



AGENDA MATERIAL

COMMITTEE OF THE WHOLE

MEETING DATE: MONDAY, JUNE 27, 2022

LOCATION: S. H. BLAKE MEMORIAL AUDITORIUM
(Council Chambers)

TIME: 6:30 P.M.



MEETING: Committee of the Whole

DATE: Monday, June 27, 2022

Reference No. COW - 30/53

CLOSED SESSION in the McNaughton Room at 5:00 p.m.

Committee of the Whole - Closed Session

Chair: Councillor Aldo Ruberto

Closed Session Agenda will be distributed separately to Members of Council and EMT only.

DISCLOSURES OF INTEREST

OPEN SESSION in S.H. Blake Memorial Auditorium at 6:30 p.m.

Committee of the Whole - Administrative Services Session

Chair: Councillor Mark Bentz

DISCLOSURES OF INTEREST

CONFIRMATION OF AGENDA

Confirmation of Agenda - June 27, 2022 - Committee of the Whole

WITH RESPECT to the June 27, 2022 Committee of the Whole, we recommend that the agenda as printed, including any additional information and new business, be confirmed.

PRESENTATIONS

Response to Unsheltered Homelessness Pilot Project

Memorandum from Cynthia Olsen, Manager - Community Strategies, relative to the above noted.
(Distributed Separately)

ITEMS ARISING FROM CLOSED SESSION

REPORTS OF COMMITTEES, BOARDS AND OUTSIDE AGENCIES

Inter-Governmental Affairs Committee Minutes

Minutes of Meeting 02-2022, 03-2022 and 04-2022 of the Inter-Governmental Affairs Committee held on March 14, 2022, April 7, 2022 and May 9, 2022, for information.

Audit Committee Minutes

Minutes of Meeting 03-2021 of the Audit Committee held on December 10, 2021, for information.

Community Safety & Well-Being Advisory Committee Minutes

Minutes of Meeting 01-2022, of the Community Safety & Well-Being Advisory Committee, held on April 13, 2022, for information.

REPORTS OF MUNICIPAL OFFICERS

City of Thunder Bay 2019-2022 Corporate Strategic Plan – Revised Implementation Plan and Final Progress Update

Report R 101/2022 (City Manager's Office - Strategic Initiatives & Engagement) presenting the City of Thunder Bay 2019-2022 Corporate Strategic Plan – Revised Implementation Plan, for information.

Memorandum from Tracie Smith, Director - Strategic Initiative & Engagement, dated May 16, 2022, requesting to provide a presentation relative to the above noted.

For information only.

Heritage Register – 281 Ray Court (Doctor's Cottage)

Report R 104/2022 (Office of the City Clerk - City Manager's Office) recommending that 281 Ray Court (Doctor's Cottage) be listed on the City of Thunder Bay Heritage Register.

WITH RESPECT to Report R 104/2022 (City Manager's Office - Office of the City Clerk), we recommend that the following property be added to the City of Thunder Bay Heritage Register:

1. 281 Ray Court (Doctor's Cottage);

AND THAT any necessary by-laws be presented to City Council for ratification.

Report R 108/2022 (Corporate Services & Long Term Care - Corporate Information Technology) - Single Source Purchase of Software Modules and Related Implementation Services for the City's Property Information System (AMANDA)

Report R 108/2022 (Corporate Services & Long Term Care – Corporate Information Technology) recommending that City Council approve the use of the negotiated method of procurement as outlined in Sections 4.08 and 4.09 of the Supply Management By-law No. 113- 2011 to approve the purchase of additional software modules for the City's Property Information System (AMANDA) and related implementation services in the amount of \$507,536.04 (inclusive of HST) from Granicus, LLC (Granicus).

WITH RESPECT to Report R 108/2022 (Corporate Services & Long Term Care – Corporate Information Technology), we recommend that the use of the negotiated method of procurement as outlined in Sections 4.08 and 4.09 of the Supply Management By-law No. 113- 2011 be approved for the purchase of additional software modules for the City's Property Information System (AMANDA) and related implementation services in the amount of \$507,536.04 (inclusive of HST) from Granicus, LLC (Granicus);

AND THAT the Manager – Supply Management be authorized to issue the required purchase orders to Granicus;

AND THAT the General Manager – Development and Emergency Services be authorized to sign all documentation related to this matter;

AND THAT any necessary by-laws be presented to City Council for ratification.

Restricted Acts (Lame Duck) Provisions

Report R 109/2022 (City Manager's Office - Office of the City Clerk) recommending that City Council delegate certain authorities to Administration relative to Section 275 of the Municipal Act, 2001.

WITH RESPECT to Report 109/2022 (City Manager's Office – Office of the City Clerk), we recommend that City Council delegate certain authorities to Administration relative to Section 275 of the *Municipal Act*, 2001, specifically:

1. That authority to expend money related to real property matters or disposition of any real or personal property in value exceeding \$50,000, be delegated to the General Manager of Development & Emergency Services in concert with the City Treasurer & General Manager of Corporate Services and Long Term Care;
2. That authority to expend money related to real property matters or disposition of any real or personal property, in value exceeding \$50,000, relating to the development at Prince Arthur's Landing and Pool 6 lands, Victoriaville Centre and Chapples Park be delegated to the City Manager in concert with the General Manager of Development & Emergency Services and the City Solicitor;
3. That authority to settle matters in value exceeding \$50,000, currently under litigation be delegated to the City Solicitor in concert with the City Manager;

4. That authority to apply for and receive grant funding from other levels of government, agencies or the private sector be subject to approval by the City Manager in concert with the City Treasurer & General Manager of Corporate Services and Long Term Care;
5. That the authority to take any and all necessary steps to protect the interests of the City of Thunder Bay through any action or other legal proceeding, in value exceeding \$50,000, be delegated to the City Solicitor in concert with the City Manager;
6. That the authority of the City Manager to approve appropriation change orders be increased from \$500,000 to \$2,000,000 in concert with the City Treasurer & General Manager of Corporate Services and Long Term Care;
7. That the authority to execute passage of debenture by-laws with respect to capital works approved by either 2022 Council reports or prior year budgets be delegated to the City Clerk in concert with the City Treasurer & General Manager of Corporate Services and Long Term Care, with the Mayor and City Clerk as signatories;

All to be effective should City Council for the City of Thunder Bay become subject to the provisions of Section 275 and expiring on November 15, 2022;

AND THAT any necessary by-laws be presented to City Council for ratification.”

Memorandum of Understanding - Metis Nation of Ontario

Report R 111/2022 (City Manager's Office - Strategic Initiatives & Engagement, Indigenous Relations Office (IRO)) recommending that Council accept the above mentioned Relationship Agreement Update.

WITH RESPECT to Report R 111/2022 (City Manager's Office - Strategic Initiatives and Engagement, Indigenous Relations Office (IRO)), we recommend that the following Relationship Agreement Update be approved;

AND THAT the City of Thunder Bay Memorandum of Understanding (MOU) with the Thunder Bay Métis Council (Métis Nation of Ontario) be approved;

AND THAT the Mayor be designated as signatory on behalf of the city of Thunder Bay;

AND THAT any necessary By-laws be presented to City Council for ratification.

Food and Organic Waste Diversion Program – Implementation Plan

Report R 24/2022 (Infrastructure & Operations - Environment) recommending the development and implementation of a food and organic waste diversion (Green Bin) program to achieve and maintain compliance with the requirements of the Provincial Policy Statement, and for the optimization of the City's collection services with the use of new technology and policies to minimize the cost of implementing the new program and achieve effective participation.

This report was introduced as a 'first report' at the June 6, 2022 Committee of the Whole meeting to allow Council and the general public time to consider the implications of the report.

Report R 24/2022 (Infrastructure & Operations - Environment) Food and Organic Waste Diversion Program – Implementation Plan re-presented.

WITH RESPECT to Report R 24/2022 (Infrastructure & Operations – Environment), we recommend the implementation of a curbside Food and Organic Waste Diversion (Green Bin) Program to single family households starting in 2025 and multi-family properties in 2026 be approved;

AND THAT Green Bin service to local businesses and institutions be evaluated once the residential program is implemented;

AND THAT the City's curbside Leaf and Yard Waste collection program be expanded to four (4) collection events annually beginning in 2023;

AND THAT Garbage Collection services be amended by utilizing proven industry best practices as outlined in this report to achieve compliance with the required diversion targets for Green Bin waste as identified in the Provincial Policy Statement;

AND THAT automated cart-based collection of Garbage and Green Bin waste be implemented for single-family households starting in 2025;

AND THAT all waste collection vehicles purchased between 2022 and 2025 be outfitted auto-cart ready and with split body compartments to accommodate co-collection of Garbage and Green Bin waste;

AND THAT an aerobic Green Bin processing solution as identified through the Request for Information (RFI) process is the preferred option for the City of Thunder Bay;

AND THAT Administration release a Request for Proposal (RFP) for the procurement of an aerobic Green Bin processing solution for the City's program and report back to Council by December 2022 with a recommendation and source of financing;

AND THAT Administration finalize a detailed program implementation plan, including program costs and design parameters and report back to Council by January 2023;

AND THAT the costs associated with this new program development and expansion be added to the Solid Waste and Recycling Services Operating and Capital Budgets for 2023 and beyond for Council's consideration;

AND THAT any necessary by-laws are presented to City Council for ratification.

Contract 10, 2022 - Hot-In-Place Asphalt Paving

Report R 99/2022 (Infrastructure & Operations – Engineering & Operations), recommending that Contract 10, 2022 for Hot-In-Place Asphalt Paving be awarded to Pioneer Construction Inc., which submitted a tender in the amount of \$1,258,553.04 (inclusive of HST).

WITH RESPECT to Report R 99/2022 (Infrastructure & Operations – Engineering & Operations), we recommend that Contract 10, 2022 for Hot-In-Place Asphalt Paving be awarded to Pioneer Construction Inc., which submitted a tender in the amount of \$1,258,553.04 (inclusive of HST); it being noted that the amount shown is based on estimated quantities; final payment for this Contract will be based on measured quantities for the completed work;

AND THAT the General Manager of Infrastructure and Operations report significant variations in the Contract quantities to City Council;

AND THAT the Mayor and Clerk be authorized to sign all documentation related to this matter;

AND THAT any necessary By-laws be presented to City Council for ratification.

Contract 11, 2022 - Multi-Use Trails and Parks

Report R 96/2022 (Infrastructure & Operations - Engineering & Operations) relative to the above noted. (Distributed Separately)

OUTSTANDING ITEMS

Outstanding List for Administrative Services as of June 14, 2022

Memorandum from City Clerk Krista Power, dated June 14, 2022 providing the Administrative Services Outstanding Items List, for information.

NEW BUSINESS

ADJOURNMENT

MEETING DATE 06/27/2022 (mm/dd/yyyy)

SUBJECT Confirmation of Agenda

SUMMARY

Confirmation of Agenda - June 27, 2022 - Committee of the Whole

RECOMMENDATION

WITH RESPECT to the June 27, 2022 Committee of the Whole, we recommend that the agenda as printed, including any additional information and new business, be confirmed.



MEETING DATE 06/27/2022 (mm/dd/yyyy)

SUBJECT Response to Unsheltered Homelessness Pilot Project

SUMMARY

Memorandum from Cynthia Olsen, Manager - Community Strategies, relative to the above noted. (Distributed Separately)



MEETING DATE 06/27/2022 (mm/dd/yyyy)

SUBJECT Inter-Governmental Affairs Committee Minutes

SUMMARY

Minutes of Meeting 02-2022, 03-2022 and 04-2022 of the Inter-Governmental Affairs Committee held on March 14, 2022, April 7, 2022 and May 9, 2022, for information.

ATTACHMENTS

- 1 IGA Minutes March 14 2022
- 2 IGA Minutes April 7 2022
- 3 IGA Minutes May 9 2022

DATE: MONDAY, MARCH 14, 2022

MEETING NO. 02-2022

TIME: 12:08 P.M.

PLACE: MICROSOFT TEAM MEETING

CHAIR: COUNCILLOR BRIAN MCKINNON

PRESENT *via electronic participation:*

Councillor Albert Aiello
Councillor Shelby Ch'ng
Councillor Brian McKinnon

OFFICIALS *via electronic participation:*

Norm Gale, City Manager
Krista Power, City Clerk
Erin Nadon, Executive Administrator to the City
Manager

GUESTS *via electronic participation:*

Councillor Rebecca Johnson
Councillor Peng You
Kerri Marshall, General Manager Infrastructure
and Operations
Kayla Dixon, Director of Engineering

RESOURCE PERSON *via electronic
participation:*

Jeff Howie, Policy Assistant to the Mayor

1.0 DISCLOSURES OF INTEREST

There were no disclosures announced at this time.

2.0 AGENDA APPROVAL

MOVED BY: Councillor Albert Aiello
SECONDED BY: Councillor Shelby Ch'ng

With respect to the March 14, 2022 Inter-Governmental Affairs Committee, we recommend that the agenda as printed, including any additional information and new business, be confirmed.

CARRIED

3.0 APPOINTMENT OF CHAIR AND VICE CHAIR

The City Manager administered the nomination of Chair.

It was the consensus of the Committee that with respect to the position of Chair of the Inter-Governmental Affairs Committee for the City of Thunder Bay we recommend that Councillor Brian McKinnon be appointed Chair of the Committee until November 30, 2022 or until such time as a replacement has been appointed, as required annually.

The Chair of the Inter-Governmental Affairs Committee administered the nomination of Vice Chair.

It was the consensus of the Committee that with respect to the position of Vice Chair of the Inter-Governmental Affairs Committee for the City of Thunder Bay we recommend that Councillor Shelby Ch'ng be appointed Vice Chair of the Committee until November 30, 2022 or until such time as a replacement has been appointed, as required annually.

4.0 MINUTES OF PREVIOUS MEETINGS

The Minutes of Meeting No. 08-2021 held on December 13, 2021 and Meeting No. 01-2022 held on March 7, 2022, of the Inter-Governmental Affairs Committee, to be confirmed.

MOVED BY: Councillor Albert Aiello
SECONDED BY: Councillor Shelby Ch'ng

THAT the Minutes of Meeting No. 08-2021 held on December 13, 2021 and Meeting No. 01-2022 held on March 7, 2022, of the Inter-Governmental Affairs Committee, be confirmed..

CARRIED

5.0 REVIEW OF TERMS OF REFERENCE

A discussion was held at a meeting of the Inter-Governmental Affairs Committee on March 8, 2021; it was the consensus of the Committee that a smaller group be developed to review and update the Terms of Reference and bring back changes to the full committee once completed.

The priority of Administration throughout 2021 has been to respond to the COVID-19 Pandemic, as such, work related to the Inter-Governmental Affairs Committee Terms of Reference remains outstanding.

6.0 ADVOCACY – PEDESTRIAN BRIDGE NEEBING-MCINTYRE FLOODWAY

Copy of memo from Councillor Mark Bentz, City of Thunder Bay to City Clerk Krista Power, City of Thunder Bay dated January 28, 2022, relative to the above-noted, for consideration.

WITH RESPECT to Report No. 1/2022 (Corporate Services & Long-Term Care – Financial Services) we recommend that the Infrastructure and Operations budget be amended by reallocating the \$120,000 allocated for the Vickers/Carrick Street bridge design to the recreational trail maintenance budget;

AND THAT the design work be deferred until 2023 to allow for further negotiations and work to establish a partnership with CN to achieve a joint crossing on the Neebing-McIntyre Floodway;

AND THAT, Administration, with the assistance the Intergovernmental Affairs Committee as needed, pursue dialog with CN Rail to explore such a partnership.

Copy of memo from Director Kayla Dixon, City of Thunder Bay to the Inter-Governmental Affairs Committee dated March 7, 2022, relative to the above-noted, for consideration.

Director Kayla Dixon shared the outcome of the initial meeting with CN held on February 23, 2022. CN is willing to explore a joint bridge crossing on the Neebing-McIntyre Floodway once administration has provided CN more details, in writing, on how safety and clearance concerns would be addressed. Administration is preparing the request to CN for their consideration by the end of March 2022. Once feedback has been received from CN administration will return to the Inter-Governmental Affairs Committee to provide an update and determine if further advocacy is required.

7.0 ADVOCACY – REVIEW OF TOLL ROADS

Copy of memo from Councillor Peng You, City of Thunder Bay to Councillor Brian McKinnon, Chair – Inter-Governmental Affairs Committee, City of Thunder Bay dated December 21, 2021, relative to the above-noted, for consideration.

WITH RESPECT to the Memorandum from Councillor Peng You dated December 21, 2021, we recommend that the Inter-Governmental Affairs Committee take on the task of advocating for changes in legislation that would allow municipalities to designate a highway as a toll highway;

AND THAT opportunities to advocate for change be included when meeting with NOMA, OGRA and AMO;

AND THAT any necessary by-laws be presented to City Council for ratification.

Councillor Peng You appeared before Committee via MS Teams, provided an update relative to the above noted and responded to questions.

Discussion was held relative to the above noted.

MOVED BY: Councillor Shelby Ch'ng

SECONDED BY: Councillor Albert Aiello

WITH RESPECT to the memorandum from Councillor Peng You, we recommend that the Inter-Governmental Affairs Committee pursue the potential for advocacy for the authority to install and implement toll roads within the municipality of Thunder Bay;

AND THAT this item be added to the list of potential speaking points with the Minister of Transportation in an effort to gain further information and understanding;

AND THAT the information gathered at OGRA be shared with the Inter-Governmental Affairs Committee and relevant members of Administration for future decision should that be required.

CARRIED

8.0 ADVOCACY - 2021 DISTRICT OF THUNDER BAY POINT IN TIME COUNT

Copy of letter from Chair Lucy Kloosterhuis, The District of Thunder Bay Social Services Administration Board to The Honourable Steve Clark, Minister of Municipal Affairs and Housing, The Honourable Merrilee Fullerton, Minister of Children, Community and Social Services, The Honourable Christine Elliot, Minister of Health and The Honourable Michael Tibollo, Associate Minister of Mental Health and Addictions dated February 17, 2022, relative to the above-noted, for consideration.

9.0 BUSINESS ARISING FROM PREVIOUS MINUTES

9.1 Ring of Fire Update

Wyloo Metals recently invested in NorOnt Resources. An information session is scheduled for March 24, 2022 to provide an overview of Wyloo Metals recent investment in NorOnt Resources and upcoming activities related to the Ring of Fire development.

9.2 2022 Annual Ontario Good Roads Association (OGRA) Conference

The conference dates have changed for this in-person event. The new conference dates are from Sunday, April 10 – Wednesday, April 13, 2022.

9.3 Request to The District of Thunder Bay Social Services Administration Board (TBDSSAB)

Copy of letter from City Clerk Krista Power, City of Thunder Bay to Chief Administration Officer William Bradica, TBDSSAB, dated December 13, 2021, relative to the above-noted, for information.

Copy of letter from Chief Administration Officer William Bradica, TBDSSAB to City Clerk Krista Power, City of Thunder Bay, dated January 21, 2022, relative to the above-noted, for information.

Copy of memo from City Manager Norm Gale, City of Thunder Bay to City Clerk Krista Power, City of Thunder Bay, dated January 27, 2022, relative to the above-noted, for information.

9.4 Advocacy – Private Members Bill 17, the Gender Affirming Health Care Advisory Committee Act

The committee agreed to defer this item to the next scheduled Inter-Governmental Affairs Committee meeting.

10.0 2022 ANNUAL RURAL ONTARIO MUNICIPAL ASSOCIATION (ROMA) CONFERENCE

Copy of letter from Deputy Minister Monique Rolf von den Baumen-Clark, Ministry of Northern Development, Mines, Natural Resources and Forestry to Mayor Bill Mauro, City of Thunder Bay, dated February 25, 2022, relative to the above-noted, for information.

