Agenda
Committee of Council
The Corporation of the City of Brampton

Date: Wednesday, February 3, 2021

Time: 9:30 a.m.

Location: Council Chambers - 4th Floor, City Hall - Webex Electronic Meeting

Members:

Mayor Patrick Brown (ex officio)	
Regional Councillor R. Santos	Wards 1 and 5
Regional Councillor P. Vicente	Wards 1 and 5
City Councillor D. Whillans	Wards 2 and 6
Regional Councillor M. Palleschi	Wards 2 and 6
Regional Councillor M. Medeiros	Wards 3 and 4
City Councillor J. Bowman	Wards 3 and 4
City Councillor C. Williams	Wards 7 and 8
Regional Councillor P. Fortini	Wards 7 and 8
City Councillor H. Singh	Wards 9 and 10
Regional Councillor G. Dhillon	Wards 9 and 10

NOTICE: In consideration of the current COVID-19 public health orders prohibiting large public gatherings and requiring physical distancing, in-person attendance at Council and Committee meetings will be limited to Members of Council and essential City staff only. Public attendance at meetings is currently restricted. It is strongly recommended that all persons continue to observe meetings online or participate remotely.

For inquiries about this agenda, or to make arrangements for accessibility accommodations for persons attending (some advance notice may be required), please contact:
Sonya Pacheco, Legislative Coordinator, Telephone 905.874.2178, TTY 905.874.2130
cityclerksoffice@brampton.ca

Note: Meeting information is also available in alternate formats upon request.

1. **Call to Order**

2. **Approval of Agenda**

3. **Declarations of Interest under the Municipal Conflict of Interest Act**

4. **Consent**

In keeping with Council Resolution C019-2021, agenda items will no longer be pre-marked for Consent Motion approval. The Meeting Chair will review the relevant agenda items during this section of the meeting to allow Members to identify agenda items for debate and consideration, with the balance to be approved as part of the Consent Motion given the items are generally deemed to be routine and non-controversial.

5. **Announcements**

6. **Government Relations Matters**

6.1. Staff Update re: Government Relations Matters

To be distributed prior to the meeting

6.2. Update from Mayor P. Brown, re: COVID-19 Emergency

7. **Public Delegations**

7.1. Possible Delegations re: Notice of the Intention to Amend Mobile Licensing By-law 67-2014

a. Appendix A - Licence Fees and to Revoke By-law 75-2020, a By-law to provide relief to fees and timelines under By-law 67-2014, as amended, during the COVID-19 emergency (See Item 9.2.1)

b. Appendix B - Expiry Dates (See Item 9.2.2)

7.2. Delegation from Joseph Ehrlich, Manager, Project Planning, Rapid Transit, and Leona Hollingsworth, Sr. Manager, Community and Stakeholder Relations – Peel, Metrolinx, re: Queen Street-Highway 7 Bus Rapid Transit Project

(See Item 12.2.5)

7.3. Delegation from Sylvia Roberts, Brampton Resident, re: Brampton Transit Regional Service Improvements

7.4. Delegation from Keba Thomas, Brampton resident, re: Request to Establish a New Position/Office to Address Indigenous and Urban Migrant Affairs

7.5. Delegation from Jules Bedeau, Renewed Computer Technology, re: Repurposing of Old City Computers

(See Item 11.3.2)

8. Community Services Section

(Regional Councillor R. Santos, Chair; City Councillor C. Williams, Vice-Chair)

8.1. Staff Presentations

8.2. Reports

8.2.1. Staff Report re: Request to Begin Procurement – Supply, Delivery and Installation of Four-Fold Doors at 11 Fire Stations

Recommendation

8.3. Other/New Business

8.4. Correspondence

8.5. Councillors Question Period

8.6. Public Question Period

5 Minute Limit (regarding any decision made under this section)

During the meeting, the public may submit questions regarding recommendations made at the meeting via email to the City Clerk at cityclerksoffice@brampton.ca, to be introduced during the Public Question Period section of the meeting.

9. Legislative Services Section

(City Councillor J. Bowman, Chair; City Councillor D. Whillans, Vice-Chair)

9.1. Staff Presentations

9.2. Reports

9.2.1. Staff Report re: Mobile Licensing By-law 67-2014 - Licence Fees 2021

(See Item 7.1a)

Recommendation

9.2.2. Staff Report re: Mobile Licensing By-law 67-2014 - Expiry Dates

(See Item 7.1b)

Recommendation

9.3. Other/New Business

9.3.1. Discussion Item at the request of Regional Councillor Medeiros, re: Pet Grooming Services

9.4. Correspondence

9.5. Councillors Question Period

9.6. Public Question Period

5 Minute Limit (regarding any decision made under this section)

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10. Economic Development Section

(Regional Councillor M. Medeiros, Chair; Regional Councillor P. Vicente, Vice-Chair)

10.1. Staff Presentations

10.1.1. Staff Presentation re: Brampton Entrepreneur Centre: 2020 Year in Review (RM 117/2019)

To be received

10.2. Reports

10.3. Other/New Business

10.4. Correspondence

10.5. Councillors Question Period

10.6. Public Question Period

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11. Corporate Services Section

(City Councillor H. Singh, Chair; Regional Councillor R. Santos, Vice-Chair)

11.1. Staff Presentations

11.2. Reports

11.2.1. Staff Report re: Request to Begin Procurement – Multi-functional Print Services, Print Shop Print Services and Printing as a Service - Specialized

(See Item 11.2.2)

Note: The subject report was deferred to this meeting pursuant to Recommendation CW015-2021 (January 20, 2021).

11.2.2. Staff Report re: Supplementary Report - Request to Begin Procurement Multi-Functional Printers and Services, Print Shop Printers and Services, Specialized Printers

(See Item 11.2.1)

To be distributed prior to the meeting

11.2.3. Staff Report re: Request to Begin Procurement - NetApp Storage VOR Purchase, Supply, Install, Maintenance, Support for a five Year Period

Recommendation

11.2.4. Staff Report re: Film Services Feasibility Report and Film Office Update

Recommendation

11.2.5. Staff Report re: Hotel VISA and BIA E-Gift Card Promotion

Recommendation

11.2.6. Staff Report re: 2021 Temporary Borrowing By-Law

Recommendation

11.2.7. Staff Report re: COVID-19 Improper Disposal of Sharps Mitigation Measures – Downtown Brampton – January 2021 Update (RM 32/2020)

To be received

11.3. Other/New Business

11.3.1. Discussion Item at the request of City Councillor Williams, re: City Policies for Hiring Key Positions within the City

11.3.2. Discussion Item at the request of City Councillor Bowman, re: Repurposing of Old City Computers

(See Item 7.5)

11.4. Correspondence

11.5. Councillors Question Period

11.6. Public Question Period

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12. Public Works and Engineering Section

(Regional Councillor P. Vicente, Chair; Regional Councillor P. Fortini, Vice-Chair)

12.1. Staff Presentations

12.1.1. Staff Presentation re: Bramalea Sustainable Neighbourhood Action Plan (SNAP)

(See Item 12.2.1)

To be received

12.2. Reports

12.2.1. Staff Report re: Bramalea Sustainable Neighbourhood Action Program (SNAP)

(See Item 12.1.1)

Recommendation

12.2.2. Staff Report re: Request to Begin Procurement - Hiring of a General Contractor to Complete the Addition and Renovation at Balmoral Recreation Centre

Recommendation

12.2.3. Staff Report re: Parking Related Concerns – Blair Drive – Ward 3 (File I.AC)

Recommendation

12.2.4. Staff Report re: Traffic By-law 93-93 - Administrative Update (File I.AC)

Recommendation

12.2.5. Staff Report re: Queen Street – Highway 7 BRT Initial Business Case

(See Item 7.2)

Recommendation

12.2.6. Staff Report re: Request to Begin Procurement - SmartBus Maintenance and Support Services

Recommendation

12.3. Other/New Business

12.3.1. Discussion Item at the Request of Mayor Brown re. Automated Speed Enforcement (ASE) Program Update

12.4. Correspondence

12.5. Councillors Question Period

12.6. Public Question Period

5 Minute Limit (regarding any decision made under this section)

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13. Referred Matters List

Note: In accordance with the Procedure By-law and Council Resolution, the Referred Matters List will be published quarterly on a meeting agenda for reference and consideration. A copy of the current Referred Matters List for Council and its committees, including original and updated reporting dates, is publicly available on the City's website.

14. Public Question Period

15 Minute Limit (regarding any decision made at this meeting)

During the meeting, the public may submit questions regarding recommendations made at the meeting via email to the City Clerk at cityclerksoffice@brampton.ca, to be introduced during the Public Question Period section of the meeting.

15. Closed Session

Note: A separate package regarding these agenda items are distributed to Members of Council and senior staff only.

15.1. Open Meeting exception under Section 239 (2) (k) of the Municipal Act, 2001

A position, plan, procedure, criteria or instruction to be applied to any negotiations carried on or to be carried on by or on behalf of the municipality or local board.

15.2. Open Meeting exception under Section 239 (2) (c) and (k) of the Municipal Act, 2001:

A proposed or pending acquisition or disposition of land by the municipality or local board; and a position, plan, procedure, criteria or instruction to be applied to any negotiations carried on or to be carried on by or on behalf of the municipality or local board.

16. Adjournment

Next Regular Meeting: Wednesday, February 24, 2021

Public Notice

Notice of Intention to Amend Mobile Licensing By-law 67-2014 Appendix B – Expiry Dates.

The City of Brampton intends to amend Mobile Licensing By-law 67-2014, as amended, to amend the following:

- Mobile Licensing By-law 67-2014, Appendix B –Expiry Dates will be replaced to implement a new expiry date schedule for the various licence categories in the By-law.

Committee of Council will consider this matter, via regular meeting with electronic participation, at its meeting on Wednesday, February 3, 2021 scheduled to start at 9:30 a.m., Council Chambers, 4th Floor, City Hall.

In consideration of the ongoing COVID-19 pandemic, the City Council meeting on December 9 will be convened as a virtual meeting, in accordance with the City's Procedure By-law, originating from the Council Chambers, 4th Floor, City Hall at the address noted below. Persons wishing to participate through remote delegation must contact the City Clerk's Office to register and receive instructions to participate in a virtual meeting. Limited in-person public attendance at meetings may be permitted by pre-registration only (subject to occupancy limits) with the City Clerk's Office. It is strongly recommended that all persons continue to observe meetings online or participate remotely.

Members of the public may watch the meeting live from the City of Brampton website at: https://www.brampton.ca/EN/City-Hall/meetings-agendas/Pages/Welcome.aspx or http://video.isilive.ca/brampton/live.html

Correspondence related to this matter may be submitted via email to the City Clerk at cityclerksoffice@brampton.ca up until the start of the meeting.

During the Council Meeting, the public may submit questions regarding decisions made at the meeting via email to the City Clerk at cityclerksoffice@brampton.ca, to be introduced during the Public Question Period section of the meeting.

A copy of the staff report and proposed by-law amendment, as considered by the City's Committee of Council on December 2, 2020, is available from the City Clerk's Office, or the City's website at www.brampton.ca.

Questions and comments may be directed to:

- James Bisson, Manager, Licensing Enforcement, Enforcement & By-law Services, Legislative Services, 905-458-3424 ext. 63222, james.bisson@brampton.ca

Dated January 28, 2021

P. Fay, City Clerk
2 Wellington St. W., Brampton, ON L6Y 4R2
905 874-2106 cityclerksoffice@brampton.ca

Public Notice

Notice of Intention to Amend Mobile Licensing By-law 67-2014 Appendix A - Licence Fees and to revoke By-law 75-2020 a By-law to provide relief to fees and timelines under By-law 67-2014, as amended, during the COVID-19 emergency.

The City of Brampton intends to amend Mobile Licensing By-law 67-2014, as amended, to amend the following:

- Mobile Licensing By-law 67-2014, Appendix A -Licence Fees will be replaced so that the new fee schedule would reflect the January 1, 2020 fees for the licences.
- By-law 75-2020, a By-law to provide relief to fees and timelines under By-law 67-2014, as amended, during the COVID-19 emergency will be revoked.

Committee of Council will consider this matter, via regular meeting with electronic participation, at its meeting on Wednesday, February 3, 2021 scheduled to start at 9:30 a.m., Council Chambers, 4th Floor, City Hall.

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Dated January 28, 2021

P. Fay, City Clerk

2 Wellington St. W., Brampton, ON L6Y 4R2
905 874-2106 cityclerksoffice@brampton.ca

The Corporation of The City of Brampton
2 Wellington Street West, Brampton, ON L6Y 4R2 T: 905.874.2000 TTY: 905.874.2130

BRAMPTON Flower City
brampton.ca

Chief Administrative Office
City Clerk

For Office Use Only:
Meeting Name:
Meeting Date:

Delegation Request

Please complete this form for your request to delegate to Council or Committee on a matter where a decision of the Council may be required. Delegations at Council meetings are generally limited to agenda business published with the meeting agenda. Delegations at Committee meetings can relate to new business within the jurisdiction and authority of the City and/or Committee or agenda business published with the meeting agenda. **All delegations are limited to five (5) minutes.**

Attention: City Clerk's Office, City of Brampton, 2 Wellington Street West, Brampton ON L6Y 4R2
Email: cityclerksoffice@brampton.ca Telephone: (905) 874-2100 Fax: (905) 874-2119

Meeting:
- ☐ City Council
- ☑ Committee of Council
- ☐ Planning and Development Committee
- ☐ Other Committee:

Meeting Date Requested: February 3, 2021
Agenda Item (if applicable): IBC for Queen Street-Highway 7 B

Name of Individual(s):
Joseph Ehrlich
Leona Hollingsworth

Position/Title:
Joseph Ehrlich- Manager, Project Planning, Rapid Transit
Leona Hollingsworth- Sr. Manager, Community and Stakeholder Relations – Peel

Organization/Person being represented: Metrolinx

Full Address for Contact:
10 Bay Street
Toronto, Ontario
M5J 2W3

Telephone:

Email: Leona.Hollingsworth@metrolinx.cor

Subject Matter to be Discussed:	Briefing on the recently published Initial Business Case for the Queen Street-Highway 7 Bus Rapid Transit project for Brampton City councillors.
Action Requested:	Presentation will provide an opportunity for Metrolinx to outline the proposed service options and project benefits, including travel time savings, increased transit ridership, shaping growth, and improved quality of life.

A formal presentation will accompany my delegation: ☑ Yes ☐ No

Presentation format:
- ☐ PowerPoint File (.ppt)
- ☑ Adobe File or equivalent (.pdf)
- ☐ Picture File (.jpg)
- ☐ Video File (.avi, .mpg)
- ☐ Other:

Additional printed information/materials will be distributed with my delegation: ☐ Yes ☑ No ☐ Attached

Note: Delegates are requested to provide to the City Clerk's Office **well in advance of the meeting date:**
(i) 25 copies of all background material and/or presentations for publication with the meeting agenda and /or distribution at the meeting, and
(ii) the electronic file of the presentation to ensure compatibility with corporate equipment.

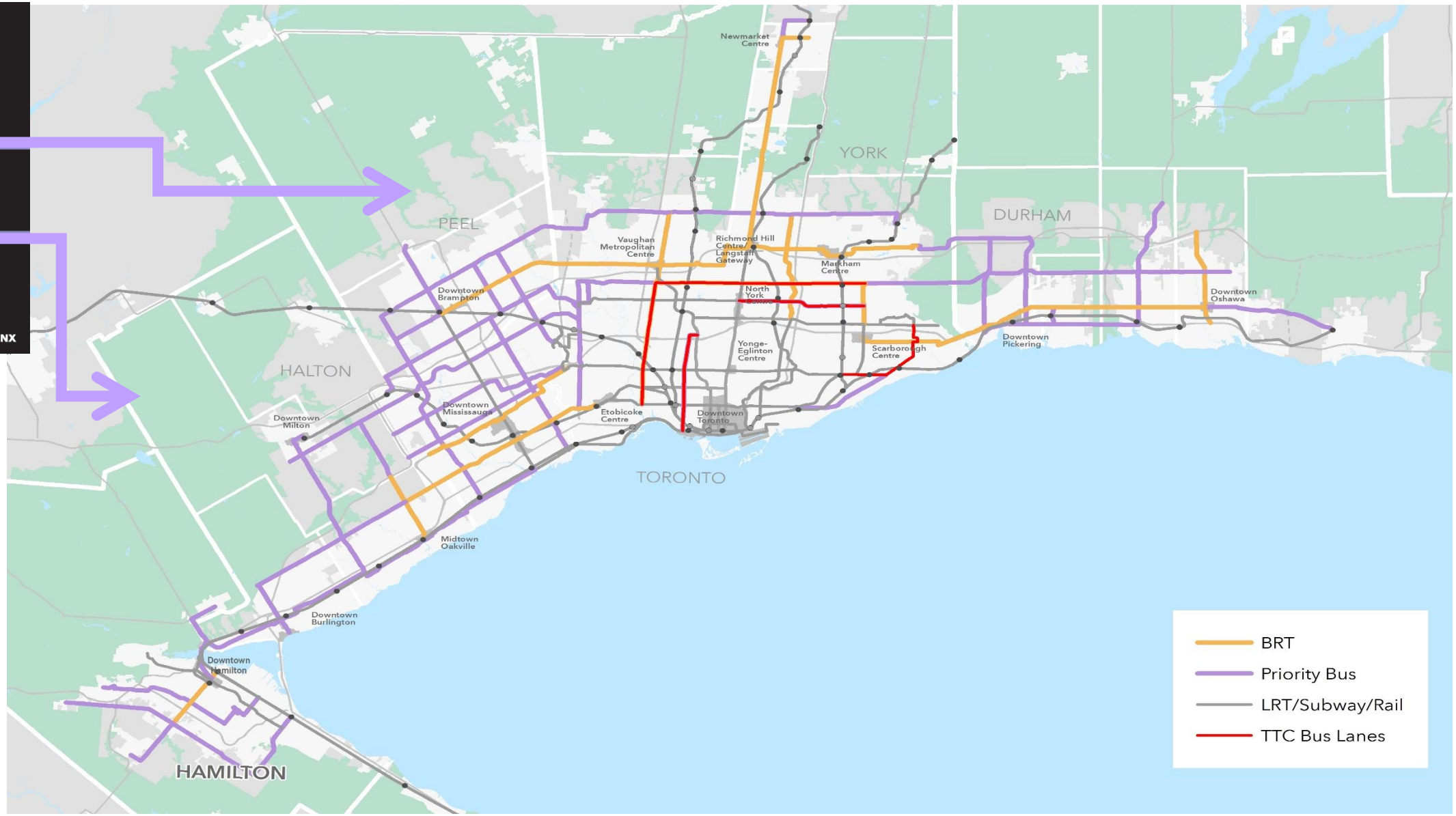
Submit by Email

Once this completed form is received by the City Clerk's Office, you will be contacted to confirm your placement on the appropriate meeting agenda.

Queen St-Hwy 7 BRT Initial Business Case Briefing

December 15, 2020

BRT AS PART OF THE TOTAL TRANSIT SYSTEM



BRT/BUS PRIORITY AS PART OF THE FRTN

- Multi Jurisdictional corridors connecting municipalities and Municipal Service Providers (MSP) to regional destinations, GO Stations, LRT and subways;
- Planned in partnership with municipalities, and MSPs as the operators of services and owners of the Right of Way (ROW);
- Supports an adaptable transportation network : Investment in BRT corridors will provide much need through transit capacity that can be scaled and grown overtime to meet demand resulting from new urban development;
- Delivery options to be explored for future, potential delivery of the BRT project.

PRIORITY BUS TO BRT SPECTRUM

Mixed Traffic Operations

Priority Bus

Bus Rapid Transit

Fully Separated Operations

Priority Bus Features

- Shared HOV and bus lanes
- Aligned to curb
- Queue jump lanes

Shared Features

- Transit signal priority
- Off-board fare collection
- All door boarding
- High quality stations
- All-day frequent service

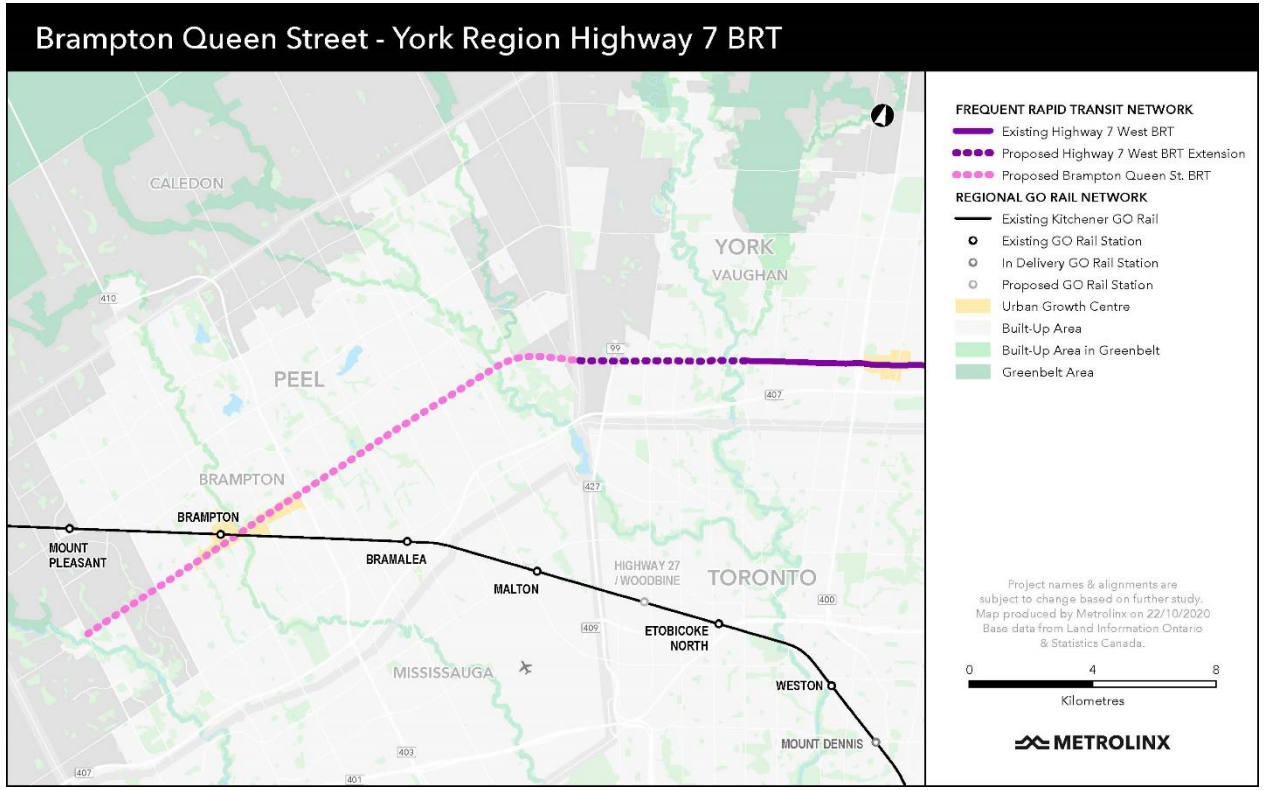
BRT Features

- Dedicated bus lanes
- Median busway
- Platform-level boarding
- Grade Separation

These are some examples of Priority Bus & BRT features, there are many other transit features that make up BRT.

OVERVIEW

- Brampton-York BRT is a 24-km bus rapid transit line from the current YRT Viva infrastructure terminus at Helen Street in York Region to Mississauga Road in Brampton
- Centre-median BRT is proposed along the 24-km line, with two configuration options being considered:
  1. Conversion of one general purpose traffic lane in each direction
  2. Addition of a transit lane in each direction through road widening (with lane conversion through Downtown Brampton)
- Proposing infrastructure and service integration between Brampton and York, extending the frequent rapid transit network through York Region and Brampton. Project will integrate with the existing Viva network along Highway 7.
- Key issues/needs include decision on whether to widen the road or convert general purpose traffic lanes into transit lanes and ensuring integration between Brampton and York Region services



KEY PROJECT BENEFITS

9.5
Minutes Saved Per Rider

Transportation
Extending the GTHA's frequent rapid transit network through the Queen St-Highway 7 Corridor, providing increased transportation choices and connecting key destinations

37%
Increase in Ridership

Quality of Life
Shaping growth, improving public health, environmental health and air quality, safety and connectivity and encouraging active transportation.

2,000-2,400
Millions of Dollars of Economic Benefits

Economic and Regional Development
Connecting commuters to jobs, catalyzing urban land development, and supporting innovation and prosperity by connecting major employment hubs, academic institutions, and centres of innovation.

2.6-3.3
Benefit to Cost Ratio

Environmental Sustainability
Improved energy use and efficiency through lower vehicle kilometres travelled (VKT) by increased ridership, lower auto use, and supporting car-free forms of development and lifestyles.

OPTIONS ANALYZED IN THE INITIAL BUSINESS CASE

- The IBC evaluated service plans and infrastructure options separately. From the evaluation the recommended service is a single main BRT trunk route plus additional feeder priority routes.

Scenario 4: Centre-Median BRT with Lane Conversion* – Proposes the conversion of a traffic lane per direction to median BRT exclusive lanes along the corridor, including Downtown Brampton (curbside BRT instead of centre-median at pinch-point).

This option reduces the number of traffic lanes along the length of the corridor by one per direction, impacting general traffic but having much lower property and construction costs

Scenario 5: Centre-Median BRT with Lane Addition* – Proposes one median BRT exclusive lane per direction along the length of the corridor as a result of road widening everywhere except Downtown Brampton (Queen Street between McMurchy Avenue and Kennedy Road). Through Downtown Brampton lane conversion is proposed.

This option widens the road through the majority of the corridor, providing the service without impacting general traffic.

Scenario 6: Hybrid Alternative Including Centre-Median BRT (Lane Addition) and Mixed Traffic – Proposes one BRT exclusive lane per direction except for segments in constrained zones (ex. Downtown Brampton and rail/highway crossings) and segments showing impacted capacity due to traffic lane conversion. Mixed traffic solutions would be implemented in the exceptions.

Sample road cross-section in-between Dixie Road and Highway 410 for Scenario 4 and Scenario 5

*Scenario 4 and Scenario 5 will be evaluated and refined in the Preliminary Design Business Case

INITIAL BUSINESS CASE SUMMARY

QUEEN ST – HWY 7 BRT	OPTION 4 – LANE CONVERSION, CURBSIDE LANE AT PINCHPOINT	OPTION 5 – ROAD WIDENING, LANE CONVERSION AT PINCHPOINT	OPTION 6 – ROAD WIDENING, MIXED TRAFFIC AT PINCHPOINT
Strategic Case			
Transit Ridership	18,813 total ridership in the AM peak hour	18,734 total ridership in the AM peak hour	15,110 total ridership in the AM peak hour
Transit User Experience	10 minute travel time reduction*	9 minute travel time reduction*	7 minute travel time reduction*
Mobility Choices	4% higher transit mode share (6.9 to 7.1%)	5% higher transit mode share (6.9 to 7.2%)	3% higher transit mode share (6.9 to 7.1%)
Environmental Quality and Safety	Most considerable improvement	Considerable improvement	Least considerable improvement
Overall Strategic Benefit	Greatest improvements in additional transportation choices, sustainable growth, emission reduction and connectivity	Greatest improvements in additional transportation choices, sustainable growth, emission reduction and connectivity	Noticeable improvements in additional transportation choices, sustainable growth, emission reduction and connectivity
Economic Case			
Total Benefits($2020, NPV)	$1.96 billion	$2.42 billion	$1.63 billion
Total Cost ($2020, NPV)	$585 million	$936 million	$582 million
Capital Cost ($2020, NPV)	$95 million	$490 million	$151 million
Benefit-Cost Ratio	3.3	2.6	2.8
Net Present Value	$1.37 billion	$1.48 billion	$1.05 billion
Financial Case			
Total Project Costs ($2019, NPV)	$595 million	$946 million	$590 million
Net Present Value ($2019, NPV)	- $381 million	- $ 701 million	- $ 418 million
Deliverability and Operations Case			
Summary	Minimal physical constraints during construction process	Considerably high amount of reconstruction of constrained segments	Least amount of reconstruction of constrained segments, but mixed traffic operations heightens operational risks

*Average travel time saving between major origin-destination pairs compared to the BAU.

STATUS AND NEXT STEPS

NEXT STEPS

Status Update

- IBC draft is complete, final version will be published in December 2020
- The IBC results showed significant benefits, including travel time savings, increased transit ridership, and shaping growth
- Work ongoing developing PDBC scope and governance agreements with all stakeholders

Upcoming Milestones

- Confirm PDBC scope of work and release tender to market for contract to complete PDBC – Late 2020/Early 2021

METROLINX

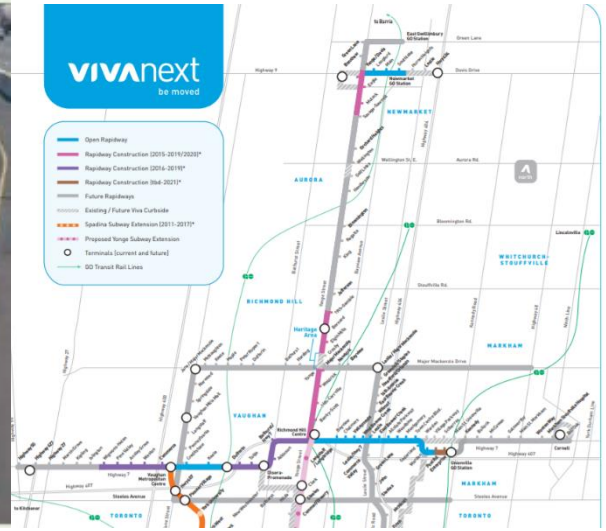
BRT INFRASTRUCTURE IN THE GTHA

Median Busway

Curbside Bus Lane

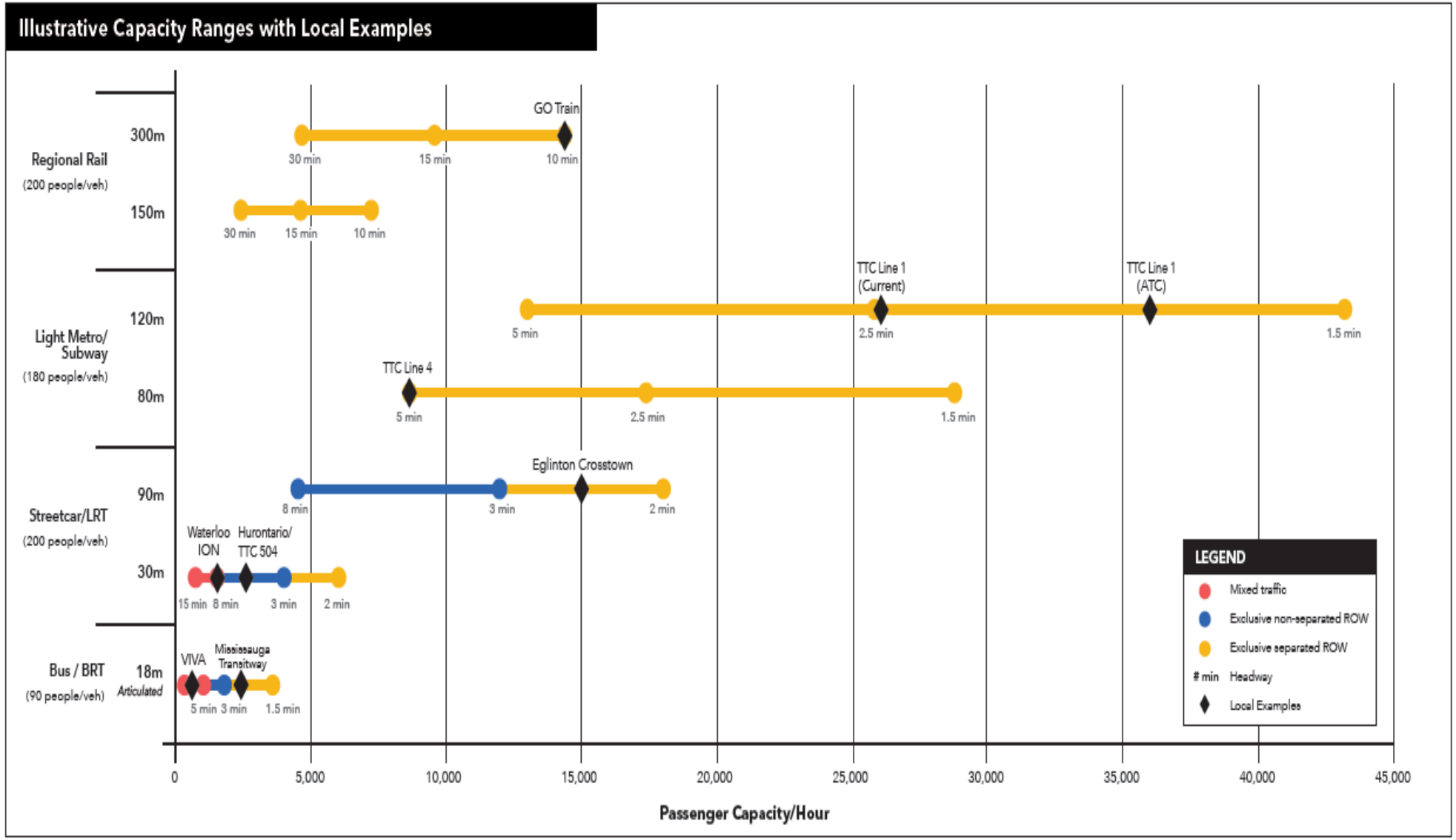
Priority Bus

Branded Services/BRT Lite



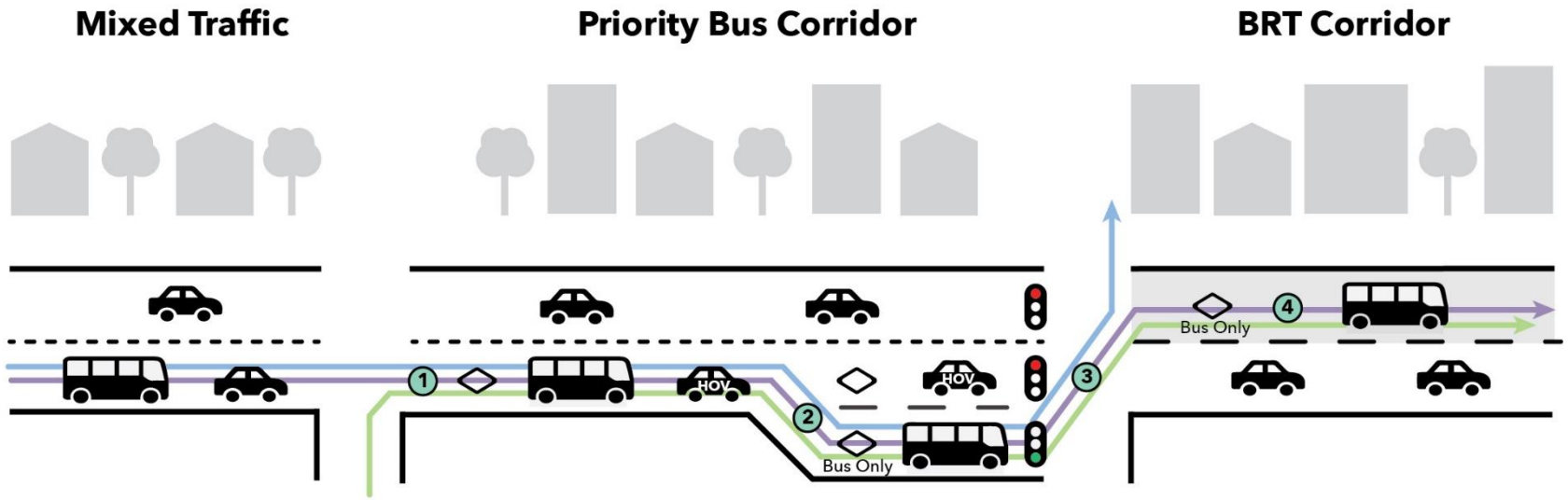
CAPACITY OF TRANSIT TECHNOLOGIES

- BRT capacity approx 5,000 pph
- From the findings of the RTP 2041 and FRTN work -BRT is the best option for 905 communities and corridors to connect with TTC subway and GO Rail/Bus
- RTP 2041 and FRTN work findings show BRT and bus priority are the best options to deliver the objectives of the 2041 RTP and implementation of the FRTN



WHY BRT?

- A cost effective approach to develop ridership over time and support cross border travel as services are adjusted to meet demand
- BRT can be designed to be converted to LRT when demand warrants
- Flexibility for multiple bus routes and service providers to use the infrastructure which increases project benefits
- Leverage existing Municipal Service Providers increasing fare integration and regional travel options
- Increases in ridership, faster travel times and encourages development (e.g. Viva, Dundas Corridor, Durham-Scarborough BRT)



Some measures that can be used to improve speed and reliability of transit in priority corridors:

1. Shared bus and HOV lane
2. Queue jump lane for buses
3. Transit Signal Priority
4. Dedicated bus lane

Multiple bus routes can share Priority Bus and BRT corridors, and operate in mixed traffic, without the need to transfer.

BRAMPTON Flower City
brampton.ca

Chief Administrative Office
City Clerk

For Office Use Only:
Meeting Name:
Meeting Date:

Delegation Request

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Email: cityclerksoffice@brampton.ca Telephone: (905) 874-2100 Fax: (905) 874-2119

Meeting:
- ☐ City Council
- ☑ Committee of Council
- ☐ Planning and Development Committee
- ☐ Other Committee:

Meeting Date Requested: 2021 February 3 **Agenda Item (if applicable):**

Name of Individual(s): Sylvia Roberts

Position/Title: Resident

Organization/Person being represented:

Full Address for Contact: **Telephone:** **Email:**

Subject Matter to be Discussed:	Brampton Transit & Regional Service Improvements
Action Requested:	Next Transit 5 Year Business Plan includes plans on how to service All Day Two Way GO, begin adding service in 2022 budget, start planning the Steeles BRT

A formal presentation will accompany my delegation: ☑ Yes ☐ No

Presentation format:
- ☐ PowerPoint File (.ppt)
- ☑ Adobe File or equivalent (.pdf)
- ☐ Picture File (.jpg)
- ☐ Video File (.avi, .mpg)
- ☐ Other:

Additional printed information/materials will be distributed with my delegation: ☐ Yes ☐ No ☐ Attached

Note: Delegates are requested to provide to the City Clerk's Office **well in advance of the meeting date:**
(i) 25 copies of all background material and/or presentations for publication with the meeting agenda and /or distribution at the meeting, and
(ii) the electronic file of the presentation to ensure compatibility with corporate equipment.

Submit by Email

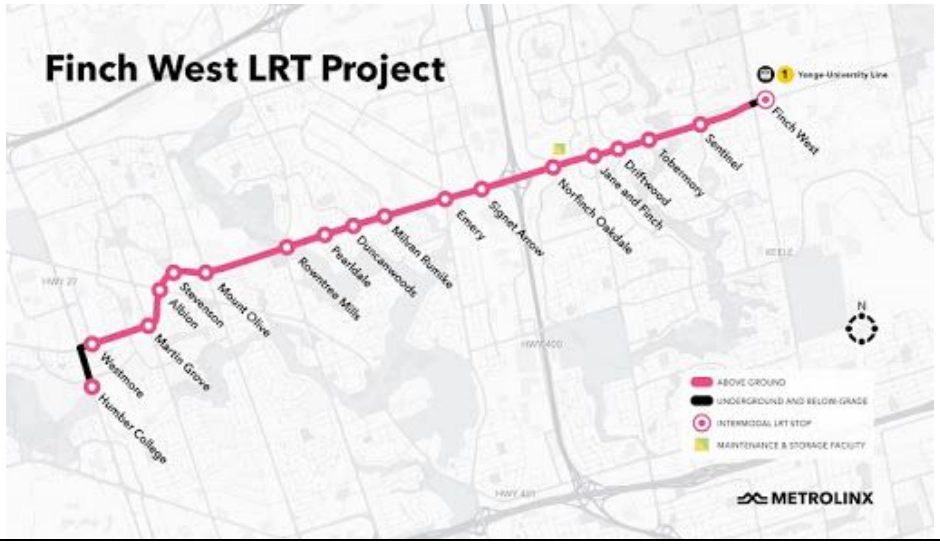
Once this completed form is received by the City Clerk's Office, you will be contacted to confirm your placement on the appropriate meeting agenda.

Personal information on this form is collected under authority of the Municipal Act, SO 2001, c.25 and/or the Planning Act, R.S.O. 1990, c.P.13 and will be used in the preparation of the applicable council/committee agenda and will be attached to the agenda and publicly available at the meeting and om the City's website. Questions about the collection of personal information should be directed to the Deputy City Clerk, Council and Administrative Services, 2 Wellington Street West, Brampton, Ontario, L6Y 4R2, tel. 905-874-2115.

Brampton Transit & Regional Service Improvements

Effects of Line 6 Finch West, and GO RER to Bramalea on Brampton Transit

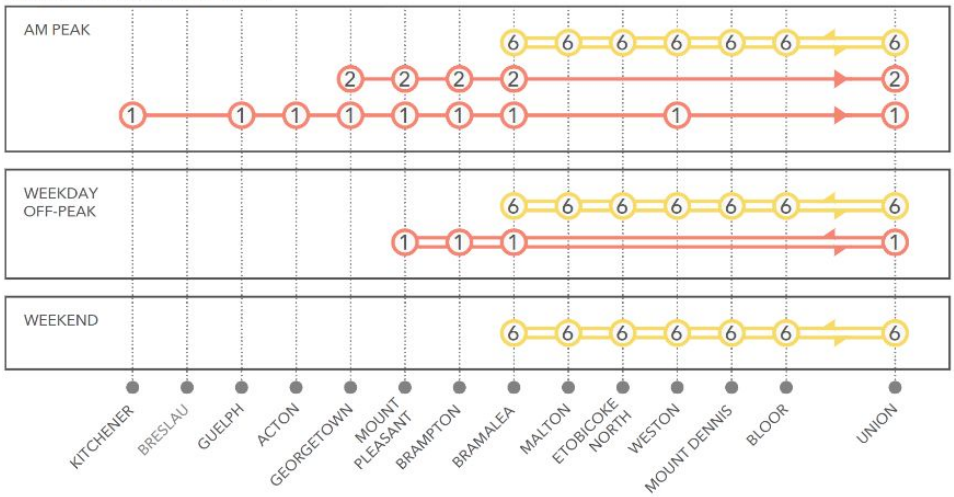
Line 6 Finch West



The Line 6 Finch West LRT is currently expected to be completed in 2023, this will provide faster service than the bus line it is largely replacing, and interconnect to Line 1. The impact on Brampton Transit is that it goes to Humber College, which is the terminus for a number of Brampton routes, such as the 11/511 on Steeles, and route 50 The Gore Road, and could potentially increase ridership by several hundred per hour, necessitating additional buses and service hours. What is the plan for servicing increased ridership? Articulated buses take ~2 years from order to deployment, this is supposed to open in 2023, and the 2021 budget was passed in December.

GO Expansion

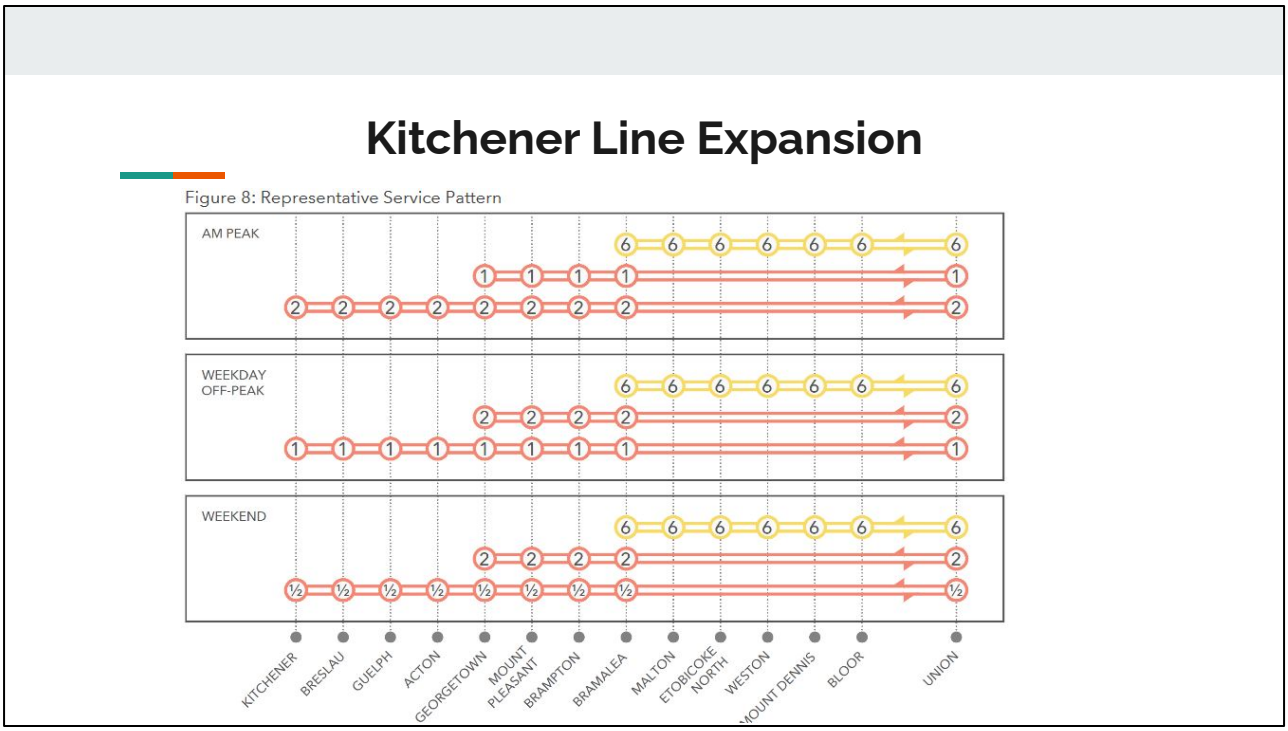
Figure 7: BAU Service Pattern



This is the Kitchener GO Business As Usual Service Pattern, which is based on the previously approved GO Expansion Full Business Case

Page 26 (pdf page 33) of the Kitchener IBC
http://www.metrolinx.com/en/regionalplanning/projectevaluation/benefitscases/2019-11-14-Kitchener-Mid-Term-Service-Expansion-IBC-Update-FINAL.pdf

Page 45 of the GO Expansion Business Case
http://www.metrolinx.com/en/docs/pdf/board_agenda/20181206/20181206_BoardMtg_GO_Expansion_Full_Business_Case.PDF



This is the GO RER version, notice significantly improved service beyond Bramalea GO, however in both cases, Bramalea gets 6 electric trains peak, off peak, and weekends, and 9 per hour for peak, and the other Brampton stations get 3 per hour. The good news is a massive number of people will be able to take it, ~2000 per train, which means Bramalea will get capacity of ~17.5k The bad news is Brampton needs to figure out how to get that many people on the train, even if we just focus on the 6 trains that don't go past Bramalea, this is ~11.5k per hour, in comparison, the 11/511 only move ~2k per hour max, this means, Brampton is going to need significantly improve bus service to hope to get close to filling these trains, if we don't we might find Metrolinx not building up to this capacity, or if they start with this service, they may start cutting service. Even if we sandbag the capacity and say only 8k per hour will board at Bramalea GO, this is still the equivalent of over 100 articulated buses per hour, how do you get that many people there? Remember, Humber College is further east of Bramalea GO, and also needs service.

Page 26 (pdf page 33) of the Kitchener IBC
http://www.metrolinx.com/en/regionalplanning/projectevaluation/benefitscases/2019-11-14-Kitchener-Mid-Term-Service-Expansion-IBC-Update-FINAL.pdf

Bramalea GO Mobility Hub

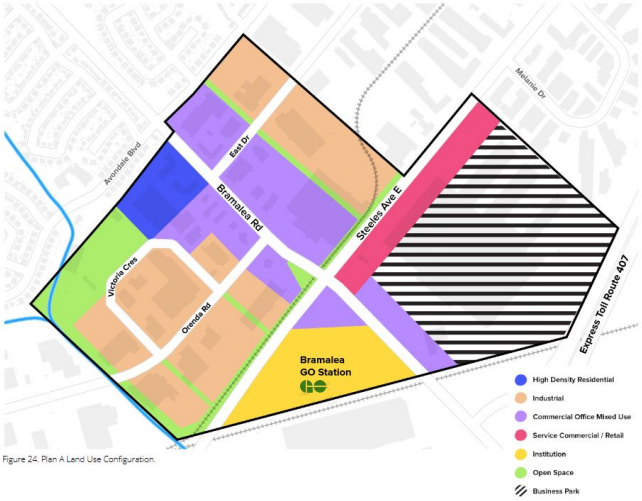


Figure 24. Plan A Land Use Configuration.

This is Plan B, the longer range plan for Bramalea GO, at the level of Brampton Transit service required for Bramalea GO RER, this is a significant benefit for the area, and strongly incentivizes intensification of employment in this area.

Bramalea GO Mobility Hub Land Use Assessment Page 38 (pdf page 53)
https://uwaterloo.ca/planning/sites/ca.planning/files/uploads/files/bramalea_go_mobility_hub_land_use_assessment_study.pdf

What does this mean?

- We need a transportation plan for Bramalea GO
- Implementation needs to start in the 2022 budget

In order to meet the significant increased need to service Bramalea GO, Brampton needs a plan how to achieve sufficient service, and it will need to be phased in to be able to afford it, while also covering the rest of the City, including expanding into the new greenfield areas. Implementation will need to start in 2022, even if the finished plan isn't done.

RCT
Renewed Computer Technology

Working with our partners,
communities & ambassadors to succeed

En travaillant avec nos partenaires,
communautés et ambassadeurs pour réussir

Delegation to Committee of Council
February 3rd, 2021
Renewed Computer Technology of Ontario

With funding from
Canada

EXTENDING TECHNOLOGY
...expanding minds

Data Security / La sécurité des données:

- ✓ Data Security is a major concern for many of our donors. RCT follows a meticulous process when wiping and securing hard drives from a donor.

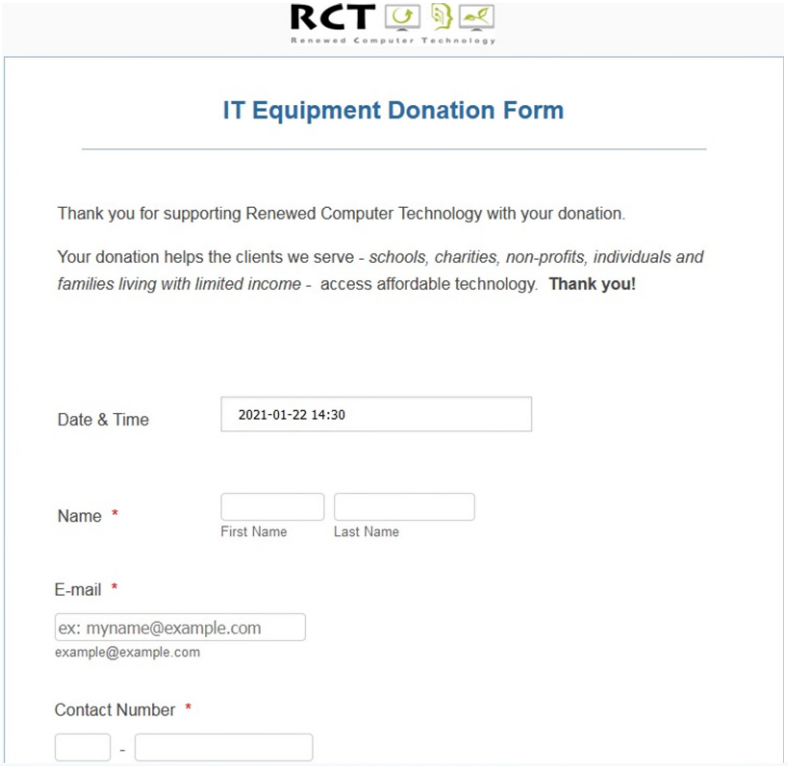
- ✓ La sécurité des données est une préoccupation majeure pour beaucoup de nos donateurs. RCT suit un processus méticuleux lors de l'essuyage et la sécurisation des disques durs d'un donneur.

With funding from
Canada

RCT
Renewed Computer Technology

Donation Offer / Offre de don
Donation Delivery / Livraison des dons

- ✓ Donor contacts RCT with offer and completes donation form on RCT Website:
- ✓ Le donateur communique avec RCT avec l'offre et remplit le formulaire de don sur le site Web de RCT:


RCT
Renewed Computer Technology

IT Equipment Donation Form

Thank you for supporting Renewed Computer Technology with your donation.

Your donation helps the clients we serve - *schools, charities, non-profits, individuals and families living with limited income* - access affordable technology. **Thank you!**

Date & Time 2021-01-22 14:30

Name *
First Name Last Name

E-mail *
ex: myname@example.com
example@example.com

Contact Number *
-

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RCT
Renewed Computer Technology

Chain of Custody / Chaine de Contrôle

- ✓ RCT coordinates a pickup time with each donor. Once an agreed upon time is determined, RCT sends a cartage company to pick up the equipment and we bring the equipment directly to the RCT warehouse (point to point delivery).

- ✓ RCT coordonne une heure de ramassage avec chaque donneur. Une fois qu'une heure convenue est déterminée, RCT envoie une entreprise de transport pour ramasser l'équipement et nous apportons l'équipement directement à l'entrepôt de RCT (livraison point à point).

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Detailing & Production / Détail et production A

- ✓ When donated computers arrive at RCT, each donation is unpacked, counted, skidded and moved to our secure holding area in our warehouse. Our warehouse and offices are locked, have alarm systems and follow Federal government and WEEE Reuse and Refurbishment Standard requirements.

- ✓ Lorsque les ordinateurs donnés arrivent à RCT, chaque don est déballé, compté, dérapé et déplacé dans notre zone de détention sécurisée dans notre entrepôt. Nos entrepôts et nos bureaux sont verrouillés, munis de systèmes d'alarme et conformes aux exigences de la norme de réutilisation et de remise à neuf des DEEE et du gouvernement fédéral.

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Detailing & Production / Détail et production B

- ✓ Once the computers are required for orders, they are transferred from storage to detailing. The detailing team will review unit and remove RAM and hard drives. The hard drives are passed to our Senior Technicians. Senior Technicians oversee the wiping of each hard-drive received. All hard drives are removed and are stored in a separate secure area that only the Operations Manager has access to.

- ✓ Une fois que les ordinateurs sont nécessaires pour les commandes, ils sont transférés de l'entreposage à la description détaillée. L'équipe de détail examinera l'unité et retirera la RAM et les disques durs. Les disques durs sont transmis à nos techniciens principaux. Les techniciens principaux supervisent l'effacement de chaque disque dur reçu. Tous les disques durs sont retirés et stockés dans une zone sécurisée distincte à laquelle seul le gestionnaire des opérations a accès.

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Data Security & Destruction / Sécurité et destruction des données

- ✓ Hard Drives are wiped using a Destroyinator device. These devices are wiped using the US DoD-5220.22-M 3 Pass method with 10% verification of erasure and 100% sector verification. Solid State Drives are also wiped with the Destroyinator, using the 'Secure Erase' function with 100% verification of erasure. Any drives that have defective sectors or that cannot be erased are destroyed via a lever crusher. Once the hard drives are wiped, they are put into our inventory so they can be used for future orders.

- ✓ Les disques durs sont effacés à l'aide d'un périphérique Destroyinator. Ces dispositifs sont essuyés à l'aide de la méthode DoD-5220.22-M 3 Pass des États-Unis avec une vérification d'effacement de 10 % et une vérification de secteur de 100 %. Les disques SSD sont également essuyés avec le destructeur, en utilisant la fonction 'Secure Erase' avec une vérification à 100% de l'effacement. Tous les disques qui ont des secteurs défectueux ou qui ne peuvent pas être effacés sont détruits par un concasseur à levier. Une fois que les disques durs sont effacés, ils sont mis dans notre inventaire.

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Disk Processing Certificate / Certificat de Traitement de Disque

Renewed Computer Technology

DISK PROCESSING CERTIFICATE

Date: September 17, 2020
Time: 22:16

Company Information

Business Name: Renewed Computer Technology
Business Location: Mississauga, ON

Technician Information

Name: Technician

Disk Information

Name: sdaf
Product Name: IBM-ESXS ST9300603SS
Serial Number: 6SE4D7NP0000B150HPML
Platform Name: /dev/sdaf
Partitioning: RAW (Basic)
Size: 279 GB
Total Sectors: 585,937,500
Bytes per Sector: 512

Disk Examine

Attributes

Method: Complete disk examination
Exclude Failed: Yes
Failure Limit: 100

Results

Name: Examining sdaf
Started at: 17/09/2020 09:57:54
Duration: 00:48:07
Errors: No Errors
Result: Examined

Disk Erase

Renewed Computer Technology

Attributes

Erase Method: US DoD 5220.22-M, 3 passes
Verification: 10%
Use Fingerprint: No
Initialize Disk: Yes

Results

Erase Range: Whole disk
Name: Erasing sdaf
Started at: 17/09/2020 10:46:03
Duration: 03:58:40
Errors: No Errors
Result: Erased

Erase Passes
Pass 1 (0x000000000000) - OK
Pass 2 (0xFFFFFFFFFFFF) - OK
Pass 3 (Random) - OK
Verification - passed OK

System Information

OS: Linux Mint 19 64-bit
Type: x86_64

Hardware Information

Manufacturer: Supermicro
Description: X11SPL-F
Logical Processors: 16

I hereby state that the data erasure has been carried out in accordance with the instructions given by software provider.

TECHNICIAN

Page # 2

Erased by KillDisk for Industrial Systems v. 4.0.05, Kernel: 9.12.30 kd

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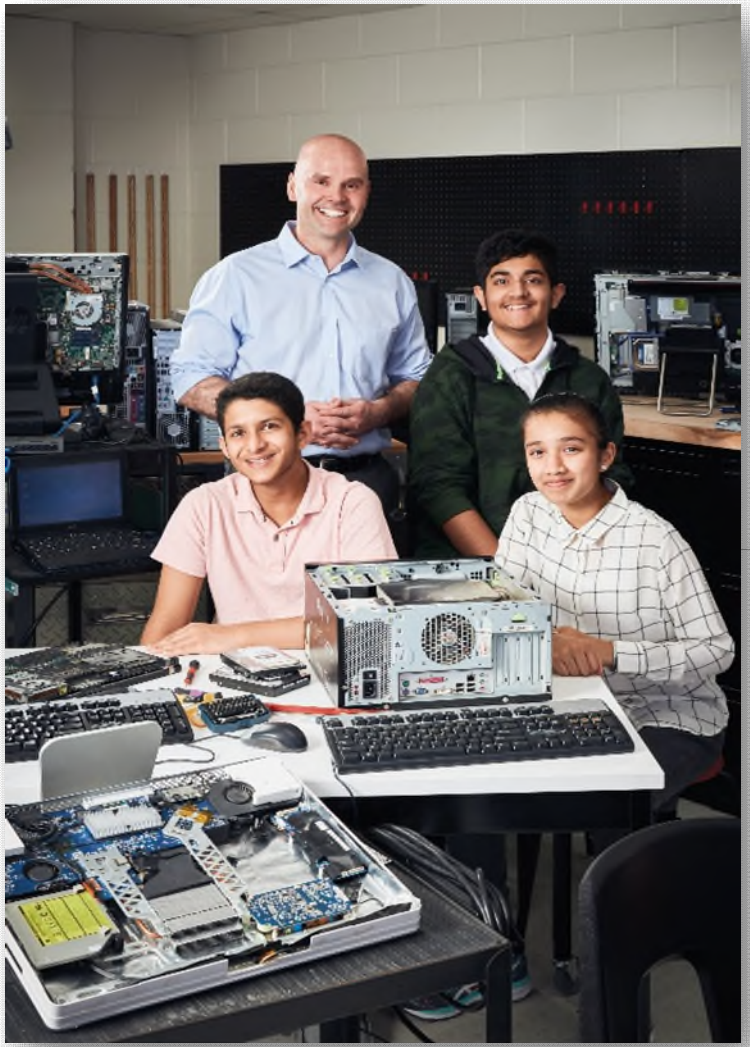
Canada

RCT
Renewed Computer Technology

- ✓ Thank you / Merci !

Any questions? Avez-vous des questions?



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Report
Committee of Council
The Corporation of the City of Brampton
2021-02-03

Date: 2020-01-15

Subject: **Request to Begin Procurement – Supply, Delivery and Installation of Four-Fold Doors at 11 Fire Stations**

Contact: George Tijanic, Division Chief – Administrative Services, Brampton Fire & Emergency Services (905-874-2734)
Scott Glew, Division Chief - Apparatus & Maintenance, Brampton Fire & Emergency Services (905-458-5343)

Report Number: Brampton Fire and Emergency Services-2021-112

Recommendations:

1. THAT, the report titled "Request to Begin Procurement – Supply, Delivery and Installation of Four-Fold Doors at 11 Fire Stations" dated January 15th, 2021 be received;
2. THAT, the Purchasing Agent be authorized to commence the procurement for the Supply, Delivery and Installation of Four-Fold Doors at 11 Fire Stations; and
3. THAT, the appropriate City staff be authorized and directed to take the necessary action to give effect thereto.

Overview:

- This report seeks Council approval to commence the procurement for the Supply, Delivery and Installation of Four-Fold Doors at 11 Fire Stations.

Background:

On October 28, 2020, the Government of Ontario announced the COVID-19 Resilience Infrastructure Stream ("COVID stream") under the Investing in Canada Infrastructure Program (ICIP) in Ontario. Under the new COVID stream, $250 million in combined

federal-provincial funding was dedicated to local governments across the province to support public infrastructure. As a result, the City performed a comprehensive city-wide assessment to develop a list of priority projects that met the eligibility criteria. Based on this assessment, the City included the supply, delivery and installation of new four-fold doors (also known as bi-fold garage doors) to replace the existing overhead bay doors on the front of 11 fire stations as one of its five priority projects that it will ultimately include as part of its funding application.

Replacing the existing overhead bay doors with four-fold doors will reduce response times as four-fold doors take less than 7 seconds to open whereas traditional overhead doors take 14-21 seconds. Moreover, fewer accidents will occur as crews rush out to respond to 9-1-1 emergency calls since they open much faster and are more visible throughout the opening motion. In addition, four-fold doors require less maintenance and are typically more reliable.

Current Situation:

Currently, all of the City's 13 fire stations are equipped with traditional overhead doors. However, future Fire Station 201, 203 and 214, which are all in various phases of design and construction, are slated to have four-fold doors installed to align with new industry best practices. Therefore, only 11 of the 13 fire stations in-service require replacement, which include Fire Station 202, 204, 205, 206, 207, 208, 209, 210, 211, 212 and 213.

The City submitted this project as part of its application on January 7th, 2021 and expects to hear back from the provincial and federal governments by the end of the first quarter of this year at which time the contract can be awarded. In the meantime, the City intends to issue a public procurement contingent on receiving grant funding to expedite this project as construction must be completed by the end of 2021 to meet the grant eligibility criteria.

Brampton Fire & Emergency Services staff will oversee the completion of this project and in partnership with the City's Building, Design and Construction team. A consultant has been engaged to assist with the design and contract administration of this project due to its size and nature.

Corporate Implications:

<u>Purchasing Comments</u>

A public Procurement Process will be conducted and the lowest compliant Bid will be eligible for contract award. Purchase approval shall be obtained in accordance with the Purchasing By-law.

All communication with Bidders involved in the procurement must occur formally, through the contact person identified in the Bid Document.

Financial Implications:

A funding source currently does not exist to proceed with this procurement as it is contingent on receiving ICIP grant funding. A budget amendment report to create a capital project with sufficient funding will be provided to Council for review and approval once the Provincial and Federal Governments approve the City's application. 100% of the funding required for the supply, delivery and installation of four-fold doors at 11 fire stations will be covered by this grant. Should the Provincial and Federal Governments decide to decline this specific project as part of the application review process, the City will not pursue this project at this time.

Term of Council Priorities:

This report has been prepared in full consideration of the Term of Council Priority of "Brampton is a Healthy & Safe City" by positively affecting emergency response times and thereby improving the safety of the City's residents.

Conclusion:

It is recommended that the Purchasing Agent be authorized to commence the procurement as described in this report.

Authored by:

George Tijanic, Division Chief,
Administrative Services

Reviewed by:

Kim Kane, Deputy Fire Chief

Approved by:

Bill Boyes, Fire Chief

Submitted by:

David Barrick, Chief Administrative Officer

Report
Staff Report
The Corporation of the City of Brampton
2021-02-03

Date: 2021-01-08

Subject: **Mobile Licensing By-law 67-2014, Licence Fees 2021**

Contact: **J. Bisson, Manager, Licensing Enforcement, Legislative Services, 905-458-3424 ext. 63222**

Report Number: Legislative Services-2021-085

Recommendations:

1. **THAT** the report from James Bisson, Manager, Licensing Enforcement, Legislative Services, dated January 8, 2021, to the Committee of Council Meeting of February 3, 2021, re: Mobile Licensing By-law 67-2014, Licence Fees 2021, be received.

2. **THAT** Council enact amendments to Mobile Licensing By-Laws 67-2014 as attached as Appendix 3 to this Report.

3. **THAT** Council repeal by-law 75-2020.

Overview:

- **The Mobile Licensing By-law includes a provision for an automatic annual fee increase aligned with the Consumer Price Index.**
- **In view of the current pandemic, Council has directed staff to not increase the fees in 2021, but to keep them the same as January 1, 2020 fees.**
- **In April 2020, Council enacted a by-law to provide relief to the mobile licensing businesses that were affected by the pandemic.**
- **In order to comply with Council's direction to not increase fees in 2021, a schedule needs to be enacted.**
- **By-law 75-2020 is still in effect as the Emergency Order is still in place for the City of Brampton. The renewals have now been completed however, the fee for filing a lease for a taxicab and all late fees are affected and remain at $0.00 until the by-law is repealed or the emergency order for Brampton is terminated.**

Background:

The Mobile Licensing By-law 67-2014 was enacted on March 26, 2014. At that time, the licence fees were reviewed and set in Appendix A to the By-law. Licence fees are mainly comprised of labour costs, and in order to keep the fees current, the following clause was added;

These rates shall automatically increase and be rounded up to the nearest dollar on the first day of January in each year by the percentage increase in the All Items Index of the Consumer Price Index (not seasonally adjusted) for the Toronto Census Metropolitan Area, published by Statistics Canada, during the 12-month period ending on September 30 in the year immediately preceding the rate increase date.

In 2020, the percentage change was 0.5%, this change would increase all fees in the schedule by that amount and would have been in effect for January 1, 2021.

In 2020, Council made two changes to user fees and licence fees, the first occurred on April 22, 2020, when Council adopted all recommendations put forward in the staff report entitled 'Options for Relief to the Taxi Industry and other Mobile Licensees'. By-law 75-2020 (Appendix 1) was enacted by Council. This By-law did not repeal the Licence Fee Appendix A from the Mobile Licensing By-law. This by-law had the following clause in it identifying the term of the by-law;

13. This By-law shall come into force on the date of its passing and shall remain in force until the later date of the termination of either the emergency declared by the Lieutenant Governor in Council or the emergency declared by The Corporation of the City of Brampton.

As the City of Brampton has not terminated the emergency, and By-law 75-2020 remains in effect at this time.

The renewal fees for the various businesses were reduced for every month the EMCPA Ontario Regulation 82/20 was in effect. This resulted in a three-month reduction in driver licence fees and for the owner licence renewal fees for refreshment vehicles, driving schools, limousines, taxicabs, tow truck and personal transportation companies.

The second change became effective on July 1, 2020 when all user fees were reduced to the values set for 2019, By-law 95-2020. The licence fees for mobile licensing were added to the User Fee By-law to reflect the change. The User Fee By-law did not delete or repeal the licence fees from Mobile Licensing By-law.

Staff ensured that both reductions were in place for all fees charged in 2020. Appendix 2 to this report is the revised list of fees as of July 1, 2020.

Current Situation:

In December 2020, Council approved the new User Fee By-law. All of the fees were reverted back to the fees that were approved at the beginning of 2020.

The Mobile Licence Fees were removed from the User Fees By-law and were not subject to the requested change to revert the fees back to the January 2020 levels. This would require the Mobile Licence By-law- Licence Fee appendix to be replaced and adopted by Council, Appendix 3 to this report.

By-law 75- 2020 is still in effect and the following fees have been waived during the time the by-law is in effect;

- Late renewal fees- $56.00
- Filing of Lease Fee for taxicabs- $66.00

By-law 75-2020 should be repealed for these fees to be part of the new Licence fee Appendix A, in the Mobile Licensing By-law 67-2014, as amended.

Corporate Implications:

Financial Implications: No financial implications.

Term of Council Priorities:

This report aligns with the City of Brampton 2018-2022 Priorities:

Brampton is a Healthy and Safe City: Focusing on community safety and encourage active and healthy lifestyles. Residents need to feel safe when using the various transportation services.

Brampton is a Well-Run City: Continuously improving the day-to-day operation of the corporation by streamlining service delivery while providing a safe and functional licensing experience to the small business operators providing service to the residents in the City.

Conclusion:

In order to have the licence fees in the Mobile Licensing By-law reflect the direction Council has provided for all fees in the City, By-law 75-2020 providing relief to the mobile businesses should be repealed and the new Appendix A- Licence Fees attached

to this report as Appendix 3, should be approved by Council, so that the new fee schedule would reflect the January 1, 2020 fees for the licences.

Authored by:	Reviewed by:
James Bisson, Manager, Licensing Enforcement,	Paul Morrison, Director, Enforcement and By-law Services
Approved by:	Submitted by:
Paul Morrison, Acting Commissioner of Legal Services	David Barrick, Chief Administration Officer

Attachments:

APPENDIX 1: **Consolidated By-law Appendix A- Licence Fees, Effective July 1, 2020**

APPENDIX 2: **By-law 75-2020, To provide relief to fees and timelines under By-law 67-2014, as amended, during the COVID-19 emergency.**

APPENDIX 3: **Draft copy of Appendix A –Licence Fees, to By-law 67-2014**

Appendix A - Mobile Licensing By-law
Licence Fees
Effective July 1, 2020 in accordance with By-law's 75-2020 & 95-2020

MOBILE LICENCE FEES	NEW LICENCE FEE	RENEWAL FEE	TWO YEAR RENEWAL FEE
Schedule 1- Driving Schools:			
Driving School Operator	$155	$155	
Driving School Instructor	$96	$72	$168
Driving School Motor Vehicle Owner	$171	$128.25	
Schedule 2 - Limousines:			
Limousine Owner	$269	$201.74	
Limousine Driver	$96	$72	$168
Schedule 3 - Refreshment Vehicles:			
Refreshment Vehicle Class A (Coffee Truck)	$292	$219.01	
Refreshment Vehicle Class B (Ice Cream Bike)	$236	$176.99	
Refreshment Vehicle Class C (Hot Dog Cart/ Chip Truck)	$236	$176.99	
Refreshment Vehicle Class D (Ice Cream Truck)	$292	$219.01	
Refreshment Vehicle Driver Class A	$96	$72	$168
Refreshment Vehicle Driver Class B	$96	$72	$168
Refreshment Vehicle Driver Class C	$96	$72	$168
Refreshment Vehicle Driver Class D	$96	$72	$168
Special Event-Refreshment Vehicle (All Classes)	$111 Per Event		
Schedule 4 - Taxicabs:			
Broker- New	$619		
Broker- Renewal		$485	
Taxicab/Accessible Taxicab Owner - New	$3,852		
Taxicab/Accessible Taxicab Owner - Renewal		$329.26	
Conditional Licence Renewal-No Vehicle		$50	
Taxicab/Accessible Taxicab Owner - Transfer	$366		
Taxicab/ Accessible Taxicab Owner -Transfer from an Owner to their Spouse	$366		
Taxicab/ Accessible Taxicab Owner -Transfer from the registered Owner to a sibling child of the Owner	$366		
Taxicab/ Accessible Taxicab Owner -Transfer to a corporation controlled by that Owner	$366		
Taxicab Driver	$96	$72	$168
Schedule 5 - Tow Truck:			
Tow Truck Owner	$356	$266.99	
Tow Truck Driver	$96	$72	$168

Schedule 6 – Personal Transportation Company:	NEW FEE	RENEWAL FEE
Personal Transportation Company – New and Yearly Renewal	$20,440	$15,330.01
Personal Transportation Company – Monthly paid on the 15th of every month for every Transportation Service that took place the previous month.	$0.30/Transportation Service originating in the City of Brampton.	
All Schedules-ADDITIONAL FEES	**Each Item**	
Replacement of Driver or Owner Licence	$34	
Closed Application Fee	$55	
Late Renewal	$55	
Replacement of Plate	$64	
Vehicle Inspection Fee (Not applied to Taxicab/Accessible Taxicabs)	$126	
Schedule 4 - Taxicabs - ADDITIONAL FEES:	**Each Item**	
Extension of Vehicle Model Year	$0	
Filing of Lease	$0	
Replacement of Driver's Photo I.D. Card	$34	
Replacement of Tariff card	$34	
Taxicab Priority List - Initial Application	$126	
Taxicab Priority List -Renewal	$64	

These rates shall automatically increase and be rounded up to the nearest dollar on the first day of January in each year by the percentage increase in the All Items Index of the Consumer Price Index (not seasonally adjusted) for the Toronto Census Metropolitan Area, published by Statistics Canada, during the 12-month period ending on September 30 in the year immediately preceding the rate increase date.

THE CORPORATION OF THE CITY OF BRAMPTON

BY-LAW

Number _____- 2020

To provide relief to fees and timelines under By-law 67-2014, as amended during the COVID-19 emergency

_____

WHEREAS By-law 67-2014, as amended, was enacted on March 26, 2014 to provide for a system of Licensing for Mobile Businesses;

AND WHEREAS on March 18, 2020 the Government of Ontario issued a Declaration of Emergency and enacted Ontario Regulation 50/20 pursuant to subsection 7.0.1(3) of the *Emergency Management and Civil Protection Act*;

AND WHEREAS on March 24, 2020 the Government of Ontario enacted Ontario Regulation 82/20 – Closure of Places of Non-essential Businesses pursuant to Subsection 7.0.2(4) of the *Emergency Management and Civil Protection Act*;

AND WHEREAS The Corporation of the City of Brampton deems it necessary to provide relief to certain provisions of By-law 67-2014, as amended, during the COVID-19 emergency;

NOW THEREFORE the Council of The Corporation of the City of Brampton ENACTS AS FOLLOWS:

1. Capitalized terms in this by-law shall have the same meaning as defined in By-law 67-2014, as amended ("**By-law 67-2014**").

2. This by-law applies to current Licences that expire in 2020 as particularized in this by-law.

3. By-law 67-2014 shall continue to apply to applications for new Licences.

4. Any Person listed in Schedule "A" to this by-law who completed their renewal prior to the passing of this by-law will have the licence fee reduction applied to their renewal in 2021.

5. Notwithstanding subsection 22(1) of By-law 67-2014 if a Person fails to renew a Licence by the renewal date in 2020, no Late Renewal Fee shall be payable.

6. Notwithstanding paragraph 35(8)(i) of Schedule 4 of By-law 67-2014 upon application for an extension to the model year, a Motor Vehicle currently licensed as a Taxicab having a model year of 2010 shall be permitted an extension on the model year until May 31, 2021 provided that all other applicable requirements are met.

7. Notwithstanding paragraph 35(8)(i) of Schedule 4 of By-law 67-2014 no fee shall be payable for an application for an extension on a model year for a Motor Vehicle currently licensed as a Taxicab upon the Licence renewal date in 2020, provided that all other applicable requirements are met.

8. Notwithstanding the fees set out under Schedule 4 – Taxicabs in Appendix A of By-law 67-2014, no fee shall be payable for the Filing of a Lease.

9. Notwithstanding Appendix A of By-law 67-2014 any Licence fee upon renewal shall be reduced by the amount shown in Schedule "A" to this by-law by the number of months that Ontario Regulation 82/20 – Order Under Subsection 7.0.2(4) – Closure of Places of Non-Essential Businesses remained in effect.

10. Notwithstanding sections 14 and 29 and Appendix B of By-law 67-2014, the expiry dates to apply for a renewal of a Licence that expires in 2020 are extended as set out in Schedule "B" to this by-law.

11. All other expiry dates for Licences not listed in Schedule "B" to this by-law shall remain the same as set out in Appendix B of By-law 67-2014.

12. (1) All Schedules attached to this By–law shall form part of this by-law.

    (2) In the event of a conflict between any of the general provisions of this by-law and any provisions set out in the Schedules attached to this by-law, the provisions of the Schedules shall prevail.

13. This By-law shall come into force on the date of its passing and shall remain in force until the later date of the termination of either the emergency declared by the Lieutenant Governor in Council or the emergency declared by The Corporation of the City of Brampton.

READ A FIRST, SECOND AND THIRD TIME AND PASSED IN OPEN COUNCIL THIS 29th day of APRIL, 2020.

Approved as to form.

2020/04/27

C. Grant

Approved as to content.

2020/04/28

P. Morrison

-

_____

Patrick Brown, Mayor

_____

Peter Fay, City Clerk

SCHEDULE "A"
TO BY-LAW -2020

Licence Fee Relief Chart

Licence Type	2020 Licence Fee	Fee Reduction/month
Refreshment Vehicle Owner's Licence	$292	$24.33
Driving School Vehicle Owner's Licence	$171	$14.25
Taxicab Plate Owner's Licence	$448	$37.33
Tow Truck Owner's Licence	$363	$30.25
Limousine Owner's Licence	$269	$22.42
Personal Transportation Company	$20,788	$1732.33
Driver- All Classes under All Schedules	$98	$8.17

SCHEDULE "B"
TO BY-LAW -2020

Type of Licence	New date for expiry
Driver/ Driving School Instructor Licences required under By-law 67-2014	90 days after O.Reg. 82/20 has been revoked
All Refreshment Vehicle Owner Licences required under Schedule 3 - Refreshment Vehicles	June 30
Driving School Vehicle Owners Licences required under Schedule 1 of By-law 67-2014	July 31
Tow Truck Owner Licences required under Schedule 5 of By-law 67-2014- Owners and Drivers of Tow Trucks	September 30
Taxicab and Accessible Taxicab Owner's Licences required under Schedule 4 of By-law 67-2014 –Taxicab Owners, Drivers and Taxicab Brokers	November 30

Appendix A - Mobile Licensing By-law
Licence Fees

MOBILE LICENCE FEES	YEARLY FEE	TWO YEAR FEE
Schedule 1- Driving Schools:		
Driving School Operator	$158	
Driving School Instructor	$98	$196
Driving School Motor Vehicle Owner	$174	
Schedule 2 - Limousines:		
Limousine Owner	$274	
Limousine Driver	$98	$196
Schedule 3 - Refreshment Vehicles:		
Refreshment Vehicle Class A (Coffee Truck)	$298	
Refreshment Vehicle Class B (Ice Cream Bike)	$241	
Refreshment Vehicle Class C (Hot Dog Cart/ Chip Truck)	$241	
Refreshment Vehicle Class D (Ice Cream Truck)	$298	
Refreshment Vehicle Driver Class A	$98	$196
Refreshment Vehicle Driver Class B	$98	$196
Refreshment Vehicle Driver Class C	$98	$196
Refreshment Vehicle Driver Class D	$98	$196
Special Event-Refreshment Vehicle (All Classes)	$113 Per Event	
Schedule 4 - Taxicabs:		
Broker- New	$630	
Broker- Renewal	$494	
Taxicab/Accessible Taxicab Owner - New	$3,918	
Taxicab/Accessible Taxicab Owner - Renewal	$448	
Conditional Licence Renewal-No Vehicle	$51	
Taxicab/Accessible Taxicab Owner - Transfer	$373	
Taxicab/ Accessible Taxicab Owner -Transfer from an Owner to their Spouse	$373	
Taxicab/ Accessible Taxicab Owner -Transfer from the registered Owner to a sibling child of the Owner	$373	
Taxicab/ Accessible Taxicab Owner -Transfer to a corporation controlled by that Owner	$373	
Taxicab Driver	$98	$196
Schedule 5 - Tow Truck:		
Tow Truck Owner	$363	
Tow Truck Driver	$98	$196

Schedule 6 – Personal Transportation Company:	
Personal Transportation Company – New and Yearly Renewal	$20,788
Personal Transportation Company – Monthly paid on the 15th of every month for every Transportation Service that took place the previous month.	$0.30/Transportation Service originating in the City of Brampton.
All Schedules-ADDITIONAL FEES	**Each Item**
Replacement of Driver or Owner Licence	$36
Closed Application Fee	$56
Late Renewal	$56
Replacement of Plate	$66
Vehicle Inspection Fee (Not applied to Taxicab/Accessible Taxicabs)	$129
Schedule 4 - Taxicabs - ADDITIONAL FEES:	**Each Item**
Extension of Vehicle Model Year	$129
Filing of Lease	$66
Replacement of Driver's Photo I.D. Card	$36
Replacement of Tariff card	$36
Taxicab Priority List - Initial Application	$129
Taxicab Priority List -Renewal	$66

These rates shall automatically increase and be rounded up to the nearest dollar on the first day of January in each year by the percentage increase in the All Items Index of the Consumer Price Index (not seasonally adjusted) for the Toronto Census Metropolitan Area, published by Statistics Canada, during the 12-month period ending on September 30 in the year immediately preceding the rate increase date.

Report
Staff Report
The Corporation of the City of Brampton
2021-02-03

Date: 2021-01-18

Subject: **Mobile Licensing By-law 67-2014, Expiry Dates, ALL WARDS**

Contact: J. Bisson, Manager, Licensing Enforcement, Legislative Services, 905-458-3424 ext. 63222

Report Number: Legislative Services-2021-144

Recommendations:

1. **THAT** the report from James Bisson, Manager, Licensing Enforcement, Legislative Services, dated January 18, 2021, to the Committee of Council Meeting of February 3, 2021, re: Mobile Licensing By-law 67-2014, Expiry Dates, ALL WARDS, be received.

2. **THAT** Council enact amendments to the Mobile Licensing By-Law, 67-2014, as described in Appendix 1 to this Report.

Overview:

- **Appendix B of the Mobile Licensing By-law sets the expiry dates for all classes of licences issued under the By-law.**

- **Staff reviewed the expiry dates and recommend changes in some areas. This would assist staff with a more effective workload distribution to meet the needs of the businesses.**

Background:

The Mobile Licensing By-law 67-2014 was enacted March 26, 2014. At that time, the expiry dates (Appendix B to the By-law) for some licences were changed to assist with a more effective workload distribution for licence renewals and to provide applicants with more suitable licence expiry dates for their businesses. There were three changes overall - Taxicab Brokerages, Driving School Operators and priority list applicant renewals.

The Taxicab Brokerage renewal was moved from May 31 to February 28. This would ensure that renewals coincide with the requirement to supply their number of completed trips for the previous year.

Driving School Operators were changed from April 30 to February 28 to allow time for all schools to renew their licences before the April 30 renewal of the driving school vehicle licences. The driving school instructors are not permitted to operate under the school name if the school is not licensed.
The expiry dates have been in place since 2014. In those six years staff continued to monitor the effectiveness of the changes.

Current Situation:

In 2020, as part of the relief for the mobile businesses, the expiry dates were extended for many of the businesses. The change to the expiry dates and the extension of 90 days for driver and operator licences was expected to help make a difference in the enforcement clerks' workload in 2020. The extended reopening of Ontario businesses caused issues with the new expiries along with the processing of licences from emailed submissions delayed renewals and resulted in delays for processing licensing renewal. The delays were due to the overlapping of the submissions of the renewals and the numbers of renewals for the month of September for drivers and tow trucks. The renewal processing extended past October.

This resulted in staff looking at solutions to create a more even distribution of the expiry dates for large licence groups and creating open months between large renewals. Under the current expiry date system driving school vehicle owner licence expires on April 30 followed by taxicab owners on May 31 and tow trucks on June 30. In 2020, there were over 1,300 owner licences to be processed in that three month period. In 2021, there will be 1,100 licences to renew due to the effects of the pandemic on the industries.

Taxicab Owner Licences

In order to break up the expiry dates for these licences, staff is proposing that the taxicab owner licence expiry be moved to February 28. Currently the expiry date of these licences is May 31 and in 2020 the licences were extended to expire on November 30. Staff suggest that taxicab owners do not renew in 2021 and the licence be extended to February 28, 2022. This will provide some relief to this industry that has been impacted by the pandemic. Staff will require the taxicab owners to provide a Vehicle safety certificate in July 2021 to ensure the vehicles are in safe mechanical order.

Driving School Operator (Schools) Licences

Driving school operator's licence expire on February 28, however their Ministry permits expire on September 30 every 4 years. This results in conditional licences being issued to the September expiry date. Moving driving school operator's licences to September will benefit the businesses and will allow for a smoother renewal process and timeline for driving school vehicle owners who cannot renew their licence unless the school is licensed. This also makes the February renewal solely for taxicabs. If Council approves these recommended changes, the driving school operator licences issued in 2021 will expire on September 30, 2022.

Refreshment Vehicle Owner Licenses

Currently, refreshment vehicle owner and operator licences expire in March and April. Many of the refreshment vehicles are seasonal and they do not get licensed until the weather gets warmer. There are less than 100 licences for renewal. Since taxicab renewals are being moved and the month of May tends to be when the weather gets warmer, it is suggested that these licences get moved to a May 31 expiry. The expiry date change would be effective in this licence year extending the renewals from March and April for the current licensees.

A chart showing the plate owner expiry changes is attached an Appendix 1

Corporate Implications:

Financial Implications:

The financial impact for changing the expiry dates and subsequently extending the renewal for taxicab owners to February 28, 2022 can result in revenue loss of up to $171,000. The actual revenue loss will be dependant on the number of plates that are renewed.

This report aligns with the City of Brampton 2018-2022 Priorities:

Brampton is a Healthy and Safe City: Focusing on community safety and encourage active and healthy lifestyles. Residents need to feel safe when using the various transportation services.

Brampton is a Well-Run City: Continuously improving the day-to-day operation of the Corporation by streamlining service delivery while providing a safe and functional licensing experience to the small business operators providing service to the residents in the City.

Conclusion:

A review of expiry dates has been completed by staff with the aim of creating a more efficient licensing process and in meeting the needs for the various businesses licensed under the Mobile Licensing By-law. A new expiry schedule has been suggested by staff for Council's consideration to enact as part of the Mobile Licensing By-law.

The proposed changes create a more balanced workload for the clerks throughout the year. The change will assist the refreshment vehicle owners by moving the expiry to date where they will be operating the vehicles they are renewing. This also helps driving school vehicle owners by having the expiry for the driving school licences occur after their expiry date thereby resulting in a smoother renewal process. The driving schools will benefit from having the expiry date correspond with the provincial permit expiry date for their school.

Authored by:

James Bisson, Manager, Licensing Enforcement

Reviewed by:

Paul Morrison, Director, Enforcement and By-law Services

Approved by:

Paul Morrison, Acting Commissioner of Legislative Services

Submitted by:

David Barrick, CAO

Attachments:

APPENDIX 1: Expiry Date Changes Table

EXPIRY DATE CHANGES

Licence Type	Currently Expiring	Changes to Expiry Date	Next Expiry Date
Driving School Operators (schools)	February 28, 2021	September 30	September 30, 2022
Driving School Vehicle Owners	April 30, 2021	None	April 30, 2022
Limousine Owner's	September 30, 2021	None	September 30, 2022
Refreshment Vehicle Owner's Class A, C, D	March 30, 2021	Yes -New expiry May 31 - Current licence expiry extended to May 31, 2021.	May 31, 2021
Refreshment Vehicle Owner's B	April 30, 2021	Yes -New expiry May 31 - Current licence expiry extended to May 31, 2021.	May 31, 2021
Personal Transportation Companies	August 31, 2021	None	August 31, 2022
Taxicab Broker	February 28, 2021	None	February 28, 2022
Taxicab Owner's	May 31, 2021	Yes - New expiry February 28 - Current licence expiry extended to February 28, 2022. - Owner's will be required to provide a valid safety standards certificate by May 31, 2021.	February 28, 2022
Tow Truck Owner Licences	June 30, 2021	None	June 30, 2022

Presentation
The Corporation of the City of Brampton
2021-02-03

Date: 2020-01-15

Subject: **Brampton Entrepreneur Centre: 2020 Year in Review**

Contact: **Jennifer Vivian, Manager, Entrepreneurial Services**

Report Number: Planning, Bld & Ec Dev-2021-117

Recommendations:

1. **THAT** the presentation from Jennifer Vivian, Manager, Entrepreneurial Services, dated January 15, 2021, to the Committee of Council meeting of February 3, 2021 entitled "**Brampton Entrepreneur Centre: 2020 Year in Review**" **(2021-117, File CE.x)**, be received.

Brampton Entrepreneur Centre Update
Committee of Council
February 3, 2021

BRAMPTON

HOME OF THE hustle

Brampton Entrepreneur Centre

MEET THE TEAM

Jennifer Vivian
Manager

Daniel Bishun
Business Advisor

Lisa Rossetti
Business Associate

Ashley Naraine Crevier
Business Associate

Oyindamola Esho
Intern

Shirin Monga
Intern

THE BRAMPTON ENTREPRENEUR CENTRE + CO-WORKING SPACE

Our Vision
To contribute to the stability and growth of the local economy by fostering the careful preparation, launch and long-term sustainability of micro and small businesses across all sectors.
**typically under 10 employees

Our Mission
To provide current, accurate and thorough information through online documents, seminars and workshops, consultations and business plan reviews with a strong customer service approach. This information will be cost-effective, easily accessible and highly responsive to client needs.

