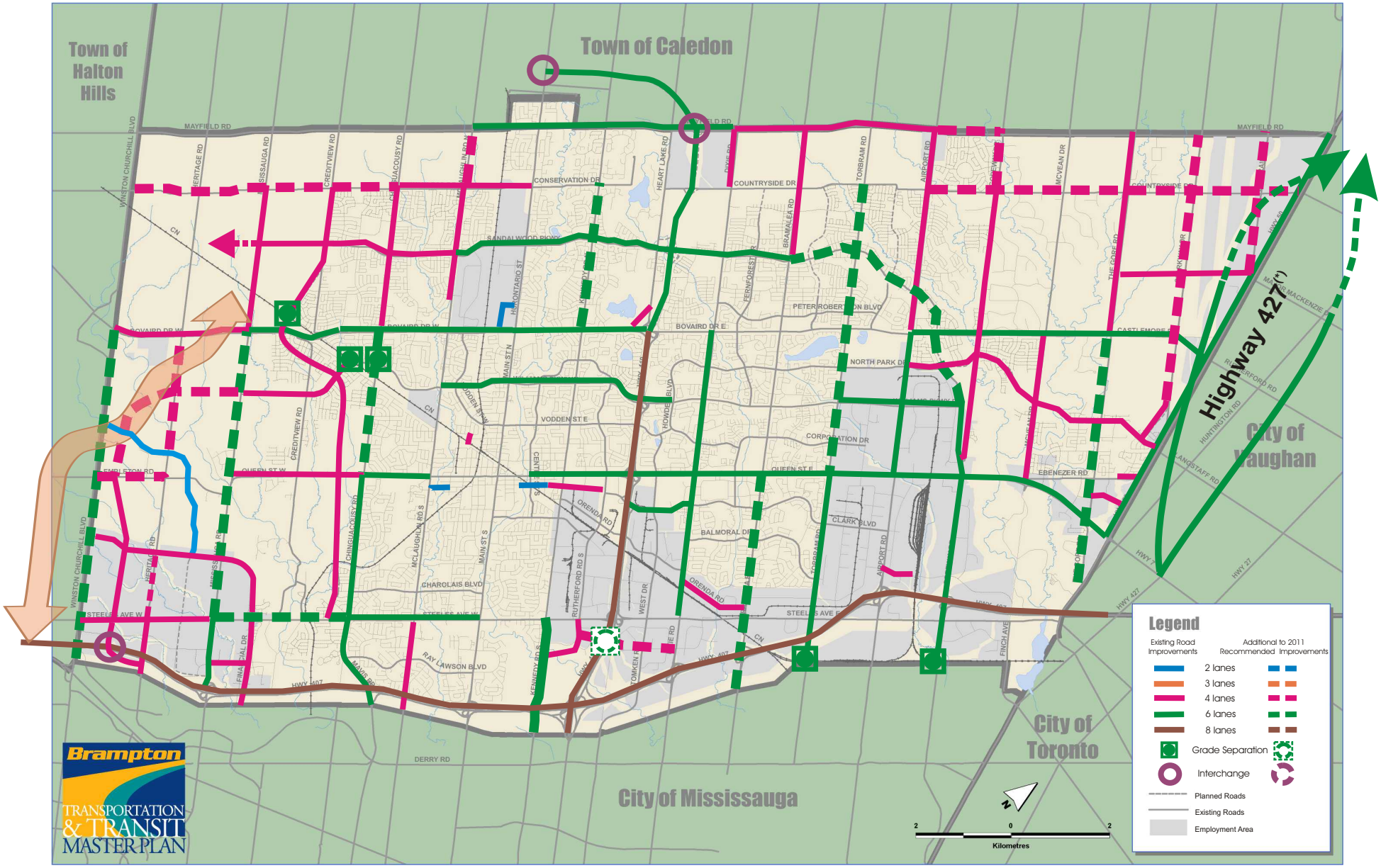


Marshall Macklin Monaghan
PROJECT MANAGERS • ENGINEERS • SURVEYORS • PLANNERS

ENTRA CONSULTANTS

Figure 6: 10-Year Capital Works Program

J:\2002jobs\16-02083.jwg\Reports\Final Report\Figures\Figure 3.12 - 10-Year Capital Works Program.cdr



(*) Alternative alignments of the extension are shown on a strategicl level; there has been no decision made up to date.