11.0 CORRESPONDENCE

11.1 National Childcare Program

Copy of letter from Deputy Clerk Jennifer Hill, Township of Hornepayne to The Honourable Doug Ford, Premier of Ontario and The Honourable Steve Clark, Minister of Municipal Affairs and Housing, dated December 13, 2021, relative to the above-noted, for information.

Copy of resolution from the Northwestern Ontario Municipal Association, dated December 14, 2021, relative to the above-noted, for information.

Copy of letter from Acting Town Clerk Colleen Hutt, Niagara on the Lake to City Clerk Bonnie Nistico-Dunk, City of St. Catharines, dated January 12, 2022, relative to the above-noted, for information.

11.2 Ontario Fire Code, Retrofit Section 9.5

Copy of letter from Deputy Clerk Jennifer Hill, Township of Hornepayne to The Honourable Doug Ford, Premier of Ontario and The Honourable Steve Clark, Minister of Municipal Affairs and Housing, dated December 13, 2021, relative to the above-noted, for information.

11.3 Denouncing Quebec's Bill 21

Copy of press release from Ontario Big City Mayors, dated December 17, 2021, relative to the above-noted, for information.

Copy of letter from Deputy Clerk Tara Reynolds, Town of Bradford West Gwillimbury to The Honourable Doug Ford, Premier of Ontario, dated December 22, 2021, relative to the above-noted, for information.

Copy of memo from Jason Veltri, Chair – Anti-Racism & Respect Advisory Committee, dated January 26, 2022, relative to the above-noted, for information.

City Clerk Krista Power indicated that Council has endorsed the initiative that asks the Canadian Coalition of Inclusive Municipalities to create a nationwide campaign that highlights the harmful widespread impacts of Bill 21 on social cohesion and inclusion in Canada; and that a letter has been sent to the Federal government requesting it unequivocally condemn and challenge Quebec's Bill 21.

11.4 AMO Policy Update – New Year Calls to Action and other issues of municipal concern

Copy of newsletter from the Association of Municipalities Ontario, dated January 5, 2022, relative to the above-noted, for information.

City Manager Norm Gale outlined that he has been asked to sit on an AMO Technical Working Group on Municipal Insurance Costs and Joint & Several Liability; and that a briefing note is being worked on for presentation at the Ontario Good Road Association conference.

11.5 “Catch and Release” Justice

Copy of letter from City Clerk Amy Burkhart, City of Sarnia to The Right Honourable Justin Trudeau, Prime Minister of Canada and The Honourable Doug Ford, Premier of Ontario, dated December 16, 2021, relative to the above-noted, for information.

Copy of letter from Clerk Lizet Scott, Corporation of the Township of Perth South to The Right Honourable Justin Trudeau, Prime Minister of Canada and The Honourable Doug Ford, Premier of Ontario, dated February 9, 2022, relative to the above-noted, for information.

11.6 Bill 13, the Supporting People and Businesses Act, 2021 and Bill 276, the Supporting Recovery and Competitiveness Act, 2021

Copy of letter from Minister Steve Clark, Ministry of Municipal Affairs and Housing to Mayor Bill Mauro, City of Thunder Bay, dated January 6, 2022, relative to the above-noted, for information.

11.7 Support for the Expansion of the Northern Ontario School of Medicine

Copy of resolution from the Northwestern Ontario Municipal Association, dated January 17, 2022, relative to the above-noted, for information.

Copy of news release from the Ministry of Colleges and Universities, dated March 4, 2022, relative to the above-noted, for information.

Chair Brian McKinnon provided a brief update on the above-noted.

11.8 Ontario Launches Northern Transportation Task Force

Copy of news release from the Ministry of Transportation of Ontario, dated January 21, 2022, relative to the above-noted, for information.

Copy of letter from Minister Caroline Mulroney, Ministry of Transportation to President Danny Whalen, Federation of Northern Ontario Municipalities (FONOM) and President Wendy Landry, Northwestern Ontario Municipal Association (NOMA), dated February 28, 2022, relative to the above-noted, for information

11.9 Ministry of Transportation Winter Maintenance – Overview – 2021-22

Copy of the Winter Maintenance Package from the Ministry of Transportation of Ontario, dated December 13, 2021, relative to the above-noted, for information.

11.10 Ontario Housing Affordability Roundtable

Copy of letter from Minister Steve Clark, Ministry of Municipal Affairs and Housing to Mayor Bill Mauro, City of Thunder Bay, dated February 7, 2022, relative to the above-noted, for information.

11.11 Anti-Racism and Discrimination Initiatives for an Inclusive Northern Ontario

Copy of news release from the Northern Policy Institute, dated February 15, 2022, relative to the above-noted, for information.

11.12 Request to Dissolve Ontario Land Tribunal (OLT)

Copy of letter from Town Clerk Michael de Rond, The Corporation of the Town of Aurora to the Honourable Doug Ford, Premier of Ontario, dated February 22, 2022, relative to the above-noted, for information.

Copy of letter from Town Clerk Paula Parker, The Corporation of the Town of Kingsville to the Honourable Doug Ford, Premier of Ontario, dated February 22, 2022, relative to the above-noted, for information.

Copy of resolution from Regional Clerk Christopher Raynor, The Regional Municipality of York, dated March 2, 2022, relative to the above-noted, for information.

City Clerk Krista Power provided an update relative to the above noted and indicated that Council will receive training on the Planning Act on March 21, 2022. This is an evolving issue which will be addressed by Council.

11.13 Ontario Big City Mayors (OBCM) Meeting Summary

Copy of news release from the OBCM, dated February 25, 2022, relative to the above-noted, for information.

11.14 Northwestern Ontario Municipal Association (NOMA) Board Meeting Summary Report

Copy of NOMA Meeting Summary Report, dated February 28, 2022, relative to the above-noted, for information.

11.15 Firefighter Certification

Copy of letter from President Wendy Landry, Northwestern Ontario Municipal Association to the Honourable Sylvia Jones, Solicitor General of Ontario, dated February 28, 2022, relative to the above-noted, for information.

City Manager Norm Gale indicated that a report will be brought to Council, relative to the above noted.

11.16 Seeking input about the use of floating accommodations on waterways over Ontario's public lands

Copy of letter from Director Peter D. Henry, Crown Forests and Lands Policy Branch Ministry of Northern Development, Mines, Natural Resources and Forestry, dated March 3, 2022, relative to the above-noted, for information.

12.0 OUTSTANDING ITEMS

Outstanding List for the Intergovernmental Affairs Committee as of March 7, 2022.

Memorandum from Executive Administrator Erin Nadon, dated March 7, 2022 providing the Intergovernmental Affairs Committee Outstanding Items List, for information.

13.0 NEW BUSINESS

None.

14.0 NEXT MEETING

The next regular Inter-Governmental Affairs Committee meeting is scheduled for April 11, 2022 at 12:00 p.m. via Microsoft Teams. Selection of new meeting date will be required as delegates will be attending the Ontario Good Roads Association (OGRA) conference.

The committee agreed that the next meeting of the Inter-Governmental Affairs Committee will be scheduled on May 9, 2022 and that another meeting will be organized to review the briefing notes for the OGRA Conference.

15.0 ADJOURNMENT

The meeting adjourned at 12:55 p.m.

DATE: THURSDAY, APRIL 7, 2022

MEETING NO. 03-2022

TIME: 11:38 A.M.

PLACE: MICROSOFT TEAM MEETING

CHAIR: COUNCILLOR BRIAN MCKINNON

PRESENT *via electronic participation:*

Mayor Bill Mauro
Councillor Shelby Ch'ng
Councillor Brian McKinnon
Councillor Kristen Oliver

OFFICIALS *via electronic participation:*

Norm Gale, City Manager
Erin Nadon, Executive Administrator to the
City Manager

GUESTS *via electronic participation:*

Linda Evans, General Manager Corporate
Services and Long Term Care
Kayla Dixon, Director of Engineering

RESOURCE PERSON *via electronic
participation:*

Jeff Howie, Policy Assistant to the Mayor

1.0 DISCLOSURES OF INTEREST

None.

2.0 AGENDA APPROVAL

MOVED BY: Mayor Bill Mauro
SECONDED BY: Councillor Shelby Ch'ng

With respect to the April 7, 2022 Inter-Governmental Affairs Committee, we recommend that the agenda as printed, including any additional information and new business, be confirmed.

CARRIED

3.0 2022 Annual Ontario Good Roads Association (OGRA) Conference

Reviewed the scheduled sessions at the 2022 OGRA Annual Conference being held in-person from April 10 - 13, 2022. It was the consensus of the committee that the following individuals will present the City of Thunder Bay priorities for discussion at the provincial minister delegation meetings.

- Andrea Horwath NDP | Northern Platform - Lead Shelby Ch'ng; Linda Evans
- Lisa MacLeod Minister of Tourism, Sport and Cultural Industries | Science North – Lead Bill Mauro
- Caroline Mulroney Minister of Transportation | Alstom and NWA Expressway – Lead Bill Mauro; Brian McKinnon

- Jim McDonell P.A. Ministry of Municipal Affairs and Housing | Homelessness and Transitional Housing – Lead Shelby Ch’ng
- Stephen Blais Liberal Party Critic | Northern Platform
- Amajot Sandhu PA Ministry of Infrastructure | Infrastructure

4.0 NEW BUSINESS

None.

5.0 NEXT MEETING

The next regular Inter-Governmental Affairs Committee meeting is scheduled for Monday, May 9, 2022 at 12:00 p.m. via Microsoft Teams.

6.0 ADJOURNMENT

The meeting adjourned at 11:56 a.m.

DATE: MONDAY, MAY 9, 2022

MEETING NO. 04-2022

TIME: 12:02 P.M.

PLACE: MICROSOFT TEAM MEETING

CHAIR: COUNCILLOR BRIAN MCKINNON

PRESENT *via electronic participation:*

Mayor Bill Mauro
Councillor Brian McKinnon
Councillor Albert Aiello

OFFICIALS *via electronic participation:*

Norm Gale, City Manager
Erin Nadon, Executive Administrator to the
City Manager

GUESTS *via electronic participation:*

Councillor Rebecca Johnson

RESOURCE PERSON *via electronic participation:*

Jeff Howie, Policy Assistant to the Mayor

1.0 DISCLOSURES OF INTEREST

None.

2.0 AGENDA APPROVAL

MOVED BY: Mayor Bill Mauro
SECONDED BY: Councillor Albert Aiello

With respect to the May 9, 2022 Inter-Governmental Affairs Committee, we recommend that the agenda as printed, including any additional information and new business, be confirmed.

CARRIED

3.0 MINUTES OF PREVIOUS MEETINGS

The Minutes of Meeting No. 02-2022 held on March 14, 2022 and Meeting No. 03-2022 held on April 7, 2022, of the Inter-Governmental Affairs Committee, to be confirmed.

MOVED BY: Councillor Albert Aiello
SECONDED BY: Mayor Bill Mauro

THAT the Minutes of Meeting No. 02-2022 held on March 14, 2022 and Meeting No. 03-2022 held on April 7, 2022, of the Inter-Governmental Affairs Committee, be confirmed.

CARRIED

4.0 BUSINESS ARISING FROM PREVIOUS MINUTES

4.1 Ring of Fire Update

Brief discussion regarding Wyloo Metals recent investment in NorOnt Resources and upcoming activities related to the Ring of Fire development.

4.2 2022 Annual Ontario Good Roads Association (OGRA) Conference

It was the consensus of the Committee that Chair Brian McKinnon and Policy Assistant to the Mayor Jeff Howie provide update to Council relative to the above-noted.

4.3 Advocacy – Private Members Bill 17, the Gender Affirming Health Care Advisory Committee Act

Jason Veltri, President - Rainbow Collective Thunder Bay has asked that this item be placed on hold pending the outcome of the provincial election.

A discussion was held related to the Committee Terms of Reference (TOR) and the process in which deputations are brought to the Intergovernmental Affairs committee. Executive Administrator Erin Nadon to review the TOR and report back to the committee.

4.4 Advocacy – Pedestrian Bridge Neebing-McIntyre Floodway

A request letter has been sent to CN for their consideration to share the structure over the Neebing-McIntyre Floodway for a pedestrian bridge, a meeting date will be secured shortly to discuss next steps.

CN will be hosting an open house in early June 2022. This may be an opportunity to discuss this issue. Also discussed the possibility of sharing the structure with CN at the OGRA Conference, the discussion was positive.

4.5 Advocacy – Review of Toll Roads

City Manager Norm Gale to provide a memo update relative to the above noted to Councillor Peng You.

5.0 RURAL AND NORTHERN IMMIGRATION PILOT (RNIP)

Copy of letter from Assistant Deputy Minister Marian Campbell Jarvis, Immigration, Refugees and Citizenship Canada to Chief Executive Officer Eric Zakrewski, Thunder Bay Community Economic Development Commission (CEDC), dated March 31, 2022, relative to the above-noted, for information.

The committee discussed the content of the above noted letter.

6.0 ASSOCIATION OF MUNICIPALITIES ONTARIO (AMO) 2022 CONFERENCE

The Association of Municipalities of Ontario (AMO) Conference is being held in person from August 14-17, 2022 in Ottawa, Ontario.

Attendance at the 2022 AMO Conference.

MOVED BY: Councillor Albert Aiello
SECONDED BY: Mayor Bill Mauro

With respect to the 2022 AMO Conference, being held August 14-17, 2022, we recommend that all expenses for this conference be paid for Mayor Bill Mauro, Councillor Brian McKinnon, Councillor Shelby Ch'ng, City Manager Norm Gale and Policy Assistant Jeff Howie;

AND THAT these expenses be paid through the Inter-Governmental Affairs Committee budget.

CARRIED

Policy Assistant Jeff Howie indicated that requests for delegation meetings with Cabinet Ministers are due by June 24, 2022. The committee discussed and recommended that the issues brought to the OGRA Conference also be brought to the AMO Conference. Policy Assistant Jeff Howie to circulate to the committee, via email, the current briefs and gather additional topics for consideration.

7.0 CORRESPONDENCE

7.1 Railway Crossing Maintenance/Construction Expenses

Copy of letter from Mayor Cheryl Fort, Township of Hornepayne to President Joanne Vanderheyden, Federation of Canadian Municipalities, dated March 7, 2022, relative to the above-noted, for information.

Copy of resolution from the Township of Hornepayne, dated February 9, 2022, relative to the above-noted, for information.

It was the consensus of the Committee that a resolution be crafted and shared with Council in support of the Township of Hornepayne, relative to the above-noted.

7.2 Review of Service Delivery - Fire Services County of Simcoe

Copy of letter from Chief Administrative Officer George Vadeboncoeur, Town of Wasaga Beach to Director of Legislative Services/Clerk John Daly, County of Simcoe, dated March 11, 2022, relative to the above-noted, for information.

7.3 Ontario's Natural Resource Users Key Ask for Ontario's 2022-23 Budget

Copy of letter from Anishinabek Nation, Bingwi Neyaashi Anishinaabek, Federation of Northern Ontario Municipalities, Northwestern Ontario Municipal Association, Ontario Federation of Anglers and Hunters, Ontario Forest Industries Association, Ontario Fur Managers Federation, Ontario Mining Association, Ontario Prospectors Association, Ontario Waterpower Association, Red Rock Indian Band, Rural Ontario Municipal Association, The Town of Hearst, Thunder Bay Chamber of Commerce, Timmins Chamber of Commerce, Unifor and the United Steelworkers to The Honourable Greg Rickford, Minister of Indigenous Affairs, Minister of Northern Development, Mines, Natural Resources and Forestry, dated March 14, 2022, relative to the above-noted, for information.

7.4 Support for the Expansion of the Northern Ontario School of Medicine

Copy of resolution from the Township of Chapple, dated March 8, 2022, relative to the above-noted, for information.

7.5 Rural Ontario Municipal Association (ROMA) Conference Participation

Copy of letter from Minister Steve Clark, Ministry of Municipal Affairs and Housing to Mayor Bill Mauro, City of Thunder Bay, dated March 17, 2022, relative to the above-noted, for information.

7.6 Moratorium on New Gravel Mining Approvals in Ontario

Copy of letter from the Reform Gravel Mining Coalition to Clerk Krista Power, City of Thunder Bay, dated March 24, 2022, relative to the above-noted, for information.

Copy of letter from City Clerk Danielle Manton, City of Cambridge to Clerk Krista Power, City of Thunder Bay, dated March 31, 2022, relative to the above-noted, for information.

7.7 Provincial New Housing Legislation

Copy of news release from the Ontario Big City Mayors, dated March 30, 2022, relative to the above-noted, for information.

7.8 More Homes for Everyone Plan

Copy of letter from Deputy Minister Kate Manson-Smith, Ministry of Municipal Affairs and Housing, dated March 31, 2022, relative to the above-noted, for information.

7.9 Housing Supply Action Plan Public Consultation

Copy of notice from the Ministry of Municipal Affairs and Housing, dated April 1, 2022, relative to the above-noted, for information.

7.10 Status of Emergency Orders Under the Emergency Management and Civil Protection Act

Copy of letter from Minister Steve Clark, Ministry of Municipal Affairs and Housing to Mayor Bill Mauro, City of Thunder Bay, dated April 6, 2022, relative to the above-noted, for information.

7.11 Waasigan Transmission Line Community Open Houses

Copy of invitation from Hydro One, dated April 20, 2022, relative to the above-noted, for information.

7.12 Accessibility Standards Canada - Accessibility Standard Open House

Copy of invitation from Chief Executive Officer Philip Rizcallah, Accessibility Standards Canada, dated April 15, 2022, relative to the above-noted, for information.

7.13 Ontario Energy Board (OEB) Policy Day

Copy of email from OEB, dated April 21, 2022, relative to the above-noted, for information.

7.14 Municipal Final Authority for Development Planning

Copy of letter from City Clerk Todd Coles, City of Vaughan to Clerk Krista Power, City of Thunder Bay, dated April 28, 2022, relative to the above-noted, for information.

7.15 Proposed Regulations Changes under the Aggregate Resources Act

Copy of letter from Director Jennifer Keyes, Ministry of Northern Development, Mines, Natural Resources and Forestry Resources Planning and Development Policy Branch, dated April 29, 2022, relative to the above-noted, for information.

8.0 OUTSTANDING ITEMS

Outstanding List for the Intergovernmental Affairs Committee as of May 4, 2022.

Memorandum from Executive Administrator Erin Nadon, dated May 4, 2022 providing the Intergovernmental Affairs Committee Outstanding Items List, for information.

9.0 NEW BUSINESS

None.

10.0 NEXT MEETING

The next regular Inter-Governmental Affairs Committee meeting is scheduled for June 6, 2022 at 12:00 p.m. via Microsoft Teams.

15.0 ADJOURNMENT The meeting adjourned at 12:37 p.m.



MEETING DATE 06/27/2022 (mm/dd/yyyy)

SUBJECT Audit Committee Minutes

SUMMARY

Minutes of Meeting 03-2021 of the Audit Committee held on December 10, 2021, for information.

ATTACHMENTS

1 Audit Committee Minutes dated, December 10, 2022.

MEETING: AUDIT COMMITTEE

COMMITTEE:	Audit Committee	MEETING NO.:	03-2021
TIME:	10 am	DATE:	December 10, 2021
PLACE:	MS Teams		
CHAIR:	John Friday		

MEMBERS:

Councillor Shelby Ch'ng
 Councillor Mark Bentz
 Councillor Cody Fraser, Vice-Chair
 John Friday, Chair
 Doug Heath

AUDITORS:

Dave Kubinec, BDO Canada LLP
 Ania Berezowski, BDO Canada LLP

GUEST:

Phil Racco, Enterprise Risk Management
 Consultant, MNP,

OFFICIALS:

Norm Gale, City Manager
 Linda Evans, General Manager - Corporate
 Services & Long Term Care and City
 Treasurer
 Emma Westover, Director - Financial Services,
 Don Crupi, Manager - Internal Audit and
 Continuous Improvement
 John Tyson, Internal Audit & Continuous
 Improvement Analyst
 Tracie Smith, Director, Strategic Initiatives &
 Engagement
 Melanie Davis, Policy & Research Analyst,
 Corporate Services & Long Term Care
 Trish Malmborg, Administrative Clerk,
 Corporate Services & Long Term Care
 Administration Office

AGENDA**1.0 WELCOME AND DISCLOSURE OF INTEREST**

The Chair called the meeting to order at 10:05 am.
 There were no disclosures of interest declared at this time.