Our Services
- Guidance on business start-up steps
- Guidance on permits, regulations and other start-up requirements
- Existing business support
- Leading-edge information, resources, templates and market research
- Workshops and seminars (free and low-cost)
- Individual, private consultations
- Site selection services
- Market research services
- Business plan reviews
- Referral services
- Guidance on growth and change issues
- Professional development and networking opportunities
- Access to funding opportunities
- Site selection support - we help you find suitable locations for your business
- Co-working (free with approved application)
- Starter Company Plus grant program
- Summer Company grant program

BRAMPTON ENTREPRENEUR CENTRE - IMPACT

1,194
consultations conducted

20K
inquiries handled

220
seminars delivered

1,360
mentor matches

6,000
outreach to business

9,680
seminar/event participants

All figures from 2020

Small Business Accelerator
A Starter Company+Program

Summer Company

DMS shopHERE
powered by Google

MNP ACCOUNTING CONSULTING TAX

START UP PEEL™
– powered by Startup Canada™ –

FedDev Ontario

Meridian™

LOOKING AHEAD.....

- Small Business COVID Recovery Network Project
- Sponsorships: MNP, TD & Meridian
- Launch of Starter Company Plus
- Launch of the 2021 Summer Company Program
- 12 Week Food Venture Program
- Expanded Virtual Library & Training


What the BEC is this place?
Welcome to the new home of Brampton Entrepreneur Centre + Co-working Space
BRAMPTON
Co-working space!
BECause we care about your small business!
Visit us inside or apply at brampton.ca/incubator


Co-working space! What the BECI?!
The new home of Brampton Entrepreneur Centre + Co-working space
BRAMPTON

Report
Staff Report
The Corporation of the City of Brampton
2021-01-20

Date: 2020-12-18

Subject: **Request to Begin Procurement – Multi-functional Print Services, Print Shop Print Services and Printing as a Service - Specialized**

Contact: Kumanan Gopalasamy
Chief Information Officer
905-874-2018
Kumanan.Gopalasamy@brampton.ca

Report Number: Corporate Support Services-2021-050

Recommendations:

1. THAT the report titled "**Request to Begin Procurement – Multi-Functional Print Services, Print Shop Printing Services and Printing as a Service – Specialized"** to the Committee of Council meeting of January 20, 2021, be received; and
2. THAT the Purchasing Agent be authorized to commence procurement of Multi Functional Print Services, Print Shop Printing Services and Printing as a Service – Specialized.

Overview:

- **This report is to obtain Council authority to begin procurement of the Print Services for the City of Brampton for a Five (5) Year Period.**
- **The City has a requirement to provide print services for:**
  - **Office Multi and Single Function Printer Fleet**
  - **Print Shop**
  - **Additional Print Services such as specialized printers and printing**
- **There are 108 locations being serviced by the printer fleet.**
- **The equipment in the dedicated Print Shop provides high volume print and specialized print services.**
- **There are additional Print Services that the City needs a vendor to provide including 3D printing, laser cutting and engraving.**

Background:

Printer Fleet
The City provides printers across 108 locations for standard printing needs including:

- Black & White and Colour
- Single sided and Duplex (double sided)
- Various paper sized
- Finisher functionality (stapling, hole-punching, collating)

The printers located throughout the City are scaled to meet low to medium printing volumes associated with day to day activities. High volume print requirements or other specialist printing is redirected to the Print Shop.
Print Shop
The print shop has the capability to print high volume jobs, booklets, binders, postcards, business cards, greeting cards, numbered tickets, score cards, lanyards, custom cut cards and magnets, posters, banners, easel mounts, NCR and numbered forms, glass and wall decals, architectural drawings.
They also provide document scanning, cut & fold paper and provide prepress & document setup.

Current Situation:

Currently, the printer fleet and Print Shop equipment are supplied and maintained by Ricoh on a 5 year contract. The original equipment supplied is reaching 5 years old, printing requirements for some areas have changed and additional capability is required to meet current and future printing requirements of the City.

Scope of the Project:

The City requires a Managed Print Services provider that is able to deliver high reliability, 'best in class' equipment and services that are flexible to the diverse requirements of the City Departments. The project involves supply of equipment, on demand services, consumables and comprehensive reporting.
The implementation would be rolled out in two phases:

1. Multi-function printers
2. Print Shop printers

The scope of work defined in the RFP will include:

- Help Desk services;
- Print needs and operational efficiency assessments;
- Deployment & installation services;
- User/operator training;
- Device decommissioning and drive wipe services;
- Break/fix & preventative maintenance services; and
- Consumable supplies;

Corporate Implications:

Purchasing Comments:

A public procurement process will be conducted and submissions will be evaluated in accordance with the published evaluation process within the procurement document. Purchase approvals will be obtained in accordance with the City's Purchasing By-Law. All communications with Bidders involved in the procurement must occur formally, through the contact person identified in the procurement document.

Financial Implications:

Sufficient funding available within the Digital Innovation and Information Technology operating budget. Should additional funding be required due, it will be requested in a separate report back to Council.

Term of Council Priorities:

This report fulfills the Council Priority of a Well-run City by improving the day-to-day operations of the corporation by streamlining service delivery, effectively managing municipal assets and demonstrating value for money of City programs and services.

Conclusion:

It is recommended that Council authorize the Purchasing Agent to commence procurement for Multi Functional Print Services, Print Shop Printing Services and Printing as a Service – Specialized.

Authored by:

Jennifer Ellis
Manager, Customer Care
Digital Innovation and IT
Corporate Support Services

Reviewed by:

Kumanan Gopalasamy
Chief Information Officer
Digital Innovation and IT
Corporate Support Services

Approved by:

Michael Davidson
Commissioner, Corporate Support Services

Submitted by:

David Barrick
Chief Administration Officer

Attachments:

Report
Staff Report
The Corporation of the City of Brampton
2021-02-03

Date: 2021-01-05

Subject: **Begin Procurement Report - NetApp Storage VOR. Purchase, Supply, Install, Maintenance, Support for a five Year Period**

Contact: **Kumanan Gopalasamy**
Chief Information Officer, Corporate Support Services

Report Number: Corporate Support Services-2021-071

Recommendations:

1. THAT the report titled " **Begin Procurement Report– Netapp Storage VOR. Purchase, Supply, Install, Maintenance, Support for a five Year Period** " dated Feb 03, 2021, be received; and,
2. THAT the Purchasing Agent be authorized to commence procurement, via the tendering process, of **Enterprise storage platform replacement within the City of Brampton which includes, Purchase, Installation, Maintenance and Support for a five (5) Year Period**
3. THAT, The Chief Information Officer, be authorized to execute any required related documents after the Purchase Order has been issued.

Overview:

- Information Technology has made significant investments enhancing the Corporate Storage Area Network (SAN) infrastructure with NetApp storage technologies.
- Replacement of the current NetApp storage is required in order to ensure the ongoing support, warranty, maintenance, technical support and health of the Corporations file storage. A new contract is required.
- A new contract will be put in place via the competitive tendering process.
- The Vendor will be responsible for providing options for future equipment, upgrades, integration, peripherals and all related services.

- This report is to obtain Council authorization to begin procurement for a Vendor of Record (VOR). The VOR shall be established as a blanket purchase agreement with an upset limit of $3,500,000 to purchase an Enterprise storage platform replacement for a Five (5) Year Period with a one year extension.
- Funding for purchases to be made under this contract is provided through the Information Technology capital and operating budgets. The current estimate for spending over the initial 5 year term of this contract is forecast to be $3,500,000 subject to annual budget approvals and business requirements.

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Background:
Data Centre and Cloud Technologies, in keeping with the mandate of running current, supported and up to date technology, are looking to enhance the Corporation's storage and compute infrastructure. As a result, some older end of life equipment needs to be replaced.

NetApp Storage Systems is recognized as a proven market leader in Storage Area Network (SAN) technology. The City of Brampton has standardized on NetApp Storage Systems equipment for its SAN environment. This has allowed IT staff to design a durable and reliable storage environment. This standardized approach has allowed the City to benefit from a reduction in the total cost of ownership by building a storage network that is scalable and easy to manage, faster to repair, troubleshoot and configure.

The selection of a Vendor of Record (VOR) will ensure the consistency and predictability for ongoing support, warranty, maintenance, technical support and health of the current storage environment. The VOR will also provide the supply, delivery, installation and technical support options for future equipment, upgrades, integration and for the provision of all other related services

Updated technology also provides a platform that is future ready to receive new technology advances when they become available.

The new solution will integrate seamlessly into our current backend Compute server environment, providing the latest Storage Area Network (SAN) technology and performance enhancements.

Current Situation:
Scope of the Initiative:
The City is seeking approval to create a new VOR arrangement with a supplier for NetApp products and services. The new contract will be for an initial term of 5 years commencing approximately April, 2021 to April 30th 2026, with the option of a one year extension period. This will put in place guaranteed discount levels and predictable pricing will lead to better budgeting.

This type of agreement will also facilitate the expedited procurement of NetApp products and services over the term of the agreement.

The scope of work defined in the tender will include:

- Replacement of system components
- Warranty requirements
- Installation assistance and training
- Vendor best practices for migration
- Ongoing maintenance and support for the term of the contract
- Setup and configuration.

Budget

Based on current IT planning, it is anticipated that the spending over the term of the agreement will be approximately $3,500,000 (excluding taxes).This estimate is based on historical average annual spend of $700,000 including purchase and ongoing maintenance (excluding taxes).
The value put forward in this report is recommended as the upset limit for the contract. There is no contractual obligation to spend to that maximum amount. Staff is committed to continue to perform annual reviews of the SAN product portfolio, ensuring that the City's business needs continue to be met and that adequate storage is available for corporate use.
Once the Purchasing Agent has executed and provided the Purchase Order to the vendor, there may at times be the requirement to authorize quotations, ordering documents or other related documents.
Staff are recommending that the Chief Information Officer be granted the authority to execute these documents, subject to review by the Legal Division, when necessary, and provided the documents don't exceed the total value of the Purchase Order(s) that is in place with the vendor.

Tentative Project Schedule:

Bid Document Issued	March/April 2021
Contract Start Date	May/June 2021
Phase I implementation	August/Sept 2021
Phase II implementation	January/March 2022

Corporate Implications:

Financial Implications:

Sufficient funding available within the Digital Innovation and Information Technology capital budget. Should additional funding be required, it will be requested in a separate report back to Council.

Other Implications:

Term of Council Priorities:

2018-2022 Term of Council Priority: Brampton is a Well-Run City

Enterprise storage platform replacement aligns with the 2018-2022 Term of Council Priority Brampton is a Well-Run City:
Solution specifically supports the following objectives:

- Continuously improving the day-to-day operations of the corporation by streamlining service delivery, effectively managing municipal assets, and leveraging partnerships for collaboration and advocacy.

Conclusion:

This report summarizes the scope of work and provides a tentative schedule and method of procurement for a new Vendor of Record, for the supply, delivery, installation and technical support of NetApp Storage Technologies Contract for a 5 Year Term.

In conclusion, this report recommends that the Purchasing Agent be authorized to begin procurement for Enterprise Storage Platform Replacement.

Authored by:	Reviewed by:
Pat Carmichael, Manager, Data Center and Cloud	
[Author/Principal Writer]	[Manager/Director]
Approved by:	Submitted by:
[Commissioner/Department Head]	[Chief Administrative Officer]

Attachments:

Report
Staff Report
The Corporation of the City of Brampton
2021-02-03

Date: 2021-01-11

Subject: **Film Services Feasibility Report & Film Office Update**

Contact: Jason Tamming, Director Strategic Communications, Culture & Events
jtamming@brampton.ca / 905-874-2889

Report Number: Corporate Support Services-2021-119

Recommendations:

1. That the report from Jason Tamming, Director Strategic Communications, Culture and Events, dated January 11, 2021 to the Committee of Council meeting of February 3, 2021 titled Film Services Feasibility Study & Film and Television Office Update be received; and

2. That the Film Services Feasibility Study be endorsed by Council and staff given approval to move forward with recommendations.

Overview:

- The City of Brampton Film and Television Office has been operational for approximately seven years and is currently a unit within the Tourism Department.

- Year-over-year statistics illustrate the continuing upward trend in film production companies selecting Brampton as a location and support formalizing processes, guidelines and by-laws for efficiency and for leveraging film as an economic driver.

- SKH Consulting was contracted in Q4 2019 to assess film opportunities for Brampton going forward and the goal of becoming a “film friendly city.”

- The study identifies a number of recommendations for the Film and Television Office the majority of which will be implemented pending endorsement of the study by Council.

- The pandemic had significant impacts on filming in Ontario for the period from March to September 2020. All productions have been operating since September in accordance with guidelines from the Section 21 Film and Television Health and Safety Advisory Committee of the Ministry of Labour, Training and Skills Development.

Background:

The City of Brampton's Film and Television Office has experienced increased year-over-year activity and for the last four years. Filming in 2019, the last full year of operation prior to COVID-19, attracted approximately $3,000,000 in production spending, saw over 100 shoot days and generated just over $300,000 in revenue for the City of Brampton. At present, there are two fairly new studio spaces in Brampton.

Recognition of increased film activity led to the determination that a more strategic and focused approach to growth in this sector was required. To achieve this objective, SKH Consulting was engaged to carry out a feasibility study with Sarah Ker-Hornell, an industry expert with extensive experience in the Canadian film industry including 12 years as CEO & Executive Director of screen-based industry consortium *FilmOntario*, as lead on the project.

SKH Consulting conducted interviews with over 30 internal and external stakeholders – the full list is included in the attached report. City reports and documents were also reviewed as part of the analysis of the film sector in Brampton. The Film Services Feasibility Survey was administered in Q1 2020.

The Feasibility Study recommends that the following policy items be implemented as a package.

- The establishment of the film and television industry as a lead economic development file for the City of Brampton.
- Council direction to all departments, agencies, boards and commissions to review relevant policies, procedures and activities with the expectation of adding/including film activity service or support in their scope of work.
- The provisions of by-laws, such as zoning, be interpreted to include filming at locations within the City of Brampton.
- The establishment of a Brampton Film and Television Industry Advisory Board. A departmental-led advisory board will initially be established to focus on film processes and best practices with membership comprised of industry leads including producers, film union representatives, studio owners, industry support service representatives and key internal and external stakeholders. The function and membership of the board will be re-evaluated on an ongoing basis to ensure industry needs and issues are being appropriately met.
- The protection of Employment Lands zoning to attract infrastructure activity and development.
- Undertake a review of the redirection of industry municipal building and parking rental fees to the Film and Television Office to offset overhead and operations.
- The establishment of the Brampton Film and Television Office to be located on the first floor of City Hall. Since receipt of this strategy, the office has been moved to the first floor of City Hall for increased visibility and improved customer service.

Recommendation details are available in full in the report attached.

As noted, filming in Brampton is experiencing an annual upward trend. In addition to volume, filming now requires the implementation of pandemic safety measures as prescribed by the Ontario Ministry of Labour that result in a more complex and staff intensive scenario. If film trends continue, additional resources will be sought in the 2022 budget process to support.

Current Situation:

Soon after receipt of the Film Services Feasibility Study, filming in Brampton was halted because of COVID-19 in March of 2020 and come September, the remainder of 2020, the film and TV production industry showed signs of persistence and recovery due to the continued efforts by all film and TV production workers and stakeholders to maintain healthy and safe working environments that followed health and safety protocols set out by the Section 21 Film and Television Health and Safety Advisory Committee of the Ministry of Labour, Training and Skills Development first issued in July.

The City of Brampton Film and Television Office continues to be very busy working with production representatives and the Ontario Film Commission to identify locations based on production inquiries from commercials, television series and feature films. Weekly calls with the Film Commissioner of Ontario aid in keeping staff abreast of opportunities as well as best practices during the pandemic. It is interesting to note that many productions planned for American cities have moved to Ontario because of the high COVID levels in the USA and the flexible but strong guidelines in Ontario.

In 2020, large tent-pole productions took notice of Brampton locations, which attracted approximately $2,900,000 in production spending (nearly the same figure as all of 2019) over 85 filming days and 290 permitted days (which include prep, hold and wrap days – more than 2019 due to increased COVID-19 protocols), generating approximately $58,000 in revenue for the City of Brampton.

Production activity also provided much-needed economic support for many Brampton filming locations including the Toronto & Region Conservation Authority (TRCA) who hosted productions including Hulu's "The Handmaid's Tale", Apple's "See" (starring Jason Momoa) and others for over 160 days at Heart Lake Conservation Park and Claireville Conservation Area. The CAA Centre hosted CBC's "Battle of the Blades" figure skating competition show for over 70 days and Metrolinx, TRCA and city facilities and roadways hosted the latest Kevin Hart feature film "The Man From Toronto" over 81 permitted days in 2020.

Current guidelines as prescribed by the Ministry of Labour are available at – https://www.filmsafety.ca/revised-section-21-covid-19-guidelines-november-25-2020/

The Film and Television Office is recognized within the Tourism Department and was relocated to the first floor of City Hall early in 2020. Work to implement the remaining recommendations of the Film Services Feasibility Study is slated to begin in Q1 2021, pending Council endorsement, and will support the resurgence of film production in Brampton as part of the City's economic recovery.

Corporate Implications:

Financial Implications:

There are no financials implications from this report. Future operating impacts as a result of the growth of the Film Services industry will come back to Council either as a separate report back or through future Budget submission. Financial recommendations regarding the redirection of

rental and parking revenue outlined in this report will be further reviewed by staff and internal departments using a post-COVID-19 framework.

Term of Council Priorities:

This recommendation aligns with the Term of Council Priorities. Responsible program administration supports a Well Run City and providing support to the film sector contributes to furthering Brampton as a Mosaic.

Conclusion:

Staff recommends the endorsement of the Film Services Feasibility Study and its implementation as a key step to further support the objective of Brampton being a film-friendly city. As noted in Financial Implications, further internal discussions regarding the redirection of revenue from rentals and parking will be scheduled post-pandemic.

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Attachments:

- Film Services Feasibility Study
- Ontario Film Commission Health & Safety Update - January 14, 2021

Film Services Feasibility Study

January 2020

Prepared for

City of Brampton, Economic Development + Culture

Delivered by

SKH Consulting

Strategic Government & Stakeholder Relations Solutions

Brampton Film Services Feasibility Study

January 2020

Executive Summary

In keeping with Vision 2040, the City of Brampton is exploring additional Economic Development streams, seeking to identify priority industries to drive growth in direct, indirect, and induced revenues, employment and workforce development, and the attraction of private sector capital investment. This study is reviewing the City of Brampton's current film + television activity, and assessing its capacity for growth, and the attendant opportunities for Brampton. [1]

The incredible growth of online TV services, and their appetite for original screen entertainment content is driving up international production volumes and quality at a significant rate. Communities across Ontario are actively trying to prove themselves "Film Friendly" and attract this industry with varying degrees of success, appreciating its power as an economic engine, and value as a cultural force.

Film Friendliness is an international standard for lead film and television production jurisdictions defined as the ability to attract and service film and television productions in a quick turnaround one-stop-shop concierge manner, available 24/7, while quickly addressing any customer issues or community concerns related to location filming.

Thanks to stable National and Provincial film and television tax credits – triggered only when a production deal is in place - and fulsome production expertise, Canadian film and television production volumes continue to grow to record volumes year over year – almost $9 Billion at last count, with over half of that work from foreign production partners.[2]

Ontario's volumes have grown over 23% in the past few years alone, and is expected to grow at a compound annual growth rate of 5.4% until at least 2022.[3]
There is tremendous industry appetite for fresh, Film Friendly location jurisdictions, close to airports and studios, and an immediate need for land for backlot and staging purposes. No municipal financial incentives are required to attract production.

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[1] For the purposes of this report, digital media has not been included, but could be in future, as the industry presence in Brampton grows.
[2] CMPA Profile 2018: Economic Report on the Screen-based Media Production Industry in Canada. P 8
[3] FilmOntario Economic Update 2018, p 4
These numbers are based on the Ontario Creates tax credit administration reports, and do not include television commercials, corporate videos, music videos, broadcaster in-house production, or small projects that fall outside the tax credit qualifying spend.

Brampton already has some significant advantages as a location jurisdiction, and has attracted close to $3 million in production spending in 2019. [4]

City revenues from production activity have doubled over the same period – despite shoot days hovering around 100 - to just over $300 thousand, indicating an increase to the quality and scale of productions looking to Brampton.

Policy tools, revenue and resource redirection, staffing adjustments, and physical office positioning, will work together to enable Brampton to scale up its locations offerings, market Brampton to the industry, and service significant growth in production volumes to deliver increased revenues, employment, job training, and private sector capital investment.

These volumes could double or triple in the next 24 months.

First step is a package of Policy tools, implemented together:

1. Council formally establishing an outward facing orientation that places priority on Film Friendliness, identifying the industry as an economic development driver, and ensuring its formal inclusion in the scope of work all departments, agencies, boards and Commissions.

2. Establish a formal Brampton Film + Television Office on the Main floor of City Hall, and review the re-direction of industry municipal building and parking rental fees to offset overhead and operations.

3. Formally recognize the current Film Specialist scope and ability to function as day to day liaison with all departments, agencies, boards and Commissions, including the Mayor's office, delegate to junior office staff, and actively co-develop with Economic Development the City's relationship and communications with the production industry nationally and internationally.

4. Establish a Brampton Film + Television Industry Advisory Board, co-Chaired by the Mayor or his Council designate, to assist with production attraction, workforce development, community outreach, labour data gathering, and attracting private sector capital

Working closely with the Ontario Film Commission, Brampton's Film Specialist can tag into their LA marketing efforts, and Locations Database to ramp up the Brampton offerings, including available lands for lease, range of buildings and streetscapes, as well as the many wonderful parklands.

[4] Brampton Film Office Reports, 2018, 2019

The film + television industry is an excellent fit for the economic development Vision for the City of Brampton, internally and externally.

City revenues, with some categories diverted, should cover any overhead investments. Industry workforce development addresses the need for Brampton to deliver youth training and employment, and jobs for a wide range of residents. Give-back community programmes enhance and enrich City community offerings for its citizens. Land lease and development opportunities attract private sector capital driving more property tax revenues to the City.

Thanks to the incredible, sustained growth in Ontario's new manufacturing - Film + Television industry - Brampton has an opportunity and the capacity to transform into a Film Friendly jurisdiction that drives businesses, and attracts employment and job training, community outreach, and private sector capital.

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Introduction

In keeping with Vision 2040, the City of Brampton is exploring additional Economic Development streams, seeking to identify priority industries to drive growth in direct and indirect revenues, employment and workforce development, and the attraction of private sector capital investment.

The film and television production industry, referred to as the Film Industry, is one of Ontario's lead economic development drivers – the new manufacturing – delivering employment and workforce development, private sector capital, and increased global market share.

Communities across Ontario are actively trying to attract this industry with varying degrees of success, including Pickering, Markham, Mississauga, Ottawa, and further north, appreciating its power as an economic engine, and value as a cultural force.

Currently, Brampton serves a growing number of film shooting days per year – just over 100 days in 2019 – with the potential to double or triple that volume over the next 24 months and attract the attendant revenues, workforce development, and investment.

Study Mandate

This Feasibility Study is tasked with investigating the City of Brampton's current film and television production activity[5], assessing its capacity and offering recommendations for delivering "Film Friendliness" for large-scale domestic and international productions, for Economic Development and Council to consider.

Film Friendliness is an international standard for lead film and television production jurisdictions defined as the ability to attract and service film and television productions in a quick turnaround one-stop-shop concierge manner, available 24/7, while quickly addressing any customer issues or community concerns related to location filming.

Investigations included a review of internal reports, City of Brampton Master Plans, Film website, permit and locations documents, one-on-one interviews with Mayor Brown and over 21 departments, and on-site reviews of physical space and infrastructure. A detailed Methodology is in Appendix A. Benchmarking with similar municipalities has already been conducted internally, and is not repeated here[6].

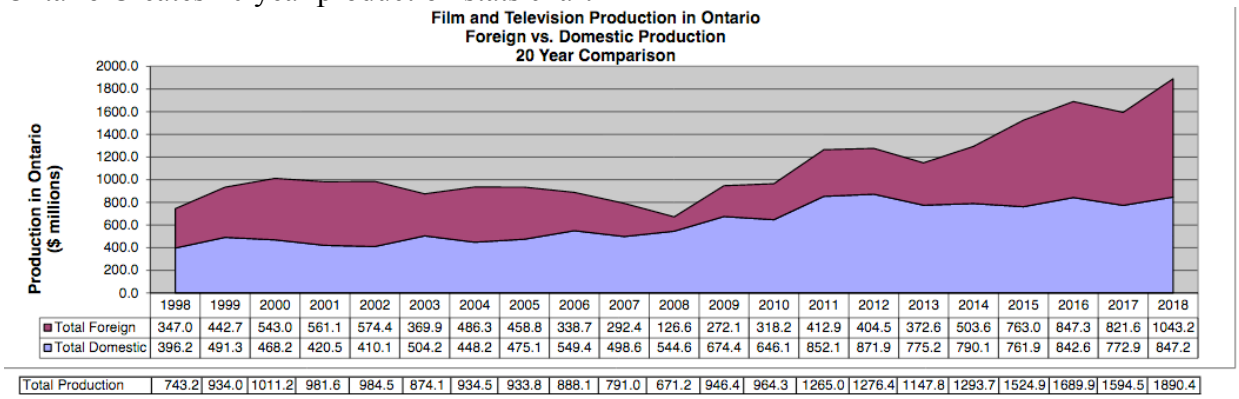
[5] For the purposes of this report, digital media has not been included, but could be in future, as the industry presence in Brampton grows.
[6] The City of Brampton's Film Specialist and Economic Development have produced several internal reports regarding aspects of servicing film + television production, including basic volume data, which informed our investigation.

The Current Industry Picture

Thanks to stable National and Provincial film and television tax credits – triggered only when a production deal is in place - and fulsome production expertise, Canadian film and television production volumes continue to grow to record volumes year over year. [7] The total volumes of film and television production in Canada increased to an all-time high of $8.92 Billion in 2017/18. All of the growth was due to another sharp increase in the volumes of foreign location service production; it rose by $993 million to a high of $4.77 Billion in 2017/18.[8]

Ontario offers a total package of talent, infrastructure, and incentives to attract production. This meant a growth in production volume of 23% from 2014 – 2017 to $1.6 Billion in 2017, growing again in 2018 to $1.9 Billion[9] for film and television alone, representing one quarter of Canada's total film and television production volume, and is expected to grow at a compound annual growth rate of 5.4% until at least 2022.[10][11]

Ontario Creates 20 year production stats chart



	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total Foreign	347.0	442.7	543.0	561.1	574.4	369.9	486.3	458.8	338.7	292.4	126.6	272.1	318.2	412.9	404.5	372.6	503.6	763.0	847.3	821.6	1043.2
Total Domestic	396.2	491.3	468.2	420.5	410.1	504.2	448.2	475.1	549.4	498.6	544.6	674.4	646.1	852.1	871.9	775.2	790.1	761.9	842.6	772.9	847.2
Total Production	743.2	934.0	1011.2	981.6	984.5	874.1	934.5	933.8	888.1	791.0	671.2	946.4	964.3	1265.0	1276.4	1147.8	1293.7	1524.9	1689.9	1594.5	1890.4

The chart above represents productions shot in Ontario which have received facilitation services and/or applied for tax credits from Ontario Creates

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7 CMPA Profile 2018: Economic Report on the Screen-based Media Production Industry in Canada. P 8

8 Ibid, p 8

9 Ontario Creates 2018 production report

10 FilmOntario Economic Update 2018, p 4

11 These numbers are based on the Ontario Creates tax credit administration reports, and do not include television commercials, corporate videos, music videos, broadcaster in-house production, or small projects that fall outside the tax credit qualifying spend.

Explosion of online TV services

The incredible growth of online TV services, and their appetite for original screen entertainment content is driving up international production volumes and quality at a significant rate.

There are currently 25 online TV services, such as Amazon, Hulu, AppleTV, with Netflix taking a market share of over 70%.

Canada was the first market outside the United States in which Netflix launched, giving it a huge first-mover advantage over rivals that has led to a dominance seen in few, if any, other territories globally. [12]

Lead production jurisdictions such as Ontario are meeting that demand, and expanding their human and physical infrastructure to do so.

This includes expanding their selection for location shooting.

Economic Development Opportunity for Brampton

There is tremendous industry appetite for fresh, Film Friendly location jurisdictions, close to airports and studios. With the locations 'stock' becoming familiar in the Toronto, Hamilton and Dundas areas, the rapid increase in studio development coming on-line close to Brampton (north Toronto and Mississauga), and the immediate need for land for film backlot and staging purposes, growth is there for the taking – if Brampton takes the necessary steps to be able to service the volumes.

Without requiring investment in costly marketing, Brampton could choose to take the internal steps critically necessary in order to become identified as a Film Friendly jurisdiction, doubling or tripling the current permit days within 24 months, delivering a significant increase in rental and service volumes, local spending (catering, dry cleaning, taxis, location fees, extras casting, car and truck rentals, etc.), as well as community donations, employment and job training, and attraction of significant private sector capital investment, as the industry grows and invests in Brampton.

[12] PWC Entertainment and Media outlook, 2019 - 2023

Current Competitive Advantages for Brampton

Brampton has some distinct advantages over neighbouring jurisdictions, including:

- Proximity to Toronto and Mississauga studios
- Proximity to Pearson airport, and key transportation arteries
- Positive reactions from all Senior staff regarding the opportunity for increased film activity volumes
- Positive reactions from key external agencies, including Brampton Transit, Peel Regional Police, and TRCA – all keen to see expanded film + television production volumes.
- No permit fees, and a revenue-neutral approach for City services
- The ability for Film Office to deliver consolidated permitting to clients for all City services and locations
- Stable and reasonable fees for City owned property rentals
- Excellent Location and Property Use Agreements, already approved by Legal and Risk + Insurance departments
- A centralized enforcement unit for all municipal enforcement, including parking, road occupation, parks, and municipal licensing and property standards
- Industry standard broadband connectivity
- Land parcels of minimum 5-8 acres, either available or in transition, for production backlot and staging leases.
- Land parcels of minimum 10-12 acres available for private sector studio development
- Warehouses and buildings going offline for repurposed studio development consideration
- Diverse range of interior and exterior architecture and vast and numerous public spaces
- Diverse population for background/extra performers
- Available office space on the Main floor of City Hall to house a Brampton Film and Television Office (BFTO) and staff, with a customer service window
- Large windows in the proposed BFTO to showcase to the community the clips and posters of productions shot in Brampton
- Relationship with Toronto Global, the Economic Development Agency for the Toronto Region

Transforming into a Film Friendly Jurisdiction

So, how does a jurisdiction meet the goal of being Film Friendly, and driving Economic Development? It begins with exceptional customer service.

There are several aspects to be considered, not the least of which is developing a strategy that satisfies both key stakeholder groups: the industry, and the community.

Policy tools, revenue and resource adjustments, staffing adjustments, and physical office positioning, will work together to enable Brampton to scale up its locations offerings, market Brampton to the industry, and service significant growth in production volumes to deliver increased revenues, employment, job training, and private sector capital investment.

No municipal financial incentives are required to attract production.

1. Policy Tools – Leadership from the Mayor and Council

The first step is Council formally establishing an outward facing orientation that places priority on Film Friendliness.

We recommend that the following policy items be implemented as a package.

a) Establish film and television industry as lead Economic Development file for Brampton, ensuring that the City consider the impact and implications of **any** programs, policies and budget decisions on the film and television industry in recognition of its significant economic and cultural impact for Brampton. This also serves to protect the Film Office and staff as a separate and distinct service.

b) Council direct all departments, agencies, boards and Commissions to review relevant policies, procedures and activities with the expectation to add/ include film activity service in their scope of work.

c) Ensure that provisions of by-laws such as zoning shall not be interpreted to exclude or prevent locations filming.

d) Establish a Brampton Film and Television Office, with Film Specialist and staff

e) Redirect municipal building and parking rental fees to the Brampton Film and Television Office to offset overhead and operations.

f) Establish a Brampton Film and Television Industry Advisory Board.

g) Protect Employment Lands zoning, to attract infrastructure activity and development.

Most of these policy tool functions are self-evident and do not require explanation here.

Let's unpack the Film Office, Film Commissioner, and Advisory Board items.

2. Brampton Film + Television Office (BTFO)

Lead jurisdictions and their clients know that it is critical to establish a formal Film + Television Office with both a physical and virtual presence, 24 hour response time for inquiries, permit deliverables within 48 hours, and access 24/7.

Film production touches almost every department within the City's administration, and almost every neighbourhood within the City boundaries.

Addressing client issues +/or community concerns related to location filming promptly is essential, with the Film Office serving as an advocate for both clients and residents.

BFTO Physical Presence
Brampton's City Hall currently has some unused space and service counter on the Main Floor, including a public facing wall of windows. This space would be optimal for servicing productions, including scout and prep meetings, permit pickups, as well as raising the profile of this economic driver with City Council and staff and the community, with film posters, continuous show reels, etc.

BFTO Virtual Presence
The BFTO website will often be the first stop for information about filming in Brampton. As a primary marketing tool – to both industry and community – it is essential that the site and any/all social media be regularly updated directly by the Film Office. A link to this site should be included on all marketing materials and appropriate Brampton and industry sites, such as Ontario Creates Film Commission, Toronto Global, and Brampton Economic Development.

BFTO Function
The Film Office is the point of contact for all industry inquiries, scouting, and permit co-ordination, for all Brampton locations, including access to and use of City owned buildings, parks, recreation centres, etc. The office also co-ordinates parking, traffic control, Paid Duty police officers, Fire Department, and more.

Related Film Office activities include the provision of locations advice, dealing with the concerns of retailers and residents, liaising with the BIA, dealing with complaints, and troubleshooting on behalf of the industry, and responding to questions/problems from City Councillors.

While current software systems do not allow for a quick shift to a one-permit, one-invoice process, there is the capacity to have all permits go to the Film Office, where they would be consolidated onto one 'master' permit. Finance has recommended that permit invoicing remain as is, at present.

It is important for turn-around time efficiencies that all departments allow the Film Office staff to have access to viewing their road and facilities work and event schedules and activities.[13]

In keeping with best practices in other lead jurisdictions, and in recognition of the significant economic impact of the production industry, Brampton would maintain its no-fee policy for location filming permits, and continue to provide other services to the industry on a revenue-neutral basis.

In order to attract new clients, Brampton would maintain current rental service rates.[14]

Currently, thanks to the internal relationship work done by the Film Specialist, the various departments generally 'make it work' for film activity, with some departments rarely impacted, while others are more consistently involved.
Interestingly, some consider this activity an'extra', or somewhat outside the scope of the City's work.

Council's policy tools come into play here – all City departments would recognize film activity as part of the scope of Brampton's Economic Development priorities, and would respond swiftly, as required by a Film Friendly jurisdiction.

In response to an industry permit request, the Film Office would check the appropriate schedules and then if it appears available, would inquire with the relevant department/agency directly. In the absence of any conflict with the use of the facility or location, the Film Commissioner would be able to inform the department/agency that a film would be shooting there.

The Film Office would send out daily City-wide email bulletins regarding location shoot activity, for their inclusion in their planning.[15]

[13] In each of our meetings, departments were very willing to allow this; we understand that this approach is underway.
[14] A review of rates in comparative jurisdictions was recently done by the Film Specialist, so will not be expanded upon here.
[15] As result of our research and discussions, we understand that this approach is underway.

Permit and Revenue Data Gathering

In managing the Film permit activity, the Film Office can pay careful attention to capturing inquiry, scout, and production activity, in order to measure inquiry to scout ratios, and scout to permit ratios, along with reported production spend in Brampton.

Exit polls for each production will also deliver key feedback and insight for service improvements[16].

City departments use a range of software programmes for scheduling and accounting. We have had discussions with Finance and together have determined a path to capture and report the film revenue generated by all departments, without the need to change current IT software programmes or supports.[17]

[16] As a result of our research and discussions, we understand that this approach is underway.

[17] This is a Vendor capture capability, where each production's name is used as Vendor identity. This can be reinforced for the client when issuing the consolidated permit, through the Film Office.

3. Industry Nomenclature "Film Commissioner" - The Face of a Film Friendly Jurisdiction

A Film Friendly City must deliver one-stop-shop, concierge service and a point of contact, available 24/7.

The Film industry values a specific figure with a direct relationship to the Mayor, and the power to 'make it happen' at City Hall and within Brampton, often referred to as Film Commissioner[18].

It should be noted that Mayor Brown has always been aware of the economic benefits of cultivating a strong screen-based industry. This is evidenced, in part, by his visits to Brampton film location work, such as "Handmaid's Tale", and are important for building a Film Friendly reputation.

Currently, Brampton has a Film Specialist, working alone, deep within Economic Development, and without a direct relationship to the Mayor.

Remarkably, thanks to the Specialist's industry background, and excellent 'back channel' relationships developed with staff across the City departments, to our knowledge to date Brampton has managed to grow to over 100 shoot days per year without a production walking away unhappy, a department crying foul, or a community asking for a moratorium on production activity.[19]

In keeping with industry standards, we recommend that the Film Specialist scope be formalized , and consider a title change as follows:

Traditionally, the Film Commissioner (in current case, Film Specialist) reports through Senior Economic Development to the Mayor's Office, with the support and authority to establish and manage relations and communications with all City departments, agencies and Commissions in accordance with the new Film Friendly mandate, delegate to junior film office staff, and actively co-develop the City's relationship and communications with the production industry nationally and internationally, and other relevant parties and governments.[20]

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[18] It is understood that the word 'Commissioner' has a very specific connotation at a Canadian City Hall that is different from its common industry meaning. Some small jurisdictions refer to this role as 'Film Manager'.

[19] The Directors Guild of Canada – Ontario division: There have been no complaints reported by the DGC Locations Caucus (Locations Scouts and Managers).

[20] This work is currently being delivered by the Brampton Film Specialist with remarkable results given the lack of official authority, staff, or resources. An increase in

Continued outreach to clients – particularly in LA – is essential; promoting Brampton as a Film Friendly jurisdiction should be ongoing. This includes but is not limited to: conceive and produce messages (social media or otherwise) and materials to promote Brampton as Film Friendly, including working closely with Toronto Global Economic Development Agency, and the Ontario Film Commission marketing team, including their LA office, attending appropriate locations trade shows, developing FamTours (familiarity tours) for the domestic and international community, and business meetings to carry the message.

The Film Specialist also conducts Exit Polls for each production in order to continue to improve service and production experiences. [21]

Additionally, productions can be encouraged to include "Filmed on location in the City of Brampton" and City logo, in their credits.

Film Office Staff

Given the scope of work required, it will also be necessary to establish Film Support staff role(s), reporting to the Film Specialist, to assist with all deliverables as directed, including customer service to both industry and community.[22]

An increase in the staff complement – which could be seconded from existing staff – allows for a marked improvement in customer service and satisfaction by creating more opportunities for one-on-one interaction with clients, and to address and monitor production footprint and community concerns on locations.

volumes could result in a drop in the level of service and could result in unwanted staff turnover.

[21] Since we have been working with the Brampton Film Specialist, I understand that this is now in place.

[22] This staff role could be seconded from elsewhere in the City.

4. Brampton Film + Television Industry Advisory Board (BFTO Board)

Another key step in driving economic development for this sector is the establishment of the Brampton Film + Television Industry Advisory Board, comprised of 14-16 relevant industry business leaders, Co-Chaired by the Mayor and an industry stakeholder, and 1 or 2 additional Councillors, and supported by Film Office staff, with a mandate to provide advice and advocacy on policy and strategies to ensure the competitiveness and viability of the Film industry in Brampton, and develop marketing, community outreach programs and infrastructure and workforce development.[23]

This places the Mayor in a leadership role with the industry, and increases the profile of the industry in Brampton, nationally, and internationally, enabling quick action.

The BFTO Board would provide advice to Council through the Economic Development Committee.

An ideal Advisory Board would comprise industry leads from:

- Production and Labour (ie one from each industry Union and Guild, Producers and Production Manager);
- Support Services (ie equipment, studio owner/operator, legal, financial)
- Post secondary partners such as Sheridan and Ryerson

The Advisory Board can also work with the Film Office to respond to issues of concern from Councillors and community members, as well as identify industry issues in need of immediate action.

First project would be to develop a Strategic Action Plan covering customer service operations, marketing, community outreach, workforce and infrastructure development goals, along with inter-government advocacy as needed, and steps to achieve those goals.

[23] The scope could be expanded to include digital media, but for the purposes of this study, the focus remains film + television production.

Industry Workforce development planning starts with the Advisory Board.

Working with the Film Commissioner, crew Unions and Guilds, such as IATSE 873 and Nabet 700 Unifor (technical), IATSE 667 (camera), IATSE 411 (including Production Assistants, Food service), Directors Guild of Canada (including Art Department, Locations, Editorial, Production Accounting), and ACTRA (on camera performers and stunt talent), can offer info sessions at middle and high schools, participate in local Career/Job Fairs, and arrange some job shadowing opportunities on larger shows. Job categories urgently available currently include, for example, truck driving, carpentry, bookkeeping, and accounting.

These partners can also share their members' postal region information, to assist in gathering data on Brampton residents working in the industry.

In partnership with Ontario Creates, the unions and guilds have initiated a workforce development strategy for 7 key regions, including the GTHA. Brampton could take an active role in this work almost immediately.

Attracting Private Sector Film Infrastructure Investment

When a Film Friendly jurisdiction delivers well for location production activity, physical infrastructure development inquiries begin.

An industry developed Strategic Action Plan should include goals to attract private sector investment for satellite offices (such as equipment), and physical infrastructure development, such as retrofit and purpose-built studios, land leases for backlot, support and staging purposes.

Community outreach programmes

The Advisory Board assists with the design and implementation of community outreach programmes, such as "give-back" programmes to assist with community development (such as adding new playground equipment), where production activity has been busy, and engage in green initiatives to reduce and reuse resources, and other targeted outreach to improve community relations.

Once Brampton is identified and operates as Film Friendly, jobs, workforce development and investment in the City will follow.

Locations Inventory Driving Production Volumes

As noted earlier, the industry is thirsting for new and varied locations, close to airports, transportation routes, and studios. The Film Specialist and staff will be able to tackle this work swiftly, to ramp up opportunities for Brampton.

1. Working more closely with Ontario Creates
The Province's creative industry development agency, Ontario Creates, is home to the Ontario Film Commission, which works with production leads to source locations, studio space, and to assist with all aspects of permits and other requirements. Brampton's Film Specialist can develop a strong rapport with the Ontario Film Commissioner, speaking regularly, to ensure that Brampton is top of mind.[24]

2. Ontario Locations Database
They have a robust database of over 80 Film Friendly municipal and regional agencies and jurisdictions from across Ontario.

Brampton currently has some locations posted in this database, and these locations have attracted production. The more varied the locations offered in a Film Friendly jurisdiction, the more production activity is attracted, since establishing a base camp for production reduces the need for (and expense of) of unit moves.

We have met with the Ontario Film Commissioner, Justin Cutler, to share what we have learned about Brampton's current advantages for location shooting, and he is delighted and committed to working closely with Brampton to expand locations postings.

Currently, in-demand locations include 4-8 acre parcels for backlots and staging, warehouses, and warehouses for potential studio retrofit.[25]

They will now include Brampton's Film Specialist in all communications and production searches, to improve production opportunities.

3. Ontario LA Development Office
They will also ensure that Brampton's Film Specialist has an opportunity to connect directly and regularly with their LA development office, and marketing activities, to enable a proactive approach to attracting production.

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[24] Over the course of our research, we facilitated a formal meeting for the Film Specialist, and the Manager of Tourism/Events/Ec Dev/Culture, to meet with the Ontario Film Commissioner and review Brampton's current competitive advantages and ignite a new relationship.
[25] See Appendix B for industry developed Studio Tiers Classification.

4. FamTours
FamTours (familiarity tours) have become an industry standard practice. Ontario Creates will assist Brampton's Film Commissioner in developing FamTours for Ontario Location and Production Managers, and include Brampton where appropriate for the annual LA Producer FamTours.

5. Working with Brampton's Realty Department
Taking a deeper dive into Brampton's land 'stock', our meeting with Brampton's Realty team was extremely positive.

In keeping with Brampton's 2040 Vision Master Plan, Brampton is purchasing and assembling land parcels with an eye for strategic development. Many of these land parcels are in "transition', meaning that they are earmarked for development, perhaps even sold, but are not slated for immediate development – in some cases, for 10 or 20 years.

Keeping the Film Office up to speed on available lands is a wonderful opportunity to add significant advantage to Brampton's locations stock, and infrastructure development potential, as well as leasing revenues.

If a significant number of additions are made to the Locations Inventory and uploaded to the Ontario Creates database, then City revenues could increase exponentially almost immediately.

Economic Impact of Film + Television Industry in Brampton

Brampton has developed several Master Plans, to guide its future, including a Financial Master Plan to manage growth and sustainability. [26]

The film and television industry is an excellent fit. City revenues, with some categories diverted, as noted in Policy section, earlier, should cover any overhead investments. Industry workforce development addresses the need for Brampton to deliver youth training and employment, and jobs for a wide range of residents. Give-back community programmes enhance and enrich City community offerings for its citizens. Land lease and development opportunities attract private sector capital driving more property tax revenues to the City.

Significant production activity with high profile series can also help drive "production tourism", and enhance the overall Brampton Tourism offerings.

Direct Spend
Direct Spend includes all production spending in a jurisdiction, including local labour, goods and services. Film and television production is labour intensive, employing hundred of people per production – roughly 50% of a production budget. Productions also purchase goods and services from other industries (lumber, flooring, catering, trucks, fabric, paint, etc.), which in turn generates spin-off, or indirect economic impacts (labour, goods and services) beyond the production sector.[27]

The goal for a modest sized Film Friendly jurisdiction is to actively pursue one or two television series to Brampton, as their primary location (in addition to locations, back lot leases, base camp leases, and warehouse use) in order to enjoy increases in direct and indirect spending, (labour, goods and services) in the jurisdiction.

This must be carefully done – to remain competitive and attract big players, Brampton must strive to maintain City services on a revenue neutral basis, and maintain current location use rates for the foreseeable future.

[26] See Appendix A.2 for a list of Brampton studies and reports reviewed
[27] Currently, there is no Brampton data for labour specific to film and television production, so it is not possible to estimate the direct and indirect jobs at this time, and their GDP. Our assessment will, therefore, focus on the reported production spend and revenues in Brampton.

A Note about Economic Impact calculations

The 'direct' economic impact for film + television comes only from the labour spending, to labour in the jurisdiction.

The 'indirect' economic impact comes from spending in the jurisdiction on things other than labour (truck rentals, catering, lumber, etc).

The 'induced' economic impact comes from labour income (in supplier companies) created by the non-labour spending.

As no 'direct' film and television Brampton labour data currently exists, we will take a look at the reported production spend data on indirect spending - goods and services - and reported data on City revenues from this spending.

Working with the Brampton Film + Television Industry Advisory board union and guild members, it would be possible to gather Brampton industry labour data, to begin to map "direct" spending.

So how has Brampton fared?

With no formal Film Office or supports, and one full-time experienced production staffer, Brampton has done surprisingly well.

Reported production "spend" in Brampton has seen significant increases since 2013, from a reported production spend of only $315,6640 in 2013 to just under $3 million in 2019.[28]

Production revenues to the City itself currently go to the specific department (ie parking fees to the parking division), rather than general revenues; there is a variety of software used across City departments, as with scheduling, and to date, not all departments have indicated a separate line item for industry activity. As a result, it has been difficult to accurately determine production revenues to the City.

We have had discussions with Finance, and together have determined a path to capture and report the film revenue generated by all departments, without the need to change current IT software, programming, or supports.[29] Each film or television project will be treated as a separate Vendor, and Finance will be able to gather info as needed.

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[28] 2018 Brampton Film Office Annual Report, p 4, Brampton Film Office Report 2019
[29] It is my understanding that this approach is now being implemented.

Production revenue to the City reported to the Film Specialist in 2019 was $310,591.41 – just under double the 2018 revenues of $160,535.11[30]. This is due to an effort to post some City facilities and property on the Ontario Creates locations database, and the City's 'make it work' approach. For example, City Hall West Tower and the Williams Parkway Operations Centre delivered revenues of $76,000.00 in a three-month period in 2019.

Redirecting municipal building and parking rental fees to the Brampton Film and Television Office could be used to offset overhead and operations.

Interestingly, while permit days have remained near the 100 days mark in 2018 and 2019, the production spend and revenues to the City have significantly increased – a signal that larger, better funded productions are selecting Brampton for their locations work.

With Brampton indirect production spend growing from $2 million in 2018 to just under the $3 million mark in 2019, and City revenues doubling, with little marketing or support, there is definitely opportunity to actively double or triple production spend – and deliver even higher volumes if a series chooses to make Brampton their home.

[30] 2018 Brampton Film Specialist Annual Report, p6, Brampton Film Office Report 2019

Conclusion

Film + Television is a good fit for the economic development Vision for the City of Brampton, internally and externally.

Overall, with an increase to the staffing compliment, and strategic policy tools, the City has the capacity to double or triple its production volumes within 24 months. An annual evaluation of the structures, changes and progress of the implementation of this report will identify strengths, results, shortcomings, and any further improvements that may be warranted.

With leadership from Council, policy tools, revenue and resource redirection, staffing adjustments, and physical office positioning, can work together to enable Brampton to scale up its locations offerings, market Brampton to the industry, and service significant growth in production volumes to deliver increased revenues, employment, job training, community development, and private sector capital investment.

Sarah Ker-Hornell, President
Eric Jensen, Associate

SKH Consulting
Strategic Government & Stakeholder Relations Solutions
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Appendix A

A.1 Methodology

In addition to reviewing the existing City of Brampton Master Plans (Vision 2040, Financial, Economic Development, and Culture), and various reports from the Brampton Film Specialist, we consulted with Mayor Patrick Brown, and 21 City of Brampton and Peel Region department teams, Ontario Creates (the Ontario industry development agency for film, television, interactive media, books, music and magazine publishing), and the Directors Guild of Canada Ontario branch Locations Caucus Representative. The full list is offered in Appendix A.2.

There is no current data regarding the number of industry workers who live in Brampton, in order to calculate Full-Time Employment equivalents or GDP. As noted earlier, this could be tackled with the Brampton Film + Television Advisory Board union and guild leaders.

Indirect production spend information is gathered when issuing a location film permit, but is not as reliable as film and television tax credit administration reporting in aggregate done by Ontario Creates. That said, Ontario Creates does not capture, television commercials, corporate videos, music videos, in-house broadcaster production, or small screen content activity spending below tax credit qualifying thresholds. For our purposes, then, we used the reporting provided by the Brampton Film Office.

Induced impact typically includes the employment and GDP generated within industries that supply goods and services to the production sector.
Without the direct labour spending data, induced spending cannot be calculated.

A.2 Interviews

Peel Regional Police (Corporate headquarters – 7150 Mississauga Rd.):

- Natalie Muzyczka (Supervisor, Central Paid Duty & Alarm)
- Mario Ferrante (Manager, Central Paid Duty & Alarm)
- Michael Mckenzie (Sergeant – Community Events 22 Division)

Region of Peel – Traffic Engineering:

- Sally Eshak (Technical Analyst, Traffic Engineering)
- Brian Melnyk (Technical Analyst, Traffic Engineering)

City of Brampton Traffic Services:

- Kevin Minaker (Manager, Traffic Operations & Parking)
- Shane Loftus (Supervisor, Municipal Parking Operations)
- Lenka Nielsen - Senior Operations Technician - Roads Maintenance, Operations & Fleet

Commissioner of Community Services

- Al Meneses (Commissioner, Community Services)

Facility Operations & Security Services

- Dave Salt (Supervisor, Operations)
- Alyssa Fiorini (Supervisor, Facility Services)

Finance

- Kartik Sengar (Manager, Client Services)
- Mustafa Yaqubi (Senior Advisor, Client Servcies)

Risk & Insurance:

- Deborah Tracogna - Manager, Risk & Insurance
- Jeff Lane – Risk Management Analyst

Legal:

- Christopher Pratt (Legal Counsel, Realty, Property, Communications, Development)

IT & Contract Systems:

- Nicki Todd McVean (Administrator, Enterprise Systems)

Brampton Library:

- John Simone (Director, Business Management & Operations)

Downtown Brampton BIA:

- Suzy Godefroy (Executive Director)

Toronto Regional Conservation Authority

- Doug Miller (Senior Manager, Conservation Parks)

Enforcement:
- JeanPierre Maurice (Manager, By-Law Enforcement)

Parks:
- Jim Pitman (Manager, Parks Maintenance)
- Cindy Chambers (Supervisor, East Parks Maintenance)
- Joe Ferreira (Central Operations)

Fire Prevention & Emergency Measures:
- Andrew Von Holt (Division Chief, Fire Prevention)
- Alain Normand (Manager, Emergency Measures)

Realty & City Facility Allocation:
- Vicki Wong (Senior Manager, Realty Services)
- Randy Rason (Director, Building Design & Construction)
- Cindy Binnell (Manager, Building Design & Construction)
- Britta Meir (Project Coordinator, Building Design & Construction)

Security Services:
- Jason Keddy (Manager, Security Services)
- Prabhjot Dhanauta (Coordinator, Security Operations)

Recreation & Rentals:
- Derek Boyce (Director, Recreation)
- Dave Cooper (District Manager, Recreation)
- Anand Patel (Manager, Recreation Planning) – Oversees Rental Office

Peel District School Board:
- Kelly O'Boyle (Manager, Facility Rentals)

Economic Development & Culture:
- Clare Barnett (Director, Economic Development & Culture)
- Denise McClure (Senior Manager, Economic Development)
- Kelly Stahl (Senior Manager, Culture)
- Laura Lukasik (Manager, Tourism & Special Events)
- Michael Ciuffini (Film Specialist)

Brampton Transit:
- Vincent Rodo (Director, Transit)
- Ivana Tomas (Manager, Marketing & Customer Communications)

Ontario Creates:
- Justin Cutler (Ontario Film Commissioner)

Directors Guild of Canada – Ontario
- John Rakish (Location Manager/DGC Ontario Locations Caucus Representative)

The Office of Mayor Patrick Brown
- His Worship, Mayor Patrick Brown
- Justin Heran, EA to Mayor Brown

A.3 Brampton reports

2018 Brampton Film Office Annual Report", dated February 22, 2019
2019 SWOT – Film Industry in Brampton
1984 – Current – Filmed in Brampton
2018 Film Inquiries and Permits
2018 Film Services Review – Road Occupancy and Access Permit Process
2019 Brampton Film Office Summary
Brampton Parks and Recreation Master Plan, 2017
Brampton Vision 2040, 2018
Brampton Economic Development Master Plan, 2018
Brampton Culture Master Plan, 2018
Brampton Long Term Financial Master Plan, 2017
Brampton film and television website
https://www.brampton.ca/EN/Business/filmithere/Pages/Welcome.aspx
Brampton Film Office Report 2019

Appendix B – Studio Tier categories, as defined by industry

Tier One

- Compliant with all health and safety regulations
- Sound attenuation on stages
- Adjacent support space and parking for all vehicles
- Capacity for security of studio
- Free of non-film related tenants
- Clear span or non-structural beams that can be removed
- Useable height 20 feet or greater

Tier Two

- Compliant with all health and safety regulations
- Some sound attenuation
- Some support space and must have parking for unit trucks
- May have columns that are not removable
- Useable height minimum 20 feet

Tier Three

- Compliant with all health and safety regulations
- May not have any sound attenuation on stages
- May not have adjacent support space or parking for any vehicles incl unit trucks
- May have columns or barriers
- Useable height under 20 feet

FIN

ONTARIO CREATES | ONTARIO CRÉATIF
175 Bloor Street East
South Tower, Suite 501
Toronto, ON M4W 3R8
ontariocreates.ca

Film and Television Production Health and Safety Results June 2020 - January 2021

Date: 01-14-2021

Regional Film Offices,

In an effort to reduce the spread of COVID-19, the province has made the difficult decision to increase public health restrictions across Ontario with Enhanced Shutdown Measures that took effect January 14, 2021. Ontario's film industry has implemented rigorous and effective health and safety protocols to ensure safe working environments including extensive testing regimes. Film production activity is permitted to continue under the enhanced measures, provided current Ontario regulations are followed.

The Province-wide Shutdown News Release can be found **here**

The updated Workplace Safety Measures document can be found here
*Please see page 28 for details about re: the film and television industry.

Regulations can be found here:

- **Stay at Home Order**
- **Emergency Declaration**
- **The re-opening of Ontario Act O. Reg. 82/20: RULES FOR AREAS IN STAGE 1 (ontario.ca)** *Film & TV specific requirements can be found in in s62 & s63

In response to a number of questions raised about the shutdown measures announced on Tuesday, January 12. Ontario Creates has assembled this fact sheet regarding the measures taken by industry to maintain safe sets and their results.

Health and Safety Protocols

The Section 21 Health and Safety Guidelines were published on Thursday June 25th 2020 and updated most recently on November 24th. Film and television productions are required to ensure workplaces are safe; that cast, crew and communities are protected; and that physical distancing is maintained as much as possible.

The guidelines were created by the Section 21 Film and Television Health and Safety Advisory Committee, an advisory body to the Ministry of Labour, Training & Skills Development (MLTSD), pursuant to Section 21 of the Occupational Health and Safety Act (OHSA). The committee

advises on Safety Guidelines for the Film and Television Industry in Ontario which are meant to assist employers/producers, supervisors and cast and crew in the industry in determining ways to best comply with their obligations as set out under the OHSA.

Committee representatives include experienced advisors, both domestic and foreign, from all aspects of the motion picture industry. The committee is comprised of unions, guilds, producers associations and municipal and provincial government representatives representing film, television and commercial production. These entities have worked hand-in-hand with MLTSD throughout the drafting process.

The guidelines provide productions of any size with a foundation for safe return to work protocols. The guidelines contain general and department specific recommendations and resources. In addition to these industry-wide protocols, each individual production maintains a health and safety plan specific to the circumstances of that production. In many cases, productions have implemented more stringent health and safety measures than recommended by the Section 21 Guidelines, proceeding with PCR and antigen testing on a frequent cadence and creating workplace zones that isolate workers by role.

COVID-19 Testing

The film and television sector is making extensive use of COVID-19 testing for film workers and the sector was selected by the Ministry of Health to receive Panbio rapid antigen tests to support screening on production sites. The film and television sector was selected because of its robust health and safety practices and the infrastructure it has created to administer the tests. PRC and antigen testing cadence ranges from every other day to weekly, depending on the role of individual worker. Many productions also require a negative pre-employment test result 48 hours prior to employment.

Workplace Prevention Measures

COVID-19 health and safety measures such as social distancing, masking, testing, adherence to close contact recommendations and cohorting have been widely implemented. Productions have created well defined tiered workplace zones to limit contact between employees. Location management teams have also worked closely with regional and municipal film offices across the province to ensure well defined distinctions between public space and the workplace when working on location to ensure public safety.

Rigorous health and safety protocols specifically developed for film and television production in collaboration with unions, producers, epidemiologists, and health, safety experts, municipal and provincial film offices and the Ministry of Labour have been the foundation of a safe return to production across Ontario.

Health and Safety – Results to Date

- Sixty-two live action productions have actively worked in Ontario since production activities were permitted to resume in June.
- Ontario Creates is not aware of any COVID-19 outbreaks on productions since film and television activity has resumed.
- The positivity rate from COVID-19 testing reported by the sector has been 0.07% based on 105 positive results from 148,417 tests conducted between August and January. Every positive test has been identified through regular testing without any other Close Contacts resulting in a positive infection.

Other Jurisdictions

British Columbia and Quebec, continue to allow film and television production to continue. Most recently, Quebec has exempted its film and television sector from both the lockdown and the curfew that Premier Legault announced on January 6th.

Globally, film and television production continues in key jurisdictions, such as the United Kingdom, Germany, France, Ireland, Greece, Victoria State in Australia, and the U.S. states of California, Oregon, Illinois, Florida, Hawaii, Georgia.

Economic Impact

In 2019, the film and television sector generated $2.16B towards Ontario's GDP, creating 44,500 direct and spin-off full time jobs for Ontarians. A total of 62 live action productions have taken place throughout the province since production activities were permitted to resume in June 2020.

In addition to activity in the Greater Toronto Area, production activity rapidly restarted following the hiatus across the province, including the following key projects:

- Northern Ontario - Resident Evil, All My Puny Sorrows, Flee The Light
- Central Ontario – Nightmare Alley (Dir. Guillermo Del Toro), Man From Toronto, Kim's Convenience, The Boys, Titans, Frankie Drake, Murdoch Mysteries
- Eastern Ontario – Locke and Key, Love Found at Whitbrooke Harbor
- Southernwestern Ontario –The Handmaid's Tale, Hardy Boys, See, Departure, Murdoch Mysteries, Frankie Drake, Sneakarella

Report
Staff Report
The Corporation of the City of Brampton
2021-02-03

Date: 2020-01-13

Subject: **Hotel VISA & BIA E-Gift Card Promotion**

Contact: Jason Tamming, Director Strategic Communications, Culture & Events
jason.tamming@brampton.ca | 905.874.2889

Report Number: Corporate Support Services-2021-116

Recommendations:

1. That the report from Jason Tamming, Director Strategic Communications, Culture and Events, dated January 13, 2021 to the Committee of Council meeting of February 3, 2021 titled Hotel VISA and BIA E-Gift Card Promotion be received;

2. That Council approve the recommendation to financially support this promotion with funds from a tourism grant provided by the Federal Economic Development Agency of Southern Ontario (FedDev); and,

3. That Council approve the promotion be activated in partnership with the Downtown Brampton BIA to support Brampton's economy and tourism.

Overview:

- Brampton's economy and tourism have been significantly impacted by COVID-19.

- A number of tourism offices have participated in a hotel VISA promotion whereby a reservation consisting of a minimum two-night stay is eligible for a VISA gift card.

- The Downtown Brampton BIA, a non-profit association, has offered to partner with the City and act as the delivery organization of this promotion.

- Tourism support funds have been granted to the Brampton Tourism office by the Federal Economic Development Agency of Southern Ontario and are available to cover the project costs of $11,600.00.

- The promotion will include a VISA gift card valued at $50.00 plus a Downtown Brampton BIA E-Gift Card of $25.00 for a minimum two-night stay in Brampton-based accommodation. Hotel guests will also receive City of Brampton's Visitor Guide and Food Guide.

Background:

Support for this project will contribute to Brampton's economy and tourism, which has been severely impacted by COVID-19.

Impacts to the tourism sector have included but, are not limited to:

- The permanent closure of many restaurants;
- Hotel vacancy rates as low as 13.6%;
- The permanent closure of attractions; and
- The temporary but, lengthy closures of other attractions such as PAMA and Playdium.

Minister Lisa MacLeod, responsible for Heritage, Sport, Tourism and Culture Industries for the Province, has shared that tourism industry in Ontario has been the hardest hit by COVID-19.

Current Situation:

Many tourism offices in Ontario have participated in a hotel VISA gift card promotion whereby guests staying at participating hotels for two nights or more are eligible for a VISA gift card. The card may not be used to cover hotel charges. Mississauga Tourism has offered this promotion and card data confirms that 75% of the VISA gift cards awarded to guests to date have been used at Mississauga businesses. This program has proven to provide direct financial support to the local economy and tourism.

Tourism staff has reviewed the logistics of offering this promotion. In order to do so, a partner organization is required to carry out the operations of the promotion. The Downtown Brampton BIA has agreed to act as a partner and Suzy Godefroy, Executive Director, delegated to Council on December 9, 2020 (CW-312-2020) and provided an overview of the program plan.

The program being proposed for Brampton offers the following incentives for hotel guests staying two or more nights in a participating Brampton hotel:

- $50.00 VISA Gift Card to use anywhere in the City

- $25.00 BIA E-Gift Card
- City of Brampton Visitor and Food Guides to support choices for using gift cards

The program will be limited to 125 promotional packs distributed to participating hotels. Costing for the program is as follows:

Item	Cost
Custom Production of Cards 125 Cards @ $2.50 each	$312.50
Funds for Cards 125 Cards @ $50.00 each	$6,250.00
Vendor Administration Fee	$500.00
Funds for BIA E-Gift Cards 125 Cards @ $25.00 each	$3,125.00
Admin Fee Payable to BIA (20% of program value)	$1,412.50
TOTAL:	**$11,600.00**

The Brampton Tourism Office is in receipt of a tourism support grant from the Federal Economic Development Agency of Southern Ontario with funds available to cover the costs associated with this promotion.

A formal agreement between the City of Brampton and the Downtown Brampton BIA will be drawn up to outline the program responsibilities of each party.

City of Brampton Responsibilities:

1. Develop terms and conditions for visitor participation that will be approved by both parties.
2. Provide funding to the Downtown Brampton BIA to purchase, distribute, track and activate the VISA and BIA gift cards.
3. Promote the program through City of Brampton's *Experience Brampton* digital channels.

Downtown Brampton BIA Responsibilities:

1. Purchase VISA gift cards for distribution to participating hoteliers.
2. Add program information to the Downtown Brampton BIA website to promote the program including a full list of participating accommodation providers – list to be provided by Tourism staff.
3. Activate and track VISA gift cards and BIA E-Gift cards.
4. Submit a final report including card data.

If approved, the program would be strategically rolled out to align with the Provincial COVID Level. The program will continue until all promotional packages have been distributed to guests.

Corporate Implications:

Financial Implications:

Funding for this promotion is available through a tourism grant from the Federal Economic Development Agency for Southern Ontario.

Term of Council Priorities:
This recommendation aligns with the Term of Council Priorities – Brampton is a Mosaic. Funding tourism projects supports Brampton's economy and tourism and also furthers Brampton's identity as a diverse city offering cultural events of great interest to residents and visitors.

Conclusion:

$11,600.00 to deliver the Hotel VISA and BIA E-Gift Card promotion in partnership with the Downtown Brampton BIA. The program will support both Brampton's economy and tourism.

Authored by:

Laura Lukasik
Manager, Tourism & Special Events

Reviewed by:

Jason Tamming
Director, Strategic Communications, Culture & Events

Approved by:

Michael Davidson
Commissioner Corporate Support Services

Submitted by:

David Barrick
Chief Executive Officer

Report
Staff Report
Committee of Council
The Corporation of the City of Brampton
2021-02-03

Date: 2020-12-18

Subject: **2021 Temporary Borrowing By-Law**

Contact: Mark Medeiros, Treasurer (Acting)
mark.medeiros@brampton.ca 905-874-2520

Report Number: Corporate Support Services-2021-097

Recommendations:

1) That the report titled **"2021 Temporary Borrowing By-Law"** to the Committee of Council meeting of February 3, 2021, re: be received.

2) That a by-law be enacted in accordance with Section 407 of the *Municipal Act, 2001* and in the form attached to this report as Appendix A, to authorize the temporary borrowing of funds, if considered necessary by the Treasurer, to meet current expenditures for the year 2021, until sufficient taxes are collected and other non-tax revenue are received.

Overview:

- **The *Municipal Act, 2001* authorizes a municipality to borrow money, as Council considers it necessary, to meet the current expenditures of the Corporation for the year, until taxes are collected and other non-tax revenues are received.**

- **A by-law is required for the purpose of authorizing the Corporation to borrow money if deemed necessary to meet current expenditures for the year 2021.**

- **As in previous years, staff does not anticipate having to temporarily borrow money in 2021 to meet operational requirements. However, in the event the City of Brampton finds it necessary to borrow money for operational requirements, this By-law gives the Treasurer the authority to temporarily borrow money, subject to the legislative limitations.**

Background:

Section 407(1) of the *Municipal Act, 2001* states that at any time during a fiscal year, a municipality may authorize temporary borrowing, until the taxes are collected and other revenues are received, of the amounts that the municipality considers necessary to meet the expenses of the municipality for the year and of the amounts, whether or not they are expenses for the year, that the municipality requires in the year.

The area that can be borrowed for are as follows:

(a) Reserve, sinking and retirement funds;

(b) Principal and interest due on any debt of the municipality;

(c) School purposes;

(d) Other purposes the municipality is required by law to provide for; and

(e) The amount of principal and interest payable by a person or municipality primarily liable for a debt, if the municipality has guaranteed the debt and the debt is in default.

Section 407(2) of the *Municipal Act, 2001* sets out the requirement that the total amount that may be borrowed at any one time for the purposes described above plus any outstanding amounts of principal borrowed and accrued interest shall not exceed:

- From January 1st to September 30th in the year, 50% of the total estimated revenues of the municipality as set out in the Budget adopted for the year; and
- From October 1st to December 31st in the year, 25% of the total estimated revenues of the municipality as set out in the Budget adopted for the year.

Although actual borrowings under the provision have not been required for a considerable amount of time, Council has approved a Temporary Borrowing By-Law in prior years as a proactive measure for unforeseen circumstances.

Current Situation:

As in previous years, staff does not anticipate having to temporarily borrow money in 2021 to meet operational requirements. However, if the City of Brampton finds it necessary to borrow money for this purpose, this By-law gives the Treasurer the authority to temporarily borrow money, subject to the legislative limitations noted above.

The following table outlines the City of Brampton's upper limits should borrowing be required in 2021, based on the City's 2021 approved budget:

Revenues set out in 2021 Budget*	Maximum Borrowing Limits 2021	
	between Jan 1 and Sep 30	Between Oct 1 and Dec 31
$734 million	$367 million	$183 million

**Excluding contribution from reserves and revenue derivable from arrears of taxes*

Corporate Implications:

There are no immediate financial implications resulting from the recommendations in this report. The cost of any potential short-term borrowing will be offset by the interest revenue earned in the operating investment portfolio.

Strategic Plan:

This report achieves the Strategic Plan priorities of Good Government by delivering the statutory responsibility for "handling all the financial affairs of the municipality on behalf of and in the manner directed by Council".

Term of Council Priorities:

This report fulfils the Council Priority of a Well-Run City through strict adherence to effective financial management policies and ensuring sustainable financial operations.

Conclusion:

Finance staff is recommending that a by-law be enacted in accordance with Section 407 of the *Municipal Act, 2001* to authorize the temporary borrowing of funds, if considered necessary by the Treasurer, to meet current expenditures for the year 2021, until sufficient taxes are collected and other non-tax revenues are received.

Authored by:

Majbah Ahmed, Manager, Banking and Investments

Reviewed by:

Mark Medeiros, Treasurer (Acting)

Approved by:

Michael Davidson, Commissioner, Corporate Support Services

Submitted by:

David Barrick, Chief Administrative Officer

Attachment: Appendix A – 2021 Temporary Borrowing By-law

Appendix A

THE CORPORATION OF THE CITY OF BRAMPTON

BY-LAW

Number _____- 2021

To authorize the temporary borrowing
of funds for the Year 2021
The Corporation of the City of Brampton

WHEREAS Section 407 of the *Municipal Act 2001* S.O. 2001, c.25 as amended (the "Act") provides that a municipality may authorize temporary borrowing, until the taxes are collected and other non-tax revenues are received, of the amounts that the municipality considers necessary to meet the current expenditures of the municipality for the year;

AND WHEREAS The Corporation of The City of Brampton (hereinafter called the "City") finds it necessary to borrow from time to time, in accordance with Section 407 of the Act;

AND WHEREAS the taxes levied or to be levied and other non-tax revenues to be raised for current expenditures of the City to be made during the 2021 fiscal year (hereinafter called the "current year") have not yet been fully collected, and such taxes and other non-tax revenues hereafter to be collected will provide the monies required to repay the sums to be borrowed pursuant to this by-law and interest thereon;

NOW THEREFORE the Council of The Corporation of the City of Brampton hereby ENACTS as follows:

1. The City is hereby authorized to borrow from time to time during the current year, in accordance with Section 407 of the Act, such sum or sums as considered necessary by the Treasurer to meet, until the taxes are collected and other non-tax revenues are received, the current expenditures of the City for the current year.

2. The lender(s) from whom amounts may be borrowed under the authority of this by-law shall be the Royal Bank of Canada and such other lender(s) as may be determined from time to time by by-law of the City Council.

3. The total amount which may be borrowed at any one time under this by-law plus any outstanding amounts of principal borrowed and accrued interest under Section 407 of the Act together with the total of any similar borrowings that have not been repaid, shall not exceed during the period January 1 and September 30 of the current year fifty percent (50%) of the total estimated revenues of

the City as set out in the budget adopted for the current year, and from October 1 and December 31 of the current year, twenty-five percent (25%) of the total estimated revenues of the City as set out in the budget adopted for the current year.

4. The City Treasurer shall, at the time when any amount is borrowed under this by-law, ensure that the lender is or has been furnished with a certified copy of this by-law and a statement showing the nature and amount of the estimated revenues for the current year and also showing the total of any other amounts borrowed from any and all sources under the authority of Section 407 of the Act, that have not been repaid.

5. If the budget for the current year has not been adopted at the time an amount is borrowed under this by-law:

   (a) The limitation on total borrowing, as set out in section 3 of this by-law, shall be temporarily calculated until such budget is adopted using the estimated revenues of the City as set forth in the budget adopted for the previous year; and

   (b) The statement furnished under section 4 shall show the nature and amount of the estimated revenues of the City as set forth in the budget adopted for the previous year and the nature and amount of the revenues received for and on account of the current year.

6. For the purposes of this by-law the estimated revenues referred to in sections 3, 4 and 5 do not include revenues derivable or derived from a) arrears of taxes, fees or charges; or b) a payment from a reserve fund of the City, whether or not the payment is for a capital purpose.

7. The City Treasurer is hereby authorized and directed to apply in payment of all sums borrowed under this by-law, together with interest thereon, all or any of the monies hereafter collected or received, either on account of or realized in respect of the taxes levied for the current year and previous years or from any other source, that may be lawfully applied for such purpose.

8. Any two of the Mayor, Chief Administrative Officer, City Treasurer, or Deputy Treasurer, are hereby authorized to execute on behalf of the City any credit agreement, evidence of indebtedness and any other documentation necessary to effect the temporary borrowing authorized by this by-law on such terms and rate(s) of interest as the Treasurer may approve and in such form as may be approved by the City Solicitor or designate.

READ a FIRST, SECOND and THIRD TIME and PASSED in Open Council this ___th day of , 2021.

Approved as to form.
___/___/___
_____

_____
Mayor

Approved as to content.
___/___/___
_____

_____
Peter Fay, City Clerk

Report
Staff Report
The Corporation of the City of Brampton
2021-02-03

Date: 2020-01-22

Subject: COVID-19 Improper Disposal of Sharps Mitigation Measures – Downtown Brampton – January 2021 Update (RM 29-2020)

Contact: Mikkel Marr, Director, Organizational Performance and Strategy
Jason Keddy, Manager, Security Services
Razmin Said, Manager, Community Safety and Well-Being

Report Number: CAO's Office-2021-158

Recommendations:

1. That the report titled**: [COVID-19** Improper **Disposal of Sharps Mitigation Measures – Downtown Brampton – January 2021 Update (RM 29-2020)]** to the Committee of Council meeting February 3, 2021 be received.

Overview:

- The objective of the pilot is to reduce the amount of improperly disposed of sharps in Downtown Brampton and collect data that can be used to develop a Region-wide strategy for the safe disposal of sharps.

Background:

During the May 5, 2020 weekly Social Support Task Force meeting, partner organizations Regeneration Outreach and the Knights Table expressed they had noticed an increase in unsafely disposed sharps around their property.

Social Support Taskforce staff followed up with Brampton's Security Services and determined that the incidents were also increasing within Brampton's downtown.

At the May 13, 2020 City Council meeting, a motion, moved by Regional Councillor Santos and seconded by Councillors Medeiros, Bowman and Vicente, was introduced, with the operative that staff engage with the Region of Peel to collaboratively address

this risk within Brampton impacting our vulnerable populations and create an action plan to address this growing concern during the COVID-19 pandemic; and that staff install "Sharps" receptacles within Brampton's downtown high incident areas; and that staff report back to council regarding progress of these actions at a future Council Meeting – May 27, 2020

In addition, at Regional Council on May 14, 2020, Councillor Rowena Santos noted that City of Brampton staff were directed to report to the May 27th City Council meeting regarding the progress of actions to address the immediate concerns related to an increase in sharps related incidents during the COVID-19 pandemic emergency period.

As such, the Acting Commissioner of Health Services and the Commissioner of Public Works undertook to work with local municipal staff and community partners to understand and address the current issue and then report back to Regional Council on a broader approach to the safe disposal of sharps in the community.

May 21, 2020, City of Brampton Staff from Security Services, Brampton Emergency Management Office and CAO Office met with Region of Peel Staff from Housing Services, Public Works and Community Partnerships to collaborate on creative solutions and next steps.

As a result of the collaborative engagement, Brampton Staff and Region of Peel Staff agreed to implement a Downtown Brampton COVID-19 Sharps Disposal Mitigation Pilot where receptacles will be installed at 11 "hot" spots as well as at Regeneration and Knights Table, and that the results of this pilot will be considered as part of the Region of Peel's work related to community safety and harm reduction.

The Agenda included:

1. A review of the May 13, 2020 City of Brampton Motion for alignment
2. Considerations for installation of Sharps receptacles
3. Longer-term work related to safe sharp disposal
4. Next steps

Current Situation:

On-going pilot program, COVID-19 Improper Disposal of Sharps Mitigation Measures – Downtown Brampton – January 2021 Update included in Appendix A "COVID-19 Improper Disposal of Sharps Mitigation Measures Downtown Brampton – January Update" which provides updates on Measurements, Receptacle usage and Monthly Sharps count frequency.

Corporate Implications:

<u>Financial Implications:</u>

No additional funding required.

Region of Peel to utilize existing contract with ESC Cares for extent of the pilot through COVID-19 emergency related funding.

Other Implications:

NIL – Pilot Program

Term of Council Priorities: Community partnerships – Community Safety

Conclusion:

Sharps refer to needles, as well as items such as scalpels, lancets, razor blade, scissors, metal wire, retractors, clamps, pins, staples, cutters, and glass items. Essentially, any object that is able to cut the skin can be considered a "sharp". These items can be found in our communities, private or public properties, roads, and/or parks.

These items are a cause for concern and anxiety for the general public, and may present a potential risk of infection if they are not handled and disposed of in a safe manner. Although the risk is low, contaminated sharps that puncture the skin can transmit infectious agents, such as Human Immunodeficiency Virus (HIV), hepatitis B virus, and hepatitis C virus. The purpose of this pilot program is to minimize this risk by decreasing the exposure of the public to all sharps and ensuring their safe disposal.

Short-term actions:

Downtown Brampton COVID-19 Sharps Disposal Mitigation Pilot (June 3, 2020 – September 5, 2021):

- Installation of Large sharps kiosk-style receptacle and Wall-mounted receptacles Joint Municipal-Regional Sharps Mitigation action plan:
- Communication, education and signage - enhanced communication between City of Brampton, Peel Outreach and Peel Public Health Harm Reduction Program

Medium term and Long-term Recommendations:

Providing input into the Region of Peel's Community Safety and Wellbeing Plan and Peel Public Health's and harm reduction work

- Having centralized sharps drop boxes
- Supporting the Region of Peel safe consumption site(s) in an area that is easily accessible.
- The Region of Peel is leading the Peel Opioid Strategy and collaborating with stakeholders on a Regional drug strategy that may provide insight on this matter

Authored by:

[Mikkel Marr, Director Organizational Performance and Strategy]

Reviewed by:

[Mikkel Marr, Director Organizational Performance and Strategy]

Approved by:

[David Barrick, Chief Administrative Officer]

Submitted by:

[David Barrick, Chief Administrative Officer]

Report authored by: Mikkel Marr, Director Organizational Performance and Strategy
APPENDIX A authored by: Region of Peel

Attachments:

Appendix A

Report Approval Details

Document Title:	COVID-19 Improper Disposal of Sharps Mitigation Measures – Downtown Brampton – January 2021 Update.docx
Attachments:	- Feb 3 2021 Appendix A COVID-19 Improper Disposal of Sharps Mitigation Measures – Downtown Brampton – Update (RM 29-2020).docx
Final Approval Date:	Jan 28, 2021

This report and all of its attachments were approved and signed as outlined below:

David Barrick - Jan 28, 2021 - 7:14 PM

APPENDIX A
COVID-19 Improper Disposal of Sharps Mitigation Measures
Downtown Brampton – January Update

Region of Peel
working with you

1. Pilot Project Summary

In May 2020, City of Brampton Council passed a resolution that City staff engage with the Region of Peel to address the risk of improper disposal (litter) and handling of sharps within Brampton and install sharps receptacles within Downtown Brampton's high incident areas. City of Brampton staff identified 11 "hot spots" as the best sites for sharps receptacles.

The matter was also discussed at Regional Council in May 2020 where the Acting Commissioner of Health Services undertook to work with local municipal staff and community partners to understand and address the current issue and then report back to Regional Council on a broader approach to the safe disposal of sharps in the community. The Interim Commissioner of Public Works advised that the Region's contract for sharps disposal is available for the City of Brampton to use at their discretion.

The Region received funding through the federal government's Reaching Home program to install sharp receptacles for a one-year pilot running from July 2020 to August 2021. Regional staff oversaw the installation of the receptacles and monthly track the number of sharps collected by the vendor. City of Brampton staff provide data on the number of littered sharps collected by their staff.

The objective of the pilot is to reduce the amount of improperly disposed of sharps in Downtown Brampton and collect data that can be used to develop a Region-wide strategy for the safe disposal of sharps.

2. Installation of Sharps Receptacles

Nine sharps receptacles were installed in "hot spots" in July. Two additional receptacles were installed in October and November.

1. 65 Queen St E - Four Corners Library
2. 8 Nelson St W – Brampton Transit Terminal
3. 16 John St – Peel Living Apartment
4. 1 Theatre Lane – Market Square Parking Garage
5. 2 Diplock Lane – Nelson Parking Garage
6. Vivian Lane
7. McKinney Lane
8. 287 Glidden Rd – The Knight's Table
9. 253 Queen St E – Regeneration Thrift Store
10. *44 Church St E – St. Andrew's Presbyterian Church (installed in October)*
11. *156 Main St N – Regeneration Outreach/Grace United Church (installed in November)*

St. Andrew's Presbyterian Church – Regional Councillors Santos and Vicente emailed staff at the end of August to inquire about a receptable at this location as they are seeing more sharps during COVID. Staff completed a site assessment and worked with the property owner to install a wall-mounted receptacle in October.

Regeneration Outreach/Grace United Church – This location was originally identified as a "hot spot" in July, however there were barriers to installing the receptacle. Staff worked with the property owner to pour a concrete pad at the site and the receptacle was installed in November.

3. Measurement

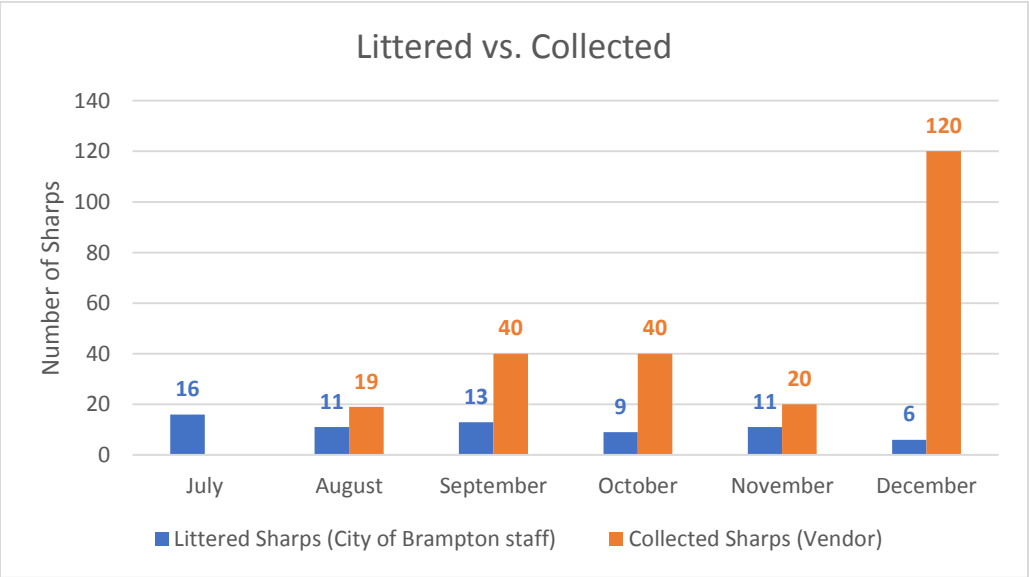
Measurement	Update (July – December)
Monthly service (collection) data for the sharps receptacles	From July to December, the collection data shows that six out of eleven sharps receptacles are being used. See Table 1, Receptable Usage for details. As shown in Figure 1, since the receptacles were installed there has been a decrease in the number of littered sharps and an increase in the number of sharps collected by the vendor. Usage of the receptacles peaked in December which corresponds to an increase in activity at The Knight's Table and the Regeneration Thrift Store as reported by facility staff. Both locations serve as food banks for the community. December is the first month showing a significant increase in number of sharps collected. It is not clear if this is a one-off or a sign that the community has embraced the usage of certain sharps receptacles. Staff will continue to monitor the vendors collection data in order to assess the receptacle types and locations to determine if it is necessary to relocate the receptacles to high traffic areas where the targeted users congregate.
Qualitative feedback from City of Brampton staff and community organizations	- Peel Police: Officers are not locating many sharps during their patrols nor have they received many direct complaints while they are patrolling. - Regeneration Outreach: Since the receptacles were installed, Regeneration staff haven't noticed as many sharps on the property. They are also seeing less people hanging out of the property due to COVID-19. - Regeneration Thrift Store: Staff are still finding littered sharps around the property, including near the receptable. On average, there are 10 littered sharps per week however on some days they are finding 6 sharps per day. - Peel Living: Staff have not experienced any issues with sharps since the receptacles were installed.
Pilot costs	To date, $9,670 has been spent on the pilot. This includes installation of the receptacles and six months of service. Staff originally budgeted $80,000 for the pilot to account for a two-year pilot and twice per month service for the receptacles. After discussion with

	Human Services, this budget was reduced to $26,240 for a one-year pilot with once per month service.

Table 1: Receptacle Usage

Month	Receptacles Used
July	None
August	**Four locations:** - Brampton Transit - Four Corners Library - McKinney Lane - The Knight's Table
September	**Two repeat locations:** - Four Corners Library - McKinney Lane
October	**One repeat, one new location:** - McKinney Lane - Regeneration Thrift Store
November	**One repeat, one new location:** - McKinney Lane - St. Andrew's Church
December	**Two repeat locations:** - The Knight's Table - Regeneration Thrift Store

Figure 1: Monthly Sharp Counts in Downtown Brampton



Presentation
The Corporation of the City of Brampton
2021-02-03

Date: 2021-01-15

Subject: **Bramalea Sustainable Neighbourhood Action Plan (SNAP)**

Contact: Stavroula Kassaris, Environmental Planner, Public Works and Engineering, stavroula.kassaris@brampton.ca, 905-874-2083

Report Number: Public Works & Engineering-2021-122

Recommendations:
That the presentation from Shannon Logan, Senior Program Manager of Sustainable Neighbourhoods, Toronto and Region Conservation Authority, and Stavroula Kassaris, Environmental Planner, Public Works and Engineering, to the Committee of Council meeting of February 3, 2021 re: Bramalea Sustainable Neighbourhood Action Plan (SNAP) be received.

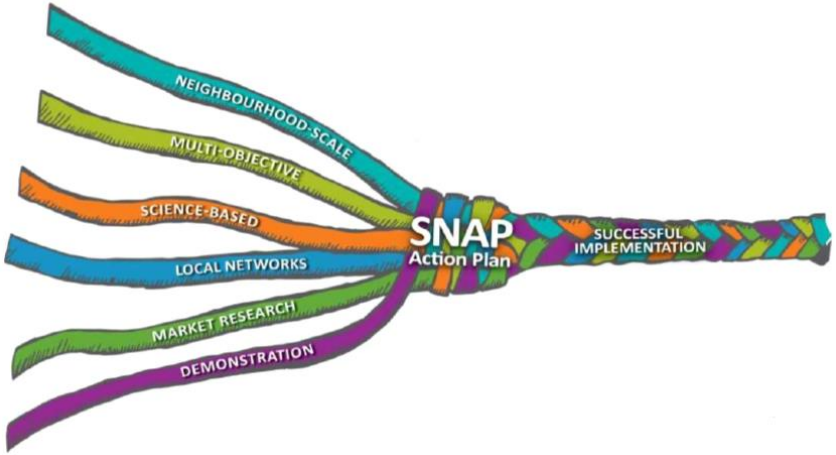
Bramalea Sustainable Neighbourhood Action Plan

Committee of Council

February 3, 2021

Toronto and Region Conservation Authority

What is the Sustainable Neighbourhood Action Program (SNAP)?



- Sustainable Neighbourhood Action Program (SNAP): a collaborative, neighbourhood-based approach for advancing urban renewal and climate action in older urban areas.

