

TOWN OF HALTON HILLS – GENERAL INFORMATION PACKAGE

COUNCIL MEETING – FEBRUARY 7, 2022

ADVISORY/SPECIAL COMMITTEES AND BOARD MEETING MINUTES

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GENERAL CORRESPONDENCE

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275	CITY OF BURLINGTON – Resolution passed at its Council meeting held on January 18, 2022, regarding Regional Waterpipe Smoking By-law.
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REQUEST FOR SUPPORT

PAGE	INFORMATION
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PROCLAMATIONS

PAGE	INFORMATION
285	BLACK HISTORY MONTH – February 2022 (Proclamation)

STAFF ACHIEVEMENTS

PAGE	INFORMATION
286-287	Town of Halton Hills Staff Members Certification – Association of Ontario Road Supervisors dated December 13, 2021 regarding congratulatory message on staff certification.

DOWNTOWN ACTON BIA
BOARD OF MANAGEMENT MEETING
Tuesday, January 25th, 2022

Online Meeting

AGENDA

I. Call to Order

Matthew Galliford, Vice-Chair, called meeting to order at 6:31pm.

II. Attendance

Present: Matthew Galliford. Monica Parker-Galway. Michael Albano. SangWon Bak. Alex Hilson. Kim Duncanson. Erin Kaiser. Victor Alksnis. Zina Pallister.

Regrets: Joba Debi. Patricia Daleman. Norman Paulsen.

III. Declaration of Pecuniary Interests – none.

IV. Approval of Agenda

Motion to approve agenda.

Motion: Michael Albano – Town of Halton Hills

Second: Monica Parker-Galway – Profile Hair Salon

All in favour.

Motion carried.

V. Adoption of November 22nd, 2021, Minutes

Motion: Adoption of November 22nd, 2021 Meeting Minutes

Motion: Matthew Galliford – House of Workwear

Second: Monica Parker-Galway – Profile Hair Salon

All in favour.

Motion carried.

VI. Guest Speaker – Erin Kaiser

Erin talks about the current Façade Improvement Program (FIP) and how the town is looking to consolidate the program into a stronger Community Improvement Plan (CIP) which accomplishes a similar task for businesses looking to renovate. The new CIP would also grant more money than the current FIP.

VII. Coordinator's Report – Alex Hilson

Attached after formal minutes.

VIII. Monthly Task Calendar

Attached after formal minutes.

IX. Events

- **Holiday Market:** Turned out very well. Lots of lessons learned. Brittany Sedore deserves much of the credit for the event coming together as it did. We were looking at doing a Valentines' Market but with the recent uncertainty regarding lockdowns, we are looking at Easter and Mothers' Day.
- **Farmers' Market:** We will soon be reaching out to our vendors and preparing them for the start of our market season on Thursday, June 2nd. We are waiting on the Town for a revised event application.
- **Leathertown:** Kim and Alex have met and are working on updating the literature surrounding the event. We will then reach out to previous years' vendors.

X. Beautification

- **Christmas Lights:** Halton Hills Electrical took down our lights. Cost was \$904.00. They are back at our container.
- **Canada Flags:** We need to purchase new flags for this season. Alex will talk to Zina about the best flags to purchase.

Motion: To spend up to \$3000.00 on Canada Flags.

Motion: Monica Parker-Galway – Profile Hair Salon

Second: Michael Albano – Town of Halton Hills

All in favour.

Motion carried.

- **Flowers:** Alex has talked with Julie from the Flower Shed. He will get an invoice and coordinate with her closer to planting in June. We might also need to replace the window baskets on the bridge at Main Street South.
- **Bench at Medical Centre:** Alex and Monica met with the Town in December. There are steps that need to be carried out. Alex has not worked on it this month. He will update next month. Monica also asks Alex to touch base with Metrolinx because they have recently installed concrete downtown.

XI. Financials

Motion: To approve financial reports.

Motion: Monica Parker-Galway – Profile Hair Salon

Second: Matthew Galliford – House of Workwear

All in favour.

Motion carried.

XII. Other Business

- **OBIAA Conference:** The board is in favour of sending two representatives to the OBIAA conference. Alex will get an invoice and the matter will be voted on at the next meeting.
- **Façade Improvement Program:** The board has a conversation about whether to accept the Town's recommendation to end the BIA's Façade Improvement Program (FIP) and blend it into the Town's Community Improvement Plan (CIP). Victor brings up concerns concerning whether the CIP money will be disproportionately spent out of town compared to the FIP. Based on the information given to

the board, it appears Acton applicants will be fairly allocated funds should they meet the program criteria. Mike says he supports the program because there is a Town guarantee of Acton representation.

Motion: To accept the recommendation from the town to close the Façade Improvement Program and to have representation from the BIA on the budget committee for the CIP.

Motion: Monica Parker-Galway – Profile Hair Salon

Second: Matthew Galliford – House of Workwear

All in favour.

Motion carried.

- **AGM:** The proposed date for our AGM will be Monday, May 9th, 2022, 6:30pm.

XIII. Adjournment

Meeting was adjourned at 7:50pm.

Motion: Michael Albano – Town of Halton Hills

Second: Monica Parker-Galway – Profile Hair Salon

All in favour.

Motion Carried.

Next Meeting: To Be Determined.

January Coordinator's Report

January 25th, 2022

- As you all know, we experienced another lockdown this month. The ongoing closures are challenging for our businesses, and I have heard from more than one owner how much of a struggle it is to keep going at this point. Thankfully, it looks like this closure will be a brief one.
- I am thankful to be marking my second full year with the BIA. I appreciate all the support I've received and am enjoying the work as much as ever.
- We are saying goodbye—at least in the short term—to Matthew Galliford, our Vice-Chair, as he deals with the closing of his business. We will miss the tremendous work he has done for the BIA over the last two years.
- Last month, we finished our first Holiday Market. As previously mentioned, we experimented with the concept for the first time this year. We have learned a lot and are looking towards an even better event next year. Brittany Sedore—who has attended our meetings in the past—deserves much of the credit for an event well run. We had looked at doing a Valentines' Market but with the Provincial closures, it seemed more prudent to wait. We are planning an indoor market for Easter and one for Mothers' Day in advance of our Farmers' Market in June.
- We were on the ball this year and had Halton Hills Electrical take down our Christmas decorations. They are safe back at our container.
- We experienced some tagging downtown this month. Three buildings were vandalized. I filed a report with Police and talking with businesses about getting it cleaned up.
- Our three co-op students have finished their semester. We thank them for their help and hope to have more young supporters in the new semester.
- I have worked with the Town on an application to My Main Street that will involve some Public Art in our Downtown. More to come.
- Otherwise, we have been preparing for the rest of the year. Our Canada Summer Jobs application has been filed, our membership with OBIAA was sent in and we're already getting ready for our busy summer season.

JAN 2022

SUN	MON	TUE	WED	THU	FRI	SAT
						01
		-		-		-
02		03	04	05	06	07
	-	-		-		08
09		10	11	12	13	14
	- Take Down Holiday Decorations	- Economic Support Recovery Task Force		-		- Social Media Blitz
16		17	18	19	20	21
	-	- Erin Meeting	-	- Library Focus Group		-
23		24	25	26	27	28
	- Put up Valentines' Decorations	- BIA Board Meeting - Canada Summer Jobs Deadline				-
						29

TASK / PROJECT:	DEADLINE:
Planning and Coordination of Farmers Market preparation, permits and	Current / Ongoing until
Run Indoor Market	Ongoing
Take down Holiday Parkette display	By mid-January
Put up Valentines' Display	By the end of the month.
Pay WSIB Premium.	By mid-January
Beautification Progress: Coordinate with Town on installation of garbage cans etc. *Make TIMELINE of Deliveries / Installs	Garbages to be installed as soon as possible
Organize intermodal container for easy use.	A.S.A.P. / Ongoing
Organize the office to be tidy and visitor friendly for any meetings or	A.S.A.P. / Ongoing
Create and implement a Monthly Events Calendar of promotions and events. Include weekly BIA Promotional incentives that reward BIA Bucks for participation. Advertise promos to social media.	Ongoing. Weekly promotions can be logo scavenger hunts, photo ops, etc.
Assign tasks to Co-op Students	Everyday
Get BIA Materials to board.	At least five days before the next board meeting.
Add Monthly Task Calendar as an item of discussion to Monthly BIA	Monthly
Do Canada Summer Jobs application	When opens.
Prepare for Leathertown.	Ongoing until event.
Order and prepare flags.	For March.
Prepare for flowers.	Coming into Spring.
Make decision on Façade Improvement Program	By winter.
Canada Day event? Plan for July 1 st .	Ongoing to July
Communicate any COVID guidance from other levels of government.	Ongoing.
Send BIA Board Meeting Minutes to Town and Membership.	By end of week that meeting takes place.
Concrete Pad Project. Check in with Town. Finish paperwork. Get quotes.	Ongoing
BIA Business and Owner Profiles	Coordinating with business for approval



HERITAGE HALTON HILLS COMMITTEE MINUTES

Minutes of the Heritage Halton Hills Committee meeting held on
Wednesday January 19, 2022 Via Zoom

Members Present: Councillor T. Brown, Chair, R. Denny, C. Donaldson,
S. Frick (departed at 3:51 p.m.), G. Miller, L. Quinlan, M. Rowe,
A. Walker (arrived at 3:34 p.m.)

Regrets: B. Cospier

Staff Present: L. Loney, Senior Heritage Planner; B. Parker, Director of Policy;
T. Jayaveer, Planner Policy/Development Review;
L. Bateson, Administrative Coordinator; R. Brown, Deputy Clerk

1. CALL TO ORDER

Councillor T. Brown, Chair called the meeting to order at 3:30 p.m.

2. DISCLOSURE OF PECUNIARY/CONFLICT OF INTEREST

G. Miller declared a pecuniary or conflict of interest with respect to Item 4.a of the agenda (586 Main Street, Glen Williams - Door Replacement) as her spouse owns the property. She did not partake in any voting or discussion on this matter.

3. RECEIPT OF PREVIOUS MINUTES

3.a Minutes of the Heritage Halton Hills Committee Meeting held on October 20, 2021

Recommendation No. HH-2022-0001

THAT the Minutes of the Heritage Halton Hills Committee Meeting Minutes dated October 20, 2021 be received.

CARRIED

4. SCHEDULED ITEMS FOR DISCUSSION

4.a 586 Main Street, Glen Williams – Door Replacement

L. Loney reviewed the request for a door replacement with the committee and noted that staff had no concerns or objections with the proposed door replacement.

Recommendation No. HH-2022-0002

THAT the Heritage Halton Hills Committee recommends the approval of the proposed door replacement at 586 Main Street, Glen Williams.

CARRIED

4.b 70 Mill Street – Research and Evaluation Report

L. Loney provided the committee with an overview of the report noting the heritage value of the property and clarifying some of the details of the report. Committee members provided some comments that L. Loney will incorporate into the report before it goes to Council.

Recommendation No. HH-2022-0003

THAT the Heritage Halton Hills Committee recommends that Council proceed with a Notice of Intention to Designate the property at 70 Mill Street.

CARRIED

4.c 29 Edith Street – Research and Evaluation Report

L. Loney reviewed the report with the committee and advised that the property meets the criteria for designation and staff are in support of designation of this property.

Recommendation No. HH-2022-0004

THAT the Heritage Halton Hills Committee recommends that Council proceed with a Notice of Intention to Designate the property at 29 Edith Street.

CARRIED

4.d Heritage Student – Subcommittee Projects

L. Loney advised the committee that they are applying for funding from the Canada Summer Jobs program to help fund a Heritage Summer Student. The Summer Student posting will be going out soon. L. Loney asked the committee to provide her with any ideas for projects and/or work programs for the Summer Student.

4.e 100 Forgotten Sites Along the Bruce Trail - Sponsorship Request

Councillor T. Brown put the sponsorship request before the committee and asked the committee for their input and suggestion on how to respond to the request. The committee asked if there was a Town policy or procedure with respect to matters such as this request, R. Brown noted that she would find out and report back to the committee at the next meeting. The committee discussed the request further and determined that they had other initiatives that could use the funding and decided that they would decline the funding request.

Recommendation No. HH-2022-0005

THAT the Heritage Halton Hills Committee declines sponsorship request for The Royal Oak of Speyside story in “100 Forgotten Sites Along the Bruce Trail”.

CARRIED

5. SUB-COMMITTEES AND WORKING GROUPS

6. CLOSED SESSION

7. ITEMS TO BE SCHEDULED FOR UPCOMING MEETINGS

- 26 Queen Street Designation
- Armory Designation
- Bower Street Designation

8. ADJOURNMENT

The meeting adjourned at 4:13 p.m.

Halton Hills Public Library Board

Wednesday, December 8, 2021

Zoom Videoconference

7:00 p.m.

Minutes

Present: Ted Brown, Betsy Cospers, Larry Hawes, Matt Kindbom, Ann Lawlor,
Keith Medenblik (Chair), Joanna Meler, James Schumacker, Tamara Smith

Staff Present: Clare Hanman, Beverley King, Mary Querques (Recorder), Melanie Southern

Regrets: Lisa Caissie, Marilyn Willis

1.0 Declaration of Quorum

- K. Medenblik declared that a quorum was present and called the meeting to order at 7:03 p.m.

2.0 Approval of Agenda

Moved by M. Kindbom

That the agenda be approved as presented.

Seconded by J. Schumacker

12/08/21-1

CARRIED

3.0 Declaration of pecuniary interest

- None declared

4.0 Minutes of November 10, 2021 and In Camera Minutes of November 10, 2021

Moved by T. Brown

That the Minutes of November 10, 2021 and the In Camera
Minutes of November 10, 2021 be approved.

Seconded by B. Cospers

12/08/21-2

CARRIED

5.0 Consent Agenda

- None

6.0 Correspondence

- None

7.0 Business Arising

7.1 Advocacy Committee Update

- M. Southern reported:
 - The Advocacy webpage is now live on the HHPL website.

- Community Foundation Halton North (CFHN) and the Library each issued a media release on Giving Tuesday regarding the \$10,000 donation awarded to HHPL as part of the 2021 CFHN Webathon.
- As discussed at the November Board meeting, legal advice around the costs of setting up an endowment fund and related issues is still pending.

7.2 Strategic Plan Update

- B. King reported that the staff working group and consultants met on November 17 and December 1 to review the staff and community surveys. Surveys will be released as soon as revisions are complete. Once finalized, copies of the Community Survey will be provided to Board members so that they are aware of the contents in the event that they are approached with questions.
- As an incentive, members of the public who complete the Community survey (running until January 14), can enter draws for two iPads and assistance from staff to set up the Library apps.
- A short Branding survey will be released in late January after the primary analysis of the Staff and Community surveys is complete.
- Focus group sessions are being planned for late January.
- The first Board workshop is tentatively scheduled for January 14 (currently in person).
- To provide the consultants sufficient time to compile the survey data and provide an update to the Board, Board members were asked to consider rescheduling the January 12 meeting to January 19.

8.0 Council Update

- T. Brown reported that Budget deliberations are continuing. To date, there have been no requests for changes to the 2022 Library budget.

9.0 Friends of the Library Update

- M. Southern attended the December 2 meeting to express thanks on behalf of Board and staff for the hard work and fundraising efforts of the Friends over the past year.
- An event for donors to the Acton Reading Deck is under consideration for when this new space opens in the spring.
- Friends of the Library membership now stands at 72.

10.0 Community Connections Update

- None.

11.0 Financial Report

11.1 Month End Report (October)

- M. Southern reported that spending is at the expected level. It is expected that at year-end, the Library will be approximately 5% under budget due to staffing gaps.
- The Month End Report was received for information.

12.0 New Business

12.1 Presentations/Delegations – None

12.2 Report No. LBD-2021-064 re: 2022 Work Plan

- M. Southern presented the Library’s proposed 2022 Work Plan and provided an overview of the key initiatives and associated actions planned for the upcoming year.
- It was noted that while strategies for all of HHPL’s key audiences as outlined in the current strategic plan are included in 2022 work plan, the definition of current and future key audiences will be explored and updated for the new strategic plan.
- The Board will receive quarterly updates on the status of initiatives along with quarterly metrics.

Moved by J. Schumacker

That the 2022 Work Plan be received.

Seconded by T. Smith

12/08/21-3

CARRIED

12.3 Report No. LBD-2021-060 re: 2022 Key Agenda Items

- M. Southern presented the proposed 2022 Key Agenda Items for information and feedback, noting that the February through March Board meetings will be dominated by items related to the new Strategic Plan. A few tweaks were made to balance the year.

Moved by T. Smith

That the recommendations in Report No. LBD-2021-060 re: 2022 Key Agenda Items be accepted for information and feedback;

AND FURTHER THAT the January 12 Board meeting be rescheduled to January 19 as previously discussed in agenda item 7.2 Strategic Plan Update.

Seconded by J. Meler

12/08/21-4

CARRIED

12.4 Report No. LBD-2021-066 re: Library Website Refresh – Critical Path

- C. Hanman presented Report No. LBD-2021-066 to provide information about the 2022 website refresh. HHPL’s website was redesigned and launched in 2018 and this scheduled refresh will allow HHPL to maintain functionality, and continue to provide residents with reliable access to information and electronic services. Funding of \$75,000 has been allocated for this project and work will be done by eSolutions, which designed the current website and has been included on the Library’s Single Source purchasing list for 2022. This project is scheduled to begin in January 2022

with the presentation of the updated website to the Board expected in October 2022.

Moved by B. Cospier
Seconded by T. Smith

That Report No. LBD-2021-066 be received.

12/08/21-5

CARRIED

- 12.5** Report No. LBD-2021-061 re: Health and Safety Policy as related to the vaccination policy
- M. Southern proved an update about Halton Region's recommendations regarding workplace vaccination policies, the status of Council and Committee vaccination policies in other municipalities, and the Town. The Board was asked to consider confirming its commitment and continue in solidarity with the Town in adherence to this policy which requires staff and the Board to be fully vaccinated or provide a valid medical exemption.

Moved by M. Kindbom

That Report No. LBD-2021-061 dated December 2, 2021 regarding Health and Safety policy as related to the vaccination policy and the Library Board be received;

AND FURTHER THAT the Library Board confirms its commitment to adhere to the Town of Halton Hills' Health and Safety Policy #HS-068 as it relates to the vaccination policy to all members of the Library Board as of January 1, 2022;

AND FURTHER THAT the Library Board will be advised of any amendments to this policy.

Seconded by J. Meler

12/08/21-6

CARRIED

- 12.6** Report No. LBD-2021-062 re: Board Policy Review (Accessibility Policies (AODA), Children's & Youth Services Policy, Safety & Security of Children & Vulnerable Adults Policy, Volunteers Policy) (First Review)
- B. King presented for consideration, proposed revisions to the Board's Accessibility Policies (AODA), Children's & Youth Services Policy, Safety & Security of Children & Vulnerable Adults Policy, and Volunteers Policy. The proposed changes reflect changes in legislation, modifications requested by staff, housekeeping fixes, and current best practices in public libraries.

Moved by M. Kindbom

That Report No. LBD-2021-062 dated December 1, 2021 regarding the Board Policy Review - Accessibility Policies (AODA), Children's & Youth Services Policy, Safety &

Security of Children & Vulnerable Adults Policy, Volunteers Policy be received and adopted as presented.

Seconded by T. Smith

12/08/21-7

CARRIED

12.7 Report No. LBD-2021-065 re: Board Bylaws Review

- M. Southern presented recommendations for Board consideration, to amend two articles of the Board By-Laws:
 - Amendment to Article 11 – Officers of the Board, will ensure that the By-Law meets the requirements stipulated in the Ontario Public Library Act by changing the term of office for the Chair and Vice-Chair from two years, to a full term.
 - Amendment to Article 19 – Order of Proceedings would include the addition of a Land acknowledgment statement, and a review of the order of agenda items.

Moved by T. Smith

That Report No. LBD-2021-065, dated December 2, 2021 regarding Amendments to Halton Hills Public Library Board By-Laws Article 11: Officers of the Board, and Article 19: re: Order of Proceedings be received, and that amendments will be provided at the next Board meeting.

Seconded by A. Lawlor

12/08/21-8

CARRIED

12.8 Report No. LBD-2021-059 re: Chief Librarian's Report – December 2021

- M. Southern noted highlights from the December 2021 Chief Librarian's Report:
 - Halton Regional Council has approved the extension of mandatory non-medical masks/face coverings in public places until April 30, 2022 (Regional By-law No. 47-20).
 - The Letter to Santa and Winter Wonder programs are being positively received by patrons.
 - Giving Tuesday – in addition to social media posts encouraging the public to donate to the Library, past donors were sent a copy of the 2020 Annual Report and will also receive a Holiday card from the Library in December.
 - HHPL has launched its LinkedIn profile, which will provide further information about HHPL to those using this professional network. This profile will also be used to post and highlight HHPL awards, accomplishments and significant organizational changes.
 - In cooperation with the Town, the Library will be participating in a review of staff workplace allocations. A preliminary assessment is expected to be completed by mid-January 2022.

- B. King noted that HHPL's OLA Super Conference proposed session topic for the Moccasin Identifier Project has been accepted and will be included in the 2022 OLA Super Conference program.

12.9 OLA Super Conference 2022

- Not discussed

12.10 Report No. LBD-2021-063 re: Amendments to Chief Librarian's job description

- M. Southern discussed that the Public Libraries Act states that the Board must appoint a Chief Executive Officer (CEO), and that while the Chief Librarian's job description does fulfill the CEO requirements, it was recommended that the job title be amended to reflect the CEO title.

Moved by M. Kindbom

That Report No. LBD-2021-063 dated December 2, 2021 regarding Amendments to the Chief Librarian's job description be received;

AND THAT the Board approves the Amendments to the Chief Librarian's job description;

AND FURTHER THAT the Chief Librarian will now have the title of "Chief Executive Officer" (CEO) effective immediately.

Seconded by B. Cospier
12/08/21-9

NOT CARRIED

Moved by A. Lawlor

That Report No. LBD-2021-063 dated December 2, 2021 regarding Amendments to the Chief Librarian's job description be received;

AND THAT the Board approves the Amendments to the Chief Librarian's job description;

AND FURTHER THAT the Chief Librarian will now have the title of "Chief Librarian and Chief Executive Officer" (CEO) effective immediately.

Seconded by T. Smith
12/08/21-10

CARRIED

- Staff were directed to begin using Library letterhead for job descriptions as they are updated.

12.11 In Camera re: Personnel Matters

C. Hanman and B. King left the meeting.

Moved by T. Smith

That the meeting move In Camera.

Seconded by J. Meler

12/08/21-11

CARRIED

Moved by T. Brown

That the meeting move Out of Camera

Seconded by J. Schumacker

12/08/21-12

CARRIED

Rising Report:

- The Board received information regarding an ongoing personnel issue after which M. Querques left the meeting.
- The Board received information regarding the Chief Librarian's year-end performance review.

13.0 Health & Safety Report

- M. Southern reported that there had been no Health or Safety incidents reported since the November Board meeting.

14.0 Next Meeting

Wednesday, January 19, 2022

7:00 p.m.

Zoom Videoconference

15.0 Adjournment

Moved by J. Schumacker

That the meeting be adjourned.

Seconded by M. Kindbom

12/08/21-13

CARRIED

The meeting adjourned at 9:15 p.m.

Signed: _____
Keith Medenblik, Chair
Halton Hills Public Library Board

Signed: _____
Melanie Southern, Chief Librarian
Halton Hills Public Library

APPROVED: January 19, 2022

DATED: January 19, 2022

**Downtown Georgetown BIA
Manager's Report
December 2021**

A. Beautification

a. Public Art

- Administration successfully installed new LED lights and holiday decorations throughout the downtown. There were a number of electrical issues with the streetlight poles along Main Street which were reported to the Town on several occasions. These issues were largely resolved and the lights served as a welcoming feature into the downtown.
- The new BIA banners were also successfully installed. There was one incident of an unhinged banner following a windstorm. Quality Tree was promptly contracted to resolve the issue.

b. Welcoming place from Front & Back Lots

- Administration continues to explore ways to introduce public art pieces into the downtown following the holiday season. The BIA Manager will be meeting with the Town to further discuss available options.

B. Economic Development

a. Advocate for Impactful Investments

- The BIA has continued its partnership with the Town of Halton Hills, Acton BIA and Halton Hills Chamber of Commerce for the revamped “shop local” campaign. The campaign, which has included print and digital advertising as well as social media, will echo a unified messaging across platforms. Businesses will be encouraged and educated on the various way they can participate and take advantage of the various marketing opportunities.

b. Maintain good relationships with stakeholders (municipality, region & community groups)

- The BIA Manager has remained in constant communication with the Town of Halton Hills, providing feedback on business sentiments through the pandemic and provincial restrictions. There are scheduled meeting over the next number of weeks with the Mayor of Halton Hills, Town administration and community stakeholder. The meetings, which are part of the efforts by the Town's Economic Support and Recovery Task Force will gather feedback from the business community and device support plans and programs.

C. Support Membership Success (support small Business Success)

a. Market & communicate the BIA's message to the members & community

- The website and bi-weekly e-newsletter continue to be a source of up-to-date news and information for the Downtown businesses and their patrons.
- In partnership with Metroland, DGBIA businesses will be featured in a monthly half-page paid story at no cost to them. Operating as part of the BIA's larger marketing partnership with Metroland, the monthly insert in the paper is targeted to feature business stories or flyers from individual businesses. The Metroland writers have consulted with the DGBIA and various businesses to create the sector-themed stories.

b. Promote a prosperous mix of retail & service

- Through the Metroland partnership, administration has been heavily marketing the DGBIA gift certificates over the holiday season. The push, which involved print and digital advertising, was part of the DGBIA's efforts to support the variety of participating downtown establishments and encouraging holiday shopping in the downtown. The impact of these marketing efforts continue to be evaluated on monthly basis through meetings with representatives from Metroland. A report that will cover the entire period of the partnership will be presented to the BIA and Marketing Committee Chair. The report will help inform any future marketing partnership.
- While the BIA office was closed for the holidays, patrons of the BIA gift certificates were directed to leave a voicemail at the BIA office after which they were contacted by the BIA Manager to process the transaction over the phone. Purchased BIA Gift Certificates were picked up the Carpet Barn store at the intersection of Guelph Street and Mill Street.

c. Advocate on behalf of businesses on all levels of government

- The BIA Manager has regularly participated in Ontario BIA Association (OBIAA) 'Best Practices Calls' where representatives from various levels of government have been present to discuss legislations and grants relating to small businesses. Recent discussions centered on in-person BIA Board meetings and general trends across BIAs.
- The BIA Manager recently signed up to be part of the OBIAA's Customer Relations Management (CRM) Committee. The Committee will be discussing the OBIAA's new CRM program for Business Improvement Areas and formulating the

parameters of the program. Once finalized the program would help BIAs manage sensitive data and offer tools for effective communication with membership and the general public.

- The BIA Manager completed an application for the 2022 Canada Summer Jobs program. If successfully obtained, the grant would enable administration to hire two summer students for the positions of Special Events Coordinator and Marketing Assistant.

d. Offer events that directly support and promote the overall economic health of the BIA members

- Administration has been mapping out potential dates and times for the year's slate of events. Consideration is being given to the recent spike in COVID-19 cases and how subsequent provincial restrictions may affect the nature of the events. Tentatively, the DGBIA for the 2022 calendar year will be hosting the Georgetown Farmers Market, Downtown Movie Night, Classics Car Show, Masquerade, and Holiday Magic. The events will utilize spaces on Main Street, Mill Street, Church Street, and the Church Street Parking Lot. Consideration is also being given to the ongoing construction on the old McGibbon Hotel. Construction may affect access to Main Street and Mill Street during some events.

e. Establish relationships with business owners to ensure open dialogue and ongoing support.

- The BIA Manager has continued regular communication with business owners through emails and phone calls. The BIA Manager will conduct a round of phone calls and in-person visits with business owners to solicit feedback about recent provincial restrictions.

BOARD OF MANAGEMENT MEETING

Monday, November 22nd, 2021

Online Meeting

AGENDA

I. Call to Order

Monica Parker-Galway, Chair, called meeting to order at 6:35pm on November 22nd, 2021.

II. Attendance

Present: Matthew Galliford. Norman Paulsen. Monica Parker-Galway. Patricia Daleman. Joba Debi. Michael Albano. Zina Pallister. Alex Hilson. Kim Duncanson. Linda Ann Hush. Heather Wedlake.

III. Declaration of Pecuniary Interests – none.

IV. Approval of Agenda

Motion to approve agenda.

Motion: Michael Albano – Town of Halton Hills

Second: Matthew Galliford – House of Workwear

All in favour.

Motion carried.

V. Adoption of October 19th, 2021, Minutes

Motion: Adoption of October 19th, 2021 Meeting Minutes

Motion: Matthew Galliford – House of Workwear

Second: Jobi Debi – The Clay Oven

All in favour.

Motion carried.

VI. Guest Speaker – Damian Szybalski

Damian talks about the benefits of the BIA writing a Memorandum of Understanding (MOU) with the Town. BIAs in other jurisdictions have signed them. Monica asks for examples to be sent to the BIA and for future meetings to take place.

VII. Coordinator's Report – Alex Hilson

Attached after formal minutes.

VIII. Monthly Task Calendar

Attached after formal minutes.

IX. Events

- **Holiday Market:** So far so good. There are lessons being learned but it has been successful so far.

X. Beautification

- **Christmas Lights**

The Christmas Lights have been installed and are working well so far except for the couple stands of last year's lights which have been left on and are already strobing and dying.

- **Waste Receptacle Update**

Four waste receptacles have been installed. The others are ready to go at the Public Works Yard. The Town is getting to them as they can.

- **Bench at Medical Centre**

Alex needs to fill in application with the Town. We are planning on contracting Michael Burns to install concrete. The money is already in the remnants of the RED (Rural Economic Development) grant from several years ago.

Motion: To install concrete pad at reasonable cost.

Motion: Norman Paulsen – Acton Motors

Second: Monica Parker-Galway – Profile Hair Salon

XI. Financials

Motion: To approve financial reports.

Motion: Patricia Daleman – Grant Thornton LLP

Second: Norman Paulsen – Acton Motors

XII. Christmas Dinner

Planned for Tommy's Bar and Gril for Monday, December 20th. Board members are encouraged to bring a guest. Please RSVP ahead of time.

XIII. Other Business

- Heather and Linda from Dollar Stretcher Daze launch a formal complaint against a board member for the start of an alleged rumour that has impacted their business. A meeting will be organized to discuss the matter further and to decide on suitable consequences.
- Mike will look at calendar and assist in picking dates for meetings until June, or whenever possible.

XIV. Adjournment

Meeting was adjourned at 7:26pm.

Motion: Patricia Daleman – Grant Thornton LLP

Second: Jobi Debi – The Clay Oven

All in favour.

Motion Carried.

Next Meeting: To Be Determined.

November 22nd, 2021

- We had a very busy month.
- Since the last meeting, we hosted our Trick or Treat event, our Zombie Walk, continued our Indoor Market, participated in both Remembrance Day events, hosted Pictures with Santa and were in the Santa Claus Parade. These events have all been great, getting our name back in front of the community. New events like the Zombie Walk were well received by those who participated.
- We changed our Parkette to a Remembrance theme. As always, thanks to Matt for that. We will be switching to a holiday theme this week if all goes to plan.
- Our cornstalks were well received. We took them down last week. We also took down our flags.
- As expected, the flags are quite worn. It is good we are looking at replacing them.
- We finished restringing our Christmas lights and installed them. As has been the case the last couple times we have done the switch, I helped with stopping traffic to put the decorations over the street and Halton Hills Electrical did the work. When the lights were put on the poles, the old lights were plugged in on a few of them. Those have already started to strobe. The new lights have been good so far.
- LRS Spa held an opening gala over the weekend which I attended. The inside looks great. Vinyland is celebrating four years in business. The Red Harp is celebrating six.
- One last update: I was happy to join the conference committee for the OBIAA's 2022 conference. I have also applied to speak on volunteer management. More to come.

NOV2021

SUN	MON	TUE	WED	THU	FRI	SAT
	01	02	03		04 05	06
		- Indoor Market - Town Check-in		-		- Remembrance Parade
07	08	09	10		11 12	13
	-	-		- Remembrance Day		
14	15	16	17		18 19	20
	- Put Up Christmas Lights this week.	- Indoor Market - Town Check-in		-		- Photos with Santa Parade
21	22	23	24		25 26	27
	- BIA Board Meeting	-	- Culture Days Check-in	-		-
28	29	30				
		- Indoor Market				-

TASK / PROJECT:	DEADLINE:
Planning and Coordination of Farmers Market preparation, permits and Vendor applications	Current / Ongoing until event
Take Down Cornstalks	Mid-November
Any last minute changes to Christmas lights.	By installation in mid-November.
Run Indoor Market	Ongoing
Arrange Remembrance Parkette display	November 1 st , weather providing.
Arrange Holiday Parkette display	November 22 nd , weather providing.
Beautification Progress: Coordinate with Town on installation of garbage cans etc. *Make TIMELINE of Deliveries / Installs	Garbages to be installed as soon as possible
Organize intermodal container for easy use.	A.S.A.P. / Ongoing
Organize the office to be tidy and visitor friendly for any meetings or drop-ins. To be kept as a professional looking office space.	A.S.A.P. / Ongoing
Create and implement a Monthly Events Calendar of promotions and events. Include weekly BIA Promotional incentives that reward BIA Bucks for participation. Advertise promos to social media.	Ongoing. Weekly promotions can be logo scavenger hunts, photo ops, etc.
Assign tasks to Co-op Students	Everyday
Coordinate and set a timeline for Photos with Santa event. What needs to be done by when?	Ongoing until event in Parade.
Coordinate and set a timeline for the Parade participation. What needs to be done by when?	Ongoing until event in Parade.
Get BIA Materials to board.	At least five days before the next board meeting.
Add Monthly Task Calendar as an item of discussion to Monthly BIA Meeting Agenda	Monthly
Prepare Façade Improvement Program for next year.	By winter.
Canada Day event? Plan for July 1 st .	Ongoing to July
Send BIA Board Meeting Minutes to Town and Membership.	By end of week that meeting takes place.
Concrete Pad Project. Check in with Town. Finish paperwork. Get quotes.	For next meeting.
BIA Business and Owner Profiles	Coordinating with business owners for approval

Halton Hills Public Library Board

Wednesday, November 10, 2021

Zoom Videoconference

7:00 p.m.

Minutes

Present: Ted Brown, Betsy Cosper, Larry Hawes, Matt Kindbom, Ann Lawlor,
Keith Medenblik (Chair), Joanna Meler, James Schumacker

Staff Present: Barb Elliott (Recorder), Clare Hanman, Beverley King, Mary Querques,
Dennis Roberts, Melanie Southern

Guests: Greg Young, Director, TCI Management Consultants
Jon Linton, Director, TCI Management Consultants
Beth Ross, Principal, Beth Ross & Associates
Susan McGibbon, Chief Experience Officer, 360 Collective

Regrets: Lisa Caissie, Tamara Smith, Marilyn Willis

1.0 Declaration of Quorum

- K. Medenblik declared a quorum was present and called the meeting to order at 7:00 p.m.

2.0 Approval of Agenda

- There was agreement to discuss New Business item 12.2) Strategic Plan immediately after the Consent Agenda.

Moved by M. Kindbom

That the agenda be approved as revised.

Seconded by B. Cosper

11/10/21-1

CARRIED

3.0 Declaration of pecuniary interest

- None declared.

4.0 Minutes of October 13, 2021

Moved by J. Schumacker

That the Minutes of October 12, 2021 be approved.

Seconded by J. Meler

11/10/21-2

CARRIED

5.0 Consent Agenda

Moved by B. Cosper

That Consent Agenda items for Wednesday, November 10, 2021 be approved:

- 5.1** Report No. LBD-2021-052 re: One Book One Halton Hills (For Information Only)
- 5.2** Report No. LBD-2021-053 re: Outreach and Engagement Approach (For Information Only)
- 5.3** Report No. LBD-2021-056 re: Proposed 2022 Board Meeting Schedule

That Report No. LBD-2021-056 dated November 4, 2021 regarding the proposed 2022 Library Board Meeting Schedule be received;

AND FURTHER THAT the Halton Hills Public Library Board approves the Library Board Meeting Schedule for 2022.

- 5.4** Report No. LBD-2021-058 Revised Personnel Policy Manual

That Report No. LBD-2021-058 dated November 4, 2021 regarding Personnel Policy Manual Revisions (2nd Review) be received:

AND FURTHER THAT the Halton Hills Public Library Board approves the Library's 2021 Personnel Policy Manual as amended.

- 5.5** Revised Board Policy (previously approved): Diversity and Inclusion Policy (For Information Only)

Seconded by M. Kindbom

11/10/21-3

CARRIED

6.0 Correspondence

- 6.1** Letter to Community Foundation Halton North (CFHN) re: Donation received
 - The Board reviewed the letter sent on their behalf to thank the CFHN for their donation of \$10,000 to the Halton Hills Public Library.

Moved by B. Cosper

That Correspondence be received.

Seconded by A. Lawlor

11-10-21-5

CARRIED

7.0 Business Arising

- 7.1** Advocacy Committee Update
 - M. Southern reported that staff are seeking legal advice around the costs of setting up an endowment fund, and if there would be any potential conflicts or risks related to the Ontario Public Libraries Act and for the Town.

7.1.1 Board Advocacy Committee Minutes – September 22, 2021

7.1.2 Webpage Update

- M. Southern provided an overview of the revised Advocacy webpage and asked that any feedback be forwarded to her by November 12. This webpage is expected to be made available to the public on November 15.

Moved by T. Brown

That the Advocacy Committee update and Advocacy Committee Minutes of September 22, 2021 be received.

Seconded by M. Kindbom

11/10/21-6

CARRIED

8.0 Council Update

- It was noted that Council is scheduled to discuss the new design for the McGibbon project in Downtown Georgetown. The library would eventually be affected by this development due to its proximity to the downtown area.

9.0 Friends of the Library Update

- M. Southern reported that the Friends raised approximately \$1,200 over the summer through their pop-up booksales.
- The next meeting will be held December 2.
- M. Southern will prepare a letter on behalf of the Board, to thank the Friends for their hard work and contributions to HHPL.

10.0 Community Connections Update

- K. Medenblik noted positive comments received about library services and Wi-Fi, from members of the public who sometimes use library space instead of working from home.

11.0 Financial Report

11.1 Month End Report (September)

- M. Southern reported that the library is approximately 8% under budget primarily due to staffing gaps. Interviews to fill vacant positions are underway.
- Ward Budget Briefings are scheduled to begin on November 22. To date, no changes to the 2022 Library budget have been requested.

Moved by J. Meler

That the Financial Report be received.

Seconded by B. Cospers

11/10/21-7

CARRIED

12.0 New Business

12.1 Presentations/Delegations – None

12.2 Strategic Plan (discussed after item 5.0) Consent Agenda)

12.2.1 Report No. LBD-2021-055 re: Strategic Plan and Brand Development Process Overview and Consultant Discussion

- M. Southern introduced consultants Greg Young, Director, TCI Management Consultants, Jon Linton, Director, TCI Management Consultants, Beth Ross, Principal, Beth Ross & Associates, and Susan McGibbon, Chief Experience Officer, 360 Collective, who will be working with the Board and staff to develop the new library strategic plan and brand. During a question-and-answer period, the consultants provided the Board with information around how members of the community, staff and Board will be engaged during each phase of the strategic plan and brand development
- M. Southern provided an overview of the proposed methodology and workplan which will move through three phases beginning in October 2021, and completion scheduled for September 2022 with the final presentation to the Board:
 - Phase 1: Data Collection and Analysis - TCI will be collecting and reviewing demographic data and projections, best practices, current library trends, and providing community consultation through surveys and focus groups
 - Phase 2: Facilitation, Evaluation and Consultation - the HHPL Planning Team will be working with TCI to develop the Strategic Plan
 - Phase 3: Brand Development - TCI will develop three logo designs for consideration by the Strategic Planning Team
- The Board will be polled through an electronic survey to determine their preferred options for virtual workshops and availability to participate.
- K. Medenblik thanked the consultants for attending.
- The consultants left the meeting.

Moved by B. Cosper

That Report No. LBD-2021-055 dated November 4, 2021 regarding the Strategic Plan and Brand Development Process Overview be received.

Seconded by J. Schumacker

11/10/21-4

CARRIED

12.2.2 Progress to date

- B. King informed the Board that the staff working group and consultants have met twice, and that work to prepare the staff and community surveys, and determining the focus groups is progressing well. Board members were asked to consider participating in the distribution of surveys at the upcoming Georgetown BIA Holiday Markets and the Acton Farm Markets.
- There was agreement that for now, the Board would receive verbal progress updates about strategic planning activities rather than formal

reports. If feedback is required, an email will be sent prior to the Board meeting.

12.3 Report No. LBD-2021-057 re: 2021 Quarter 3 Metrics Report

- M. Querques presented the Quarter 3 Metrics Report noting that the circulation of physical and digital items, and patron usage habits, are moving toward pre-COVID levels.
- Year to date social media engagement has increased by 14% compared to 2020 levels. This was attributed to increased fall programming, active boosting of social media posts, and having a staff member dedicated to engaging the community.

Moved by A. Lawlor

That the Quarter 3 Metrics Report be received.

Seconded by J. Schumacker

11/10/21-8

CARRIED

12.4 Report No. LBD-2021-054 re: Board Policy Review (Code of Conduct for Library Users Policy, Internet Use Policy, Home Library Service Policy, Zero Tolerance of Violence and Vandalism Policy (First Review))

- B. King presented for consideration, proposed revisions to Code of Conduct for Library Users Policy, Internet Use Policy, Home Library Service Policy, Zero Tolerance of Violence and Vandalism Policy. Proposed changes reflect changes in legislation, modifications requested by staff, general housekeeping changes, and current best practices in public libraries.

Moved by M. Kindbom

That Report No. LBD-2021-054 dated November 4, 2021 Regarding the Board Policy Review – Code of Conduct for Library Users Policy, Internet Use Policy, Home Library Service Policy, and Zero Tolerance of Violence and Vandalism Policy be received be given final approval as presented.

Seconded by T. Brown

11/10/21-9

CARRIED

12.5 Report No. LBD-2021-051 re: Chief Librarian's Report – November 2021

- M. Southern noted several highlights from the November 2021 Chief Librarian's Report:
 - It has been clarified that proof of vaccination is not required for programs held in open spaces, but that library staff will be responsible for verifying the vaccination status of anyone attending programs in enclosed program rooms or using rental spaces within the library.
 - As part of the ongoing commitment to Truth and Reconciliation a number of educational programs were held during Treaties Recognition Week.

- Special Remembrance Day Grab & Go kits were assembled and distributed. Kits included Veterans Services and Flanders Fields poppy seeds and a poppy craft.
- The Community Knitting Project is ongoing and in September, 46 blankets were donated to Home Library Service or Library Connect patrons.
- 2021 Staff Day on December 6 will focus on providing information to engage and prepare staff for the upcoming strategic planning and branding process.
- Seven staff members attended the virtual OLA Child & Youth Expo, a professional development conference focused on programming, services and readers' advisory for children and youth.

Moved by T. Brown

That the Chief Librarian's Report – November 2021 be received.

Seconded by B. Cosper

11/10/21-10

CARRIED

C. Hanman and D. Roberts left the meeting.

12.6 In Camera re: Item regarding personal matters about an identifiable individual

Moved by A. Lawlor

That the meeting move In Camera.

Seconded by M. Kindbom

11/10/21-11

CARRIED

Moved by M. Kindbom

That the meeting move Out of Camera.

Seconded by J. Schumacker

11/10/21-12

CARRIED

Rising Report:

- The Board reported that information had been received regarding a personnel issue.

13.0 Health & Safety Report

- M. Southern reported that there had been no health and safety incidents reported since the October meeting.
- M. Southern reminded the Board that the 2022 Ontario Library Association Super Conference will be held virtually from February 1 – 5. Anyone interested in attending should contact B. Elliott to arrange for registration.

14.0 Next Meeting

Wednesday, December 8, 2021

7:00 p.m.

Zoom Videoconference

15.0 Adjournment

Moved by J. Meler

That the meeting be adjourned.

Seconded by B. Cospers

11/10/21-13

CARRIED

The meeting adjourned at 8:36 p.m.

Signed: _____

Keith Medenblik, Chair
Halton Hills Public Library Board

Signed: _____

Melanie Southern, Chief Librarian
Halton Hills Public Library

APPROVED: December 8, 2021

DATED: December 8, 2021

BOARD OF MANAGEMENT MEETING

Tuesday, October 19th, 2021

Online Meeting

AGENDA

I. Call to Order

Monica Parker-Galway, Chair, called meeting to order at 6:39pm on October 19th, 2021.

II. Attendance

Present: Alex Hilson. Matthew Galliford. Norman Paulsen. Monica Parker-Galway. Patricia Daleman. Joba Debi. Michael Albano. Zina Pallister.

III. Declaration of Pecuniary Interests – none.

IV. Approval of Agenda

Motion to approve agenda.

Motion: Norman Paulsen – Acton Motors

Second: Matthew Galliford – House of Workwear

All in favour.

Motion carried.

V. Adoption of September 29th, 2021, Minutes

Motion: Adoption of September 29th, 2021 Meeting Minutes

Motion: Matthew Galliford – House of Workwear

Second: Norman Paulsen – Acton Motors

All in favour.

Motion carried.

VI. Coordinator's Report – Alex Hilson

Attached after formal minutes.

VII. Monthly Task Calendar

Attached after formal minutes.

Patricia asks Alex to finish paperwork for Canada Summer Jobs 2021 and to add deadline for cheque to WSIB to calendar.

VIII. Events

- **Trick or Treat:** We are organizing the event and advertising the event for Saturday, October 23rd from 12:00pm to 2:00pm. We could use more volunteers.

- **Zombie Walk:** We are organizing and advertising.
- **Indoor Market:** We held our first market on October 19th. Getting feedback for next market.

IX. Beautification

- **Christmas Lights**

We have started restringing our Christmas lights. There are a few more to go.

- **Flowers**

We have taken the hanging baskets down. We are clearing the planters gradually.

- **Waste Receptacle Update**

Four waste receptacles have shown up. The rest are meant to arrive by the end of the month.

- **Bench at Medical Centre**

Alex needs to fill in application with the Town. Economic Development is covering the cost of the application. Alex then needs to touch base with Public Works.

X. Budget Session

- *Patricia Daleman leads us through our budget priorities for 2022 and we have a conversation for what those priorities will be given our current resources.*

Motion: To approve the budget for 2022.

Motion: Norman Paulsen – Acton Motors

Second: Patricia Daleman – Grant Thornton LLP

XI. Other Business

- Mike lets the board know that Damian from Economic Development wants to lead the board through a short presentation on a multi-year plan for the BIA at our next meeting.
- Damian also needs the information from the Façade Improvement Program for 2021. We are waiting on funds from the Town from 2020.

XII. Adjournment

Meeting was adjourned at 7:33pm.

Motion: Norman Paulsen – Acton Motors

Second: Matthew Galliford – House of Workwear

All in favour.

Motion Carried.

Next Meeting: Monday, November 22nd, 2021, 6:30pm

October 19th, 2021

- We are having our first Indoor Market as we sit in this meeting. It had been good but there are lessons we have learned which we will apply going forward.
- Trick or Treat and the Zombie Walk are coming along. We can use more volunteers for Trick and Treat. Our co-op students have been outreaching to businesses with flyers and to let them know that the events are happening.
- Our Culture Days Market — the Art Market — was very successful. We tied for second best market with thirty-five vendors. The week after — our Harvest Festival — was also good.
- We have a third co-op student. Tristan Tunney is joining Caleb and Connor. He is a big help so far.
- We have taken down our hanging baskets. We are slowly emptying the planters of flowers.
- We have been able to source new lights which we are installing to our frames. We have tested some and they look great so far.
- We have been supporting the Halton Hills Chamber with their Shop Local Initiative. We were part of the picture that was shown in local media this past week.
- Our co-op students have continued our check-in initiative with the various business and organizations downtown. The contact has been beneficial in finding out what, if anything, businesses need from us.

OCT2021

SUN	MON	TUE	WED	THU	FRI	SAT
					01	02
		-		-		
03	04	05	06	07	08	09
-	-	BIA Town Check-in	-	Farmers' Market		
10	11	12	13	14	15	16
		-		-		
17	18	19	20	21	22	23
		- Indoor Market - BIA Town Check-in	- Deadline for WSIB Cheque	-		- Trick or Treat on Main and Mill
24	25	26	27	28	29	30
		-				- Zombie Walk

TASK / PROJECT:	DEADLINE:
Planning and Coordination of Farmers Market preparation, permits and Vendor applications	Current / Ongoing until event
Take Down Flowers	Mid-October
Change lights on Christmas Decorations	By end of October
Run Farmers' Market every week.	Until October 7 th
Run Indoor Market	Ongoing
Arrange Halloween Parkette display	October 1 st , weather providing.
Arrange Holiday Parkette display	November 1 st , weather providing.
Beautification Progress: Coordinate with Town on installation of garbage cans etc. *Make TIMELINE of Deliveries / Installs	Garbages to be installed as soon as possible
Organize intermodal container for easy use.	A.S.A.P. / Ongoing
Organize the office to be tidy and visitor friendly for any meetings or drop-ins. To be kept as a professional looking office space.	A.S.A.P. / Ongoing
Create and implement a Monthly Events Calendar of promotions and events. Include weekly BIA Promotional incentives that reward BIA Bucks for participation. Advertise promos to social media.	Ongoing. Weekly promotions can be logo scavenger hunts, photo ops, etc.
Assign tasks to Co-op Students	Everyday
Coordinate and set a timeline for the Trick or Treat event. What needs to be done by when?	Ongoing until event in fall season
Coordinate and set a timeline for the Zombie Walk event. What needs to be done by when?	Ongoing until event in fall season
Get BIA Materials to board.	At least five days before the next board meeting.
Add Monthly Task Calendar as an item of discussion to Monthly BIA Meeting Agenda	Monthly
Check with Town on Façade Improvement Program closure.	End of October
Canada Day event? Plan for July 1 st .	Ongoing to July
Finish Canada Summer Jobs paperwork for year.	By end of October.
Send BIA Board Meeting Minutes to Town and Membership.	By end of week that meeting takes place.
Concrete Pad Project. Check in with Town. Finish paperwork. Get quotes.	By end of October.
BIA Business and Owner Profiles	Coordinating with business owners for approval



January 25, 2022

His Worship Rick Bonnette
Mayor
Town of Halton Hills
mayor@haltonhills.ca

Dear Mayor Bonnette:

Strengthening the agriculture and agri-food sector is critical to Canada's economic growth. In partnership, the Governments of Canada and Ontario are working to deliver the greatest benefits for farmers, food processors and Canadian families.

As part of these ongoing efforts, we would like to share with you that today we are boosting the per claim administration payment amount provided to municipalities through the Ontario Wildlife Damage Compensation Program (OWDCP).

We understand the important role OWDCP plays in supporting farmers by providing compensation when their livestock and/or poultry has been injured or killed by wildlife, and to beekeepers whose beehives, bee colonies and related equipment are damaged by wildlife.

Municipalities are valued partners in delivering the OWDCP, and we appreciate your commitment to administering this program. In recognition of the crucial role municipalities play, the payment amount provided to municipalities will increase to \$50 per application, from the previous \$30, for any application with an injury/kill date of February 1, 2022 onwards. This increase recognizes that municipalities' incremental costs of program delivery have increased because of changes made over the past few years to strengthen the program.

To ensure a smooth transition date, February 1, 2022, municipalities will be able to begin accessing the increased payment amount through OWDCP. This coming into force date will also ensure a smooth transition, as well as minimize any potential errors in payments or financial reporting.

This timely investment will help to sustain one of the business risk management supports that our livestock farmers count on to do the invaluable work that they do in supplying safe, high-quality food for the people of the province.

.../2

This initiative builds on other supports extended to the province's agricultural sector to protect its progress as we move forward during the COVID-19 pandemic.

We would like to recognize Mayor Kevin Holland, of the Township of Conmee, who has advocated for these improvements during meetings of the Association of Municipalities of Ontario (AMO).

Updated program guidelines are available at www.ontario.ca/predation. Should you have any questions, please contact wildlife.damage@ontario.ca.

Sincerely,



Marie-Claude Bibeau
Federal Minister of Agriculture
and Agri-Food



Lisa M. Thompson
Ontario Minister of Agriculture,
Food and Rural Affairs

**Ministry of
Transportation**

Office of the Minister

777 Bay Street, 5th Floor
Toronto ON M7A 1Z8
416 327-9200
www.ontario.ca/transportation

**Ministère des
Transports**

Bureau de la ministre

777, rue Bay, 5^e étage
Toronto ON M7A 1Z8
416 327-9200
www.ontario.ca/transport



January 19, 2022

107-2022-110

His Worship Rick Bonnette
Mayor, Town of Halton Hills
1 Halton Hills Drive
Halton Hills ON L7G 5G2
mayor@haltonhills.ca

Dear Mayor Bonnette:

I am pleased to announce the launch of the 2021-22 Gas Tax Program and to advise you of your funding allocation.

Our government is committed to working with municipalities to improve Ontario's transportation network and support economic growth. Investing in transit will reduce traffic congestion, create jobs and help businesses to develop and prosper.

The Town of Halton Hills will be eligible to receive an allocation of **\$572,129** for this program year.

In the coming days we will be forwarding the electronic versions of your Letter of Agreement, along with program guidelines, reporting forms and the Canadian Content for Transit Vehicle Procurement policy to the primary contact at the Town of Halton Hills.

Please return a scanned copy of the signed Letter of Agreement, in pdf format, and the required supporting by-law (if applicable), and the 2021 Reporting Forms to **MTO-PGT@ontario.ca**.

The ministry recognizes that COVID-19 impacted gasoline sales in 2020-21. As a result, the province has committed \$120M in *one-time* additional funding to address the impacts of COVID-19 on the 2021-22 Gas Tax program. The one-time additional funding announced through the 2021 Fall Economic Statement (FES) maintains the funding envelope at the level of the 2020-21 program year. This funding will help stabilize 2021-22 program allocations as the province continues its COVID-19 recovery and transit systems begin to build back their ridership levels.

.../2

In order to further mitigate the impact of COVID-19, the ministry is using 2019 ridership instead of 2020, and will be using municipal spending figures from either 2019 or 2020, whichever is higher, when calculating municipal allocations. These actions will stabilize allocations, ensure that all municipalities can receive their largest allocation possible under the program, and ensure that no municipality is unduly penalized.

If you have any questions regarding the Gas Tax program, please contact Kevin Dowling, Acting Director, Municipal Programs Branch, at kevin.dowling@ontario.ca.

Sincerely,

A handwritten signature in black ink, appearing to read "Caroline Mulroney". The signature is fluid and cursive, with the first name "Caroline" written in a larger, more prominent script than the last name "Mulroney".

Caroline Mulroney
Minister of Transportation

c. The Honourable Ted Arnott, MPP, Wellington—Halton Hills



January 27, 2022

In This Issue

- Proposed updated Standards of Care under *PAWS Act*.
- Inclusive Communities Grant.
- AMO/LAS *Municipal Energy Symposium* March 31 - April 1. Registration open.
- AMO/LAS *Municipal Energy Symposium* - Call for Proposals.
- Keynote confirmed for AMO-LAS *Energy Symposium*.
- ROMA's action plan *Opportunities for Rural Ontario in a Post-Covid World* launched.
- Canoe webinar: Doosan & Bobcat.
- Canoe vendor spotlight: FLO.
- Careers: Georgian Bay and Vaughan.

Provincial Matters

The Ministry of the Solicitor General is proposing updated standards of care for dogs kept outdoors under the PAWS Act. The [consultation](#) is open for comment until March 7, 2022.

Applications are now open for the 2022-23 Inclusive Community Grants program. Funding is available for local projects that will help older residents and people with disabilities participate in community life. The deadline to apply is March 3, 2022. Information and how to apply is found on the government [website](#).

Eye on Events

AMO and LAS are excited to host a virtual *Municipal Energy Symposium* March 31 - April 1. This leading edge event takes a critical look at the intersection of climate change, land use planning and energy post-COP26. Explore examples of how municipalities are planning for the future and what this means to daily operations. Register [here](#).

AMO and LAS are calling on municipalities and partners to showcase initiatives and innovation in addressing municipal energy and climate change at the seminal virtual *Municipal Energy Symposium*, March 31 - April 1. For more information and to submit your proposal, [click here](#). Deadline for proposals is February 4.

March 31 - April 1, AMO and LAS will hold the in demand *Municipal Energy Symposium*. Keynote Dr. Sarah Burch will explore opportunities in addressing climate change at the local level. [Register today](#).

ROMA Matters

A key event at the 2022 ROMA Conference was the launch of the ROMA Board's action plan for economic and social growth and sustainability in rural Ontario. [Read](#) the ROMA Board's strategies that rethink rural Ontario for today and into the future.

LAS

Canoe Procurement Group vendors Doosan and Bobcat provide a wide array of equipment from lawn care to loaders to forklifts. Join our webinar on February 9 at 11 am to learn how our Canoe vendors can help you keep your communities beautiful. [Registration is open.](#)

Looking to add electric vehicles to your fleet or expand your charging capability? We're pleased to welcome FLO Services Inc. to the [Canoe Procurement Group](#). Their contract includes many solutions from EV charging stations for public or fleets to monitoring systems and maintenance. [Contact Tanner](#) to find out about this and our other 180+ vendors.

Careers

Chief Administrative Officer - Township of Georgian Bay. The CAO is responsible for leadership and general management of the Corporation, acting as key advisor and liaison to Council. Interested candidates email a cover letter and your resume to [Kartik Kumar](#) by February 28, 2022.

Director & Chief Licensing Officer - City of Vaughan. This role is responsible for managing and providing direction of the overall operations and staff of the By-Law & Compliance, Licensing & Permit Services Department. To obtain a detailed Position Profile or to be considered for the position, please contact Kartik Kumar at careers@lesp.ca by February 11, 2022.

About AMO

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[AMO Watch File](#) Tel: 416.971.9856

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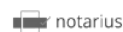
[MEPCO Municipal Employer Pension Centre of Ontario](#)

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January 20, 2022

In This Issue

- Community housing regulatory posting.
- ROMA Conference 2022: Information you need to know to participate.
- AMO/LAS *Municipal Energy Symposium* March 31 - April 1. Registration open.
- AMO/LAS *Municipal Energy Symposium* - Call for Proposals.
- Managing your Occupational Health and Safety Program with 4SafeCom.
- Blog: Does your municipality use safety technology?
- New Year's Resolution: Help staff performance with LED lighting.
- Canoe vendor spotlight: Siemens Canada.
- Canoe webinar: Sharp Technology.
- Careers: Brampton and the Ontario Securities Commission.

Provincial Matters

The government has a community housing [regulatory posting](#) for public comment until February 18. The changes are expected to be potentially significant for municipalities and District Social Administration Boards concerning community housing service agreements, service levels, and access. AMO will provide a submission in response to the posting.

Eye on Events

All registered delegates will receive platform log-in credentials on **Friday, January 21 from chime.ca** to participate in the virtual 2022 ROMA Annual Conference. Remember to check your spam and junk folders. If you haven't registered and wish to participate in the conference, [click here](#).

AMO and LAS are excited to host a virtual *Municipal Energy Symposium* March 31 - April 1. This leading edge event takes a critical look at the intersection of climate change, land use planning and energy post-COP26. Explore examples of how municipalities are planning for the future and what this means to daily operations. Register [here](#).

AMO and LAS are calling on municipalities and partners to showcase initiatives and innovation in addressing municipal energy and climate change at the seminal virtual *Municipal Energy Symposium*, March 31 - April 1. For more information and to submit your proposal, [click here](#). Deadline for proposals is February 4.

AMO's Health & Safety Partner, 4S Consulting Services Inc., will conduct a live demonstration of the 4SafeCom Online Safety Training & Management System. The focus of the demo will be to show how municipalities can manage their OHS program easily and effectively. Demos are on [January 25](#) and [February 1](#). Register today.

LAS

Safety management software can help your municipality in managing your Ontario

Health Service program real-time across departments. Read our [latest blog](#) by 4S Consulting Services, Inc.

Did you know that better lighting can boost staff morale and enhance productivity? Use our [Facility Lighting Service](#) to improve light levels, reduce energy consumption and help your staff do their best. [Give us a call](#) for a free budget proposal.

We're pleased to welcome Siemens Canada to the [Canoe Procurement Group](#), expanding our offerings of surveillance systems, fire protection, building automation, and more. [Contact Tanner](#) to find out about this and our other 180+ vendors.

[Canoe Procurement Group](#) vendor Sharp Electronics is one of the leading suppliers of printers, multifunction devices, displays and more. Join us virtually on January 26 at 11 am to see how your offices can benefit. Be sure to [register here](#).

Careers

[Government Relations Specialist - City of Brampton](#). This role contributes to the development and implementation of government relations initiatives to support the Mayor, Councillors, Chief Administrative Officer and the Corporate Leadership Team. Apply [online](#) by January 26, 2022.

[Senior Analyst, Domestic Affairs - Ontario Securities Commission](#). The Senior Analyst is accountable for keeping abreast of domestic policy and matters, and providing advice, analysis and recommendations on domestic securities policies and regulatory affairs to stakeholders across the Commission. Apply [online](#) by January 26, 2022.

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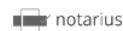
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January 13, 2022

In This Issue

- There is still time to submit questions for ROMA's Ministers' Forums.
- AMO/LAS *Municipal Energy Symposium* March 31 - April 1. Registration open.
- AMO/LAS *Municipal Energy Symposium* - Call for Proposals.
- LAS is eager to help in 2022.
- Canoe's spring webinar series starts January 26.
- Ontario Municipal Leaders Summit on Antisemitism on January 21. Register today!
- Careers: Brampton, Niagara Region, Simcoe, Waterloo, Fort Frances and Bruce.

Eye on Events

ROMA 2022 delegates have the opportunity to engage in two Ministers' Forums where TVO's John Michael McGrath will pose your questions live to provincial Cabinet Minister's. Submit your questions [here](#) by January 14, 12:00 pm EST.

AMO and LAS are excited to host a virtual *Municipal Energy Symposium* March 31 - April 1. This leading edge event takes a critical look at the intersection of climate change, land use planning and energy post-COP26. Explore examples of how municipalities are planning for the future and what this means to daily operations. Register [here](#).

AMO and LAS are calling on municipalities and partners to showcase initiatives and innovation in addressing municipal energy and climate change at the seminal virtual *Municipal Energy Symposium*, March 31 - April 1. For more information and to submit your proposal, [click here](#). Deadline for proposals is February 4.

LAS

LAS currently has almost 20 different programs and services including AMO's digital services partners to make your lives easier. Keep LAS in mind as you consider your 2022 workplans. As your Association's business services arm, we're the "easy button" for Ontario's municipal sector.

Canoe's popular bi-weekly webinar series is back. Join us every other Wednesday at 11:00 am to hear how different vendors make municipal life easier and more affordable. From office printers to equipment to water and wastewater, we've got it covered. Register today: Sharp Technology (Jan 26), Doosan/Bobcat (Feb 9), Exprolink/Madvac (Feb 23), and Computrol (Mar 8).

Municipal Wire*

The Centre for Israel and Jewish Affairs (CIJA) is hosting an Ontario Municipal Leaders Summit on Antisemitism on January 21, 2022. This virtual event will be Chaired by Vaughan Mayor the Hon. Maurizio Bevilacqua. [Register today](#).

Careers

Supervisor, Inspections, Building - City of Brampton. This position is responsible for the supervision of inspectors; monitors the inspection program to ensure proper and consistent application of technical standards and divisional standard practices and more. Please apply online by January 19, 2022.

Claims Examiner - Niagara Region. The Claims Examiner is responsible for the administration of claims, including claim response, assessment, defense, settlement negotiation, and the disposing of claims. Closing date: January 17, 2022.

Business Systems Analyst - County of Simcoe. Leads the systems analysis and design process for major systems projects across the Corporation to ensure that business needs are thoroughly understood and that the technical solutions are properly aligned and adequately specified. Apply online by January 31, 2022.

Database Applications Specialist II SAP - County of Simcoe. The Specialist provides systems analysis and design support for corporate database systems and web-based applications, including vendor liaison during implementation, programming support, troubleshooting, and operational support. Apply online by January 31, 2022.

Senior Sustainability Officer - City of Waterloo. Reporting within the CAO's Office, the Senior Sustainability Officer will lead corporate and community sustainability plans and actions, with a significant focus on climate change action. Apply online by January 28, 2022.

Chief Building Official/Municipal Planner - Town of Fort Frances. Apply by submitting a completed application package to the attention of 'Human Resources Manager' at jobs@fortfrances.ca with the subject line: Chief Building Official/Municipal Planner. At present, we are only accepting external job applications by email or by fax at (807) 274-8479. Deadline: February 11, 2021.

Chief Administrative Officer - Bruce County. The CAO is responsible for providing vision and leadership to members of the senior management team and for the administration and coordination of the delivery of services to the County's residents and businesses. Apply by email by February 7, 2022 to careers@waterhousesearch.ca quoting project BC-CAO. To receive a detailed position description, contact Jon Stungevicius at 416-214-9299 x1, or Amy Oliveira at 416-214-9299 x4.

About AMO

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January 6, 2022

In This Issue

- AMO's newest policy updates and calls to action.
- Excess soil regulation changes now in effect.
- ROMA Conference Ministers' Forum: Deadline to submit questions is January 14.
- ROMA Conference: Register by January 20.
- Blog: LAS' Business and data analytics intern.
- Using LAS this year? Don't forget to do this.
- Canoe webinar: Cutting edge solutions from Sharp Electronics.
- Careers: AMO, Brampton, Greater Sudbury and Waterloo.

AMO Matters

Yesterday's Policy Update included two Calls to Action (Joint & Several Liability and CN's compliance with the *Drainage Act*) and updates on issues of municipal concern, including health care, housing, and cannabis. Click [here](#) for more details.

Provincial Matters

On-Site and Excess Soil Management Regulation (O. Reg 406/19) came into effect on January 1, 2022. You can review the webinar AMO hosted on the changes [here](#).

Eye on Events

The deadline to submit your questions for the two Ministers' Forums at this year's ROMA conference is **January 14 by 12 pm**. As a registered conference delegate and municipally elected official take the opportunity to submit questions [here](#).

ROMA 2022: Rural Opportunities virtual conference offers two full days of engaging keynotes, addresses from key ministers and party leaders, concurrent session discussions on timely issues, and opportunities to connect with colleagues from across the province. Full details [here](#).

LAS

What's it really like being an intern at LAS? Read our [latest blog](#) written by Edward Kwan who worked as a Business & Data Analytics intern during the fall term.

If you plan on using one or more [cooperative programs](#) from LAS this year, don't forget to post your [Notice of Participation](#). This ensures your purchasing department remains in compliance with trade agreements.

Sharp Electronics is one of the leading suppliers of printers, multifunction devices, displays and more. Join the LAS webinar on January 26 at 11 am to hear how your offices can benefit from this [Canoe contract](#). Be sure to [register here](#).

Careers

Advisor, Municipal Engagement - AMO. Interested in working for one of Canada's

most influential public policy advocacy organizations? Is community building and advancing the interests of municipal government appealing to you? Are you interested in supporting AMO in its efforts to deliver premier events and training and to advance diversity and equity objectives in local government? AMO is seeking an Advisor, Municipal Engagement. Interested candidates please apply in confidence to: careers@amo.on.ca by January 11, 2022.

Supervisor, Court Operations & Administration - City of Brampton. Reporting to the Manager, Court Administration, this role is responsible to coordinate the daily operation and administration of the Courthouse by providing leadership, supervision and coordination of Court staff. Applications must be received by: January 14, 2022.

Co-ordinator of Special Operations - City of Greater Sudbury. Develop and co-ordinate CGS's Emergency Management Program in line with emergency management best practices and legislative requirements. Qualified candidates should submit their résumé by January 17, 2022 to hrjobs@greatersudbury.ca.

Commissioner, Community Services - Region of Waterloo. Reporting to the CAO, you will establish corporate strategic priorities for the Region and ensure that Departmental initiatives and programs are integrated and aligned with these priorities. To apply for this position, please visit [here](#) by February 4, 2022.

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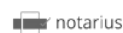
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VIA EMAIL

January 24, 2022

Legislative & Planning Services
Department
Office of the Regional Clerk
1151 Bronte Road
Oakville ON L6M 3L1

Dorothy DiBerto, Credit Valley Conservation Authority
Katie O'Connell, Ministry of Northern Development, Mines, Natural Resources and Forestry
Peter Fay, City Clerk, City of Brampton
Kathryn Lockyer, Regional Clerk, Region of Peel
Valerie Petryniak, Town Clerk, Town of Halton Hills

Please be advised that at its meeting held Wednesday, January 19, 2022, the Council of the Regional Municipality of Halton adopted the following resolution:

RESOLUTION: LPS02-22 - Proposed Brampton Brick Quarry, Pre-consultation Meeting

THAT the Regional Clerk forward a copy of Report No. LPS02-22 re: "Proposed Brampton Brick Quarry, Pre-consultation Meeting" to the Town of Halton Hills, City of Brampton, the Region of Peel, Credit Valley Conservation Authority, and the Ministry of Northern Development, Mines, Natural Resources and Forestry for their information.

Included please find a copy of Report No. LPS02-22 for your information.

If you have any questions please contact me at the e-mail address below.

Sincerely,

A handwritten signature in blue ink, appearing to read "G. Milne", written over a light blue circular stamp.

Graham Milne
Regional Clerk
graham.milne@halton.ca

Regional Municipality of Halton

HEAD OFFICE: 1151 Bronte Rd, Oakville, ON L6M 3L1
905-825-6000 | Toll free: 1-866-442-5866

Report To:	Regional Chair and Members of Regional Council
From:	Bob Gray, Commissioner, Legislative and Planning Services and Corporate Counsel
Date:	January 19, 2022
Report No:	LPS02-22
Re:	Proposed Brampton Brick Quarry, Pre-consultation Meeting

RECOMMENDATION

THAT the Regional Clerk forward a copy of Report No. LPS02-22 re: “Proposed Brampton Brick Quarry, Pre-consultation Meeting” to the Town of Halton Hills, City of Brampton, the Region of Peel, Credit Valley Conservation Authority, and the Ministry of Northern Development, Mines, Natural Resources and Forestry for their information.

REPORT

Executive Summary

- Regional staff have been advised of Brampton Brick Limited’s intent to apply for an aggregate license from the Ministry of Northern Development, Mines, Natural Resources and Forestry (the “Ministry”) to establish a new shale operation in the City of Brampton on the east side of Winston Churchill Boulevard, north of the hamlet of Norval. A City of Brampton zoning by-law amendment will also be required.
- No applications have been submitted at the time of writing this report. Applications are anticipated to be filed in the first half of 2022.
- This is the same site as the previous Brampton Brick Limited application from 2008, with revisions to the previous site plan and operations plan intended to reflect anticipated urban residential growth to the east of the subject lands. A settlement was reached in 2018 between the applicant and the City of Brampton and the application was withdrawn. New applications are required for any future quarry proposal at the subject site.

- On September 29, 2021, City of Brampton staff convened a pre-consultation meeting with the proponent and staff from Halton Region, Peel Region, the Town of Halton Hills, and Credit Valley Conservation in attendance. Agency application requirements were discussed at the meeting.
- The proposed Brampton Brick Limited Shale Quarry will require approvals under the *Aggregate Resources Act* (Licence Approval) and the *Planning Act* (City of Brampton Zoning By-law Amendment). There are no planning approvals required from Halton Region.
- This report is to provide information to Council on the pre-consultation meeting, the complete application requirements, and the steps Regional staff will undertake to participate in the *Aggregate Resources Act* and City of Brampton application processes.

Background

The subject lands are located in the City of Brampton on the east side of Winston Churchill Boulevard (the municipal boundary between Halton Region and Peel Region), north of Highway 7 in Peel Region. The lands have an area of 34.9 hectares with a fragmented frontage along Winston Churchill Boulevard. Adjacent uses include agricultural uses and a mix of rural residential and institutional uses along Winston Churchill Boulevard. A map showing the subject lands is shown in Attachment #1 to this report.

Lands in Halton adjacent to the site are part of the Regional Natural Heritage System and Agricultural Area and have a number of constraints identified including:

- Greenbelt Natural Heritage System
- Natural Heritage System Key Features
- Enhancement Areas
- Agricultural System Outside Prime Agricultural Area
- Identified Mineral Resource Areas

In September 2021, Regional staff were advised of Brampton Brick's intent to apply for an aggregate license from the Ministry to allow for shale extraction with an excavation area of 9.35 hectares. The proposal also includes an upgraded bridge crossing for truck access, a stockpiling area, floodplain and open space. Excavated materials would be stockpiled and shipped north to a brick plant on Wanless Drive in Brampton. The proposal does not involve any blasting.

There had been a previous application at the subject lands for a quarry in 2013, but a settlement was reached between the applicant and the City of Brampton resulting in the application being withdrawn in 2018. The applicant is proposing to make a new application with the same parameters as the previous proposal.

Discussion

It is anticipated that a forthcoming City of Brampton Zoning By-law Amendment application will request rezoning the lands shown as 'Lands Subject to the Application' on Attachment #1 from an Agricultural Zone to Industrial Mineral Extraction in the City's Zoning By-law 270-2004 to permit an aggregate extraction use.

With respect to a licence application to the Ministry, no licence will be issued without required planning approvals in place. It is anticipated that applications related to the license will be received at the same time, anticipated in 2022.

At the time of writing this report, no applications have been submitted to the agencies.

Pre-consultation Meeting

On September 29, 2021, a pre-consultation meeting was held with representatives of Brampton Brick and staff from Halton Region, Peel Region, the City of Brampton and Credit Valley Conservation. A pre-consultation meeting is required in advance of filing planning applications in Brampton, as outlined in Section 5.32 in the City of Brampton Official Plan.

At pre-consultation meetings, staff from the various agencies indicated to Brampton Brick what application(s) are required, and the information and materials required in support of applications in order to be deemed complete. Based on the discussion at the meeting, it was determined that a Zoning By-law Amendment with the City of Brampton is required in addition to approval of a licence under the *Aggregate Resources Act*.

Complete Application Requirements

For the proposed application by Brampton Brick, Halton staff identified thirteen studies or areas of research required as part of a complete application. The list is consistent with the studies and research identified in the Halton Regional Official Plan and Halton's Aggregate Resources Reference Manual. It should be noted that the proposed shale extraction will not require any blasting and as such no Blasting Impact Assessment is required with the application. Reports requested by Halton from the proponent at the pre-consultation meeting include:

- Agricultural Impact Assessment
- Archaeological Study
- Cultural Heritage Study (built and landscape)
- Environmental Impact Study
- Financial Impact Study
- Air Quality Assessment
- Planning Justification Report
- Progressive and Final Rehabilitation and Monitoring Study
- Haul Route Study, Transportation Impact Study including Safety Analysis

- Water Resources Report (including hazard land assessment and karst)
- Adaptive Environmental Management Plan
- Noise and Vibration Study
- *Aggregate Resources Act* Site Plans and summary report

Required studies may be submitted individually or as consolidated studies. In addition to the above list, a public consultation strategy was requested as a City of Brampton requirement. Halton Region's requirements were incorporated into the overall list of application requirements, along with the Town of Halton Hills', Credit Valley Conservation's and Peel Region's requirements. The applicant needs to provide all required items in order for the City to deem the applications complete in accordance with City policy.

Brampton Brick Limited was advised that the need for additional studies or reports may also be identified through the application review.

The Brampton Agency Review Team (BAART) Approach

The City of Brampton historically has used a joint agency review team called BAART (Brampton Agency Aggregate Review Team). It is anticipated that there will be a joint, interagency review approach under City of Brampton leadership as the agency with the only *Planning Act* application required for this proposal. This is similar to Halton's approach as defined by the Consolidated Streamlined Mineral Aggregate Review Protocol (Joint Agency Review Team Protocol), recently updated and approved by Council in February 2020.

A decision on the technical review approach will be made after the application for zoning amendment is received. Halton Region would participate in an interagency review.

Halton Region's Next Steps

With the conclusion of the pre-consultation meeting, the timing for next steps for Regional staff are dependent upon the filing of development applications. Next steps are:

- An application for a Zoning By-law Amendment will need to be submitted to the City of Brampton inclusive of the comprehensive set of technical studies identified at the pre-consultation meeting.
- Should the City of Brampton deem the application complete, review of the application will begin and it will be circulated to the reviewing agencies for comment.

Public consultation will include a statutory public meeting facilitated by the City of Brampton as required by the *Planning Act*. Through the pre-consultation process, the Region also requested that the applicant host a public information session as part of the *Aggregate Resources Act* licencing process, in the event that the Ministry continues to accept individual meetings in place of open meetings (an accommodation made by the

Ministry in response to COVID-19 and restarting application review timelines in August 2020).

Staff will be reviewing all materials generated by this proposal to ensure that Regional interests are addressed should the Brampton Brick Limited proposal be launched.

CONCLUSION

Once an application for Zoning By-law Amendment is deemed complete by the City of Brampton, information will be posted on the Region's website and a staff report will be provided to Council outlining next steps in the process.

Regional Council will have no planning applications before it requiring a decision. The Ministry, through the *Aggregate Resources Act* licencing process, is ultimately responsible for making a decision on the quarry approval. Halton Region will be involved in the review of the applications as a result of the proximity of the subject lands to the Halton border through the lens of Provincial and Regional policy conformity. Should there be impacts to Regional interests identified as part of the technical review, staff will report back to Council prior to taking a formal position on the application.

Staff from Halton Region, Peel Region, Credit Valley Conservation, and the Town of Halton Hills will work together through the Brampton-led technical review to ensure coordinated review and comment on the technical studies, fees requirements, and anticipated project timelines. There will be a report at the conclusion of the technical review process outlining the findings of that work.

FINANCIAL/PROGRAM IMPLICATIONS

The application fee for applications requiring *Planning Act* approval in a bordering municipality is \$19,675.88, plus HST, in accordance with the 2022 Fees & Charges By-law 57-21 approved as part of the 2022 Budget.

The applicant has been made aware, through the pre-consultation meeting, that peer review costs for technical reports are also required to be paid by the applicant, based on actual costs, in accordance with Policy 187(10) of the Regional Official Plan and the 2022 Fees & Charges By-law 57-21.

Respectfully submitted,



Curt Benson
Director, Planning Services and Chief
Planning Official



Bob Gray
Commissioner, Legislative and Planning
Services and Corporate Counsel

Approved by



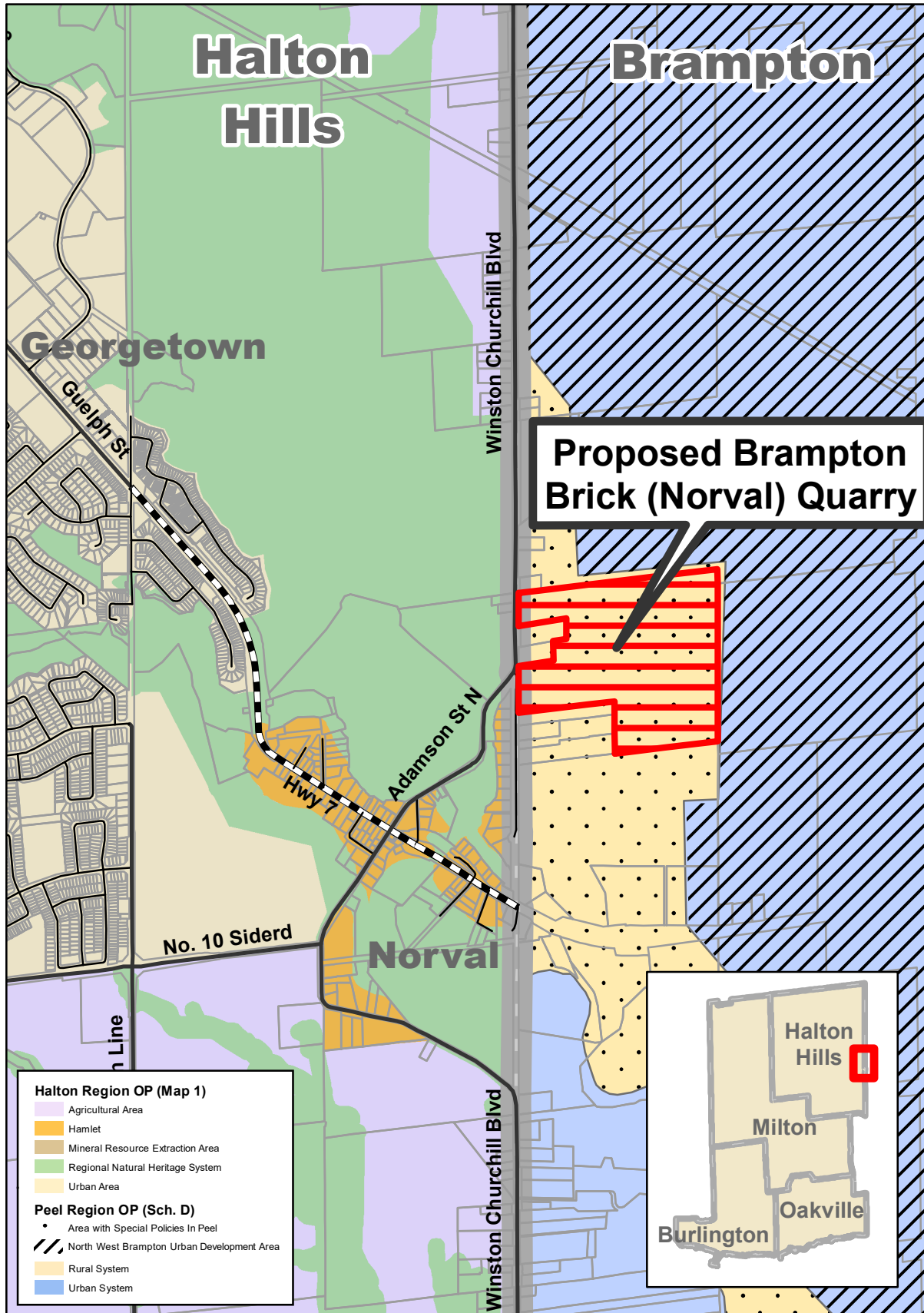
Jane MacCaskill
Chief Administrative Officer

If you have any questions on the content of this report,
please contact:

Curt Benson

Tel. # 7181

Attachments: Attachment #1 – Locational map





VIA EMAIL

January 24, 2022

Legislative & Planning Services
Department
Office of the Regional Clerk
1151 Bronte Road
Oakville ON L6M 3L1

Barb Veale, Conservation Halton
Heather Watt, Ministry of Municipal Affairs and Housing
Kevin Arjoon, City Clerk, City of Burlington
Valerie Petryniak, Town Clerk, Town of Halton Hills
Meaghen Reid, Town Clerk, Town of Milton
Vicki Tytaneck, Town Clerk, Town of Oakville

Please be advised that at its meeting held Wednesday, January 19, 2022, the Council of the Regional Municipality of Halton adopted the following resolution:

RESOLUTION: LPS05-22 - Orlando Corporation North Porta Regional Official Plan Amendment Application – Initiation Report (File No. RQ64A)

1. THAT Regional staff be directed to proceed with a Statutory Public Meeting for the Proposed Regional Official Plan Amendment (File RQ64A) – “An Amendment to Address the Addition of Employment Lands to the Urban Area and to the Town of Milton’s ‘401 Industrial/Business Park Secondary Plan’” by the end of the first quarter of 2022 to fulfill the requirements of the Planning Act.
2. THAT the Regional Clerk forward a copy of Report No. LPS05-22 to the Ministry of Municipal Affairs and Housing, the City of Burlington, the Town of Halton Hills, the Town of Milton, the Town of Oakville, and Conservation Halton, for their information and comment.

Included please find a copy of Report No. LPS05-22 for your information.

If you have any questions please contact me at the e-mail address below.