2.0 AGENDA APPROVAL

With respect to the December 10, 2021 meeting of the Audit Committee, we recommend that the agenda as printed, including any additional information and new business, be confirmed.

MOVED BY: Doug Heath

SECONDED BY: Councillor Shelby Ch'ng

WITH RESPECT to the December 10, 2021 meeting of the Audit Committee, we recommend that the agenda as printed, including any additional information and new business, be confirmed.

CARRIED

3.0 MINUTES OF PREVIOUS MEETING

Minutes of Meeting No. 02-2021 of the Audit Committee, held on July 13, 2021, to be confirmed.

MOVED BY: Councillor Shelby Ch'ng
SECONDED BY: Doug Heath

THAT the Minutes of Meeting No. 02-2021 of the Audit Committee, held on July 13, 2021, be confirmed.

CARRIED

4.0 BUSINESS ARISING FROM PREVIOUS MINUTES

None at this time.

5.0 AUDIT PLAN REPORT

Copies of the Corporation of the City of Thunder Bay Planning Report to the Audit Committee for 2021, for information.

Dave Kubinec, Partner, BDO Canada LLP, presented the audit plan for the audit of the consolidated financial statements of The Corporation of the City of Thunder Bay for the year ending December 31, 2021

MOVED BY: Doug Heath
SECONDED BY: Councillor Shelby Ch'ng

THAT the Audit Plan for the audit of the consolidated financial statements of The Corporation of the City of Thunder Bay for the year ending December 31, 2021, as presented by BDO at the December 10, 2021 meeting be accepted.

CARRIED

6.0 CONTRACT PRICING AUDIT REPORT

Copies of the Contract Pricing Audit Report to the Audit Committee, provided by Don Crupi, Manager, Internal Audit & Continuous Improvement, for information. Don Crupi provided an overview and answered questions relative to the above noted.

The following resolution was presented to the Audit Committee for their consideration:

MOVED BY: Councillor Shelby Ch'ng
SECONDED BY: Doug Heath

THAT the Contract Pricing Audit Report, as presented at the December 10, 2021 meeting of the Audit Committee, be accepted.

CARRIED

7.0 INTERNAL AUDIT WORK PLAN UPDATE FOR 2022

Document entitled Internal Audit – Work Plan – Overview 2022, to the Audit Committee, for information.

Document entitled Internal Audit – Risk Assessment - Work Plan 2022 – 2024 to the Audit Committee, for information.

Don Crupi, Manager, Internal Audit & Continuous Improvement, provided an update and answered questions relative to the above noted.

The following resolution was presented to the Audit Committee for their consideration:

MOVED BY: Doug Heath
SECONDED BY: Councillor Shelby Ch'ng

THAT the Internal Audit Work Plan Update for 2022, as presented at the December 10, 2021 meeting of the Audit Committee, be accepted.

CARRIED

8.0 ENTERPRISE RISK MANAGEMENT PROGRESS UPDATE

Administration recommended that the Audit Committee resolve into Closed Session to discuss the business at hand.

MOVED BY: Doug Heath
SECONDED BY: Councillor Shelby Ch'ng

THAT the Audit Committee resolve into Closed Session in order to receive information that is relative to the security of property of the municipality or local board, and then revert back to Open Session to continue with the business at hand.

CARRIED

The meeting resolved into closed session at 11:13 am.

Phil Racco, Senior Manager, Enterprise Risk Services, MNP, entered the meeting via MS Teams at 11:14 am.

Don Crupi, Manager, Internal Audit & Continuous Improvement, and Phil Racco, Senior Manager, Enterprise Risk Services, MNP, provided a presentation and responded to questions relating to Enterprise Risk Management, for information.

Phil Racco, Senior Manager, Enterprise Risk Services, MNP, left the meeting at 11:43 am.

The meeting reconvened in Open Session at 11:44 am.

9.0 NEW BUSINESS

Frequency of Meetings

A request was received to consider holding four meetings per year, up from three, in order to include a more detailed discussion on other components of the consolidated statements (i.e. Outside Boards, Tbaytel, and Thunder Bay Hydro). It was determined that Management would bring a recommendation to the first meeting of the Audit Committee in the spring of 2022.

10.0 NEXT MEETING

The next meeting of the Audit Committee to be determined in 2022.

11.0 ADJOURNMENT

The meeting adjourned at 11:55 am.

MEETING DATE 06/27/2022 (mm/dd/yyyy)

SUBJECT Community Safety & Well-Being Advisory Committee Minutes

SUMMARY

Minutes of Meeting 01-2022, of the Community Safety & Well-Being Advisory Committee, held on April 13, 2022, for information.

ATTACHMENTS

1 CSWB Minutes Meeting 01-2022 held April 13, 2022

DATE: WEDNESDAY, APRIL 13, 2022

MEETING NO. 01-2022

TIME: 3:14 PM

PLACE: VIA MICROSOFT TEAMS

CHAIR: TBD

PRESENT:

Chief Sylvie Hauth, *Thunder Bay Police Services*
Nancy Black, *St. Joseph's Care Group*
Jeff Upton, *Lakehead District School Board*
Diane Walker, *Children's Centre Thunder Bay*
Brice Morriseau, *Fort William First Nation*
Paul Capon, *Matawa First Nations Management*
Jenny Leadbeater, *Canadian Mental Health Association*
Shannon Robinson, *Thunder Bay District Health Unit*
Albert Brule, *United Way Thunder Bay*
Stacey Parks, *Thunder Bay Multicultural Association*
NAN Representative - *Vacant*

OFFICIALS:

Dana Earle, *Deputy City Clerk*
Joel DePeuter, *Acting General Manager – Development & Emergency Services*
Wayne Gates, *Chief – Superior North EMS*
Cynthia Olsen, *Manager – Community Strategies*
Lee-Ann Chevrette, *CSWB Specialist*
Lori Wiitala, *Council & Committee Clerk*

GUESTS:

Jeff Howie, *Policy Assistant to the Mayor*

1.0 WELCOME & DISCLOSURES OF INTEREST

Dana Earle, Deputy City Clerk, called the meeting to order at 3:14 p.m. and asked for any disclosures of interest. No disclosures were declared at this time.

2.0 LAND ACKNOWLEDGEMENT

Diane Walker, Children's Centre Thunder Bay, provided a land acknowledgement.

3.0 CONFIRMATION OF AGENDA

MOVED BY: Chief Sylvie Hauth
SECONDED BY: Albert Brule

WITH RESPECT to the April 13, 2022 Community Safety & Well-Being Advisory Committee meeting, we recommend that the agenda as printed, including any additional information and new business, be confirmed.

CARRIED

4.0 ELECTION OF CHAIR AND VICE CHAIR

Dana Earle, Deputy City Clerk, administered nominations for Chair and Vice Chair of the Community Safety & Well-Being Advisory Committee for 2022 and 2023.

Jeff Upton, Lakehead District School Board, put their name up for the position of Chair.

There were no other nominations for position of Chair.

It was the consensus of the Committee that Jeff Upton be appointed Chair of the Community Safety & Well-Being Advisory Committee for the City of Thunder Bay until December 2023, or until such time as a replacement has been appointed.

Paul Capon, Matawa First Nations Management, nominated Diane Walker for the position of Vice-Chair.

Diane Walker agreed to let their name stand.

There were no other nominations for position of Vice-Chair.

It was the consensus of the Committee that Diane Walker be appointed Vice Chair of the Community Safety & Well-Being Advisory Committee for the City of Thunder Bay until December 2023, or until such time as a replacement has been appointed.

Jeff Upton assumed the Chair.

5.0 PROCEDURAL BY-LAW AND CODE OF CONDUCT

Dana Earle provided a PowerPoint presentation outlining the procedural by-law and code of conduct.

6.0 TERMS OF REFERENCE

The Committee Terms of Reference were reviewed, as will be required annually.

It was consensus of Committee that no amendments to the Terms of Reference were required.

7.0 CSWB IMPLEMENTATION AND ACTION TABLE UPDATE

Lee-Ann Chevrette, CSWB Specialist, provided a PowerPoint presentation relative to the above noted. The following information was provided:

CSWB Plan was approved in June 2021 with a focus on the following six (6)

priorities:

- Racism & Discrimination
- Mental Health & Substance Misuse
- Housing & Homelessness
- Community Violence & Gender-based Violence
- Poverty Reduction & Financial Empowerment
- Supports for Children, Youth & Families

Discussion was held regarding the above mentioned priorities and whether it was a complete list and it was determined that the list is a starting point and other items that are of priority may be added to the CSWB Plan.

Discussion was held regarding hosting meetings during the Municipal Election between the months of July and November 2022 when CSWB Advisory Committee breaks and it was advised that information meetings can be held and the information received can be shared with the Committee once meetings resume in December 2022.

8.0 ADDITIONAL ACTION TABLES

Discussion was held regarding the above noted and it was determined that community violence and public safety are a concern; there needs to be a wider discussion surrounding the Indigenous community and how to work in parallel with the Thunder Bay Police Service.

9.0 COORDINATOR'S REPORT

Lee-Ann Chevrette provided an update relative to the above noted and advised the Committee that a report will be included at each meeting.

10.0 NEXT MEETING

Lee-Ann Chevrette advised that the Committee will meet four (4) times per year. The next meeting date is to be determined.

11.0 ADJOURNMENT

The meeting adjourned at 5:08 p.m.

Corporate Report

DEPARTMENT/ DIVISION	City Manager's Office - Strategic Initiatives & Engagement	REPORT	R 101/2022
DATE PREPARED	06/10/2022	FILE	
MEETING DATE	06/27/2022 (mm/dd/yyyy)		
SUBJECT	Fourth & Final Progress Update – City of Thunder Bay 2019-2022 Corporate Strategic Plan		

RECOMMENDATION

For information only.

LINK TO STRATEGIC PLAN

The Fourth and Final Update provides a high-level overview of the progress achieved as of May 9, 2022, on the priority action from the 2019-2022 Corporate Strategic Plan. The Update also includes progress on the 14 recommendations from the City's Program and Services Review, which were approved for action by City Council (R144/2020). The Final Update outlines the current status and trends of the key indicators for success identified in the Strategic Plan and indicates the intended outcomes of those actions yet to be achieved.

EXECUTIVE SUMMARY

The 2019-2022 City of Thunder Bay Strategic Plan guides the decisions and actions of City Council and Administration during this term of Council. This Report presents the fourth and final progress update at May 9, 2022 (Attachment A).

DISCUSSION

A Long-Term Vision – One City, Growing Together

The City's Strategic Plan guides the decisions and actions of City Council and Administration for the current term of Council.

While the "2019-2022 Corporate Strategic Plan: One City, Growing Together" coincides with the term of Council and is a corporate document intended to guide the work of internal Departments and Divisions, its goals are longer term and reflect the community's input. The

input and ideas brought forward through the engagement process were documented in Corporate Report R72/2019, when the Strategic Plan was presented for approval in October 2019.

The Strategic Plan presents goals under four pillars: Lead, Serve, Grow, Renew.

Under each pillar there are strategy statements and priorities to guide movement toward achieving the long-term goal. As well, there are strategic questions to guide decision making as opportunities emerge.

The Revised Implementation Plan – 2019-2022 Corporate Strategic Plan: Once City, Growing Together (R89/2021) included 14 recommendations from the City's Program and Services Review which were approved for action by City Council (R144/2020). These Program and Services Review Strategic Actions were incorporated into their own identifiable section under the pillars of Serve, Renew and Service Excellence.

The Fourth & Final Progress Update at May 9, 2022, provides a high-level overview of progress on all of the priority actions from the Revised Implementation Plan. The Update captures the status of the Strategic Actions which have been achieved; are ongoing; are off target; or have been deferred. A follow-up Report will come before Council in November 2022, to provide an update on the outstanding items to be completed this year.

The Strategic Plan includes eight key indicators identified to measure progress. As the Final Update, the key indicators for success, including their current status and trends, have been provided to show progress over the course of the 2019 – 2022 Strategic Plan Implementation.

The COVID-19 pandemic, which began in 2020, occurred during three quarters of the Strategic Plan timeframe. The Update outlines the impacts of the pandemic state and the significant accomplishments achieved in spite of this unprecedented situation.

It is important to remember the Strategic Plan is not intended to reflect everything the City of Thunder Bay does for its citizens on a daily basis as a municipal government. The City provides a wide-range of important services and facilities that are essential to the quality of life in Thunder Bay. City Council, management, and staff are committed to maintaining these vital services and facilities. The Strategic Plan provides a focus on enabling change and continuous improvement through a phased implementation of plans, partnerships and timely actions to create the results the community wants: One City, Growing Together.

Progress Reports and Communication

The Fourth & Final Progress Update (Attachment A) document will be added to the City's website at thunderbay.ca/stratplan. An infographic highlighting key outcomes of the 2019-2022 Strategic Plan will be posted alongside the Final Update.

A follow-up Report on the outstanding Strategic Actions in 2022 will be presented to City Council in November 2022.

FINANCIAL IMPLICATION

Where the goals and priority actions have financial implications they have been brought forward to Council for approval as required through the annual budget process.

CONCLUSION

It is concluded that Administration will continue work on the ongoing Strategic Actions from the Revised Implementation Plan (including actions from the Program and Service Review). Some items, as noted in Final Update, will be completed by end of year, while others continue beyond the scope of the Strategic Plan. A follow-up Report will be provided in November 2022.

Planning is underway for the City's next Strategic Plan which will direct the Corporation from 2023 – 2026.

BACKGROUND

Municipal Strategic Planning is an important process to advance the shared goals of the community, Council, and Administration. Benefits include more effective resource allocation; a clear focus and direction; a guide for decision making; a sense of accomplishment as milestones are reached; improved communication among Council, Administration, and the community; and flexibility to respond to changing community needs. Effective corporate strategic plans address 'change' through a rational and structured framework coupled with a dynamic and responsive sense of direction.

Four previous Strategic Plans have guided the actions and decisions of Council and Administration: The 2004-2006 New Foundation Strategic Plan, the 2007-2010 Building on the New Foundation Strategic Plan, the 2011-2014 Strategic Plan, and the 2015-2018 Becoming our Best Strategic Plan.

The 2019-2022 Strategic Plan was presented to Committee of the Whole on October 17, 2019, with Corporate Report R72/2019 and approved.

The Implementation Plan – 2019-2022 Corporate Strategic Plan and first progress updated was presented to Committee of the Whole on October 26, 2020, with Corporate Report R123/2020. Administration's recommendations on implementation of the City's Program and Services Review and incorporation into the Implementation Plan for the 2019-2022 Strategic Plan was presented to Committee of the Whole December 9, 2020, with Corporate Report R144/2020 and approved.

The Revised Implementation Plan – 2019-2022 Corporate Strategic Plan which incorporated recommended actions from the City's Program and Services Review, and the second progress update was presented to Committee of the Whole on June 28, 2021, with Corporate Report R89/2021.

The Third Progress Update on the Strategic Plan was presented to Committee of the Whole on November 1, 2021, with Corporate Report R166/2021.

This is the Fourth & Final Progress Update, Corporate Report R101/2022, which is being presented to Committee of the Whole on June 27, 2022.

REFERENCE MATERIAL ATTACHED:

T. Smith memo dated May 16, 2022

Attachment A - Implementation Plan - Progress Update - May 9 2022 - FINAL

***PREPARED BY: TRACIE SMITH, DIRECTOR—STRATEGIC INITIATIVES & ENGAGEMENT AND
JODI WRIGHT, COMMUNICATIONS SPECIALIST—STRATEGIC INITIATIVES & ENGAGEMENT***

THIS REPORT SIGNED AND VERIFIED BY: (NAME OF GENERAL MANAGER)	DATE:
Norm Gale, City Manager	June 20, 2022

MEMORANDUM

TO: Krista Power, City Clerk

FROM: Tracie Smith, Director - Strategic Initiatives & Engagement

DATE: May 16, 2022

RE: City of Thunder Bay 2019-2022 Corporate Strategic Plan – Revised Implementation Plan and Final Progress Update
Committee of the Whole – June 27, 2022

I would like to request the opportunity to provide a presentation relative to provide an update and information relating to the City of Thunder Bay 2019-2022 Corporate Strategic Plan – Revised Implementation Plan at the June 27, 2022 Committee of the Whole meeting. The corporate report will be provided no later than June 16, 2022.

City Manager Norm Gale will provide introductory remarks and introduce the presenters, Tracie Smith, Director - Strategic Initiatives & Engagement and Jodi Wright, Communications Specialist – Corporate Communications.

Cc: Norm Gale, City Manager



2019-2022 Strategic Plan

FOURTH & FINAL PROGRESS UPDATE

*Including Program & Services Review Strategic Actions
(Based on status at May 9, 2022)*

June 27, 2022, Committee of the Whole



One City, Growing Together 2019-2022 Strategic Plan

Our vision for Thunder Bay is One City, Growing Together. Thunder Bay will foster an inclusive city focused on service excellence and partnerships to provide a high quality of life to our citizens. We embrace and celebrate our diversity as it makes our community a vibrant and dynamic place to grow.

The Strategic Plan aims to achieve this vision by focusing on civic leadership, service excellence, and city growth and renewal. Through the Strategic Plan we have identified key priorities to guide decision making and provide a framework for requests to City Council. These priorities include: growth and prosperity, community safety and well-being, cost-effective and quality services to citizens, financial sustainability to provide and maintain service and infrastructure levels, and environmental stewardship. These priorities are considered in each project undertaken by the City to further the Strategic Plan.

A revised Implementation Plan for the Strategic Plan outlines the strategic actions to be achieved from 2019 – 2022, and includes 14 additional strategic actions incorporated based on recommendations from the City's recent Program & Services Review which were approved in December 2020 by City Council [*Corporate Report R144/2020*].

Fourth & Final Progress Update

This is the fourth and final update on the 2019-2022 One City, Growing Together Corporate Strategic Plan. This update, as of May 9, 2022, provides the progress, actions, measures and results on each of the Implementation Plans' strategic priorities. This includes the 14 additional items incorporated from the City's Program & Services Review. With this update occurring as of May 2022, while some projects have been achieved, others remain ongoing until the end of the year. Additionally, some of the identified strategic actions continue beyond the scope of this Strategic Plan timeframe with work progressing into future years. In these instances, the progress achieved towards these ends has been outlined. This update provides a final look at the results achieved and progress made over the past four years towards furthering the City's vision and realizing its goals.

From 2020 – 2022, the City, residents, and world have been disrupted by the unanticipated and unprecedented COVID-19 global pandemic. This pandemic has impacted every aspect of City operations. Administration, under direction of Council, responded accordingly. Actions include: shifting employee work locations; implementing new technologies; updating and adapting to changes in Corporate Safety Procedures; responding to frequent changes in Provincial Regulation; opening and closing City facilities; operating through staff shortages; providing ongoing communication to CTB employees and Thunder Bay residents; managing City operations and planning in an Emergency Response Team structure; working closely with community partners to provide a coordinated response; and more. The response by all City Departments has been immediate and ongoing.

