4. IMPLEMENTATION

A strong and coordinated implementation strategy is needed, to ensure that the TTMP objectives are met. This Chapter identifies the elements of the implementation strategy. The "glue" needed to tie these elements together and make them a reality is the long-term commitment and conviction of staff and Council.

4.1 The Implementation Process

The City of Brampton is growing at a rapid rate, expected to continue over the coming 25 to 30 years. The city's road system will not be able to accommodate this growth if the transportation status quo continues, with the current heavy dependence on single occupant vehicle trips. Major corridors, including Steeles Avenue, Queen Street, Bovaird Drive, Hurontario Street / Main Street, and Highway 50, are struggling with severe congestion causing delay to the movement of people and goods.

Implementation of the TTMP involves actualizing ambitious targets for increasing transit use. As such, it will require a combination of a number of initiatives:

- Pro-active transit improvements to lead development – both service and facilities;
- Supporting road and signal systems infrastructure improvements, both to accommodate essential private vehicle trips and to 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 (e.g. TDM, TSM, ITS, etc.);
- Ongoing monitoring and re-evaluation of projects and programs, at regular intervals.

This Chapter describes required actions in these areas, and tools needed to accomplish them.

4.1.1 Detailed Environmental Assessments

The TTMP meets the Phase 1 and Phase 2 requirements of the Municipal Class EA (June 2000), but prior to the implementation of the recommendations, the Class Environmental Assessment process requires detailed studies for each specific project. An alternative process defined in the Planning Act via development/review of the Official Plan, Secondary Plans, Block Plans, Subdivisions and environmental reports would also fulfill the requirements for some initiatives.

Countryside Drive east of Heart Lake Road to Airport Road is not currently recommended for improvements within the short-term timeframe, based on screenline analysis results, but there may be other rationales for widening in the context of an EA Study. These include elimination of jogs in the road alignment, and also the strategic role of this street because of its proposed interchange with the Highway 410 extension.

Mississauga Road between Queen and Steeles has been assessed in an EA by the Region of Peel, and that study concluded that widening to six lanes may not be possible, due to natural environment constraints. Nonetheless, the TTMP has demonstrated the need for this widening by horizon 2021. It is expected that this issue will need to be revisited at a time post-2011, within the EA process.

4.2 Programming: Establishing Priorities and Financing Requirements

4.2.1 Roads

The roads program outlined above defines the implementation plan in terms of the five year, ten year, twenty and thirty year horizons.

Annual priorities for the road improvements within those ten-year time spans have been defined. **Table 4.1** summarizes the proposed timing associated with the road components of the TTMP, based on the cost estimates prepared for the 2004 Development Charges By-Law Update. As noted in Chapter 3, this study includes the 2004-2013 timeframe. Therefore, the

2011 recommendations have been spread to 2013. It is also recommended that the modelling results be used as a guideline and adjusted for ±2 years.

The road improvements identified in Figures 3.13 through 3.15 will be used as the basis for preparing annual Servicing and Financing Studies and the yearly Capital Budget. These processes will be used to update cost estimates and priorities annually. Further elaboration on priorities and financing will be provided through future reviews of the Development Charge Background Study and By-Law and updates to this plan.

Regardless of the priorities and timing established, funding will continue to be an issue. The potential capital costs recommended through the TTMP will require a greater financial commitment to address outstanding rehabilitation and expansion needs.

Given limitations on current revenue streams, provision of a dedicated, sustainable financing source is a prerequisite to ensure the long-term viability of the transportation system in Brampton and achieving the Transportation Vision of a balanced road and transit system. It is expected that other sources of funding beyond property taxes and development charges must be made available. The details are discussed further in Section 4.5.

4.2.2 Transit

To accomplish the goals outlined in TTMP will require a significant increase in Brampton Transit's bus fleet, a revised routing structure, and supporting infrastructure in the transportation network including signal and transit priority, high occupancy vehicle lanes (HOV) and/or reserved bus lanes (RBL), and supporting policies and travel management programs.

The increase in fleet requirements will require additional funding, including support from upper tier governments. While the plans as presented are for 2011, 2021 and beyond, the short-term needs are immediate, and a staged program towards the longer term objectives is required. This requires stable and sustained funding support beginning in the short-term.

A second key issue is ensuring the necessary support for network and policy elements outside of transit's specific area of influence. This includes:

TABLE 4.1: Projects Timeline

ROAD NAME	DESCRIPTION		Project Type
	FROM	TO	
2002			
Hallstone Rd.	Financial Dr.	Mississauga Rd.	RW2-4
Hallstone Rd.	East of Financial Dr.	Creditview Rd.	R&P
Castlemore Rd.	Airport Rd.	Goreway Dr.	RW2-4
2003			
Castlemore Rd.	Goreway Dr.	McVean Dr.	RW2-6
Chinguacousy Rd.	Major Williams Sharp Dr.	Williams Pkwy.	RW2-4
Chinguacousy Rd.	Hwy. #7	Sandalwood Pkwy.	RW2-4
Chinguacousy Rd.	Williams Pkwy.	Hwy. #7	RW2-4
Goreway Dr.	Queen St.	Highway 407	RW4-6
Heritage Road	Southern Boundary	Steeles Avenue	-
Sandalwood Pkwy.	Heart Lake Rd.	Dixie Rd.	RW2-6
Sandalwood Pkwy.	McLaughlin Rd.	Chinguacousy Rd.	NC4
Airport Road (City's portion of Regional Project)	Braydon Boulevard	Mayfield Road	RW2-4
Bovaird Drive (City's portion of Regional Project)	Hurontario Street	Lake Louise Drive	RW4-6
Dixie Road (City's portion of Regional Project)	Clark Boulevard	Queen Street	RW4-6
Mayfield Road (City's portion of Regional Project)	300 m West of Hurontario Street	Heart Lake Road	RW2-4
Queen Street East (City's portion of Regional Project)	West Drive	Airport Road	RW4-6
Queen Street East (City's portion of Regional Project)	Beaumaris Drive	Highway 50	RW4-6
The Gore Road (City's portion of Regional Project)	Queen Street East	Eastbrook Way	RW2-4
Grade Separations			
Chinguacousy & CN Halton Line			
Gateways			
Hurontario Street & Steeles Avenue			
Park Street Parkette			
Mississauga Toad & Steeles Avenue			
North East Corner of Hwy 410 & Hwy 407			
Hurontario Street & Mayfield Road			
Highway 10 / Williams Parkway Intersestion Improvement			
2004			
Chinguacousy Rd.	Sandalwood Pkwy.	Wanless Dr.	RW2-4
Castlemore Road	Goreway Drive	McVean Drive	-
Castlemore Road	Goreway Drive	Highway 50	-
Bramalea Road	Bovaird Drive	Queen Street	-
Bramalea Road	Queen Street	Steeles Avenue	-
Eastern Ave.	Kennedy Road	Hansen Road	RW2-4
Ebenezer Rd.	Mid Concession Rd.	Hwy. #50	-
Heritage Rd.	Steeles Ave.	Southern Boundary	-
Heartlake Road Realignment			
Humberwest Pkwy.	Castlemore Rd.	Williams Pkwy.	NC4
Humberwest Pkwy.	Castlemore Rd.	Highway 7	-
McLaughlin Rd.	Lowry Dr.	Wanless Dr.	RW2-4
Torbram Road	Sandalwood Pkwy.	Countryside Dr.	-
Torbram Road	Countryside Dr.	Mayfield Rd.	R&P
Highway 410 Extension - MTO (Bovaird to Highway 10)	-	-	NC4
Wanless Drive	-	-	-
Wexford Rd. - Extension	-	-	-
Airport Road (City's portion of Regional Project)	Castlemore Rd.	Braydon Boulevard	RW2-4
Bovaird Drive (City's portion of Regional Project)	Lake Louise Drive	Mississauga Road	RW2-4
Steeles Avenue (City's portion of Regional Project)	The Shoppers World Entrance	Chinguacousy Road	RW4-6
Winston Churchill Boulevard (City's portion of Regional Project)	Steeles Avenue	Embleton Road	RW2-4
Gateways			
North west corner of Hwy 407 & Mississauga Road			
North west corner of Hwy 407 & Gorewood Drive			
2005			
Bramalea Rd.	Countryside Dr.	Sandalwood Pkwy.	RW2-4
Heart Lake Rd. (diversion)	Bovaird Dr.	Heart Lake Dr.	NC4