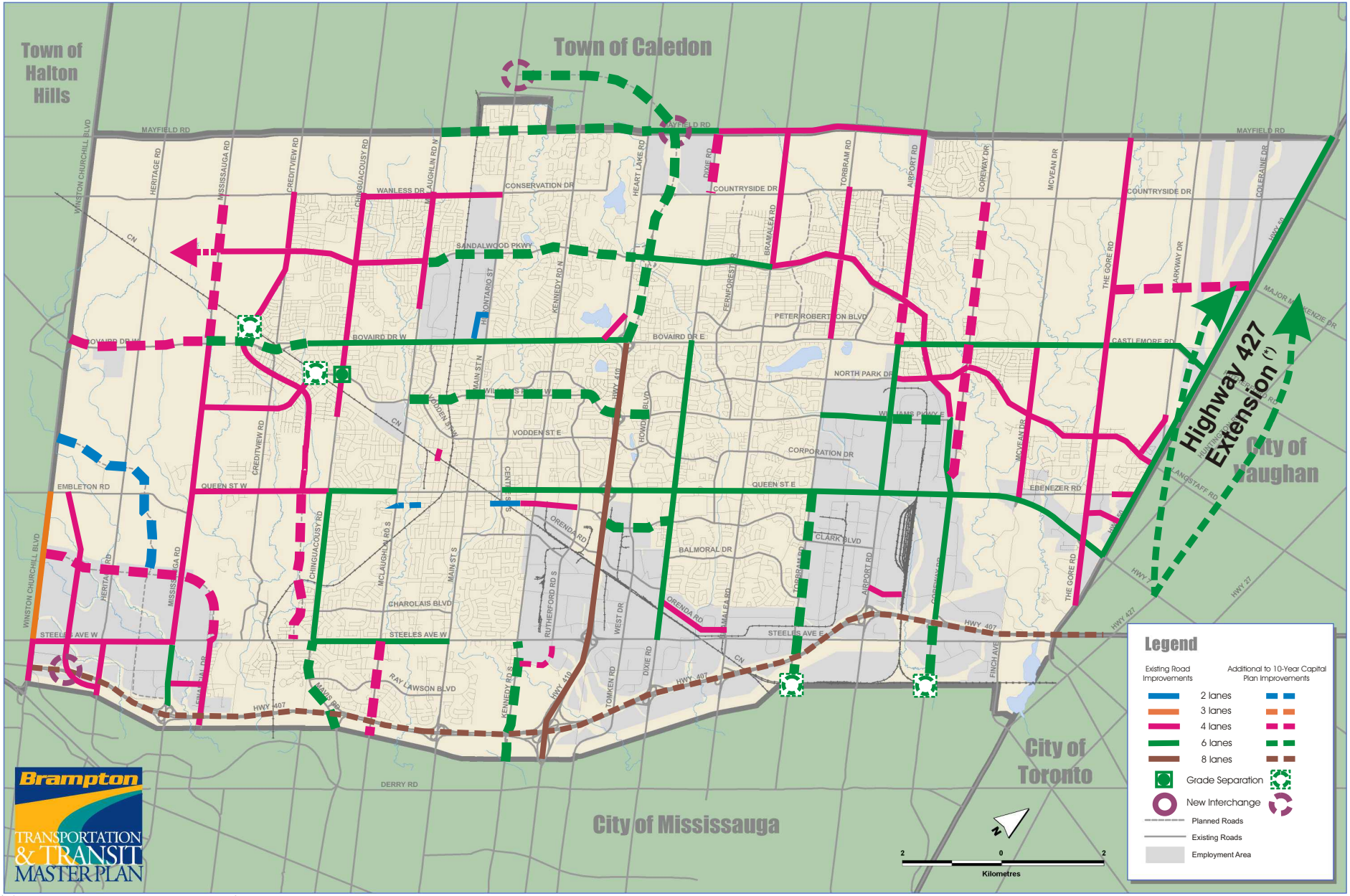
N/S Peel-Halton Freeway is shown conceptually