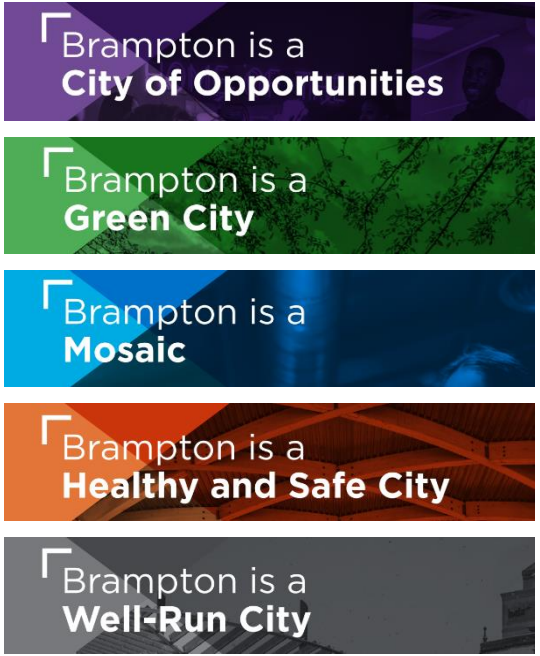
- Brampton has two existing SNAPS:
  - County Court SNAP (complete)
  - Fletchers Creek SNAP (ongoing)
- New = Bramalea SNAP

Multiple Benefits of SNAPs

- ✓ Achieves multiple objectives of City, Region, TRCA, local community
- ✓ Creates efficiencies
- ✓ Presents integrated, on-the-ground solutions
- ✓ Showcases innovation
- ✓ Fosters collaborative partnerships
- ✓ Empowers residence
- ✓ Builds a sense of place
- ✓ Opens access to funding

SNAP Supports the…

- Term of Council Priorities
- Brampton Grow Green Environmental Master Plan
- Community Energy & Emissions Reduction Plan
- Brampton 2040 Vision: Living the Mosaic
- Nurturing Neighbourhoods Program
- Brampton Eco Park Strategy
- Brampton Active Transportation Master Plan
- Brampton One Million Trees Program



Bramalea SNAP Profile

- K, E & F sections of broader Bramalea area
- Built between 1960 - 1980
- Approximately 17,000 people
- Highly diverse demographics
- Range of income levels
- Mix of recent immigrants and longtime residents
- Low, medium, and high density built form

Action Plan Co-creation Process

Neighbourhood Selection (2019)

Phase 1: Scoping Issues, Stakeholders and Interests

Phase 2: Defining Motivational Themes and Action Planning Concept Areas

Phase 3: Co-creating the Action Plan

Workshop #1

Workshop #2

Commence Implementation (2021)

Multi-Stakeholder Engagement

Quick Starts and Events

Scoping and Analysis

BRAMPTON

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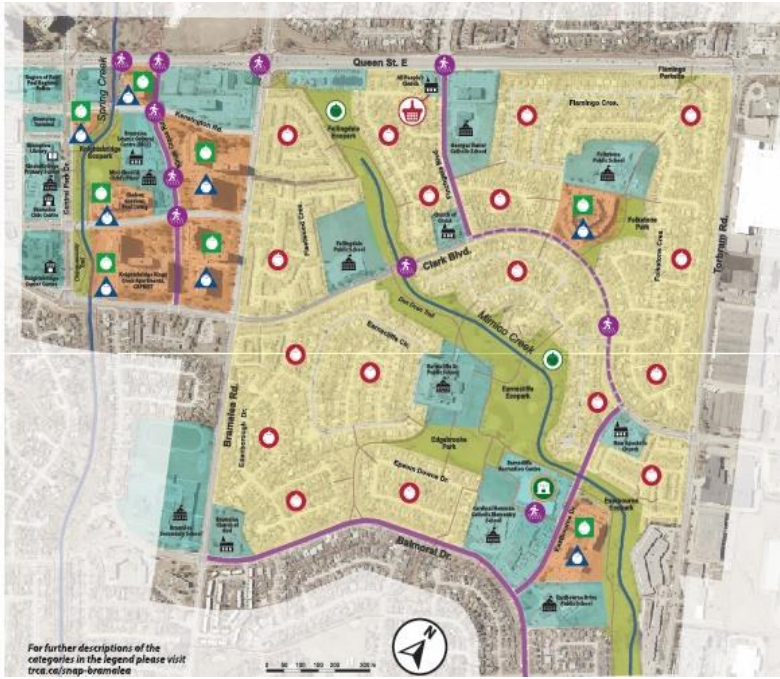
Bramalea SNAP Action Plan

"Working together for a green, healthy, and welcoming Bramalea SNAP."

1. System of Eco Spaces and Green Infrastructure
2. Safe and Active Transportation Network
3. Healthy Local Food System
4. Home & Building Efficiency and Resilience
5. Institutional & Commercial Collaboration and Greening
6. Community Resilience



System of Eco Spaces and Green Infrastructure

Re-shaping older parks into Eco Spaces, supporting a healthy green infrastructure system extending into backyards, tower properties, and streets.

Recommended Actions:

- Eco Spaces for Fallingdale, Earnscliffe, Eastbourne Parks
- Park improvements in Knightsbridge Park
- Tree planting in parks, boulevards, high-rise properties

Safe and Active Transportation Network

Enhancements to the existing pedestrian and cycling routes, including safe pedestrian crossings and multi-objective road diets improvements in key areas.

Recommended Actions:

- Road diets: Kings Cross Rd, Balmoral Dr, Finchgate Blvd, Eastbourne Dr
- Recreational trail along Clark Blvd
- Pedestrian safety improvements
- Traffic calming measures
- Recreation trail wayfinding
- Bus stop improvements

Healthy Local Food System

A series of interconnected urban agriculture initiatives on private and public land to support local growing, sharing, distribution, and skills building.

Recommended Actions:

- Community gardens: Fallingdale and Earnscliffe Parks, and multi-unit residential buildings
- Container or balcony gardens
- Food literacy education, skills-building workshops

Home and Building Efficiency and Resilience

Integrated initiatives and targeted programming to reduce GHGs and increase overall climate change resilience in residential homes and buildings.

Recommended Actions:

- High density properties: Concept plans and/or recommendations for efficiency, resilience, community co-benefits
- Low/medium density properties: Targeted Home & Property Efficiency and Resilience Initiative to increase uptake of indoor/outdoor retrofits

Institutional & Commercial Collaboration and Greening

Targeted engagement of institutional and commercial properties to collaborate on community-based SNAP projects and encourage greening initiatives on their own properties.

Recommended Action:

- Encouraging energy and water retrofits, parking lot greening, sustainable landscaping, tree planting, green/cool roofs, and solar, geothermal, and district energy

Community Resilience

Facilitating community events and programming to help support neighbourhood connections, capacity-building, emergency preparedness, education, arts and culture.

Recommended Actions:

- Host resident meetings, educational events
- Facilitate events, local markets, pop-up initiatives
- Support community-based projects and crowdsourced funding initiatives
- Continue collaborating with Bramalea Community Network and Councillors

Priority Actions (2021 & 2022)

- Eco Space designs for parks, and channel/floodplain design for re-naturalization of Mimico Creek
- Tower efficiency and resilience initiatives at CAPREIT and Peel Living buildings
- Multi-objective road diets on Kings Cross Rd, Balmoral Dr, Eastbourne Dr
- Research and piloting for targeted Home/Property Resilience and Efficiency Initiative

Next Steps

1. Establish Implementation Team
2. Establish Working Groups for priority project
3. Develop detailed Performance Monitoring Plan
4. Seek external funding opportunities

Contacts

Shannon Logan, Senior Program Manager, Sustainable Neighbourhoods
Toronto and Region Conservation Authority
Shannon.Logan@trca.ca

Stavroula (Stav) Kassaris, Environmental Planner
City of Brampton
Stavroula.Kassaris@brampton.ca

Report
Staff Report
The Corporation of the City of Brampton
2021-02-03

Date: 2021-01-04

Subject: **Bramalea Sustainable Neighbourhood Action Program (SNAP)**

Contact: Stavroula Kassaris, Environmental Planner, Public Works and Engineering, stavroula.kassaris@brampton.ca, 905-874-2083

Report Number: Public Works & Engineering-2021-065

Recommendations:

1. That the report titled **re: Bramalea Sustainable Neighbourhood Action Program (SNAP)** to the Committee of Council meeting of February 3, 2021, be received;

2. That Council endorse the "Bramalea Sustainable Neighbourhood Action Plan" dated November 2020; and

3. That staff be directed to form a Bramalea SNAP Implementation Team in collaboration with the Toronto and Region Conservation Authority and the Region of Peel.

Overview:

- **The Sustainable Neighbourhood Action Program (SNAP) is an innovative, neighbourhood-based approach for advancing urban renewal and climate action in older urban areas.**
- **Bramalea SNAP is comprised of the K, E, and F sections of the broader Bramalea area, and is bounded by Queen Street to the north, Clark Avenue and Balmoral Drive to the south, Central Park and Bramalea Road to the west, and Torbram Road to the east.**
- **This collaborative project is led by the Toronto and Region Conservation Authority (TRCA), in partnership with the City of Brampton and the Region of Peel.**
- **Through meaningful community and stakeholder engagement, a Bramalea Sustainable Neighbourhood Action Plan has been completed, and will drive**

measurable environmental improvements, as well as community health and well-being benefits.

- **The purpose of the report is to seek Council endorsement of the Bramalea Sustainable Neighbourhood Action Plan and direction to establish an Implementation Team in partnership with the TRCA and the Region of Peel.**

Background:

The Sustainable Neighbourhood Action Program (SNAP) is an innovative, collaborative model for sustainable urban renewal and climate action that focuses on the neighbourhood scale. Guided by a customized Action Plan for the selected neighbourhood, the program aligns municipal sustainability priorities with community needs, identifies integrated retrofit solutions, and fosters partnerships between public agencies, community organizations, businesses, and residents. As a result, SNAPs help deliver program efficiencies, empower residents, and showcase innovation. Initially developed by the Toronto and Conservation Authority (TRCA) in 2009, there are over a dozen SNAPs across Ontario, including two in Brampton - County Court SNAP and Fletchers Creek SNAP.

<u>Brampton's Latest SNAP: Bramalea (K, E, and F Sections):</u>

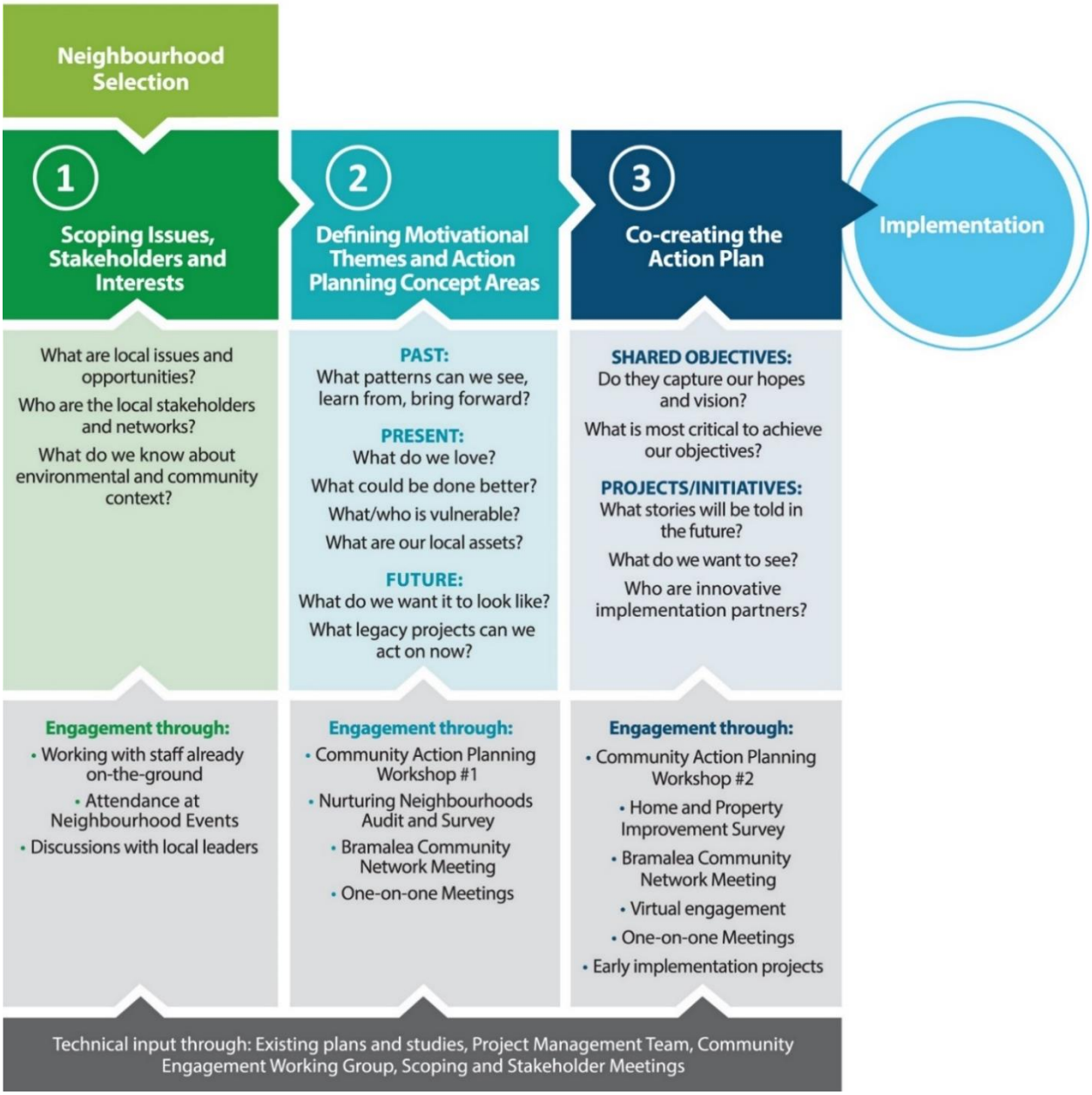
The Bramalea area, specifically the K, E, and F sections, was selected as the latest SNAP through a collaborative process involving the TRCA, City of Brampton, and Region of Peel, which identified multiple shared sustainability, urban renewal, and climate action priorities.

The Bramalea SNAP is bounded by Queen Street to the north, Clark Avenue and Balmoral Drive to the south, Central Park and Bramalea Road to the west, and Torbram Road to the east (refer to Appendix 1). Developed between 1960s and 1980s, this area is home to approximately 17,000 people with a highly diverse demographic, variety of build forms (low, medium, and high density), a range of income levels, and a mix of recent immigrants and longtime residents. The neighbourhood presents several sustainability challenges, such as aging homes and buildings, a channelized creek and degraded natural heritage system, low urban forest canopy cover, and urban heat island vulnerabilities. It is also identified as among the highest residential electricity and natural gas intensity consumption areas in Brampton.

As noted in Figure 1 below, the development of the Bramalea SNAP was comprised of three main phases: Phase 1 - Scoping Issues, Stakeholders and Interests; Phase 2 -

Defining Motivational Themes and Action Planning Concept Areas; and Phase 3 - Co-creating the Action Plan.

Figure 1: Bramalea SNAP development process



This process put an emphasis on the co-creation of an Action Plan with shared outcomes, including measurable environmental improvements as well as community health and well-being benefits. To support this, a streamlined approach was used, which focused on getting to implementation faster and integrating critical factors for success from lessons learned through previous SNAPs. These factors included: building excitement and identifying motivating themes to guide the plan; incorporating meaningful engagement of

local neighbourhood, government/agency staff, and implementation partners; following through on quick-start projects; achieving an adequate baseline understanding; and delivering a conceptual level Action Plan.

Meaningful community and stakeholder engagement has been central throughout the development of the Bramalea SNAP. This included two intensive multi-stakeholder workshops that brought together government agencies, area residents, business owners, local organizations, etc. The first workshop, held in September 2019 in collaboration with the City's Nurturing Neighbourhoods Program, focused on exploring the past, present, and future of Bramalea, and identifying motivating themes and integrated project ideas for the Action Plan. The second workshop took place in February 2020, and concentrated on confirming action plan directions, developing concepts for several potential projects, and exploring motivations and partnerships for implementation. Engagement also included meetings, virtual surveys, as well as early implementation projects, such as tree planting events. In December 2020, Brampton's Environment Advisory Committee endorsed the establishment of the Bramalea SNAP and its Action Plan.

Current Situation:

The Bramalea SNAP Action Plan is complete and ready for implementation. The Action Plan outlines a path for neighbourhood revitalization that integrates local community interests and sustainability objectives under the overarching theme of working together for a green, healthy, and welcoming Bramalea SNAP neighbourhood (refer to Appendix 2).

The Action Plan identifies ten shared action plan objectives based on local sustainability priorities and community interests, which relate to:

- Natural Heritage Systems
- Climate Resilience and Low Carbon
- Safe and Welcoming Public Spaces
- Active Movement
- Health and Well-being
- Stormwater Management
- Materials Management
- Water Efficiency
- Arts, Culture, and Place
- Engagement and Inclusion

The Action Plan is then organized around six themes, each with their own recommended actions:

1. System of Eco Spaces and Green Infrastructure;
2. Safe and Active Transportation Network;
3. Healthy Local Food Systems;
4. Home and Building Efficiency and Resilience;
5. Institutional and Commercial Collaboration and Greening; and

6. Community Resilience.

To measure impact and success over time, long-term neighbourhood-scale target outcomes as well as short-term indicators have been identified, and will be monitored and reported throughout the implementation of the Action Plan. Example indicators include number of trees and shrubs planted, length of cycling infrastructure added, number of community events/workshops offered, and number of fusion or eco-friendly landscape installed. Several of the indicators also align with the *Brampton Grow Green Environmental Master Plan* metrics and targets.

Next Steps:

Following Council's endorsement of the Bramalea SNAP Action Plan, next steps include:

a. Commencing Priority Projects identified for 2021 and 2022, which include:
    i. Eco Space designs for Fallingdale, Earnscliffe, Eastbourne and Edgebrooke Parks and channel and floodplain design for the re-naturalization of Mimico Creek;
    ii. Tower resilience and efficiency initiatives at the CAPREIT and Peel Living multi-unit residential buildings;
    iii. Multi-objective road diets on Kings Cross Road, Balmoral Drive, and Eastbourne Drive;
    iv. Research for and piloting of targeted Home and Property Resilience and Efficiency Initiative;
b. Establishing a Bramalea SNAP Implementation Team comprised of City, TRCA, and Region of Peel staff to help champion, coordinate, deliver, and monitor actions;
c. Developing a detailed Performance Monitoring Plan based on target outputs and outcomes outlined in the Action Plan; and
d. Seeking external funding opportunities to implement City and community-based projects.

Corporate Implications:

Financial Implications:

There are no immediate direct financial implications resulting from the approval of the recommendations of this report.

The Bramalea SNAP Action Plan primarily focuses on leveraging existing and upcoming projects, initiatives, and opportunities to implement its goals. Any additional resources

and funding required to implement actions will be identified and brought forward to Council for approval as part of the annual budget process.

The Bramalea SNAP will also position the City to be successful in achieving external funding opportunities.

Other Implications:

There are no other implications resulting from the approval of the recommendations of this report.

Term of Council Priorities:

The Bramalea SNAP directly fulfills the “Brampton is a City of Opportunity” Term of Council Direction, in particular Council Priority “Create Complete Communities” that includes the Key Initiative to “Expand the Sustainable Neighbourhood Action Plan (SNAP) Program to support urban renewal of existing neighbourhoods”.

Bramalea SNAP also contributes to the Term of Council priorities of “Brampton is a Green City”, “Brampton is a Mosaic”, “Brampton is Healthy and Safe City”, and “Brampton is a Well Run City”.

Conclusion:

The Sustainable Neighbourhood Action Program is a collaborative and comprehensive neighbourhood-level approach for environmental sustainability and climate resilience that brings together municipal priorities with the needs of the local community, while achieving multiple co-benefits. The Bramalea SNAP offers the opportunity to effect positive change in one of Brampton’s most dense and diverse neighbourhoods, and in a manner that will improve efficiencies, draw strong community support, foster partnerships, and help the City achieve its sustainability goals, all of which align with the City’s Term of Council Priorities.

Authored by:

Stavroula Kassaris, Environmental Planner

Reviewed by:

Michael Won, Director, Environment and Development Engineering

Approved by:

Submitted by:

Jayne Holmes, Acting Commissioner, Public Works & Engineering	David Barrick, Chief Administrative Officer

Attachments:

Appendix 1 – Map of Bramalea SNAP
Appendix 2 – Bramalea Sustainable Neighbourhood Action Plan

SNAP Boundary

Watercourse

Park

0 250 500 m

Bramalea SNAP

Toronto and Region Conservation Authority

Bramalea Sustainable Neighbourhood Action Plan

"Working together for a green, healthy and welcoming Bramalea"

November 2020

In collaboration with:

BRAMPTON

Region of Peel
working with you

HCI HEALTHY COMMUNITIES INITIATIVE

ACKNOWLEDGEMENTS

The Bramalea SNAP is a comprehensive action plan for neighbourhood revitalization that integrates local community interests and sustainability objectives under the overarching theme of working together for a green, healthy and welcoming Bramalea. This Bramalea SNAP supports a future where the neighbourhood's public and private spaces integrate nature, community and the arts; healthy, local food is grown and shared; streets are lively and safe for people; and local leadership supports collective action for shared goals, fostering courtesy and respect for people and environment.

Thank you to the Project Management Team who provided guidance and expertise on the development of this Action Plan.

Shannon Logan	Senior Program Manager, Sustainable Neighbourhoods, TRCA
Sonya Meek	Senior Manager, Sustainable Neighbourhoods, TRCA
Jennifer Miles	Coordinator, Community Learning, Education and Training, TRCA
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Toronto and Region Conservation Authority (TRCA) has authored this report on behalf of project partners, the City of Brampton, the Region of Peel and former Healthy Communities Initiative. Action Plan recommendations were identified through a co-creation process involving residents and stakeholders, City, Region, and TRCA staff. **A special thank you to municipal Councillors, local stakeholders, and numerous staff groups that were extensively involved in collaborative engagement activities have helped co-design the recommended initiatives.**

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Appendix

Action Plan Shared Objectives and Descriptions

Summary of Action Plan Recommendations

INTRODUCTION

The Bramalea SNAP is a comprehensive action plan for neighbourhood revitalization that integrates local community interests and sustainability objectives under the overarching theme of working together for a green, healthy and welcoming Bramalea. This Bramalea SNAP supports a future where the neighbourhood's public and private spaces integrate nature, community and the arts; healthy, local food is grown and shared; streets are lively and safe for people; and local leadership supports collective action for shared goals, fostering courtesy and respect for people and environment.

The development of the Bramalea SNAP Action Plan has been led by Toronto and Region Conservation Authority (TRCA), in collaboration with the City of Brampton, the Region of Peel, and the former Healthy Communities Initiative. As one of eight SNAP projects in the Toronto Region, the Bramalea SNAP seeks to demonstrate the implementation of number of shared municipal and agency objectives at the neighbourhood scale. These include: Brampton Grow Green Environmental Master Plan, Community Energy and Emissions Reduction Plan, Eco Parks Strategy and 2040 Vision; TRCA's Etobicoke and Mimico Creek Watershed Plans; and the Region of Peel's Public Health, Climate Change and Water Efficiency strategies.

What is SNAP?

The Sustainable Neighbourhood Action Program (SNAP) of TRCA is a collaborative, neighbourhood-based approach for advancing urban renewal and climate action in older urban areas. SNAPs help municipalities and other community collaborators improve efficiencies, draw strong local support and build innovative partnerships for the implementation of a broad range of initiatives in the public and private realms. More information is available at: trca.ca/conservation/sustainable-neighbourhoods.

THE BRAMALEA NEIGHBOURHOOD

Located in the City of Brampton, Region of Peel, Bramalea is a unique community with its own sense of identity. The Bramalea SNAP Action Plan corresponds with the K, E and F sections of the broader Bramalea area, which is bounded by Queen Street to the north, Clark Avenue and Balmoral Drive to the south, Central Park and Bramalea Road to the west, and Torbram Road to the east. This area is home to 17,000 people with a highly diverse demographic, a range of income levels, and a mix of recent immigrants and longtime residents.

The neighbourhood includes a diversity of housing forms built between 1960 to 1980, ranging from single family dwellings to high-rise towers (images courtesy of Toronto and Region Conservation Authority)

Figure 1: Bramalea SNAP Neighbourhood, City of Brampton, Region of Peel

The neighbourhood is comprised of distinctive sections. The western side includes the Knightsbridge area (K section), which is comprised of twelve high-density multi-unit residential buildings, including two owned by Peel Living, as well as a commercial strip plaza and Knightsbridge Park. It is adjacent to Bramalea City Centre, Region of Peel headquarters, a major transit hub, and Chinguacousy Park. This area drains to Spring Creek and is part of the Etobicoke Creek Watershed. The eastern side of the neighbourhood (E and F sections) is comprised mostly of low-density single dwellings and semi-detached homes, with two multi-unit residential buildings, five elementary schools, half a dozen places of worship, and two commercial plazas. It also contains extensive parkland, which form the headwaters of the main branch of Mimico Creek, within the Mimico Creek Watershed. These include Fallingdale, Earnscliffe, Eastbourne and Edgebrooke Parks, as well as several smaller parkettes. See Table 1 for the Neighbourhood Profile.

Table 1: Neighbourhood Profile (Source: Statistics Canada 2016 Census, Environics 2019)

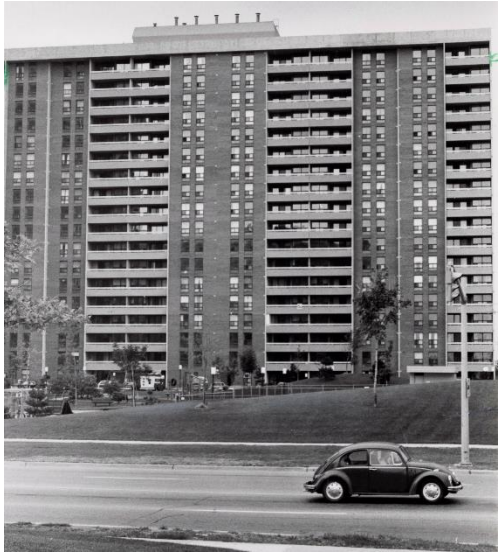
Size	229 ha
Land Use	Low/Medium Density Residential – 40% (92.2 Ha) Recreational – 24% (54.3 Ha) *Parks – 15% (33 ha)* Institutional – 6% (13.3 Ha) Commercial – 5% (12.4 Ha) Roads – 6% (13.2 Ha)
Population	16,991 total - 9,535 in E/F section, 7,456 in K section
Diversity	68% visible minorities in E/F section, 90% in K section 62% immigrants in E/F section, 50% in K section Most common visible minorities - South Asian 38.5%, Black 18.1%, Filipino 4.6%
Housing	5,783 total households - 3,044 in E/F section, 2,739 in K section Own 59% (3,428) and Rent 41% (2,355) Houses 39% (2,253) Single-detached house 13% (754) Semi-Detached house 11% (617) Row House 15% (882) Apartments 61% (3,530) High-rise 53% (3,115) Low-rise 5% (293) Detached Duplex 2% (122)
Median Age	50-52 years
Median Income	$90,746 in E/F section, $58,150 in K section
Employment Rate	60.6% in E/F section, 54% in K section Top 3 occupations: Sales & Service, Trades & Transport, Business & Finance
Transportation	% of residents who travel to work Car (as driver 4,569 or 66%) Car (as passenger 502 or 7%) Public Transit (1,553 or 22%) Walk (220 or 3%) Bicycle (40 or 0.58%)

Bramalea has a diversity of land uses including an extensive parkland system and commercial retail plazas (images courtesy of Toronto and Region Conservation Authority)

Bramalea's Unique History

Bramalea's unique identity stems from it's development history. Planned in the post war period, Bramalea is known as Canada's first "satellite city", developed by one of the country's largest real estate developers of the time, *Bramalea Limited* and sold under the Province's former Home Ownership Made Easy (H.O.M.E) program. Separate from the Town of Brampton, the Master Plan for the 'New Town' of Bramalea envisioned a complete community – "a balanced and integrated urban community… provid[ing] for the well-being and prosperity of a population in access of 50,000 people" (Bramalea Master Plan 1958). The master plan included distinct neighbourhoods, each with their own school and parkland with trail system for safe transportation, a commercial "downtown" for shopping and essential services, and a surrounding ring of employment lands for residents of the community.

Another unique feature that forms a core part of Bramalea's identity is alphabetic theming of each neighbourhood or "section". As each section was developed between 1960 and 1980, it was given a letter which was used in streets, parks and schools (e.g. A section, B section, C section). Children within these boundaries would attend a local school and complete against each other in recreational activities.



Thousands of people moved to the 'new town' of Bramalea during the 1960s and 1970s, established roots and a strong connection to their section (Images from Toronto Star Photograph Archive, Courtesy of Toronto Public Library)

NEIGHBOURHOODS SELECTION AND KEY DRIVERS

The Bramalea neighbourhood was selected based on a screening process that identified the alignment of multiple urban renewal and climate action priorities of the City, Region, and TRCA. A summary of these key priorities, as well as motivating community interests, formed the basis of the SNAP Action Plan and include:

- **Neighbourhood well-being –** identified as Low and Medium-Low on the Region of Peel Neighbourhood Information Tool Well-being Index, there is opportunity to integrate capacity building and socio-economic objectives into sustainability projects and achieve co-benefits in the community.

- **Climate vulnerability –** identified as High on the Peel Heat Vulnerability Index as well having a high Natural System Vulnerability, there is opportunity to address heat stress and other vulnerabilities through integrated green infrastructure, tree planting, restoration, and other adaptation measures.
- **Energy intensity –** identified as among the highest residential electricity and natural gas intensity consumption areas in the City's Community Energy and Emissions Reduction Plan, there is opportunity to pilot targeted strategies to reduce Greenhouse Gas (GHG) emissions and support the City's new energy efficiency, GHG reduction, and building retrofit targets.
- **Chronic disease prevention –** identified as an area with high Diabetes prevalence, where one in five adults have Diabetes (Ontario Diabetes Database, 2015), there is opportunity for upstream disease prevention through built environment retrofits for active living and healthy lifestyle.
- **Eco Park and channel naturalization** – with TRCA's channel naturalization project and several City playground renewal projects planned, there is opportunity to develop integrated Eco Space designs in parks supported by nearby private lands. This area is classified as a high priority catchment within TRCA's Integrated Restoration Prioritization tool, indicating high impairment across aquatic and terrestrial habitats. Work in this area is important to improve the quality and quantity of natural cover and improve immediate aquatic conditions and downstream conditions.
- **Welcoming, green public spaces** – there is opportunity to renew public spaces to serve multiple uses for all life stages, and to animate them with nature, beauty, public art, and music.
- **Healthy, local food** – there is significant interest in supporting food security and healthy eating through urban agriculture in all forms and helping nourish and care for vulnerable community members.
- **Safe streets and pathways** – to support active transportation and safety for all, there is a strong interest in improved pedestrian experience, cycling opportunities, and reduced traffic impacts and safety concerns
- **Local leadership and collaboration** – there are interests in local decision making, collective action for shared goals, and fostering courtesy and respect for people and environment.

Bramalea is also located within TRCA's Urban Activity Zone, an area for targeted environmental education based on socio-economic factors. There are opportunities for improved stormwater management to support flood mitigation measures in Spring Creek and improved headwater conditions in Mimico Creek. There are also potential collaboration opportunities with the adjacent Bramalea City Centre, identified in the City's Vision 2040 for future long-term redevelopment.

Spotlight: Health and the Built Environment

With chronic disease prevention and improved neighbourhood well-being as key interests in this neighbourhood, the Action Plan addresses health, social, and environmental priorities through integrated built environment projects. The built environment can have a significant impact on human health by either supporting or discouraging healthy behaviours and social connection between residents in the community. Peel Public Health's strategic priorities of enabling active living and healthy eating, promoting mental well-being, and reducing health-related impacts of climate change can all be supported through creation of a healthy built environment.

"Citizens are largely working against an environment where sedentary behavior is the default."

-- Dr. Lawrence Loh, Region of Peel Medical Officer of Health

Increasing safety and connectivity in the built form can increase walkability, encourage other forms of active transportation, and help lower greenhouse gas emissions. Daily physical activity from active transportation is a powerful protective factor that can reduce the onset of chronic diseases like type 2 diabetes. Integrating public transit stops, wide sidewalks with street furniture, trees for shade, as well as traffic calming measures to reduce vehicle speeds through protected intersections, crossings, and roundabouts can make walking and cycling a safe, convenient, and attractive option. An attractive built form encourages people to be outdoors and supports social interactions and connectedness. Together, transit-oriented and pedestrian-friendly neighbourhoods improve community safety, prevent injuries, and support residents to age in place.

Growing local food through community and balcony gardens can provide physical, social, and mental health benefits and increases fruit and vegetables consumption. Improved access to nature also supports physical activity opportunities and mental well-being.

An example of residents of all ages participating in physical activity and enjoying time outdoors

SHARED ACTION PLAN OBJECTIVES

A set of ten shared action plan objectives have been identified based on local sustainability priorities and community interests, and have guided the development of the Bramalea SNAP Action Plan. Each objective adds its own unique lens, and together, reflect a shared set of comprehensive driving objectives. Detailed objective descriptions are included in Appendix 1.

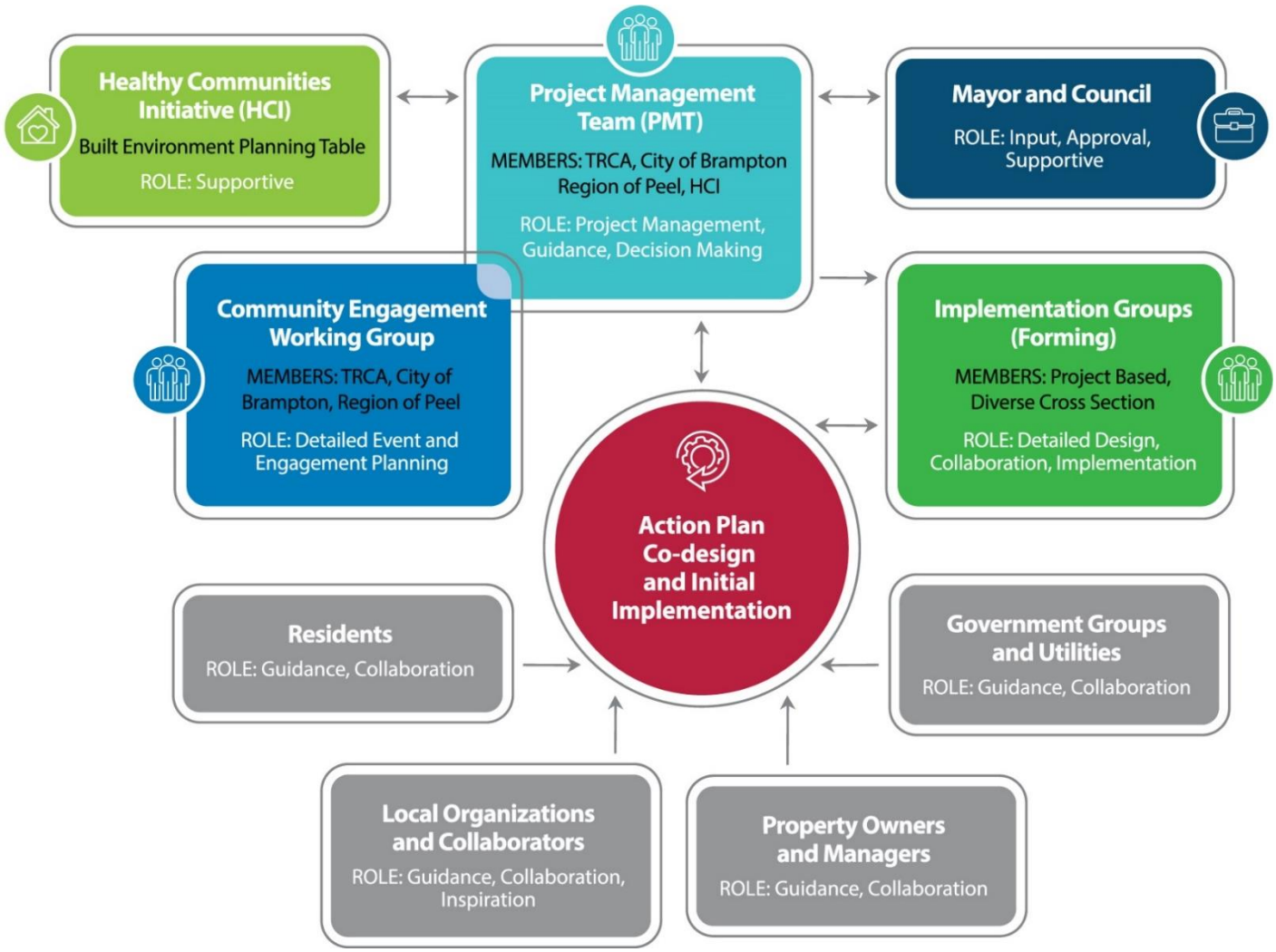
Figure 2: Bramalea SNAP Action Plan Objectives

THE SNAP GOVERNANCE MODEL

The Bramalea SNAP was initiated and developed using a highly collaborative approach to foster co-design and co-ownership of the Action Plan among key stakeholders and the community. Driven by a cross-section of priorities, the SNAP governance model allows for the identification, exploration, and implementation of shared solutions.

The project was guided by a Project Management Team comprised of staff from TRCA, City of Brampton, Region of Peel, supporting cross-departmental coordination, as well engagement of diverse local stakeholders in co-design and initial implementation. Figure 3 illustrates the project management and governance structure.

Figure 3 – Project Management and Governance Structure



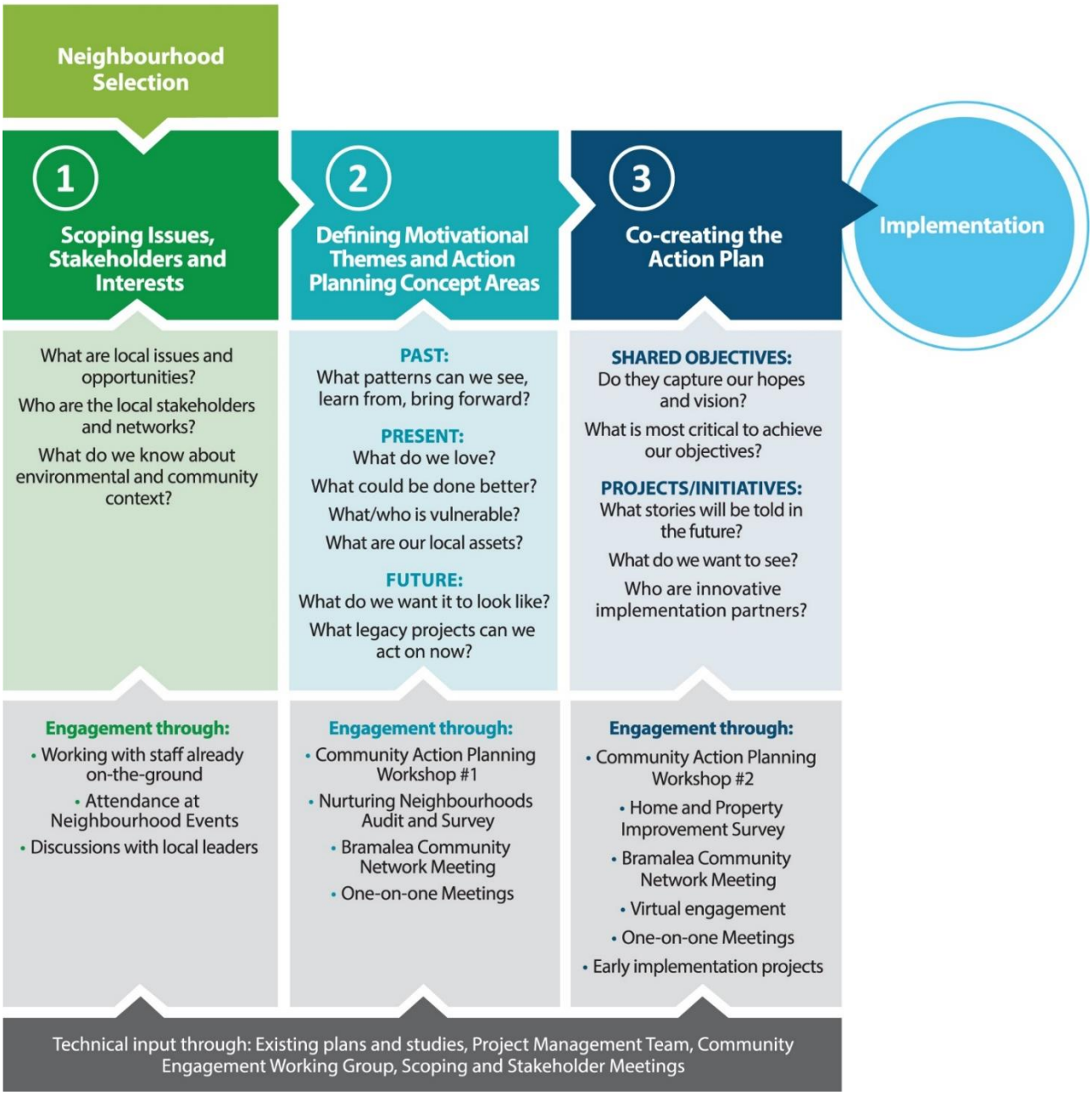
Spotlight on Local Leaders: The Bramalea Community Network

The Bramalea SNAP has been developed in close collaboration with the Bramalea Community Network (BCN), who have offered guidance on emerging directions, and have helped promote community events and local input to the Plan. The BCN, formally called Knightsbridge Network, was created in 2008 by a group of concerned community partners with guidance from the Region of Peel's community partnerships division. The BCN consists of parents, service organizations, municipalities, and schools. The purpose of the Network is to collectively identify needs, educate about available services, support safety, and strengthen sustainable community well-being. Since 2017, TRCA has been part of the BCN by providing support and program opportunities to those who serve vulnerable groups. Working closely with the BCN has strengthened TRCA strong local partnership, and sense of accountability and trust from local community groups.

THE ACTION PLAN CO-DESIGN PROCESS

The planning process put an emphasis on co-creation of an Action Plan with shared outcomes, including measurable environmental improvements as well as community health and well-being benefits. To support this, a streamlined approach was used, putting a focus on getting to implementation faster and integrating critical factors for success from lessons learned through previous SNAPs. These factors included: building excitement and identifying motivating themes to guide the plan; incorporating meaningful engagement of local neighbourhood, government and agency staff and implementation partners; follow through on quick-start projects; achievement of adequate baseline understanding; and delivering a conceptual level Action Plan. The process was comprised of three main phases illustrated in Figure 4.

Figure 4 – Action Plan Co-Design Process



Meaningful community and stakeholder engagement have been central to the action planning co-design process. The engagement undertaken aimed to understand local top of mind issues and motivating interests, identify shared plan objectives and projects, invite involvement in early on-the-ground projects, and build longer term relationships and capacity building to help support the action plan implementation. A selection of the collaborative and creative activities used during engagement are highlighted below. Workshop summaries and detailed engagement results are available under separate cover.

Throughout the action planning process, community members expressed strong interest in involving and honoring indigenous groups in all project plans, particularly for natural heritage and parks initiatives (e.g. choice of plants that could be used for naturalization efforts). Indigenous perspectives and approaches have been and will continue to be sought and integrated into plan and project designs.

Nurturing Neighbourhoods and Bramalea SNAP walking audit and mapping exercise at one of the community action planning workshops (Images courtesy of Toronto and Region Conservation Authority)

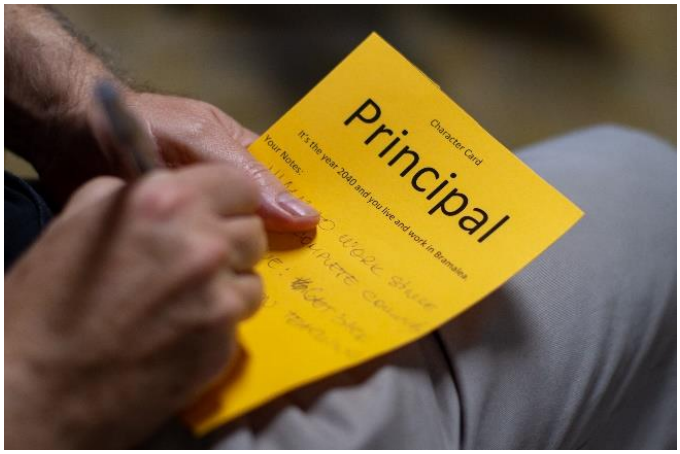
Co-Design Process – Highlights

Two large multi-stakeholder workshops designed to bring all stakeholders together to co-design a shared plan were critical parts of the process. The first workshop focused on exploring the past, present, and future of Bramalea, and identifying motivating themes and integrated project ideas. The second workshop confirmed emerging directions, offered inspirational speakers, and supported co-design of principles, features, and partnerships for several initiatives. Highlights of the creative co-design are below:

- **Past, Present, Future approach** – Designed to encourage shared reflection and future-oriented visioning, the workshops facilitated creative discussions to invite perspectives and ideas on neighbourhood past, present, and future to help guide action planning.
- **2040 Cover Story –** The SNAP team piloted a new activity to inspire participants to imagine what the future of Bramalea could look like in the year 2040 through top news stories and news makers, and to use character role playing to consider different viewpoints. Outcomes helped reveal local values, hopes and dreams for the future, as well as perspectives that might not have otherwise been considered.
- **Rapid Co-design discussions –** A broad cross section of the community and government staff were engaged in future-oriented discussions to support co-designed initiatives. Design staff assisted in sketching ideas and programs in more detail and identified potential implementation partners to help bring them to life.

"Every step of the plan was built with sustainability in mind -- not only environmental sustainability, although that is a big part of it -- but sustainability in terms of engaging the residents of this and surrounding areas in such a way that commitment to the values and goals of this program will endure through time."

-- Local resident



Role playing exercise and parks co-design activity at one of the community action planning workshops
(Images courtesy of Toronto and Region Conservation Authority)

Nurturing Neighbourhoods Program

The City of Brampton's Nurturing Neighbourhoods Program is an innovative initiative launched in 2019 as part of the implementation of the Brampton 2040 Vision. It aims to connect residents with available resources, improve civic engagement, and empower residents to play an active role in enhancing their neighbourhood. Each Complete Neighbourhood Audit undertaken as part of this program includes an in-person or virtual neighbourhood walk, a survey, and follow-up mapping activity. Given the complementary nature of this program and the SNAP, the teams collaborated to leverage a Nurturing Neighbourhoods audit planned for Bramalea. Working together as part of the first multi-stakeholder workshop, the team delivered three concurrent neighbourhood walks, reflective mapping activity, and facilitated community discussions.

Table 2 – Who has been involved

City of Brampton
Region of Peel
Toronto and Region Conservation Authority
Central West Local Health Integration Network (LHIN)
Councillors and Mayor
The Indigenous Network
Residents
Bramalea Community Network
Multi-Unit residential building owners and managers
Schools
Community Health Nurses
Ecosource
SummerLunch+
Bramalea Community Health Centre
Boys and Girls Club of Peel
YMCA
Peel Police
All People's Church
Bramalea Baptist Church
Brampton Library
Association for Canadian Educational Resources (ACER)
Building up our Neighbourhood
Algoma University
Peel Art Gallery Museum & Archives (PAMA)
Chinguacousy Garden Club and Horticultural Society

THE BRAMALEA SNAP ACTION PLAN

The Bramalea SNAP is a comprehensive action plan for neighbourhood revitalization that integrates local community interests and sustainability objectives under the overarching theme of working together for a green, healthy and welcoming Bramalea. This Bramalea SNAP supports a future where the neighbourhood's public and private spaces integrate nature, community and the arts; healthy, local food is grown and shared; streets are lively and safe for active people; and local leadership supports collective action for shared goals, fostering courtesy and respect for people and environment.

As illustrated in Figure 5 on the following page, the Action Plan is made up of six themes, each with their own integrated initiatives:

1. System of Eco Spaces and Green Infrastructure
    - Fallingdale, Earnscliffe, Eastbourne, Edgebrooke and Knightsbridge Parks as Eco Spaces
2. Safe and Active Transportation Network
    - Multi-objective Road Diets and Pedestrian Realm Improvements
3. Healthy Local Food System
4. Home and Building Efficiency and Resilience
    - Tower Resilience and Efficiency Initiative
    - Home and Property Resilience and Efficiency Initiative
5. Institutional and Commercial Collaboration and Greening
6. Community Resilience

This report represents a high-level summary of the recommended initiatives, and outlines the context, locally inspired objectives and recommended actions identified during the action planning process. The proposed projects will be scoped at a more detailed implementation planning level and will involve further engagement with the community and local implementation groups. A summary of all recommended actions across the themes is included in Appendix 2.

Supporting COVID-19 Recovery through a greener, healthier neighbourhood

The global COVID-19 pandemic has had far reaching impacts. The need to physically distance and even isolate at times underscores the value of local green space in helping to provide physical and mental relief and the importance of neighbourhood connections. The SNAP Action Plan supports neighbourhood health and resilience, and together with City, Region, and TRCA, seeks to support COVID-19 recovery through:

- Supporting physical and mental health through increased opportunity for active lifestyle (more active transportation infrastructure, community gardens) and access to fresh produce (backyard/balcony gardens, sharing programs)
- Increasing local high-quality greenspace (Eco Spaces, greener streets) and opportunities for more nature at home (Residential and Tower Resilience programs)
- Providing alternative outdoor transportation options through a safe and active transportation Network (better walking and cycling trails, safer crossings)
- Increasing opportunities for improved neighbourhood connections and relationships, check-ins, extra help

A CLOSER LOOK AT THE ACTION PLAN

Figure 5: Action Plan Concept Map

LEGEND*

- System of Ecoparks & Green Infrastructure
- Home/Property Resilience & Efficiency
- Tower Resilience & Efficiency
- Institutional, Commercial Collaboration & Greening
- Deep Energy Retrofit

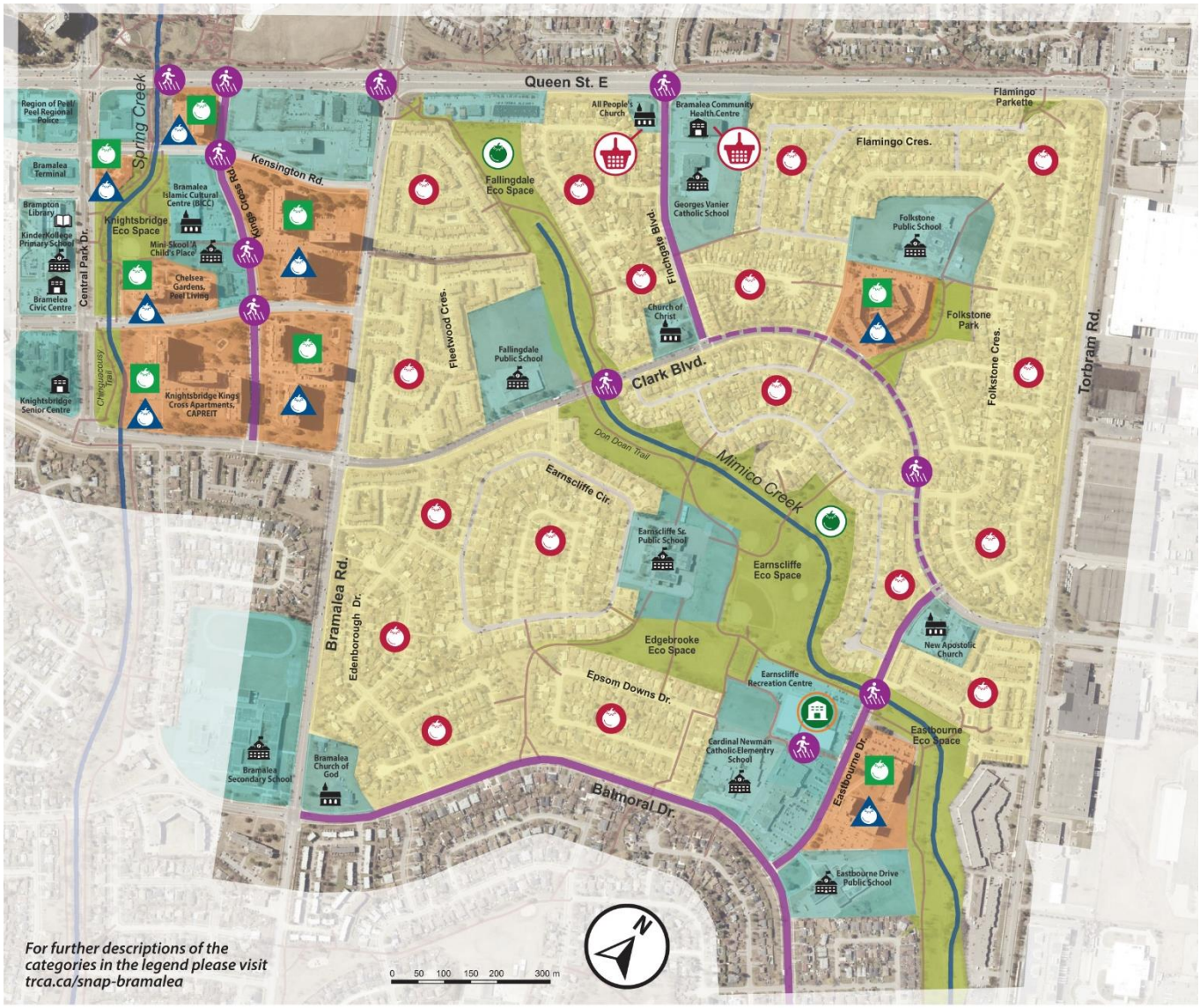
Safe & Active Transportation Network

- New Multi-purpose Road Diet
- New Multi-Purpose Trail
- New/Enhanced Pedestrian Crossing/Connectivity

Healthy Local Food System

- Local Food Distribution Hub
- Balcony Garden
- Backyard Garden
- Community Garden on Private Land
- Community Garden on Public Land

- Water Course
- Existing Trail
- Library
- Places of Worship
- School
- Community Centre



In collaboration with The City of Brampton, Region of Peel and the Healthy Communities Initiative (HCI)

* *Exact locations may vary and are subject to further analysis and refinement during the implementation process.*

1.0 SYSTEM OF ECO SPACES AND GREEN INFRASTRUCTURE

Applying Brampton Eco Park principles and philosophy, the action plan recommends a series of public space revitalization projects, re-shaping older parks into Eco Spaces. Through such park retrofits and the implementation of other Action Plan projects, a healthy green infrastructure system will extend from within parks into backyards, tower properties, and streets.

Fallingdale, Earnscliffe, Eastbourne and Edgebrooke Parks as Eco Spaces

Residents emphasized their passion and personal connection to local parks throughout the action planning process - these green spaces are local treasures and significant community assets. The re-imagining of Fallingdale, Earnscliffe, Eastbourne and Edgebrooke Parks through Eco Space design is a key recommendation of the Bramalea SNAP Action Plan. Located in the E and F sections of the neighbourhood, these adjacent parks form an extensive linear open space system over 30 ha in size with Mimico Creek originating at the north end and forming a central spine and connecting feature throughout all the parks.

These adjacent parks form an extensive linear open space system with Mimico Creek as a central feature (Images courtesy of Toronto and Region Conservation Authority)

What are Eco Spaces?

Brampton Eco Park is a network of Eco Spaces, including parks, natural heritage features, and streetscapes. Eco Spaces can be found in natural and urban areas across Brampton, and reflect the needs of the local natural environment and Brampton community. They strengthen the coexistence of people and the environment by: enhancing and maintaining healthy natural systems and processes, integrating opportunities for meaningful social and environmental interactions and experiences, and actively striving to incorporate seven guiding Eco Park principles:

1. Maximize ecological value
2. Make nature visible
3. Integrate with the surrounding community
4. Reflect local identity
5. Provide opportunities for social services
6. Design with nature
7. Support innovation

Source: Brampton Eco Park Strategy (2019)

Developed in the late 1960s early 1970s and consistent with the design approach of the time, these parks have extensive passive grassed areas with a trail network, as well as many amenities, some ready for updating. There are three older playgrounds, new outdoor fitness circuit equipment, six baseball diamonds, three tennis courts, and multi-purpose fields. Earnscliffe Recreation Centre is a central feature, as are several adjacent elementary schools and places of worship. The park system is surrounded by low density residential homes, a commercial plaza, two multi-unit residential buildings, and is bisected by local collector roads Clark Blvd and Eastbourne Dr. The existing Mimico Creek has been channelized with concrete.

Eco Space design for these parks will integrate several City and TRCA projects. Most notably, the restoration of Mimico Creek led by TRCA, which will include removal of the degraded concrete-lined channel and re-naturalization of the creek and floodplain, resulting in improvements to fish and wildlife habitat, water quality and flood conveyance. Other nearby projects the City is exploring include updates to the playgrounds, a potential energy retrofit of Earnscliffe Recreation Centre, and new community gardens in Earnscliffe and Fallingdale. Eco Space design will also include a range of potential park features identified by community members and government staff, from small to large interventions, City-led to community-based, and natural to more active uses.

In addition to the seven guiding Eco Park principles, several locally inspired objectives were identified during community action planning workshops and other local engagement. These complement the Eco Park principles and will also be incorporated into the park design and projects.

Example of a nature-based public art installation suggested by community members (Image courtesy of City of Brampton)

Locally Inspired Objectives for Fallingdale, Earnscliffe, Eastbourne and Edgebrooke Parks:

- Create safe, clean and welcoming spaces
- Support thriving natural systems
- Support healthy active living, for all ages, year round
- Be engaging, attractive, and a draw for residents
- Showcase local assets and unique history
- Be climate friendly, resilient, minimize greenhouse gases
- Support community through local employment and skills training, and community-based projects

Community members and government staff identified a range of potential park features, from small to large interventions, City-led to community-based, and natural to more active uses. There is opportunity for more trees, natural meadow habitat, outdoor classrooms and demonstration areas. Walking destinations could include an art walk, labyrinth, amphitheater supported by interpretive signage, improved wayfinding, additional seating and shade, and improved lighting. Gathering areas could include community gardens and cooking spaces, weekend event space and picnicking, supported by more waste and recycling receptacles, anti-litter campaigns, and washrooms. The parks could integrate natural playgrounds, adult equipment/outdoor fitness, a skating rink or path, and more multi-use trails.

Recommended Actions:

1.1 Develop an Eco Space parks design for the Fallingdale, Earnscliffe, Eastbourne and Edgebrooke Park system, integrating all planned projects and identified features, guided by the Eco Park principles and locally inspired objectives.

1.2 Initiate channel and floodplain design for the re-naturalization of the Mimico Creek, a key component of the Eco Space design.

Knightsbridge Park as Eco Space

The revitalization of Knightsbridge Park through an Eco Space lens is another key recommendation of the Bramalea SNAP Action Plan. Located within the K section, Knightsbridge Park is highly cherished, representing the only public park space in the neighbourhood that can be accessed without crossing major regional roads. This park is 4 ha in size, contains a playground, two tennis courts, a baseball diamond, and trail system that includes portions of the Chinguacousy Trail. The park is linear in shape and centers around the heavily channelized Spring Creek, part of Etobicoke Creek Watershed. High water volumes in the creek and flooding occasionally impact low-lying areas of the neighbourhood, including the trails that follow the creek through underpasses below Kensington Rd and Knightsbridge Rd that bisect the park. Surrounding land uses include high density residential multi-unit buildings and a commercial plaza, and Central Park Blvd, the Knightsbridge Seniors Centre, and the Brampton Library Chinguacousy Branch.

Knightsbridge Park contains a number of sports fields, a playground, the Chinguacousy Trail and Spring Creek
(Images courtesy of Toronto and Region Conservation Authority)

With 7,500 people living in nearby multi-residential buildings and limited neighbourhood park space, Knightsbridge Park is well-used, by many as an alternative to a back yard.

In addition to the seven guiding Eco Park principles, several locally inspired objectives were identified during community action planning workshops and other local engagement. These complement the Eco Park principles and will also be incorporated into future park projects.

Locally Inspired Objectives for Knightsbridge Park:

- Safe, welcoming, clean, source of pride
- Hub for community activities, events
- Better access, physical connectivity
- Supporting education, healthy active living
- Balance of nature and community uses
- Supporting community: hub for residents, community-based projects, local employment and skills training

Eco Space enhancements identified by the community and government staff include small interventions and larger scale projects. Overall, there is a strong interest from the public to have more animated community space, including a multi-use event space or amphitheater for public art, music and celebrations, and a

community garden. To support physical activity for everyone, there were suggestions for an expanded playground potentially with natural elements, adult equipment and outdoor fitness area, and improved pathway connections to Chinguacousy Park in the north and Chelsea Gardens towers in the east. Safety was also a priority, with suggestions for improved lighting and visibility, as well as supportive safety workshops. Other desired amenities range from additional seating and shade, picnic tables, wayfinding, washrooms, to outdoor games, classroom, library and study space. There was strong interest in integrating more trees and gardens supporting biodiversity and habitat, a clean and healthy creek, a greener parking lot, waste and recycling receptacles, and community clean ups. Community members envisioned a modern park with free WiFi and energy efficient lighting.

Example of animated public space with outdoor games suggested by community members

Recommended Actions:

1.3 Review and address smaller scale enhancements including improved lighting and visibility, surface replacements, additional seating and shade, waste and recycling receptacles.
1.4 Review and improve pathway connections to Chinguacousy Park in the north and Chelsea Gardens towers in the east.
1.5 Work with community groups to plant more trees and gardens, host supportive safety workshops, anti-litter campaigns, community clean ups, and community-based projects to create more animated spaces.
1.6 Integrate larger scale enhancements into future park renewal plans including playground and fitness stations, wayfinding, green parking lot and washrooms.

2.0 SAFE AND ACTIVE TRANSPORTATION NETWORK

The SNAP Action Plan recommends a series of enhancements to the existing pedestrian and cycling routes, including safe pedestrian crossings and multi-objective road diets improvements in key areas. Safe trails, reduced traffic speeds, and increased pedestrian and cycling safety along major roads and intersections are of significant concern to many community members in Bramalea. Improving the pedestrian and cycling experience may also encourage people to choose active forms of transportation and support better

Peel Boys and Girls Club camp participants illustrate ideas for Kings Cross Road improvements in Knightsbridge (Image courtesy of Toronto and Region Conservation Authority)

health outcomes. The community also shared many ideas for re-imagining streets as more animated, inviting public spaces.

Multi-objective Road Diets and Pedestrian Realm Improvements

This effort will be primarily led by City of Brampton and Region of Peel as part of their efforts to increase active transportation and community safety, and ongoing road enhancements and connectivity. The City is interested in bringing a "Road Diet" approach to key roads, described further in the box below.

What is a Road Diet?

A road diet usually involves narrowing or eliminating travel lanes to calm traffic and increase the safety of all road users. It could also help discourage through (non-local) traffic on local roads. It's about reclaiming street space for other roadway users. Examples of what a road diet can include are as follows:

- Widening sidewalks and adding bike lanes
- Reducing the number and width of automobile lanes
- Adding vegetation like street trees or planters
- Making the sidewalk-to-sidewalk distance in crosswalks shorter
- Using bulb-outs/bump-outs or curb extensions
- Painting crosswalks to make them more noticeable
- Creating "parkettes" using former road space

This work will involve further community engagement and be informed by the following locally inspired objectives identified during action planning workshops and extensive local engagement.

Locally Inspired Objectives for Multi-objective Road Diets and Pedestrian Realm Improvements:

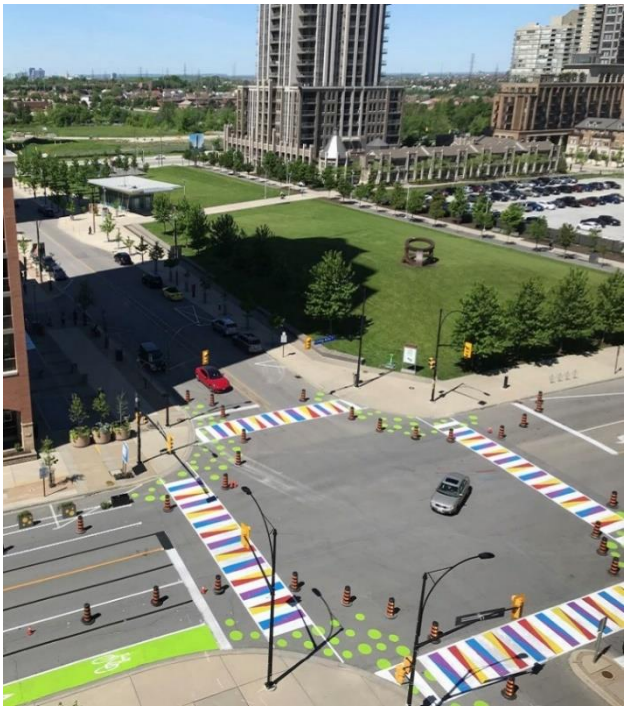
- Safety for pedestrians, cyclists
- Traffic calming
- Inclusive, welcoming
- Animation, public art, community
- Supporting active transportation
- Extending Eco Park and green infrastructure into the neighbourhood

Recommended Actions:

2.1 Create multi-objective Road Diets on Kings Cross Road, Balmoral Drive, Finchgate Boulevard, Eastbourne Drive.

2.2 Create a new recreational trail to connect pedestrians and cyclists along Clark Boulevard from Finchgate Boulevard to Eastbourne Drive.

2.3 A series of pedestrian safety improvements at key road crossing locations, and new pedestrian crossings in some locations.



Example of a lively road transformation initiative on Living Arts Drive in Mississauga (Image courtesy of City of Mississauga)

2.4 Install traffic calming measures (e.g. improved speed signs, better school drop-off zones).
2.5 Make recreational trail improvements in parks (e.g. sign and wayfinding, better connections).
2.6 Create innovative and sustainable bus stop improvements (e.g. natural/pollinator garden roofs).

3. 0 HEALTHY LOCAL FOOD SYSTEM

Growing healthy, local food through various forms of urban agriculture is a key interest in this community. At the same time, food security and higher than average levels of type 2 diabetes are of concern in some areas of the neighbourhood. The area also includes several local leaders and partners already working together to support food access for vulnerable community members, including local Food Hub's run by the All People's Church, the Bramalea Baptist Church, the Bramalea Community Health Centre Food Program, and Families of Virtue breakfast programming. There is also early planning underway for new community gardens on public and private land.

Locally Inspired Objectives for a Healthy Local Food System:

- A broad range of urban agriculture activities in backyards to towers
- Support access to affordable healthy food for vulnerable community members
- Support community building, social cohesion and local economic development
- Honour the past agricultural and indigenous history
- Increase biodiversity and local greening

"Implementation of backyard and balcony gardens is a great idea. Not only does it allow for the small neighbourhood/streets to interact with each other but it can also provide a days worth of dinner for a family."

-- Local resident

The Action Plan recommends a series of interconnected urban agriculture initiatives on private and public land to support local growing, sharing, distribution and skills building. The Plan will support neighbourhood-scale connections and programming between these initiative on public and private land, and between homes and towers. All of this work will involve local partners already on the ground as well as potential new implementation partners.

Example of Community Gardens facilitated by the City on public lands (Image courtesy of City of Brampton)

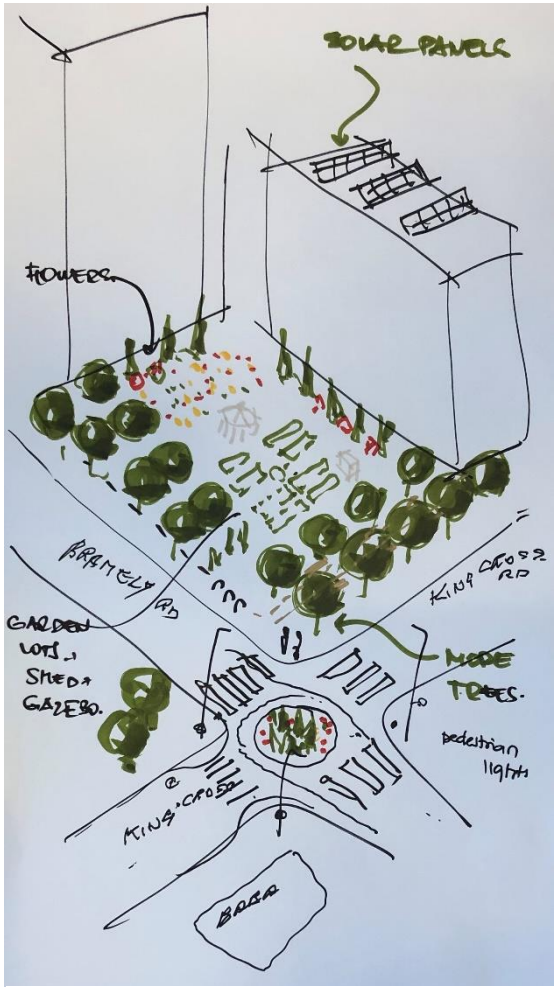
Growing produce at the San Romanoway Tower Gardens in Black Creek SNAP, Toronto (Image courtesy of Toronto and Region Conservation Authority)

Recommended Actions:

3.1 Create new community gardens in Earnscliffe Park and Fallingdale Park.
3.2 Create new community gardens at multi-unit residential buildings, starting with CAPREIT and Peel Living owned buildings.
3.3 Initiate container or balcony gardens programming at multi-unit residential buildings.
3.4 Increase backyard gardening at low and medium density homes, exploring harvest sharing components.
3.5 Host supportive education and skills-building workshops (e.g. nutrition, harvesting, preparation, preservation, etc.)

4.0 HOME AND BUILDING EFFICIENCY AND RESILIENCE

Second only to transportation, the residential sector represents a significant proportion of Brampton's energy use (26%), greenhouse gas (GHG) emissions (21%) and water consumption (73%)[1]. With many older residential homes and buildings built during the 1960s through 1980s, Bramalea is within an area identified as among the highest residential energy and water use intensity in Brampton. There are also pockets of the Bramalea area with very low tree canopy cover and with older trees that will need succession plantings. Lower tree canopy cover, combined with urban heat and other local vulnerabilities, make pockets of this neighbourhood particularly vulnerable to climate change impacts as identified by Peel Heat Vulnerability Index.



City of Brampton design staff Illustration from the community action planning workshop (Image courtesy of Toronto and Region Conservation Authority)

The Action Plan recommends integrated initiatives and targeted programming to increase overall climate change resilience and reduce GHG emissions in all residential homes and buildings, from single detached dwellings to the high-rise towers. As outlined below, these initiatives focus on indoor and outdoor retrofits and revitalization projects to increase uptake in tree planting and sustainable landscapes, food growing and sharing, active living, energy and water conservation and efficiency, and supportive programming. This could also extend to shared systems between buildings across the neighbourhood at a district scale.

Tower Resilience and Efficiency Initiative

With fourteen residential towers and one townhouse complex located in the neighbourhood, a majority of households in this area of Bramalea are apartments in multi-unit residential buildings (MURBs). Fifty-three percent or 3,115 households are in high-rise and 5% or 293 are in low-rise building. The K-Section alone contains a cluster of twelve towers within four blocks, built during the post-war tower development boom of the 1960s and 1970s. The higher density areas have low tree

[1] City of Brampton Community Energy and Emissions Reduction Plan, 2020

canopy cover and area identified as vulnerable to urban heat. Many of these towers are home to the community's most vulnerable populations, including low-income, recent immigrants, and seniors, and a higher than average percent suffers from type 2 diabetes in this area.

There is a tremendous amount of interest and opportunity in working with tower owners and management to undertake revitalization work that increases resilience and energy and water efficiency, but also help address some of the local health and well-being priorities and achieves community benefits within the tower community. This work will involve further engagement of local stakeholders and be informed by the following locally inspired objectives identified during action planning workshops and extensive local engagement.

Locally Inspired Objectives for Tower Resilience and Efficiency Initiative:

- Growing, preparing food
- Active, healthy living
- More trees, green infrastructure
- Connections between towers, shared uses
- Eco-construction methods
- Climate resilience and building efficiency
- Community building, local employment, skills training

Co-design workshops, community surveys, and engagement of tower owners have identified a range of possible features across tower properties. They include greening activities such as tree planting, perennial flowers and pollinator gardens, rainwater capture and use, parking lot greening, solar panels, and energy efficient lighting. Urban agriculture activities were a significant interest to many community members, including community gardens, container or balcony gardens and planter boxes, roof top gardens. Desired outdoor amenities include fitness equipment for all ages, natural playground components, a bike hub, and gathering spaces such as outdoor amphitheater, seating and tables, shade structures, and outdoor BBQ space. Suggested community programming included on-site events, community boards, and children's programs. There was also strong interest in safe pedestrian crossings outside the buildings and making stronger connections to nearby park space.

Community allotment gardens and mural installation at San Romanoway towers at Black Creek SNAP in Toronto
(Images courtesy of Toronto and Region Conservation Authority)

This initiative would also include building emergency preparedness measures, helping increase resilience to climate-related vulnerabilities like flooding and heat waves. Potential measures identified from other related tower initiatives include tenant communications, emergency plans, elevator safety, back-up generators and alternative energy sources.

Recommended Actions:

4.1 Work with interested tower property owners to develop site concept plans and/or recommendations to that support indoor and outdoor resilience and efficiency as well as community co-benefits.
4.2 Facilitate implementation of identified projects through fundraising and partnership brokering with public, private and non-government organizations.
4.3 Facilitate neighbourhood-wide virtual events to showcase projects and share lessons among tower owners.

Quick Start Projects – Revitalization at five towers is underway!

Early implementation and quick start projects have been integrated into the action planning process to build community interest and excitement, and inform the plan directions. TRCA has already begun working with tower owners Peel Living and CAPREIT and other local collaborators to co-develop tower revitalization concept plans and facilitate implementation partnerships for five buildings within the SNAP neighbourhood. This work brings forward the SNAP Action Plan objectives based on community and government engagement, and will involve close collaboration with building tenants and local implementation partners. Early projects completed include a series of tree planting events and tenant stewardship with ACER's Project Crossroads. Community gardens and educational programming with Ecosource are also being explored.

One of the Tower Concept Plans developed in parallel to the SNAP planning process, and one of the community tree planting days in collaboration with ACER's Project Crossroads and City of Brampton (Images courtesy of Toronto and Region Conservation Authority)

"At CAPREIT we pride ourselves on our ability to improve the resident experience. The Bramalea SNAP initiative will allow us to continue to build on the resident experience for our building communities and help develop a lasting resident and community relationship and a sense of pride. We find it important to giveback to our community and our residents, as it allows us the opportunity to create memorable experience."

-- CAPREIT

Home and Property Resilience and Efficiency Initiative

With high residential energy intensity in the area and close to 2,300 homes of low and medium density exceeding 50 years in age, there is a need and opportunity to encourage home and property retrofits that reduce risks associated with climate change impacts and bring down overall GHG emissions.

The SNAP Action Plan recommends a Home and Property Resilience and Efficiency Initiative targeting existing low-rise properties in the E and F Sections. The initiative will be shaped by locally inspired objectives for indoor and outdoor improvements identified during the co-design workshops and surveys. Tailored marketing and the program offering will be informed by key homeowner interests, values and motivation as it relates to home improvement, as well as identified barriers to action and desired supports.

Locally Inspired Objectives for the Home and Property Resilience and Efficiency Initiative:

- Enhance energy efficiency through a range of home retrofits
- Increase local renewable energy production including solar PV and thermal
- Increase water conservation through eco-friendly or Fusion Landscapes and efficient fixtures
- Increase green infrastructure including raingardens or other Low Impact Development (LID)
- Enhanced urban forest through replacement and planting of diverse tree and shrub species
- Increase percentage of stormwater retained or reused through rainwater harvesting
- Increase household emergency preparedness and climate resilience

Homeowner Interests	Gardening for flowers and produce, other post-COVID-19 considerations to be explored, including health, well-being and community connections
Values and Motivations	Utility bills, resale value, and curb appeal, and to a lesser extent home comfort, and climate change and environment
Barriers to action	Upfront costs of home improvement projects, and for outdoor work, already having trees and landscaping in place, space limitations, and lack of knowledge of what to plant
Desired Supports	Internet resources, incentives, individual prizes, one-on-one in-home or virtual consultations, and local workshops

Homeowner and volunteers working on sustainable landscape retrofits in West Bolton SNAP, Caledon (Image courtesy of Toronto and Region Conservation Authority)

Neighbours come together for a do-it-yourself home energy party in County Court SNAP, Brampton (Image courtesy of Toronto and Region Conservation Authority)

This initiative will be phased to support the directions of the City of Brampton's forthcoming home retrofit design initiative, and will involve ongoing collaboration of TRCA, City, Region and utilities. It will be developed based on further homeowner engagement and focus group testing to confirm tailored marketing messages. Based on the vulnerability analysis undertaken as part of the SNAP, it it recommended that the first phase of the program target early action in the most vulnerable pockets of the neighbourhood, including the medium density areas.

This work will support increased neighbourhood connections and overall community resilience by profiling home retrofit skills that residents already have, encouraging further skills building and sharing, facilitating community-based projects and demonstrations.

Recommended Actions:

4.4 Develop a targeted Home and Property Resilience and Efficiency Initiative to increase home owner uptake in key indoor and outdoor retrofits, integrating locally tailored marketing, free virtual or in-home consultations, referrals to available programs, incentives and individual prizes, ongoing support and follow ups, and cross promotion of related events.

5.0 INSTITUTIONAL AND COMMERCIAL COLLABORATION AND GREENING

There is a diversity of institutional and commercial properties within the neighbourhood, including Earnscliffe Recreation Centre, five elementary schools, six places of worship, and four commercial plazas. There are an even greater number just beyond the boundaries of the neighbourhood, including the Bramalea Civic Centre, Brampton Library, commercial Bramalea City Centre to the east and numerous industrial properties to the west. Some of these properties have been engaged throughout the planning process, and for others there is opportunity to explore interest.

Locally Inspired Objectives for Institutional and Commercial Collaboration and Greening:

- Enhanced energy and water efficiency through a range of building retrofits
- Increase local renewable energy production solar, geothermal
- Increase green infrastructure and outdoor water efficiency through Fusion Landscapes, Low Impact Development (LID), diverse tree, shrub and garden planting
- Increase emergency preparedness and resilience to climate-related vulnerabilities
- Neighbourhood-scale initiatives including district energy
- Sponsorship or involvement in local community-based projects and events

Example of institutional parking lot greening (Image courtesy of Toronto and Region Conservation Authority)

The Action Plan recommends targeted engagement of institutional and commercial properties to explore interest in collaborating on community-based SNAP projects and encourage greening initiatives on their own properties, including learning or applying new sustainable technologies and approaches. These include energy and water retrofits, parking lot greening, sustainable landscaping, tree planting, green or cool roofs, sustainable energy (e.g. solar, geothermal) and district energy. There is opportunity to help support Places of Worship participation in Brampton's Lighthouse Program supporting emergency preparedness and response. For schools, it can involve collaboration on School Travel Plans (STP) to support active transportation goals.

Recommended Actions:

5.1 Engage local businesses in collaboration with TRCA's Partners and Project Green, the City's Economic Development Office and Community Energy and Emissions Reduction Plan (CEERP) team.
5.2 Engage local schools in collaboration with the Bramalea Community Network, TRCA Community Learning team and Region of Peel active transportation team.
5.3 Engage places of worship in collaboration with the Bramalea Community Network, Brampton's Emergency Management Office, municipal Councillors and local contacts.
5.4 Engage municipally owned facilities through City and Regional staff.

Supporting a climate resilient, low-carbon future

The Bramalea SNAP Action Plan supports directions set out by municipal plans regarding reduced greenhouse gas emissions through the integrated projects on public and private lands. Through the development of the Action Plan, a rapid vulnerability assessment was undertaken to identify the key climate change impacts on the community, its buildings and infrastructure, as well as its natural systems and highlight areas that may be more vulnerable to these impacts. These adaptation measures have also been integrated into the Action Plan recommendations. Together these include:

Mitigation

- Indoor and outdoor home and building retrofits for increased water and energy efficiency and waste management
- Exploring use of sustainable, locally generated energy
- Green infrastructure and natural system restoration supporting carbon sequestration, and reducing heating and cooling requirements
- Increased walking and cycling, reducing car use for local trips
- Reduced food miles through local food production and urban agriculture

Adaptation

- Natural system resilience and reduced heat stress through Eco Spaces, multi-purpose road diets and green infrastructure
- Improving community emergency preparedness through neighbourhood connections, local food production, and local leadership
- Increased private property resilience through better lot-level stormwater management for frequent and severe storms, and sustainable landscapes and rainwater harvesting to alleviate drought impacts
- Exploring use of sustainable, locally generated energy

6.0 COMMUNITY RESILIENCE

Example of a Neighbourhood street party in County Court SNAP in Brampton (Image courtesy of Toronto and Region Conservation Authority)

The Bramalea SNAP Action Plan supports community resilience by integrating community health and socio-economic benefits and supporting stronger neighbourhood connections. The Plan also supports emergency preparedness through stronger local networks, local awareness of climate-related issues and education. There is already a strong sense of belonging in Bramalea, with local leaders and organizations active in some areas of the neighbourhood. However more is needed to support and grow these efforts, and to support new community-based projects and programming. Many residents expressed interest in ongoing involvement in the SNAP, which is critical. They are interested in volunteering, skills sharing, helping undertake engagement, promotion, and fundraising.

Locally Inspired Objectives for Community Resilience:

- Offer opportunities for resident connections, skills building and skills sharing
- Support local leadership and formation of resident groups
- Connect existing programs and organizations with members of the community
- Increase emergency preparedness awareness, education and action
- Support community-based projects that support animated spaces, and arts and culture

"The most important feature of this action plan is that it is bringing the community together as a whole."

-- Local resident

The Action Plan recommends facilitating community events and programming to help support further neighbourhood connections, capacity-building, emergency preparedness, arts and culture. TRCA will lead these efforts in the short term, helping support community members as they move from participants to leaders.

Recommended Actions:

6.1 Host regular virtual resident meetings and/or educational events related to recommended projects, emergency preparedness, and other resident interests, and collaborate with Bramalea Community Network and other local stakeholders to co-design and promote.

6.2 Facilitate fun, family oriented annual events, local markets and pop-up initiatives (as in-person events are allowed based on COVID-19 restrictions), cross-promoting existing programs and organizations.

6.3 Support community members and implementation partners in collaborating on community-based projects and crowdsourced funding initiatives.

6.4 Continue to collaborate with the Bramalea Community Network and municipal Councillors on implementation projects of shared interest.

MEASURING SUCCESS

The Bramalea SNAP has been designed to address core environmental priorities, but also a number of critical social and health related priorities. These support numerous municipal and Conservation Authority plans and strategies. To measure impact and success over time, a framework of long term neighbourhood-scale target outcomes has been identified based on the action plan's shared objectives. These are outlined in Table 2. 'Outcomes' are defined as observed changes anticipated over the long term (by 2040).

Table 2: Target Outcomes (Longer term observed changes)

SUSTAINABILITY OBJECTIVE	KEY OUTCOME
Natural system health	• Increase natural cover in TRCA's terrestrial natural heritage system from 3% (5.9 ha) to 8% (17.6 ha) by 2040 • Increase urban forest canopy cover from 17% (39.7 ha) to 27% (60.8 ha) by 2040 • Increase habitat quality in the TNHS and riparian zones
Stormwater management	• Improved floodplain function, hydrology and capacity and reduced velocity and erosion in Mimico Creek by 2040 • Increase infiltration of stormwater to reduce runoff volumes and increase water quality by 2040
Climate resilience and low carbon	• Increase household energy efficiency to support City target of 35% energy efficiency gain by retrofitting 80% of existing homes by 2041 • Increase commercial and institutional energy efficiency to support City target of 22% energy efficiency gain by retrofitting 60% of existing buildings by 2041 • Improved knowledge amongst area residents in emergency preparedness
Water efficiency	• Increase household water efficiency to support City target of 34% gain from 2016 levels by 2041 • Achieve the Region of Peel water efficiency target by reducing the residential single-family indoor water demands to 150 Lcd by 2025
Active movement	• % Increase in residents participating in walking or cycling • Increase Region of Peel's Walkability Score
Health and well-being	• Increase in % of program participants reporting physical and mental well-being • Increase in % of program participants reporting physical activity during leisure time • # and % of participants in SNAP learning activities who indicate that they have improved their likelihood of finding employment through those activities
Safe and welcoming public spaces	• Increase % of people indicating they know their neighbourhoods • Increased satisfaction levels in neighbourhood features • Increase in the # of interesting spaces for people to gather • Decreased levels of litter in public spaces
Arts, culture and place	
Engagement and inclusion	

In support of the long term target outcomes above, additional shorter term indicators can be used to track progress in the right direction. These are referred to as 'outputs' and represent direct results of project or program activities. Indeed, achievement of these also represent success in their own right.

Table 3 illustrates a selection of example measurable outputs for each action plan theme as well as a summary of the multiple objectives they collectively support.

A Performance Monitoring Plan will be developed to confirm specific monitoring and evaluation strategies for the outputs and outcomes identified. Baseline is available for many of the indicators, and where not available will be obtained prior to work being undertaken.

Spotlight: Enhancing the Urban Forest

The neighbourhood urban forest canopy can be increased by 10% through planting an estimated 2,897 across public and private properties:

- 564 in residential yards
- 262 along local streets
- 876 at multi-unit residential buildings
- 7 in parking lots
- 871 on institutional properties
- 317 in parks outside the large Eco Spaces

Table 3: Target Outputs (Shorter term direct actions)

ACTION PLAN RECOMMENDATION	EXAMPLE OUTPUTS	SUSTAINABILITY OBJECTIVE ADDRESSESED
System of Eco Spaces and Green Infrastructure	• Increased area of improved habitat through restoration or enhancement • Increased # and species of trees and shrubs planted • Increased # projects or improvements that integrate the arts or interpretive signage	• Natural system health • Stormwater management • Safe and welcoming public spaces • Arts, culture and place • Active movement
Safe and Active Transportation Network	• Increased length (kms) of cycling infrastructure added (e.g. bike lanes, multi-use recreational trails, bicycle friendly roads) • Increase total length of multi-purpose road diets • # of new or enhancement pedestrian crossings	• Safe and welcoming public spaces • Active movement • Natural system health • Arts, culture and place
Healthy Local Food System	• Increased # of community and balcony gardens in production • Increased # of participants and hours in learning, education and skills training SNAP program activities • Increased # participants and hours in programs involving active living, such as gardening, walking, cycling, etc.	• Health and well-being • Active movement • Natural system health • Stormwater management
Home and Building Efficiency and Resilience	• Increased # of home retrofits in energy efficiency, green energy sources, or water efficiency • Increased # fusion or eco-friendly landscapes installed • Increased # of participants and hours in learning, education and skills training SNAP program activities	• Climate resilience and low carbon • Water efficiency • Natural system health • Stormwater management • Materials management

Institutional and Commercial Collaboration and Greening	• Increased area or # of green infrastructure or Low Impact Development projects installed • Increased # of ICI retrofits in energy efficiency, green energy sources, or water efficiency • Increased waste diversion from landfill resulting from materials management initiatives	• Climate resilience and low carbon • Water efficiency • Natural system health • Stormwater management • Materials management
Community Resilience	• Increased # and % of total residents involved in program activities • Increased # community events or workshops • Increased # new and existing delivery partnerships	• Engagement and inclusion • Arts, culture and place • Climate resilience and low carbon

NEXT STEPS

This shared SNAP Action Plan was co-developed with a focus on collaborative implementation. Following the approval of the Action Plan, next steps include:

1. **Establish Implementation Team –** The Project Management Team will transition to an Implementation Team to be co-chaired by City of Brampton and TRCA. This Team will oversee overall SNAP implementation through annual work plan alignment, coordination among working groups, tracking and performance monitoring, and review of community engagement cross-promotion opportunities. TRCA will develop a Terms of Reference for the Implementation team with expectations, roles, responsibilities, and timelines.

2. **Establish Working Groups for Priority Projects –** Working groups with representative from City, Region and TRCA have already emerged to lead priority project implementation and continued community engagement. To help guide working groups and maintain the spirit of the Action Plan, an Implementation Framework is being developed that identifies lead implementers, key collaborators and partners, potential funding sources, next steps and estimated implementation timeframes. Key priority projects for 2021-2022 include:

    2.1 **Eco Space parks design** for the Fallingdale, Earnscliffe, Eastbourne and Edgebrooke Park system and initiation of channel and floodplain design for the re-naturalization of the Mimico Creek – to be led by City and TRCA in collaboration with Region and other implementation groups.

    2.2 **Tower Resilience and Efficiency Initiatives** at CAPREIT and Peel Living buildings – to be led by TRCA in collaboration with tower owners and implementation groups.

    2.3 **Multi-objective Road Diets** on Kings Cross Road, Balmoral Drive and Eastbourne Dr – to be led by City of Brampton in collaboration with TRCA, Region of Peel and implementation groups.

    2.4 **Targeted Home and Property Resilience and Efficiency Initiative** – further community research in 2021 and piloting of the initiative in 2022 to be led by TRCA in collaboration with City and Region in coordination with the City's forthcoming home retrofit design initiative.

3. **Development of detailed Performance Monitoring Plan –** Based on the target outputs and outcomes outlined in the Action Plan, the Implementation Team will confirm a Performance Monitoring Plan including an evaluation framework of key short and long term output and outcome indicators, data sources and timelines for tracking.

4. **Fundraising in support of community-based projects –** Where there is opportunity to leverage implementation resources, City, TRCA and Region will collaborate across staff groups and community organizations to support fundraising efforts and community-based projects.

APPENDIX 1

ACTION PLAN SHARED OBJECTIVES AND DESCRIPTIONS

Shared Objective	Description – based on community and partner input
Natural system health	The community's natural heritage and urban forest is enjoyed, well cared for, and expanded to support diverse local habitat and connections. This green infrastructure system is resilient to climate change impacts, provides many health and environmental benefits, and supports the natural water cycle and improved stormwater management.
Stormwater management	The community's natural and built environment supports integrated stormwater management on public and private land. This reduces rainwater runoff, improves water quality, mitigates flood risk, and supports the natural water cycle.
Climate resilience/preparedness and low carbon	The community is aware of local climate-related risks and is adapting through resilient natural and built infrastructure, community connections, and emergency plans. It is also mitigating further harm by reducing carbon use and greenhouse gases through building retrofits and more active transportation.
Water efficiency	The community reduces overall water consumption by practicing indoor and outdoor water conservation, making use of high efficiency appliances and fixtures, and using alternative water sources such as rainwater where possible.
Health and well-being	Residents live happy, healthy lives, practicing good diet and lifestyle behaviors resulting in better physical and mental health outcomes. They have access to affordable, healthy food options and local urban agriculture, as well as nature, supporting nourishment of the most vulnerable community members. Residents are ready for school and have job skills that help support employment.
Active movement	Residents choose active forms of transportation for local trips and commuting, supported by accessible and connected active transportation infrastructure. Residents enjoy a high-quality public realm and pedestrian experience, which results in improved health, and reduced congestion and greenhouse gas emissions.
Safe and welcoming public spaces	Residents feel safe and welcome making use of parks and streets, which offer multiple uses for all life stages. High-quality public spaces are designed with safety in mind, and integrate nature, beauty, public art, and music.
Engagement and inclusion	Residents feel a strong sense of belonging, are active and connected in their community, and practice courtesy and respect for all people and environments. There are opportunities for local leadership and decision-making and collective action for shared goals.
Arts, culture, and place	Residents enjoy vibrant spaces, programs, and events that support understanding and local history, celebration of local talent, strengthening of community identity and sense of place. This includes local events and celebrations, and wayfinding and art in the public realm.
Materials management	This is a clean community that is litter-conscious and minimizes the quantity of waste generated. Everyone's efforts to refuse, reduce, reuse, and recycle results in less waste going to landfill and reduced greenhouse gases related to the consumption and transport of goods and services in the neighbourhood.