Sincerely,

Graham Milne
Regional Clerk
graham.milne@halton.ca

Regional Municipality of Halton

HEAD OFFICE: 1151 Bronte Rd, Oakville, ON L6M 3L1
905-825-6000 | Toll free: 1-866-442-5866

Report To:	Regional Chair and Members of Regional Council
From:	Bob Gray, Commissioner, Legislative and Planning Services and Corporate Counsel
Date:	January 19, 2022
Report No:	LPS05-22
Re:	Orlando Corporation North Porta Regional Official Plan Amendment Application – Initiation Report (File No. RQ64A)

RECOMMENDATION

1. THAT Regional staff be directed to proceed with a Statutory Public Meeting for the Proposed Regional Official Plan Amendment (File RQ64A) – “An Amendment to Address the Addition of Employment Lands to the Urban Area and to the Town of Milton’s ‘401 Industrial/Business Park Secondary Plan’” by the end of the first quarter of 2022 to fulfill the requirements of the Planning Act.
2. THAT the Regional Clerk forward a copy of Report No. LPS05-22 to the Ministry of Municipal Affairs and Housing, the City of Burlington, the Town of Halton Hills, the Town of Milton, the Town of Oakville, and Conservation Halton, for their information and comment.

REPORT

Executive Summary

- On November 2, 2021, Halton Region received a Regional Official Plan Amendment (ROPA) application submitted by Glen Schnarr & Associates Inc. on behalf of Orlando Corporation. The proposed amendment is provided as Attachment #1 to this report.
- The application proposes to amend the Regional Official Plan to add to the Urban Area the portion of the lands at 8350 Esquesing Line in the Town of Milton that are located between the existing Urban Area designation and the Greenbelt Plan Protected Countryside, referred to in the application as the ‘northern sliver’ lands.
- The purpose of adding these lands to the Urban Area is to permit development for employment uses comprehensively with the majority of the property to the south that is currently within the Region’s Urban Area and which is proposed to form part of the Town of Milton’s 401 Industrial/Business Park Secondary Plan.

- This report provides Regional Council with information on the ROPA application and outlines key policy considerations and next steps in the review of the application.

Background

The lands subject to the ROPA application filed by Orlando Corporation on November 2, 2021 are a part of the property known as 8350 Esquesing Line in the Town of Milton. The lands are located within a part of the Town referred to as the 'North Porta Lands'. The 8350 Esquesing property is generally bounded by Boston Church Road to the west, Esquesing Line to the east, James Snow Parkway to the south, and Lot 4 / Concession IV to the north. The specific lands subject to the ROPA application are located at the northern edge of the property and are bounded by the existing Urban Area designation to the south and the Protected Countryside boundary of Greenbelt Plan to the north. The subject lands are referred to as the 'northern sliver' lands in the application and are proposed to be added to the Urban Area in the Regional Official Plan. A context map showing the location of the subject lands is provided as Attachment #2 to this report. The lands subject to the ROPA application are approximately 14.25 hectares in size.

There are a number of previous and ongoing planning initiatives related to the subject lands and the ROPA application. To assist with understanding this context, a brief summary of these planning processes is provided below:

- ***Sustainable Halton***

Through the Sustainable Halton process, which culminated with ROPA 38 in 2009, Halton identified a strategy to accommodate growth to the year 2031. This included the addition of the area referred to as the 'North Porta Lands', which are located north of the Town of Milton's 401 Industrial/Business Park Secondary Plan area. In this context, the majority of 8350 Esquesing Line was added to the Region's Urban Area to accommodate employment growth to 2031. However, the boundary of the Urban Area designation was delineated based on an existing watercourse at the northern edge of the property. This resulted in the lands north of the watercourse (i.e., the lands now subject to the ROPA application and referred to as the 'norther sliver' lands) being designated as part of the Region's Natural Heritage and Agricultural Systems.

- ***Town of Milton OPA 31 and OPA 67***

The Regional Official Plan requires Local Municipalities to plan comprehensively for new growth areas. The North Porta Lands were added to the Town's Urban Area through OPA 31 and were subsequently planned for comprehensively as part of the OPA 67 – "North Porta Lands", adopted by the Town in August 2021 and forwarded to the Region for review. The Town's amendment proposes to amend the boundary of the adjacent 401 Industrial/Business Park Secondary Plan to incorporate the North Porta Lands. As the 'northern sliver' lands are not currently part of the Urban Area, they are not addressed in either OPA 31 or OPA 67. Instead, they are addressed as part of the ROPA application and other concurrent local applications discussed below.

- ***Concurrent Local Development Applications***

In addition to the ROPA application, Orlando Corporation has concurrently filed a number of local development applications with the Town of Milton, including official plan and zoning by-law amendments and draft plans of subdivision. The applications apply to two blocks of land known collectively as the Milton North Business Park, which constitutes the majority of the North Porta Lands.

The purpose of these applications is to enable an overall development proposal for industrial / employment uses as shown in Attachment #3 to this report. The applications will also allow for stormwater management, refinements to the natural heritage system, and updates to the transportation network, among other things. These applications are supported by a number of technical studies and reports. Of particular note for the ROPA application, the Comprehensive Environmental Servicing Strategy (CESS) will address refinements to the Regional Natural Heritage System, including the watercourse, which defines the existing boundary of the Urban Area.

The local development applications were deemed complete by the Town on November 30, 2021 and are now under review. It is important to note that as they are based on the 'northern sliver' lands being added to the Urban Area, the concurrent local development applications are in part dependent on the ROPA application that would bring these lands into the Urban Area.

- ***Regional Official Plan Review (ROPR)***

Through the ROPR, Halton is considering how to accommodate growth to 2051, including the assessment of settlement area boundary expansions. Orlando Corporation has participated in the ROPR process and has made submissions related to the subject lands. Settlement area boundary expansions are typically considered as part of a comprehensive process such as the ROPR. However, given the size and context of the subject lands, changes to the Growth Plan that enable consideration of expansions of a certain size outside a municipal comprehensive review, and other timing considerations, Regional staff received Orlando's ROPA application. Regional staff will continue to consider Orlando's submissions and will monitor the timing of these processes to ensure alignment between the ROPA application and the ROPR.

The North Porta Regional Official Plan Amendment (ROPA) Application

As described above, the lands subject to the ROPA application are currently designated Regional Natural Heritage System and Agricultural Area in the Regional Official Plan. Further, they are located between the current boundary of the Urban Area (as defined by an existing watercourse) and the Greenbelt Plan Protected Countryside. Referred to as the 'northern sliver' lands, the subject lands are approximately 14.25 hectares in size.

As part of the ROPA and the concurrent local development applications, the Regional Natural Heritage System designation currently on the subject lands associated with a watercourse is proposed to be realigned to generally be adjacent to the Greenbelt Plan lands. The existing and proposed locations for the watercourse are shown in Attachment #4, which presents excerpts from the environmental study provided in support of the applications. The first figure (Figure 12) identifies the current location of the watercourse, which generally traverses the property from the northwest to the southeast. The second figure (Figure 13) identifies the proposed location of the realigned watercourse and other associated refinements to the Regional Natural Heritage System. Justification for the realignment of the watercourse is contained in this study. Regional staff provided comments on this document in November 2021 and it remains under review.

The proposed realignment of the watercourse would enable the lands south of the watercourse's new location to be re-designated to 'Urban Area', thereby facilitating their development comprehensively with the remainder of 8350 Esquesing Line and the North Porta Lands. In this regard, the applicant is requesting a change in land use designation in the Regional Official Plan from Agricultural Area to Urban Area with an Employment Area overlay.

The ROPA application was filed on behalf of Orlando Corporation on November 2, 2021. The submission was reviewed against the application requirements set out in the pre-consultation meeting with the applicant that occurred on April 28, 2021.

Regional staff have reviewed the application submission and have determined it to be complete in accordance with the provisions of the *Planning Act* and provided notice to the applicant on November 30, 2021. Subsequent notice of the complete application was provided through local newspapers, signage on the site, and through notices mailed to surrounding property owners. The application has been circulated to internal departments and external agencies for review and Regional staff are awaiting comments.

Next Steps

Regional staff will work co-operatively with partner agencies through the technical review of the submitted information and will also work closely with Town of Milton staff as they process the submitted local official plan and zoning by-law amendments and draft plans of subdivisions.

Public consultation is an important part of the process to amend the Regional Official Plan. To that end, the application and supporting materials will be made available for review on **halton.ca**. The application and supporting materials have also been circulated for comment to the Ministry of Municipal Affairs and Housing, Conservation Halton, and other public agencies. A public information centre and a statutory public meeting will be held in early 2022 to provide opportunities for the public to ask questions and provide feedback on the application.

Following the public information centre and statutory public meeting, and based on all feedback received, Regional staff will prepare a report to Regional Council with a recommendation on the application later in 2022.

Conclusion

Regional staff will process and co-ordinate the review of the submitted technical information provided with the ROPA application and will report back to Regional Council with information to support a future statutory public meeting and subsequently, a recommendation on the proposed amendment.

FINANCIAL/PROGRAM IMPLICATIONS

The cost of reviewing the Regional Official Plan Amendment is funded from the Planning Services Operational Budget.

Respectfully submitted,



Curt Benson
Director, Planning Services and Chief
Planning Official



Bob Gray
Commissioner, Legislative and Planning
Services and Corporate Counsel

Approved by



Jane MacCaskill
Chief Administrative Officer

If you have any questions on the content of this report,
please contact:

Curt Benson

Tel. # 7181

Attachments: Attachment #1 – Proposed Regional Official Plan Amendment (RQ64A)
Attachment #2 – ROPA Subject Lands Context Map
Attachment #3 – Development Applications Concept Plan
Attachment #4 – Existing and Proposed Watercourse Location Figures

Draft Amendment No. XX
to THE REGIONAL PLAN
Official Plan for the Halton Planning Area
Regional Municipality of Halton

An Amendment to Address the
Addition of Employment Lands to
the Urban Area and to the Town of
Milton's '401 Industrial / Business
Park Secondary Plan'

August 2021

DECLARATION

IN THE MATTER OF REGIONAL OFFICIAL PLAN AMENDMENT NUMBER XX

IN THE REGIONAL MUNICIPALITY OF HALTON

I, [Name of Regional Clerk], in my capacity as Regional Clerk for the Regional Municipality of Halton, hereby declare that notice of adoption by Council for the Regional Municipality of Halton was given under Section XX of the *Planning Act*, R.S.O., 1990, c.P.13.

There were no appeals to ROPA XX within the time allowed for appeal. Under Section 17(27) of the *Planning Act*, R.S.O. 1990, c.P.13, Regional Official Plan Amendment Number XX came into force and effect on _____, 2021, being the day following the last day for filing a notice of appeal.

[Name of Regional Clerk]

Regional Clerk
Regional Municipality of Halton

Date

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THE CONSTITUTIONAL STATEMENT

Part A, The Preamble, does not constitute part of this Amendment.

Part B, The Amendment, consisting of 10 items, constitutes Amendment No. XX to the Regional Plan, the Official Plan for Halton Planning Area, Regional Municipality of Halton. The Amendment will incorporate certain lands into the Region's Urban Area with an Employment Area overlay. The title of Amendment No. XX is "An Amendment to Address the Addition of Employment Lands to the Urban Area and to the Town of Milton's '401 Industrial / Business Park Secondary Plan'".

Part C, The Appendices, does not constitute part of this Amendment.

PART A THE PREAMBLE

Purpose

The purpose of this Amendment is to add lands to the Urban Area to facilitate future Employment development within the area of the Town of Milton known as the Milton 401 Industrial / Business Park Secondary Plan Area. The result of the amendment is to incorporate into the Urban Area lands to be planned and developed for employment uses.

Location

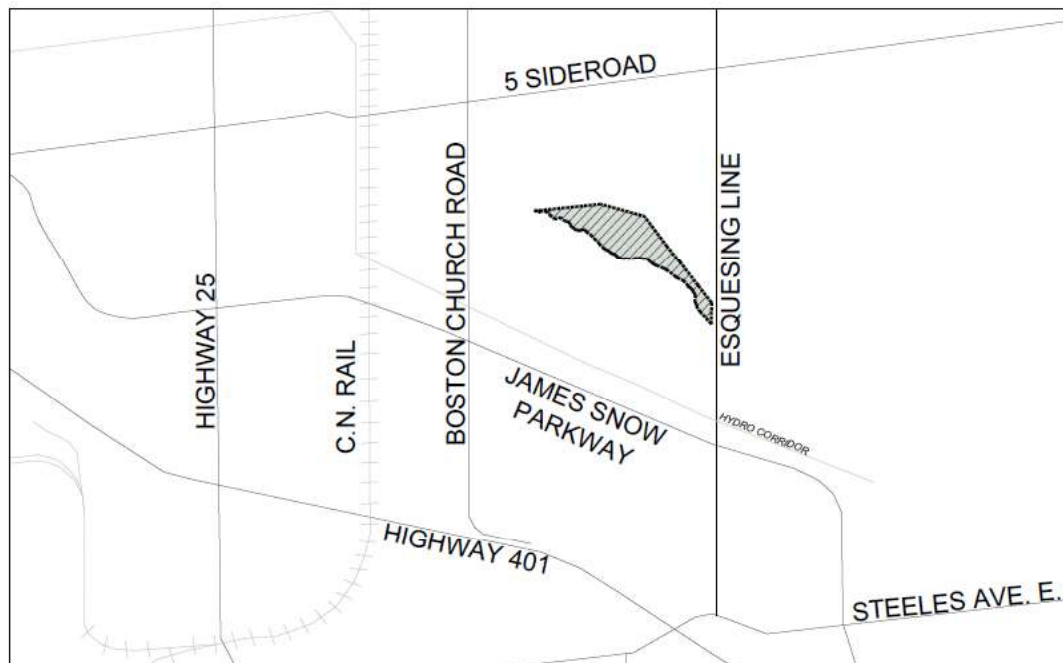
The area containing lands to be incorporated in the Urban Area is referred to as the “Amendment Area” and is shown in Figure 1 below. It contains the lands bounded by:

- i) North – limit of the Greenbelt Plan
- ii) East – Esquesing Line
- iii) South – the existing Urban Area limit
- iv) West – the existing Urban Area limit

Figure 1

July 22, 2021

The Amendment Area



Basis

The current 2031 'Urban Area' limit for the Town of Milton was established through Halton Region Official Plan Amendment No. 38 (ROPA 38) and in this vicinity it was meant to accommodate employment growth to 2031. The current 2031 'Urban Area' limit falls short of including all lands that are mapped as "Provincially Significant Employment Zone" (PSEZ) and as a result, excludes a portion (or 'northern sliver') of a property that is proposed for future employment growth, consistent with the Province's "Provincially Significant Employment Zone" (PSEZ) area. This 'northern sliver' of land should logically be included within the Regional and Town "Urban Area".

ROPA XX will bring the 'northern sliver' lands into the 'Urban Area' and will facilitate the advancement of development applications to develop these lands for employment uses consistent with the Provincially Significant Employment Zone (PSEZ) mapping and related Growth Plan objectives and policy directives.

This will be achieved by redesignating the lands within the Amendment Area currently within the "Agricultural Area" designation to the "Urban Area" designation with an "Employment Area" overlay. As a result of this change to Map 1, a number of corresponding changes are required to other Maps to reflect the change to the "Urban Area" designation and certain constraints. ROPA XX will enable comprehensive planning of these lands and the continued implementation of the growth strategy set out in the Regional Plan and the PSEZ mapping and related employment policy directives as set out in the Growth Plan.

PART B THE AMENDMENT

Introductory Statement

All of this part constitutes Amendment No. XX to the Regional Plan, the Official Plan for Halton Planning Area, Regional Municipality of Halton.

Details of the Amendment

The Amendment consists of 10 items.

The Regional Plan is amended as follows:

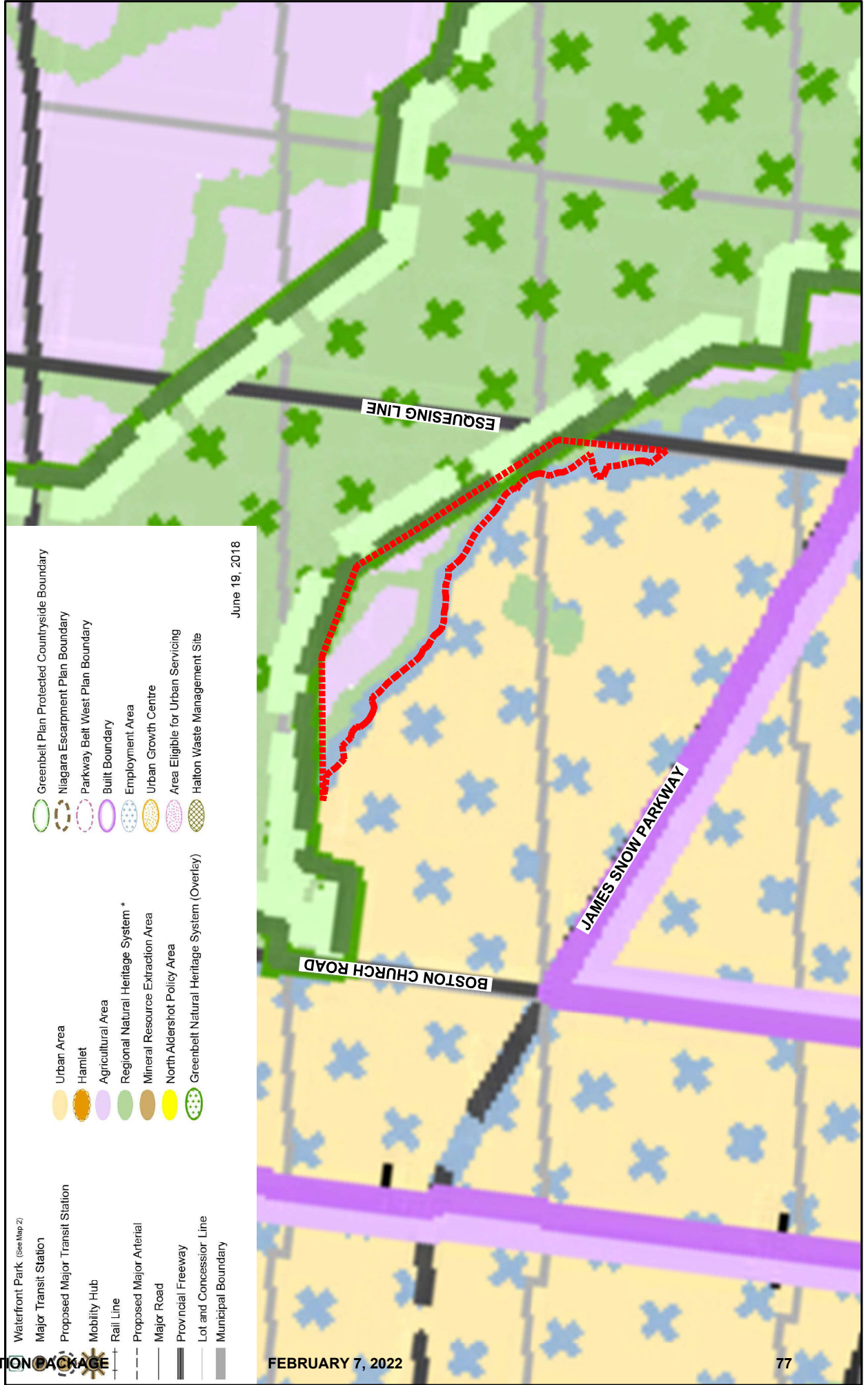
Item 1	Map 1, <i>Regional Structure</i> , is amended by redesignating the lands designated “Agricultural Area” within the Amendment Area to “Urban Area” and applying the “Employment Area” overlay to these lands as shown herein on Map 1 provided as Attachment #1.
Item 2	Map 1B, <i>Parkway Belt Transportation and Utility Corridors</i> , is amended to reflect the modified “Urban Area” designation as shown herein on Map 1B provided as Attachment #2.
Item 3	Map 1C, <i>Future Strategic Employment Areas</i> , is amended to reflect the modified “Urban Area” designation and “Employment Area” overlay as shown herein on Map 1C provided as Attachment #3.
Item 4	Map 1D, <i>Municipal Wellhead Protection Zones</i> , is amended to reflect the modified “Urban Area” designation as shown herein on Map 1D provided as Attachment #4.
Item 5	Map 1E, <i>Agricultural System and Settlement Areas</i> , is amended to reflect the modified “Urban Area” designation and to remove the “Prime Agricultural Areas” constraints from this area as shown herein on Map 1E provided as Attachment #5.
Item 6	Map 1F, <i>Identified Mineral Resource Areas</i> , is amended to reflect the modified “Urban Area” designation as shown herein on Map 1F provided as Attachment #6.
Item 7	Map 1G, <i>Key Features within the Greenbelt and Regional Natural Heritage Systems</i> , is amended to reflect the modified “Urban Area” designation and to remove the areas identified as “Prime Agricultural Areas in NHS Enhancements / Linkages / Buffers” and “Key Features” from this area as shown herein on Map 1G provided as Attachment #7.
Item 8	Map 3, <i>Functional Plan of Major Transportation Facilities</i> , is amended to reflect the modified “Urban Area” designation as shown herein on Map 3 provided as Attachment #8.

Item 9	Map 4, <i>Right-of-Way Requirements of Arterial Roads</i> , is amended to reflect the modified “Urban Area” designation as shown herein on Map 4 provided as Attachment #9.
Item 10	Map 5, <i>Regional Phasing</i> , is amended to reflect the modified “Urban Area” designation and applying the overlay “Urban Area with Regional Phasing between 2021 and 2031” as shown herein on Map 5 provided as Attachment #10.

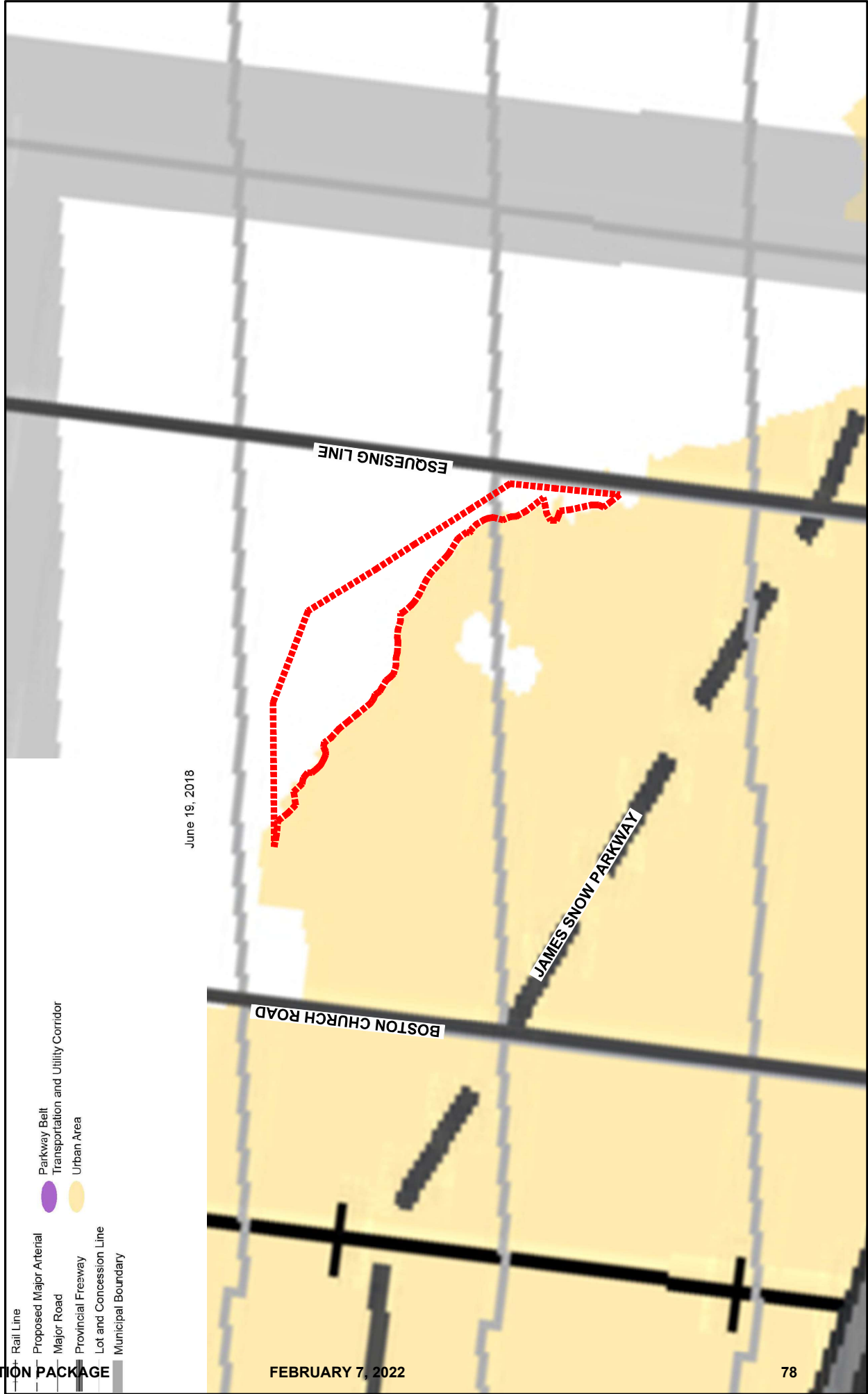
- Items 1 through 10 (changes to and addition of maps)

Specified maps of the Plan are amended as shown on Attachments 1 through 10.

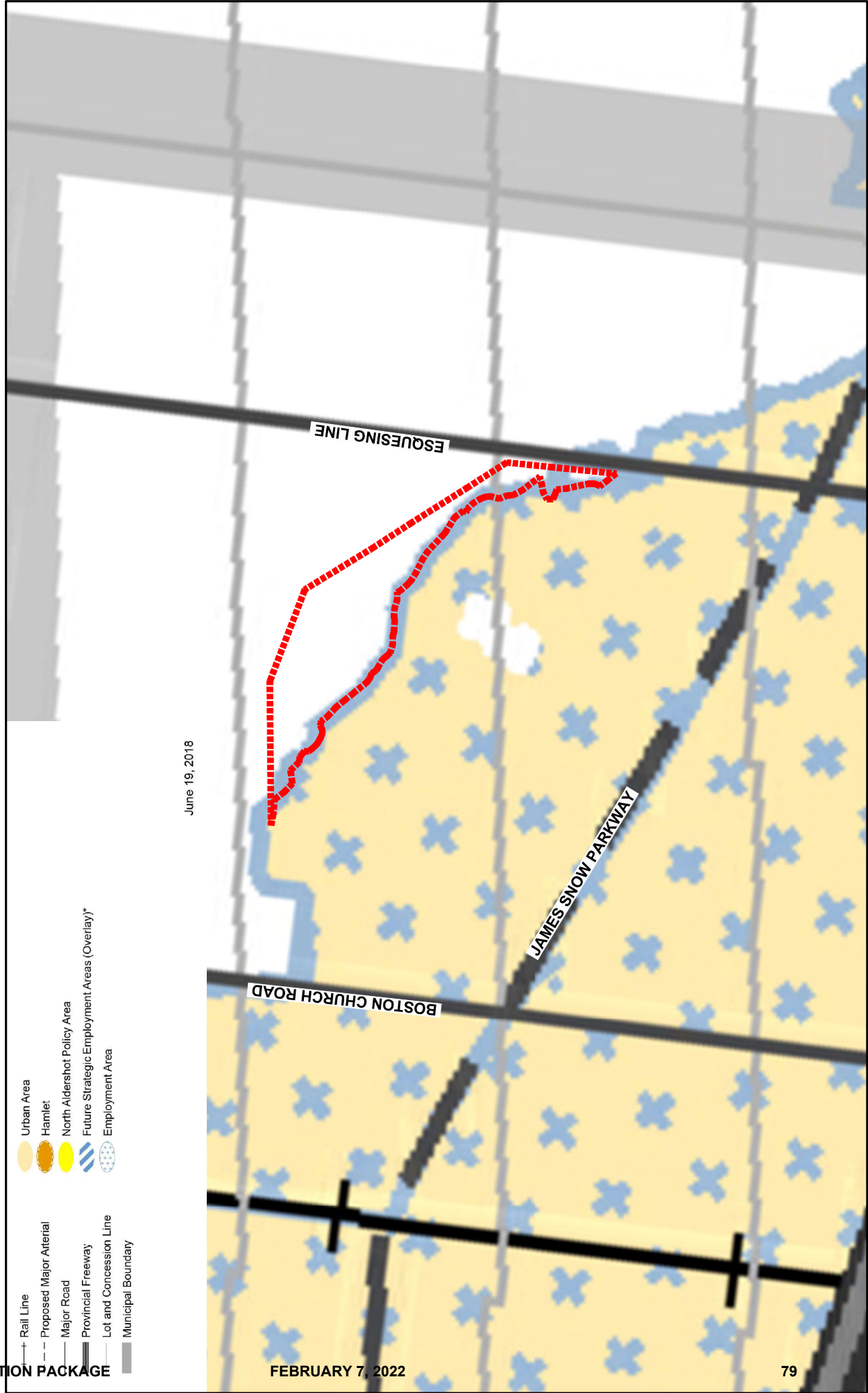
Map 1
Regional Structure
Draft Amendment Area



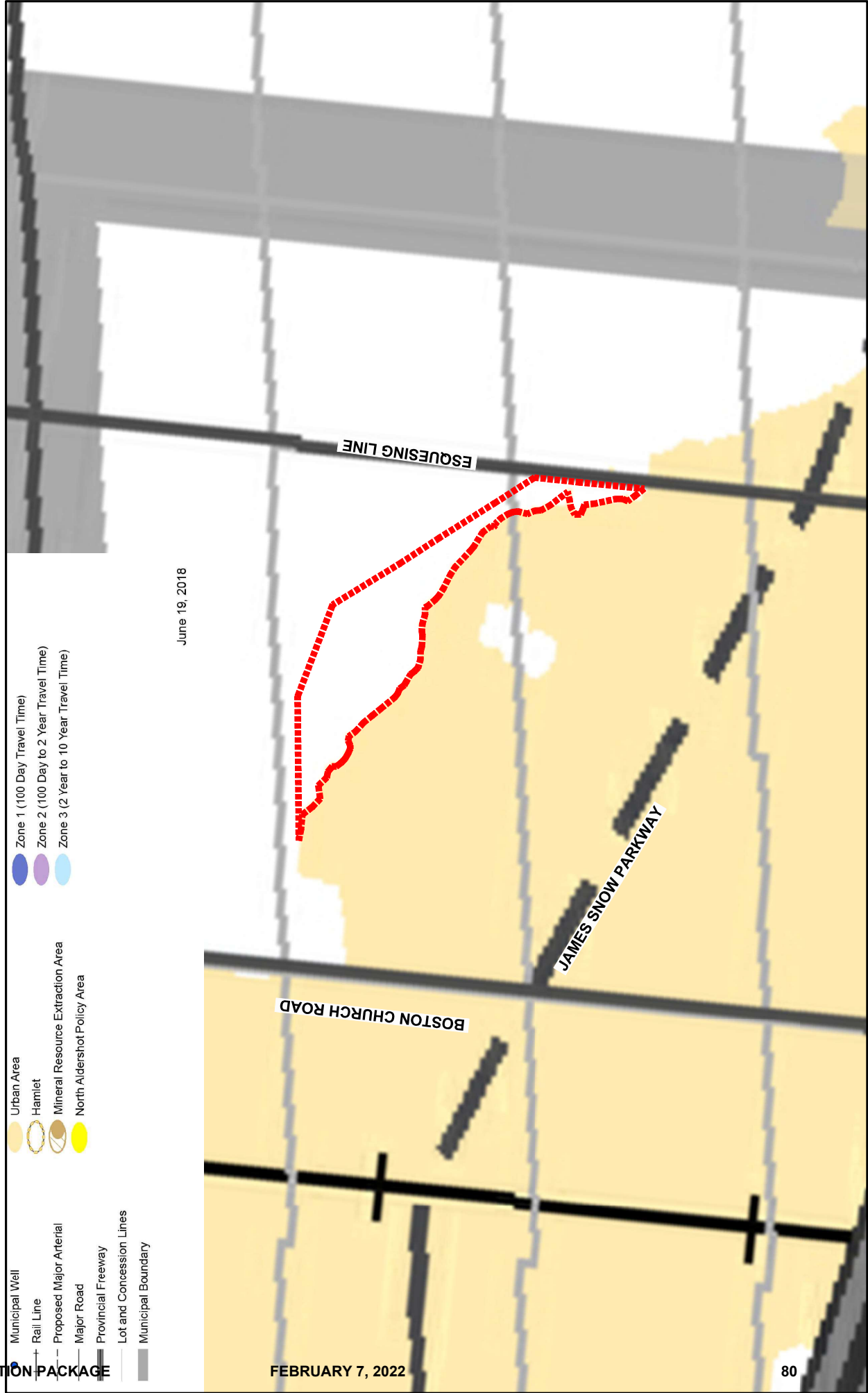
Map 1B
Draft Amendment Area
Parkway Belt Transportation and Utility Corridors



Map 1C
Future Strategic Employment Areas
Draft Amendment Area



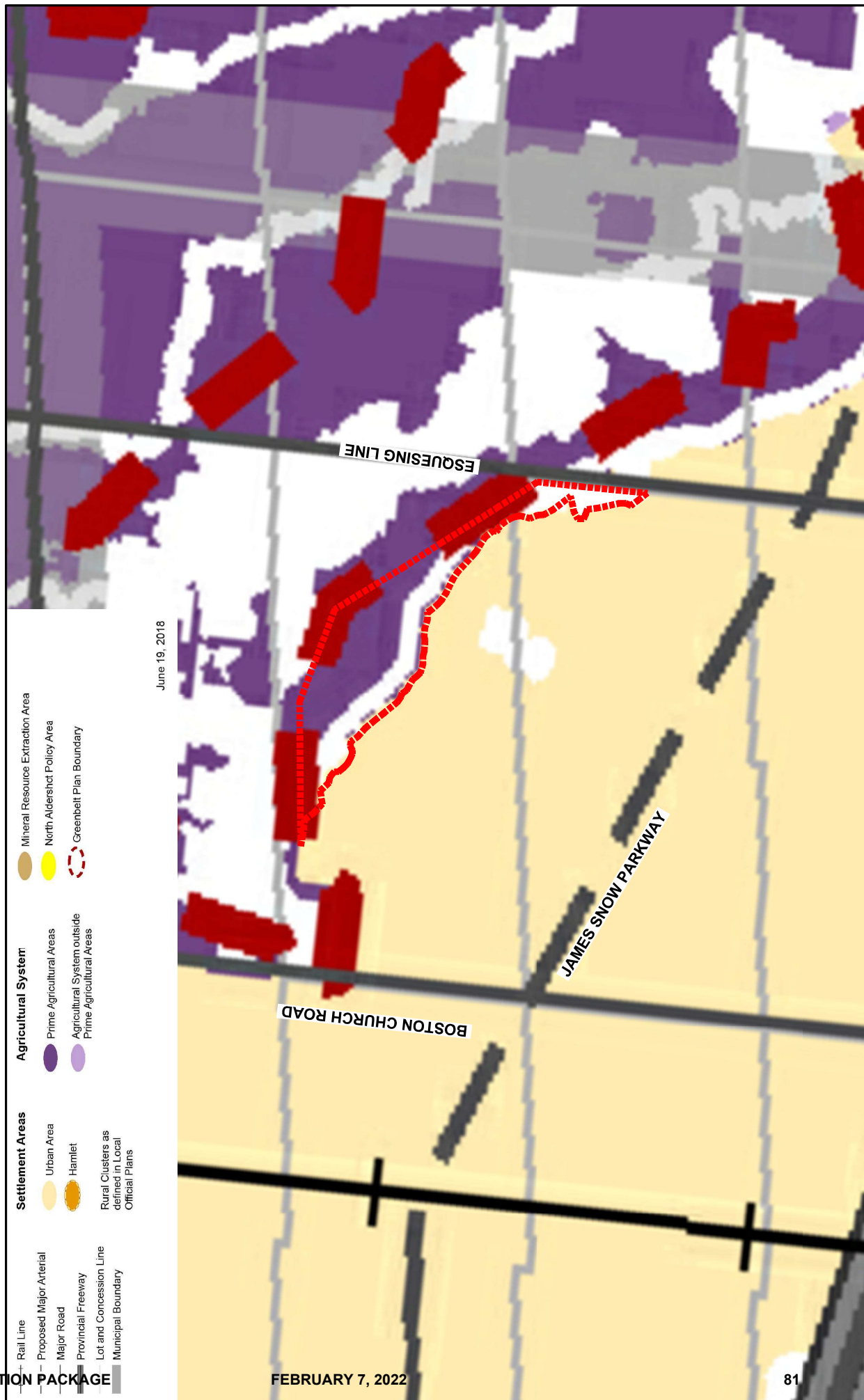
Map 1D
Draft Amendment Area
Municipal Wellhead Protection Zones



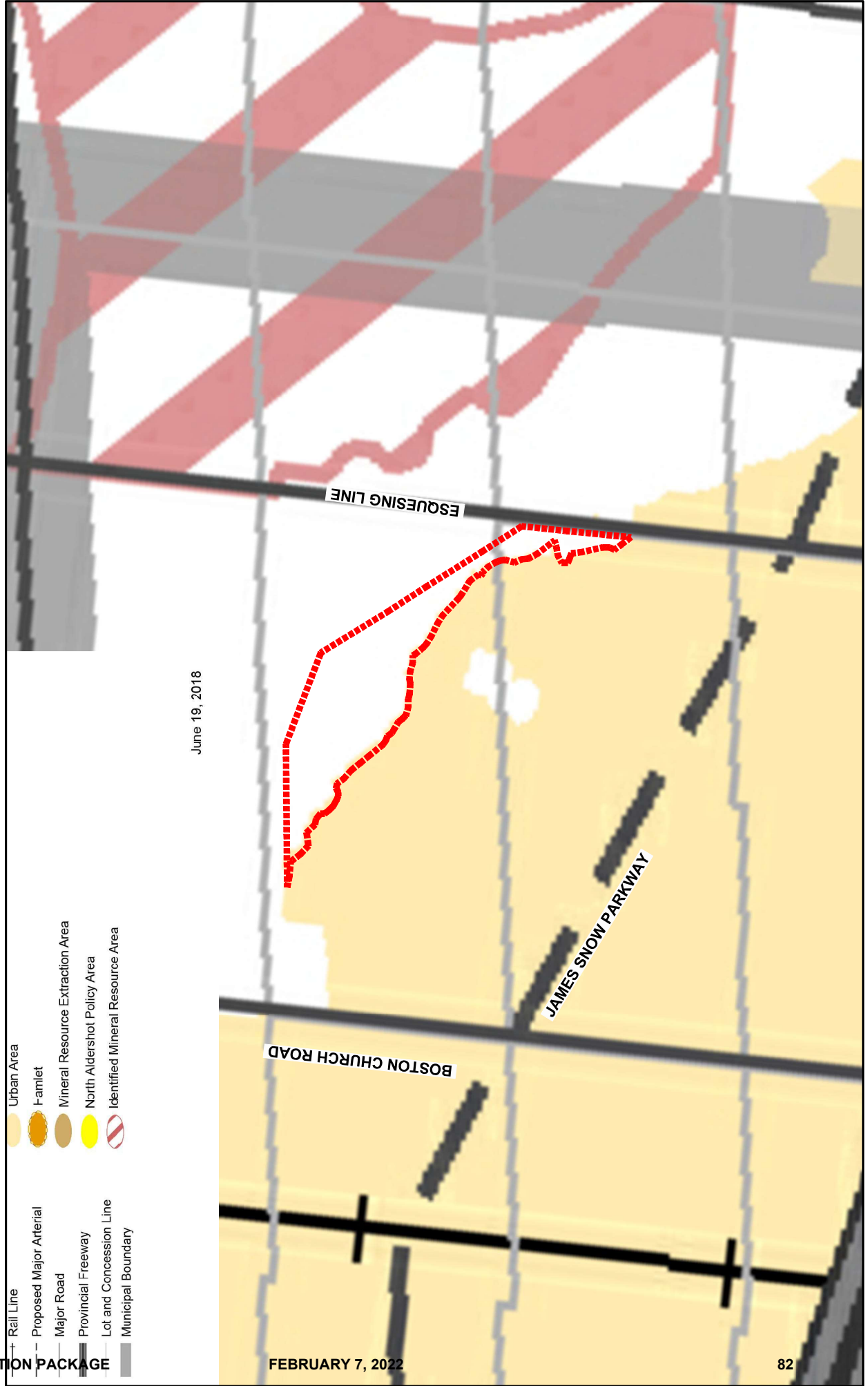
Map 1E Agricultural System and Settlement Areas



Draft Amendment Area



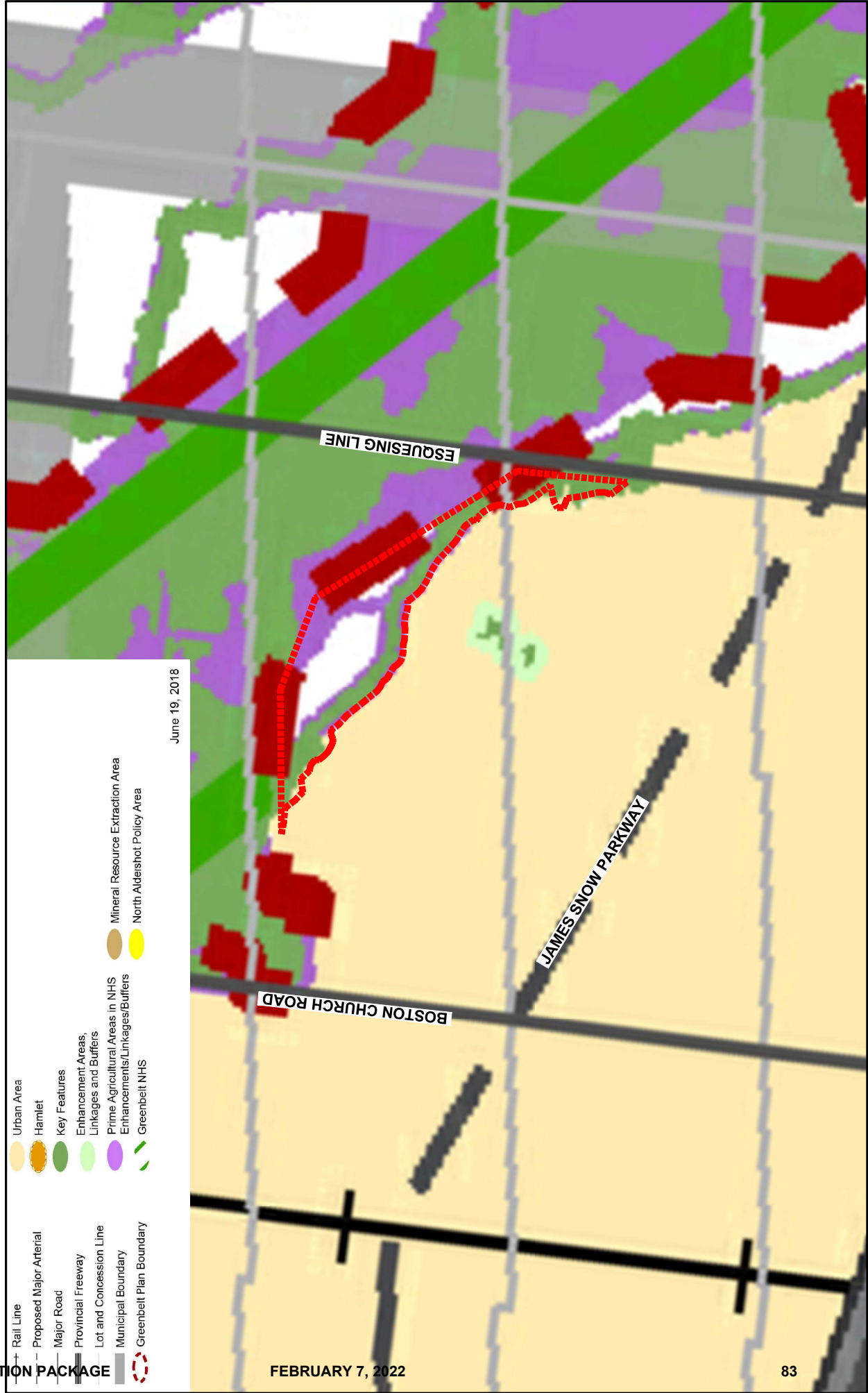
Map 1F
Draft Amendment Area
Identified Mineral Resource Areas



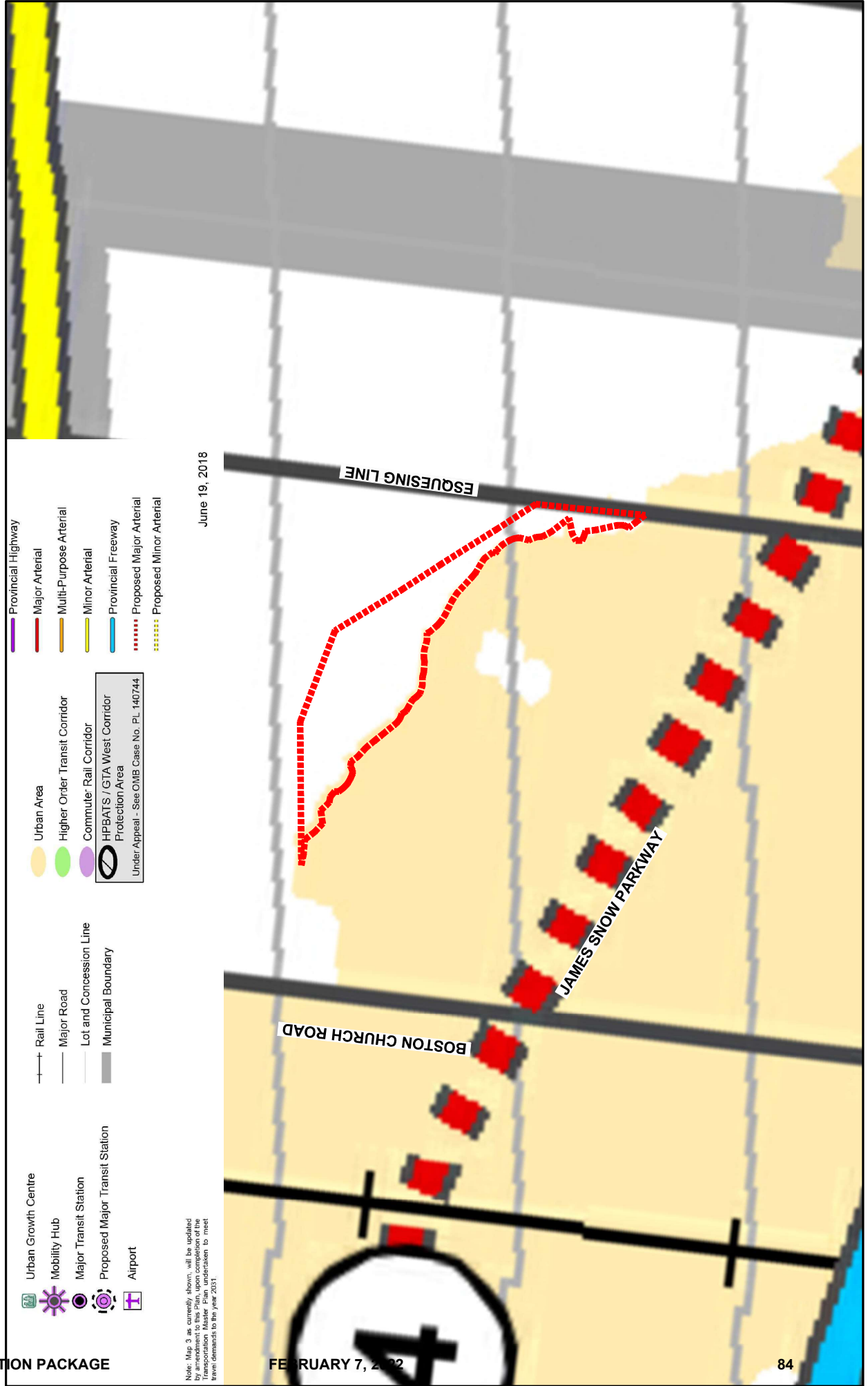
Map 1G

 Draft Amendment Area

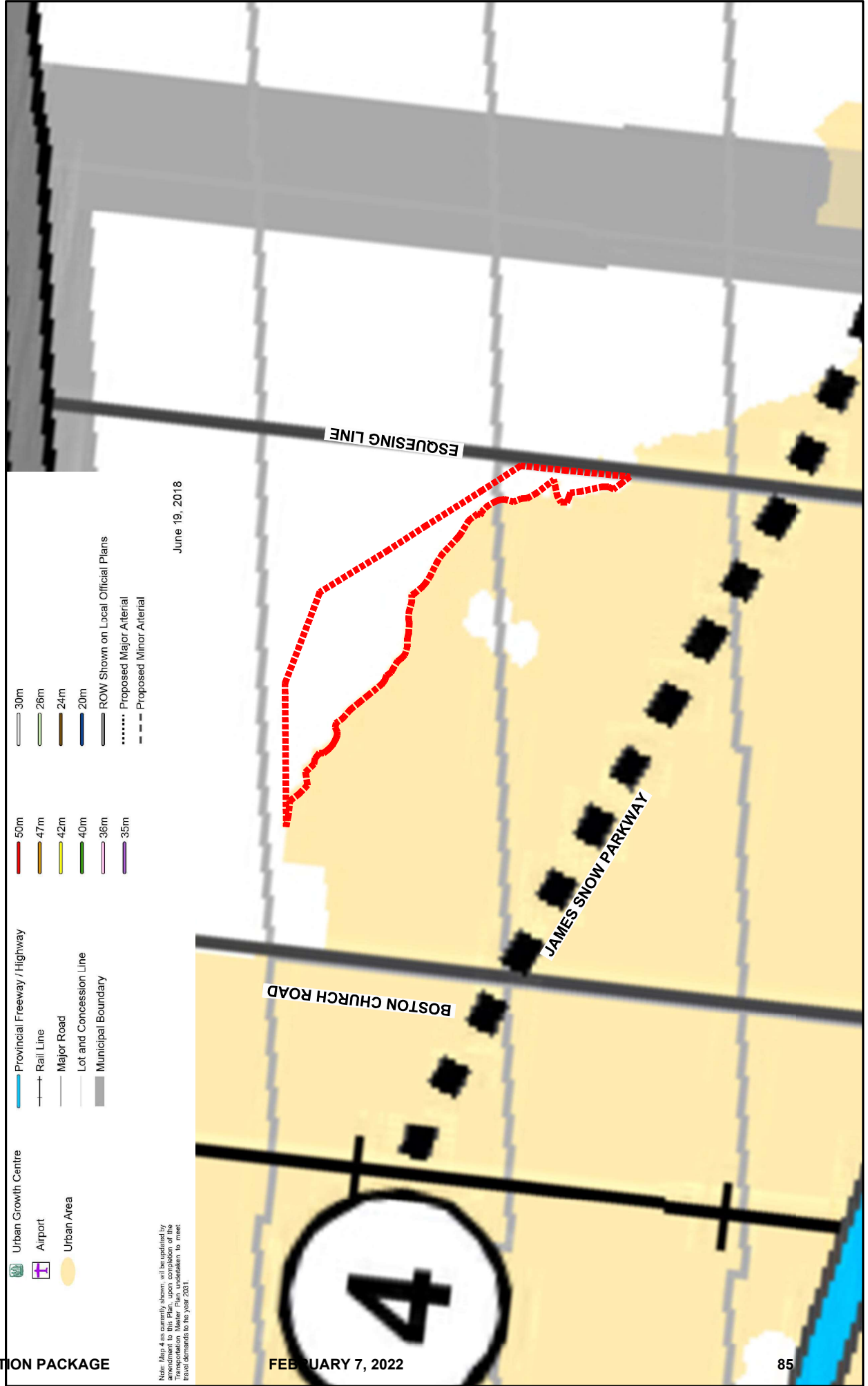
Key Features Within the Greenbelt and Regional Natural Heritage Systems



Map 3 Functional Plan of Major Transportation Facilities Draft Amendment Area

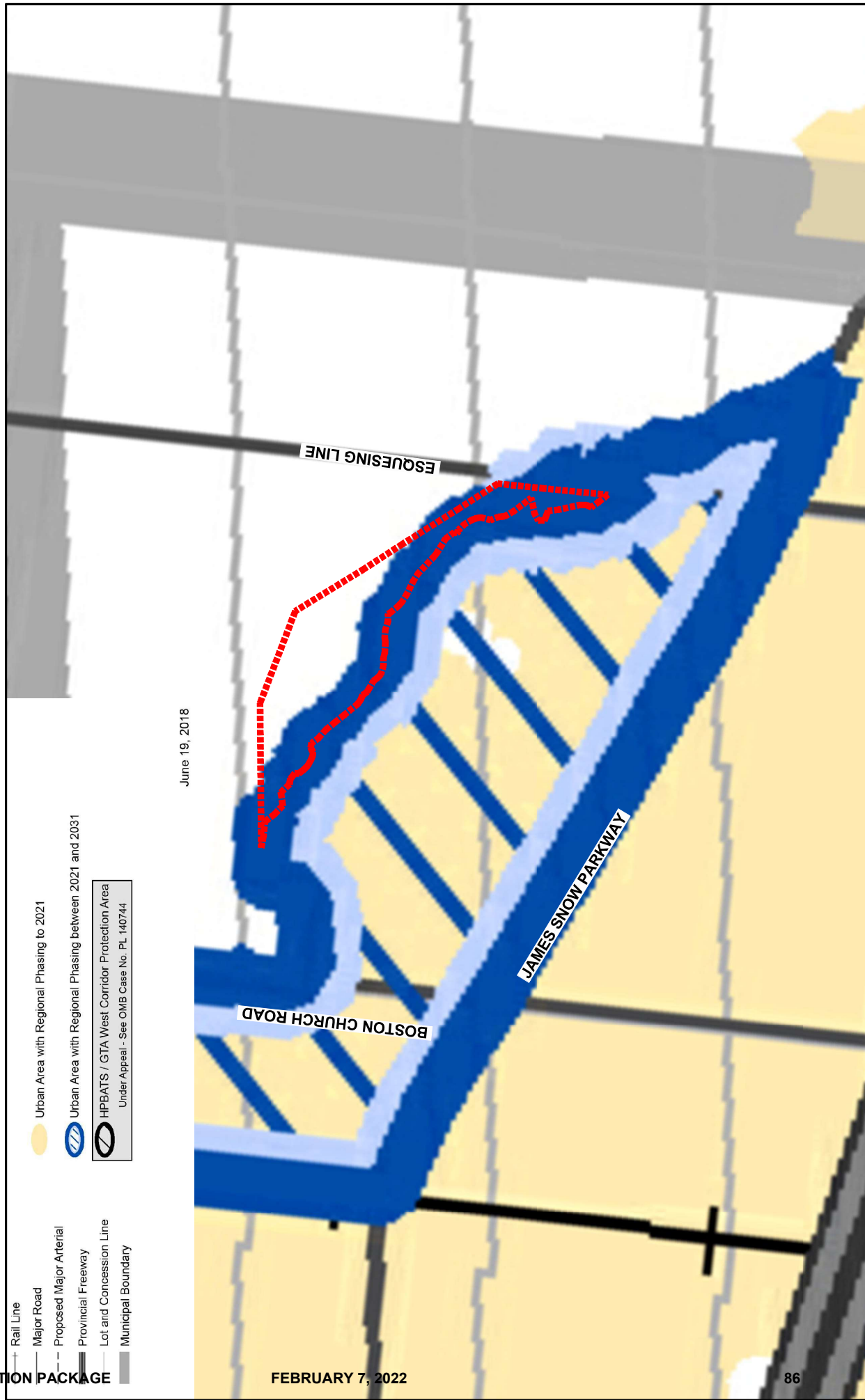


Map 4 Draft Amendment Area Right-of-Way requirements of Arterial Roads



Note: Map 4 is currently shown, will be updated by the Transportation Master Plan, undertaken to meet travel demands to the year 2031.

Map 5
Regional Phasing
Draft Amendment Area

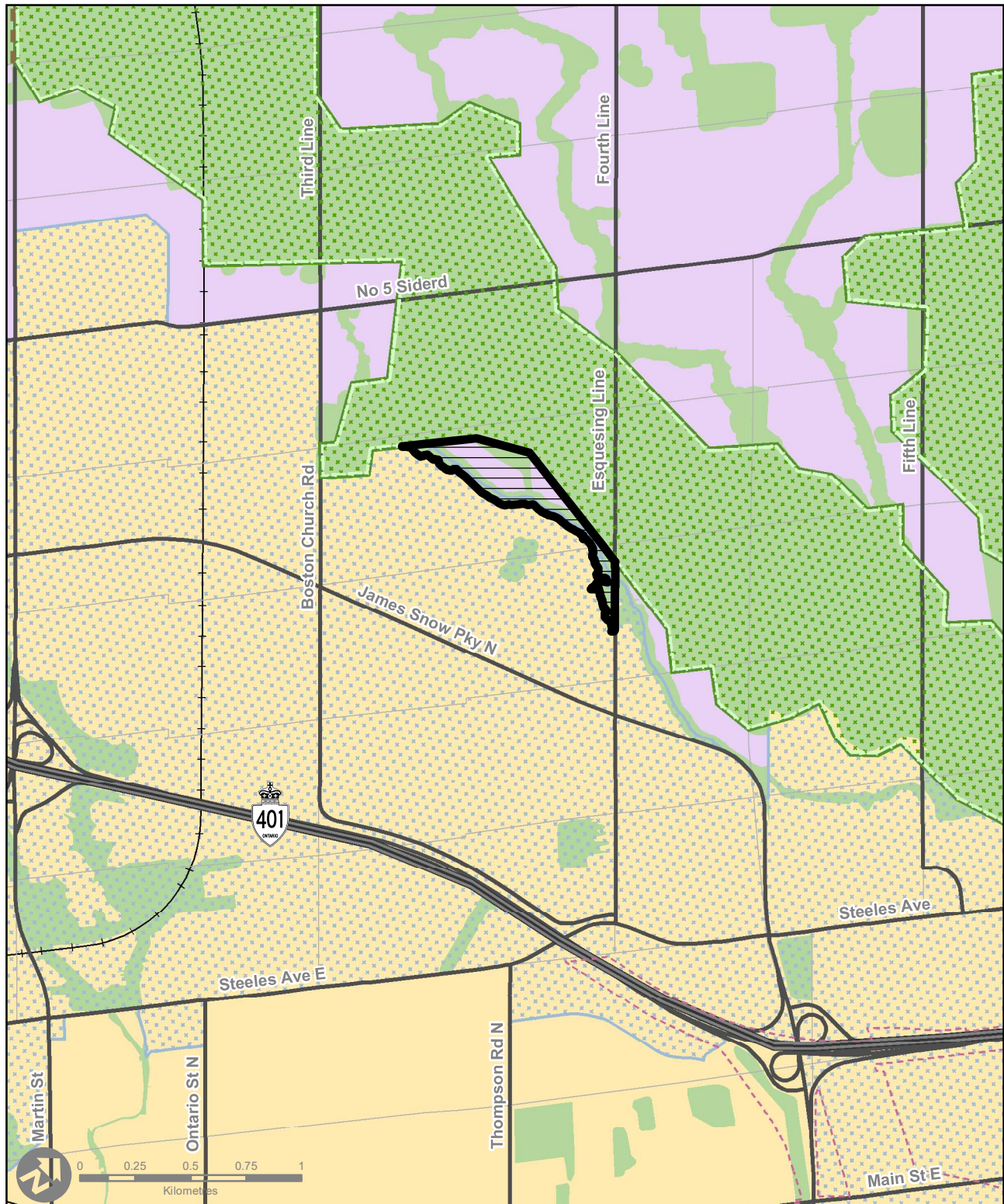


PART C THE APPENDICES

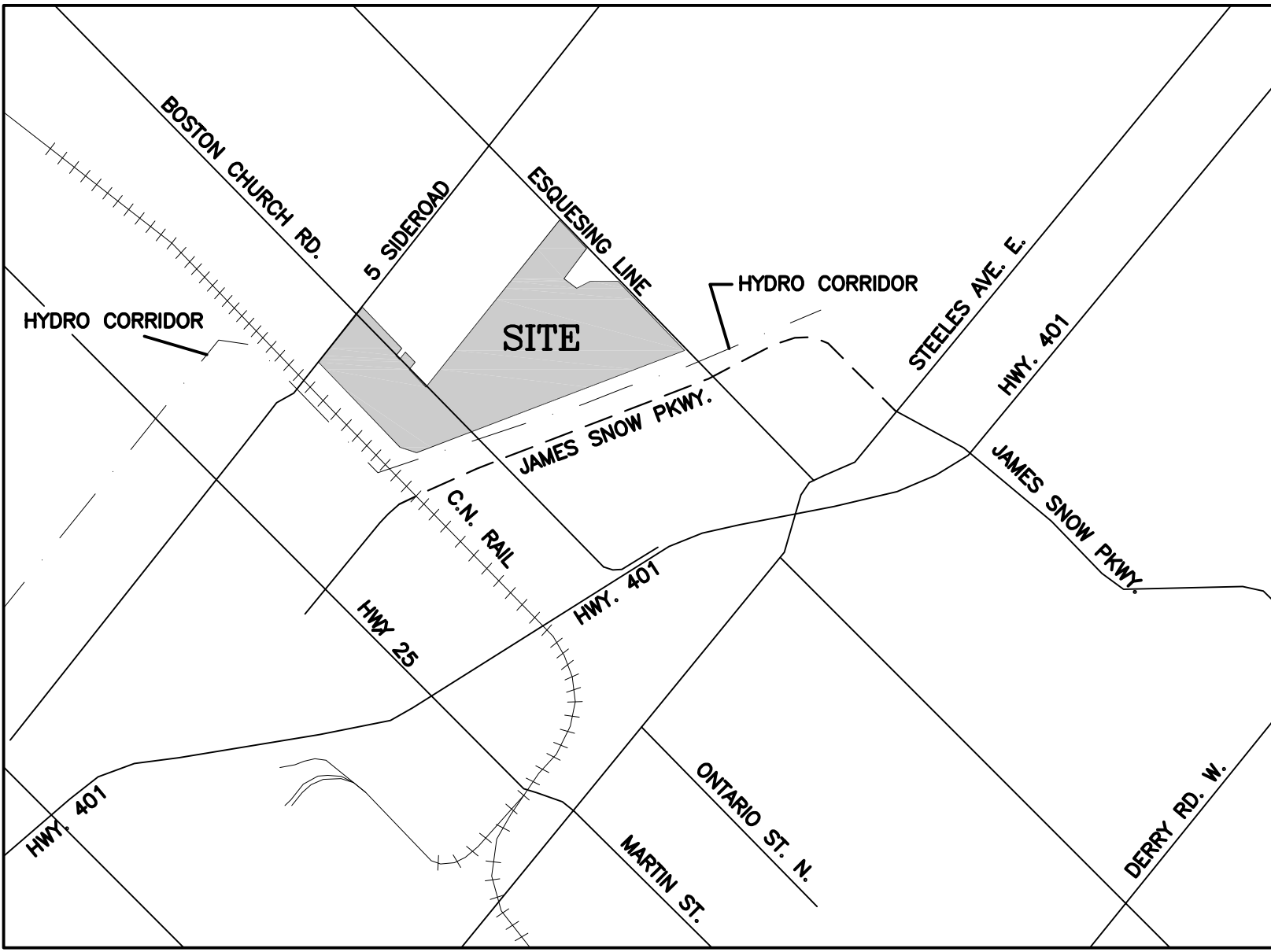
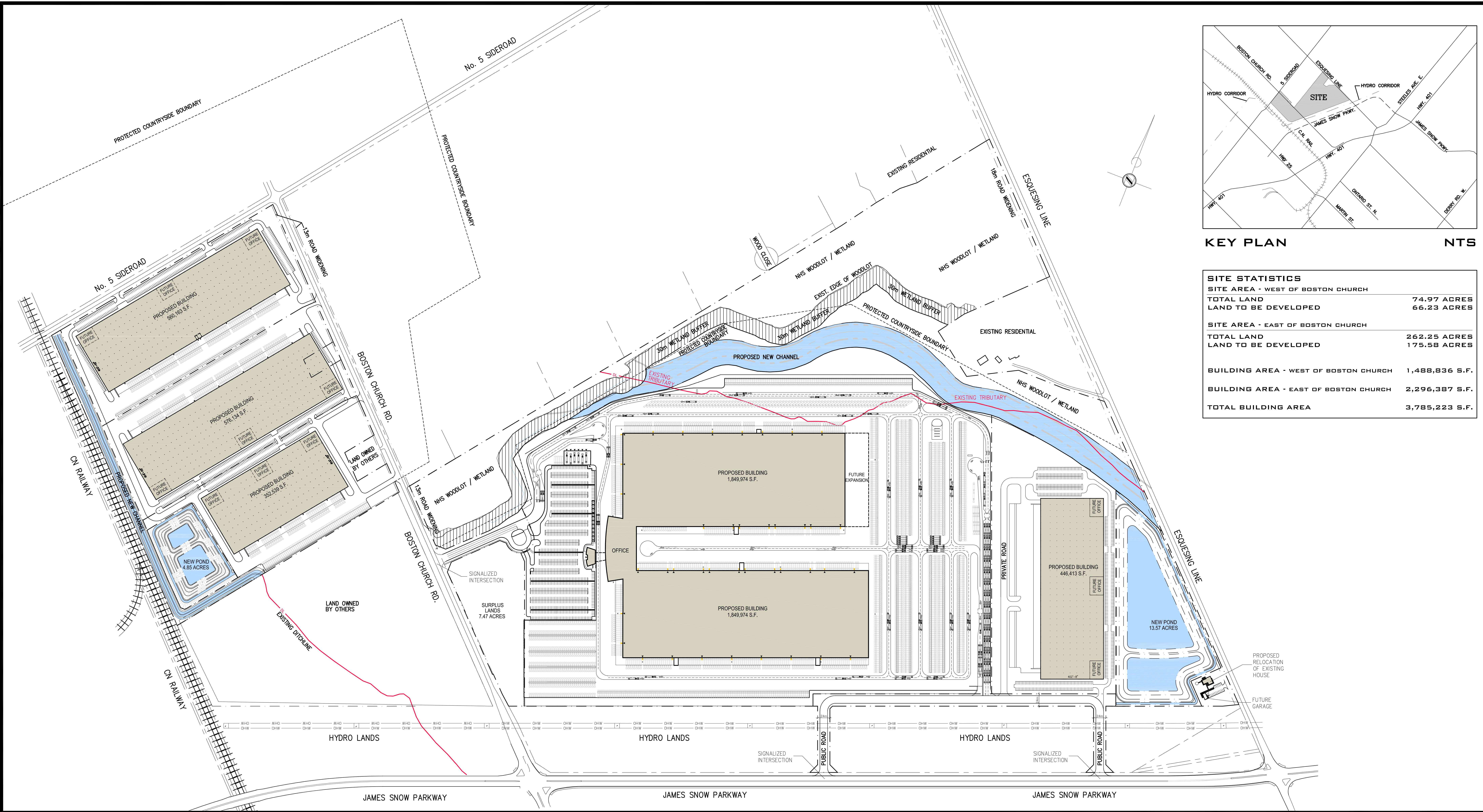
The following Appendices do not constitute part of Amendment No. XX, but are included as information supporting the amendment.

Appendix I Notice of Public Meeting

Appendix I Notice of Public Meeting

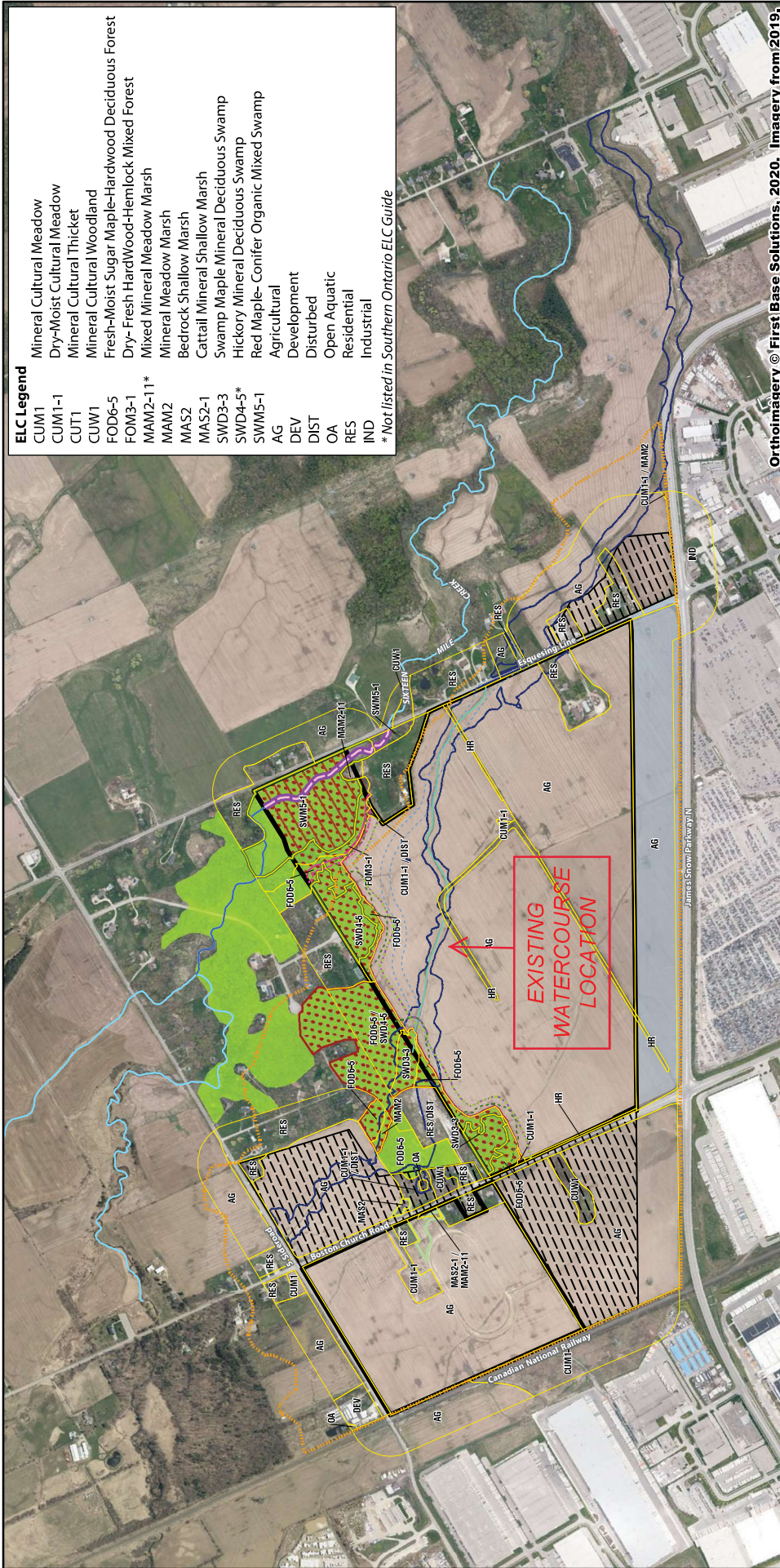


- | | | |
|---------------------------|---|---|
| —+— Rail Line | Urban Area | Greenbelt Plan Protected Countryside Boundary |
| — Major Road | Agricultural Area | Niagara Escarpment Plan Boundary |
| — Provincial Freeway | Regional Natural Heritage System * | Parkway Belt West Plan Boundary |
| — Lot and Concession Line | Greenbelt Natural Heritage System (Overlay) | ROPA Subject Lands |
| — Municipal Boundary | Employment Area | |



KEY PLAN NTS

SITE STATISTICS	
SITE AREA - WEST OF BOSTON CHURCH	
TOTAL LAND	74.97 ACRES
LAND TO BE DEVELOPED	66.23 ACRES
SITE AREA - EAST OF BOSTON CHURCH	
TOTAL LAND	262.25 ACRES
LAND TO BE DEVELOPED	175.58 ACRES
BUILDING AREA - WEST OF BOSTON CHURCH	1,488,836 S.F.
BUILDING AREA - EAST OF BOSTON CHURCH	2,296,387 S.F.
TOTAL BUILDING AREA	3,785,223 S.F.



Milton North Business Park, Comprehensive Environmental Servicing Study

Figure 12 Regional Natural Heritage Feature Components

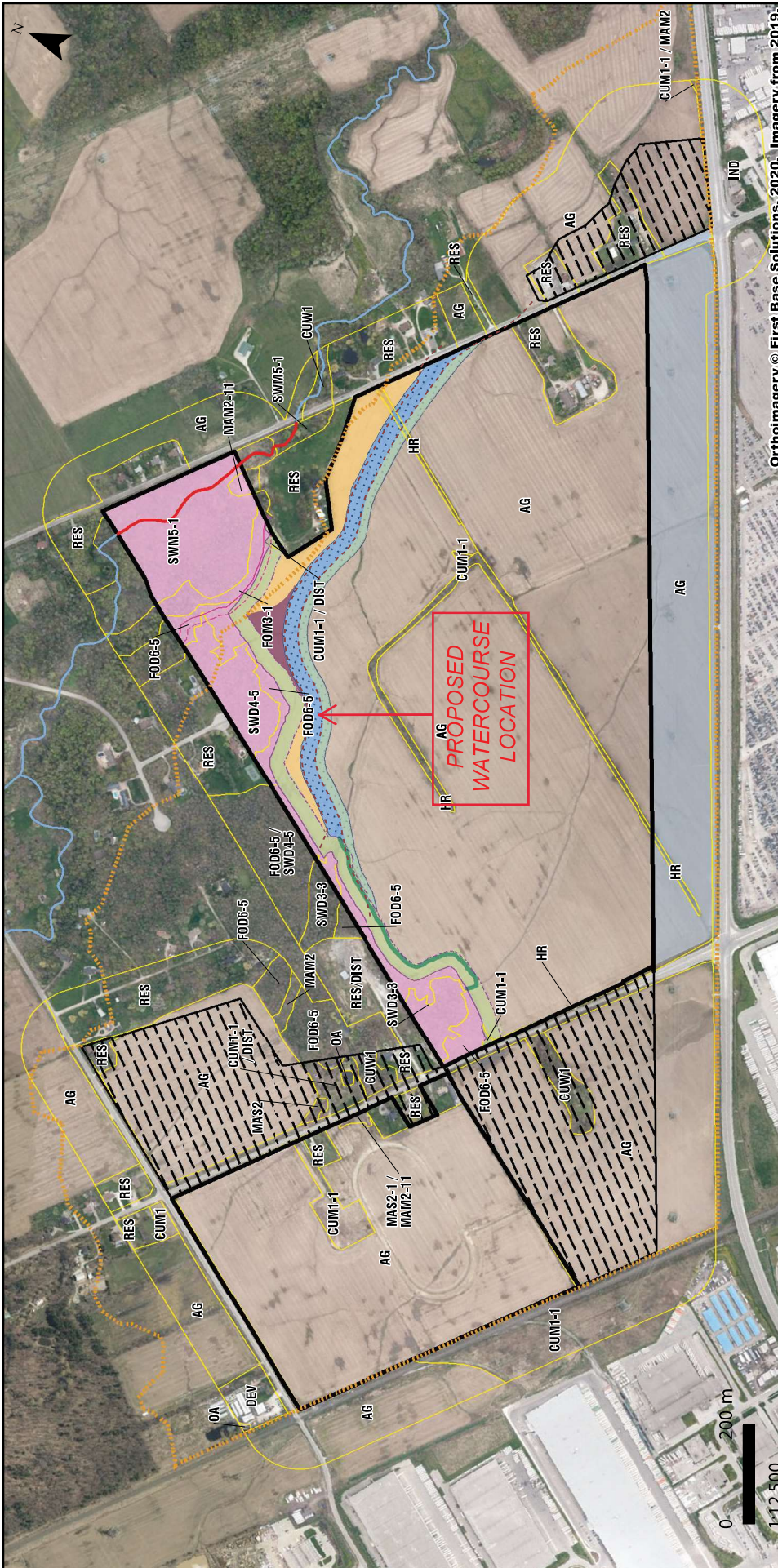
SAVANTA
A GEI Company

0 200 m
1:18,000



- Orlando Lands
- Non-participating Lands
- Subject Lands For Comprehensive Environmental Servicing Study
- Ecological Land Classification
- Floodlines (TMIG 2021)
- Proposed Floodlines (TMIG 2021)
- Sixteen Mile Creek - Middle Branch
- Significant Woodlands
- Habitat for Species of Conservation Concern Eastern Wood-Pewee
- Candidate Bat Maternity Colonies Habitat
- Rare Vegetation Type
- Candidate Turtle Overwintering Habitat
- Habitat for Species of Conservation Concern (Snapping Turtle)
- Linkage (as defined by Regional NHS)
- Regionally Significant Wetlands
- Other Wetlands
- Natural Feature Buffers
 - Significant Woodlands +30 m
 - Regionally Significant Wetlands +30 m
 - NHS Staked Limit +30 m
 - Staked Top of Bank +15 m

Any information shown on Parcels 2, 3 and 5 should be considered preliminary and is subject to further investigations.



Milton North Business Park,
Comprehensive Environmental Servicing Study
Figure 13

Proposed Natural Heritage System (Constraints and Opportunities)

Concept Plan: Milton North Concept Plan 2021-08-24

File: Milton North SITE PLAN r12.dwg

* Final orientation of Proposed Wetland Compensation Area to be defined during the detailed design phase.

Any information shown on Parcels 2, 3 and 5 should be considered preliminary and is subject to further investigations.

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- Orlando Lands**
- Non-participating Lands
 - Subject Lands For Comprehensive Environmental Servicing Study
 - Hydro Corridor
 - Ecological Land Classification
 - Watercourse
 - High Constraint Watercourse
 - NHS Staked Limit
 - Staked Top of Bank
 - NHS Staked Limit + 30 m
 - Staked Top of Bank +15 m
 - Proposed Floodlines (TMIG 2021)
 - Proposed Natural Heritage System**
 - Vegetated Buffers
 - Intermediary Areas
 - Retained Features
 - Created Wetland
 - Realigned Watercourse
 - Green Swale

ELC Legend

- CUM1 Mineral Cultural Meadow
- CUM1-1 Dry-Moist Cultural Meadow
- CUT1 Mineral Cultural Thicket
- CUM1 Mineral Cultural Woodland
- FOD6-5 Fresh-Moist Sugar Maple-Hardwood Deciduous Forest
- FOM3-1 Dry-Fresh Hardwood-Hemlock Mixed Forest
- MAM2-11* Mixed Mineral Meadow Marsh
- MAS2 Bedrock Shallow Marsh
- MAS2-1 Cattail Mineral Shallow Marsh
- SWD3-3 Swamp Maple Mineral Deciduous Swamp
- SWD4-5* Hickory Mineral Deciduous Swamp
- SWM5-1 Red Maple- Conifer Organic Mixed Swamp
- AG Agricultural
- DEV Development
- DIST Disturbed
- OA Open Aquatic
- RES Residential

* Not listed in Southern Ontario ELC Guide

Orthoimagery © First Base Solutions, 2020. Imagery from 2019.

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Park Secondary Plan'

August 2021

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Regional Clerk
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Date

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Purpose

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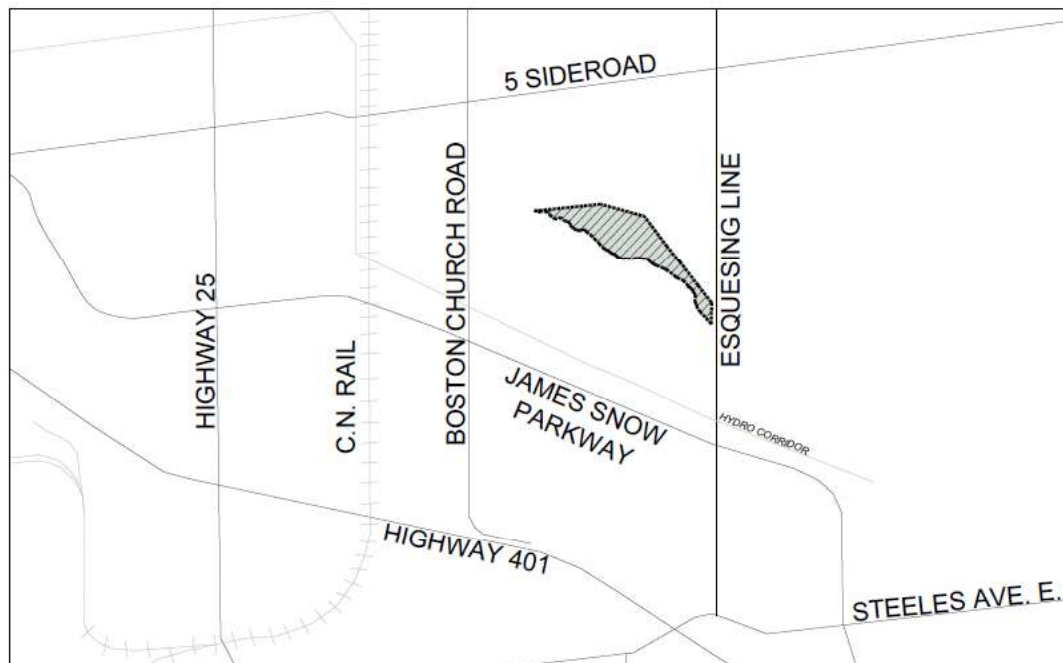
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- i) North – limit of the Greenbelt Plan
- ii) East – Esquesing Line
- iii) South – the existing Urban Area limit
- iv) West – the existing Urban Area limit

Figure 1

July 22, 2021

The Amendment Area



Basis

The current 2031 'Urban Area' limit for the Town of Milton was established through Halton Region Official Plan Amendment No. 38 (ROPA 38) and in this vicinity it was meant to accommodate employment growth to 2031. The current 2031 'Urban Area' limit falls short of including all lands that are mapped as "Provincially Significant Employment Zone" (PSEZ) and as a result, excludes a portion (or 'northern sliver') of a property that is proposed for future employment growth, consistent with the Province's "Provincially Significant Employment Zone" (PSEZ) area. This 'northern sliver' of land should logically be included within the Regional and Town "Urban Area".

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Item 8	Map 3, <i>Functional Plan of Major Transportation Facilities</i> , is amended to reflect the modified “Urban Area” designation as shown herein on Map 3 provided as Attachment #8.

Item 9	Map 4, <i>Right-of-Way Requirements of Arterial Roads</i> , is amended to reflect the modified “Urban Area” designation as shown herein on Map 4 provided as Attachment #9.
Item 10	Map 5, <i>Regional Phasing</i> , is amended to reflect the modified “Urban Area” designation and applying the overlay “Urban Area with Regional Phasing between 2021 and 2031” as shown herein on Map 5 provided as Attachment #10.