Marshall Macklin Monaghan
PROJECT MANAGERS • ENGINEERS • SURVEYORS • PLANNERS

ENTRA CONSULTANTS

Figure 8: 2021 Road Network

16-02083.jwg\Reports\Executive Summary\Figure 8 - 2021 Road Network.cdr



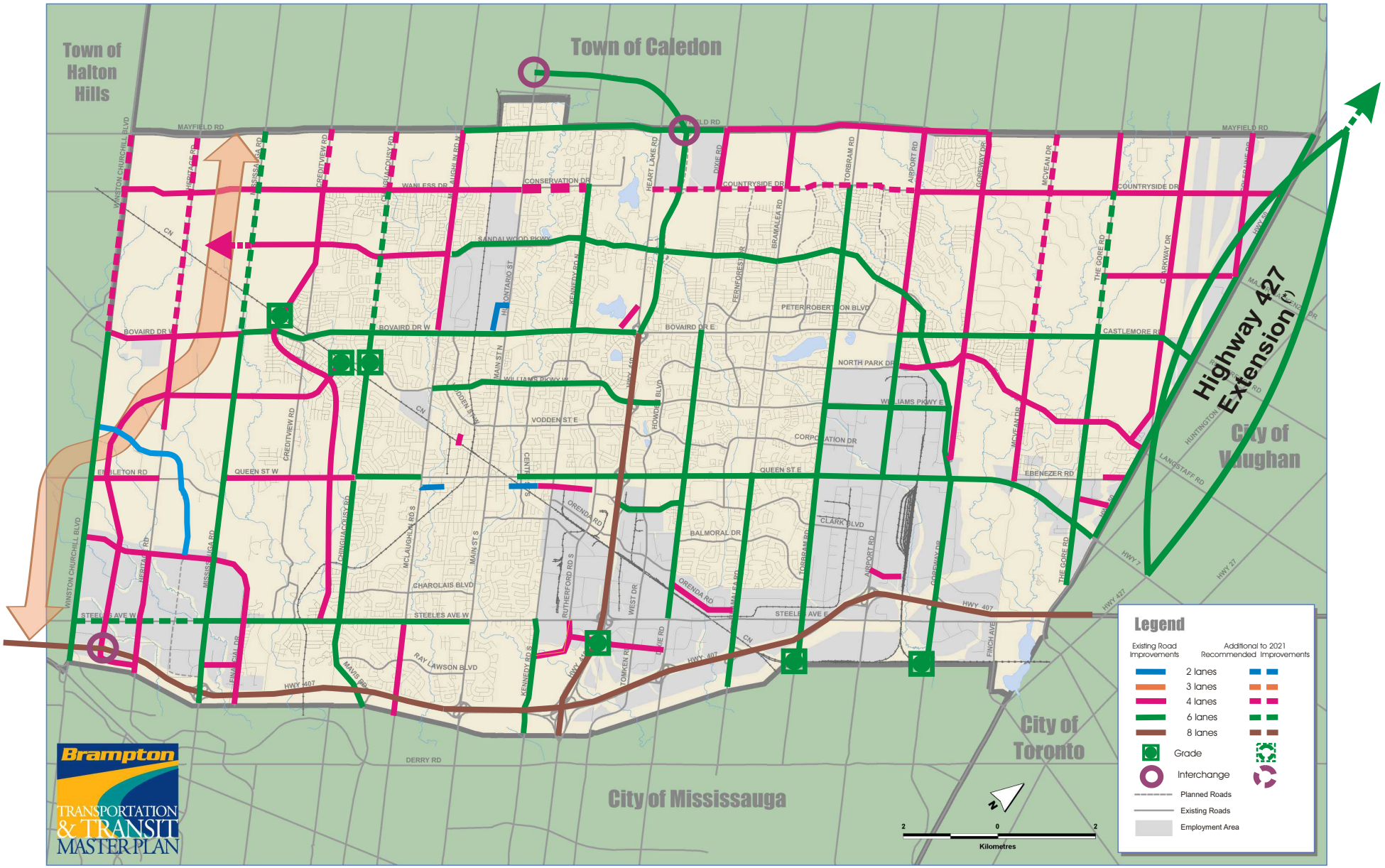
(*) Alternative alignments of the extension are shown on a strategicl level; there has been no decision made up to date.