TABLE 4.1: Projects Timeline

ROAD NAME	DESCRIPTION		Project Type
	FROM	TO	
Castlemore Rd.	McVean Dr.	The Gore Rd.	RW2-4
Clarkway Drive (Realignment)	North of Cottrelle Parkway	-	NC4
Clarkway Drive	Cottrelle Parkway	Mayfield Road	-
Countryside Drive	Saint Johns Road	Gore Road	-
Countryside Drive	Heartlake Road	Gore Road	-
Finley Rd.	West Dr.	Hwy 410	R&P
Kennedy Rd.	Steeles Avenue	South City Limit	RW2-6
McLaughlin Rd.	Queen St.	John Knox School	RW4-5
McVean Drive	Queen Street	Castlemore Road	-
Wanless Dr.	Hwy. #10	McLaughlin Rd.	RW2-4
Sandalwood Parkway	Bramalea Road	Torbram Road	RW2-4
Torbram Rd.	Bovaird Drive	Countryside Dr.	RW2-4
Highway 50 (City's portion of Regional Project)	Queen Street East	Castlemore Road	RW4-6
Mayfield Road (City's portion of Regional Project)	Heartlake Road	Dixie Road	RW2-6
Mississauga Road (City's portion of Regional Project)	Highway 407	Steeles Avenue	RW4-6
Queen Street West (City's portion of Regional Project)	Chinguacousy Road	McLaughlin Road	RW2-4
Queen Street	Centre Street	Highway 410	-
Main Street BRT Line (*)	Sandalwood Pkwy (at Kennedy)	Southern City Boundary	Special Intersection Improvements
Queen Street BRT Line (*)	Chinguacousy Road	Highway 50	
Grade Separations			
Torbram Rd. & CN Halton Line - 2005			
Gateways			
Mavis Road & Hwy 407			
Airport Road & Hwy 407			
2006			
Countryside Drive	Dixie Rd.	Bramalea Rd.	RW2-4
Countryside Drive	Clarkway Drive	Saint Jones Road	-
Countryside Drive	Heart Lake Road	Dixie Road	RW2-4
Castlemore Road	The Gore Road	Hwy. #50	RW2-4
Fogal Rd.	Hwy. #50	The Gore Rd.	NC4
Heritage Road	Steeles Avenue	Embleton Rd.	R&P
Heritage Road	Steeles Avenue	Wanless Drive	-
Merging Lanes (Highway 10 at highway 410)	-	-	NC2
Ken Whillans Dr.	Church St.	Nelson St.	R&P
McVean Drive	Queen Street	Cottrelle Parkway	RW2-4
Sandalwood Parkway	Chinguacousy Road	Creditview Road	NC4
Wanless Dr.	McLaughlin Rd.	Chinguacousy Rd.	RW2-4
Cottrelle Parkway (formerly Williams Parkway.)	McVean Dr.	The Gore Rd.	NC4
Cottrelle Parkway (formerly Williams Parkway)	The Gore Rd.	Hwy. #50	NC4
Mississauga Road (City's portion of Regional Project)	Steeles Avenue	Queen Street West	RW2-4
Queen Street East (City's portion of Regional Project)	Airport Road	Beaumaris Drive	RW4-6
The Gore Road (City's portion of Regional Project)	Eastbrook Way	Castlemore Road	RW2-4
Dixie Road	Bovaird Drive	Southern City Boundary	Special Intersection Improvements
Kennedy Road	Bovaird Drive	Southern City Boundary	
Torbram Road	Bovaird Drive	Southern City Boundary	
Bovaird Drive	Creditview Road	Torbram Road	
Steeles Avenue	New creditview Road	Hwy. #50	
Gateways			
Hwy 410 & Queen Street			
Hwy 410 & Bovaird Drive			
2007			
Countryside Dr.	Bramalea Rd.	Torbram Rd.	RW2-4
McLaughlin Rd.	Southern Boundary	Steeles Ave.	RW2-4
Intermodal Dr.	Airport Rd.	CNR Bridge	RW2-4
McVean Dr.	Cottrelle Parkway	Castlemore Rd.	RW2-4
New East/West Road (Major MacKenzie extension)	Hwy 50 (Coleraine Drive)	The Gore Road	NC4
Cottrelle Parkway (formerly North Park Dr.)	Airport Rd.	McVean Dr.	NC4

TABLE 4.1: Projects Timeline

ROAD NAME	DESCRIPTION		Project Type
	FROM	TO	
Bovaird Drive (City's portion of Regional Project)	Hurontario St.	Heart Lake Dr.	RW4-6
Steeles Avenue West (City's portion of Regional Project)	Winston Churchill Boulevard	Mississauga Road	RW2-4
The Gore Road (City's portion of Regional Project)	Castlemore Road	Mayfield Road	RW2-4
Winston Churchill Boulevard (City's portion of Regional Project)	Highway 407	Steeles Avenue	RW2-4
Gateways			
Hwy 50 & Queen Street			
Hwy 50 & Castlemore Road			
2008			
Clark Boulevard (Eastern Section) [1]	Kennedy Rd.	Rutherford Rd.	NC4
Creditview Road (extension of new Creditview Road)	Sandalwood Pkwy.	Wanless Dr.	RW2-4
Creditview Road (Old)	Highway 7	Sandalwood Parkway	R&P
Goreway Dr.	Southern Boundary	Highway 407	RW4-6
Humberwest Pkwy.	Airport Rd.	Castlemore Rd.	NC4
Financial Dr.	Southern Boundary	Mississauga Road	NC4
Heritage Rd.	Embleton Rd.	Bramwest Pkwy.	R&P
Williams Pkwy.	McLaughlin Rd.	Howden Boulevard	RW4-6
Queen Street East	Centre Street	Highway 410	RW4-6
Torbram Rd.	Southern Boundary	Queen St.	RW4-6
Humberwest Pkwy.	Queen St.	Williams Pkwy.	RW4-6
Mississauga Road (City's portion of Regional Project)	Queen Street West	Bovaird Drive	RW2-4
Grade Separations			
New Creditview Rd. & CN Halton Line			
Gateways			
Airport Road & Mayfield Road			
Chinguacousy Road & Mayfield Road			
2009			
Bramalea Rd.	Countryside Dr.	Mayfield Rd.	RW2-4
Castlemore Road	Airport Road	Goreway Drive	RW4-6
Castlemore Rd.	Goreway Dr.	McVean Dr.	RW4-6
Chinguacousy Rd.	Steeles Ave.	Queen St.	RW4-6
Clarkway Dr.	Mayfield Rd.	Countryside Dr.	R&P
Clark Boulevard	Hwy. #410	Dixie Rd.	RW4-6
Countryside Dr.	Torbram Rd.	Airport Road	RW2-4
Coleraine Drive	Highway 50	Mayfield Road	-
Financial Dr.	Mississauga Road	Heritage Road	NC4
Heritage Rd.	Bramwest Pkwy.	Hwy. #7	R&P
Orenda Road	Dixie Road	Bramalea Road	-
Sandalwood Pkwy.	Airport Rd.	Torbram Rd.	RW2-4
Wanless Dr.	Mississauga Rd.	Creditview Rd.	R&P
Williams Parkway	Torbram Road	Humberwest Parkway	-
Highway 50 (City's portion of Regional Project)	Castlemore Road	Countryside Drive	RW4-6
Gateways			
Hwy 7 & Winston Churchill Boulevard			
Hurontario Street & northern City Boundary			
2010			
Clarkway Dr.	Countryside Dr.	Castlemore Rd.	RW2-4
Clark Blvd Extension	-	-	-
Chinguacousy Road	Queen Street	Bovaird Drive	RW4-6
Countryside Dr.	Airport Road	The Gore Rd.	R&P
Financial Dr.	Heritage Road	Winston Churchill Blvd.	NC4
New Road A	Financial Dr.	Winston Churchill Blvd.	NC2
Heritage Rd.	Hwy. #7	Wanless Dr.	R&P
Sandalwood Pkwy.	Dixie Rd.	Bramalea Rd.	RW4-6
Sandalwood Pkwy.	Bramalea Road	Torbram Road	RW4-6
Wanless Dr.	Creditview Dr.	Chinguacousy Rd.	R&P
Williams Parkway (extension)	Chinguacousy Rd.	Creditview Rd.	NC4
The Gore Road (City's portion of Regional Project)	Highway 50	Queen Street East	RW2-4