APPENDIX 2

SUMMARY OF ACTION PLAN RECOMMENDATIONS

SYSTEM OF ECO SPACES AND GREEN INFRASTRUCTURE **Re-shaping older parks into Eco Spaces, supporting a healthy green infrastructure system extending into backyards, tower properties, and streets**	SAFE AND ACTIVE TRANSPORTATION NETWORK **Enhancements to the existing pedestrian and cycling routes, including safe pedestrian crossings and multi-objective road diets improvements in key areas**	HEALTHY LOCAL FOOD SYSTEM **A series of interconnected urban agriculture initiatives on private and public land to support local growing, sharing, distribution and skills building**	HOME AND BUILDING EFFICIENCY AND RESILIENCE **Integrated initiatives and targeted programming to increase overall climate change resilience and reduce GHG emissions in all residential homes and buildings, from single detached dwellings to the high-rise towers**	INSTITUTIONAL AND COMMERCIAL COLLABORATION AND GREENING **Targeted engagement of institutional and commercial properties to collaborate on community-based SNAP projects and encourage greening initiatives on their own properties**	COMMUNITY RESILIENCE **Facilitating community events and programming to help support further neighbourhood connections, capacity-building, education, arts and culture.**
Fallingdale, Earnscliffe, Eastbourne and Edgebrooke Parks: 1.1 Develop an Eco Space parks design for the Fallingdale, Earnscliffe, Eastbourne and Edgebrooke Park system, integrating all planned projects and identified features, guided by the Eco Park principles and locally inspired objectives. 1.2 Initiate channel and floodplain design for the re-naturalization of the Mimico Creek, a key component of the Eco Space design. Knightsbridge Park: 1.3 Review and address smaller scale enhancements including improved lighting and visibility, surface replacements, additional seating and shade, waste and recycling receptacles. 1.4 Review and improve pathway connections to Chinguacousy Park in the north and Chelsea Gardens towers in the east. 1.5 Work with community groups to plant more trees and gardens, host supportive safety workshops, anti-litter campaigns, community clean ups, and community-based projects to create more animated spaces. 1.6 Integrate larger scale enhancements into future park renewal plans including playground and fitness stations, wayfinding, green parking lot and washrooms.	2.1 Create multi-objective Road Diets on Kings Cross Road, Balmoral Drive, Finchgate Boulevard, Eastbourne Drive. 2.2 Create a new recreational trail to connect pedestrians and cyclists along Clark Boulevard from Finchgate Boulevard to Eastbourne Drive. 2.3 A series of pedestrian safety improvements at key road crossing locations, and new pedestrian crossings in some locations. 2.4 Install traffic calming measures (e.g. improved speed signs, better school drop-off zones). 2.5 Make recreational trail improvements in parks (e.g. sign and wayfinding, better connections). 2.6 Create innovative and sustainable bus stop improvements (e.g. natural/pollinator garden roofs).	3.1 Create new community gardens in Earnscliffe Park and Fallingdale Park. 3.2 Create new community gardens at multi-unit residential buildings, starting with CAPREIT and Peel Living owned buildings. 3.3 Initiate container or balcony gardens programming at multi-unit residential buildings. 3.4 Increase backyard gardening at low and medium density homes, exploring harvest sharing components. 3.5 Host supportive education and skills-building workshops (e.g. nutrition, harvesting, preparation, preservation, etc.).	High density, multi-unit residential buildings: 4.1 Work with interested tower property owners to develop site concept plans and/or recommendations to that support indoor and outdoor resilience and efficiency as well as community co-benefits. 4.2 Facilitate implementation of identified projects through fundraising and partnership brokering with public, private and non-government organizations. 4.3 Facilitate neighbourhood-wide virtual events to showcase projects and share lessons among tower owners. Low and Medium density homes: 4.4 Develop a targeted Home and Property Resilience and Efficiency Initiative to increase home owner uptake in key indoor and outdoor retrofits, integrating locally tailored marketing, free virtual or in-home consultations, referrals to available programs, incentives and individual prizes, ongoing support and follow ups, and cross promotion of related events.	5.1 Engage local businesses in collaboration with TRCA's Partners and Project Green, the City's Economic Development Office and Community Energy and Emissions Reduction Plan (CEERP) team. 5.2 Engage local schools in collaboration with the Bramalea Community Network, TRCA's Community Learning team and Region of Peel active transportation team. 5.3 Engage places of worship in collaboration with the Bramalea Community Network, Brampton's Emergency Management Office, municipal Councillors and local contacts. 5.4 Engage municipally owned facilities through City and Regional staff.	6.1 Host regular virtual resident meetings and/or educational events related to recommended projects, emergency preparedness, and other resident interests, and collaborate with Bramalea Community Network and other local stakeholders to co-design and promote. 6.2 Facilitate fun, family oriented annual events, local markets and pop-up initiatives (as in-person events are allowed based on COVID-19 restrictions), cross-promoting existing programs and organizations. 6.3 Support community members and implementation partners in collaborating on community-based projects and crowdsourced funding initiatives. 6.4 Continue to collaborate with the Bramalea Community Network and municipal Councillors on implementation projects of shared interest.

Report
Council Report
The Corporation of the City of Brampton
2021-02-03

Date: 2021-01-13

Subject: **Begin Procurement Report - Balmoral Recreation Centre**

Secondary Title: **Request to Begin Procurement - Hiring of a General Contractor to Complete the Addition and Renovation at Balmoral Recreation Centre- 225 Balmoral Dr., Brampton ON L6T 1V4, Ward 7**

Contact: Samantha Boyd, Interim Manager, Building Design and Construction, Public Works & Engineering

Report Number: Public Works & Engineering-2021-106

Recommendations:

1. That, the report from Samantha Boyd, Interim Manager, Building Design and Construction, Public Works and Engineering, titled **"Request to Begin Procurement - Hiring of a General Contractor to Complete the Addition and Renovation at Balmoral Recreation Centre- 225 Balmoral Dr., Brampton ON L6T 1V4, Ward 7"** dated January 13, 2021, to the Committee of Council Meeting of February 3, 2021 be received;

2. That, the Purchasing Agent be authorized to commence the procurement for the general contracting services for the renovation and addition of the Balmoral Recreation Centre; and

3. That, the appropriate City staff be authorized and directed to take the necessary action to give effect thereto.

Overview:

- **The report seeks Council approval to commence procurement for hiring a General Contractor to complete the addition and renovation at Balmoral Recreation Centre.**

Background:

In a report dated June 19, 2019, Council approved the request to begin procurement of hiring an Architect to provide design and contract administration for the addition and renovation of Balmoral Recreation Centre.

In December 2019, Building Design and Construction staff retained CS&P Architects Inc. to provide design and contract administration services for this project through a competitive bid process.

Current Situation:

The specifications and drawings for the addition and renovation of Balmoral Recreation Centre are being finalized by CS&P Architects Inc. This project is approaching the construction procurement stage, scheduled to begin February 2021 and upon approval of this report. The anticipated substantial completion date for this project is April 2023.

Corporate Implications:

Purchasing Comments:

A public Procurement Process will be conducted to pre-qualify General Contractors and submissions shall be evaluated in accordance with the published evaluation process within the Bid Document.

The pre-qualified General Contractors will be invited to submit a Bid and the lowest compliant Bid will be eligible for contract award. Purchase approval will be obtained in accordance with the Purchasing By-Law.

All communication with Bidders involved in the procurement must occur formally, through the contact person identified in the Bid Document.

Financial Implications:

Funding for Hiring of a General Contractor to Complete the Addition and Renovation at Balmoral Recreation Centre is an approved capital initiative, which currently has sufficient funding available.

Other Implications:

Term of Council Priorities:

This report achieves the following Term of Council priorities:

- Brampton is a Mosaic, as it will facilitate programs to engage the community and cultural activities.

- Brampton is a Green City, all work will seek opportunities to minimize the impact on the environment and maximize sustainability.

- Brampton is a City of Opportunities, as this project will provide services and programs to the neighbourhood.

- Council Priority – Brampton is a Safe & Healthy City, this facility will provide a venue to deliver programing geared to community safety, improving mental health support and encourage active healthy lifestyles.

- This project support Brampton's 2040 vision of healthy citizens enjoying physical and mental wellness, fitness and sports.

Conclusion:

It is recommended that the Purchasing Agent be authorized to commence the procurements as described in this report.

Authored by:

Samantha Boyd
Interim Manager, Building Design & Construction
Public Works & Engineering

Reviewed by:

David Bottoni
Director, Building Design & Construction
Public Works & Engineering

Approved by:

Jayne Holmes
Interim Commissioner,
Public Works & Engineering

Submitted by:

David Barrick
Chief Administrative Officer
City of Brampton

Attachments: None.

Report
Staff Report
The Corporation of the City of Brampton
2021-02-03

Date: 2020-11-25

Subject: **Parking Related Concerns – Blair Drive – Ward 3 File I.AC (TRAF)**

Contact: Binita Poudyal, Traffic Operations Technologist, Road Maintenance, Operations and Fleet, Public Works and Engineering Department, 905-874-2878

Report Number: Public Works & Engineering-2021-004

Recommendations:

1. That the report titled**: Parking Related Concerns – Blair Drive (Ward 3)** to the Committee of Council meeting of February 3, 2021 be received; and

2. That Traffic By-law 93-93, as amended, be further amended to implement "No Parking, Anytime" restrictions on west and south sides of Blair Drive between Glidden Road and the westerly limit of the roadway (including cul-de-sac).

Overview:

- **Staff received concerns related to parked vehicles on both sides of Blair Drive.**

- **On-street parking is currently not permitted for a period longer than three hours unless otherwise posted.**

- **The Public Works and Engineering Department reviews the need for on-street parking/stopping restrictions on City streets taking into consideration public safety, emergency/maintenance vehicle access and the needs of the area residents.**

Background:

The Public Works and Engineering Department reviewed on-street parking on Blair Drive to address potential safety issues created by parked and stopped vehicles.

The need to implement parking and stopping restrictions is evaluated by taking into account public safety, access requirements of emergency services and maintenance vehicles and the site-specific characteristics of the roadway.

Current Situation:

Blair Drive is an industrial roadway where on-street parking has been observed to be used primarily by staff of area businesses. Observations undertaken by staff revealed that parking was evident on both sides of Blair Drive, causing egress problems for staff/visitors, and at times resulted in limited access for through traffic (including emergency services and maintenance vehicles). Additionally, the large trucks requiring access to the roadway raise concerns when the travel portion of the road can only accommodate one vehicle due to the parked vehicles on both sides. It has also been noted that large trucks frequently park/stop on the roadway, causing sightline issues for motorists attempting to exit driveways or pedestrians attempting to cross the road.

Although public consultation is not required to implement restrictions based on safety concerns, a letter explaining the proposed parking restrictions along Blair Drive was sent out to ensure those impacted were advised. Feedback that was received showed support for parking restrictions on the west and south sides of Blair Drive between Glidden Road and the westerly limit of the roadway, including the cul-de-sac.

In order to alleviate the above-noted concerns, staff recommends implementing “No Parking, Anytime” restrictions on the west/south side of Blair Drive between Glidden Road and the westerly limit of the roadway (including cul-de-sac). Figure 1, attached, illustrates the recommended restriction.

Corporate Implications:

Financial Implications:

The costs associated with the installation of the traffic signs required to support this initiative are estimated to be $401. There is sufficient funding available within the Public Works and Engineering operating budget to proceed with the recommendations in this report.

Strategic Plan:

This report achieves the “Move & Connect” Priority of the Strategic Plan by supporting the “active transportation and cycling strategy” initiative of the plan.

Council Priority – Streets for People

This report incorporates the Vision Zero framework into transportation planning, design and operations to prevent fatal and serious injury from motor vehicle collisions within the City right-of-way.

Conclusion:

Based on the parking review of the subject roadway, staff recommends implementing "No Parking, Anytime" restrictions on west and south sides of Blair Drive between Glidden Road and the westerly limit of the roadway (including the cul-de-sac).

Authored by:

Binita Poudyal, Traffic Operations Technologist, Road Maintenance, Operations and Fleet,
Public Works and Engineering Department

Reviewed and Recommended by:

Michael Parks, C.E.T.
Director,
Road Maintenance, Operations and Fleet
Public Works and Engineering

Approved by:

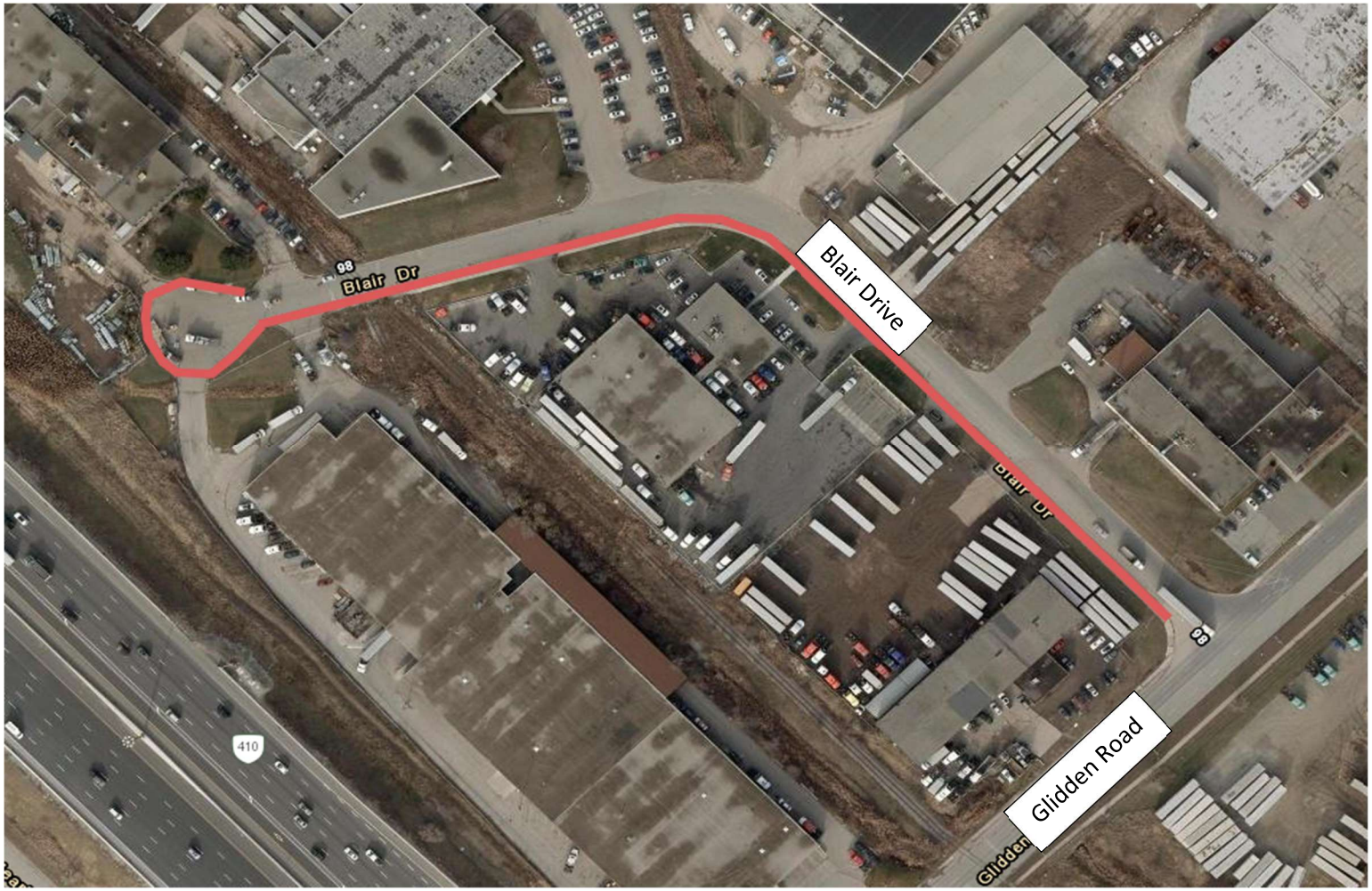
Jayne Holmes
Acting Commissioner
Public Works and Engineering

Submitted by:

David Barrick, Chief Administrative Officer

Attachments:

Figure 1: Recommended No-Parking Restrictions on Blair Drive



CITY OF BRAMPTON

Date: December 2020

Drawn by: B. Poudyal

NTS

Figure 1:

Proposed No Parking Restrictions along Blair Drive

Report
Staff Report
The Corporation of the City of Brampton
2021-02-03

Date: 2021-01-09

Subject: **Traffic By-law 93-93 - Administrative Update - File I.AC (TRAF)**

Contact: Binita Poudyal, Traffic Operations Technologist, Road Maintenance, Operations and Fleet, Public Works and Engineering Department, 905-874-2878

Report Number: Public Works & Engineering-2021-094

Recommendations:

1. That the report titled: **Traffic By-law 93-93 - Administrative Update – (R094/2021 - File I.AC TRAF)**, to the Committee of Council meeting of February 03, 2021, be received; and,

2. That Traffic By-law 93-93, as amended, be further amended.

Overview:

- **Administrative changes are required to update and/or add new by-law information to the appropriate schedules and consolidated text of the General Traffic By-law 93-93.**

- **The by-law schedules relating to "Rate of Speed", "Fire Routes" and "Community Safety Zones" are impacted by this administrative update.**

Background:

Administrative changes to Traffic By-law 93-93 are necessary on a regular basis as staff identifies, adds and modifies by-law information to the appropriate schedules of the by-law. This allows Traffic By-law 93-93 to support appropriate changes to the City's road network and subsequent traffic and parking regulations.

Current Situation:

The following amendments to the schedules of Traffic By-law 93-93 are recommended:

Rate of Speed (Schedule X):

A housekeeping amendment is required to the “Rate of Speed” schedule to modify street name for the following location.

- Pantomine Boulevard

Fire Routes (Schedule XXII)

A housekeeping amendment is required to the “Fire Routes” schedule to modify index number for the following locations.

- 2975 Bovaird Drive East
- 2-20 Dewside Drive

Community Safety Zones (Schedule XXIV):

A housekeeping amendment is required to the “Community Safety Zones” schedule to modify the street name for the following community safety zone.

- McMurchy Avenue

Community Safety Zones (Schedule XXIV):

Based on the report to the July 8, 2020 Council meeting titled “Timetable for Automated Speed Enforcement Implementation”, the following roadway section is recommended to be designated as Community Safety Zones to meet the provincial requirements for implementing Automated Speed Enforcement.

Street	Between	Ward
Pantomine Boulevard	Clementine Drive and Stephanie Avenue/Susan Avenue	6

Corporate Implications:

Financial Implications:

There is no financial impact resulting from the recommendations in this report.

Strategic Plan:

This report achieves the “Move & Connect” Priority of the Strategic Plan by supporting the “active transportation and cycling strategy” initiative of the plan.

Council Priority – Streets for People

This report incorporates the Vision Zero framework into transportation planning, design and operations to prevent fatal and serious injury from motor vehicle collisions within the City right-of-way.

Conclusion:

The aforementioned administrative updates to Traffic By-law 93-93 are required to support appropriate changes to the City’s road network and subsequent traffic and parking regulations.

Authored by:	Reviewed and Recommended by:
Binita Poudyal Traffic Operations Technologist, Road Maintenance, Operations and Fleet, Public Works and Engineering Department	Michael Parks, C.E.T. Director, Road Maintenance, Operations and Fleet Public Works and Engineering
Approved by:	Submitted by:
Jayne Holmes Acting Commissioner Public Works and Engineering	David Barrick, Chief Administrative Officer

Report
Staff Report
The Corporation of the City of Brampton
2021-02-03

Date: 2021-01-11

Subject: **Queen Street – Highway 7 BRT Initial Business Case**

Contact: Doug Rieger, Director, Transit Development
doug.rieger@brampton.ca, 905.874.2750 ext. 62349

Report Number: Brampton Transit-2021-148

Recommendations:

1. That the report titled**: Queen Street – Highway 7 BRT, Initial Business Case** to the Committee of Council Meeting of February 3, 2021, be received.

2. That the Metrolinx report titled Brampton Queen Street – York Region Highway 7 (Queen St – Highway 7) BRT Initial Business Case, attached as Appendix 2 be received.

3. That the Council support the conclusions of the Metrolinx Queen St – Highway 7 BRT Initial Business Case report that the following two scenarios, identified as providing greater transit benefits, be carried forward to the Preliminary Design Business Case:

   - Scenario 4: conversion of a traffic lane per direction to median BRT exclusive lanes along the length of the Queen Street – Highway 7 Corridor, except in Downtown Brampton where one traffic lane per direction is converted to a curbside BRT lane, between McMurchy Avenue and Kennedy Road.

   - Scenario 5: median BRT lanes (one per direction) along the length of the Queen Street – Highway 7 Corridor as a result of road widening (retaining the current number of traffic lanes), everywhere except Downtown Brampton (Queen Street between McMurchy Avenue and Kennedy Road) where lane conversion is considered.

4. That the Council authorize staff:
   A. to continue to work with Metrolinx to advance the Queen St – Highway 7 BRT in-development project to the next stage to develop the preliminary design with the associated business case for the corridor.

   B. to continue to work with Metrolinx and Region of Peel, and Region of York to develop the terms of reference of a Memorandum of Understanding for any

required governance framework to administer the project, potential partnerships, subject to Council approval.

5. That a copy of this report be forwarded to Metrolinx.

Overview:

- **The Metrolinx benefits management process contains five decision gates of feasibility, preliminary design, procurement and detailed design, construction & delivery, and in service stages of the project life cycle. Major infrastructure investment decisions by Metrolinx are evaluated through business cases at each gate to successfully proceed to the next stage.**

- **The Queen St - Highway 7 Initial Business Case report confirms the need for rapid transit investments along the Queen St - Hwy 7 corridor and marks the opening of the crucial first gate of the Metrolinx benefits management process.**

- **The report evaluates three BRT infrastructure scenarios in addition to the Business as Usual scenario and identified two namely Scenario 4 and Scenario 5 (described in more detail in this report) as offering greater benefits, and carried forward to develop the scope of the preliminary design business case. Both scenarios contemplate implementation of median BRT lanes except in downtown Brampton where curbside lanes will be considered - Scenario 4 considers conversion of existing lanes, and Scenario 5 considers road widening keeping the existing lanes.**

- **Queen Street rapid transit corridor is a Term of Council priority, designated in the City's Transportation Master Plan, and identified in the 2040 Vision. The Queen Street corridor also forms a part of the 2014 Metrolinx RTP Frequent Rapid Transit Network and is identified as 'in-development' project.**

- **Queen St – Highway 7 BRT is in close proximity to two major transit terminals – the future Downtown Terminal, and Bramalea Terminal. The City is requesting that Metrolinx consider having a direct connection of the BRT Route with these terminals, to offer an immediate and seamless connection between different transit systems and modes.**

- **Metrolinx will be developing the scope work for Preliminary Design Business Case as the next stage of the benefits management process. City staff remain engaged with Metrolinx staff on this important project and topics of discussions include any required governance frame work for project coordination, and infrastructure coordination. This work will also lead to Metrolinx releasing an RFP for the preliminary design,**

environmental project report and the associated business case, in the spring of 2021.

- **Staff is requesting direction to continue to work with Metrolinx on the next stage of the project and if required staff will bring forward any terms of reference or a Memorandum of Understanding for Council approval.**

Background:

The Queen Street is the busiest transit corridor in Brampton having a ridership growth of over 130% from 2010 the year of launch of Züm service. This corridor is also supported by the local transit services. With the City's population and employment projected to grow over the next 25 years, the transportation and transit needs on the corridor will also grow. Added are the demand pressures due to the exceptional growth of Brampton transit ridership over the past decade (160% compared to the population growth of 27%) that has seen a doubling of ridership per capita prior to the COVID-19 situation.

Planning Context

A rapid transit corridor along Queen Street is identified as a Term of Council Priority. The City's Transportation Master Plan recommends bus rapid transit and priority bus service along Queen Street as a key infrastructure element to support the projected transit demand. The Brampton 2040 Vision identifies Queen Street corridor as key spine to support the enhanced rapid transit network in Brampton. The Term of Council Priorities also highlights Queen Street BRT as an example for advancing higher order transit infrastructure to equalize all forms of transportation.

Downtown Brampton is identified as Urban Growth Centre. The Metrolinx 2041 Regional Transportation Plan identifies Queen Street and Highway 7 as part of the frequent rapid transit network, and as a part of the larger transit network in GTHA provides a critical inter-regional transit corridor connecting a number of residential, employment, community, and recreational destinations within Brampton spanning west to east, and with York Region, and beyond.

The Queen St – Highway 7 BRT will help support and advance the City's Transportation Master Plan recommendations of achieving increased transit mode share target and the goal of having 50% of 2041 trips through sustainable modes.

The Region of Peel's Long Range Transportation Plan also calls for an increase in the share of trips made by sustainable modes of transportation, including transit, and denotes Queen Street as a rapid transit corridor, as does the Region's Major Transit Station Area study.

In 2019, the City and Metrolinx consolidated other planning studies into a single Queen St – Highway 7 BRT study led by Metrolinx. The details of the studies consolidation are outlined in a 2019 staff report that updated the status of the Planning for Queen Street – Highway 7 BRT. The new Initial Business Case (IBC) considered the Queen St/.

Highway 7 corridor from Mississauga Road in the west to Helen Street (Vaughan) in the east, connecting with Highway 7 Rapidway the York Region BRT system.

Figure-1 depicts the Queen St – Highway 7 corridor conceptually (approximately 24 km segment) that is under planning by Metrolinx.

Figure-1: Queen Street – Highway 7

Queen St - Highway 7
Hwy 7 Rapidway

<u>Metrolinx Benefits Management Process</u>
Metrolinx follows a benefits-management framework wherein major infrastructure projects are evaluated at stages (also called decision gates) as part of advancing them from planning through preliminary design, detailed-design, and construction, and in-service stages. The evaluation is carried out using business cases for each stage. Approvals are required from the Metrolinx Investment Panel prior to advancing the project from one decision gate to the next.

The 2019 staff report outlines the Metrolinx Benefits management process in more detail, Figure 2 below recaps the decision gates and depicts where the Queen Street rapid transit project currently sits within this process.

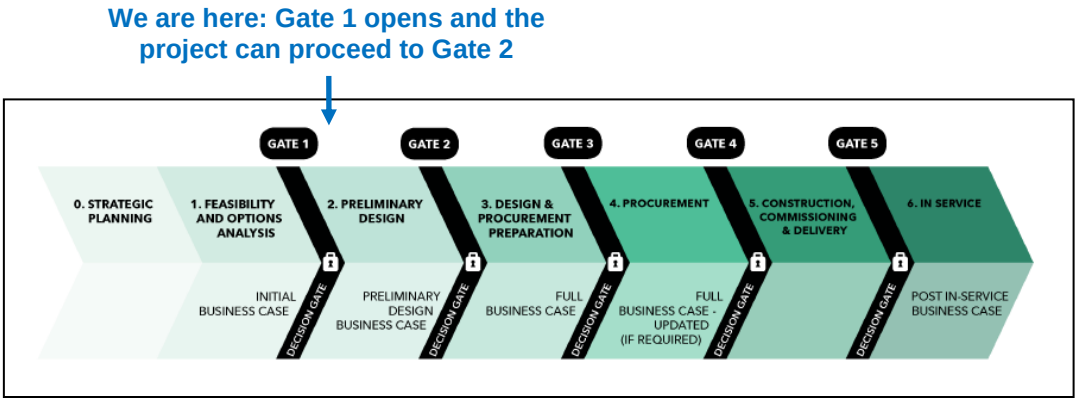


Figure-2: **Metrolinx Benefits Management Process**

In the summer of 2018 Metrolinx initiated the planning and feasibility options analysis as part of the evaluating the Queen St – Highway 7 BRT initial business case, the first step to clearing the decision Gate 1. This business case is carried through a process of evaluation through sub-cases of strategic case, financial case, economic case, and deliverability and operations case to help determine if and which option(s) could advance to the next stage of preliminary design.

In February this year Council passed a resolution requesting Metrolinx to prioritize the Queen St – Highway 7 BRT including advancing the project to the next stage of the Metrolinx benefits management process and procuring the necessary consultant work to support this advancement by fall of 2020.

<u>Study Purpose</u>
The purpose of the Queen St – Highway 7 BRT Initial Business Case is to evaluate planning options under the Metrolinx benefits management process (Figure 2 above) to confirm the need and justification of a BRT corridor and identify options to be carried forward to the next decision gate of Preliminary Design Business Case. The Region of Peel, the Region of York, and the City of Brampton are key stakeholders to this study.

Current Situation:

The Initial Business Case confirmed the need for a BRT route along the Queen St-Highway 7 corridor with priority bus networks and their peak levels of service to maximize the transit ridership in the study area.

<u>BRT Service Scenarios</u>
Three BRT service scenarios (Scenarios 1 to 3) were developed based on the criteria's of transit demand, accessibility, mode share impact, auto travel impacts, and transit level of service to help define the BRT service concepts. The BRT service defined concepts were carried forward for further analysis as Scenarios 4, 5, and 6.

In addition to the Business as Usual (BAU) option, Scenario 4, Scenario 5, and Scenario 6 outlined below were analyzed through the Metrolinx business case process:

Scenario 4	Conversion of a traffic lane per direction to median BRT exclusive lanes along the length of the Queen Street – Highway 7 Corridor, except in Downtown Brampton where one traffic lane per direction is converted to a curbside BRT lane, between McMurchy Avenue and Kennedy Road.
Scenario 5	Median BRT lanes (one per direction) along the length of the Queen Street – Highway 7 Corridor as a result of road widening (retaining the current number of traffic lanes), everywhere except Downtown Brampton (Queen Street between McMurchy Avenue and Kennedy Road) where lane conversion is considered.
Scenario 6	Implementation of two (2) median BRT lanes on the corridor by adding a median BRT lane per direction as a result of widening the road where necessary, except in segments that are in the following constrained zones where a mixed traffic solution is considered. Constrained zones: Downtown Brampton (McMurchy Avenue to Centre Street); Delta Park Boulevard to Sun Pac Boulevard (crossing of CN rail tracks); Highway 410 crossing; Highway 427 crossing; and Kipling Avenue to Islington Avenue

The initial business case evaluated the scenarios through the lenses of a Strategic Case, an Economic Case, a Financial case and an Operations & Deliverability Case.

Highlights from the Queen St – Highway 7 Initial Business Case document are brought forward as Appendix 1, refer:
Appendix 1A for BRT service definition,
Appendix 1B for Scenario 4 roadway configuration,
Appendix 1C for Scenario 5 roadway configuration, and
Appendix 1D for constrained corridor segments

Appendix-2 contains a copy of the full Queen St-Highway 7 BRT Initial Business Case report for reference.

BRT stop type, spacing and, and locations were considered for evaluation purposes only and based on the positioning of the BRT lanes median or curbside operation, minimizing throwaway costs, familiarity with the existing Viva BRT system, less frequent, major stop intersections, and connecting with other transit routes.

Key points from the Initial Business Case sub-cases are outlined hereunder comparing the benefits and costs, and deliverability of for **Scenario 4, Scenario 5, and Scenario 6**:

Strategic Case

	Scenario 4	Scenario 5	Scenario 6
Transit Ridership (AM Peak Hr)	18,813	18,734	15,110
Transit User Experience: Travel time reduction compared to BAU	10 min	9 min	7 min
Mobility Choices	Mode shares - Scenario: 7.1 - BAU: 6.9 Change +4%	Mode shares - Scenario: 7.2 - BAU: 6.9 Change +5%	Mode shares - Scenario: 7.1 - BAU: 6.9 Change +3%
Environmental Quality and Safety	Most considerable improvement	Considerable improvement	Least considerable improvement
Overall Strategic Benefit (additional transportation choices, sustainable growth)	**Greatest improvements**	**Greatest improvements**	**Noticeable improvements**

Economic Case

Cost and Benefits 60 Year Life Cycle	Scenario 4	Scenario 5	Scenario 6
Total Benefits ($2020 NPV)	**$1.96 billion**	**$2.42 billion**	**$1.63 billion**
Costs ($2020 NPV)			
Capital Cost	$95 million	$368 million	$151 million
Operating & Maintenance Costs	$412 million	$375 million	$353 million
Rehab Costs	$78 million	$78 million	$78 million
Total Cost	**$585 million**	**$936 million**	**$582 million**
Benefit-Cost Ratio	**3.3**	**2.6**	**2.8**
Net Present Value	$1.37 billion	$1.48 billion	$1.05 billion

Note:
1 Does not include fleet acquisition, terminal costs – Brampton, Bramalea, financing costs
2 Scenario 5 includes crossings for Hwy 410, CN rail tracks, and Humber River

Financial Case

Project Costs and Net Present Value, 60 Year Lifecycle	Scenario 4	Scenario 5	Scenario 6
Total Project Costs ($2019, NPV)	$595 million	$946 million	$590 million
Net Present Value ($2019, NPV)	-$381 million	-$ 701 million	-$ 418 million
Financial Impact	**Lowest**	**Highest**	**Medium**

Deliverability and Operations Case

Project Costs and Net Present Value ($2019, NPV)	Scenario 4	Scenario 5	Scenario 6
Physical Constraints • crossings: rail corridor, highways, natural features • narrow right of way segments	Minimal physical constraints during construction process	Considerably high amount of reconstruction of constrained segments	Least amount of reconstruction of constrained segments, but mixed traffic operations high lights operational risks

Vehicle (lane) Capacity constraints	May constrain truck and goods movement	Retains vehicle lanes	May constrain truck and goods movement in constrained segments
Summary	**Highest performer**	**Requires most substantial construction**	**Fewer constraints during construction, congestion issues during operations**

Overall, all three Scenarios perform better than BAU option. Scenario 4 and Scenario 5 offering increased transit reliability and better reduction in travel times compared to Scenario 6. **Scenario 4 and Scenario 5** will **form the basis of the Preliminary Design Business Case**.

ROW width constraints

The Initial Business Case identifies a number of road segments along the corridor that are likely to be constrained for ROW widths compared to the required widths based on the lane configuration linked to the infrastructure Scenario carried forward. As well a number of crossings have been identified that could be required or need to be rebuilt along the corridor. These ROW constraints and crossings will be studied in greater detail during the next stage of preliminary design. Appendix 1D outlines the constrained segments and major crossings for Scenario 4 and Scenario 5 that may need to be investigated further during the preliminary design stage.

Key City considerations

From a policy perspective, Scenario 4 and, to a lesser extent, Scenario 5 are supported by direction in the City's 2040 Vision, Transportation Master Plan, and the Community Energy and Emissions Reduction Plan.

- Brampton 2040 Vision
  The Queen Street BRT helps in achieving the Brampton 2040 Vision of integrated transportation choices and new modes, sustainability, and emphasis on walking, cycling, and transit by adding a higher level of transit service tightly linked to the regional transit network. The Queen Street BRT will help in achieving shorter trips, fewer auto trips, more trips by transit, foot and bike, and more mixed-mode trips.

  The Queen Street BRT will be integral to urban growth and development and will help foster intensification at select station stops (Major Transit Station Areas) along the corridor with the added benefit of acting as a catalyst for mixed use developments.

- Transportation Master Plan
  The Scenario 4 and Scenario 5 being carried forward align with the Transportation Master Plan recommendations of achieving increased transit mode share target and the goal of having 50% of 2041 trips through sustainable modes. The TMP identifies

implementation of higher order transit corridors with Queen Street being one of the identified corridor.

In terms of infrastructure supply interventions to effect mode-shift - replacing a traffic lane in each direction with dedicated BRT lane provides the strongest impetus for mode shift however this could be detrimental from a goods movement perspective as the Queen Street is also a major goods movement corridor. In light of competing objectives, the reduction of vehicle capacity (Scenario 4) versus maintaining (Scenario 5) will be examined in more detail in the next stage of the project.

From the Active Transportation lens the options being advanced shall consider adding sidewalks, pedestrian crossings, and paths where there are gaps in the network.

- Queen Street East - Community Planning Permit System (CPPS)
  In January 2020 Council approved the Queen Street East Precinct Plan to help support the goal of a clearly understood shared vision for future built form and land uses anticipated to help with a quicker market response. The Queen Street East CPPS containing the Queen Street higher order transit corridor forms one of the key infrastructure that the plan is built upon.

- Brampton's Community Energy and Emissions Reduction Plan (CEERP)
  The Queen Street BRT implementation aligns with the CEERP recommendations of reducing greenhouse gas (GHG) emissions by 50% from 2016 levels by 2040. The transportation related GHG reduction is set to be achieved by increasing transit ridership and increased intensification around the transit stops and inducing more walking, cycling, and shared auto trips.

- BRT Corridor in Downtown Brampton (Station Area)
  A number of projects and initiatives are currently underway in the downtown Brampton such as the downtown transit terminal, the CFI project, LRT Extension EA, and the integrated downtown plan (under development), Metrolinx on-corridor infrastructure upgrades along Kitchener corridor, the work related to Downtown Reimagined, and major development applications. Most of these downtown projects and initiatives are under planning stages with a focus around the Brampton GO station area.

  Staff are working with Metrolinx to coordinate the infrastructure planning work and look for potential synergies and future opportunities. Staff plan on engaging with Metrolinx to optimize the opportunities offered by the Queen Street BRT route through the downtown.

  Any ROW constraints in the downtown Brampton will be more defined during the preliminary design stage. The fact that both Scenario 4 and Scenario 5 consider lane conversation between McMurchy Avenue and Kennedy Road helps minimize, if not avoid, additional ROW requirements in this area.

- **BRT Corridor and future Downtown Brampton Terminal, and Bramalea Bus Terminal integration**

  A direct connection (integration) to major Brampton Transit terminals located in close proximity to the Queen St – Highway 7 BRT corridor is of particular interest for the obvious benefits this offers from a customer service and ease of transfer perspective. Although the Queen St – Highway 7 BRT Initial Business Case considered an alignment along Queen Street only, Metrolinx has indicated that the options presented in this IBC will be further refined to establish a preliminary design, benefits of the project as well as a more detailed cost estimate. The development of the Preliminary Design Business Case will include defining of the terminal facilities required or implementing changes to existing facilities in order to support the corridor including the Downtown Brampton Transit Terminal, and the Bramalea (Transit) Terminals.

  Future Downtown Brampton Transit Terminal
  The Brampton Transit bus terminal in downtown Brampton, also referred to as Transit Hub, is an ICIP funded project and staff are developing a strategic implementation plan reviewing the opportunities that could be offered through the colocation of the future Transit Terminal, the future LRT (Extension) terminal, at the GO Rail station forming components of a mobility hub. The Queen Street BRT connection to this mobility hub would be a logical step in integrating the modes for customer service and ridership benefits. However this could require refinement to the BRT route alignment as Queen Street runs approximately 300 meter south of the Brampton GO station.

  Bramalea Transit Terminal
  The Bramalea Transit Terminal at Central Park Drive is located at approximately the midway point on the Queen St – Highway 7 BRT in Brampton. This terminal was opened in fall 2010 in conjunction with the introduction of Züm service along Queen Street and will form another major transit hub in Brampton for the BRT system. The terminal is approximately 150 m to the south of Queen Street and a connection to this terminal with the BRT system also needs to be explored.

  Staff will work with Metrolinx towards optimization of the Queen Street BRT connection including integration with the future Downtown Brampton Terminal, and the Bramalea Transit Terminal that will allow for direct connections between transit systems with shorter transfer times. Staff may request Council's support for the inclusion of the consideration of a corridor alignment that best integrates with the future Downtown Transit Terminal and the Bramalea Transit Terminal in the Preliminary Business Case study to help in discussions with Metrolinx on any refinements to the BRT route.

Next Steps

Metrolinx plans to proceed to the next stage – the Preliminary Design Business Case and Preliminary Design for the Queen Street BRT. A TPAP (Transit project Assessment Process) is anticipated to be completed as part of the preliminary design. The TPAP process required mandatory point of contacts with the stakeholders and public.

As the Queen St – Highway 7 BRT project spans multiple jurisdictions (City of Brampton, Region of Peel, York Region, and Metrolinx) and has linkages to other transportation infrastructure projects along the corridor, this requires coordination and could potentially lead to the development of a governance structure for project administration.

At this time Metrolinx is not requiring the City of Brampton to contribute financially to this project. Staff level discussions are occurring between City and Metrolinx for Brampton's role in the project under Metrolinx leadership, and potential cost contributions to the project if any.

Staff is seeking authority to continue to work with Metrolinx and stakeholders the Region of Peel, and the Region of York to develop the terms of reference including a draft Memorandum of Understanding for any required governance framework for Queen St-Highway 7 BRT project administration, and potential partnerships. If a Memorandum of Understanding is required, staff will bring this forward to Council for approval.

Project Timelines

The timelines for the next phase of the project will be driven by Metrolinx. Metrolinx has indicated that they anticipate to issue the RFP for the Preliminary Design Business Case in the Spring of 2021.

Corporate Implications:

Financial Implications:

There are no immediate financial implications resulting from this report. Potential future financial implications are anticipated based on discussions with Metrolinx towards cost-sharing for the project, and for cost contributions towards municipal infrastructure upgrades or new municipal infrastructure. More details on any potential cost sharing and contributions for municipal infrastructure will emerge through discussions between Metrolinx and City staff as the project advances through the preliminary design phase.

In the 2020 capital budget submission, $2,000,000 was approved for Queen Street Rapid Transit Preliminary Design & TPAP from Mississauga Road to Regional Road 50. Staff will bring forward any additional financial impacts beyond the currently approved budget, subject to Council approval.

Legal Implications:

Legal Services will review and approve as to the form of such agreements, including a Memorandum of Understanding, and any other documents relating to the Queen St – Highway 7 BRT to be executed on behalf of the City pursuant to the delegations as may be authorized by Council.

Term of Council Priorities:

The Queen Street – Highway 7 BRT, Initial Business Case is in alignment with the 2019-2022 Term of Council Priority – Brampton is a Green City – Equalize all forms of transportation. The Queen St – Hwy 7 BRT will provide a key transit link in the regional transit network connecting Brampton to the GTHA.

Conclusion:

Staff recommends that Council support the Scenario 4 and Scenario 5 carried forward towards developing the scope for the Preliminary Design Business Case, with request Metrolinx to consider integration of the major transit terminals (future downtown terminal, and Bramalea transit terminal).

If required, staff will bring forward any terms of reference or a Memorandum of Understanding for Council approval.

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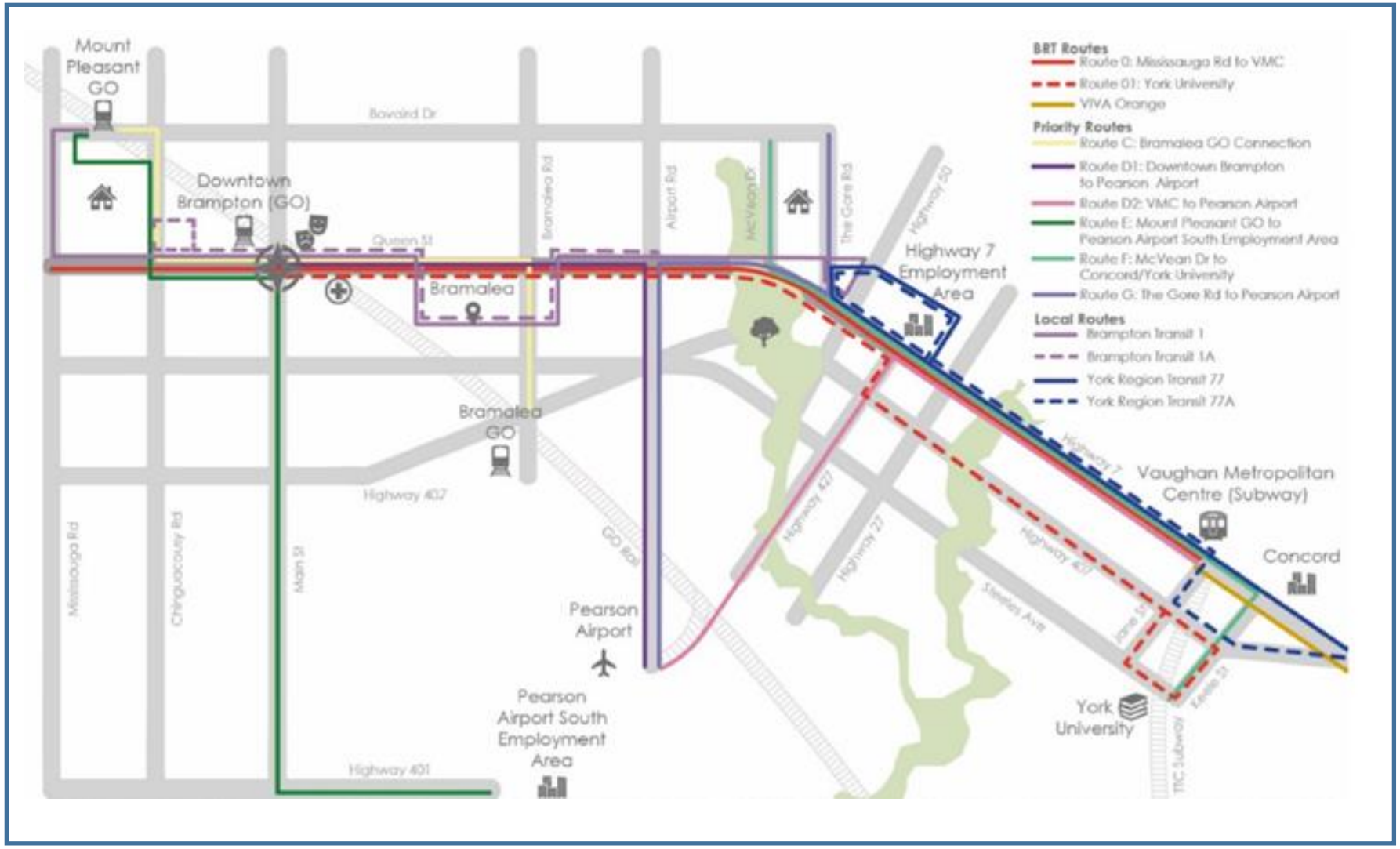
Appendix 1 Queen Street – Highway 7 BRT service definitions, roadway configurations, and segments with infrastructure constraints:
Appendix 1A – BRT service definition concepts, Scenarios 4, 5 and 6
Appendix 1B – Roadway configuration, Scenario 4
Appendix 1C – Roadway configuration, Scenario 5
Appendix 1D – Constrained corridor segments

Appendix 2: Queen Street – Highway 7 Bus Rapid Transit, Initial Business Case, Metrolinx, October 2020

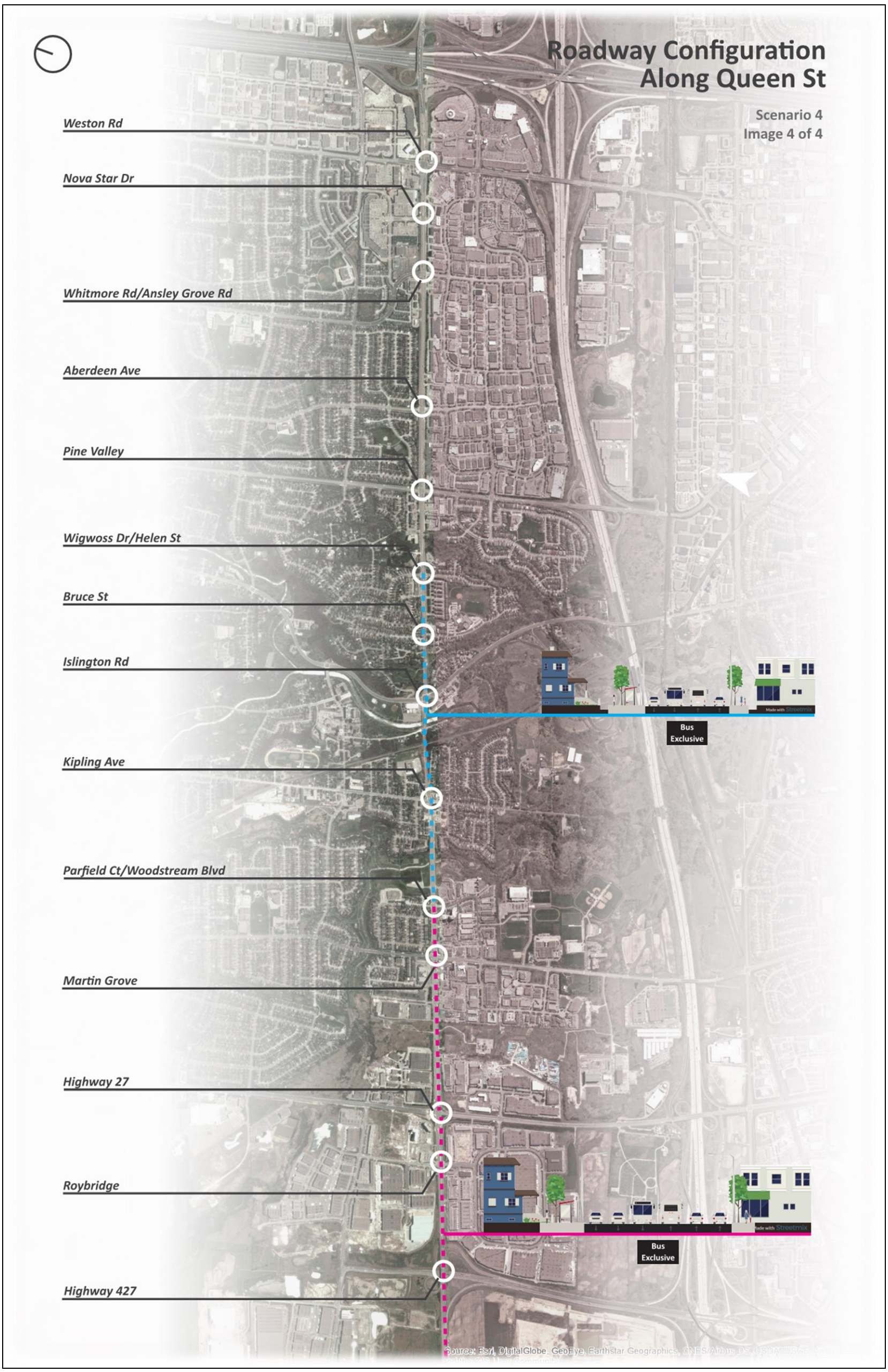
Appendix 1A

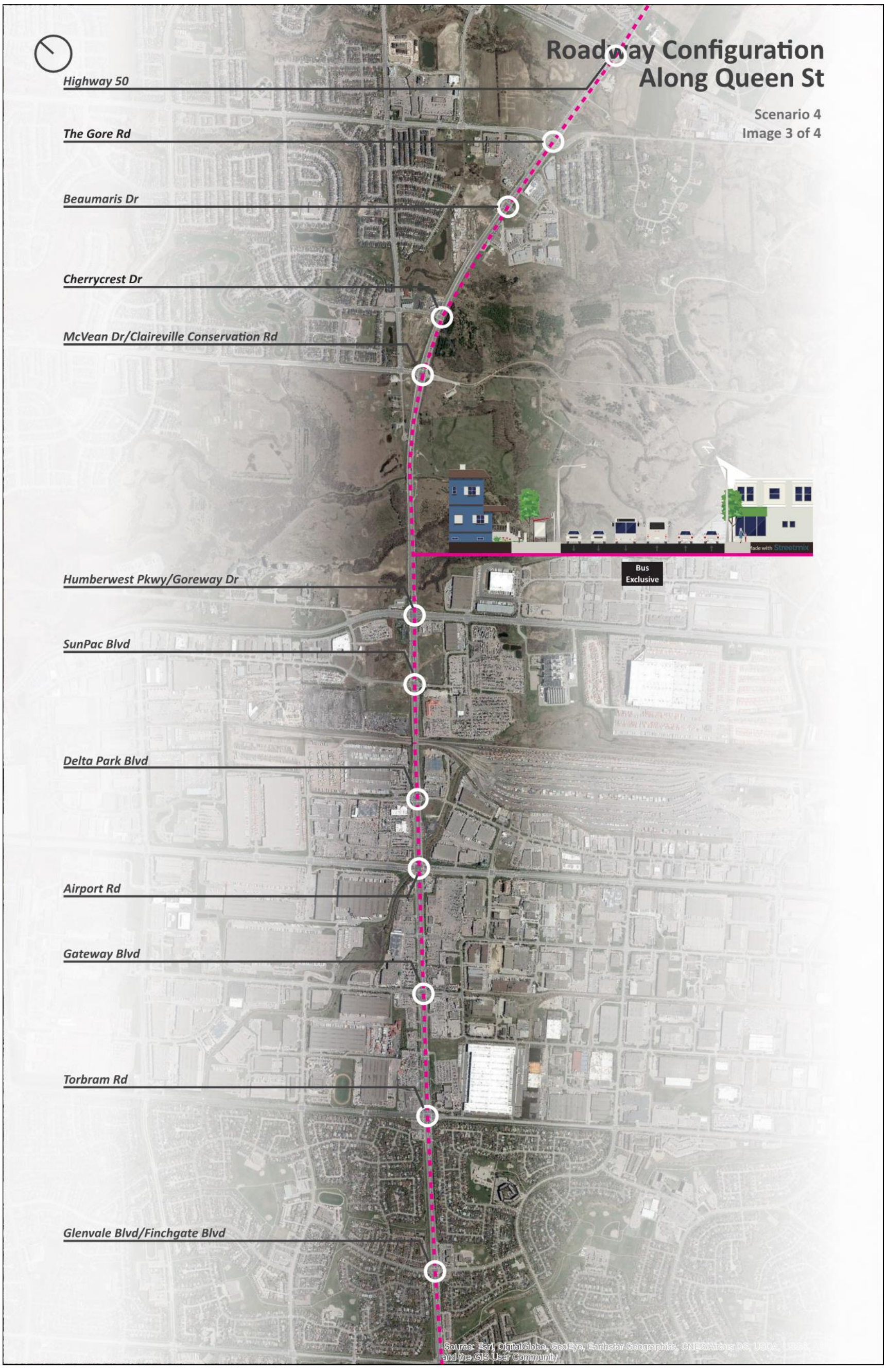
Queen Street – Highway 7 BRT, Service Definition

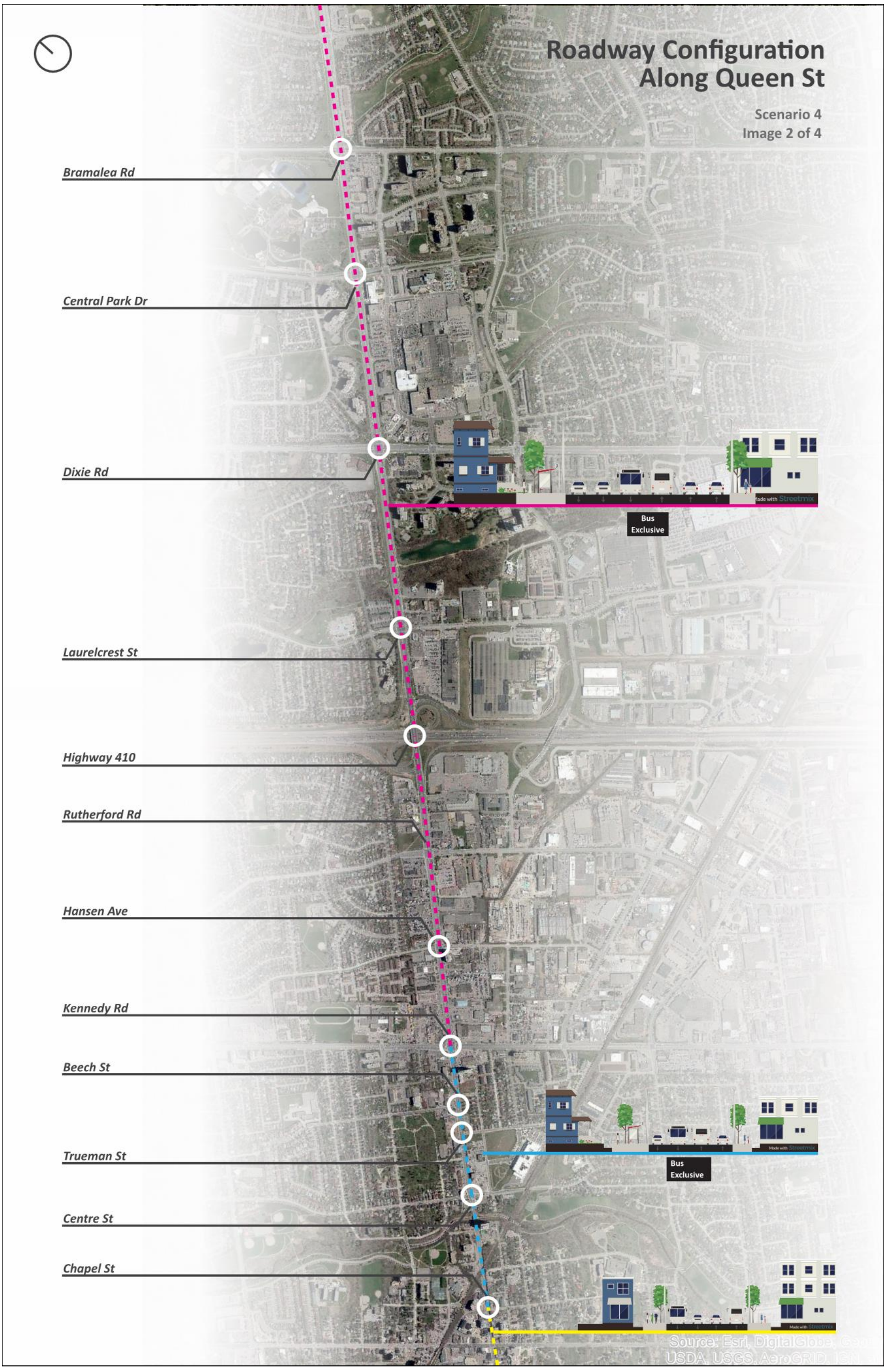
Scenarios 4, 5 and 6: Single BRT Route and Priority Bus Routes

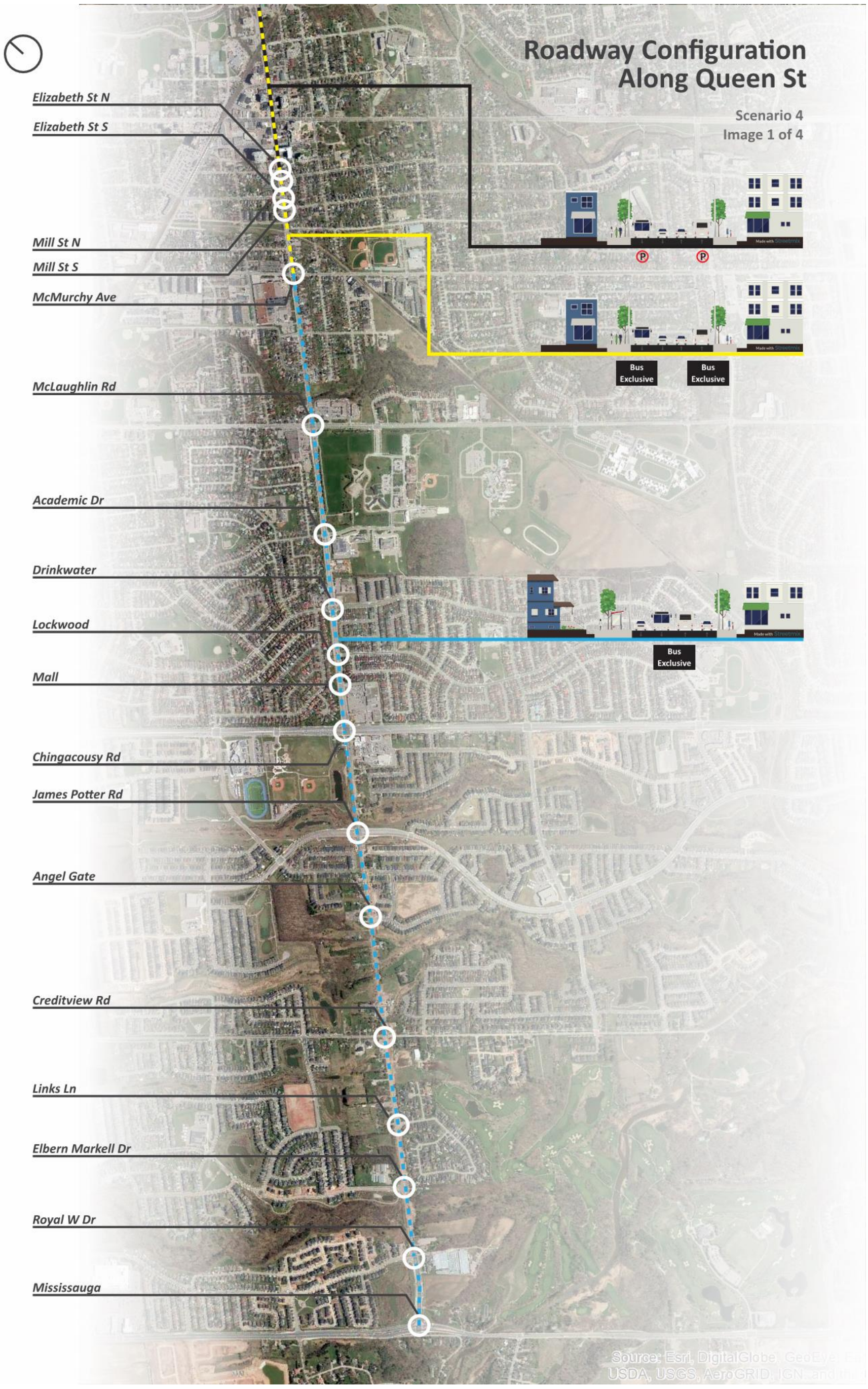


Appendix 1B
Queen Street-Highway 7 BRT – Initial Business Case
Roadway Configuration
Scenario 4

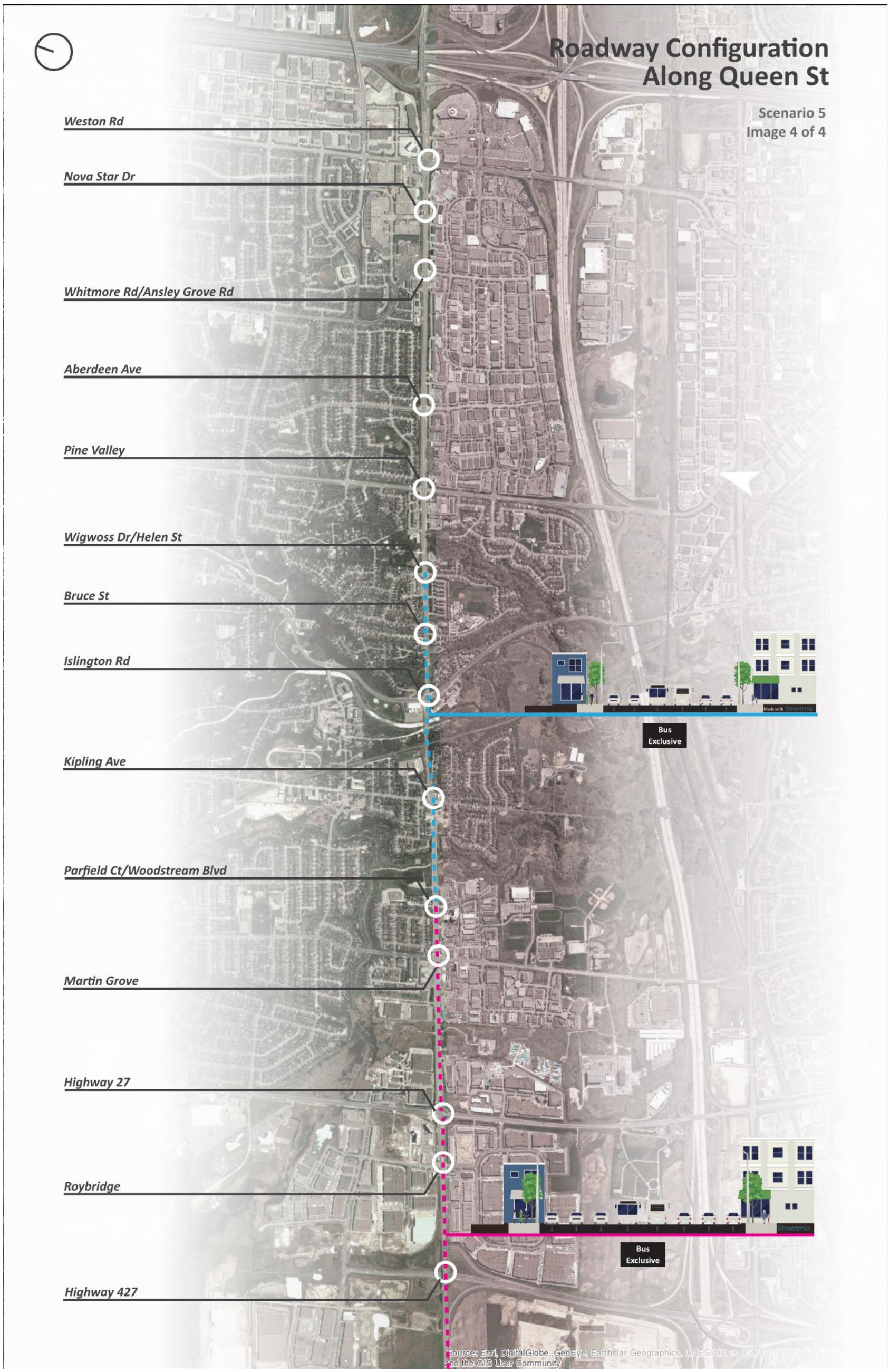

Roadway Configuration
Along Queen St
Scenario 4
Image 4 of 4
Weston Rd
Nova Star Dr
Whitmore Rd/Ansley Grove Rd
Aberdeen Ave
Pine Valley
Wigwoss Dr/Helen St
Bruce St
Islington Rd
Kipling Ave
Parfield Ct/Woodstream Blvd
Martin Grove
Highway 27
Roybridge
Highway 427
Bus
Exclusive
Bus
Exclusive
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS

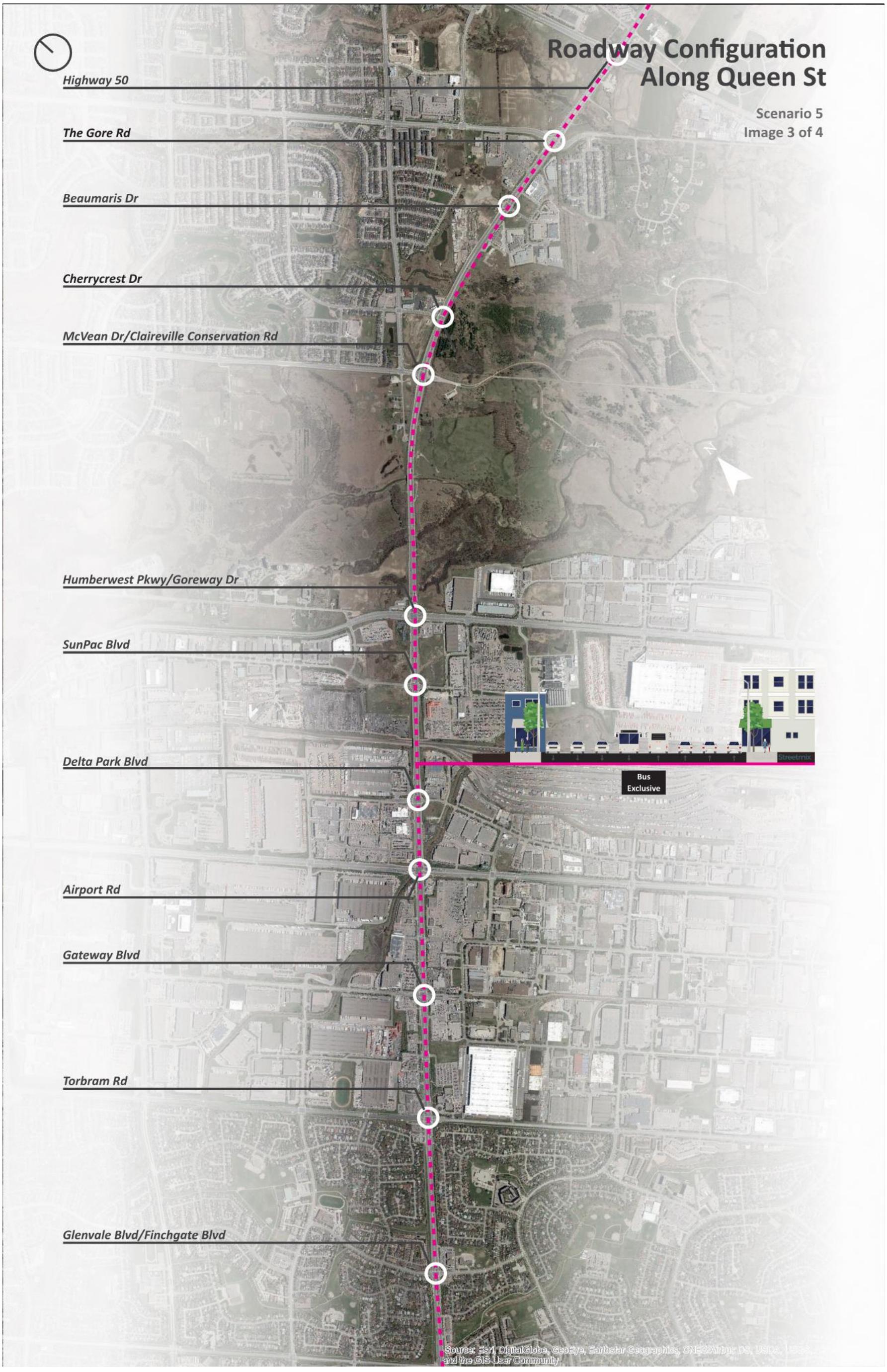

Roadway Configuration
Along Queen St
Scenario 4
Image 3 of 4
Highway 50
The Gore Rd
Beaumaris Dr
Cherrycrest Dr
McVean Dr/Claireville Conservation Rd
Bus
Exclusive
Humberwest Pkwy/Goreway Dr
SunPac Blvd
Delta Park Blvd
Airport Rd
Gateway Blvd
Torbram Rd
Glenvale Blvd/Finchgate Blvd
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community


Roadway Configuration
Along Queen St
Scenario 4
Image 2 of 4
Bramalea Rd
Central Park Dr
Dixie Rd
Laurelcrest St
Highway 410
Rutherford Rd
Hansen Ave
Kennedy Rd
Beech St
Trueman St
Centre St
Chapel St
Bus
Exclusive
Bus
Exclusive
Made with Streetmix
Source: Esri, DigitalGlobe, GeoEye, USDA, USGS, AeroGRID, IGN


Roadway Configuration
Along Queen St
Scenario 4
Image 1 of 4
Elizabeth St N
Elizabeth St S
Mill St N
Mill St S
McMurchy Ave
McLaughlin Rd
Academic Dr
Drinkwater
Lockwood
Mall
Chingacousy Rd
James Potter Rd
Angel Gate
Creditview Rd
Links Ln
Elbern Markell Dr
Royal W Dr
Mississauga
Bus Exclusive
Bus Exclusive
Bus Exclusive
Source: Esri, DigitalGlobe, GeoEye, Ea
USDA, USGS, AeroGRID, IGN, and th

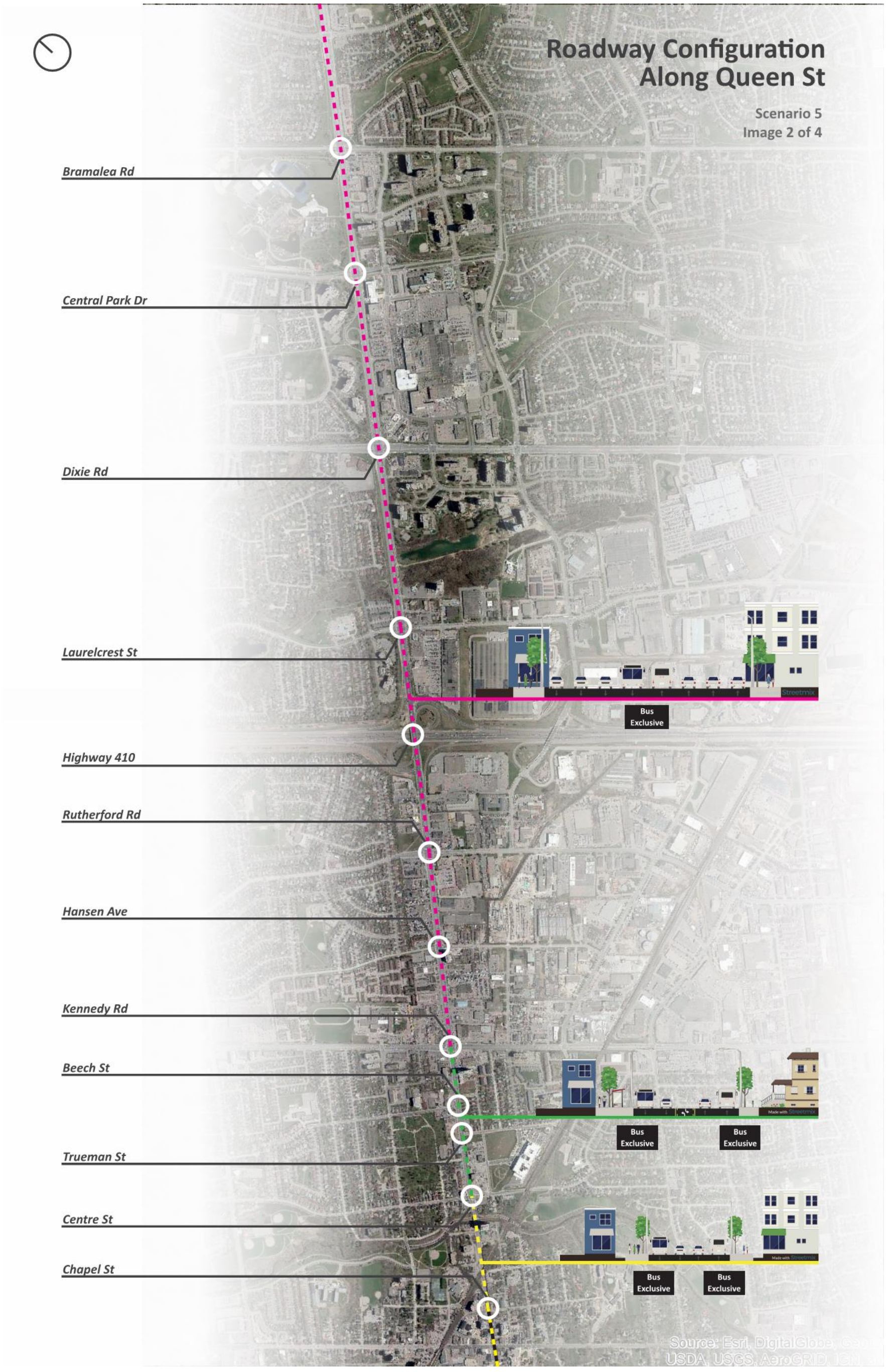
Appendix 1C
Queen Street-Highway 7 BRT – Initial Business Case
Roadway Configuration
Scenario 5

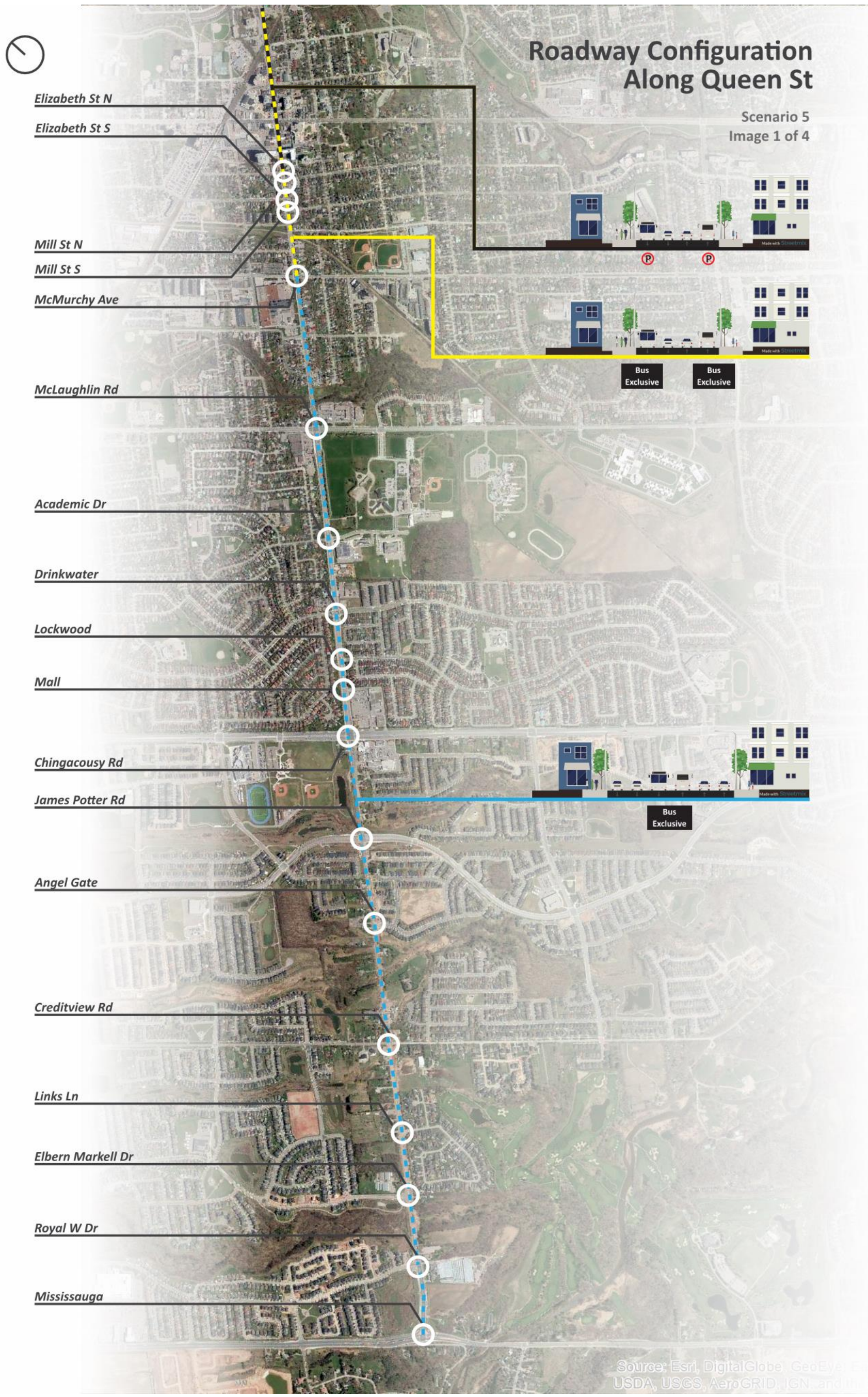

Roadway Configuration
Along Queen St
Scenario 5
Image 4 of 4
Weston Rd
Nova Star Dr
Whitmore Rd/Ansley Grove Rd
Aberdeen Ave
Pine Valley
Wigwoss Dr/Helen St
Bruce St
Islington Rd
Bus
Exclusive
Kipling Ave
Parfield Ct/Woodstream Blvd
Martin Grove
Highway 27
Roybridge
Bus
Exclusive
Highway 427
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, and the GIS User Community


Roadway Configuration Along Queen St
Scenario 5
Image 3 of 4
Highway 50
The Gore Rd
Beaumaris Dr
Cherrycrest Dr
McVean Dr/Claireville Conservation Rd
Humberwest Pkwy/Goreway Dr
SunPac Blvd
Delta Park Blvd
Airport Rd
Gateway Blvd
Torbram Rd
Glenvale Blvd/Finchgate Blvd
Bus Exclusive
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, and the GIS User Community

Roadway Configuration Along Queen St

Scenario 5
Image 2 of 4




Roadway Configuration Along Queen St
Scenario 5
Image 1 of 4
Elizabeth St N
Elizabeth St S
Mill St N
Mill St S
McMurchy Ave
McLaughlin Rd
Academic Dr
Drinkwater
Lockwood
Mall
Chingacousy Rd
James Potter Rd
Angel Gate
Creditview Rd
Links Ln
Elbern Markell Dr
Royal W Dr
Mississauga
Bus Exclusive
Bus Exclusive
Bus Exclusive
Source: Esri, DigitalGlobe, GeoEye, Ea
USDA, USGS, AeroGRID, IGN, and the

Scenario 4: Constrained corridor segments

	ROAD SEGMENT	SEGMENT LENGTH (M)	INFRASTRUCTURE CONSTRAINTS	CONFIGURATION
Brampton	MISSISSAUGA RD TO CHINGACOUSY RD	2,710	Bridge over drain crossing (east of James Porter Rd)	Bus exclusive (1 veh lane per direction)
Brampton	CHINGACOUSY RD TO MCMURCHY AVE	2,070	Bridge over creek (east of McLaughlin Rd)	Bus exclusive (1 veh lane per direction)
Brampton	FLETCHERS CREEK	24	Bridge over Fletchers Creek	Bus exclusive (1 veh lane per direction)
Brampton / Downtown Brampton	MCMURCHY AVE TO ELIZABETH ST	24	Level rail track crossing at Elliot Street	Bus exclusive (1 veh lane per direction)
Brampton / Downtown Brampton	ELIZABETH ST TO CHAPEL ST	540	Downtown Brampton / Building lines along sidewalks.	Bus shared with traffic or Bus exclusive (1 veh lane per direction) if parking is removed
Brampton	CHAPEL ST TO CENTRE ST	525	Rail corridor underpass, Etobicoke Bridge over creek	Bus exclusive (1 veh lane per direction)
Brampton	CROSSING OF HIGHWAY 410	225	Highway overpass	Bus exclusive (2 veh lane per direction)
Brampton	CROSSING OF SPRING CREEK	23	Bridge over Spring Creek	Bus exclusive (2 veh lanes per direction)
	CROSSING OF DRAIN 2 IN CLAIREVILLE CONSERVATION AREA TO HIGHWAY 427 (ROAD 99)	1380		Bus exclusive (2 veh lanes per direction)
	KIPLING AV TO CROSSING OF RAIL TRACKS	340		Bus exclusive (1 veh lane per direction)
	CROSSING OF RAIL TRACKS TO HUMBER RIVER CROSSING	75		Bus exclusive (1 veh lane per direction)
	HUMBER RIVER CROSSING TO ISLINGTON AVE	115	Bridge over Humber River	Bus exclusive (1 veh lane per direction)

Scenario 5: Constrained corridor segments

	ROAD SEGMENT	SEGMENT LENGTH (M)	INFRA-STRUCTURE CONSTRAINTS	CONFIGURATION
Brampton	MISSISSAUGA RD TO CHINGUACOUSY RD	2710	Bridge over drain crossing (east of James Porter Rd)	Bus exclusive (2 veh lanes per direction)
Brampton	CHINGUACOUSY RD TO MCMURCHY AVE	2,070	Bridge over creek (east of McLaughlin Rd)	Bus exclusive (2 veh lanes per direction)
Brampton	FLETCHERS CREEK	24	Bridge over Fletchers Creek	Bus exclusive (2 veh lanes per direction)
Brampton, Downtown Brampton	MCMURCHY AVE TO ELIZABETH ST	320	Level rail track crossing at Elliot Street	Bus exclusive (2 veh lanes per direction)
Brampton, Downtown Brampton	ELIZABETH ST TO CHAPEL ST	540	Downtown Brampton / Building lines along sidewalks.	Bus shared with traffic or Bus exclusive (1 veh lane per direction) if parking is removed
Brampton, Downtown Brampton	CHAPEL ST TO CENTRE ST	525	Rail corridor underpass, Etobicoke Bridge over creek	Bus exclusive (2 veh lane per direction)
Brampton	KENNEDY ROAD TO HIGHWAY 410	1,195		Bus exclusive (3 veh lane per direction)
Brampton	CROSSING OF HIGHWAY 410	225	Highway overpass	Bus exclusive (3 veh lane per direction)
Brampton	CROSSING OF SPRING CREEK	23	Bridge over Spring Creek	Bus exclusive (3 veh lanes per direction)
Brampton	CROSSING OF BRAMALEA CITY CENTER DRIVE	28	Drive overpass	Bus exclusive (3 veh lanes per direction)
Brampton	CROSSING OF AIRPORT ROAD INTERSECTION CULVERT	90	Culvert under intersection	Bus exclusive (3 veh lanes per direction)
Brampton	CROSSING OF CN RAIL TRACKS	200	Rail corridor overpass	Bus exclusive (3 veh lane per direction)
	CROSSING OF RIVER IN CLAIREVILLE CONSERVATION AREA	69	Bridge over river	Bus exclusive (3 veh lane per direction)
	CROSSING OF DRAIN 1 IN CLAIREVILLE CONSERVATION AREA	10	Culvert over drain	Bus exclusive (3 veh lane per direction)
	CROSSING OF DRAIN 2 IN CLAIREVILLE CONSERVATION AREA	20	Culvert over drain	Bus exclusive (3 veh lane per direction)
	CROSSING OF DRAIN 2 IN CLAIREVILLE CONSERVATION AREA TO HIGHWAY 427 (ROAD 99)	1,380	Rail corridor underpass, Etobicoke Bridge over creek	Bus exclusive (3 veh lanes per direction)
	CROSSING OF HIGHWAY 427 (ROAD 99)	300	Bridge over highway	Bus exclusive (3 veh lanes per direction)
	HIGHWAY 427 (ROAD 99) TO HIGHWAY 27	940		Bus exclusive (3 veh lanes per direction)
	HIGHWAY 27 TO WOODSTREAM BLVD	1360		Bus exclusive (3 veh lanes per direction)
	WOODSTREAM BLVD TO KIPLING AV	700	Bridge over creek	
	Bus exclusive (2 veh lanes per direction + TWLTL) KIPLING AV TO CROSSING OF RAIL TRACKS	340		Bus exclusive (2 veh lane per direction)
	CROSSING OF RAIL TRACKS	75	Rail corridor underpass	Bus exclusive (2 veh lanes per direction)
	CROSSING OF RAIL TRACKS TO HUMBER RIVER CROSSING	75		Bus exclusive (2 veh lanes per direction)
	HUMBER RIVER CROSSING	75	Bridge over Humber River	Bus exclusive (2 veh lanes per direction)
	HUMBER RIVER CROSSING TO ISLINGTON AVE	115		Bus exclusive (2 veh lane per direction)
	ISLINGTON AVE TO HELEN STREET	810		Bus exclusive (2 veh lane per direction + TWLTL)

Brampton Queen Street – York Region Highway 7 BRT Initial Business Case

October 2020

METROLINX

Brampton Queen Street – York Region Highway 7 BRT Initial Business Case

October 2020

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Executive Summary

The Need for BRT

One of the key strategies of the 2041 Regional Transportation Plan is the implementation of the Frequent Rapid Transit Network (FRTN); establishing rapid transit on a number of key corridors across the Greater Toronto and Hamilton Area (GTHA). Included in the FRTN and also identified as Priority In-Development projects are bus rapid transit (BRT) projects along Queen Street in the City of Brampton and Highway 7 in York Region, connecting to the existing Viva Network.

There is a demonstrated need to provide rapid transit connections within the City of Brampton and through to York Region to meet current and projected demand, while supporting a shift to more sustainable modes of transport. As a growing city in Canada[1] and home to major industrial and employment lands, Brampton plays a unique role in the GTHA. Brampton is also a young city with many university and college students, and many of these commuters rely on transit to access key destinations.

To support its large employment base and growing population, the City of Brampton, Brampton Transit, Region of Peel, York Region, and Metrolinx have identified bus rapid transit (BRT) along the Queen Street – Highway 7 Corridor as a core component of the FRTN. Like many important corridors in the region, the Queen Street – Highway 7 Corridor has seen increased levels of residential intensification and mixed-use development. The Queen Street – Highway 7 Corridor is a crucial transportation corridor connecting people through the cities of Brampton and Vaughan, to and from key transportation generators such as York University, Downtown Brampton, and Downtown Toronto namely by the TTC subway Line 1 at Vaughan Metropolitan Centre station. Bus rapid transit has a proven track record in the region and the future Queen Street – Highway 7 BRT will build on this by integrating with the existing York Region Transit (YRT) Viva rapidway network on Highway 7. This corridor will connect communities and provide a link between Brampton and Vaughan to support long term growth and development.

The Brampton Queen Street – York Region Highway 7 BRT Planning Study and Initial Business Case (IBC)

This IBC defines three (3) transit service concept options and three (3) infrastructure options for the Queen Street – Highway 7 BRT. Figure 1 illustrates the approach used to develop the IBC, in conjunction with the Metrolinx Business Case Framework.

The transit service concept options were evaluated with the GGHM_v4 model which is used by Metrolinx to evaluate business cases, and a preferred option was used to inform the evaluation of the infrastructure options according to the framework, including the Strategic, Economic, Financial, and Deliverability and Operations cases. All options that were considered provided different levels of increased transit service and supportive infrastructure. The IBC recommends a preferred service option and dedicated bus infrastructure to support a BRT corridor moving into the Preliminary Design Business Case phase.