Despite the pandemic conditions occurring during three quarters of the Strategic Plan timeframe, substantial advancement on the Strategic Plan has continued. The progress made on major projects, key services, and overall strategic advancement is significant. By end of year, 14 Strategic Actions are on track for achievement (eight completed now and six by end of year). Fifteen continue beyond the scope this Plan with significant progress achieved over the past four years. Two are off target to be completed in the following year or when external factors permit progress. Two have been deferred to be actioned in the next Strategic Plan timeframe. (*See Strategic Actions Status Charts below*)

When looking at the Key Indicators identified in the 2019-2022 Strategic Plan, we find the following results. Assessment growth is on a downward trend at -0.45%, similar to the previous year. Building construction, however, is up with construction activity of \$141M in 2021, significantly higher than the previous year. 1,660 building permits were issued in 2021, also an increase over previous years. Ratings of quality of life are down, sitting at 76% in 2022, however, the COVID-19 pandemic is likely to have had a strong impact. Satisfaction with City Services remains unchanged from previous years sitting at 81%, a fairly good rating. The sense of belonging to the community, while slightly down, remaining fairly high overall at 82%, higher than the provincial rating in this category of 45.8%[†]. The sense of safety in Thunder Bay is significantly up over the past three years at 82%, climbing 28%. Value for tax dollars is also up with 75% indicating they receive fairly good value for tax dollars, up 9%. The summary of completed projects can be seen in the following Strategic Actions Status Update.

Strategic Actions Status Update as of May 9, 2022

Of the 33 identified Strategic Plan Action Items including the 14 actions from the Program and Services Review:

- eight have been achieved as of May 9, 2022;
- 21 remain ongoing – six to be completed by end of 2022 and 15 continuing beyond the scope of the 2019-2022 Strategic Plan;
- two are off target – one to be completed in 2023 and one dependant upon external factors for completion;
- two are deferred, to be pursued in the timeframe of the next Strategic Plan.

STRATEGIC ACTIONS STATUS CHART: MAY 9, 2022	
33 Total Strategic Actions (including PSR items)	
<div>✓</div> <div>Achieved</div> <div>8</div>	<div>Completed</div> <div>8</div>
<div>→</div> <div>Ongoing</div> <div>21</div>	<div>To Be Completed By Year End</div> <div>6</div>
	<div>Scope Extends Beyond the 2019-2022 Plan</div> <div>15</div>
<div>⬅</div> <div>Off target</div> <div>2</div>	<div>To Be Completed in 2023</div> <div>1</div>
	<div>Advancement Contingent on External Factors</div> <div>1</div>
<div>⋮</div> <div>Deferred</div> <div>2</div>	<div>Actioned in Next Strategic Plan Timeframe</div> <div>2</div>

Definitions:

- Achieved – project has been completed.
- Ongoing – project work continues at this time.
- Off target – project work continues behind the anticipated schedule.
- Deferred – project start has been moved to a future point in time due to external factors.

Program and Service Review (PSR) Strategic Actions

The City of Thunder Bay engaged Grant Thornton LLP to conduct a Program & Services Review (PSR) in 2019 – 2020. The purpose of the review was to gain further understanding of specific services provided by the City and provide information for City Council and Administration to make informed strategic choices regarding those services. The review process identified opportunities and provided recommendations for changes, expansion, reduction, elimination and alternate service delivery.

Of the resulting PSR recommendations, Administration recommended 14 strategic actions which where approved by City Council in December 2020. The strategic actions, with accompanying priority actions, were incorporated into the 2019 – 2022 Strategic Plan Implementation Plan on April 16, 2021. Eleven additional actions from the PSR were recommended for further review beyond the scope or timeframe of the current Strategic Plan. The 14 strategic actions added to the Implementation Plan support the Strategic Plan and Corporate operations in the areas of Renew, Serve, and Service Excellence.

PSR Actions Status Update as of May 9, 2022

Due to the late addition of the 14 PSR Strategic Actions added in April 2021, several of the recommended items extend beyond the timeframe of this current Strategic Plan as can be seem in the status update.

Of the 14 approved PSR actions pursued:

- two have been achieved;
- three additional actions will be completed by year-end;
- eight remain ongoing beyond the scope of the 2019-2022 Strategic Plan;
- one has been deferred to the next Strategic Plan timeframe.

PSR ACTIONS STATUS CHART: MAY 9, 2022	
14 Program & Services Review (PSR) Recommended Actions	
<div><div>✓</div><div>Achieved</div><div>2</div></div>	<div>Completed</div> <div>2</div>
<div><div>→</div><div>Ongoing</div><div>11</div></div>	<div>To Be Completed By Year End</div> <div>3</div>
	<div>Scope Extends Beyond the 2019-2022 Plan</div> <div>8</div>
<div><div>...</div><div>Deferred</div><div>1</div></div>	<div>Actioned in Next Strategic Plan Timeframe</div> <div>1</div>

Key Indicators

In the 2019 – 2022 One City Growing Together Corporate Strategic Plan, eight key indicators were identified to measure progress of the Plan. Key indicators included:

- Assessment growth
 - Building construction value & permits
 - Completion of projects
 - Quality of life rating
- Satisfaction with services
 - Sense of belonging
 - Sense of safety rating
 - Value for tax dollars rating

Key indicator data is collected from multiple sources including the statistically valid Citizen Satisfaction Survey and internal City Departments. The Citizen Satisfaction Survey is conducted every two years, however, due to the COVID-19 pandemic and to better align with strategic planning, the Survey was deferred by one year and completed in 2022.

Summary of Key Indicator Results

Assessment growth is on a downward trend, however, building construction is up. Ratings of quality of life are down, however, the COVID-19 pandemic is likely to have had a strong impact on this rating. Satisfaction with City Services remains unchanged from previous years and the sense of belonging to the community, while slightly down, remaining fairly high overall. The sense of safety in Thunder Bay is significantly up, as is the value for tax dollars. The summary of projects can be seen above in the Strategic Actions Status Chart. The following is a further breakdown of these key indicator results:

- Assessment growth, the percentage of increase in business property tax assessment from new construction, continues on a downward trend sitting at -0.45%, close to last year’s figure of -0.39%.
- Building construction is up. While construction activity has fluctuated in recent years, it is significantly up in 2021, at \$141M. This is a \$64M increase over the previous year. The number of construction permits also continues to rise. 1,660 building permits were issued in 2021, up 319 from the previous year.
- The quality of life rating has declined by 6% since 2019, currently at 76%. This is down from its highest rating back in 2017, which was 87%. Notably, the pandemic has likely had a significant impact on residents’ perceptions of quality of life.
- Satisfaction with City services has not changed over the course of this Strategic Plan and remains at 81%, which is the same rating as in 2019.
- The sense of belonging to the community while down 7% from 2019, remains fairly high at 82% in 2022. This is in comparison to the Statistics Canada rating for Ontario, which, in 2021 was 45.8%.
- Sense of safety in Thunder Bay is significantly up. While it has fluctuated over the past, it is currently at its highest level 82% in 2022, up 28% from 2019.
- Value for tax dollars is up. It has fluctuated over the past several years, however, has jumped up by 9% from 2019 to 2022. In 2022, 75% of residents indicated fairly good value for their tax dollars.
- The summary of the completion of projects is outlined in the Strategic Actions Status Chart above and indicates 14 projects on track for completion by end of year and 15 continuing beyond the scope of this Plan. Two are off target and two have been deferred.

Key Indicators & Trends

Trend Legend:	- unchanged/neutral trend	↑ positive trend	↓ negative trend	↓↑ fluctuating trend (most recent year up)	↑↓ fluctuating trend (most recent year down)
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Indicators	Current Status	Source	Frequency	Trend
Assessment growth Assessment growth: percentage of increase in business property tax assessment from new construction activity *Includes commercial & industrial taxable and payment in lieu properties	Down ↓	CTB – Revenue Division	Annual	-0.45% (2021) -0.39% (2020) 1.29% (2019) -0.27% (2018)* 0.66% (2017)* ↓
Building construction value & permits Building construction activity - values (million) Building construction activity - number of permits	Up ↑ Up ↑	CTB – Building Division	Annual	\$141 (2021) \$77 (2020) \$156 (2019) \$84 (2018)* \$143 (2017)* ↓↑ ----- 1,660 (2021) 1,341 (2020) 921 (2019) 949 (2018)* 1,076 (2017)* ↑
Quality of life rating % of residents who rate overall Quality of Life in Thunder Bay as very good or good	Down ↓	Citizen Satisfaction Survey	2 years [†]	76% (2022) 82% (2019) 87% (2017)* ↓
Satisfaction with services % of Thunder Bay residents who rate overall satisfaction with City services high (somewhat and very satisfied)	Unchanged -	Citizen Satisfaction Survey	2 years [†]	81% (2022) 81% (2019) 85% (2017)* -

Sense of belonging % of population that has a somewhat strong or very strong sense of belonging to their community (for Thunder Bay District)	Down ↓	Citizen Satisfaction Survey Statistics Canada reports sense of belonging for Ontario: 45.8% (2021) [‡]	2 years [†]	82% (2022) 89% (2019)	↓
Sense of safety rating % of residents who strongly agree or somewhat agree they feel Thunder Bay is a relatively safe city	Up ↑	Citizen Satisfaction Survey	2 years [†]	82% (2022) 54% (2019) 66% (2017)*	↓↑
Value for tax dollars rating % of residents who believe they receive fairly good value for their tax dollars (very or fairly good)	Up ↑	Citizen Satisfaction Survey	2 years [†]	75% (2022) 66% (2019) 69% (2017)*	↓↑
Completion of projects Number of Strategic Actions completed.	See Strategic Actions Status Chart Above.				

*Data falls outside the current 2019-2022 Strategic Plan timeframe and has been included for historical reference.

[†]Citizen Satisfaction Survey delayed one year due to the COVID-19 pandemic. Conducted in 2022 instead of 2021. Results are from the statistically valid telephone Citizen Satisfaction Survey conducted by Ipsos.

[‡]Reference: Statistics Canada. [Table 45-10-0052-01 Sense of belonging to local community by gender and province](#)

Strategic Actions Progress Update as of May 9, 2022

The below update identifies Strategic Actions under each of the Pillars of Lead, Serve, Grow, Renew, and Service Excellence. Each Strategic Action provides a progress update on the Strategic Priorities associated with that action. The update also includes the action items from the Program & Services Review. As this is the final update, each item includes its intent for the remainder of the year as well as actions that may span beyond this Plan.

LEAD – Provide civic leadership to advance mutual respect, equal opportunity and hope.

1. Seek advice and work collaboratively with Indigenous partners to deepen relationships and further reconciliation.

 **Ongoing** *Scope Extends Beyond This Plan*

Draft Memorandum of Understanding with Métis Nation of Ontario, proposed signing Q2 2022. **Draft Implementation Plan with Fort William First Nation**, signing ceremony Q4 2022.

Truth and Reconciliation Committee established with **14+ Indigenous partners** for city-wide approach to Reconciliation and collaboration to access funding, share resources, and engage in Indigenous consultation.

Engagement on IR Strategy Implementation Plan March – June, **313 citizens and partners engaged to-date**. **Collective development of Reconciliation Action Plans** to achieve Strategy commitments to follow.

All non-union managerial staff trained in Cultural Awareness. **Maamawe Cultural Guide in development** for administration – September completion.

One new Indigenous Inclusion project completed (Maamawe Art Bus), **seven in progress, one in consultation** with Indigenous partners.

2. Fulfill our commitments to Indigenous and racialized persons under the Thunder Bay Anti-Racism and Inclusion Accord.

 **Ongoing** *Scope Extends Beyond This Plan*

Revised draft proposal for systemic review of Corporate policies, procedures, and other articles to address racism and barriers to be completed **end of Q2**.

Indigenous Inclusion Lens to support systemic third-party review currently **under evaluation to be completed Q4 2022**.

Internal Truth & Reconciliation Working Group **implementing Anti-Racism & Inclusion Accord priorities** and **corporate-wide Reconciliation Action Plans**. Actions to be identified Q4 2022. Reconciliation actions will continue annually. Analysis of **three investigations in Accord ongoing**.

Accord Resource Guide complete. **Accord website in final stages**, launch Q3 2022.

New Accord action items identified for 2022-2023.

3. Collaborate with other institutions and partners in our city to articulate a shared vision.

 **Deferred** *Actioned in Next Strategic Plan Timeframe*

Delayed due to impacts of COVID-19. The City Manager **continues to collaborate with community partners to advance mutual priorities**. Strategic action will be incorporated in the planning process for the next Strategic Plan.

4. Provide opportunities for residents to express their civic pride.

 **Ongoing** *To Be Completed by Year End*

50th Anniversary Work Plan implemented, including Jan. 1, 2020, **Community Celebration**. 50th theme incorporated into several **online City events**. Planned schedule of additional events disrupted due to COVID-19.

50th Anniversary sign and graphic installation completed in October 2021 in the **City Hall Lobby** as part of the legacy.

Continuation of **digital video releases by Tourism Thunder Bay** focusing on Thunder Bay events and culinary experiences. **Two videos released** with local digital distribution in Q1 2022. **Four new video episodes are planned** for the balance of 2022.

5. Further our commitments to sustainability and climate adaptation.

 **Ongoing** *Scope Extends Beyond This Plan*

Climate-Forward City: Thunder Bay Net-Zero Strategy endorsed by City Council June 2021.

Implementation of **Climate Adaptation Strategies ongoing with \$6.6 million spent on adaptation in 2021**. The pilot of the RPWCO* climate resilience roadmap and climate related emergency exercise project, supported by **\$155,000 in secured Provincial funding**, are anticipated to be complete fall 2022. **Regional Public Works Commissioners of Ontario*

Sustainability Plan renewal initiated December 2021. Over **150 people participated** in preliminary engagement. Action delayed and expected to be completed early 2023.

SERVE - Advance service excellence through a citizen focus and best use of technology.

1. Conduct an independent review of the programs and services (PSR) the City provides, how it provides them, and recommendations for what to maintain, change, reduce or enhance and propose changes to improve service.

✔ Achieved

PSR - Phase 1 **Report completed** November 2019.

PSR - Phase 2 **Report completed** June 2020.

Administration's assessment of the PSR Phase 2 Report was presented December 2020. Council directed implementation of **14 recommendations**. Additional recommendations included 11 items future consideration beyond 2022.

Of the 14 PSR actions pursued, **two have been achieved, three additional will be completed by year end, eight remain ongoing** beyond the Strategic Plan timeframe, and **one has been deferred**.

Provincial funding **offset nearly 90% of the PSR costs**.

2. Support the review through a public engagement plan that engages stakeholders and considers the service needs of residents and customers along the spectrum from youth to older adults.

✔ Achieved

A **Public Engagement Plan was implemented** in November 2019 for the Phase One Report including internal and external surveys by Grant Thornton, two public open houses at City Hall, and updates on thunderbay.ca/GetInvolved which saw **page traffic of over 1,000 visits**.

A **Public Engagement Plan was implemented** April - July 2020 for the Phase Two Report including an online **survey with 780 respondents, public comment period with 104 respondents, and webpage traffic of over 5,800 visits**. In-person engagement was not possible due to COVID-19.

Public comment **reports were provided to Council** in advance of the September 2020 Special Committee of the Whole Meeting.

3. Review points of contact with customers to identify better ways of serving the public that are inclusive and easy to use.

🕒 Off target *To Be Completed in 2023*

Service Counter review complete. Inventory of additional points of contact deferred.

The Digital Strategy was endorsed by Council in December 2021 and sets out the **framework for delivering customer-centred, digitally-powered City services**.

An **office space optimization initiative is underway** and will include assessment of potential to consolidate service counters to enhance customer service.

EMT to develop a **roadmap in 2023** to guide a coordinated approach to identifying and addressing remaining **opportunities to improve client service**. Actions to implement changes and assess customer satisfaction are deferred until roadmap is complete.

4. Develop an open data platform to make it easier for interested users to engage with City data and create opportunities for engagement.

✔ Achieved

Open Data Administrative Committee **established May 2019** and a portal implementation **roadmap completed July 2019**.

Required technology implemented to build the portal and a **governance framework developed** including an Open Data Policy and Open Data Licence, **June 2020**.

Portal launched November 2020.

Open Data Committee continues to review datasets for addition to the Portal. **Four new datasets have been added** since the Portals launch. **6,800 visits to the Open Data Portal with 300 downloads to date**.

GROW - Focus on city building and social infrastructure to strengthen our economy, lifestyle and well-being.

1. Support and work with the CEDC in the execution of its 2019-2022 Strategic Action Plan and immigration pilot. Advocate to provincial, federal and industry leaders on economic opportunities and key priorities including retention of manufacturing jobs.

 **Ongoing** *Scope Extends Beyond This Plan*

Rural & Northern Immigration Pilot – **300+ recommended candidates and 130+ participating employers** to date.

Starter Company Plus – funding for new Indigenous stream, six (\$5,000 each). **Summer Company** – nine openings. **Digital Main Street** – 186 sessions.

\$500K funding for electrical vehicle charging. **\$40K funding** for Scotties. Work with Science North for permanent Centre.

Tourism Development Fund - **16 projects, \$1.1M investments, \$11.2M leveraged.**

Three digital marketing campaigns reached **10.2M targeting workforce, investors and businesses.**

\$1.8M funding for Pool 6 Site. **Eight cruise ship visits** scheduled. **Estimated impact \$3.5-\$5.5M and 56-88 FTE jobs.**

Continued government advocacy for manufacturing and contracts (Alstom).

Tourism – See RENEW, Strategic Action 5.

2. Create a new community safety and well-being plan including a neighbourhood strategy to build capacity and support improvements led at the neighbourhood level.

 **Achieved**

Phase 2 **Community Engagement Report** finalized May 2021. Close to **1,000 residents engaged** to inform Plan development.

Thunder Bay **Community Safety & Well-Being Plan** approved June 2021.

Six priorities and six action tables identified which will develop new Implementation Plans or align with existing ones.

2021 Thunder Bay **Population Indicators Report** finalized June 2021. Report **includes 30 data indicators** that will be tracked and updated on a regular basis **to identify priorities and trends.**

3. Develop key City infrastructure that builds capacity such as a new multi-use indoor sports facility, the first phase of the Waterfront Trail and a long-term plan for the replacement of Fort William Gardens (FWG).

 **Ongoing** *Scope Extends Beyond This Plan*

Funding application for \$22.4M submitted to Green & Inclusive Community Building for a Net-Zero building program. **Multi-use indoor sports facility on hold** awaiting outcome of application.

Wayfinding signage designed (North of Prince Arthur's Landing to Richardson's Terminal). **North Water Street Lookout designed.** Anticipated tender summer 2022, construction fall 2022 or spring 2023. **Mission Island Trail section designed.** Tender later 2022, construction fall 2022 or spring 2023. **2 km section of new trail** on Pool 6 lands to future Art Gallery **received external funding.** Design underway, tender and construction in 2023.

Report on FWG completed October 2021. Active planning for Fort William Gardens replacement recommended to start 2030/2031.

4. Support construction and opening of a new Thunder Bay Art Gallery to further the ongoing development of a vibrant cultural scene on the waterfront, with a strong economic base.

 **Off target** *Advancement Contingent on External Factors*

Record of Site Condition **completed February 2021.**

Construction documents will be complete and ready for tender May 31, 2022. This will **Complete Priority Action Two:** development of public lands surrounding the Art Gallery and extension of Sleeping Giant Parkway.

Lease, funding and Municipal Capital Facilities **agreements 85-90% complete.**

75% project completion (City Portion). Further **advancement is contingent on Art Gallery progress.**

5. Work with the business community to develop and implement a zoning by-law and policies and procedures that facilitate business growth through increased ease of doing business.

 **Achieved**

New Zoning By-law adopted by Council April 2022. **Zoning By-law 100% complete.**

Strategic Core Area Community Improvement Plan (CIP) approved by City Council January 2021 and launched. **CIP is 100% complete.** CIP and grant program promotion continues in 2022. In 2022 to-date, **one application has been approved for \$12,400 and two more applications are in progress.** See RENEW, Strategic Action 2.

RENEW - Focus on essential infrastructure, revitalize our cores and enhance our Image Routes.