TABLE 4.1: Projects Timeline

ROAD NAME	DESCRIPTION		Project Type
	FROM	TO	
Mayfield Road (City's portion of Regional Project)	Highway 410	Bramalea Road	RW2-4
Grade Separations			
Williams Pkwy. (extension) & CN Halton Line			
Gateways			
Hurontario Street & Bovaird Drive			
Hurontario Street & Williams Parkway			
2011			
Castlemore Rd.	McVean Dr.	The Gore Rd.	RW4-6
Coleraine Dr.	Hwy. #50	Mayfield Rd.	R&P
Bramwest Pkwy.	Creditview Road	Heritage Road	-
Goreway Drive	Humberwest Parkway	Countryside Drive	RW2-4
Urbanization of Highway 10	Bovaird Drive	Northern City boundary	Rehabilitation
McMurchy Avenue	Pleasantview Avenue	CNR Railway	NC4
New Creditview Rd.	Steeles Ave.	Sandalwood Parkway	NC4
Orenda Rd.	Dixie Rd.	Bramalea Rd.	RW2-4
Wanless Dr.	Mississauga Rd.	Winston Churchill Blvd.	R&P
Sandalwood Pkwy.	McLaughlin Rd.	Heart Lake Dr.	RW4-6
Williams Pkwy.	Torbram Rd.	Airport Rd./ Humberwest	RW4-6
Airport Road (City's portion of Regional Project) - No Timing	Queen Street/Hwy 7	Bovaird Drive/Castlemore Rd.	RW4-6
Bovaird Drive (City's portion of Regional Project) - No Timing	Mississauga Rd.	Lake Louise Dr.	RW4-6
Bovaird Drive (City's portion of Regional Project) - No Timing	Winston Churchill Boulevard	Mississauga Rd.	RW2-4
Mavis Road (City's portion of Regional Project) - No Timing	Southern Boundary	Steeles Ave.	RW4-6
Mayfield Road (City's portion of Regional Project) - No Timing	McLaughlin Rd.	Heart Lake Road	RW4-6
Mississauga Road (City's portion of Regional Project) - No Timing	Bovaird Dr.	Wanless Dr.	RW2-4
Dixie Road (City's portion of Regional Project) - No Timing	Countryside Drive	Mayfield Road	RW2-4
Grade Separations			
Goreway Dr. & CN Halton Line			
Gateways			
Queen Street & Mississauga Road			
Queen Street & Airport Road			
2012			
Bramwest Parkway (new project)	Highway 407 (Meadowvale Rd.)	Embleton Rd.	NC4
Castlemore Rd.	The Gore Rd.	Hwy. #50	RW4-6
Sandalwood Parkway (new project)	Creditview Dr.	Mississauga Rd.	NC4
Clark-Eastern / Trueman / John Extension & Widening	Rutherford Road	Centre Street	-
Williams Parkway (new project)	Creditview Dr.	Mississauga Rd.	NC4
Dixie Road (City's portion of Regional Project)	Steeles Avenue	Clark Boulevard	RW4-6
Dixie Road (City's portion of Regional Project)	Queen Street East	Bovaird Dirve	RW4-6
Highway 50 (City's portion of Regional Project)	Countryside Drive	Mayfield Road	RW2-6
Mayfield Road (City's portion of Regional Project)	Bramalea Road	Airport Road	RW2-4
Queen Street West (City's portion of Regional Project)	Chinguacousy Road	Mississauga Road	RW2-4
Gateways			
Morton Homes Pond			
Lormel Gate			
Fanshore North			
Danimar Holdings			
Eldorado			
2013			
John St.	Centre St.	Trueman St.	R&P
Park St.	Queen St.	Nelson St.	R&P
New Interchange			
Bram West Parkway			
2017			
Humberwest Parkway./Sandalwood Parkway	Williams Parkway	Bramalea Rd.	RW4-6
Bramalea Rd.	Southern Boundary	Queen Street	RW4-6
Winston Churchill Blvd.	Southern Boundary	Bovaird Drive	RW2-6