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[1] Statistics Canada 2011 Census of Population. Retrieved from https://www.brampton.ca/en/City-Hall/Pages/About-Brampton.aspx.

IBC steps including scenario creation and evaluation - Brampton Queen St-Hwy 7 York BRT corridor

A Transportation portrait - actual (2016) and future (2041) & service goals

↓

B Define service scenarios (3)

↓

C **EVALUATION 1:** Determine best adequate service definition scenario

↓

D Define infrastructure scenarios (3)

↓

E **EVALUATION 2:** Business Case - BRT scenario evaluation

↓

F Recommendation of preferred scenario

Figure 1: IBC steps through to recommendation of a preferred scenario

Transit Services options

The transit service options were defined in collaboration with the project team, in order to compare the benefits of different transit service levels and routes to support a future network. The goals of each service option are:

- To provide increased efficiency of transit operations including speed, reliability and capacity;
- To ensure a quality user experience with seamless connections and good comfort; and
- To support and increase urban development and density.

Service options evaluated transit demand, accessibility, impact on mode share (ability to increase the proportion of travel by transit), impact on auto travel, and transit level of service. The service options are numbered as follows in the proceeding report:

- Option 1: Single main BRT trunk route
- Option 2: Two main BRT trunk routes
- Option 3: Two main BRT trunk routes and Priority Bus routes

Based on the evaluation, the recommended service option is a single main BRT trunk route plus the addition of the feeder priority routes, a combination of service options 1 and 3. The analysis

indicates that this recommended service option will have the highest number of transit boardings while increasing transit accessibility in general, meaning more people will have convenient access to a sustainable mode of transportation. The single main BRT trunk route is preferred over splitting the service into two main routes as the transit demand analysis suggests that it will have higher boardings. The addition of feeder priority routes is preferred as it makes considerable improvements to transit accessibility. Table 1 shows a summary of the evaluation of transit service definition.

Table 1: Transit service definition evaluation summary

CRITERIA	KEY FINDINGS
TRANSIT DEMAND	There is higher transit demand with BRT across all service options. However, splitting the main BRT route into two sections will impact transit demand (resulting in a reduction in demand)
TRANSIT ACCESSIBILITY	Feeder routes (as modelled in Option 3) make a significant improvement for access to employment
IMPACT ON MODE SHARE	Service options 1 and 3 result in increases in transit mode share across the corridor
IMPACT ON AUTO TRAVEL	Lane reductions suggest there is capacity on the local network across all scenarios for potential displaced traffic as a result of the removal of existing traffic capacity on Queen St. However limited analysis has been completed on this and it should be further analyzed in the preliminary design phase to understand the full impacts prior to making a determination on lane configuration.
TRANSIT LEVEL OF SERVICE	Service option 3 has the highest increase in transit VKTs due to the feeder routes

This service concept was used to evaluate the different infrastructure scenarios against a Business As Usual scenario (BAU) in 2041.

Infrastructure Scenarios

One of the many benefits of BRT systems is their flexibility to multiple environments where infrastructure and right of way constraints are varied along the length of the corridor, as with the Queen Street – Highway 7 Corridor. In general, there are two operating options for BRT systems: centre median or curbside; with the option to combine these two along the length of a corridor and create a hybrid system. Centre median operation is generally preferred where possible, as it typically offers the best reliability for transit services, and thus shorter travel times for customers. The infrastructure scenarios are numbered as follows in the proceeding report:

- Option 4: Centre median operation with conversion of one general purpose traffic lane in each direction across the corridor
- Option 5: Centre median operation with the addition of a transit lane in each direction across the corridor; except in downtown Brampton where conversion of one general purpose traffic lane in each direction is applied

- Option 6: Hybrid operation of centre median BRT on the majority of the corridor, but with buses operating in mixed traffic conditions for constrained portions (downtown Brampton, highway crossings, rail track crossings and segment between Kipling and Islington Ave). Where there is median lanes proposed, this option assumed widening of one transit lane in each direction.

This IBC has evaluated three options for BRT infrastructure along Queen St and Highway 7 with a preferred future transit service scenario. Both Options 4 and 5 provide maximum transit priority across the corridor, while Option 6 performs lower due to buses in mixed traffic along sections of the corridor. It is also recognized that prior to making a determination on whether to convert existing traffic lanes over to BRT exclusive lanes, or widen the corridor to accommodate BRT lanes; more detailed design and analysis, including understanding the implications on goods movement through the corridor, as well as extensive community and stakeholder consultation is required. This analysis should be completed as part of the future Preliminary Design Business Case and Preliminary Design phases.

Summary of Business Case Evaluation

The **Strategic Case** indicates that the Queen Street – Highway 7 BRT performs well with respect to providing increased transportation choice; shaping growth in a sustainable manner and providing the means of reducing emissions from auto travel; and connecting commuters and students to jobs and education. Options 4, 5, and 6 are compared against the 2041 BAU scenario in Table 3. A legend for the summary tables is included as Table 2. The quantitative evaluation criteria are also illustrated by the applicable numbers.

Table 2: Legend for performance ranking of scenarios

Color legend for performances (ranking):

Low performance
Medium performance - low
Medium performance - high
High performance

Table 3: Strategic Case Summary of Scenarios 4, 5 and 6, IBC Queen Street - Highway 7 BRT

Criteria		2041 BAU	Scenario 4	Scenario 5	Scenario 6
Strategic Case	Transit ridership forecasts (AM peak hour boardings)	13,696	**18,813**	**18,734**	**15,110**
	Transit user experience (average travel time [mins] between major O-D pairs)	117	**107**	**108**	**110**
	Mobility choice (transit mode share [%] in study area)	6.85	**7.14**	**7.18**	**7.05**
	Shaping growth				
	Public health				
	Environmental health and air quality				
	Safety & connectivity				
	Active transportation benefits				
	Community & heritage				
	Accessibility to jobs				
	Catalyzing urban land development				
	Innovation & prosperity				
	Energy use & efficiency				
	Protection of natural environment				
	Summary				

The **Financial Case** evaluation shows that Option 4 has the lowest capital costs predominately due to the conversion of existing traffic lanes, rather than widening of the corridor. This evaluation is summarized in Table 4.

Table 4: Financial case summary of Scenarios 4, 5, and 6 (60-year appraisal period, $000s present value)

IMPACT	SCENARIO 4	SCENARIO 5	SCENARIO 6
CAPITAL COST	$94,900	$491,400	$151,400
OPERATING & MAINTENANCE COSTS	$420,100	$374,500	$359,400
REHAB COST	$80,200	$80,200	$80,200
PRESENT VALUE COSTS (PVC)	$595,200	$946,100	$590,900
INCREMENTAL REVENUE	$213,900	$245,000	$173,400
NET PRESENT VALUE	-$381,400	-$701,200	-$417,500

The **Economic Case** evaluation shows that Options 4 and 5 generate more benefits than Option 6, primarily due to the increased transit priority across the entire corridor under these two options. The Benefit Cost Ratio for all options is above 1 and all Options perform better than the BAU. This evaluation is summarized in Table 5.

Table 5: Economic Case Summary (60-year appraisal period, $000s present value)

IMPACT	SCENARIO 4	SCENARIO 5	SCENARIO 6
TRANSPORTATION USER BENEFITS	$1,613,400	$2,065,200	$1,426,600
EXTERNAL BENEFITS	$146,600	$125,000	$44,200
PRESENT VALUE BENEFITS (PVB)	$1,957,200	$2,415,900	$1,630,700
CAPITAL COST	$94,600	$489,800	$150,900
OPERATING & MAINTENANCE COSTS	$412,300	$367,600	$352,700
REHAB COST	$78,400	$78,400	$78,400
PRESENT VALUE COSTS (PVC)	$585,400	$935,800	$582,000
NET PRESENT VALUE (PVB – PVC)	$1,371,900	$1,480,100	$1,048,700
BENEFIT COST RATIO (PVB / PVC)	3.3	2.6	2.8

The **Deliverability and Operations Case** evaluation shows varying levels of possible impacts and constraints across all the options compared to the BAU in Table 6. This analysis is very preliminary as options for deliverability and operation of the corridor will be determined as the project progresses into the preliminary design phase. The table highlights that there are likely more significant physical impacts with widening the corridor to incorporate additional transit lanes (Options 5 and 6) rather than converting existing general purpose lanes to transit exclusive lanes (Option 4).

Table 6: Deliverability and Operation Case Summary of Options 4, 5, and 6, IBC Queen Street – Highway 7 BRT

Criteria		2041 BAU	Scenario 4	Scenario 5	Scenario 6
Deliverability and Operations Case	Project delivery				
	Operations and Maintenance Plan				
	Procurement				
	Constraints				
	Summary				

Table 7 summarizes the IBC evaluation for the Brampton Queen Street – York Region Highway 7 BRT project.

Table 7: Initial Business Case Summary of Option 4, 5, and 6 for the Queen Street – Highway 7 BRT project

Initial Business Case Element	2041 BAU	Scenario 4	Scenario 5	Scenario 6
Strategic Case				
Financial Case				
Economic Case				
Deliverability and Operations Case				
Summary				

Next Steps

The IBC identifies several optimization strategies to be considered during the Preliminary Design Business Case for the Queen Street – Highway 7 BRT. The final solution will be defined through further analysis of the impacts, costs and benefits; some of which are outlined below:

- Transit service and operations:
  - Refinements of transit routes that feed the BRT corridor based on further analysis of overall accessibility to major origin and destination points including York University, TTC Line 1 and Pearson Airport;
  - Define more detailed levels of transit service for other time periods;
  - Ensuring the design is compatible with alternative fuels technology as it develops and is implemented by operators; and
  - Further evaluation of fleet, maintenance, and facility needs for the operation of transit services.
- Infrastructure needs and design:
  - Continue to the preliminary design phase to ensure that the final design is achieving maximum benefit while remaining sensitive to the local context;
  - Undertake detailed impacts including traffic studies and extensive consultation on options under consideration;
  - An incremental approach to implementation of the ultimate solution could be considered to provide appropriate transit priority where required;
  - Define the bus terminal facilities required or changes to existing facilities to be implemented in order to support the BRT corridor and additional service at key locations such as Brampton GO Station and Bramalea Transit Terminal; and
  - Identify and define other transit priority measures to be implemented on adjacent roads to the BRT corridor, if required.

1

Introduction

Decision History

One of the key strategies of Metrolinx's 2008 Regional Transportation Plan ("The Big Move")[2] was to establish rapid transit on a number of suburban arterial corridors in the GTHA. This includes Highway 7 through York Region, which becomes Queen Street in Brampton and serves as one of the northern GTHA's principal corridors for the movement of goods and people. The corridor is increasingly becoming a destination for employment and services for those within and outside the region. The strategy to establish rapid transit corridors led to the delivery of the Highway 7 bus rapid transit (BRT) system through York Region which forms part of York Region Transit's (YRT) Viva rapidway network, offering high frequency transit service in a rapidly growing region.

The 2041 RTP, released in 2018, built on the successes of The Big Move and aims to provide even more people with access to reliable rapid transit and accelerate mode shift to sustainable and active modes. One of the key strategies of the 2041 RTP is to continue the westward extension of the existing Highway 7 BRT infrastructure into Brampton.

Under the 2041 RTP, the Queen Street and Highway 7 West portions of BRT corridor are separate in-development projects. Given the continuous linear nature of the Queen Street – Highway 7 Corridor, ridership patterns, and importance of integration across transit agencies to better serve riders, the decision was made to combine the Queen St West Priority Bus, Queen Street and Highway 7 West BRT for study under the Brampton Queen Street – York Region Highway 7 BRT Planning Study and Initial Business Case. This will ensure the project reflects existing and future service planning and integration across transit systems as they develop. The completed viva rapidway along Highway 7 between Helen St and the Vaughn Metropolitan Centre, serves both YRT and Brampton Transit buses and Queen Street serves primarily Brampton Transit buses.

Currently, Metrolinx is working with the City of Brampton, Brampton Transit, Peel Region, York Region and the City of Vaughn to advance rapid transit along the Queen Street – Highway 7 Corridor, in the context of the existing Züm, Viva and YRT services. Using the Metrolinx Business Case framework to quantify and compare the benefits of alternative scenarios, this planning study and Initial Business Case aims to guide the Queen Street – Highway 7 BRT initiative toward an initial service and infrastructure concept that can be further refined in preliminary and detailed design, and eventually lead to construction.

Brampton Queen Street – York Region Highway 7 BRT Planning Study and Initial Business Case scope

The scope of this study is to develop and evaluate alternative approaches for introducing BRT infrastructure and service to the Queen Street – Highway 7 Corridor. Figure 2 shows the corridor study area.

The planning study involves proposing a bus network that respond to the existing and future travel needs of those who may use the corridor, identifying infrastructure changes to support the

[2] http://www.metrolinx.com/thebigmove/Docs/big_move/TheBigMove_020109.pdf

increased service (i.e. designated transit lanes), and comparing options to define the recommended future transit scenario on the corridor. Both transit service (bus routes, frequencies, stop locations) and infrastructure alternatives (roadway changes) are evaluated against a comprehensive analysis in terms of their impact on ridership, time savings, congestion, and reliability using Metrolinx's GGHM_v4 travel demand model.

The Initial Business Case is a framework for comparing scenarios and selecting a preferred alternative for further refinement and preliminary design. The objective is to identify a preferred scenario as a foundation for future planning, development and funding. The concept and design are to be further developed in the Preliminary Design Business Case and the Full Business Case, according to the Metrolinx Business Case Framework.

Figure 2: The Queen Street – Highway 7 Corridor study area extends from Mississauga Road in the West to Helen Street in the East, at the end of the extended Viva rapidway. This report is structured as follows:

- **Section 2: The Case for Change,** which provides a detailed assessment of the need for this project;
- **Section 3: Investment Options,** which outlines the service concept goals and the infrastructure scenarios developed to achieve these goals;
- **Section 4: Strategic Case,** which describes how the investment options can meet various strategic metrics in the Regional Transportation Plan;

- **Section 5: Economic Case,** which assesses the economic costs and benefits of each option;
- **Section 6: Financial Case,** which reviews the overall financial impact of each option;
- **Section 7: Deliverability and Operations Case,** which evaluates how the project can be implemented; and
- **Section 8: Business Case** Summary

2

The Case for Change

Planning Context

The 2041 RTP aims to provide even more people with access to reliable rapid transit throughout the region and accelerate mode shift to sustainable and active modes. One of the key strategies of the 2041 RTP is to continue the westward extension of the Highway 7 BRT into the City of Brampton and Region of Peel. The Highway 7 portion of the project within York Region is now complete, serving both YRT and Brampton Transit buses on the western section between the Vaughn Metropolitan Centre and Helen St, while Brampton Transit serves Queen Street in the City of Brampton.

Further, the Brampton 2040 Vision[3] identifies rapid transit on Queen Street East and highlights its potential as a 'transit spine' that will support the gradual redevelopment of the corridor.

The Queen Street – Highway 7 Corridor in Brampton has undergone a significant amount of change in recent years. As the region has grown and employment and housing opportunities have become geographically dispersed across the region, corridors have seen increased growth in both local and regional traffic, as well as new development. As corridors become more important in providing access between communities, so too has the importance in providing transit along these corridors increased, as a means of ensuring equitable access to housing, employment areas, and recreational opportunities.

Brampton Transit introduced Züm services along Queen St in 2010, as well as some BRT-Lite infrastructure including queue jump lanes, and upgrades to bus stops and facilities. This increased ridership and the corridor will be at capacity without additional transit priority provided in the future.

In addition, corridors themselves should be destinations, with a range of living, working, and recreational opportunities. This means providing pedestrian-scale and active transportation infrastructure, in light of the increased desire to provide transportation alternatives and achieve a sustainable mode split between vehicles, transit, and active modes.

A growing population in Brampton and surrounding municipalities is placing increased pressure on the transit and road networks. Therefore, the need for a business case defining the best transit solution on that corridor has been identified. Further, to support forecasted growth and increase the use of sustainable transportation modes, intensification along the Queen Street Corridor will be necessary to provide the convenient connectivity to transit that will drive increased ridership.

Project Study Area

The study area for the Queen Street – Highway 7 BRT is between Mississauga Road in Brampton and Helen Street in Vaughan (immediately west of Pine Valley Drive), as

[3] City of Brampton, 2018. "Living the Mosaic: Brampton 2040 Vision". <https://www.brampton.ca/EN/City-Hall/Documents/Brampton2040Vision/brampton2040Vision.pdf>

shown in Figure 2. The Queen Street Corridor in Brampton stretches from near the western boundary of the city at Mississauga Road to Highway 50 in the east, where the corridor enters the City of Vaughan as Highway 7 and continues east through Richmond Hill and Markham. The total length of the corridor through Brampton is approximately 18.5 kilometres. The length of the corridor through Vaughan to the terminus of the study area at Helen Street is approximately 5.5 kilometres, for a total study area length of approximately **24 kilometres.**

The corridor passes through a mix of neighbourhoods, commercial areas, and industrial employment lands. These include the Bramalea City Centre shopping mall and the area around Airport Rd. The corridor also passes through Downtown Brampton which maintains its historic character. In addition, the Claireville Conservation Area at the east end of the study area provides green space and recreational opportunities with convenient access to nearby residential neighbourhoods.

Corridor Portrait

Policy portrait

The corridor forms a key part of the FRTN, under the 2041 RTP and is also supported by City of Brampton's Vision 2040, Transportation Master Plan, and in-development Community Energy and Emissions Reduction Plan

Brampton Vision 2040 - Living the Mosaic

Vision 2040 is built around seven target vision statements. For transportation, the vision is that in 2040, Brampton will be a mosaic of safe, integrated transportation choices and new modes, contributing to civic sustainability and emphasizing walking, cycling, and transit. The vision further states that the primary direction for transportation planning in Brampton is providing travel choices as alternatives to the car and reclaiming road space for other activities. To that end, priorities in the civic transportation agenda will be: first walking, then cycling, transit, and goods movement, and then shared vehicles and private vehicles. BRT along the corridor is intended to provide the strongest impetus for mode change along the Queen Street corridor.

Two other aspects of Vision 2040 are supported by the BRT and the options under consideration within this IBC. The first is that it envisions a regional rapid transit network that is complete, with the full collaboration of Brampton, whose local network is filled out more fully and tied tightly to the regional system. The second is the clustering of buildings and activities to bring origins and destinations closer together and the mixing of uses to

foster links between living, jobs, and recreation, with this leading to shorter trips, fewer auto trips, more trips by transit, foot and bike, and more mixed-mode trips. The provision of BRT on Queen Street will support achievement of the second aspect by fostering intensification at select station stops (Major Transit Station Areas) along the corridor.

The options considered within this IBC also broadly support the development of Queen's Boulevard as envisioned in Vision 2040. This is to be a grand urban boulevard, stretching from the Etobicoke Creek to Highway 410, which is centred on a rapid transit spine and which includes wide sidewalks and protected bikeways.

Transportation Master Plan

Under the Transportation Master Plan, the mode share targets of 50% trips made by sustainable modes by 2041 with 20% of those being made by transit. The options considered under this IBC support the city in achieving these targets to varying degrees.

Community Energy and Emissions Reduction Plan

Work undertaken during the on-going development of the City's Community Energy and Emissions Reduction Plan has identified transportation as the largest source of greenhouse gas emissions and as a large consumer of energy (in the form of fossil fuels) in Brampton. Key to reducing these is a shift to transit and other sustainable modes of transportation and a decrease in average trip length.

Region of Peel's Long Range Transportation Plan 2019

The Region of Peels Travel Demand Forecasting model assumes that 6-lane portions of Queen Street under Regional jurisdiction remain 6-lanes into 2041. The Region has also adopted a 50% mode share target for travel by sustainable modes which has been adopted by the local municipalities.

Land use portrait

Land use along the Queen Street Corridor is varied but is generally characterized as residential in the western portion of the corridor, commercial through Downtown Brampton, and commercial/industrial east of downtown. South of the Queen Street Corridor, Brampton has some of the largest industrial lands in the GTHA. Throughout the

corridor, blocks are generally large and designed for vehicle travel, with more historical areas of the city near Downtown Brampton retaining more walkable characteristics including a denser road network and with intermixed zoning including commercial, residential, and institutional.

Regionally significant destinations include:

- **Downtown Brampton Urban Growth Centre,** from McLaughlin Road to Highway 410 and encompassing the Queen Street Corridor and portions of Main Street north of Queen Street;
- **Brampton GO Station** within Downtown Brampton; and
- **Bramalea City Centre** with a regional bus terminal.

The Highway 7 Corridor through Vaughan presents generally the same characteristics as the eastern Queen Street Corridor, with natural areas, industrial employment lands, commercial areas, and a mix of residential development east of Martin Grove Road. Some moderate residential intensification is occurring along the Highway 7 Corridor at Kipling Avenue and opposite the terminus of the existing York Region Transit Viva BRT service at Helen Street.

Regionally significant destinations on the Highway 7 Corridor include the **TTC Vaughan Metropolitan Centre (VMC) subway station** and **York University** on the southeast part of the corridor.

Socio-demographic portrait

Brampton is a young city with a rapidly growing population. Per the Statistics Canada 2016 Census:

- Brampton grew by nearly 70,000 residents between 2011 and 2016, **over triple the rate** of the Ontario provincial average.
- 20% of Brampton residents are aged 0-14 relative to 14% in the whole of Ontario. A similar proportion, 69%, are aged 15-64, and slightly fewer are aged 65+, at 11%. **The median age of the population is 36** while in Ontario it is 41.
- **Brampton has a high proportion of immigrants** from other nations, at 46%, and the same proportion of the population has a mother tongue other than English or French.
- **The average household size is larger** in Brampton than the Ontario average, with 3.5 members as opposed to 2.6.
- **Median income tends to be lower** in Brampton than elsewhere in Ontario, by approximately 10%. However, more residents in Brampton than the Ontario average have employment income, at 73% versus 71% for the entire province. Lower overall incomes may result in a higher proportion of income spent on housing costs relative to the Ontario average, with over 30% of households spending more than a third of their income on housing.

The largest employment sectors in Brampton according to the 2016 Census are manufacturing, transportation and warehousing, and retail trade. Given Brampton's significant industrial lands relative to other GTHA municipalities, this employment portrait

is to be expected. The higher proportion of people working in these sectors may also contribute to somewhat lower average incomes overall, as less of the labour force is employed in professional services and other similar higher-earning occupations. Major employers in Brampton include:

- Rogers Communications (communications services)
- Fiat Chrysler Automobiles Inc. (automotive manufacturing)
- Loblaw Companies Inc. (food and beverage)
- Canadian Tire Corp. (retail goods distribution)[4]

Large business parks, manufacturing and industrial areas, and suburban retail areas support these employers and others like them.

Given the residential and employment development patterns that have historically arisen in Brampton and the fact that many residents travel outside of the City for work, its commuting patterns are currently heavily biased in favour of private cars:

- 76% of Brampton residents drive to work and an additional 7% travel to work as a passenger in a car, relative to 72% and 6% respectively for all of Ontario.
- 14% of residents take transit to work compared to 15% for the province.
- Fewer residents than average walk or cycle to work, with less than 2% of Census respondents indicating this was their typical mode for commuting relative to a combined 6% for Ontario as a whole.

In neighbouring Vaughan, per the Statistics Canada 2016 Census:

- The population grew at a slightly faster rate than the Ontario average between 2011 and 2016.
- The median age of the population is 40, slightly above that of Brampton but lower than that of Ontario.
- Median household income is higher than the Ontario average by over $30,000.
- 78% of residents drive to work and another 6% travel to work as a passenger in a car, higher than in Ontario and in Brampton.
- 16% of residents take transit to work; one point higher than the province as a whole. Less than 1% of residents cycle to work.

Transportation portrait

Road, cycling, and pedestrian infrastructure

Road infrastructure along the Queen Street – Highway 7 Corridor is varied between Mississauga Road and Helen Street, but infrastructure is generally consistent with suburban arterial roads, particularly east of downtown Brampton. Pedestrian infrastructure is generally continuous along the corridor, with some buffer between the road and sidewalk. In eastern portions of the corridor, the south side sidewalk is paved asphalt while the north side is concrete and separated from the curb lane by an asphalt kilt strip. There is limited bicycle infrastructure along the corridor.

[4] http://www.brampton.ca/EN/Business/economic-development/Research-and-Data/Pages/Top-Employers.aspx

- Figure 3 shows the roadway configuration along Queen Street from Mississauga Road to Mill Street North.
- Figure 4 shows the roadway configuration along Queen Street from Chapel Street to Bramalea Road.
- Figure 5 shows the roadway configuration along Queen Street, Glenvale Boulevard to Highway 50.
- Figure 6 shows the roadway configuration along Queen Street/Highway 7 from Highway 427 to Weston Road.

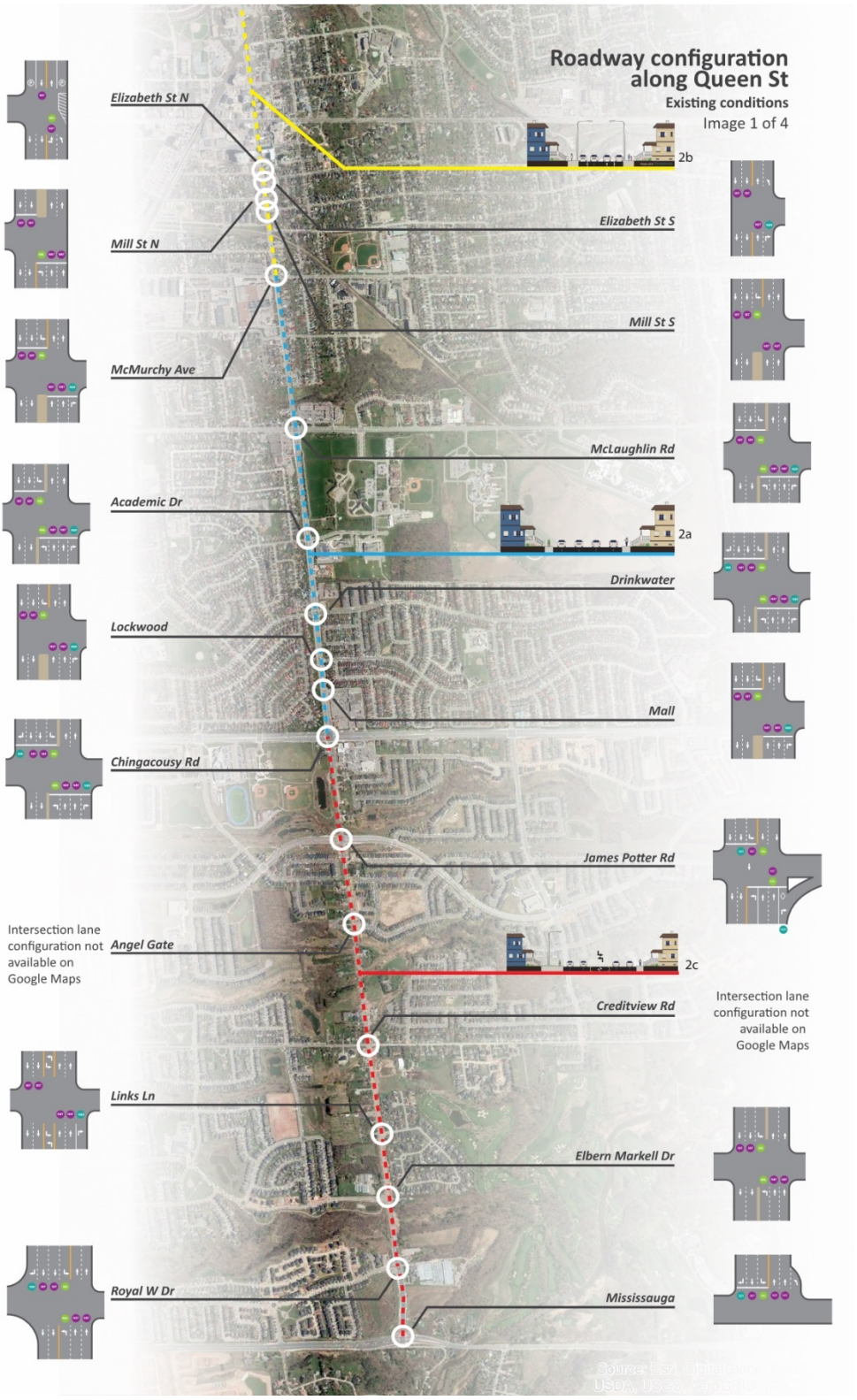

Figure 3: Roadway configuration along Queen Street, Mississauga Road to Mill Street North

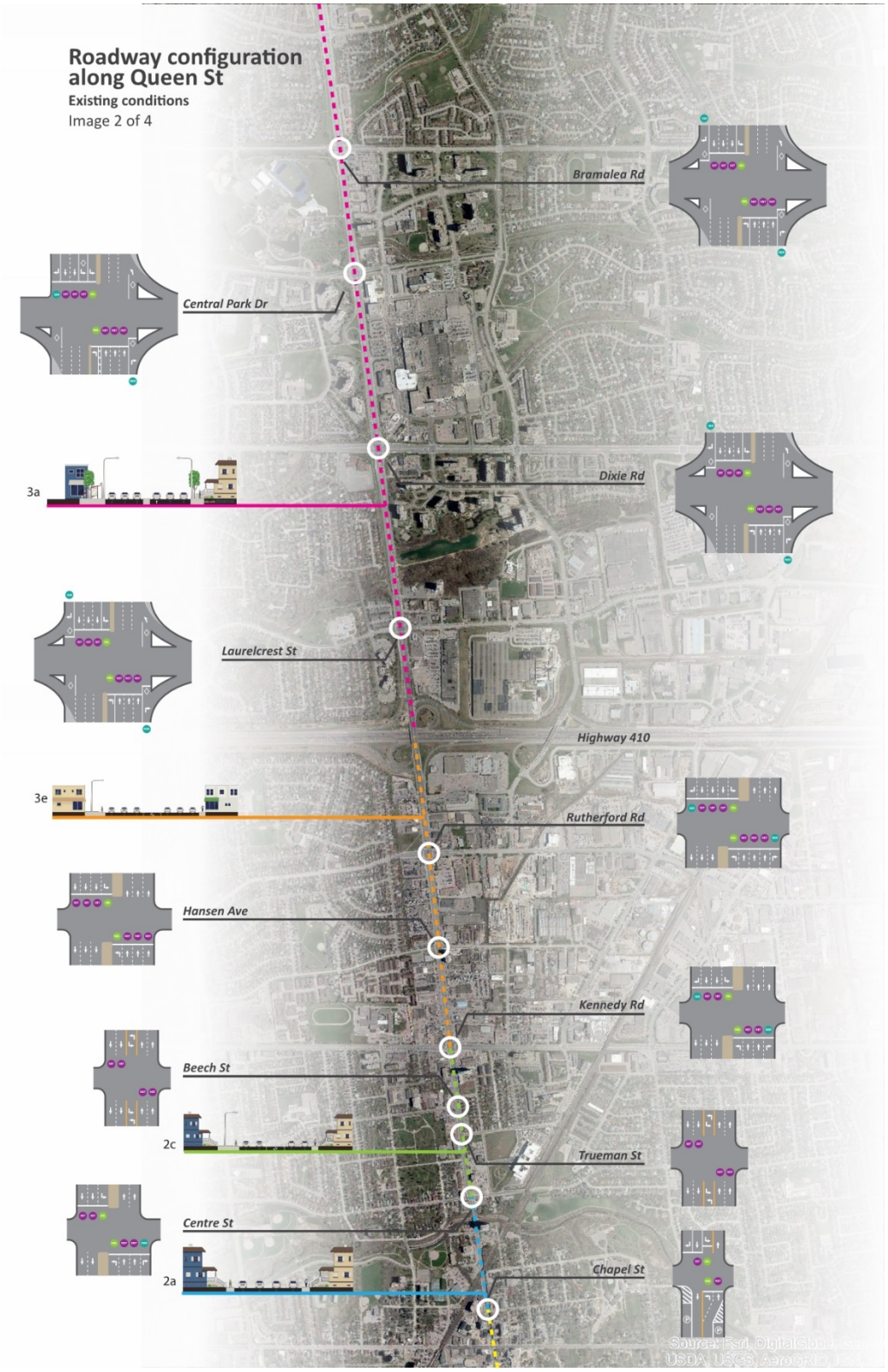

Figure 4: Roadway configuration along Queen Street, Chapel Street to Bramalea Road

Figure 5: Roadway configuration along Queen Street, Glenvale Boulevard to Highway 50

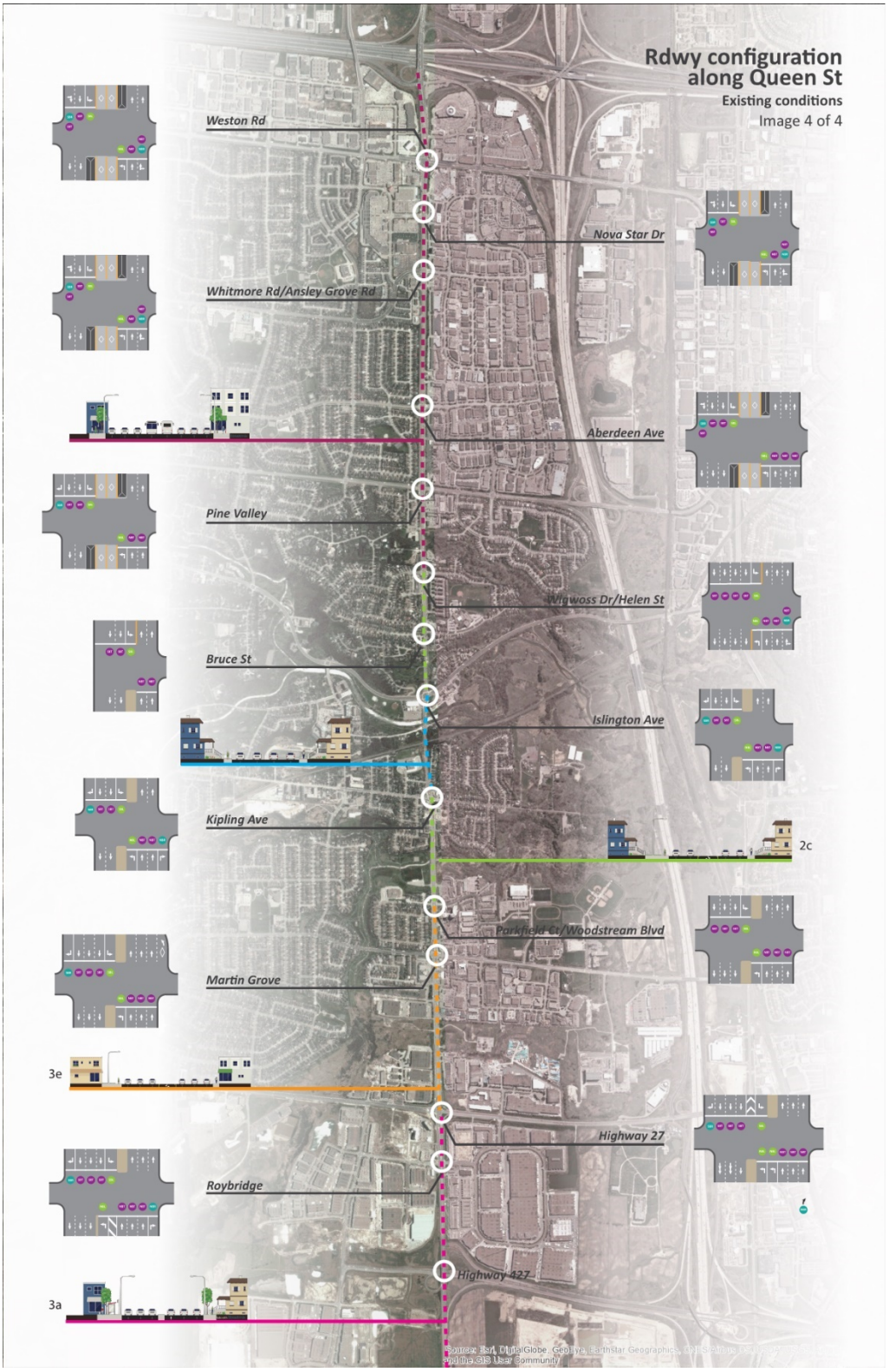

Figure 6: Roadway configuration along Queen Street/Highway 7, Highway 427 to Weston Road

Goods Movement

Queen Street between Hwy 410 and Hwy 50 is classified as a Goods Movement Corridor via Peel's Strategic Goods Movement Network. Medium and heavy trucks alone comprise about 8-12% of the total traffic on the corridor. There are also trucking movements to and from Highway 427 as well as across the Peel and York boundary at Highway 50. This presents unique challenges ensuring the efficient movement of all mode types across the corridor in the future, while ensuring priority for transit vehicles in the future.

Transit services and infrastructure

Existing transit service in the study area is provided by Brampton Transit and York Region Transit (YRT). Brampton Transit serves the Queen Street and Highway 7 Corridor and YRT serves the area immediately east of Highway 50. Services are mixed with both rapid bus (Züm/Viva) and standard service offered along the corridor. Both transit services connect to the Toronto Transit Commission (TTC) subway network at Vaughan Metropolitan Centre, the western terminus of Line 1 (Yonge-University-Spadina) which provides service to the downtown Toronto core. Züm services runs directly to York University via Queen St and Highway 407 which accounts for majority of the ridership along Queen St. Figure 7 illustrates the existing transit service along the Queen Street Corridor and Highway 7.

YRT's existing BRT service is provided through the Viva Rapid Transit network, a well-established service that entered operation in 2005 and has been continuously expanding since. The Viva BRT network currently has six routes with buses typically operating in the centre median. Some routes operate in curbside lanes. The overall Viva network stretches between Sheppard Avenue in north Toronto to the East Gwillimbury GO Station in Newmarket, a distance of over 35 kilometres, and from Martin Grove Rd in Vaughn to beyond Highway 48 at the eastern border of Markham, representing an approximately 40-kilometre east-west span. The peak period for transit ridership, according to observed boardings, is between 6:00 and 9:00 AM. The peak hour for transit ridership is between 7:00 and 8:00 AM.

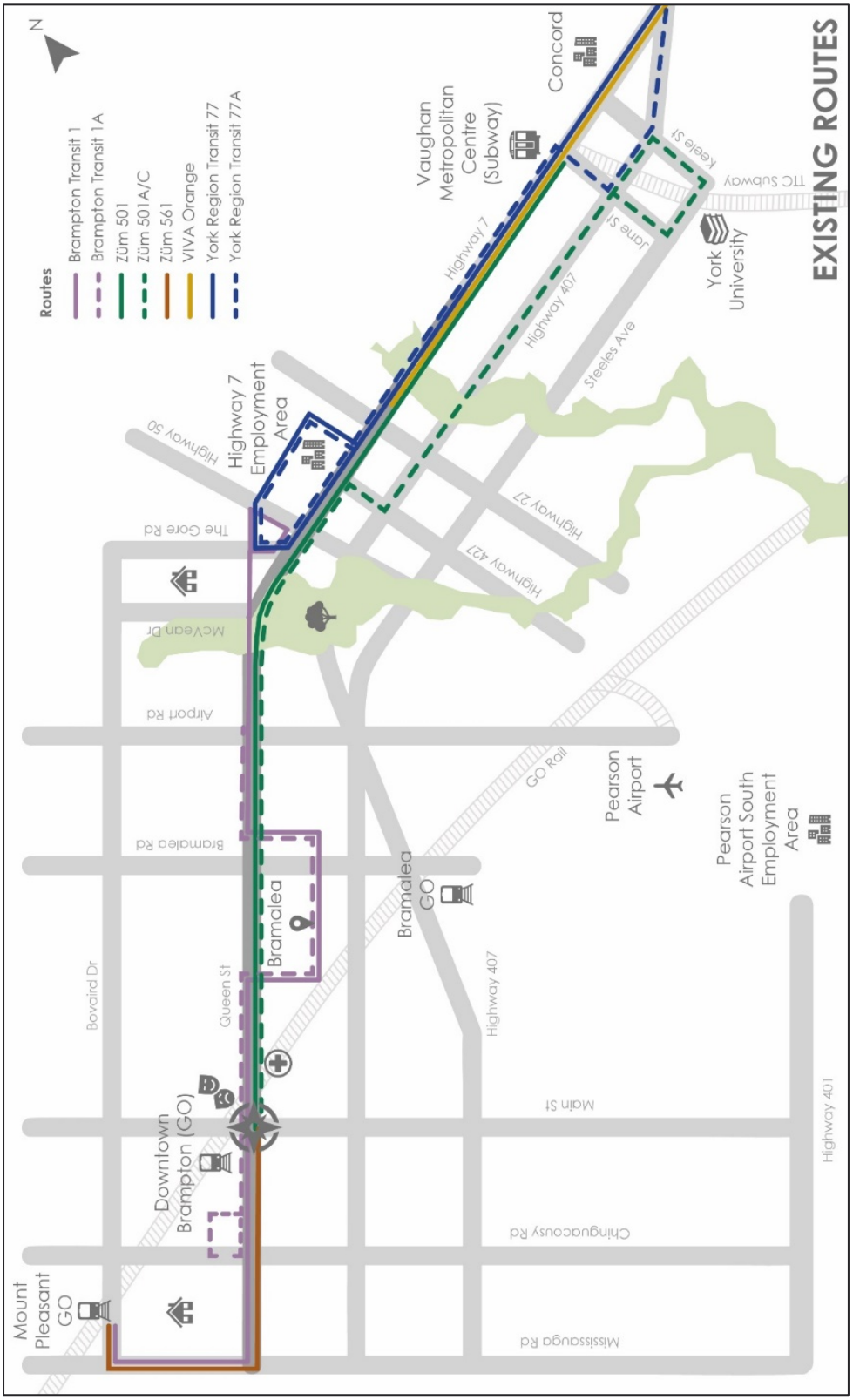

Figure 7: Transit service on Queen Street – Highway 7 Corridor, fall 2018

Where are people travelling?

The key destinations for Queen Street transit riders in the AM peak period include:

- York University, with over 50% of trips taken by students;
- Downtown Brampton and Bramalea City Centre;
- The Highway 7 area between Highway 50 and Helen Street;
- Vaughan Metropolitan Centre TTC station;
- Mississauga;
- Pearson Airport; and
- GO Stations (Mount Pleasant, Brampton, and Bramalea).

Few trips are to and from Toronto, including the downtown area, suggesting that the majority of corridor users remain within the immediate region.

Figures 7 and 8 illustrate main origins and destinations of trips using the Queen Street – Highway 7 Corridor according to 2017 TTS data in AM peak periods.

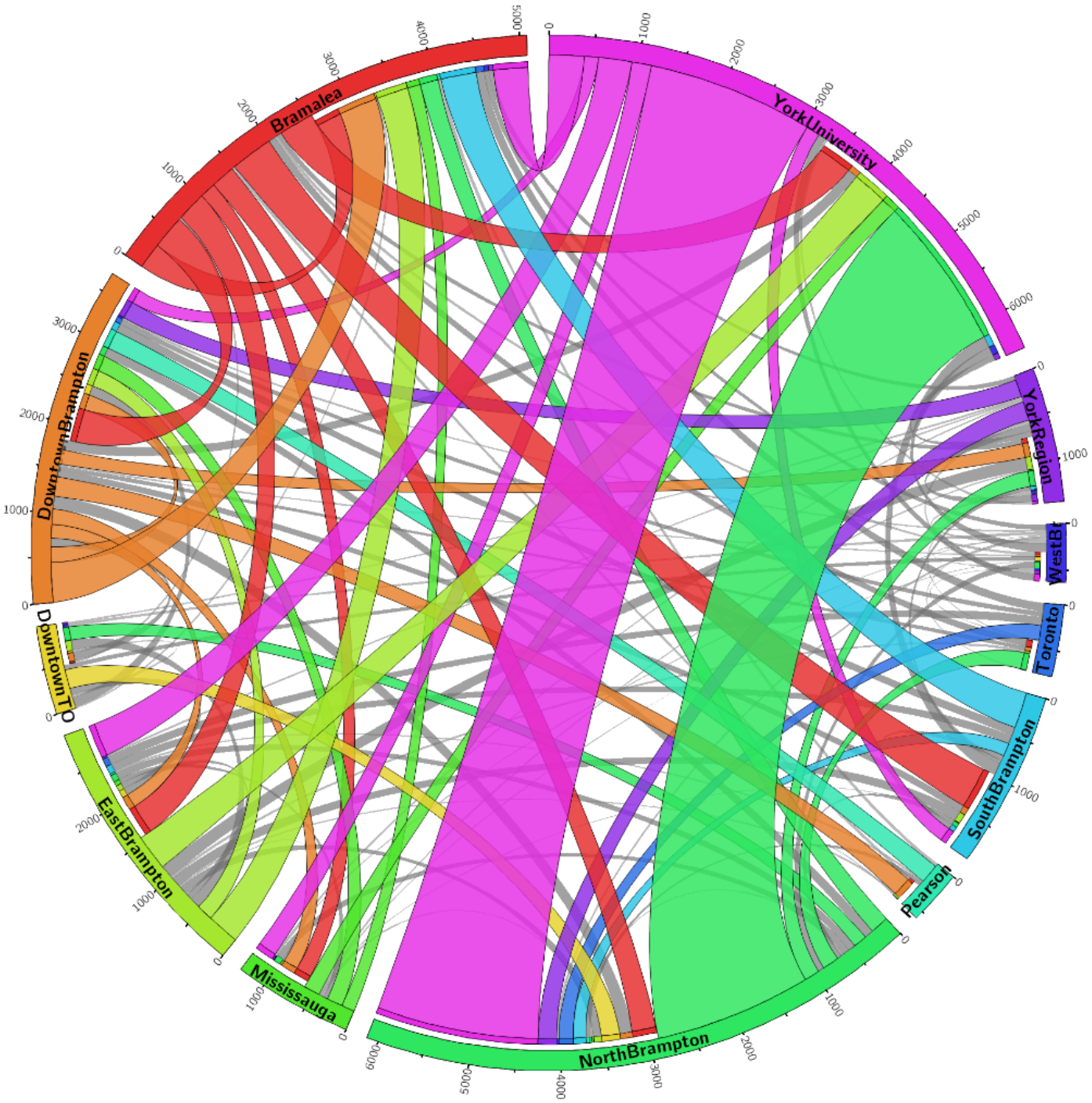

Figure 8: Key regional travel origins and destinations (Source: TTS data of all trips using Queen Street Corridor)

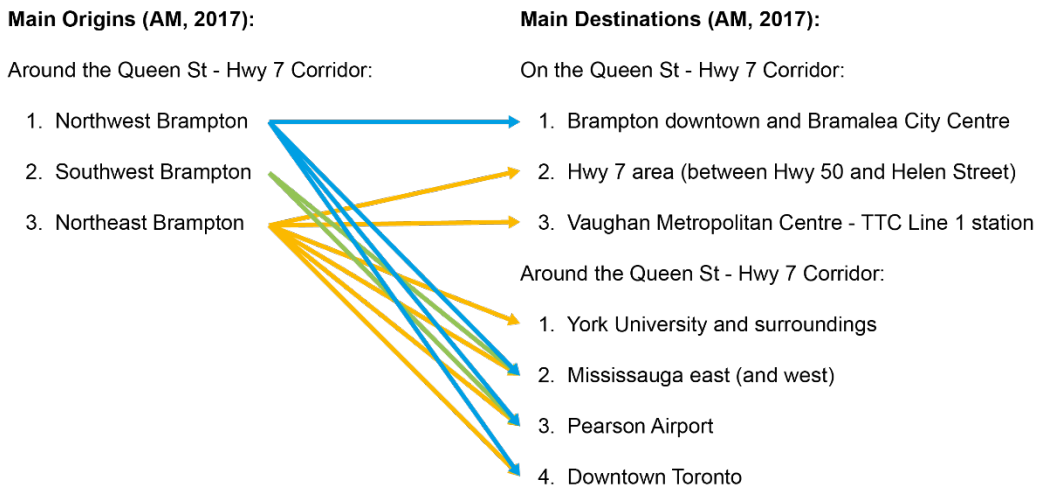

Figure 9: Main origins and destinations, AM peak period (2017) (Source: TTS data of all trips using Queen Street Corridor)

How are people travelling?

- Transit trips in Brampton are nearly all taken by bus. Of over 20,000 daily transit trips on Queen Street – Highway 7 bus routes, 90% involve bus only with no GO or subway connection.
- Only 10% of transit trips on Queen Street involve connections to non-bus modes. The proportion of transit riders relying on bus may change in the future with the recent opening of the TTC Line 1 subway extension to Vaughan Metropolitan Centre.

Figure 10 shows daily transit ridership on Queen Street buses by higher order mode.

Figure 10: Trips using Queen Street buses by higher order mode (Source: TTS data of all trips using Queen Street Corridor)

Transit ridership

The Queen Street – Highway 7 Corridor is currently served by three Brampton Transit bus routes, the 1, Züm 501, and Züm 561 routes. Brampton Transit route 1 operates as a local bus while Züm routes 501 and 561 operate express service. York Region Transit (YRT) services also operate on the eastern portion of Queen Street, where passengers can transition between Brampton Transit and YRT at Queen Street East and Highway 50. YRT route 77 (express) and 77A (local) routes serve this area of Brampton. The Viva orange route uses only a portion of the Highway 7 corridor under study.

2017 AM peak hour (7:00 – 8:00 AM) ridership by direction for transit routes (excluding Viva orange) that operate in the study area shown in Table 8. Results are rounded to the nearest 5.

Table 8: 2017 AM peak hour ridership for passengers on Queen Street bus routes (Sources: Brampton Transit and YRT)

	EASTBOUND RIDERSHIP (ALL ROUTES)	WESTBOUND RIDERSHIP (ALL ROUTES)
BRAMPTON TRANSIT	930	580
YORK REGION TRANSIT[5]	985	1,790
TOTAL	1,915	2,370

Data from Brampton Transit shows that existing route 501 eastbound transit boardings and alightings are highly concentrated at key stops along Queen Street. Figure 11 shows route 501 EB boarding activity over the transit service period. There is a high concentration of boardings at Downtown Brampton Terminal and Bramalea Terminal, and of alightings at Bramalea and York University, with some activity at likely transfer points. Overall, there is minimal eastbound activity on Queen Street/Highway 7 east of Highway 50 at all periods. Figure 12 shows route 501 EB alighting activity over the transit service period.

Figure 11: Route 501 EB boardings, all day (Source: Brampton Transit, 2017)

Figure 12: Route 501 EB alightings, all day (Source: Brampton Transit, 2017)

[5] Estimated based on calculation of average service frequency and net boardings during AM peak hour as available from York Region Transit timetables.

Westbound boardings and alightings on route 501 are similarly concentrated. Boarding are highest at York University and Bramalea, with the highest activity in the mid- to late afternoon. The York University stop sees the highest boarding activity on the route, with nearly 6,000 boardings per hour in the PM peak hour between 5 and 6 p.m. Figure 13 shows route 501 WB boarding activity over the transit service period. Alightings concentrate at Downtown Brampton Terminal and Bramalea, with some other locations where transfers are likely occurring seeing activity. Figure 14 shows route 501 WB alighting activity over the transit service period.

Figure 13: Route 501WB boardings, all day (Source: Brampton Transit, 2017)

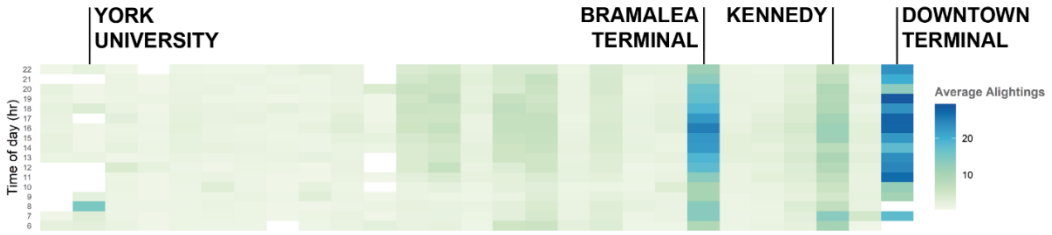

Figure 14: Route 501 WB alightings, all day (Source: Brampton Transit, 2017)

Brampton Transit route 1 shows similar concentration patterns to route 501 but with significantly lower hourly boardings and alightings (see Figures 15 and 16). Eastbound boardings and alightings show Downtown Terminal, Bramalea, and Kennedy areas have noticeably greater passenger activity than elsewhere on the route. Boardings are greatest at Bramalea in the afternoon, with some additional boarding peaks in other areas in this same period. Alightings are highest at Downtown Terminal in the early morning, with moderate activity at Bramalea in the mid-afternoon. The overall peak number of boardings and alightings per stop on route 1 in the eastbound direction is approximately 800 per hour.

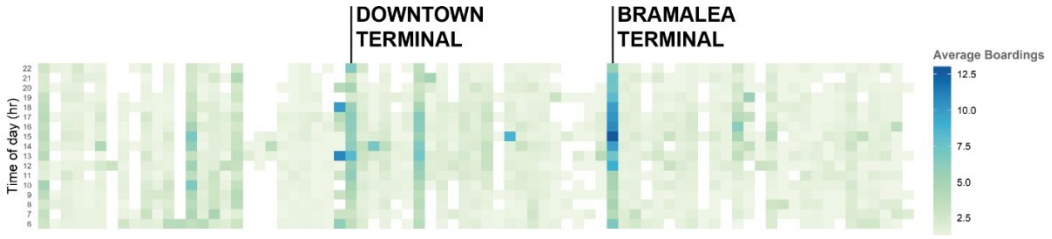

Figure 15: Route 1 EB boardings, all day (Source: Brampton Transit, 2017)

Figure 16: Route 1 EB alightings, all day (Source: Brampton Transit, 2017)

The same general activity patterns can be seen for route 1 westbound journeys (see Figures 17 and 18). Downtown Terminal, Bramalea, and Kenney have the greatest passenger activity, as was the case for eastbound riders. Westbound alighting activity tends to be spread more evenly across the day, with concentration in the AM and PM peak periods, whereas boarding activity is highly concentrated in the late afternoon.

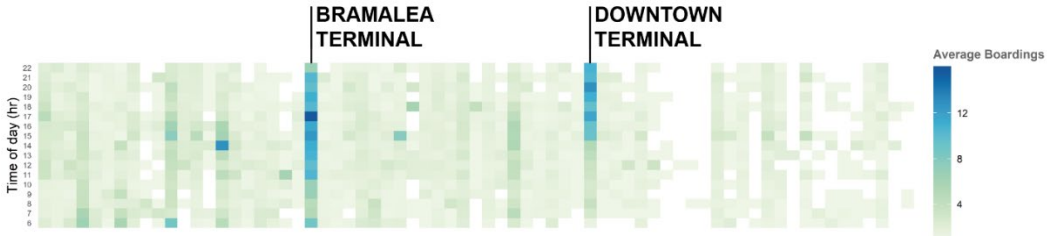

Figure 17: Route 1 WB boardings, all day (Source: Brampton Transit, 2017)

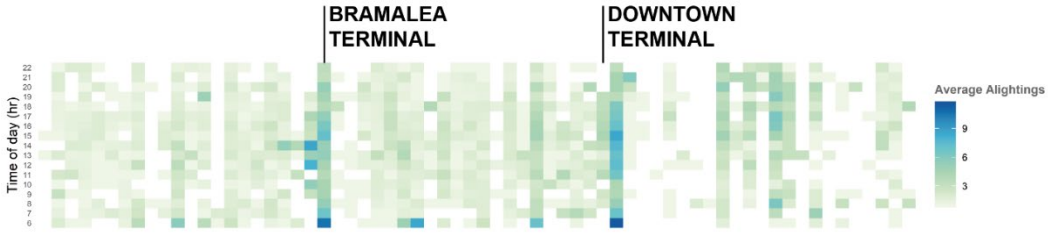

Figure 18: Route 1 WB alightings, all day (Source: Brampton Transit, 2017)

Existing transit accessibility along the Queen Street Corridor is variable, with highest transit scores in Downtown Brampton and Bramalea, as shown in Figure 19. These locations coincide with job availably within transit access, as shown in Figure 20. Job accessibility within 45 minutes of transit in Brampton is lower than more urbanized areas such as downtown Toronto, due partly to the overall higher density of employment in the downtown core relative to more suburban municipalities or areas with industrial employment, including Brampton. Improvements to transit reliability through the introduction of bus lanes will increase availability to employment as travel times become shorter and the network changes to support high frequency corridors.

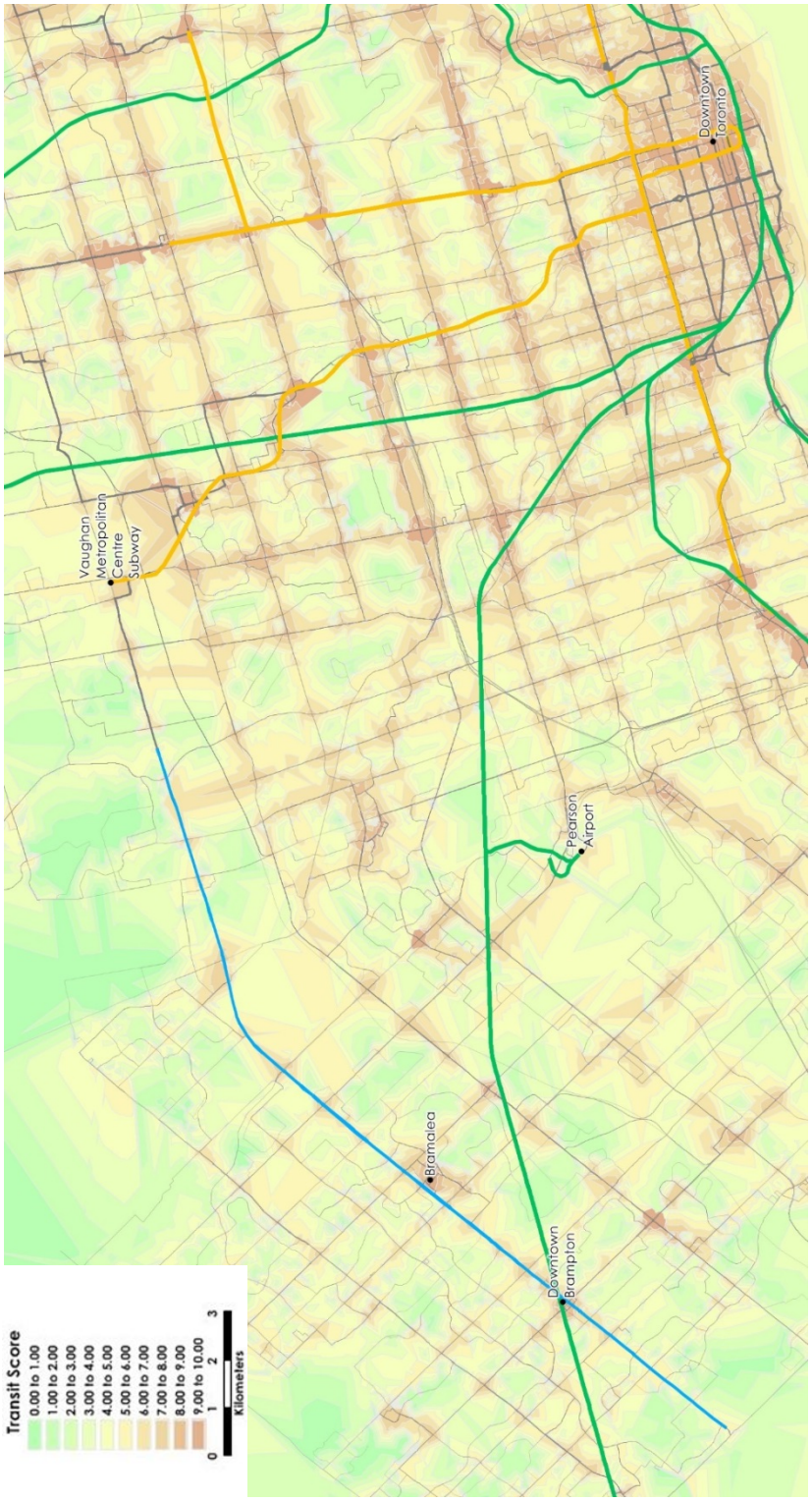

Figure 19: Transit density, with green lines showing GO Transit and yellow lines showing TTC subway (Queen Street Corridor shown as blue line) (Source: Transit Accessibility Index by Arup, based on GTFS data, fall 2017)

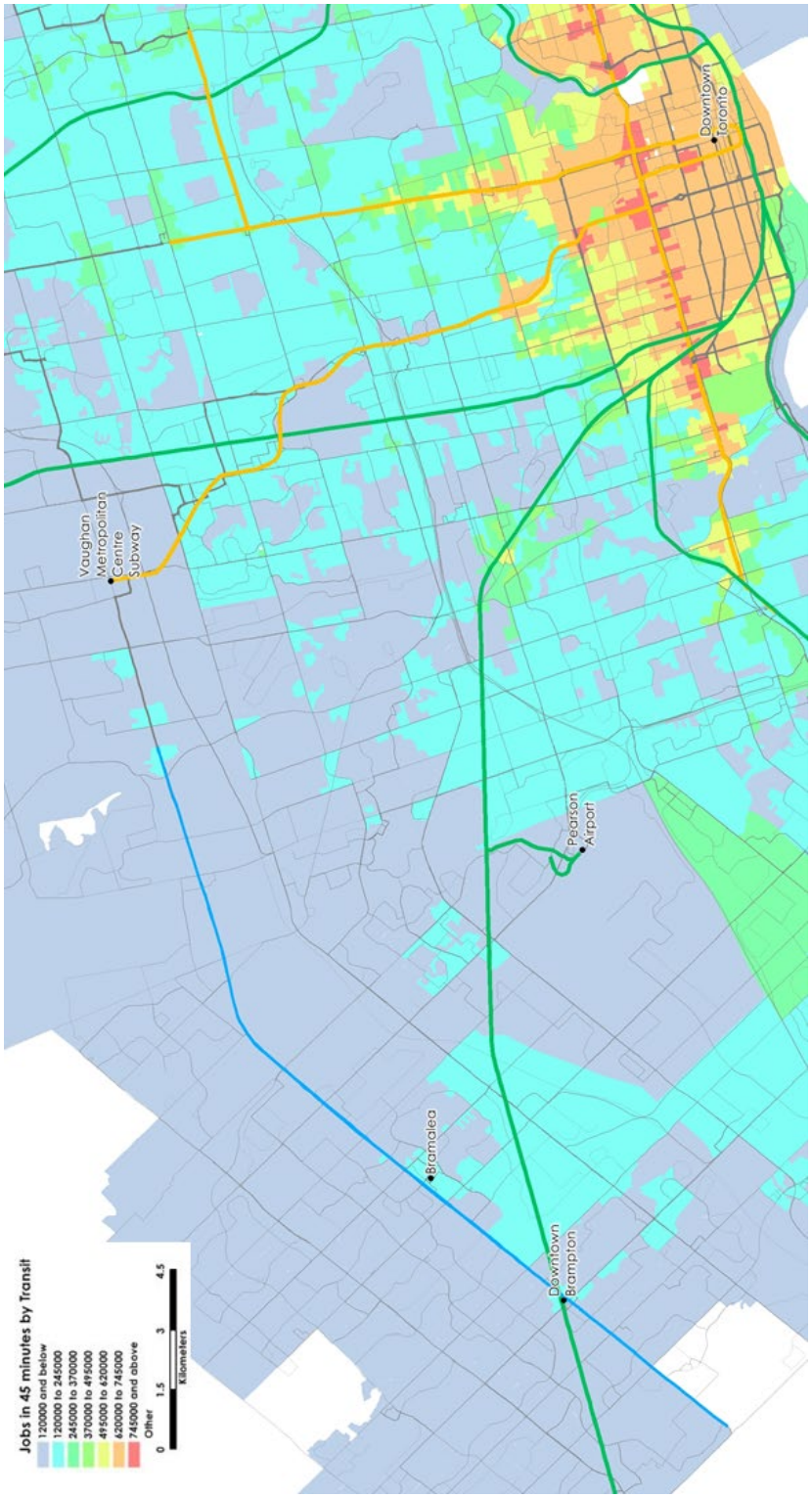

Figure 20: Job accessibility within 45 minutes of transit, with green lines showing GO Transit and yellow lines showing TTC subway (Queen Street Corridor shown as blue line) (Source: Transit Accessibility Index by Arup, based on GTFS data, fall 2017)

Who is using transit?

As a whole, the Statistics Canada 2016 Census indicates that the average Queen Street transit rider is likely to be younger and come from a household of lower income than the Brampton and Vaughan average. Riders could be employed, or be students on a part-time or full time basis. These findings indicate that the ridership may not be typical of the 9-5 employment and/or student schedule. Overall, education-related trips account for approximately 40% of overall trips for the whole of Brampton and Vaughan. Appendix C provides more details on transit rider demographics that assisted in informing this IBC.

Traffic conditions

The Queen Street Corridor is a major route for traffic including goods movement. The corridor serves both inter- and intra-municipal trips, provides direct access to 400-series highways, and is a major east-west commuter route. Overall:

- Traffic conditions are heaviest between Kennedy Road and Highway 50;
- As a whole, traffic is heavier in the eastbound direction in the AM peak period;
- As a whole, traffic is higher in the westbound direction in the PM peak period;
- Analysis shows that generally, east of Kennedy Road, the corridor is at or above capacity for vehicular traffic; and
- A wide variation in the concentration of driveways and accesses exists along the corridor.

Appendix B provides detail on traffic conditions along a major portion of the corridor.

Future Projects and Trends in Terms of Travel Demand

Future planned projects

Residential and mixed-use developments

Though Brampton's residential neighbourhoods are generally made up of single detached homes with a suburban character, many new developments are increasingly higher density in nature, and typically incorporate retail and commercial land uses. These higher density developments, as in many GTHA municipalities and regions, tend to be oriented towards transit and pedestrian-friendly urban areas. Many recent development applications are clustered in the west, close to downtown Brampton and Brampton GO Station.

As Brampton's population continues to grow, many of the most significant development projects are for residential construction. Mid-rise developments are seen as particularly suitable for the Brampton context, by supporting a pedestrian scaled and environmentally friendly urban environment and are encouraged in Brampton's Official Plan. Sites on the Queen Street Corridor which provide strong connectivity to future BRT stops offer potential for this form of development. The following areas provide adjacency to the Queen Street Corridor and are well-suited for mixed use intensification:

- Main Street North, Queen West, Four Corners, and Mobility Hub in downtown Brampton, where heritage integration is noted as an important consideration for new development.
- Queen Street East (greyfield infill) and Bramalea (intensification and infill) in Brampton's central area.
- Major Transit Station Areas (MTSA) locations along the corridor;
- Mobility Hubs and transit corridors at Hurontario-Main, Steeles and Bramalea, as well as the Queen Street Corridor itself.

Though not located on the Queen Street Corridor, Mount Pleasant Village in Brampton is one example of a large, master planned redevelopment which is an existing "urban transit village", developed around and based on active transportation and transit. The project is within walking distance of the existing Mount Pleasant GO Station.

Large natural areas along the Queen Street Corridor provide excellent natural amenities within a short distance of future BRT stations but reduce the transit-oriented development potential in certain areas. Natural areas include Norton Place Park, Donald M. Gordon Chinguacousy Park, and Claireville Conservation Area.

Committed public transportation investments

A number of local and regional transportation projects in neighbouring municipalities and regions support the Queen Street – Highway 7 BRT project by providing regional connectivity for transit riders. These projects are outlined in the Metrolinx 2041 Regional Transportation Plan. Current committed transportation projects include the following:

- Hurontario LRT, a 20 km rapid transit line that will connect Brampton with neighbouring municipalities. Three stops will be included in Brampton: Ray Lawson, Sir Lou, and Brampton Gateway Terminal. The projected opening year for the project is 2024.
- GO Expansion which will provide all-day, two-way 15-minute GO service on select routes.
- YRT Viva infrastructure between Vaughan Metropolitan Centre TTC Station and Helen Street, which is currently under construction as of summer 2019.

Figure 21 maps the existing and in-delivery regional rail and rapid transit projects across the GTHA.

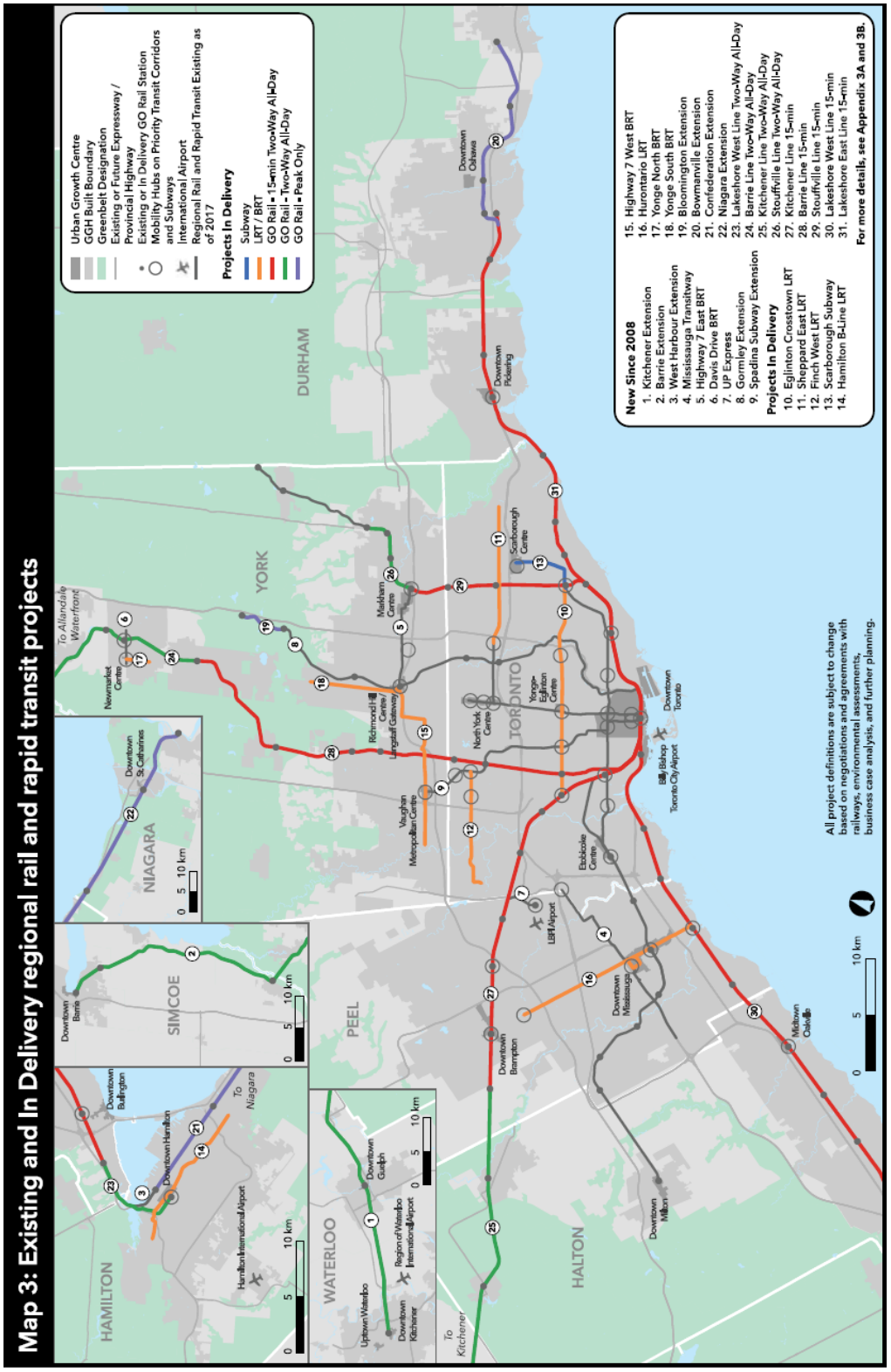

Figure 21: Metrolinx existing and in-delivery regional rail and rapid transit projects in the GTHA for 2041 (Source: Metrolinx)

Future Travel Patterns

In order to be able to test different future BRT scenarios with Metrolinx's Regional Transportation Modelling tool, future travel patterns had to be determined. The future scenario considered for 2041 is based on the inclusion of projected land uses and in-delivery transportation projects cited above, and on the total travel demand of the modelling calibration year (2011) in the Metrolinx GGHM_v4 model.

2041 business as usual scenario

The 2041 business as usual (BAU) scenario assumes projected land use and transportation projects and travel demand, as well as minimal changes to transit frequencies, routes and stopping patterns as existing services shown in Figure 22. There are no assumed changes to the local bus routes. Table 9 summarizes the assumed headways for the main routes that serve the Queen Street and Highway 7 corridors. Within the GGHM_v4 model, a number of services in the study area were recoded to reflect the existing services on Queen Street/Highway 7 for this scenario. These transit route changes are documented within Appendix E.

Table 9: Peak period and midday bus headways for transit routes on Queen Street/Highway 7 for the 2041 BAU scenario

ROUTE	ROUTE DESCRIPTION	PEAK HEADWAY (MINUTES)	MIDDAY HEADWAY (MINUTES)
ZUM 501	Queen St	16-18	18
ZUM 501A	Queen St via Hwy 407	11-18	18
ZUM 501C	Queen St / Hwy 407	26	--
ZUM 561	Queen West	15	20
BRAMPTON TRANSIT 1	Queen Street	20	28
BRAMPTON TRANSIT 1A	Queen Street	20	28
YORK REGION TRANSIT 77	Hwy 7 / Centre	15	23
YORK REGION TRANSIT 77A	Hwy 7 / Centre via Clarke	45	--
VIVA ORANGE	Highway 7	15	20

Figure 22: 2041 BAU scenario transit route map for the Queen Street – Highway 7 Corridor

Definition of Opportunity

The Queen Street – Highway 7 Corridor is a crucial transportation corridor connecting people through the regions of Brampton and Vaughan, to and from key transportation generators such as York University, Downtown Brampton, and Downtown Toronto. The corridor has varied traffic and land use conditions and constraints. The regions around the corridor are responding to future travel demand with changes to transit infrastructure and service. This new future transit service will have to respond to growing communities and their transportation demand, according to goals for sustainable development.

Problem/Opportunity Key Drivers

Challenges

- Current transit use on the Queen Street – Highway 7 Corridor is limited to what appears to be a captive market, dominated by:
    - A young population (under 30);
    - Mostly students; and
    - Medium income households of relatively large size (average 3.5 persons per household).
- Overall, there is low transit connectivity in the area, with relatively poor access to employment. Transit is not competitive with auto travel;
- There are long distances between key origins and destinations and to downtown Toronto;
- Facilitation of trucks and goods movement through the corridor;
- There are transit access issues to the Pearson Airport employment area;
- Inter-agency coordination may be a challenge as agencies need to respond to their local policies, resources, etc.; and
- Some physical constraints exist on the corridor.

Opportunities

- There is a large market that can be considered 'untapped'; i.e. who would be likely to take advantage of transit but have not yet adopted regular transit usage;
- Connections to the TTC subway and GO Transit near the corridor;
- BRT enables fast, limited stop services;
- Supporting better integration through service and infrastructure improvements across the region; and
- The current land use and infrastructure still allow for creative solutions.

The Case for BRT

As a main travel route between Peel Region and York Region municipalities, and with connections to the rest of the GTHA, the Queen Street – Highway 7 Corridor is seen as a key route for the introduction of BRT, as a means of completing a broader high frequency transit network. The corridor has both locally- and regionally-significant areas including Brampton GO Station, downtown Brampton, Bramalea City Centre, and many other employment, residential, and retail destinations.

Numerous previous studies highlight the importance of the Queen Street – Highway 7 BRT as a local and regional connector, and key to building a sustainable transportation network that connects GTHA communities. A summary of these studies is provided as Appendix A. In particular, the Queen Street – Highway 7 BRT is identified as part of overall regional transit investment in the Metrolinx 2041 Regional Transportation Plan. In addition, the Brampton 2040 Vision[6] – developed collaboratively with the participation of over 13,000 residents – identifies rapid transit on Queen Street East and highlights its potential as a 'transit spine' that will support the gradual redevelopment of the corridor.

In Brampton, the Queen Street – Highway 7 BRT would provide connections through York Region at the eastern terminus of the York Region Transit (YRT) Viva network and Toronto Transit Commission (TTC) subway, while multiple other services including GO Transit rail would connect BRT riders to major municipal centres including Union Station in Toronto.

Overall, the Queen Street – Highway 7 BRT is seen as a critical piece of the GTHA's transportation network. It will support local growth within Brampton and Vaughan while providing residents with the access to jobs and services across the region. This project will enable mode shift towards transit, decreasing the overall environmental impacts of transport in the region, including GHG emissions.

[6] City of Brampton, 2018. "Living the Mosaic: Brampton 2040 Vision". <https://www.brampton.ca/EN/City-Hall/Documents/Brampton2040Vision/brampton2040Vision.pdf>

3

Investment Options

BRT Scenario Evaluation Methods

Global approach

The Metrolinx Benefits Management Framework process is a seven-step process that assesses the rationale for investment from the strategic planning phase through to post in-service phase of a transportation project. This is shown in Figure 23. It includes Business Case studies at different stages (initial, preliminary, and full), as well as the project lifecycle.

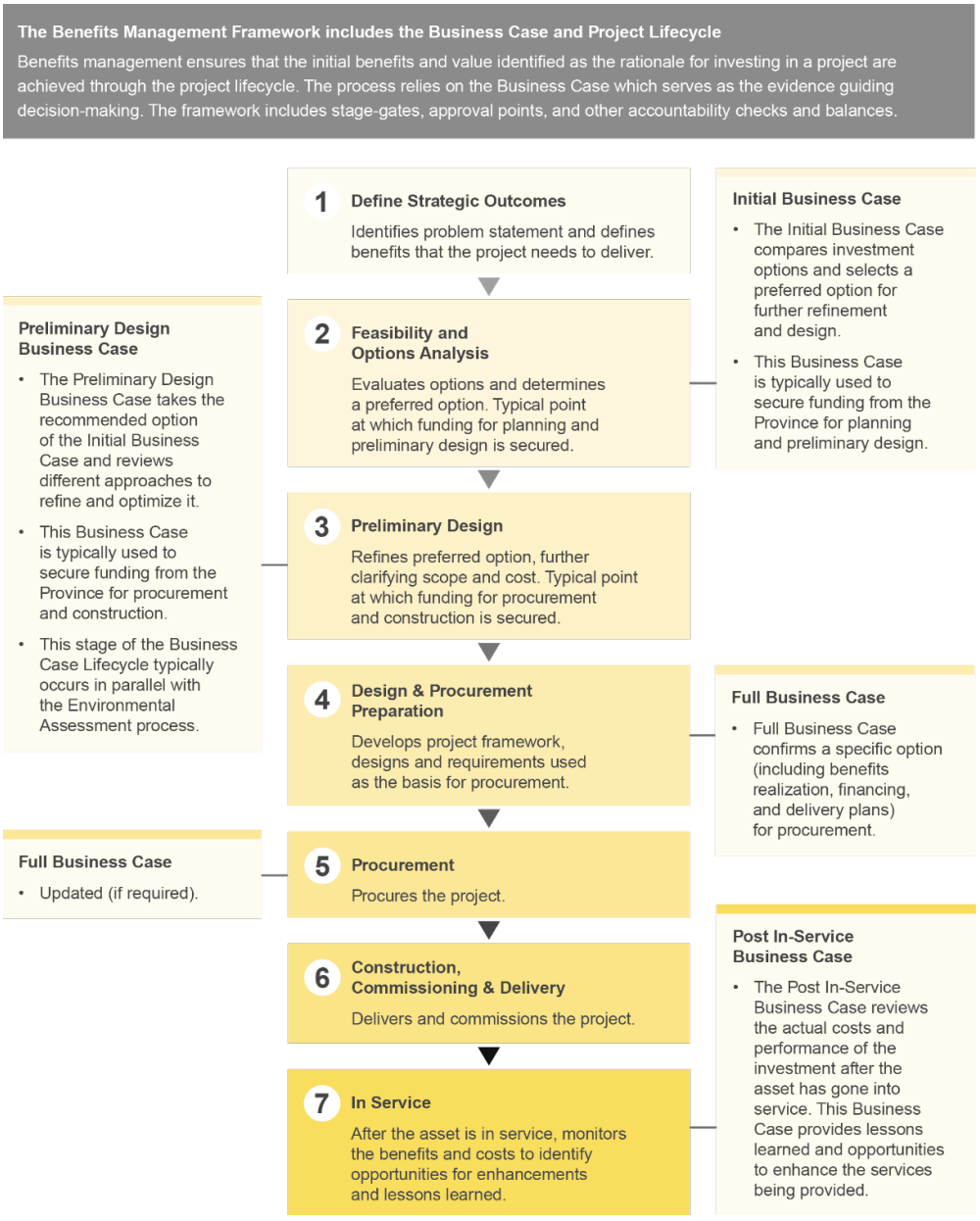

Figure 23: Metrolinx Business Case Guidance and Project Lifecycle Framework (Source: Metrolinx)

Per the Metrolinx Business Case Guidance and Project Lifecycle Framework, the current project is in Stage 2: Feasibility and Options Analysis and represents in Initial Business Case. The section below provides additional detail on this project as it relates to the Metrolinx framework:

- **Strategic planning,** where the problem statement and investment benefits are defined.
- **Options analysis,** where multiple service plans and infrastructure options are assessed to determine a preferred option. At this stage, the **Initial Business Case (IBC)** is developed to evaluate investment options and select a preferred option to proceed with design development. The present study and report consists of the IBC and planning study, including scenario evaluation of service concepts and infrastructure concepts at a high level, with the GGHM_v4 regional transportation model from Metrolinx. The approach followed in the present IBC is illustrated in Figure 24:

IBC steps including scenario creation and evaluation - Brampton Queen St-Hwy 7 York BRT corridor

A Transportation portrait - actual (2016) and future (2041) & service goals

↓

B Define service scenarios (3)

↓

C **EVALUATION 1:** Determine best adequate service definition scenario

↓

D Define infrastructure scenarios (3)

↓

E **EVALUATION 2:** Business Case - BRT scenario evaluation

↓

F Recommendation of preferred scenario

Figure 24: IBC steps for the Brampton Queen Street – York Region Highway 7 BRT

The next steps to be achieved after this present IBC for the Brampton Queen Street – York Region Highway 7 BRT are:

- **Preliminary design,** where the preferred option is refined. At this stage, the **Preliminary Design Business Case** is developed to refine and optimize the IBC.
- **Design & procurement preparation,** where an investment framework, designs, and requirements are developed as the basis for procurement. At this stage, a **Full Business Case** is developed, confirming a specific option.

- **Procurement,** where the investment is procured, and the Full Business Case is updated if required.
- **Construction, commissioning & delivery,** where the project is delivered.
- **In service,** the post-construction phase, where monitoring and evaluation are undertaken of the transportation project. At this stage, a **Post In-Service Business** is undertaken to review the actual project costs and performance to provide lessons learned and identify service enhancement opportunities.

Evaluation methodology of the BRT scenarios with the Greater Golden Horseshoe Model

For Metrolinx business cases, the Metrolinx GGHM_v4 transportation model is used to assess the impact of transit investment on network ridership. The model encompasses local transit services (e.g. Brampton Transit, TTC) and regional transit services (GO Transit), subway, and streetcars, to evaluate how new investments may result in changes to ridership. Given the regional importance of transit, this method allows for a broad understanding of overall network ridership. The model provides an indication of the level of ridership expected in the future with and without BRT infrastructure. The model does not identify in detail impacts to traffic congestion at the intersection level. Impacts of the BRT infrastructure on local traffic etc will be further analyzed in the preliminary design phases.

The method shown in Figure 25 defines the process that is followed in the current IBC for determining a preferred BRT service and infrastructure scenario using the GGHM_v4 model.

Evaluation Methodology of the IBC for the Brampton Queen Street - York Region Highway 7 BRT

1. Definition of 3 service scenarios: scenarios 1, 2, and 3
2. Modelling of the 3 service scenarios on 2041 horizon (in order to compare efficiency of the transit network and service levels)
3. Selection of 1 **preferred BRT service scenario**
4. Definition of 3 infrastructure scenarios: scenarios 4, 5, and 6
5. Modelling of the 3 infrastructure scenarios with preferred service definition
6. Recommendation of BRT scenario

Figure 25: IBC evaluation methodology for the Brampton Queen Street – York Region Highway 7 BRT

- In **step 1,** three (3) service options are defined. These service scenarios are selected and developed based on pre-defined transit service concept goals (section 4.1), general BRT service concepts, and have been discussed with the IBC project team during IBC evaluation.
- In **step 2,** the service options are modelled with a competitive speed in the GGHM_v4 model on the 2041 horizon, in order to compare efficiency of the transit network and service levels on the BRT corridor.
- In **step 3,** the preferred BRT service option is selected. This may be, for instance, the scenario that offers the maximum transit ridership on the BRT corridor.
- In **step 4,** three (3) infrastructure scenarios are defined using the preferred service definition option. These infrastructure scenarios allow the transit service provider to meet the preferred BRT scenario selected in step 3.
- In **step 5,** the possible infrastructure scenarios are modelled with the preferred service scenario in the GGHM_v4 model.
- In **step 6,** a final recommendation is developed based on the best combination of the service and infrastructure scenarios.

This methodology aims to define a BRT project that maximizes BRT ridership as a priority, then defines the best infrastructure to support it.

The modelling of these scenarios in the AM peak period (three hours from 6 to 9 AM) has been conducted in the GGHM_v4 model by Metrolinx, with assistance from Arup in coding and analyzing the results of each scenario.

Appendix F details the modelling assumptions and results of all modelled scenarios during the IBC.

BRT Service Concept Scenarios

Three (3) service concept scenarios were defined in collaboration with the project team, composed of Metrolinx, the City of Brampton, Brampton Transit, York Region, Peel Region, and the City of Vaughn in order to compare the benefits of a range of transit service scenarios indicative of possible future operations. The objective of this step is to evaluate different service concept scenarios in order to define one scenario that maximizes the service goals that were pre-identified with the project team and that are detailed in the following section.

Service concept goals

To promote a good traveller experience, expand transit ridership, and encourage sustainable lifestyle habits, service options were defined based on the following guidelines and with the objective to maximize these goals:

1. **Increased efficiency of transit operations**
    i. Increased transit travel speed:

a. Avoid congestion: ensure that transit continues to operate smoothly despite future traffic growth
b. Design network and infrastructure to reduce transit travel time between major origin/destination pairs
c. Optimize transfer times: make transit easier to use by avoiding or streamlining transfers

ii. Improve service reliability with adequate rolling stock, IT systems, operational planning, and infrastructure
iii. Increase transit capacity

2. Ensure a quality user experience

i. Seamless transfers: simple connections for all passengers, with a maximum of one transfer for the major origin/destination pairs
ii. Integrated fare system, ensuring free movement between all transit operators using the corridor
iii. Increase comfort on platforms and in rolling stock choices

3. Support and increase urban development and density

i. Develop network coverage of existing dense neighbourhoods
ii. Integrate transit services with neighbouring communities: take advantage of overlapping services, especially connectivity with the existing transit network to the east
iii. Grow Downtown Brampton, Bramalea City Centre, and Vaughan Metropolitan Centre (VMC): support desired densification of hubs and corridors with the BRT implementation

The overarching principles of maintaining existing service coverage, increasing service levels, minimizing transfers, and serving key origins and destinations motivated the service options.

Service Concept Scenarios

Three (3) transit service scenarios on the study corridor were developed, including definition of routes, stops, and proposed service frequencies for AM peak period. Scenarios are based on 2041 ridership projections and are compared against the 2041 business as usual (BAU) scenario with the current bus routes, subject to future traffic conditions. Detailed information on the definition of the three (3) service concept scenarios is provided in Appendix D.

2041 business as usual scenario

As a reference scenario against which to compare network improvements, the business as usual (BAU) scenario (see Figure 22), consists of future transit service improvements from Metrolinx,

Brampton Transit, and YRT, **without** a Queen Street – Highway 7 BRT service. It also includes In-Delivery infrastructure projects by Metrolinx outlined in the 2041 RTP. The scenario also tests the capability of the existing and future planned transit network projects to respond to future travel demand.

The 2041 BAU scenario is intended to:

- Evaluate the efficiency of the existing transit network to respond to the future travel demand in 2041, and
- Have a reference scenario for measuring network improvements, in addition to the infrastructure improvements.

Scenarios 1-3

Across all scenarios, a reduction in traffic lanes was assumed between McMurchy Road and Kennedy Road to accommodate a BRT lane. This is likely to have contributed to a reduction in vehicle kilometres traveled in this section. Downtown Brampton has been assumed to be from Centre St to McMurchy Avenue, which is larger than the section with parking restrictions. The modelled scenarios include lane reductions from 2 lanes down to 2 lanes in the section outside Theatre Lane to George St. This has an impact on VKT through the area.

- **Scenario 1** (Figure 26) proposes one main trunk route from Mississauga Road to Vaughan Metropolitan Centre TTC Station, plus the existing feeder routes. The corridor included 2 median BRT exclusive lanes (one per direction) with widening of the right-of-way (no impact on number of lanes for regular traffic), except in downtown Brampton on Queen Street.
- **Scenario 2** (Figure 27) proposes two main trunk routes on the Queen Street – Highway 7 Corridor, from Mississauga Road to Vaughan Metropolitan Centre TTC Station, added with the existing feeder routes. The corridor included 2 median BRT exclusive lanes (one per direction) with widening of the right-of-way (no impact on number of lanes for regular traffic), except in downtown Brampton on Queen Street.
- **Scenario 3** (Figure 28) proposes two main trunk routes on the Queen Street – Highway 7 Corridor, from Mississauga Road to Vaughan Metropolitan Centre TTC Station, with the addition of several Priority Bus routes using the new BRT corridor and infrastructure. The corridor included 2 median BRT exclusive lanes (one per direction) with widening of the right-of-way (no impact on number of lanes for regular traffic), except in downtown Brampton on Queen Street.