Marshall Macklin Monaghan
PROJECT MANAGERS • ENGINEERS • SURVEYORS • PLANNERS

ENTRA CONSULTANTS

Figure 7: 2011 Road Network

16-02083.jwg\Reports\Executive Summary\Figure 7 - 2011 Road Network.cdr



(*) Alternative alignments of the extension are shown on a strategicl level; there has been no decision made up to date.

N/S Peel-Halton Freeway is shown conceptually

Marshall Macklin Monaghan
PROJECT MANAGERS • ENGINEERS • SURVEYORS • PLANNERS

ENTRA CONSULTANTS

Figure 9: 2031 Road Network

16-02083.jwg\Reports\Executive Summary\Figure 9 - 2031 Road Network.cdr

Continued growth of the Brampton Transit network and the level of transit mode share in Brampton also depends on integration with GO Rail and Bus services. Enhancement of service on the Georgetown and Milton GO Rail corridors is essential. Introduction of GO Rail service on the Bolton corridor would also assist in balancing mode share in Brampton.

Transit Strategies for 2011 and 2021

The transit strategies for 2011 and 2021 are shown in **Figures 11** and **12**. They define a hierarchy of services designed to service Brampton residents within the City and linking to the rapid transit network beyond its boundaries.

Downtown Brampton

Downtown Brampton (the Four Corners) is the crossroads for east/west and north/south transit, at the Downtown Transit Terminal. Road space downtown is limited. The vision of the TTMP is for this area to become increasingly more transit (and hence pedestrian) oriented. This means increasing the degree of transit priority on Queen and Main, in an incremental manner which continues to balance the needs of transit riders with local business and essential vehicle trips. These incremental steps must be based on a multi-disciplinary planning approach, incorporating economic planning, urban design and transportation (i.e. transit/traffic/parking) planning. In the long-term, grade separation of the bus services in a bus tunnel is recommended. This will also include expansion of the transit terminal.