TABLE 4.1: Projects Timeline

ROAD NAME	DESCRIPTION		Project Type
	FROM	TO	
Clarkway Dr.	Cottrelle Parkway (north of realignme	Mayfield Road	RW2-4
Countryside Drive	Airport Road	Hwy. #50	RW2-4
McLaughlin Road	Wanless Drive	Mayfield Road	RW2-4
Heritage Road	Steeles Ave.	Financial Drive	RW2-4
Kennedy Road (City's portion of Regional Project)	Southern Boundary	Steeles Avenue	RW4-6
Mississauga Road (City's portion of Regional Project)	Steeles Ave.	Bovaird Drive	RW4-6
Recommended Improvements By 2021 (Project specific timing NOT assigned)			
Coleraine Dr.	Highway 50	Mayfield Road	RW2-4
Torbram Rd.	Bovaird Drive	Countryside Drive	RW2-6
Biscayne Creek / Westcreek Blvd connection	Biscayne Creek	Westcreek Boulevard	NC4
Bramwest Parkway	Embleton Road	Heritage Road	NC4
Williams Parkway	Mississauga Road	Heritage Road	NC4
Heritage Road	Road A	Bovaird Drive	RW2-4
Wanless Drive	Winston Churchill Boulevard	Chingouacousy Road	RW2-4
Goreway Road	Countryside Drive	Mayfield Road	RW2-4
Embleton Road (City's portion of Regional Project)	Winston Churchill Blvd.	Heritage Rd.	RW2-4
The Gore Road (City's portion of Regional Project)	Highway 50	Castlemore Road/Bovaird D	RW4-6
Kennedy Road (City's portion of Regional Project)	Bovaird Drive	Conservation Drive	RW4-6
Mayfield Road (City's portion of Regional Project)	Airport Road	Goreway Drive	RW2-4
Steeles Avenue (City's portion of Regional Project)	Mississauga Road	Chinguacousy Road	RW4-6
Airport Road	Countryside Drive	Southern City Boundary	Special Intersection Improvements
Chingoucousy Road	Wanless Drive	Steeles Avenue	
Kennedy Road (extension)	Bovaird Drive	Sandalwood Parkway	
Bramalea Road	Countryside Drive	Southern City Boundary	
Dixie Road (extension)	Bovaird Drive	Countryside Drive	
Torbram Road (extension)	Bovaird Drive	Countryside Drive	
Wanless Drive	Creditview Road	Highway 10	
Queen Street	Chinguacousy Road	Creditview Road	
Sandalwood Parkway	Creditview Road	Highway 10	
Sandalwood Parkway	Kennedy Road	Airport Road	
Williams Parkway	Creditview Road	Airport Road	
McLaughlin Road	Wanless Dr.	Steeles Ave.	
Interchanges			
Highway 407 & Bramwest Parkway			
Highway 410 & Mayfield Road			
Highway 410 & Highway 10			
Grade Separations			
Highway 410 & Biscayne Creek/Westcreek Blvd connection			
Recommended Improvements by 2031 (Project specific timing NOT assigned)			
Chinguacousy Rd.	Bovaird Dr.	Wanless Dr.	RW4-6
Chinguacousy Rd.	Wanless Drive	Mayfield Road	RW2-4
McVean Dr.	Bovaird Dr.	Mayfield Rd.	RW2-4
Winston Churchill Blvd.	Bovaird Dr.	Mayfield Road	RW2-4
Creditview Road	Wanless Drive	Mayfield Road	RW2-4
Heritage Road	Bovaird Drive	Mayfield Road	RW2-4
Conservation Drive	Highway 10	Kennedy Road	RW2-4
Mississauga Road (City's portion of Regional Project)	Bovaird Drive	Mayfield Road	RW4-6
Steeles Avenue (City's portion of Regional Project)	Winston Churchill Blvd.	Mississauga Road	RW4-6
The Gore Road (City's portion of Regional Project)	Castlemore Rd.	Countryside Dr.	RW4-6

- Support for roadway infrastructure enhancements on both city and Regional roads, including signal priority, intersection modifications, and dedication of roadway infrastructure to high-occupancy vehicles and dedicated transit;

- Roadway connectivity in new developments, to ensure that new services can continue to enhance the corridor grid network, and support local feeder services;

- Ability to integrate with adjacent and inter-regional systems including coordinated services, schedules and with streamlined fare structures and payment methods that are designed from the customer's perspective; and

- Supportive policies in the areas of land use development, travel demand management, parking pricing and supply.

4.2.3 Cycling and Walking Infrastructure

Ongoing implementation of the City's Pathways Master Plan is the core initiative. The expansion of off-road facilities should continue as funds permit. On-street facilities should be pursued as part of reconstruction and expansion of roads.

Situations can be expected to occur where choices will need to be made between provision of enhanced on-street cycle lanes and introduction of bus rapid transit. These choices will need to take into consideration both the local situation and network needs, based on the travel demands and circumstances at that time. These are likely to be part of an Environmental Assessment.

Expansions of sidewalks will be related to enhancements to the transit network and the broader urban realm for pedestrians, in an ongoing evolution of the City.

4.2.4 Policies and Programs

Section 3.4 of this report documents the recommended policies and programs (detailed Policy Papers can be found in **Appendix G**). These address Transportation Systems Management, Intelligent Transportation Systems, Travel Demand Management, Bicycle and Pedestrian Access, and Goods Movement.

Because of their importance to the evolution of the Brampton transportation system, two programs are highlighted below.