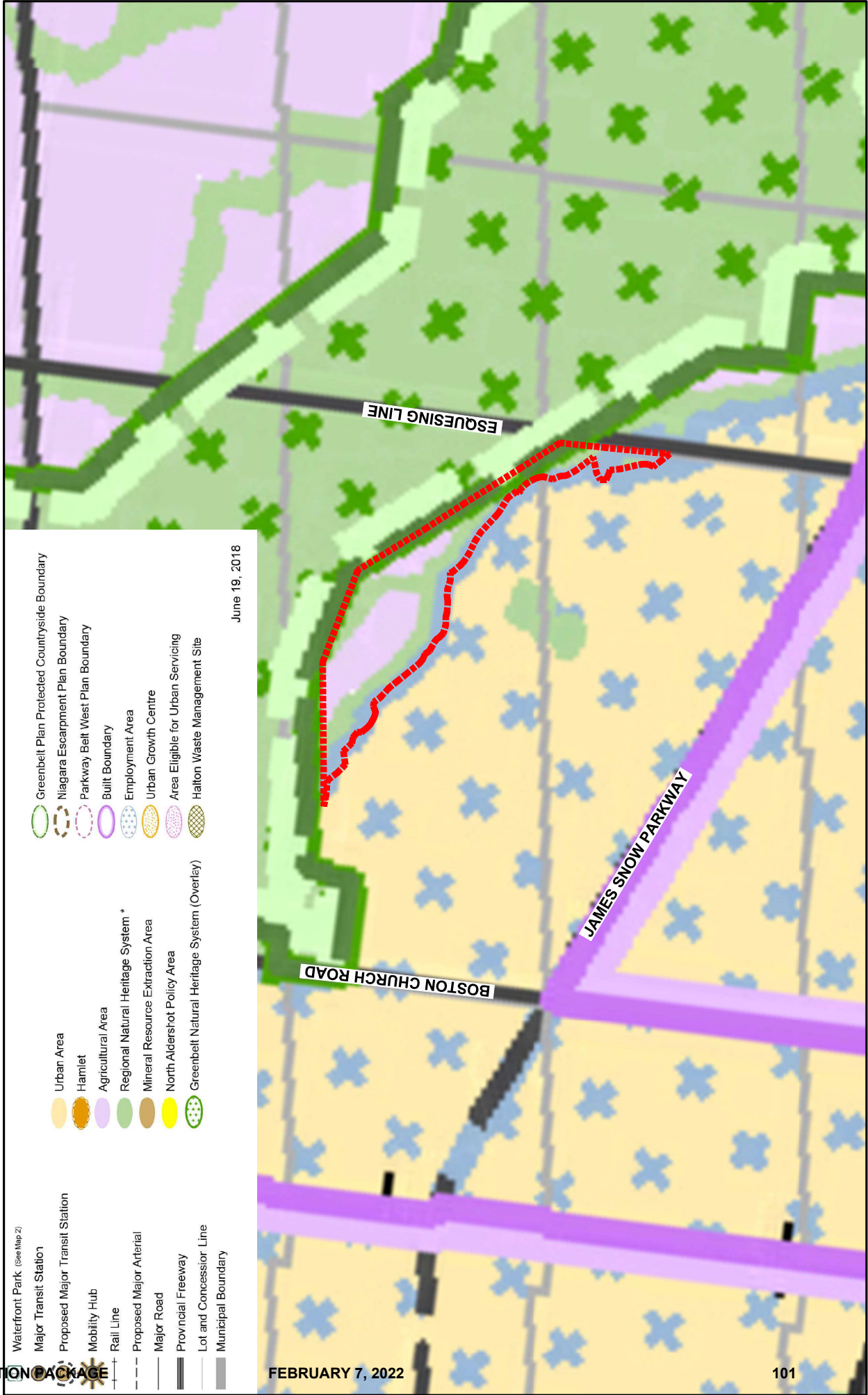
- Items 1 through 10 (changes to and addition of maps)

Specified maps of the Plan are amended as shown on Attachments 1 through 10.

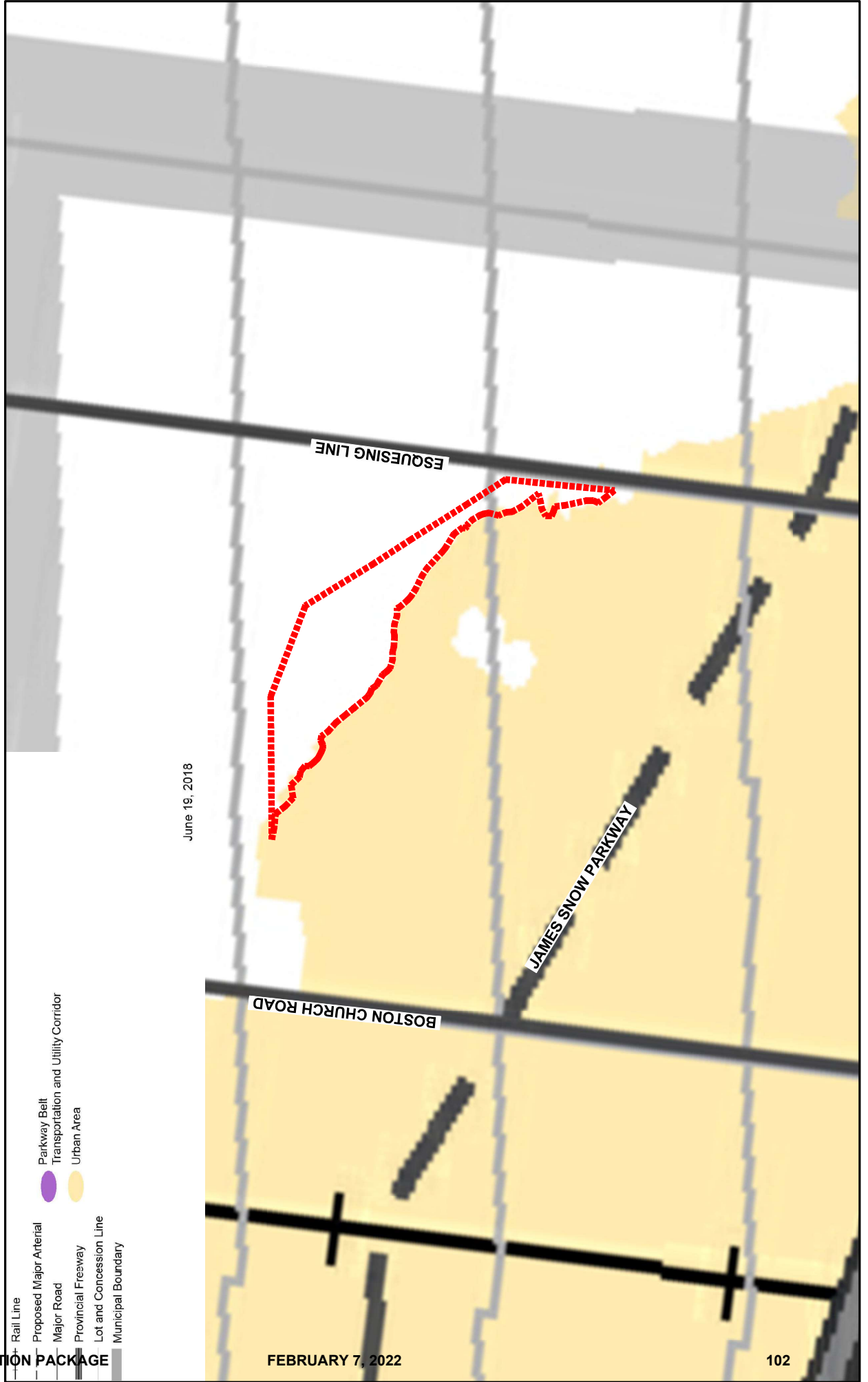
Map 1 Regional Structure



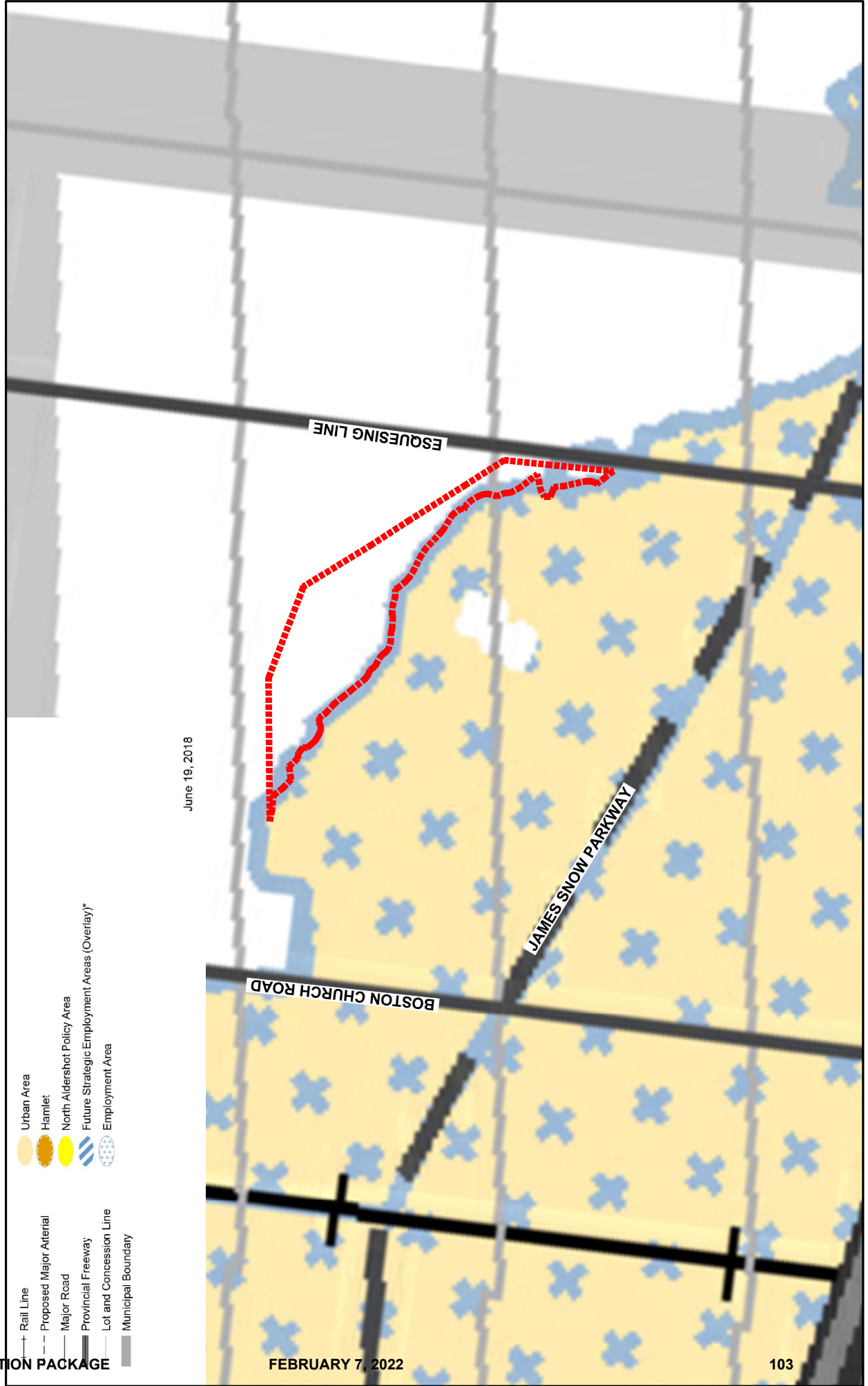
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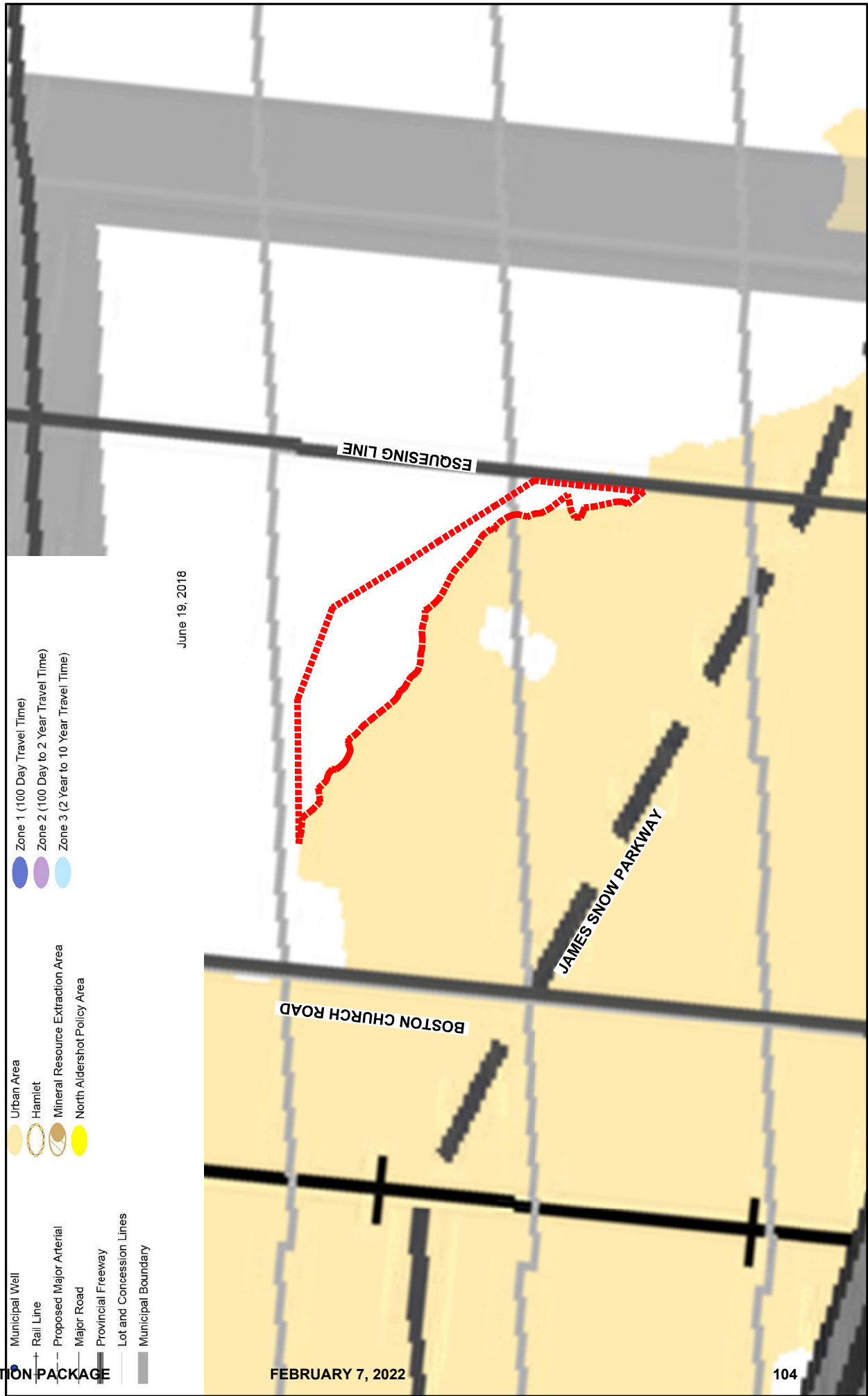
Map 1B
Draft Amendment Area
Parkway Belt Transportation and Utility Corridors



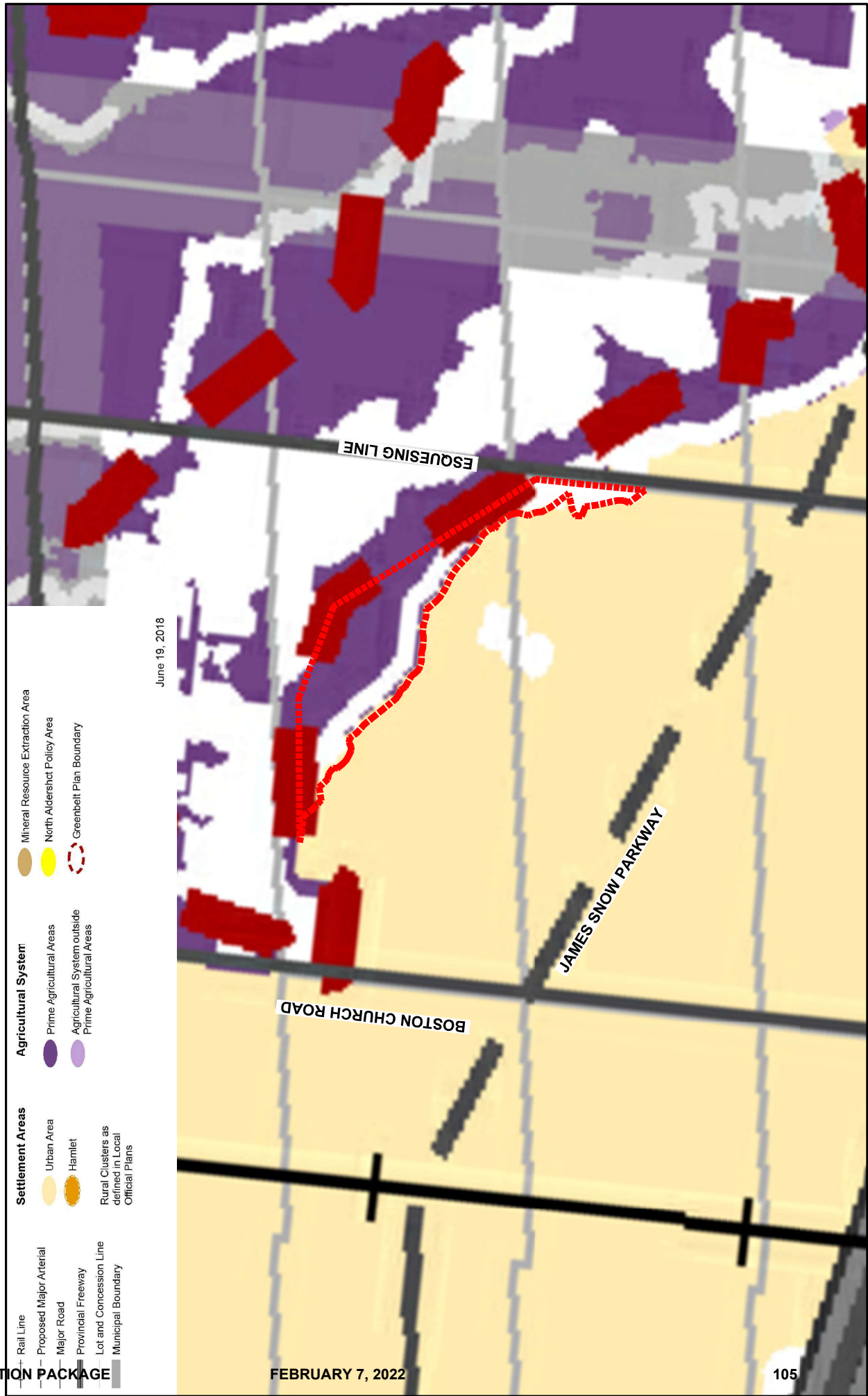
Map 1C
Future Strategic Employment Areas
Draft Amendment Area



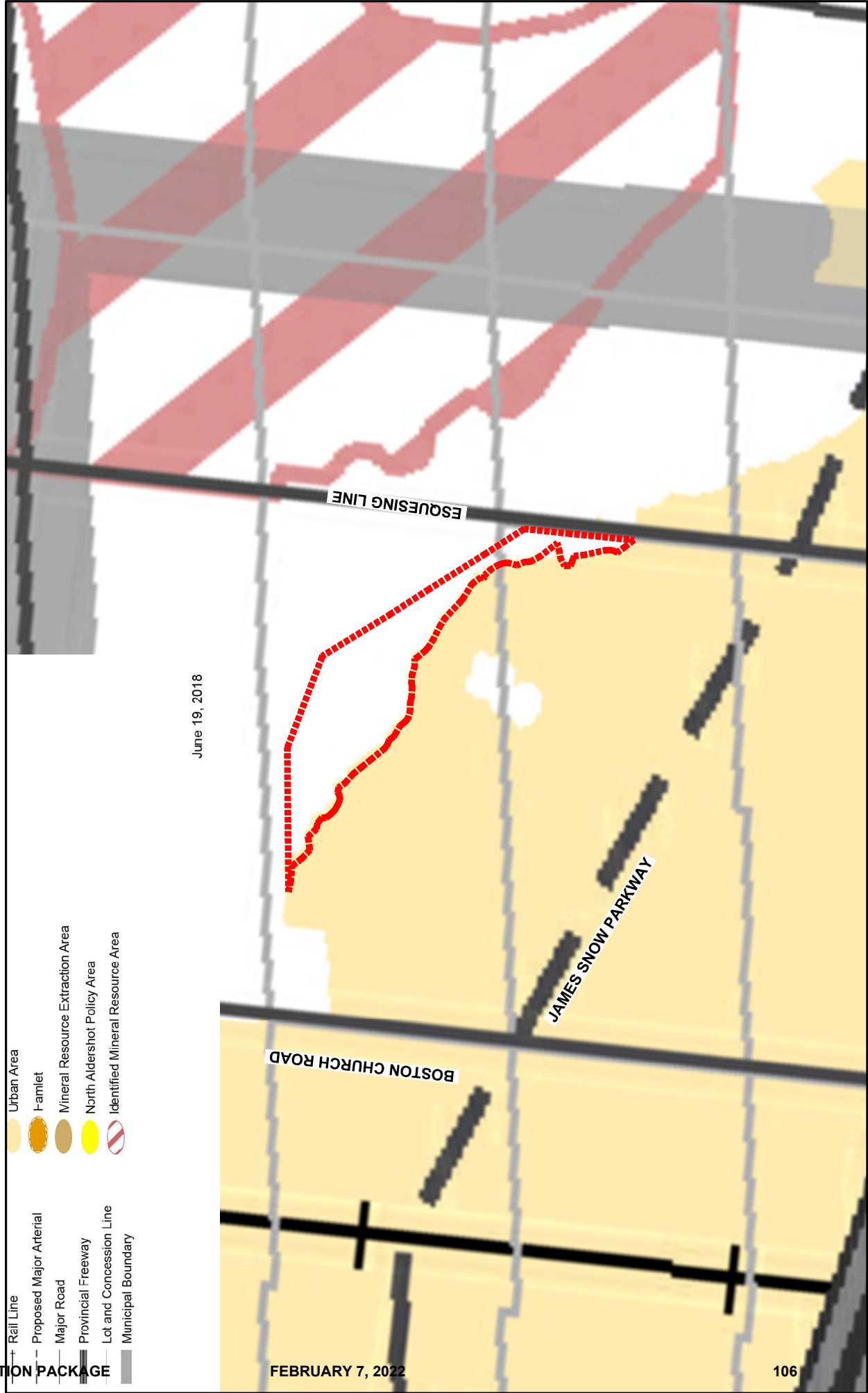
Map 1D
Draft Amendment Area
Municipal Wellhead Protection Zones



Map 1E
Draft Amendment Area
Agricultural System and Settlement Areas



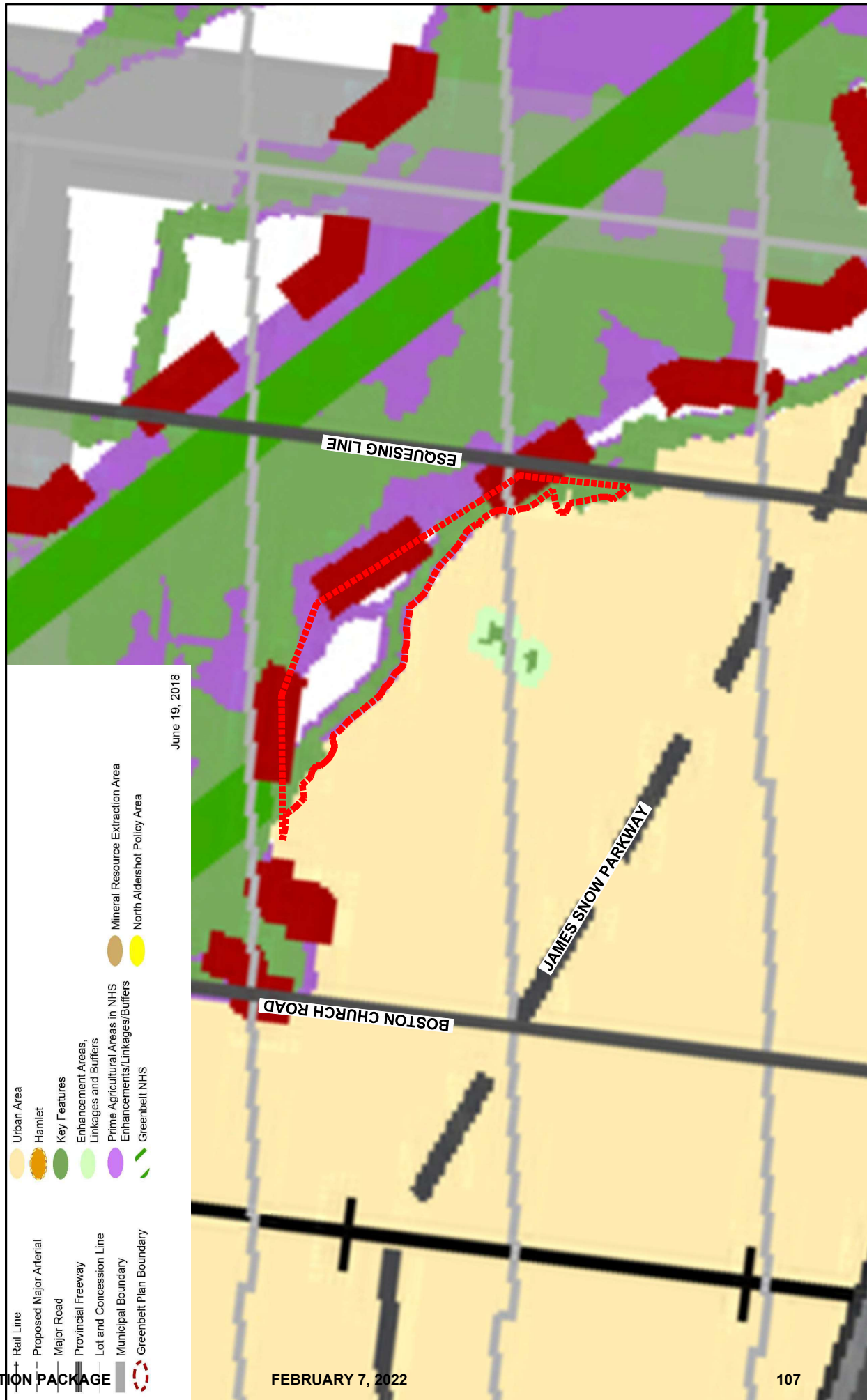
Map 1F
Draft Amendment Area
Identified Mineral Resource Areas



Map 1G

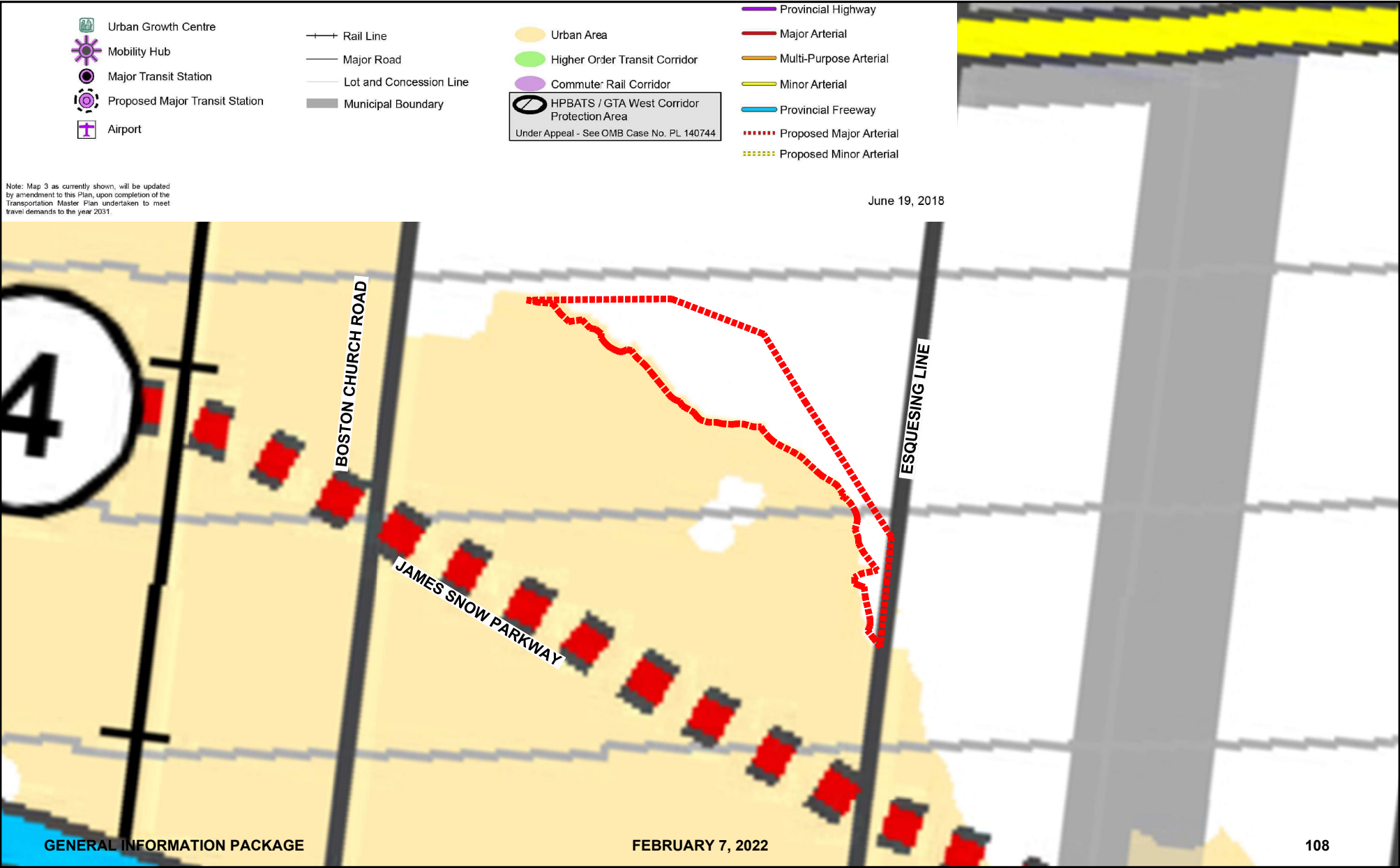
Draft Amendment Area

Key Features Within the Greenbelt and Regional Natural Heritage Systems



Map 3
Functional Plan of Major Transportation Facilities

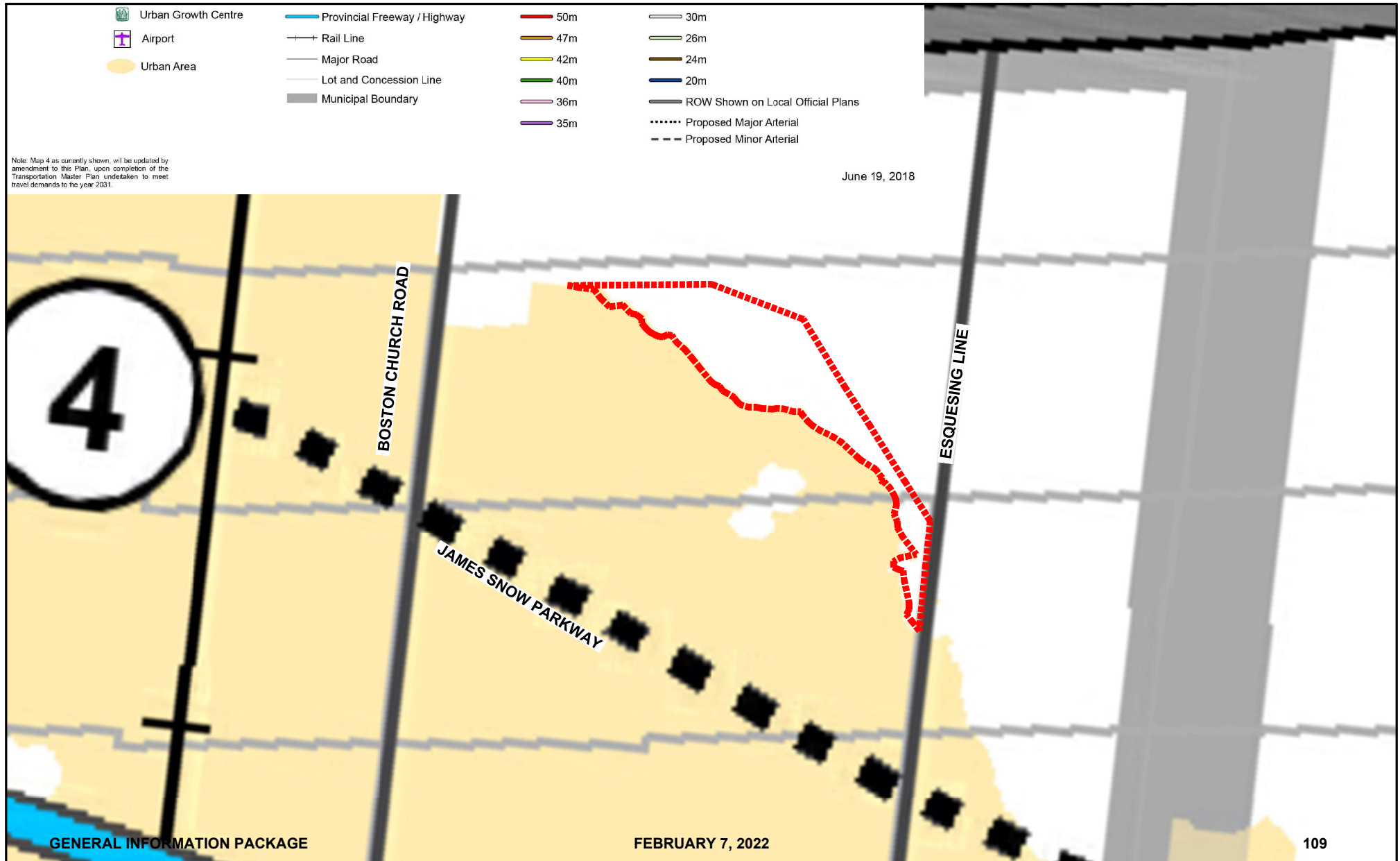
 Draft Amendment Area



Map 4 Right-of-Way requirements of Arterial Roads

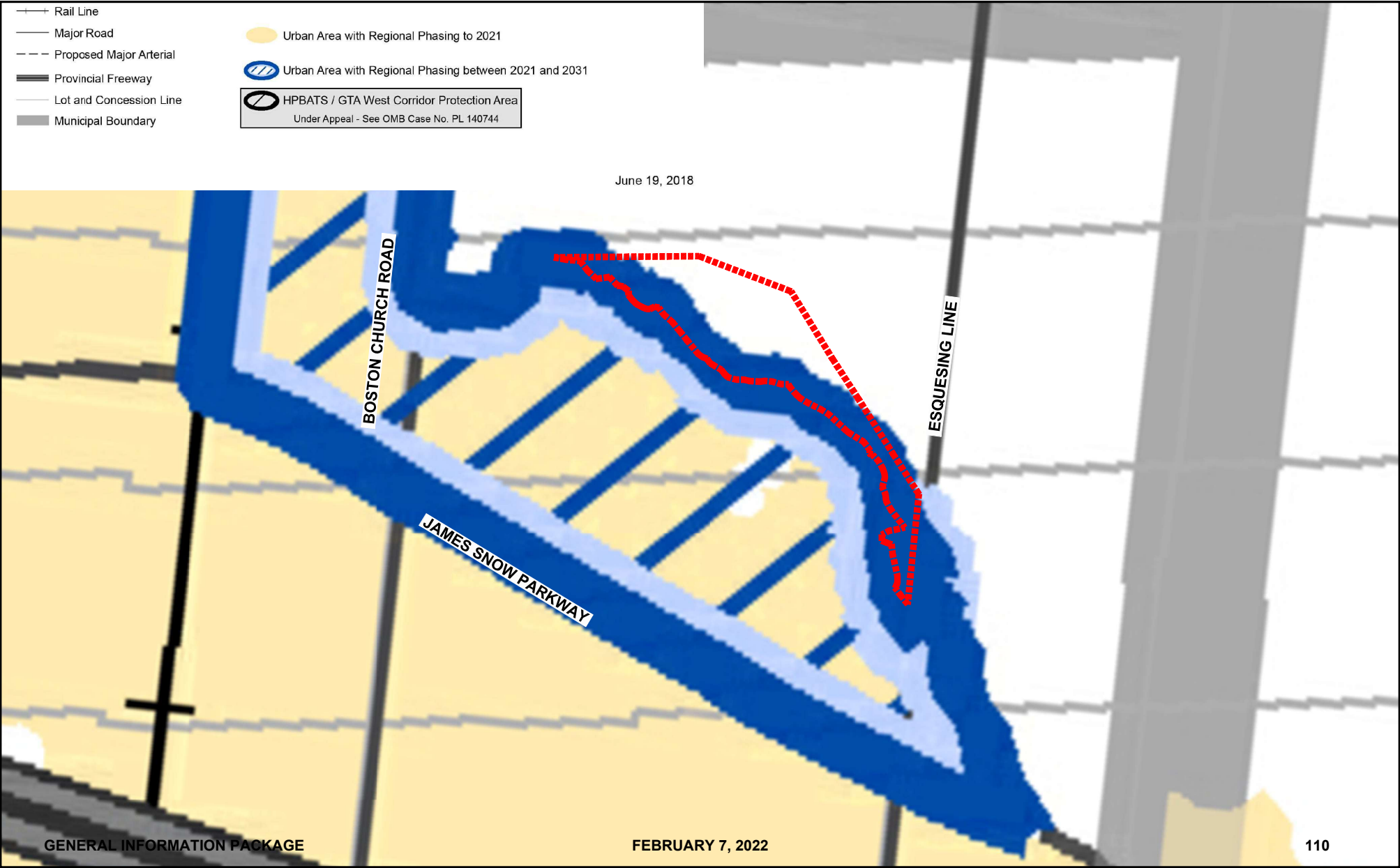


Draft Amendment Area



Map 5
Regional Phasing

 Draft Amendment Area

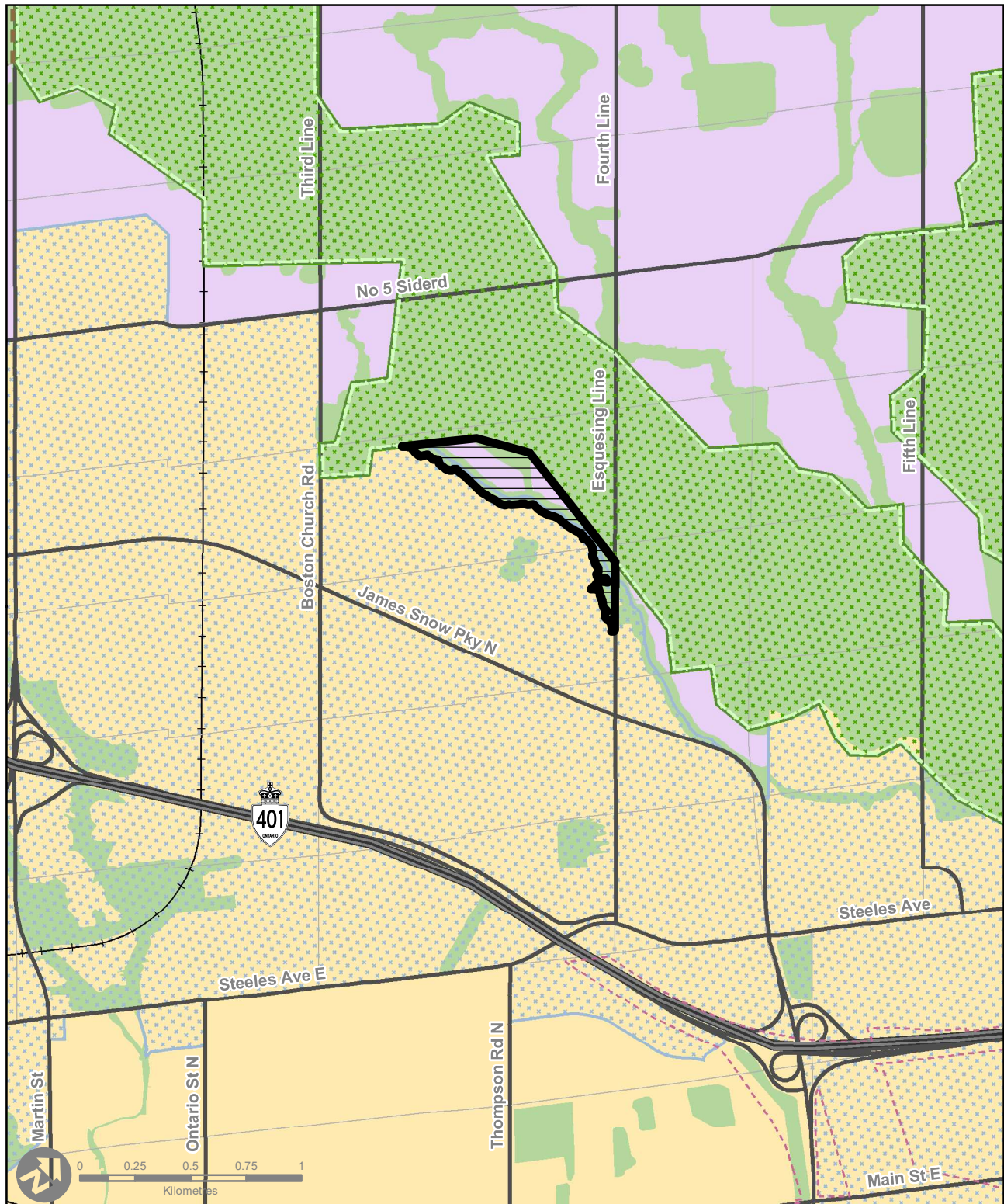


PART C THE APPENDICES

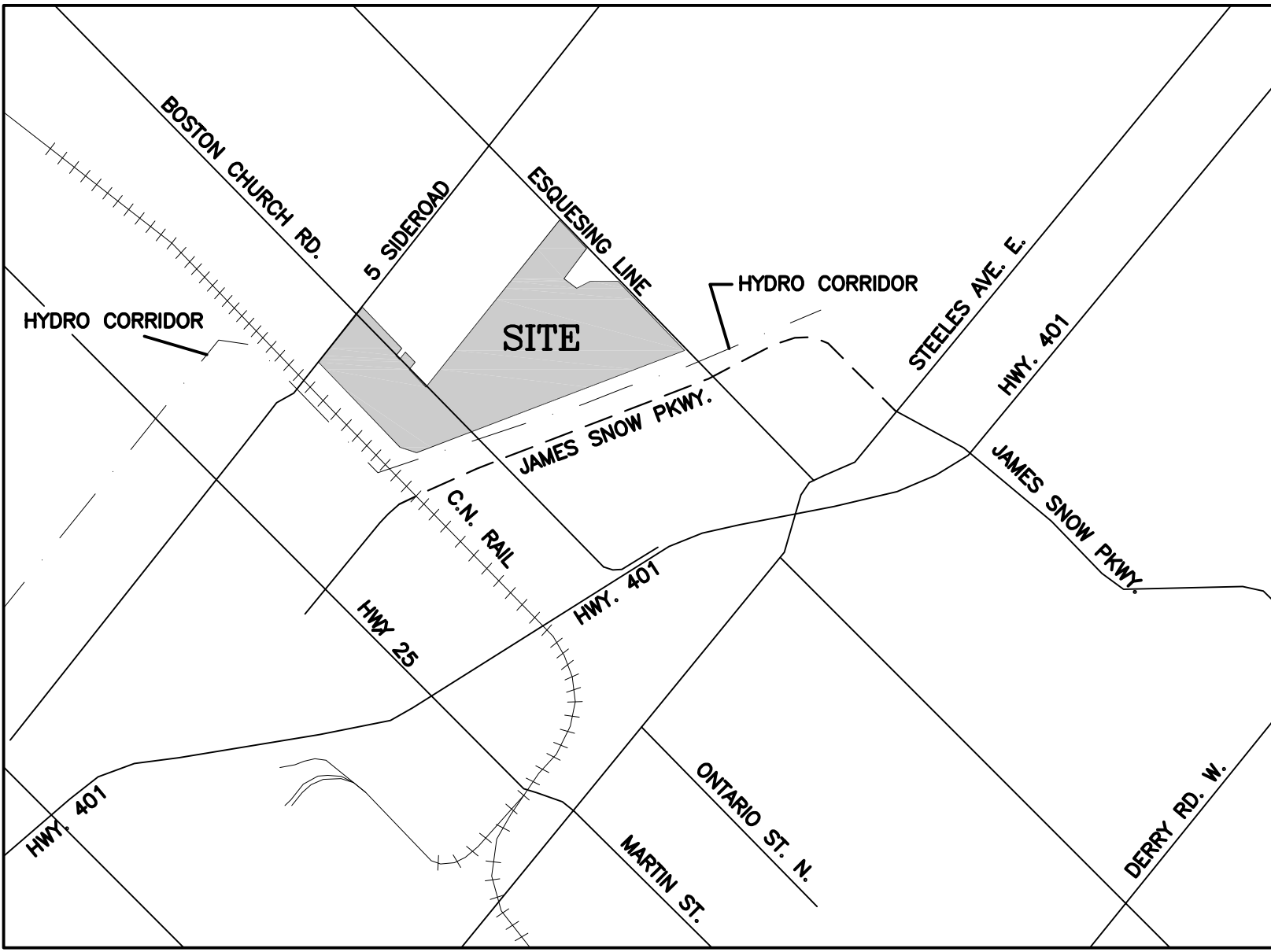
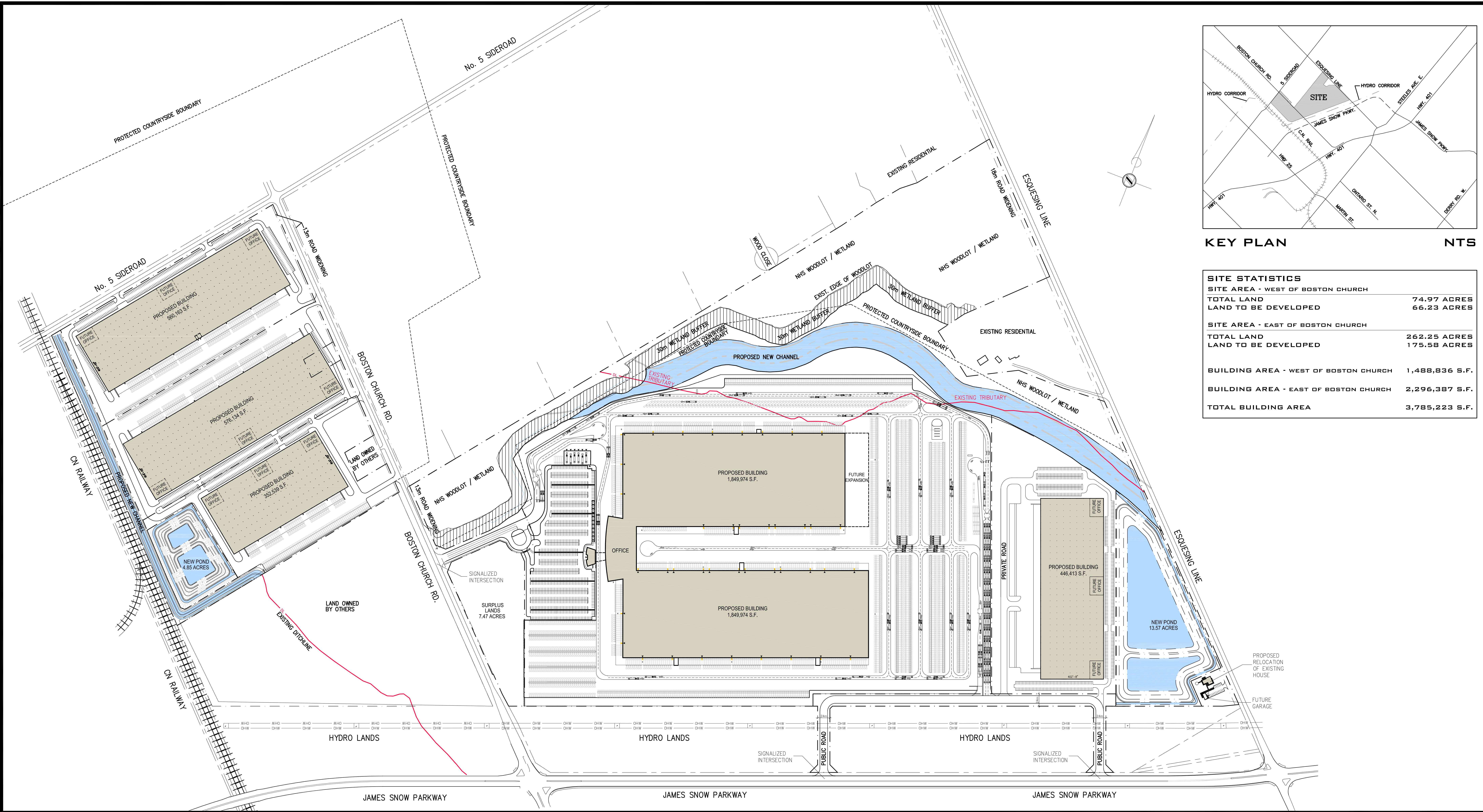
The following Appendices do not constitute part of Amendment No. XX, but are included as information supporting the amendment.

Appendix I Notice of Public Meeting

Appendix I Notice of Public Meeting

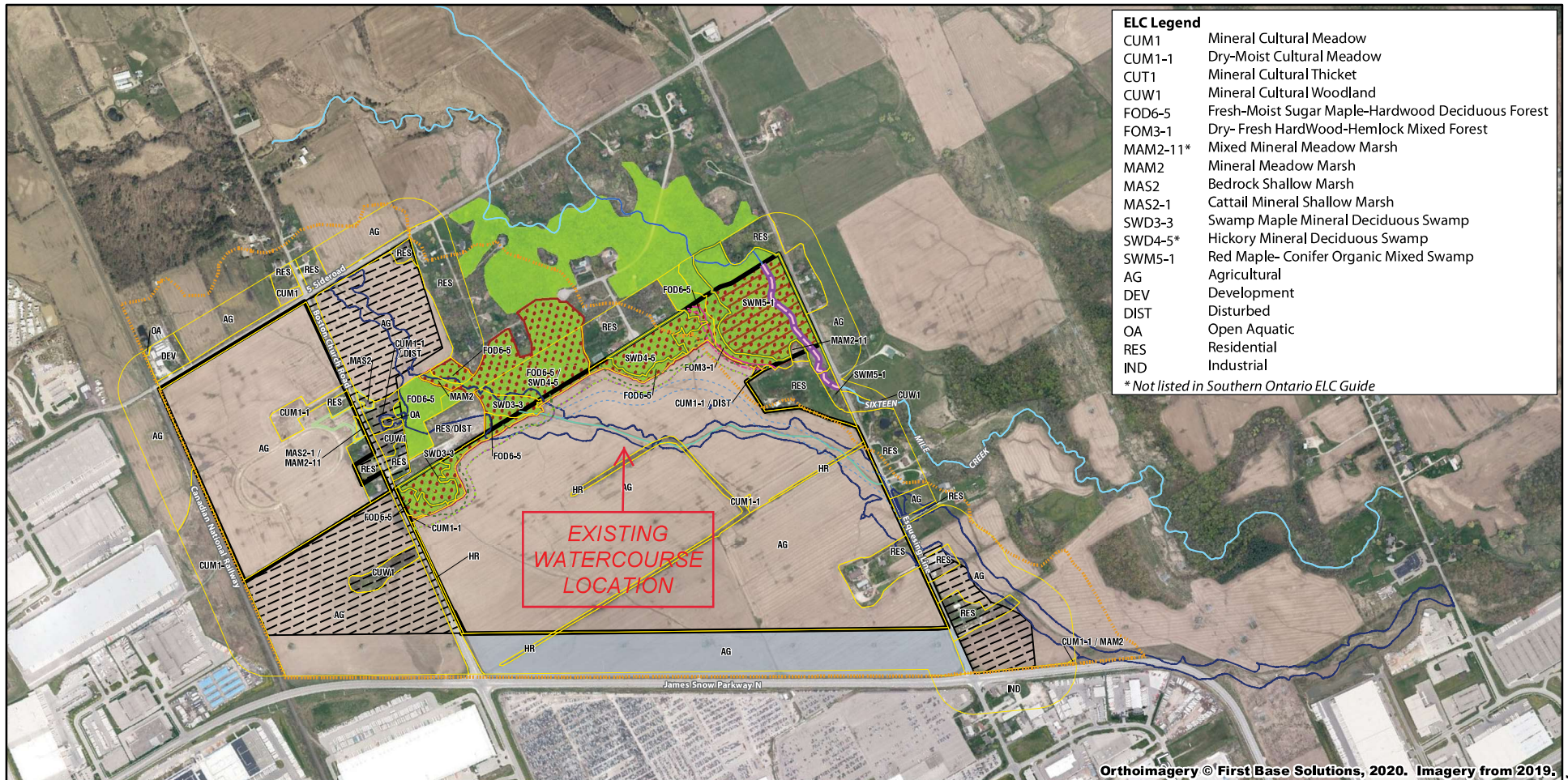


- | | | |
|---------------------------|---|---|
| —+— Rail Line | Urban Area | Greenbelt Plan Protected Countryside Boundary |
| — Major Road | Agricultural Area | Niagara Escarpment Plan Boundary |
| — Provincial Freeway | Regional Natural Heritage System * | Parkway Belt West Plan Boundary |
| — Lot and Concession Line | Greenbelt Natural Heritage System (Overlay) | ROPA Subject Lands |
| — Municipal Boundary | Employment Area | |



KEY PLAN NTS

SITE STATISTICS	
SITE AREA - WEST OF BOSTON CHURCH	
TOTAL LAND	74.97 ACRES
LAND TO BE DEVELOPED	66.23 ACRES
SITE AREA - EAST OF BOSTON CHURCH	
TOTAL LAND	262.25 ACRES
LAND TO BE DEVELOPED	175.58 ACRES
BUILDING AREA - WEST OF BOSTON CHURCH	1,488,836 S.F.
BUILDING AREA - EAST OF BOSTON CHURCH	2,296,387 S.F.
TOTAL BUILDING AREA	3,785,223 S.F.



Orthoimagery © First Base Solutions, 2020. Imagery from 2019.

Milton North Business Park, Comprehensive Environmental Servicing Study

Figure 12 Regional Natural Heritage Feature Components

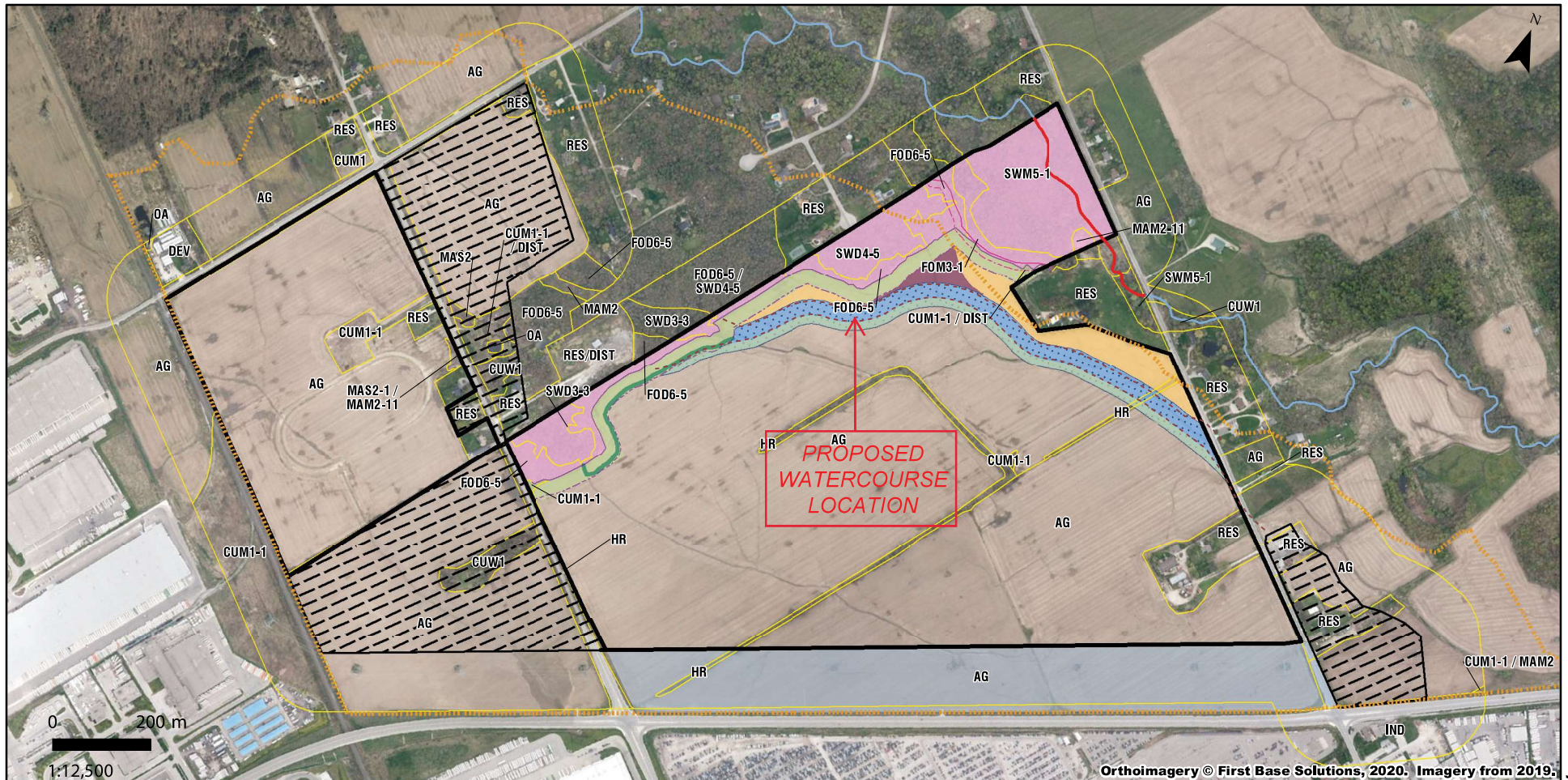
SAVANTA
A GEI Company

0 200 m
1:18,000



- Orlando Lands
 - Non-participating Lands
 - Subject Lands For Comprehensive Environmental Servicing Study
 - Ecological Land Classification
 - Floodlines (TMIG 2021)
 - Proposed Floodlines (TMIG 2021)
 - Sixteen Mile Creek - Middle Branch
 - Significant Woodlands
 - Habitat for Species of Conservation Concern Eastern Wood-Pewee
 - Candidate Bat Maternity Colonies Habitat
 - Rare Vegetation Type
 - Candidate Turtle Overwintering Habitat
 - Habitat for Species of Conservation Concern (Snapping Turtle)
 - Linkage (as defined by Regional NHS)
 - Regionally Significant Wetlands
 - Other Wetlands
- Natural Feature Buffers**
- Significant Woodlands +30 m
 - Regionally Significant Wetlands +30 m
 - NHS Staked Limit +30 m
 - Staked Top of Bank +15 m

Any information shown on Parcels 2, 3 and 5 should be considered preliminary and is subject to further investigations.



Orthoimagery © First Base Solutions, 2020. Imagery from 2019.

Milton North Business Park, Comprehensive Environmental Servicing Study

Figure 13

Proposed Natural Heritage System (Constraints and Opportunities)

Concept Plan: Milton North Concept Plan 2021-08-24

File: Milton North SITE PLAN r12.dwg

* Final orientation of Proposed Wetland Compensation Area to be defined during the detailed design phase.

SAVANTA
A GEI Company

Any information shown on Parcels 2, 3 and 5 should be considered preliminary and is subject to further investigations.

- Orlando Lands
- Non-participating Lands
- Subject Lands For Comprehensive Environmental Servicing Study
- Hydro Corridor
- Ecological Land Classification
- Watercourse
- High Constraint Watercourse
- NHS Staked Limit
- Staked Top of Bank
- NHS Staked Limit +30 m
- Staked Top of Bank +15 m
- Proposed Floodlines (TMIG 2021)
- Proposed Natural Heritage System**
 - Vegetated Buffers
 - Intermediary Areas
 - Retained Features
 - Created Wetland
 - Realigned Watercourse
 - Green Swale

ELC Legend

- CUM1 Mineral Cultural Meadow
- CUM1-1 Dry-Moist Cultural Meadow
- CUT1 Mineral Cultural Thicket
- CUW1 Mineral Cultural Woodland
- FOD6-5 Fresh-Moist Sugar Maple-Hardwood Deciduous Forest
- FOM3-1 Dry- Fresh HardWood-Hemlock Mixed Forest
- MAM2-11* Mixed Mineral Meadow Marsh
- MAS2 Bedrock Shallow Marsh
- MAS2-1 Cattail Mineral Shallow Marsh
- SWD3-3 Swamp Maple Mineral Deciduous Swamp
- SWD4-5* Hickory Mineral Deciduous Swamp
- SWM5-1 Red Maple- Conifer Organic Mixed Swamp
- AG Agricultural
- DEV Development
- DIST Disturbed
- OA Open Aquatic
- RES Residential

* Not listed in Southern Ontario ELC Guide

Report To:	Regional Chair and Members of Regional Council
From:	Bob Gray, Commissioner, Legislative and Planning Services and Corporate Counsel
Date:	January 19, 2022
Report No:	LPS05-22
Re:	Orlando Corporation North Porta Regional Official Plan Amendment Application – Initiation Report (File No. RQ64A)

RECOMMENDATION

1. THAT Regional staff be directed to proceed with a Statutory Public Meeting for the Proposed Regional Official Plan Amendment (File RQ64A) – “An Amendment to Address the Addition of Employment Lands to the Urban Area and to the Town of Milton’s ‘401 Industrial/Business Park Secondary Plan’” by the end of the first quarter of 2022 to fulfill the requirements of the Planning Act.
2. THAT the Regional Clerk forward a copy of Report No. LPS05-22 to the Ministry of Municipal Affairs and Housing, the City of Burlington, the Town of Halton Hills, the Town of Milton, the Town of Oakville, and Conservation Halton, for their information and comment.

REPORT

Executive Summary

- On November 2, 2021, Halton Region received a Regional Official Plan Amendment (ROPA) application submitted by Glen Schnarr & Associates Inc. on behalf of Orlando Corporation. The proposed amendment is provided as Attachment #1 to this report.
- The application proposes to amend the Regional Official Plan to add to the Urban Area the portion of the lands at 8350 Esquesing Line in the Town of Milton that are located between the existing Urban Area designation and the Greenbelt Plan Protected Countryside, referred to in the application as the ‘northern sliver’ lands.
- The purpose of adding these lands to the Urban Area is to permit development for employment uses comprehensively with the majority of the property to the south that is currently within the Region’s Urban Area and which is proposed to form part of the Town of Milton’s 401 Industrial/Business Park Secondary Plan.

- This report provides Regional Council with information on the ROPA application and outlines key policy considerations and next steps in the review of the application.

Background

The lands subject to the ROPA application filed by Orlando Corporation on November 2, 2021 are a part of the property known as 8350 Esquesing Line in the Town of Milton. The lands are located within a part of the Town referred to as the 'North Porta Lands'. The 8350 Esquesing property is generally bounded by Boston Church Road to the west, Esquesing Line to the east, James Snow Parkway to the south, and Lot 4 / Concession IV to the north. The specific lands subject to the ROPA application are located at the northern edge of the property and are bounded by the existing Urban Area designation to the south and the Protected Countryside boundary of Greenbelt Plan to the north. The subject lands are referred to as the 'northern sliver' lands in the application and are proposed to be added to the Urban Area in the Regional Official Plan. A context map showing the location of the subject lands is provided as Attachment #2 to this report. The lands subject to the ROPA application are approximately 14.25 hectares in size.

There are a number of previous and ongoing planning initiatives related to the subject lands and the ROPA application. To assist with understanding this context, a brief summary of these planning processes is provided below:

- ***Sustainable Halton***

Through the Sustainable Halton process, which culminated with ROPA 38 in 2009, Halton identified a strategy to accommodate growth to the year 2031. This included the addition of the area referred to as the 'North Porta Lands', which are located north of the Town of Milton's 401 Industrial/Business Park Secondary Plan area. In this context, the majority of 8350 Esquesing Line was added to the Region's Urban Area to accommodate employment growth to 2031. However, the boundary of the Urban Area designation was delineated based on an existing watercourse at the northern edge of the property. This resulted in the lands north of the watercourse (i.e., the lands now subject to the ROPA application and referred to as the 'norther sliver' lands) being designated as part of the Region's Natural Heritage and Agricultural Systems.

- ***Town of Milton OPA 31 and OPA 67***

The Regional Official Plan requires Local Municipalities to plan comprehensively for new growth areas. The North Porta Lands were added to the Town's Urban Area through OPA 31 and were subsequently planned for comprehensively as part of the OPA 67 – "North Porta Lands", adopted by the Town in August 2021 and forwarded to the Region for review. The Town's amendment proposes to amend the boundary of the adjacent 401 Industrial/Business Park Secondary Plan to incorporate the North Porta Lands. As the 'northern sliver' lands are not currently part of the Urban Area, they are not addressed in either OPA 31 or OPA 67. Instead, they are addressed as part of the ROPA application and other concurrent local applications discussed below.

- ***Concurrent Local Development Applications***

In addition to the ROPA application, Orlando Corporation has concurrently filed a number of local development applications with the Town of Milton, including official plan and zoning by-law amendments and draft plans of subdivision. The applications apply to two blocks of land known collectively as the Milton North Business Park, which constitutes the majority of the North Porta Lands.

The purpose of these applications is to enable an overall development proposal for industrial / employment uses as shown in Attachment #3 to this report. The applications will also allow for stormwater management, refinements to the natural heritage system, and updates to the transportation network, among other things. These applications are supported by a number of technical studies and reports. Of particular note for the ROPA application, the Comprehensive Environmental Servicing Strategy (CESS) will address refinements to the Regional Natural Heritage System, including the watercourse, which defines the existing boundary of the Urban Area.

The local development applications were deemed complete by the Town on November 30, 2021 and are now under review. It is important to note that as they are based on the 'northern sliver' lands being added to the Urban Area, the concurrent local development applications are in part dependent on the ROPA application that would bring these lands into the Urban Area.

- ***Regional Official Plan Review (ROPR)***

Through the ROPR, Halton is considering how to accommodate growth to 2051, including the assessment of settlement area boundary expansions. Orlando Corporation has participated in the ROPR process and has made submissions related to the subject lands. Settlement area boundary expansions are typically considered as part of a comprehensive process such as the ROPR. However, given the size and context of the subject lands, changes to the Growth Plan that enable consideration of expansions of a certain size outside a municipal comprehensive review, and other timing considerations, Regional staff received Orlando's ROPA application. Regional staff will continue to consider Orlando's submissions and will monitor the timing of these processes to ensure alignment between the ROPA application and the ROPR.

The North Porta Regional Official Plan Amendment (ROPA) Application

As described above, the lands subject to the ROPA application are currently designated Regional Natural Heritage System and Agricultural Area in the Regional Official Plan. Further, they are located between the current boundary of the Urban Area (as defined by an existing watercourse) and the Greenbelt Plan Protected Countryside. Referred to as the 'northern sliver' lands, the subject lands are approximately 14.25 hectares in size.

As part of the ROPA and the concurrent local development applications, the Regional Natural Heritage System designation currently on the subject lands associated with a watercourse is proposed to be realigned to generally be adjacent to the Greenbelt Plan lands. The existing and proposed locations for the watercourse are shown in Attachment #4, which presents excerpts from the environmental study provided in support of the applications. The first figure (Figure 12) identifies the current location of the watercourse, which generally traverses the property from the northwest to the southeast. The second figure (Figure 13) identifies the proposed location of the realigned watercourse and other associated refinements to the Regional Natural Heritage System. Justification for the realignment of the watercourse is contained in this study. Regional staff provided comments on this document in November 2021 and it remains under review.

The proposed realignment of the watercourse would enable the lands south of the watercourse's new location to be re-designated to 'Urban Area', thereby facilitating their development comprehensively with the remainder of 8350 Esquesing Line and the North Porta Lands. In this regard, the applicant is requesting a change in land use designation in the Regional Official Plan from Agricultural Area to Urban Area with an Employment Area overlay.

The ROPA application was filed on behalf of Orlando Corporation on November 2, 2021. The submission was reviewed against the application requirements set out in the pre-consultation meeting with the applicant that occurred on April 28, 2021.

Regional staff have reviewed the application submission and have determined it to be complete in accordance with the provisions of the *Planning Act* and provided notice to the applicant on November 30, 2021. Subsequent notice of the complete application was provided through local newspapers, signage on the site, and through notices mailed to surrounding property owners. The application has been circulated to internal departments and external agencies for review and Regional staff are awaiting comments.

Next Steps

Regional staff will work co-operatively with partner agencies through the technical review of the submitted information and will also work closely with Town of Milton staff as they process the submitted local official plan and zoning by-law amendments and draft plans of subdivisions.

Public consultation is an important part of the process to amend the Regional Official Plan. To that end, the application and supporting materials will be made available for review on **halton.ca**. The application and supporting materials have also been circulated for comment to the Ministry of Municipal Affairs and Housing, Conservation Halton, and other public agencies. A public information centre and a statutory public meeting will be held in early 2022 to provide opportunities for the public to ask questions and provide feedback on the application.

Following the public information centre and statutory public meeting, and based on all feedback received, Regional staff will prepare a report to Regional Council with a recommendation on the application later in 2022.

Conclusion

Regional staff will process and co-ordinate the review of the submitted technical information provided with the ROPA application and will report back to Regional Council with information to support a future statutory public meeting and subsequently, a recommendation on the proposed amendment.

FINANCIAL/PROGRAM IMPLICATIONS

The cost of reviewing the Regional Official Plan Amendment is funded from the Planning Services Operational Budget.

Respectfully submitted,



Curt Benson
Director, Planning Services and Chief
Planning Official



Bob Gray
Commissioner, Legislative and Planning
Services and Corporate Counsel

Approved by



Jane MacCaskill
Chief Administrative Officer

If you have any questions on the content of this report,
please contact:

Curt Benson

Tel. # 7181

Attachments: Attachment #1 – Proposed Regional Official Plan Amendment (RQ64A)
Attachment #2 – ROPA Subject Lands Context Map
Attachment #3 – Development Applications Concept Plan
Attachment #4 – Existing and Proposed Watercourse Location Figures

Draft Amendment No. XX
to THE REGIONAL PLAN
Official Plan for the Halton Planning Area
Regional Municipality of Halton

An Amendment to Address the
Addition of Employment Lands to
the Urban Area and to the Town of
Milton's '401 Industrial / Business
Park Secondary Plan'

August 2021

DECLARATION

IN THE MATTER OF REGIONAL OFFICIAL PLAN AMENDMENT NUMBER XX

IN THE REGIONAL MUNICIPALITY OF HALTON

I, [Name of Regional Clerk], in my capacity as Regional Clerk for the Regional Municipality of Halton, hereby declare that notice of adoption by Council for the Regional Municipality of Halton was given under Section XX of the *Planning Act*, R.S.O., 1990, c.P.13.

There were no appeals to ROPA XX within the time allowed for appeal. Under Section 17(27) of the *Planning Act*, R.S.O. 1990, c.P.13, Regional Official Plan Amendment Number XX came into force and effect on _____, 2021, being the day following the last day for filing a notice of appeal.

[Name of Regional Clerk]

Regional Clerk
Regional Municipality of Halton

Date

TABLE OF CONTENTS

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PART B THE AMENDMENT	4
Introductory Statement	4
Details of the Amendment	4
PART C THE APPENDICES	7
Appendix I Notice of Public Meeting	8

THE CONSTITUTIONAL STATEMENT

Part A, The Preamble, does not constitute part of this Amendment.

Part B, The Amendment, consisting of 10 items, constitutes Amendment No. XX to the Regional Plan, the Official Plan for Halton Planning Area, Regional Municipality of Halton. The Amendment will incorporate certain lands into the Region's Urban Area with an Employment Area overlay. The title of Amendment No. XX is "An Amendment to Address the Addition of Employment Lands to the Urban Area and to the Town of Milton's '401 Industrial / Business Park Secondary Plan'".

Part C, The Appendices, does not constitute part of this Amendment.

PART A THE PREAMBLE

Purpose

The purpose of this Amendment is to add lands to the Urban Area to facilitate future Employment development within the area of the Town of Milton known as the Milton 401 Industrial / Business Park Secondary Plan Area. The result of the amendment is to incorporate into the Urban Area lands to be planned and developed for employment uses.

Location

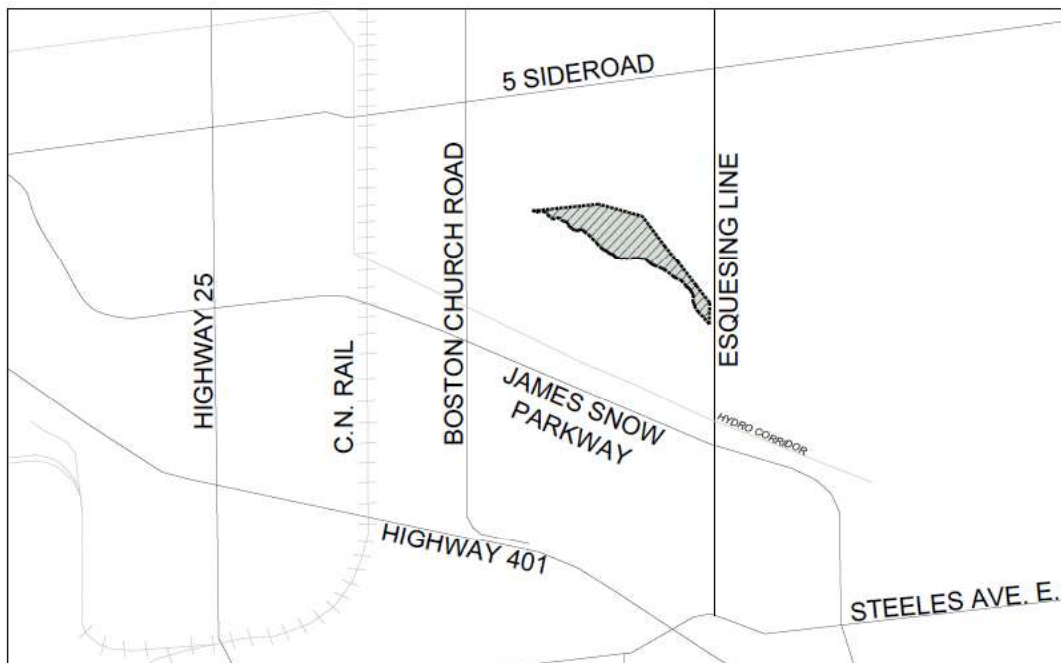
The area containing lands to be incorporated in the Urban Area is referred to as the “Amendment Area” and is shown in Figure 1 below. It contains the lands bounded by:

- i) North – limit of the Greenbelt Plan
- ii) East – Esquesing Line
- iii) South – the existing Urban Area limit
- iv) West – the existing Urban Area limit

Figure 1

July 22, 2021

The Amendment Area



Basis

The current 2031 'Urban Area' limit for the Town of Milton was established through Halton Region Official Plan Amendment No. 38 (ROPA 38) and in this vicinity it was meant to accommodate employment growth to 2031. The current 2031 'Urban Area' limit falls short of including all lands that are mapped as "Provincially Significant Employment Zone" (PSEZ) and as a result, excludes a portion (or 'northern sliver') of a property that is proposed for future employment growth, consistent with the Province's "Provincially Significant Employment Zone" (PSEZ) area. This 'northern sliver' of land should logically be included within the Regional and Town "Urban Area".

ROPA XX will bring the 'northern sliver' lands into the 'Urban Area' and will facilitate the advancement of development applications to develop these lands for employment uses consistent with the Provincially Significant Employment Zone (PSEZ) mapping and related Growth Plan objectives and policy directives.

This will be achieved by redesignating the lands within the Amendment Area currently within the "Agricultural Area" designation to the "Urban Area" designation with an "Employment Area" overlay. As a result of this change to Map 1, a number of corresponding changes are required to other Maps to reflect the change to the "Urban Area" designation and certain constraints. ROPA XX will enable comprehensive planning of these lands and the continued implementation of the growth strategy set out in the Regional Plan and the PSEZ mapping and related employment policy directives as set out in the Growth Plan.

PART B THE AMENDMENT

Introductory Statement

All of this part constitutes Amendment No. XX to the Regional Plan, the Official Plan for Halton Planning Area, Regional Municipality of Halton.

Details of the Amendment

The Amendment consists of 10 items.