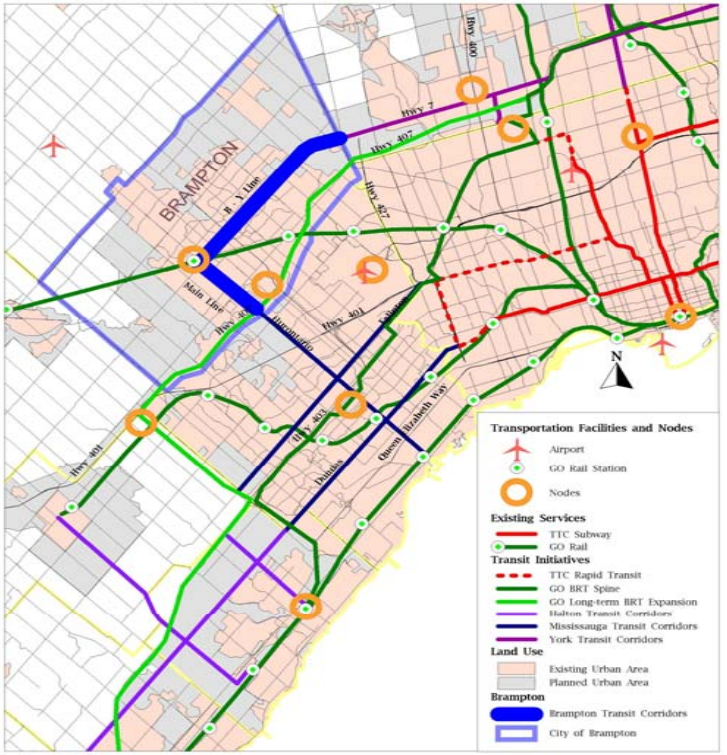
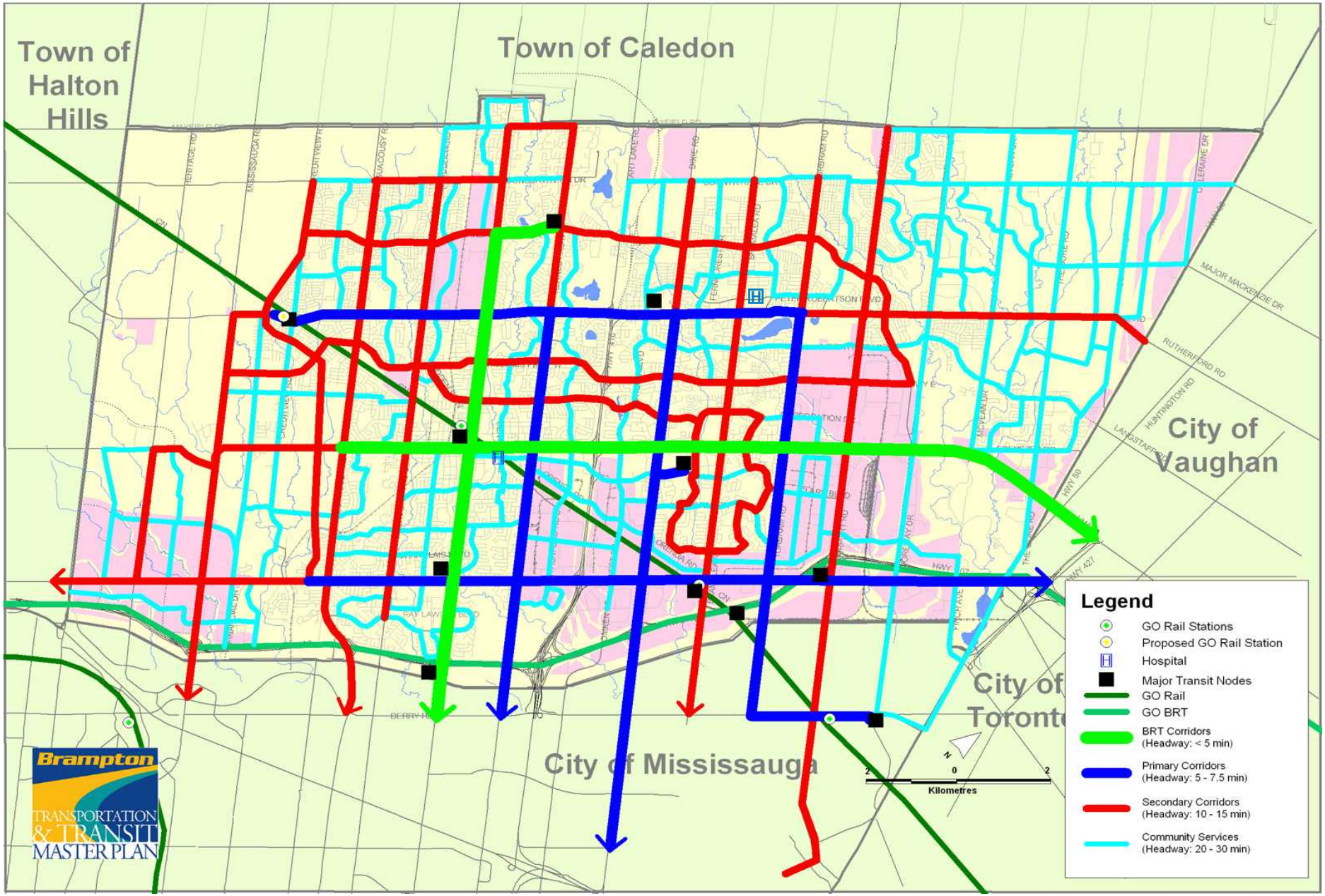