Scenario 1: Single main BRT trunk route on the Queen Street – Highway 7 Corridor

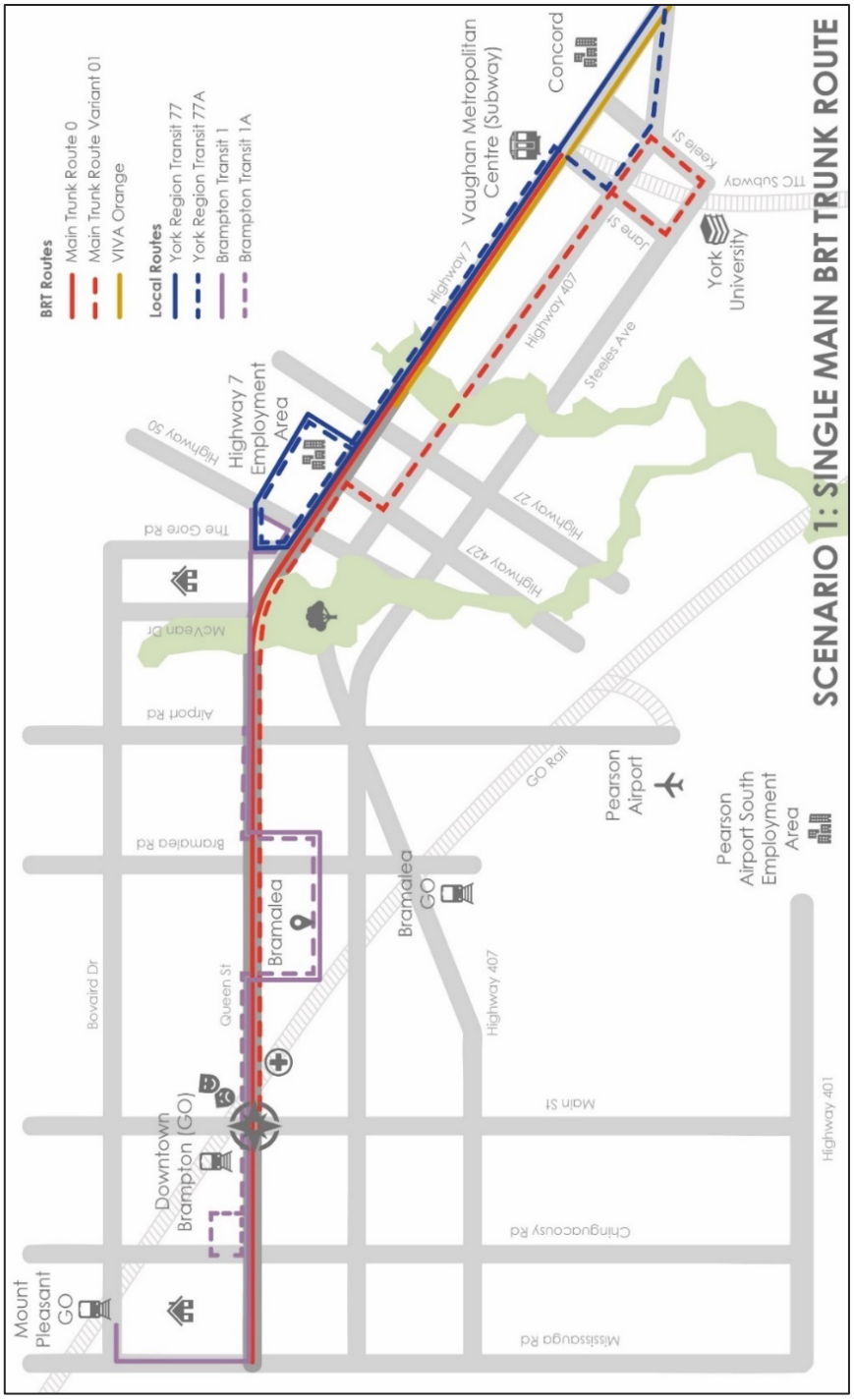

Figure 26: Scenario 1 – 2041 single main trunk route along the Queen Street – Highway 7 BRT Corridor

Scenario 2: Two main BRT trunk routes on the Queen Street – Highway 7 Corridor

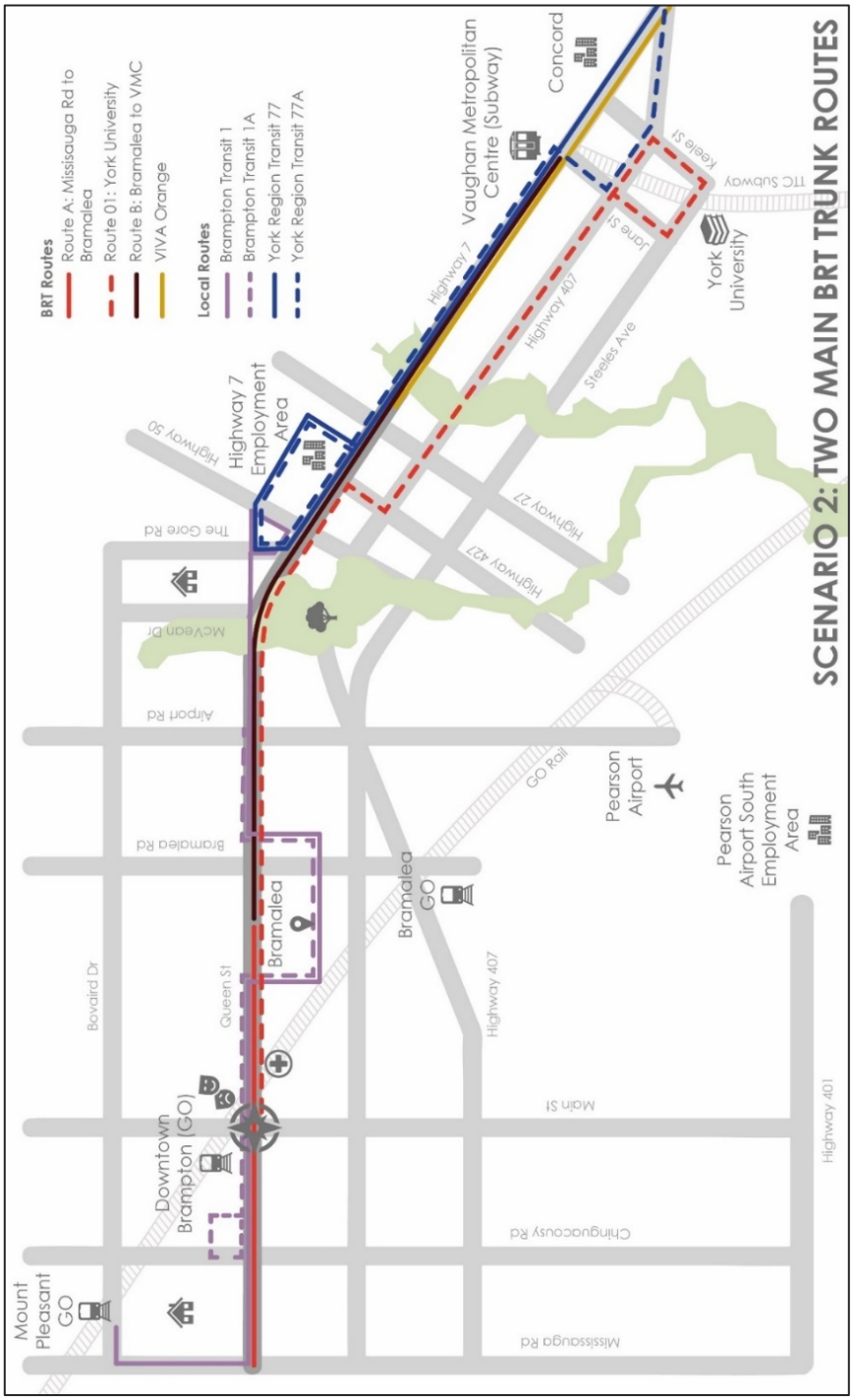

Figure 27: Scenario 2 – 2041 – Two main trunk routes along the Queen Street – Highway 7 BRT Corridor

Scenario 3: Two main BRT trunk routes and Priority Bus routes on the Queen Street – Highway 7 Corridor

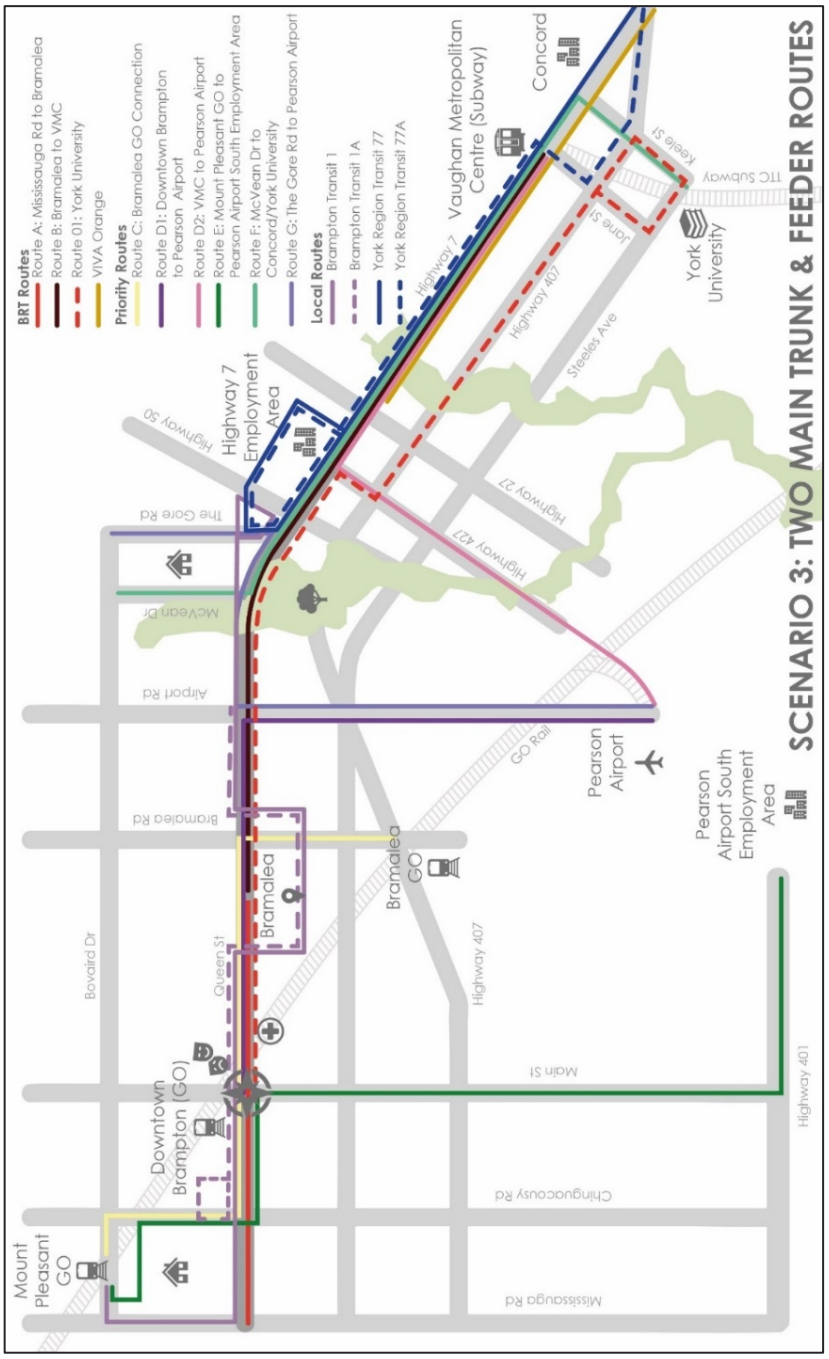

Figure 28: Scenario 3 – 2041 Two main trunk routes along the Queen Street – Highway 7 BRT Corridor, and added feeder transit routes

Service concept scenario evaluation

Evaluation framework and criteria

Each of the three (3) service concept scenarios were evaluated against the 2041 BAU Scenario using a set of criteria to determine the preferred service definition. The performance of each scenario is assessed using metrics derived from modelling results for the 2041 AM peak period (6:00-9:00 a.m.) generated by the Metrolinx GGHM_v4 model. The evaluation criteria and metrics are described in Table 10.

Table 10: Service definition evaluation criteria, objectives, and metrics

CRITERIA	OBJECTIVE	METRIC
TRANSIT DEMAND	The service concept should support higher transit usage within the study area.	2041 AM peak period boardings (6 – 9 AM)
TRANSIT ACCESSIBILITY	The service concept should improve residents' ability to travel to more destinations/activities by transit.	Percentage change in the number of jobs within 60 minutes in the AM peak period (6 – 9 AM)
IMPACT ON MODE SHARE	The service concept should encourage more people to choose transit within the study area.	Percentage change in transit mode share in study area in the AM peak period (6 – 9 AM)
IMPACT ON AUTO TRAVEL	The service concept assist in managing and reducing congestion along the corridor	Auto vehicle-kilometres and auto vehicle-hours travelled in the AM peak period (6 – 9 AM)
LEVEL OF SERVICE	The service concept should optimize the level of transit service provided including the additional operating cost.	Transit vehicle-kilometres travelled in the AM peak period (6 – 9 AM)

Evaluation of BRT service concept scenarios

All evaluation results are outputs of the Metrolinx GGHM_v4 model for the weekday AM peak period (6 – 9 AM).

- Transit demand

  The BRT service concept should support higher transit demand within the study area. Transit boardings are used in this evaluation as the measure for transit demand.

  Figure 29 illustrates the modelled 2041 AM peak period boardings for the routes serving Queen Street and Highway 7 in the study area.

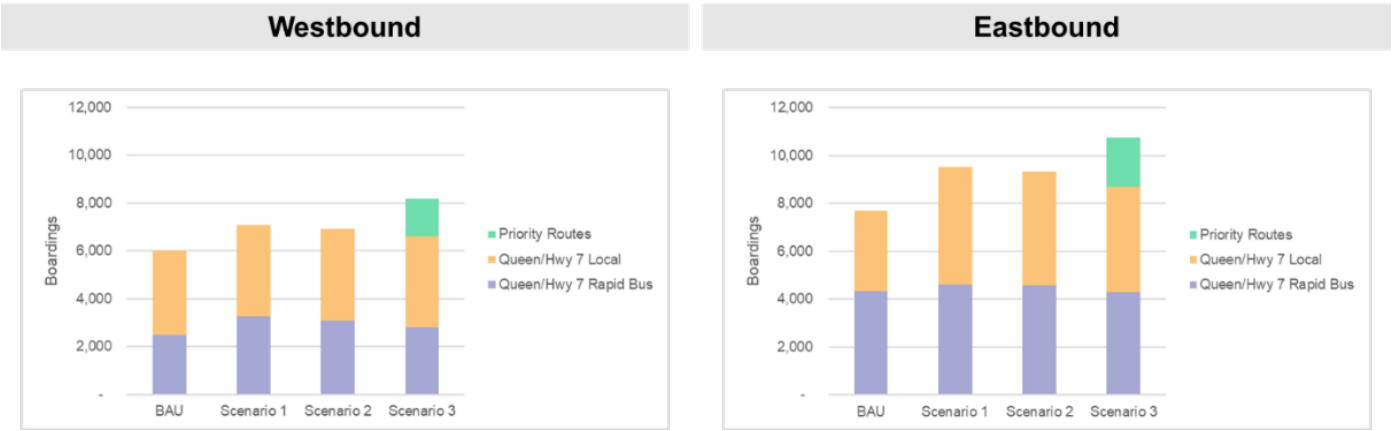

Figure 29: 2041 AM Peak Boardings along the Queen Street – Highway 7 Corridor by type, for BAU Scenario and Scenarios 1, 2, and 3

All scenarios result in higher transit boardings on the corridor compared to the BAU scenario. There are increases in demand for both eastbound and westbound services. Scenario 3 has the highest number of transit boardings. This result can be attributed to the additional demand expected on the Priority Bus routes.

Further analysis of the modelled results reveals the expected transit demand for each route along the corridor. These results are summarized by direction for the local and BRT routes in Figure 30.

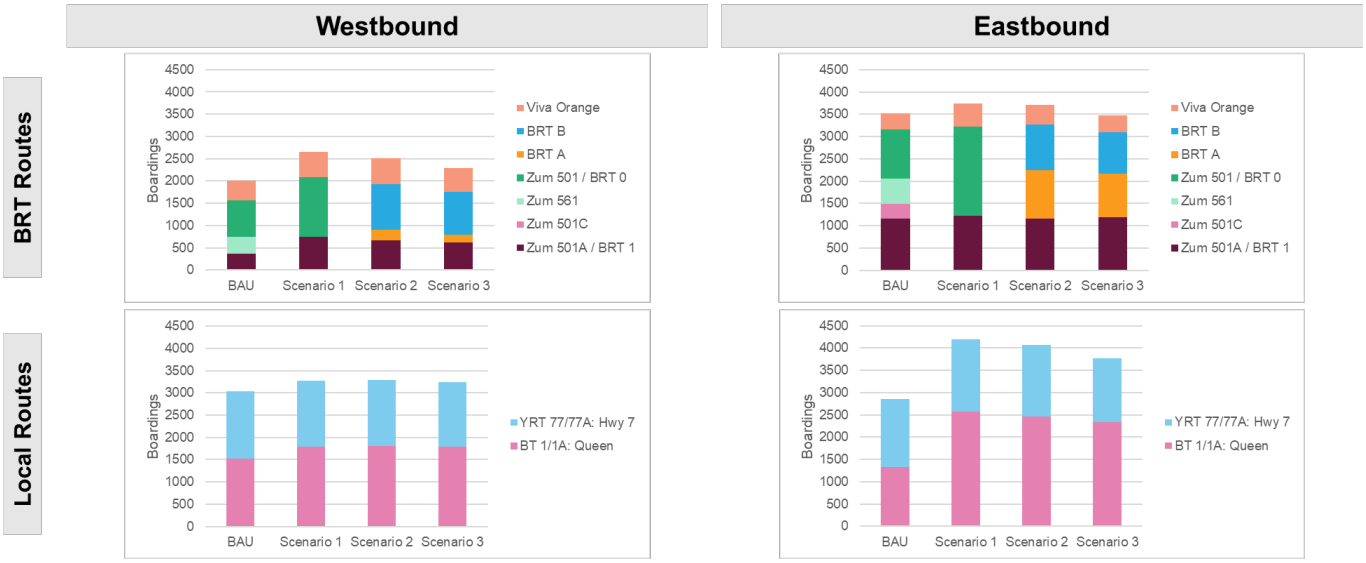

Figure 30: 2041 AM Peak boardings along the Queen Street – Highway 7 Corridor by route and direction, for BAU Scenario and Scenarios 1, 2, and 3

This analysis suggests the following:

- In Scenario 1, the growth in demand for BRT Route 0 (from Züm Route 501) largely offsets the reduction in demand from removing Züm 501C and Züm 561;
- Splitting main BRT route at Bramalea (as in Scenarios 2 and 3) would lead to a lower transit demand than a single main BRT route (as in Scenario 1);
- In Scenarios 2 and 3, there is low demand for the BRT Route A westbound (i.e. from Bramalea to Mississauga Road); and
- Across all scenarios, there are higher eastbound boardings on local Brampton Transit Route 1/1A (Queen Street) compared to the BAU.

For Scenario 3, the demand for the new priority bus routes are shown by direction in Figure 31.

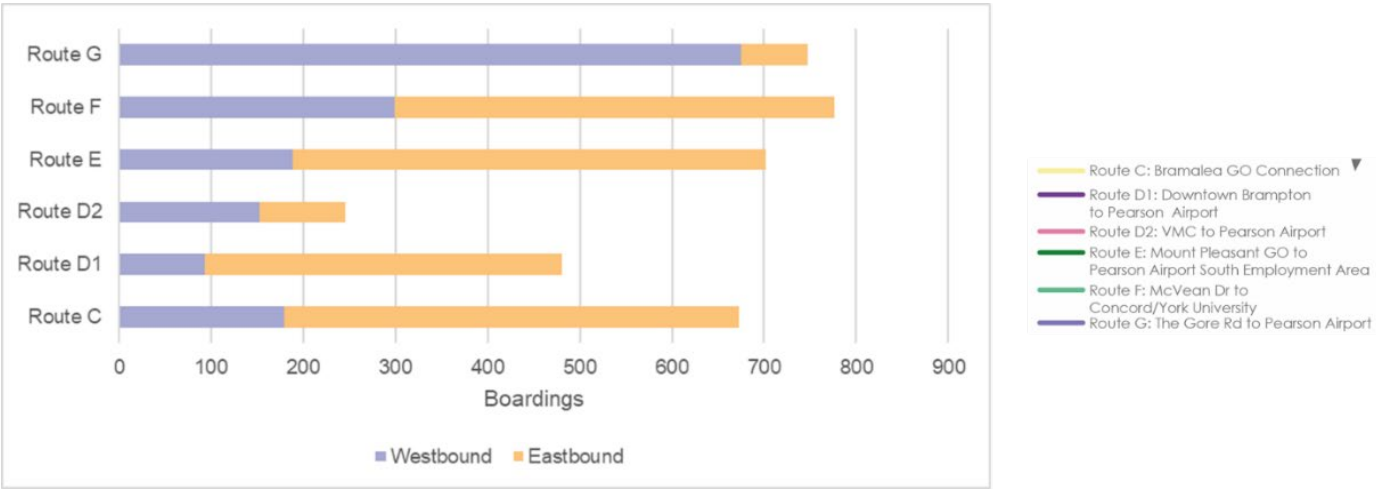

Figure 31: 2041 AM Peak Boardings for Priority Routes in Scenario 3

The Priority Routes C, E, F, and G have the highest expected demand with a combined two-way boardings between 600 and 800 passengers in the AM peak period. Two of the routes to Pearson Airport (D1: Downtown Brampton – Pearson Airport, and D2: Vaughan Metropolitan Centre – Pearson Airport) have relatively low boardings of these routes in the AM peak period. These routes could be considered for refinement and/or optimization.

Transit accessibility

The transit service concept should improve residents' ability to travel to more destinations and activities by transit. The change in access to employment is the metric for this analysis. The scenario networks were input into the Metrolinx Accessibility Toolkit to calculate the number of jobs that are accessible by transit from each Census Dissemination Area within 60 minutes. Each service concept scenario was compared to the 2041 BAU scenario to estimate the change in transit accessibility.

Table 11 summarizes the average change in access to jobs across each scenario. The changes to transit accessibility by Census Dissemination Area are illustrated in Figures 32 to 35. This analysis shows that Scenarios 1 and 2 result in small improvements in access to jobs for those along the Queen Street Corridor. In contrast, Scenario 3 results in a significant improvement as the Priority Routes, which act as main feeder routes, improve access to jobs for those living away from the Queen Street Corridor. It should be noted that the decrease in accessibility on the western end of the corridor in each figure is a result of the limited changes to transit services at this end of the corridor.

Table 11: Average jobs accessible by transit within 60 minutes during AM peak period (study area average), for 2041 BAU Scenario and Scenarios 1, 2, and 3

SCENARIO	AVERAGE NUMBER OF JOBS	% CHANGE FROM BAU
BAU	48,000	--
SCENARIO 1	48,600	1.3
SCENARIO 2	48,500	0.9
SCENARIO 3	51,500	7.2

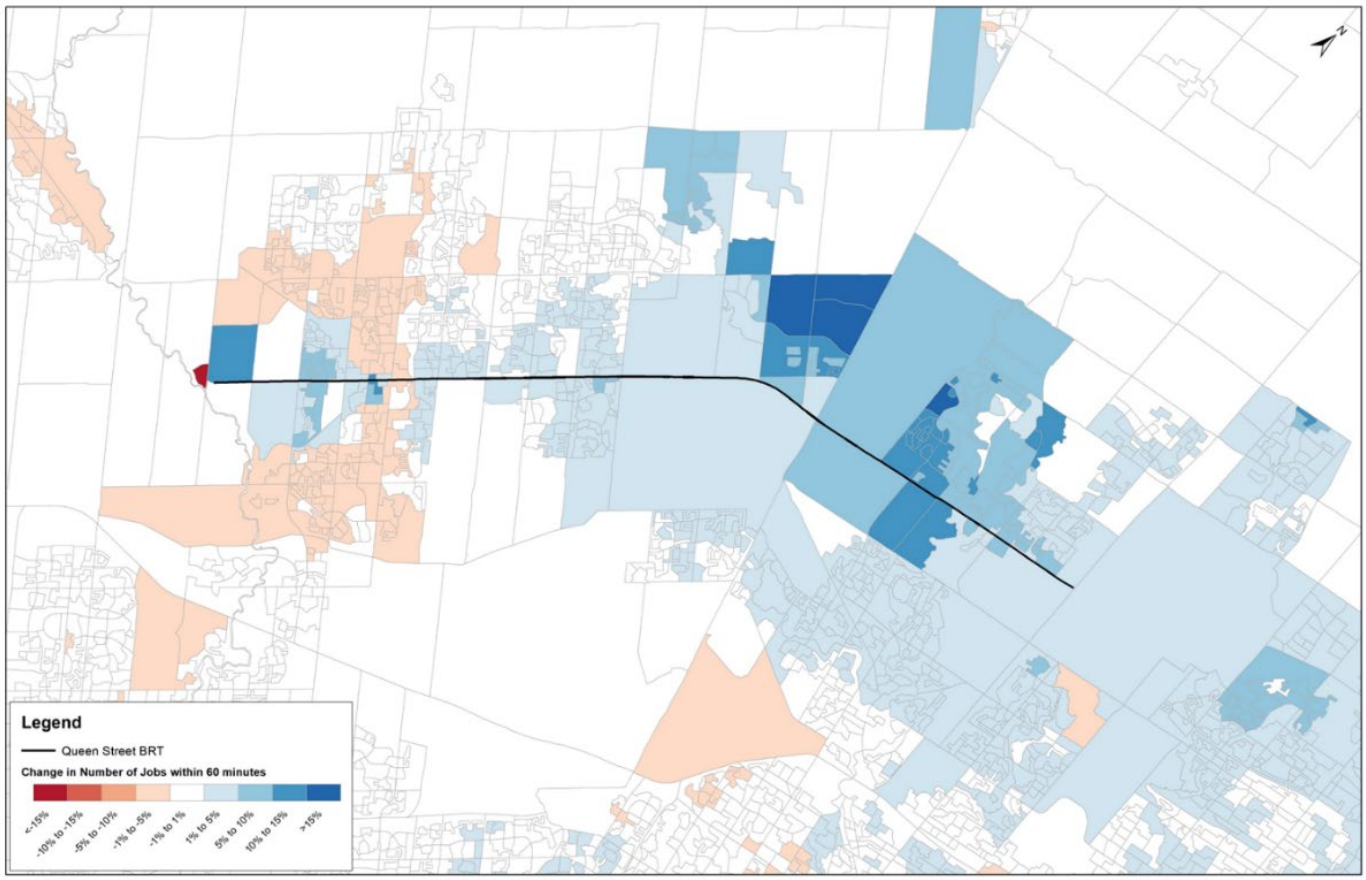

Figure 32: Change in access to jobs by transit (Scenario 1 vs 2041 BAU), AM peak period (Metrolinx Accessibility Toolkit)

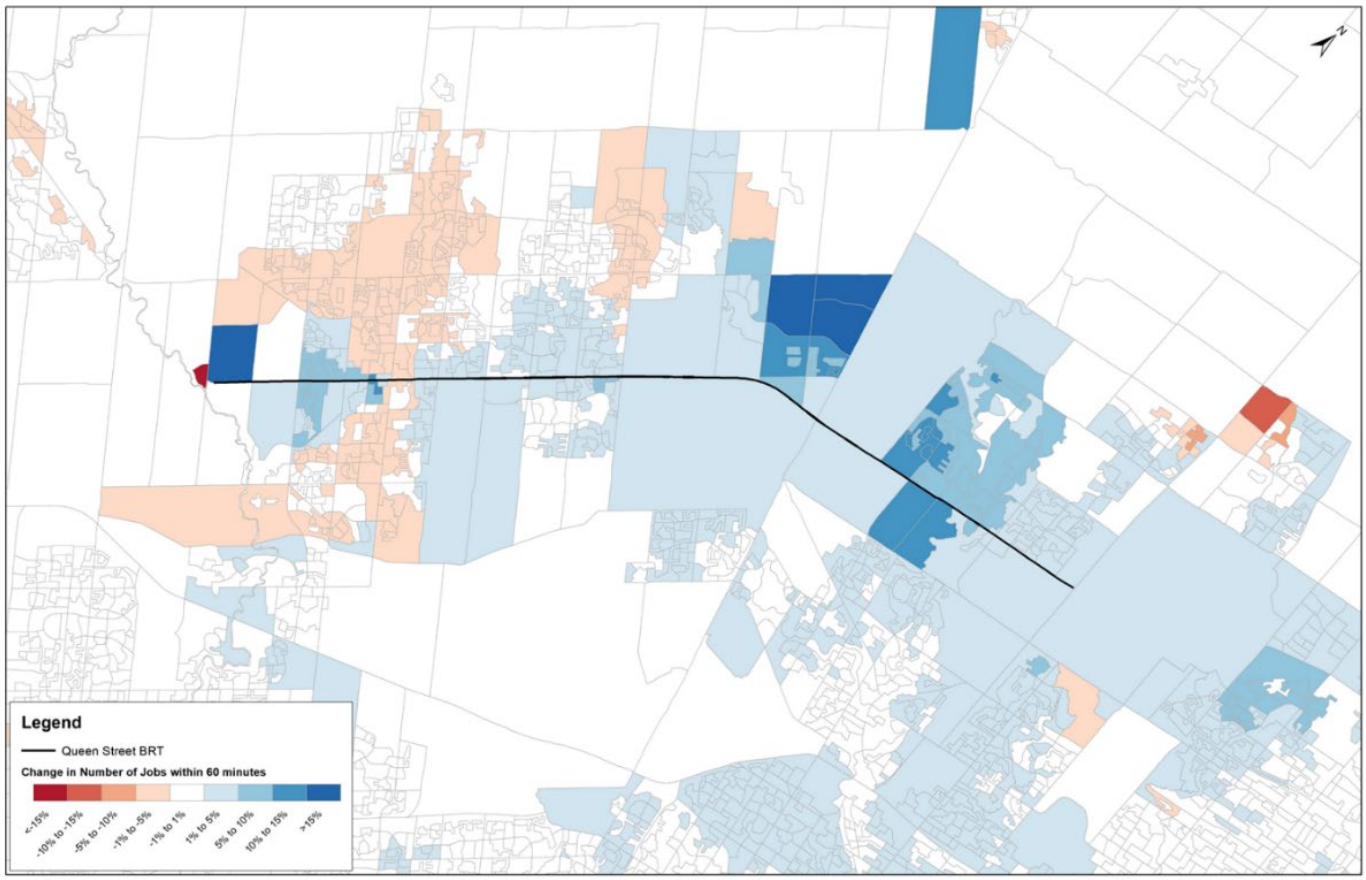

Figure 33: Change in access to jobs by transit (Scenario 2 vs 2041 BAU), AM peak period (Metrolinx Accessibility Toolkit)

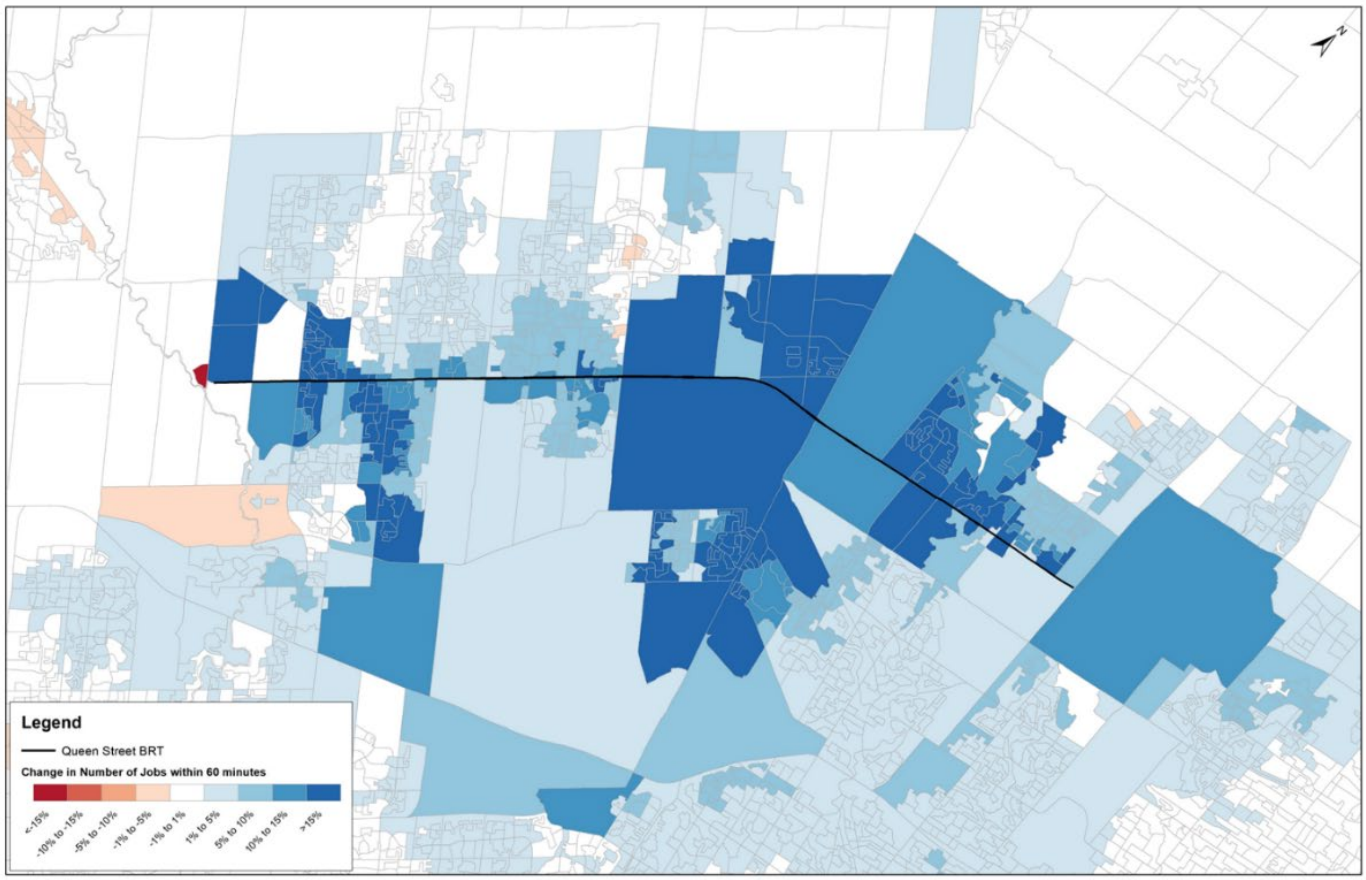

Figure 34: Change in access to jobs by transit (Scenario 3 vs 2041 BAU), AM peak period (Metrolinx Accessibility Toolkit)

- Impact on mode share

  The BRT service concept should encourage more people to choose transit within the study area. This evaluation assesses the change in modelled mode share for each scenario compared to the 2041 BAU based on the results from the GGHM_v4 model. Figure 35 to Figure 37 illustrate the change in mode share by traffic analysis zone (TAZ). In each scenario, there are slight increases to transit mode share along the Queen Street – Highway 7 Corridor, with the highest increases on the west of Downtown Brampton. As shown in Figure 36, the splitting of the main BRT route into two sections in Scenario 2 appears to impact transit mode share. As shown in Figure 37, the feeder routes for Scenario 3 have a positive impact on transit mode share outside of the Queen Street Corridor, particularly in the Gore Road area.

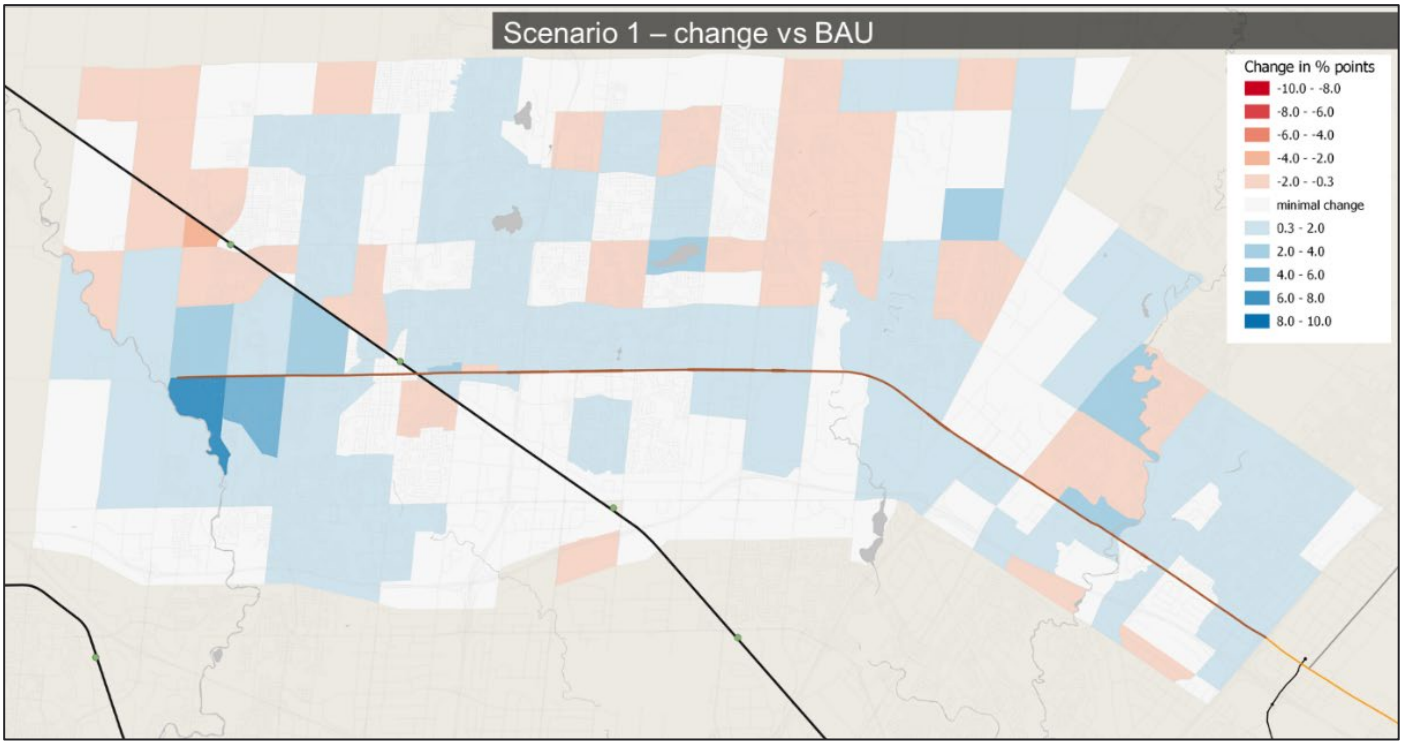

Figure 35: Change in transit mode share (Scenario 1 vs 2041 BAU), AM peak period (Metrolinx Accessibility Toolkit)

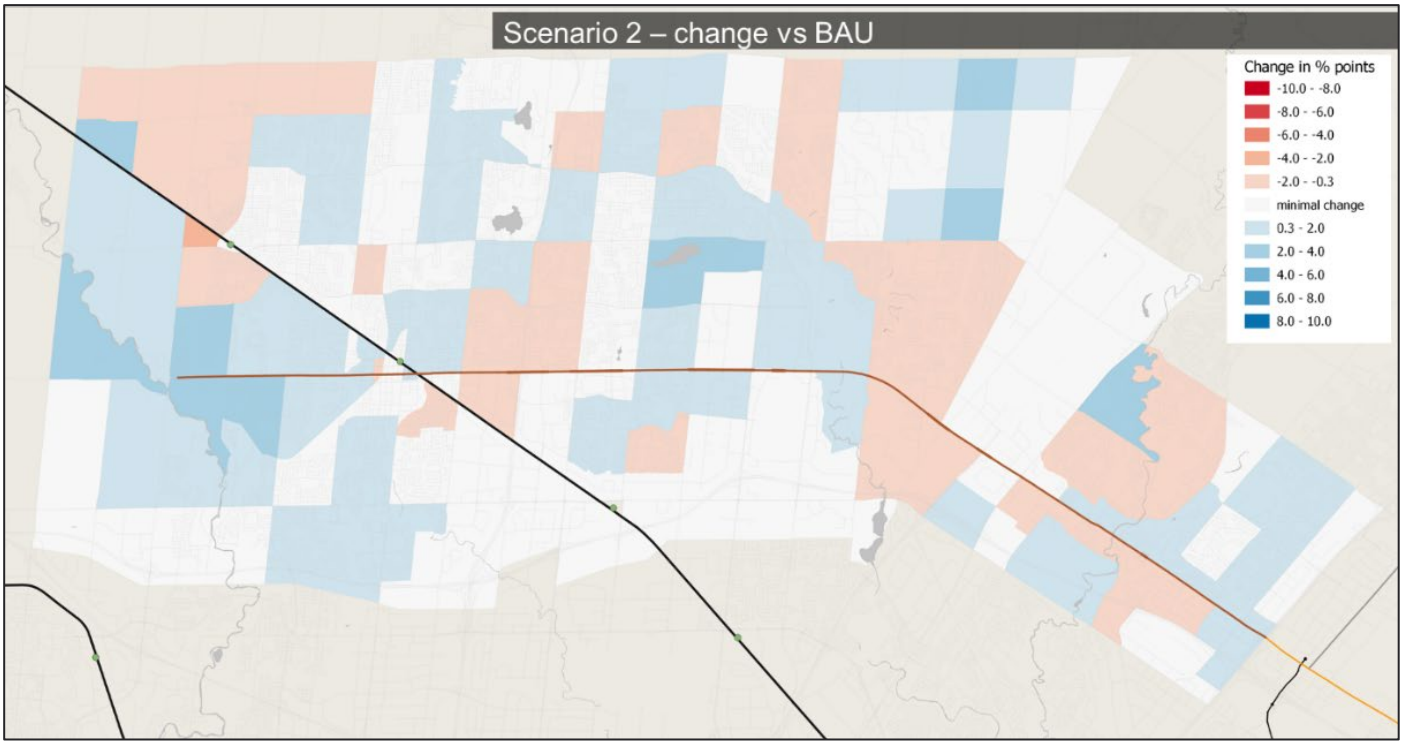

Figure 36: Change in transit mode share (Scenario 2 vs 2041 BAU), AM peak period (Metrolinx Accessibility Toolkit)

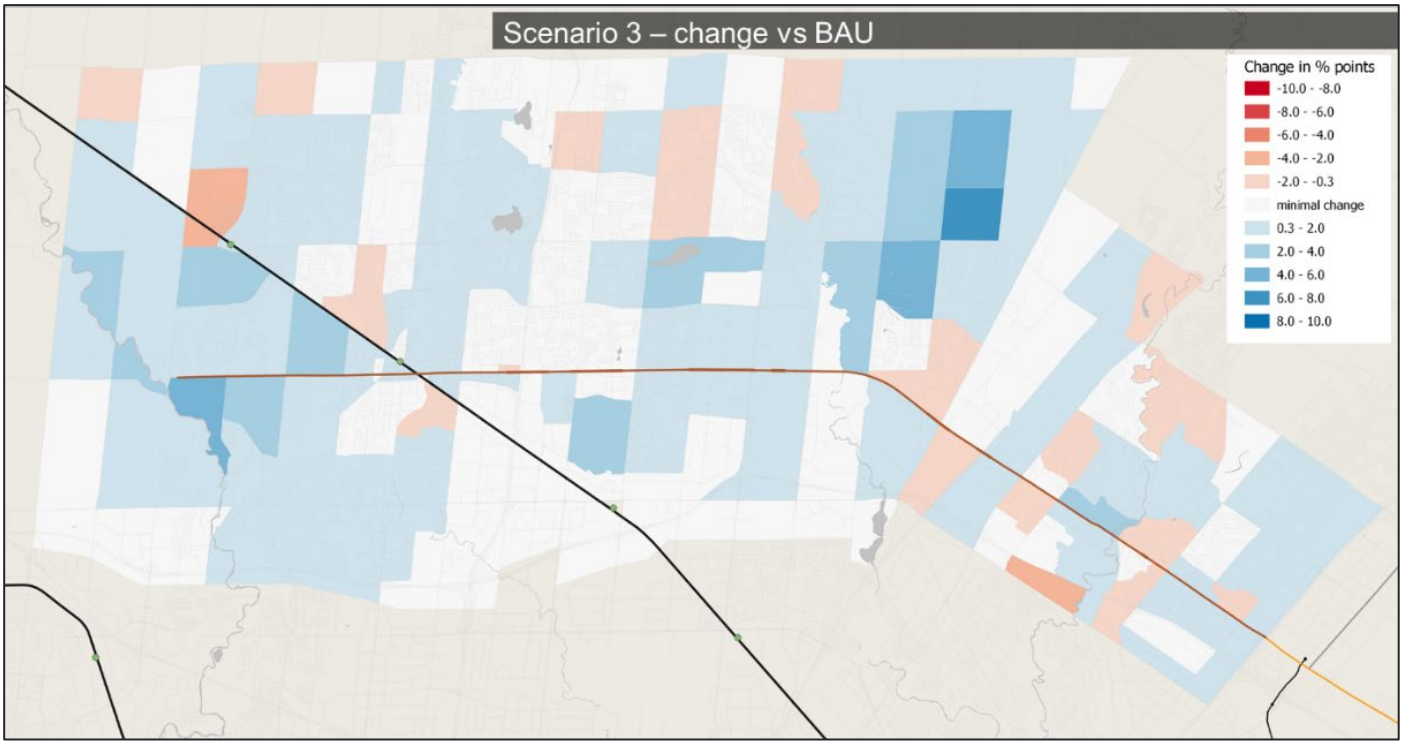

Figure 37: Change in transit mode share (Scenario 3 vs 2041 BAU), AM peak period (Metrolinx Accessibility Toolkit)

- Impacts on auto travel

  The transit service concept should reduce auto travel and assist in reducing congestion across the corridor. In this IBC this is measured using the change in vehicle-kilometres and vehicle-hours travelled in the AM peak period for each scenario compared to the 2041 BAU scenario. Additional modelling to understand the detailed impact to local traffic will be completed in the preliminary design phase. Along the corridor, each of the scenarios perform similarly. There is a reduction in vehicle kilometres and vehicle hours travelled on the sections of Queen Street within Downtown Brampton as illustrated in Figures 36 to 38, as a result of the assumed removal of one traffic lane per direction between McMurchy Road and Kennedy Road to accommodate the BRT lane.

  With the reduction in traffic lanes on Queen Street, it is expected that some vehicles may choose alternate routes to travel within Brampton. Figure 38 to Figure 40 show the change in auto vehicle-kilometres travelled by aggregate area for each scenario compared to the 2041 BAU. Across all scenarios, there are similar results. There is a 3-5% reduction in vehicle-km travelled within Downtown Brampton (that can be attributed to the reduction in travel on Queen Street due to the reduction in traffic capacity) and the higher frequency of transit service proposed. In all other study area zones, there is minimal change (i.e. less than 1%). This suggests that there may be minimal increases in vehicle traffic associated with rerouting off Queen Street into local areas, however this will be further refined in the next phases of work.

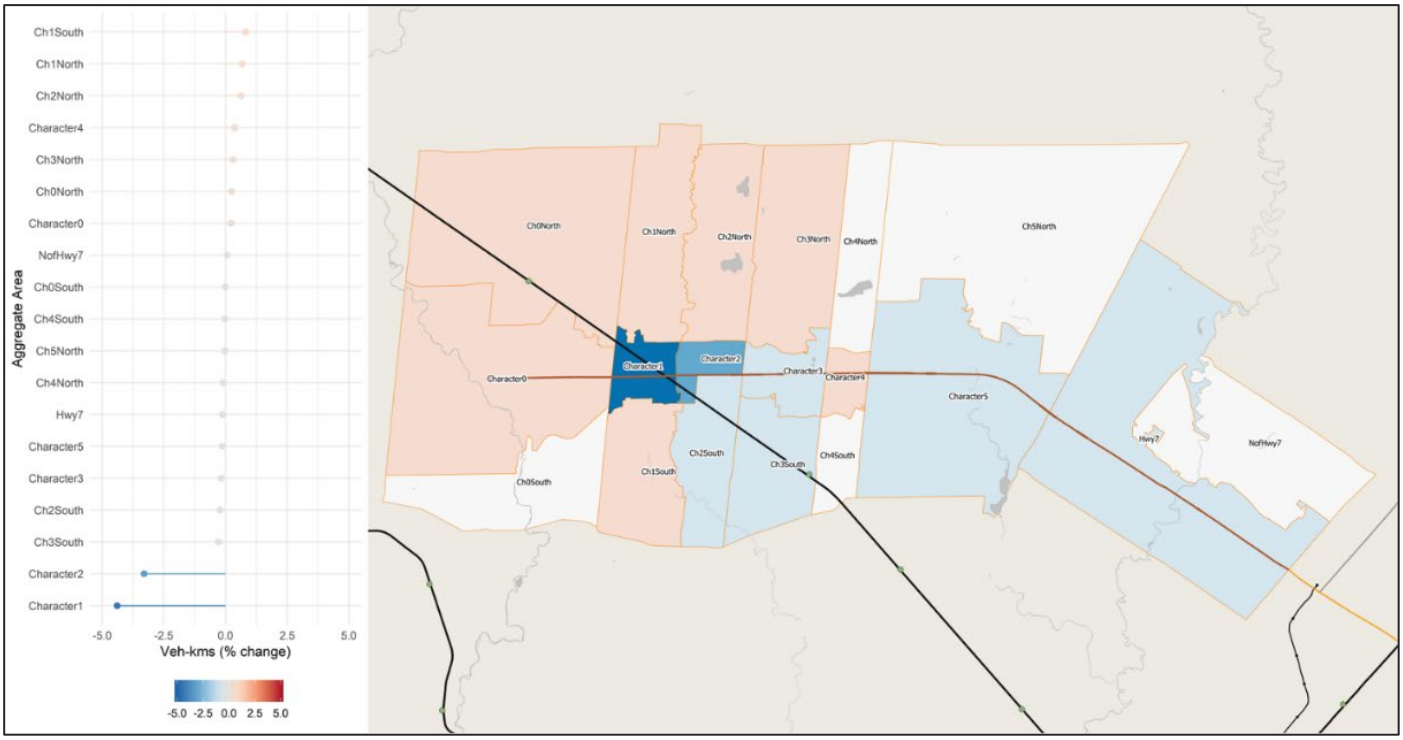

Figure 38: Change in auto vehicle-km travelled by aggregate area (Scenario 1 vs 2041 BAU), AM peak period

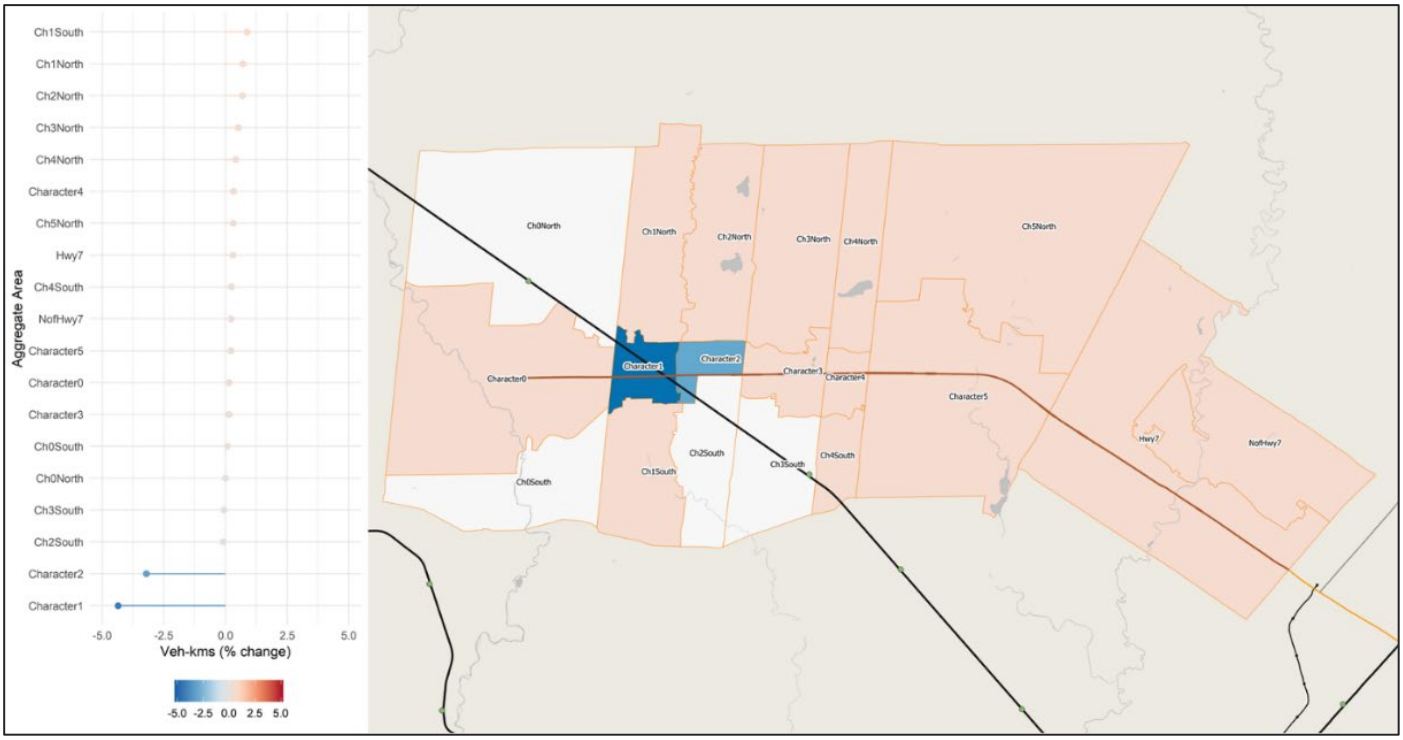

Figure 39: Change in auto vehicle-km travelled by aggregate area (Scenario 2 vs 2041 BAU), AM peak period

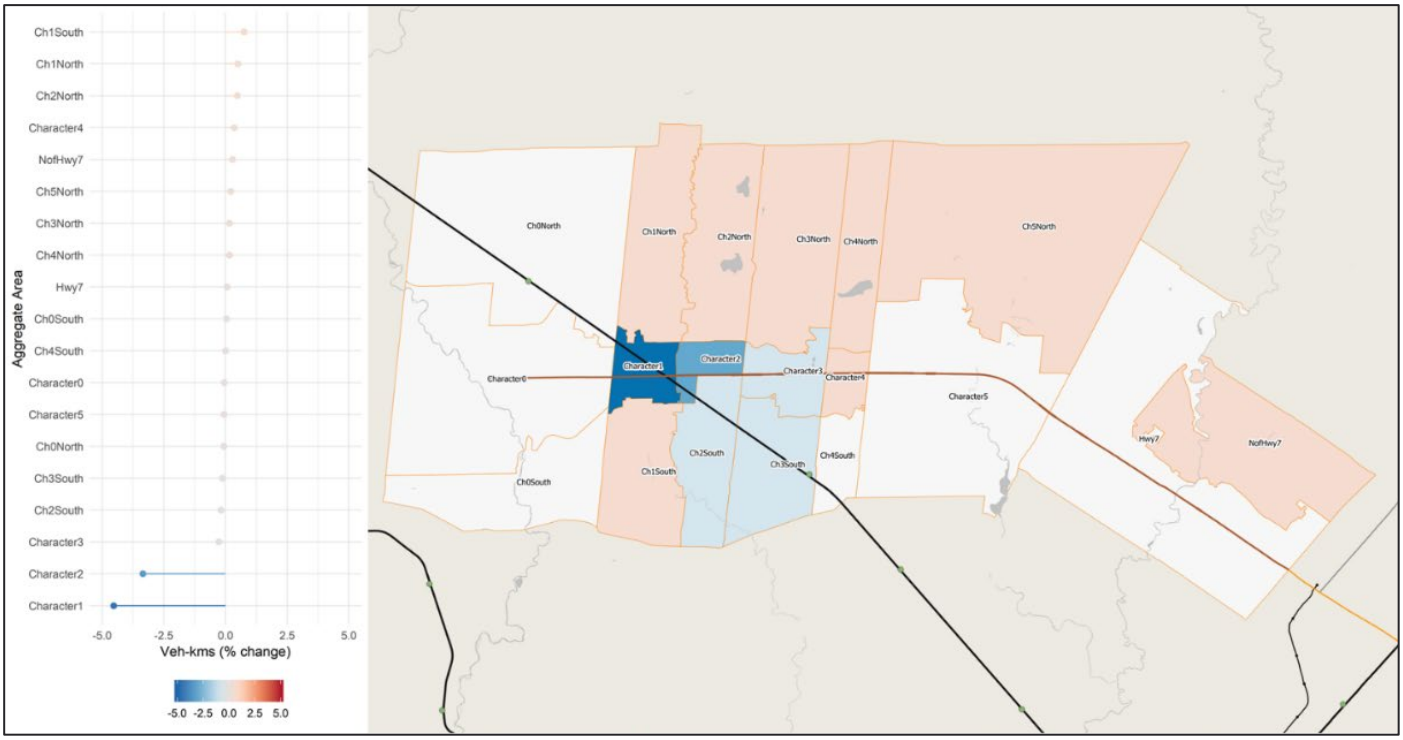

Figure 40: Change in auto vehicle-km travelled by aggregate area (Scenario 3 vs 2041 BAU), AM peak period

Figure 41 to Figure 43 show the change in auto vehicle-hours travelled by aggregate area for each scenario compared to the 2041 BAU. Across all scenarios, there are slight differences observed between the data, though they do not seem to have a major impact on the overall result and findings. These differences are largely attributed to the differences in frequency on priority bus routes that will support the BRT corridor. There is minimal change (i.e. less than 1%) in vehicle-hours travelled within downtown Brampton. There are small increases (i.e. less than 5%) in the aggregate areas surrounding Main Street. The impact of these changes on traffic congestion in these areas will be analysed through the detailed traffic assessment in the next phases of work.

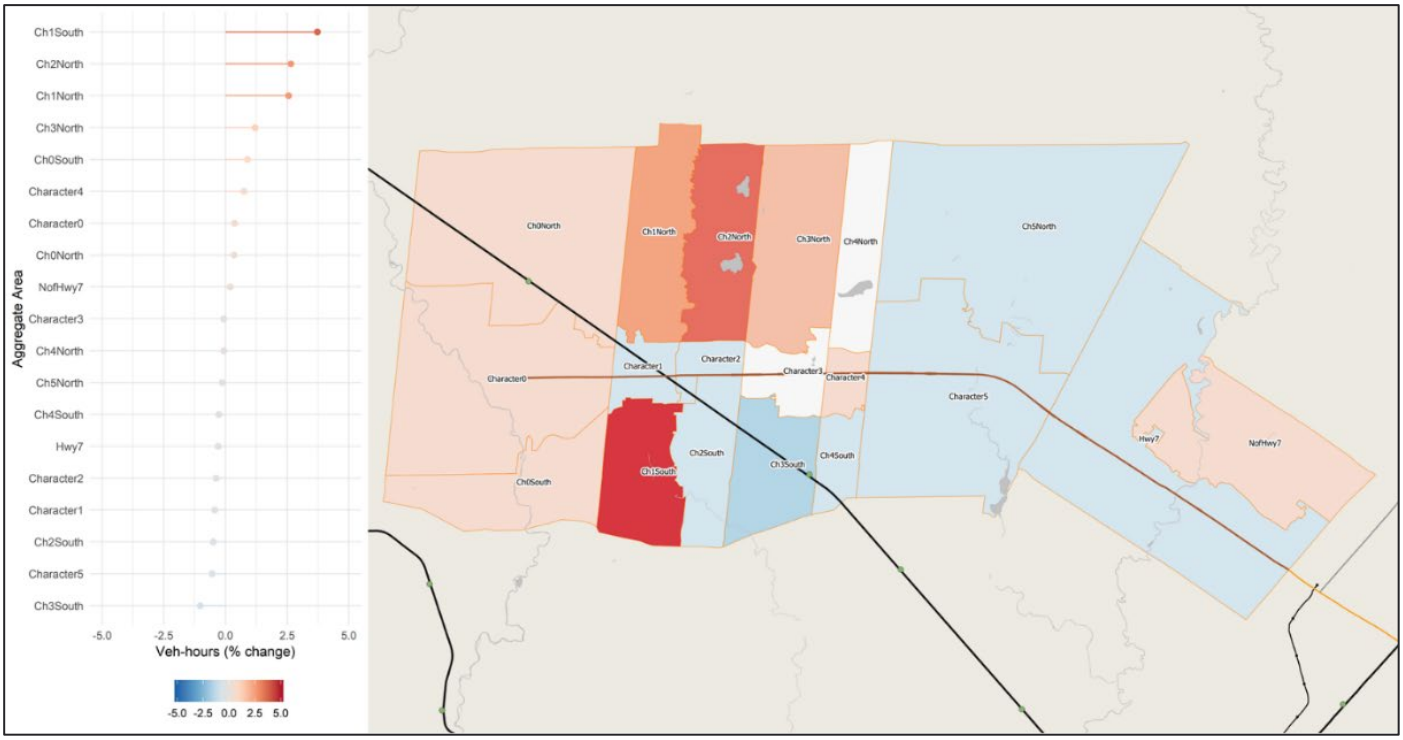

Figure 41: Change in auto vehicle-hours travelled by aggregate area (Scenario 1 vs 2041 BAU), AM peak period

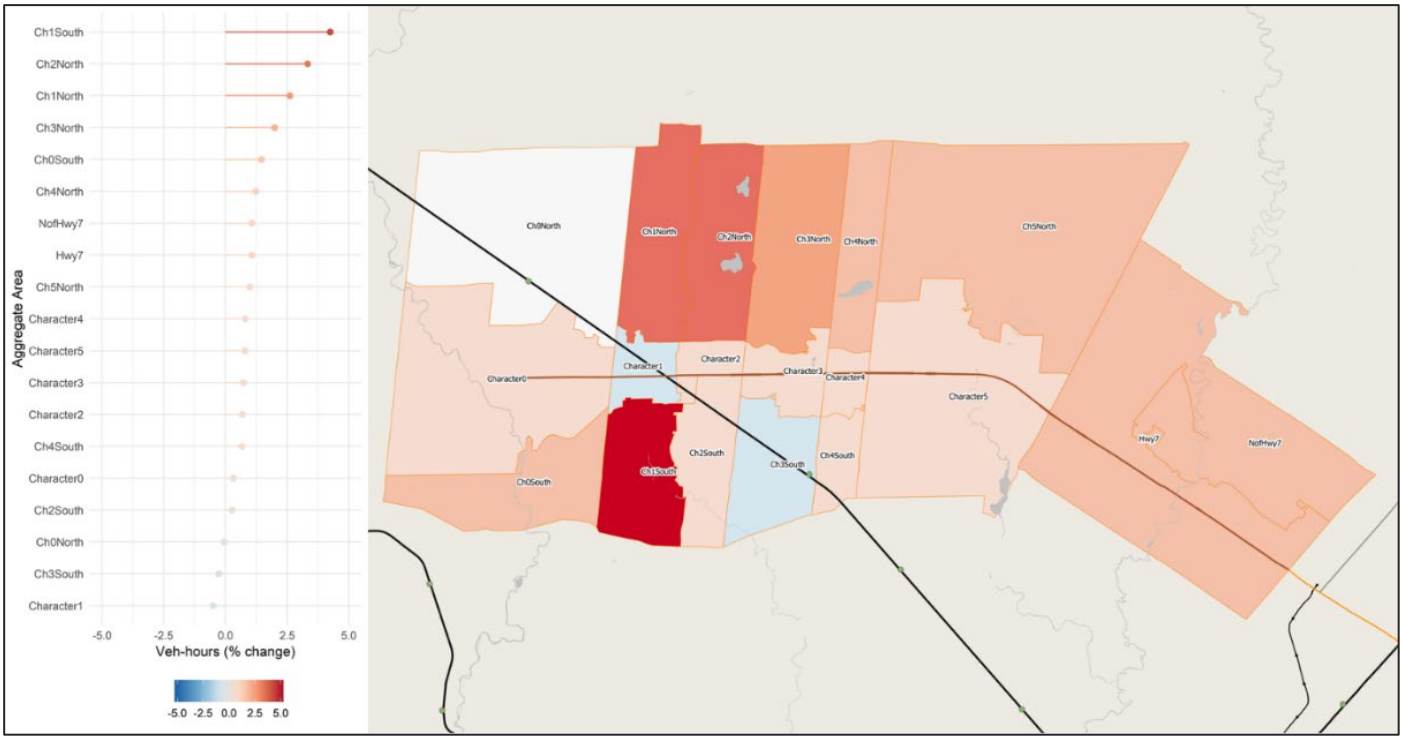

Figure 42: Change in auto vehicle-hours travelled by aggregate area (Scenario 2 vs 2041 BAU), AM peak period

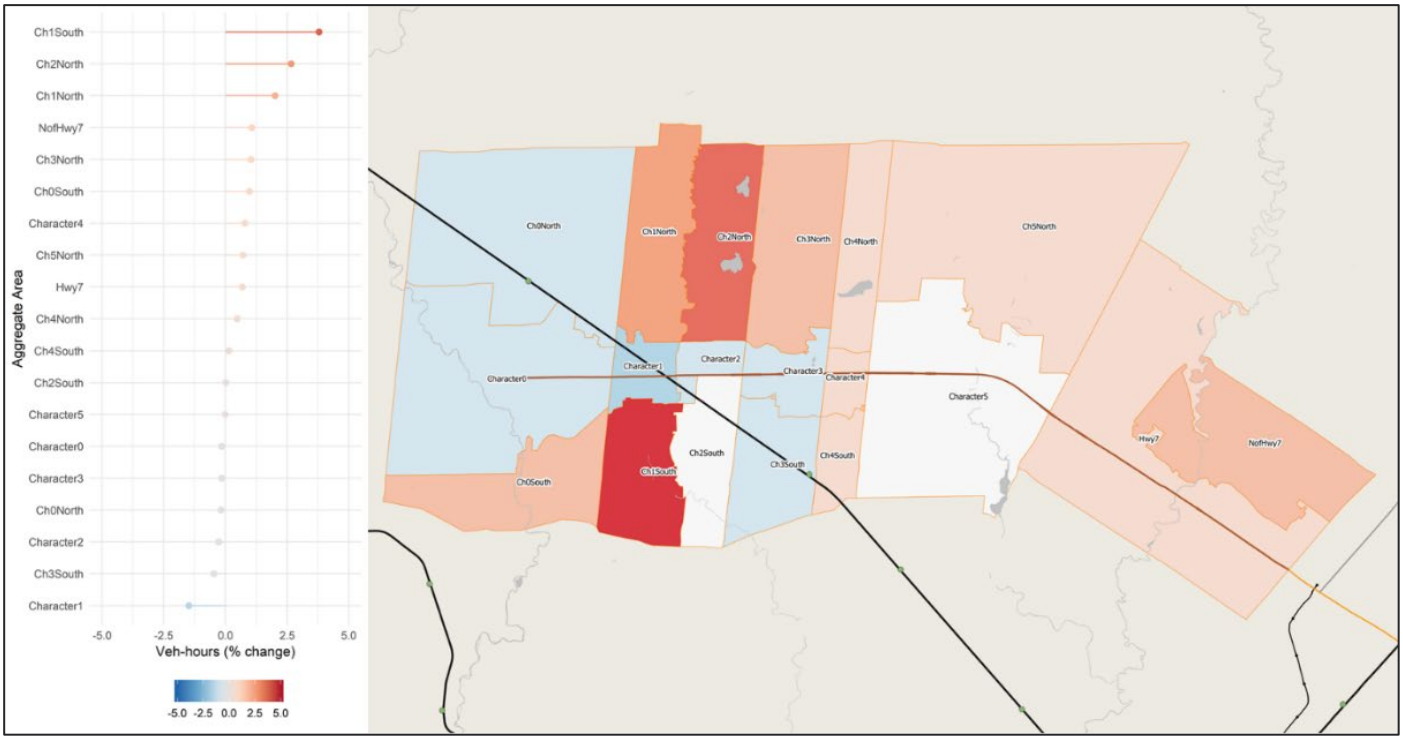

Figure 43: Change in auto vehicle-hours travelled by aggregate area (Scenario 3 vs 2041 BAU), AM peak period

- Transit Level of Service

  The transit level of service criterion is used as a proxy measure for the expected operating cost for each service scenario. This criterion is measured using the expected change in transit vehicle kilometres, which is calculated based on the route length and the proposed AM peak service headway. The analysis is focused on the routes located on Queen Street – Highway 7 Corridor. Table 12 summarizes the planned transit vehicle kilometres travelled in the AM peak period (6 – 9 AM) by scenario. Based on this analysis, Scenario 3 has the highest increase in vehicle kilometres travelled, which is expected due to the number of additional Priority Bus routes.

Table 12: Transit vehicle kilometres travelled by scenario (AM peak period)

SCENARIO	TRANSIT VKTS	CHANGE IN VKTS	% CHANGE VS BAU
BAU	3,600	--	--
SCENARIO 1	4,600	+1,000	28%
SCENARIO 2	4,600	+1,000	28%
SCENARIO 3	6,100	+2,500	69%

Recommendation of BRT service concept

Table 13 summarizes the key findings from the evaluation of the service definition.

Table 13: Transit service definition evaluation summary

CRITERIA	KEY FINDINGS
TRANSIT DEMAND	There is higher transit demand with BRT across all scenarios. However, splitting the main BRT route into two sections will impact transit demand (resulting in a reduction in demand)
TRANSIT ACCESSIBILITY	Feeder routes (as modelled in Scenario 3) make a significant improvement for access to employment
IMPACT ON MODE SHARE	Scenarios 1 and 3 result in increases in transit mode share across the corridor
IMPACT ON AUTO TRAVEL	Lane reductions suggest there is capacity on the local network across all scenarios for potential displaced traffic as a result of the removal of existing traffic capacity on Queen St. However limited analysis has been completed on this and it should be further analyzed in the preliminary design phase to understand the full impacts prior to making a determination on lane configuration
TRANSIT LEVEL OF SERVICE	Scenario 3 has the highest increase in transit VKTs due to the feeder routes

Recommended transit service definition for the IBC

Based on the evaluation, the recommended service definition is a single main BRT trunk route plus the addition of the feeder priority routes. This service definition is a combination of Scenarios 1 and 3. The single main BRT trunk route is preferred over splitting the service into two main routes as the transit demand analysis suggests that it will have higher boardings. The addition of feeder priority routes is preferred as it makes considerable improvements to transit accessibility. While the addition of priority routes is expected to increase operating costs, some of the feeder routes with low expected ridership (e.g. Routes D1 and D2) could be refined in further study stages.

The following are additional considerations and context:

- One main BRT trunk route on the corridor (instead of two) is preferable as it is shown to maximize ridership;
- The Viva Orange route from the east should not use the BRT corridor under study and should stop at Vaughan Metropolitan Centre, in order to use existing VMC facilities to ensure efficient transfers between transit services for users;
- Other transit routes and headways proposed in Scenario 3 help maximize transit ridership;
- Route 01 remains on Highway 407 for its east portion and is not shifted onto Highway 7, because that would likely increase travel times and reduce ridership; and
- Routes D1 and D2 are maintained in Scenarios 4, 5, and 6, as they are defined in Scenario 3 (routes and headways), even if the ridership of D2 is lower than the other Priority Bus routes.

They are both links to Pearson Airport and route D2 also serves the TTC subway. In further study stages, these routes and their headways can be refined.

Figure 44 shows transit service definition for Scenarios 4, 5, and 6 on the Queen Street – Highway 7 corridor.

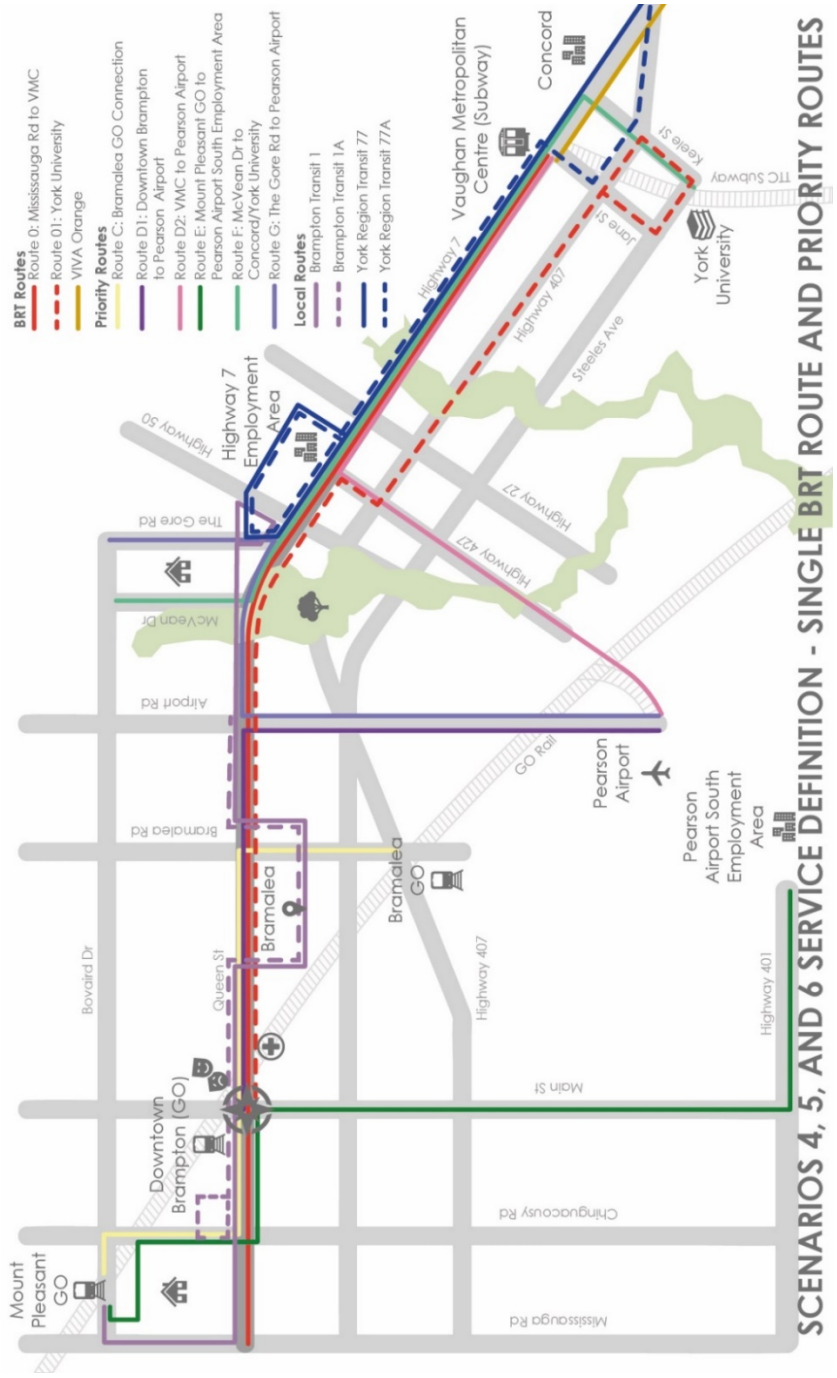

Figure 44: Transit service in Scenarios 4, 5, and 6: One main BRT route and Priority Bus routes on the Queen Street – Highway 7 BRT Corridor

Infrastructure Scenarios

BRT systems are flexible with a variety of infrastructure design options that can be accommodated within existing rights of way, and by widening rights of way, depending on the capacity, speed, and other design requirements of the BRT system. Some design options require more substantial infrastructure investments than others, with impacts to user experience and the level of service that can be achieved on the system.

Design solutions can also be combined along a corridor; for example, where there is sufficient space in the existing right of way, a centre median BRT can be deployed, while in narrow portions of a corridor, a curbside BRT system with time of day lane restrictions may be preferable.

General BRT design considerations

Right of way options

- Centre median operation

  Centre median running BRT systems apply dedicated bus lanes in the centre median along an entire corridor. Centre median BRT systems allow for efficient and reliable operation, reduced travel times, and minimizes the potential for conflict between buses and other vehicles on the roadway, particularly if the roadway has many mid-block driveways. They typically require an expanded road width or the elimination of conventional vehicle travel lane(s).

- Curbside operation

  Curbside running BRT systems use curbside platforms and operate similarly to conventional bus services in mixed traffic, but have signage dedicating exclusive use by buses in curbside lanes at certain times. Curbside operation may be preferable where rights of way are narrow and do not permit the addition of a new centre median. However, curbside operation may increase conflicts between buses and vehicles if there are many mid-block driveways, reducing reliability of the service, and potentially increasing safety risks.

  Table 14 compares centre median versus curbside operation of BRT systems.

Table 14: Right of way option comparison of BRT systems

	CENTRE MEDIAN		CURBSIDE
+	Increases reliability of transit operations	+	Increases efficiency of transit operations
+	Fewer potential conflicts with local traffic and pedestrians	-	Potential conflicts with local traffic and pedestrians
+	Minimizes conflicts with right-turning traffic and avoids merge before left turns (with traffic signal exclusive phases)	-	Impact from right-turning traffic (intersections and driveways) and need for merge before left turns
+	Can be converted to LRT if warranted	-	Not easily converted to LRT
-	Higher costs (typically)	+	Lower costs (typically)

	CENTRE MEDIAN		CURBSIDE
+	Centre median creates passenger refuge and shortens crossing distance	+	BRT accessible from sidewalks
-	Potential impact on traffic and vehicle throughput at intersections (traffic light phasing; left turn movement limitations)	+	Conflicts exist for vehicles turning right
+	Limited possibility for misuse by other road users increases transit efficiency	-	Can be used by other road users (HOV, bicycles, taxis), impacting transit efficiency and potential for misuse. Requires proper enforcement.

There are a number of important considerations with BRT options including the following:

- physical or environmental constraints limiting the potential to widen the Right-Of-Way to add lanes;
- Adjacent land uses and opportunities for changes in land use with the introduction of a BRT corridor; and
- Impacts to local traffic access, goods movement and conflicts between vehicles and buses in curb lanes.

For the purpose of this IBC, curbside BRT was not considered as a standalone option. This is because the impacts of curbside BRT on traffic, and the impacts at intersections are too detailed for this level of analysis. Detailed intersection level impacts of the BRT will be assessed at the preliminary design phase and curbside BRT may be considered in areas which are constrained, and reliability of bus service can be maintained with the implementation of curbside lanes.

Stop types, spacing, and locations

Regarding the stop types on the Queen Street – Highway 7 Corridor, the following assumptions apply to the definition of the Brampton Queen Street – York Region Highway 7 BRT project:

- When the BRT is positioned in the median section of the road, the BRT stops are similarly positioned, laid out, and equipped compared to existing stops on the Viva median BRT network in Vaughan;
- When the BRT is on the curbside, the stops are similar to the existing bus stops and with limited modifications (BRT branding, some equipment systems).

Relative to local non-BRT bus service, BRT is characterized by wider stop spacing. Less frequent stops allow the BRT to travel more reliability. Stops were selected based on a careful consideration of the following criteria:

- Using existing Züm/Viva bus stops on the Queen Street – Highway 7 Corridor where possible (to maintain familiarity with transit system and minimize throw-away costs);
- Locating stops at major intersections;
- Connecting to other transit routes;

- Connecting to major destinations (e.g. secondary schools, major employment areas); and
- Keeping average stop spacing greater than 800 m.

As a point of comparison, existing BRT services elsewhere in the GTHA use the following stop spacing:

- Viva: 1 stop per 1,000-1,600 m
- Durham Region Transit PULSE service between Oshawa and University of Toronto Scarborough: 1 stop per 550 m

Converting a lane versus adding a lane

When introducing an on-street BRT system, one important consideration is whether or not a vehicle travel lane (also known as a general purpose [GP] lane) will be removed to allow for the introduction of a transit-only lane, or the roadway will be widened or adjusted to maintain existing vehicle capacity while adding a new transit-only lane. In corridors characterized by heavy traffic volumes such as the Queen Street – Highway 7 Corridor, converting a vehicle travel lane may present a significant challenge by increasing traffic congestion and inducing pressure on adjacent local streets, unless mode shift to BRT along the same corridor is immediate.

In constrained conditions, such as in a downtown location or where existing underpasses and overpasses exist, or where there is sensitivity to adjacent land uses, vehicle travel lane reductions or mixed traffic BRT operations may be required. As noted previously, the BRT system does not necessarily require a single design solution (e.g. only adding a lane or only converting a lane) for the length of the route. Local contexts may dictate modifications as part of the design process.

Table 15 compares lane addition versus lane conversion for BRT operation.

Table 15: Lane addition versus conversion for BRT operation option comparison

	ADDING A BUS LANE		CONVERTING A LANE
+	Increases reliability of transit operations versus operating in mixed traffic and reduces travel time for customers	+	Increases reliability of transit operations versus operating in mixed traffic and reduces travel time for customers
-	Right of way widening required	+	Not likely to require substantial right of way widening (may be required at intersections where stops are proposed)
+	Maintains existing traffic capacity	-	Reduces existing traffic capacity
+	Can be curbside or median	+	Can be curbside or median
+	24hr operation	+	Flexible time of day use – 24hr or peak period operation
-	Higher costs	+	Lower costs

BRT speeds in semi-exclusive lane conditions

An Arup model for estimating speed and travel times of buses travelling on the proposed semi-exclusive corridor was developed. The resulting speed estimates were used as an input into the regional travel demand model (GGHM_v4) when modelling exclusive BRT lanes.

The approach also takes into consideration other operational characteristics including the bus acceleration and deceleration rates, the vertical gradient, traffic signal operations and the posted speed limits. The bus travel time is derived from the following components:

- The time when the bus is in motion. This includes bus acceleration, cruising and deceleration times under free-flow conditions;
- Dwell times at bus stops to board and alight passengers; and
- The time spent in a stop conditions at signalized intersections. The amount of traffic signal delay varies and is dependent on cycle length, green phases, and signal progression.

Distances between stops and intersections were measured and used to calculate the bus speeds along the corridor.

Overall, the average bus speeds on the proposed semi-exclusive corridor are 31.0 km/h and 31.2 km/h in the eastbound and westbound direction, respectively. Details are described in Table 16.

Table 16: Calculated average bus speeds on the Queen Street – Highway 7 BRT exclusive BRT lanes (Arup, 2019)

DIRECTION	CALCULATED AVERAGE BUS SPEED ON SEMI-EXCLUSIVE CORRIDOR (KM/H)
EASTBOUND	31.0 km/h
WESTBOUND	31.2 km/h
AVERAGE (BOTH DIRECTIONS)	31.1 km/h

Queen Street – Highway 7 BRT infrastructure options

Three (3) infrastructure options have been developed for the Queen Street – Highway 7 BRT Corridor, as per evaluation methods defined previously. Each scenario consists of a combination of one or all of the different BRT lane configurations: centre median with lane conversion, centre median with road widening, and buses operating in mixed traffic conditions. All options consider the provision for active transportation across the corridor as much as possible.

Scenario 4: centre median BRT operation with lane conversion

Scenario 4 proposes the conversion of a traffic lane per direction to median BRT exclusive lanes along the length of the Queen Street – Highway 7 Corridor, including downtown Brampton. This reduces the number of traffic lanes along the length of the corridor (one per direction).

- Lane configuration assumptions for the calculation of the required Right-of-Way (ROW):
    - General purpose (GP) traffic lanes' widths reduced to a minimum of 3.3 m each;

- BRT lanes at 3.5 m wide each plus a 0.6 m buffer (0.3 m between each direction of traffic);
- Two bike lanes at 2 m wide each;
- Sidewalks at current widths.

Figures 45 to 48 illustrate the BRT concept on the corridor for Scenario 4, with an illustrative cross section per segment. An analysis of the estimated ROW widths available and required along the corridor has led to the BRT concept per segment and to the evaluation of impacts on the ROW. These however are not indicative of the ROW that will be required for the BRT infrastructure; instead it was used to support the initial modelling, early concept designs and costs estimates of the infrastructure. These will be further refined in future phases of the study.

Table 17 provides a description of the configuration for road segments that are likely constrained by the width of the ROW being narrowed than what is required between outside limits of current sidewalks or between curbs/current paved areas.