The Regional Plan is amended as follows:

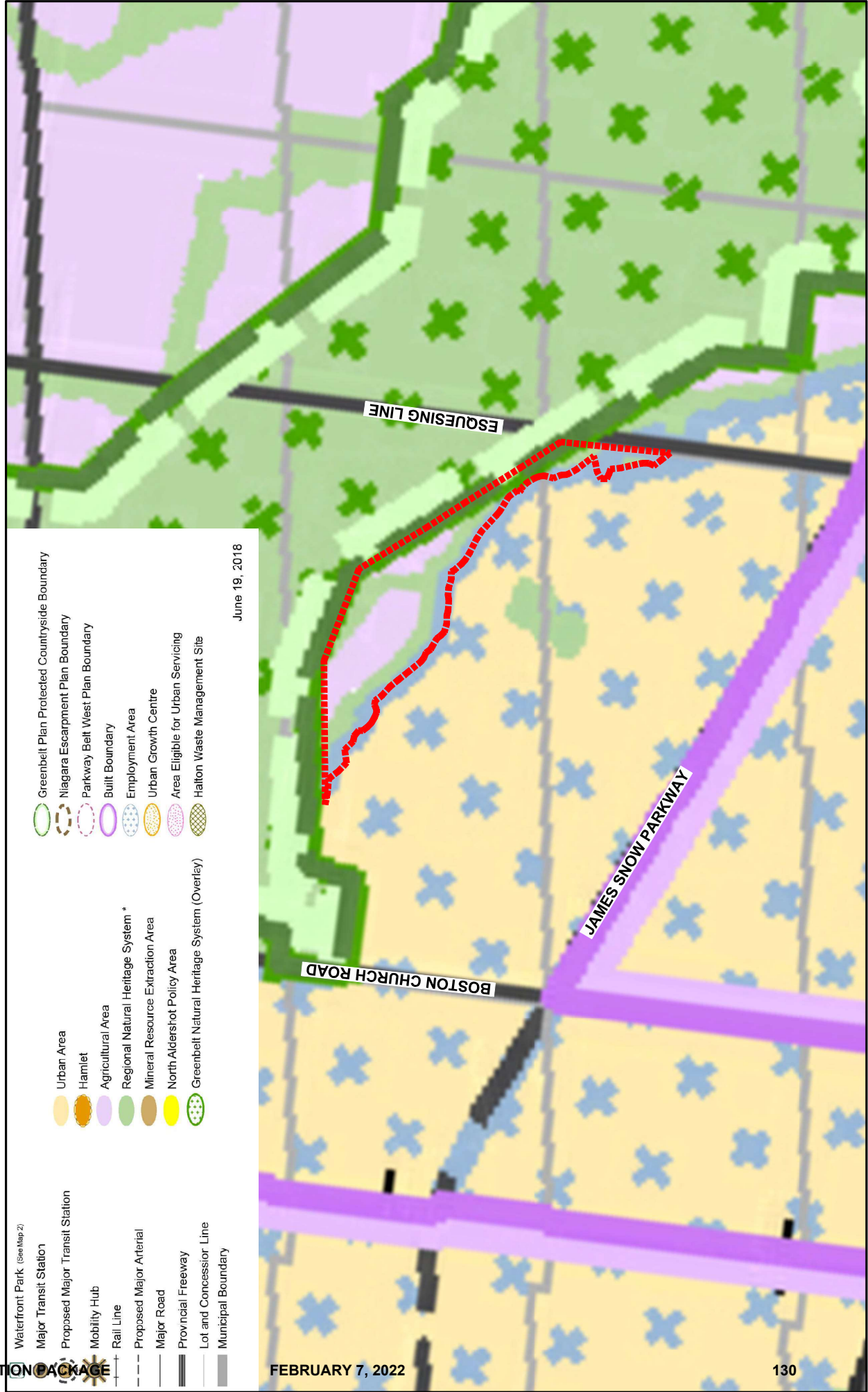
Item 1	Map 1, <i>Regional Structure</i> , is amended by redesignating the lands designated “Agricultural Area” within the Amendment Area to “Urban Area” and applying the “Employment Area” overlay to these lands as shown herein on Map 1 provided as Attachment #1.
Item 2	Map 1B, <i>Parkway Belt Transportation and Utility Corridors</i> , is amended to reflect the modified “Urban Area” designation as shown herein on Map 1B provided as Attachment #2.
Item 3	Map 1C, <i>Future Strategic Employment Areas</i> , is amended to reflect the modified “Urban Area” designation and “Employment Area” overlay as shown herein on Map 1C provided as Attachment #3.
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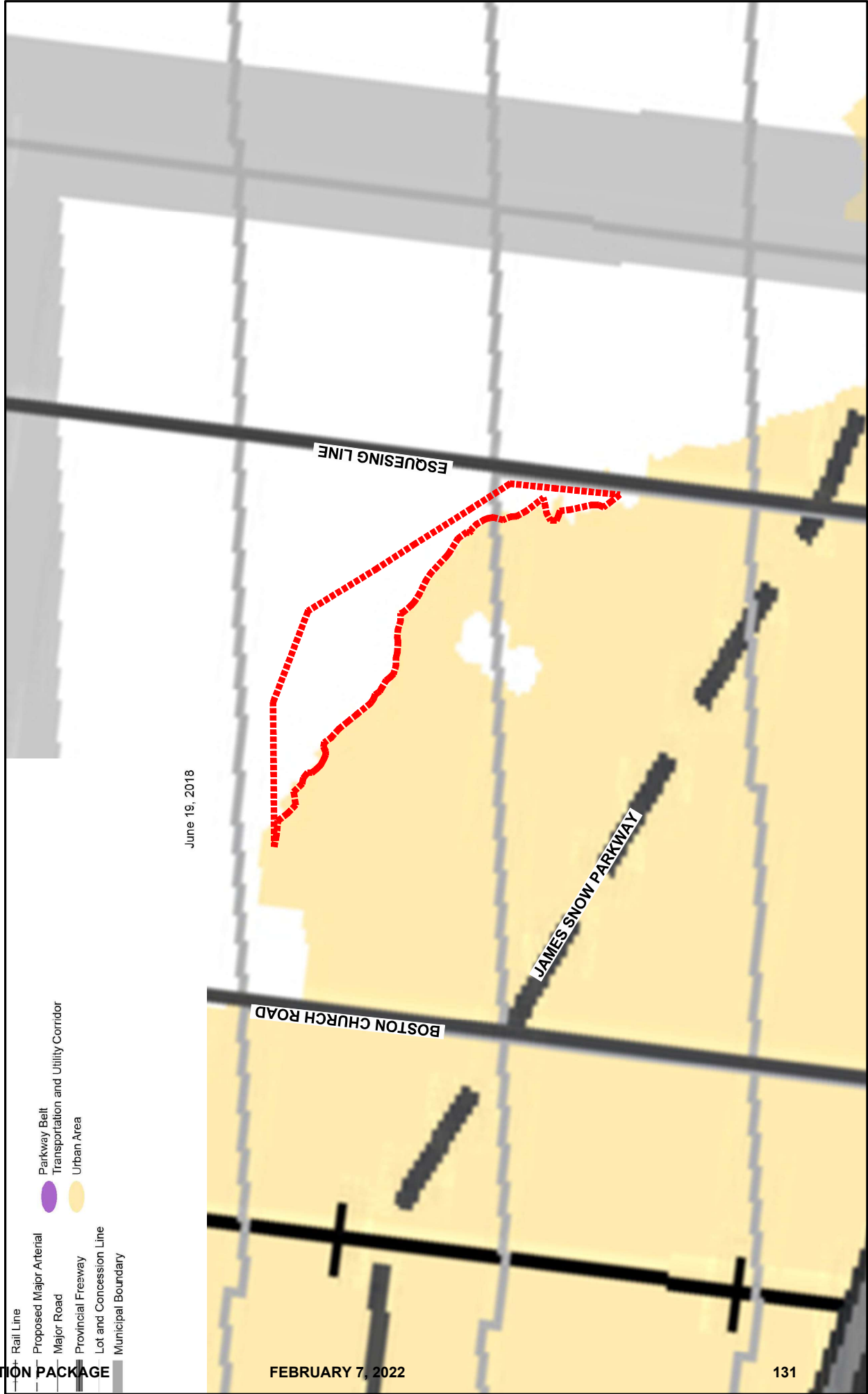
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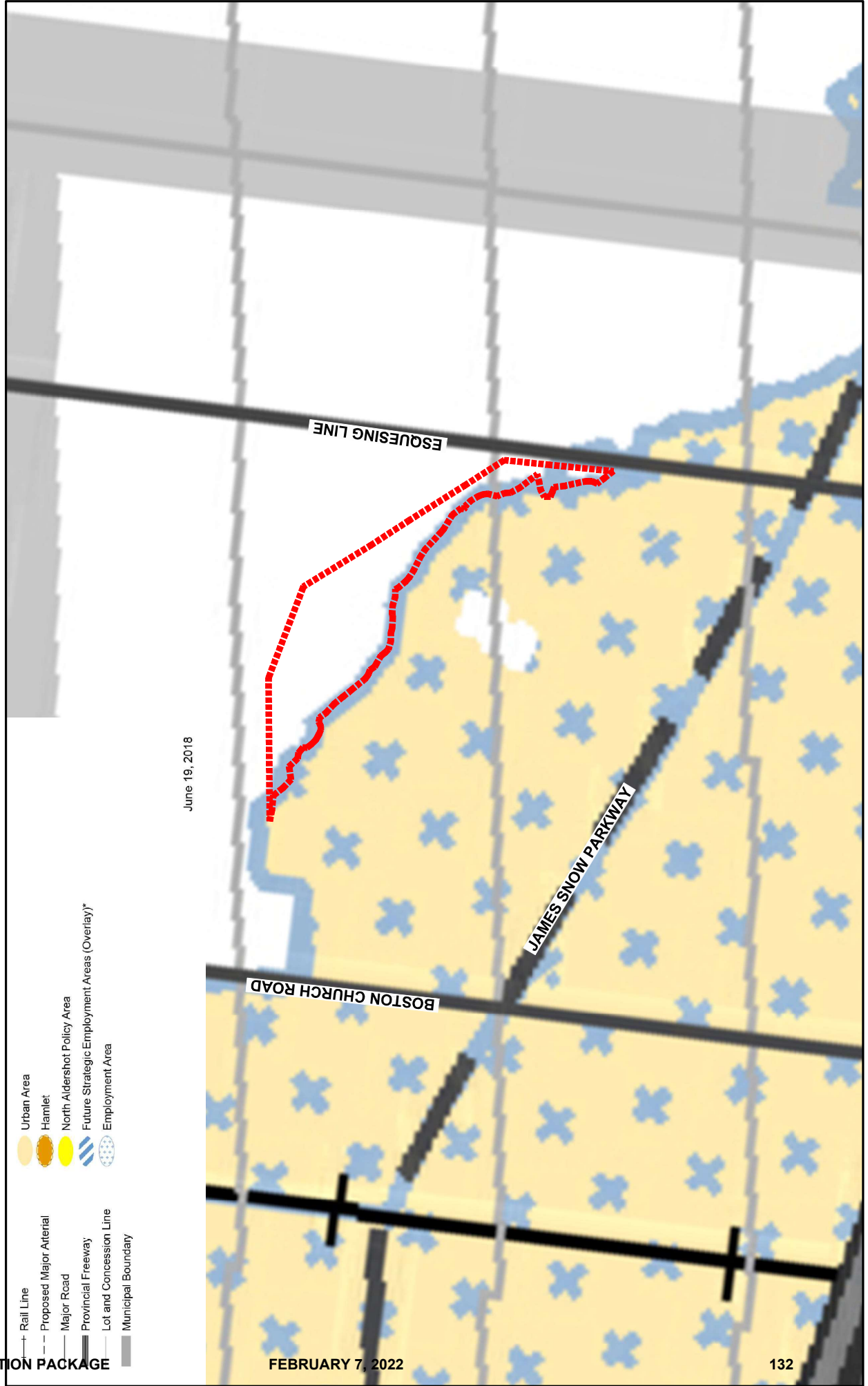
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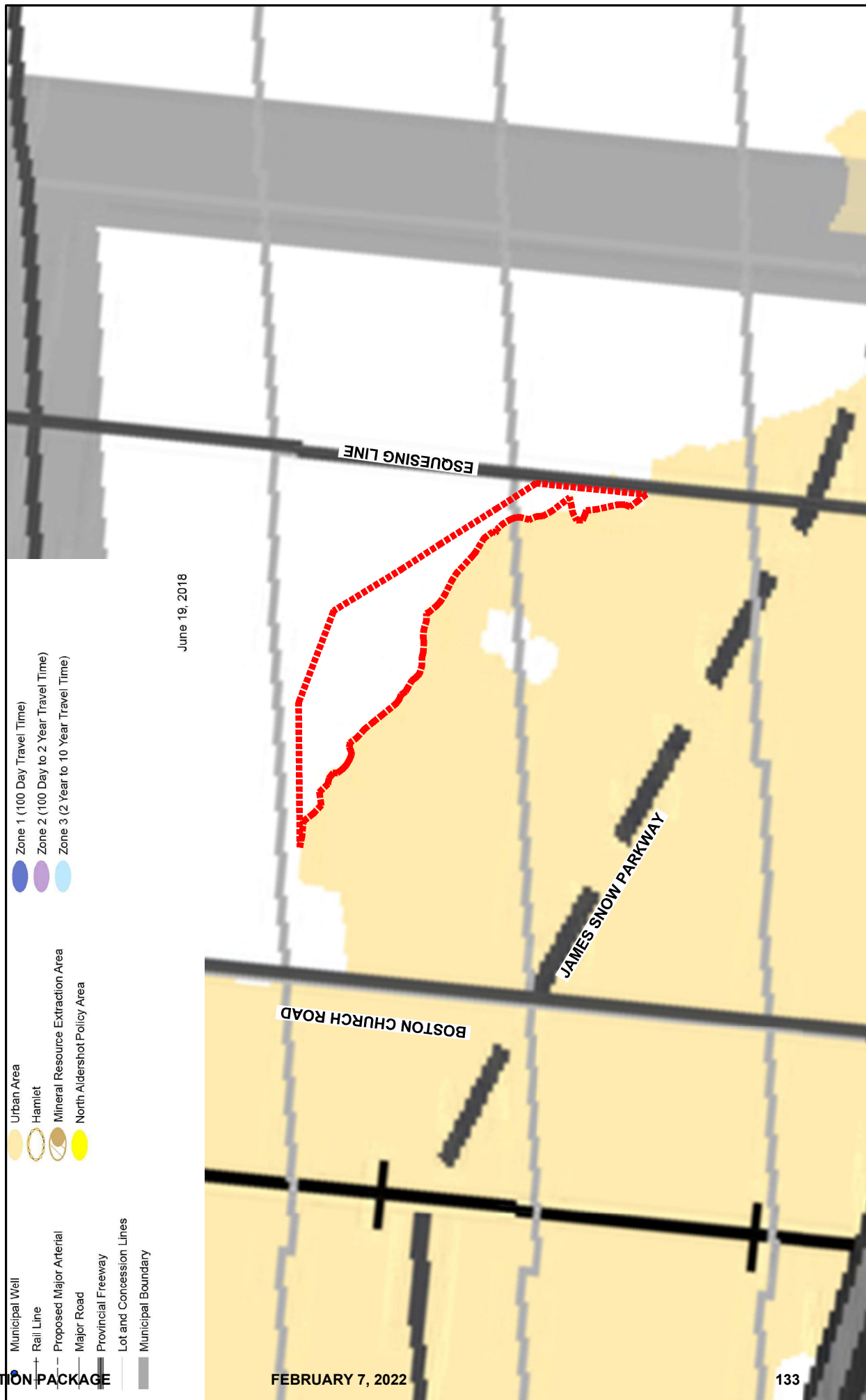
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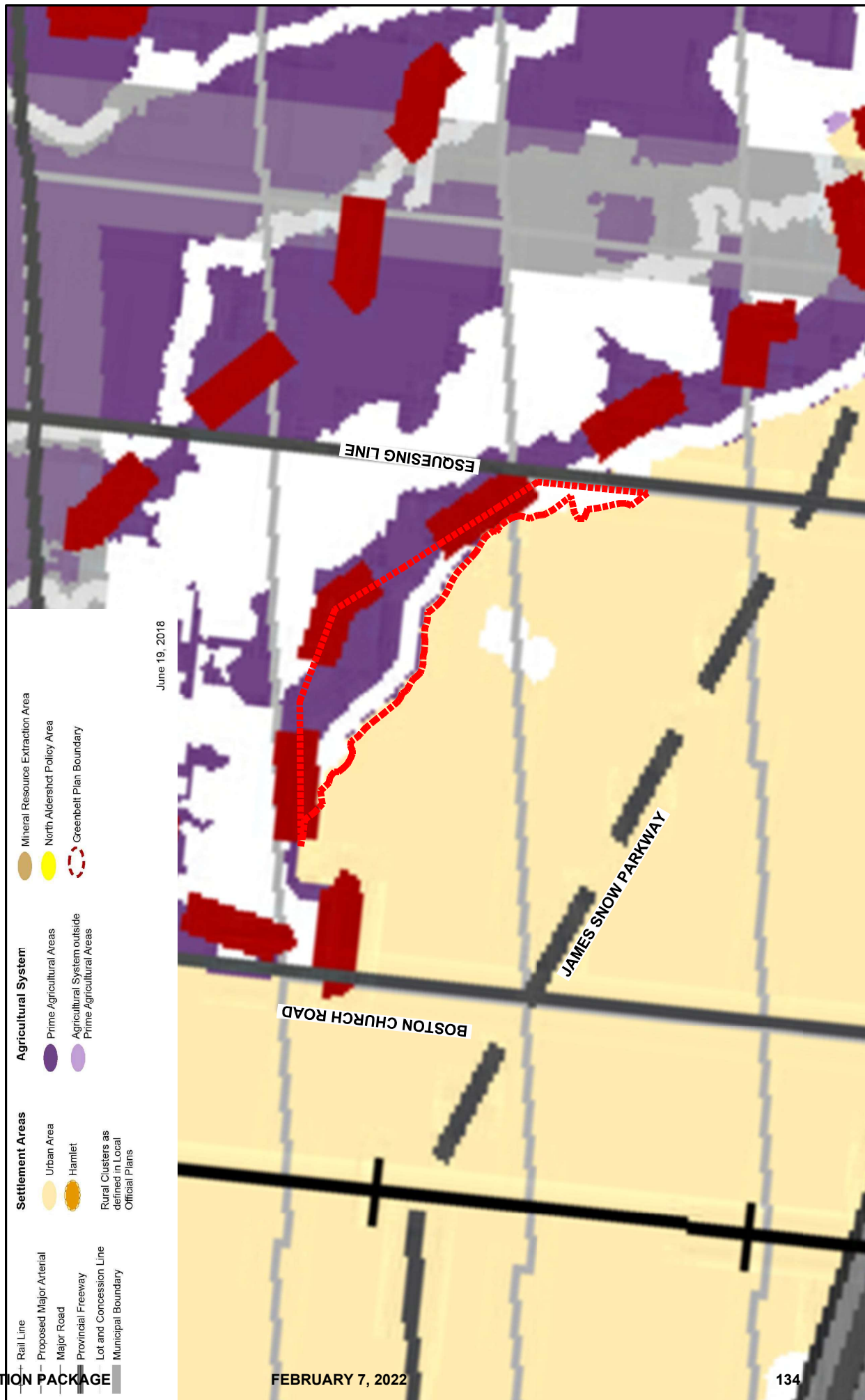
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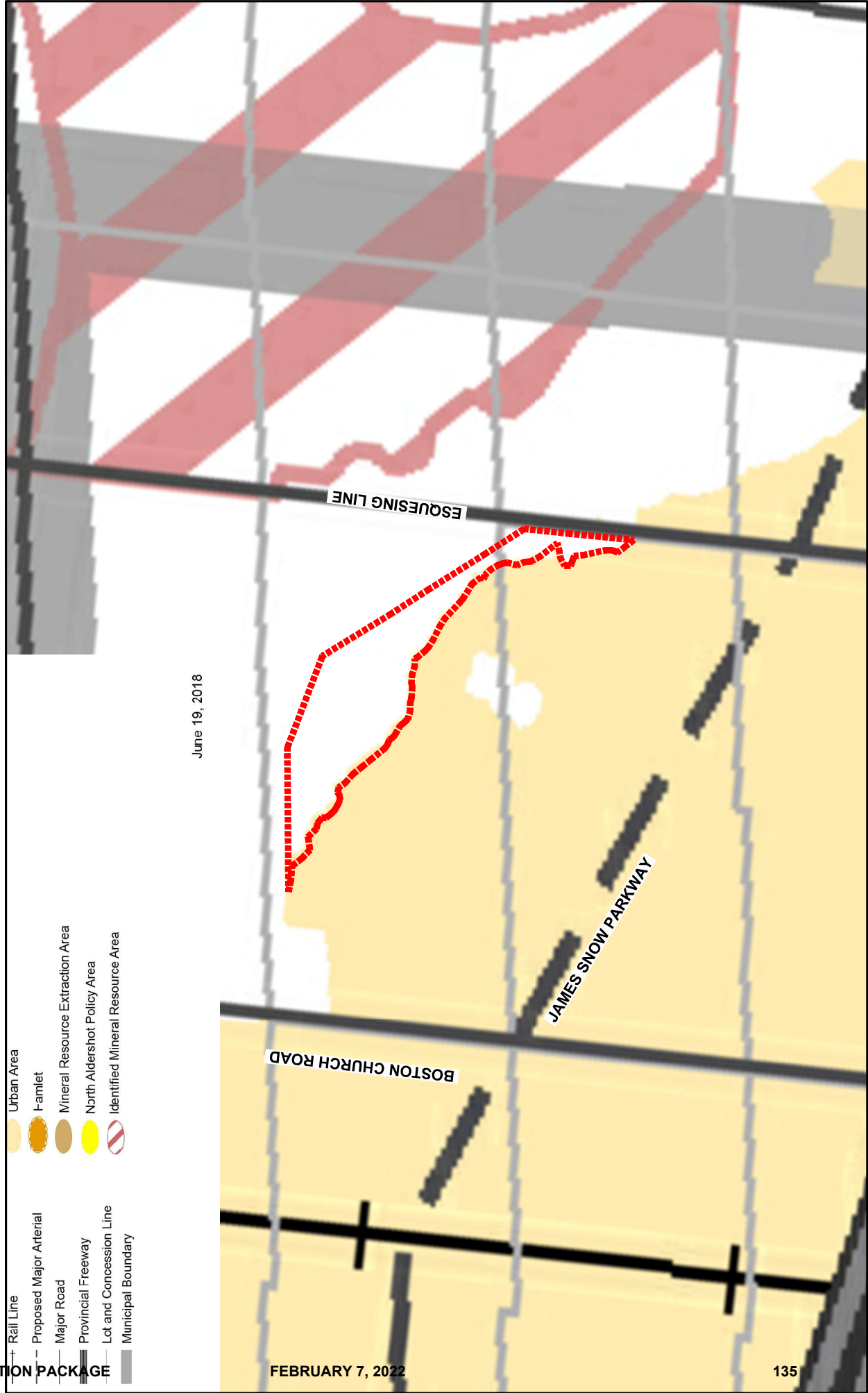
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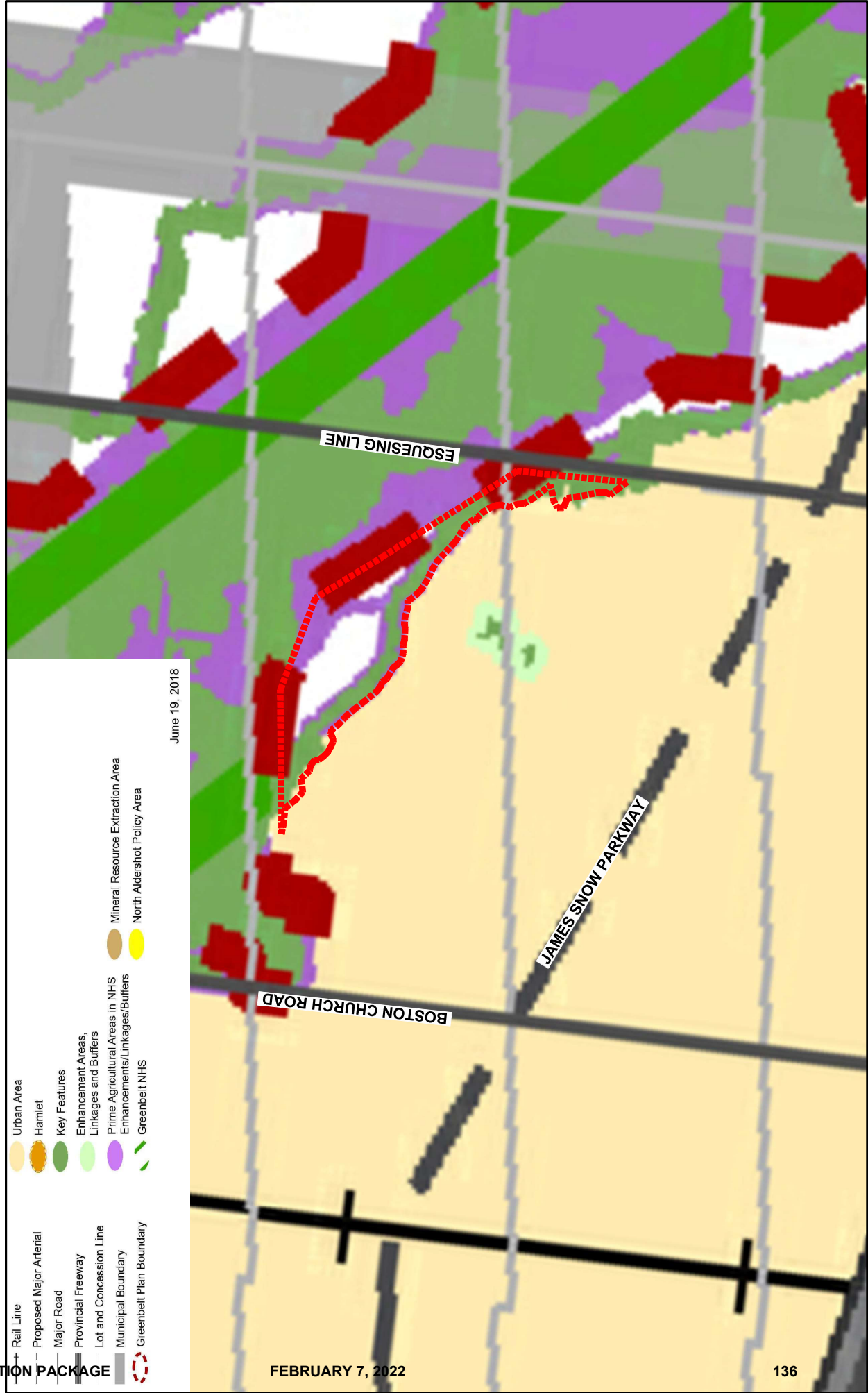
Map 1F
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Map 1G

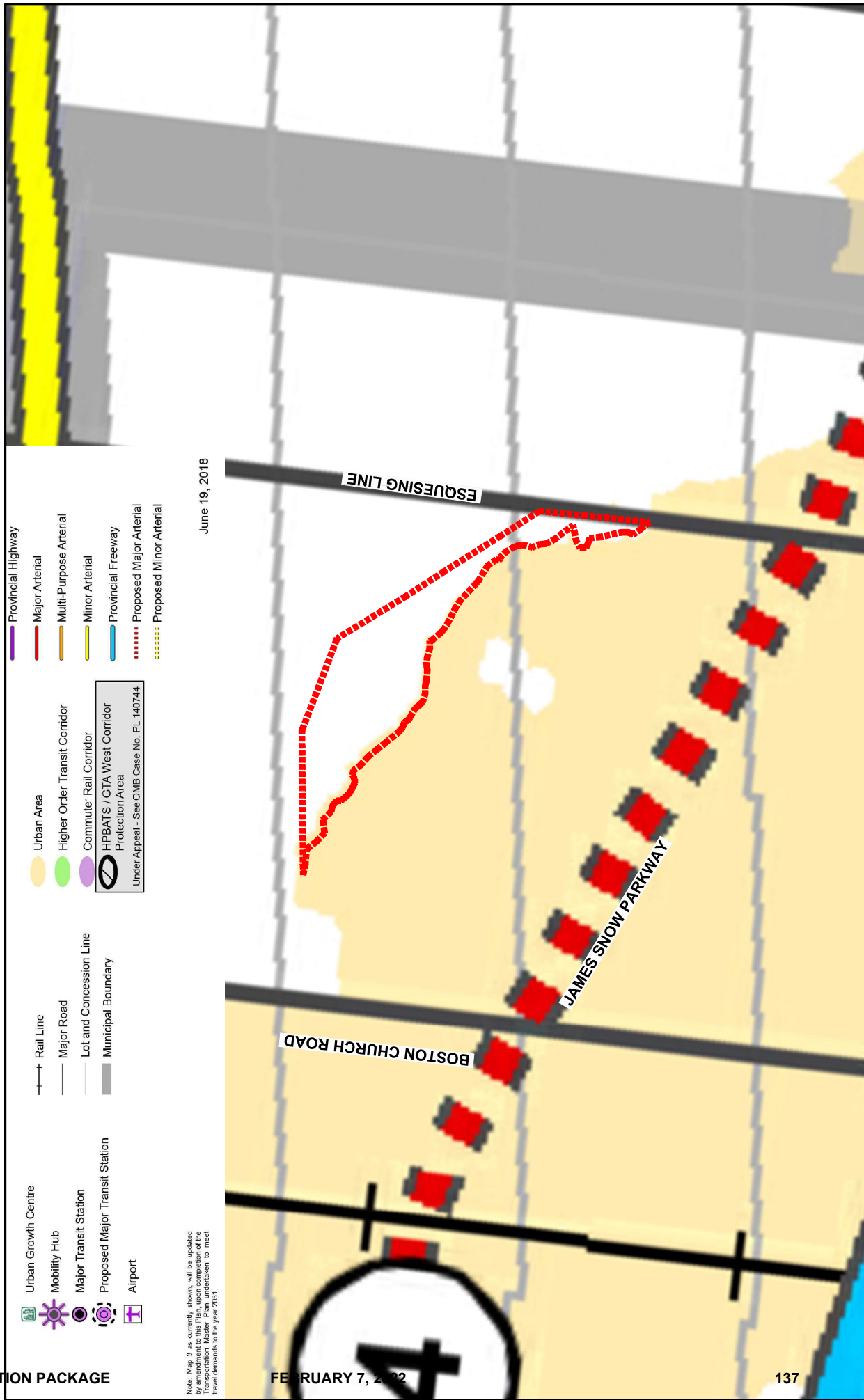
Draft Amendment Area

Key Features Within the Greenbelt and Regional Natural Heritage Systems

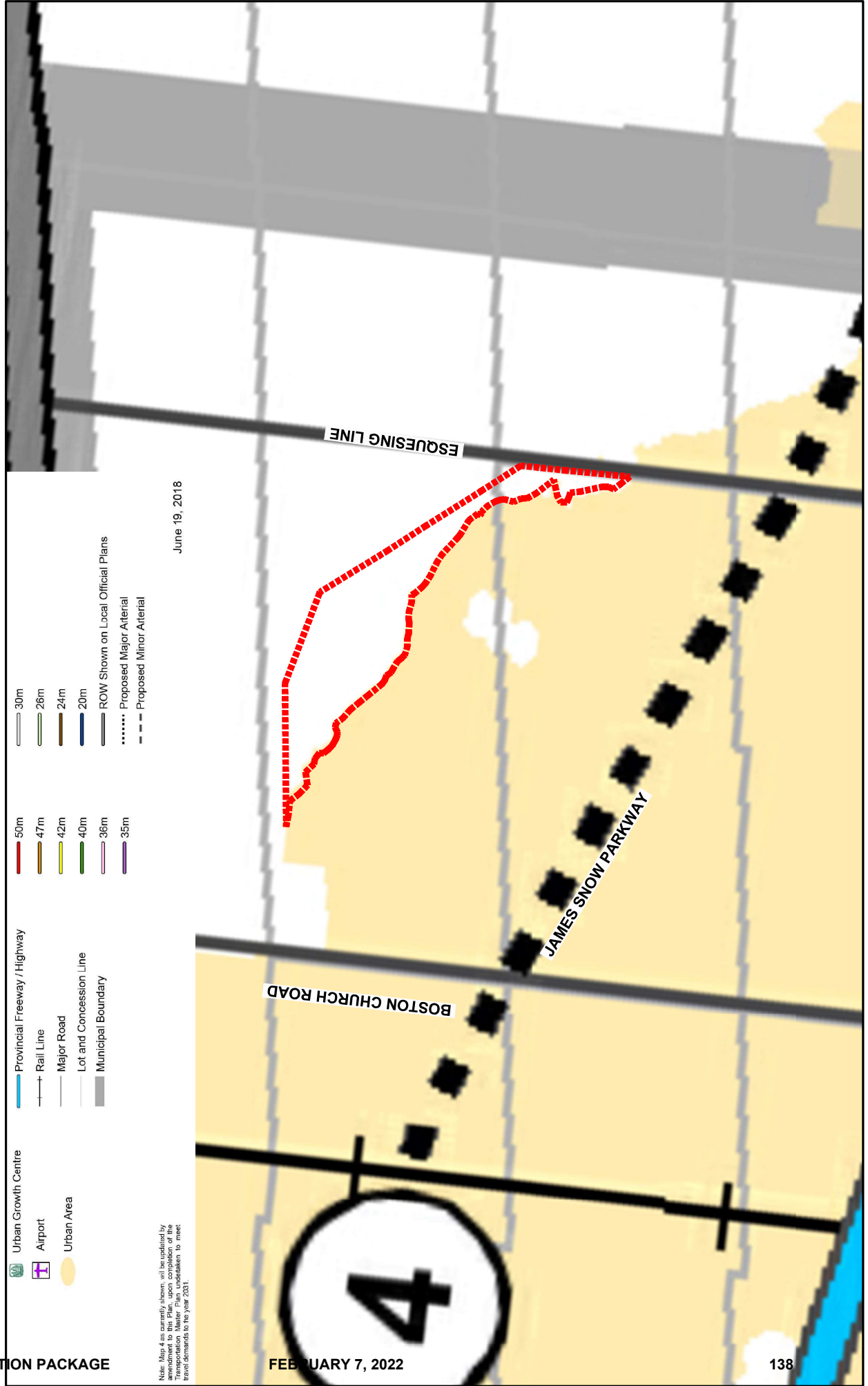


Map 3 Functional Plan of Major Transportation Facilities

 Draft Amendment Area

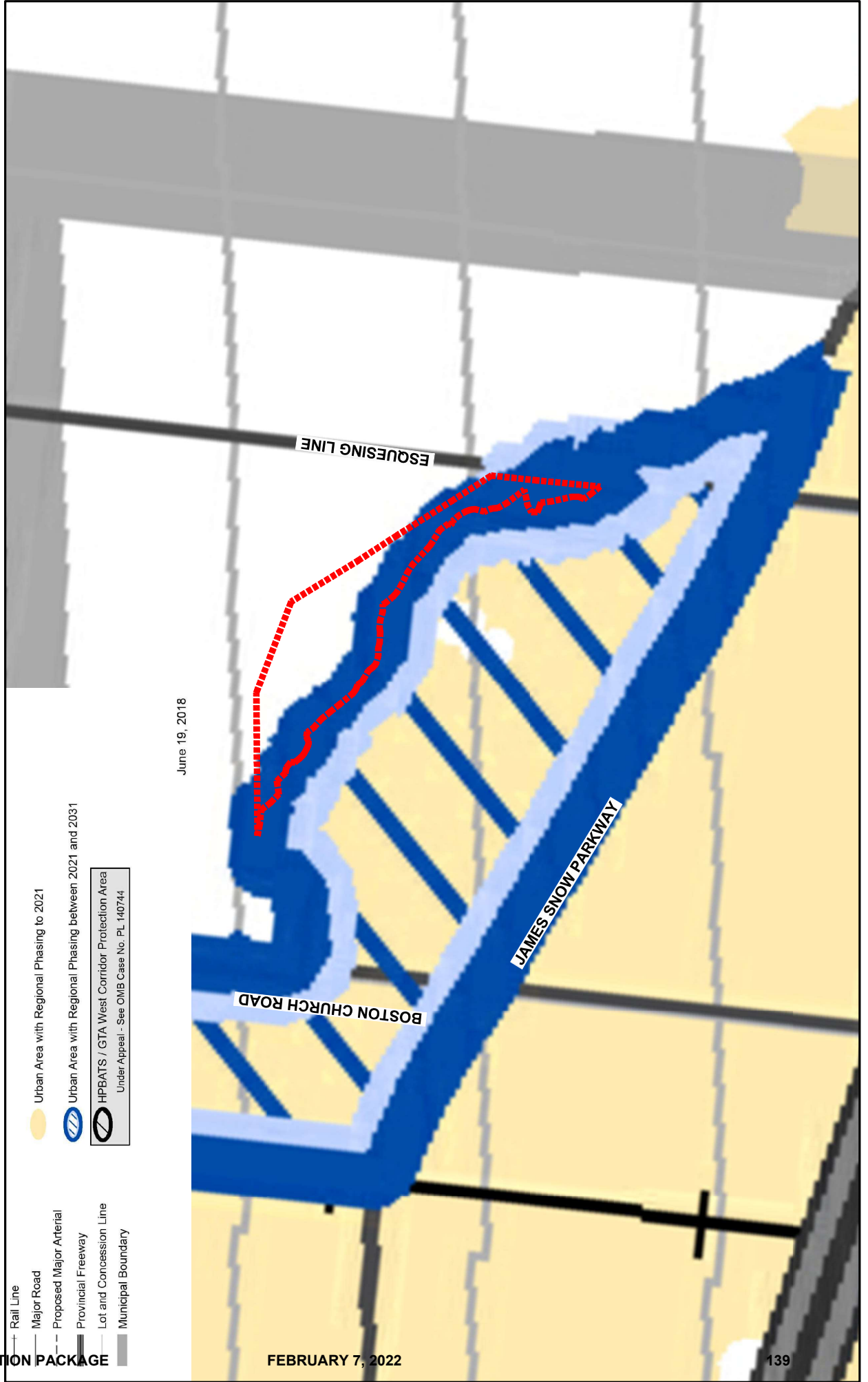


Map 4 Draft Amendment Area Right-of-Way requirements of Arterial Roads



Map 5
Regional Phasing
Draft Amendment Area

GENERAL INFORMATION PACKAGE



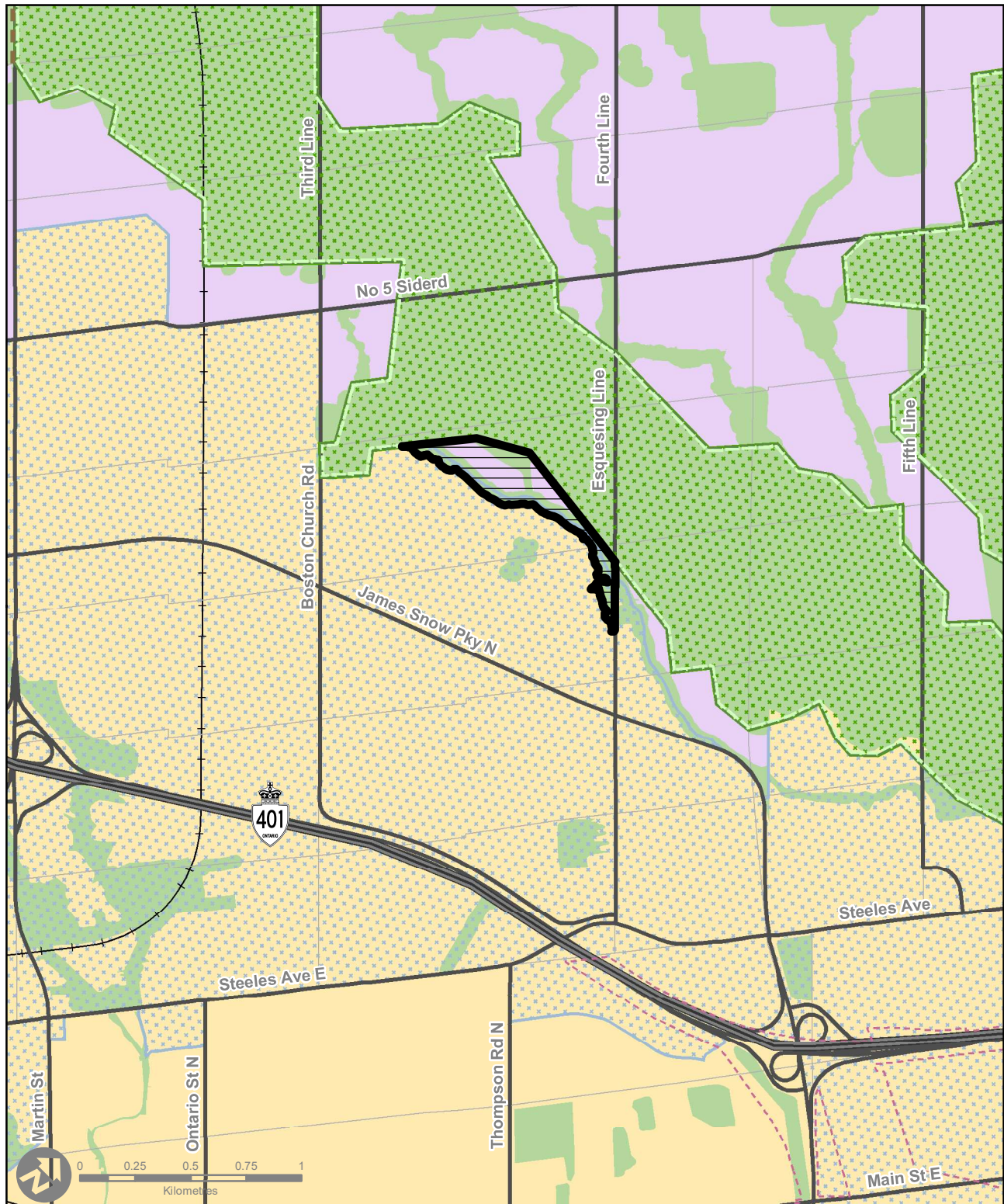
FEBRUARY 7, 2022

PART C THE APPENDICES

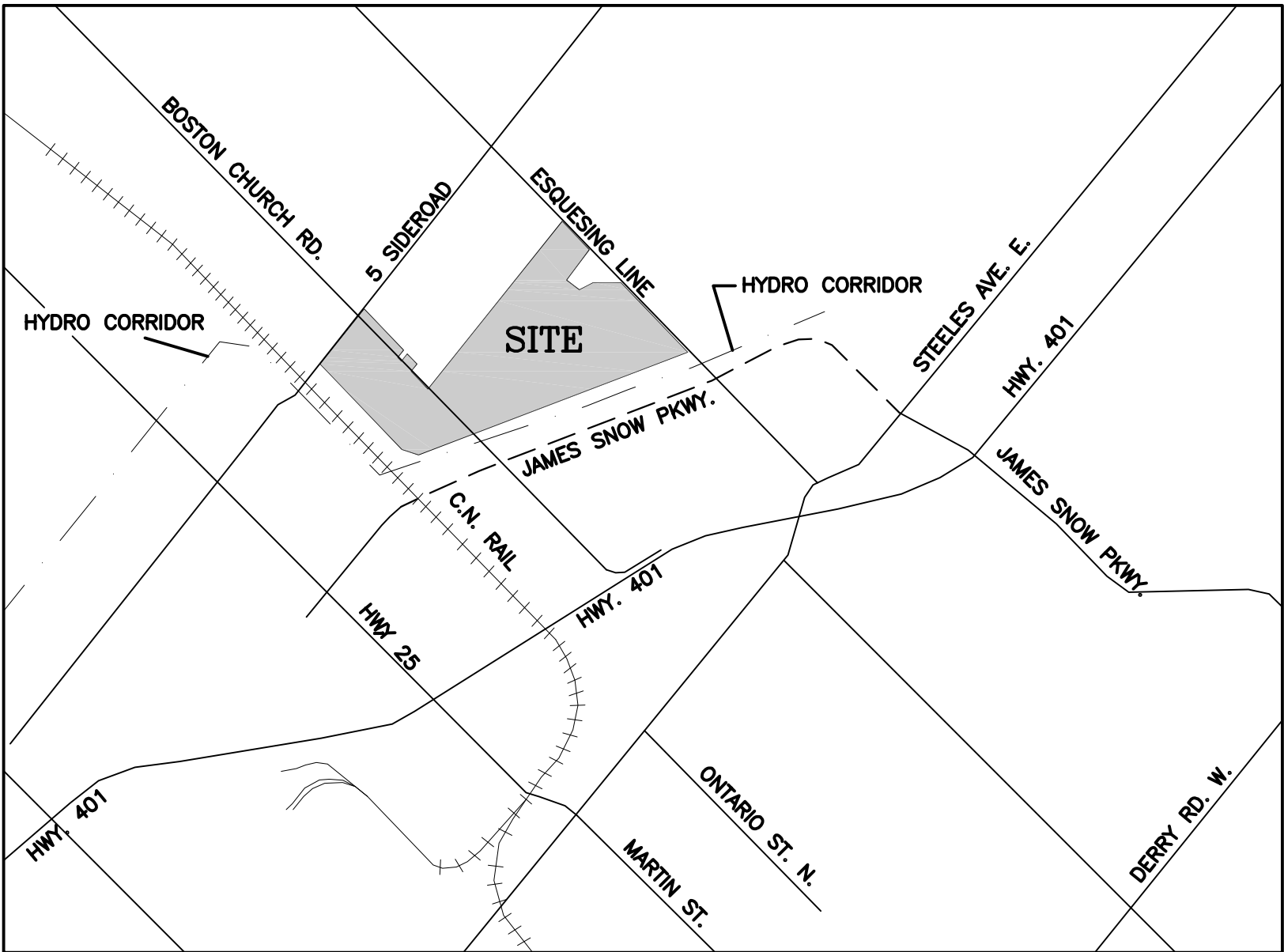
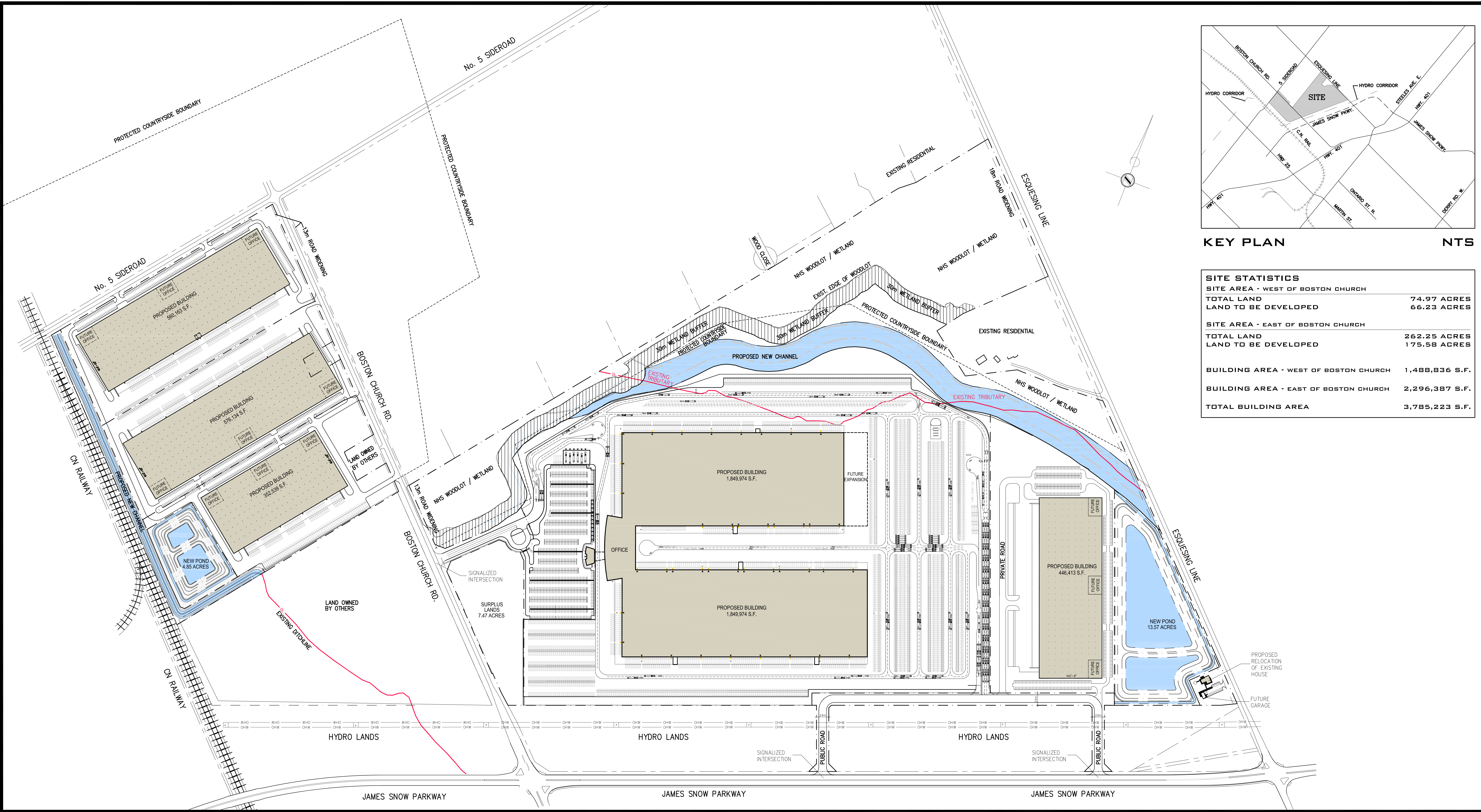
The following Appendices do not constitute part of Amendment No. XX, but are included as information supporting the amendment.

Appendix I Notice of Public Meeting

Appendix I Notice of Public Meeting

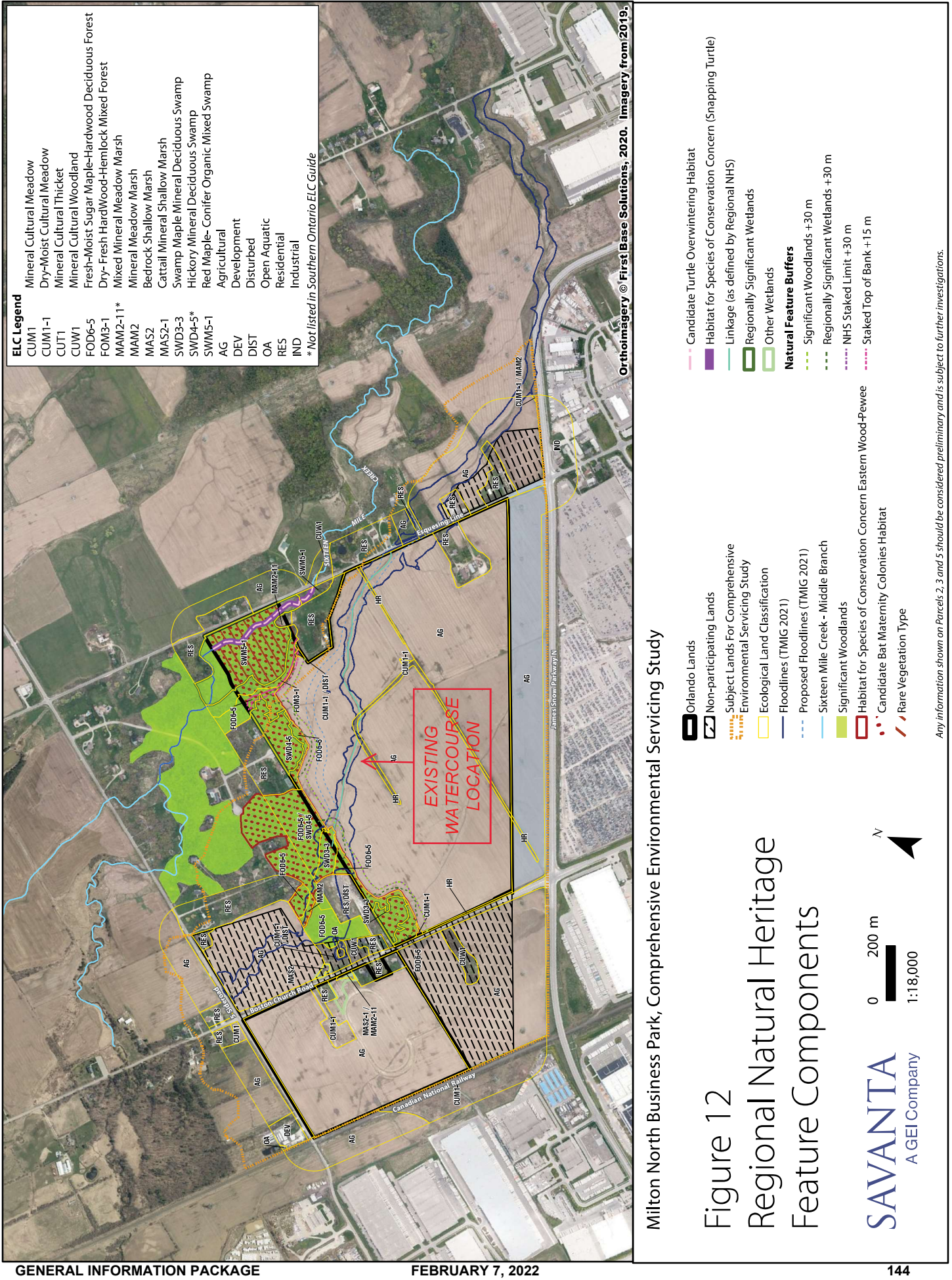


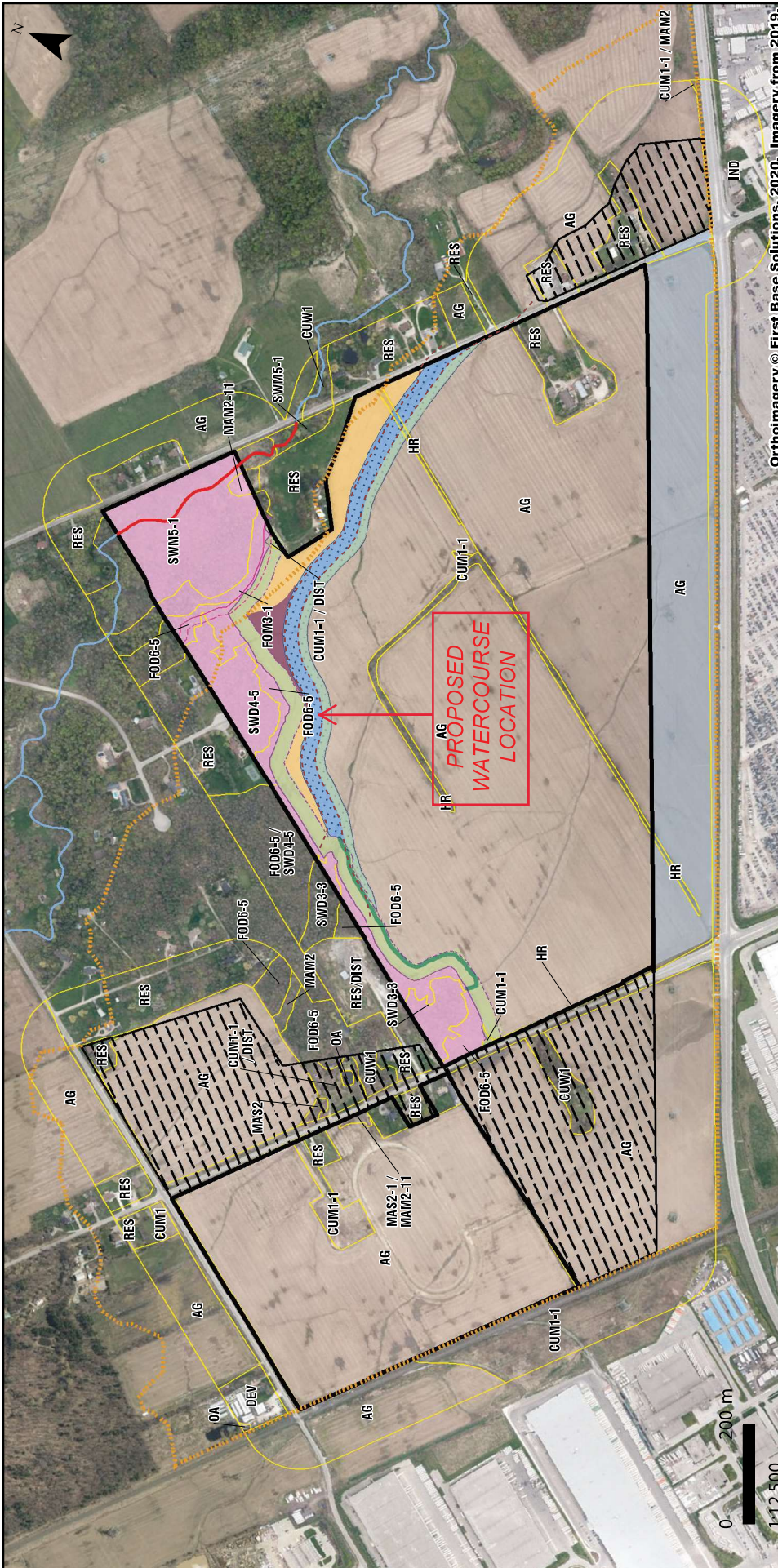
- | | | |
|---------------------------|---|---|
| —+— Rail Line | Urban Area | Greenbelt Plan Protected Countryside Boundary |
| — Major Road | Agricultural Area | Niagara Escarpment Plan Boundary |
| — Provincial Freeway | Regional Natural Heritage System * | Parkway Belt West Plan Boundary |
| — Lot and Concession Line | Greenbelt Natural Heritage System (Overlay) | ROPA Subject Lands |
| — Municipal Boundary | Employment Area | |



KEY PLAN NTS

SITE STATISTICS	
SITE AREA - WEST OF BOSTON CHURCH	
TOTAL LAND	74.97 ACRES
LAND TO BE DEVELOPED	66.23 ACRES
SITE AREA - EAST OF BOSTON CHURCH	
TOTAL LAND	262.25 ACRES
LAND TO BE DEVELOPED	175.58 ACRES
BUILDING AREA - WEST OF BOSTON CHURCH	1,488,836 S.F.
BUILDING AREA - EAST OF BOSTON CHURCH	2,296,387 S.F.
TOTAL BUILDING AREA	3,785,223 S.F.





Milton North Business Park,
Comprehensive Environmental Servicing Study
Figure 13

Proposed Natural Heritage System (Constraints and Opportunities)

Concept Plan: Milton North Concept Plan 2021-08-24

File: Milton North SITE PLAN r12.dwg

* Final orientation of Proposed Wetland Compensation Area to be defined during the detailed design phase.

Any information shown on Parcels 2, 3 and 5 should be considered preliminary and is subject to further investigations.

SAVANTA
A GEI Company

- Orlando Lands**
- Non-participating Lands
 - Subject Lands For Comprehensive Environmental Servicing Study
- Hydro Corridor**
- Ecological Land Classification
 - Watercourse
 - High Constraint Watercourse
 - NHS Staked Limit
 - Staked Top of Bank
 - NHS Staked Limit + 30 m
 - Staked Top of Bank +15 m
 - Proposed Floodlines (TMIG 2021)
- Proposed Natural Heritage System**
- Vegetated Buffers
 - Intermediary Areas
 - Retained Features
 - Created Wetland
 - Realigned Watercourse
 - Green Swale

- ELC Legend**
- CUM1 Mineral Cultural Meadow
 - CUM1-1 Dry-Moist Cultural Meadow
 - CUT1 Mineral Cultural Thicket
 - CUM1 Mineral Cultural Woodland
 - FOD6-5 Fresh-Moist Sugar Maple-Hardwood Deciduous Forest
 - FOM3-1 Dry-Fresh Hardwood-Hemlock Mixed Forest
 - MAM2-11* Mixed Mineral Meadow Marsh
 - MAM2 Bedrock Shallow Marsh
 - MAM2-1 Cattail Mineral Shallow Marsh
 - SWD3-3 Swamp Maple Mineral Deciduous Swamp
 - SWD4-5* Hickory Mineral Deciduous Swamp
 - SWM5-1 Red Maple- Conifer Organic Mixed Swamp
 - AG Agricultural
 - DEV Development
 - DIST Disturbed
 - OA Open Aquatic
 - RES Residential

* Not listed in Southern Ontario ELC Guide

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VIA EMAIL

January 24, 2022

Legislative & Planning Services
Department
Office of the Regional Clerk
1151 Bronte Road
Oakville ON L6M 3L1

Kevin Arjoon, City Clerk, City of Burlington
Meaghan Reid, Town Clerk, Town of Milton
Vicki Tytaneck, Town Clerk, Town of Oakville
Valerie Petryniak, Town Clerk, Town of Halton Hills

Please be advised that at its meeting held Wednesday, January 19, 2022, the Council of the Regional Municipality of Halton adopted the following resolution:

**RESOLUTION: LPS06-22 - Regional Program for Community Improvement
Plans: 2021 Annual Update**

1. THAT Report No. LPS06-22 re: "Regional Program for Community Improvement Plans: 2021 Annual Update" be received for information.
2. THAT the Regional Clerk forward a copy of Report No. LPS06-22 to the City of Burlington, the Town of Halton Hills, the Town of Milton, and the Town of Oakville for their information.

Included please find a copy of Report No. LPS06-22 for your information.

If you have any questions please contact me at the e-mail address below.

Sincerely,

A handwritten signature in blue ink, appearing to read "G. Milne", written over a light blue circular stamp.

Graham Milne
Regional Clerk
graham.milne@halton.ca

Regional Municipality of Halton

HEAD OFFICE: 1151 Bronte Rd, Oakville, ON L6M 3L1
905-825-6000 | Toll free: 1-866-442-5866

Report To:	Regional Chair and Members of Regional Council
From:	Bob Gray, Commissioner, Legislative and Planning Services and Corporate Counsel
Date:	January 19, 2022
Report No:	LPS06-22
Re:	Regional Program for Community Improvement Plans: 2021 Annual Update

RECOMMENDATION

1. THAT Report No. LPS06-22 re: "Regional Program for Community Improvement Plans: 2021 Annual Update" be received for information.
2. THAT the Regional Clerk forward a copy of Report No. LPS06-22 to the City of Burlington, the Town of Halton Hills, the Town of Milton, and the Town of Oakville for their information.

REPORT

Executive Summary

- The Regional Program for Community Improvement Plans (CIPs) (the "Program") allows Halton Region to provide grants to the Local Municipalities that support their CIP programs provided the applications meet Program requirements, including assisting with the implementation of Regional Official Plan policies.
- The purpose of this report is to provide Regional Council with the annual update on the implementation of the Program as required in the Program Guidelines.
- In the 2021 Program Year, Regional staff monitored the progress of an existing application in the Town of Halton Hills and continued to work with local municipal partners on their CIPs. The Program has disbursed a total of \$19,550 since 2017 in support of applications to Local CIPs in Halton Region.
- There are now four Local CIPs in Halton Region – one in Halton Hills, two in Oakville, and one in Burlington. As the number and scope of Local CIPs continues to increase, Regional staff also expect an increase in requests for funding through

the Program and recommend continued monitoring of the Program, its uptake, and its effectiveness in supporting Local Municipal CIPs.

Background

Community Improvement Plans (CIPs) are a tool under the *Planning Act* that allow municipalities to designate Community Improvement Project Areas and establish financial incentive programs to promote rehabilitation and redevelopment in these areas. The *Planning Act* also enables municipalities to provide grants and loans for carrying out a CIP. The Regional Official Plan enables the use of CIPs as a tool for implementing its policies. This includes allowing the Region to participate in Local Municipal CIPs and make loans and grants to the Local Municipalities in support of their CIPs.

Regional Council initiated the Regional Program for CIPs in September 2016 through Report No. LPS94-16. The purpose of the Program is to support Regional Official Plan implementation by providing Regional grants in response to Local Municipal CIP program applications that support Regional policy objectives. The Program Guidelines, which summarize the parameters of the Program, are provided for reference as Attachment #1 to this report. In 2017, \$75,000 was allocated on an annual basis for the Program's implementation.

This is the fifth annual Program Update report to Regional Council and provides information on implementation during the 2021 Program Year.

Discussion

Application Status Summary – 2021 Program Year

During the 2021 Program Year (being January to December), an existing application in Halton Hills continued to be monitored and Regional staff responded to inquiries from Local Municipal staff on potential applications. No new applications were received in the 2021 Program Year. A summary of application status and the funding approved and disbursed to date through the Program is provided below.

File No.	Location	Total Funding Approved in Principle	Disbursed to Date	Remaining Funding Approved in Principle	Status
2017-001-H	125 McDonald Boulevard, Acton	\$50,000 (2017)	\$11,250 (2018)	\$38,750	In Progress
2019-001-O	2485 Speers Road, Oakville	\$7,625 (2019)	\$7,625 (2020)	-	Complete
	2529 Royal Windsor Drive, Oakville	\$675 (2019)	\$675 (2020)	-	Complete
Total	-	\$58,300	\$19,550	\$38,750	-

Next Steps

While no new applications were received in 2021, Regional staff continued to work with the Local Municipalities on the development and implementation of their CIP programs.

When the Program began in 2017, there were only two Local Municipal CIPs in effect in Halton Region: the Town of Halton Hills' Comprehensive CIP and the Town of Oakville's Kerr Village CIP. Since that time, two additional Local Municipal CIPs have been approved. The Town of Oakville approved a Brownfield CIP in 2018 and the City of Burlington recently approved its Brownfields Focus CIP in April 2021. This brings the number of Local CIPs in Halton to four. Further, the Town of Halton Hills is currently in the process of reviewing and updating the Town's CIP.

Regional staff are also continuing to explore opportunities to leverage CIPs to support and encourage the creation of new assisted and affordable housing rental units in Halton.

As the number of Local CIPs increases, the potential for uptake of the Regional Program for CIPs also increases. In addition to the potential for more applications to the Program, the scope or type of Local Municipal CIP applications may also expand to include applications with greater levels of complexity. Regional staff, alongside Halton's Local Municipal partners, will continue to implement the Program and evaluate its effectiveness in implementing the Regional Official Plan and supporting Local Municipal CIPs.

FINANCIAL/PROGRAM IMPLICATIONS

The Regional Program for CIPs is funded through the Planning Services Operating Budget.

Respectfully submitted,



Curt Benson
Director, Planning Services and Chief
Planning Official



Bob Gray
Commissioner, Legislative and Planning
Services and Corporate Counsel

Approved by



Jane MacCaskill
Chief Administrative Officer

If you have any questions on the content of this report,
please contact:

Curt Benson

Tel. # 7181

Attachments: Attachment #1 – Regional Program for CIPs Guidelines

Regional Program For Community Improvement Plans (CIPs) Guidelines

Regional Official Plan Guidelines



Halton Region Official Plan Guidelines

The **Regional Official Plan (ROP)** is Halton's guiding document for land use planning. It contains policies that guide decisions related to, among other things, managing growth and its effects on Halton's social, economic and natural environment.

The **ROP Guidelines** are a set of documents that clarify, inform, and aid in the implementation of the Plan's policies.

"This Plan calls for the preparation of certain guidelines or protocols to provide more detailed directions in the implementation of its policies."

Halton Region Official Plan – Section 192
as adopted by Regional Council, December 16, 2009

The Guidelines have been prepared in accordance with Section 192 of the ROP. They provide direction and outline approaches that can be used to satisfy the relevant policies of the Plan.

The Guidelines may be updated from time to time as required through a report to Regional Council.

For more information, visit halton.ca/ROP or halton.ca/ROPguidelines or call 311.

Regional Program For Community Improvement Plans (CIPs) Guidelines

The **Regional Program For Community Improvement Plans (CIPs) Guidelines** identify the Regional Official Plan policies that may be implemented through Local Municipal CIP programs and outline the process and associated conditions applicable to a Local Municipality's request for Regional participation in such programs.

Purpose	<p>The purpose of the Guidelines is to:</p> <ul style="list-style-type: none">• provide an overview of the CIP-related policies in the Regional Official Plan• identify the Regional Official Plan policy a Local CIP program application must demonstrate are implemented to qualify for Regional support• identify a process for the Local Municipalities to follow when requesting Regional support in the funding of a Local Municipal CIP program application
Application & Use	<p>The Guidelines apply when the Local Municipalities are seeking the Region's participation in Local CIP programs. The Guidelines identify those Regional Official Plan policies that the Region is seeking to implement through participation in Local Municipal CIP programs.</p> <p>The Guidelines are intended to be used by:</p> <ul style="list-style-type: none">• Regional Council and staff in determining the Local Municipal CIP programs that the Region may wish to participate in on the basis of implementing ROP policies• the Local Municipalities for clarity on the process to seek the Region's participation in Local Municipal CIP programs and the requirement that the Region's participation in Local Municipal CIP programs will assist in implementing Regional Official Plan policies• the public in understanding the purpose of CIPs and the rationale for the Region's participation in Local CIP programs
Supporting Documents	<p>In addition to the policy direction provided by the Regional Official Plan, the following documents should be considered alongside this Guideline, as appropriate:</p> <ul style="list-style-type: none">• Province of Ontario Community Improvement Plans (http://www.mah.gov.on.ca/Page6850.aspx) (http://www.mah.gov.on.ca/Page1297.aspx)
Version	<p>Version 1.0 This version of the Regional Program For Community Improvement Plans Guidelines was brought before Regional Council on September 14, 2016 through Report No. LPS94-16.</p>

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1.0 Overview

1.1 Purpose

A Community Improvement Plan (CIP) is a planning tool provided for under Section 28 of the Planning Act that permits municipalities to designate Community Improvement Project Areas and establish financial incentive programs (grants and loans) for the purpose of promoting rehabilitation and redevelopment in these Project Areas. The Planning Act permits upper and lower-tier municipalities to provide grants and loans for the purpose of carrying out a CIP and requires the municipality making the grant or loan to have provisions in its official plan relating to the making of such grants and loans.

The Regional Official Plan (ROP) contains policies that permit the Region to use CIPs as a tool to implement the policies of the ROP. The “Regional Program For CIPs” has been developed to provide a framework for implementing this policy direction. This document provides an overview of the Program, outlines key Regional Official Plan policies that may be implemented through CIPs, and establishes implementation processes and requirements.

1.2 Regional Program For CIPs

The Regional Program For CIPs (the “Program”) provides a framework for operationalizing the ROP direction to use CIPs to implement the policies of the Plan. The Program is based on the following premise: the Region will provide grants to Local Municipalities in support of individual applications to their CIP programs provided it is demonstrated that those applications assist in implementing Regional Official Plan policies.

This Guideline document assists in the implementation of the Program by identifying the ROP policies that may be implemented through Local Municipal CIP programs and by identifying a process for Local Municipalities to follow when requesting a financial contribution from the Region under the Program.

In developing the Guidelines, consideration has been given to the best practices of other regional municipalities and ensuring the Program conforms to the requirements of Section 28 of the Planning Act and associated regulations.

2.0 Regional Program For CIPs – Key ROP Policies

2.1 Key ROP Policies for CIP Implementation

The Implementation section of the Regional Official Plan contains policies regarding CIPs which provide the basis for the Regional Program For CIPs. These implementation policies are reproduced below for reference. In summary, the policies allow the Region to:

- prepare and implement Regional CIPs related to prescribed matters (s. 205.3 & 205.4);
- participate in Local Municipal CIPs and make grants / loans in support of these CIPs (s. 205.5); and
- use CIPs, when appropriate, to implement the policies of the Regional Official Plan (s. 205.6).

Section	Policy
205.3	Under the Planning Act and its regulations, the <i>Region</i> is a prescribed upper-tier municipality that may designate all or part of the <i>Region</i> as a Community Improvement Project Area for the purpose of preparing and implementing Community Improvement Plans to improve the following elements within the Project Area: <ul style="list-style-type: none"> 205.3(1) <i>infrastructure within the Region's jurisdiction,</i> 205.3(2) <i>land and buildings within any Intensification Area, and</i> 205.3(3) <i>Affordable Housing.</i>
205.4	Under a Community Improvement Plan, the <i>Region</i> may acquire and dispose of lands and buildings, undertake improvements to such lands and buildings, and make grants and loans to other parties for the purpose of carrying out programs under the Plan.
205.5	The <i>Region</i> may also participate in a Local Municipality's Community Improvement Plan and make loans and grants to that Local Municipality in support of its Plan.
205.6	Regional Council, in consultation with the affected Local Councils, will use Community Improvement Plans at the appropriate time and circumstances to implement <i>policies</i> of this Plan.

2.2 Key ROP Policies Implemented Through the Regional Program For CIPs

ROP policies identified as having the potential to be implemented through the use of CIPs are listed below:

Promoting & Supporting Intensification and the Development of Intensification Areas	Promoting Residential Intensification of Brownfields and Greyfields
Promoting Employment Area Intensification of Brownfields and Greyfields	Encouraging and Creating Assisted, Affordable and Special Needs Housing
Supporting and Promoting Agriculture	Protecting and Preserving Cultural Heritage Resources

Regional participation in Local Municipal CIP programs will be based on a demonstration that the applicable CIP program will aid in implementing these ROP policies. To provide context regarding the implementation of these policies, they are described in greater detail on the following pages. These descriptions provide guidance as to how implementation of these policies through a Local Municipal CIP program may be achieved and demonstrated.

2.2.1 Promoting and Supporting Intensification and the Development of Intensification Areas

The ROP contains a distribution of population and employment to the planning horizon year of 2031 as set out in Table 1:

Table 1 – Population and Employment and Distribution 2031¹

Municipality	Population		Employment	
	2006	2031	2006	2031
Burlington	171,000	193,000	88,000	106,000
Oakville	172,000	255,000	82,000	127,000
Milton	56,000	238,000	28,000	114,000
Halton Hills	58,000	94,000	20,000	43,000
Halton Region	456,000	780,000	218,000	390,000

To achieve this population and employment distribution, which sees Halton Region and its Local Municipalities growing to accommodate 780,000 people and 390,000 jobs by 2031, the ROP contains a growth strategy. The strategy plans for growth through intensification (growth occurring in the already developed urban area known as the Built-Up Area, shown on Map 1 of the ROP) and through urban expansion (growth occurring in areas designated for urban uses that are outside the Built-Up Area and that are not yet developed for urban uses, known as the designated greenfield area).

To plan for intensification, the ROP requires that by 2015 and for each year thereafter, a minimum of 40% of all residential development occurring annually within Halton will be within the Built-Up Area. To achieve this, the ROP contains an intensification target for the Region and each Local Municipality as set out in Table 2:

Table 2 – Intensification Targets

Minimum Number of New Housing Units to be Added to the Built-Up Area Between 2015 and 2031				
Burlington	Oakville	Milton	Halton Hills	Halton Region
8,300	13,500	5,300	5,100	32,200

The ROP contains more detailed policies for Intensification Areas, which are specific areas within the Built-Up Area that are planned to be the focus for accommodating intensification in the Region. The Region's Intensification Areas include:

- Urban Growth Centers (Midtown Oakville, Downtown Burlington and Downtown Milton) as shown on Map 1 (these areas are planned to achieve, by 2031 or earlier, a minimum density of 200 people and jobs per hectare);
- Major Transit Station Areas and Mobility Hubs as shown on Map 1; and
- Intensification Corridors and Mixed Use Nodes as identified in Local Municipal Official Plans.

The ROP considers intensification and the development of Intensification Areas as the highest priority of development within Halton. To that end, policies within the ROP direct the Region to implement programs and incentives, including CIPs, to promote and support intensification and Intensification Areas:

Section	Policy
81(7.2)	<p>[It is the <i>policy</i> of the <i>Region</i> to:]</p> <p>Consider <i>intensification</i> and <i>development of Intensification Areas</i> as the highest priority or urban <i>development</i> within the <i>Region</i> and implement programs and incentives, including Community Improvement Plans under the Planning Act, to promote and support <i>intensification</i>.</p>

¹ Amendment No. 2 to the Growth Plan extended the forecast period to 2041 and includes 2041 population and employment figures for Halton. At the time this Guideline was prepared, the Region had not yet undertaken an update to its Official Plan to reflect the 2041 time horizon or figures. The figures in Table 1 and Table 2 reflect those in the September 28, 2015 Interim Office Consolidation of the ROP.

CIP programs that support intensification may help implement the Regional Program For CIPs and achieve the intensification and density targets and policies as well as the population and employment distribution of the ROP.

2.2.2 Promoting Residential Intensification of Brownfields and Greyfields

The ROP promotes residential intensification through the development or redevelopment of brownfield and greyfield sites (Section 85(13)). Specifically, the ROP directs the Region to work with the Local Municipalities, government agencies and the private sector to make brownfield and greyfield sites available and to use CIPs to develop or redevelop them, where appropriate, for housing with components of Assisted, Affordable and Special Needs Housing:

Section	Policy
86(13.1)	<p>[It is the <i>policy</i> of the <i>Region</i> to:]</p> <p>In partnership with the Local Municipalities, other government agencies and the private sector, identify <i>brownfield and greyfield sites</i> outside <i>Employment Areas</i> and work towards making them available, where appropriate, for <i>development</i> or redevelopment for housing purposes with components of <i>Assisted, Affordable and Special Needs Housing</i>. Such sites or lands may be declared as Community Improvement Project Areas under the Planning Act to facilitate their <i>development</i> or redevelopment.</p>

CIP programs that promote residential intensification of brownfield and greyfield sites with components of assisted, affordable and special needs housing may help implement the Regional Program For CIPs and achieve the population distribution in Table 1 as well as the intensification, density, and housing targets of the ROP.

2.2.3 Promoting Employment Area Intensification on Brownfields and Greyfields

The ROP contains policies supporting the intensification of employment lands which includes the redevelopment of brownfields and greyfields within these employment areas for employment uses:

- plan for, protect and preserve the Employment Areas for current and future use (s. 77.4(2));
- ensure the necessary infrastructure is provided to support the development of the Employment Areas in accordance with policies of this Plan (s. 77.4(3)); and
- require Local Municipalities to promote intensification and increased densities in both new and existing Employment Areas by facilitating compact, transit-supportive built form and minimizing surface parking (s. 77.4(5)).

CIP programs that promote the redevelopment and intensification of brownfield and greyfield sites within employment areas for employment purposes may help implement the Regional Program For CIPs and, among other things, achieve the employment distribution in Table 1 of the ROP.

2.2.4 Encouraging and Creating Assisted, Affordable and Special Needs Housing

The overall goal for housing in the ROP is to “supply the people of Halton with an adequate mix and variety of housing to satisfy differing physical social and economic needs” (Section 84). Policies within the ROP encourage and support the provision of assisted, affordable and special needs housing. The ROP contains two specific housing targets in Section 86(6):

- at least 50% of new housing units produced annually be in the form of townhouses or multi-storey buildings
- at least 30% of new housing units produced annually be affordable or assisted housing.

These targets are aimed at increasing the amount of assisted and affordable housing in the Region.

The ROP also identifies the opportunity for the use of financial and other incentives, including CIPs, to add to the Region’s assisted, affordable and special needs housing stock:

Section	Policy
86(15)	[It is the <i>policy</i> of the <i>Region</i> to:] Consider financial and other incentives including grants, property tax reductions, <i>infrastructure</i> improvements and Community Improvement Plans in the provision of <i>Assisted, Affordable</i> and <i>Special Needs Housing</i> .

CIP programs that promote assisted, affordable and special needs housing may help implement the Regional Program For CIPs and achieve its housing mix and housing affordability targets in Section 86(6).

2.2.5 Supporting and Promoting Agriculture

Agriculture is recognized as the primary activity and land use in Halton's Agricultural Area. A major goal of the ROP is to maintain a permanently secure, economically viable agricultural industry and to preserve the open space character and heritage of Halton's non-urbanized areas. The ROP identifies a list of programs and plans that the Region may implement to support and sustain agriculture in Halton, including the use of CIPs:

Section	Policy
101(5)i)	[Develop and implement programs and plans to support and sustain <i>agriculture</i> in <i>Halton</i> , which may include, among others, the following:] use of Community Improvement Plans under the Planning Act to promote and support <i>agriculture</i> .

CIP programs that support and promote agriculture may help implement the Regional Program For CIPs and achieve its overall goal of maintaining a permanently secure, economically viable agricultural industry and the employment distribution in Table 1 of the ROP.

2.2.6 Protecting and Preserving Cultural Heritage Resources

The Region's commitment to protecting its cultural heritage resources is reflected in the fact that Halton was one of the first Regions to prepare an Archaeological Management Plan. The goal, objectives and policies of the ROP reaffirm and strengthen this commitment to preserving the Region's Cultural Heritage Resources including its material, cultural and built heritage resources. The overall ROP goal for cultural heritage resources is "to protect the material, cultural and built heritage of Halton for present and future generations" (Section 165).

In support of this goal, the ROP policies require, among other things, development proposals on adjacent lands to protected cultural heritage resources to consider the preservation, relocation and/or adaptive re-use of historic buildings and incorporate in any reconstruction or alteration design features that are in harmony with the area's character (Section 167(3)). Other ROP policies also focus on protecting and preserving the Region's material, cultural and built heritage resources. These policies include:

- encouraging Local Municipalities to prepare, as part of any area-specific plan or relevant official plan amendment, an inventory of heritage resources and provide guidelines for preservation, assessment and mitigative activities (Section 167(5)); and
- developing a coordinated heritage signage and heritage promotion program in Halton (Section 167(8)).

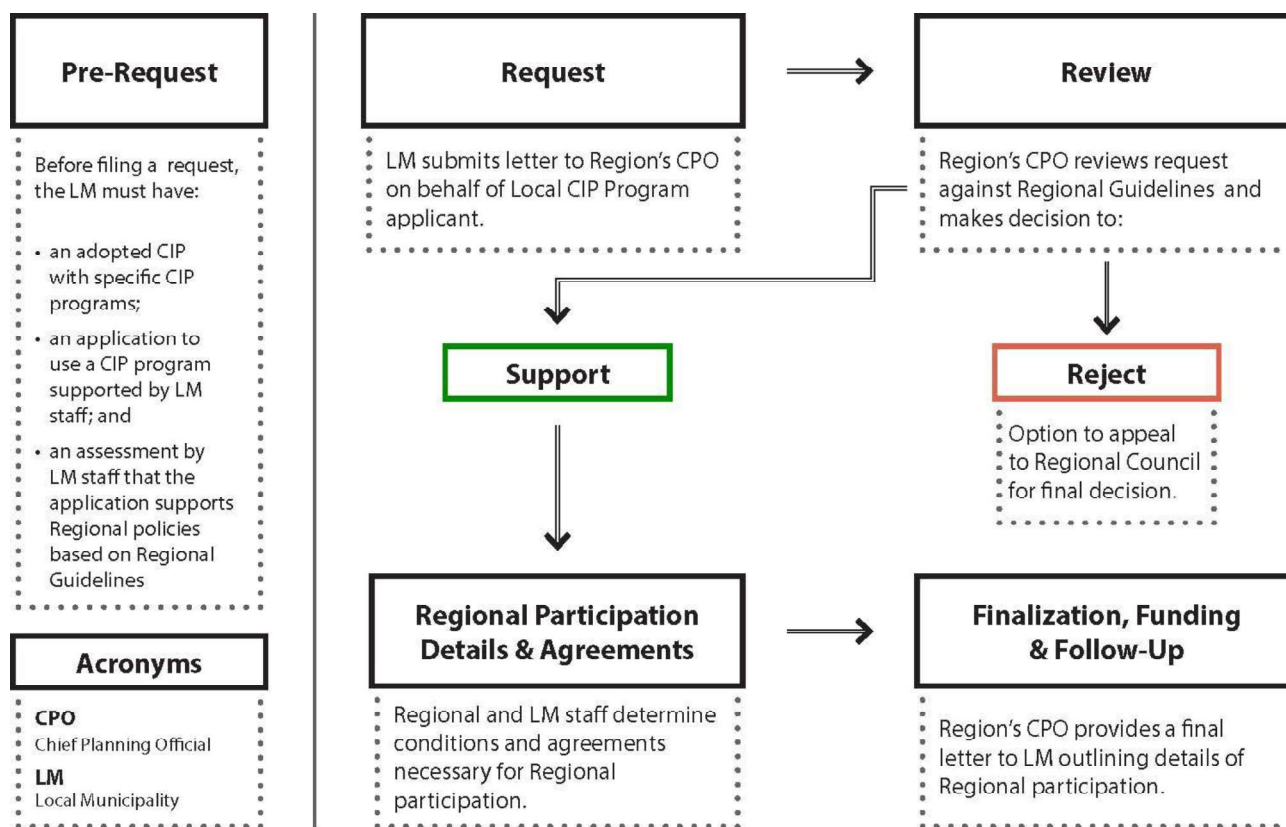
CIP programs that support the protection and preservation of cultural heritage resources may help implement the Regional Program For CIPs and ensure that cultural heritage resources are maintained for current and future generations.

3.0 Regional Program For CIPs – Implementation

3.1 Program Request Process

The process Local Municipalities are to follow when making a request under the Regional Program For CIPs is outlined below. The process is shown at a high-level in the following flow chart and described in further detail below. This process ensures clarity and consistency in the Region's response to Local Municipal requests and the implementation of ROP policies through Local Municipal CIP programs.

Regional Program For CIPs –Local Municipality Request Process Flowchart



Regional Program For CIPs – Local Municipality Request Process

Pre-Request

The following is required prior to seeking a financial contribution from the Region in support of a Local Municipal CIP program application:

- an approved Community Improvement Plan with specific programs;
- an application to utilize an approved CIP program;
- support for the application by Local Municipal staff; and
- an assessment by Local Municipal staff of the ROP policies implemented through the program application.

Request

1) Local Municipality Provides Written Request to Region's Chief Planning Official

The Local Municipality provides a letter to the Region's Chief Planning Official requesting the Region's participation in a specific CIP program application. The letter must contain the following information:

- a) Applicable Community Improvement Plan and Community Improvement Project Area
- b) Community Improvement Plan Program Details, Costs, and Benefits
- c) Community Improvement Plan Program Application Details
- d) Assessment of How Application Implements Regional Official Plan Policies (as outlined in Section 2.2)
- e) Details of Local Municipal Funding & Conditions
- f) Details of Requested Regional Funding

Review

2) Region's Chief Planning Official Reviews Request

The Region's Chief Planning Official reviews the request to determine whether ROP policies would be implemented through the Region's participation in the Local CIP program application.

3) Region's Chief Planning Official Approves or Rejects Request

The Region's Chief Planning Official may approve or reject the Local Municipality's request. A letter will be sent in reply to the Local Municipality outlining the Chief Planning Official's decision. If the decision is to approve the request, the Chief Planning Official's letter will indicate support in principle, subject to a meeting between Regional and Local staff to determine the participation details and agreements, if necessary. If the decision is to reject the request, the Local Municipality has an opportunity to appeal to Regional Council for a final decision.

Regional Participation Details & Agreements

4) Regional and Local Municipal Staff Meet and Determine Details & Agreements

Regional and Local Municipal staff determine the details of the Region's financial contribution and any conditions and/or agreements necessary to enable the Region's participation.

Finalization, Funding & Follow-Up

5) Region's Chief Planning Official Provides Final Letter to Local Municipality

The Region's Chief Planning Official provides a final letter to the Local Municipality indicating:

- a) the amount of Regional funding to be provided;
- b) the applicable conditions attached to this funding; and
- c) the expected timing and delivery of this funding.

6) Local Municipality Provides Update on Funding Usage

The Local Municipality provides information on use of Regional funds for the Region's use in an annual report to Regional Council on the Region's participation in Local CIP programs through the Regional Program For CIPs.

3.2 Program Requirements

The following conditions are applicable to any financial contribution made by the Region to a Local Municipality in support of a Local Municipal CIP program application:

Requirement	Description
ROP Policy Implementation	Any financial grant made by the Region to an individual Local Municipal CIP program will be based on a demonstration that the Local Municipal CIP program application assists in implementing one or more of the key ROP policies described in Section 2.2.
Matching Contribution	Any financial grant made by the Region to an individual Local Municipal CIP program application must be matched by the Local Municipality.
Maximum Contribution	Any financial grant made by the Region to an individual Local Municipal CIP program application will be capped at a maximum of \$50,000.

In addition, the Planning Act (Section 28(7.2)) enables the Region to establish any other conditions it considers appropriate for participating in Local Municipal CIP programs. For example, the Region could require that a certain number or percentage of affordable housing units be created as a condition for its financial participation in a CIP program. The nature and extent of any additional Regional conditions required to secure Regional participation in a Local Municipal CIP program would be established through discussions between Regional and Local Municipal staff as part of the process outlined in Section 3.1.

Regional participation in Local Municipal CIP programs is subject to the availability of funding in support of the Regional Program For CIPs as approved by Regional Council.

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VIA EMAIL

January 24, 2022

Legislative & Planning Services
Department
Office of the Regional Clerk
1151 Bronte Road
Oakville ON L6M 3L1

Barb Veale, Conservation Halton
Joshua Campbell, Credit Valley Conservation Authority
Nancy Davy, Grand River Conservation Authority
Debbie Ramsay, Niagara Escarpment Commission
Kevin Arjoon, City Clerk, City of Burlington
Meaghen Reid, Town Clerk, Town of Milton
Vicki Tytaneck, Town Clerk, Town of Oakville
Valerie Petryniak, Town Clerk, Town of Halton Hills

Please be advised that at its meeting held Wednesday, January 19, 2022, the Council of the Regional Municipality of Halton adopted the following resolution:

RESOLUTION: LPS04-22 - Interim Service Delivery Agreement for Ecological Review Services in Halton

THAT the Regional Clerk forward a copy of Report No. LPS04-22 to the City of Burlington, the Town of Halton Hills, the Town of Milton, the Town of Oakville, Conservation Halton, Credit Valley Conservation, the Grand River Conservation Authority, and the Niagara Escarpment Commission, for their information

Included please find a copy of Report No. LPS04-22 for your information.

If you have any questions please contact me at the e-mail address below.

Sincerely,

A handwritten signature in blue ink, appearing to read "G. Milne", written over a light blue circular stamp.

Graham Milne
Regional Clerk
graham.milne@halton.ca

Regional Municipality of Halton

HEAD OFFICE: 1151 Bronte Rd, Oakville, ON L6M 3L1
905-825-6000 | Toll free: 1-866-442-5866

Report To:	Regional Chair and Members of Regional Council
From:	Bob Gray, Commissioner, Legislative and Planning Services and Corporate Counsel
Date:	January 19, 2022
Report No:	LPS04-22
Re:	Interim Service Delivery Agreement for Ecological Review Services in Halton

RECOMMENDATION

THAT the Regional Clerk forward a copy of Report No. LPS04-22 to the City of Burlington, the Town of Halton Hills, the Town of Milton, the Town of Oakville, Conservation Halton, Credit Valley Conservation, the Grand River Conservation Authority, and the Niagara Escarpment Commission, for their information.

REPORT

Executive Summary

- In 2018, Halton Region, local municipalities, and conservation authorities endorsed a renewed Memorandum of Understanding (MOU) for the provision of integrated and seamless planning in Halton. Section 7 of the 2018 MOU contains provisions to improve coordination of environmental planning services to implement Natural Heritage System policies of the Regional Official Plan.
- The Region and Conservation Halton identified a need to enter into an Interim Service Delivery Agreement for Ecological Review Services in Halton (Interim Agreement), using Conservation Halton's technical expertise related to ecological services.
- Recent changes to the *Conservation Authorities Act* place importance on conservation authorities and municipalities entering into MOUs to define the nature of services provided by conservation authorities. The contents of the Interim Agreement are comprehensive and align with what is anticipated in the future regulations related to the *Conservation Authorities Act*.

- The Interim Agreement, which came into effect on December 2, 2021, establishes that Conservation Halton will deliver ecological review services to Regional Planning staff for a term of three years for fees outlined in the Agreement. It also defines among other matters, roles and responsibilities, service delivery standards and general workflow processes, monitoring, staff training and cost recovery provisions.
- This Interim Agreement provides a useful foundation for future agreements and could inform future updates to the 2018 MOU among Halton area conservation authorities and municipalities in accordance with Section 7 provisions relating to planning for the natural environment.

Background

On June 20, 2018, through Report No. LPS66-18, re: New Memorandum of Understanding for an Integrated Halton Area Planning System, Regional Council endorsed a new MOU with Halton's local municipalities, and conservation authorities for the provision of integrated and seamless planning in Halton.

The 2018 MOU outlines a collaborative, consensus-based, and principles-based framework to assist the parties in managing growth and change while protecting the natural environment. The 2018 MOU contains a work plan for several specific improvements to the delivery of an integrated planning system in Halton including: specific targets for review and responding to development applications; best practices for pre-consultations and complete applications; staff training; data sharing; planning partnership arrangements; dispute resolution mechanisms; and, a framework to define roles and responsibilities for coordinated planning for the natural environment. Section 7 of the 2018 MOU contains provisions to improve coordination of environmental planning services to implement Natural Heritage System policies of the Regional Official Plan.