4.2.4.1 Transit Supportive Policies for Brampton

The transit priority initiatives must be supported by a strong policy/program framework. As the City moves to implement the BRT program, it will be important to define a comprehensive strategy for downtown and other BRT corridors, which includes the following:

- A review of parking policies (both on and off-street) and definition of a staged plan for the adjustment of rates and rate structures to encourage transit use and discourage long-term parking on-street. This could include limiting the permitted parking duration in metered spaces to a certain duration. The policies should also include promoting shared-use of parking, which would limit parking over-supply, a key factor in auto dependence;
- Urban design to create an attractive and accessible pedestrian realm, which supports transit;
- Traffic management and operations, to balance circulation and access with transit priority improvements.

4.2.4.2 Principles for Road Network Enhancement

On an ongoing basis, the City should continue to plan for implementation of a robust **continuous network of arterial and collector roads** which can provide improved accessibility across the City, and accommodate additional development-related demands away from the major arterial network. Three ongoing initiatives are recommended.

The first is that opportunities for providing **additional road connections across freeways and for creating "bypasses" of key nodal intersections** should be explored as part of intensification applications. Additional road crossings of freeways parallel to the arterial network can enhance the potential for intensification at major highway nodes. Specifically, a crossing of the Highway 410 corridor south of Steeles Avenue is proposed, to link Westcreek Boulevard to Biscayne Crescent. The City should protect for this link.

Secondly, the principle of **continuous collectors at 300 meter spacing** should be reflected in Secondary Plans and other development plans. These roads should ideally be continuous across at least one concession block. This spacing is needed to provide effective transit service, in terms of sufficient accessibility based on walking distance. It also provides the flexibility in the road network needed to cope with incident management, emergency vehicle access and avoidance of extreme intersection designs (such as double left turn lanes). Supplementary to this principle is the expected need for introduction of new road

connections into existing communities as they evolve to a more transit-supportive form. (For example, consider the City of Mississauga City Centre District Plan, which features small, urban scale blocks for transit and pedestrian access.) As the City intensifies, there will likely be a need to retrofit such links into the network. A good example is the potential Royce Avenue connection.

Thirdly, roads and streets have a role beyond merely conveying people and goods. The design of access and frontage also plays a role in community development. Where possible, direct access should be provided on collector roads. In the case of low-density housing on these roads, designs exist which can limit the number of accesses while maintaining frontage on the street, such as service road concepts. This will support transit-supportive, involved, active and participatory communities, with “eyes on the street”.

These two latter principles are based on the Transit Supportive Land Use Guidelines (MMAH/MTO, 1992), a still pertinent reference for municipal transportation planning.

4.3 Development Review

The private sector will continue to play a major role in development of the City. City staff need to have the appropriate tools for review of development applications, to support the implementation of the strategic direction of the TTMP. One practical tool developed through the TTMP is the Connectivity Index checklist. This Index is presented as a draft for refinement by City staff. The recommended action is to adopt a "Connectivity Index" for use in review of development applications, and implement this Index in the secondary plan/plan of subdivision/rezoning review processes as a tool for staff. This Index would be intended to measure the connectivity to (existing or planned) transit services, pedestrian and bike facilities. This Index would be defined to address the design of plans of subdivision as well as applications for commercial and industrial uses. As time goes by and the Index is used on a series of applications, staff will also enhance their understanding of what works and what doesn't in terms of accessibility for alternate modes.

Short interconnected blocks with direct pedestrian connections to transit would have a higher Connectivity Index rating. This type of development favours pedestrians and cyclists because short interconnected streets facilitate these modes while

discouraging speeding and dispersing vehicular traffic. Direct routes that shorten trips for pedestrians and cyclists encourage the use of these modes and support healthy, safe communities.

The Connectivity Index can be an important tool for development of communities oriented to travel by public transit, walking and cycling.

How would this be used?

Developments with higher Connectivity Index scores should be promoted. Developments with low scores should be revisited to try to obtain an "above-average" score. It is not conceived that failure to achieve a certain score would mean that the application would necessarily be rejected entirely, as there may be other factors to consider.

Table 4.2 shows a number of draft suggested factors and ratings for the Connectivity Index, for plans of subdivision, secondary plans and rezonings. The spatial values generally reflect the 1992 Provincial Transit Supportive Land Use Guidelines. The ratings of 0/5/10 are subjective, and the relative weightings among and between factors need to be defined with values specific to Brampton, based on the City's review.

TABLE 4.2: CONNECTIVITY INDEX FACTORS

Development application: _____

Location: _____

Applicant: _____

Planning Scale	Factor	Rating		Development Rating
		Range	Value	
Secondary Plan	1. Residential density to support transit service (adjacent to bus route)	37 units/ha - supports frequent bus service at 1 km spacing	10	
		17 units/ha - supports 1/2 hour bus service at 1 km spacing	5	
		10 units/ha - supports 1 hour bus service at 1 km spacing	0	
Secondary Plan	2. Average spacing of collector roads	< 301 m	10	
		301 - 1000 m	5	
		> 1000 m	0	
Secondary Plan/ Plan of Subdivision	3. Average spacing of local roads / transit stops on transit routes	< 201 m	10	
		201 - 400 m	5	
		> 400 m	0	
Plan of Subdivision	4. Unobstructed distance to complementary land uses - *e.g. neighbourhood retail is a complementary land use for residential development, restaurant uses are complementary to office uses* - *distance is based on Brampton*	Within 400 m	10	