1. Develop the asset management plan to reflect sustainability goals and make it available in plain language.

 **Ongoing** *Scope Extends Beyond This Plan*

New Strategic Asset Management Policy adopted February 2019.

Phase 1 of Asset Management Plan for Core Assets (water, wastewater, storm water, roads, and bridges & culverts) was **adopted by City Council December 2021**.

Work has commenced on Phase 2 – complete Asset Management Plan for all other assets (facilities, fleet, machinery & equipment, parks, sidewalks). **Phase 2 set to be completed July 2024**.

Work has commenced on Phase 3 – a **financing strategy** to fund the Asset Management Plan at a defined level of service to be established by Council and informed through public consultation, **set for completion July 2025**.

2. Revitalize the downtown cores in partnership with stakeholders, with a special focus on strategic investments such as addressing the future of Victoriaville and initiatives that further community safety and well-being.

 **Ongoing** *Scope Extends Beyond This Plan*

Project management and prime consultant retained for demolition of Victoriaville Centre. Prime consultant has advanced detailed project design. **Detailed design and refined costing estimates to be complete fall 2022. If approved, Project completion fall 2025.**

Downtown Fort William Revitalization Committee meeting monthly and holding workshops. Committee to hold consultations on draft Strategic Plans fall 2022.

Project Prevent partners continue to **increase connections to supports for street-involved individuals**. Led by Thunder Bay Police Service, Project Prevent is a **three-year funded project** ending March 2023. Established **relationships will continue beyond project**.

See GROW, Strategic Action 5.

3. Rehabilitate Boulevard Lake Dam to improve the City’s response to severe rain events, reducing risk of flooding and damage to critical infrastructure; improve accessibility and active transportation facilities; and enhance cultural/heritage features of the dam to improve the quality of life of our citizens.

 **Achieved**

Municipal Class Environmental Assessment completed and required permitting obtained, June 2020.

Project Design and Tender Project completed, June 2020.

Dam rehabilitation **completed**. Grand opening **November 2021**. In Q3 – Q4 2022, to finalize the project, the control gates will be commissioned and the automation programmed.

4. Focus our beautification efforts to make significant progress on implementing the Image Route Plan.

 **Ongoing** *To Be Completed by Year End*

Waverley Park Lookout – **Interpretive sign** complete summer 2022 with **installation fall 2022 or spring 2023**, depending on production lead times.

Wayfinding Downtown Cores Phase – **Wayfinding signage installation** began fall 2021, set for **completion fall 2022**.

North Core Streetscape pilot projects implemented summer 2021, with one-way and two-way angled parking pilots and public space bump-outs continued over winter 2021/2022. **Public engagement** on pilot summer 2021. **Stakeholder engagement** continues. BIA Members survey closes May 2022. North Core Streetscape consultation and conceptual design continuing. **Final concept to be presented to City Council summer 2022**.

5. Promote, both inside and outside Thunder Bay, our many attractions, parks, facilities, services and innovative product development to encourage use.

 **Ongoing** *To Be Completed by Year End*

Mapping **software to showcase City parks and facilities contingent on implementation of the City’s new ArcGIS Enterprise Portal**, part of the Digital Strategy. Testing of parks mapping software anticipated summer-fall 2022 with implementation **winter 2022, integrated on the City’s website** and promoted to citizens.

Walking tour app updated to include 11 itineraries. Check in Canada accommodation **booking system integrated** into tourism website to improve e-commerce purchase cycle. 2022 **visitor magazine** released. Third episode (water sports) of **tourism mini-documentary series** to be released June 2022. ‘Bring it Here’ **convention attraction video** in circulation April 2022. Thunder Bay leads most Canadian markets in post pandemic recovery with a 2021 **annual occupancy rate of 59%**, far ahead of the 41.9% Canadian average.

SERVE (Program & Services Review)

<div>1. Create a Digital Strategy.</div> <div><div><div>Achieved</div></div><div><p>The comprehensive Corporate Digital Strategy was approved by City Council in December 2021.</p><p>Actions are underway to implement various governance components and IT operating model changes.</p><p>A roadmap for improving digital service delivery for property planning and permitting services is now in place, a new parking mobile application has been launched, a new water billing system with customer portal is being implemented and a new online campsite booking system is planned for later this year.</p><p>Work on the Corporate Digital Strategy is expected to build momentum over the next three to four years.</p></div></div>	<div>2. Develop More Corporate Information Technology (CIT) Performance Metrics.</div> <div><div><div>Achieved</div></div><div><p>The CIT Intranet page launched December 2021. The new site includes a variety of self-serve and electronic work request options. Page includes information on the CIT team, services, work classification and typical service turn-around times. Metrics related to work orders, helpdesk calls and projects are included. The team will continue to develop additional metrics related to CIT operations and the Digital Strategy.</p></div></div>	<div>3. Review Specific Facilities for Possible Cost Reductions.</div> <div><div><div>Ongoing</div><div>Scope Extends Beyond This Plan</div></div><div><p>City Hall – Second-generation energy audit recommendations are complete and pending approval of 2024 Capital budget.</p><p>Archives – The digitization pilot project has been completed, data has been collated and analyzed, no savings have been realized. Implementation of TOMRMS* is ongoing, 80% complete. There has been some delay with the remaining 20% of the corporation as a result of COVID implications. <i>*The Ontario Municipal Records Management System</i></p><p>Victoriaville – See RENEW, Strategic Action 2.</p></div><div><p>Baggage Building Arts Centre – Report on future operations model deferred to Q4 2022. Facility currently operated by City for rentals and programming.</p><p>Pagoda Building – The Pagoda opened earlier this season, May 11 vs. mid-June. It has been closed for the past two years during the pandemic due to restrictions and labour shortages. Its operating season will be extended by two months this year. The Centre opened for the Spring Craft Revival (April 24) and tourism is seeking additional partner event opportunities to align opening.</p></div></div>	<div>4. Develop Strategy for Recreation Revenues.</div> <div><div><div>Ongoing</div><div>Scope Extends Beyond This Plan</div></div><div><p>User Fee Model adopted by City Council December 2021. User fee changes to be submitted in 2023 budget for implementation Q2 2023.</p><p>RFP for Digital Advertising in Recreation Facilities release deferred to Q2 2022. Anticipated implementation by Q4 2022.</p><p>Affordable Access to Recreation & Culture Pilot concept presented to City Council December 2021. Report back to City Council anticipated by Q4 2022 with approved program to be implemented Q3 2023.</p></div></div>
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SERVE (PSR)

5. Investigate Options to Increase Waste Diversion Rate.

→

Ongoing

Scope Extends Beyond This Plan

The **expansion of the municipal recycling program** to include #3 to #7 coded plastics **implemented May 2022**.

Planning is ongoing for integration of the provincially mandated food and organic waste program into our existing solid waste system. Program to be **operational by 2025** provincial deadline. A first Report will be presented to City Council summer 2022.

Transitioning the existing provincial waste diversion programs remains ongoing. The City’s municipal **blue bag recycling program** is scheduled to **transition to the new regulatory framework on July 1 2024**.

Recycling of plastics **increased by 7%** from 2020 – 2021.

6. Improve Roads Communication and Consultation.

→

Ongoing

To Be Completed by Year End

Roads is working with Corporate Communications to **develop new videos highlighting operations**.

Manager of Roads provides **updates** to Communications following **winter weather events** which are **posted to social media** – keeping the **public updated on roads operations**.

Planning is underway and the **development and delivery of an enhanced communication plan**, informed by public engagement, will be created in 2022.

7. Evaluate Sister Cities.

→

Ongoing

Scope Extends Beyond This Plan

Subcommittee has completed work relative to **evaluations of current relationships with existing Sister Cities and Friendship Cities**. A recommendation is coming forward to the next Sister Cities meeting for decision.

Addition of membership on Sister Cities from Lakehead University, Confederation College and CEDC.

Additional **measures of success have been identified in Evaluation Plan** which will be used as a strategic document to assist the Committee in future years to continue to **evaluate relationships that bring the highest value to the city** (economic benefit, cultural exchange benefit).

80% project completion.

RENEW (PSR)

1. Renew Conservatory.

→

Ongoing

Scope Extends Beyond This Plan

Two **external funding applications were successful (\$2M and \$1.7M)**. A third is still pending.

The **RFP for design/consulting services** for renewal of the Conservatory is currently out and will be **awarded in May**. Design is expected to be completed over the summer with a **tender going out in Q1 2023**.

Tender for the **replacement of the Conservatory greenhouse structure was awarded** in January 2022. Site work and demolition is scheduled to begin May/June 2022. **Construction is planned to be completed by the end of 2022**.

SERVICE EXCELLENCE (PSR)

<div>1. Create Human Resource Strategy.</div> <div><div><div><div>→</div><div>Ongoing</div><div>Scope Extends Beyond This Plan</div></div></div><p>The scope of work in a Request for Proposal for a consultant to support the development of a Human Resources Strategy is underway to be issued June 2022. Work will continue through 2022, with a presentation of the strategy to Council in Q1 2023.</p><p>Work is underway to implement the recommendations for streamlining the recruitment and selection process, as outlined in the December 2021 Recruitment Process Improvement Project Report to City Council. Short-term and mid-term recommendations to be completed by Q4 2022. \$60,000 in funding was received from the Provincial Audit and Accountability Fund Intake #2 to support this work.</p></div>	<div>2. Continue Building out Corporate Safety.</div> <div><div><div><div>→</div><div>Ongoing</div><div>Scope Extends Beyond This Plan</div></div></div><p>Gap analysis completed on elements 005 (Incident Investigation) and 007 (Health and Safety Communication). Audits for elements 005 and 007 are scheduled to begin May 2022.</p><p>Moving forward, each year a couple of Elements will be selected for review through a gap analysis prior to being audited until all 13 Elements have been covered. In 2022, elements 003 (Training Awareness and Competence), 006 (Emergency Response and Preparedness), and 011 (Corrective Action Reporting) will be reviewed through a gap analysis, and will be audited in 2023</p><p>Audits will identify and document deficiencies or opportunities for improvement that will be tracked and reported through annual management reviews. The Safety Management System is a process of ongoing continual improvement.</p></div>	<div>3. Review Supervisor Workload at Long Term Care.</div> <div><div><div><div>...</div><div>Deferred</div><div>Actioned in Next Strategic Plan Timeframe</div></div></div><p>No immediate action taken due to COVID-19. Available resources will be analyzed for action in Q4 2022 and pursued in 2023.</p></div>	<div>4. Update and Formalize Fleet Practices.</div> <div><div><div><div>→</div><div>Ongoing</div><div>To Be Completed by Year End</div></div></div><p>Standardized reporting process achieved. Monthly reports of CVOR* compliance implemented. Negative financial variance reported bi-annually. <i>*Commercial Vehicle Operator's Registration</i></p><p>Goal of achieving CVOR performance rating of ≤35% by end of 2022 achieved. CVOR rating 29%. CVOR performance management will be ongoing. Driver Safety and CVOR Management meetings held quarterly. Bi-Annual CVOR updates to EMT.</p><p>Review and update of fleet acquisition procedures to be achieved Q2 2022. Annual pre-notification of capital purchases to operational areas to confirm equipment relevancy. Elimination of in-year non-emergency fleet acquisitions by operational areas.</p><p>Pilot project investigated to use technology to identify instances of anti-idling policy non-compliance. Pilot to begin Q3 2022 and data reviewed after 12 months, Q3 2023.</p></div> <div><p>Take Home Fleet Policy to be achieved Q3 2022 with a Report presented to Council updating the Vehicle Take Home Policy and outlining the number of vehicles going home.</p><p>Data leveraged to understand fleet utilization and demand. Review completed October 2021. Ongoing annual reviews of underutilized fleet by respective General Managers.</p><p>Roads and Fleet have been working together to improve communication and have equipment ready when needed. The enhanced communication has been successful to date. Vehicle servicing agreements will be reviewed as they expire to ensure the best alignment for the needs of both Fleet and Roads.</p></div>
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SERVICE EXCELLENCE (PSR)

5. Modernize Phone Systems to Facilitate Operational Improvements, Efficiencies and Potential Costs Savings.

 **Ongoing** *To Be Completed by Year End*

Work continues with **reviewing existing services, design of the new services and implementation of the modernized phone system.**

Additional sites have been identified bringing the **total number of sites in scope to 85.**

Work has been **completed for 67 City sites, 9 additional sites are in progress, and the remaining sites are scheduled to be completed by December 2022.**

Overall corporate **cost savings** related to the 67 sites reviewed and actioned to date are estimated at **\$24,900 per year.** Final cost savings are subject to change based on the additional 18 to be completed.

6. Optimize Office Space.

 **Ongoing** *Scope Extends Beyond This Plan*

Project Terms of Reference approved by Executive Management Team, **project initiated**, and Report to City Manager/Executive Management Team expected September 2022.



Corporate Report

DEPARTMENT/ DIVISION	City Manager's Office - Office of the City Clerk	REPORT	R 104/2022
DATE PREPARED	06/02/2022	FILE	
MEETING DATE	06/27/2022 (mm/dd/yyyy)		
SUBJECT	Heritage Register – 281 Ray Court (Doctor's Cottage)		

RECOMMENDATION

WITH RESPECT to Report R 104/2022 (City Manager's Office - Office of the City Clerk), we recommend that the following property be added to the City of Thunder Bay Heritage Register:

- 281 Ray Court (Doctor's Cottage);

AND THAT any necessary by-laws be presented to City Council for ratification.

EXECUTIVE SUMMARY

Following discussion and review, the Heritage Advisory Committee is recommending to City Council that the following property described in this Report be added to the Heritage Register: 281 Ray Court (Doctor's Cottage).

Listing properties on the Heritage Register recognizes their cultural heritage value in the community. A property listed on the Register is provided with a measure of interim protection. Demolition requests for properties listed on the Register can be delayed for up to 60 days to allow time for the municipality to complete a detailed assessment of the cultural heritage aspects of the property.

DISCUSSION

In April 2008, City Council established a Heritage Register for the City of Thunder Bay, (Report No. 2008.060 (Office of the City Clerk). This Register is provided for in Subsection 27(1) of the Ontario Heritage Act (the "Act"). One of the roles of the Heritage Advisory Committee is to research and recommend to Council properties that are of significant historic and or architectural interest to the community to be included on the Heritage Register.

Inclusion on the City of Thunder Bay Heritage Register:

- recognizes properties of architectural and or cultural heritage value in the community;
- fosters civic identity and pride by drawing attention to the cultural heritage and historic development of the community;
- promotes knowledge and enhances an understanding of the community's cultural heritage; and
- provides easily accessible information about heritage value for land-use planners, property owners, developers, the tourism industry, educators, and the general public.

Prior to placing a property on the Heritage Register, property owners are invited to meet with the Heritage Advisory Committee to discuss the history of the property and the Heritage Register. Prior to recommending to City Council that a property be placed on the Heritage Register, the property owners are advised of the date at which this recommendation will be made to Council. No objections have been received from owners of this property.

Following discussion and review, the Heritage Advisory Committee determined at its meeting of February 24, 2022 that it be recommended to Council that the following property be listed on the local Heritage Register:

281 Ray Court, Thunder Bay, Ontario (Doctor's Cottage)

Constructed: 1906

Contractor: Unknown

Built along McVicar Creek, this home's original address was 286 River Street. Its original owner, talented artist Mrs. Cymanthe Ann Bready, resided here until 1929. Her portrait remains in the home today being passed down from owner to owner. More widely remembered as the Doctor's Cottage, Dr. Harold resided here from 1931-1959 followed by Dr. Powell from 1959-2000. A wonderful example of Shingle Style design, the one-and-a-half-storey home is finished in cedar shakes with contrasting red painted trim work. A two storey gabled tower made completely of mosaic patterned Vert Island sandstone decorates the façade standing semi-detached from the structure. The cross-gable roof features two chimneys of Vert Island sandstone, and several gabled dormers. One unique attribute of the home's interior is its mezzanine, designed to accommodate a string quartet.



FINANCIAL IMPLICATIONS

There are no financial implications associated with this report.

CONCLUSION

It is concluded that: 281 Ray Court (Doctor's Cottage) is a historic property of interest and should be included on the Heritage Register.

BACKGROUND

The Local Architectural Conservation Advisory Committee (LACAC) was established in 1977 to provide City Council with recommendations regarding the designation of heritage buildings and areas. Changes in the *Ontario Heritage Act* led City Council to replace LACAC with the Heritage Advisory Committee (HAC) in March of 2004 (By-law No. 47-2004). HAC adopted the slogan "Preserving and Promoting our Past", and created a strategic plan to reflect changes in the *Ontario Heritage Act* that broadened the Committee's heritage resources protection and promotion role.

The *Ontario Heritage Act* mandates that a municipal clerk must maintain a register of properties that are of cultural heritage value or interest. The Act defines the effects of being placed on the register and being designated under the Act. The Act defines the process of creating Heritage Conservation Districts. The Act defines the role of the Municipal Heritage Advisory Committee in these processes.

The Heritage Advisory Committee provides City Council with recommendations for: properties to be placed on the Heritage Register; and properties and districts to be designated under the Act. The Heritage Advisory Committee drafts designation by-laws when recommendations are approved. The Heritage Advisory Committee consults with property owners and advises Council on the alteration and/or disposition of these properties.

The Heritage Register is a planning document that is consulted by municipal decision makers, developers and property owners when development proposals or permits are being considered. Including a property on the Register may be the first step in identification and evaluation of a property that may warrant some form of conservation, recognition or protection through designation. It will also identify the location as being of significant built heritage that can be incorporated into municipal planning.

REFERENCE MATERIAL ATTACHED:

None.

PREPARED BY: MATT SZYBALSKI, MANAGER – ARCHIVES, RECORDS & PRIVACY

THIS REPORT SIGNED AND VERIFIED BY: (NAME OF GENERAL MANAGER)	DATE:
Norm Gale, City Manager	June 13, 2022

MEETING DATE 06/27/2022 (mm/dd/yyyy)

SUBJECT Report R 108/2022 (Corporate Services & Long Term Care - Corporate Information Technology) - Single Source Purchase of Software Modules and Related Implementation Services for the City's Property Information System (AMANDA)

SUMMARY

Report R 108/2022 (Corporate Services & Long Term Care – Corporate Information Technology) recommending that City Council approve the use of the negotiated method of procurement as outlined in Sections 4.08 and 4.09 of the Supply Management By-law No. 113-2011 to approve the purchase of additional software modules for the City's Property Information System (AMANDA) and related implementation services in the amount of \$507,536.04 (inclusive of HST) from Granicus, LLC (Granicus).

RECOMMENDATION

WITH RESPECT to Report R 108/2022 (Corporate Services & Long Term Care – Corporate Information Technology), we recommend that the use of the negotiated method of procurement as outlined in Sections 4.08 and 4.09 of the Supply Management By-law No. 113-2011 be approved for the purchase of additional software modules for the City's Property Information System (AMANDA) and related implementation services in the amount of \$507,536.04 (inclusive of HST) from Granicus, LLC (Granicus);

AND THAT the Manager – Supply Management be authorized to issue the required purchase orders to Granicus;

AND THAT the General Manager – Development and Emergency Services be authorized to sign all documentation related to this matter;

AND THAT any necessary by-laws be presented to City Council for ratification.

ATTACHMENTS

1 Report R 108/2022 - AMANDA

Corporate Report

DEPARTMENT/ DIVISION	Corporate Services & Long Term Care - Corporate Information Technology	REPORT	R 108/2022
DATE PREPARED	06/08/2022	FILE	
MEETING DATE	06/27/2022		
SUBJECT	Single Source Purchase of Software Modules and Related Implementation Services for the City's Property Information System (AMANDA).		