At the time that the 2018 MOU was endorsed by Regional Council, the Province was undertaking a review of the *Conservation Authorities Act* and associated regulations to clarify roles and responsibilities of conservation authorities in municipal planning, among other matters. In recognition of uncertainty related to the pending changes to the *Conservation Authorities Act*, the MOU did not provide specific roles and responsibilities but provided general provisions for greater coordination between the Region and Halton area conservation authorities for planning the natural environment. Once changes to the *Conservation Authorities Act* were concluded it was anticipated that independent service delivery agreements and future updates to the MOU would be advanced to provide clarity.

Recent changes to the *Conservation Authorities Act* place importance on conservation authorities and municipalities entering into MOUs to define the nature of services provided by conservation authorities. The *Conservation Authorities Act* regulations that

set out standards and requirements for the delivery of municipal programs and services are not yet in place but a consultation paper on these matters is anticipated to be released on the Province's Environmental Registry for public review this year.

Consistent with the 2018 MOU, the Region and Conservation Halton identified the need to enter into an Interim Agreement to streamline environmental planning review, using Conservation Halton's ecological services, to support Regional Planning staff in implementing the Natural Heritage System policies of the Regional Official Plan through development application review.

The terms of the Interim Agreement between Halton Region and Conservation Halton are outlined in the discussion section below. A full copy of the executed Agreement is attached to this report (Attachment #1).

Discussion

Halton Region and Conservation Halton have a shared interest in the protection, management, and enhancement of the natural heritage system in Halton. Both parties share goals in providing efficient, timely, coordinated, and consistent environmental reviews for development and site alteration applications.

The purpose of the Agreement is to define how ecological review services for development and site alteration applications will be coordinated between Halton Region and Conservation Halton staff within Conservation Halton's watershed area in Halton.

The terms of the Agreement focus on Conservation Halton technical ecological support services to Halton Region to help inform Regional Planning staff's review of applications under the *Planning Act* and development permits under the *Niagara Escarpment Planning and Development Act*.

Components of the Agreement

The Agreement contains the following components to clarify how the coordinated environmental planning review process between Conservation Halton and Halton Region will be implemented:

1. *Purpose and Goal* - establishes and maintains an efficient and timely coordinated environmental planning review process for development and site alteration applications that upholds the protection of Halton's Natural Heritage System.
2. *Roles and Responsibilities of Conservation Halton and the Region*– provides an overview of the specific processes, tasks and responsibilities associated with ecological review services to be provided by both Conservation Halton and Regional Planning staff to support coordinated review of development applications.
3. *Service Delivery Standards of Conservation Halton* – outlines service delivery standards, including the timelines that Conservation Halton is expected to meet to

provide timely input to the Region for a streamlined development application review process. This is accompanied by a more detailed table that sets out development review timeframes for specific types of development applications.

4. *Monitoring, Conflict Resolution and Notice* - contains provisions on how service delivery will be monitored through key performance measures such as review timelines to ensure that an efficient and streamlined process is achieved, how conflicts will be resolved between the two parties, and how notice will be given for certain matters including termination of the Agreement.
5. *Training* – outlines staff training requirements to be completed by both Regional and Conservation Halton staff to provide clear direction how the Region's Natural Heritage policies are to be interpreted and to clarify roles and responsibilities of both parties in implementing the Agreement. It also sets out requirements for regularly scheduled liaison meetings to be held between Regional Planning staff and Conservation Halton staff.
6. *Billing/Fees/Reimbursement of Expenses* – outlines billing and reimbursement provisions relating to Conservation Halton's ecological review services to the Region.

The Commissioner of Legislative & Planning Services at the Region executed the Agreement on the Region's behalf. Conservation Halton's President & CEO was authorized by Conservation Halton's Board of Directors to execute the Agreement on Conservation Halton's behalf. It came into effect on December 2, 2021, which is the date on which both parties executed the Agreement. The term of the Agreement is a three year period.

Next Steps

As the Agreement is now in effect, the transition of ecological review services from the Region to Conservation Halton is underway to implement the Agreement. Joint staff training sessions have been provided so that both parties are clear on roles and responsibilities, the review process, and how to interpret the Region's Natural Heritage System definitions, policies, and guidelines. Regularly scheduled liaison meetings have also been established between the two parties to support communications for specific development files and to monitor the effectiveness of the Agreement.

Monitoring provisions for the Agreement, including tracking of key performance measures such as review timelines, will begin within a six-month transition period.

The contents of the Agreement are comprehensive and align with what is anticipated in the future regulations dealing with conservation authority services to support municipal programs and services. This Agreement could serve as a foundation for additional service delivery agreements with other conservation authorities that have jurisdiction in

Halton or a more fulsome update of the 2018 MOU among Halton area conservation authorities and municipalities in accordance with Section 7 provisions relating to planning for the natural environment.

FINANCIAL/PROGRAM IMPLICATIONS

Conservation Halton staff estimate that the equivalent of two staff, a Planning Ecologist and an Environmental Planner, would be needed to meet service delivery requirements in the Agreement. The estimated annual cost as per the Agreement in Year 1 is \$240,793, Year 2 is \$252,832, and Year 3 is \$265,474. The costs to reimburse Conservation Halton for ecological services under the terms of the Agreement have been incorporated into the Planning Services Operating Budget and recovered through the Region's development review fees, in accordance with the 2022 Fees & Charges By-law 57-21 approved as part of the 2022 Budget.

Respectfully submitted,



Curt Benson
Director, Planning Services and Chief
Planning Official



Bob Gray
Commissioner, Legislative and Planning
Services and Corporate Counsel

Approved by



Jane MacCaskill
Chief Administrative Officer

If you have any questions on the content of this report,
please contact:

Curt Benson

Tel. # 7181

Attachments: Attachment #1 - Interim Service Agreement for Ecological Review Services in Halton

This Interim Service Delivery Agreement for Ecological Review Services in Halton (the “Agreement”) made this ____ day of _____, 2021.

BETWEEN:

THE REGIONAL MUNICIPALITY OF HALTON

hereinafter referred to as the "Region"

- and -

THE HALTON REGION CONSERVATION AUTHORITY

hereinafter referred to as the "Conservation Halton"

WHEREAS the Planning Services department within the **Regional Municipality of Halton** and the **Halton Region Conservation Authority** (the “**Parties**”) have a shared interest in providing efficient, timely and coordinated environmental review commentary in response to development applications within Halton Region in a consistent and reasonable manner;

AND WHEREAS on July 18, 2018, the Parties entered into a Memorandum of Understanding relating to provision of an integrated planning process in Halton Region (the “**2018 Updated MOU**”);

AND WHEREAS Conservation Halton is mandated to provide, in the area over which it has jurisdiction, under Section 20 of the *Conservation Authorities Act* the organization and delivery programs and services that further the conservation, restoration, development and management of natural resource in watersheds in Ontario;

AND WHEREAS Conservation Halton has the authority to enter into a memorandum of understanding, or such other agreement, with a municipality situated in whole or in part within its area of jurisdiction in respect of programs and services that the authority may provide on behalf of the municipality, under the *Conservation Authorities Act*;

AND WHEREAS Conservation Halton has technical and professional expertise related to natural heritage and watershed and sub-watershed planning and management;

AND WHEREAS based on section 7.4 of the 2018 Updated MOU, the Parties agreed to amend the MOU to outline roles and responsibilities in relation to the long-term provision of this Ecological Review Services in Halton Region;

AND WHEREAS the Parties identified a shared need to guide the provision of this Environmental Planning Review Service during the interim period until such time that the 2018 Updated MOU is amended;

NOW THEREFORE the Parties hereby agree to enter into this Agreement in relation to the provision of Ecological Review Services in Halton Region within the Halton Region Conservation Authority’s jurisdiction, on an interim basis, in accordance with specific terms and conditions outlined herein.

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1. Definitions

- “**Conservation Halton**” – means The Halton Region Conservation Authority
- “**Development**” – means *development* as defined in the Regional Official Plan as it relates to “*Development Applications*”
- “**Development Applications**” – refers to the following application types:
- Local Official Plan Amendments;
 - Zoning By-law Amendments;
 - Draft Plans of Subdivision;
 - Plan of Condominium;
 - Site Plan Control;
 - Part Lot Control
 - Minor Variances;
 - Consents; and
 - Niagara Escarpment Commission (NEC) Development Permits.
- “**Ecological Review Services**” – means
- A multi-disciplinary approach to reviewing and commenting on environmental studies that characterize the components of Halton’s Natural Heritage System, demonstrate potential impacts on the components and ecological functions of the system and the mitigation measures to ensure there are no negative impacts on the system as a whole.
 - The identification for the need of Environmental Impact Assessment (EIA) in accordance with the Regional Official Plan and Provincial Plans, in consultation with all Parties;
 - Conducting site visits to verify boundaries of key features and components as defined in Sections 115.2, 115.3, and 115.4 in the Regional Official Plan and to discuss potential constraints/future study requirements/refinements to key features;

- The Region reserves the right to enlist the Regional Forester as needed to verify boundaries of significant woodlands and review significant woodland assessments where there is a Regional interest (e.g. potential impacts on Regional Forest tracts).
- Waiving, scoping and assessing Terms of References for EIAs, and EIAs submitted by the proponents’ consultants in accordance with the Region’s EIA Guideline (2020). The EIA Process outlined in Section 2.0 and the EIA Content in Section 3.0 of the Guideline shall be adhere to;
- The review of Sub-watershed Impact Study (SIS), or equivalent study as determined by the Local Municipality, as requested by the Region to verify that the report satisfies the requirements of the Sub-watershed Study (SWS). In cases where the Regional review is not requested, Conservation Halton will review based on its role as a watershed management agency, regulatory authority and/or public commenting body;
- The review of Environmental Implementation Report (EIR), or equivalent study as determined by the Local Municipality, as requested by the Region to verify that the report satisfies the requirements of the SWS, in consultation with all Parties. In cases where the Regional review is not requested, Conservation Halton will review based on its role as a watershed management agency, regulatory authority and/or public commenting body;
- Specifying modifications or additional technical studies required and conditions of acceptance; validating the technical methods used to determine potential environmental impacts in accordance with Regional Official Plan;
- Identifying the nature and extent of mitigation measures required to demonstrate no negative impacts to Halton’s Natural Heritage System as per section 118(3) of the Regional Official Plan; and
- Providing technical support in recommending and clearing ecological conditions based on the findings of the EIA or EIR in order to satisfy policies of the Regional Official Plan and Provincial Plans and clearing of conditions.

“**Halton Region**” or the “**Region**” – means The Regional Municipality of Halton.

“**Natural Heritage System**” – means the Greenbelt Natural Heritage System and the Regional Natural Heritage System as identified in the Regional Official Plan.

“**Negative Impact**” – means *negative impact* as defined in the Regional Official Plan.

“**Parties**” – means the Parties to this agreement, including the Regional Municipality of Halton and the Halton Region Conservation Authority .

“**Policy Planning Review**” – means the responsibility of interpreting natural heritage policy under Provincial and Regional plans is that of Halton Region.

“**Provincial Plans**” – means the provincial plan that are relevant to environmental planning matters in Halton Region, including the “Greenbelt Plan”, the “Niagara Escarpment Plan”, the “A Place to Grow Plan for the Greater Golden Horseshoe”, as amended from time to time.

“**Regional Official Plan**” – means the in force and effect Official Plan of the Regional Municipality of Halton.

“**Site Alteration**” – means *site alteration* as defined in the Regional Official Plan as it relates to “*Development Applications*”.

“**Staff**” – means employees of the Parties.

2. Purpose

- 2.1 This interim Agreement details the agreed upon terms of service to be provided by Conservation Halton to the Region relating to interim Ecological Review Services in Halton as it relates to Development Applications.

3. Goal

- 3.1 The goal of this Agreement is to establish and maintain an efficient, timely and coordinated environmental review process for Development and Site Alteration

applications in Halton that upholds the Parties’ values and expectations for protecting Halton’s Natural Heritage System in a coordinated and reasonable manner.

4. Agreement

4.1 The Agreement is as follows:

- a) Conservation Halton agrees to deliver Ecological Review Services to the Legislative and Planning Services department of the Region in accordance with the service levels described in **Section 6 – Roles and Responsibilities of Conservation Halton, Section 8 – the Service Delivery Standards**, agrees to execute the tasks outlined in **Table 2 – Service Agreement Table for the Ecological Review of Development Applications, contained in Schedule 2**, and generally follow the workflow processes identified in **Figures 1 through 5, contained in Schedule 3**.
- b) The Region agrees to deliver planning services in accordance with **Section 7 – Roles and Responsibilities of the Region**, agrees to execute the tasks outlined in **Table 2 - Service Agreement Table for the Ecological Review of Development Applications, contained in Schedule 2**, and generally follow the workflow processes identified in **Figures 1 through 5, contained in Schedule 3**.
- c) The Region and Conservation Halton agree to hold regularly scheduled liaison meetings as a means to execute the tasks outlined in Sections 6 and 7 – Roles and Responsibilities, Section 8 – the Service Delivery Standards, and in Table 2 - Service Agreement Table for the Ecological Review of Development Applications, contained in Schedule 2.

5. Limitations

- 5.1 Conservation Halton has a number of roles and responsibilities including those legislated responsibilities under the *Conservation Authorities Act*, watershed management agency and public commenting agency roles (e.g. provides technical comments to the Niagara Escarpment Commission). Conservation Halton will continue to provide planning application and technical clearance reviews pursuant to these roles. The function of Conservation Halton’s roles and responsibilities under the *Conservation Authorities Act*, or any other piece of legislation is not impacted by this Agreement.
- 5.2 Conservation Halton will continue to provide input on Natural Hazards policies through the Provincial One-Window Protocol, as mandated by the Province and led by the Ministry of Municipal Affairs and Housing.
- 5.3 Should there be a conflict of interest or a perceived conflict of interest between providing the requested Ecological Review Services required under this Agreement and other Conservation Halton responsibilities then written notice shall be provided to the Region’s managers and Conservation Halton’s managers as early in the review process as possible. In such a situation, the Region may wish to retain a third party consultant to complete the review.
- 5.4 This Agreement does not replace the Region’s position as lead Environmental Planning review and approval agency in the integrated Halton Area Planning System for applications under the *Planning Act*.
- 5.5 This Agreement does not preclude the Region from obtaining consultants to support the environmental planning review, where deemed necessary, to meet the goals and objectives of the Halton Region’s Official Plan, Strategic Plan, and roles and responsibilities under the current Memorandum of Understanding, 2018.
- 5.6 Nothing in this Agreement shall limit Conservation Halton and the Region from independently appealing a decision or lack of decision to the Ontario Land Tribunal (OLT) or other Tribunal, Board or Commission on behalf of their policies and regulations, in accordance with the provisions of the *Planning Act*. Conservation Halton cannot appeal a Regional decision if it has provided technical review clearance to address Regional ecological policies on the file.

6. Roles and Responsibilities of Conservation Halton

- 6.1 A breakdown of the specific services affected by this Agreement, associated tasks, and associated responsibilities of Conservation Halton relating to ecological review services for development applications are detailed in **Table 2, contained in Schedule 2** to this agreement. The Party (or Parties) responsible for each task Deliverables and Service Standards are also listed.
- 6.2 Notwithstanding **Schedule 2, Table 2 Service Agreement Table for the Ecological Review of Development Applications**, Conservation Halton will perform the following roles and responsibilities under this Agreement:
- a) Environmental Technical Review Memo and EIA Checklists – Conservation Halton will provide all comments for ecological review services in the Environmental Technical Review Memo, to be developed by the Region and Conservation Halton and complete the checklists in Appendices D-1, D-2 and D-3 of Halton’s EIA Guidelines (2020), as needed based on a case by case.
 - b) Pre-consultation and Site Visits– Conservation Halton will consult with Region prior to attending a pre-consultation meeting and/or site visits in relation to matters requiring ecological review services by Conservation Halton and coordinate as necessary to ensure guidance, that is consistent with the Region’s position, is offered to the proponent.
- 6.3 Recommendation on Development Applications: Conservation Halton will provide to the Region technical recommendations on a Development Application, based on their ecological expertise, to assist the Region in interpreting Sections 115.3, 115.4 and 118(3) of the Regional Official Plan and in accordance with the processes detailed in Halton’s EIA Guideline (2020).
- 6.4 Where Conservation Halton has provided technical recommendations for a Development Application pursuant to Section 6.3, and the Development Application has been appealed to the Ontario Land Tribunal or other Tribunal, Board or Commission, the Region may require Conservation Halton to provide their ecological expertise to support Conservation Halton’s technical recommendations during the appeal.
- 6.5 The extent of the support required pursuant to section 6.4 will be determined on a case-by-case basis in consultation between legal counsel for Conservation Halton and legal counsel for Halton Region.
- 6.6 Conservation Halton shall provide written notice to Halton Region as soon as possible if Conservation Halton amends any technical recommendations pursuant to sections 6.3, 6.4 or 6.5.

7. Roles and Responsibilities of the Region

- 7.1 A breakdown of the specific services affected by this Agreement, associated tasks, and associated responsibilities of the Region relating to ecological review services for development applications are detailed in **Table 2, contained in Schedule 2** to this agreement. The Party (or Parties) responsible for each task Deliverables and Service Standards are also listed.
- 7.2 Notwithstanding **Table 2 – Service Agreement Table for the Ecological Review of Development Applications**, the Region will perform the following roles and responsibilities under this agreement:
- a) Screening – The Region shall identify Development Applications that would require technical review/clearance by Conservation Halton based on the proximity of these activities to the Halton’s Natural Heritage System and its mapped and unmapped Key Features.
 - b) Pre-consultation – The Region will consult Conservation Halton prior to attending a pre-consultation meeting in relation to matters requiring technical review and clearance by Conservation Halton and coordinate as necessary to ensure appropriate guidance is offered to the proponent.

- c) Circulation – The Region shall undertake the following circulation steps:
 - i. Circulate for technical review/clearance Development Application in consultation with Conservation Halton as detailed in **Table 2, contained in Schedule 2**;
 - ii. Include with the circulation the Environmental Technical Review Memo that includes information required from the Region as specified within the template; and
 - iii. Specify a review/comment Timeline for Conservation Halton to conduct their technical review/clearance within if the Timeline differs from the Timelines listed in **Section 8 – Service Delivery Standards**.
- d) Policy Interpretation – The Region shall be responsible for interpretation of all Natural Heritage System protection and enhancement policies in the Regional Official Plan, Provincial Policy Statement, 2020, and applicable provincial plans as updated from time to time, in consultation with Conservation Halton.
- e) Public Commenting Agency – The Region shall review Development Applications, provide comments and issue conditions in relation to the implementation of the Natural Heritage System protection and enhancement policies of the Regional Official Plan, which will be carried out in consultation with Conservation Halton.
- f) Approval – Where the Region is the planning approval authority under the *Planning Act*, issue approval for Development Applications that implements the Natural Heritage System protection and enhancement policies of the Regional Official Plan.

8. Service Delivery Standards of Conservation Halton

- 8.1 Service Delivery Standards, as described in **Table 2 – Service Agreement Table for the Ecological Review of Development Applications, contained in Schedule 2**, are to be followed in relation to the provision of services by Conservation Halton.
- 8.2 The Parties agree to work within the following timelines in **Table 1 – Technical Comments Review Deadline, contained in Schedule 1** to meet the review times set out in **Schedule 2 Non-Statutory Development Application Review Timelines** in the **2018 Updated MOU**.

9. Monitoring, Conflict Resolution and Notice

- 9.1 This Agreement comes into effect the day on which it is executed by all Parties. There will be a six (6) month transition period from the date of execution at which time training as detailed in Section 10 will be undertaken. The tracking of performance measures **identified in Schedule 4** will start when the 6-month transition period has ended.
- 9.2 This Agreement shall be revised and amended from time to time as needed to be consistent with the **2018 Updated MOU**.
- 9.3 This Agreement shall be reviewed and amended between the Region and Conservation Halton to:
 - a) Reflect any changing policies, legislation, or programs at the provincial, watershed, or Regional level;
 - b) Assess its effectiveness, relevance and appropriateness with respect to affected parties.
- 9.4 In the event of any dispute between the Region and Conservation Halton staff in carrying out the terms this Agreement that cannot be resolved between staff members, the issue(s) under dispute are to be elevated to the Manager level for resolution. Should the Managers be unable to resolve the issue(s), the matter will be elevated to the Director level for resolution.
- 9.5 This Agreement may be terminated at any time by either Party by providing six (6) months written notice, which may be given personally, electronically or sent by registered mail. Notice shall be deemed to be received as follows, as applicable: (i) on the date of personal delivery, or (ii) if delivered by prepaid registered mail, ten (10) clear days following the mailing.
- 9.6 Any notice, election, demand, request, consent or objection required or contemplated to be given or made by any provisions of this Agreement shall be given or made in writing

and either delivered personally, electronically or sent by registered mail, postage prepaid, addressed:

Region:	1151 Bronte Road Oakville, Ontario L6M 3L1 Attn: Director of Planning Services and Chief Planning Official Email: curt.benson@halton.ca
Conservation Halton:	2596 Britannia Road West Burlington, Ontario L7P 0G3 Attn: Director of Planning and Watershed Management Email: bveale@hrca.on.ca

10. Training

- 10.1 The Region shall be responsible for providing training to Conservation Halton as part of the execution of this Agreement for interim ecological review services. The training will provide clear direction on how to interpret the Natural Heritage definitions, policies and guidelines and apply Halton’s high level of standard in the protection of the Halton’s Natural Heritage System.
- 10.2 The Region shall provide the following training and/or materials to Conservation Halton and the Region’s Community Planners:
 - a) Training and materials on Halton’s Environmental Impact Assessment Guideline (2020);
 - b) Training and materials on Natural Heritage mapping and screening tools;
 - c) Training and materials on Natural Heritage policies;
 - d) Training and materials on Halton Region’s requirements for conformity with Provincial plans;
 - e) Training on the standardized Environmental Technical Review Memo (2021) and
 - f) Any additional training and/or creation of new materials that Halton Region and Conservation Halton deem necessary to execute the Agreement.
- 10.3 Conservation Halton shall provide training to Halton Region on their roles and responsibilities under the *Conservation Authority Act*, or any relevant legislation.
- 10.4 To assist in the transition of Ecological Review Services as prescribed in this Agreement, the Region’s Community Planners and Conservation Halton agree to hold regularly scheduled Region and Conservation Halton Liaison Meetings and other technical support meetings as needed.

11. Billing/Fees/Reimbursement of Expenses

- 11.1 Prior to the commencement of this Agreement, and on an annual basis thereafter, Conservation Halton shall provide the Region an estimate of the salary and benefit cost of the Service Delivery Staff (the “Annual Cost Estimate”). The Region may request supporting documentation and upon receipt of such request, Conservation Halton shall provide same with respect to Annual Cost Estimates.
- 11.2 Conservation Halton estimates the need for two (2) Service Delivery Staff, a Planning Ecologist and an Environmental Planner to implement their roles and responsibilities under this Agreement. The combined Annual Cost Estimate for the Service Delivery Staff

in Year 1 of implementing this agreement is \$240,793; Year 2 is \$252,832 (with 5% inflation); and Year 3 is \$265,474 (with 5% inflation).

- 11.3 Prior to the commencement of this Agreement, and on a quarterly basis thereafter, Conservation Halton shall invoice the Region for a quarter-portion of the Annual Cost Estimate (the “Quarterly Invoice”).
- 11.4 Notwithstanding section 11.2, other than the first Quarterly Invoice, each Quarterly Invoice shall include the actual costs for the Service Delivery Staff incurred by Conservation Halton during the preceding quarter, including aggregate or total salary, benefit, associated administration and training cost of the Service Delivery Staff. Supporting documentation shall also be provided and any further or additional documentation concerning actual costs shall be supplied upon request from the Region.
- 11.5 The Region shall pay each Quarterly Invoice within thirty (30) days.
- 11.6 The Region shall be permitted to dispute a Quarterly Invoice at its sole discretion. Notwithstanding the generality of the foregoing, the Region will be required to pay all undisputed portions of each Quarterly Invoice in accordance with this Agreement.
- 11.7 As dispute concerning a Quarterly Invoice, or a disputed portion therein, shall be resolved in accordance with this Agreement.
- 11.8 The Region acknowledges that the Annual Cost Estimate may be adjusted throughout the year based upon any Conservation Halton review of job descriptions, salary adjustments and unanticipated benefit cost increases. In such an event, the revised Annual Cost Estimate shall be provided to the Region at least thirty (30) days in advance of the date of delivery of the next Quarterly Invoice to the Region.
- 11.9 All increases to the Annual Cost Estimate beyond permissible costs explicitly identified herein shall require the written approval of the Commissioner of Legislative and Planning Services and the Commissioner of Finance and Regional Treasurer and such approval shall not be unreasonably withheld. Any request for an increase to the Annual Cost Estimate shall be subject to a detailed review, which may include comparison with industry compensation standards and supporting documentation shall be provided upon request from the Region.
- 11.10 For the purposes of the Quarterly Invoicing and reporting, a fiscal year will be the 1st of January to the 31st of December. For audit purposes, all financial records will be maintained and reports prepared to coincide with the January to December Fiscal year. All records must be kept for seven (7) years in accordance with Halton Region’s audit requirements.
- 11.11 Where the Region requires Conservation Halton to provide support for technical recommendations for a Development Application that has been appealed to the Ontario Land Tribunal or other Tribunal, Board or Commission pursuant to Section 6.4, the Region shall pay for the additional costs incurred for these services.

12. Communications

- 12.1 Conservation Halton is not to act on behalf of Halton Region in relation to a Development Application or Site Alteration matter unless agreed to by Halton Region in order to execute the tasks described in **Table 2 - Service Agreement Table for the Ecological Review of Development Applications**, contained in **Schedule 2**.
- 12.2 When communicating in any way as it relates to the Ecological Review Services described in this Agreement, Conservation Halton must declare that they are acting in accordance with this Agreement, in a purely technical manner, and that the Region maintains final decision authority with respect to the application and interpretation of Regional Official Plan policies relating to the protection and enhancement of Halton’s Natural Heritage System.

12.3 The Region’s Planning staff shall be included on all correspondence from Conservation Halton to landowners/consultants as it relates the Region’s interests as outlined in this Agreement.

12.4 Nothing in Section 12 is meant to affect the free and open dialogue of Conservation Halton with landowners and consultants regarding technical review matters affected by this Agreement. Such communications should be provided within the appropriate policy context to eliminate confusion and avoid outcomes that would not conform to the relevant policies.

13. Information Sharing / Open Data

13.1 The Parties will work together to define a screening map and guidelines to assist all parties in determining when development applications will be circulated for technical review.

13.2 Any information or data sources generated by the Province, Conservation Halton or the Region, or generated through municipal or watershed studies will be shared, where possible.

14. Insurance

14.1 Conservation Halton agrees that it shall, at its own expense during the performance of the Services, name the Region as additional insured and maintain the following insurance:

14.2 Comprehensive General Liability insurance, such coverage shall include:

14.2.1 personal injury coverage, bodily injury and public liability and property damage coverage against loss or damage resulting from bodily injury to or death to one or more persons and loss of or damage to property of the Region or any other public or private property resulting from or arising out of any negligent act or omission on the part of the Conservation Halton. Such insurance shall include;

14.2.2 a \$2,000,000.00 limit of coverage per occurrence; and

14.2.3 a cross liability/severability of interest clause.

14.3 In respect of the Comprehensive Automobile Liability Insurance

14.3.1 Conservation Halton agrees to carry a comprehensive automobile liability policy providing bodily injury liability and property damage liability insurance. The policy shall protect Conservation Halton and the Region against all liability arising out of the use of owned or leased automobiles, both passenger and commercial. The limits of the liability under this insurance policy shall not be less than \$2,000,000.00 per occurrence

14.4 Conservation Halton further agrees that the coverage provided by the policies specified in this Section will not be changed, amended, or cancelled until sixty (60) days after written notice of such intended change, amendment or cancellation has been delivered to the Region.

14.5 Conservation Halton shall deliver proof of insurance to the Region in a form of a certificate of insurance policy as soon as possible after execution of this Agreement and before commencing to perform any of the Services, and thereafter evidence satisfactory of the renewal of insurance shall be delivered to the Region at least thirty (30) days before the termination thereof and will remain in force until the termination of the agreement.

15. Workplace Safety and Insurance Board Coverage

- 15.1 Workplace Safety and Insurance coverage is applicable and required where Conservation Halton engages in any form of services on the Region's premises. Workplace Safety and Insurance Board (WSIB) certificate showing Conservation Halton's coverage shall be provided to the Region upon execution of this Agreement.

16. Indemnification

- 16.1 Conservation Halton covenants and agrees to indemnify and save the Region, its Councillors, officers, employees and agents harmless from any liability, action, claim, loss, injury, damage, payment, cost, fine, fine surcharge, recovery or expense, including assessable legal fees arising out of the performance of its obligations under this Agreement, including without limitation any negligent act or omission by any employee, agent or sub-consultant or anyone else from whom it is in the law responsible, save and except where the liability, action, claim loss, injury, damage, payment, cost, fine, fine surcharge, recovery or expense, including assessable legal fees, arises out of the negligence of the Region, its Councillors, officers, employees or agents.

- 16.2 The Region covenants and agrees to indemnify and save Conservation Halton, its Board Members, officers, employees and agents harmless from any liability, action, claim, loss, injury, damage, payment, cost, fine, fine surcharge, recovery or expense, including assessable legal fees arising out of the performance of its obligations under this Agreement, including without limitation any negligent act or omission by any employee, agent or sub-consultant or anyone else from whom it is in the law responsible, save and except where the liability, action, claim loss, injury, damage, payment, cost, fine, fine surcharge, recovery or expense, including assessable legal fees, arises out of the negligence of Conservation Halton, its Board Members, officers, employees or agents.

17. General

- 17.1 The Region and Conservation Halton acknowledge that there are no covenants, representations, warranties, agreements or conditions express or implied, collateral or otherwise forming part of or in any way affecting or relating to this Agreement other than as set out in this Agreement which constitutes the entire agreement between the parties and which may be modified only by further written agreement.
- 17.2 This Agreement and the covenants and agreements herein contained extend to and enure to the benefit of and are binding upon the Region, Conservation Halton, and their respective successors and assigns, according to the purport and intent of their respective covenants and agreements.
- 17.3 Should any provision or provisions of this Agreement be illegal or unenforceable, it or they shall be considered separate and severable from this Agreement, and the remaining provisions shall remain in force and be binding upon the parties hereto as though the said provision or provisions had never been included.
- 17.4 The Region and the Provider agree that each of them shall and will, upon the reasonable request of the other, make, do, execute, or cause to be made, done or executed, all such further and other lawful acts, deeds, things, documents and assurances whatsoever necessary to give effect to this Agreement, and the terms and conditions contained herein.
- 17.5 This Agreement may be executed in any number of counterparts and may be delivered by means of electronic transmission.
- 17.6 The headings contained in this Agreement are for reference only.
- 17.7 Schedule "1", "2" and "3" annexed hereto shall form part of this Agreement.

SIGNED AND DELIVERED

November 11, 2021

This ____ day of ____ 2021

at the

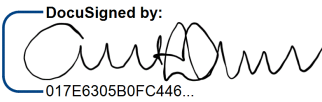
Province of Ontario

This 2 day of Dec 2021

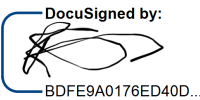
at the

Province of Ontario

THE REGIONAL MUNICIPALITY
OF HALTON

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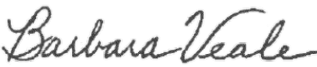
Per: _____
Name: Curt Benson
Title: Director, Planning Services and
Chief Planning Official

DocuSigned by:

BDFE9A0176ED40D...

Per: _____
Name: Robert Gray
Title: Commissioner of Legislative
& Planning Services, Corporate
Counsel

I/We have authority to bind the
Corporation.

THE HALTON REGION
CONSERVATION AUTHORITY



Per: _____
Name: Barb Veale
Title: Director, Planning and
Watershed Management



Per: _____
Name: Hassaan Basit
Title: President and CEO of
Conservation Halton

I/We have authority to bind the
Corporation.

Schedule 1

Table 1 – Technical Comments Review Timelines for Development Applications

The following table describes the timeframes for development review applications that the Parties will aim to achieve, broken down by certain major application types. This table should be read in accordance with Schedule 2 of the Memorandum of Understanding for an Integrated Halton Area Planning System (July 16, 2018). In some cases timeframes may change due to circulation deadlines provided by the Local Municipality and/or the Niagara Escarpment Commission.

Application Type	Planning Stage	Comments for First Circulation Conservation Halton	Total Review Time First Circulation	Comments for Resubmissions Conservation Halton	Total Review Time Resubmission
Draft plans of subdivision or condominium	Pre-Consultation	4 calendar days	5 calendar days	N/A	N/A
	EIA Scoping	5 calendar days	5 calendar days	N/A	N/A
	Terms of Reference for EIA	12 calendar days	14 calendar days	5 calendar days	7 calendar days
	Technical Review Clearance without an EIA	15 calendar days	20 calendar days	5 calendar days	7 calendar days
	Application Review with an EIA	35 calendar days	45 calendar days	15 calendar days	20 calendar days
Site specific local official plan amendments	Pre-Consultation	4 calendar days	5 calendar days	N/A	N/A
	EIA Scoping	5 calendar days	5 calendar days	N/A	N/A
	Terms of Reference for EIA	12 calendar days	14 calendar days	5 calendar days	7 calendar days
	Application Review without an EIA	15 calendar days	20 calendar days	5 calendar days	7 calendar days
	Application Review with an EIA	35 calendar days	45 calendar days	15 calendar days	20 calendar days
Site specific zoning by-law amendments	Pre-Consultation	4 calendar days	5 calendar days	N/A	N/A
	EIA Scoping	5 calendar days	5 calendar days	N/A	N/A
	Terms of Reference for EIA	12 calendar days	14 calendar days	5 calendar days	7 calendar days
	Application Review without an EIA	12 calendar days	18 calendar days	10 calendar days	12 calendar days
	Application Review with an EIA	20 calendar days	30 calendar days	15 calendar days	20 calendar days
Site Plans	Pre-Consultation	4 calendar days	5 calendar days	N/A	N/A
	EIA Scoping	5 calendar days	5 calendar days	N/A	N/A
	Terms of Reference for EIA	12 calendar days	14 calendar days	5 calendar days	7 calendar days
	Application Review without an EIA	10 calendar days	14 calendar days	5 calendar days	7 calendar days
	Application Review with an EIA	12 calendar days	14 calendar days	10 calendar days	12 calendar days
Consent, Minor Variances, Part Lot Control	Pre-Consultation	4 calendar days	5 calendar days	N/A	N/A
	EIA Scoping	5 calendar days	5 calendar days	N/A	N/A
	Terms of Reference for EIA	14 calendar days	14 calendar days	5 calendar days	6 calendar days
	Application Review without an EIA	10 calendar days	14 calendar days	5 calendar days	7 calendar days

Application Type	Planning Stage	Comments for First Circulation Conservation Halton	Total Review Time First Circulation	Comments for Resubmissions Conservation Halton	Total Review Time Resubmission
	Application Review with an EIA	12 calendar days	14 calendar days	10 calendar days	12 calendar days
Niagara Escarpment Commission Development Permits	Pre-Consultation	4 calendar days	5 calendar days	N/A	N/A
	EIA Scoping	5 calendar days	5 calendar days	N/A	N/A
	Terms of Reference for EIA	14 calendar days	14 calendar days	5 calendar days	6 calendar days
	Application Review without an EIA	13 calendar days	15 calendar days	6 calendar days	8 calendar days
	Application Review with an EIA	13 calendar days	15 calendar days	11 calendar days	13 calendar days

Schedule 2

Table 2 – Service Agreement Table for the Ecological Review of Development Applications

Reference	Review Stage	Tasks	Party Responsible	Deliverable
1	Pre-Application in support of pending development applications	a) Parties will consult to establish an appropriate response to landowner and/or consultant inquiries regarding natural heritage related constraints affecting limits of development. Final decision retained on file. Note: Some proposals will not be appropriate to pursue and ecological review services should not be applied prematurely in such instances. Parties should discuss each inquiry on a case by case basis to determine whether or not preliminary feedback is appropriate given nature of proposal.	All Parties – The Region makes final decision as it relates to Regional Natural Heritage interests.	Record of consultation and final decision retained on file by both Parties.
		b) Review Regional Official Plan and relevant Provincial Plans mapping (and Halton Region Enviro Planning Viewer if available) to identify relevant natural heritage features, areas, designations and constraint areas.	Conservation Halton	Conservation Halton shall include the Region on all correspondence.
		c) Provide preliminary feedback to landowner/consultant including standard information/text regarding applicable natural heritage system development constraints/study requirements.	Conservation Halton	
		d) Arrange a site visit if necessary to facilitate further investigation, verify boundaries of NHS components and discuss potential constraints/future study requirements. Task 8 – Site Visits of this table shall be followed.	Conservation Halton	Field note summary
		e) In the event that the landowner and/or consultant wants the Parties to determine if an Environmental Impact Assessment (EIA) is required based on a development concept provided, Tasks 2 b) and 2c) of this table should be followed.	Conservation Halton	See deliverables in Tasks 2b) and 2c)
		f) If an EIA is deemed required, EIA scoping and terms of reference (ToR) should follow Tasks 3 and 4 of this table.	All Parties	See deliverables in Tasks 3 and 4
2	Pre-Consultation or Preliminary Circulation of Development Applications	a) Parties review circulations and consult as necessary to determine whether proposed Development Applications warrants provision of ecological review services by Conservation Halton.	All Parties – The Region makes final decision as it relates to Regional Natural Heritage interests.	
		b) Where ecological review services are deemed warranted per task 2a), the Region’s Community Planner will: i. complete the “Regional Technical Circulation” section of the Environmental Technical Review Memo; ii. circulate the Environmental Technical Review Memo and application submission materials, as needed, to the Conservation Halton Environmental Planner; iii. Discuss draft comments from Conservation Halton prior to finalizing Regional notes on a Pre-Consultation or comments on a Development Application.	Region	Environmental Technical Review Memo
		c) Where ecological review services are deemed warranted per task 2a), Conservation Halton’s Environmental Planner will circulate the Environmental Technical Review Memo to the appropriate technical staff.	Conservation Halton	Environmental Technical Review Memo and Appendix D-1 - Waiving Assessment Tool (where applicable)

Reference	Review Stage	Tasks	Party Responsible	Deliverable
		d) Conservation Halton technical staff will complete the “Conservation Halton Technical Comments” section of the Environmental Technical Review Memo.	Conservation Halton	Environmental Technical Review Memo and Appendix D-1 - Waiving Assessment Tool (where applicable)
		e) Conservation Halton submits Environmental Technical Review Memo containing documentation referenced in 2b) to the Region and discusses comments prior to Conservation Halton finalizing their comments.	Conservation Halton	Environmental Technical Review Memo and Appendix D-1 - Waiving Assessment Tool (where applicable)
3	EIA Scoping/Terms of Reference (ToR) Checklist	a) Where it has been determined that an EIA is required in accordance with Regional Official Plan policies, Conservation Halton will provide the Region with a completed Appendix D-2 Scoping and Terms of Reference Checklist Conservation Halton submits this checklist to the Region.	Conservation Halton	Environmental Technical Review Memo and Appendix D-2 Scoping and Terms of Reference Checklist
		b) The Region will review the Scoping and Terms of Reference Checklist to ensure that the scope of work meets the intent of all NHS protection and enhancement policies in the Regional Official Plan, Provincial Policy Statement (2020) and applicable provincial plans as updated from time to time, in consultation with Conservation Halton.	All Parties	
		c) Conservation Halton to provide Scoping and Terms of Reference Checklist to the proponent.	Conservation Halton	
4	EIA Terms of Reference (ToR)	a) Conservation Halton will provide ecological review services of the ToR and ensure it completeness against the completed Appendix D-2 Scoping and Terms of Reference Checklist that was completed in task 3 above.	Conservation Halton	Environmental Technical Review Memo
		b) Region will use the ecological review services from the Conservation Halton to complete the policy planning review.	Region	
		c) Where resubmissions are required to address comments on the ToR, Conservation Halton will continue to provide ecological review services until regional policies can be satisfied.	Conservation Halton	Environmental Technical Review Memo
		d) Region will be the approval authority of the ToR in regards to the Regional Official Plan policies and in accordance with the Region’s EIA Guideline (2020).	Region	
5	Review of EIA	a) Parties should review the EIA against Appendix D-3 EIA Submission Checklist to confirm that the EIA meets submission requirements and have been prepared in accordance with an approved ToR.	All Parties	Appendix D-3 EIA Submission Checklist.
		b) Conservation Halton will provide ecological review services of the EIA and submit technical review memo to Region.	Conservation Halton	Environmental Technical Review Memo
		c) The Region will review the Environmental Technical Review Memo to ensure that the scope of work meets the intent of all Natural Heritage System protection and enhancement policies in the ROP, PPS, and applicable provincial plans, in consultation with Conservation Halton.	All Parties	
		d) If the Region is satisfied with the Environmental Technical Review Memo provided in 5b), Conservation Halton will provide technical comments on the EIA to the relevant agency under a separate “Interim Agreement” section in their letter. The Region will make reference in their comments to Conservation Halton’s letter.	Conservation Halton	
		e) Where resubmissions are required to address comments on the EIA, Conservation Halton will continue to provide ecological review services until Regional policy can be satisfied.	Conservation Halton	Environmental Technical Review Memo
		f) Once Conservation Halton and Halton Region have determined that the EIA has addressed policies of the ROP policies and Provincial plan, Conservation Halton will provide to the Region with recommendations for final conditions/clauses based on the proposed mitigations and/or conclusions of the EIA (i.e. requirement for landscape plan).	Conservation Halton	Environmental Technical Review Memo

Reference	Review Stage	Tasks	Party Responsible	Deliverable
6	Sub-watershed Impact Study (SIS) and Environmental Impact Report (EIR)	a) Parties review circulations and consult as necessary to determine whether proposed development application and subsequent SIS/EIR warrants provision of ecological review services by Conservation Halton.	All Parties – The Region makes final decision as it relates to Regional interests.	
		b) Conservation Halton will provide ecological review services of the EIR to determine if the report satisfies the requirements of the applicable Sub-watershed Impact Study (SIS).	Conservation Halton	
		c) Conservation Halton will provide ecological review services of the SIS to verify that the report satisfies the requirements of the Sub-watershed Study.		
		d) Conservation Halton will provide ecological review services of the EIR/SIS and submit the Environmental Technical Review Memo to the Region.	Conservation Halton	Environmental Technical Review Memo
		e) If the Region is satisfied with the Environmental Technical Review Memo provided in 6d), Conservation Halton will provide technical comments on the EIR/SIS to the relevant agency under a separate “Interim Agreement” section in their letter. The Region will make reference in their comments to Conservation Halton’s letter.	Conservation Halton	
		f) Where resubmissions are required to address comments on the EIR/SIS, Conservation Halton will continue to provide ecological review services as required by the Region to demonstrate that Regional policy can be satisfied.	Conservation Halton	Environmental Technical Review Memo
		g) Once Conservation Halton and Halton Region have determined that the EIR/SIS has addressed policies of the ROP policies and Provincial plan, Conservation Halton will provide to the Region with recommendations for final conditions/clauses based on the proposed mitigations and/or conclusions of the EIR/SIS (i.e. requirement for landscape plan).	Conservation Halton	Environmental Technical Review Memo
7	Decision / Conditional Approval	a) The Region shall be responsible for providing final recommendation for approval and conditions on a development application.	Region	
8	Clearing Conditions	a) The Region shall be responsible for the clearance of conditions that were requested by the Region on a development application.	Region	
		b) Where ecological review services are is deemed warranted per task 7a), Conservation Halton will provide ecological review services of the additional plans/drawings/studies and submit a technical review memo to the Region.	Conservation Halton	Environmental Technical Review Memo
8	Site Visits	a) Conservation Halton will arrange site visit if necessary, in coordination with the Region and proponent to facilitate further investigation, verify boundaries of Natural Heritage System components and discuss constraints/study requirements. Proceeding the site visit, the Conservation Halton will submit a summary of field notes and any mapping to show proposed boundary refinements to the to Natural Heritage System to the Region. Any communications on the site visit will be done in accordance with Section 12 Communications of this Agreement.	Conservation Halton	Field note summary

Schedule 3

Figure 1 – Conservation Halton General Review Process

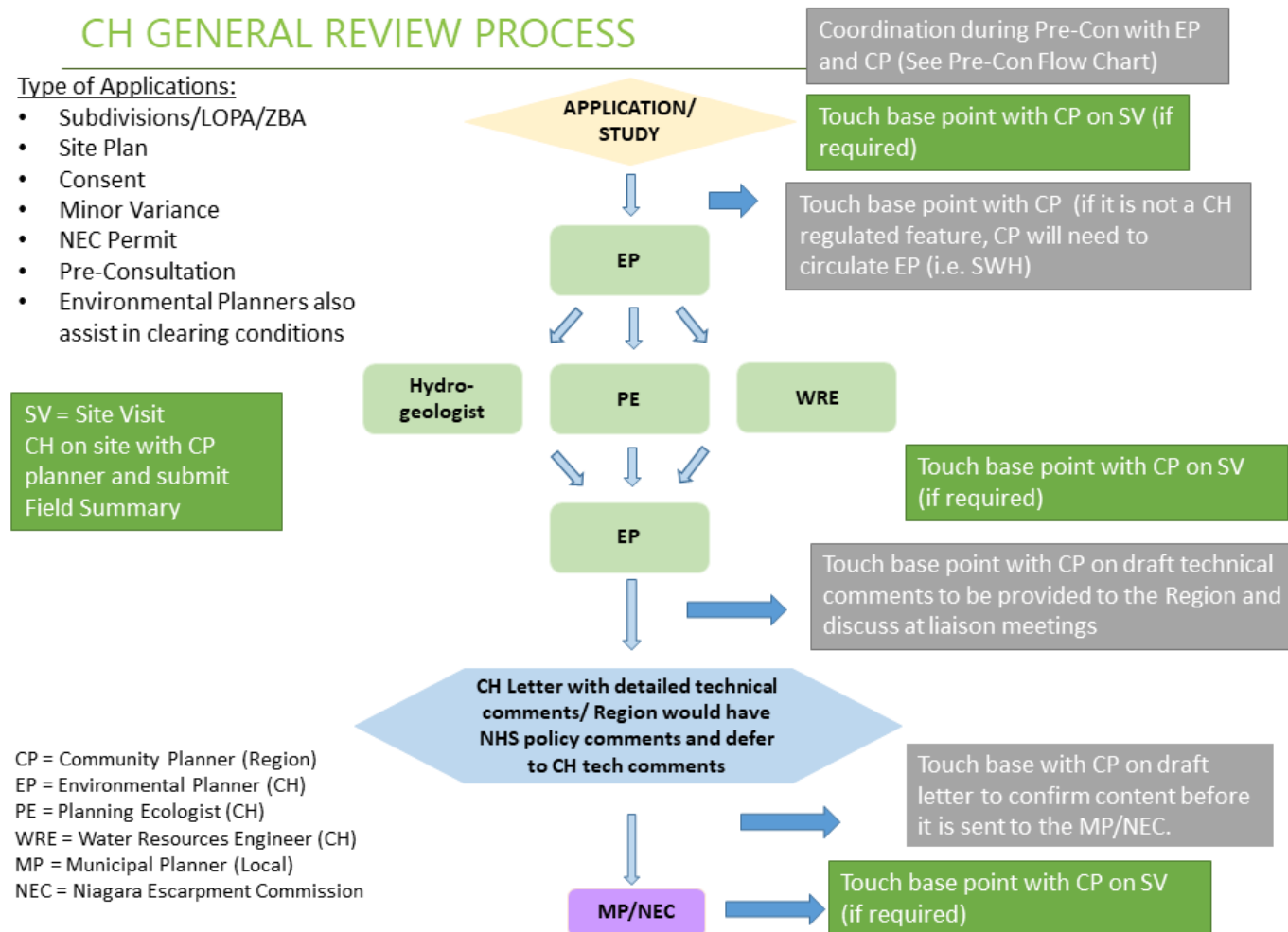


Figure 2 – Regional Role in Pre-Consultation Process

REGIONAL ROLE IN PRE-CONSULTATION PROCESS

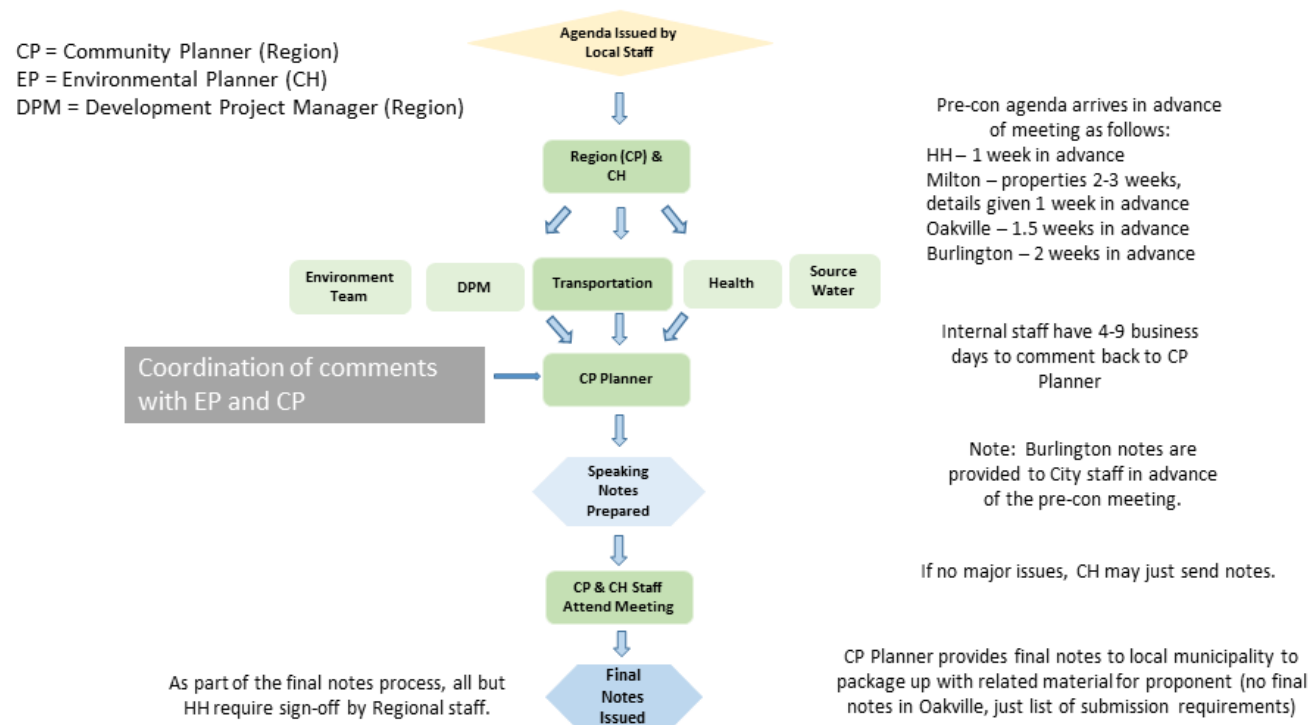


Figure 3 – Region/Conservation Halton: Proposed EIA Waiving Tool Review Process

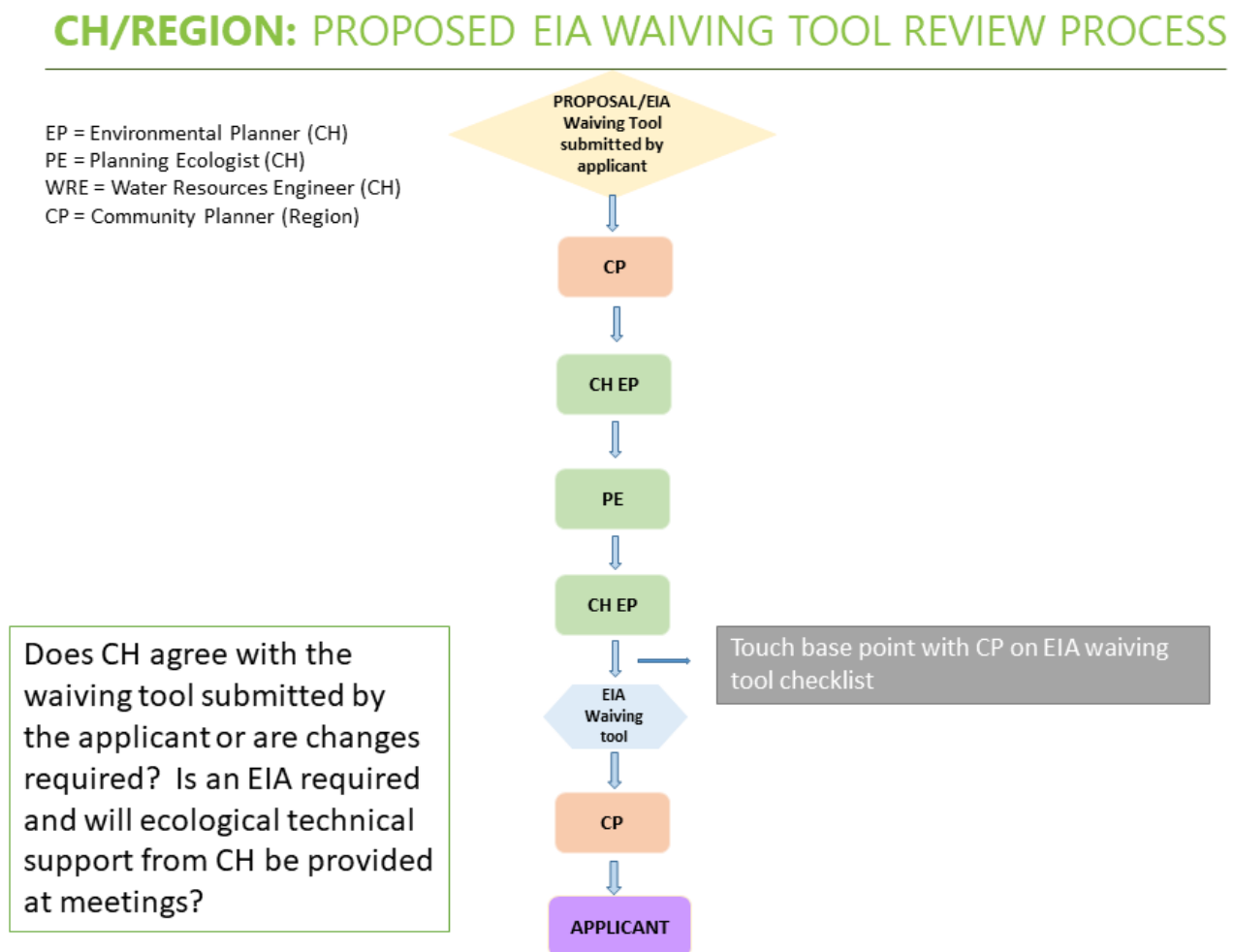


Figure 4 – Region/Conservation Halton: Proposed EIA Scoping Tool Process

CH/REGION: PROPOSED EIA SCOPING TOOL PROCESS

EP = Environmental Planner (CH)
 PE = Planning Ecologist (CH)
 CP = Community Planner (Region)

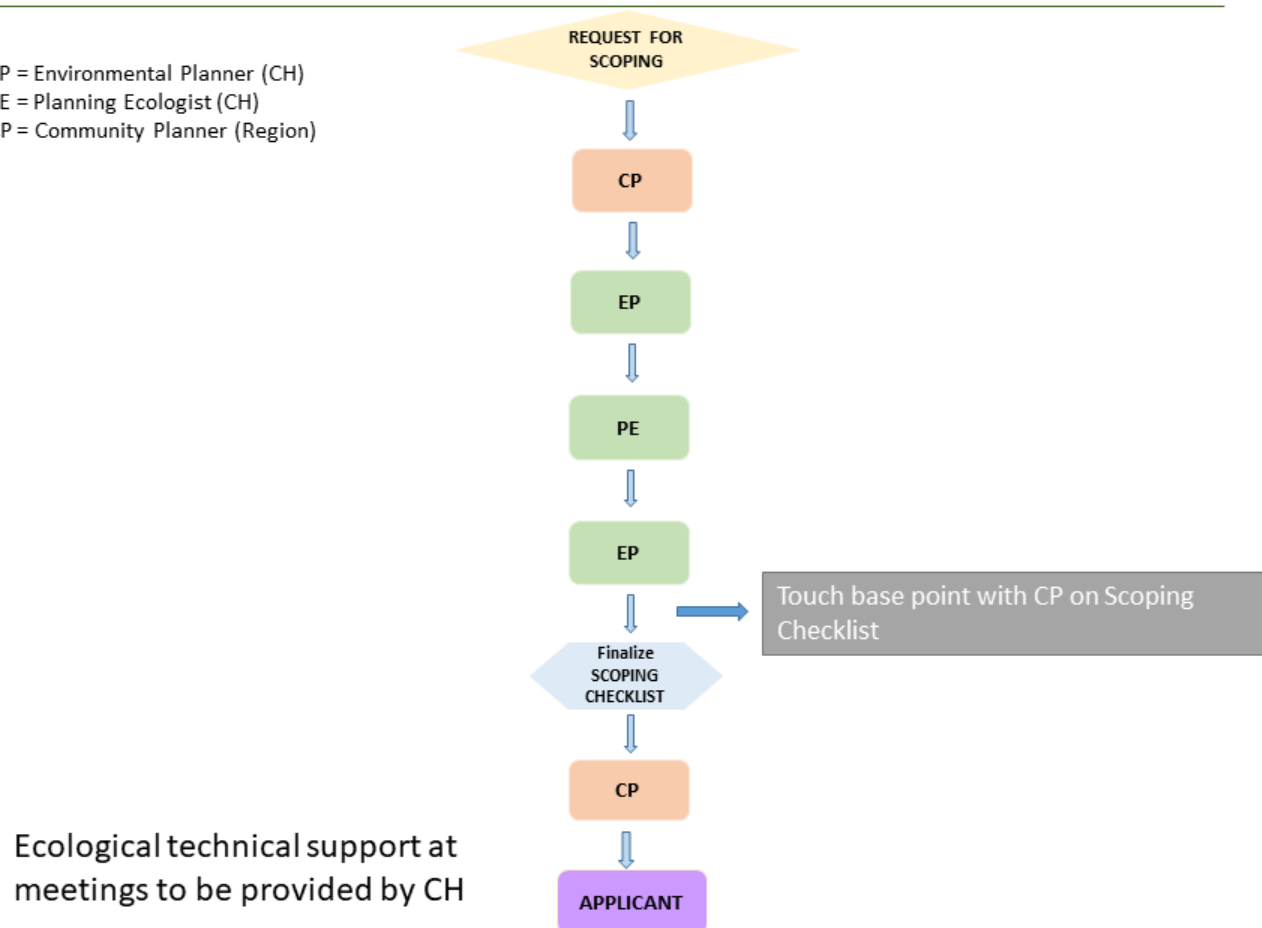
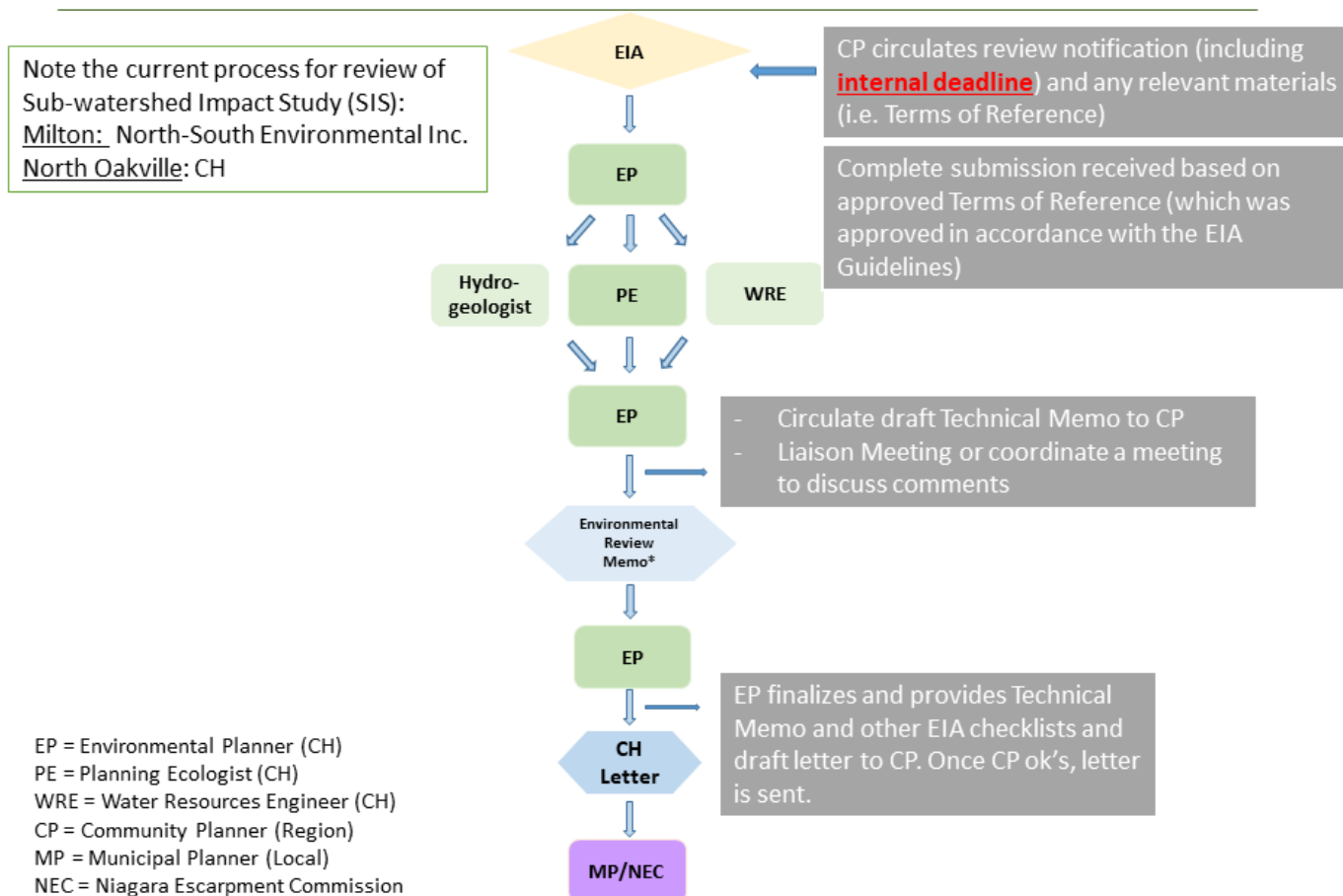


Figure 5 – Region/Conservation Halton: General Ecological Review Process

CH/REGION: GENERAL ECOLOGICAL REVIEW PROCESS



Schedule 4
Performance Measures

Focus Area	Objective	KPI	Target (%)	How to Measure	Notes
Timelines	Deliver timely reviews and excellent customer service and experience	Percentage of reviews that meet the required review timeline.	Year 1: 80 Year 2: 85 Year 3: 90	Track/calculate timelines / deadlines met	
Process	Ensure review process is efficient and effective for CH & Regional staff and external clients	Overall satisfaction of process.	Year 1: 80 Year 2: 85 Year 3: 90	Annual survey by CH & Regional staff	
Communications	Ensure communications between CH & Regional staff is positive and correspondence is clear and comprehensive	Overall satisfaction of communications between CH & Regional staff Quality of correspondence from CH & Regional staff	Year 1: 80 Year 2: 85 Year 3: 90	Annual survey by CH & Regional staff	
Conflict Resolution	Resolve conflicts in a timely and professional manner	Overall satisfaction of resolving issues.	Year 1: 80 Year 2: 85 Year 3: 90	Annual survey by CH & Regional staff	
Training, Resources and Tools	Ensure CH and Regional staff are adequately trained, prepared and provided with resources and tools to deliver terms of the Agreement	Overall satisfaction of training, preparedness, resources, and tools	Year 1: 80 Year 2: 85 Year 3: 90	Annual survey by CH & Regional staff	
Working Relationship	Ensure positive and productive working relationships and mutual trust between CH & Regional staff	Overall satisfaction of working relationship	Year 1: 80 Year 2: 85 Year 3: 90	Annual survey by CH & Regional staff	



VIA EMAIL

January 5, 2022

Legislative & Planning Services
Department
Office of the Regional Clerk
1151 Bronte Road
Oakville ON L6M 3L1

Gerry Smallegange, President and CEO Burlington Hydro
Scott Knapman, President and CEO, Halton Hills Hydro
Troy Hare, President and CEO, Milton Hydro
Rob Lister, President and CEO Oakville Hydro
Honourable Ted Arnott, MPP, Wellington-Halton Hills
Stephen Crawford, MPP, Oakville
Honourable Parm Gill, MPP, Milton
Honourable Jane McKenna, MPP, Burlington
Effie Triantafilopoulos, MPP, Oakville-North Burlington
Honourable Anita Anand, MP, Oakville
Pam Damoff, MP, Oakville
Honourable Karina Gould, MP, Burlington
Adam van Koeeverden, MP, Milton
Honourable Michael Chong, MP, Wellington-Halton Hills
Kevin Arjoon, City Clerk, City of Burlington
Meaghen Reid, Town Clerk, Town of Milton
Vicki Tytaneck, Town Clerk, Town of Oakville
Valerie Petryniak, Town Clerk, Town of Halton Hills

Please be advised that at its meeting held Wednesday, December 15, 2021, the Council of the Regional Municipality of Halton adopted the following resolution:

RESOLUTION: ST-08-21 – Digital Access Strategy Report

1. THAT Regional Council receive the Halton Digital Access Strategy outlined in Report No. ST-08-21 re: Digital Access Strategy Report.
2. THAT the Regional Chair write to the Provincial Minister of Infrastructure and the Federal Minister of Rural Economic Development requesting a commitment to deliver affordable broadband service speeds of 1 Gbps across all of Halton Region by 2026, to support economic growth and quality of life.
3. THAT staff investigate the feasibility of a unified broadband network in Halton Region as recommended in the Digital Access Strategy report.

Regional Municipality of Halton

HEAD OFFICE: 1151 Bronte Rd, Oakville, ON L6M 3L1
905-825-6000 | Toll free: 1-866-442-5866

4. THAT Regional staff report back with details of the Hydro Utilities Group (HUG) proposal to coordinate deployment of 5G wireless technology with the telecommunication companies leveraging municipal assets and accelerating the delivery of 5G wireless infrastructure.
5. THAT the Regional Clerk forward a copy of Report No. ST-08-21 to Halton's Members of Provincial Parliament, Halton's Members of Federal Parliament, the City of Burlington, the Town of Halton Hills, the Town of Milton, the Town of Oakville, Burlington Hydro Inc., Halton Hills Hydro Inc., Milton Hydro Distribution Inc. and Oakville Hydro Electric Distribution Inc. for their information.

Included please find a copy of Report No. ST-08-21 for your information.

If you have any questions please contact me at the e-mail address below.

Sincerely,



Graham Milne
Regional Clerk
graham.milne@halton.ca

Report To:	Regional Chair and Members of Regional Council
From:	Tony Oliveri, Commissioner, Strategic Transformation
Date:	December 15, 2021
Report No:	ST-08-21
Re:	Digital Access Strategy Report

RECOMMENDATION

1. THAT Regional Council receive the Halton Digital Access Strategy outlined in Report No. ST-08-21 re: Digital Access Strategy Report.
2. THAT the Regional Chair write to the Provincial Minister of Infrastructure and the Federal Minister of Rural Economic Development requesting a commitment to deliver affordable broadband service speeds of 1 Gbps across all of Halton Region by 2026, to support economic growth and quality of life.
3. THAT staff investigate the feasibility of a unified broadband network in Halton Region as recommended in the Digital Access Strategy report.
4. THAT Regional staff report back with details of the Hydro Utilities Group (HUG) proposal to coordinate deployment of 5G wireless technology with the telecommunication companies leveraging municipal assets and accelerating the delivery of 5G wireless infrastructure.
5. THAT the Regional Clerk forward a copy of Report No. ST-08-21 to Halton's Members of Provincial Parliament, Halton's Members of Federal Parliament, the City of Burlington, the Town of Halton Hills, the Town of Milton, the Town of Oakville, Burlington Hydro Inc., Halton Hills Hydro Inc., Milton Hydro Distribution Inc. and Oakville Hydro Electric Distribution Inc. for their information.

REPORT

Executive Summary

- Report No. ST-05-21, re: Halton Digital Access Strategy, was adopted by Regional Council on Wednesday, April 21, 2021, and approved the development of a Halton-wide Digital Access Strategy to further work to promote enhanced broadband services in both the rural and urban areas and also to establish a framework in which to consider current ad hoc requests from telecommunications companies to utilize municipal assets including streetlight poles. This report summarizes the findings of the Strategy.
- The exponential growth in the demand for mobile services has led to major advancements in wireless network technologies every 10 years, resulting in the emergence of ground breaking 4G networks in 2010 and now leading to 5G technology that presents significant economic opportunities for Halton Region.
- 5G technology implementation is expected to be a key economic driver over the next decade generating significant economic growth and it is important that Halton Region be positioned to benefit from that growth.
- Currently the CRTC standard is for all Canadian homes and businesses to have access to broadband internet speeds of at least 50 Mbps for downloads and 10 Mbps for uploads (50/10 Mbps) with a goal to achieve this by the end of 2021. There are areas in Halton Region that do not currently have access to this service level particularly in the rural and older urban areas, and recent Provincial announcements now target 50/10 Mbps for 98 per cent of rural Halton households and businesses by 2025. In addition, many of the internet services available in Halton do not use fibre technologies to the home and are therefore not scalable to 1 Gbps services required to support 5G.
- The next generation 5G connectivity will rely on both a comprehensive fibre network scalable to at least 1 Gbps services as well as a 5G wireless network across all of Halton Region. It is estimated that there are currently significant gaps in the fibre network in Halton which will need to be addressed to achieve the benefits of 5G technology.
- A 5G network implementation requires the attachment of wireless transmitting devices to vertical poles typically along road right of ways. There is a potential opportunity to use municipal vertical assets for these 5G device attachments including streetlight and hydro poles.
- The four Hydro Electric Distribution companies, referred to as the Halton Utilities Group (HUG), have proposed a coordinated and streamlined approach to supporting the deployment of 5G wireless technology that would leverage municipal

assets such as streetlight poles. Halton Region and the Local Municipalities are investigating this approach and will report back to their respective Councils.

- General health concerns related to 5G technology have been raised by the public. According to Health Canada, based on the available scientific evidence, there are no health risks from exposure to the low levels of radiofrequency electromagnetic fields emitted by 5G devices.

Background

The long standing need for reliable broadband connectivity has been amplified during the COVID-19 pandemic in Halton Region as residents and businesses have required reliable broadband access in order to work, learn, access health care services, conduct business, and communicate with friends and family.

Digital Access Strategy

In April 2021, Regional Council approved Report No. ST-05-21 which authorized the development of a Digital Access Strategy including:

- Broadband Digital Readiness Report:
 - Setting the stage for Halton Region and the Local Municipalities in both rural and urban areas.
 - Sizing Next Generation Broadband Network Infrastructure.
- Benefits and Implementation Plan:
 - Halton Region-wide 5-Year Digital Access Implementation Plan.
- Strategic and Commercial Reports:
 - Individual reports for each of the Local Municipalities and Halton Region.

This work was completed jointly with the Local Municipalities under the leadership of the Halton CAOs and a staff team including representatives from each municipality. Nordicity Group Limited was engaged to prepare the Digital Access Strategy. A copy of the Nordicity Halton Digital Access Strategy Report is included as a Document Under Separate Cover on Halton.ca.

Discussion

Next Generation Technology Overview

The 5G wireless network technologies are currently being deployed globally and Canadian telecom operators spent almost \$9 billion on new 5G spectrum in 2021 and are now rolling out their 5G plans.

The next-generation broadband capabilities will rely on new 5G technologies that will transform national and regional economies. Over the last 50 years, there has been innovation evolving from 2G, 3G to 4G in order to meet consumer demand for a range of

services and improved quality and reliability. 5G networks are the next infrastructure generation that will provide a higher capacity than current 4G networks creating bandwidth speed and capacity necessary for the massive number of connected devices using the internet. The next generation connectivity will rely on a fully integrated fibre based wire line and 5G wireless network.

The availability of next-generation high-speed broadband connectivity (wireline as well as wireless) across the Region will be critical to enable the economic benefits of 5G technologies. A fully integrated viable broadband network is critical for the provision of reliable internet services for Halton Region's sustainable economic development. The commercialization of these technologies will be transformational and is referred to as, the "Gigabit Economy".

To realize the full benefits of the Gigabit Economy, 5G wireless networks are required as only these networks can provide the following requisite key features:

- higher data rates (> 1 Gb);
- improved spectral efficiency coverage;
- lower delays (latency); and,
- greater reliability (performance).

While 4G network technology will continue to support the evolution of the Gigabit Economy, it is believed that 4G will soon reach its limits in terms of its ability to support the exponential growth in demand for bandwidth speed and capacity requirements in wireless networks.

Examples of key improvements in the operating characteristics of 5G over 4G networks include the following:

- Greatly enhanced mobile broadband data rates that enable ever faster flows of greater amounts of information;
- Ultra-low latency and reliability—which is suitable for mission-critical services;
- Ability to scale significantly and efficiently to connect a massive number of sensors; and,
- Enhanced security, such as capabilities like biometric identification to help safeguard the integrity of information.

5G will enable applications that are not currently possible with 4G technology by providing the following capabilities:

- Broadband availability everywhere at speeds up to 10 Gbps;
- Smart vehicles enabled with a reliable and secure connection to the cloud;
- Super-high-definition media distribution; and,
- Critical control of remote devices enhanced by ultra-low latency and reliability including Advanced Traffic Management Systems (ATMS) and Advanced Metering Infrastructure (AMI).

In addition, 5G networks will enable connected societies – “smart cities”, “smart businesses”, and “smart industries”.

Broadband Digital Readiness in Halton Region

A 1Gbps fibre network is critical to the deployment of 5G in Halton. While the telecommunications companies have deployed fibre networks in Halton, significant gaps continue to exist particularly in the rural area and in older urban areas.

The CRTC has targeted all Canadian homes and businesses to have access to broadband internet speeds of at least 50 Mbps for downloads and 10 Mbps upload (50/10 Mbps). Innovation, Science and Economic Development Canada (ISED) data suggests that most of Halton has, or will have with current investments proposed in the rural areas, internet services that meet the 50/10 Mbps target. The Nordicity Group Limited report challenges the ISED estimates of 50/10 Mbps service availability as actual service experienced by customers is not measured or reported by the ISED or the CRTC. Municipalities which have surveyed their communities for actual service performance, including Report No. CA-04-18, re: Halton’s Rural Broadband Study, regularly report that the current service experienced is substantially lower than the current 2021 CRTC 50/10Mbps target. Regardless of the current coverage and reliability of 50/10 Mbps, the challenge is that many of the services offered are not based on fibre technology and therefore may not be scalable to 1 Gbps services. Expansion of fibre networks in Halton is essential to deliver the benefits of 5G technology.

During July and August of 2021 the Federal and Provincial governments broadly announced additional rural broadband funding which will include Halton. While details of the awards are not yet public, the understanding is they support implementation of fibre investments in rural Halton and could provide the necessary infrastructure for rural 5G wireless deployments. Currently there are no Federal or Provincial broadband funding programs for urban gaps in fibre networks and 5G deployments.

Halton Region and the Local Municipalities have or are developing fibre networks to support initiatives such as the Advanced Traffic Management System and the Automated Meter implementation. It is possible that these fibre networks could play a role where there are significant gaps in service provided through the telecommunications companies. Staff will continue to investigate this opportunity.

The Nordicity Group Limited report recommends that a unified broadband service, using fibre (FTTH/P) technology would best position Halton Region’s residents and businesses to benefit from 5G technology. This will require significant coordination and cooperation with the telecommunication companies and support from the Provincial and Federal Government. Staff will continue to investigate the feasibility of this recommendation and continue to work to specifically identify broadband service levels and gaps across the Region. Staff will also investigate the opportunity to work with the telecommunication companies to map the existing fibre networks across the Region.

Next Generation Technology Municipal Opportunity

To implement the 5G wireless technology, network operators such as Bell, Rogers and others need to create a network of small cell technology (antennas) to deliver the technology into homes, businesses and mobile devices. These small cells are essential for 5G network capability as they allow the operators to support more users with faster speeds, without the need to acquire additional wireless spectrum. Small cells are mini cellular towers (antennas), which are roughly the size of a standard laptop and can be installed on top of buildings, traffic signals, streetlights, and utility poles. In this context the Local Municipalities and Hydro Distribution companies can leverage their existing pole infrastructure (mainly streetlights and utility poles) to facilitate faster deployment of 5G network capability.

The Local Hydro companies (HUG) are proposing to coordinate and streamline the deployment of the 5G wireless technologies by the telecommunications companies leveraging municipal as well their own assets.

In early 2022, each of the Local Municipalities and Halton Region will receive a customized 5G Strategy Commercial report prepared by Nordicity Group Limited, which will evaluate the HUG proposal. Staff anticipate that the Local Councils will consider these reports in the first quarter of 2022.

It is recommended that Regional staff report back to Regional Council with the details of this proposal and recommendations once the Local Municipalities reports have been considered by their respective Councils.

5G Health Studies

Halton Region's Public Health Department and Public Health Ontario has identified Health Canada as the authority on health effects of cell phones, cell phone towers, antennas and 5G devices.

In Canada, Industry Canada (ISED) sets stringent standards for RF emissions for all emitting devices including cell phones and towers, which concord with those of international organizations such as the IEEE, ITU and FCC. Similarly, Health Canada sets RF standards for devices under its Safety Code 6 within its public health mandate.

Both ISED and Health Canada have concluded that the RF emissions – including those from 5G networks, do not pose a danger to the public.

Staff will continue to consult with Public Health Ontario (PHO) who will review new research evidence provided by Health Canada on new technology effects.

Federal and Provincial Advocacy

The experience through the COVID-19 pandemic has further demonstrated that broadband is an essential service. Halton Region continues to advocate to the Provincial and Federal Governments to increase and accelerate broadband connectivity, quality and affordability in Halton's communities. The current CRTC 50Mbps/10Mbps Rural Broadband target, although helpful for minimal viable connectivity in areas without connectivity, is not sufficient to support Next Generation technology and applications. Over the next three to five years, the demand for internet high speed across the Region is expected to exceed the CRTC's target of 50/10 Mbps as shown in the table below.

Emerging Demand Trends for Internet High Speed Services

High Speed Internet Services Demand Drivers	Expected Demand for Internet High Speed	
	3 – 5 years	Beyond 3 years
Residential (including self-employed, and work from home)	50 Mbps to 100 Mbps	100 Mbps to 1 Gbps
Small Medium Enterprises (SMEs)	50 Mbps to 1 Gbps	100 Mbps to 1 Gbps
Large Enterprises & Institutions (more than 100 employees)	100 Mbps to 10 Gbps	1 Gbps to 10 Gbps
Municipalities, Utilities, School and Health (MUSH)	100 Mbps to 10 Gbps	1 Gbps to 40 Gbps

To help shape the connectivity, quality and affordability of internet services in all of Halton into the future, the following is required:

- Federal and Provincial governments to ensure fibre investments awarded through the UBF/ICON programs support 5G requirements and are scalable to the 1 Gbps target.
- Federal and Provincial governments to ensure fibre investments include urban underserved pockets.
- Federal and Provincial governments and telecommunication providers to ensure affordability of fiber and 5G services.
- Federal and Provincial governments ensure investments to support 1 Gbps across Halton by 2026.
- Federal and Provincial governments require telecommunications companies to disclose their fibre network mapping to municipalities.

Conclusion

The Digital Access Strategy report provides an overview of 5G technology and the projected economic benefits. It is essential that Halton Region continues to advocate to ensure residents and businesses have access the internet services required to support both the economy and quality of life.

FINANCIAL/PROGRAM IMPLICATIONS

The Rural Broadband Program and the Halton Digital Access Strategy development are funded from the CAO's Department Strategic Initiative 2021 operating budget.

Respectfully submitted,



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Approved by



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Attachments: Attachment #1 – Digital Access Strategy Report – Under Separate Cover

Document Under Separate Cover
Attachment #1
to Report No. ST-08-21

HALTON REGION DIGITAL ACCESS STRATEGY

Prepared for



Prepared By

 **Nordicity** | **NGL Nordicity Group Limited ("Nordicity")**,

in partnership with

 **NE&S** | **Networks, Economics & Strategy Inc. ("NE&S")**

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Executive Summary

This report, commissioned by the Halton Region, and prepared by Nordicity Group Limited (“Nordicity”)¹, presents Digital Access Strategy for the Region – referred to as **Halton Region Digital Access Strategy (HDAS)**. The main objectives of the report include a) assessment of the Region’s digital infrastructure readiness, b) identification of options for next generation broadband connectivity in the Region (5G and Fibre) and its associated socio-economic benefits, and c) recommended digital access implementation action plan.

The Region’s economy exhibited a growth of 1.4% per year, as its GDP increased from \$24.03 billion (2016) to \$25.40 billion (2020). In the emerging digital world digital transformation of the economy will be crucial for its long-term sustainable growth. The digital sector creates high value jobs for knowledge workers. Given the share of digital sector has remained constant around 9% its GDP, it presents an opportunity to further grow the Region’s economy through digital transformation.

The analysis presented in this study demonstrates that the adoption of 5G technologies will significantly increase the digital sector share in the Region’s GDP which will double it’s the current growth rate. 5G technology will have a transformative effect on employment, productivity, and GDP in the different sectors of the Region’s economy. The adoption of 5G applications (**Artificial Intelligence, Cloud Computing, Internet of Things**) will transform key sectors of the national as well as regional economies and improve the quality of life for its ‘digital citizens’.

However, the adoption of these 5G applications require the deployment of 5G wireless communication networks as the existing 3G and 4G networks will not be able to provide the comprehensive key performance characteristics such as “adaptive architecture”, bandwidth speed and capacity necessary for the massive number of connected devices in Internet of Things (IoT) ecosystem. The 5G networks are required for *mission-critical, high-bandwidth, low-latency* applications such as *autonomous vehicles, patient-centric health, enhanced-reality*, etc.

5G networks will enable connected societies – “**smart cities**”, “**smart businesses**”, and “**smart industries**”, that will transform society and offer long-term sustainable socio-economic wellbeing.

While 4G network technology continue to support the evolution of the Gigabit Economy, it is believed that 4G will soon reach its limits in terms of its ability to support the exponential growth in demand for bandwidth speed and capacity requirements in wireless networks. For example, 4G networks will be inadequate for the next set of high-bandwidth, low-latency video applications such as remote surgeries in the health sector, guided vehicles, robotic, drone and 3D printing in manufacturing processes, autonomous/connected vehicles etc.

To fully realise the socio-economic benefits of the 5G technologies as detailed in this study, the Region will require an integrated approach regarding the broadband network capability deployed by the ISPs. For example, Ciena (a major US based telecom technology firm), in its 2017 whitepaper noted “**5G is not just about the Radio Access Network (RAN). Next-generation wireless is going to need a lot of help from wireline technologies to deliver on its promises.**”

In this sense, the availability of next-generation high speed broadband connectivity (both wireline and wireless) in the Region will be critical to enable the economic benefits of 5G technologies. Accordingly, it has been recognized by policy makers such as CRTC that a modern broadband infrastructure is a critical enabler for widespread availability of high-speed internet services and correspondingly, digitally enabled citizenry, as well as innovation and growth in all sectors of the economy.

It is worth noting, that as with previous communications technology windows, it is likely that 5G networks in Canada will also be deployed first in large metropolitan areas with progressive deployments

along the transportation corridors and smaller centres. Therefore, it is critical for the Region to implement an effective digital access strategy to ensure it is not left behind from its peers in the adoption of 5G enabled technologies, which will be instrumental for sustainable growth in the emerging digital economies.