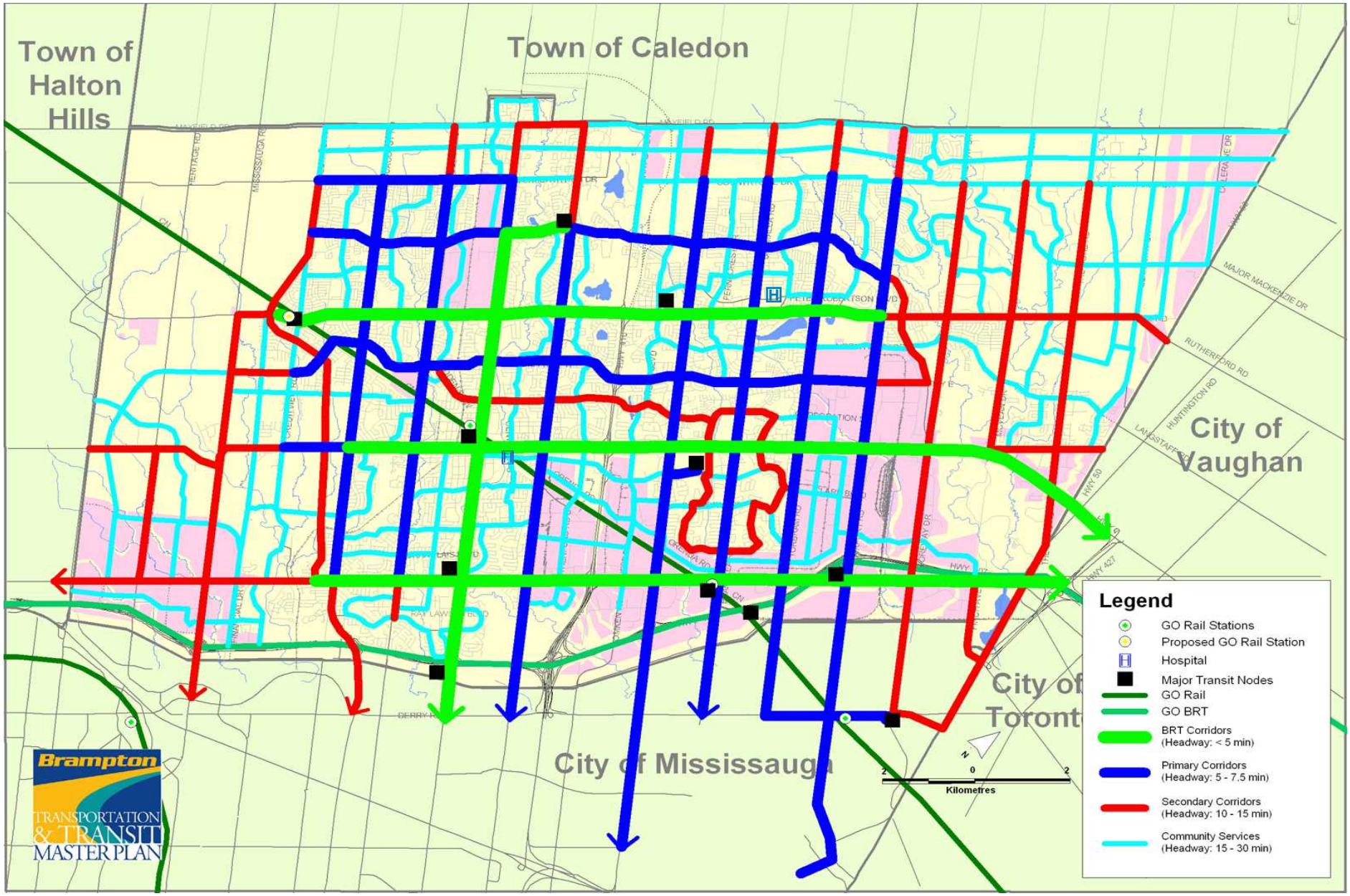
Figure 10: Strategic Transit Links to Connect Brampton into the GTA Rapid Transit Network



Marshall Macklin Monaghan
PROJECT MANAGERS • ENGINEERS • SURVEYORS • PLANNERS

ENTRA CONSULTANTS

Figure 11: 2011 Strategic Transit Framework



Marshall Macklin Monaghan
PROJECT MANAGERS • ENGINEERS • SURVEYORS • PLANNERS

ENTRA CONSULTANTS

Figure 12: 2021 Strategic Transit Framework

16-02083.jwg\Reports\Executive Summary\Figure 12 - 2021 Strategic Framework.cdr

6. COSTS

The current 10-Year Capital Works Program allocates approximately $440 millions for roads (this value has been updated with the most recent costs). The projected costs for the TTMP are shown in **Table 1**. The figures in the table are based on the preliminary results of the Development Charges By-law Update study.

It is important to note that even with these improvements the level of service on the city road network is projected to decrease from the current level. Maintaining or improving the level of service would extremely costly, and would not provide the "stick" needed to accompany the "carrot" of improved transit service required to accommodate the projected growth in demand in a sustainable manner.