RECOMMENDATION

WITH RESPECT to Report R 108/2022 (Corporate Services & Long Term Care – Corporate Information Technology), we recommend that the use of the negotiated method of procurement as outlined in Sections 4.08 and 4.09 of the Supply Management By-law No. 113- 2011 be approved for the purchase of additional software modules for the City's Property Information System (AMANDA) and related implementation services in the amount of \$507,536.04 (inclusive of HST) from Granicus, LLC (Granicus);

AND THAT the Manager – Supply Management be authorized to issue the required purchase orders to Granicus;

AND THAT the General Manager – Development and Emergency Services be authorized to sign all documentation related to this matter;

AND THAT any necessary by-laws be presented to City Council for ratification.

EXECUTIVE SUMMARY

This Report recommends the single source purchase of software modules and related implementation Services from Granicus to advance projects related to e-permitting, e-planning, digital plan review and mobile inspection technology which are eligible through the Province of Ontario's Ontario's Municipal Affairs and Housing Streamline Development Approval Fund (SDAF) and are consistent with the comprehensive Digital Strategy endorsed by City Council.

The City's Property Management System (AMANDA) is developed and sold exclusively through Granicus and has been in use at the City of Thunder Bay since 1999.

LINK TO STRATEGIC PLAN

The City of Thunder Bay's "One City, Growing Together" 2019 – 2022, Strategic Plan details a vision of the City that will act to Lead, Serve, Grow, and Renew. The Digital Strategy supports these goals particularly as it relates to advancing service excellence through a citizen focus and best use of technology.

Serve: Goal 3. Review points of contact with customers to identify better ways of serving the public that are inclusive and easy to use.

The Digital Strategy identifies a number of digital service delivery enhancements, which directly support this goal, including projects related to e-permitting and streamlining development approvals.

DISCUSSION

The City's Property Management System (AMANDA) is used to effectively manage customer requests and work processes related to the Planning, Building, Realty Services and Licensing & Enforcement portfolio of services. The AMANDA software, developed and sold exclusively through Granicus has been in use at the City of Thunder Bay since 1999.

The Corporate Digital Strategy has recommended additional investment for the AMANDA system to aid in streamlining operations and enabling a citizen centric approach to digital service delivery. The SDAF criteria for eligible projects specifically includes provisions for e-permitting and e-planning to aid in the streamlining of development approvals through digital transformation & modernization.

The additional AMANDA Software components (including subscriptions and maintenance for year one) will be used to advance e-permitting, e-planning and provide functionality for an online customer portal. These software components are only available for purchase through Granicus and therefore a sole source purchase is recommended.

It will be more cost effective and beneficial for the City to contract Granicus to provide the required implementation services for the following reasons:

- Granicus, as the sole provider and developer of the software, is best positioned to implement solutions using the software as designed and intended;
- Granicus is familiar with our operations, the modules we currently use and what changes and additional configuration is needed to advance e-permitting and e-planning;
- Granicus is able to leverage various sub-contractors and partners as needed through their partner program. This is most beneficial to the City given the short period for which these services will be eligible under the SDAF timelines; and
- Granicus will provide overall project management for all aspects of Implementation.

The consultant resources and implementation services are required to:

- install and configure the required software modules;
- implement the necessary functionality; and
- transfer knowledge to the City's team members to position them to further enhance the product.

FINANCIAL IMPLICATION

Cost for software modules	\$ 103,050.00
Cost for software subscription/maintenance (year one) - not to exceed	\$ 55,659.44
Cost for Implementation Services - not to exceed	<u>\$ 290,437.50</u>
Subtotal	\$ 449,146.94
HST	\$ 58,389.10
HST Rebate	<u>\$ (50,484.11)</u>
Net Cost	\$ 457,051.93

All costs are eligible for reimbursement from the Provincial SDAF initiative and will be submitted as part of the City's final report to the Province in February 2023.

CONCLUSION

It is concluded that Granicus should be awarded a single source contract in the amount of \$507,536.04 (inclusive of HST) to supply additional modules for the City's Enterprise Property Information System (AMANDA) and to provide the related implementation services.

BACKGROUND

The Streamline Development Approval Fund (SDAF) has been made available to large urban municipalities to unlock housing supply by streamlining, digitizing, and modernizing their approach to managing and approving applications for residential developments. On January 19, 2022, the City of Thunder Bay was advised its allocation was up to \$1.75 million. Corporate Report 29/2022 outlining the funding entitlement and establishment of a project budget was presented to Council at that Committee of the Whole meeting on March 7, 2022.

The development of a comprehensive Digital Strategy that aligns with the City's Strategic Plan was a recommendation of the Grant Thornton Program and Services Review and was recommended for Implementation in Corporate Report 144/2020 (City of Thunder Bay Program and Service Review – Implementation) and was presented at a special Committee of the Whole meeting on December 9, 2020.

The resulting comprehensive Corporate Digital Strategy (Corporate Report R160/2021) was presented to City Council and endorsed at the Committee of the Whole meeting on December 20, 2021.

The software modules and implementation services for which approval is being requested are inline with the SDAF eligibility and the Corporate Digital Strategy which include e-permitting, e-planning and establishment of an online customer portal as priorities for 2023.

PREPARED BY: JACK AVELLA, DIRECTOR – CORPORATE INFORMATION TECHNOLOGY & KAREN LEWIS, GENERAL MANAGER – DEVELOPMENT AND EMERGENCY SERVICES

THIS REPORT SIGNED AND VERIFIED BY:	DATE:
Linda Evans, General Manager – Corporate Services & Long Term Care and City Treasurer	June 17, 2022

Corporate Report

DEPARTMENT/ DIVISION	City Manager's Office - Office of the City Clerk	REPORT	R 109/2022
DATE PREPARED	06/13/2022	FILE	
MEETING DATE	06/27/2022 (mm/dd/yyyy)		
SUBJECT	Restricted Acts (Lame Duck) Provisions		

RECOMMENDATION

WITH RESPECT to Report 109/2022 (City Manager's Office – Office of the City Clerk), we recommend that City Council delegate certain authorities to Administration relative to Section 275 of the *Municipal Act*, 2001, specifically:

- That authority to expend money related to real property matters or disposition of any real or personal property in value exceeding \$50,000, be delegated to the General Manager of Development & Emergency Services in concert with the City Treasurer & General Manager of Corporate Services and Long Term Care;
- That authority to expend money related to real property matters or disposition of any real or personal property, in value exceeding \$50,000, relating to the development at Prince Arthur's Landing and Pool 6 lands, Victoriaville Centre and Chapples Park be delegated to the City Manager in concert with the General Manager of Development & Emergency Services and the City Solicitor;
- That authority to settle matters in value exceeding \$50,000, currently under litigation be delegated to the City Solicitor in concert with the City Manager;
- That authority to apply for and receive grant funding from other levels of government, agencies or the private sector be subject to approval by the City Manager in concert with, the City Treasurer & General Manager of Corporate Services and Long Term Care;
- That the authority to take any and all necessary steps to protect the interests of the City of Thunder Bay through any action or other legal proceeding, in value exceeding \$50,000, be delegated to the City Solicitor in concert with the City Manager;
- That the authority of the City Manager to approve appropriation change orders be increased from \$500,000 to \$2,000,000 in concert with the City Treasurer & General Manager of Corporate Services and Long Term Care;
- That the authority to execute passage of debenture by-laws with respect to capital works approved by either 2022 Council reports or prior year budgets be delegated to the City

Clerk in concert with the City Treasurer & General Manager of Corporate Services and Long Term Care, with the Mayor and City Clerk as signatories;

All to be effective should City Council for the City of Thunder Bay become subject to the provisions of Section 275 and expiring on November 15, 2022;

AND THAT any necessary by-laws be presented to City Council for ratification.”

LINK TO STRATEGIC PLAN

Lead

Provide civic leadership to advance mutual respect, equal opportunity and hope.

EXECUTIVE SUMMARY

This report presents legislative information relative to Section 275 of the Municipal Act, 2001 which provides for a list of restricted acts that a municipal council is prohibited from performing in a municipal election year where it is determined that there will be a material change in its membership during the next term of office.

This is commonly referred to as the ‘restricted acts clause’ or ‘lame duck’ period of council.

This report outlines the time periods in which Thunder Bay city council may be restricted from performing certain actions and provides for a draft by-law which addresses these matters and delegates authority to appropriate members of city administration to ensure business continuity is in place and there is limited liability and risk to the corporation during these periods.

Delegation of authority already exists for specific roles and existing authorities will be utilized in their current form, this report only speaks to extensions of delegation as it relates to the specific restricted acts outlined in the Act.

DISCUSSION

Section 275 of the *Municipal Act, 2001* (the Act) provides for restrictions on the decisions and actions of a council during an election year once that council becomes what is colloquially known as ‘lame duck’. More particularly the Act provides that once it is determined that “the new council will include less than three-quarters of the members of the outgoing council” then it is subject to the restrictions set out in Section 275.

In the case of the council for the City of Thunder Bay that would mean once we know that 4 or more members will not be returning following the 2022 municipal election. There are two timeframes in 2022 where city council may be in this situation.

- From Nomination Day through to the end of the current term of Council (August 19, 2022 to November 14, 2022); or,
- From Final Voting Day of the 2022 Municipal Election through to the end of the current term of Council (October 24, 2022 to November 15, 2022)

At the time of the writing of this report, it is anticipated that the city of Thunder Bay will be in a restricted acts 'lame duck' position as of August 19, 2022. This is as a result of information shared with the Clerk and publicly on the number of sitting members of council not planning to run for re-election.

The 'Restricted Acts' are noted below, and would be in effect during one or both of the above periods until the new term of council takes office:

- (a) the appointment or removal from office of any officer of the municipality;
- (b) the hiring or dismissal of any employee of the municipality;
- (c) the disposition of any real or personal property of the municipality which has a value exceeding \$50,000 at the time of disposal; and
- (d) making any expenditures or incurring any other liability which exceeds \$50,000.

Subsection 275 (4) of the Municipal Act clarifies that (c) and (d) do not apply if these dispositions or expenditures were previously approved in the budget by August 19, 2022 (Nomination Day).

Subsection 275 (4.1) clarifies that Council may take all necessary and appropriate actions in the event of an emergency.

In 2018, a By-law was in place relative to restricted acts and similar delegation to administration was provided. It is integral to understand that while authority may be delegated, there was little need to utilize this delegated authority in 2018 as most matters were not time sensitive and were deferred until the new term of city council was in place.

In preparation for the presentation of this report, the City Clerk met with the City Manager and the Executive Management Team to determine what matters if any may meet these thresholds and may require decision by Administration during any restricted acts period. Considerations for application of funding by Administration, approval of funds relative to realty matters, legal matters or property related matters were discussed. A review was also completed with the City Solicitor as counsel for City Council.

The City of Thunder Bay will not be in a hiring freeze during the restricted acts period, administration has ongoing delegated authority to hire and terminate employees as required to fulfill the responsibilities of the corporation and to meet all established policies and procedures

as it relates to management of the corporations human resources, this does not require further delegation.

It is important to note that (statutory) officers of the municipality will not be able to be hired or dismissed during the lame duck period. Administration has provided for additional resources to back up current statutory officers, for example, there are Deputy Clerks, Fire Chiefs, Treasurers, and Solicitors. Should a statutory officer be required to be absent or be on administrative leave, there would be no urgency to replace that individual an acting manager would already in place to provide coverage in the short term.

Further, a review was completed of municipalities across Ontario as it is standard practice to establish a Restricted Acts By-law to safeguard and protect the interests of the municipality in the case that municipal councils are not able to make decisions relative to property, legal or financial matters and there are implications on deferral of those decisions.

FINANCIAL IMPLICATION

There are no known financial implications relative to this report.

CONCLUSION

It is concluded that City Council should approve this report and the associated draft by-law as appended to this report and that Administration should bring forward the by-law for ratification at the July 25, 2022 meeting.

BACKGROUND

At the July 23, 2018 Committee of the Whole meeting a memorandum came forward from City Clerk, John Hannam with recommendation to approve a Restricted Acts By-law. By-law 72/2018 was approved which provided for delegation of authority to administration during the restricted acts period. This By-law was time limited to this period and is no longer in force.

REFERENCE MATERIAL ATTACHED:

BL 67/2022 - Restricted Act - Delegation of Authority

PREPARED BY: KRISTA POWER, CITY CLERK

THIS REPORT SIGNED AND VERIFIED BY: (NAME OF GENERAL MANAGER)	DATE:
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Norm Gale, City Manager	June 17, 2022
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Memorandum

Corporate By-law Number BL 67/2022

TO: Office of the City Clerk **FILE:**

FROM: Krista Power, City Clerk
City Manager's Office - Office of the City Clerk

DATE: 06/13/2022

SUBJECT: BL 67/2022 - Restricted Act - Delegation of Authority

MEETING DATE: City Council - 06/27/2022 (mm/dd/yyyy)

By-law Description: A By-law to delegate certain authorities to Administration.

Authorization: Report 109/2022 (City Managers' Office/Office of the City Clerk) - City Council
- June 27, 2022

By-law Explanation: The purpose of this by-law is to delegate certain authorities to Administration on the decisions and actions of a council during an election year (lame duck) as per Section 275 of the Ontario Municipal Act, 2001.

Schedules and Attachments:

Amended/Repealed By-law Number(s):



THE CORPORATION OF THE CITY OF THUNDER BAY
BY-LAW NUMBER BL 67/2022

A By-law to delegate certain authorities to Administration.

Recitals

1. Section 275 of the Ontario Municipal Act, 2001 (the Act) provides for restrictions on the decisions and actions of council during an election year once it is determined that less than 3/4s of that council will be returned in the new council.
2. The Restricted Acts that would be in effect until the new council takes office include: the appointment or removal from office of any officer of the municipality, the hiring or dismissal of any employee of the municipality, the disposition of any real or personal property of the municipality which has a value exceeding \$50,000 at the time of disposal, and making any expenditures or incurring any other liability which exceeds \$50,000.
3. With respect to Section 275 of the Ontario Municipal Act, 2001, it is recommended that City Council delegate certain authorities to Administration during an election year should the council become subject to the provisions of this Section.

ACCORDINGLY, THE COUNCIL OF THE CORPORATION OF THE CITY OF THUNDER BAY ENACTS AS FOLLOWS:

1. That authority to expend money related to real property matters or disposition of any real or personal property in value exceeding \$50,000, be delegated to the General Manager of Development & Emergency Services in concert with the City Treasurer & General Manager of Corporate Services and Long Term Care;
2. That authority to expend money related to real property matters or disposition of any real or personal property, in value exceeding \$50,000, relating to the development at Prince Arthur's Landing and Pool 6 lands, Victoriaville Centre and Chapples Park be delegated to the City Manager in concert with the General Manager of Development & Emergency Services and the City Solicitor;
3. That authority to settle matters, in value exceeding \$50,000, currently under litigation be delegated to the City Solicitor in concert with the City Manager;
4. That authority to apply for and receive grant funding from other levels of government, agencies or the private sector be subject to approval by the City Manager in concert with, the City Treasurer & General Manager of Corporate Services and Long Term Care.

5. That the authority to take any and all necessary steps to protect the interests of the City of Thunder Bay through any action or other legal proceeding, in value exceeding \$50,000, be delegated to the City Solicitor in concert with the City Manager;
6. That the authority of the City Manager to approve appropriation change orders be increased from \$500,000 to \$2,000,000 in concert with the City Treasurer & General Manager of Corporate Services and Long Term Care;
7. That the authority to execute passage of debenture by-laws with respect to capital works approved by either 2022 Council reports or prior year budgets be delegated to the City Clerk in concert with the City Treasurer, with the Mayor and City Clerk as signatories;
8. By-law BL 67/2022 will be effective when/if City Council for the City of Thunder Bay becomes subject to the provisions of Section 275 and will expire on November 15, 2022.
9. This By-law shall come into force and take effect on the date it is passed.

Enacted and passed this 27th day of June, A.D. 2022 as witnessed by the Seal of the Corporation and the hands of its proper Officers.

Bill Mauro

Mayor

Krista Power

City Clerk

Corporate Report

DEPARTMENT/ DIVISION	City Manager's Office - Strategic Initiatives & Engagement	REPORT	R 111/2022
DATE PREPARED	06/14/2022	FILE	
MEETING DATE	06/27/2022 (mm/dd/yyyy)		
SUBJECT	Memorandum of Understanding - Metis Nation of Ontario		

RECOMMENDATION

WITH RESPECT to Report R 111/2022 (City Manager's Office - Strategic Initiatives and Engagement, Indigenous Relations Office (IRO), we recommend that the following Relationship Agreement Update be approved;

AND THAT the City of Thunder Bay Memorandum of Understanding (MOU) with the Thunder Bay Métis Council (Métis Nation of Ontario) be approved;

AND THAT the Mayor be designated as signatory on behalf of the city of Thunder Bay;

AND THAT any necessary By-laws be presented to City Council for ratification.

EXECUTIVE SUMMARY

Following a 2019 Métis Nation of Ontario (MNO) election, newly elected representatives of the MNO made a formal request to meet with the City of Thunder Bay with the objective of building a working relationship. MNO presented three key areas of interest for discussion: potential MOU; flag raising at City Hall; and the Spirit Garden at the Harbourfront.

In 2020, Kevin Muloin was duly appointed President of the MNO and assumed the lead in discussions previously initiated by former President Graham, Jean Camirand and Cameron Burgess on the potential for an MOU with the City of Thunder Bay, and the flag raising at City Hall. A meeting between the City Manager's Office and MNO was held on July 24, 2020, in which MNO committed to present a draft MOU for City review. A draft MOU was received October 13, 2020.

On November 23, 2020 the Indigenous Relations and Inclusion (IRI) Strategy was unanimously approved by City Council. The Strategy implements key aspects of the City's "2019-2022 Corporate Strategic Plan", specific to Pillar 1 - Lead: Provide civic leadership to advance mutual respect, equal opportunity and hope.

he Indigenous Relations Office is responsible for Priority Actions 1 and 2 under this Pillar:

1. Seek advice and work collaboratively with Indigenous partners to deepen relationships and further reconciliation;
2. Fulfill our commitments to Indigenous and racialized persons under the Thunder Bay Anti-Racism and Inclusion Accord.

The IRI Strategy areas of focus will be addressed through four Strategic Goals: Pillar 1 - Respectful Relations, Pillar 2 - Responsive City, Pillar 3 - Education and Inclusion, and Pillar 4 - Indigenous Community Prosperity. Through public engagement the IRI Strategy will inform the city's work, reaffirm the city's Indigenous relations efforts and articulate how it will further implement the Accord and the City's commitment to Reconciliation.

In 2021, appointed MNO President Kevin Muloin resigned and Wendy Houston was appointed President; conversations continued with the Indigenous Relations Office and Thunder Bay Metis Council (MNO) to discuss key outstanding provisions. The draft MOU was shared with the City Solicitor's office for review and advice on language and next steps. A finalized draft of the MOU was jointly developed, reviewed by both parties' legal teams and mutually agreed upon on June 6, 2022.

DISCUSSION

The City of Thunder Bay and the Province of Ontario identifies Fort William First Nation, Red Sky Métis, and Métis Nation of Ontario as the official rights holders and traditional custodians of the lands comprising Thunder Bay.

MNO is seeking to work with the city to develop a relationship that recognizes the contributions of the Métis people in the development of the city. This MOU will enhance relationships through mechanisms for ongoing communication and information sharing, as well as opportunities for supporting collaborative social, educational and cultural development in our respective communities. It could also assist in establishing a dispute resolution model to resolve outstanding issues and address future differences.

This MOU does not threaten or challenge other nations or communities' rights or interests. Work towards maintaining and fulfilling commitments under existing agreements is an on-going priority for the Indigenous Relations Office.

The provincial body of MNO has signed previous MOUs with the province of Ontario and Canada. In February 2017, MNO and Canada; December 11, 2017 trilateral between Ontario, Canada, MNO. There is no public evidence of bilateral MOUs with MNO and municipalities available. The City of Thunder Bay is leading the way in advancing Indigenous Relations with MNO. This will be one of MNO's first bilateral MOUs with a municipality.