Given the exponential growth in broadband usage, it is likely that in the near future the demand for internet speeds will be significantly higher than the CRTC's current target speed of 50/10 Mbps. The CRTC reports also indicate that there has been an exponential growth in the broadband usage in Canada. Therefore, it is reasonable to believe that demand for internet speeds will reach up to 1 Gbps in the Region in the medium term. We also believe that businesses, industry, and MUSH (Municipalities, Universities, Schools, and Hospitals) institutions are likely to require 1 Gbps or higher speed internet services. Similarly, residential, including self-employed and work-from-home, demand for the internet speed is also expected to increase exponentially, ranging between 100 Mbps and 1 Gbps

The full realization of the economic benefits of 5G technologies will depend on the availability of a fully integrated wireless and wireline broadband capability across the Region, using next generation network technologies i.e., 5G (wireless) network supported by FTTH/P (wireline) network. This means the FTTH/P network capability across the Region will be a key enabler of the delivery of reliable 5G services and full realisation of the associated economic benefits. However, based on our assessment a significant gap exists in most parts of the Region in terms of broadband capability in meeting the emerging demands for reliable and scalable highspeed services in a digital (1Gig+) economy

As per ISED data the households in the Region are mostly covered with 50/10 Mbps. It is worth noting that availability of reliable internet speed depends on the technology (e.g., copper-based DSL, Fibre, Wireless etc.) used to deliver services. Since, the majority of those households are not served with Fibre-to-home technology ISED broadband coverage data, in our view, appears to present a very optimistic view. According to our estimates about less than a one third (30.6%) of the households in the Region may have access to reliable internet services potentially meeting the CRTC target speed of 50/10 Mbps or more. This means a significant gap exists in most parts of the Region in terms of broadband capability in meeting the emerging demands for reliable and scalable highspeed services in a digital (1Gig+) economy.

Therefore, there is need for deployment of a unified broadband network by the ISPs in the Region using future proof FTTH/P technology. A unified broadband network means an integrated fibre based wireline network delivering broadband connectivity services across the Region, using uniform standards in terms of internet speed capability and quality of service. We believe a unified FTTH/P network capability across the Region will be critical to the full realization of the economic benefits of 5G technologies as presented in this study.

According to our assessment, the ISPs would require about \$362.8 million investment to deploy FTTH/P network in the unserved/underserved areas of the Region. This investment 82% of the total \$439.5 million to deploy a future proof FTTH/P network across the entire Region. This means it will make more sense for the ISPs to deploy a unified future proof FTTH/P network in the Region, with an additional investment of \$76.7 million. However, the \$439.5 million represents our estimate of total the investment required for the deployment of FTTH/P network in the Region - *excludes the value of any existing FTTH/P network deployed in the Region and the impact of any potential Federal and Provincial funding for the Region.*

In our view a unified FTTH/P network would future proof the Region's broadband infrastructure capability in terms of meeting the exponentially increasing demand for internet speed and broadband usage in emerging digital world. The unified broadband service would be scalable up to and beyond 1

Gbps as required and ensure service reliability and redundancy. We also believe there is need for an open access regime to prevent deployment of duplicate networks by different ISPs. An open access regime would encourage competing service providers to offer a range of innovative and affordable services to different subscribers' groups across the Region.

Organization of report

After a brief introduction to this study in Section 1, we provide a detailed understanding of 5G technology in terms of its definition, evolution and capabilities as well as presentation of evidence to confirm that it has no adverse health impacts.

In Section 3 we demonstrate the need for digital access strategy for the Region, followed by assessment of digital infrastructure readiness in Section 4, and analysis of options to implement next generation broadband connectivity in the Region in Section 5. Section 6 the details modelling framework used to estimate the socio-economic benefits of 5G technologies, which are presented in Section 7. In Section 8 we present our recommended digital access implementation plan, followed by our conclusion in Section 9.

1. Introduction

There is extensive empirical evidence in the economic literature that shows the presence of modern digital infrastructure is an important driver for sustainable economic growth². The advancements in digital technologies have played an instrumental role in accelerating economic and productivity growth across all sectors of the economy. That is, the presence of modern digital infrastructure is a key enabler of innovation and modernization for industries like *agriculture, mining, manufacturing, trade, services*, among others. Widespread use of digital technologies has led to job creation in existing industries as well as the emergence of new services and industries. A modern digital infrastructure also facilitates economic integration, improves living standards, and effectively assists *health, education, and businesses* in all sectors.

Therefore, the presence of a modern digital infrastructure enabled by the next-generation broadband capabilities is becoming increasingly important for long-term economic development and sustainable growth. The building blocks of the next-generation digital infrastructure are illustrated in Figure 1 below.

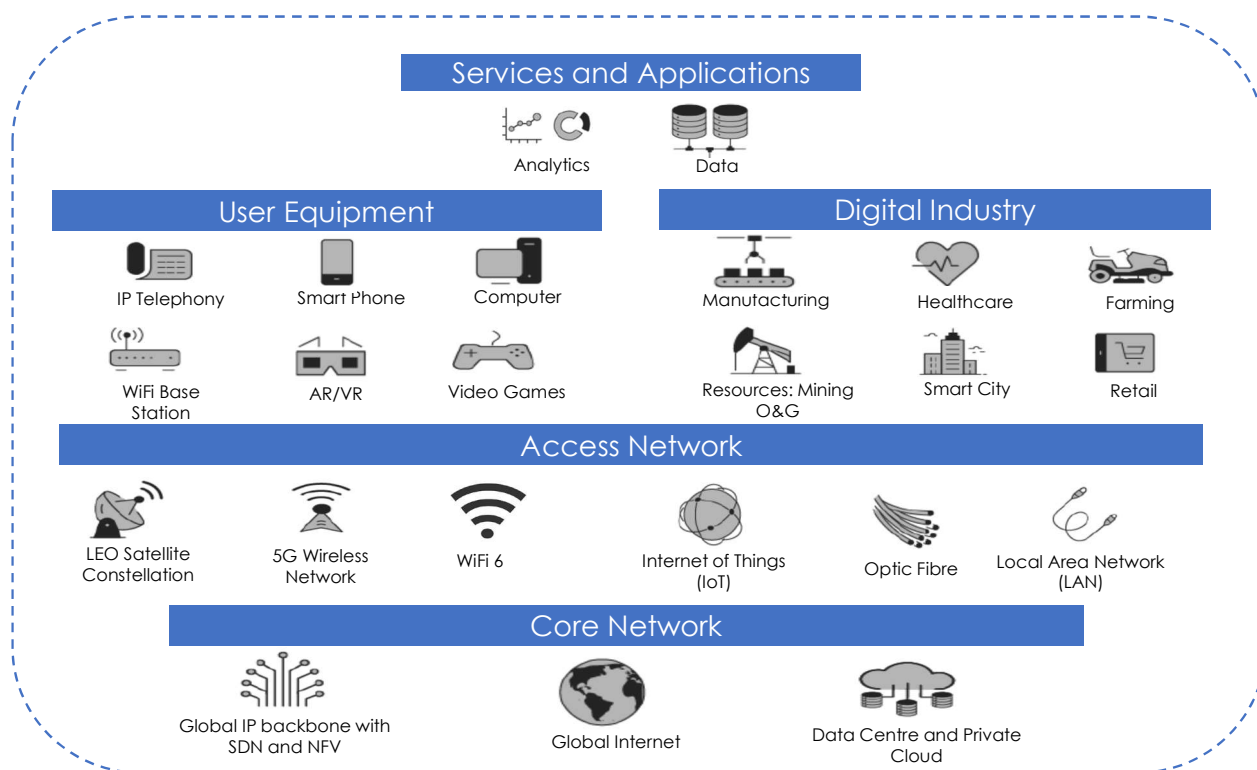


Figure 1: Digital Infrastructure Building Blocks

As shown in the above figure, the quality and capacity of both *wireline* and *wireless* broadband networks, encompassing “Core Network”, and “Access Network” play a foundational role in the development of a modern digital infrastructure capability. Next-generation broadband capability means deployment of a future-proof³ fully integrated fibre-based wireline and 5G wireless networks. That is, a high-quality fibre-based access network capability will be critical to fully realize the economic benefits of 5G enabled services. As 5G networks are enabled, the demand for broadband connectivity (i.e., internet speed requirement and data usage per capita) in urban, suburban, as well as rural areas will exponentially increase. This means the network operators will need high-performing 5G transport

network capabilities that are easy to scale - ***“5G is not just about the Radio Access Network (RAN). Next-generation wireless is going to need a lot of help from wireline technologies to deliver on its promises.”***⁴

The adoption of 5G technologies will transform key sectors of the national as well as regional economies and improve the quality of life for its *‘digital citizens’*. The rollout of 5G technologies require the deployment of 5G wireless communication networks as the existing 3G and 4G networks will not be able to provide the comprehensive key performance characteristics such as “adaptive architecture”, bandwidth speed and capacity necessary for the massive number of connected devices in Internet of Things (IoT) ecosystem. The 5G networks are required for *mission-critical, high-bandwidth, low-latency* applications such as *autonomous vehicles, patient-centric health, enhanced-reality*, etc.

2. Understanding 5G Technology

2.1 Defining a 5G Network

5G networks provide a significantly higher capacity than current 4G networks based on higher data rates, better spectral efficiency, coverage, and lower latency. 5G networks enable a much higher density of mobile users, massive IoT, and machine communications, amongst other benefits. In sum, 5G wireless broadband network technologies are *“a set of technologies connecting people-to-people and people-to-information to a unified connectivity fabric connecting people to everything”*⁵.

5G networks operate primarily on mid-band spectrum (3.5GHz and above) but also require multiple lower spectrum bands (currently used by 3G and 4G networks) through dynamic network optimization technology.

2.2 Wireless Networks – Evolution and Capabilities

Since the inception of the first generation (1G) analog cellular networks in the 1980s and through the subsequent evolution of 2G through 4G digital networks, the telecoms industry has seen rapid growth in the penetration and adoption of mobile telecom services in Canada and the USA as well as globally ⁶.

The exponential growth in the demand for mobile services led to major advancements in wireless network technologies approximately every 10 years, resulting in the emergence of groundbreaking 4G networks in 2010.

As shown in Table 1 below - *summarizing the key characteristics and features of wireless network generations deployed*, the focus of previous advancements in wireless technologies (1G to 4G) was to enable subscribers to add data services to voice in wireless service offerings and subsequently improve data speeds and usage.

The rollout of 4G/LTE networks has spurred exponential growth in wireless broadband usage and correspondingly, opportunities for new technologies that are affecting all parts of our society – *Internet of Things (IoT), Autonomous Vehicles (AV), eHealth, mobile banking*.

The commercialization of these technologies will transform our existing socio-economic system into, what is referred to as the ***“Gigabit Economy”***⁷.

Table 1: Basic Comparison of Different Generations of Wireless Network Technologies

Basic comparison among mobile system generations*					
Feature	1G	2G	3G	4G	5G
Deployment	1980	1990	2001	2010	2020+
Frequency band	800 MHz	900 MHz	2,100 MHz	2,600 MHz	3–90 GHz
Speed	2 Kbps	64 Kbps	2 Mbps	Less than 1 Gbps	1 Gbps and more
Latency ¹	In seconds	500-1000 ms ¹	200 ms ¹	100 ms ¹ and less	1 ms ¹ and less
Technology	Analogue cellular	Digital cellular	– HSPA – UMTS – 1xRTT/EVDO	– LTE Advanced – Wi-Fi	– Multi-radio access technology – Wi-Fi – Wi-Gig
Services	Voice	– Digital voice – SMS – Packet (General Packet Radio Service), – Low-rate data	– Higher quality audio and video calls – mobile broadband	– High data rate – Wearable devices	– Very high data rate ¹ to fulfill extreme user demands – Device-to-device, – Machine-to-machine, – Internet of Things

* N. Al-Falahy and O. Y. Alani, "Technologies for 5G Networks: Challenges and Opportunities," in IT Professional, vol. 19, no. 1, pp. 12-20, Jan.-Feb. 2017

To realize the full benefits of the *Gigabit Economy*, 5G wireless networks are required as only these networks can provide the requisite key features:

- higher data rates (> 1 Gbps),
- improved spectral efficiency,
- lower delays (latency), and
- greater reliability (performance).

While 4G network technology continue to support the evolution of the Gigabit Economy, it is believed that 4G will soon reach its limits in terms of its ability to support the exponential growth in demand for bandwidth speed and capacity requirements in wireless networks. For example, the initial service sets for the *Internet of Things* being deployed in 4G networks as narrow band applications (NB-IoT), are inadequate for the next set of high-bandwidth, low-latency video applications such as remote surgeries in the health sector, guided vehicles, robotic, drone and 3D printing in manufacturing processes, autonomous/connected vehicles etc.

5G communications networks can enable the capacity and efficiency required to support the large-scale commercialization of new technologies in all sectors of the economy and in turn, generate benefits throughout our society. That is, *"As the demand for high-speed and low-latency applications increases dramatically, the 5G system should have the technology and flexibility to meet those requirements and support multifold increases in network capacity and connectivity."*⁸

5G will deliver capacity and efficiency not currently possible with the existing wireless network technologies⁹

For example, 5G enabled networks can offer speeds of up to 1Gbps for tens of connections and tens of Mbps for tens of thousands of connections. Examples of key improvements in the operating characteristics of 5G over 4G networks include the following:

- Greatly enhanced mobile broadband data rates that enable ever faster flows of greater amounts of information.
- Ultra-low latency and reliability—which is suitable for mission-critical services (see Figure 14 below)
- Ability to scale significantly and efficiently to connect a massive number of sensors; and,

- Enhanced security, such as capabilities around biometric identification to help safeguard the integrity of information.

5G networks will enable connected societies – “**smart cities**”, “**smart businesses**”, and “**smart industries**”, that will transform society and offer long-term sustainable socio-economic wellbeing.

2.3 5G Technology – Potential Health Impacts

Over the last 50 years, manufacturers and wireless service providers have steadily innovated over various 2G, 3G and 4G iterations to meet consumer demand for a vast range of services and improved quality and reliability. 5G¹⁰ services - first launched in April 2019 for the consumer markets in South Korea and the US¹¹, offer significantly higher performance parameters (bandwidth speeds, extreme lower latency, reliability), as mentioned above.

5G networks comprise small (micro) cell antenna and cellular towers (macro cells) for data throughput and coverage respectively. The very high data flow traffic in urban and suburban (higher population density) areas, require a densification of the radio access network (RAN) via the installation of small cell antennas. These small cells use mid band spectrum characterized by higher bandwidth but lower coverage. Thus, service providers are in the process of installing radio antenna on the streetlights, rooftops and sides of buildings. While there are more small cell transmitters in a 5G network, the RF (Radio Frequency) energy emitted by these transmitters is significantly lower than that emitted from cell towers developed for 2G-4G networks.¹²

Leading international standard setting organizations and regulatory agencies which set health and safety standards for wireless networks and devices include the Institute of Electrical and Electronics Engineers (IEEE)¹³, the International Telecommunications Union (ITU)¹⁴, World Health Organization (WHO)¹⁵, US Federal Communications Commission (FCC).¹⁶

Since the 1980s - when commercial cellular services were first mass marketed¹⁷, there have been concerns raised by consumers globally and in Canada, regarding potential hazards from the emissions of radiofrequency (RF) energy as well as the cumulative effects of all wireless devices¹⁸.

These concerns have led to debates around the IEEE and WHO standards and extensive studies of RF energy¹⁹ emissions from cell towers and from the mobile devices. While a few studies have raised doubts about RF emissions²⁰, the consensus among scientific researchers and public health authorities is that wireless networks and devices – including 5G, do not pose a public health risk. A recent, comprehensive study concluded: “*the widely perceived health risks that are attributed to 5G are not supported by scientific evidence from communications engineering*”.²¹

In Canada, Industry Canada (ISED) sets stringent standards for RF emissions for all emitting devices including cell phones and towers²², which concord with those of international organizations such as the IEEE, ITU and FCC. Similarly, Health Canada sets RF standards for devices under its Safety Code 6 under its public health mandate.

Both ISED and Health Canada have concluded that the RF emissions – including those from 5G networks, do not pose a danger to the public.

Health Canada’s review of scientific public health studies in Canada and internationally concluded that health impacts associated with exposures to 5G networks and devices are well below its Safety Code 6 standards.²³

3. The Need for Digital Access Strategy for the Halton Region

The 5G wireless network technologies are currently being deployed in the global marketplace. With the development of complete 5G standards in 2018-19, the telecom operators in Canada recently started the commercial deployment of 5G networks, following pre-commercial tests started in 2017.

In this study, we will demonstrate that 5G network technologies will have a transformative effect on employment, productivity, and GDP in the different sectors of the economy. It is worth noting that the investment in the next generation of both wireline and wireless broadband networks is mainly led by the private sector telecom operators in Canada. As with previous communications technology windows, it is likely that 5G networks in Canada will also be deployed first in large metropolitan areas with progressive deployments along the transportation corridors and smaller centres. It is also likely that 5G will co-exist with 4G networks for a few years given the major Canadian operators recently (starting in 2012) made significant investments for deployment of their 4G LTE and LTE Advanced networks. Therefore, it is expected that LTE will remain the baseline technology for wide-area broadband coverage.²⁴ This will also allow the wireless network operators to continue to realize their return on their 4G LTE investment.

In this context, it is critical for the Region to implement an effective digital access strategy to ensure it is not left behind from its peers in the adoption of 5G enabled technologies, which will be instrumental for sustainable growth in the emerging digital economies.

The main purpose of this study is to demonstrate to the Region's key stakeholders the critical importance of digital access strategy for deployment of both wireline and wireless broadband networks, which in turn, will enable the economic potential of 5G services and applications - as measured by GDP and employment impacts and sustainable economic growth.

For this purpose, the study aims to fulfill five broad sequential milestones:

- 1) Establish an **economic baseline status** of digital economic activities in the Halton Region and its four municipalities namely Burlington, Oakville, Milton & Halton Hills. This part of the study will include a thorough retrospective assessment of the state of Digital economy (2016- 2020) in Halton and four municipalities.
- 2) Conduct **gap analysis - digital infrastructure readiness assessment** to identify the key prospects and challenges of digital economy in Halton and municipalities.
- 3) Identification of options for the Region to implement the next generation broadband connectivity
- 4) Assess the **socio-economic impact of 5G adoption** through its various use cases on other sectors of Halton Region & the municipal economy.
- 5) Recommended digital access action plan.

3.1 Current Economic Baseline

As a result of rapid technological advancements in recent years, the domain of the digital economic sector has stretched beyond the use of information & communication technologies (ICT) to include several other verticals like *digital intermediary platforms* and *digitally delivered goods*, as shown in Figure 2 below.

Defining Digital Economy				
ICT / Digital Enabling Infrastructure	E-Commerce	Digital Intermediary Platforms	Digitally Delivered Products	Support Services
<ul style="list-style-type: none"> •Hardware •Software •Telecommunications •Other Support Services 	<ul style="list-style-type: none"> •Online retailers •Online wholesalers 	<ul style="list-style-type: none"> • Restaurant delivery services •Traveller Accomodation •Transport 	<ul style="list-style-type: none"> •Digital only firms providing finance & insurance services •Travel arrangement, reservation and planning services 	<ul style="list-style-type: none"> •Education Services •Other information Services

Figure 2: Pillars of the digital economy

An understanding of key elements (verticals) of the digital economy is thus critical in measuring its impact across the region. This study borrows heavily from definitions and concepts of the digital economy used by Statistics Canada²⁵, U.S. Bureau of Economic Analysis²⁶, and the vast literature on digital economy measurement published by the Organisation of Economic Co-operation and Development (OECD)²⁷, including its proposed national accounting framework for measuring digital economy sectors as distinct satellite accounts.²⁸

3.1.1 Defining Digital economy

As shown in Figure 2, the standard Digital Supply-Use framework classifies digital economic activities into the following seven main categories:

- **Digitally delivered products:** Digitally delivered products consist of content transmitted and consumed in digital format. It includes purchasing or renting music and videos, reading books and newspapers, storing photos and documents, or accessing banking services online
- **E-commerce:** E-Commerce refers to the sale of goods or services where the order is received and the commitment to purchase is made via the Internet. The goods or services are ordered via online methods, but the payment and ultimate delivery of the goods or services do not have to be conducted online.
- **Hardware:** Hardware is an important component of Digital Enabling Infrastructure. It consists of the manufactured physical elements that constitute information & communications systems
- **Software:** Software is also categorized as a part of Digital Enabling Infrastructure which includes the programs and other operating information used by computing devices and servers.
- **Support services:** Support Services are an important component of digital economy that includes services necessary for digital infrastructure such as education services, consulting services and computer repair services. A portion of these services like computer repair & maintenance services form a part of Digital Enabling Infrastructure.
- **Telecommunications:** The equipment and services required for the digital transmission of information over a distance by cable, telegraph, telephone, broadcasting, or satellite. Telecommunication goods and services are also considered as Digital Enabling Infrastructure

- **Digital Intermediary Platforms:** Digital intermediary platforms provide links between the service providers and users. These platforms are set up purely to act as intermediaries, matching buyers, and sellers, where typically one or the other pays an intermediation fee; and those that are set up as electronic retailers.

A well-defined classification of digital sector based on the nature of the economic activity is critical in ensuring consistency in the evaluation of the digital economy's contribution to economic growth and for comparative analysis with other sectors and other jurisdictions. The digital categories - listed above, are then mapped to the economic sectors according to the North American Industry Classification Systems (NAICS).

The North American Industry Classification System (NAICS) of all economic activities has been widely used by countries as an international standard to classify data according to economic activity in economic statistics, such as for production or national income, employment, population, and others.

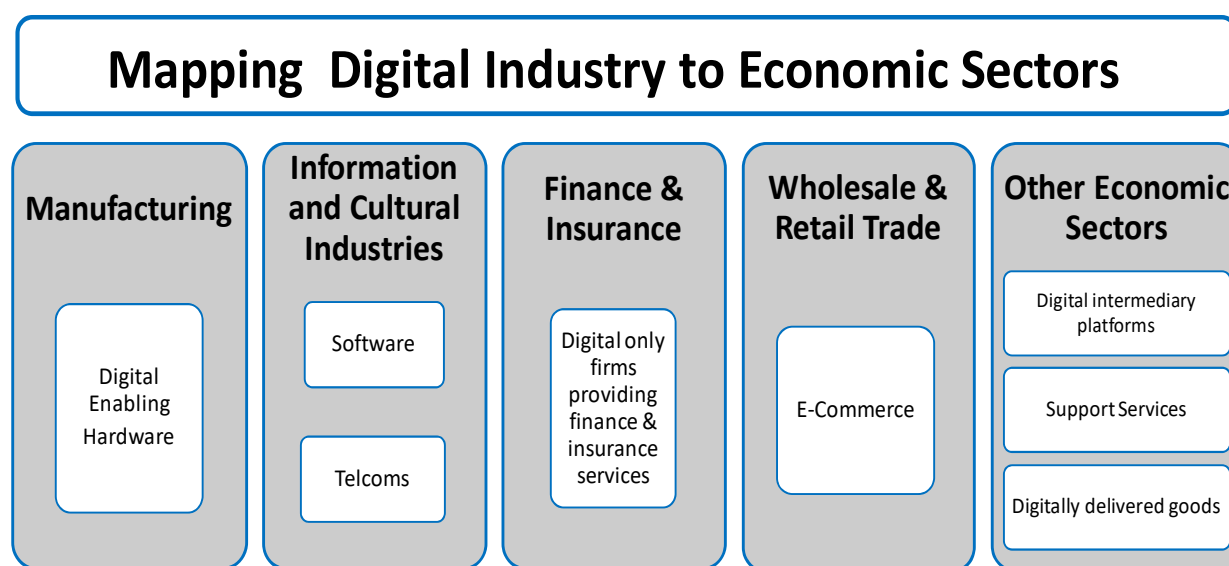


Figure 3: Digital Mapping to ISIC Economic Sectors

This mapping exercise will enable us to understand the cross-sector linkages formed by the digital industries with the other sectors of the Halton economy & municipalities.

3.1.2 Sizing Halton's Economy (GDP)

As shown in Figure 4 below, Halton's GDP witnessed a steady increase from \$24.0 billion in 2016 to \$26.2 billion in 2019, before exhibiting a decline to \$25.4 billion in 2020 principally due to Covid 19. A similar pattern was observed in all municipalities except Oakville where the GDP increased throughout the 2016-2020 period from \$9.3 billion (2016) to \$10.4 billion (2020).

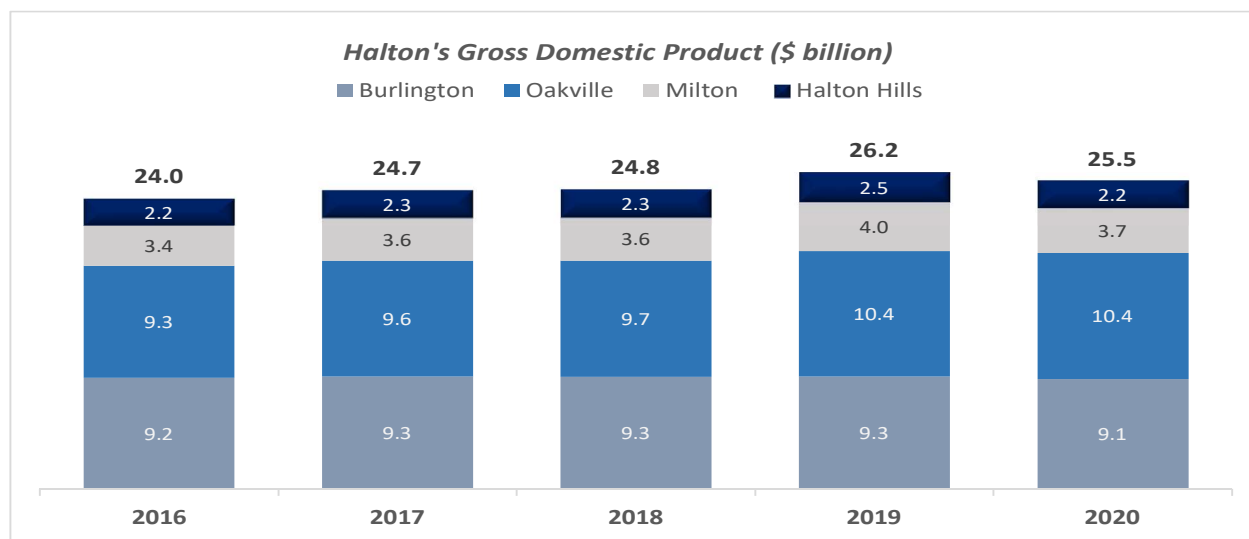


Figure 4: Halton Region's Domestic GDP

Source: Nordicity's calculations based on Halton Employment Survey & Statistics Canada Data

The impact of Covid 19 was also reflected in the distribution of GDP among various economic sectors. As shown in Table 2, sectors like "Transport and Warehousing", "Arts, Entertainment & Recreation", "Management of Companies, and Enterprises", and "Accommodation & Food Services" were worse hit, presumably due to shutdowns caused by the pandemic.

Table 2: Halton's GDP Mix (2016-2020)

Economic Sectors	Halton					Growth (CAGR)
	2016	2017	2018	2019	2020	
Manufacturing	\$4.49B	\$4.33B	\$4.22B	\$4.65B	\$4.11B	-2.18%
Wholesale trade	\$1.47B	\$1.61B	\$1.43B	\$1.41B	\$1.36B	-1.89%
Retail trade	\$1.57B	\$1.66B	\$1.69B	\$1.71B	\$1.87B	4.38%
Transport and Warehousing	\$1.00B	\$1.02B	\$0.98B	\$1.00B	\$0.73B	-7.58%
Information and cultural industries	\$0.94B	\$0.92B	\$1.04B	\$0.98B	\$1.03B	2.27%
Finance and insurance	\$1.72B	\$1.92B	\$1.74B	\$1.98B	\$2.20B	6.32%
Management of companies and enterprises	\$0.54B	\$0.51B	\$0.49B	\$0.35B	\$0.22B	-20.37%
Professional, scientific, & technical services	\$1.86B	\$1.86B	\$1.89B	\$2.11B	\$1.84B	-0.31%
Admin. support, and waste mgt. etc.	\$0.32B	\$0.36B	\$0.33B	\$0.36B	\$0.32B	0.60%
Education services	\$1.70B	\$1.85B	\$1.83B	\$1.78B	\$1.71B	0.21%
Arts, entertainment, and recreation	\$0.40B	\$0.40B	\$0.43B	\$0.46B	\$0.26B	-10.25%
Accommodation and food services	\$0.54B	\$0.56B	\$0.55B	\$0.58B	\$0.42B	-5.81%
Other Services	\$0.65B	\$0.68B	\$0.68B	\$0.74B	\$0.67B	0.82%
Remaining sectors	\$6.83B	\$7.04B	\$7.46B	\$8.08B	\$8.66B	6.10%
Total	\$24.03B	\$24.71B	\$24.76B	\$26.19B	\$25.40B	1.40%

A detailed account of GDP distribution by economic sectors for four municipalities is presented in Appendix A

3.2 Halton's Digital Economy (GDP)

The digital sector is considered to be a catalyst of economic growth and hence its contribution in terms of its share in the overall economy reflects upon the sector's strength in driving Region's GDP growth. Halton's overall GDP increased by 1.40% per year (see Table 2 above), from \$24.0 billion in 2016 to \$25.5

billion in 2020. However, as shown in Figure 5 below, the share of its digital sector almost remained constant – *slightly increased from 9.2% (2016) to 9.3% (2020)*.

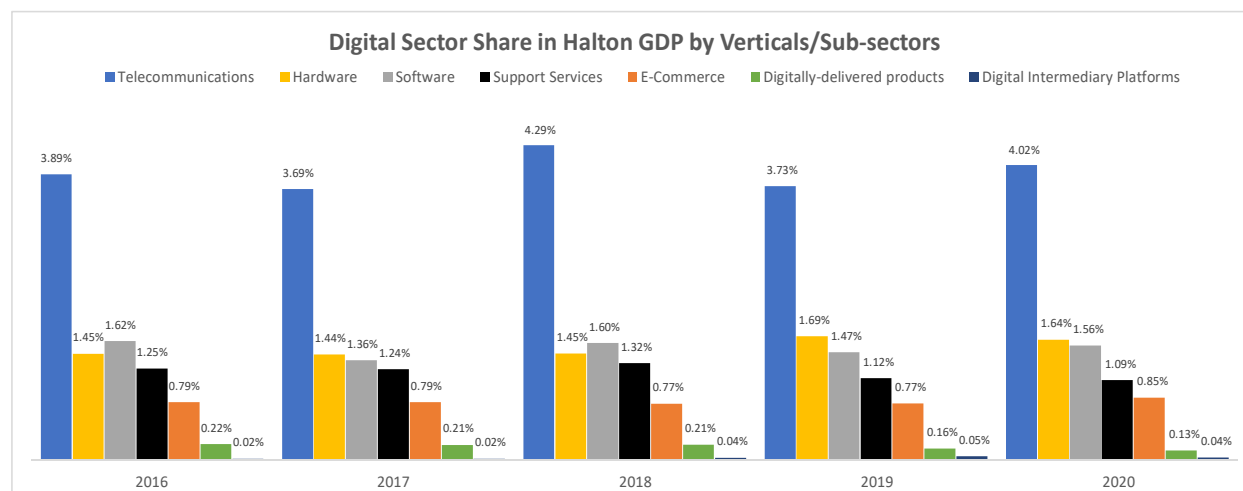


Figure 5: Digital Sector Share in Halton GDP by verticals/sub-sectors

Source: Nordicity's calculations based on Halton Employment Survey, Statistics Canada Data & Digital Supply-Use Tables.

Note: A detailed account of Digital GDP impact by verticals for the four municipalities is presented in Appendix B.

For better understanding of the economic trends that steered the performance of the Region's Digital Sector in 2016-2020, the Figure 5 above provides its breakdown verticals/sub-sectors. The largest contributor has been the *Telecommunications* sector with its share of about 4.02% in 2020 followed by *Hardware* (1.64%), *Software* (1.56%), *Support Services*, (1.09%), *E-Commerce* (0.85%). The contribution of *Digitally-Delivered Products* and *Digital Intermediary Platforms* has been minimal (below 0.15%).

Although share of Digital sector in the Region's employment has been relatively lower at around 7.2% in 2016-2020, similar trends were found in terms contribution of vertical/sub-sectors as shown Figure 6 below.

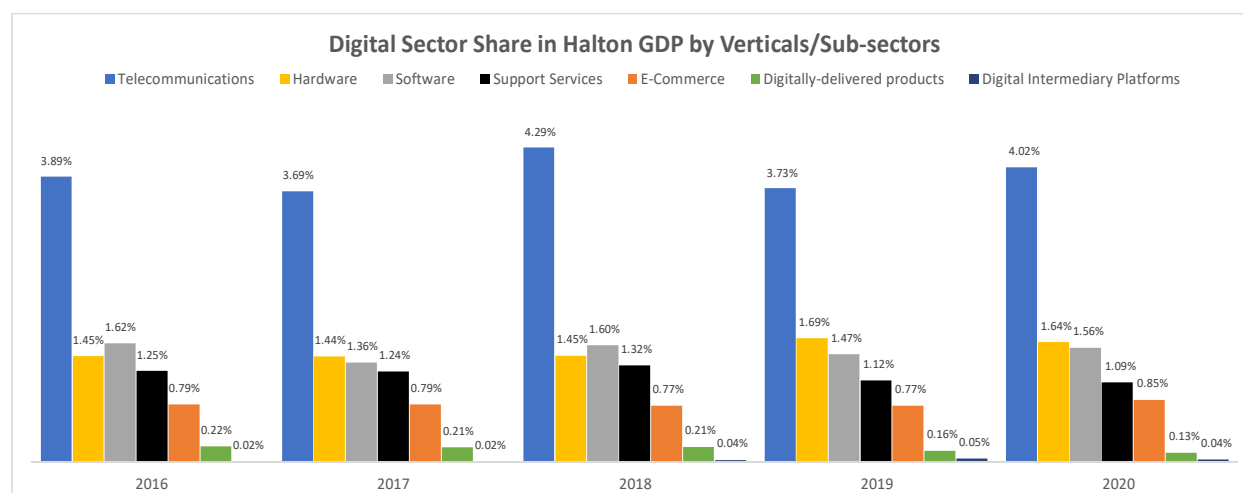


Figure 6: Digital Sector Share in Halton Employment by Verticals/Sub-sectors

Source: Nordicity's calculations based on Halton Employment Survey, Statistics Canada Data & Digital Supply-Use Tables

A detailed account of Digital Employment impact by verticals for the four municipalities are presented in Appendix C.

It is worth noting that while Telecommunication is the key enabler of digital infrastructure the role of sub-

sectors such as **Software, E-Commerce, Support Services, Digitally Delivered Products, and Digital Intermediary Platforms**, will be instrumental role in future economic growth given. As demonstrated in the following section these sectors produce higher value-added products and services (GDP per worker) and create highly paid jobs.

3.3 Productivity Impact Analysis

Productivity estimates have been long recognized as an important contributor to income growth and economic development. There has been an accentuated focus to explore the relationship between economic growth and factor productivity of different sectors of the economy.

Factor productivity serves as an indicator of the overall economic performance of the sector and provides useful insights for policymaking and investment decisions.

This study provides estimates for labor productivity as a key measure of the economic performance of the Halton's digital sector. Labour productivity is defined as output per labor input²⁹. A review of the current productivity levels across Halton's digital economy is instrumental in understanding the extent of 5G's impacts on the sales enablement and economic growth in future. As GDP and output are used interchangeably in economic literature, this study produced productivity estimates by calculating GDP generated per worker for the Digital sector³⁰.

As an expected outcome of digitization, productivity gains were realized in each sub-sector/vertical of Halton's digital economy during 2016-2020. The increase in productivity is attributed to increased automations of operations and higher value jobs in the sector. As shown in Figure 7, GDP per employee growth was highest for Digital Intermediary platforms (5.2%) followed by Digitally Delivered products (2.4%), E-Commerce (2.3%), Support-Services (2.1%), Software (1.6%), Hardware (0.85%) and finally telecommunications (0.5%). Of the four municipalities, Milton's overall digital productivity exhibited highest compound annual growth (2.25%) followed by Burlington (1.57%), Halton Hills (1.32%) and Oakville (1.19%).

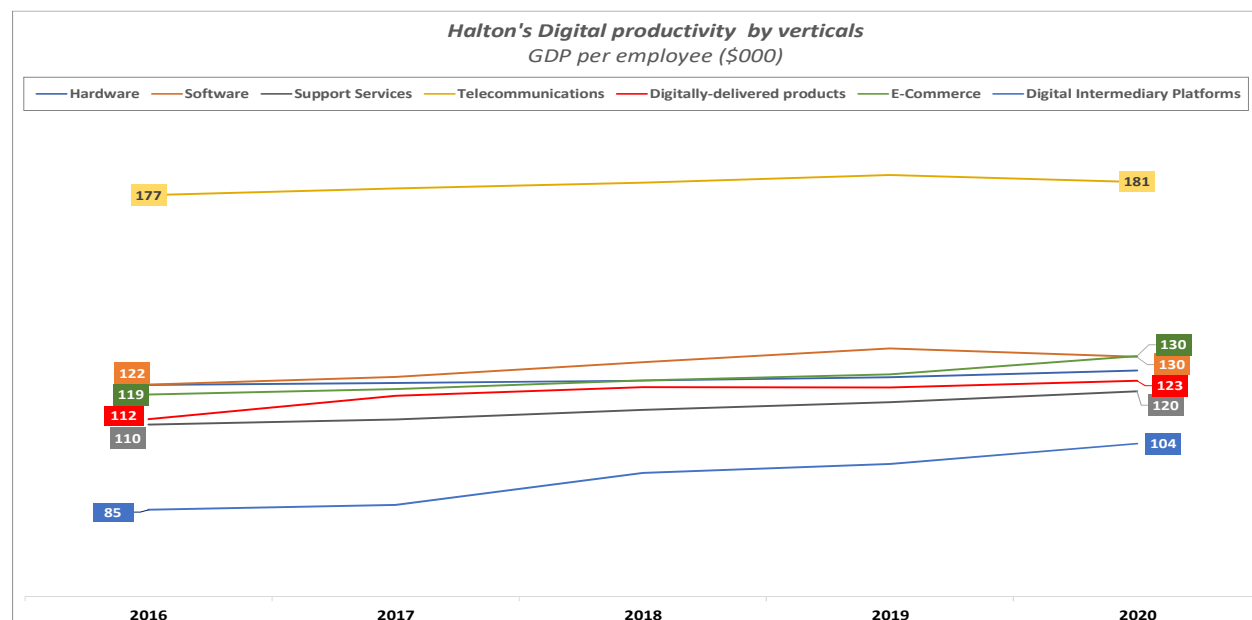


Figure 7: Halton's Digital Productivity by verticals/sub-sectors

Source: Nordicity's calculations based on Halton Employment Survey, Statistics Canada Data & Digital Supply -Use Tables

A detailed account of Digital Productivity impact by verticals for the four municipalities is presented in Appendix D.

4. Digital Infrastructure Readiness Assessment

4.1 Broadband Connectivity - Current Status

The analysis presented in Section 3 above provides the baseline and helps identify key challenges and opportunities for each municipality in terms of economic growth and productivity, i.e., how 5G enabled services and applications can help address economic challenges and create new development opportunities for long term sustainable economic growth for the Region. As noted above, the availability of next-generation high speed broadband connectivity (wireline as well as wireless) network across the Region will be critical to enable the economic benefits of 5G technologies. In other words, a fully integrated viable broadband network is critical for provision of reliable internet services for the Region's sustainable economic development. **That is, in order for 5G wireless network to be able to offer exponentially higher (1 Gig+) speeds and capacity, the wireline network must also improve proportionately³¹.**

In this context it has been recognized by the CRTC³², and many other Canadian jurisdictions³³ that a modern broadband infrastructure is a critical enabler for widespread availability of high-speed internet services and correspondingly, digitally enabled citizenry, as well as innovation and growth in all sectors of the economy.

However, in terms of the internet speed targets presently set by the CRTC, all Canadian homes and businesses should have access to the broadband Internet speeds of at least 50 Mbps for downloads and 10 Mbps for uploads with the option for unlimited monthly data transfer. According to the ISED data about 96% of the 198K households in the Region appear to have access to fixed broadband internet services with speed of 50/10 Mbps or more – see Table 3 below. That is only 6,998 (3.5%) households are under that threshold or are not served, including 2,587 in Halton Hills (12%), 2,569 in Milton (7.2%), 1,325 in Burlington (1.8%), and 517 Oakville (0.8%).

Table 3: Halton Region – Fixed (Wireline) Broadband Coverage

Wireline Broadband Coverage		Oakville		Burlington		Milton		Halton Hills		TOTAL	
Households	Total	68,634	100.0%	72,555	100.0%	35,554	100.0%	21,481	100.0%	198,224	100.0%
	50/10 or more	68,117	99.2%	71,230	98.2%	32,985	92.8%	18,894	88.0%	191,226	96.5%
	Under Served	517	0.8%	1,325	1.8%	2,569	7.2%	2,587	12.0%	6,998	3.5%
Population	Total	193,805	100.0%	183,212	100.0%	109,936	100.0%	61,233	100.0%	548,186	100.0%
	50/10 or more	192,475	99.3%	179,222	97.8%	103,164	93.8%	53,805	87.9%	528,666	96.4%
	Under Served	1,330	0.7%	3,990	2.2%	6,772	6.2%	7,428	12.1%	19,520	3.6%
Area (KM ²)	Total	139	100.0%	190	100.0%	366	100.0%	275	100.0%	970	100.0%
	50/10 or more	79	56.8%	57	30.0%	58	15.8%	50	18.2%	244	25.2%
	Under Served	60	43.2%	133	70.0%	308	84.2%	225	81.8%	726	74.8%

Source: Nordicity's calculations based on ISED's Broadband Coverage Database

It is worth noting that although ISED Broadband Coverage data show that while 96% of Region's current population – as currently distributed, has 50/10 Mbps speeds via fixed infrastructure, this coverage is only available in 25.2% (244 Sq. km) of Halton region's total area of 970 Sq. Km – see Figure 8 below.

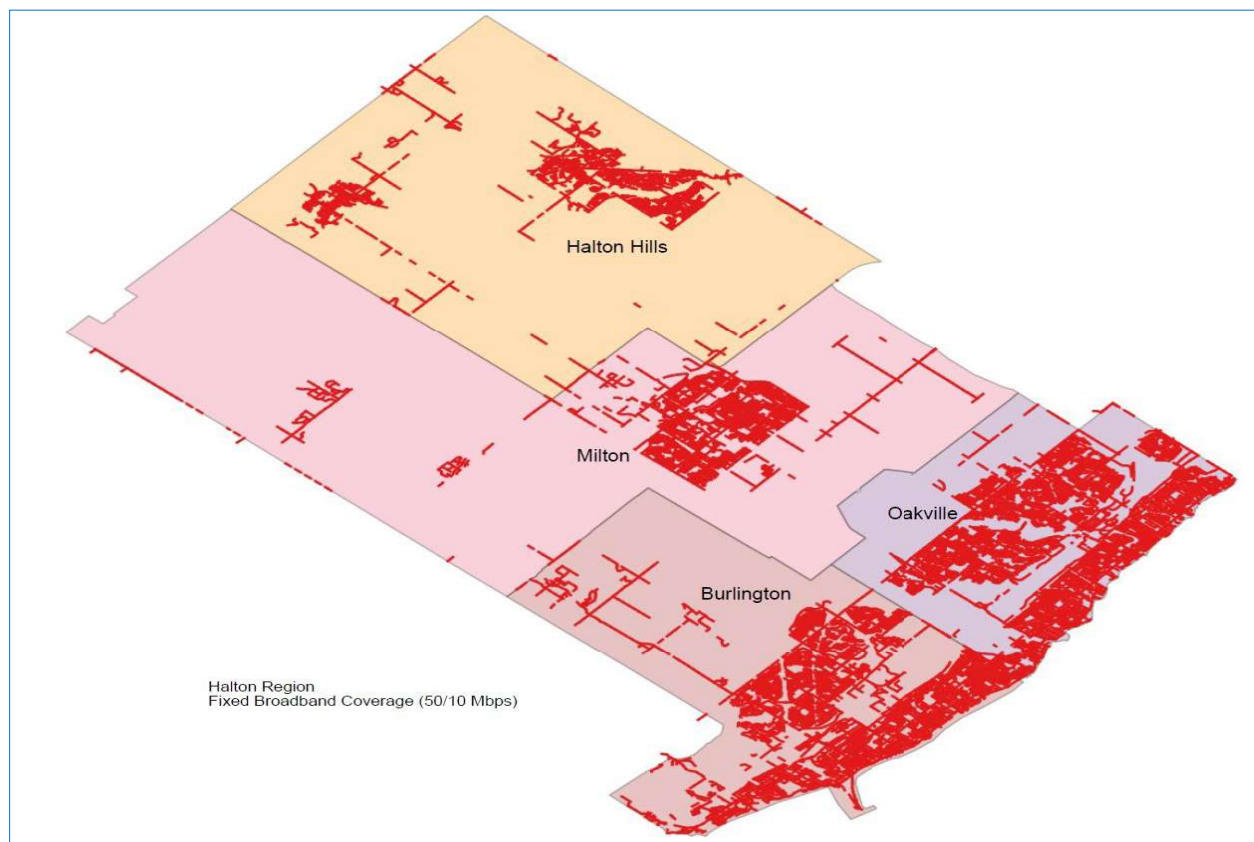


Figure 8: Halton Region - Wireline Broadband Coverage Area
Source: Nordicity's calculations based on ISED's Broadband Coverage Database

With 25% of the Region's total area covered by the fixed broadband services with the internet speed of 50/10 Mbps, we believe the benefits of 5G wireless network capability will be only partially realized, i.e., restricted to the high population density (urban) areas.

We also believe that in terms of availability of fixed (wireline) internet services, the ISED Broadband Coverage data appear to overstate the availability of broadband coverage - as explained below.

4.2 Broadband Connectivity – Gap Analysis

The internet service providers (ISPs) that provide fixed broadband services across Canada mainly use the following four broad categories of technologies:

DSL	Digital Subscriber Line (DSL) is a legacy technology, and its further deployment has been universally discontinued. Furthermore, given its constraint, this technology is not considered as a practical solution for the provision of high-speed Internet in low density rural areas - <i>the maximum speed this technology can deliver is approximatively 50 Mbps, only under specific conditions and contingent on the subscriber being located within 2km from the Central Office (CO).</i>
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DOCSIS	Data Over Cable Service Interface Specification (DOCSIS) is a broadband technology used by cable-based carriers (such as Rogers, Cogeco) to deliver high speed internet services using Hybrid Fibre Coaxial (HFC) cable network. This technology meets the current requirements set by CRTC for 50/10 Mbps as well as future midterm needs but not the ultimate goal of 1Gbps in the anticipated long-term evolution of broadband speed standards. For example, according to CRTC's 2020 Communications Monitoring Report, <i>fibre-based gigabit services have far faster upload speeds than their DOCSIS-based counterparts</i> (p.104)
FTTH/P	Fibre to the home/premise (FTTH/P) with the Gigabit-Passive-Optical-Network (GPON) architecture and to be released GPON2 (NG-PON2/10G-PON) is the most typical wireline deployment in recent years. GPON can deliver up to 1Gbps to a subscriber, without any constraints. In the future, GPON2 will be able to deliver between 2.5Gbps to 10Gbps to a subscriber. Furthermore, as noted above fibre based (GPON) services have far faster upload speeds than those delivered through DOCSIS based technology.
FWA	Fixed Wireless Access (FWA) is an interesting and efficient solution for the deployment of internet connectivity in less densely populated areas. However, similar to DSL technology, it is rarely possible to reliably obtain speeds of 50/10 Mbps with technologies using unlicensed frequencies (2.4 GHz or 5 GHz Wi-Fi). Technologies such as LTE (Long Term Evolution), licensed frequencies, and a robust design may allow them to obtain higher speeds and more stable performances. However, it is unlikely to be able to meet the current broadband demands for larger industries and MUSH institutions. Critically, FWA will not allow service providers to scale up to ISED and CRTC goal 1 Gbps service in the future.

The main ISPs currently providing internet services in the Region include:

- **Bell** provides internet services using DSL, and FTTH/P technologies. It is worth noting that according to the CRTC, FTTH/P based internet services are only available to 45% of the Canadian households which are mainly in the large urban areas such as GTA, MTA, Vancouver, Calgary (see CRTC CMR 2020, p. 51). This means, Bell's FTTH/P deployment in the Region is limited to high density (more than 100 households per sq. km) areas. Therefore, it is reasonable to assume that the remaining vast majority of the households are served through DSL and/or DOCSIS (Cable) technologies.
- **Rogers**, as mentioned above delivers high speed internet services, using DOCSIS - Hybrid Fibre Coaxial (HFC) cable network, to mainly high-density household areas.
- **Cogeco** also as mentioned above delivers high speed internet services, using DOCSIS - Hybrid Fibre Coaxial (HFC) cable network, to mainly high-density household areas.
- **Standard Broadband**, provides internet services using FTTH/P technology but only in Ballinafad (Halton Hills), and Moffat and Brookville (Milton)
- **Xplornet** provides internet services mainly using FWA (Fixed Wireless Access) technology.

Although the ISED data indicates that about 96% of the 198K households in the Region to have access to fixed broadband internet services with speed of 50/10 Mbps or more, we believe it is critical to further examine state of broadband coverage in the Region. In our view, 96% coverage is based internet speeds offered by the service providers. This means if a service provider offers a 50 Mbps download speed it is based on a "best effort" service model, which usually refers to an "up to" or "average" speed promise. In other words, the actual internet speed delivered to the subscribers can be significantly lower than the promised speed. In this sense, it is important to examine the reliability of speed offered by the service providers, which depends on different factors such as:

- **Broadband Technology:** The broadband network technology (DSL, DOCSIS, FTTH/P, FWA etc.) used to deliver internet services can significantly influence delivery of internet speed. For example, on a DSL/FWA platform the internet speed decreases as the subscribers are further away from the service hub (central office/cell site). The internet speed can decrease significantly on DSL, and FWA networks, if the subscribers located beyond a certain distance. For example, it becomes very challenging for service providers to deliver more than 25Mbps speed on a DSL network to a customer located beyond 1 Km from their service hub.
- **Oversubscription Rate:** Oversubscription rate refers to the ratio used by the telecom operators to dimension their broadband service/network. It refers to the assumption that not all subscribers will demand peak service e.g., 50 Mbps at the same time. Typically, wireline network operators assume only 10% to 20% of the subscribers will demand peak service at the same time. Broadband service speed can significantly decrease if the actual ratio of those subscribers exceeds the oversubscription rate assumed by the telecom operator. In such situation, it is difficult to deliver reliable internet service if the broadband network lacks flexibility and scalability for upgrade e.g., DSL, DOCSIS, and FWA.
- **Quality of Service (QoS):** The quality of service refers to the ability of the broadband network to maintain a performance level (e.g., internet speed) required for a reliable delivery of different service applications such as IP-TV, Videoconferencing, telemedicine etc. For example, a constant internet speed of 15-25 Mbps is required for uninterrupted delivery of IP-TV service, depending on whether it is a Standard Definition (SD), High Definition (HD), or 4K etc., video service. For example, 1-2 HD TVs on a DSL platform can significantly degrade broadband speed offered by ISPs when used at the same. FTTH/P (wireline), and 5G (wireless) technologies would only meet QoS level required for critical applications in the emerging digital world.

In this context we further examined the ISED data for the broadband coverage in the Region. Using ISED, Census Canada geomatics data we first categorized the Region's households according to five density levels as below.

Density Level	Definition
Very Low Density	<=Less than 10 Households per KM ²
Low Density	> 10 to <=25 Households per KM ²
Medium Density	> 25 to <=50 Households per KM ²
High Medium Density	> 50 to <=100 Households per KM ²
High Density	> 100 Households per KM ²

Then we assigned coverage (internet speed) to each density level, according to the characteristics of the available network technologies described above. For example, according to CRTC FTTH/P based internet services are mainly deployed in large urban areas. On this basis, we assumed high-density areas in the Region would likely have FTTH/P, and therefore meet or exceed the CRTC speed target of 50/10 Mbps. For the other four density levels we assigned internet coverage speeds based on our industry experience and knowledge on similar project, some involving field surveys of broadband infrastructure³⁴.

On this basis we estimate that less than one third (30.6%) of the households in the Region may have access to reliable internet services potentially meeting the CRTC target speed of 50/10 Mbps or more - see Table 4 below.

The five ISPs listed above mainly deliver internet services to households in the Region using FTTH/P, DSL and DOCSIS-HFC technologies. As explained above, only FTTP/P (using GPON technology) can deliver up to 1Gbps to a subscriber, without any constraints. That is, only 21,613 (10.9%) of the households in the Region may have access to a future proof fixed broadband internet services including 1,118 in Halton Hills (5.2%), 3,609 in Milton (10.2%), 4,832 in Burlington (6.7%), and 12,054 Oakville (17.6%).

Table 4: Halton Region – Fixed (Wireline) Broadband Coverage by Internet Speed

Broadband Coverage by Technology	Oakville		Burlington		Milton		Halton Hills		TOTAL	
FTTH/P	12,054	17.6%	4,832	6.7%	3,609	10.2%	1,118	5.2%	21,613	10.9%
50/10Mbps	18,845	27.5%	5,500	7.6%	9,236	26.0%	5,494	25.6%	39,075	19.7%
Below 50/10Mbps	27,518	40.1%	10,412	14.4%	16,483	46.4%	8,731	40.6%	63,144	31.9%
25/5Mbps	10,027	14.6%	46,162	63.6%	5,979	16.8%	6,032	28.1%	68,200	34.4%
Below 25/5Mbps	190	0.3%	5,649	7.8%	247	0.7%	106	0.5%	6,192	3.1%
Total	68,634	100.0%	72,555	100.0%	35,554	100.0%	21,481	100.0%	198,224	100.0%

Source: Nordicity's estimates based as based on the analysis of household density per square kilometer using ISED Census Canada, and MPAC data.

Note: Given the methodology applied, the broadband coverage for the new sub-divisions developed in 2015 or later (which are likely to be served with FTTH/P) may not have been properly represented in our above assessment.

Based on our estimates almost 90% of the households currently do not have access to internet services with speeds of 50/10 Mbps or more, using future proof (FTTH/P) fixed broadband.

We believe the impacts of the weakness in broadband coverage will grow significantly in the future.

According to CRTC's CMR report (2020), Canadians continue to use more data, subscribe to faster, larger packages and allocate more money to Internet access services (p. 51). That is, with the exponential growth in broadband usage, it is likely that in the near future, the demand for internet speeds will be significantly higher than 50/10 Mbps, reaching up to Gigabit³⁵ service in the Region.

We believe also that based on current trends of broadband usage it is reasonable to believe that demand for internet speeds will reach up to 1 Gbps in the medium term. We also believe that businesses, industry, and MUSH (Municipalities, Universities, Schools, and Hospitals) institutions are likely to require 1 Gbps or higher speed internet services. Similarly, residential, including self-employed and work-from-home, demand is also expected to increase exponentially, ranging between 100 Mbps and 1 Gbps.

That is, the availability of reliable and scalable high-speed internet services is not only essential to meet the emerging demand for high-speed internet connectivity but also for the enablement of digital infrastructure in the Region to assure its long term sustainable economic development. In other words, the presence of a modern digital infrastructure is becoming increasingly critical to achieve the objectives of inclusive prosperity, tackling social and governance challenges and enriching citizens' quality of life.

The sectors that play an instrumental role in achieving this objective include *businesses, agriculture, education, health, and public safety*. Correspondingly, the *availability of broadband networks can have a significant impact on the performance of these sectors, as illustrated below*.

Business	<ul style="list-style-type: none"> – Broadband is critical for businesses to improve their productivity and efficiency to remain competitive. – Adequate broadband connectivity is essential to attract new business and retain existing business
Agriculture	<ul style="list-style-type: none"> – Transition to smart agriculture and smart farming is critical to remain competitive. – This requires broadband infrastructure to leverage advanced technologies in farming such as big data, cloud computing, internet of things (IoT) for tracking, monitoring, automating, and optimizing operations.
Education	<ul style="list-style-type: none"> – Access to high-speed internet and online applications are becoming increasingly important for high quality education. – Modern educational technologies including application such as augmented reality (AR), virtual reality (VR) depend on high-quality broadband services, at school and at home
Workforce	<ul style="list-style-type: none"> – Reliable access to online applications are becoming increasingly important to improve workforce efficiency and competitiveness
Health	<ul style="list-style-type: none"> – Efficient functioning of health care services - <i>eHealth</i>, <i>telemedicine</i> is becoming increasingly dependent on high-quality broadband capability e.g., connecting with patients virtually for remote consultation, monitoring and some medical procedures.
Public Safety	<ul style="list-style-type: none"> – High quality broadband capability is critical in a modern community to ensure effective response to emergencies, and public safety incidents, without any delays.
Government Services	<ul style="list-style-type: none"> – Reliable broadband enables more effective interaction with citizens and more efficient delivery of public services.

5. Next Generation Broadband Connectivity Implementation Options Analysis

Based on the assessment presented in the previous section, we believe significant gap exists in most parts of the Region in terms of broadband capability in meeting the emerging demands for reliable and scalable highspeed services in a digital (1Gig+) economy. That is, in most cases 50/10 Mbps speed is delivered through copper-based Digital Subscriber Line (DSL) or cable-based Data Over Cable Service Interface Specification (DOCSIS) wireline networks. As stated above, DSL is a legacy technology, and its further deployment has been universally discontinued. DOCSIS technology (used by Rogers, and COGECO) delivers high speed internet services using Hybrid Fibre Coaxial (HFC) cable network. Although this technology meets the current requirements set by CRTC for 50/10 Mbps and future midterm needs, it lacks the scalability to deliver reliable speed of 1 Gbps plus in the anticipated long-term evolution of broadband speed standards.

As such, the technological limitation of existing broadband networks could significantly inhibit the full realization of the benefits of 5G enabled services in the Region. To address this gap, we present the following three options for consideration.

- Status Quo Model
- Status Quo with an Accelerated FTTH/P Deployment
- Unified FTTH/P Deployment³⁶

5.1 Status Quo Model

The status quo model assumes the existing ISPs and potentially new entrants will continue to upgrade their existing broadband networks to meet the growing demand for internet services with higher speed requirements. The main limitation of this option is that it will primarily depend on the level of the interest of the ISPs to upgrade their broadband network capabilities. Typically, ISPs implement network upgrades on an incremental basis, depending on their ability to retain subscribers in the face of competitors' comparative capabilities and the opportunity to gain market share and higher subscriber revenues. That is, ISPs will only consider FTTH/P deployment where it is feasible from their financial perspective e.g., higher density areas ensuring return on investments expected by their shareholders, and/or where they anticipate a significant gain or loss in their market share. Under this status quo

approach, it will likely take several years (at least 7 to 15 years) for ISPs to meet the demand for high-speed internet connectivity on equitable basis for all the residents across the Region. This option will also restrict the full realization of economic benefits of 5G technologies across different sectors of the Region's economy – *5G rollout will be restricted to the deployment of small cells only to enable operators to support more subscribers with faster speed without the need to acquire additional spectrum.* Therefore, we believe the wireless network operators (MNOs) in the Region such as Bell, and Rogers will likely focus on 5G (small cell) deployments to enhance their wireless network capacity mainly in high density areas and along transportation corridors to meet the needs of their mobile broadband subscribers who are demanding faster speed and more data.

5.2 Status Quo with an Accelerated FTTH/P Deployment

The objective of this option is to accelerate FTTH/P deployment where required, to ensure all of residents have access to the internet services with similar speeds across the Region. For this purpose, we propose that the Region, in collaboration with the telecom network operators, advocates for funding through public sources to subsidize the higher cost of FTTH/P deployment in low density areas.

As in the case of Status Quo Model this option also has similar limitations. For example, it will primarily depend on the level of the interest of the ISPs to upgrade their broadband network capabilities in the lower density areas. However, depending on the availability of provincial and federal funding programs and their eligibility criteria, this option will accelerate the FTTH/P deployment in selected areas of the Region, particularly lower density, and rural areas.

It is worth noting that FTTH deployment cost per household in very low-density rural areas of the Region - representing about 6,192 households, is almost 3 times higher than the deployment cost in medium density areas, as shown in Figure 9 below.

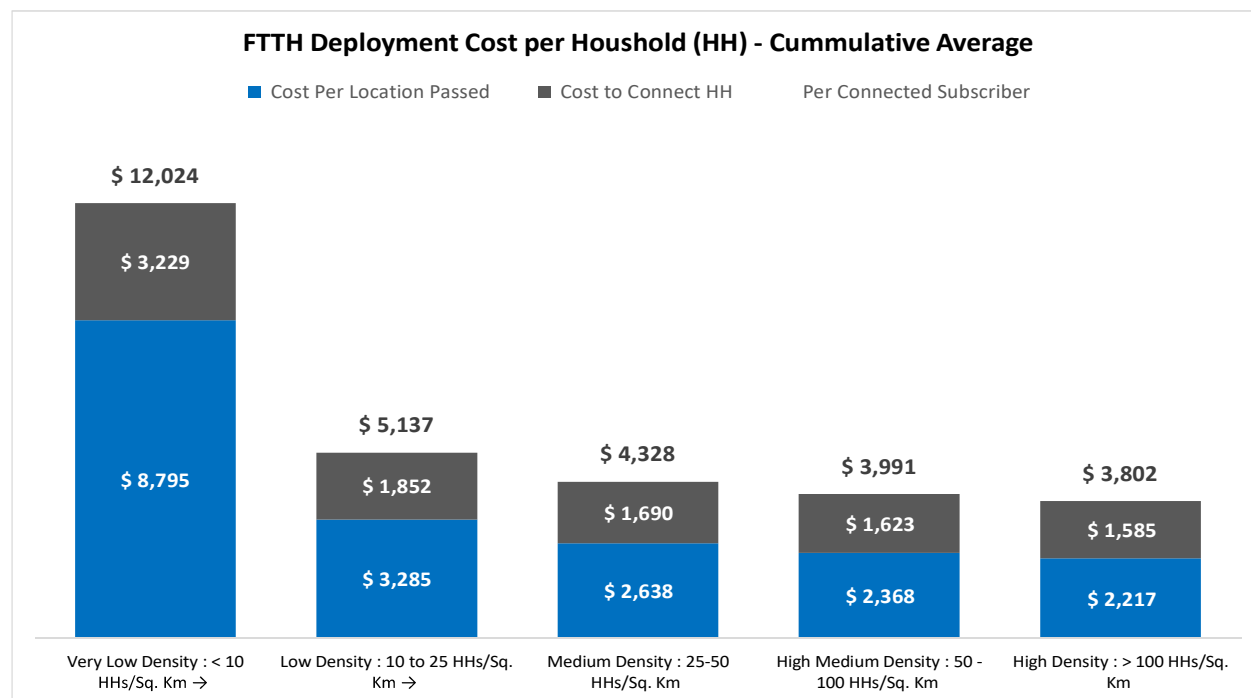


Figure 9: Halton Region – FTTH Deployment Cost per Household

Source: Estimated amounts based on Nordicity's Broadband Investment Model using ISED's Broadband Coverage, Census Canada, GIS data

This option lacks the integrated approach required to fully realize the economic benefits of 5G technologies across different sectors of the Region's economy. Furthermore, as stated above, the wireless network operators (MNOs) such as Bell, Rogers, will likely limit their 5G technology rollout to small cell deployments only to increase their network capacity to meet the growing demand for higher speeds and data from their wireless broadband subscribers, mainly in high density areas and along transportation corridors.

5.3 Unified FTTH/P Deployment

It is worth noting that an initial investment of \$54.5m is estimated to be required to serve 6,192 low-density (which are mostly rural areas) with future proof FTTH broadband capacity – costing \$8,895 per household or \$12,024 per connect household (subscriber). However, in the scenario that a unified FTTH network is deployed across the Region covering 198K households, while total initial investment will increase to \$439m, the average FTTH cost per household will be significantly reduced: from \$12,024 to \$3,802, as shown in Figure 13 above. This means, a significant amount of subsidy per household will be required if FTTH deployment is targeted only to address the connectivity gap for the 6,192 households in low-density/rural areas only.

Table 5: Halton Region – FTTH Deployment Investment Analysis

	Very Low Density: < 10 HHs/Sq. Km	Low Density: 10 to 25 HHs/Sq. Km	Medium Density: 25-50 HHs/Sq. Km	High Medium Density: 50 - 100 HHs/Sq. Km	High Density: > 100 HHs/Sq. Km	Total Region
Estimated households/locations passed	6,192	68,200	63,144	39,075	21,613	198,224
Penetration rate (connected ratio assumed)	80.00%	80.00%	80.00%	80.00%	80.00%	80.00%
Estimated connected households/locations	4,954	54,560	50,515	31,260	17,290	158,579
Average monthly subscription rate	130.62	130.62	130.62	130.62	130.62	130.62
Net present value (NPV)	(\$49,491,287)	(\$47,065,254)	\$26,249,364	\$37,909,743	\$32,397,434	-
Payback (years)	Over 25 Years	19	13	10	8	15
Breakeven (NPV=0) monthly rate	\$189.69	135.72	127.54	123.45	119.54	130.62
Total initial capex	\$54,460,095	\$189,914,854	\$118,393,576	\$55,433,958	\$21,259,438	\$439,461,922
Rate of Return (assumed borrowing cost)	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
Study (useful) life	25 Years	25 Years	25 Years	25 Years	25 Years	25 Years
Cost per household/location passed	\$8,795	\$2,785	\$1,875	\$1,419	\$984	\$2,217
Cost per connected household/location	\$10,993	\$3,481	\$2,344	\$1,773	\$1,230	\$2,771
Activation cost per household/location	\$1,031	\$1,031	\$1,031	\$1,031	\$1,031	\$1,031
Total cost per connected household/location	\$12,024	\$4,512	\$3,374	\$2,804	\$2,260	\$3,802

The analysis shown in Table 5 above indicates that it might be more cost efficient to implement a uniform future proof broadband infrastructure across the region, which will permanently address the internet connectivity challenges in the Region. Furthermore, this option will help eliminate the digital divide and enable equitable realization of the socio-economic benefits of 5G technologies by all the residents in the Region.

This option has been considered by some jurisdictions in Ontario outside GTA such as Northumberland County, Township of Leeds and Thousand Islands, and the City of Quite West. For example, Northumberland considered a utility approach to deploy a unified broadband network across the County

using FTTH/P technology, financed through a combination of public funding and P3 (Public Private Partnership) investment.

Some jurisdictions in Ontario have considered creation of municipally owned dark fibre network – YorkNet. YorkNet, incorporated in 2017 as YTN Telecom Network Inc. is a wholly owned Regional corporation that operates and manages the expansion of the fiber-optic network in York Region. YorkNet currently operates about 400Km of dark fibre along the regional roads, with the objectives including.

- To improve delivery of Region’s services (traffic management, transit, infrastructure monitoring and policing).
- To provide a reliable and cost-effective connectivity to municipalities, schools, hospitals, and other public-sector organizations in the Region
- To provide open access to ISPs and business to deliver affordable internet services, particularly in rural areas of the Region.

It seems the main focus of YorkNet is to promote access to and affordability of broadband services – especially in rural areas where the major ISPs have historically delayed the roll out of high speed broadband networks (fixed and mobile) due to lower profitability. We believe YorkNet provides an effective platform for the Region to ensure a unified a broadband capability across the Region. However, it will depend on its ability to collaborate with the ISP in prioritizing their FTTH/P, and 5G network roll outs, and attracting public funding.

The Durham Region has a mixed approach in which it has mostly favoured private investors. For example, it promoted creation of Durham Broadband, which is owned by a group of private local firms, providing dark fibre network access services, like YorkNet, to institutions and businesses across the region.

However, in May 2021 the Regional Council, recognizing that the citizens in many rural areas did not have access to affordable broadband due to the higher costs of service and issues with funding programs, have indicated the desire to play a direct role by deploying a fibre optic backbone network along the regional roads connecting hamlets and rural communities. The purpose of building the fibre optic backbone network is to make it available for lease by the private sector in order to reduce the time and cost required for ISPs to bring service to rural communities.

We believe both York and Durham dark fibre network models may provide an effective platform to ensure a unified broadband infrastructure required for 5G capabilities across the regions. However, it will depend on their ability to collaborate with the ISPs in attracting public funding/investments, and prioritizing their FTTH/P, and 5G network roll outs for the regions.

5.4 Leveraging Region’s Pole Infrastructure for 5G Deployment

As part of their 5G roll out plans, the mobile network operations such as Rogers, Bell, and others will need to deploy small cell technology. These small cells are essential for 5G network capability as they allow the operators to support more users with faster speeds without the need to acquire additional spectrum. Small cells are mini cellular towers (antennas), which are roughly the size of a standard laptops, which can be installed on top of the buildings, traffic signals, streetlights, and utility poles. In this context the Region can leverage its existing pole infrastructure (mainly street-light and utility poles) to facilitate faster deployment of 5G network capability. The breakdown of 82,327 poles in the Region is provided in Table 6 below.

Table 6: Halton Region – Vertical Assets (Poles) Inventory

Municipality	Number of Poles by Ownership		
	Hydro (Utility)	Municipal (Street Light)	Combined
Burlington	14,471	11,184	25,655
Halton Hills	9,398	3,569	12,967
Milton	9,799	9,786	19,585
Oakville	8,682	10,293	18,975
Region	-	5,145	5,145
Halton Region	42,350	39,977	82,327
Note: Traffic signal poles, due to operational and technical reasons cannot be used for 5G equipment installation, therefore excluded			

The emergent need of wireless operators (mainly Bell and Rogers) for deployment of their 5G small cells presents an opportunity for the Region to partner with the LDCs to effectively utilize their vertical assets (street-light, and utility pole assets as shown Table 6) for a faster rollout of 5G networks. In this context the Halton Utility Group (HUG) has proposed to aggregate Halton's poles for their optimal utilization for 5G small cells deployments.

In our view the HUG proposal presents certain benefits in terms of optimal use of the Region's existing pole infrastructure including:

- Pooling of assets will allow the Region to negotiate more favourable rates, given the critical mass, as compared to municipalities negotiating rates individually.
- The HUG LDCs may effectively manage operations of 5G attachments based on HUG's existing day-to-day working relationship with the network operators. Although, some municipalities may have an existing relationship with the telecom operators for use of their pole infrastructure, they may require a framework to manage the use of their poles for 5G small cells operations. This would mean incremental costs for capacity-building and loss of synergies that may occur under combined operations as proposed by the HUG.

We also believe there are certain risks associated with HUG proposal, which need to be carefully examined and mitigated, as explained below.

- **Utilization Factor Risk:** As mentioned above, the main driver of small cells deployments by the wireless operators is to increase their network capacity to support their mobile broadband users demanding faster speed and more data, which is mainly in high density areas. That is, small cells split the macro coverage areas into smaller coverage areas, which allows the wireless network operators to support their subscribers without the need to acquire additional spectrum. For this purpose, depending on the network capacity requirements, about 4 to 10 small cells are typically needed for every macro cell site. This may mean **small cells deployment in the Region could range from 3,300 to 8,300 representing a maximum pole utilization ratio of 4% to 10% in the next 3-5 years.** This utilization may increase significantly in a fully developed 5G ecosystem, encompassing a massive IoT infrastructure. However, such a scenario would occur in the long run, which will also depend on the overall broadband network capability and roll out of 5G use cases across different economic sectors of the Region. In the scenario with less 10% utilization of total poles for 5G small cells may present revenues risk for the HUG to fully recovering its operating expenses.

- **Regulatory Risk:**

HUG proposal is based on assumption occupancy fees for 5G small cells will be commercially negotiated. In the recent years, mobile operators in Ontario, agreed to pay LDCs commercially negotiated rates for the installation of wireless on utility poles but only for a relatively small number of their 4G (LTE) cell sites.

It is worth noting that wireless attachments to utility poles typically have not been subject to any regulations for rate determination, and therefore have been commercially negotiated. That is, there has been no complaints regarding the wireless attachment rates. This is mainly due to the limited number of wireless attachments under the 3G/4G environment. However, with the emergence of 5G technologies the telecom operators are likely to deploy a far greater number of wireless equipment (small cells) to increase their overall network capacity. The standards for wireless cell sites are federally regulated in Canada by the ISED – Ministry of Innovation, Science and Economic Development. In recent years both the Federal and Ontario governments have introduced programs and initiatives to accelerate the deployment of broadband networks particularly in unserved and underserved areas. In October 2020 the CRTC initiated consultation proceeding: CRTC 2020-366³⁷, stating:

“The Commission is concerned, based on submissions received in the proceeding initiated by Telecom Notice of Consultation 2019-406, that untimely and costly access to poles owned by Canadian carriers has negative impacts on the deployment of efficient broadband-capable networks, particularly in areas of Canada with limited or no access to such networks. Therefore, the Commission is initiating a proceeding to identify and implement regulatory measures that will make access to such poles more efficient.”

Also, earlier this year the Government of Ontario introduced Bill257: “Building Broadband Faster Act, 2021.”, which received royal assent on April 12 2021³⁸, stating its purpose as:

“The purpose of the Act is to expedite the delivery of broadband projects of provincial significance by removing barriers and streamlining processes related to infrastructure that may result in delays to the timely completion of these broadband projects, while enhancing co-ordination and engagement with and being fair to public and private sector stakeholders”

The Act also amended Ontario Energy Board Act, enabling the Board to facilitate the efficient development of, use of and access to electricity infrastructure to which this Part applies.

In this context, there is a great risk that the Canadian regulators (CRTC and/or OEB) may, following the precedence of the US regulator - FCC (Federal Communications Commission), take steps to bring the wireless small cells attachments to the poles under regulated framework for rate setting. For example, the FCC in its September 27, 2018, declaratory ruling (FCC 18-33) concluded that the state and local governments are limited to charge fees that are no greater than a reasonable approximation of objectively reasonable costs for processing applications and for managing deployments in the rights-of-way.

Under such a scenario the HUG may be required to charge regulated fees, which could be significantly lower than the commercially negotiated rates.

Detailed assessment, including financial analysis of this opportunity will be provided in the commercial reports to be submitted in January 2022 for each Halton municipality. The commercial reports will also outline framework between the local municipalities and the LDCs for coordination of the operations and management of 5G small cell attachments to municipal and LDC poles.

6. Modeling 5G Benefits

We have modelled 5G use cases for different sectors of the economy as applicable to the Halton Region and its four municipalities, in order to estimate the socio-economic benefits of 5G technologies.³⁹ Based on a detailed economic modeling, we have estimated the potential contributions of 5G enabled services and applications across different sectors of the Halton economy as explained in the following sub-sections.

5G benefits include the following:

- (a) direct benefits, i.e., increased revenues (new demand) to the 5G service providers, as well as network infrastructure providers.
- (b) socio-economic benefits across different sectors of the economy in terms of increased revenues (new demand), new investments and productivity gains.

6.1 5G Direct Benefits – Telecom Services and Broadband Infrastructure Providers

The telecom services and broadband infrastructure providers are expected to generate incremental revenues with the adoption (subscriptions) of 5G services across different sectors of the economy, including consumers, businesses, government organizations. The three primary sources of 5G-related benefits include:

- **IoT Connectivity:** Incremental connectivity revenues enabled through (IoT) application across all sectors of the economy comprising:
 - *Connected Business*
 - *Connected Car*
 - *Connected Cities*
 - *Connected Consumer Electronics*
 - *Connected Energy*
 - *Connected Health*
 - *Connected Home*
 - *Connected Industry*
- **5G-enabled Applications:** Incremental revenues generated by new applications that telecom service providers will be able to offer on their 5G network, viz. **Augmented Reality** and **Ultra-HD Video**.
- **5G Migrated Subscribers:** Incremental data usage results from subscribers migrating from 4G to 5G networks and the adoption of 5G enabled services.

According to our Canadian economy survey, 5G-enabled telecom services revenues under the above three categories will increase exponentially at an annual growth rate of approximately 34%, reaching an estimated \$84b over the next 10 years. In order to realize these revenues opportunities, we estimate that the telecom services and network infrastructure providers will need to invest approximately ~\$11b in the next 3-5 years to deploy 5G wireless networks across Canada. We believe similar economic benefits will occur in the Region with 5G roll outs, as detailed in Section 7 below.

6.2 Long term Socio-economic benefits of 5G technologies

As noted above, 5G will enable applications - currently not possible with 4G technology, by providing the following capabilities:

- Broadband is available everywhere at speeds up to 10 Gbps.
- Smart vehicles enabled with a reliable and secure connection to the cloud.

- Super-high-definition media distribution.
- Critical control of remote devices enabled by ultra-low latency and reliability; and
- Better interaction of humans and the internet of things with support for such capabilities as tactile internet.

As illustrated in Figure 10 below, 5G will enable disruptive technologies for all economic sectors through enhanced capabilities that are not available on a wide scale in the existing 4G networks:

- **eMBB**: Enhanced Mobile Broadband,
- **mMTC**: Massive machine-type communications or capacity for massive machine to machine connectivity; and,
- **uRLLC**: Ultra-reliable low latency communications providing reliability to perform critical operations wirelessly.

Figure 14 below provides key examples of **uRLLC** applications, such as conducting robotic surgeries using augmented reality (AR) and virtual reality (VR) in health sector and enabling additive manufacturing using 3D printing in fully connected factories in the manufacturing sector.

	Enhanced Mobile Broadband									
	Massive Machine Connections					Mission Critical				
	Capacity									Reliability
	Bandwidth usage	Connection density	Throughput	Device power	Latency					
Mining			Smart Mining - satellite operations using connected equipment							
Utilities			Smart Grid and Distributed Generation							
Manufacturing				Industry 4.0 - Additive Manufacturing						
Transportation		Autonomous Driving, fleet platooning, and intelligent system to avoid accidents								
Real Estate		VR 360 Tour								
Finance and Insurance		businesses connected to end-users - mobile banking, block chain (public ledger)								
Information and Cultural Industries							Headsets using AR/VR			
Health Care						VR/AR technology for robotic surgeries				
Construction			Tele-operated driving							
Agriculture						precision farming - satellite farming and drone				
Wholesale		AGV (automated guided vehicle)								
Retail		Smart IoT								

Figure 10: 5G-enabled applications

As shown in Figure 10 above, the three key applications of 5G network technologies – **eMBB**, **mMTC**, and **uRLLC**, are based on capacity and reliability factors (parameters) which are not available in the existing wireless networks as summarized below:

Capacity	– Very high bandwidth density
	– Very high connection density
Speed	– Very high throughput
Reliability	– Very low device power usage
	– Very low latency

That is 5G will be the key enabler for development of several disruptive technologies – which are needed for industry, the public sector, and the services sectors. Some of the examples of 5G Use Cases for Transport, Health, Energy & Utilities, and Manufacturing sectors are listed below.

Transport

- Autonomous Vehicles / Automated Driving
- Enhanced Road Safety and Traffic Management Services with applications such as Vehicle-to-Vehicle and Vehicle-to-Road Infrastructure (e.g., traffic lights etc.) Communication.
- Digital Transport and Logistics Systems
- Intelligent Navigation

Health

- Remote Surgery, Rehabilitation, Assisted Living Services, and Emergency Response Care Services
- Realtime Remote Health Care, Wellness Monitoring and Telemedicine
- Artificial Intelligence Based Diagnosis (Increased Accuracy)

Energy & Utilities

- Smart Grid – ability to accurately predict energy loads and system maintenance requirements
- Remote monitoring of energy sites – solar/wind farm (e.g., wind conditions), power generation stations.

Manufacturing

- Additive Manufacturing or 3D Printing
- Automated Guided Vehicles (Robots, Drones, Vehicles) including Collaborative Robotics
- Augmented Reality (Remote) Maintenance, Troubleshooting, and Production Operations Management.
- Analytics to predict breakdown and downtime
- Seamless intra-/inter-enterprise communication capability to monitor facilities and installation distributed in larger area, and enable efficient coordination of cross value chain activities and optimization of process flows

Figure 11, below illustrates the relative impact of the five 5G factors in the evolution of the future **Digital Economy**, from 3G to 4G to 4G+ leading to 5G networks. It demonstrates the rapidly increasing positive impacts of low latency in generating growth in the digital economy relative to connection and bandwidth density, throughput, and device power.

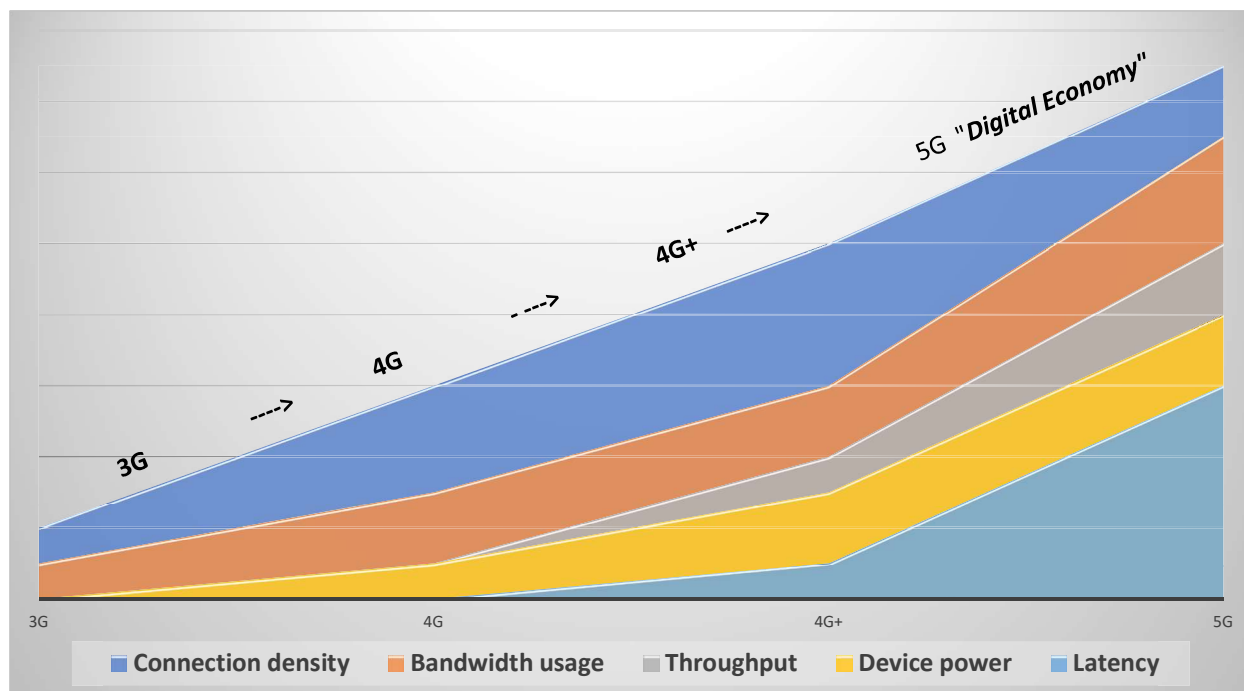


Figure 11: Impact of 5G capabilities on the evolution of the future “*Digital Economy*”

The deployment of 5G networks will have much broader impacts in the economy than previous 1G to 4G generations as ICT development and the Gigabit economy are both inextricably linked to the availability of 5G networks. Thus, 5G will be the integrating force in a single infrastructure for network connectivity, information processing, and data storage - i.e., the “nervous system” of a digital economy. **“The digital economy is now firmly established as a core driver of global growth.”**⁴⁰ The next generation of digital transformation across all economic sectors will be instrumental in the evolution of the true digital economy.

5G networks will set the stage for the introduction of new technologies and applications across all sectors of the economy as illustrated in use cases provided in the next subsection.

The deployment of 5G networks will be a prerequisite to attract new investments in next-generation technologies in all sectors of the economy. By matching 5G networks and 5G technologies, economies will be able to generate new demand, efficiency, and technological enablement, resulting in long-term sustainable economic growth. We believe the **key benefit of 5G technologies will be productivity gains measured in terms of GDP growth**. However, according to our assessment, as described in Section 6.3 below, each sector's productivity gains will vary.