The majority of the costs are in the earlier horizons, reflecting the urgency of the need to address Brampton's growing transportation needs. The Development Charge process will be able to recover some of the cost of this construction, but there will be a shortfall for transit if the traditional method and interpretation for calculating Development Charges is applied. This is not sustainable through property taxes. Monies would have to be sought and secured from alternative sources. It is recommended that the City use the TTMP to highlight the concerns relating to the current system to the provincial government, to identify the need for structural reform.

Table 1: The Projected Costs for the TTMP

	Infrastructure Costs
	City
10-Year Capital Works Program [(1)]	$439 million
Improvements Recommended by 2011	$415 million
Improvements Recommended by 2021	$443 million
Improvements Recommended by 2031	$ 63 million
TOTAL	$1,360 million

(1) Costs associated with AcceleRide infrastructure are included. The cost of rolling stocks and contingencies are excluded. By 2011 other than the AcceleRide, HOV lanes, transit signal priority, and queue jump lanes are assumed on Kennedy Road, Dixie Road, Torbram Road, Bovaird Drive, and Steeles Avenue. By 2021, McLaughlin Road and Airport Road are added as HOV corridors.
(2) The total includes also the expenditures forecasted by the City for 2012 and 2013
(3) All figures are rounded to the nearest thousand and include 3% GST
(4) Preliminary cost for Clark Boulevard improvement is not included in the figures

Brampton's current capital estimates to 2011 for transit include approximately $82 million for vehicle purchases and $57 million for other non-vehicle costs. To achieve the 2011 transit plan, an additional $36 million for vehicle purchases are required. Additional non-vehicle costs, which include new garage expansion, maintenance facilities are estimated at approximately $9 million over and above the projected $57 million, for a total investment for 2011 of $184 million.

Assuming that the improvements in transit-related roadway infrastructure, including transit priority, HOV and reserved bus lanes are achieved in this time frame to create the necessary network efficiencies, this current estimate for vehicles will be sufficient to meet the needs of the 2011 plan. Without the related improvements, additional bus purchases will be required.

To the 2021 horizon, new bus purchases will require a capital investment of approximately $122 million, with non-vehicle costs of approximately $20 million, for a total of $142 million.

7. SHORT-TERM ACTION PLAN

Roads

A short-term action plan has been identified in recognition of needs and opportunities. Increased capacity across the Highway 410, Steeles Avenue, Brampton/Vaughan and Brampton/Halton Hills screenlines is needed. These and other locations of congestion need to be addressed, primarily by road improvements in the short term. These include intersection improvements, and road expansions and extensions.

The Highway 410 extension should be considered as the highest priority road improvement in Brampton. Brampton should continue to work with the Province to advance its implementation, through joint initiatives where appropriate. Together with the Sandalwood Parkway extension, the completion of Highway 410 will provide a better distribution of traffic around Trinity Common and along Bovaird Drive.

The western edge of the City (i.e. west of McLaughlin Road to Mississauga Road and beyond) is also a priority for road improvements. The City needs to move ahead with initiatives that can address north/south capacity constraints. An effective secondary arterial/collector network is being planned through the Secondary Plan process. Implementation of those links is important in provision of capacity relief to the existing arterials.

Transit

The City is completing a five-year transit service review, independent of the TTMP. The focus of these new services is to begin establishing the recommended 2011 grid pattern and supporting network of neighbourhood routes.

A significant component to emerge from the long-term plan development was the AcceleRide initiative – a precursor to higher order transit on key east-west and north-south corridors, to be implemented in the short-term. The concept includes high frequency branded services on Main Street from downtown to Mississauga (the Main Line) and on Queen Street from Brampton to York Region (the BY Line). These streets are proposed to be designated as transit priority corridors in the City's Official Plan.

The BRT service in the two major corridors will be supported by the emerging grid of connecting corridor services. The BRT elements included priority running ways, enhanced station facilities, high frequency service, layered service levels in the corridor, simple fare collection systems and enhanced intelligent transportation technology.

The AcceleRide concept of high frequency corridor services, supported by a comprehensive network of corridor and neighbourhood services, frames the development of the 2011 and 2021 transit networks.