Pillar 1-Respectful Relations of the IRI Strategy includes commitment to implementing relationship agreements, which aligns with the recent jointly developed MOU. The Indigenous Relations office will guide this collective work by supporting city divisions so reconciliation

actions are cohesive and contribute to long-term sustainable outcomes in advancing Indigenous relations in the City of Thunder Bay.

FINANCIAL IMPLICATION

There are no immediate financial implications associated with the newly developed MOU. Implementation in 2022 will be undertaken within the approved IRO section budget. Future financial implications will be forecasted through the administrative review process and brought forward to Council for approval, as required, through the annual budget process.

CONCLUSION

It is concluded that this Memorandum of Understanding between the city of Thunder Bay and Thunder Bay Métis Council (Métis Nation of Ontario) be approved.

REFERENCE MATERIAL ATTACHED:

Attachment A - Memorandum of Understanding - Metis Nation of Ontario
T. Smith Memorandum dated June 14, 2022.

PREPARED BY: TANIS THOMPSON, MANAGER – INDIGENOUS RELATIONS

THIS REPORT SIGNED AND VERIFIED BY: (NAME OF GENERAL MANAGER)	DATE:
Norm Gale, City Manager	June 20, 2022

DRAFT

MEMORANDUM OF UNDERSTANDING

This Memorandum of Understanding (“MOU”) is effective as of the ____ day of _____, 2022 (the “Effective Date”).

BETWEEN:

MÉTIS NATION OF ONTARIO SECRETARIAT INC.

being a not-for-profit corporation incorporated under the laws of Ontario, as represented by the President of the Métis Nation of Ontario, the Chair of the Lakehead/Nipigon/Michipicoten Consultation Committee, and designated representatives of the MNO Thunder Bay Métis Council, the MNO Greenstone Métis Council, and the MNO Superior North Shore Métis Council

(collectively referred to as the “MNO”)

AND:

THE CITY OF THUNDER BAY

incorporated under the laws of Ontario

(the “City of Thunder Bay”)

(herein after referred to individually as a “Party” and collectively as the “Parties”)

WHEREAS:

- A. On January 1, 1970, the City of Thunder Bay was formed through the merger of the cities of Fort William, Port Arthur, and the geographic townships of Neebing and McIntyre, the geography of which is identified on the map attached as Schedule “A” to this MOU;
- B. The City of Thunder Bay is committed to providing the highest quality of life for residents by building a healthy city through the delivery of essential services provided by responsible leadership, planning, and effective management of municipal resources;
- C. The MNO, including its relevant local and regional governance structures—i.e., the MNO Thunder Bay Métis Council, the MNO Greenstone Métis Council, and the MNO Superior North Shore Métis Council (collectively, the “Community Councils”), as well as the MNO Regional Councilor for MNO Region 2—represent a regional, rights-bearing Métis community (the “Métis Community”) that has Indigenous rights and interests, including: spiritual, cultural, socio-economic, harvesting, and other traditional Métis practices and uses related to the waterways, shorelines, and lands (“Métis Rights and Interests”) in the Métis traditional territories of Lakehead, Nipigon, and Michipicoten (the “Traditional Territory”), which is generally outlined on the map attached as Schedule “B” to this MOU;

- D. The MNO and the Community Councils have executed a Regional Consultation Protocol (the “**Protocol**”) that establishes a Regional Consultation Committee (the “**Consultation Committee**”)—consisting of the MNO Regional Councilor for MNO Region 2, the Regional Captain of the Hunt (ex-officio member), and representation from all of the Community Councils—for the purposes of ensuring that the Métis Community is effectively consulted and, where appropriate, accommodated on all projects and developments being considered, planned, pursued, reviewed, and/or implemented within the Traditional Territory that may impact Métis Rights and Interests;
- E. The City of Thunder Bay has not been delegated procedural aspects of the Crown’s duty to consult and accommodate Indigenous peoples, but acknowledges that future plans and projects in the city may impact the exercise of Métis Rights and Interests given that the City of Thunder Bay is located within the Traditional Territory and, as such, desires to work with the MNO, in the spirit of reconciliation, towards identifying, avoiding, mitigating, and/or accommodating any such potential impacts;
- F. For greater certainty, the City of Thunder Bay does not purport to either affirm or deny the validity of the nature or scope of the Métis Rights and Interests in the Traditional Territory or specifically within the City of Thunder Bay;
- G. This MOU sets out the principles that will guide the Parties in developing a predictable, stable, respectful, constructive, and collaborative working relationship;

NOW THEREFORE THE PARTIES AGREE AS FOLLOWS:

1 OBJECTIVES

1.1 The objectives of this MOU are to:

- (a) establish a mutually-beneficial, cooperative, productive, and ongoing working relationship between the City of Thunder Bay and the MNO, through the Consultation Committee, for the purposes of building trust and potentially securing the Métis Community’s support in relation to future plans and projects within the Traditional Territory and/or affecting Métis Rights and Interests;
- (b) provide a process through which the City of Thunder Bay can engage with the Métis Community at the local and regional levels in order to identify, mitigate, minimize, avoid, and where applicable, accommodate any Métis Rights and Interests that may be impacted by future plans and projects proposed by the City of Thunder Bay;
- (c) enable the Métis Community to benefit from and participate in economic opportunities flowing from future plans and projects proposed by the City of Thunder Bay; and
- (d) pursue other initiatives as may be identified and agreed to by the Parties from time to time.

2 COORDINATION AND IMPLEMENTATION

2.1 The Parties agree to:

- (a) meet to discuss and implement this MOU at frequent intervals using methods mutually-agreed to by the Parties;
- (b) work together to achieve the objectives of this MOU as set out in section 1.1;
- (c) provide timely responses to all reasonable requests for information made by the other Party in the review and decision-making processes related to future plans and projects; and
- (d) pursue such other mutually-agreeable and beneficial initiatives as may be agreed upon to support the objectives of this MOU.

2.2 The City of Thunder Bay agrees to:

- (a) fly the Métis flag annually at City Hall and make an official proclamation on November 16th recognizing Louis Riel Day and the contributions by Métis in the development of the city; and
- (b) will work with the MNO to create information displays sharing the rich Métis history at appropriate city owned sites.

2.3 The Parties may desire to negotiate additional agreements for the purposes of implementing this MOU, including but not limited to the provision of capacity funding and the confidentiality of sensitive information (e.g., traditional knowledge and land use information), acknowledging that the City is a municipality that is subject to the *Municipal Freedom of Information and Protection of Privacy Act*.

3 WITHOUT PREJUDICE

- 3.1 Nothing in this MOU or its implementation is intended to, nor should be interpreted as, abrogating, derogating, extinguishing, defining, creating, modifying, limiting, prejudicing, restricting, or surrendering any right, freedom, interest, or claim protected by section 35 of the *Constitution Act, 1982* held or exercised by the Métis Community.
- 3.2 Nothing in this MOU shall limit, diminish, abrogate, or derogate the rights of the City of Thunder Bay in any present or future plans or projects, permits, licenses, or other authorizations that the City of Thunder Bay has obtained or may obtain.

4 NOTICE

- 4.1 Any notices or communications required or permitted to be given pursuant to this MOU will be in writing and delivered to, or sent by prepaid courier or confirmed facsimile, addressed as follows:

In the case of MNO, to each of the following:

Regional Consultation Committee

226 May Street South

Thunder Bay, ON P7E1B4

Fax: [##]

Attention: Chair, Lakehead/Nipigon/Michipicoten Traditional Territory Consultation
Committee

Métis Nation of Ontario

MNO Lands, Resources and Consultation Branch

Unit 311 – 75 Sherbourne Street

Toronto, ON M5A 2P9

Fax: [##]

Attention: Linda Norheim, LRC Director

Métis Nation of Ontario

MNO Secretariat Inc.

Suite 1100 – 66 Slater Street

Ottawa, ON K1P 5H1

Fax: [##]

Attention: Jennifer St. Germain, CSO

Métis Nation of Ontario

In the case of Thunder Bay:

City of Thunder Bay

500 Donald Street East

Thunder Bay, ON P7E 5V3

Fax: 807-623-1164

Attention: [Name], Mayor

City of Thunder Bay

5 DISPUTE RESOLUTION

- 5.1 The Parties are committed to working together to resolve any differences or disputes that may arise under this MOU informally in a timely, practical, and respectful manner.
- 5.2 If resolution of a difference or dispute under this MOU cannot be resolved within a reasonable period of time, it will be referred to:

In the case of MNO:

Métis Nation of Ontario
226 South May Street
Thunder Bay, ON P7E1B4
Attention: Regional Councillor Tim Sinclair
Métis Nation of Ontario

In the case of Thunder Bay:

City of Thunder Bay
500 Donald Street East
Thunder Bay, ON P7E 5V3
Attention: [Name], Mayor
City of Thunder Bay

or such other designates as the Parties may identify for resolution of the dispute.

6 TERM, AMENDMENT, AND TERMINATION

- 6.1 This MOU comes into effect upon the Effective Date first written above.
- 6.2 This MOU may be amended from time to time with the written consent of the Parties.
- 6.3 Subject to sections 6.4, the term of this MOU is five (5) years with an option to renew for such further term as the Parties mutually agree to should the objectives described in section 1.1 continue to be important to both Parties after this initial term.
- 6.4 At any time, a Party may terminate this MOU by providing written notice of its intent to do so to the other Party in accordance with section 4.1, in which case this MOU shall be terminated 30 days following the delivery of such notice.

7 GENERAL PROVISIONS

- 7.1 This MOU shall not be assigned, either in whole or in part, by any Party.
- 7.2 For greater certainty, this MOU and the MNO's participation in discussions under it, do not amount to consent or support for any specific development or project proposed or undertaken by the City of Thunder Bay.
- 7.3 This MOU shall be interpreted in accordance with the laws of Ontario.
- 7.4 This MOU may be executed in counterparts and by electronic or facsimile signature. Each signature will be deemed to be an original signature and all executed documents together will constitute one and the same document.

[The remainder of this page has been intentionally left blank]

IN WITNESS WHEREOF the Parties have agreed to this MOU as of the Effective Date noted above.

CITY OF THUNDER BAY

Per:

[Name]
City of Thunder Bay
Mayor

MÉTIS NATION OF ONTARIO

Per:

Tim Sinclair
Provisional Council of the Métis
Nation of Ontario, Region 2 Councilor
and
Chair of the Regional Consultation
Committee

Jennifer St. Germain
Métis Nation of Ontario
Chief Strategy Officer

Per: Community Council Presidents

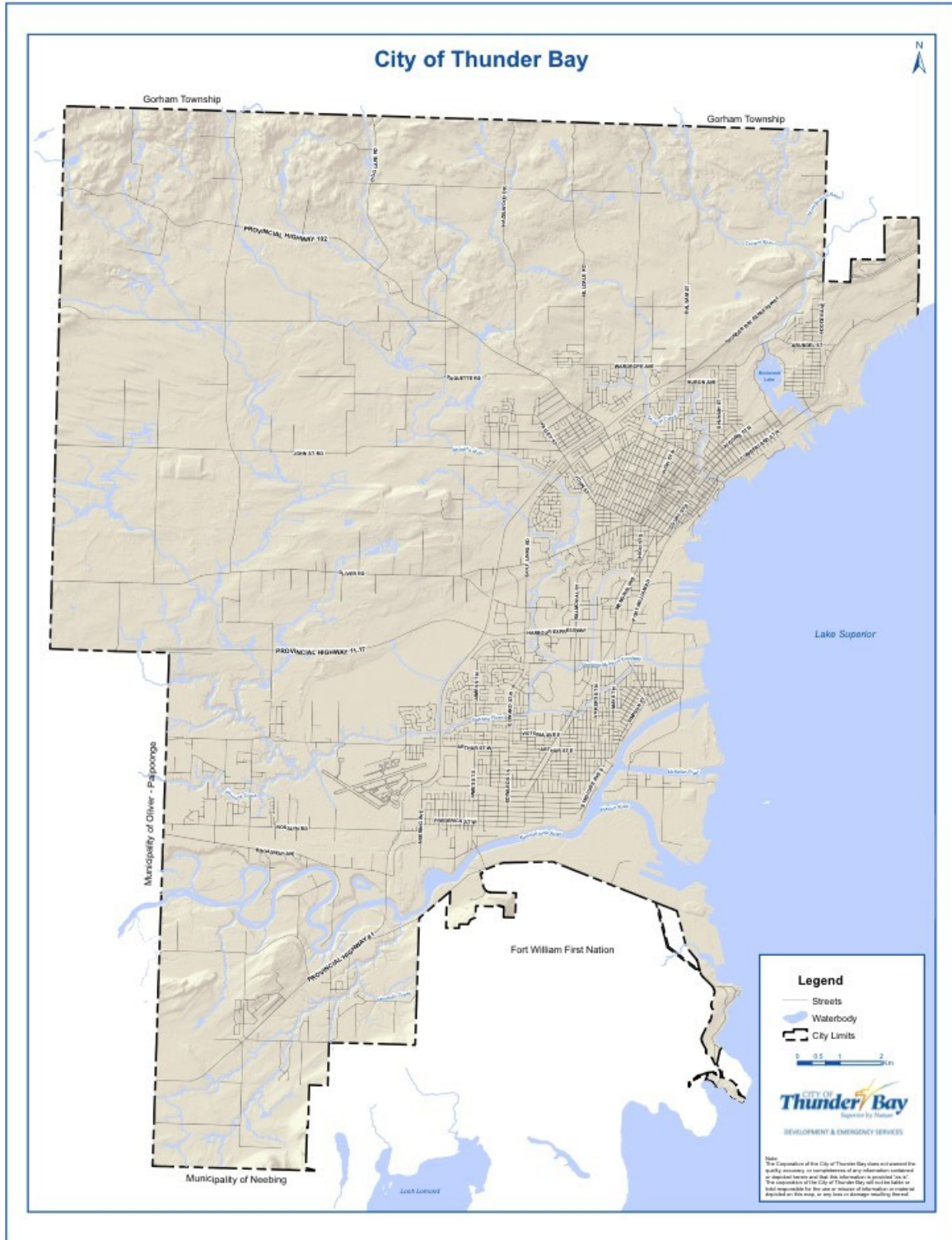
Wendy Houston
MNO Thunder Bay Métis Council
President

William Gordon
MNO Greenstone Métis Council
President

Trent Desaulniers
MNO Superior North Shore Métis
Council
President

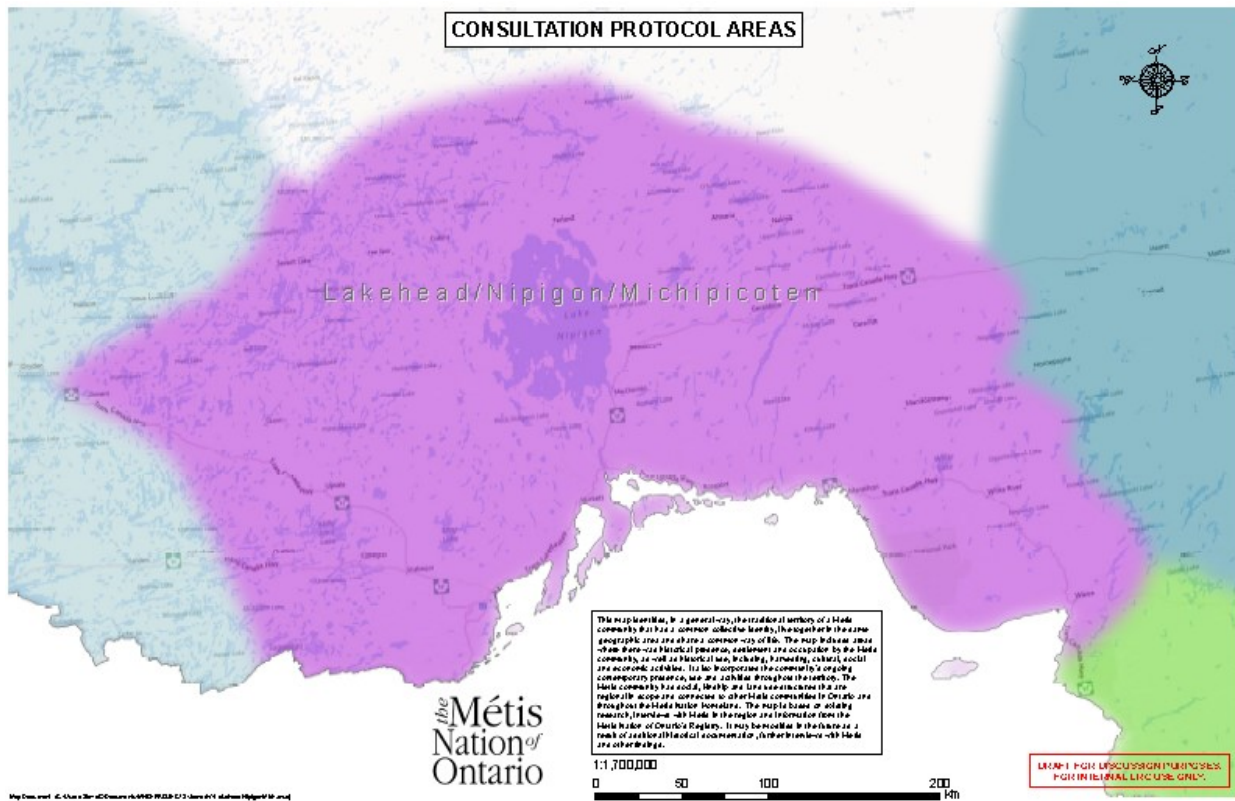
Schedule "A"

City of Thunder Bay Area Map



Schedule “B”

Lakehead/Nipigon/Michipicoten Traditional Territory Area Map



MEMORANDUM

TO: Krista Power, City Clerk

FROM: Tracie Smith, Director – Strategic Initiatives & Engagement

DATE: June 14, 2022

RE: Métis Nation of Ontario Memorandum of Understanding – June 27, 2022,

Committee of the Whole

I request the opportunity to present a Memorandum of Understanding between the City of Thunder Bay and Thunder Bay Métis Council (Métis Nation of Ontario) at Committee of the Whole on June 27, 2022.

The presenters are as follows;

- Introduction – Tracie Smith, Director – Strategic Initiatives & Engagement
- Presentation – Tanis Thompson, Manager – Indigenous Relations

MEETING DATE 06/27/2022 (mm/dd/yyyy)

SUBJECT Food and Organic Waste Diversion Program – Implementation Plan

SUMMARY

Report R 24/2022 (Infrastructure & Operations - Environment) recommending the development and implementation of a food and organic waste diversion (Green Bin) program to achieve and maintain compliance with the requirements of the Provincial Policy Statement, and for the optimization of the City's collection services with the use of new technology and policies to minimize the cost of implementing the new program and achieve effective participation.

This report was introduced as a 'first report' at the June 6, 2022 Committee of the Whole meeting to allow Council and the general public time to consider the implications of the report.

Report R 24/2022 (Infrastructure & Operations - Environment) Food and Organic Waste Diversion Program – Implementation Plan re-presented.