6.3 Modelling 5G Use Cases

Adoption and use of 5G technologies will revolutionize and transform existing economic sectors and industries. The 5G capabilities (**eMBB-Enhanced Mobile Bandwidth**, **mMTC-Massive Machine Type Communications**, and **uRLLC-Ultra-reliable and Low-latency Communications**) will enable applications (5G Drivers) such as **Artificial Intelligence (AI)**, **Cloud Computing** and **Internet of Things (IoT) etc.**, as shown in Table 7 below.

Table 7: Revenue Impact of 5G Benefit Drivers

5G Benefit Driver	5G Revenue Impact*
5G Enabled Telecom Services Demand	0.017%
Artificial intelligence (AI)	0.043%
Virtual, mixed, and augmented reality	0.013%
Integrated Internet of Things (IoT) systems	0.055%
Additive manufacturing	0.023%
3D printing	0.022%
Advanced robotics	0.013%
Big data analytics	0.020%
Blockchain technologies	0.003%
Cloud computing	0.364%
Internet-connected smart devices, or Internet of things (IoT)	0.185%
Software and hardware using artificial intelligence (AI)	0.381%
*Nordicity's calculations based on StatsCan data and literature review	

These applications will support a variety of use cases, as explained in Appendix G, that will drive economic resiliency in the future and increase cross-industry benefits by enabling revolutionary technical abilities. As shown in Table 7 above Cloud Computing, Internet of Things (IoT) and Artificial Intelligence will generate revenue multiplier effect to the magnitude of 0.364%, 0.185% and 0.381% respectively and hence are the major contributors to the Region's economic benefits enabled by the 5G technology. According to our estimates, 5G technologies, with its roll out starting in 2022 will generate incremental revenue of \$12.4 billion in 2022-2036. Accordingly, the estimated incremental revenue will increase from \$598 million in 2022 to \$1,126 billion by 2026 as shown in Figure 12 below.

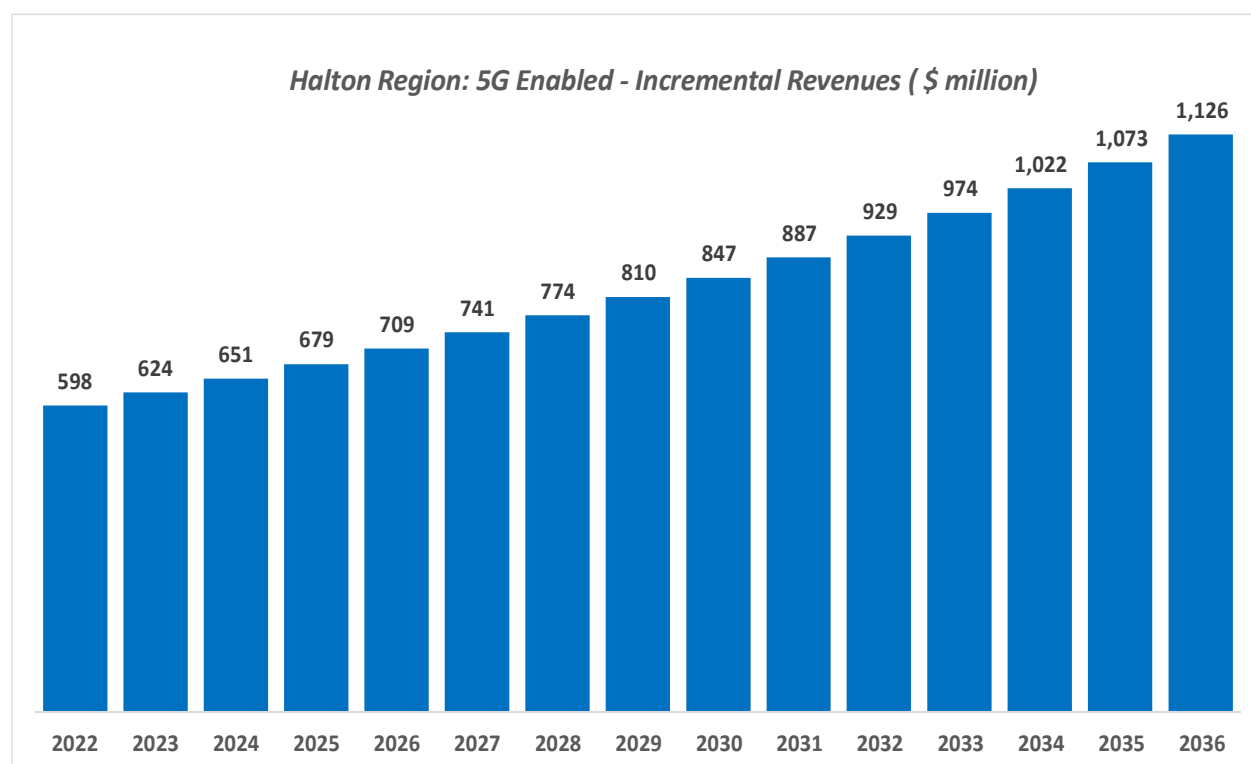


Figure 12: Projected 5G Incremental Revenue Contribution (2022-2036)

Source: Nordicity's projections based on Baseline modelling, Statistics Canada Data on emerging technology adoption rates

Over 80% of the Region's 12.4 billion revenues in 2022-2026 will be enabled by the three key 5G applications including **Artificial Intelligence**, **Cloud Computing**, and **Inter-connected Smart Devices and IoTs**, as shown in Figure 13 below.

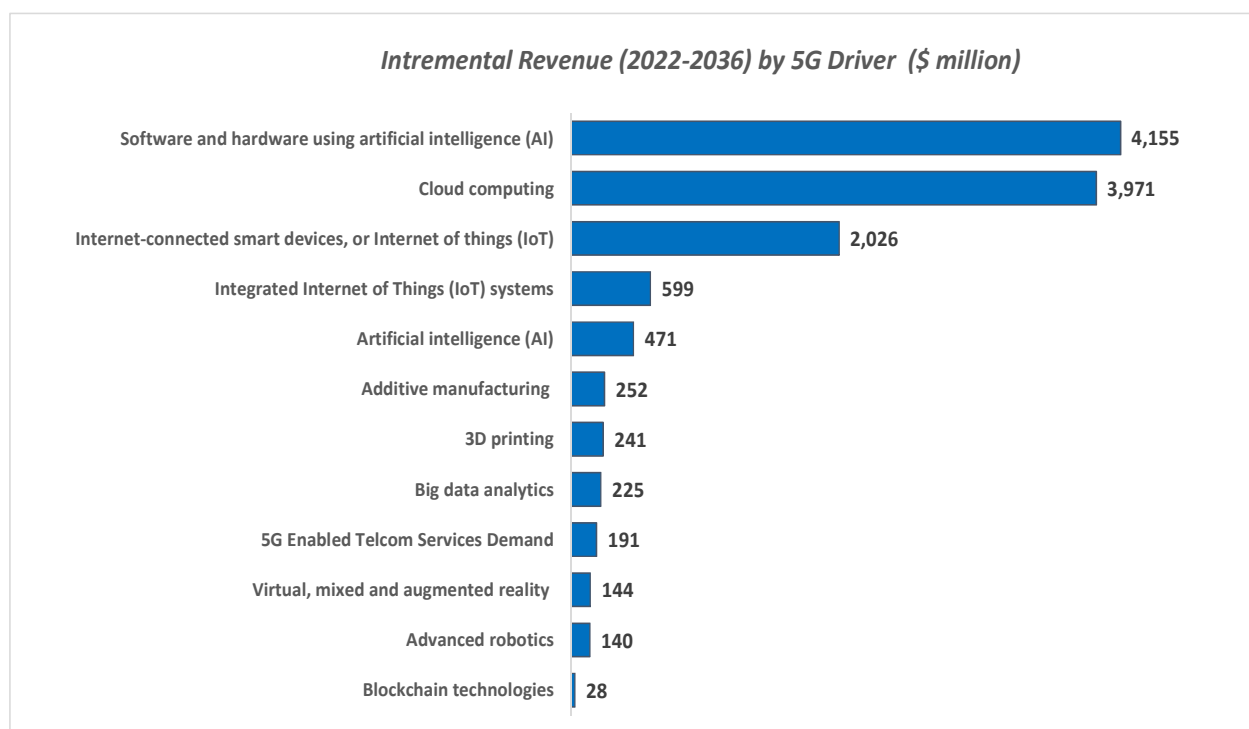


Figure 13: Cumulative impacted revenues by 5G drivers

Source: Nordicity's projections based on Baseline modelling, Statistics Canada Data on emerging technology adoption rates

7. 5G Socio-economic Impact Analysis

The present value of the \$12.4 billion incremental revenue forecast is \$9.66 billion - *averaging about \$809 million per year or 1.65% of the existing revenues of \$49 billion*. These incremental revenues (demand) will attract about \$2.56 billion new investment to enable 5G applications across the 19 economic sectors of the Region. About \$770 million (30%) of these investments will be made by the telecommunications sector, and the remaining \$1.79 billion will be invested by the business and industries across the other economic sectors of the Region. These investments represent the estimates for the development and commercialization of 5G-enabled technologies and applications across different Halton's economic sectors such as manufacturing, health care, energy, transportation and so forth.

The increased economic activities in terms of incremental revenues and new investments enabled by 5G applications in the Region will generate \$12.25 billion in new GDP and will support 91,644 additional jobs in 2022-2036, as Figure 14 below. The new GDP impact will double the Region current growth trends – by additional 1.46% growth per year, representing a socio-economic return of 18.38% and a productivity gain of 1.20%.

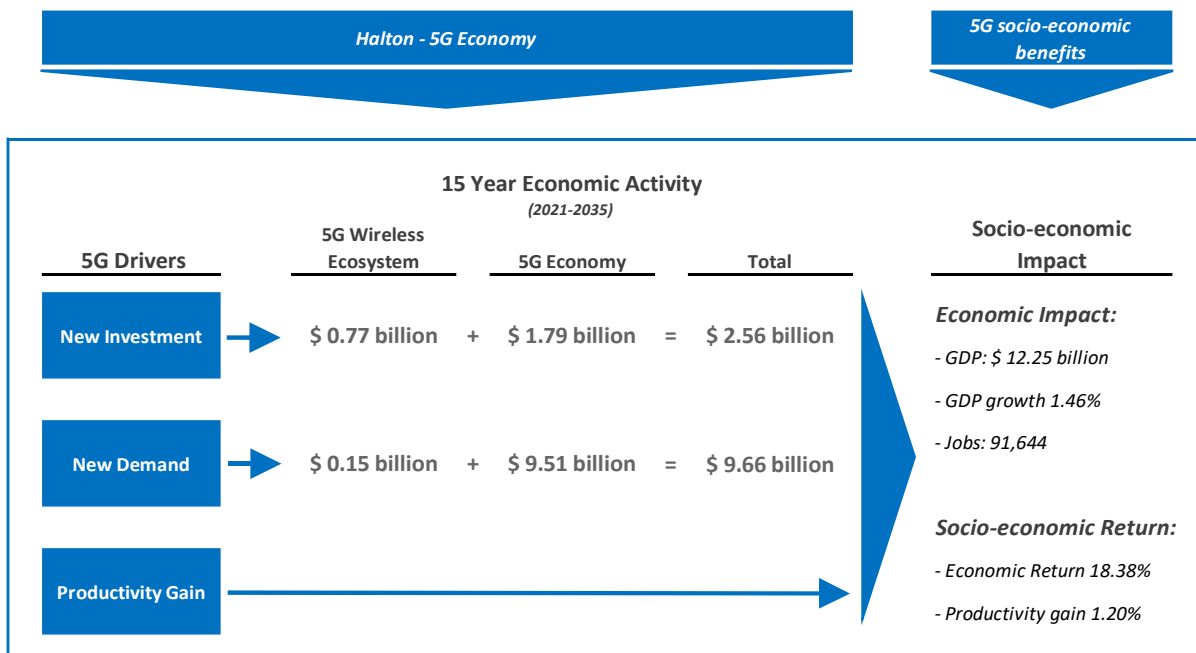


Figure 14: 5G Economic Impact Analysis Summary

Source: Nordicity's projections based on Baseline modelling, Statistics Canada Data on emerging technology adoption rates. The basis of above estimates are explained in Appendix H

As shown in Figure 15 below, the largest economic GDP impact of 5G will occur in the following five sectors of the Halton Region:

- Manufacturing (**30% of the total impact**)
- Utilities (**15% of the total impact**)
- Real Estate Rental & Leasing (**8% of the total impact**)
- Finance and Insurance (**7% of the total impact**)
- Information & Cultural Industries (**7% of the total impact**)

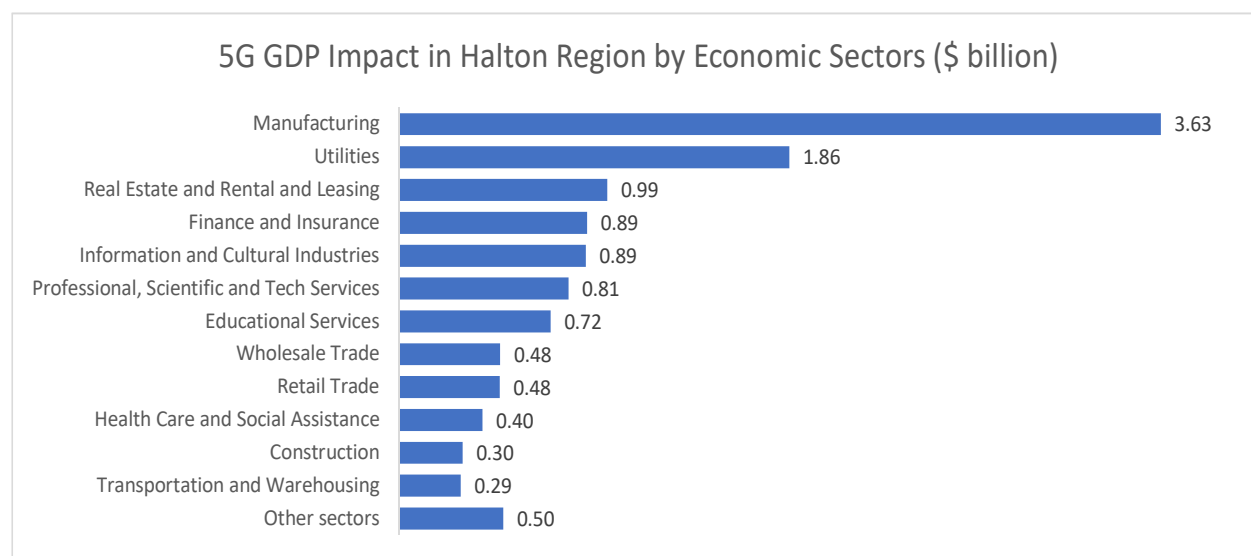


Figure 15: 5G GDP Impact in Halton Region by Economic Sectors

Source: Nordicity's projections based on Baseline modelling, Statistics Canada Data on emerging technology adoption rates

As shown in Figure 16 below, the following five sectors will lead Halton Region's 5G-driven growth in job creation.

- Manufacturing (**27% of the total impact**)
- Utilities (**12% of the total impact**)
- Real Estate Rental & Leasing (**8% of the total impact**)
- Education services (**8% of the total impact**)
- Retail Trade (**7% of the total impact**)

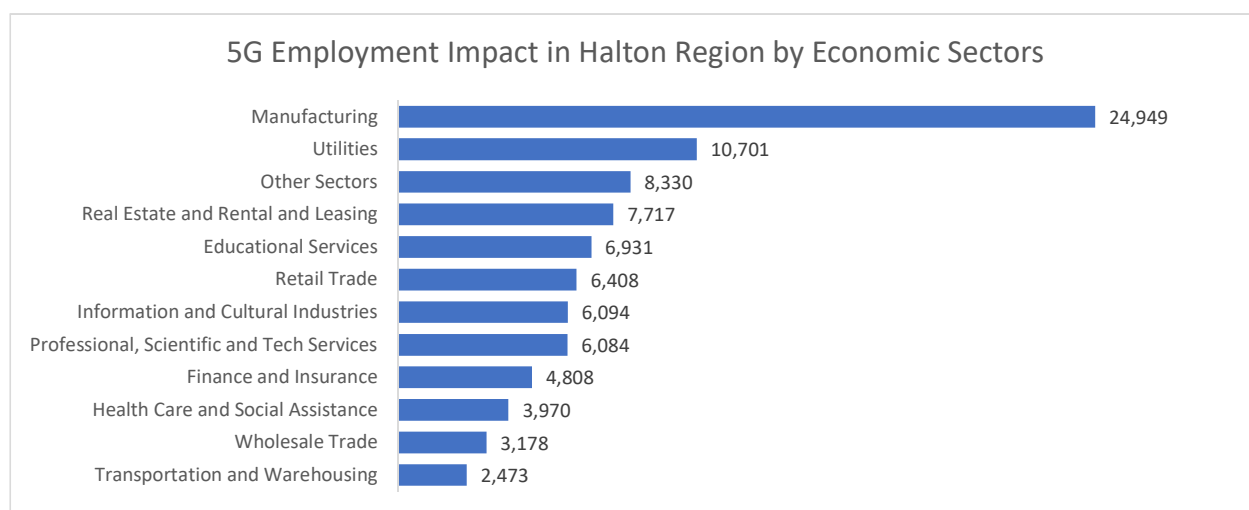


Figure 16: 5G Employment Impact in Halton Region by Economic Sectors

Source: Nordicity's projections based on Baseline modelling, Statistics Canada Data on emerging technology adoption rates

8. Recommended Digital Access Implementation Action Plan

Our analyses presented in the previous sections demonstrate that the adoption of 5G technologies will enable digital transformation across different economic sectors of the Region. The digital transformation will result significant economic benefits for the Region. The key benefits drivers include investments of \$2.56 billion in new technologies, and generation of \$9.66 billion of new demand, which will result in:

- \$12.25 billion GDP over the next 15 years, representing an annual GDP growth of 1.46% over and above the existing trends, and
- productivity improvements of 1.20% representing creation of high value 91,644 jobs over the next 15 years.

8.1 FTTH/P – A Key Enabler of 5G Economic Benefits

The realization of economic benefits of 5G technologies, as explained will depend on the availability of a fully integrated wireless and wireline broadband capability across the Region, using next generation network technologies – FTTH/P (wireline), and 5G (wireless). It is worth noting that for a 5G network to deliver its promised service capabilities it is critical to provide a fiber optic connection to the 5G small cell sites. Wireless networks have limited capacity to carry data over any distance, whereas as fibre networks can carry very large size data over long distances (up to 10 kilometers) without such limitations. Furthermore, given 5G services face significant challenges in penetrating walls, foliage, etc., multiple 5G small cells are required within buildings to ensure service reliability. This means fibre connectivity will be needed into such buildings in order to provide reliable 5G services - **FTTH/P network capability across the**

Region will be a key enabler of the delivery of reliable 5G services and full realisation of the associated economic benefits.

8.2 A Unified Future Proof Broadband Capability Required

Although ISED data indicates most of the households in the Region have access to CRTC's current target speed of 50/10Mbps. However, according to our assessment about 137.5K (69%) households in the Region do not have access to internet services that meet the CRTC target (see Table 4 above). This gap may be addressed according to the two status approaches presented in sections 5.1 and 5.2 above. However, these approaches may take several years in addressing this gap given a vast majority of these households would not qualify for funding under the Federal/Provincial broadband infrastructure program. Further, both approaches will lack the integrated approach required to fully realize the economic benefits of 5G technologies across different sectors of the Region's economy.

It is worth noting that the CRTC's current speed target do not appear to align with the emerging demand for internet speed. According to our estimates over the next three to five years, the demand for internet high speed broadband services across the Region is expected to exceed the CRTC's target of 50/10 Mbps as shown in Table 8 below.⁴¹

Table 8: Emerging Demand Trends for Internet High Speed Services

High Speed Internet Services Demand Drivers	Expected Demand for Internet High Speed	
	3 – 5 years	Beyond 3 years
Residential (including self-employed, and work from home)	50 Mbps to 100 Mbps	100 Mbps to 1 Gbps
Small Medium Enterprises (SMEs)	50 Mbps to 1 Gbps	100 Mbps to 1 Gbps
Large Enterprises & Institutions (more than 100 employees)	100 Mbps to 10 Gbps	1 Gbps to 10 Gbps
Municipalities, Utilities, School and Health (MUSH)	100 Mbps to 10 Gbps	1 Gbps to 40 Gbps

We believe that the COVID19 pandemic has demonstrated that the emerging demand trends for internet high speed services shown above will equally apply to rural, sub-urban, and urban areas. Therefore, there is a need to address the connectivity gap on an urgent basis. One option could be to assure 50/10 Mbps in the underserved and unserved areas using FWA (Fixed Wireless Access) technology, which can be deployed relatively quickly. Under this option broadband infrastructure with 50/10 Mbps capability could be extended to the underserved and unserved areas in the Region. However, given the limitations of FWA technology we believe 50/10 Mbps would be available on a best effort basis. Furthermore, the limited ability of the FWA technology to scale up to higher speeds and the relatively small quantum of spectrum currently available for this technology, will be a limiting factor for this option. This implies that depending on the availability of spectrum and bandwidth usage trend of the internet users, future scalability to speeds higher than the 50/10 Mbps speeds under this option cannot not be guaranteed for the users. It is also worth noting that if the CRTC's target speeds are increased in the future, major upgrades of FWA network would be required in terms of deployment of additional wireless sites for capacity. This means it might be more cost efficient to consider a future proof broadband network infrastructure option, which is FTTH/P.

Since under the FTTH/P option presented in Section 5.2, the broadband networks in different parts of the Region would be deployed by different ISPs, the operational capability of the broadband networks would also depend on the different technological and network configuration choices made by the individual ISPs. Thus, quality of service and network reliability might vary as the broadband networks are deployed and

operated by different ISPs operating in the Region. On this basis we recommend the **Region proactively advocates and collaborates with the ISPs and stakeholders for an implementation of a unified broadband network in the Region using FTTH/P technology approach as explained Section 5.3. A unified FTTH/P network capability across the Region will be critical to full realization of the economic benefits of 5G technologies presented above.**

8.3 Unified Broadband Network Business Model

Future proof broadband capability in the Region will be critical to support advanced 5G applications such as smart agriculture, automated vehicles, home-based medical consultations and diagnostics, advanced manufacturing – Industry 4.0. These applications will require a reliable and scalable broadband capability to support large scale deployment of IoTs including but not limited to smart homes, buildings, offices, connected vehicles etc. Therefore, we believe it would be more cost efficient to consider a future proof broadband network infrastructure option. Accordingly, we recommend implementation of a unified broadband network across the Region using 100% FTTH/P technology. Under this approach, the broadband infrastructure would be operated by a single entity, to deliver broadband services on a wholesale basis using an open access framework.

The broadband infrastructure may be jointly owned and/or operated by a group of private sector players (as in case of Durham Broadband) such as investors, ISPs, etc.

We believe this option would future proof the Region's broadband infrastructure capability in terms of meeting the exponentially increasing demand for internet speed and broadband usage in emerging digital economy world. The unified broadband service would be scalable up to and beyond 1 Gbps as required and ensure service reliability and redundancy. Open access to the network would encourage competing service providers to offer a range of affordable services to different subscribers' groups across the Region.

The analysis shown in Table 5 above indicates that it might be more cost efficient to implement a uniform future proof broadband infrastructure across the region, which will permanently address the internet connectivity challenges in the Region. Furthermore, this option will help eliminate the digital-divide and enable equitable realization of the socio-economic benefits of 5G technologies by all the residents in the Region.

The unified broadband service would be scalable up to and beyond 1 Gbps as required and ensure service reliability and redundancy. We also believe there is need for an open access regime to prevent deployment of duplicate networks by different ISPs. An open access regime would encourage competing service providers to offer a range of innovative and affordable services to different subscribers' groups across the Region. Therefore, we recommend the Region undertakes initiatives to encourage deployment of a unified broadband network by the ISPs.

9. Conclusion

We believe the Region can play an instrumental role in adoption of 5G technologies leading to the evolution of 1Gig+ economy. This study demonstrates that the 5G technology will have a transformative effect on employment, productivity, and GDP in the different economic sectors of the Region. For example, according to our estimates the adoption of 5G technologies will significantly increase the digital sector share, create higher value jobs (productivity improvement), doubling its annual GDP growth, which currently trends at 1.40%. However, the realization of these benefits will depend on the availability of reliable and scalable high-speed internet services - which is not only critical to meet the

emerging demand for high-speed internet connectivity but also for the enablement of digital infrastructure in the Region to ensure its long term sustainable economic development.

It is worth noting that in the 5G world, wireless network would represent a small portion of the massive capacity required for data traffic generated by a large-scale deployment of IoTs including but not limited to smart homes, buildings, offices, connected vehicles etc. This means the 5G promise is heavily predicated on the deployment of future proof wireline broadband network technology which is FTTH/P.

Based on our estimates almost 90% of the households currently do not have access to internet services with speeds of 50/10 Mbps or more, using future proof (FTTH/P) fixed broadband. This means a significant gap exists in most parts of the Region in terms of broadband capability in meeting the emerging demands for reliable and scalable highspeed services in a digital (1Gig+) economy

To fill this gap, we recommend implementation of a unified broadband network in the Region using FTTH/P technology to deliver broadband services which may be based on an open access framework. We believe a unified FTTH/P network capability across the Region will be critical to the full realization of the economic benefits of 5G technologies as presented in this study.

Furthermore, the ISPs would require about \$362.8 million investment to deploy FTTH/P network in the unserved/underserved areas of the Region. This investment represents 82% of the total \$439.5 million to deploy a future proof FTTH/P network across the entire Region. This means it will make more sense for the ISPs to deploy a unified future proof FTTH/P network in the Region, with an additional investment of \$76.7 million.

The unified broadband service would be scalable up to and beyond 1 Gbps as required and ensure service reliability and redundancy. We also believe there is need for an open access regime to prevent deployment of duplicate networks by different ISPs. An open access regime would encourage competing service providers to offer a range of innovative and affordable services to different subscribers' groups across the Region. Therefore, we recommend the Region undertakes initiatives to encourage deployment of a unified broadband network by the ISPs.

Appendix A: GDP Mix – Halton Region Municipalities

Economic Sectors	Burlington - Total					
	2016	2017	2018	2019	2020	Growth
Manufacturing	\$1.80B	\$1.83B	\$1.75B	\$1.84B	\$1.69B	-1.60%
Wholesale trade	\$0.57B	\$0.58B	\$0.51B	\$0.43B	\$0.42B	-7.43%
Retail trade	\$0.62B	\$0.65B	\$0.66B	\$0.64B	\$0.73B	4.32%
Transport and Warehousing	\$0.31B	\$0.32B	\$0.29B	\$0.29B	\$0.19B	-11.03%
Information and cultural industries	\$0.43B	\$0.45B	\$0.54B	\$0.46B	\$0.51B	4.33%
Finance and insurance	\$0.66B	\$0.75B	\$0.65B	\$0.71B	\$0.79B	4.67%
Management of companies and enterprises	\$0.20B	\$0.19B	\$0.21B	\$0.16B	\$0.10B	-16.25%
Professional, scientific and technical services	\$0.74B	\$0.74B	\$0.72B	\$0.80B	\$0.79B	1.79%
Administrative and support, waste management and remediation services	\$0.16B	\$0.17B	\$0.16B	\$0.16B	\$0.13B	-4.68%
Education services	\$0.66B	\$0.68B	\$0.70B	\$0.60B	\$0.60B	-2.13%
Arts, entertainment and recreation	\$0.09B	\$0.10B	\$0.12B	\$0.12B	\$0.07B	-5.59%
Accommodation and food services	\$0.21B	\$0.22B	\$0.22B	\$0.24B	\$0.17B	-5.71%
Other Services	\$0.27B	\$0.28B	\$0.27B	\$0.29B	\$0.25B	-1.23%
Remaining sectors	\$2.48B	\$2.36B	\$2.46B	\$2.57B	\$2.64B	1.60%
Total	\$9.20B	\$9.32B	\$9.26B	\$9.30B	\$9.11B	-0.26%

Note: Growth rate above is compound annual growth rate

Economic Sectors	Oakville- Total					
	2016	2017	2018	2019	2020	Growth
Manufacturing	\$1.65B	\$1.48B	\$1.43B	\$1.54B	\$1.38B	-4.47%
Wholesale trade	\$0.42B	\$0.45B	\$0.44B	\$0.46B	\$0.45B	1.74%
Retail trade	\$0.53B	\$0.57B	\$0.57B	\$0.57B	\$0.61B	3.47%
Transport and Warehousing	\$0.33B	\$0.34B	\$0.32B	\$0.28B	\$0.20B	-11.05%
Information and cultural industries	\$0.33B	\$0.30B	\$0.33B	\$0.35B	\$0.35B	1.37%
Finance and insurance	\$0.88B	\$0.98B	\$0.92B	\$1.09B	\$1.26B	9.19%
Management of companies and enterprises	\$0.32B	\$0.30B	\$0.27B	\$0.18B	\$0.11B	-23.25%
Professional, scientific and technical services	\$0.94B	\$0.94B	\$0.99B	\$1.05B	\$0.95B	0.18%
Administrative and support, waste management and remediation services	\$0.09B	\$0.12B	\$0.10B	\$0.11B	\$0.09B	1.34%
Education services	\$0.64B	\$0.75B	\$0.72B	\$0.76B	\$0.74B	3.59%
Arts, entertainment and recreation	\$0.15B	\$0.15B	\$0.16B	\$0.18B	\$0.10B	-9.84%
Accommodation and food services	\$0.20B	\$0.21B	\$0.21B	\$0.20B	\$0.15B	-7.54%
Other Services	\$0.24B	\$0.26B	\$0.25B	\$0.27B	\$0.25B	0.68%
Remaining sectors	\$2.53B	\$2.71B	\$2.95B	\$3.36B	\$3.80B	10.75%
Total	\$9.26B	\$9.57B	\$9.65B	\$10.39B	\$10.44B	3.03%

Note: Growth rate above is compound annual growth rate

Economic Sectors	Milton - Total					
	2016	2017	2018	2019	2020	Growth
Manufacturing	\$0.54B	\$0.51B	\$0.52B	\$0.66B	\$0.53B	-0.58%
Wholesale trade	\$0.43B	\$0.52B	\$0.43B	\$0.47B	\$0.43B	-0.06%
Retail trade	\$0.20B	\$0.21B	\$0.22B	\$0.24B	\$0.24B	4.25%
Transport and Warehousing	\$0.25B	\$0.25B	\$0.23B	\$0.26B	\$0.19B	-6.89%
Information and cultural industries	\$0.04B	\$0.04B	\$0.05B	\$0.05B	\$0.05B	4.71%
Finance and insurance	\$0.12B	\$0.13B	\$0.11B	\$0.11B	\$0.11B	-1.77%
Management of companies and enterprises	\$0.01B	\$0.01B	\$0.01B	\$0.01B	\$0.00B	-20.50%
Professional, scientific and technical services	\$0.12B	\$0.12B	\$0.13B	\$0.19B	\$0.15B	6.23%
Administrative and support, waste management and remediation services	\$0.05B	\$0.06B	\$0.05B	\$0.08B	\$0.06B	3.08%
Education services	\$0.27B	\$0.29B	\$0.28B	\$0.29B	\$0.26B	-0.59%
Arts, entertainment and recreation	\$0.11B	\$0.10B	\$0.10B	\$0.11B	\$0.05B	-16.08%
Accommodation and food services	\$0.08B	\$0.08B	\$0.08B	\$0.09B	\$0.07B	-2.61%
Other Services	\$0.08B	\$0.09B	\$0.10B	\$0.12B	\$0.11B	8.29%
Remaining sectors	\$1.06B	\$1.17B	\$1.28B	\$1.37B	\$1.47B	8.41%
Total	\$3.36B	\$3.58B	\$3.57B	\$4.02B	\$3.72B	2.56%

Note: Growth rate above is compound annual growth rate

Economic Sectors	Halton Hills - Total					
	2016	2017	2018	2019	2020	Growth
Manufacturing	\$0.49B	\$0.50B	\$0.51B	\$0.61B	\$0.48B	-0.48%
Wholesale trade	\$0.05B	\$0.05B	\$0.05B	\$0.05B	\$0.05B	1.43%
Retail trade	\$0.22B	\$0.23B	\$0.24B	\$0.26B	\$0.27B	4.70%
Transport and Warehousing	\$0.11B	\$0.12B	\$0.14B	\$0.17B	\$0.10B	-2.61%
Information and cultural industries	\$0.13B	\$0.12B	\$0.13B	\$0.13B	\$0.10B	-6.80%
Finance and insurance	\$0.06B	\$0.06B	\$0.07B	\$0.07B	\$0.07B	6.04%
Management of companies and enterprises	\$0.01B	\$0.01B	\$0.01B	\$0.01B	\$0.00B	-20.00%
Professional, scientific and technical services	\$0.07B	\$0.06B	\$0.06B	\$0.08B	\$0.07B	-0.60%
Administrative and support, waste management and remediation services	\$0.01B	\$0.01B	\$0.02B	\$0.02B	\$0.01B	3.23%
Education services	\$0.13B	\$0.13B	\$0.13B	\$0.13B	\$0.12B	-1.61%
Arts, entertainment and recreation	\$0.05B	\$0.05B	\$0.05B	\$0.05B	\$0.03B	-9.66%
Accommodation and food services	\$0.05B	\$0.05B	\$0.05B	\$0.05B	\$0.04B	-7.84%
Other Services	\$0.06B	\$0.06B	\$0.06B	\$0.06B	\$0.06B	0.18%
Remaining sectors	\$0.77B	\$0.79B	\$0.79B	\$0.78B	\$0.82B	1.87%
Total	\$2.20B	\$2.25B	\$2.29B	\$2.47B	\$2.23B	0.29%

Note: Growth rate above is compound annual growth rate

Appendix B: Halton's Digital Economy (GDP)

As part of this analysis, we estimated the current digital share in the GDP of the Halton Region and four municipalities. The Digital share represents the economic value of digital economic activities in the region. For this purpose, we leveraged StatsCan's recently published Digital Supply-Use framework, which captures and presents the digital and non-digital components of the production by domestic industries, imports of products, and their use, either as inputs for final consumption, investment, and exports.

As shown in Figure 17 below, the Halton Region's digital sector generated GDP of \$2.22 billion in 2016, which increased to \$2.37 billion in 2020, representing a compound annual average growth rate (CAGR) of 1.67%. While the "direct" contribution constituted a major proportion of the total impact, the inter-sectoral linkages captured in "indirect" impact reflect a lower but evolving contribution towards the digital sector's growth. The accelerated spread of COVID-19 in 2020 uncovered and intensified numerous operational constraints in every economic sector globally. The pandemic also affected the digital economy sectors in both positive and negative ways. Negative effects include the shut down of some of the ICT goods manufacturing units, which formed a key component of digital economy and globalized supply chain, roadblocks posed by travel restrictions, and finally, lack of spending by consumers in early COVID phase adversely affected some digital industries. However, these adverse effects were more than offset by a boom in *e-commerce*, *telecommunications (broadband connectivity)*, *software*, and the other digital economy verticals, which ensured a growth rate of the sector in 2020.

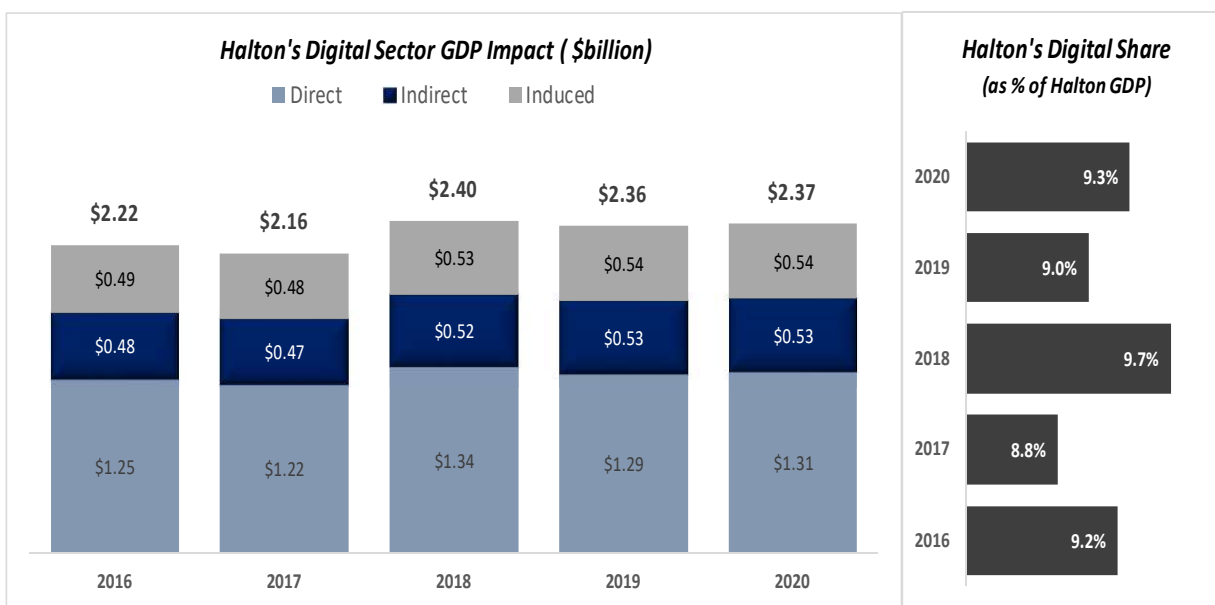


Figure 17: Digital Sector GDP Impact (Direct + Indirect + Induced) & Digital Economy Share

Source: Nordicity's calculations based on Halton Employment Survey, Statistics Canada Data & Digital Supply-Use Tables.

Note: The above estimates were developed based on the methodology outlined in Appendix C.

The digital sector is considered to be a catalyst of economic growth and hence its contribution in terms of share in national economy reflects upon the sector's strength in driving the Halton region's GDP growth. As shown in Figure 4, Halton's overall GDP (nominal) increased from \$24.0 billion in 2016 to \$25.5 billion in 2020, representing a compound annual growth rate of 1.40 % (using GDP at current prices). Because of higher growth in GDP driven by Halton's digital sector, its contribution (share) in its overall GDP increased from 9.2% in 2016 to 9.3% in 2020, as shown in Figure 5 below.

Figure 18 below presents the Halton region's GDP broken out by the four municipalities: Burlington, Oakville, Milton, and Halton Hills.

- **Burlington:** Digital GDP grew at a compound annual rate of 2.42% from \$1.16 billion (2016) to \$1.27 billion (2020).
- **Oakville:** the digital sector grew at 2.19%(CAGR) from \$761 million (2016) to \$830 million (2020).
- **Milton:** the digital sector GDP increased from \$99 million (2016) to \$105 million in 2020 at 1.54%.
- **Halton Hills:** the digital sector contributed \$204 million of value-add (GDP) in 2016; however, it declined in subsequent years to \$147 million in 2020.

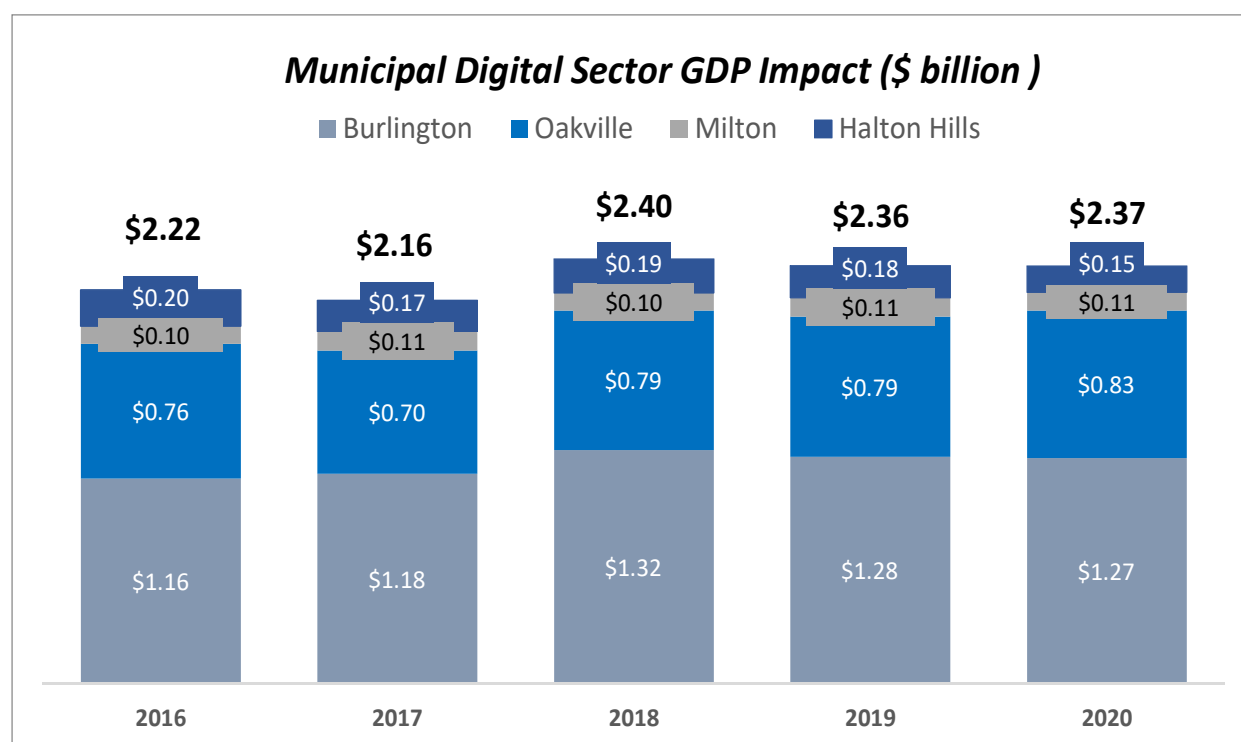


Figure 18: Municipal Digital Sector GDP Impact (Direct + Indirect + Induced)

Source: Nordicity's calculations based on Halton Employment Survey, Statistics Canada Data & Digital Supply -Use Tables

Halton Region Digital Sector GDP Mix

To better understand the economic trends that steered the performance of Digital Sector in 2016-2020, the total Digital GDP component was broken down by verticals. The contribution of each vertical to the Halton's digital economy (GDP) is described in Figure 19 below.

Halton Region, a prominent manufacturing centre in North America, boasts of a rich innovation ecosystem focused on advanced manufacturing firms in automotive, steel, and materials. In addition, Halton's manufacturing base supports the technology clusters (ICT, cleantech, fintech, e-commerce, etc.) thriving in the region.

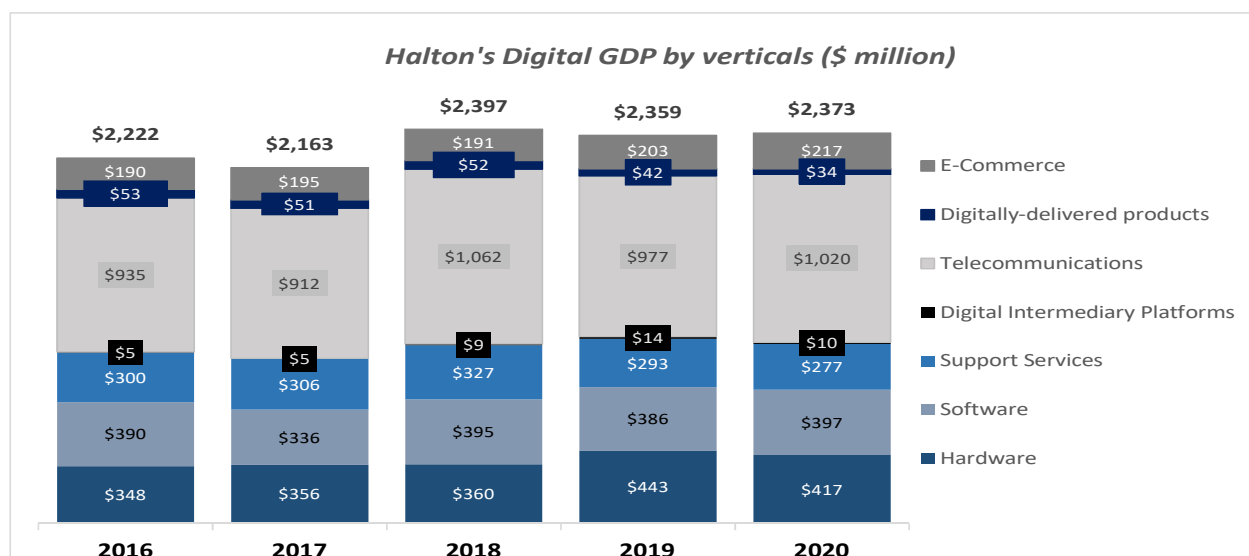


Figure 19: Halton's Digital Sector GDP Impact (Direct + Indirect + Induced) by verticals/ sub-sectors

Source: Nordicity's calculations based on Halton Employment Survey, Statistics Canada Data & Digital Supply -Use Tables.

Note: A detailed account of Digital GDP impact by verticals for the four municipalities is presented in Appendix D.

The hardware segment/ICT manufacturing of Halton's Digital economy remained robust during 2016-2020 with its total contribution to Halton's GDP increasing from \$348 million (2016) to \$417 million (2020). This performance occurred despite the worldwide shut down of manufacturing units and supply chain disruptions which adversely impacting production and trade of hardware or ICT goods.

The shutdown of manufacturing units in the east Asia – the world's ICT manufacturing hub, in 2020, triggered an increase in component prices by 2-3% due to shortage of supplies ⁴². This surge in input prices also caused the increase in the prices of finished hardware goods, further accentuated by a fall in production of ICT hardware, including computer, communication, and electronic equipment/components. However, despite this global slowdown, Halton's Digital hardware sector registered 4.6% growth (CAGR) in 2016- 2020.

A major portion of this growth was driven by Burlington, which contributed \$353 million in 2020 to the hardware sector, exhibiting a growth of 3.3% (CAGR) from its contribution in 2016 (\$310 million). Oakville was second to Burlington with a \$64 million contribution to GDP in 2020. Milton & Halton Hills both had positive but small contributions to Halton's Digital hardware GDP in 2016 (\$1.1 million, and \$696 thousand, respectively), however, these were reduced substantially (by over 60%) in 2020 (\$6K & \$15K)

The software development segment of Halton's Digital Economy contributed \$397 million to Total Digital GDP in 2020 exhibiting a growth of 0.5% CAGR from 2016 (\$390 million). Oakville led the development of software services in 2016 (\$202 million) and remained the top contributor in 2020 with a total GDP impact of \$197 million. Burlington's contribution to Halton's software segment exhibited a steady growth of 5.25% (CAGR), increasing from \$142 million (2016) to \$174 million in 2020. Milton's software segment showed a steady increase in its GDP contribution from \$11.7 million in 2016 to \$14 million in 2020 whereas Halton Hill's contribution declined from \$34.8 million in 2016 to \$12.1 million in 2020.

Support Services contribution to digital GDP declined by 2% in Halton region. A similar downward trend was observed in Burlington, Halton Hills, and Milton where the support services GDP contribution declined by 4.6% 7.1% and 14.8%, respectively. Oakville emerged as an exception with an increase in support services GDP: from \$107 million in 2016 to \$123 million in 2020, exhibiting a growth rate of 3.4% CAGR.

Telecoms also emerged as a resilient sector in the Halton Region amidst the economic downturn triggered by the spread of Covid 19. While the demand for telecommunication services took a hit from its business customers due to derailment of sectors like travel, tourism & hospitality, and closure of businesses, households have seen a surge in demand. Mandatory work from home and streaming as the safest means of entertainment, have strengthened the demand for broadband services. As a result, the GDP contribution of telecommunications sector increased from \$935 million in 2016 to \$1020 million 2020, exhibiting a compound annual growth rate of 2.2%. In 2016-2020, the growth of the telecom sector in Milton and Burlington were among the highest with 4.6% and 4.2 % respectively. Oakville exhibited a modest growth of 1.3% during the same period. Halton Hills, however, experienced decline in the telecom sector with its contribution decreasing from \$130 million in 2016 to \$97.8 million in 2020.

Digitally delivered products included in the analysis were products created and delivered (either to intermediaries or final consumers) in digital format by finance & insurance industries and arts & entertainment and recreation sectors - including gambling industries. While digital financial services witnessed a growth in its contribution to GDP, the non-depository credit intermediation services, entertainment, and gambling industry have experienced steady decline in the region during 2016 -2020. As a result, the contribution of this vertical to Halton's digital economy declined from \$53 million (2016) to \$34 million (2020). The rate of decline was greater in 2020, possibly because the arts & entertainment sector took a huge hit during the peak of Covid crisis. A similar trend was observed in other municipalities, where the contribution of digitally delivered products declined in all years during 2016-2020.

Finally, Halton region's e-commerce and digital intermediary services sub-sectors exhibited substantial growth during 2016-2020. While e-commerce grew at a compound annual growth rate of 3.4 %, the digital intermediary services exhibited substantial growth of 21.2% (CAGR) during 2016-2020. The peer-to-peer services intermediated by digital intermediary platforms such as Airbnb, Uber, etc. facilitate transactions in goods and services. These platforms have become increasingly popular and have witnessed exponential growth in last few years. In 2020, Burlington and Oakville contributed \$3 million each in Digital Intermediary platforms followed by Milton (\$2.3 million) and Halton Hills (\$1.2 million). All four municipalities registered over 15% growth in this subs-sector during 2016-2020.

Appendix C: Halton Region Digital Sector Employment

In 2016 the Halton Digital sector employed 16,216 FTE (Full Time Equivalent) employees, referred to as “employment”, which increased to 16,384, a modest average increase of 0.26% per year as shown in Figure 20. As a result, the share of digital employment in Halton’s over all economy remained the same at around 7.2% during the study period.

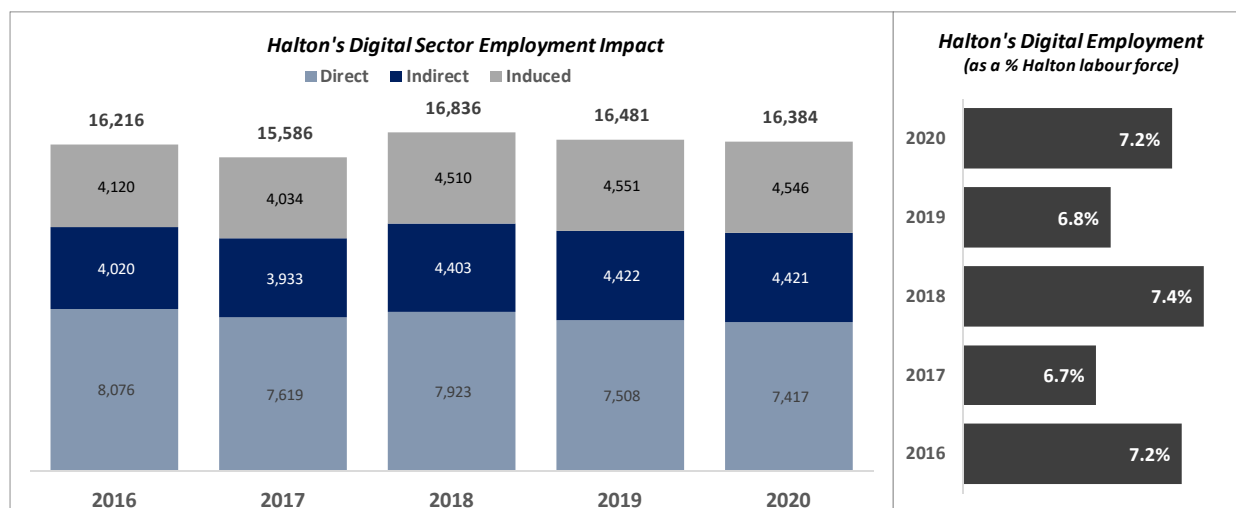


Figure 20: Halton’s Digital Sector Employment Impact (Direct + Indirect + Induced) & Digital Share

Source: Nordicity’s calculations based on Halton Employment Survey, Statistics Canada Data & Digital Supply -Use Tables

As shown in Figure 21, Burlington with an average 55% share in Halton’s employment impact, exhibited a modest growth of 0.84% by increasing from 8,599 FTEs in 2016 to 8,890 FTEs in 2020.

Following a similar growth trend, Oakville’s FTEs increased from 5,535 in 2016 to 5,757 in 2020, constituting on an average 34% of Halton’s employment impact. Whereas Milton and Halton Hills constituted about 4% and 7% of Halton’s Employment impact, respectively.

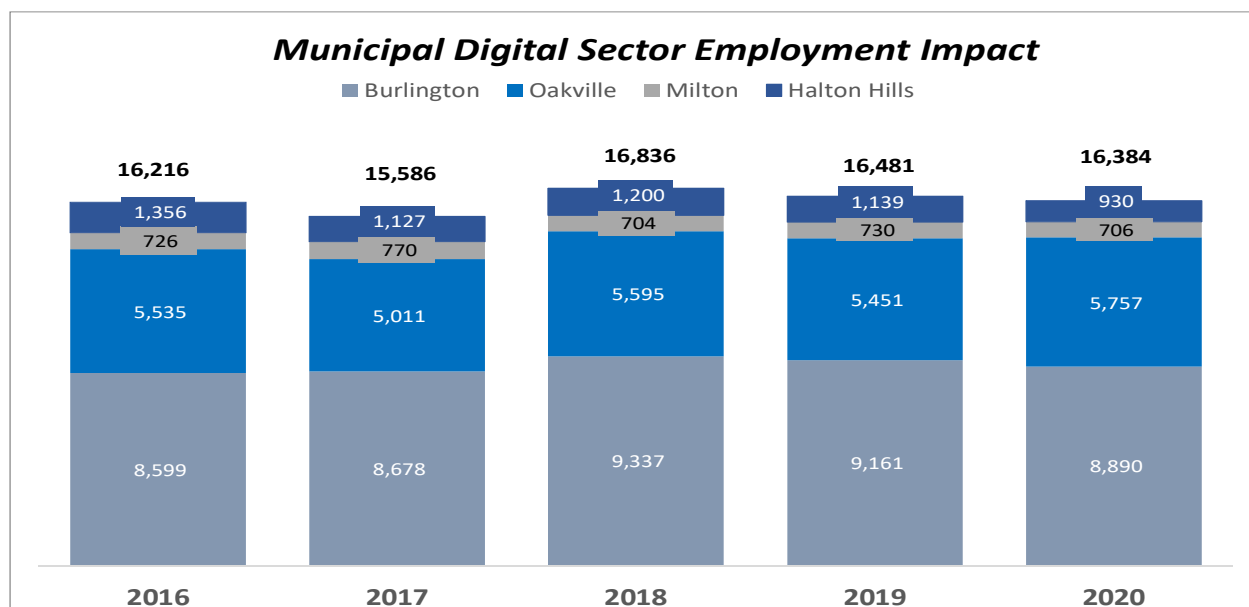


Figure 21: Municipal Digital Sector Employment Impact (Direct + Indirect + Induced)

Source: Nordicity’s calculations based on Halton Employment Survey, Statistics Canada & Digital Supply -Use Tables

Halton Region Digital Sector Employment Mix

Halton's ICT sector employment impact by vertical/sub-sector is shown in Figure 22 below. Telecommunications, Software, and Hardware have been major contributors to employment to Halton's Digital sector. While the share of digitally delivered products and support services declined during 2016-2020, the share of e-commerce exhibited a modest growth of 1.1% during the same year. Digital Intermediary platforms, yet again emerged as a vertical/sub-sector with the highest growth potential with a compound annual growth rate of 15.2%.

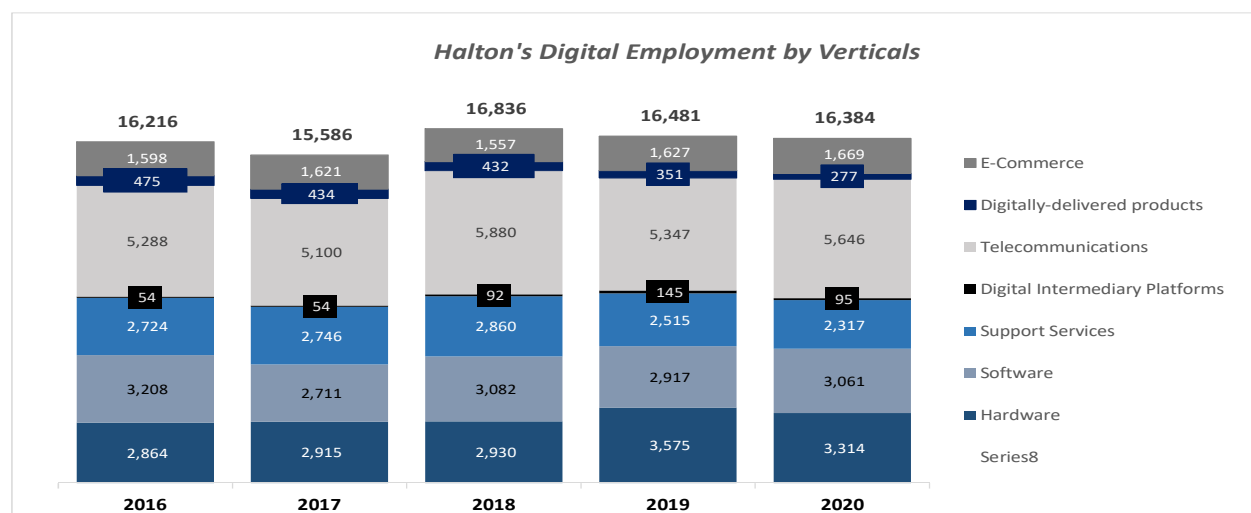


Figure 22: Halton's Digital Sector Employment Impact (Direct + Indirect + Induced) by verticals/sub-sectors

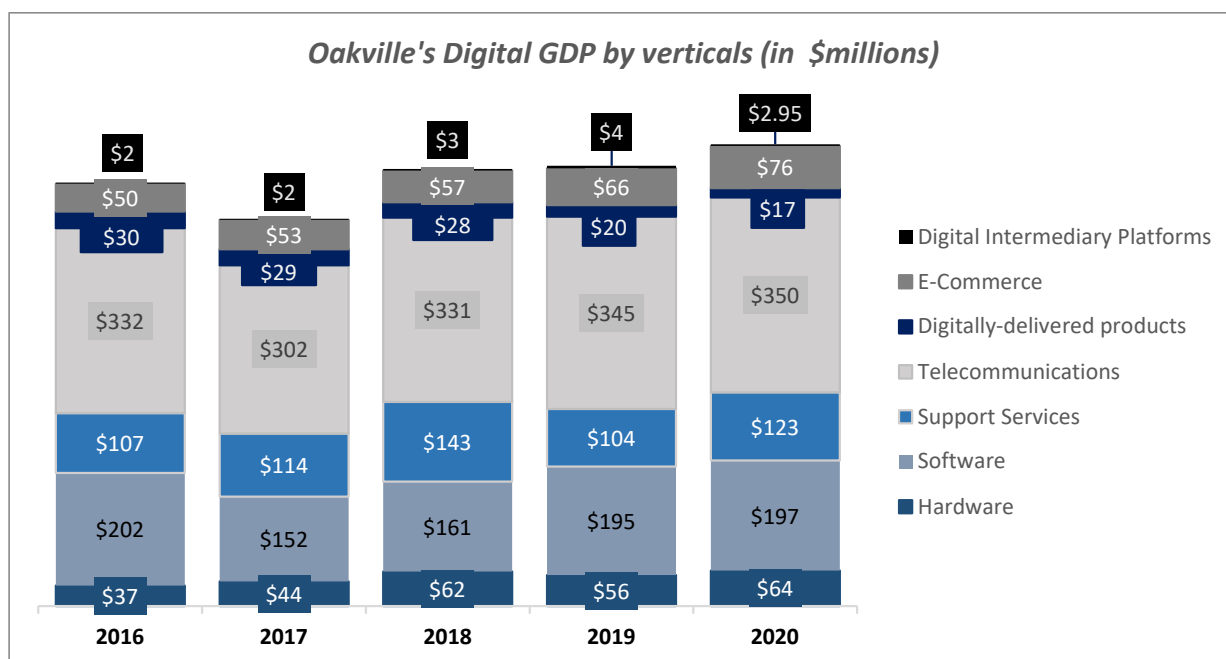
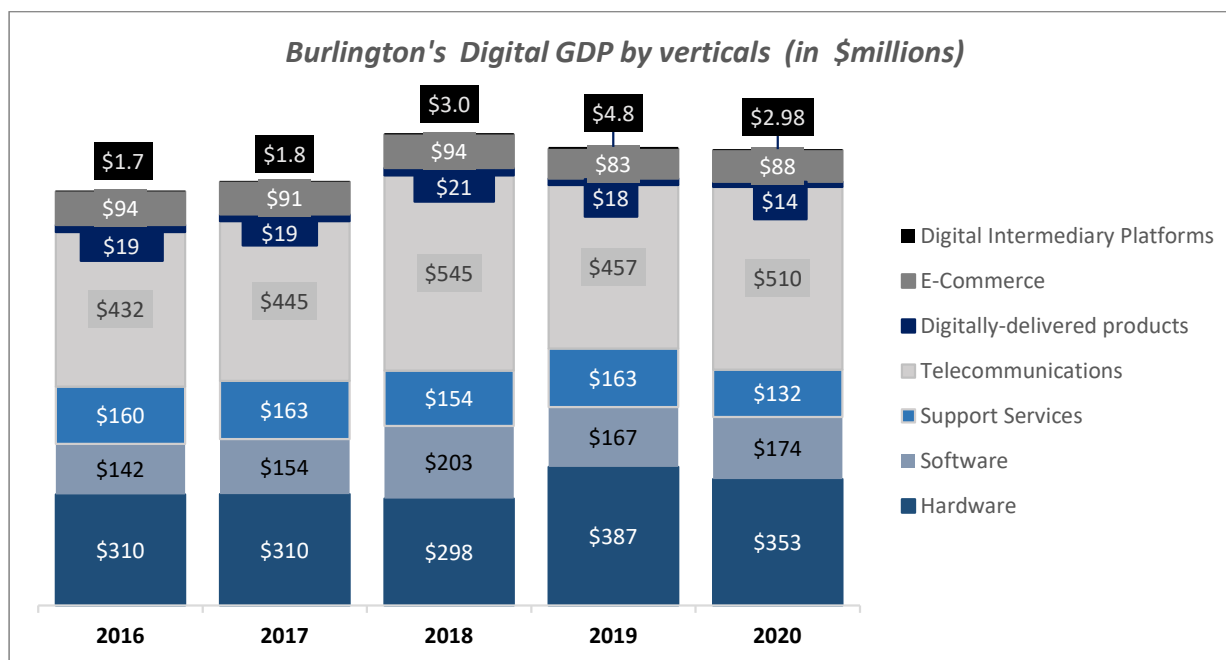
Source: Nordicity's calculations based on Halton Employment Survey, Statistics Canada Data & Digital Supply-Use Tables

A detailed account of Digital Employment impact by verticals for the four municipalities are presented in Appendix E.

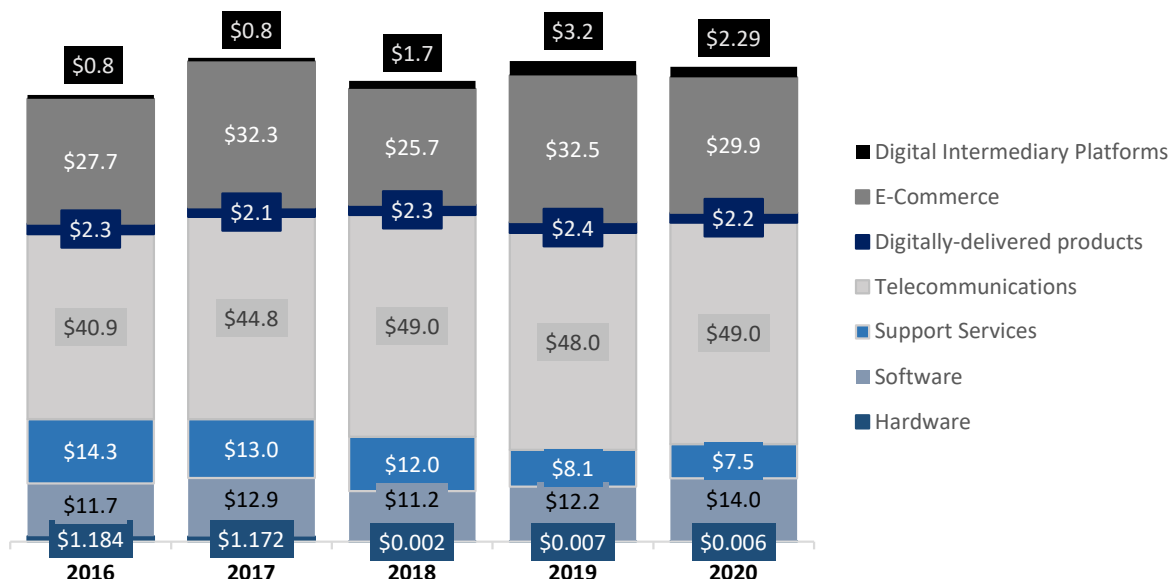
Of the four municipalities, Burlington contributed most towards employment in the hardware sub-sector, constituting an average share of 86% at a compound annual growth rate of 2.42%. Burlington also registered positive employment growth in the Software (3.57%) and Telecommunications (3.69%) sub-sectors. While Oakville exhibited substantial compound annual growth in its Hardware (13.9%), E-commerce (9%) and Digital Intermediary Platforms (9%) sub-sectors, in Milton growth occurred in Software (3.05%), Telecommunication (4.07%), and Digital Intermediary Platform (24.82%) sub-sectors of its digital economy.

Finally, for Halton Hills, E-commerce and Digital intermediary platforms were the sub-sectors with a positive annual growth of 1.2% and 27.9%. The steep decline in employment for some sub-sectors like hardware in Milton & Halton Hills could be the result of the economic meltdown caused by Covid Crisis. The prolonged lockdown in the region could have caused temporary & even permanent shutdowns of specific businesses leading to decline in employment in these sub-sectors.

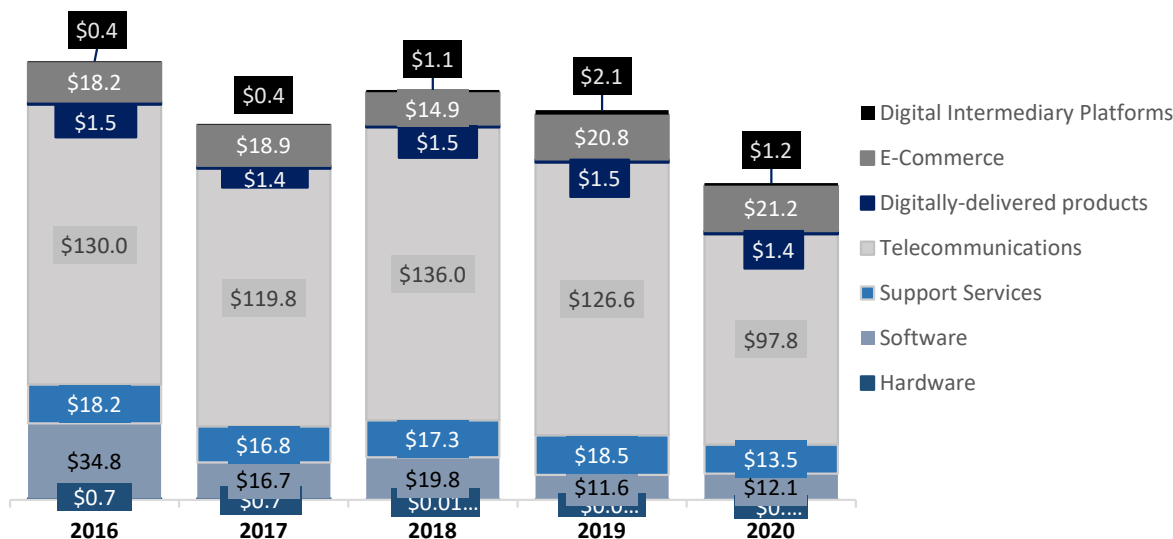
Appendix D: GDP Impact by Verticals



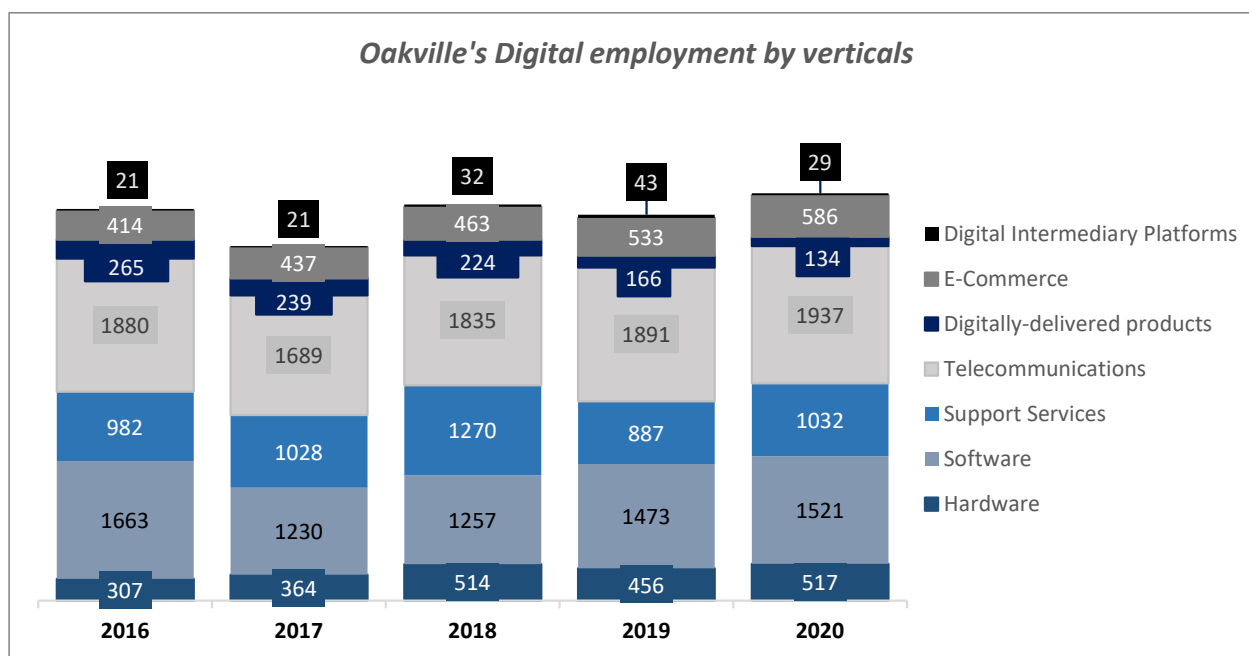
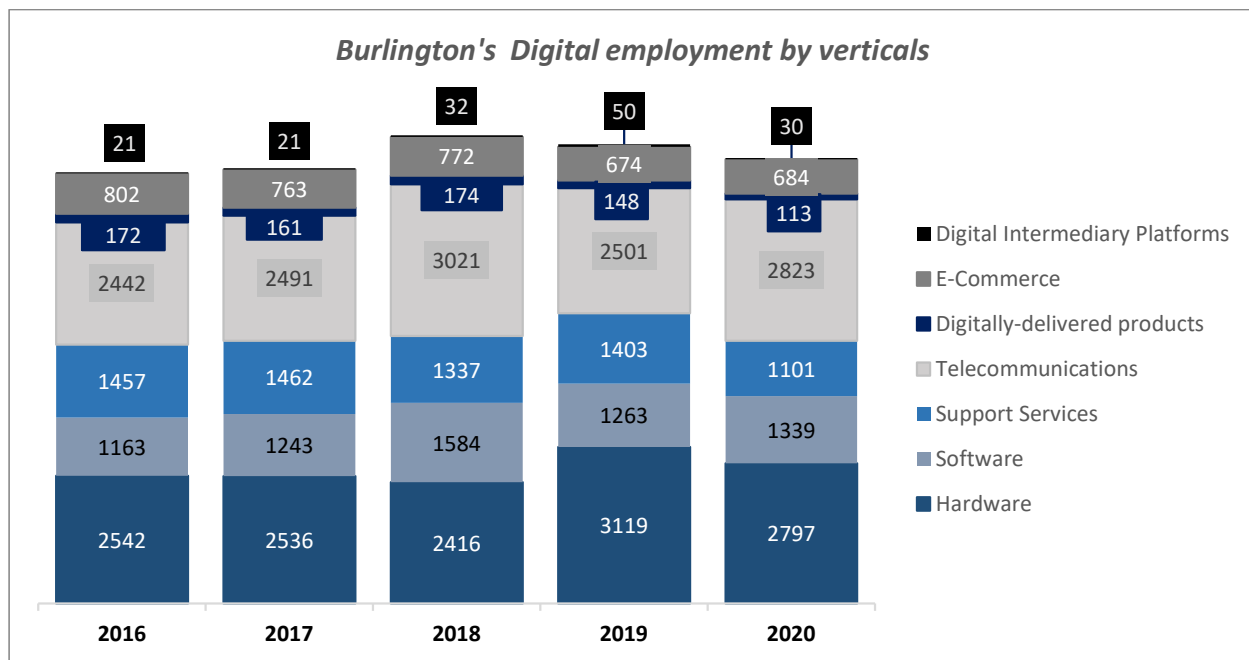
Milton's Digital GDP by verticals (in \$millions)



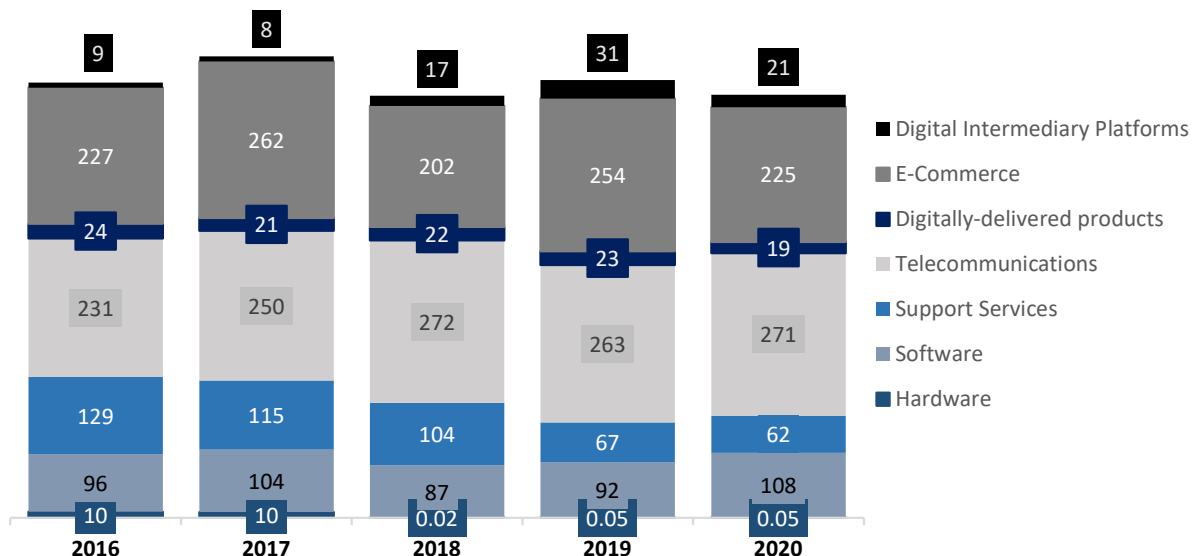
Halton Hills' Digital GDP by verticals (in \$millions)



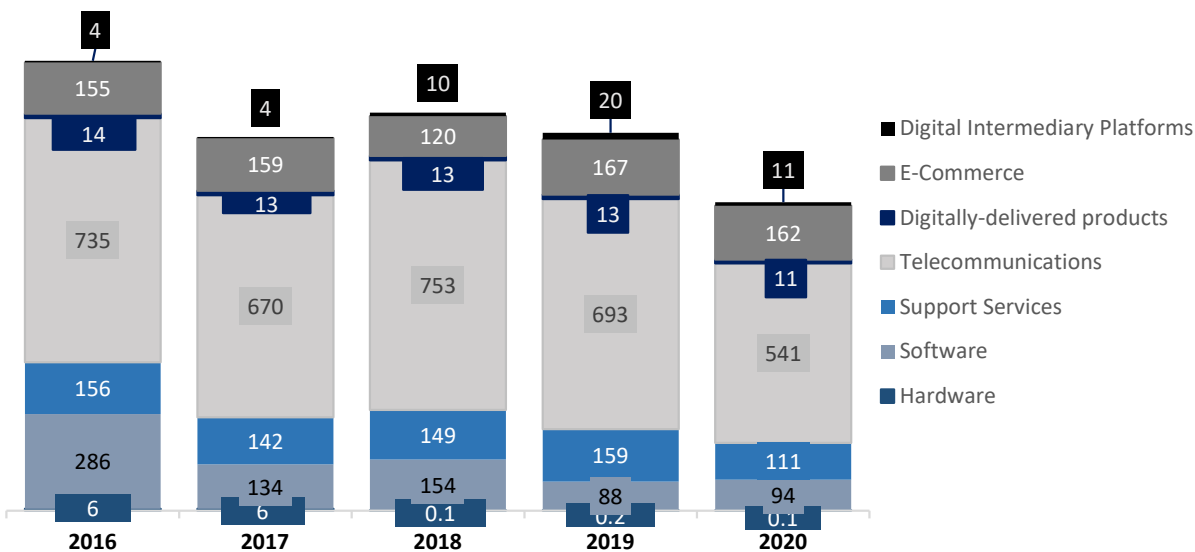
Appendix E: Employment Impact by Verticals



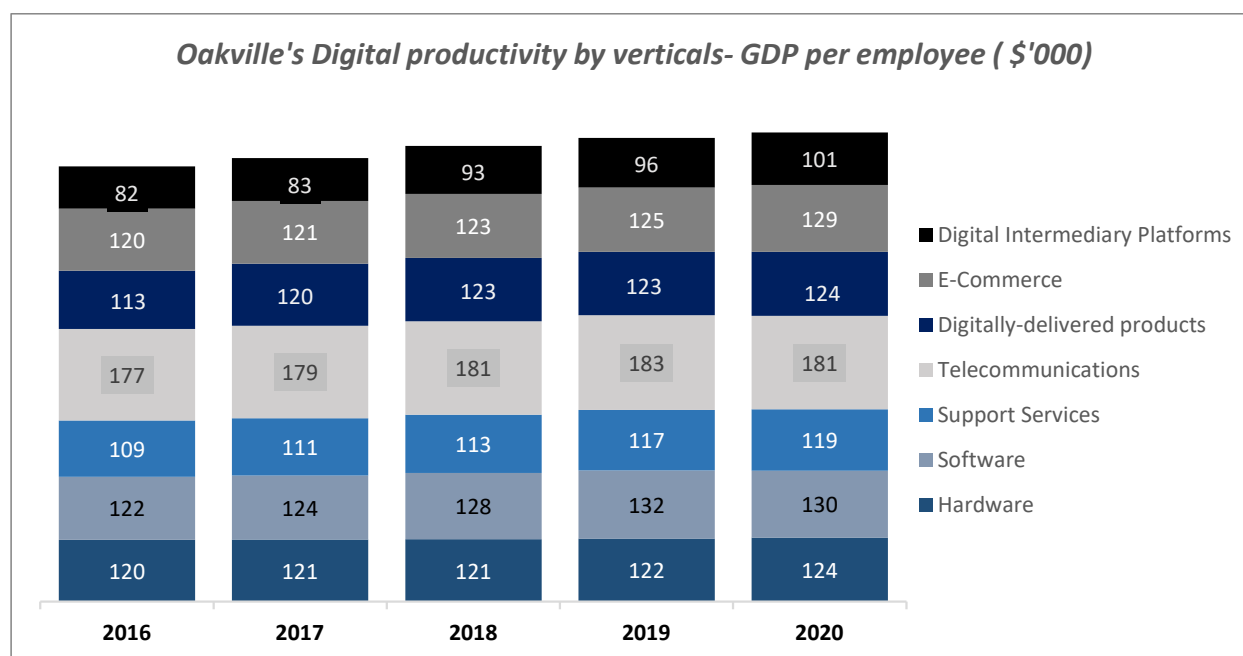
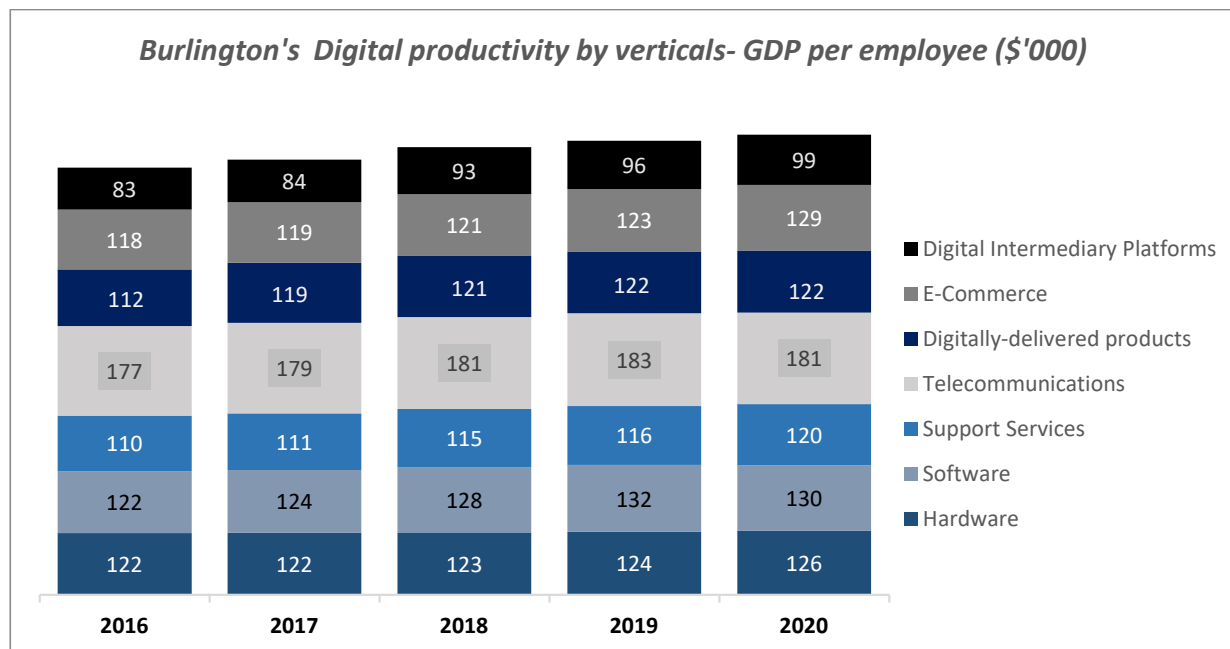
Milton's Digital employment by verticals



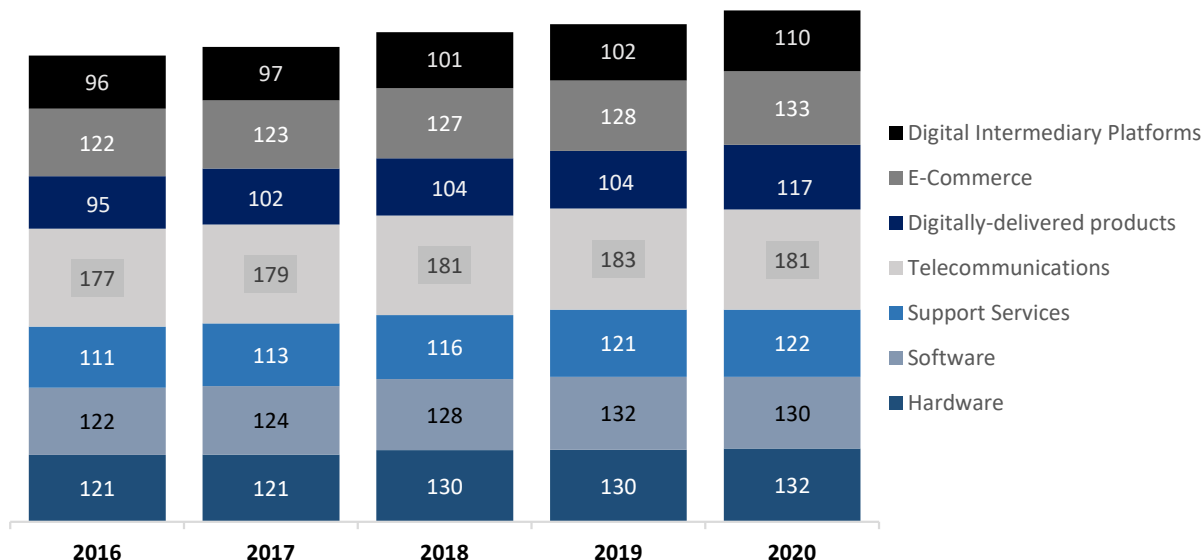
Halton Hills' Digital employment by verticals



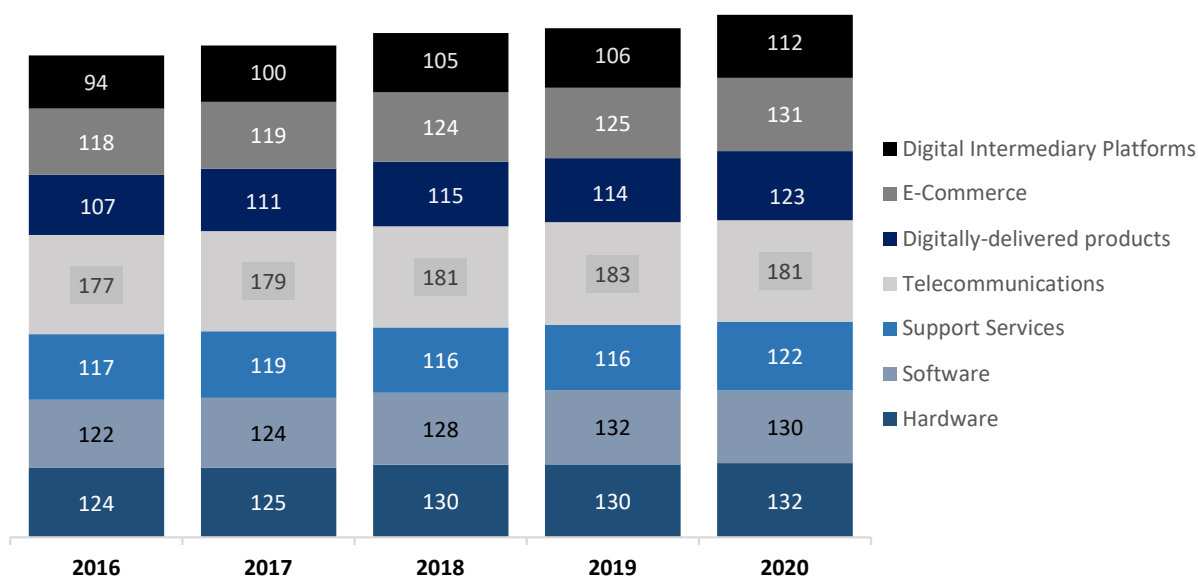
Appendix F: Productivity Impact by Verticals



Milton's Digital productivity by verticals- GDP per employee (\$'000)



Halton Hills' Digital productivity by verticals -GDP per employee (\$'000)



Appendix G: 5G Use Cases by Sector

To understand the magnitude and timing of the economic impact 5G adoption and use, we analyzed the following 19 economic sectors of Halton Region and its municipalities.