Table 17: Scenario 4 configuration constrained corridor segments (Arup, 2019)

ROAD SEGMENT	SEGMENT LENGTH (M)	INFRASTRUCTURE CONSTRAINTS	CONFIGURATION
MISSISSAUGA RD TO CHINGACOUSY RD	2,710	Bridge over drain crossing (east of James Porter Rd)	Bus exclusive (1 veh lane per direction)
CHINGACOUSY RD TO MCMURCHY AVE	2,070	Bridge over creek (east of McLaughlin Rd)	Bus exclusive (1 veh lane per direction)
FLETCHERS CREEK	24	Bridge over Fletchers Creek	Bus exclusive (1 veh lane per direction)
MCMURCHY AVE TO ELIZABETH ST	320	Level rail track crossing at Elliot Street	Bus exclusive (1 veh lane per direction)
ELIZABETH ST TO CHAPEL ST	540	Downtown Brampton / Building lines along sidewalks.	Bus shared with traffic or Bus exclusive (1 veh lane per direction) if parking is removed
CHAPEL ST TO CENTRE ST	525	Rail corridor underpass, Etobicoke Bridge over creek	Bus exclusive (1 veh lane per direction)
CROSSING OF HIGHWAY 410	225	Highway overpass	Bus exclusive (2 veh lane per direction)
CROSSING OF SPRING CREEK	23	Bridge over Spring Creek	Bus exclusive (2 veh lanes per direction)

ROAD SEGMENT	SEGMENT LENGTH (M)	INFRASTRUCTURE CONSTRAINTS	CONFIGURATION
CROSSING OF DRAIN 2 IN CLAIREVILLE CONSERVATION AREA TO HIGHWAY 427 (ROAD 99)	1380		Bus exclusive (2 veh lanes per direction)
KIPLING AV TO CROSSING OF RAIL TRACKS	340		Bus exclusive (1 veh lane per direction)
AT CROSSING OF RAIL TRACKS	75	Rail corridor underpass	Bus exclusive (1 veh lane per direction)
CROSSING OF RAIL TRACKS TO HUMBER RIVER CROSSING	75		Bus exclusive (1 veh lane per direction)
HUMBER RIVER CROSSING TO ISLINGTON AVE	115	Bridge over Humber River	Bus exclusive (1 veh lane per direction)

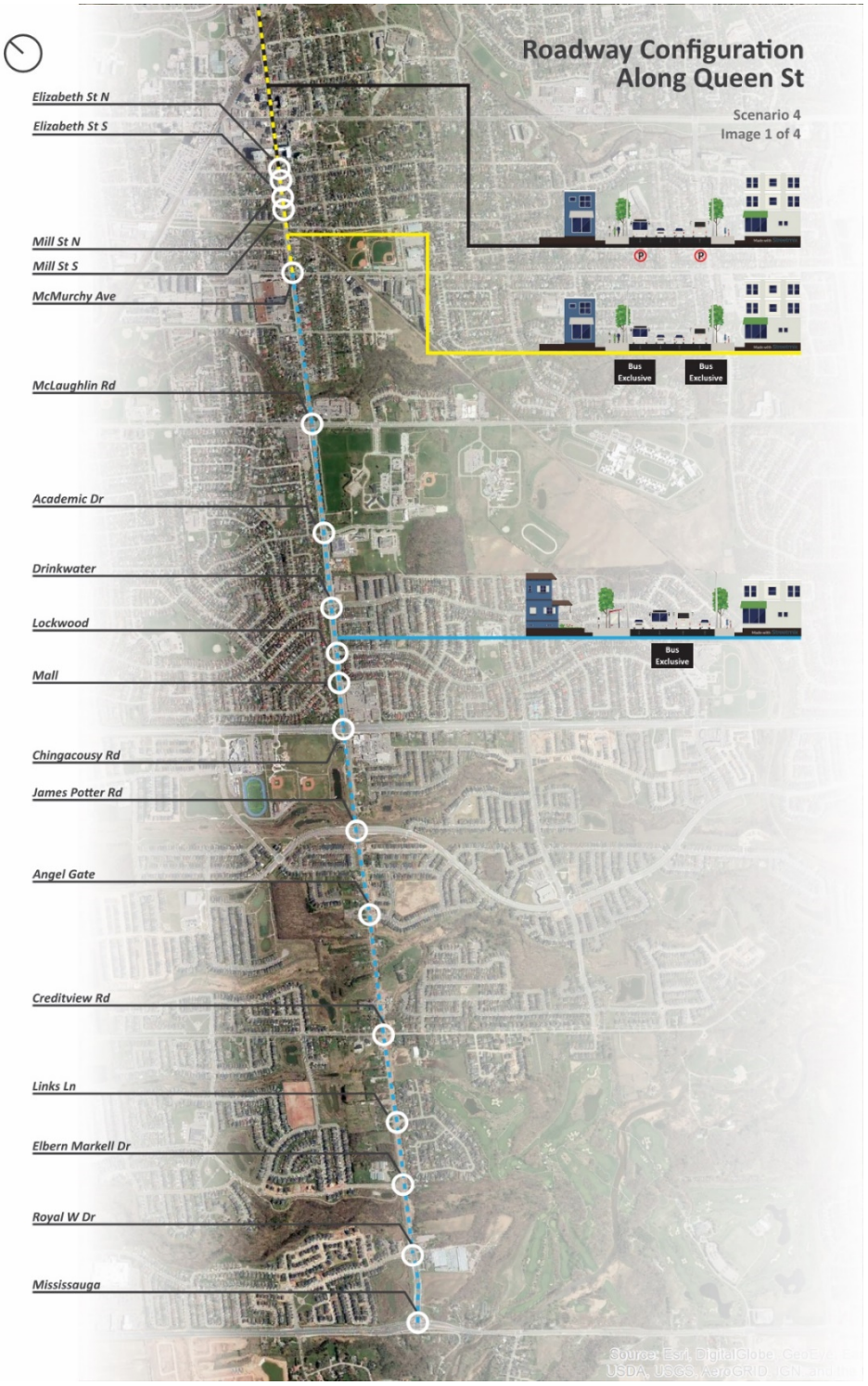

Figure 45: Scenario 4 road configuration, Mississauga Road to Mill Street North

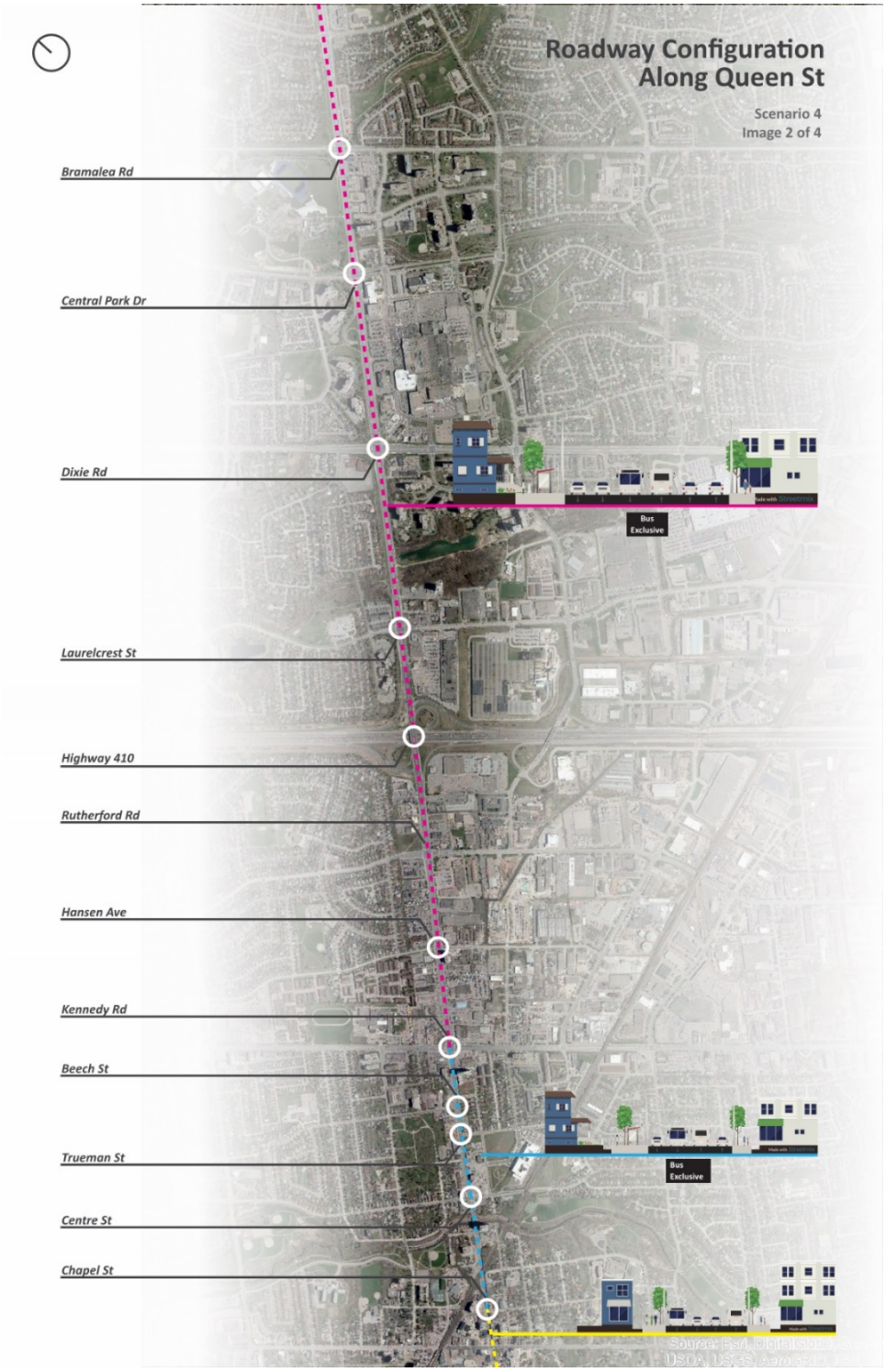

Figure 46: Scenario 4 road configuration, Chapel Street to Bramalea Road

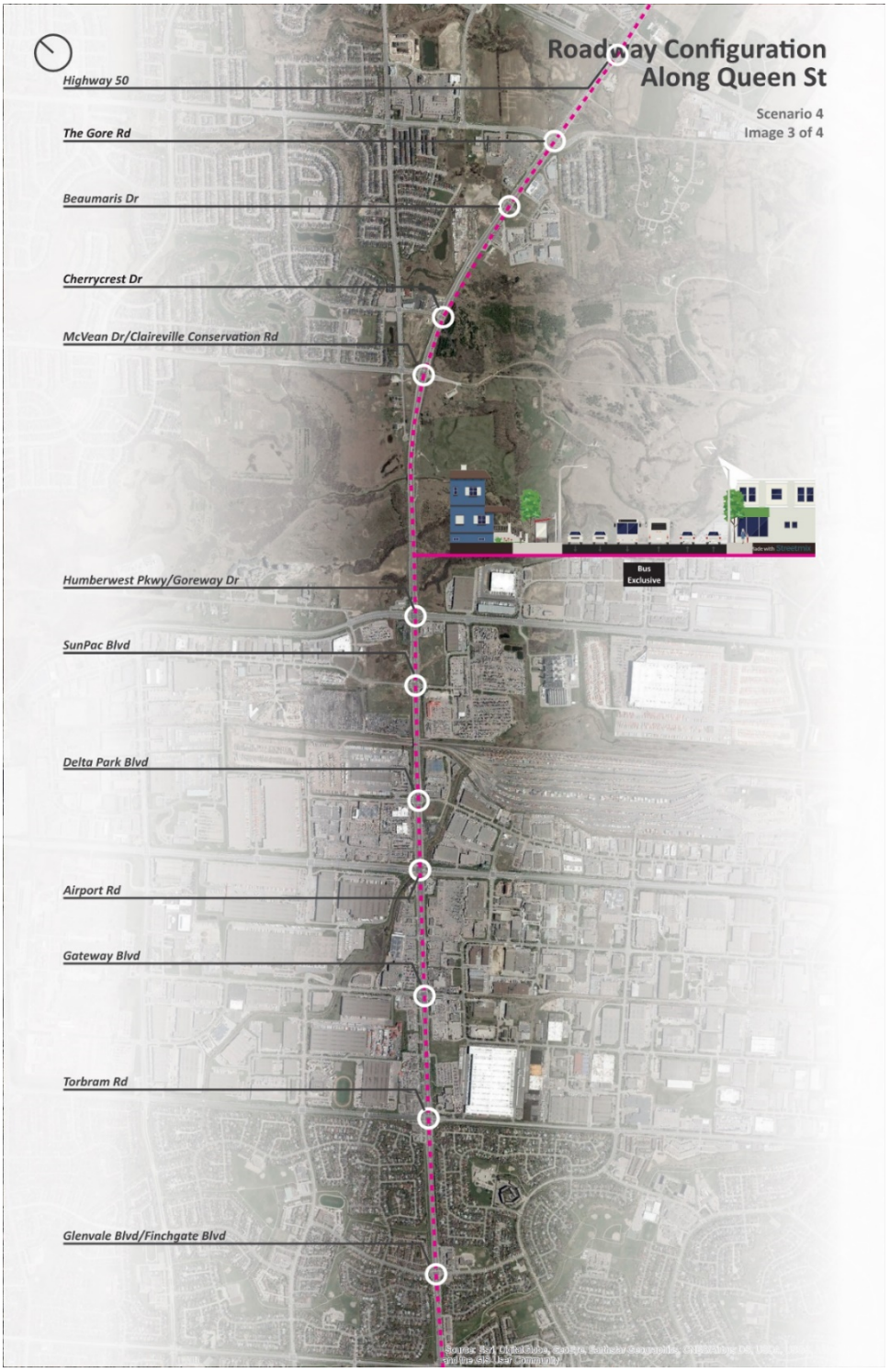

Figure 47: Scenario 4 road configuration, Glenvale Boulevard to Highway 50

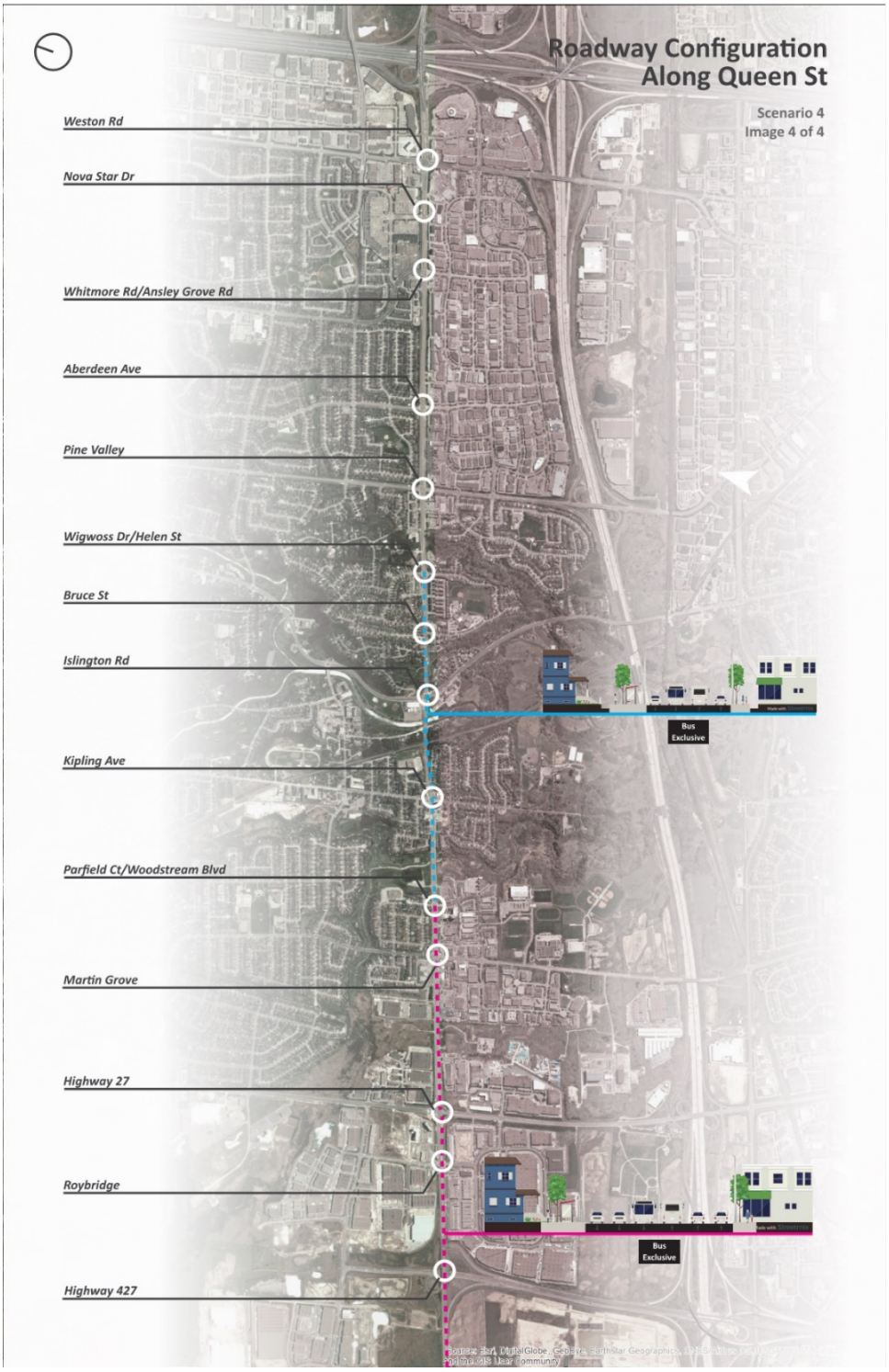

Figure 48: Scenario 4 road configuration, Highway 427 to Weston Road

Scenario 5: centre median BRT operation with lane addition

Scenario 5 proposes one median BRT exclusive lane per direction along the length of the Queen Street – Highway 7 Corridor as a result of road widening, everywhere except Downtown Brampton (Queen Street between McMurchy Avenue and Kennedy Road) where lane conversion is considered, resulting in a reduction in the number of auto travel lanes (one per direction) on that section of the corridor.

- Lane configuration assumptions for the calculation of the required Right-of-Way (ROW)
    - GP traffic lanes' widths reduced to a minimum of 3.3 m each;
    - BRT lanes at 3.5 m wide each plus a 0.6 m buffer (0.3 m between each direction of traffic);
    - Two bike lanes at 2 m wide each;
    - Sidewalks at current widths.

Figures 49 to 52 illustrate the BRT concept on the corridor for Scenario 5, with an illustrative cross section per segment. An analysis of the estimated ROW widths available and required along the corridor has led to the BRT concept per segment and to the evaluation of impacts on the ROW. These however are not indicative of the ROW that will be required for the BRT infrastructure; instead it was used to support the initial modelling, early concept designs and costs estimates of the infrastructure. These will be further refined in future phases of the study.

As a result of this analysis, Table 18 provides a description of the configuration for road segments that are likely constrained by the width of the ROW being narrowed than what is required.

Table 18: Scenario 5 configuration on constrained corridor segments (Arup, 2019)

ROAD SEGMENT	SEGMENT LENGTH (M)	INFRA-STRUCTURE CONSTRAINTS	CONFIGURATION
MISSISSAUGA RD TO CHINGUACOUSY RD	2710	Bridge over drain crossing (east of James Porter Rd)	Bus exclusive (2 veh lanes per direction)
CHINGUACOUSY RD TO MCMURCHY AVE	2,070	Bridge over creek (east of McLaughlin Rd)	Bus exclusive (2 veh lanes per direction)
FLETCHERS CREEK	24	Bridge over Fletchers Creek	Bus exclusive (2 veh lanes per direction)
MCMURCHY AVE TO ELIZABETH ST	320	Level rail track crossing at Elliot Street	Bus exclusive (2 veh lanes per direction)
ELIZABETH ST TO CHAPEL ST	540	Downtown Brampton / Building lines along sidewalks.	Bus shared with traffic or Bus exclusive (1 veh lane per direction) if parking is removed
CHAPEL ST TO CENTRE ST	525	Rail corridor underpass, Etobicoke Bridge over creek	Bus exclusive (2 veh lane per direction)
KENNEDY ROAD TO HIGHWAY 410	1,195		Bus exclusive (3 veh lane per direction)
CROSSING OF HIGHWAY 410	225	Highway overpass	Bus exclusive (3 veh lane per direction)
CROSSING OF SPRING CREEK	23	Bridge over Spring Creek	Bus exclusive (3 veh lanes per direction)
CROSSING OF BRAMALEA CITY CENTER DRIVE	28	Drive overpass	Bus exclusive (3 veh lanes per direction)
CROSSING OF AIRPORT ROAD INTERSECTION CULVERT	90	Culvert under intersection	Bus exclusive (3 veh lanes per direction)
CROSSING OF CN RAIL TRACKS	200	Rail corridor overpass	Bus exclusive (3 veh lane per direction)
CROSSING OF RIVER IN CLAIREVILLE CONSERVATION AREA	69	Bridge over river	Bus exclusive (3 veh lane per direction)

ROAD SEGMENT	SEGMENT LENGTH (M)	INFRA-STRUCTURE CONSTRAINTS	CONFIGURATION
CROSSING OF DRAIN 1 IN CLAIREVILLE CONSERVATION AREA	10	Culvert over drain	Bus exclusive (3 veh lane per direction)
CROSSING OF DRAIN 2 IN CLAIREVILLE CONSERVATION AREA	20	Culvert over drain	Bus exclusive (3 veh lane per direction)
CROSSING OF DRAIN 2 IN CLAIREVILLE CONSERVATION AREA TO HIGHWAY 427 (ROAD 99)	1,380	Rail corridor underpass, Etobicoke Bridge over creek	Bus exclusive (3 veh lanes per direction)
CROSSING OF HIGHWAY 427 (ROAD 99)	300	Bridge over highway	Bus exclusive (3 veh lanes per direction)
HIGHWAY 427 (ROAD 99) TO HIGHWAY 27	940		Bus exclusive (3 veh lanes per direction)
HIGHWAY 27 TO WOODSTREAM BLVD	1360		Bus exclusive (3 veh lanes per direction)
WOODSTREAM BLVD TO KIPLING AV	700	Bridge over creek	Bus exclusive (2 veh lanes per direction + TWLTL)
KIPLING AV TO CROSSING OF RAIL TRACKS	340		Bus exclusive (2 veh lane per direction)
CROSSING OF RAIL TRACKS	75	Rail corridor underpass	Bus exclusive (2 veh lanes per direction)
CROSSING OF RAIL TRACKS TO HUMBER RIVER CROSSING	75		Bus exclusive (2 veh lanes per direction)
HUMBER RIVER CROSSING	75	Bridge over Humber River	Bus exclusive (2 veh lanes per direction)
HUMBER RIVER CROSSING TO ISLINGTON AVE	115		Bus exclusive (2 veh lane per direction)
ISLINGTON AVE TO HELEN STREET	810		Bus exclusive (2 veh lane per direction + TWLTL)

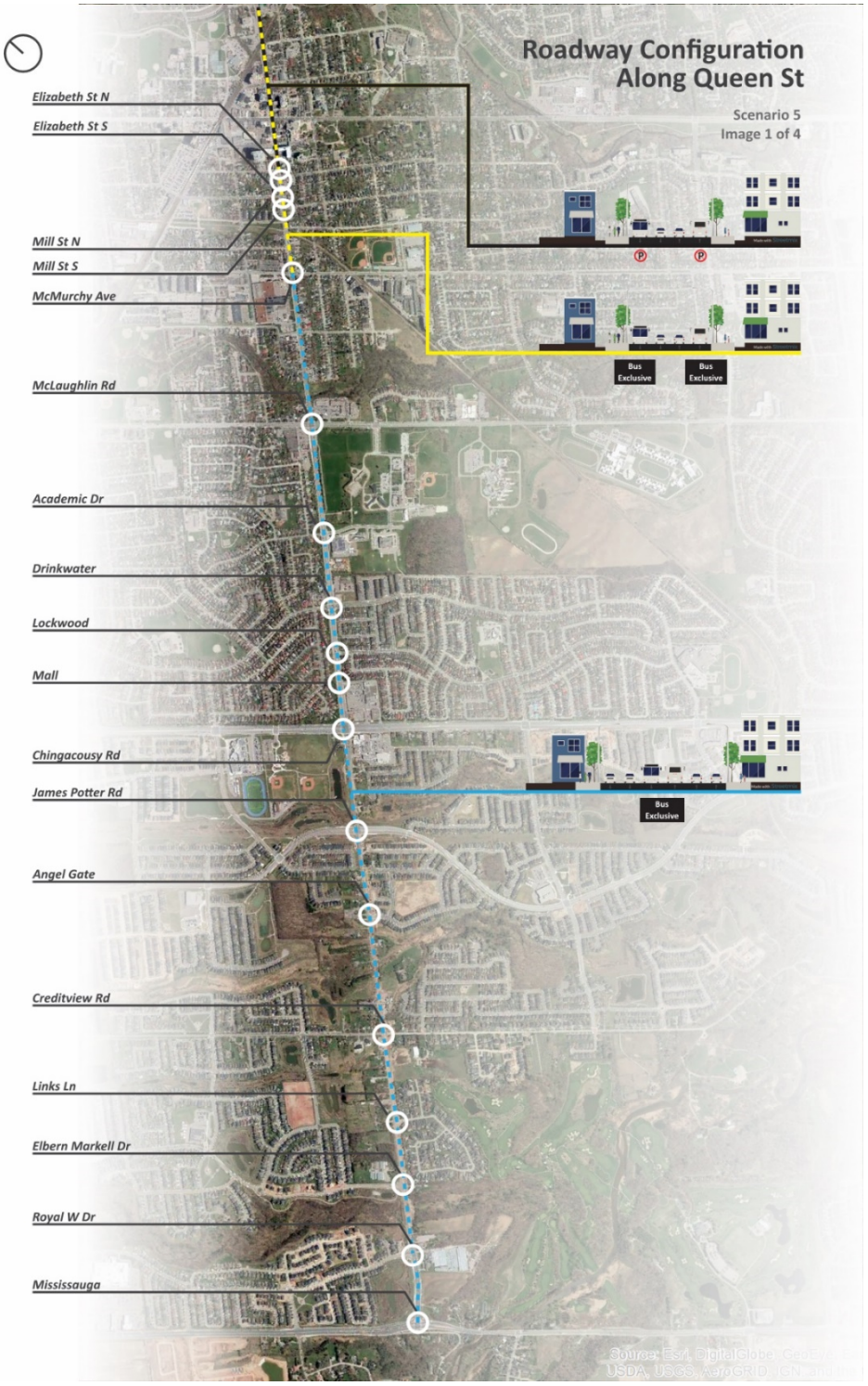

Figure 49: Scenario 5 road configuration, Mississauga Road to Mill Street North

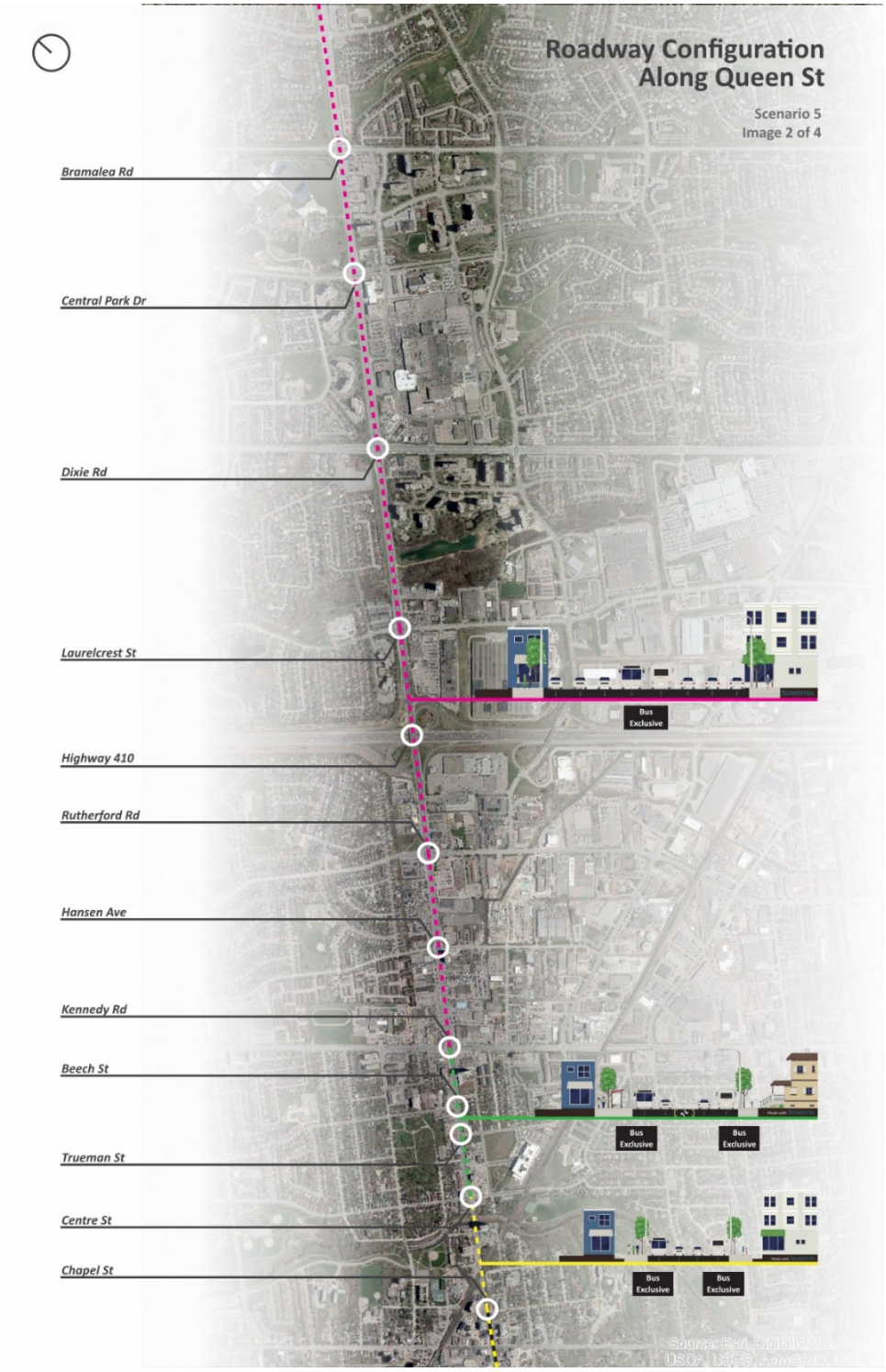

Figure 50: Scenario 5 road configuration, Chapel Street to Bramalea Road

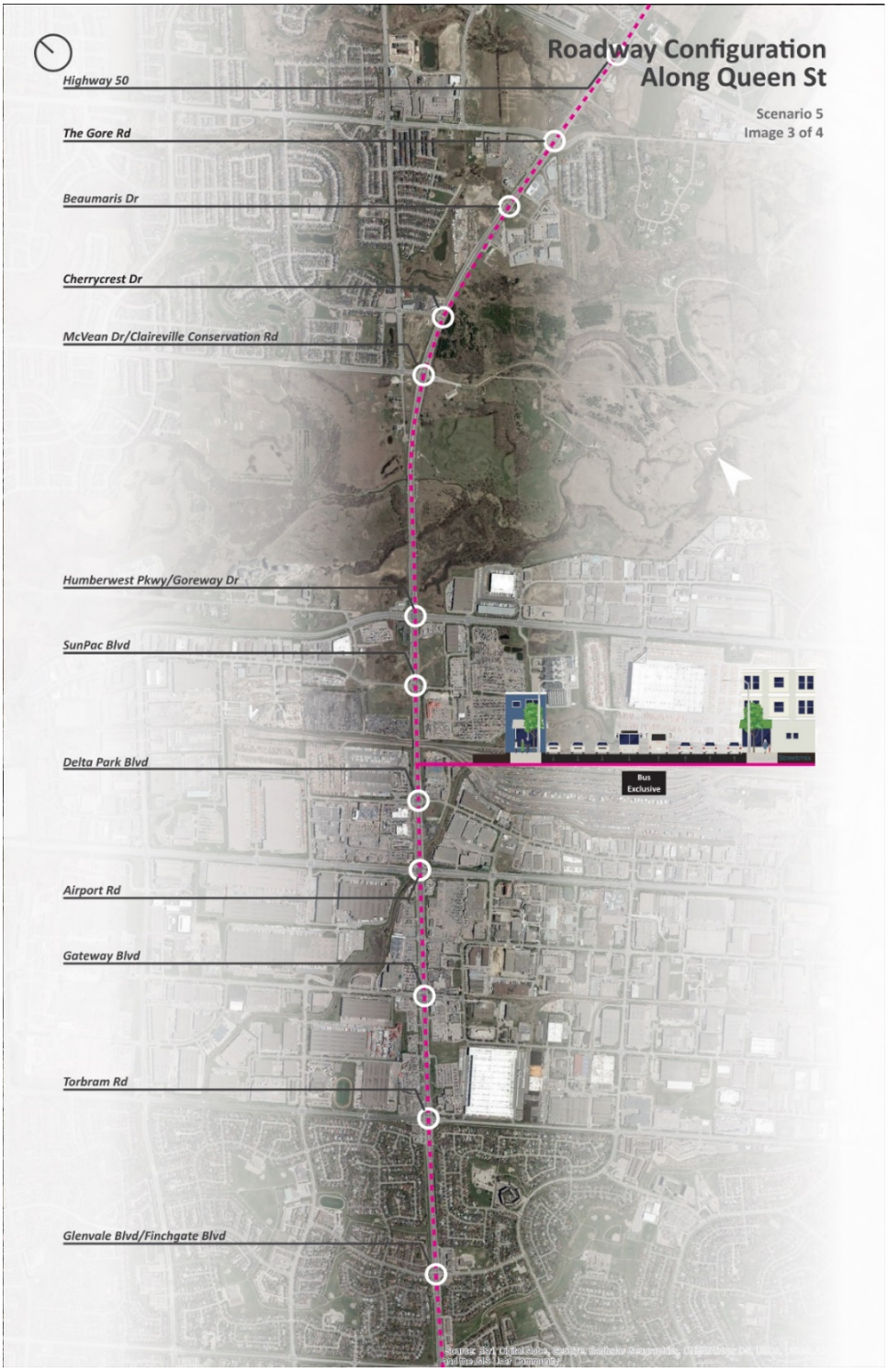

Figure 51: Scenario 5 road configuration, Glenvale Boulevard to Highway 50

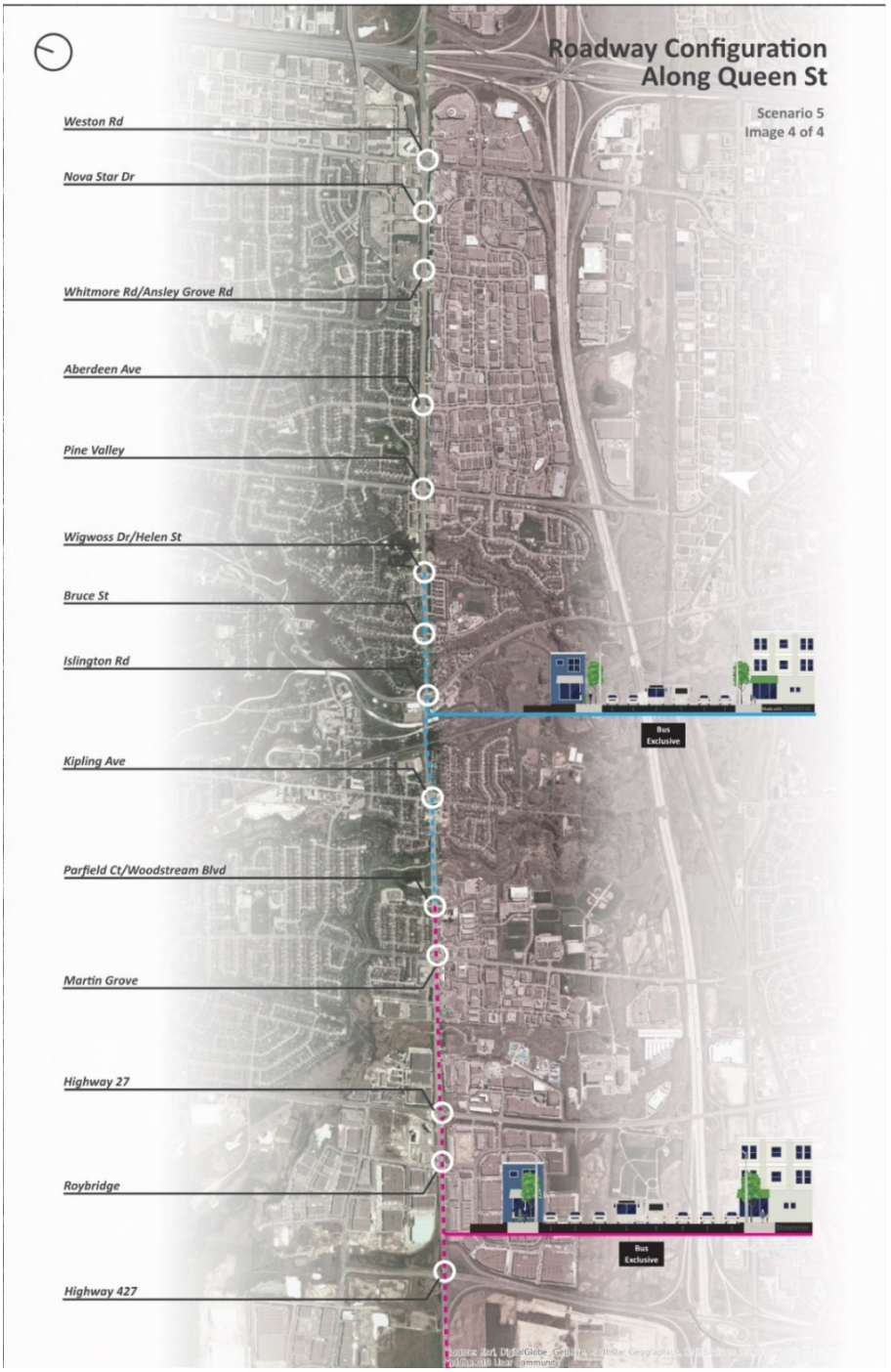

Figure 52: Scenario 5 road configuration, Highway 427 to Weston Road

Scenario 6: hybrid alternative including centre median BRT operation (lane addition) and mixed traffic segments

Scenario 6 has been defined based on the GGHM_v4 modelling results of Scenarios 4 and 5. Scenario 6 is a hybrid scenario that optimizes the following parameters:

- Preference for median exclusive BRT lanes;
- Minimize widening (impact on property and costs), based on the evaluation of the available and required right of way undertaken for Scenarios 4 and 5 (sections 5.2.1 and 5.2.2);
- Minimize impact on the built environment, based on the evaluation of the available and required right of way undertaken for Scenarios 4 and 5 (sections 5.2.1 and 5.2.2);
- Minimize impact on existing road infrastructure (impact on costs);
- Minimize high infrastructure costs (for example, at rail/highway underpasses, or river crossings);
- Minimize impact on traffic, based on the evaluation of the modelling results of Scenarios 4 and 5; and
- Maximize transit ridership based on the evaluation of the modelling results in Scenarios 1 to 5.

The following maps (Figures 53 to 55) of volume/capacity (V/C) ratios resulting from the GGHM_v4 modelling of Scenarios 4 and 5, as well as estimations of the available and required rights of way, have been used in order to define Scenario 6.

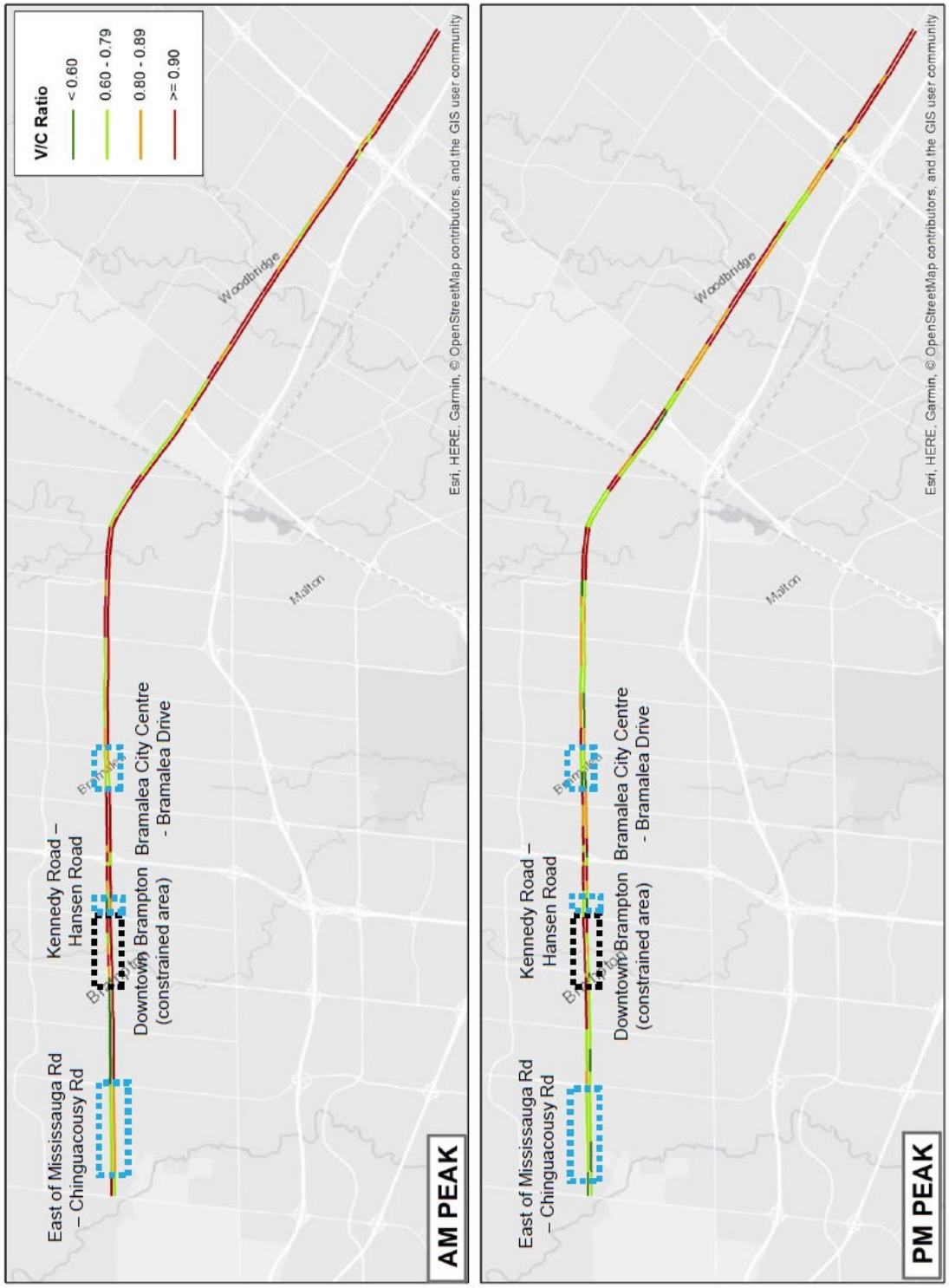

Figure 53: V/C ratios: Queen Street – Highway 7 – 2041 BAU

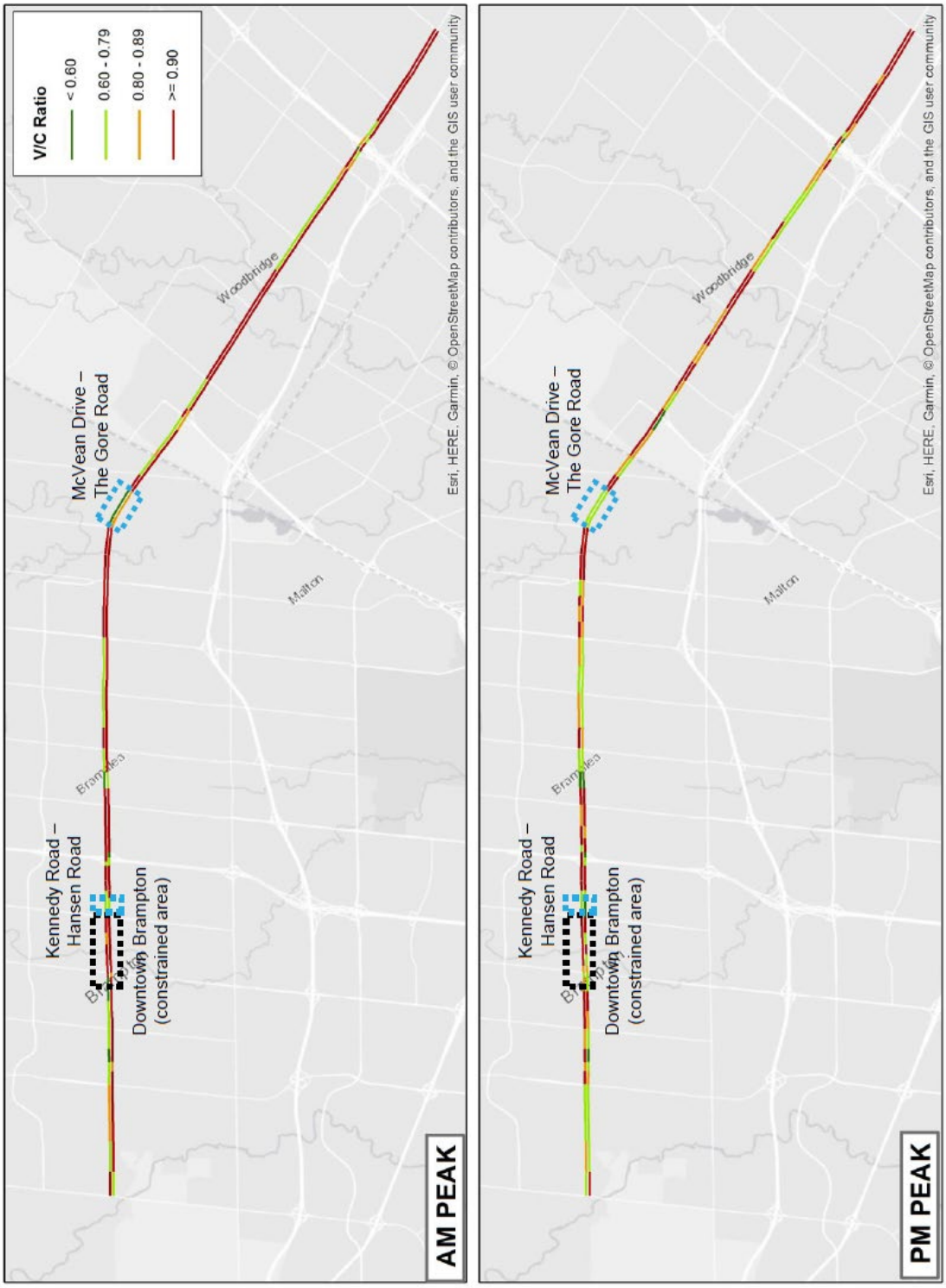

Figure 54: V/C ratios: Queen Street – Highway 7 – 2041 Scenario 4

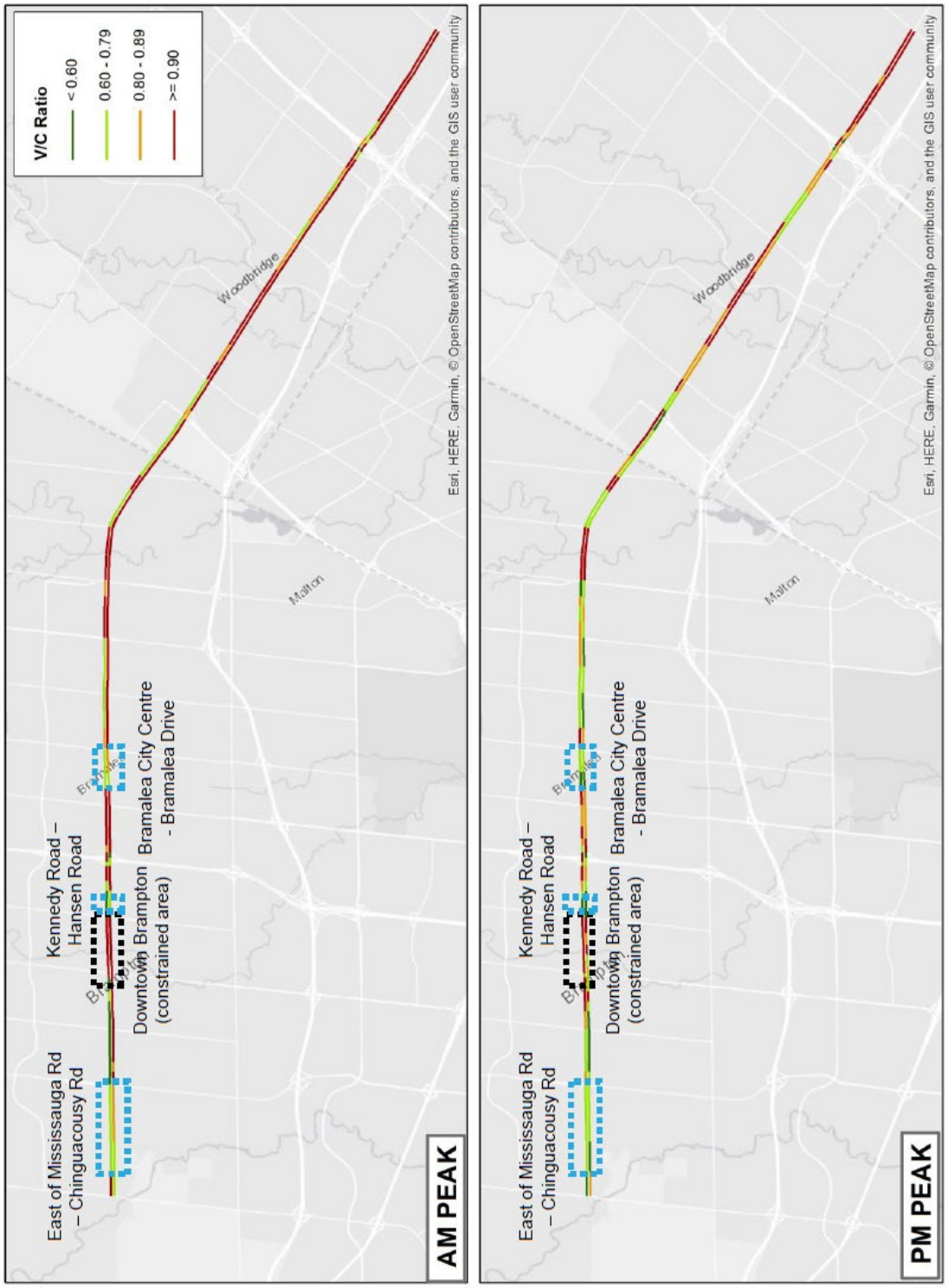

Figure 55: V/C ratios: Queen Street – Highway 7 – 2041 Scenario 5

The definition of Scenario 6 is based on the following rationale (in order): the preferred option (for transit operations performance reasons mainly) is the implementation of two (2) median exclusive BRT lanes on the corridor, by adding a BRT lane per direction (no impact on number of regular traffic lanes), which can lead to widening of the road or not (depending on available ROW), except for:

- (1) Segments that are in constrained zones (in terms of ROW: Downtown Brampton from McMurchy Avenue to Centre Street, Delta Park Blvd to Sun Pac Blvd [crossing of CN rail tracks], Hwy 410 crossing, Hwy 427 crossing, Kipling Ave to Islington Ave), where a mixed traffic solution will be evaluated, and
- (2) Segments showing remaining capacities (if their V/C is lower than 0.9) in situations with traffic lane conversion (Scenario 4) in AM and PM peaks: mixed traffic solution could also be tested on those identified segments which are:
    - A 400-metre segment in front of the Bramalea City Centre;
    - A 1,500-metre segment between McVean Drive and Gore Road; and
    - A 450-metre segment between Kennedy Road and Hansen Road.
    - However, either due to their short length or for BRT operational purposes (maximizing length of exclusive BRT lanes leads to more time savings in transit), the project team has decided to not test those segments with a mixed traffic solution in Scenario 6 in this Initial Business Case.

Figures 56 to 59 illustrate the BRT concept on the corridor for Scenario 6. An analysis of the estimated ROW widths available and required along the corridor has led to the BRT concept per segment and to the evaluation of impacts on the ROW. These however are not indicative of the ROW that will be required for the BRT infrastructure; instead it was used to support the initial modelling, early concept designs and costs estimates of the infrastructure. These will be further refined in future phases of the study.

As a result of this analysis, Table 19 provides a description of the configuration for road segments that are constrained by the width of the ROW being narrowed than what is required for BRT infrastructure.

Table 19: Scenario 6 corridor configuration and mitigation measures on constrained corridor segments

ROAD SEGMENT	SEGMENT LENGTH (M)	INFRA-STRUCTURE CONSTRAINTS	CONFIGURATION
MISSISSAUGA RD TO CHINGUACOUSY RD	2710	Bridge over drain crossing (east of James Porter Rd)	Bus exclusive (2 veh lanes per direction)
CHINGUACOUSY RD TO MCMURCHY AVE	2,060	Bridge over creek (east of McLaughlin Rd)	Bus exclusive (2 veh lanes per direction)
FLETCHERS CREEK	24	Bridge over Fletchers Creek	Bus exclusive (2 veh lanes per direction)
MCMURCHY AVE TO ELIZABETH ST	320	Level rail track crossing at Elliot Street	Bus mixed with GP traffic (2 veh lanes per direction)
ELIZABETH ST TO CHAPEL ST	540	Downtown Brampton / Building lines along sidewalks.	Bus mixed with GP traffic (1 veh + 1 parking lanes per direction)
CHAPEL ST TO CENTRE ST	525	Rail corridor underpass, Etobicoke Bridge over creek	Bus mixed with GP traffic (2 veh lanes per direction)
KENNEDY ROAD TO HIGHWAY 410	1,195		Bus exclusive (3 veh lane per direction)
CROSSING OF HIGHWAY 410	225	Highway overpass	Bus mixed with GP traffic (3 veh lane per direction)
CROSSING OF SPRING CREEK	23	Bridge over Spring Creek	Bus exclusive (3 veh lanes per direction)
CROSSING OF BRAMALEA CITY CENTER DRIVE	28	Drive overpass	Bus exclusive (3 veh lanes per direction)
CROSSING OF AIRPORT ROAD INTERSECTION CULVERT	90	Culvert under intersection	Bus exclusive (3 veh lanes per direction)
CROSSING OF CN RAIL TRACKS	200	Rail corridor overpass	Bus exclusive (3 veh lane per direction)
CROSSING OF RIVER IN CLAIREVILLE CONSERVATION AREA	69	Bridge over river	Bus exclusive (3 veh lane per direction)

ROAD SEGMENT	SEGMENT LENGTH (M)	INFRA-STRUCTURE CONSTRAINTS	CONFIGURATION
CROSSING OF DRAIN 1 IN CLAIREVILLE CONSERVATION AREA	10	Culvert over drain	Bus exclusive (3 veh lane per direction)
CROSSING OF DRAIN 2 IN CLAIREVILLE CONSERVATION AREA	20	Culvert over drain	Bus exclusive (3 veh lane per direction)
CROSSING OF DRAIN 2 IN CLAIREVILLE CONSERVATION AREA TO HIGHWAY 427 (ROAD 99)	1,380	Rail corridor underpass, Etobicoke Bridge over creek	Bus exclusive (3 veh lanes per direction)
CROSSING OF HIGHWAY 427 (ROAD 99)	300	Bridge over highway	Bus mixed with GP traffic (3 veh lanes per direction)
HIGHWAY 427 (ROAD 99) TO HIGHWAY 27	940		Bus exclusive (3 veh lanes per direction)
HIGHWAY 27 TO WOODSTREAM BLVD	1360		Bus exclusive (3 veh lanes per direction)
WOODSTREAM BLVD TO KIPLING AV	700	Bridge over creek	Bus exclusive (2 veh lanes per direction + TWLTL)
KIPLING AV TO CROSSING OF RAIL TRACKS	340		Bus exclusive (2 veh lane per direction)
CROSSING OF RAIL TRACKS	75	Rail corridor underpass	Bus mixed with GP traffic (2 veh lanes per direction)
CROSSING OF RAIL TRACKS TO HUMBER RIVER CROSSING	75		Bus exclusive (2 veh lanes per direction)
HUMBER RIVER CROSSING	75	Bridge over Humber River	Bus exclusive (2 veh lanes per direction)
HUMBER RIVER CROSSING TO ISLINGTON AVE	115		Bus exclusive (2 veh lane per direction)
ISLINGTON AVE TO HELEN STREET	810		Bus exclusive (2 veh lane per direction + TWLTL)

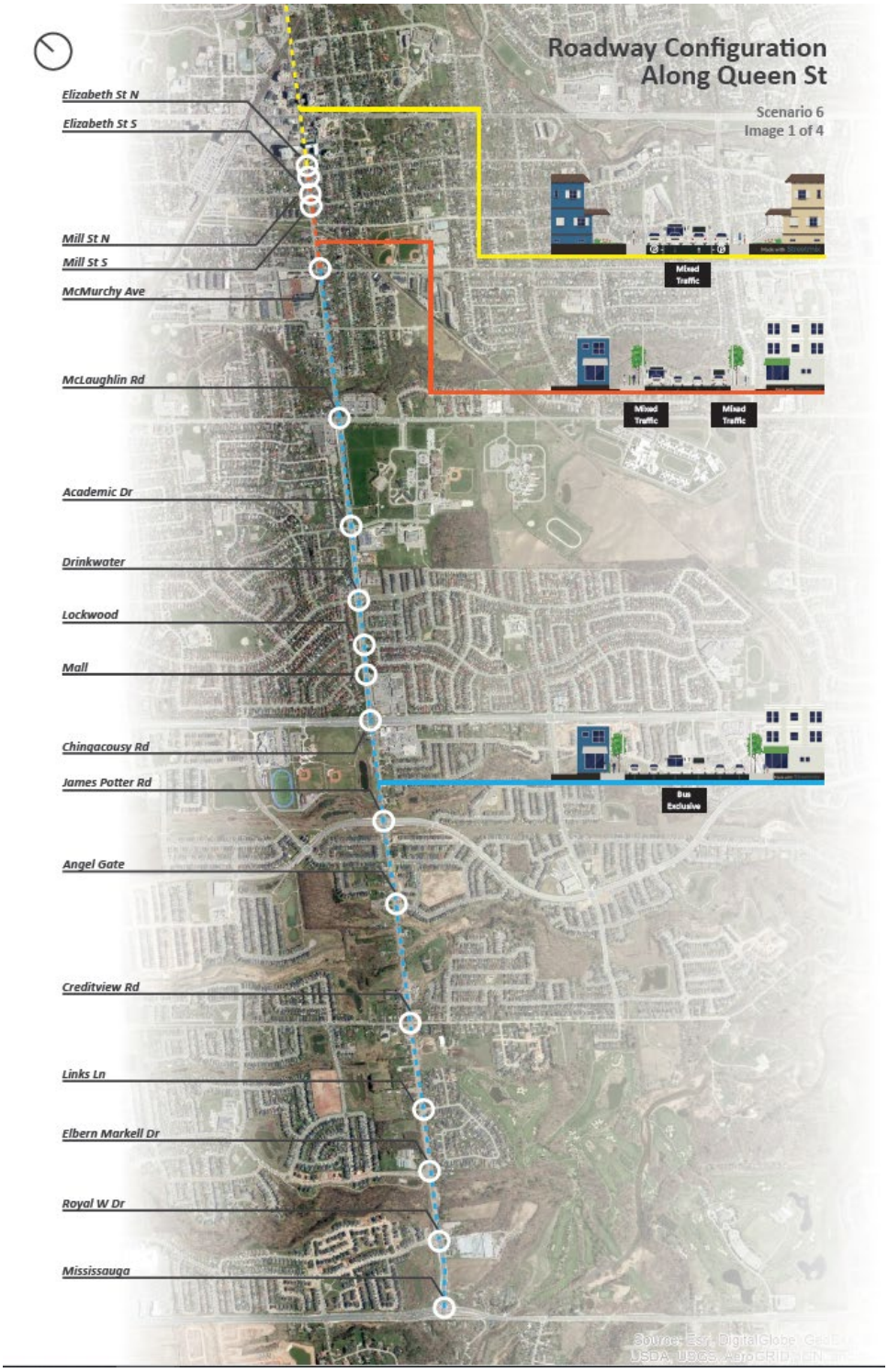

Figure 56: Scenario 6 road configuration, Mississauga Road to Mill Street North

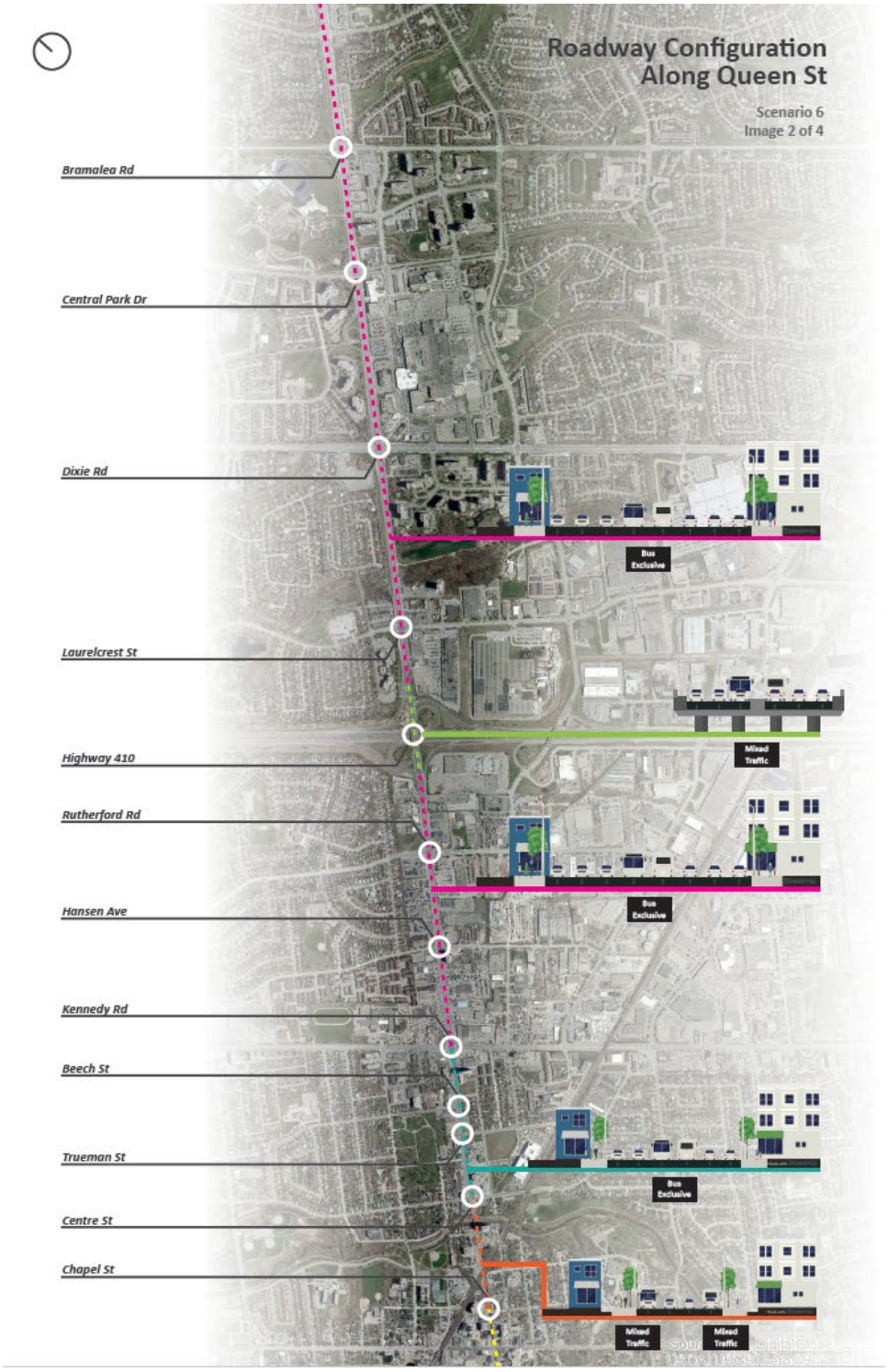

Figure 57: Scenario 6 road configuration, Chapel Street to Bramalea Road

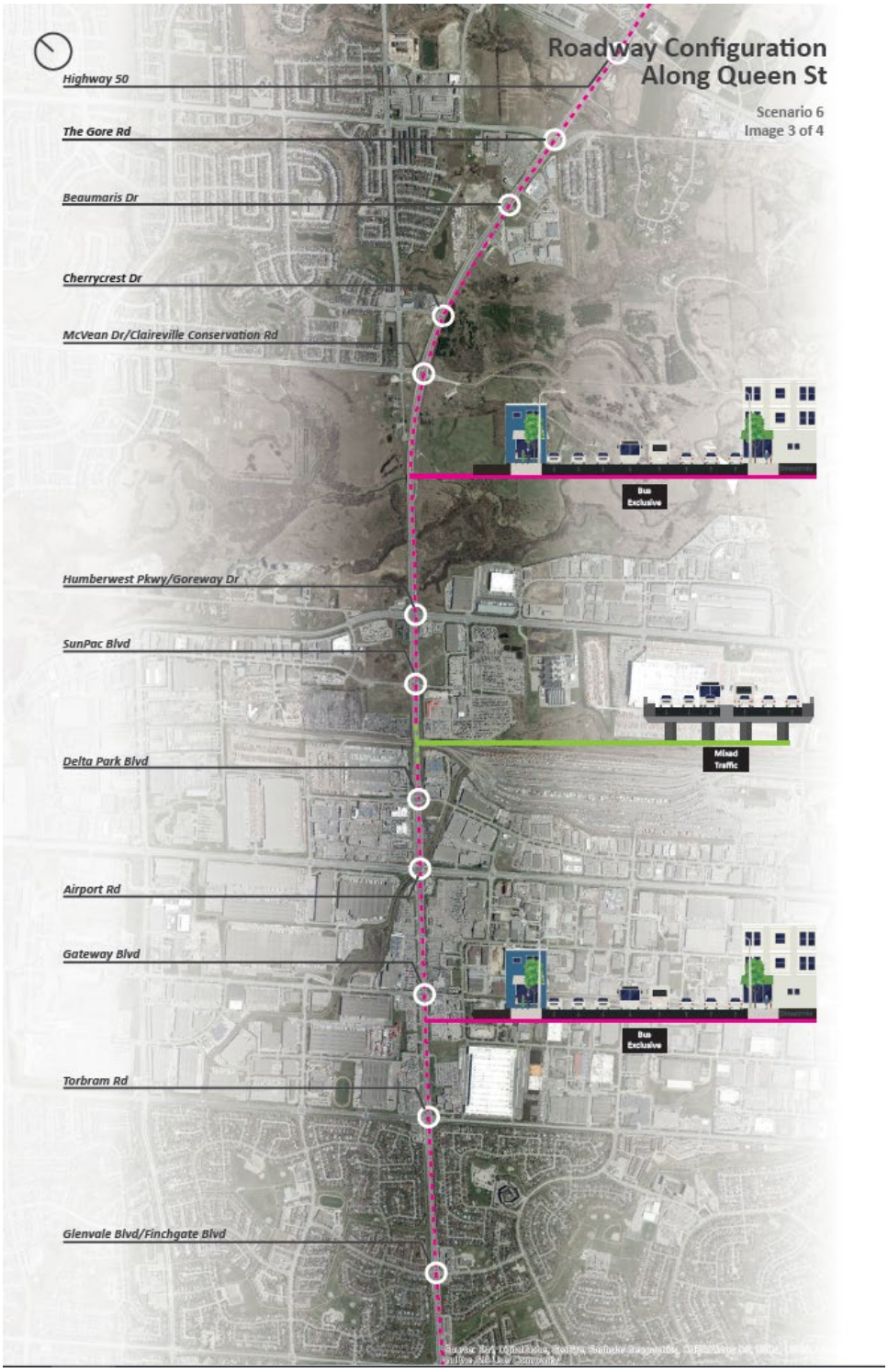

Figure 58: Scenario 6 road configuration, Glenvale Boulevard to Highway 50

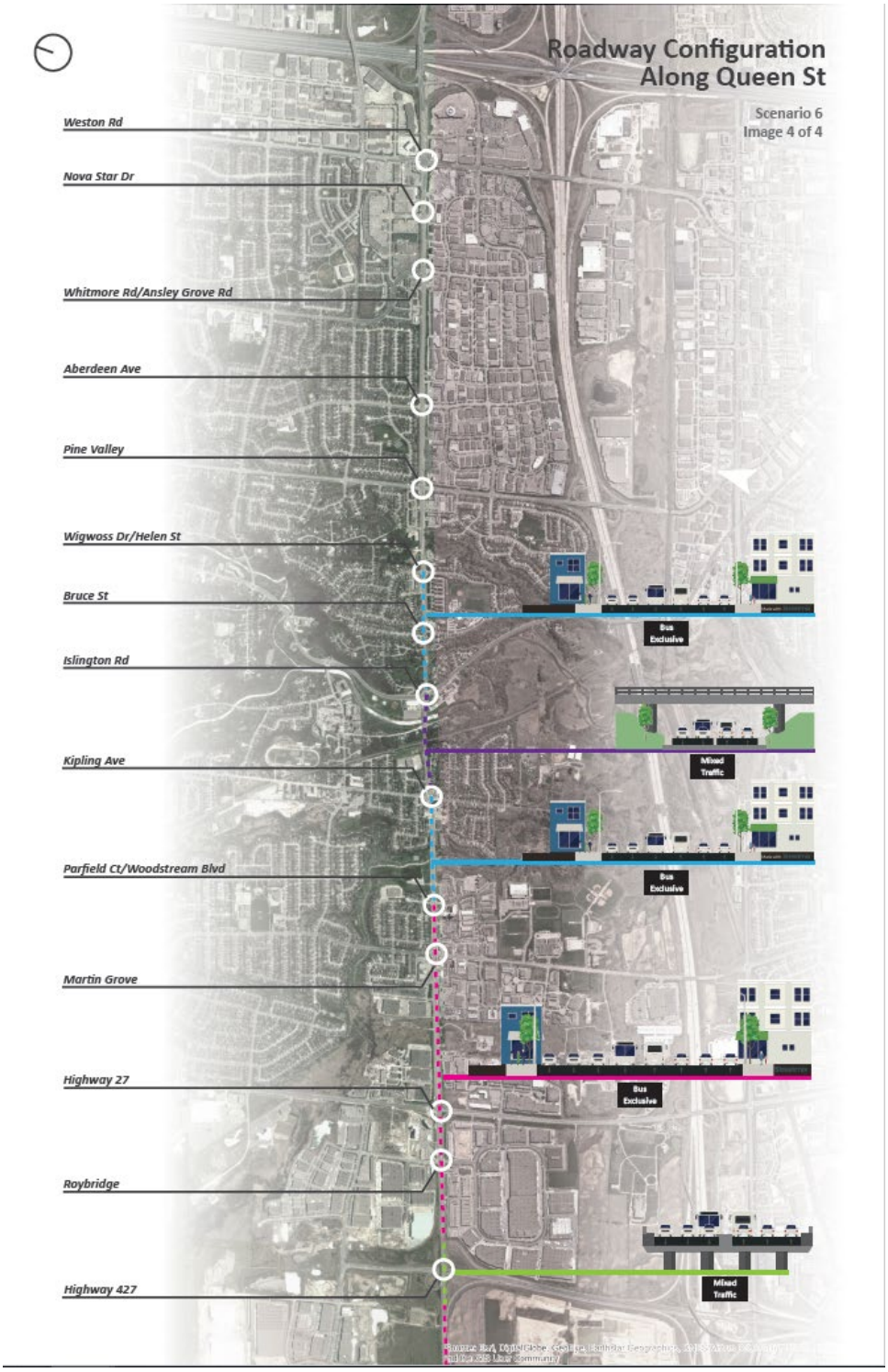

Figure 59: Scenario 6 road configuration, Highway 427 to Weston Road

4

Strategic Case

Transportation

The forecasted transit demand within the study area and during the 3-hour AM peak period is shown in Table 20, as an output of the GGHM_v4 model. Scenario 4 and 5 generates the most favourable forecast, with a 37.4% and 36.8% increase in transit ridership over the business-as-usual scenario. Scenario 6 generates slightly more marginal gains with a 10.3% improvement over the BAU.

Table 20: Transit ridership (boardings) in 2041 BAU Scenario and Scenarios 4, 5, and 6, AM peak period (6-9 AM) (GGHM_v4 model)

	2041 BAU SCENARIO	SCENARIO 4	SCENARIO 5	SCENARIO 6
TRANSIT RIDERSHIP IN STUDY AREA	13,696	18,813	18,734	15,110
DIFFERENCE WITH 2041 BAU (%)	-	37.4	36.8	10.3

2041 AM Peak Boardings along the Queen Street – Highway 7 Corridor are broken down by Type in the following graphs (Figure 60 and Figure 61). Both Scenarios 4 and 5 result in relatively higher transit boardings on the corridor with Scenario 6 numbers being closer to the BAU scenario. Both Scenarios 4 and 5 are seen as strongly supporting increased transit ridership and mixed-use intensification at transit stops that leads to shorter trips.

For reference to the transit routes, refer to Figure 22 and Figure 44.

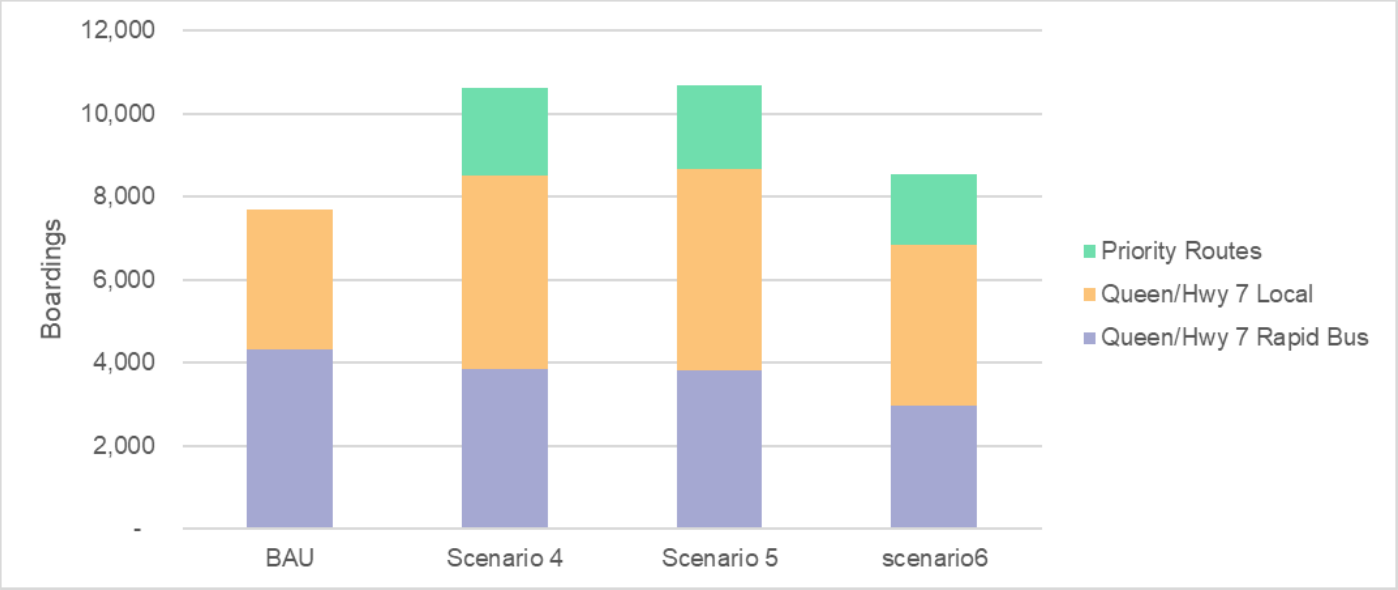

Figure 60: 2041 AM Peak Period (6-9 AM) Boardings on the Queen Street – Highway 7 Corridor by type (EB)

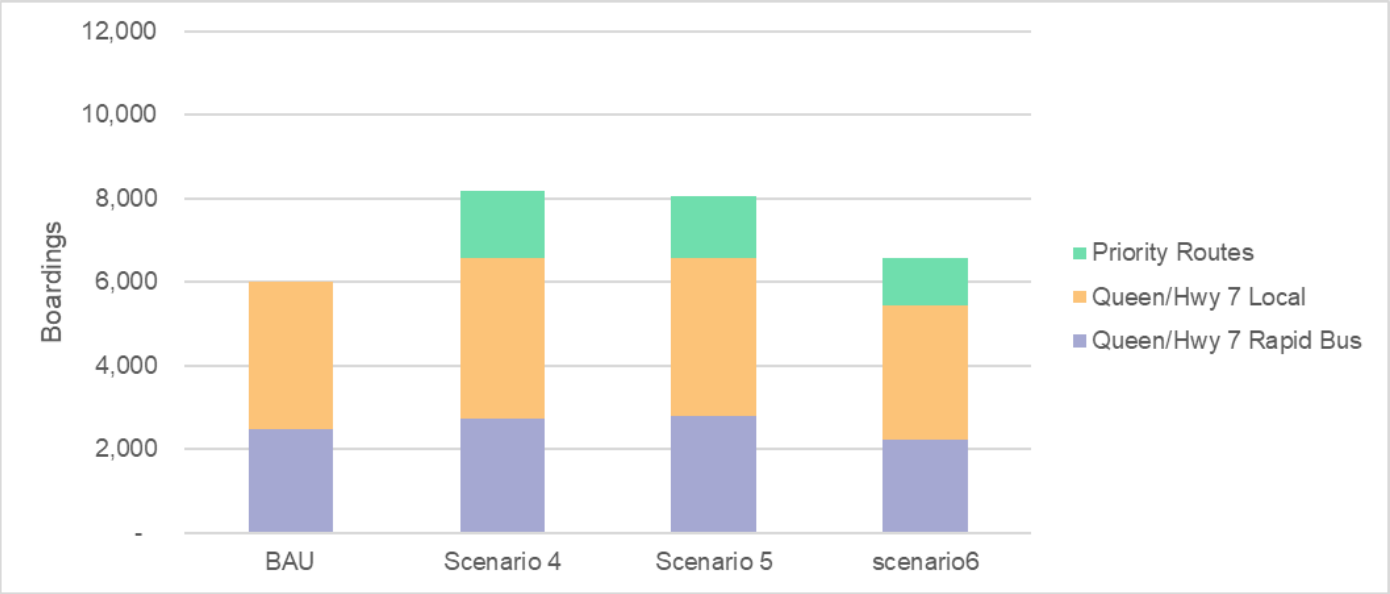

Figure 61: 2041 AM Peak Period (6-9 AM) Boardings along Queen Street – Highway 7 Corridor by type (WB)

2041 AM Peak boardings along Queen Street – Highway 7 Corridor are broken down by Route in Figure 62 to Figure 65. A slight growth in both local and BRT boardings in the westbound direction can be observed in Scenarios 4 and 5, with a slight decrease in Scenario 6. A relatively higher increase in boardings for eastbound local routes is noted, with Scenarios 4 and 5 still associated with the most noticeable gains. The observed decrease in eastbound BRT boardings may be attributed to truncation of the Viva Orange line in the model.

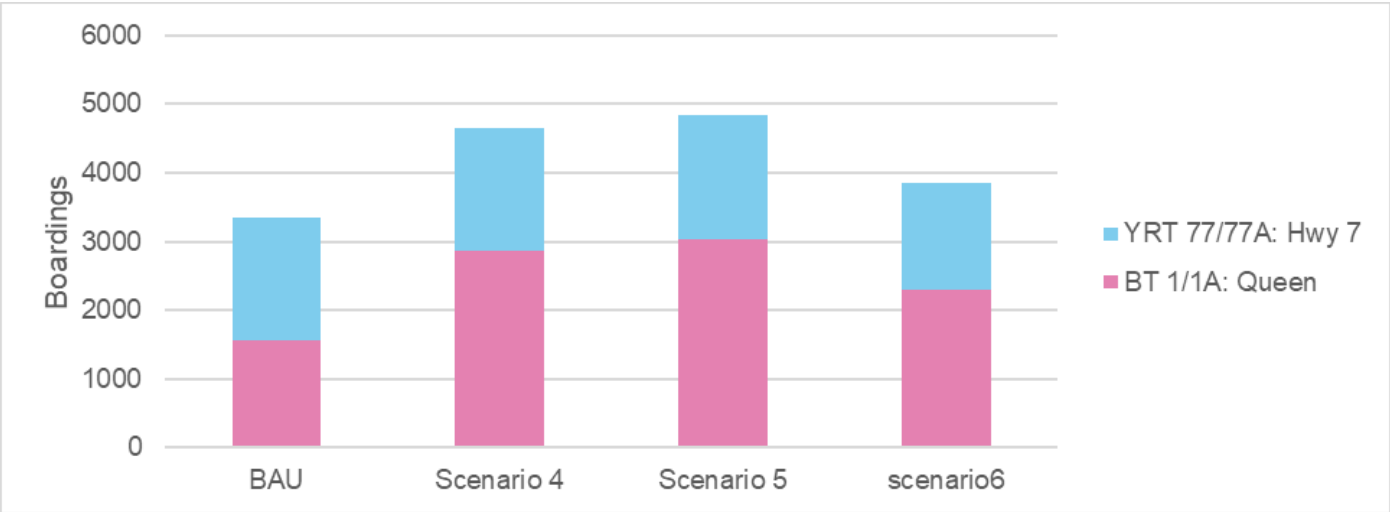

Figure 62: 2041 AM Peak Period (6-9 AM) Boardings along Queen Street – Highway 7 Corridor by Local Route (EB)

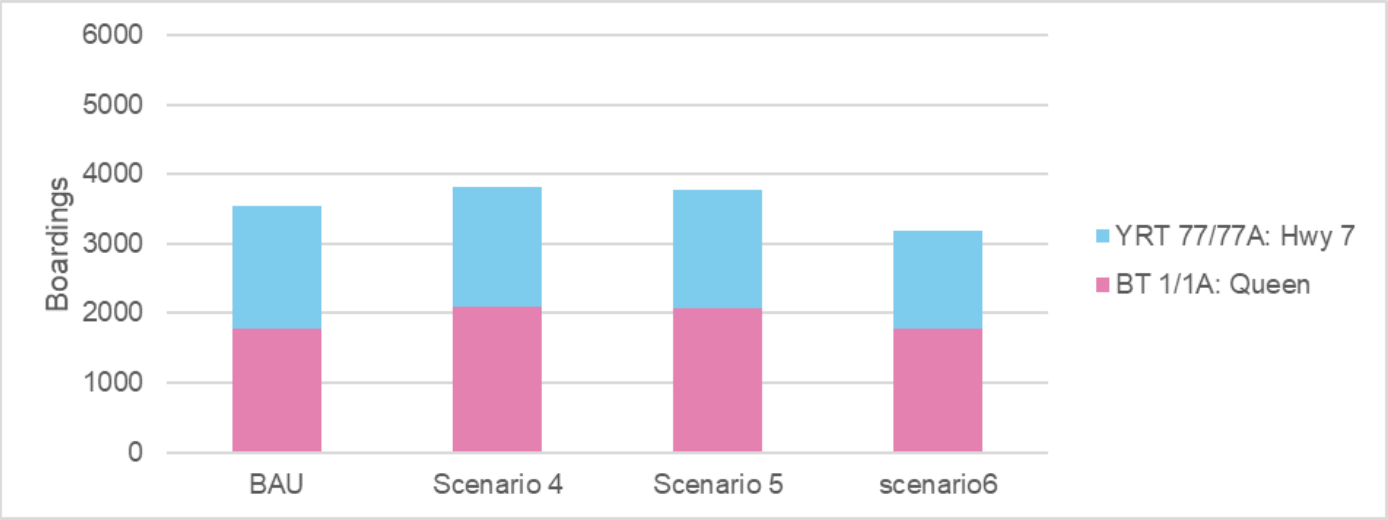

Figure 63: 2041 AM Peak Period (6-9 AM) Boardings along Queen Street – Highway 7 Corridor by Local Route (WB)

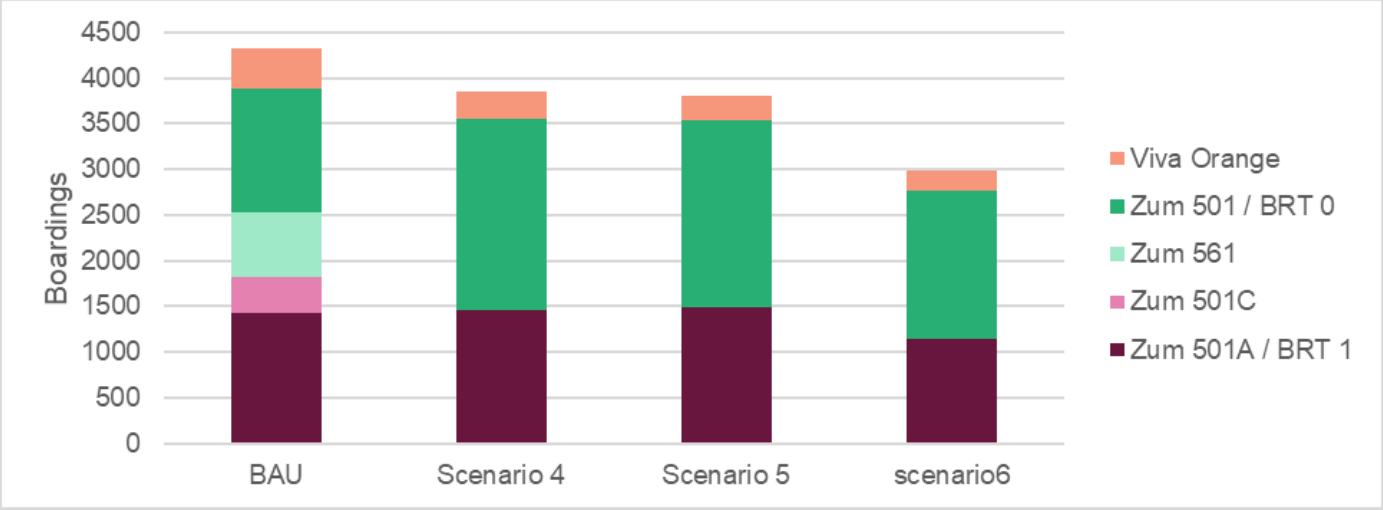

Figure 64: 2041 AM Peak Period (6-9 AM) Boardings along Queen Street – Highway 7 Corridor by BRT Route (EB)

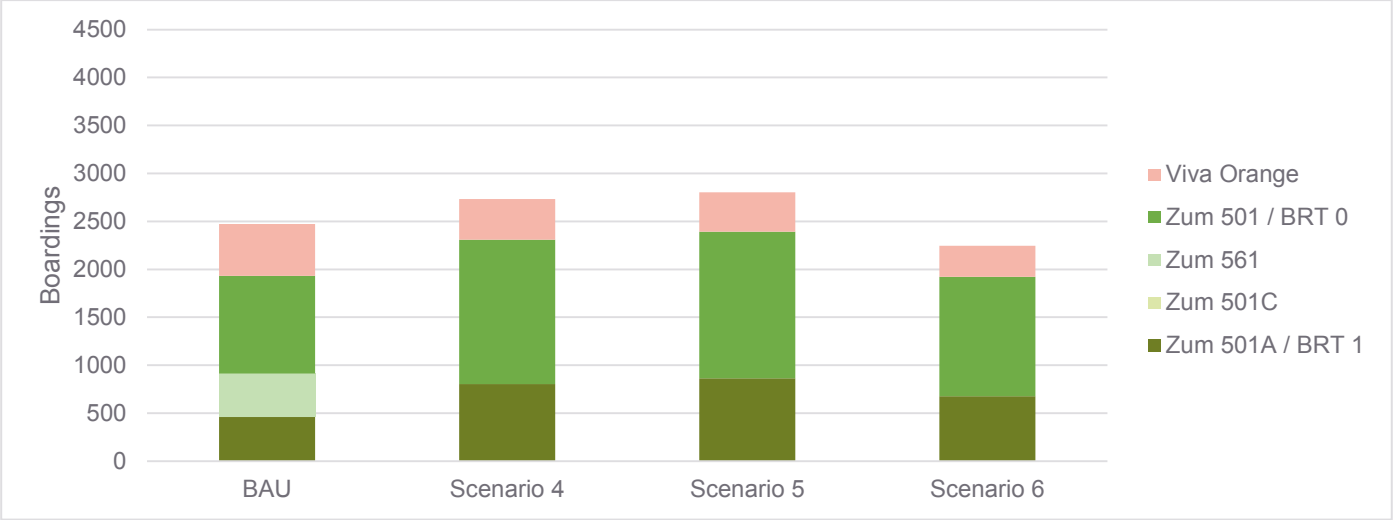

Figure 65: 2041 AM Peak Period (6-9 AM) Boardings along Queen Street – Highway 7 Corridor by BRT Route (WB)

Lastly, 2041 AM Peak boardings for Priority Routes are shown in Figure 66 to Figure 68. Priority Routes in Scenarios 4, 5, and 6 are shown to have similar ridership patterns. The slightly higher boardings in Scenario 4 for Priority Routes E, F, and G may be attributed to higher attractiveness of transit due to increased frequencies compared to auto in this scenario.

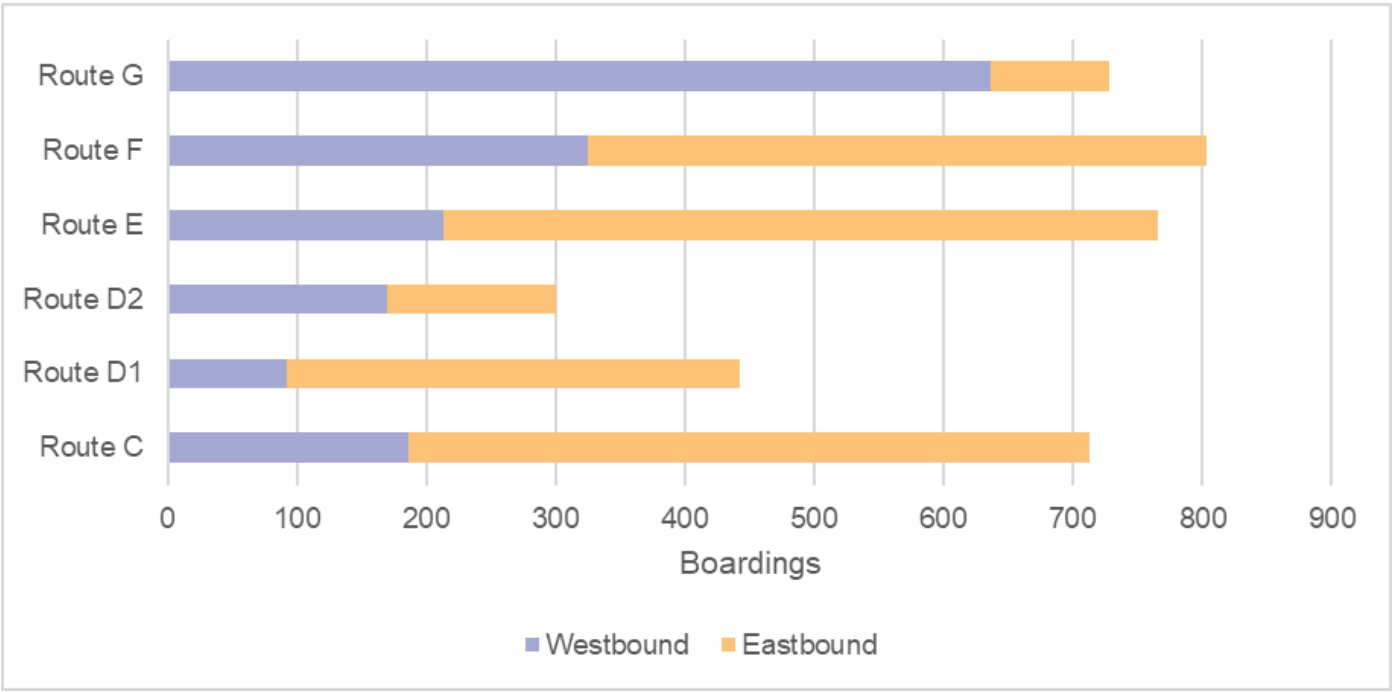

Figure 66: 2041 AM Peak Period (6-9 AM) Boardings for Priority Routes (Scenario 4)

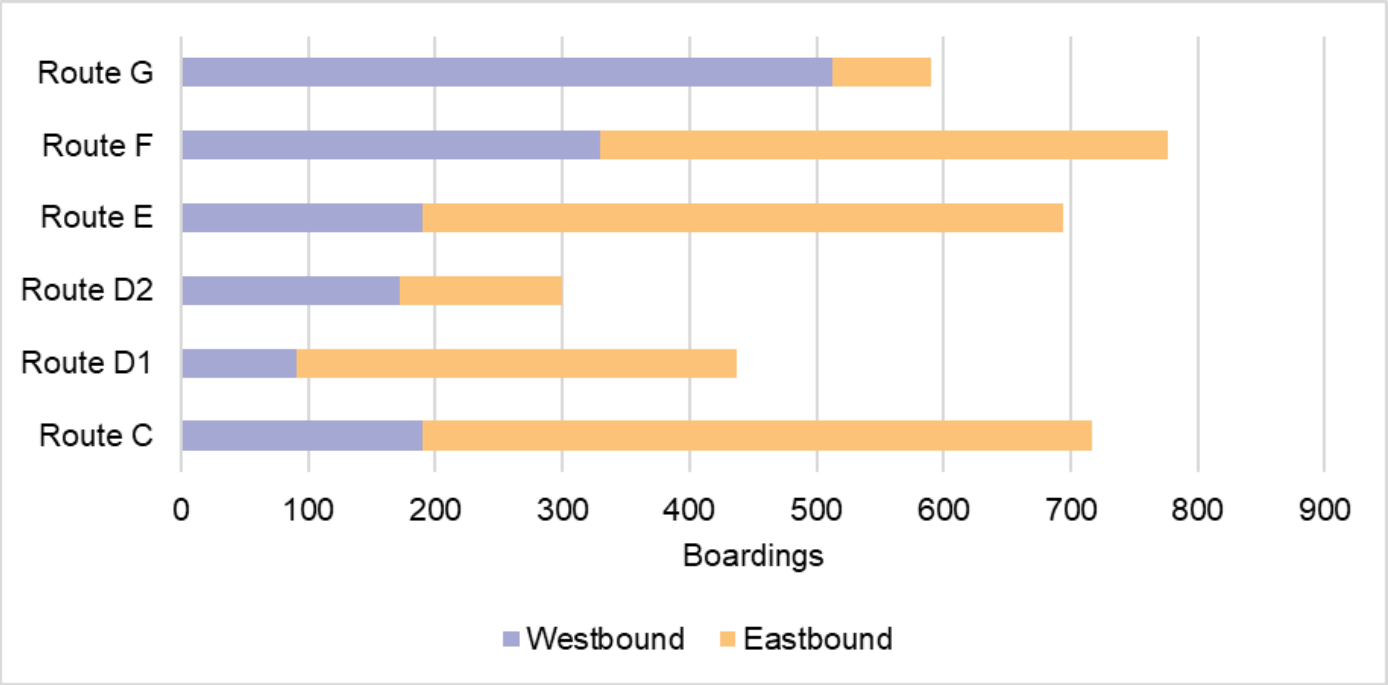

Figure 67: 2041 AM Peak Period (6-9 AM) Boardings for Priority Routes (Scenario 5)

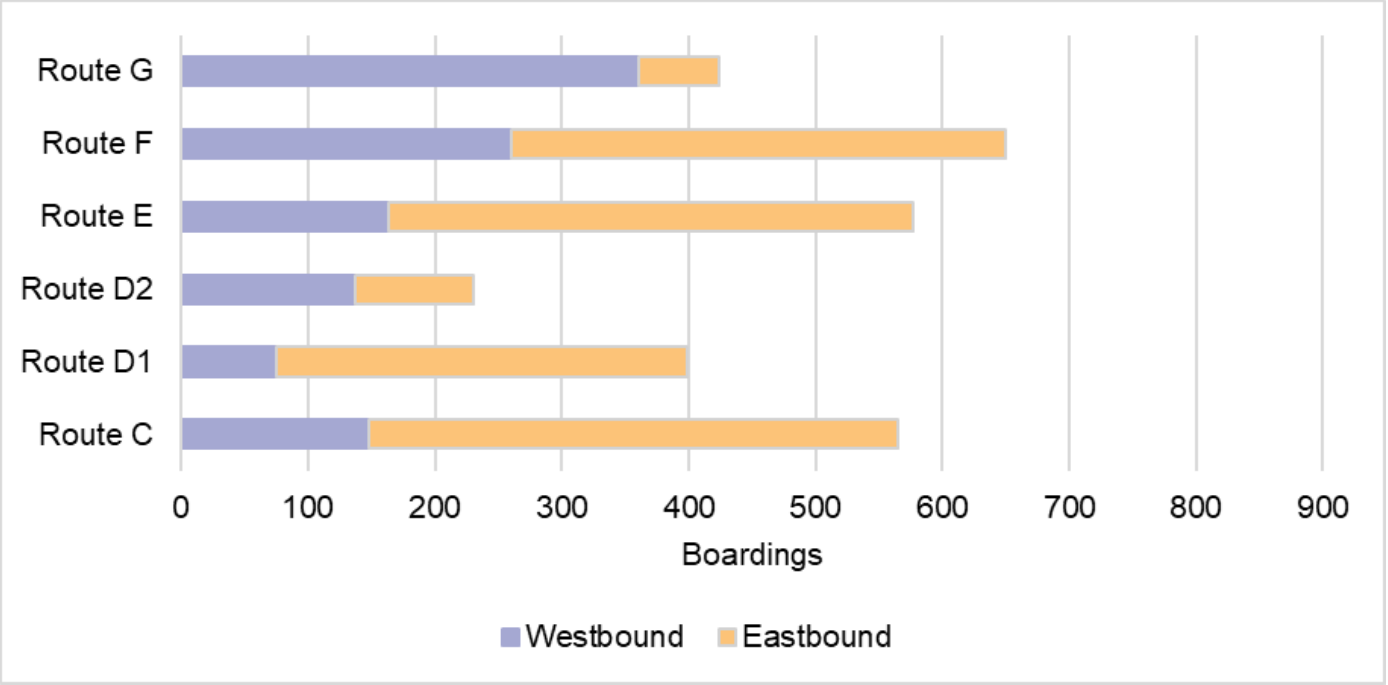

Figure 68: 2041 AM Peak Period (6-9 AM) Boardings for Priority Routes (Scenario 6)

Results show that, for the ridership forecasts and travel demand criteria, Scenario 4 and Scenario 5 perform better than Scenario 6. All scenarios perform better than 2041 BAU scenario.