Planning Scale	Factor	Rating		Development Rating
		Range	Value	
		400-1,000 m	5	
		> 1,000 m	0	
Plan of Subdivision/ Site	5. Frequency of Transit Service(s) within walking distance of 400 m	≤10 min	10	
		10 min to 30 minutes	5	
		>30 minutes	0	
Plan of Subdivision	6. Hours of Transit Service(s)	All Day	10	
		Peak Period	5	
		None	0	
Site	7. Presence of sidewalks linking to the arterial street	Both sides	10	
		One side	5	
		None	0	
Secondary Plan/ Plan of Subdivision/ Site	8. Presence of bike lanes/routes/paths within:	5 minute ride/10 minute walk	10	
		10 minute ride/20 minute walk	5	
		More than 10 minute ride/20 minute walk	0	
		None	0	
Site	9. Pedestrian Connection to Streets	Direct to building	10	
		Through or adjacent to parking area, with designated walkway	5	
		No designated walkway through parking lot	0	

Planning Scale	Factor	Rating		Development Rating
		Range	Value	
Site	10.Presence of bike facilities	Bike lock-up/ showers/ change rooms (as applicable)	10	
		Bike racks in secure location	5	
		None	0	
Site	11. Brampton Transit bus service access	On-site	10	
		Within 400 m	5	
		> 400 m	0	
Site	12. Proximity to rapid transit service for long distance trips; for example, GO rail	On-site	10	
		Within 400 m	5	
		> 400 m	0	
	TOTAL SCORE:			

Total possible scores: Secondary Plan = 40, Plan of Subdivision = 60, Site = 80.

4.4 Monitoring and Growth Management

A monitoring and master plan review process is an essential element of the implementation strategy. Monitoring of land use is assumed to be undertaken through the Growth Management Program. It will be essential for Transportation and Transit staff to work with Planning staff to coordinate transportation and land use plans. The transportation monitoring program should track changes in travel characteristics including trip generation rates, modal splits, trip lengths and auto occupancies, and road and transit system performance and utilization, addressing auto and commercial vehicle demand on screenlines and at key constraint points. A regular, well-defined program of counts is needed to achieve this goal – on an annual basis. Coordination with Peel Region should be maintained for collection of Cordon count data and TTS data. The data should be made available to the public and the consulting community through the Internet, to achieve inclusive decision-making and facilitate information exchange.

By monitoring program results in relation to objectives and targets, City staff will be able to assess whether existing policies and programs need to be strengthened, whether new policies and programs are needed, whether shifts are needed in road and transit capital and operating expenditures, and whether upgrades in rapid transit technology need to be considered. It would be logical to produce an annual report documenting the progress of the TTMP. This report should include trends in travel, current issues and opportunities, and success stories.

In order to manage growth and relate infrastructure to travel needs, it is recommended to update the transportation and transit master plan every three to five years, to take into account changing trends in demographics, development and travel patterns. If the growth is higher than anticipated it would be prudent to undertake the master plan update at every three years. If demand growth slows from the current pace, a five-year interval may be more appropriate.

The TTMP recommendations, along with the results of the monitoring program, should be implemented in accordance with the City's Growth Management Program through annual review and adjustments to the City and Regional Capital Budgets (recognizing financial sustainability), as well as through the development approval process, by issuing appropriate approvals and conditions that ensure the levels of growth are correlated with provision of required infrastructure.

4.4.1 "In House" Modelling

Developing "in house" transportation modelling capabilities, both at the macro and micro levels, will help the monitoring process. This will provide flexibility in reviewing the results, testing future transportation scenarios, and modelling alternative solutions. The outcomes would help in updating the recommendations.

4.5 Alternative Delivery Mechanisms and Management of Costs

The City of Brampton can manage its assets most effectively by using best practices in the selection, development and implementation of infrastructure projects. One key best practice focuses on defining alternate funding or delivery mechanisms. Various options exist for innovative funding sources to meet infrastructure needs and to defray the costs incurred in procuring benefits to the City (or at least specifically allocate the costs).

It is important to note that municipal governments in Ontario do not have the ability to levy taxes. The senior levels of government are a major source of funding for transit and transportation initiatives. The need for Brampton to possess that ability has long been recognized, but today it is still missing. Therefore, the City should continue to lobby senior levels of government for sufficient and sustainable funding such as a portion of the gas tax, and/or changes to the City of Brampton Act to address Funding powers.

4.5.1 Summary of Recommended Initiatives

- **Special Levies**
  - Residential or commercial tax or general levy on property tax bill; can be utilized to fund and subsidize AcceleRIDE or other programs

- **Corporate Sponsorships**
  - For example - develop and maintain pedestrian and bike trails in exchange for promotion of companies through advertising

- **Funding Partnerships**
  - Private sector capital financing in design, construction, operation or maintenance for AcceleRIDE or other initiatives

- **Strategic Budget Allocations**
  - Set aside portion of tax revenue, in special fund that grows through investment. Acts as a secure source of revenue during declining funding for roads, transit improvements or other regular maintenance projects

4.5.2 Discussion

Why Consider Alternative Funding Mechanisms?