It should be noted that the programs of road and transit improvements are inter-dependent. On the arterials defined for high frequency service and requiring high occupancy vehicle or reserved bus lanes, road improvements have been proposed to accommodate these needs. Those inter-related changes are reflected in the costing as well. Thus the transit plan is entirely dependent on the roads plan - explicitly on the high frequency arterials, and implicitly on the supporting routes, where sufficient traffic capacity is needed to ensure reliable transit service.

8. POLICIES AND PROGRAMS

The TTMP report documents the many recommended policies and programs. The primary focus is on support for the balanced vision.

The areas addressed are as follows:

- Transportation Systems Management: the City can move ahead with improved systems management techniques for roads and transit as it grows, to make the best use of existing infrastructure and manage impacts on neighbourhoods;
- Intelligent Transportation Systems: the City should develop an ITS Strategy, to be able to take advantage of transportation technology as it develops;
- Travel Demand Management: a wide range of recommendations is laid out, encompassing parking strategies, social marketing, Travel Management Associations for high-intensity commercial/industrial areas, car-sharing, and support for greater use of alternate travel modes;
- Bicycle and Pedestrian Access: Implementation of the City's PathWays Master Plan for Cycling is a key initiative. Pedestrian access is also to be improved, to enhance access to and along transit routes; and
- Goods Movement: the City should continue to work with the Region and higher levels of government to develop an appropriate goods movement routing system and funding formula; and

- Alternative Funding Mechanisms: the City should take advantage of opportunities to leverage transportation improvements through public-private partnerships and other innovative funding programs.

9. IMPLEMENTING THE TRANSPORTATION AND TRANSIT MASTER PLAN

The TTMP includes a comprehensive mechanism for implementing and monitoring the vision. The focus should be on pro-active transit improvements to lead development – both service and facilities. The implementation process includes:

- Supporting road and signal systems infrastructure improvements to accommodate essential private vehicle trips and facilitate bus rapid transit services;
- Development of expanded and enhanced pedestrian and cycling infrastructure;
- Ongoing implementation of staged changes to policies and programs, to support the balancing of transit, walking and cycling, and auto modes;
- Ongoing monitoring and re-evaluation of projects and programs, at regular intervals.

10. KEY RECOMMENDATIONS

Road Program

- Continue implementing the 10-Year Capital Works Program; and
- Implement the staged initiatives defined above, working with the Region and Province where appropriate

Transit Program - AcceleRide

- Continue to complete the design and approvals needed;
- Work with Peel Region to protect and implement transit priority and supporting geometric changes in potential BRT corridors;
- Work with GO Transit, City of Mississauga and York Region staff to achieve effective inter-regional transit links;
- Implement service improvements on the BY Line and Main Line;
- Continue to pursue funding from senior levels of government for implementation and operating costs;
- Implement the first changes to traffic operations and on-street parking in the Four Corners;
- Monitor the success of this program in the Four Corners, in terms of schedule reliability, passenger boardings and economic changes to the local businesses;
- Build on the success of the Four Corners program to advance to the second stage of transit priority.

Transit Program – Other Initiatives

- Complete a study with the Region of Peel and City of Mississauga to define the HOV/RBL network;
- Work with GO Transit to implement service expansions on the Georgetown GO service;
- Enhance integration of Brampton Transit services, to minimize auto travel to GO stations;
- Protect for, plan and implement the network of commuter parking lots around the periphery of the City, to facilitate higher occupancy vehicle trips;
- Protect all rail corridors within the City for future transportation use, should they be de-commissioned.

Policies & Programs

- Implement the Transit Supportive Development Checklist in the development application review process;
- Undertake the urban design / parking / transit study needed for future development of the Four Corners;
- Work with the Region and other levels of government on goods movement initiatives, and work towards a truck route network;
- Develop an ITS strategy for the City, including implementation of COMPASS on the freeway network;
- Develop a parking strategy for transit nodes and corridors;
- Review and update zonings and urban design guidelines for development along transit corridors, to ensure that land use and transportation work together in realization of the balanced vision.

Finally, maintaining a high level of urban design in supporting the transportation – land use vision should be noted as an underlying goal in implementation of the TTMP.