- a) Accommodation and Food Services
- b) Admin. & Support, Waste Management Services
- c) Agriculture, Forestry, Fishing and Hunting
- d) Arts, Entertainment and Recreation
- e) Construction
- f) Educational Services
- g) Finance and Insurance
- h) Health Care and Social Assistance
- i) Information and Cultural Industries
- j) Manufacturing
- k) Mining, Quarrying, and Oil and Gas Extraction
- l) Other Services (except Public Administration)
- m) Professional, Scientific and Technical Services
- n) Public Administration
- o) Real Estate and Rental and Leasing
- p) Retail Trade
- q) Transportation and Warehousing
- r) Utilities
- s) Wholesale Trade

We modelled the impact of 5G applications (**5G benefit drivers**) to demonstrate their economic impact on the 19 economic sectors in terms of GDP, jobs and productivity improvements.

Adoption and use of 5G technologies will revolutionize and transform existing economic sectors and industries. The 5G capabilities including eMBB-Enhanced Mobile Bandwidth, mMTC-Massive Machine Type Communications, and uRLLC-Ultra-reliable and Low-latency Communications will enable applications that will drive productivity improvement and new demand for products and services resulting in new (incremental) revenue (demand) streams in the above listed 19 economic sectors. The 5G applications their estimated impact on new revenues generation in the Region's economy are shown in Table 7 in Section 6.3 above.

These applications will support a variety of use cases that will drive economic growth in the future and increase cross-industry benefits by enabling revolutionary technical abilities. For example, as shown in Table 7 the Artificial Intelligence, Cloud Computing, and Internet of Things (IoT) will generate revenue multiplier effect to the magnitude of 0.364%, 0.185% and 0.381% respectively and hence will be the major contributors of the economic benefits in the Region's 19 economic sectors. For these sectors about \$12.4 billion new revenues are estimated in the next 15 years, representing \$598 million with 5G initial rollout in 2022 (assumed), increasing at rate of 4.6% per year to \$1.26 billion by 2036, as shown in Figure 12 in Section 6.3 above. Top three 5G applications that will account for over 80% of the forecasted 12.4 billion revenues include **Artificial Intelligence (34%)**, **Cloud Computing (32%)** and **Inter-connected Smart Devices and IoTs (16%)**, as shown Figure 13 in Section 6.3 above.

In 2020 total revenues generated in the Region by the 19 economic sectors are estimated to be \$48.95 billion, manufacturing being the largest with is share of 30.7% (\$15.03 billion), followed by Real Estate 8.3% (\$4.03 billion), and others as shown in Table 9 below.

Table 9: Halton 2020 Revenues Mix by 19 Key Economic Sectors

Halton's Key Economic Sector	Current Sales (2020)	
	Amount (\$ billion)	Share
Manufacturing	15.03	30.7%
Real Estate and Rental and Leasing	4.08	8.3%
Finance and Insurance	4.01	8.2%
Retail Trade	3.19	6.5%
Professional, Scientific and Technical Services	2.97	6.1%
Health Care and Social Assistance	2.70	5.5%
Educational Services	2.42	4.9%
Wholesale Trade	2.31	4.7%
Public Administration	2.07	4.2%
Information and Cultural Industries	1.93	3.9%
Construction	1.82	3.7%
Transportation and Warehousing	1.61	3.3%
Utilities	1.24	2.5%
Other Services (except Public Administration)	1.13	2.3%
Accommodation and Food Services	0.96	2.0%
Arts, Entertainment and Recreation	0.53	1.1%
Admin. & Support, Waste Management Services	0.52	1.1%
Agriculture, Forestry, Fishing and Hunting	0.35	0.7%
Mining, Quarrying, and Oil and Gas Extraction	0.08	0.2%
Total	48.95	100.0%

The \$12.4 billion incremental revenue estimated to be enabled by 5G application, represent an annualised average of \$809 million per year (representing a compound growth rate of 1.65%) to the \$48.95 billion revenues currently generated by the businesses in the Region.

While all 19 sectors in the Region will benefit from the 5G applications, the greatest impacts (over 2% annual increase in revenues) will occur in certain sectors such as *Utilities*, *Information and Cultural Industries*, *Professional, Scientific and Technical Services*, and *Educational Services* - the revenue growth effect of 5G technologies will vary across sectors ranging from 0.01% to 5.10%, as shown Figure 23 below.

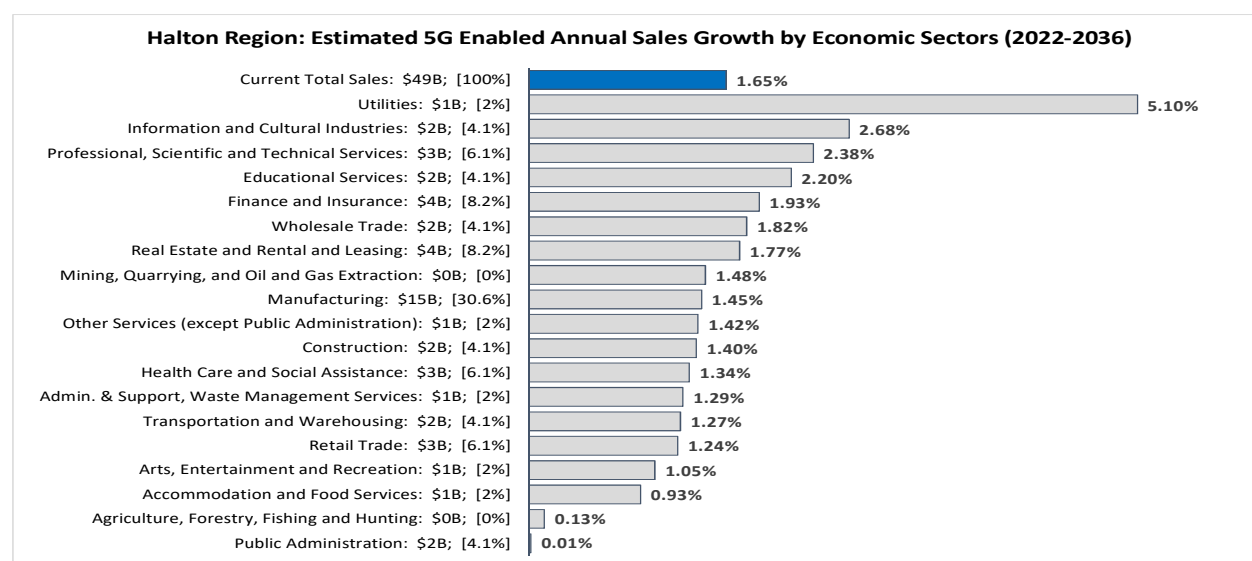


Figure 23: Halton Region: 5G Enabled Annual Sales Growth by Economic Sectors

Source: Nordicity's projections based on Baseline modelling, Statistics Canada Data on emerging technology adoption rates

The basis of our estimates for 5G related revenue growth impacts as shown in Figure 23 above is explained below for the Region's 8 key economic sectors: "**Manufacturing**", "**Real Estate**", "**Utilities**", "**e-Health**", "**Trade**", "**Transportation**", "**Information, Culture & Education**", and "**Finance & Insurance**".

Manufacturing

Manufacturing is the Region's largest sector representing 30.7% (\$15.03 billion) of the total revenues in 2020. While the Canadian manufacturing sector has declined in recent years as production has been 'off-shored' to low labour cost plants, Halton's manufacturing sector remained steady - powered by sectoral expansion in Burlington, and Oakville. In this context, the 5G technology represents an opportunity for Region's manufacturing sector to increase efficiency and competitiveness by facilitating the digitization of factories. 5G technologies will be instrumental in the evolution of next generation of advanced manufacturing systems e.g., **Industry 4.0**. For example, most of the factory processes, controls, and machines are currently connected through a wired local area network to ensure the reliability of operations. However, wired connectivity alone is not sufficient to address the needs of applications generated by emerging mobility technologies such as guided vehicles, robotics, and drones. Therefore, 5G communications capabilities will be the key enabler for transformation of Industry 4.0 manufacturing processes. That is, *with billions of sensors, machine-controlled robots, and autonomous logistics, all capable of communicating and operating remotely in real-time via 5G networks, manufacturers can achieve massive productivity gains.*⁴³

In other words, connected drones, remote robotics, teleoperated driving vehicles, and VR/AR applications enabled by 5G networks will further increase the precision, quality, flexibility of manufacturing facilities. Similarly, various combinations of teleoperated vehicles, remote control robotics and AR/VR applications will significantly reduce costs, increase productivity, and improve on safety in manufacturing industries.

Real Estate

With its 8.3% (\$4.08 billion) share in the Region's 2020 total revenue output, the Region's Real Estate appears to be its second major economic sector – also exhibiting the second highest GDP growth rate of 4.38% in 2016-2020. High growth momentum places this sectors in a unique position to gain from digital transformation to be enabled by 5G network deployments. Commercial real estate investors can benefit from leasing space within and on the building envelop, particularly in larger cities. While 4G and previous generations relied on large cell towers, 5G will transmit from many smaller cell towers which telecoms can place on rooftops, inside buildings and on vertical surfaces. The Covid19 crisis imposed several setbacks on the commercial real estate sector with reduced occupancy, new safety regulations, closure of associated business leasing to delay in payments. For this severely impacted sector, the rollout of 5G can present several revenue generating opportunities when the workforce returns to offices.

Besides commercial real estate, residential estate is also set to gain from 5G revolution in form of **connected homes**. Smart Homes with "connected" fixtures and appliances will redefine the way of living. From automatic detection of damage on roofs to reminders for gutters maintenance and grocery refills will improve efficiency around maintenance of property. 5G will support tech and amenities that enhance the occupier experience and strengthen cyber and business security.

Big data analytics will enable smooth collection and management of data around transactions in this sector. Real estate agents, builders and property managers will have unprecedented access to usage analytics. **Virtual Reality** will provide more engaging virtual reality tours that will help buyers looking to buy properties in distant locations, including holiday homes in remote & rural areas. As result one can

expect a surge in demand for properties in less dense areas, making them lucrative & cost-effective options for those who can live and work in remote setups.

Utilities

Utilities represented 3.4% of the Regions' 2020 GDP, increasing from \$46.9m (2016) to \$501 million (2020) according to our estimates. The sector exhibited a very high GDP growth (24.3%) between 2016 and 2020 primarily driven by its robust performance in Oakville (60% GDP growth) and Halton Hills (27% GDP growth).

Current wireless technologies have enabled the introduction of smart meters and smart grid applications to a certain extent. However, the reliability and latency requirements for certain operations – such as switching electricity sourcing to lowest cost suppliers in real-time e.g. solar to wind according to demand, is currently not offered by current wireless networks.

Utilities are currently faced with rising costs due to increasing system complexities while at the same time, lack the necessary automation tools and real-time preventive controls. 5G can enable **remotely-connected machine intelligence** to real-time preventive control systems. This combined with **connected drones**, and **smart IoT** will enable a significant reduction in costs that can be transferred towards consumer welfare. Furthermore 5G will offer a platform to use civic and energy resources more efficiently and reliably through smart cities and smart grid applications.

5G will facilitate better waste management with applications such as pay-as-you throw digital tracking which monitors and charges for a solid waste disposal using digital technologies and hence reduce the volume of solid waste. The sensors and analytics on water networks can also be used by utilities to manage water resources efficiently thereby reducing water leakages.

e-Health

Healthcare represented 7.3% of the Region's 2020 GDP. The rapid increase in communication technology - adopted by the health sector during the COVID-19 pandemic has laid the foundation for the future of health by enabling several avenues of remote care.

Continuous and **real-time communication** between doctors and patients enhanced by use of 5G technologies, can greatly reduce number of hospital visits and length of hospital stay for patients. This will in turn allow cost savings for patients and better time management by doctors resulting in improved health outcomes.

Advanced technologies like **AI, IoT and big data analytics** showed potential for growth under current Covid crisis. For example, Internet of Things (IoT) are widely used in current pandemic situation by epidemiologists in the process of tracing contacts of infected people, monitoring and managing infected patients who need to quarantine themselves at home, provisioning medical check-ups and remote monitoring of non-infected patients with chronic conditions. This has enabled faster and more accurate collection and sharing of health information both among health systems and between healthcare providers and patients.

While the existing wireless network technologies have enabled a connected health ecosystem comprising of doctors, patients, and health facilities, access to specialized health services such as surgical operations for patients have been a major challenge, due to lack of availability of doctors (surgeons) and fully equipped health facilities in remote and rural areas. 5G can address these challenges by enabling applications such as **remote diagnosis, remote imaging, and remote surgery**, as they require a very low latency to support reliable audio and video operations.

“Moreover, the haptic feedback enabled by various sensors located on the surgical equipment is also needed in remote surgery such that the surgeons can feel what the robotic arms are touching for precise decision-making...it is haptic feedback that requires the tightest delay requirement with the end-to-end round-trip times (RTTs) lower than 1ms.”⁴⁴

5G networks connected to region’s health service centres will enable these applications and vastly increase access to specialized services for residents in rural and remote areas.. 5G-enabled applications promise significant cost savings by reducing the need for transportation and accommodation of patients from rural areas in metropolitan health centres and by enabling better scheduling and utilization of facilities, equipment, professional services in the health sector.

Trade

The Trade sector including both wholesale and retail represented 12.7% of the Region’s 2020 GDP. Increased 5G adoption and use by consumers and businesses have enhanced their interactions - thus generating vast new commercial opportunities in sales, marketing, and after-sale customer service. Capturing and analyzing data through analytics, AI and automation have ushered new era of even more immersive shopping experiences. Retailers using online platforms are better able to guide consumers’ preferences by pushing personalized ads / offers to their virtual accounts. **Augmented Reality (AR)** allows the customer to visualize the item they wish to shop in a personalized setting. For example, many online furniture stores allow the customer to visualize the furniture item in their room settings, thereby improving the shopping experience and encouraging purchase. Consumers will be able to use high-speed mobile data to have “any time access” to online shopping from the comforts of their home without having to travel to nearby stores for making purchases.

Transportation

Transportation represented 2.7% of the Region’s 2020 GDP. The low latency and reliability features of 5G networks will enable major transformations in the transportation sector currently not possible with existing wireless network technologies. For example, while current wireless technologies can provide on-demand information and vehicle-to-vehicle information, **fully autonomous vehicles**, and **fleet platooning** require the ultra-reliability and low latency offered by 5G technology.

The operation of fully autonomous vehicles - in parallel with the roll out of 5G wireless networks, promises to ensure significant improvements in road safety and traffic efficiency as part of a major transformation in the transport infrastructure. Driverless vehicles will require instantaneous and reliable access to data from other vehicles and the surrounding environment to safely automate decisions such as secure spacing between and passing other vehicles.

Fully autonomous vehicles will enhance the productivity of all other sectors that involve vehicle operations, such as warehousing, and particularly mining, construction, manufacturing, health, and so forth. 5G technology will enable advances in e-Transportation that will foster social benefits by making transportation safer as well as making it more accessible for the disabled and elderly populations.

Information, Culture and Education

The Information, Culture and Education sectors combined represented 14% of the Region’s 2020 GDP. With 5G, we expect the demand for IT solutions to grow beyond the levels expected before Covid 19 outbreak across sectors including entertainment, gaming, over the top (OTT) platforms and Education Specific solutions such as videoconferencing, intelligent cloud computing, e-learning platforms, and heightened interest in contactless, underscores contribution of 5G technology in assisting businesses and

societies adapt and stay functional in the remote set-up. As a result, we expect wider adoption of digital solutions variously by workers, performers, students, employers, professionals alike.

5G-enabled virtual reality / augmented reality (VR/AR) applications will transform the notions of viewer and audience by enabling 'fully immersive experiences.

The distinctions between 'live' in-theatre and home viewing will be largely removed.

For example, **4K/8K** streaming and **AR/VR** to mobile devices enabled by 5G will enable a fully immersive experience for users at sporting events and live concerts.

Other major 5G applications include AR-enabled city tours, museum guides and remote learning/teaching. Overall, 5G will greatly facilitate the development of new applications and these in turn, will create new demand in this sector driven by factors such as better coverage, consistent and improved customer experience, faster time-to-market, and increased productivity.

Finance and Insurance

The finance and Insurance sector represented 8.8% of the Region's 2020 GDP. As is the case in other sectors, 5G technology will generate incremental demand and productivity in this sector - primarily due to its ultra-reliable capability. Ultra-reliability will ensure secure, instantaneous delivery of financial transactions over wireless networks. Furthermore, instead of onsite visits, banking agents will be able to conduct remote (training, advisory, consultation, transaction handling) sessions with their client. Ultra-reliability and remote session capabilities will increase customer experience and confidence resulting in new demand and significant cost reductions in this sector. **5G-enabled AI advisers** in banks can replace human interaction with customers to help them through their banking needs. Besides banking, insurance companies and investment advisors also use 5G enabled drones to inspect & monitor insured properties to help streamline client management and reduce fraud. 5G applications are instrumental in strengthening security measures such as facial recognition while accessing high value accounts and making transactions more secure and fraud-proof.

Appendix H: 5G Socio-economic Impact Analysis

The \$12.4 billion (worth 9.66 billion in present value) incremental revenues (demand) projected to be enabled by 5G roll out in the Region will also attract about \$2.56 billion new investment to enable 5G applications across the 19 economic sectors of the Region. About \$770 million (30%) of these investments will be made by the telecommunications sector, and the remaining \$1.79 billion will be invested by the business and industries across all other economic sectors of the Region. These investments represent the estimates for the development and commercialization of 5G-enabled technologies and applications in different economic sectors of the Region such as manufacturing, health care, energy, transportation and so forth.

This means the adoption of 5G wireless technologies in the Region will drive **new investments** to deploy 5G applications (use cases) in different business sectors, which will generate **new demand**, and **productivity improvements**.

To demonstrate economic benefits of 5G technology for the Region our estimates, based on three parallel lines of evidence: *literature review*, *benchmarking*, and *analysis*, were modelled into the following two main categories.

- **5G use case benefits** – incremental sales (demand) and economic gain ratios were developed to estimate the benefits of the development and adoption of 5G technologies in the 19 economic sectors.
- **5G Investment Impact** – investments expected by the businesses for adoptions of 5G applications for initial commercialization leading to follow-on investments for adoption on larger scales.

Accordingly for 19 impacted sectors, we developed the cash flow forecasts (incremental revenues and investments) for the 15-year period (2022-2036). As shown in Table 10, the 5G use case cash flows were estimated based on multiplier ratios developed based on the parallel lines of evidence: literature review, historical data on sales, adoption & use of emerging 5G technologies, and an estimation of the factor to determine economic benefits attributable to 5G technologies.

Table 10: 5G Use Case Industry Revenue Impact in Halton Region

Impacted Driver	Incremental Demand	Explanation
Impacted Variable (15 Year - Present Value)	Revenue: \$847 B	A
5G Adjustment factor	1.1%	B
Success rate (assumed)	100.00%	C
Adjusted Revenue/Productivity Factor	1.140%	D = B x C
GDP/Revenue Ratio	n.a.	E
Incremental Revenue	\$9.66 B	F = A x D
Total Incremental Revenue	\$9.66 B	

Based on the historical growth rate of sales for the past 10 years, total sales (demand) for impacted sectors are estimated to be \$847 billion over 2022-2036. With the adoption of 5G technologies across the impacted sector, the projected revenues are estimated to increase by additional 9.66 billion (1.14%).

To enable these incremental revenues the businesses in the Region will deploy 5G applications (use cases), which according to our estimate will result in new investment of \$2.56 billion as shown in Table 11 below.

Table 11: 5G Investment Impact in Halton Region

Impacted Driver	5G Tech Investment	Explanation
Impacted Variable (15 Year - Present Value)	Revenue: \$847B	A
5G Adjustment factor	1.1%	B
Average Capital Intensity	7.95%	C
Initial Incremental Investments	\$0.77 B	D=A x B x C
Follow on investment factor (assumed)	2.33	E
Follow-on Investments (3 Yr. lag)	\$1.8 B	F = D x E
Total Investment	\$2.56 B	G= D + F

HALTON REGION ECONOMIC IMPACT ANALYSIS

The overall 5G-enabled economy is expected to generate total GDP of **\$12.25 billion** and **91,644** jobs in the Region in 2022-2036.

- The total GDP impact of \$12.25 billion includes the direct impact of \$6.22 billion, the indirect impact of \$2.97 billion, and the induced impact of \$3.05 billion.
- The total employment impact of 91,644 includes the direct impact of 49,103, the indirect impact of 20,752, and the induced impact of 21,788.

	Halton Total 5G Economic Impact			
	<i>Direct impact</i>	<i>Indirect impact</i>	<i>Induced impact</i>	<i>Total impact</i>
Employment (FTEs)	49,103	20,752	21,788	91,644
Gross Domestic Product (\$ million)	\$6,223	\$2,971	\$3,051	\$12,246

The total 5G GDP and employment impact as above will include 5G Investments and 5G Use Case impact. The 5G investment will generate overall GDP of **\$2.28 billion** and 18,977 jobs over 2022-2036.

- The GDP impact of \$2.28 billion includes the direct impact of \$1.02 billion, the indirect impact of \$0.62 billion, and the induced impact of \$0.64 billion.
- The total employment impact of 18,977 includes the direct impact of 10,007, the indirect impact of 4,399, and the induced impact of 4,571.

	Halton		5G Investment Impact	
	<i>Direct impact</i>	<i>Indirect impact</i>	<i>Induced impact</i>	<i>Total impact</i>
Employment (FTEs)	10,007	4,399	4,571	18,977
Gross Domestic Product (\$ million)	\$1,023	\$615	\$640	\$2,279

The adoption and use of 5G technologies across the Region are expected to generate overall GDP of **\$9.97billion** and **72,667** jobs over 2022-2036.

- The GDP impact of \$9.97 billion includes the direct impact of \$5.20 billion, the indirect impact of \$2.36 billion, and the induced impact of \$2.41 billion.
- The total employment impact of 72,667 includes the direct impact of 39,097, the indirect impact of 16,353, and the induced impact of 17,217.

	Halton		5G Use Case Impact	
	<i>Direct impact</i>	<i>Indirect impact</i>	<i>Induced impact</i>	<i>Total impact</i>
Employment (FTEs)	39,097	16,353	17,217	72,667
Gross Domestic Product (\$ million)	\$5,200	\$2,356	\$2,411	\$9,967

BURLINGTON ECONOMIC IMPACT ANALYSIS

Burlington is expected to constitute 36% of Halton's 5G-enabled economy with a GDP contribution of **\$4.43 billion** and **33,466 additional jobs** in 2022-2036.

	Burlington		Total 5G Economic Impact	
	<i>Direct impact</i>	<i>Indirect impact</i>	<i>Induced impact</i>	<i>Total impact</i>
Employment (FTEs)	17,512	7,779	8,175	33,466
Gross Domestic Product (\$ million)	\$2,164	\$1,118	\$1,145	\$4,427

The total 5G GDP and employment impact in Burlington, as above will include 5G Investments and 5G Use Case impact as below.

	Burlington		5G Investment Impact	
	<i>Direct impact</i>	<i>Indirect impact</i>	<i>Induced impact</i>	<i>Total impact</i>
Employment (FTEs)	3,185	1,376	1,422	5,983
Gross Domestic Product (\$ million)	\$303	\$192	\$199	\$695

	Burlington		5G Use Case Impact	
	<i>Direct impact</i>	<i>Indirect impact</i>	<i>Induced impact</i>	<i>Total impact</i>
Employment (FTEs)	14,327	6,403	6,753	27,483
Gross Domestic Product (\$ million)	\$1,861	\$925	\$946	\$3,732

OAKVILLE ECONOMIC IMPACT ANALYSIS

Oakville's 5G-enabled economy is expected to generate a GDP contribution of **\$5.13 billion**, and **37,458 additional jobs** over 2022-2036, reflecting 42% of Halton's 5G driven growth.

	Oakville		Total 5G Economic Impact	
	<i>Direct impact</i>	<i>Indirect impact</i>	<i>Induced impact</i>	<i>Total impact</i>
Employment (FTEs)	20,492	8,292	8,674	37,458
Gross Domestic Product (\$ million)	\$2,734	\$1,179	\$1,215	\$5,128

The total 5G GDP and employment impact in Oakville, as above will include 5G Investments and 5G Use Case impact as below.

	Oakville		5G Investment Impact	
	<i>Direct impact</i>	<i>Indirect impact</i>	<i>Induced impact</i>	<i>Total impact</i>
Employment (FTEs)	4,561	2,074	2,163	8,797
Gross Domestic Product (\$ million)	\$502	\$290	\$303	\$1,094

	Oakville		5G Use Case Impact	
	<i>Direct impact</i>	<i>Indirect impact</i>	<i>Induced impact</i>	<i>Total impact</i>
Employment (FTEs)	15,931	6,218	6,512	28,661
Gross Domestic Product (\$ million)	\$2,233	\$889	\$912	\$4,034

MILTON ECONOMIC IMPACT ANALYSIS

Milton is expected to constitute 13% of Halton's 5G-enabled economy with a GDP contribution of **\$1.62 billion** and **12,397 additional jobs** over 2022-2036.

	Milton		Total 5G Economic Impact	
	<i>Direct impact</i>	<i>Indirect impact</i>	<i>Induced impact</i>	<i>Total impact</i>
Employment (FTEs)	6,903	2,683	2,810	12,397
Gross Domestic Product (\$ million)	\$839	\$382	\$394	\$1,616

The total 5G GDP and employment impact in Milton, as above will include 5G Investments and 5G Use Case impact as below.

	Milton		5G Investment Impact	
	<i>Direct impact</i>	<i>Indirect impact</i>	<i>Induced impact</i>	<i>Total impact</i>
Employment (FTEs)	1,350	567	588	2,505
Gross Domestic Product (\$ million)	\$133	\$79	\$82	\$295

	Milton		5G Use Case Impact	
	<i>Direct impact</i>	<i>Indirect impact</i>	<i>Induced impact</i>	<i>Total impact</i>
Employment (FTEs)	5,553	2,116	2,222	9,892
Gross Domestic Product (\$ million)	\$706	\$303	\$311	\$1,321

HALTON HILLS ECONOMIC IMPACT ANALYSIS

With a 9% share in Halton's 5G-enabled economy, Halton Hills is expected to generate a GDP contribution of **\$1.11 billion** and **8,487 additional jobs** over 2022-2036.

	Halton Hills		Total 5G Economic Impact	
	<i>Direct impact</i>	<i>Indirect impact</i>	<i>Induced impact</i>	<i>Total impact</i>
Employment (FTEs)	4,376	1,994	2,116	8,487
Gross Domestic Product (\$ million)	\$524	\$290	\$296	\$1,110

The total 5G GDP and employment impact in Hilton Hills, as above will include 5G Investments and 5G Use Case impact as below.

	Halton Hills		5G Investment Impact	
	<i>Direct impact</i>	<i>Indirect impact</i>	<i>Induced impact</i>	<i>Total impact</i>
Employment (FTEs)	928	397	414	1,740
Gross Domestic Product (\$ million)	\$90	\$56	\$58	\$204

	Halton Hills		5G Use Case Impact	
	<i>Direct impact</i>	<i>Indirect impact</i>	<i>Induced impact</i>	<i>Total impact</i>
Employment (FTEs)	3,448	1,597	1,702	6,747
Gross Domestic Product (\$ million)	\$434	\$234	\$238	\$906

TOP FIVE SECTOR DRIVING 5G BENEFITS IN THE REGION

As shown in Figure 24 and Figure 25, 5G technology is expected to enhance the growth prospects of GDP and jobs in the **manufacturing** sector across all four municipalities. Improved efficiency and effectiveness in production facilities and its supply chain will dominate the benefits unleashed by adoption of 5G technologies by Halton's advanced manufacturing sectors comprising some 1,150 manufacturers – employing 34,750 professionals and 125 engineering firms, employing 3,825 professionals.⁴⁵ Besides manufacturing, 5G is set to offer improvements and opportunities in a wide array of sectors, including **Information and Cultural Industries, Real Estate, Utilities, Professional Services, Trade, Finance & Insurance, and Education**, through 5G enabling technologies, such as cloud computing, IoTs and AI.

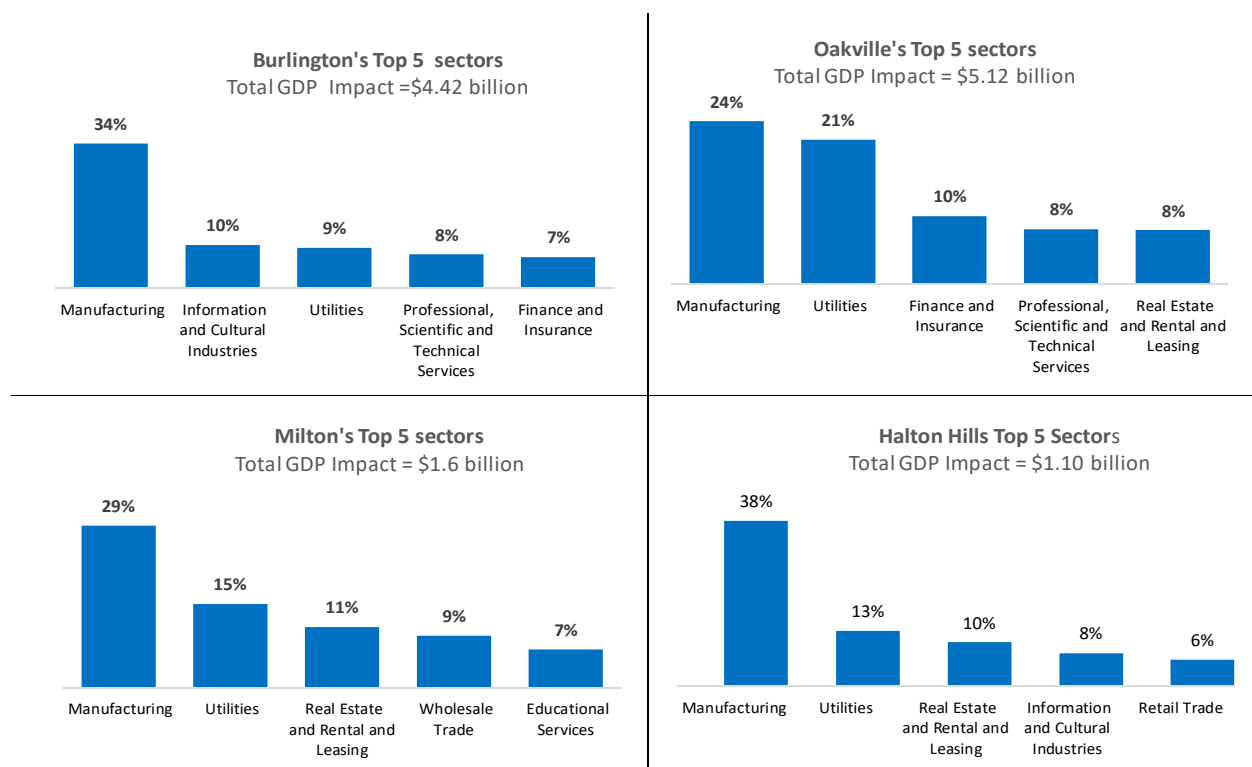


Figure 24: Top 5 impacted sectors by share in total GDP impact in each municipality

Note: Sectors are ranked according to share in respective 5G total GDP Impact

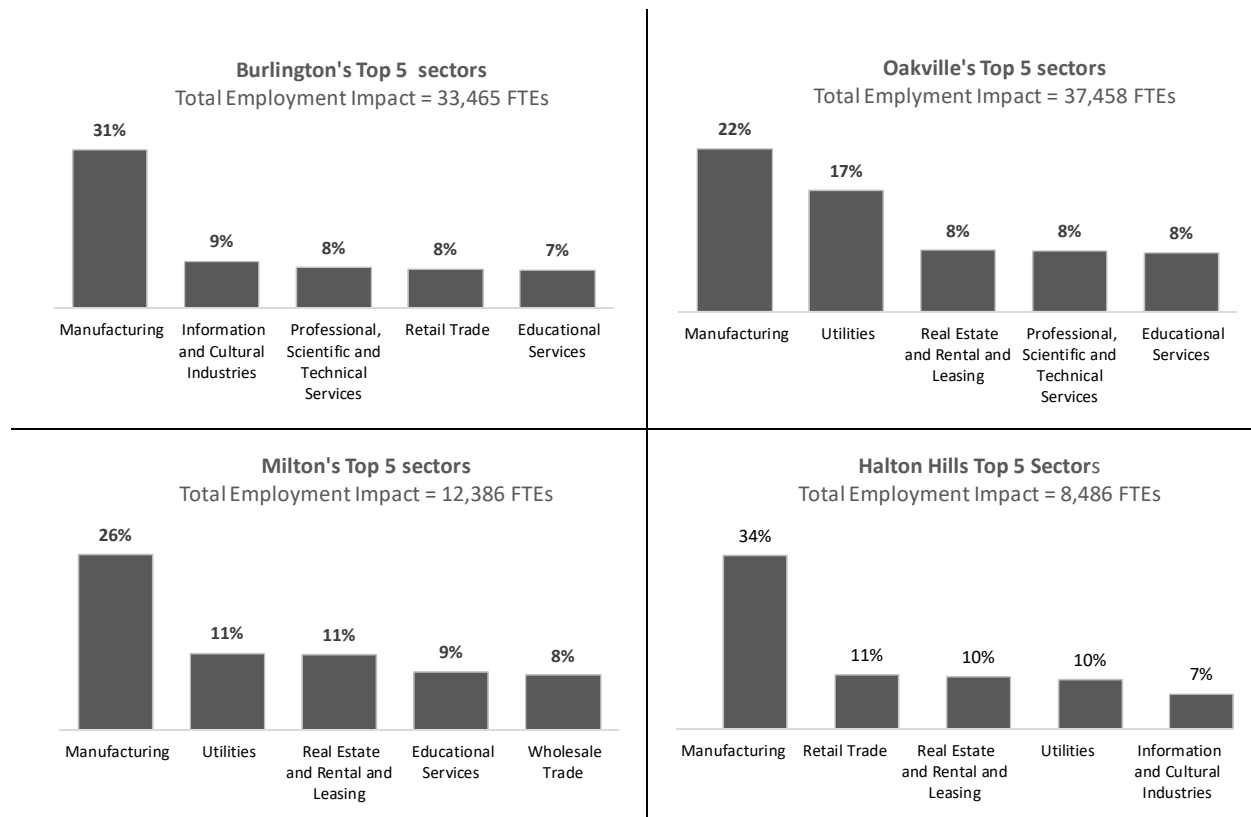


Figure 25: Top 5 impacted sectors by share in total employment impact in each municipality

Note: Sectors are ranked according to share in respective 5G total employment impact

Appendix I: Methodology

The entire modelling exercise followed a two-stage process. In the first stage, our project team analyzed the status of the digital economy sector in Halton Region and its four municipalities.

In the second stage, a forecast of macroeconomic impacts of 5G technology was developed with 15-year projections (2022-2036). For both the stages, distinct economic models were created to estimate the contribution of digital technologies to the Halton Economy and its municipalities.

At the outset, Halton and municipal economies were divided into 20 sectors according to North American Standard Industrial Classification of all Economic Activities (NAICS). Macro-economic data from StatsCan (Canada's National Statistical Agency) and employment data from Halton Employment survey was used to estimate each economic sector's GDP, Output, and other financial metric including sales, capital intensity and compensation of employees.

Economic Baseline Model:

The Halton's digital sector was classified into 7 verticals based on type of digital economic activities using Canadian Digital- Supply and Use Tables published by StatsCan and insights developed using Halton's Employment Survey.

While the Halton Employment Survey captures businesses with physical presence (office building, stores, etc.), required adjustments & approximations were made to account for businesses with online presence only (for example non-store retailers) that constitute an integral part of digital economy. Adjustments made to the data were guided by the underlying assumption that the Digital intensity of each sector at sub-provincial level is same as what exists at national level. While this assumption has limitations, there is currently lack of available data on digital metrics at sub-provincial levels.

Canadian Digital Supply and Use tables were then used to extract relevant information on contribution of Digital industries to sectoral GDP at the national level.

The resulting information was later used to:

- 1) Impute values for businesses which have online presence and were hence not captured in employment survey
- 2) Estimate the proportion of digital goods and services produced by non -digital industries.

Finally, the data for each of the seven digital economy verticals were mapped to Input-Output tables (matrix) in our model to determine their respective economic impact results: GDP, Employment, and Productivity.

The Input-Output Modelling approach encompasses quantitative economic impact assessment by mapping the interdependencies between different sectors of a national economy. The symmetric Input-Output Tables, also known as Input-Output Analytical Tables are derived from the "Supply" and "Use" Tables that form a central part of the system of National Accounts. The main use of these tables is to act as an integration framework for balancing the national accounts and determining an estimate of GDP.

Input-Output tables (I-O Tables) derived from "Supply" and "Use" tables are recognized as the basis for a wide range of macroeconomic models and economic impact analyses.

StatsCan's 2017 input-output table for the province of Ontario was used to develop output and GDP multipliers. Two types of multipliers are used to determine the economic impact, "**Type I Multipliers**" and "**Type II Multipliers**". Type I Multipliers sum together direct and indirect effects while Type II Multipliers also include induced effects

Technically, GDP is comprised of Operating Surplus and labour Income. Our team isolated the incremental labour income from this incremental GDP using the Statistics Canada's Input-Output Tables (Ontario province).

The number of jobs was then calculated using estimated incremental labour income and the information on average industry-wise compensation published by Statistics Canada.

Both GDP and employment impact was disaggregated into the direct, indirect, and induced effects as described below:

- **Direct impact:** Refers to GDP and employment generated due to direct expenditure made by digital industries or in simple terms the value added by the digital industries
- **Indirect impacts:** Refers to GDP and employment generated by the sub-industries that supply inputs to economic agents described above. These digital industries they purchase inputs from other industries called the supplier industries, so when the digital production increases the production of these supplier industries also increases. Indirect impacts capture that part of supplier industries' GDP and employment that is generated while providing inputs to digital industry.
- **Induced impact:** Refers to GDP and employment generated through the re-spending of income earned by the participants in the direct and indirect expenditure ecosystem described above. That is, induced impacts arise from re-spending that occurs in the economy at the household level, e.g., employees of participating firms using their income to purchase goods and services in the general economy.
- **Total economic impact:** The total economic impact is equal to the sum of the direct, indirect, and induced economic impacts.

Economic Impact Forecast Model

From an economic perspective, there are two main drivers of economic impact of 5G adoption and use:

- 1) Investments made in 5G technology contributes *directly* to GDP via the network build-out. The deployment of 5G infrastructure requires heavy investments in equipment and labor, such as the construction of new wireless towers and data centers, upgrades of existing sites to add 5G capabilities, and development of new network architecture and supporting software. These investments generate demand for additional inputs and labor resulting in a substantial impetus to GDP and employment.
- 2) 5G use case Impact: As 5G infrastructure expands, it boosts the uptake 5G applications by enabling improvements to existing applications and development of new use cases across industries. This would add new revenue streams in the sector and generate employment within the economy.

5G adoption and use comes along with advances in speed, latency, and capacity – all leading to productivity improvement across sectors. Besides technical efficiencies – 5G would also enable more efficient and high valued services across businesses.

At its core, the model provides an assessment of how adoption of 5G technologies generates ripples of economic activity through the Halton Region resulting in incremental sales and complimentary capital expenditure.

To estimate the socio-economic contribution of 5G technologies in the Halton Region, a comprehensive modeling approach was applied as illustrated in Figure 26 below⁴⁶:

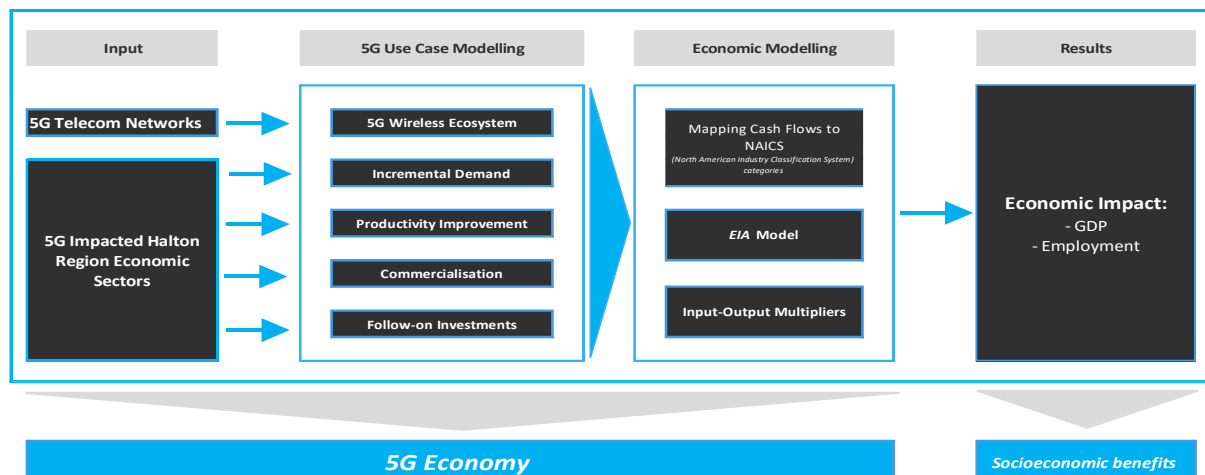


Figure 26: 5G Economic Impact Analysis Modelling Framework

As shown above, based on the modelling of applicable 5G use case for Halton Region's and four municipalities' economic sectors, we develop a 10-year forecast financial model, which is then converted into GDP and employment impacts. That is, we map the outputs of the financial model to the NAICS (North American Industry Classification System) categories, after conversion into present values using a suggested 3% hurdle rate⁴⁷. Finally, EIA Model is used to estimate economic impact results (GDP, Employment), based on Stats Canada relevant Input-Output (I-O) multipliers. The economic impact assessment (GDP and employment) is including the direct, indirect, and induced effects, as described below:

Economic Impact Type	5G Wireless Ecosystem	Commercialization of Research and Development
Direct Impact	Jobs and economic activities created and retained in the Region because of the deployment and operation of 5G Wireless networks in the Region.	Jobs and economic activities generated as result of demand generation, productivity improvement, and new investments, attributable to the development, commercialization of 5G-enabled technologies in the Region.
Indirect Impact	Jobs and economic activities generated by purchases of equipment, supplies and services from other industries	
Induced Impact	Employment and economic activities generated by direct and indirect workers' re-spending of labor income in the Region	

Glossary

1xRTT:	Single-Carrier Radio Transmission Technology
3GPP:	"3rd Generation Partnership Project" between groups of telecommunications associations
AR:	Augmented Reality
AV:	Autonomous Vehicle
CAGR:	Compound Annual Growth Rate
CMDA:	Code Division Multiple Access Technology
CO:	Central Office (Telephone Exchange)
CSA:	Climate Smart Agriculture
eMBB:	Enhanced Mobile Broadband
EVDO:	Evolution-Data Optimized
FDMA:	Frequency Division Multiple Access
FTE:	Full-time equivalent (of an employee)
FWA:	Fixed Wireless Access
Gbps:	Gigabit Per Second
GDP:	Gross Domestic Product
GHz:	Gigahertz
GSM:	Global System for Mobile Communication
HD:	High Definition
HSPA:	High Speed Packet Access
Hurdle Rate	Refers to the minimum rate of return acceptable to stakeholders on a capital investment project.
ICT:	Information and Communication Technology
IMT:	International Mobile Telecommunication system
I-O:	Input-Output
IoT:	Internet of Things
ISED:	Ministry of Industry Science and Economic Development (ISED) of Canada
Kbps:	Kilobit Per Second
LTE:	Long-Term Evolution (LTE) - 4G Mobile Communications Standard
MHz:	Megahertz
mMTC:	Massive Machine Type Communications
ms:	Millisecond
EIA Model:	Economic Impact Assessment Model
NAICS:	North American Industry Classification System
OFDMA:	Orthogonal Frequency-Division Multiple Access
PSTN:	Public Switched Telephone Network
RAN:	Radio Access Network
RTT:	Round-Trip Time or Round-Trip Delay Time (RTD) i.e., length time to send and receive a signal
UMTS:	The Universal Mobile Telecommunications System
uRLLC:	Ultra-reliable and Low-latency Communications
VR:	Virtual Reality

References

- 3GPP, “3GPP system standards heading into the 5G era”, http://www.3gpp.org/news-events/3gpp-news/1614-sa_5g
- Arthur D. Little (Vodafone Group Plc), “Creating a Gigabit Society – The role of 5G”, March 2017
- Campbell, Karen & Diffley, Jim & Fianagan, Bob & Morelli, Bill & O’Neil Brendan & Sideco, Francis, “The 5G economy: How 5G technology will contribute to the global economy”, IHS Markit, 2017
- Cattoni, Andrea & Chandramouli, Devaki & Sartori, Cinzia & Stademann, Rainer & Zanier, Paolo. (2015). Mobile Low Latency Services in 5G. IEEE Vehicular Technology Conference. 2015.
- Chen, He (Henry & Abbas, Rana & Cheng, Peng & Shirvanimoghaddam, Mahyar & Hardjawana, Wibowo & Bao, Wei & Li, Yonghui & Vucetic, Branka. (2017), “Ultra-Reliable Low Latency Cellular Networks: Use Cases, Challenges and Approaches”, https://www.researchgate.net/publication/319478345_Ultra-Reliable_Low_Latency_Cellular_Networks_Use_Cases_Challenges_and_Approaches
- CRTC, Communications Monitoring Report (CMR) 2017:
- Dhar, Sanjay Dha & Rao, Tejas & Al Amine, Majed & Mathias, Kenneth & Dyer, Thomas & Stutchbury, Jason & Chakravarthy, S.E., “How 5G Can Help Municipalities Become Vibrant Smart Cities” Accenture, 2017
- Ge, Xiaohu & Tu, Song & Mao, Guoqiang & Wang, Cheng-Xiang & Han, Tao. (2015). 5G Ultra-Dense Cellular Networks. IEEE Wireless Communications. 23, 2015
- GSMA, “The Mobile Economy North America 2017”, 2017
- He Chen, Rana Abbas, Peng Cheng, Mahyar Shirvanimoghaddam, Wibowo Hardjawana, Wei Bao, Yonghui Li, and Branka Vucetic, “Ultra-Reliable Low Latency Cellular Networks: Use Cases, Challenges and Approaches”, The University of Sydney, NSW 2006, Australia
- IHS Markit, “4G to 5G: what service providers are saying” <https://cdn.ihs.com/www/pdf/ihs-markit-5g-survey-ebook.pdf>
- Huawei and Oxford Economics (2017), “Digital Spillover - Measuring the true impact of the digital economy”
- N. C. Yilmaz, Osman & Eric Wang, Y.-P & A. Johansson, Niklas & Nadia, Brahmi & A. Ashraf, Shehzad & Sachs, Joachim. (2015), “Analysis of ultra-reliable and low-latency 5G communication for a factory automation use case”, 2015 IEEE International Conference on Communications Workshops (ICC), p. 1190-1195
- Naser Al-Falahy and Omar Y. Alani, “Technologies for 5G Networks: Challenges and Opportunities”, IT Professional, Vol. 19, Issue: 1, Jan.-Feb. 2017
- Niels Kellerho, “Mobile and Wireless Blog: 5 Things Worth Knowing About 5G” <http://wi360.blogspot.com/2015/05/5-things-worth-knowing-about-5g.html>
- Osseiran, Afif & Sachs, Joachim & Puler, Imarzio & Mowlér, Mark & Elmgren, Sebastian & Gramnaes, Kristoffer & Koivisto, Aulis & Sabella, Roberto & Zervas, Konstantin, “Manufacturing reengineered: robots, 5G and the Industrial IoT”, Ericsson Business Review, Issue 4, 2015
- Philipp Gerbert, Markus Lorenz, Michael Rüßmann, Manuela Waldner, Jan Justus, Pascal Engel, and Michael Harnisch, Boston Consulting (BCG), “Industry 4.0: The Future of Productivity and Growth in Manufacturing Industries”, APRIL 9, 2015
- Popovski, Petar & Nielsen, Jimmy & Stefanović, Čedomir & de Carvalho, E & Ström, Erik & F. Trillingsgaard, Kasper & Bana, Alexandru-Sabin & Min Kim, Dong & Kotaba, Radoslaw & Park, Jihong & Sørensen, René. (2017). “Ultra-Reliable Low-Latency Communication (URLLC): Principles and Building Blocks”, https://www.researchgate.net/publication/319328021_Ultra-Reliable_Low-Latency_Communication_URLLC_Principles_and_Building_Blocks
- Schulz, Philipp & Matthe, Maximilian & Klessig, Henrik & Simsek, Meryem & Fettweis, Gerhard & Ansari, Junaid & Ali Ashraf, Shehzad & Almeroth, Bjoern & Voigt, Jens & Riedel, Ines & Puschmann, Andre & Mitschele-Thiel, Andreas & Muller, Michael & Elste, Thomas & Windisch, Marcus. (2017), “Latency Critical IoT Applications in 5G: Perspective on the Design of Radio Interface and Network Architecture”, IEEE Communications Magazine, 55, P. 70-78.
- StatsCan (Government of Canada), CANSIM Table 180-0003, <http://www5.statcan.gc.ca/cansim/a26?lang=eng&id=1800003>
- The 5G Economy QUALCOMM study See: <https://www.qualcomm.com/invention/5g/economy>

Endnotes

¹ Nordicity (www.nordicity.com) was assisted by its partner firm NE&S: Networks, Economics & Strategy Inc. (www.nesglobe.com) in the completion of this study

² See United Nations (UN) 2030 Agenda for Sustainable Development. According to the UN 2030 Agenda widespread and equitable access to digital technology are instrumental in achieving a country's sustainable economic development goals (SDG). For example, enhanced digital capabilities help build resilient infrastructure, promote sustainable industrialization, and foster innovation (SDG # 9). It is also instrumental in creating economic and social value across industrial sectors of the economy. For instance, smart and automated manufacturing along with improved digital performance management results in enhanced operational efficiency enabling responsible consumption and production (SDG # 12). Similarly, adoption of advanced digital technologies in health sector will ensure good health and promote well-being for all (SDG # 3), eradicate poverty (SDG # 1); ensure inclusive and equitable quality education and promote lifelong learning opportunities for all (SDG # 4), gender equality (SDG # 5), generate productive employment and economic growth (SDG # 8), reduce inequality (SDG # 10), and build strong institutions (SDG # 16)

³ Existing broadband network technologies such as wireline: Copper-Based (DSL), Coaxial Cable Based wireline, and wireless: 4G/LTE has limitations in terms of meeting future demand for higher speed (over 1Gig Mbps) for internet connectivity and supporting exponential growth in internet traffic (volume). Modern broadband network technologies such as FTTH (Fibre to the home) and 5G Wireless do not have such speed and capacity constraints.

⁴ See Ciena White Paper, **"Five Key Wireline Network Improvements Needed for 5G"** https://media.ciena.com/documents/Five-Key-Wireline-Network-Improvements-Needed-for-5G_WP.pdf

⁵ The 5G Economy Qualcomm study See: <https://www.qualcomm.com/invention/5g/economy>

⁶ *"The US and Canada are notable examples of markets where migration to next-generation devices and networks has been fast. Both were among the first few countries in the world to reach 50% smartphone adoption in 2012, and 50% LTE adoption three years later"* (GSMA, 2017, *"The Mobile Economy North America 2017"*)

⁷ For example, see *"Creating a Gigabit Society – The role of 5G"*, A report by Arthur D. Little for Vodafone Group Plc (March 2017)

⁸ Naser Al-Falahy and Omar Y. Alani, *"Technologies for 5G Networks: Challenges and Opportunities"*, IT Professional, Vol. 19, Issue: 1, Jan.-Feb. 2017.

⁹ Huawei and Oxford Economics, *"Digital Spillover - Measuring the true impact of the digital economy"*, 2017, p.19

¹⁰ 5G refers to the next iteration (fifth generation) of wireless cellular technologies

¹¹ Intelligence Brief: How is 5G faring in South Korea? Mobile World. Source <https://www.mobileworldlive.com/blog/intelligence-brief-how-is-5g-faring-in-south-korea#:~:text=December%201%202018%20is%20a,5G%20launch%20in%20the%20US>.

¹² Small cells and health Published by GSMA 2015. Source: https://www.gsma.com/publicpolicy/wp-content/uploads/2015/03/SmallCellForum_2015_small-cells_and_health_brochure.pdf

¹³ IEEE is generally recognized as the global standards setting organization for wireless services See IEEE C95.1-2019 - IEEE Standard for Safety Levels with Respect to Human Exposure to Electric, Magnetic, and Electromagnetic Fields, 0 Hz to 300 GHz Source: https://standards.ieee.org/standard/C95_1-2019.html

¹⁴ ITU: Preparing for 5G: Evolution of RF-EMF Compliance Standards and Regulations for Mobile Devices Source: https://www.itu.int/en/ITU-D/Regional-Presence/ArabStates/Documents/events/2019/EMF/MILLIGAN_MWF_ITU_5G_Evolution_ComplianceStandardsDevices_Handout.pdf

¹⁵ WHO: Framework for Developing Health-Based EM F Standards published by WHO, 2006

¹⁶ US Federal Communications Commission: Source: <https://www.fcc.gov/engineering-technology/electromagnetic-compatibility-division/radio-frequency-safety/faq/rf-safety>

¹⁷ <https://www.knowyourmobile.com/phones/the-history-of-mobile-phones-from-1973-to-2008-the-handsets-that-made-it-all-happen-d58/>

¹⁸ RF energy is also emitted by common household appliances such as radios, baby monitors, microwaves as well as navigational radar, welding machines, etc.

¹⁹ Also referred to as RF-EMF or radiofrequency - electromagnetic field spectrum. RF-EMFs range in frequency from 3 kilohertz (kHz) to 300 gigahertz (GHz).

²⁰ Adverse health effects of 5G mobile networking technology under real-life conditions Ronald N. Kostoffa, Paul Herouxb, Michael Aschnerc, Aristides Tsatsakisd published by Science Direct Toxicology Letters January 2020 Source: www.elsevier.com/locate/toxlet

²¹ Health Risks Associated with 5G Exposure: A View from the Communications Engineering Perspective Authors: Luca Chiaraviglio , Senior Member, IEEE, Ahmed Elzanaty , Member, IEEE, and Mohamed-Slim Alouini, Fellow, IEEE. Published by Cornell University. June 2020 Source: <https://arxiv.org/abs/2006.00944>

²² Industry Canada: “The (RF) limits are set far below the threshold (at least 50-fold safety margin) for all known established adverse health effects” Source: <https://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf11467.html>

²³ Technical Guide for Safety Code 6: Health Canada's Radiofrequency Exposure Guidelines.

Safety Code 6, administered by Health Canada, encompasses the evidence-based safety limits for human exposure to RF-EMFs in the range of 3 kHz to 300 GHz, which includes the operating frequency range of 5G and other wireless communication technologies. Source: <https://www.canada.ca/en/health-canada/services/environmental-workplace-health/reports-publications/radiation/safety-code-6-health-canada-radiofrequency-exposure-guidelines-environmental-workplace-health-health-canada/technical-guide.html>

²⁴ Source: 3GPP system standards heading into the 5G era. http://www.3gpp.org/news-events/3gpp-news/1614-sa_5g

²⁵ “Measuring digital economic activities in Canada: Initial estimates” National Economic Accounts Division, Statistics Canada, 2019

²⁶ Defining and Measuring the Digital Economy, U.S. Bureau of Economic Analysis (2018)

²⁷ “Towards a Framework for Measuring the Digital Economy”, OECD (2018)

²⁸ OECD’s proposed accounting framework for the digital economy are referred to as satellite accounts, which are supplementary statistics that allow measurement and analysis of the digital economy in the existing macro-economic frameworks.

²⁹ Key Indicators of the Labour Market, Ninth edition Geneva, International Labour Office, 2016, Chapter 16.

³⁰ Productivity is commonly defined as a ratio between output (e.g., GDP) and inputs (unit of labour). That is, it measures how efficiently production inputs such as labour are being used in an economy to produce a given level of output. “There are different measures of productivity and the choice between them depends either on the purpose of the productivity measurement and/or data availability. One of the most widely used measures of productivity is Gross Domestic Product (GDP) per hour worked.” <http://www.oecd.org/std/productivity-stats/40526851.pdf>.

³¹ For example, see Ciena’s white paper: “Five Key Wireline Network Improvements Needed for 5G” (<https://www.ciena.com/insights/white-papers/5-Key-Wireline-Network-Improvements-Needed-for-5G.html>)

³² “We recognize that a well-developed broadband infrastructure is essential for Canadians to participate in the digital economy.” (<https://crtc.gc.ca/eng/internet/performance.htm>)

³³ For example, 2021 Business Plan of Northumberland County, ON states “...broadband connectivity in the County is essential to sustainable growth. Work on the development of a Broadband Strategy aims to address these challenges” (<https://www.northumberland.ca/en/county-government/resources/Documents/2021-Budget-Docs/BP-and-IP/IT-2021-Draft-BP-IP.pdf>)

³⁴ Based on our past experience we believe it is reasonable to assume that our assessment represents broadband coverage in the Region with +/- 20% accuracy level.

³⁵ Gigabit service is any service with a downstream data rate at or above 940 Mbps (CRTC CMR 2019, p.276)

³⁶ A unified broadband network means an integrated fibre based wireline network delivering broadband connectivity services across the Region, using uniform standards in terms of internet speed capability and quality of service.

³⁷ <https://crtc.gc.ca/eng/archive/2020/2020-366.htm>

³⁸ https://www.ola.org/sites/default/files/node-files/bill/document/pdf/2021/2021-04/b257ra_e.pdf

³⁹ In order to model the socio-economic benefits of 5G technologies we assumed the next generation future proof broadband network infrastructure (both wireline and wireless) will be deployed in the Region over the next 3-5 years. If these deployments are delayed, realisation of 5G benefits in the Region will also be delayed accordingly,

⁴⁰ Huawei and Oxford Economics, “Digital Spillover - Measuring the true impact of the digital economy”, 2017, p.3

⁴¹ Based on Nordicity’s assessment (field survey) conducted in July 2020 in another similar jurisdiction in Ontario

⁴² Impact of Covid 19 on the global Manufacturing Industries. Accessed at <https://www.prnewswire.com/news-releases/impact-of-covid-19-on-the-global-manufacturing-industry-2020-301042150.html>

⁴³ Rao, S.K., Prasad, R. Impact of 5G Technologies on Industry 4.0. Wireless Pers Commun 100, 145–159 (2018). <https://doi.org/10.1007/s11277-018-5615-7>

⁴⁴ He Chen, Rana Abbas, Peng Cheng, Mahyar Shirvanimoghaddam, Wibowo Hardjawana, Wei Bao, Yonghui Li, and Branka Vucetic, *“Ultra-Reliable Low Latency Cellular Networks: Use Cases, Challenges and Approaches”*, The University of Sydney, NSW 2006, Australia

⁴⁵ <https://www.halton.ca/For-Business/Invest-Halton/Sectors/Manufacturing>

⁴⁶ Socioeconomic benefits referred to as benefits in terms of GDP and employment including (a) Direct benefits representing 5G Wireless Networks Ecosystem, and (b) Spillover benefits represent new demand generation and productivity improvement because of 5G-enabled technologies in Canadian impacted economic sectors

⁴⁷ Hurdle rate refers to rate of return assumed/applied to calculate present values (PV) of cash flows. This rate can vary according to the nature of project, rate of return required by the investors/stakeholders. It may range from 3%-8%, depending on actual financing structure of the project. Hurdle rate of 3% is typically used by Treasury for PV calculations.

Sent on behalf of Suzanne Gillies, Committee Clerk, City of Burlington

Good day,

At the City of Burlington Council meeting held on January 18, 2021, the following recommendation was approved:

Whereas on October 20, 2021 Halton Regional Council approved Report MO-05-21 – Halton Region Waterpipe Smoking By-law and enacted By-law 41-21, to Regulate Waterpipe Smoking in the Regional Municipality of Halton; and

Whereas pursuant to the Municipal Act, 2001, S.O. 2001, c.25, Section 115, (5) when a smoking in public places by-law from an upper tier municipality is passed, a majority of councils of all its lower municipalities must pass a resolution giving their consent, representing a majority of all electors in the upper tier municipality.

Therefore, be it resolved that the Council for the Corporation of the City of Burlington consents to the passage and implementation of Halton Region By-law 41-21, to Regulate Waterpipe Smoking in the Regional Municipality of Halton; and

That a copy of this resolution be sent to the municipal clerks of Halton Region, Town of Oakville, Town of Milton, and the Town of Halton Hills to provide notice of giving consent to Halton Region By-law 41-21.

If you have any questions, please contact Kevin Arjoon, City Clerk, at Kevin.Arjoon@burlington.ca



January 7, 2022

The Honorable Doug Ford

Premier of Ontario

Room 281, Legislative Building, Queen's Park

Toronto, ON M7A 1A1

RE: [GTA WEST CORRIDOR \(413 HIGHWAY\)](#) (5.10)

Dear Premier;

This will confirm that the members of Markham City Council approved the following resolution at the December 14, 2021 Council Meeting:

CONTEXT AND HISTORY

1. Whereas the Province of Ontario initiated an Environment Assessment process in 2007 for the planning and construction of the proposed Highway 413; and,
2. Whereas the final recommendation of the Stage 1 Provincial Environmental Assessment (2012) was to first put in place the transportation system management components, rapid transit, freight rail improvements and expansion of existing highways prior to construction of a new expressway; and,
3. Whereas the Stage 2 Environmental Assessment (new expressway) undertaken by the previous provincial government was shelved because of strong objections by an Expert Panel in the fields of rural development, renewable cities, agriculture, environment, and efficient transportation who sounded alarms over predicted irreversible ecological harm caused by the uncontrolled, low density urban sprawl enabled by the Corridor; and,
4. Whereas the current Provincial Government revived the \$6+ billion Highway 413 proposal in 2018, saying it could relieve congestion issues in the fast-growing Toronto suburbs and boost Ontario's economy; and,
5. Whereas concerned citizens of Markham and a significant number of reputable organizations have demanded cancellation of the Highway 413 project, including: Environmental Defense, the David Suzuki Foundation, the Federation of Urban Neighborhoods, Gravel Watch, Halton Environmental Network, National Farmers' Union-Ontario, Rescue Lake Simcoe Coalition, Sustainable Vaughan, Concerned Citizens of King Township (CCKT), Transport Action Ontario, Greenbelt Council, the Wilderness Committee and Sustainable Mississauga; as well as formal opposition of Councils from the municipalities of Halton Hills, Caledon, Orangeville, Vaughan, Brampton, Mississauga, King and the City of Toronto; and,
6. Whereas the Federal Government has decided to conduct an Impact Assessment study for the proposed Highway 413; and,

AGRICULTURE

7. Whereas Ontario farming and food processing together employ one million persons and generate over \$35 billion economic benefits annually; and,
8. Whereas the Greater Golden Horseshoe is the third largest agricultural producer in North America after California and Chicago; and,
9. Whereas the Province of Ontario is proposing to develop the Highway 413 by razing 809 hectares of pristine farmlands, some of which are Class A and Class B farmlands and many of which will immediately cease to be farmed and other lands which over time will be developed for non-agricultural uses; and,
10. Whereas the Minister of Agriculture, Food and Rural Affairs has not completed an Agricultural Impact Assessment for the proposed Highway 413; and,

NATURAL ENVIRONMENT

11. Whereas the proposed Highway 413 will cut across 85 waterways, and destroy protected Greenbelt lands including 7 entire woodlots, 220 important wetlands and valley land features, 10 different species-at-risk and hundreds of acres of vulnerable wildlife habitat; and,
12. Whereas the Greenbelt Plan's permission for new infrastructure which negatively impacts key natural heritage features, key hydrologic features or key hydrologic areas requires determination that there is "no reasonable alternative" and that this has not been established through a planning process; and,
13. Whereas the Toronto and Region Conservation Authority (TRCA), which is the regulatory authority for developments in flood plains, wetlands, and valley lands, has also raised concerns about the potential impact of the proposed Highway 413 as well as the streamlined Environmental Assessment process; and,

GREENHOUSE GASES

14. Whereas the City of Markham has taken reasonable measures to mitigate against climate change to reduce greenhouse gas emissions (GHGs); and,
15. Whereas responding to the climate emergency requires immediate re-evaluation of all transportation plans as GHGs from transportation is the highest single source of emissions; and,
16. Whereas the Province must take immediate measures to decrease GHGs through alternatives such as increasing public transit, including the necessary local public transit networks, to enable broad access to the higher order transit including high-speed electric trains; and,

INDUCED DEMAND AND ROAD ALTERNATIVES

17. Whereas the Highway 407 was created as a truck by-pass in order to relieve congestion on Highway 401, but the Highway 407 was tolled, thereby limiting the amount of relief provided by the Highway 407; and,
18. Whereas it is well known that, as new road capacity (lane-km) is constructed, traffic demand grows to fill this capacity by the phenomenon known as "induced demand", resulting in roads that are as congested as they were prior to the expansion of the road; and,

19. Whereas several reasonable highway network management alternatives to the proposed Highway 413 exist and were recommended by the Expert Panel, including possible subsidies or congestion pricing that would shift truck traffic to the under-utilized Highway 407; and,

TRANSIT ALTERNATIVES AND TRANSIT ORIENTED COMMUNITIES

20. Whereas the proposed Highway 413 will allocate limited Provincial funds to the movement of vehicular traffic instead of much needed transit investments for complete transit-oriented communities; and,
21. Whereas transit investments and good land use planning decisions are vital to creating complete transit-oriented communities which are economically vibrant, where people and goods are moved seamlessly, and where multiple modes of transportation support the community including a focus on active transportation; and,
22. Whereas the proposed Highway 413 will lead to greater demand for development with more than 13,350 hectares of Whitebelt lands in the Greater Golden Horseshoe (Caledon and Vaughan) being impacted, leading to greater urban sprawl and development that is not supportive of transit investment; and,
23. Whereas analysis has shown (<https://ontario.transportation.ca>) that investment in various unfunded rapid transit projects, including GO Transit, 407 Transitway and LRT/BRT projects which can move 4-10 times the number of people as the proposed Highway 413, for the same invested dollars; and,
24. Whereas the 407 Transitway has been planned for decades but has no approved funding for its construction; and,
25. Whereas the City of Markham has consistently supported development of the transit-oriented communities, to support long term inter-regional transportation solutions and to enhance integration of our existing communities and supported rail integrated communities along both the GO Transit rail lines and the 407 rail transitway; and,
26. Whereas [Uncontrolled urban growth](#) threatens these resources and is widely seen to embed unsustainable infrastructure maintenance costs, deepen traffic congestion problems, increase transportation-related emissions of greenhouse gases and smog precursors, and reinforce social divisions; and,
27. Whereas planning and infrastructure decisions affect the shape of communities for decades, even centuries to come; and,
28. Whereas Transit Oriented Communities (TOC) positively contribute toward a more environmentally friendly and economically sustainable communities, reduce the reliance on car-dependent trips for all members of the community, therefore reducing Vehicle Kilometers Travelled (VKT) and reducing the high costs of auto ownership thus contributing to achieving affordable housing outcomes; and,
29. Whereas strategic land-use planning requires public policy that communicates TOCs as integral to a community's long-term vision with supportive official plan and zoning provisions that facilitate density and mixed land use; and,

NOW THEREFORE, BE IT RESOLVED:

1. That the Council of the City of Markham does not support the proposed Highway 413 at this time; and,

2. That the Council of the City of Markham continues to support an integrated GTHA rail transit network which includes high speed rapid rail transit running beside the Highway 407 (407 Transitway); and,
3. That the Council of the City of Markham fully supports a complete Federal Environmental Impact Study pursuant to s.9(1) of the Impact Assessment Act (I.A.A.), prior to any advancement of the proposed Highway 413 project; and,
4. That the Council of the City of Markham requests that the Province undertake an economic evaluation and time travel analysis of Highway 407 versus the proposed Highway 413 including the potential for congestion and non-peak hour pricing or other highway management alternatives; and,
5. That if the proposed Highway 413 does not proceed, that the funding allocated for the proposed Highway 413 should be redirected to provide for rapid transit in the Regions of York and Peel such as investment in the 407 Transitway, improved GO service on the Kitchener and Milton lines, a new GO transit line to Bolton; and,
6. That the Council of the City of Markham recommends that the Province undertake a comprehensive economic benefits analysis of the potential for TOCs along the 407 Transitway, GO Rail Transit Network and new LRT/BRT lines versus the cost of urban sprawl triggered by the proposed Highway 413; and,
7. That the Province undertake an integrated review of the Provincial Growth Plan for the Greater Golden Horseshoe and the Metrolinx Regional Transportation Plan to develop a sustainable communities strategy to provide consistent and comprehensive policies for achieving affordable housing near TOC stations including policies to achieve the Province's goal of 50 percent of all new housing over the next 30 years being within 800-1,000 metres of rapid rail transit station or high frequency (15 minutes or less, peak hour) bus transit; and,
8. That the Province must also update its affordable housing program to recognize the relationship between housing affordability and transit including the positive role of housing near rail transit TOC stations to improve the operational efficiency of the Provincial investment in mass rail transit; and,
9. That Ontarians need serious, transparent, and accountable infrastructure planning processes, based on clear and consistent rules designed to advance the environmental, social, and economic sustainability of their communities; and,
10. That a copy of this resolution be provided to the Regions of York, Peel and Halton, the Cities of Richmond Hill, Vaughan, Brampton, Mississauga, Toronto and the Towns of Milton, Caledon, and Halton Hills; and further,
11. That this Resolution be forwarded to:
 - Doug Ford, Premier of Ontario;
 - Peter Bethlenfalvy, Minister of Finance;
 - Caroline Mulroney, Minister of Transportation;
 - Kinga Surman, Minister of Infrastructure and Transit-Oriented Communities;
 - David Piccini, Minister of Environment and Climate Change;
 - Stan Cho, Associate Minister of Transportation (GTA);
 - Steve Clark, Minister of Municipal Affairs and Housing;

- Lisa Thompson, Minister of the Agriculture, Food and Rural Affairs;
- Victor Fedeli, Minister of Economic Development, Job Creation and Trade;
- Andrea Horwath, Leader of the Official Opposition & Ontario NDP Party;
- Steven Del Duca, Leader of the Ontario Liberal Party;
- All Members of Federal Parliament in the Regional Municipality of York and Peel;
- All Members of Provincial Parliament in the Regional Municipality of York and Peel;
- All Members of Regional Council in the Regional Municipality of York and Peel;
- All City Clerks in the Regional Municipalities of York and Peel;
- Rt Hon. Justin Trudeau, Prime Minister of Canada;
- Chrystia Freeland, Federal Minister of Finance;
- Hon Omar Alghabra, Federal Minister of Transport;
- Hon Marie Claude Bibeau, Minister of Agriculture and Agri-Food;
- Melanie Joly, Federal Minister of Economic Development;
- Dominic Leblanc, Federal Minister of Infrastructure and Communities;
- Jonathan Wilkinson, Federal Minister of Natural Resources;
- Steven Guilbeault, Federal Minister of Environment and Climate Change;
- Wayne Emmerson, Chairman and CEO, York Region;
- John Mackenzie, CEO, Toronto And Region Conservation Authority;
- Phil Verster, President and CEO, Metrolinx.

Should you have any questions, please contact Loy Cheah at LCheah@markham.ca

Yours sincerely,



Kimberley Kitteringham
City Clerk

Cc: Peter Bethlenfalvy, Minister of Finance;
Caroline Mulroney, Minister of Transportation;
Kinga Surman, Minister of Infrastructure and Transit-Oriented Communities;
David Piccini, Minister of Environment and Climate Change;
Stan Cho, Associate Minister of Transportation (GTA);
Steve Clark, Minister of Municipal Affairs and Housing;
Lisa Thompson, Minister of the Agriculture, Food and Rural Affairs;
Victor Fedeli, Minister of Economic Development, Job Creation and Trade;
Andrea Horwath, Leader of the Official Opposition & Ontario NDP Party;
Steven Del Duca, Leader of the Ontario Liberal Party;
All Members of Federal Parliament in the Regional Municipality of York and Peel;
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Jonathan Wilkinson, Federal Minister of Natural Resources;
Steven Guilbeault, Federal Minister of Environment and Climate Change;
Wayne Emmerson, Chairman and CEO, York Region;
John Mackenzie, CEO, Toronto And Region Conservation Authority;
Phil Verster, President and CEO, Metrolinx.

JAN 26 2022

**NO NUISANCE NOISE ONTARIO
NNNO!**

c/o Thomas R. Bell
PH 201 -2 Westney Road North
AJAX, Ontario
L1T 3H3
Email: thomasrbell@hotmail.com
Telephone: (905) 683-2455

January 23, 2022

Mayor R. Bonnette and Council
Town of Halton Hills
1 Halton Hills Dr.
Georgetown, ON
L7G 5G2

**SUBJECT: Nuisance noise created by
modified/missing mufflers**

Dear Mayor Bonnette and Councillors:

As the elected representatives of one of the 60 largest municipalities in Ontario, we are soliciting your assistance in helping your constituents to experience a quieter, less noise -polluted life while aiding millions of other Ontarians to enjoy a quieter world as well.

Our group started as a group of 106 condo dwellers who sent a petition to the Mayor and Councillors of the Town of Ajax. We petitioned that they do something about the ever-increasing, ear-deafening noises being produced by vehicles whose mufflers have been altered to create and amplify noises such as backfires and machine gun sounds, to name but a few.

The Mayor and Councillors were very supportive of our request but we quickly learned that our concern was really with the Highway Traffic Act. The Town of Ajax had passed a Council Resolution earlier in the year dealing with the noise issue and were doing as much as possible given the current provincial legislation.

We feel certain that this is not just an Ajax problem and that you likely have heard from your constituents that this is a problem and perhaps have even experienced it for yourself.

Our purpose in writing to you is to ask whether or not your jurisdiction has anything on record dealing with vehicular noise. If you do, we would appreciate receiving a copy. If you don't, we respectfully ask that you consider a resolution similar to the one passed by the Town of Ajax. We have taken the liberty of attaching a copy.

On, or about, March 15, 2022 it is our intention to write to the Honorable Caroline Mulroney, Minister of Transportation. With the assistance of all 60 jurisdictions, hopefully, the voices of over eleven million Ontarians would be heard and the government would change the Highway Traffic Act to include at least some of our suggestions. As this is an election year there is a possibility that other parties might see this as an issue as well.

Our letter to the Ontario government will include copies of the current legislation that are in force in various localities throughout the province along with suggestions for amendments to the Highway Traffic Act such as:

- (a) Including a specific and enforceable decibel limit, e.g. 80 decibels
- (b) On conviction that a sizeable fine be imposed
- (c) Offenders be required, within a given period, to supply proof that the vehicle has been re--modified to at least meet current standards

As the Highway Traffic Act has not adequately dealt with the noise pollution problem, the financial responsibility for the costs associated with implementing and operating the program be paid for by the government for a period of 5 years. The costs to include

- (i) purchase and upkeep of the necessary monitoring equipment
- (ii) training of local personnel
- (iii) financial liability for the payment of local enforcement officers

As the government would be financing the program, any fines levied should be shared on an 80% government, 20% local basis.

We are hopeful that you, and the council, will help us to eliminate this health jeopardizing problem by providing a copy of the legislation that is currently in force in your region or by enacting legislation and providing us with a copy.

Thank you in advance for any assistance that you may be able to provide.

Yours truly



Tom Bell

On behalf of NNNO!

**The Corporation of the Town of Ajax
June 21, 2021
Council Resolution Extract**



NOW THEREFORE BE IT RESOLVED THAT:

1. Ajax Council urge the Province of Ontario to work with the Lieutenant Governor to expedite the proclamation of section 75.1 of the Highway Traffic Act (Better for People, Smarter for Business Act, 2019, S.O. 2019, c. 14, Sched. 16, s. 11);
2. The Ministry of Transportation be requested to set a maximum decibel count for exhaust systems to ensure that exhaust systems with the capability of exceeding 80 decibels will not be available for sale and will not be permitted in the Province of Ontario, and consider reviewing and increasing associated penalties for non-compliance;
3. The Province of Ontario be requested to provide funding for police services in Ontario to be equipped with approved decibel monitor devices to aid in effective enforcement efforts; and
4. A copy of this motion be sent to the Hon. Caroline Mulroney, Minister of Transportation, the Hon. Rod Phillips, Minister of Long-Term Care and MPP for Ajax, all Durham Region Members of Provincial Parliament, the Region of Durham, all Durham municipalities, Durham Regional Police Service, and the Ontario Provincial Police.

Carried

Questions regarding the contents of this extract may be directed to the undersigned.

Alexander Harras
Manager of Legislative Services / Deputy Clerk
Town of Ajax
T: 905-619-2529 x 3342
E: alexander.harras@ajax.ca

PROCLAMATION
FEBRUARY 2022
BLACK HISTORY MONTH

WHEREAS Black History Month recognizes the contributions that People of African and Caribbean descent have made to Canada, shaping its identity

AND WHEREAS Black History Month was first recognized in Ontario as of February 1993

AND WHEREAS National recognition occurred on December 14th, 1995 when the House of Commons unanimously agreed to a motion presented by the Honourable Jean Augustine to recognize February as Black History Month

AND WHEREAS The United Nations proclaimed 2015-2024 the Decade for people of African Descent, an important step in the international community recognizing that people of African descent represent a distinct group whose human rights must be promoted and protected

AND WHEREAS Black History Month in Canada is very important as it educates Canadians. Few Canadians know that slavery once existed in Canada, or that many of the British Loyalists who came here after the American Revolution were Black

AND WHEREAS Black History Month continues to provide the Town of Halton Hills with the opportunity to learn, to share and to celebrate the important contributions and vital role that Canadians of African descent have made to strengthen the social, economic and cultural mosaic of our community, province, country and the world

NOW THEREFORE, I, Mayor Rick Bonnette of the Town of Halton Hills, do hereby proclaim **February 2022** as **Black History Month** in the Town of Halton Hills and encourage support for this proclamation.



Rick Bonnette
Mayor, Town of Halton Hills



AORS

PROMOTING **KNOWLEDGE**. PURSUING **EXCELLENCE**.

December 13, 2021

Town of Halton Hills
Attn: Mayor Rick Bonnette
1 Halton Hills Drive
Halton Hills, ON L7G 5G2

Attention: Mayor Rick Bonnette and Council

Re: Andy Domingos CRS-I

Dear Mayor and Council Members:

On behalf of the Association of Ontario Road Supervisors (AORS), I would like to congratulate your employee, **Andy Domingos** for his recent **Certified Road Supervisor - Intermediate** certification. As well, thank you for supporting your employee and we encourage you to publicly acknowledge this achievement.

AORS has been serving public works professionals since 1961. In 1996 AORS was granted – by Provincial Legislation – the exclusive right to use the designation ‘Certified Road Supervisor’ (CRS). The four levels of Certification – Associate, CRS, Intermediate and Senior – have mandatory experience and education criteria established by the AORS Education Committee and Certification Board. Certified individuals may publicize their credential by using initials after their names and we would certainly encourage your employee to do so.

Certification is important for your Municipality because it increases corporate ‘professionalism’, accountability and morale. Certified Road Supervisors use their broad base of knowledge to make confident decisions and therefore serve Council and public more effectively.

AORS is committed to the training and development of experienced, reliable and efficient personnel for the construction and maintenance of public roads in rural and urban municipalities across Ontario.

Thank you again for supporting AORS and for helping us meet our objectives.

Yours truly,

John Maheu, M.A.Sc., P.Eng.
Executive Director

cc. Andy Domingos CRS-I

268 Maiden Lane, Suite 206, P.O. Box 2669, St. Marys, ON N4X 1A4
Tel: 226.661.2002 • Fax: 226.661.2003 • admin@aors.on.ca • www.aors.on.ca



AORS
PROMOTING **KNOWLEDGE**. PURSUING **EXCELLENCE**.

December 13, 2021

Town of Halton Hills
Attn: Mayor Rick Bonnette
1 Halton Hills Drive
Halton Hills, ON L7G 5G2

Attention: Mayor Rick Bonnette and Council

Re: Dan King Assoc. R.S.

Dear Mayor and Council Members:

On behalf of the Association of Ontario Road Supervisors (AORS), I would like to congratulate your employee, **Dan King** for his recent **Associate Road Supervisor** certification. As well, thank you for supporting your employee and we encourage you to publicly acknowledge this achievement.

AORS has been serving public works professionals since 1961. In 1996 AORS was granted – by Provincial Legislation – the exclusive right to use the designation ‘Certified Road Supervisor’ (CRS). The four levels of Certification – Associate, CRS, Intermediate and Senior – have mandatory experience and education criteria established by the AORS Education Committee and Certification Board. Certified individuals may publicize their credential by using initials after their names and we would certainly encourage your employee to do so.

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Thank you again for supporting AORS and for helping us meet our objectives.

Yours truly,

John Maheu, M.A.Sc., P.Eng.
Executive Director

cc. Dan King Assoc. R.S.