Use of alternative funding mechanisms is a best practice in municipal planning because they can assist in fulfilling unmet needs. The following list outlines the additional benefits of specific practices. Some alternative funding techniques can better allocate costs to those benefiting from the service, thus increasing equity in provision of services. Some can increase accountability by clear allocation of funds, while others can increase flexibility or service levels through contractual arrangements or partnerships.

The potential benefits include:

- Revenue to support continued provision of safe and efficient infrastructure;
- Supplementing the property tax base;
- Incorporating life cycle costs of infrastructure (i.e., depreciation of infrastructure; operation and maintenance costs resulting from new capital investments);
- Reliable, predictable, dedicated funding to support multi-year infrastructure investment strategies;
- Providing additional options to generate infrastructure funds; and

- Promoting travel demand management. With the revenue generated, the City can promote demand management by providing incentives to organizations promoting travel demand management; for example off-peak work-shift allocations, carpools, transit passes etc.

The following sections discuss the various alternative funding mechanisms.

Special Levies: Special levies ensure a funding source to cover needs that are difficult to fund through user pay mechanisms. These levies are applicable where there is a benefit in explicitly identifying them separately from general tax levy.

Special levies can be used to generate funds for services such as environmental protection or special transit services, which are not traditionally covered by the general tax base. Special levies charged from the public can be used to increase the funding for the *Accele*RIDE rapid transit program, extend this service to previously uncovered areas and subsequently subsidize these premium public transit services. An important component of special levies is the ability to demonstrate the link to community priorities.

It is necessary to obtain public and political "buy in" for the new strategy through communication and consultation. Transparency in how resources are spent for all taxes collected, clarity of rationale, and a high standard of accountability are important aspects for the success of a special levy.

Potential levy collection venues may include:

- A particular residential or commercial tax;
- A general levy on the property tax bill; or
- A rate base/utility levy for residential and/or commercial properties.

Variables to consider are time and scope. The time horizon chosen will depend on the flexibility needed in decision making to allocate the revenues. A special levy for *Accele*RIDE could be collected until the completion of the Bus Rapid Transit network development, for example.

Development Charges: This method ensures that a city has a revenue source to fund the roads and services required as a result of new private developments. The City of Brampton already applies Development Charges to new development.

Sponsorships: Corporate sponsorships can allow significant donations or strategic funding arrangements to the City to pay for specific infrastructure programs, such as the operation and maintenance of its pedestrian and bike trails. An example of the City of St. John's, Newfoundland can be cited for a successful sponsorship program that it undertook to manage an extensive walking trail system throughout the City. The program involved development of the trail system, shelters, signage and lighting, along with operation and maintenance by the community and special interest groups. The trail system has become a popular method of commuting to work in the City.

Private companies can be approached for donations or strategic funding to help the City to pay for its pedestrian and bike trails, in exchange for promotion of the companies through advertising or signage. The City would have to engage in a strategic marketing initiative with potentially interested parties. This approach can include the involvement of local groups and organizations in the actual labour for operation and maintenance of the trails.

The sponsorship could also involve application of expertise to recognize the benefits of this type of initiative, as the basis for future capital investment. For example, utilization of pedestrian and bike trails will result in lower maintenance requirements of roads because of reduced wear and tear. The City can perform an audit with the assistance of an expert interest group at regular intervals. This audit can quantify the cost savings from decreased road maintenance requirements. The cost savings thus achieved can be placed in a revolving fund for the operation and maintenance of existing trails or other similar projects. The City of Brampton should foster such an arrangement to address the operation and maintenance demands of its pedestrian and bike trails. The fuel savings can also be related to decreased green house gas emissions, to identify a further benefit to the City.

Funding Partnerships: A private company or non-governmental organization can form a partnership with the City for AcceleRIDE or other transportation initiatives, following an open competitive bid process. This partnership would permit private sector capital financing in design and construction, and can also include private operation and maintenance services for

a set period in the development of roads, trails and/or the rapid transit system. The arrangement could involve some combination of the following:

- The City paying a monthly lease rate to a private contractor;
- The contractor funding the service with a user rate charge; or
- The City paying a regular grant to a non-governmental organization to provide the service.

Often, a private partner is willing to finance the capital for a project in exchange for a set rate or lease agreement. This will allow the City of Brampton to continue or accelerate its transportation programs without having to raise the capital to finance the project. This arrangement can alleviate a certain amount of risk from the City in project design and start up. Key features can include:

- Opportunity to raise funds through means other than property taxes, through a share capital corporation;
- Capital provided up front, which the City would not otherwise have access to;
- The private sector assuming more risk than traditional contracts; and
- Ultimately, the City paying for the project in the long term by giving a partner some exclusive rights in project operation for a set duration.

Essentially, a partnership will allow the City to avoid an increased debt load, accelerate project completion, capitalize on private sector expertise, and identify innovative solutions more readily.

Strategic Budget Allocations: Fairly prevalent across many municipalities, this method entails strategically setting aside certain moneys collected from a portion of the tax or rate bill into a special fund. The special fund is invested, and interest earned is reinvested, with the goal of having a special fund for certain types of capital for future needs. This ensures a secure source of revenue in the face of declining funding, so there is improved security for roads or transit infrastructure that require regular maintenance and upgrades. This fund will also allow the City to recognize the cumulative needs associated with many road projects that might not be high priorities on their own.