Transit user experience

A main component of transit user experience is overall travel time on the transit network. This incorporates in-vehicle travel time, which is impacted by traffic congestion, as well as transfers, waiting for vehicles, and the journey to or from the transit stop.

The transit time results for major Origin/Destination pairs across Brampton, as a weighted average of perceived transit time (in minutes) in the AM peak period (6 – 9 AM), are shown in Table 21.

Table 21: Transit time results for major OD pairs across Brampton, for scenarios 2041 BAU, 4, 5 and 6, AM Peak Period (6-9 AM)

ORIGIN	DESTINATION	BAU (MINS)	SCENARIO 4 (MINS)	SCENARIO 5 (MINS)	SCENARIO 6 (MINS)
NWBRAMPTON	DTBrampton	99	80	80	81
NWBRAMPTON	Bramalea	119	94	93	94
NWBRAMPTON	MississaugaEast	171	139	139	146
NWBRAMPTON	MississaugaWest	207	165	165	160
NWBRAMPTON	Pearson	144	126	124	127
NWBRAMPTON	DTToronto	88	89	89	91
SWBRAMPTON	MississaugaEast	102	98	100	100
SWBRAMPTON	MississaugaWest	110	105	105	101
SWBRAMPTON	Pearson	119	114	117	113
NEBRAMPTON	Hwy7	152	138	141	140
NEBRAMPTON	VMC	142	119	124	143
NEBRAMPTON	YorkU	151	136	141	164
NEBRAMPTON	MississaugaEast	137	133	132	132
NEBRAMPTON	MississaugaWest	154	149	148	136
NEBRAMPTON	Pearson	139	125	127	124
NEBRAMPTON	DTToronto	94	93	93	96
WEIGHTED AVERAGE AGAINST DEMAND ON OD PAIRS		117	107	108	110

Scenarios 4 and 5 improve the transit user experience the most compared to 2041 BAU scenario, with a perceived travel time average of 107 and 108 minutes respectively, weighted against the demand on corresponding OD pairs. Scenario 6 leads to a slight improvement at an average perceived travel time of 110 minutes.

Results show that, for the transit user experience criteria, Scenarios 4 and 5 perform better than Scenario 6. All scenarios perform better than 2041 BAU scenario.

Mobility choice

Changes in Transit Mode Share in the study area are shown in Table 22. Transit mode shares between Scenarios 4 and 5 are similar, whereas Scenario 6 shows a slightly lower transit mode share in the study area. The removal of existing traffic capacity for the implementation of BRT lanes under Option 4 suggests that this will likely foster a change in modes of people who travel on the Queen St corridor. This option also strongly supports the City of Brampton's target, as expressed in its Transportation Master Plan, of having 50% of trips made by sustainable modes by 2041 (with transit`s mode share increasing to 20% by that date).

Scenarios 4 and 5 also support the development of Queen's Boulevard as envisioned in Vision 2040. This is to be a grand urban boulevard, stretching from the Etobicoke Creek to Highway 410, which is centred on a rapid transit spine and which includes wide sidewalks and protected bikeways.

Table 22: Transit mode share in the study area across Scenarios 4, 5 and 6, AM Peak Period (6-9 AM)

	2041 BAU SCENARIO	SCENARIO 4	SCENARIO 5	SCENARIO 6
TRANSIT MODE SHARE IN STUDY AREA (%)	6.85	7.14	7.18	7.05
DIFFERENCE WITH 2041 BAU (%)	-	4.3	4.8	3.0

Results show that, for the transit user experience criteria, Scenarios 4 and 5 perform better than Scenario 6. All scenarios perform better than 2041 BAU scenario.

Quality of life

Shaping growth

Transit investments are a proven method of attracting new residential and mixed-use development. Transit oriented development (TOD) is increasing across the region as families and businesses seek to locate themselves in an area that provides convenient and affordable access to the broader region. This access is important for peoples' ability to access public services, amenities, institutions, employment, and entertainment.

Globally, implementing a BRT system is a major factor of shaping growth, increasing TOD initiates on and around the BRT corridor. Scenarios 4 and 5 perform higher than Scenario 6 due to higher amount of dedicated transit infrastructure

Results show that, for the shaping growth criteria, all scenarios perform better than 2041 BAU scenario.

Public health

The public health benefits to rapid transit investment are typically two-fold; first, there is likely to be a decrease in greenhouse gas emissions from autos associated with a mode shift to transit, and second, rapid transit riders are likely to undertake increased physical activity as a result of shifting to a more sustainable mode (e.g. walking to and from their bus stop). These public health benefits provide significant value beyond and contribute to the overall economic benefit of rapid transit investment.

Rapid transit investments typically either occur in more walkable communities or promote increased walkability in the urban form through infrastructure investments that arrive alongside rapid transit. For example, station areas may include pedestrian and bicycle facilities, and be adjacent or well-connected to mixed use developments.

Globally, the BRT that is proposed in this Initial Business Case on the Queen Street – Highway 7 Corridor includes the implementation of infrastructure for active transportation (sidewalks and bicycle lanes) in each of the three (3) proposed scenarios.

Also, the benefits and costs linked to the GHG emissions per scenario are calculated in the Economic Case and show that Scenario 4 is the highest performer, followed by Scenario 5, whereas Scenario 6 performs poorly.

Results show that, for the public health criteria, Scenarios 4 and 5 perform higher than Scenario 6. All scenarios perform better than the BAU.

Environmental health and air quality

A reduction in greenhouse gas emissions is one common benefit associated with rapid transit investment such as BRT. This is driven primarily by a reduction in vehicle kilometres travelled (VKT) in private autos as mode shift to transit occurs. Increased environmental health and improved air quality are two positive results associated with the reduction in VKT. Air quality and a clean environment are also linked to physical health outcomes, meaning BRT can support a person's overall health and wellbeing as a result of encouraging mode shift and a more active lifestyle.

Additional environmental benefits may be had depending on the propulsion technology of the BRT system, whether buses are conventional diesel, diesel-electric hybrid, natural gas, or full electric powered. The preferred propulsion technology for the buses selected to serve the Queen Street – Highway 7 BRT should appropriately balance capital costs, operating and maintenance costs and knowledge, and environmental benefits.

The benefits and costs linked to the GHG emissions per scenario are calculated in the Economic Case and show that Scenario 4 is the highest performer, followed by Scenario 5, whereas Scenario 6 performs poorly.

Results show that, for the environmental health and air quality criteria, Scenario 4 performs the highest, followed by Scenarios 5 and 6.

Safety and connectivity

Brampton residents have expressed safety and connectivity concerns caused by the many wide arterial roads in the city[7]. There are locations where crossing the road at signalized intersections is a negative experience, as well as places where links in the pedestrian and bike networks are missing. Both issues result in a lower willingness to walk or bike through the city, limiting people's transport options with impacts on health and quality of life.

Schemes involving roadway reconfigurations to accommodate BRT lanes in the existing ROW create the opportunity to introduce safer and more comfortable pedestrian conditions (such as median shelters, paving materials, and visual cues that encourage slower auto speeds, and narrower auto lanes at intersections for slower turning movements and shorter crossing distances).

In terms of connectivity, all Scenarios 4, 5, and 6 will improve intersections in terms of safety and adding sidewalks, pedestrian crossings, and paths where there are currently gaps in the network. This contributes to increased safety and connectivity for all transportation mode users. Only the segments with mixed traffic conditions in Scenario 6 do not consider any changes to the 2041 BAU situation on these segments with respect to infrastructure. Further, Scenarios 5 and 6 result in negative impacts for pedestrians due to the widening of the right of way along the length of the

[7] City of Brampton, 2019. Mapped Ideas – Brampton Open Data. <http://geohub.brampton.ca/datasets/mapped-ideas>.

corridor, which results in longer crossing distances for pedestrians not using the BRT (i.e. merely crossing the road and not accessing the median stop).

Results show that, for the safety and connectivity criteria, Scenario 4 performs the highest, followed by Scenarios 5 and 6. All scenarios perform better than the 2041 BAU scenario.

Active transportation benefits

Increasingly, corridor-wide transportation investments and retrofits incorporate active transportation infrastructure such as improved sidewalks and painted or protected bicycle lanes. These investments are part of designing 'complete streets' or corridors that accommodate all modes safely and effectively. Accommodating active modes along rapid transit corridors investments help encourage the use of transit such as the Queen Street – Highway 7 BRT by improving the first mile/last mile condition and encouraging users to take active modes to and from the BRT. A welcoming door-to-door condition along the corridor creates a pleasant experience for existing users and can help encourage new users to shift to sustainable modes.

Metrolinx has identified the economic value of active transportation through a study of cycling interventions[8]. They found that active transportation facilities (i.e. bicycle lanes) increase cycling update, resulting in reduced vehicle-cyclist conflicts, increased physical activity and health, reduced greenhouse gas emissions, and traffic decongestion. At the same time, certain costs apply to active transportation investments, including congestion (if vehicle lanes are reduced), loss of parking, and direct facility costs.

[8] Metrolinx, January 2017. "The Economic Value of Regional Strategies to Improve Transportation Outcomes – Cycling Interventions: Economic and Financial Perspective."

Figure 69: Artist's rendering of a 'complete street' BRT corridor designed for all modes

In terms of active transportation, Scenarios 4, 5, and 6 consider adding sidewalks, pedestrian crossings, and paths where there are currently gaps in the network, increasing safety and connectivity for all transportation mode users. Only the segments with mixed traffic solutions in Scenario 6 do not consider any changes to the 2041 BAU situation on these segments with respect to active transportation infrastructure.

Results show that, for the active transportation benefits criteria, Scenarios 4 and 5 perform the highest, followed by Scenario 6. All scenarios perform better than the 2041 BAU scenario.

Community and heritage

Investments in rapid transit present a strong opportunity to attract new, sustainable forms of development that take advantage of their rapid transit adjacency to support a mode shift towards transit for many trips. Rapid transit provides an affordable transportation option by reducing or eliminating the need to drive, while encouraging higher density developments in station areas which may be more affordable for residents to purchase or rent.

BRT systems provide resiliency to new mobility technologies, supporting stable growth and local community needs as they evolve over time. Median-running BRT systems are designed to be able to be converted to LRT technology as much as is feasible. The BRT routes themselves, because they do not have fixed rail, can accommodate a variety of vehicles, meaning they can

conveniently support a switch to different styles of bus (e.g. articulated versus non-articulated), propulsion technologies (e.g. from diesel to electric), or new mobility solutions altogether (e.g. autonomous shuttles).

Implementing a BRT system is a major factor behind attracting new and sustainable forms of development on and around the BRT corridor and is an opportunity for future conversion to an LRT if warranted, or other, more sustainable BRT technologies (such as electric propulsion).

Results show that, for the community and heritage criteria, Scenarios 4, 5, and 6 perform equally and all scenarios perform better than the 2041 BAU scenario.

Economic and Regional Development

Connecting commuters to jobs

Transit is one of the primary methods of providing equitable services to a population. In Brampton as in many communities, transit riders are shown to be on average of lower income and with less stable employment than those who drive to work. From a social inclusivity and accessibility to jobs perspective, the Queen Street – Highway 7 BRT is a means of ensuring that residents of Brampton and visitors to the city are well-connected with affordable, accessible transit service.

The connecting commuters to jobs criteria is informed by an accessibility analysis that shows the change in access to employment from every model zone in the region. Figure 70 shows the change in access to Jobs by Origin Zone for Scenario 3 compared to 2041 BAU scenario. It shows that Scenario 3 greatly improves access to jobs for those living along the Queen Street – Highway 7 Corridor. The transit priority bus routes of this scenario also improve job accessibility for those living away from the corridor but with access to those routes. Scenario 3 provides transit access to 51,500 jobs within the study area, which is a 7.2% increase in accessibility to jobs compared to the 2041 BAU scenario.

Scenarios 4, 5, and 6 have a very similar transit service definition, with the only difference being the length of the Viva Orange route to the east of the study area. Therefore, their job accessibility profile is considered similar to Scenario 3 and does not vary from one scenario to another. They all perform equally on this criterion.

Results show that, for the connecting commuters to jobs criteria, Scenarios 4, 5, and 6 perform equally and all scenarios perform better than the 2041 BAU scenario.

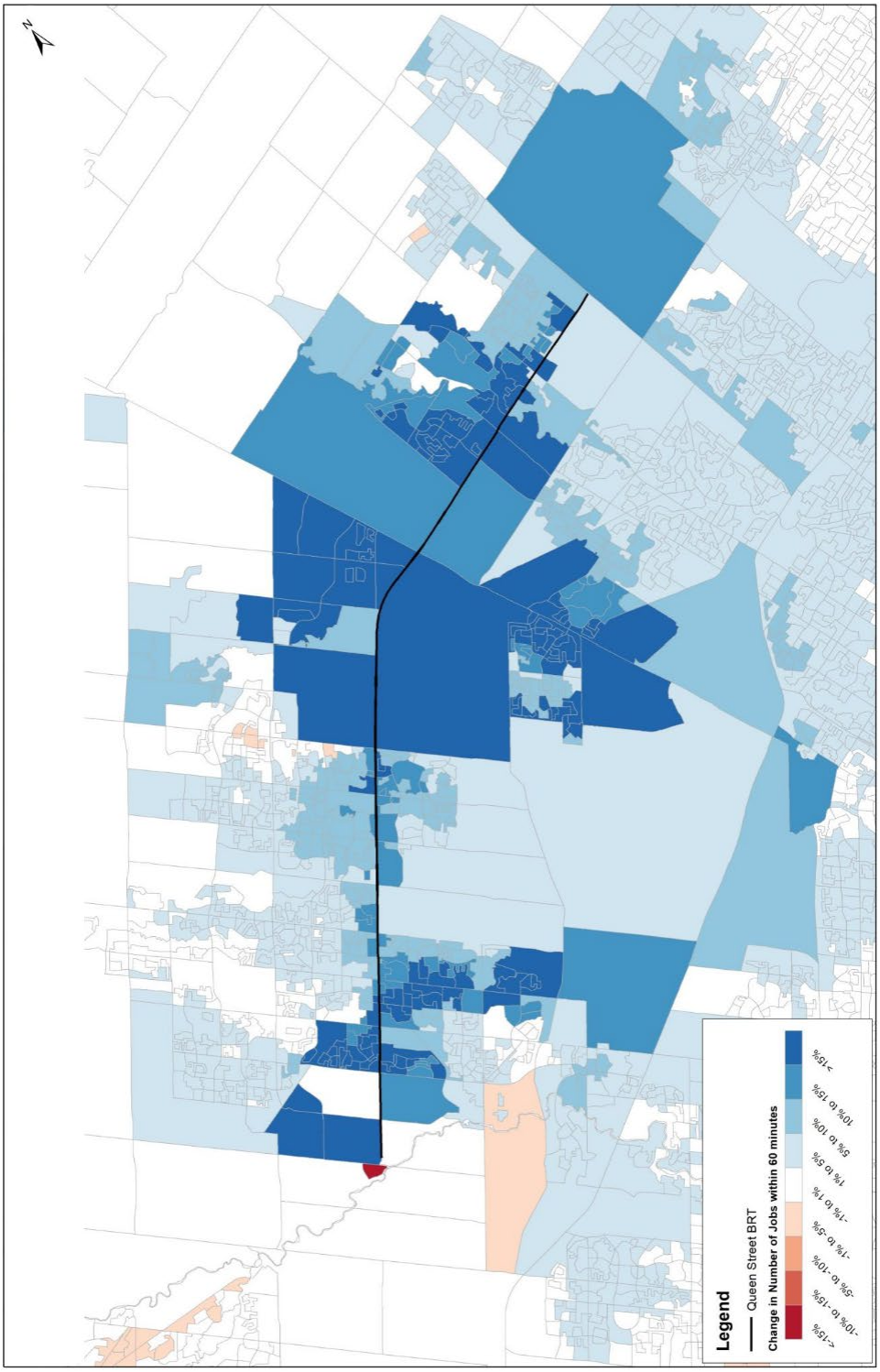

Figure 70: Change in Access to Jobs by Origin Zone (Scenario 3 vs BAU)

Catalyzing urban land development

As stated for the shaping growth criteria, transit investments are a proven method of attracting new residential and mixed-use development. They are catalyzers for urban land development and for shaping such development in a denser way. This typically generates areas that are attractive for most people, as well as for jobs, as families and businesses seek to locate themselves in an area that provides convenient and affordable access to the broader region.

Globally, implementing a BRT system is a major factor for shaping growth and increasing TOD initiates on and around the BRT corridor. It should be expected that the greater transit priority provided across the corridor, the more opportunities for urban land development, access and mobility for all.

Results show that, for the catalyzing urban land development criteria, Scenarios 4, 5 provide the most opportunity for urban land development, then Scenario 6. All scenarios perform better than the 2041 BAU scenario.

Supporting innovation and prosperity

Implementing a new transit system such as a BRT is a way of not only being able to offer transit to more users and increase transit use in the area, but also an occasion to increase the level of connectivity between major employment hubs, academic institutions, and other centres of innovation.

Scenarios 4, 5, and 6 offer the same transit service (routes and levels of service) that ensure connections throughout the major economic and academic hubs in the study area: York University, Pearson Airport employment area, downtown areas of Brampton and Bramalea, and Highway 7 employment. While level of transit service is the same for each scenario, it is expected that the provision of more dedicated infrastructure in scenario 4 and 5 will increase the level of connectivity then the limited infrastructure provided under scenario 6. The infrastructure will increase reliability and reduce travel times with the increases in service, compared with the minimal infrastructure provided under scenario 6.

Results show that, for the supporting innovation and prosperity criteria, Scenarios 4 and 5 perform better than scenario 6. All scenarios perform better than the 2041 BAU scenario.

Maintaining access to and facilitation of goods movement

The Queen St- Hwy 7 BRT corridor is a major goods movement corridor and important to the economy. Truck movements will still need to be facilitated across the corridor with the associated transit improvements. A reduction in vehicle capacity along the corridor in Scenario 4 may have a detrimental impact on goods movement compared with Scenario 5 which maintains existing vehicle capacity. Scenario 6 may also impact goods movement, due to the increases in transit

service with minimal infrastructure to support or enhance reliability. The extent of this impact will be evaluated as part of the Preliminary Design and the refinement of options.

Results show that, for the maintaining access to and facilitation of goods movement criteria, Scenario 5 is least likely to have an impact on goods movement due to the maintaining of vehicle capacity, compared with Scenarios 4 and 6

Environmental Sustainability

Energy use and efficiency

Rapid transit investments like the Queen Street – Highway 7 BRT attract high ridership and support car-free forms of development and lifestyles. They aim to reduce area-wide energy use and increase energy efficiency. This criterion is measured by the total vehicle kilometres travelled (VKT) by automobile. VKT is the sum of the driving distance of all vehicles to get from their origin to their destination. Auto VKTs can vary between scenarios when the number of trips changes and/or when the path between origin-destination pairs change due to changes on the network (increased or reduced capacity, changes in journey times due to congestion etc). The calculations of VKT from the GGHM outputs is done as the sum of all the links in the network of the number of vehicles on each link, multiplied by the length of the link.

Across the modelling of Scenarios 4 and 5, a reduction in total VKT by automobile on Queen Street within downtown Brampton is observed. There is a significant reduction in auto VKT on Queen Street in Scenario 4 due to the reduction of one traffic lane. The change in auto VKT by zone in Scenarios 4 and 5 is shown in Figures 68 to 70. Downtown Brampton has been assumed to be from Centre St to McMurchy Avenue, which is larger than the section with parking restrictions. The modelled scenarios includes lane reductions from 2 lanes down to 2 lane in the section outside Theatre Lane to George St. This has an impact on VKT through the area. Both Scenarios 4 and 5 are seen as strongly supporting increased transit ridership and mixed-use intensification at transit stops that lead to shorter trips, but Scenario 4 is seen as more likely to foster a change in people's mode of travel across the corridor.

With lane reductions in Scenario 4, the results suggest there is some diversion of traffic from areas near Queen Street to areas further away from the corridor.

With widening in Scenario 5, there is a reduction in auto traffic in downtown Brampton, and minimal change (< ±1%) in all other study area zones (<±1%).

With Scenario 6, there is no appreciable decreases or increases in observed auto VKT along the Queen Street – Highway 7 corridor.

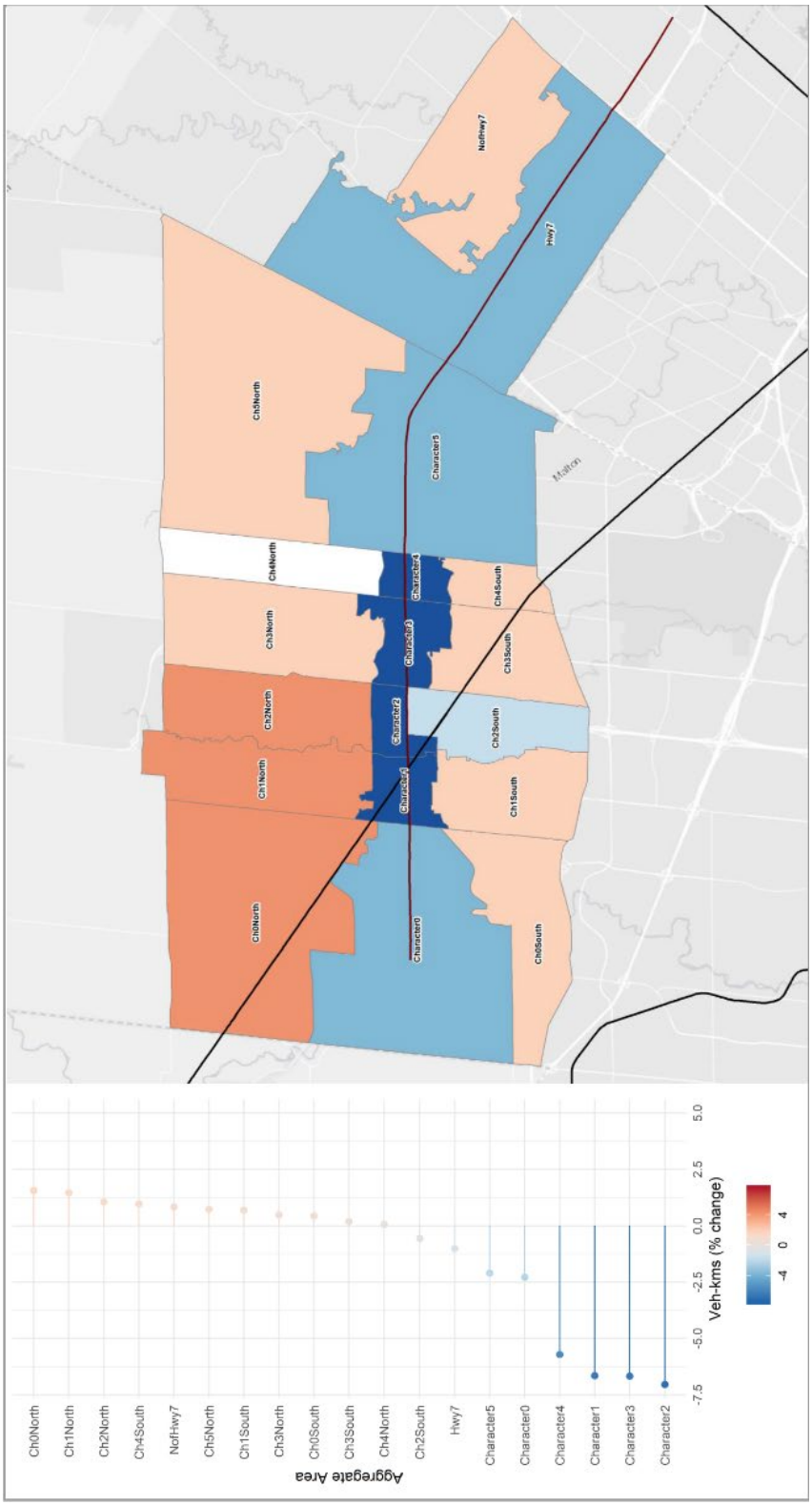

Figure 71: Scenario 4 – Change in auto vehicle-kms by zone (scenario vs BAU)

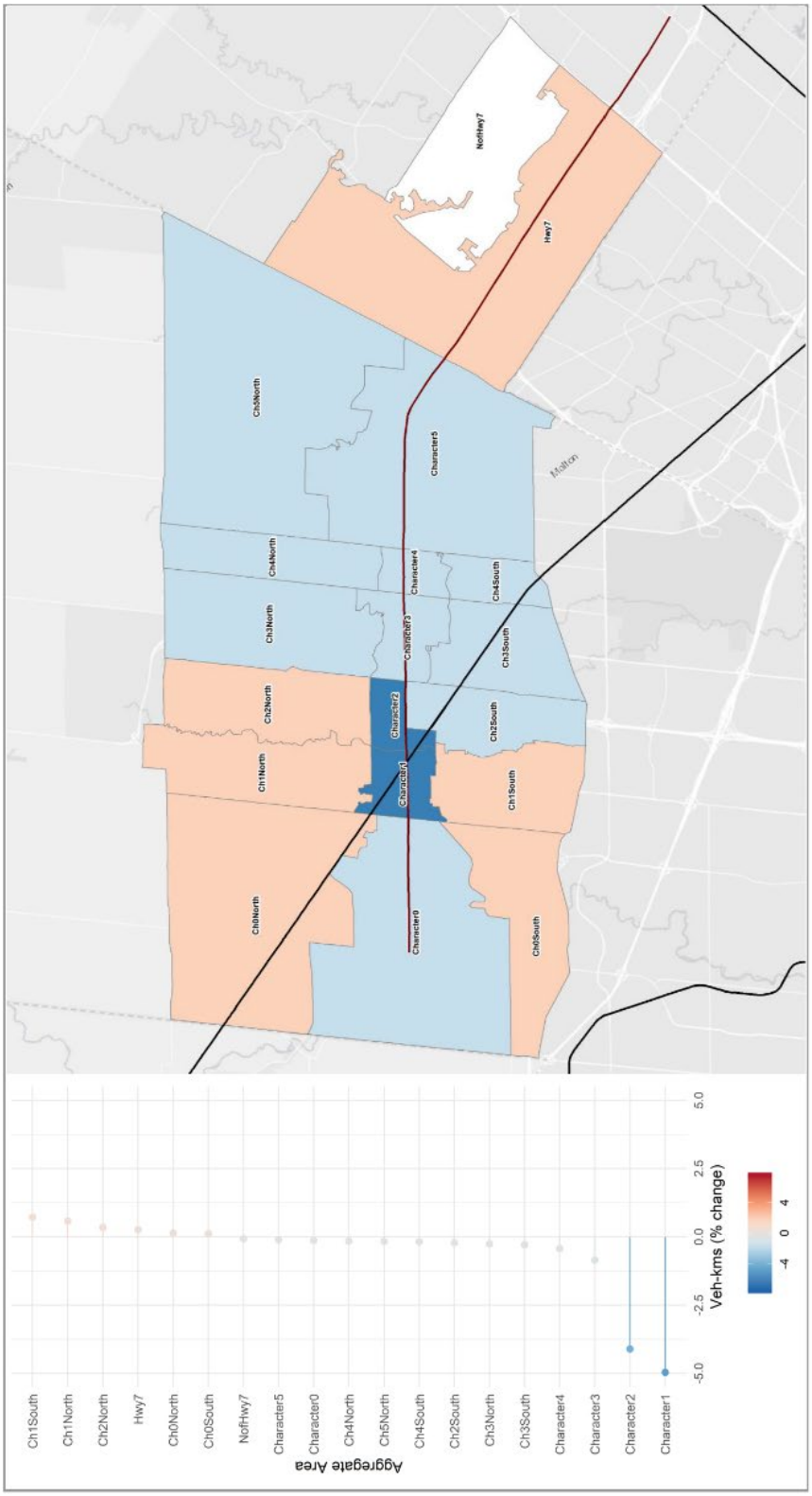

Figure 72: Scenario 5 – Change in auto vehicle-kms by zone (scenario vs BAU)

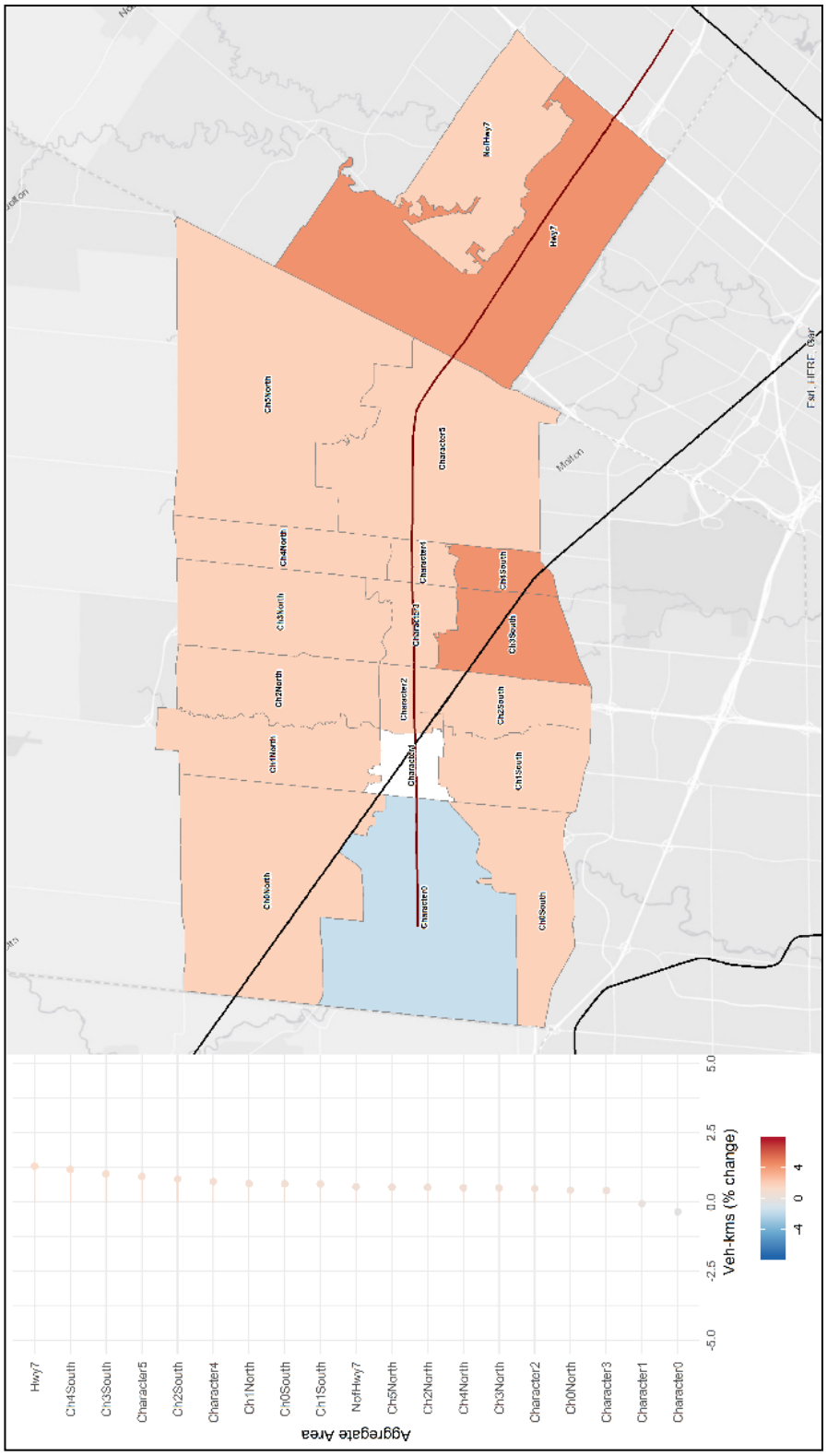

Figure 73: Scenario 6 – Change in auto vehicle-kms by zone (scenario vs BAU)

Table 23 is the legend for the zone names on the previous maps.

Table 23: Public names of assigned zones

SHORT NAME	PUBLIC NAME
CHARACTER0	Queen: Mississauga-McLaughlin
CH0NORTH	N of Queen: Mississauga-McLaughlin
CH0SOUTH	S of Queen: Mississauga-McLaughlin
CHARACTER1	Queen: McLaughlin-Centre
CH1NORTH	N of Queen: McLaughlin-Centre
CH1SOUTH	S of Queen: McLaughlin-Centre
CHARACTER2	Queen: Centre-Hwy410
CH2NORTH	N of Queen: Centre-Hwy410
CH2SOUTH	S of Queen: Centre-Hwy410
CHARACTER3	Queen: Hwy410-Bramalea
CH3NORTH	N of Queen: Hwy410-Bramalea
CH3SOUTH	S of Queen: Hwy410-Bramalea
CHARACTER4	Queen: Bramalea-Torbram
CH4NORTH	N of Queen: Bramalea-Torbram
CH4SOUTH	S of Queen: Bramalea-Torbram
CHARACTER5	Queen: Torbram-Hwy50
CH5NORTH	N of Queen: Torbram-Hwy50
CH5SOUTH	S of Queen: Torbram-Hwy50
HWY7	Hwy7: Hwy50-Hwy400
NOFHWY7	N of Hwy7

Though not considered in the present evaluation, electric buses may be considered in further stages of the project definition, as the project progresses.

Results show that, for the energy use and efficiency criteria, Scenario 4 performs the highest, followed by Scenarios 5 and 6. All scenarios perform better than the 2041 BAU scenario.

Improved or protected natural environment

Impacts to protected or environmentally-sensitive areas are anticipated with the introduction of the Queen Street – Highway 7 BRT, with an impact level that is different based on the BRT concept that is implemented. The study area includes an Environmentally Sensitive Area identified by the Toronto and Region Conservation Authority: the Claireville Conservation area,

with 848 acres of natural and forested areas. Also, the corridor crosses several designated watercourses including Etobicoke Creek, Spring Creek, Mimico Creek, the Humber River, and a variety of minor tributary streams.

Minimizing impacts on these areas during construction through the careful management of debris and runoff will be an important consideration to ensure the protection of the natural environment, as with any construction project that occurs adjacent to a watercourse or natural area.

As a whole, all scenarios should include measures to try to increase natural environmental health immediately surrounding the corridor. However, Scenarios 5 and 6 include a widening of Queen Street crossing the Claireville Conservation Area and therefore perform more poorly in this criterion compared to Scenario 4.

Results show that, for the improved or protected natural environment criteria, Scenario 4 performs the highest, whereas Scenarios 5 and 6 do not perform strongly and introduce the risk of negative impacts compared to the 2041 BAU scenario.

Strategic Case Summary

Accordingly to the evaluations of the scenarios 4, 5 and 6 throughout the different criteria of the strategic case, Table 24 shows a summary evaluation based on ranking of scenarios following a colour scheme (see Table 25). The quantitative evaluation criteria are also illustrated by the applicable numbers.

Table 24: Strategic Case Summary of scenarios 4, 5 and 6, IBC Queen Street - Highway 7 BRT

Criteria		2041 BAU	Scenario 4	Scenario 5	Scenario 6
Strategic Case	Transit ridership forecasts (AM peak hour boardings)	13,696	**18,813**	**18,734**	**15,110**
	Transit user experience (average travel time [mins] between major O-D pairs)	117	**107**	**108**	**110**
	Mobility choice (transit mode share [%] in study area)	6.85	**7.14**	**7.18**	**7.05**
	Shaping growth				
	Public health				
	Environmental health and air quality				
	Safety & connectivity				
	Active transportation benefits				
	Community & heritage				

	Accessibility to jobs				
	Catalyzing urban land development				
	Innovation & prosperity				
	Energy use & efficiency				
	Protection of natural environment				
	Summary				

Table 25: Legend for performance ranking of scenarios

Colour legend for performances (ranking):

Low performance
Medium performance - low
Medium performance - high
High performance

5

Economic Case

Introduction

The Economic Case quantifies the overall impact of the proposed project to society. In this IBC, the Economic Case measures the overall benefit of the bus rapid transit project compared to the 2041 BAU scenario. The following sections outline the approach, assumptions, and results of the economic analysis.

The economic analysis presented in this section uses an approach that aligns with the latest Metrolinx Business Case Guidance (April 2019). All impacts considered here in this economic analysis are based on results derived from the Greater Golden Horseshoe Model version 4 (GGHM_v4). The proposed construction and opening years are estimates to conduct the economic analysis in this IBC. These dates may be updated in the preliminary design phase.

Key evaluation parameters used are outlined in Table 26.

Table 26: Key economic case parameters

PARAMETER	VALUE
EVALUATION AND PRESENT VALUE YEAR	2019
CONSTRUCTION YEAR	2023
OPENING YEAR	2026
EVALUATION PERIOD (AFTER OPENING YEAR)	60 years
BENEFITS PERIOD (AFTER EVALUATION YEAR)	30 years
SOCIAL DISCOUNT RATE (ECONOMIC CASE, REAL)	3.5%
BENEFIT GROWTH CAP YEAR	2049 (or 30 years from the year of evaluation)
COST ESCALATION CAP YEAR	2049 (or 30 years from the year of evaluation)

Transportation User Impacts

Transit travel time savings

Transit travel time savings are one of the primary reasons for investing in rapid transit and can be quantified to assess the value that the investment brings to its riders. Changes to headways and vehicle speeds can lead to a difference in the perceived travel time (including weighted walk, wait, and in-vehicle times).

These transit travel time benefits are accumulated by new and existing riders over the project life span to determine the total accumulated transit travel time savings benefits for the project. The travel time benefit is calculated based on the economic principle of rule-of-a-half, where new users on average experience half of the travel time savings. This benefit is monetized with a value of time of $18.06 per hour (2019 prices).

Table 27 summarizes the present value benefit for each scenario over a 60-year appraisal period. Both Scenarios 4 and 5 have significant travel time savings associated with the exclusive BRT lane in place across the entire corridor. In Scenario 6, the operation of buses within mixed traffic impacts the travel time benefit.

Table 27: Transit Travel Time Savings ($000s, 2019 prices)

IMPACT	SCENARIO 4	SCENARIO 5	SCENARIO 6
TRANSIT TRAVEL TIME SAVINGS	$2,350,500	$2,407,400	$1,724,200

Crowding, Capacity and Reliability

Rapid transit can provide a more reliable service, resulting in more consistent schedule adherence which is highly valued by transit passengers and operations. The change in the perceived transit travel time resulting from Crowding, Capacity, and Reliability (CCR) is estimated by the GGHMv4. The approach to estimate and monetize these impacts are consistent with the calculations for transit travel time savings, using both the rule-of-half and value of time.

Following the Metrolinx model assurance process, the benefits associated with CCR have not been quantified for this initial business case. It is expected that the BRT would have a positive impact to users in terms of improved reliability, however, these have not been quantified. These benefits can be estimated and captured as part of subsequent business case analyses.

Automobile Operating Cost Impact

There is a change in automobile operating costs associated with the change in vehicle kilometres travelled (VKT) by all auto users in the study area. Changes in VKT could result from a reduction in driving associated with new transit users, or from route changes by auto users within the study area network. The changes in operating cost are related to vehicle ownership that is not typically factored into day-to-day trip making choices. Metrolinx Business Case Guidance suggests a value of $0.09/VKT. This represents the average rate associated with vehicle depreciation. Fuel costs are typically perceived in the trip making decision, and therefore should not be included here as a benefit.

Table 28 summarizes the present value benefit for each scenario over a 60-year appraisal period. Scenarios 4 and 5 lead to an overall reduction in vehicle kilometres travelled and therefore a reduction in automobile operating costs.

Table 28: Auto Operating Cost Savings ($000s, 2019 prices)

IMPACT	SCENARIO 4	SCENARIO 5	SCENARIO 6
AUTO OPERATING COST	$102,900	$32,000	-$65,500

Auto Travel Time Impacts

Auto travel times are expected to change with the implementation of the BRT infrastructure. Impacts can result from the change in the number of auto lanes (as is the case in Scenario 4, and in select areas in Scenario 5), the reduction of number of auto users on the road, or from route changes by auto users within the study area network.

These impacts are derived from the auto travel time matrices from the GGHM_v4 model and calculated using the rule-of-a-half.

Changes in auto travel time are monetized using an adjusted value of time that accounts for freight traffic within the study area. The value of time suggested in the Metrolinx Business Case Guidance is typically applied to passenger trips. Similar international guidance (e.g. UK WebTAG) suggests that light and heavy vehicles have a value of time that is approximately 30% higher than cars. The adjusted auto value of time can be calculated by the proportion of light, medium, and heavy trucks within the study area. Table 29 summarizes this calculation.

Table 29: Adjusted Auto Value of Time

VEHICLE TYPE	% OF TRAFFIC[9]	VOT %INCREASE[10]	ADJUSTED VOT ($/HOUR)
CARS	78%	0%	$18.06
LIGHT TRUCKS	9%	27%	$22.97
MEDIUM TRUCKS	6%	31%	$23.67
HEAVY TRUCKS	7%	31%	$23.67
WEIGHTED AVERAGE	100%		$19.23

Table 30 summarizes the present value benefit for each scenario over a 60-year appraisal period. Across all scenarios, there is an increase in overall auto travel time in the study area, suggesting that there is congestion as traffic grows in the corridor, as well as rerouting impacts resulting from the reduction of road capacity to accommodate the BRT infrastructure in Scenario 4. Scenario 6 has the lowest impact which is expected as there are fewer impacts to road capacity in constrained sections; the impact may be a result from rerouting within the network.

Table 30: Auto Travel Time Impacts ($000s, 2019 prices)

IMPACT	SCENARIO 4	SCENARIO 5	SCENARIO 6
AUTO TRAVEL TIME IMPACTS	-$840,000	-$374,200	-$232,100

Producer Benefits

Fare Revenue Adjustment

Incremental fare revenue associated with the increase in ridership is an economic benefit to the public transit service provider. Based on Metrolinx guidance, the additional revenue is assumed to be the additional ridership forecast by the GGHMv4 multiplied by an average fare of $3.25 in 2019 prices. The resulting benefit is summarized for each scenario in the Table 31.

Table 31: Fare Revenue Adjustment

	SCENARIO 4	SCENARIO 5	SCENARIO 6
FARE REVENUE ADJUSTMENT	$197,100	$225,800	$159,800

[9] Based on 2017 ATR Counts for Queen Street, east of Airport Road
[10] Based on the UK WebTAG Databook Table A1.3.5

External Benefits

Health and Active Travel Benefits

There are health benefits associated with increased walking activity. Each new transit user is expected to gain a marginal benefit associated with the walk access to and from the transit stop. Across all scenarios, the average access and egress walking distance to transit is assumed to be 400 metres. This distance is multiplied with each new transit trip and a suggested health benefit parameter of $3.92 per kilometre walked.

Table 32 summarizes the health benefit over a 60-year appraisal period.

Table 32: Health and Active Travel Impacts ($000s, 2019 prices)

IMPACT	SCENARIO 4	SCENARIO 5	SCENARIO 6
HEALTH AND ACTIVE TRAVEL	$95,100	$108,900	$77,100

Road Safety Impacts

There is a lower cost to society resulting from the reduction in vehicle collisions that result in property damage, injury, or death. Metrolinx Business Case Guidance suggests the value is $0.095 per reduction in VKT. This value is reduced at a rate of -5.3% per year (in line with Metrolinx Guidance), reflecting the overall trend of improvement in road safety.

Table 33 summarizes the present value benefit for each scenario over a 60-year appraisal period. As there is a reduction in VKT in Scenarios 4 and 5, there is a benefit in terms of road safety. The increase in VKT in Scenario 6 suggests that there would be a negative impact.

Table 33: Road Safety Impacts ($000s, 2019 prices)

IMPACT	SCENARIO 4	SCENARIO 5	SCENARIO 6
ROAD SAFETY	$37,800	$11,800	-$24,100

Greenhouse Gas Emissions and Local Air Quality Impacts

Car travel emits greenhouse gases (CO2) which contributes to climate change that has major implications and costs for society. Car travel also emits pollutants, such as nitrogen oxides, sulphur dioxides, and particulate matter, that impact local air quality and are harmful to health.

With the change in vehicle distance travelled, these people would contribute less (or more) emissions into the environment. The greenhouse gas impact is monetized using the change in VKT multiplied by a suggested parameter of $0.01 per VKT. Similarly, the local air quality impact is monetized using the change in VKT multiplied by $0.02 per VKT.

Table 34 summarizes the present value benefit for each scenario over a 60-year appraisal period. As there is a reduction in VKT in Scenarios 4 and 5, there is a benefit in

terms of road safety. The increase in VKT in Scenario 6 suggests that there would be a negative impact.

Table 34: Greenhouse Gas Emissions and Local Air Quality Impacts ($000s, 2019 prices)

IMPACT	SCENARIO 4	SCENARIO 5	SCENARIO 6
GREENHOUSE GAS EMISSIONS	$11,400	$3,600	-$7,300
LOCAL AIR QUALITY	$2,300	$700	-$1,500

Economic Case Summary

The present value benefits associated with each proposed scenario are compared to the present value costs to calculate net present value and benefit-cost ratio metrics, which represents the relative value of the investment to society.

Note that the costs used within the economic analysis will be slightly different to the costs presented in the financial case, for two reasons:

- The economic case analysis is conducted in real terms, and not subject to inflation; and
- The capital costs are subjected to an optimism bias of 15%.[11]

Table 35 presents the summary of the economic case.

Table 35: Economic Case Summary ($000s, 2019 prices)

IMPACT	SCENARIO 4	SCENARIO 5	SCENARIO 6
TRANSPORTATION USER BENEFITS	$1,613,500	$2,065,200	$1,426,600
FARE REVENUE ADJUSTMENT	$197,100	$225,800	$159,800
EXTERNAL BENEFITS	$146,700	$125,000	$44,300
PRESENT VALUE BENEFITS (PVB)	$1,957,200	$2,415,900	$1,630,700
CAPITAL COST	$94,600	$489,800	$150,900
OPERATING & MAINTENANCE COSTS	$412,300	$367,600	$352,700
REHAB COST	$78,400	$78,400	$78,400
PRESENT VALUE COSTS (PVC)	$585,400	$935,800	$582,000
NET PRESENT VALUE (PVB – PVC)	$1,371,900	$1,480,100	$1,048,700
BENEFIT COST RATIO (PVB / PVC)	3.3	2.6	2.8

[11] This is based on international practice for optimism bias applied on bus rapid transit projects (from UK WebTAG).

Though Scenario 6 has a higher BCR than Scenario 5, its overall benefits are lower, as demonstrated in the reduced NPV.

Figures 74 to 76 are waterfall charts that summarize the components that affect the net present value of each scenario.

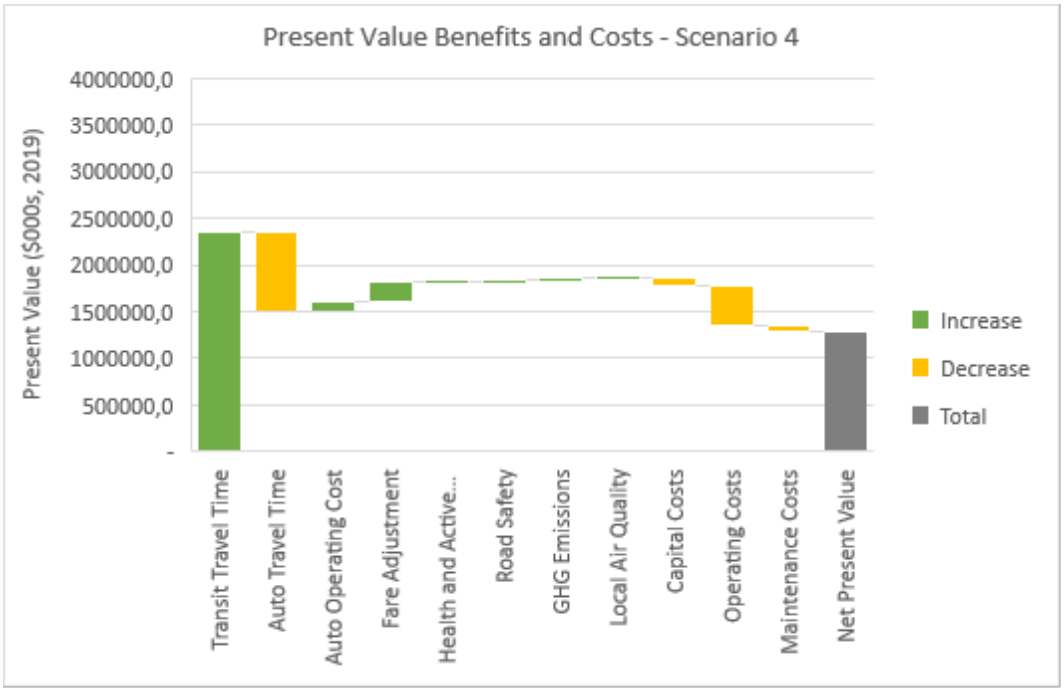

Figure 74: Scenario 4 Present Value Benefits and Costs

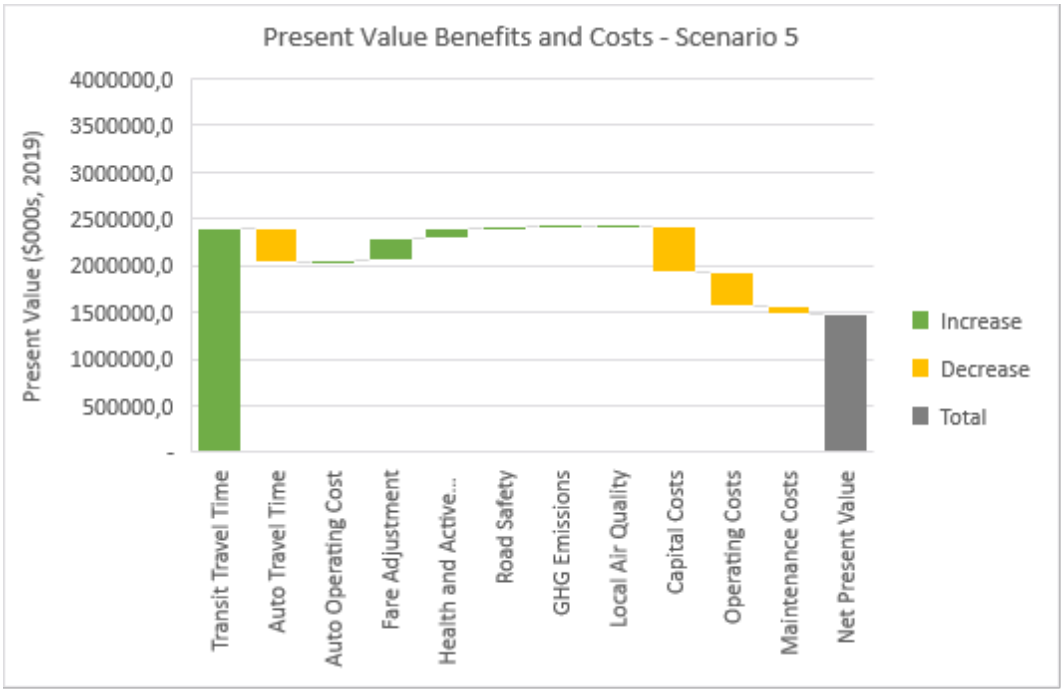

Figure 75: Scenario 5 Present Value Benefits and Costs

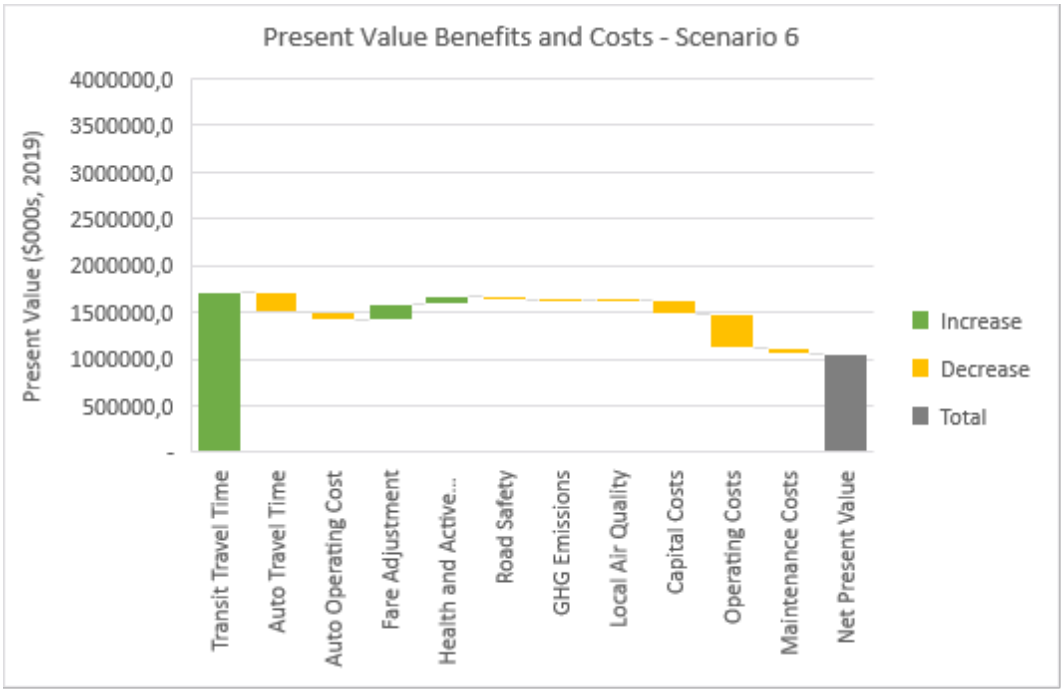

Figure 76: Scenario 6 Present Value Benefits and Costs

The Economic Case evaluation shows that with respect to overall BCR, Scenario 4 is the highest performer overall, followed by Scenario 6, then Scenario 5. However, Scenario 5 has the highest NPV. All Scenarios perform better than the 2041 BAU scenario.

6

Financial Case

Fare Revenue

Fare revenue is directly related to growth in ridership. The change in ridership in 2041 is estimated from the Metrolinx GGHM_v4 model. The incremental ridership is scaled from the opening year to the end of the appraisal period using an average growth rate of 1%.

The incremental revenue is equal to the additional demand multiplied by an average fare. For fare revenue calculations, an average fare of $3.25 is assumed for 2019, per the City of Brampton and Metrolinx. Fare integration is assumed in the study area. In this analysis, the fare is assumed to increase in nominal terms with 2.0% inflation per year, with no escalation beyond inflation.

Table 36 presents the additional annual transit ridership, annual revenues, and present value revenues (over a 60-year appraisal period) associated with each scenario.

Table 36: Change in transit ridership (trips) and revenue (000s)

	SCENARIO 4	SCENARIO 5	SCENARIO 6
2041 ANNUAL INCREMENTAL RIDERSHIP	2,992	3,428	2,426
2041 ANNUAL INCREMENTAL REVENUE ($3.25 AVERAGE FARE IN 2019 PRICES)	$9,724	$11,141	$7,884

Capital Costs

Estimating capital costs

A projection of the project costs was developed for the considered scenarios in coordination with the scope identified by the project team. The estimate was developed using industry best practices corresponding to the level of information available. The estimate is classified as Class D – Concept Sketch Design, as defined by Estimate Classification Matrix in accordance to the Association for the Advancement of Cost Engineering International (AACEi) and shown in Table 37.

Table 37: AACEi Cost Estimate Classes

ESTIMATE LEVEL	ESTIMATE DESCRIPTION	DESIGN PHASE	METHODOLOGY	ACCURACY RANGE
D	Concept Sketch Design	Planning Schematic Design	Parametric Models Capacity Factored Historical Costs	L: -20% to - 50% H: +30% to +100%
C	33% Design Development	Planning Schematic Design Design Documents	Parametric Models Equipment Factored	L: -15% to - 30% H: +20% to +50%
B	66% Design Development	Planning Schematic Design Design Documents	Unit Cost Assemblies	L: -10% to - 20% H: +10% to +20%

ESTIMATE LEVEL	ESTIMATE DESCRIPTION	DESIGN PHASE	METHODOLOGY	ACCURACY RANGE
A	100% Tender Documents	Detailed Design Engineering Construction Documents	Detailed Unit Costs Detailed Take-off	L: -2% to - 10% H: +2% to +10%

The most likely estimate includes contractor's Indirect Costs, Contractor's Overhead & Profit, and Contingency.

The developed estimate is **not intended to set the budget for the potential works,** but rather supports the comparison of the three (3) identified scenarios. Unit rates were derived using unit method of costing, which involves the use of single functional unit rates based on historical data from previous, or similar construction projects.

The scope of the civil works was identified applying a segment-by-segment calculation to obtain quantities of demolition, pavement striping, curb reconstruction, signaling works, station construction, and others. Additional unit prices were used from similar BRT infrastructure costs, like Viva.

Assumptions, Inclusions and Exclusions

- All costs include direct costs (labour, materials, and equipment), 15% of indirect costs, 15% of contractor's overhead and profit, and 20% contingency.
- The costs include Right of Way Acquisition at CAD $250/m^2.
- All costs exclude fleet acquisition.
- Demolition works occur for all required ROW in excess of what's already available. Median demolition assumes an average median width of 2.5 m.
- Restriping area includes the area of the entire corridor.
- New signaling supply occurs at all intersections except those in downtown Brampton, where only minor reconfigurations are included.
- Lane separators for the BRT have been excluded.
- All existing curbside bus stops have remained unchanged as they will serve additional bus lines.
- The costs per km exclude terminal costs (Brampton and Bramalea, if required). Metrolinx and Brampton will provide a cost estimate for this.
- Bus stop costs have been assumed to be the same as the Viva project bus stops.
- For the sections of the alignment that require widening of a rail overpass, it has been assumed full build-out of a new structure and demolition of existing one (this applies to Queen St at the intersection with Highway 410, and with Delta Park Blvd/Sun Pac Blvd)
- The scope of civil works includes: demolition, median demolition, pavement reconstruction, sidewalk reconstruction, roadway striping, utility relocation (rough estimate), new signaling

systems, signaling reconfigurations, light pole or miscellaneous relocations, curb and gutter reconstruction, manholes, refurbished curbside bus stops and new median bus stops.
- Engineering and planning costs have been included as 7% of the estimated construction cost.
- Financing costs have been excluded.

Table 38: Scenario 4 cost summary

SCENARIO 4 COST SUMMARY (CLASS D ESTIMATE)			
COST PER KILOMETRE (MID)		CAD	$3,779,000
COST PER KILOMETRE (HIGH)	+35%	CAD	$5,102,000
COST PER KILOMETRE (LOW)	-20%	CAD	$3,023,000
TOTAL ALIGNMENT LENGTH (KILOMETRES)		24.59	
TOTAL COST		CAD	$92,952,000

Table 39: Scenario 5 cost summary

SCENARIO 5 COST SUMMARY (CLASS D ESTIMATE)			
COST PER KILOMETRE (MID)		CAD	$19,565,000
COST PER KILOMETRE (HIGH)	+35%	CAD	$26,413,000
COST PER KILOMETRE (LOW)	-20%	CAD	$15,652,000
TOTAL ALIGNMENT LENGTH (KILOMETRES)		24.59	
TOTAL COST		CAD	$481,168,000

The Scenario 5 cost estimate includes the following costs:

- Those associated with the intersection of Queen Street and Highway 410. The 225 m long viaduct has been assumed to be entirely rebuilt to the required width (35.4 m). No feasibility analysis has been done to assess this.
- Those associated with the intersection of Queen Street at Delta Park Boulevard, overcrossing the CN rail corridor tracks. The length of the overpass (200 m) has been assumed to be entirely rebuilt to accommodate the required width of 35.4 m. No feasibility analysis has been done to assess this.
- The Queen Street crossing of Humber River, where the 75 m long crossing would need to accommodate a ROW of 26.3 m. No feasibility analysis has been done to assess this.
- The widening of Queen Street under the CN rail tracks in proximity to Kipling Ave. This assumes full realignment of tracks to a temporary structure, and full reconstruction of a permanent rail structure once the widening works are completed. No feasibility analysis has been done to assess this.

Table 40: Scenario 6 cost summary

SCENARIO 6 COST SUMMARY (CLASS D ESTIMATE)			
COST PER KILOMETRE (MID)		CAD	$6,930,000
COST PER KILOMETRE (HIGH)	+35%	CAD	$9,356,000
COST PER KILOMETRE (LOW)	-20%	CAD	$5,544,000
TOTAL ALIGNMENT LENGTH (KILOMETRES)		24.59	
TOTAL COST		CAD	$170,434,000

Construction phasing

For this initial business case analysis, it is assumed that construction will take place over a three-year period between 2023 and 2025. Construction costs are spread evenly across the period. (Note that capital costs are escalated by 1% per year during this period).

Maintenance Costs

Over the 60-year appraisal period, there are costs experienced at regular intervals associated with the maintenance of the BRT infrastructure. Table 41 presents the frequency and cost associated with maintaining BRT infrastructure along the corridor.

Table 41: Maintenance cost and frequency

ACTIVITY	FREQUENCY (YEARS)	COST ($000, 2019 PRICES)
RESTRIPING OF BRT LANES	5	$2,767
PAVEMENT PATCHING OF BRT LANES	2	$2,011
PAVEMENT OVERLAY REPLACEMENT OF BRT LANES	25	$40,211
REPLACE BRT STATIONS	30	$43,167

These costs are assumed to be consistent across Scenarios 4 to 6. These costs are escalated by 1% per year (above inflation) until 2031, which is the assumed cost escalation cap year.

Operating Costs

Incremental operating costs are associated with the increase in vehicle services hours to operate the proposed BRT services. The increase in peak revenue service hours is calculated from outputs from the GGHM_v4 model. These are converted to an annual value with the following assumptions and approach:

- Off-peak service hours are assumed to be 50% of the peak

- There are 6 peak and 12 off-peak service hours per weekday (251 each year)
- There are 18 off-peak service hours per weekend and holiday (114 each year)
- The above factors are used to annualize the peak service hours
- The annual service hours are multiplied by an assumed cost of $142 / service hour[12].
- Operating costs are escalated by 1.0% each year, above inflation until 2031.

Table 42: Incremental operating hours and cost

	BAU	SCENARIO 4	SCENARIO 5	SCENARIO 6
PEAK SERVICE HOURS (3 HOUR AM PEAK)	149	232	223	220
ANNUAL SERVICE HOURS	200,600	312,300	300,200	296,100
2019 OPERATING COST ($000, 2019 PRICES)	$29,339	$45,682	$43,910	$43,319
2031 OPERATING COST ($000, 2019 PRICES)	$33,060	$51,475	$49,478	$48,813

[12] Source: Viva network operational costs – York Region Transit, 2018 financial data.

Financial Case Summary

The Financial Case explores the overall financial impact of the proposed project. This includes the capital cost, incremental operating and maintenance cost, and incremental revenue. Each of the input costs and revenue described above are inflated at 2% per year, then discounted using a 5.5% rate to determine the net present value of the investment. Table 43 presents a summary of the financial case over a 60-year appraisal period.

Table 43: Financial case summary (60-year appraisal period, $000s present value)

IMPACT	SCENARIO 4	SCENARIO 5	SCENARIO 6
CAPITAL COST	$94,900	$491,400	$151,400
OPERATING & MAINTENANCE COSTS	$420,100	$374,500	$359,400
REHAB COST	$80,200	$80,200	$80,200
PRESENT VALUE COSTS (PVC)	$595,200	$946,100	$590,900
INCREMENTAL REVENUE	$213,900	$245,000	$173,400
NET PRESENT VALUE	-$381,400	-$701,200	-$417,500

Note that the costs used within the financial case will be slightly different to the costs presented in the economic case, as inflation and a different discount rate is applied here.

The Financial Case evaluation shows that Scenario 4 is the highest performer overall as it has the lowest financial impact, followed closely by Scenario 6. Scenario 5 has the highest financial impact due to the costs associated with widening the corridor

7

Deliverability and Operations Case

Introduction

The Deliverability and Operations Case evaluates the project delivery considerations, procurement options, and constraints associated with project delivery and operations. It details the technical and institutional requirements to deliver the investment.

Project Delivery

- The delivery of the Queen Street – Highway 7 BRT should consider the following:
- **Governance** – including considerations on how additional Brampton Transit and YRT projects will interface with the BRT. The role of each transit operator, of Metrolinx, and of the cities will have to be determined for the project achievement.
- **Integrated Project Team** – including thoughts on how the project team could be set up and who will be part of it, for implementation of the BRT project.
- **Project Optimization** – including various considerations for optimizing the project such as refinements to the design, operations, service planning, and cost estimates. This project optimization will take place when following the next stages of the Business Case, accordingly to the Metrolinx Business Case Guidance (April 2019). Further refinement will be required, but is not limited to:
    - The technology choice for the BRT (diesel, hybrid, 100% electric);
    - The infrastructure options on the corridor which will have to be defined through detailed design;
    - The definition of the detailed transit service (routes and levels of service) to be operated;
    - The eventual terminals to be changed or implemented in order to support the defined BRT service (Downtown Brampton Terminal, Bramalea Terminal, VMC bus terminal), as well as the detailed design of any other eventual BRT infrastructure to be implemented on roads adjacent the BRT corridor;
    - The operational plan for the transit service, including the definition of type of procurement for transit operations; and
    - The required maintenance facilities for the transit fleet depending on the operational plan and the technology choice.
- **Environmental Impact Assessment** – identification of any need for Environmental Assessment requirements, such as for the Claireville Conservation Area.
- **Public and Stakeholder Consultation** – including potential approaches for further public and stakeholder consultation as the project and designs are developed.
- **Project Readiness** – including considerations for operational readiness of the project.

Operations and Maintenance Plan

A detailed operation plan will have to be defined, based on the detailed transit service that will be operated. A preliminary high-level transit service definition has been identified in the present IBC. Based on that service level, an operational and a maintenance plan will have to be defined, including for instance:

- Roles and responsibilities for operations and maintenance;
- Required changes in regulations or legislation;
- Human resource implications; and
- Materials and equipment needed.

Procurement

Conventional Design-Build

Conventional Design-Bid-Build (DBB) procurements are commonly used to deliver public infrastructure, where requirements are clearly defined, integration risks are low, and there are specific detailed requirements and therefore limited potential for design innovation. Private contractors are selected through a competitive tender process responding to a prescriptive specification. A more permissive Design-Build (DB) model is widely used where the output requirement is clearly defined, for example a road-rail grade separation, but there may be opportunity for innovation in the detailed design.

Design-Bid-Build (DBB), or traditional procurement, appears to be the most straight-forward approach to deliver the Queen Street – Highway 7 BRT. This approach is widely used on public transit projects in the GTHA and elsewhere.

Public-Private Partnerships (PPP)

PPP models include Design-Build-Finance (DBF) PPP models where contractors must finance work during construction with payment only on substantial completion. This motivates timely project completion. It also includes Design-Build-Finance-Maintain (DBFM) model that transfers responsibility for long term maintenance, and Design-Build-Finance-Operate-Maintain (DBFOM) model that also transfers responsibility for long term operations. PPP models can transfer delivery and whole life performance risks to the contractor. To the extent these risks are transferred, specifications can be less prescriptive and more performance-based. This incentivizes contractors to optimize their design and delivery approach to maximize long term benefits and minimize life cycle costs.

Given the integrated and interconnected nature of the Brampton Transit system and existing operation of the Züm network, Alternative Financing and Procurement (AFP) may be complex to arrange. However, the Queen Street – Highway 7 BRT could be considered an independently-operated transit route under an AFP model. Complexities would arise in attempting to reach arrangements related primarily to maintenance of common infrastructure (e.g. where stops serve both the BRT system and local Brampton Transit routes). Given these complexities and the non-

standard nature of an AFP model for public transit systems in the GTHA, a traditional procurement to build the infrastructure which would then be operated by Brampton Transit appears to be the most logical approach for the BRT.

Constraints

Physical constraints

The Queen Street – Highway 7 Corridor has a number of constraints along its length, including the following:

- Rail corridor crossings;
- Highway crossings;
- Natural features;
- Narrow rights of way; and
- Multi-jurisdictional road ownership.

These constraints may impact the deliverability and operation of the Queen Street – Highway 7 BRT but none preclude the project from advancing higher-order rapid transit in the corridor. In portions with overpasses and underpasses and where there are right of way width constraints, the ability to construct new dedicated transit infrastructure is more limited than elsewhere on the corridor, potentially requiring modifications to the operation method in these areas (i.e. operation in mixed traffic for limited sections) or right of way widening.

Through these portions of the Queen Street – Highway 7 Corridor, the present IBC has identified, per scenario, these constrained segments and has proposed different solutions for them in each scenario.

Multi-jurisdictional road ownership

Queen Street – Highway 7 is a multi-jurisdictional corridor. Queen Street between McMurchy Avenue and Highway 410 is owned by the City of Brampton. Queen St between Mississauga Rd and McMurchy Ave as well as between Highway 410 and Highway 50 is owned by the Region of Peel. At Highway 50, Queen Street becomes Highway 7 and is part of the York Region regional road network, owned by York Region, and runs through the City of Vaughan. Coordination between the four (4) municipalities will be required as conceptual and detailed designs progress for the BRT to ensure consensus on standards.

Minimizing throw-away costs (rebuilding recent improvements)

All parties involved in the Queen Street – Highway 7 BRT project have made some level of investment in the existing Brampton Transit/Züm infrastructure in Brampton, as well as Viva Rapidways on Highway 7 where the Queen Street – Highway 7 BRT will connect to YRT services.

Recent improvements to York Region and Brampton Transit assets that should be considered during the planning for the Queen Street – Highway 7 BRT include:

- **Bramalea Terminal,** located at approximately the midway point on the Queen Street – Highway 7 BRT at Central Park Drive, was refurbished and opened in fall 2010 in conjunction with the introduction of Züm service along Queen Street. The value of the refurbishment project was approximately $7.5M in 2009.
- **Helen Street Viva Station,** located at the eastern terminus of the Queen Street – Highway 7 BRT, which currently serves YRT Viva passengers.
- **Highway 7 BRT infrastructure** between Vaughan Metropolitan Centre TTC station and Helen Street. As of July 2019, the construction of this infrastructure is nearing completion. The design and operation of buses on this infrastructure, particularly the integration of the BRT service west of Helen Street with the future Queen Street BRT service, will be a key consideration.
- **New fleet vehicles** have been a key component of the Brampton Transit Business Plan, resulting in the modernization and expansion of the previous 299-vehicle fleet to 407 buses to increase capacity and improve customer service.
- **New technology solutions** including digital variable message signs at Züm stops, digital displays in Transit Service Centres, and investments in mobile applications to facilitate seamless transit ridership.

Vehicle Capacity constraints

The reduction in vehicle capacity identified in scenario 4 may constrain truck and goods movement across the corridor. However it should also be noted that without adequate transit infrastructure, increases in services will also impede traffic and goods movement. The extent of this will be determined in the preliminary design phase and assist in developing the final option.

Given the value of the investments and the level of public scrutiny associated with rapid transit investments and any large-scale infrastructure works, it is important to minimize throw-away costs during construction of the Queen Street – Highway 7 BRT. This ensures appropriate value for money is achieved for new infrastructure and that continued public and stakeholder support for the project is maintained.

Conclusion

Accordingly to the evaluations of the scenarios 4, 5 and 6 throughout the different criteria of the Deliverability and Operation Case, Table 44 shows a summary evaluation based on ranking of scenarios following a colour scheme (see Table 45). This ranking is based on the expected impacts and constraints of delivering the corridor, from an IBC perspective. Majority of this analysis was qualitative and a more detailed analysis will be completed in the next phases of work.

Table 44: Deliverability and Operation Case Summary of Scenarios 4, 5, and 6, IBC Queen Street – Highway 7 BRT

Criteria		2041 BAU	Scenario 4	Scenario 5	Scenario 6
Deliverability and Operations Case	Project delivery				
	Operations and Maintenance Plan				
	Procurement				
	Constraints				
	Summary				

Table 45: Legend for performance ranking of scenarios

Colour legend for performances (ranking):

Low performance
Medium performance - low
Medium performance - high
High performance

The Deliverability and Operations Case evaluation shows that Scenario 4 could have fewer constraints then Scenario's 5 and 6, mostly due to the impact of widening the right-of-way for these two scenarios.

8

Business Case Summary

Brampton Queen St- York Region Hwy 7 BRT Initial Business Case

The Brampton Queen Street – York Region Highway 7 corridor has been identified for future rapid transit investment through the implementation of a bus rapid transit (BRT) system. The evaluation for this Initial Business Case (IBC) for the Queen Street – Highway 7 BRT corridor has been conducted with the Metrolinx regional transportation model (GGHM_v4) and with the evaluation framework defined in the Metrolinx Business Case Guidance documentation (April 2019). The project was supported by a Metrolinx project team, Arup, and a project team with representatives from each of the main stakeholders: Brampton Transit, Region of Peel, City of Brampton, York Region and City of Vaughan.

The IBC has identified:

- A supportive BRT transit service scenario including: a BRT route and priority bus networks and their peak levels of service that maximize transit ridership across the study area. This service definition is a result of an optimization exercise between different transit service scenarios using the GGHM_v4 model; and
- Three possible infrastructure scenarios for the corridor, supporting the optimized transit service definition from the first stage of the IBC. The specific infrastructure scenarios are:
    - **Scenario 4: conversion of a traffic lane** per direction to **median BRT exclusive lanes** along the length of the Queen Street – Highway 7 Corridor, except in **Downtown Brampton** where one traffic lane per direction is converted to a **curbside BRT lane**, between McMurchy Avenue and Kennedy Road;
    - **Scenario 5: median BRT lanes** (one per direction) along the length of the Queen Street – Highway 7 Corridor as a result of **road widening** (retaining the current number of traffic lanes), everywhere except **Downtown Brampton** (Queen Street between McMurchy Avenue and Kennedy Road) where **lane conversion** is considered; and
    - **Scenario 6:** implementation of two (2) **median BRT lanes** on the corridor by adding a median BRT lane per direction as a result of **widening** the road where necessary, except in segments that are in the following **constrained** zones: Downtown Brampton (McMurchy Avenue to Centre Street); Delta Park Boulevard to Sun Pac Boulevard (crossing of CN rail tracks); Highway 410 crossing; Highway 427 crossing; and Kipling Avenue to Islington Avenue, where a **mixed traffic solution** is considered.
- Scenarios 4, 5, and 6 are evaluated in this IBC through 4 cases; Strategic Case, Financial Case, Economic Case, and Deliverability and Operation Case.

The Initial Business Case evaluation for the Brampton Queen Street – York Region Highway 7 BRT project supports the need for rapid transit infrastructure and service across the corridor. Overall, Scenarios 4 and 5 offer increased transit reliability and reductions in travel times, compared with scenario 6. All scenarios perform better than the BAU.

Summary of Initial Business Case Evaluation Results

Based on the evaluations made in the Strategic, Financial, Economic, and Deliverability and Operation Cases in the present IBC for the Brampton Queen Street – York highway 7 BRT, Table 46 illustrates the IBC evaluation summary, with a simple ranking method illustrated by a colour scheme. The following main elements can be highlighted on the IBC summary:

- **Strategic Case:** The Strategic Case indicates that the Queen Street – Highway 7 BRT performs well with respect to providing increased transportation choice; shaping growth in a sustainable manner and providing the means of reducing emissions from auto travel; and connecting commuters and students to jobs and education. Scenarios 4 (conversion of a traffic lane to a BRT exclusive lane) and Scenario 5 (the addition of BRT lanes through widening the corridor) perform better than Scenario 6 which had limited BRT infrastructure.
- **Financial Case:** The Financial Case indicates that Scenarios 4 and 6 perform most highly mainly because of their capital costs being much lower than Scenario 5, which includes costs of demolition and reconstruction of major infrastructure for widening the road (highway and rail crossings). Scenario 4 performs the highest from a financial perspective as it has the least financial impact.
- **Economic Case:** The Economic Case indicates a very high benefit/cost ratio (greater than 2) for all scenarios. Scenario 4 performs the highest in terms of benefit-cost ratio while Scenario 5 performs the highest in terms of NPV. These two scenarios give the transit priority (exclusive lanes) to transit and Scenario 4 is the less expensive of the two scenarios in terms of capital costs.
- **Deliverability and Operations Case:** The Deliverability and Operations Case indicates that Scenario 4 is likely the highest performer in terms of deliverability as it presents fewer physical constraints during the construction process through conversion of a lane instead of widening the corridor. Scenario 5 requires the most substantial construction (reconstruction of constrained segments) and Scenario 6 has fewer constraints to manage during construction (due to minimal construction in constrained zones) but more during operations as mixed traffic operations will result in vehicular congestion for all road users.

Table 46 summarizes the IBC evaluation for the Queen Street – Highway 7 BRT project.

Table 46: Initial Business Case Summary of Scenarios 4, 5, and 6 for the Queen Street – Highway 7 BRT project

Initial Business Case	2041 BAU	Scenario 4	Scenario 5	Scenario 6
Strategic Case				
Financial Case				
Economic Case				
Deliverability and Operations Case				
Summary				

Table 47: Legend for performance ranking of scenarios

Color legend for performances (ranking):

Low performance
Medium performance - low
Medium performance - high
High performance

As a whole, results of the Initial Business Case evaluation for the Brampton Queen Street – York Region Highway 7 BRT project show that Scenarios 4 and 5 provide greater transit benefits than Scenario 6. The provision of dedicated transit infrastructure across the entire corridor increases transit reliability and reduces transit travel times than Scenario 6 which provides less dedicated infrastructure. All scenarios perform better than the BAU which confirms a need for BRT across the corridor.

Figure 77 identifies the next steps of the project as it enters the preliminary design phase. The project is expected to follow the Metrolinx Business Case Framework and Benefits Management process. The results of this IBC will be used as a basis for developing the scope of work for the Preliminary Design Business Case. The options presented in this IBC will be further refined to establish a preliminary design, benefits of the project as well as a more detailed cost estimate. Extensive stakeholder and public consultation will also be part of this process. Development of the Preliminary Design Business Case will include some of the following:

- Further refinement of the transit services and operations:
  - Adjustments/refinements to transit routes that feed the BRT routes such as changing the Bus Priority Routes defined for Scenarios 4, 5, and 6 and adding or removing such routes based on further analysis of overall accessibility for major origin and destination points such as York University and Pearson Airport;
  - Define levels of service for weekday PM and weekend periods for each route defined (in addition to the AM peak period which has been defined through this IBC);
  - Investigate and choose a BRT technology to operate (diesel, hybrid, or electric);
  - Evaluate fleet, maintenance, and facility needs for the operation of the transit service;
  - Define the operational plan for the transit service, including the definition of type of procurement for transit operations; and
  - Define the required changes to transit services that will feed the BRT (local Brampton Transit and York Region Transit networks).
- Preliminary design of BRT infrastructure and option development:
  - Continue into preliminary design of the corridor including detailed analyses to determine the appropriate ROW and lane configuration for the corridor, using Scenarios 4 and 5 as a baseline for this work;
  - Additional analysis required regarding the implication for removing or retaining current traffic capacities along Queen St, including understanding the implications of the movement of goods across the corridor;
  - Test multiple BRT solutions for the following constrained zones:
    - Downtown Brampton from McMurchy Avenue to Centre Street;
    - Delta Park Boulevard to Sun Pac Boulevard (crossing of CN rail tracks);
    - Highway 410 crossing;
    - Highway 427 crossing;
    - Kipling Avenue to Islington Avenue;
    - In front of Bramalea City Centre;
    - McVean Drive and Gore Road (where the corridor crosses the Claireville Conservation Area); and
    - Queen Street between Kennedy Road and Hansen Road.
  - Solutions that have the potential to further optimize costs and efficiency that can be tested on these segments with the help of other tools including meso- or micro-simulation traffic tools, include:
    - Queue jump lanes and bus priority measures for buses at intersections;
    - Transit signal priority;
    - Use of a reversible BRT lanes in certain constrained segment with traffic lights for buses; and
    - Conversion of traffic lanes to BRT lanes.

- Define the terminal facilities required or changes to existing facilities to be implemented in order to support the corridor including Brampton bus terminal, and Bramalea Bus Terminal; and

- Identify and define the detailed design required for any other bus preferential measures to be implemented on adjacent roads to the BRT corridor if required.

Planning Phase	Metrolinx Business Case Requirement
Strategic Planning	Strategic Planning
Options Analysis	Initial Business Case
Preliminary Design	Preliminary Design Business Case
Design and Procurement Preparation	Full Business Case
Procurement	Full Business Case - updated (if required)
Construction, Commissioning and Delivery	
In Service	Post In-Service Business Case

We are here

Figure 77: Project phases

Glossary of Terms

AACEi	Association for the Advancement of Cost Engineering International
AFP	Alternative Financing and Procurement
BAU	Business as Usual
BCR	Benefit Cost Ratio
BRT	Bus Rapid Transit
CN	Canadian National Railway
DBB	Design-Bid-Build
DBB	Design-Build
FRTN	Frequent Rapid Transit Network
GGHM	Greater Golden Horseshoe Model
GP (lane)	General Purpose Lane
GTHA	Greater Toronto and Hamilton Area
IBC	Initial Business Case
LOS	Level of Service
NPV	Net Present Value
OD	Origin-Destination
PPP	Public Private Partnership
ROW	Right-of-way
RTP	Regional Transportation Plan
TTC	Toronto Transit Commission
TTS	Transportation Tomorrow Survey
VKT	Vehicle Kilometres Travelled
VMC	Vaughan Metropolitan Centre
YRT	York Region Transit

Report
Staff Report
The Corporation of the City of Brampton
2021-02-03

Date: 2021-01-07

Subject: SmartBus Maintenance and Support Services

Secondary Title: Request to Begin Procurement - SmartBus Maintenance and Support Services

Contact: Ivana Tomas, Director, Transit Services
ivana.tomas@brampton.ca 905.874.2750 ext. 62330

Report Number: Brampton Transit-2021-147

Recommendations:

1. That the report titled; **Request to Begin Procurement - SmartBus Maintenance and Support Services** to the Committee of Council meeting of February 3, 2021, be received; and

2. That the Purchasing Agent be authorized to begin procurement through Direct Negotiations with Conduent Transport Solutions Inc. for the **SmartBus Maintenance and Support Services**

Overview:

- **This report seeks to obtain Council approval to enter into direct negotiation with Conduent Transport Solutions Inc. for SmartBus Maintenance and Support Services for a one (1) Year Period, with the option to renew for two (2) additional one (1) Year Periods;**

- **Brampton Transit's SmartBus system program was originally initiated by Transit in 2008, and the system was fully implemented by Conduent Transport Solutions Inc. in 2010, to enhance dispatching and vehicle tracking aspects of the Transit operation;**

- **In 2016, a four (4) Year Maintenance and Support Program was implemented to obtain technical support for the system to ensure seamless operation;**

- **With the SmartBus system still in operation, Brampton Transit requires a further extension of this program with the existing supplier Conduent Transport Solutions Inc., as the only vendor that can be contracted by the City to support the SmartBus System, due to compatibility of their solution with existing hardware and software onboard Transit vehicles.**

Background:

The original implementation of the SmartBus System in 2010, included software development and purchase of hardware equipment for transit vehicles, control centre, Züm station stops and Terminals for 5 years. The SmartBus system is a CAD/AVL (Computer Aided Dispatch/Automatic Vehicle Location) solution for the Transit fleet to increase the operational efficiency of the Transit system, and to provide greater customer information and service. The solution was sourced through a competitive procurement process and the City awarded a 5-year maintenance contract to the successful bidder in early 2008.

Upon completion of the initial 5-year contract, the Corporation issued a bid call to the vendor in late 2015, which set out the needs and requirements for the upgrade of the SmartBus system's computing infrastructure. A direct negotiation followed and the incumbent was engaged to provide the upgrade as set forth in the Agreement. The enhancement of the Smartbus system involved new computing hardware and software development required for Phase 2 of the Züm project, and it included a Maintenance and Support Program until December 31, 2020.

Current Situation:

With advancements in CAD/AVL technologies in the marketplace, and Transit's ongoing commitments to providing the best possible experience for Transit riders, Transit will be looking to replace the existing CAD/AVL system over the next 2-3 years.

Until the fleet-wide system is replaced, Conduent Transport Solutions Inc. remains the only vendor that can currently be contracted by the City to support the SmartBus System, due to compatibility with existing technology infrastructure onboard Brampton's buses.

For the continuation of the Maintenance and Support Program, the vendor will provide support for a one-year period effective March 1, 2021 to February 28, 2022, with the option to renew for two additional one-year periods. As part of this report, Transit is requesting authority to exercise these options as required, subject to future years' budget availabilities, as approved by City Council. These options will provide Transit staff with flexibility to continue with the Maintenance and Support Program for the duration of the SmartBus solution until a new system is implemented.

Corporate Implications:

Subject to Council approval of this procurement, a continuation of the Maintenance and Support Program for the SmartBus system will ensure a smooth and uninterrupted delivery of Transit services to the Community. The SmartBus technology, as configured for Brampton Transit, provides a wide range of reports on vehicle activities including; scheduling and routing compliance, bus stop summaries, computer-aided dispatch, real-time bus arrival information for riders and detours and ridership statistics, to name a few. These reports are imperative in tracking critical data as well as identifying and expediting the resolution of operational or customer service issues, to enhance the quality and reliability of our service.

Purchasing Comments:

Purchasing and Transit will enter into negotiations with Conduent Transport Solutions Inc. to establish a new contract. Upon successful conclusion of negotiations, purchase approval will be obtained in accordance with the Purchasing By-law.

All communication with Conduent Transport Solutions Inc. will occur formally through a designated contact in Purchasing.

Financial Implications
Funding for the first year of the contract is available from Transit capital project #214998-001 (Transit Preventative Maintenance). Transit staff will ensure sufficient funding is available in future years of the contract, subject to budget approval.

Term of Council Priorities:

This report achieves the Strategic Plan of Move and Connect, by maintaining up-to-date technologies onboard Transit buses to ensure a seamless delivery of Transit services to the Community.

Living the Mosaic – 2040 Vision
This report directly aligns with the vision that Brampton will be a mosaic of safe, integrated transportation.

Conclusion:

It is recommended by staff that Council authorize the Purchasing Agent to commence procurement, as described in this report.

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