RECOMMENDATION

WITH RESPECT to Report R 24/2022 (Infrastructure & Operations – Environment), we recommend the implementation of a curbside Food and Organic Waste Diversion (Green Bin) Program to single family households starting in 2025 and multi-family properties in 2026 be approved;

AND THAT Green Bin service to local businesses and institutions be evaluated once the residential program is implemented;

AND THAT the City's curbside Leaf and Yard Waste collection program be expanded to four (4) collection events annually beginning in 2023;

AND THAT Garbage Collection services be amended by utilizing proven industry best practices as outlined in this report to achieve compliance with the required diversion targets for Green Bin waste as identified in the Provincial Policy Statement;

AND THAT automated cart-based collection of Garbage and Green Bin waste be implemented for single-family households starting in 2025;

AND THAT all waste collection vehicles purchased between 2022 and 2025 be outfitted auto-cart ready and with split body compartments to accommodate co-collection of Garbage and Green Bin waste;

AND THAT an aerobic Green Bin processing solution as identified through the Request for Information (RFI) process is the preferred option for the City of Thunder Bay;

AND THAT Administration release a Request for Proposal (RFP) for the procurement of an aerobic Green Bin processing solution for the City's program and report back to Council by December 2022 with a recommendation and source of financing;

AND THAT Administration finalize a detailed program implementation plan, including program costs and design parameters and report back to Council by January 2023;

AND THAT the costs associated with this new program development and expansion be added to the Solid Waste and Recycling Services Operating and Capital Budgets for 2023 and beyond for Council's consideration;

AND THAT any necessary by-laws are presented to City Council for ratification.

ATTACHMENTS

- 1 R 24/2022 (Infrastructure & Operations - Environment) Food and Organic Waste Diversion (Green Bin) Program – First Report
- 2 Thunder Bay - Task 4 - Program Plan Development
- 3 A. Foulds Memorandum dated June 14, 2022

Corporate Report

DEPARTMENT/ DIVISION	Infrastructure & Operations - Environment	REPORT NO.	R 24/2022
DATE PREPARED	2/2/2022	FILE NO.	
MEETING DATE	6/6/2022 (mm/dd/yyyy)		
SUBJECT	Food and Organic Waste Diversion (Green Bin) Program – First Report		

RECOMMENDATION

WITH RESPECT to Report R 24/2022 (Infrastructure & Operations – Environment), we recommend the implementation of a curbside Food and Organic Waste Diversion (Green Bin) Program to single family households starting in 2025 and multi-family properties in 2026 be approved;

AND THAT Green Bin service to local businesses and institutions be evaluated once the residential program is implemented;

AND THAT the City's curbside Leaf and Yard Waste collection program be expanded to four (4) collection events annually beginning in 2023;

AND THAT Garbage Collection services be amended by utilizing proven industry best practices as outlined in this report to achieve compliance with the required diversion targets for Green Bin waste as identified in the Provincial Policy Statement;

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AND THAT all waste collection vehicles purchased between 2022 and 2025 be outfitted auto-cart ready and with split body compartments to accommodate co-collection of Garbage and Green Bin waste;

AND THAT an aerobic Green Bin processing solution as identified through the Request for Information (RFI) process is the preferred option for the City of Thunder Bay;

AND THAT Administration release a Request for Proposal (RFP) for the procurement of an aerobic Green Bin processing solution for the City's program and report back to Council by December 2022 with a recommendation and source of financing;

AND THAT Administration finalize a detailed program implementation plan, including program costs and design parameters and report back to Council by January 2023;

AND THAT the costs associated with this new program development and expansion be added to the Solid Waste and Recycling Services Operating and Capital Budgets for 2023 and beyond for Council's consideration;

AND THAT any necessary by-laws are presented to City Council for ratification.

LINK TO STRATEGIC PLAN

This report directly supports the 'Serve' pillar of the 2019-2022 Corporate Strategic Plan: Advance service excellence through citizen focus and best use of technology. This report also directly supports the fifth goal under the 'Lead' pillar of the Plan to 'Further [previous] commitments to sustainability and climate adaptation.'

EXECUTIVE SUMMARY

The Provincial Policy Statement on Food and Organic Waste creates legal obligations for the City of Thunder Bay.

This report includes recommendations for the development and implementation of a food and organic waste diversion (Green Bin) program to achieve and maintain compliance with the requirements of the Provincial Policy Statement.

The report also includes recommendations for the optimization of the City's collection services with the use of new technology and policies to minimize the cost of implementing the new program and achieve effective participation.

DISCUSSION

The City of Thunder Bay provides a range of solid waste collection, diversion and disposal services to both residents and local businesses. Curbside services include garbage, blue bag recycling and leaf and yard waste collection. Additional services are offered at the City's Solid Waste and Recycling Facility. Waste collection services are offered to approximately 37,018 single-family households, 9,133 multi-family units located in 439 buildings, approximately 956 small businesses, and a range of municipal facilities and public spaces.

Provincial Food and Organic Waste Framework

The Province introduced its Food and Organic Waste Framework on April 30, 2018. The Framework is structured in two parts including the Food and Organic Waste Action Plan, and the Food and Organic Waste Policy Statement.

Amongst the many obligations found within the Policy Statement, there are two requirements of particular relevance to the City of Thunder Bay. The Policy Statement requires municipalities in Northern Ontario with a population greater than 50,000 and density greater than or equal to 300 persons per km² to provide curbside collection of food and organic waste to single-family dwellings in the urban settlement area by 2025. The target for municipalities in Northern Ontario, like the City of Thunder Bay, is a 50 percent waste reduction and resource recovery of food and organic waste by that date.

What is Food and Organic Waste?

Food waste means the edible parts of plants and animals that are produced or harvested but are not ultimately consumed (i.e. kitchen scraps and discarded food). Organic waste means inedible parts of plants and animals, as well as other organic material that may be processed along with food waste. Examples of organic waste can include, but are not limited to leaf and yard waste, compostable products and packaging, soiled paper, diapers and pet waste.

Waste Stream Analysis

The City of Thunder Bay conducted a four season curbside waste composition study (undertaken by AET Consulting Ltd.) between 2018 and 2019. The study results indicated kitchen food waste represented 43.2% of curbside residential collected garbage. The waste composition study also identified that approximately 7% of the curbside residential garbage collected was leaf and yard. The results of the waste composition study suggest there is an additional 17,510 Metric Tonnes of combined kitchen food and yard waste available to be diverted. This tells us that over half of what residents discard today is food and organic waste.

Key Program Design Elements to Meet Obligation

Food waste is a challenging material to divert and lessons have been learned by other communities suggesting implementation requires careful planning and effective communications. There are a number of parameters and options that will need to be considered in designing a program that meets the obligations of the Policy Statement.

Service Level Considerations

The City must provide a curbside collection program for food and organic waste from single-family households and achieve the required 50 % diversion rate by 2025. It does not, however, have to provide this service to multi-family households or the ICI sector. Those property owners are responsible for meeting their obligations under the Policy statement on their own. However, recognizing the City provides garbage and blue bag recycling collection service to both multi-family properties and garbage collection service to selected businesses, it is proposed the City provide Organic ('Green Bin') service to multi-family households starting in 2026 and consideration be given to expanding Green Bin collection service to local businesses and institutions on a cost recovery basis after roll out of the residential program is complete.

Delaying roll out of service to these sectors allows for sufficient time to successfully launch the curbside single-family household program and provides adequate time to develop an appropriate service level policy.

Expanded Leaf and Yard Waste Collection

The City currently diverts roughly 2,100 Metric Tonnes/year of leaf and yard waste and the most recent curbside waste composition study identified that at least an additional 2,422 Metric Tonnes/year of leaf and yard waste may still be available for diversion from the residential wastestream. Expanding the City's leaf and yard waste collection program is the least expensive and easiest option available to partially meeting the 50% diversion requirement. Leaf and yard waste is significantly less expensive to process than food waste

Expansion of the City's leaf and yard waste collection to four events annually from two, at a minimum, is expected to capture an additional 920 Metric Tonnes/year of material. Expansion of the leaf and yard waste collection services is recommended in 2023 to allow time to assess the diversion potential of this option and reflect this information in upcoming collection and processing contracts.

Weekly Organics (Green Bin) Collection

The Policy Statement does not specify a collection frequency for food waste collection. However, almost all municipalities providing Green Bin service offer weekly collection to minimize the generation of odours and sanitation issues resulting from food storage between collection cycles. Every other week Green Bin collection has been tried in the past by other municipalities, but faced strong public opposition, suffered from poor participation and is not expected to meet the City's diversion requirements. Weekly collection is, therefore, recommended.

Bi-Weekly Garbage Collection

Experience throughout the Province has demonstrated that residents will not fully participate in food waste diversion programs unless the program is accompanied by strict garbage set out limits. While bag or item limits can be useful to some extent, the better practice has been proven to be coupling weekly Green Bin collection with every other week garbage collection. Communities with weekly garbage and Green Bin service will typically achieve capture rates of 80kg/household to 140kg/household whereas those providing every other week garbage and weekly Green Bin collection often divert as much as 110kg/household to 340kg/household material. As an example, in 2021 the City of Greater Sudbury switched to every other week garbage collection and saw an immediate 16% increase in Green Bin program participation.

It is recommended, therefore, that the City move to every other week garbage collection along with implementation of a Green Bin program in 2025 for single family households as a means of ensuring success of the program. Every other week garbage collection does not generate a net savings since the same amount of waste is still being handled irrespective of which week it is collected.

Projected Diversion Rate of Recommended Options

Green Bin capture rates for single-families average between 55%-65% of available material depending on what incentives are used to encourage participation (e.g., every other week garbage service). Multi-family properties tend to have lower participation rates ranging between 15%-35% depending on building demographics.

Expanding the leaf and yard program as proposed and including every other week garbage collection, would allow the City to achieve the required provincial diversion target without immediate implementation of multi-family household Green Bin service as shown below in Table 1.

Table 1: Predicted Capture Rate of Green Bin Program with Expanded Yard Waste Program

Housing Type	HHLDS*	Predicted Generation Rates (Tonnes/Yr)**	Anticipated Participation Rate***	Predicted Capture Rate (Tonnes/Yr)	Per capita Capture Rate (kg/hh/yr)	Provincial Target (Tonnes/Yr)
Single-Family	37,018	11,134	60%	6,680	180	
Multi-Family	9,133	2,445	27%	660	72	
Yard Waste	N/A	4,500	70%	3,150	N/A	
Total Single-Family only				9,830		8,435
Total including Multi-Family				10,491		9,794

*Households

**Excludes diapers and incontinence products

***Assumes every other week garbage collection

If the City decides to continue with the current weekly garbage collection service and defer expansion of the leaf and yard waste collection program, it is expected it would fail to meet the required provincial diversion requirements as shown below in Table 2.

Table 2: Predicted Generation and Capture Rates with Green Bin Implementation Only

Housing Type	HHLDS*	Predicted Generation Rates (Tonnes/Yr)**	Anticipated Participation Rate***	Predicted Capture Rate (Tonnes/Yr)	Per capita Capture Rate (kg/hh/yr)	Provincial Target (Tonnes/Yr)
Single-Family	37,018	11,134	30%	3,340	90	
Multi-Family	9,133	2,445	20%	489	54	
Yard Waste	N/A	4,500	50%	2,250	N/A	
Total Single-Family only				5,590		8,435
Total including Multi-Family				6,079		9,794

*Households

**Excludes diapers and incontinence products

***Assumes weekly garbage collection

Fleet Requirements and New Technology

Green Bin collection is typically done using carts and trucks fitted with either ‘lift assist’ tippers or automated collection arms. Mechanical assistance is necessary because the weight of the containers typically exceeds safe manual lifting limits. Consideration will need to be given to undertaking separate collection of the new waste stream or employment of split body vehicles to allow co-collection of garbage and Green Bin waste aboard the same truck but in separate compartments.

Co-Collection of Material

The City currently collects garbage and blue bag recycling with separate fleets. Introduction of a third collection truck at the curb to collect Green Bin waste would run counter to the City’s climate change policy goals and increase traffic congestion on City streets. Instead, it is proposed that the City begin purchasing split body side loading trucks that would allow for the co-collection of garbage and Green Bin waste, in separate compartments, onboard the same truck. Given that there is no change in the actual volume of waste being managed, there should be no need to change the number of trucks utilized by the City. Instead, it is recommended that split body trucks be purchased by the City as existing waste collection fleet is replaced.

Automated Cart Based Collection Service

Automated cart-based collection or ‘auto-cart’ is considered a best practice in the solid waste management industry, where improvements can be made in collection efficiency, worker safety and satisfaction, reductions in injuries and climate change impacts.

Typically, single operator collection trucks are capable of achieving 650-850 stops per day. The same driver operating an automated collection vehicle in the same conditions can easily exceed a route efficiency of 1,100-1,500 stops per day. The City currently achieves an average of 1,100 stops per day but does so with two operators on each truck. Moving to automated trucks would reduce net operating costs by as much as 16% or almost \$827,000 per year.

More importantly, a transition to auto-cart collection would significantly improve the safety of collection staff. The waste management industry, as a whole, pays amongst the highest WSIB premiums of any industry in Ontario. Over the last five years, the City has incurred average costs of \$200,000 per year because of WSIB claims. Eliminating the manual collection service will go a long way to reducing these costs and protecting staff.

Introduction of a Green Bin program necessitates use of carts with some sort of mechanical lift assist and co-collection of garbage and Green Bin waste is the recommended collection methodology, therefore a move to automated collection of both garbage and Green Bin waste in concert with the program rollout to single family households is being recommended.

Staffing Implications

Implementation of a Green Bin program and automated cart-based collection will require significant changes to how waste is currently managed and resourced throughout the City.

Different staffing roles are required to support the roll out and long-term success of the new programs. These include staffing roles related to promotion and education, compliance, project development and implementation, and customer service. The new roles are also consistent with other municipalities' experience in rolling out similar programs, which has demonstrated that adequate resourcing is required for implementation and long-term success of solid waste programming.

Despite the need for these new staffing roles, the proposed conversion to automated cart-based collection is projected to result in a net reduction of up to 5.34 FTEs in Solid Waste and Recycling Services. The main driver in this reduction is that automated cart collection only requires one driver per collection vehicle, as opposed to the current two-person crew required for manual collection.

Food and Organic Waste Processing Options

It is expected that the City will require a minimum of 7,300 Metric Tonnes/year of food waste processing capacity to service immediate single-family and multi-family needs. Should it expand service to the ICI sector, and with population growth, additional capacity may be required in the future.

A number of different technologies have been trialed to process various types of food and organic wastes. Generally, technologies fall into two categories including aerobic (decomposition in the presence of oxygen) and anaerobic (decomposition in the absence of oxygen) systems. Each has their advantages and disadvantages. Home based supplemental solutions for food and organic waste traditionally involve methods such as backyard composting, vermicomposters or dehydrators.

In the fall of 2021, the City released a Request for Information (RFI) to solicit information about technologies and capacity from prospective vendors. The City received feedback from vendors representing the primary types of composting technologies confirming their interest in providing a solution for the City. The various technology options were comparatively evaluated against a suite of weighted criteria that considered environmental, social, financial and technical factors as well as risk. The evaluation concluded that an aerobic processing solution for Green Bin waste is the best option for the City of Thunder Bay.

Further, a feasibility study for placing an anaerobic digester at the Mapleward Road Solid Waste and Recycling Facility was completed. Findings suggest this is not a feasible option at this time. Key reasons include not having adequate economies of scale in regards to volume of Green Bin material available for processing to bring down capital and operating costs. Based on the review

of processing technologies it is recommended to proceed with an RFP for the procurement of an aerobic Green Bin processing solution for the City. It is also recommended that the use of supplemental home based solutions continue to be promoted for homeowners who are unable or unwilling to use a cart-based collection system.

Partnerships – Synergy North

A third party consultant, Archibald Engineering, was retained by the City to estimate the potential gas recovery impacts at its landfill site of removing green bin organics from the waste stream (beginning mid-year 2025) over the remaining five (5) years of the current gas supply Agreement with Synergy North. A reduction of up to 2% in gas production per year is projected. The findings from both this study and the anaerobic digester feasibility study have been reviewed with Synergy North.

Sustainability Implications

Introduction of a Green Bin program has the potential to help the City meet its goals as outlined in the Net-Zero Strategy and EarthCare Sustainability Plan. In anticipation of development of a food and organic waste diversion program, emissions from the City's current solid waste management program were reviewed and updated. It is expected that implementation of a Green Bin program will reduce the City's carbon footprint by 5,380 tCO₂e per year and increase the City's residential waste diversion rate from 25% to 42%.

LINK TO EARTHCARE SUSTAINABILITY PLAN

The introduction of a food and organic waste diversion program supports actions within the Waste Section of the EarthCare Sustainability Plan and priority objectives within the Net-Zero Strategy.

Sustainability Plan Objective A, Corporate Action A “Develop and implement a Solid Waste Management Strategy (SWMS) for the next 20 years”.

Sustainability Plan Objective A, Corporate Action C “Maintain and promote provincial waste minimization programs”.

Sustainability Plan Objective A, Corporate Action E “Investigate the implementation of a curbside organic collection program”.

Net-Zero Strategy, Priority Action “Establish residential organics collection program”.

Net-Zero Strategy, Priority Action “Integrate NZS principles into solid waste management operation”.

Net-Zero Strategy, Priority Action “Assess feasibility of rerouting organics to an anaerobic digester”.

FINANCIAL IMPLICATION

Program changes are projected to increase the cost per household for waste management services by an average of approximately \$33 per household or \$1.5 million per year. Offsetting savings of \$827,000 per year is projected with automated cart collection after implementation in 2025.

Table 3 below outlines projected incremental new program costs:

Table 3: Incremental New Program Costs

		2022	2023	2024	2025	2026	2027	2028
Green Bin Program	Capital	\$195,000	\$330,000	\$1,092,031	\$491,532	\$109,798	\$0	\$0
	Operating	\$0	\$61,435	\$370,470	\$1,653,819	\$1,774,545	\$1,553,242	\$1,487,645
Total		\$195,000	\$391,435	\$1,462,501	\$2,145,351	\$1,884,343	\$1,553,242	\$1,487,645
Expanded Yard Waste Collection	Capital	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Operating	\$0	\$161,646	\$164,879	\$168,176	\$171,540	\$174,971	\$178,470
Total		\$0	\$161,646	\$164,879	\$168,176	\$171,540	\$174,971	\$178,470
Auto Cart Program	Capital	\$100,000	\$150,000	\$3,442,674	\$886,387	\$9,133	\$0	\$0
	Operating	\$0	\$0	\$27,764	(\$785,203)	(\$828,638)	(\$863,318)	(\$891,916)
Total		\$100,000	\$150,000	\$3,470,438	\$101,184	(\$819,505)	(\$863,318)	(\$891,916)
Grand Total		\$295,000	\$703,081	\$5,097,818	\$2,414,711	\$1,236,378	\$864,895	\$774,199

Note: All figures are compounded by a CPI rate of 3% annually.

In order to have adequate waste collection vehicles in place to support program roll out in 2025, an additional four (4) collection vehicles over the Fleet Services 2023 capital budget envelope will need to be procured in 2023. Supply chain issues are causing delays across the industry, and we can expect to wait up to two (2) years from date of procurement before actually receiving the vehicle. The approximate cost for the additional collection vehicles required in 2023 is \$2,280,000 (\$1.8k base unit truck costs + \$480k new truck upgrade costs). Fleet Services only have a budget envelope in 2023 for the purchase of two (2) base unit waste collection vehicles. Table 3 above accounts for the costs associated with the required truck upgrades to make vehicles green bin and auto cart compatible, however it does not account for base vehicle costs.

CONCLUSION

The recommendations contained within this report will allow the City to meet its obligations under the Provincial Policy Statement for Food and Organic Waste. The adoption of an automated cart-based collection program will not only improve service efficiency, but will improve worker safety and help mitigate the long term cost of the required Green Bin program. The recommendations will also allow the City to make significant progress towards its stated sustainability goals.

It is concluded that City Council should approve the recommendations to develop a food and organic waste diversion program, including the use of auto-cart technology as outlined in this report.

BACKGROUND

At the April 7, 2014 Committee of the Whole meeting, Report No. 2014.017 – Solid Waste Management Strategy was approved by City Council in principle. The Strategy called for the development of a food and organic waste diversion program, including the use of auto-cart technology.

At the December 9, 2020 Committee of the Whole Meeting, Report R 144/2020 (Program and Service Review) was presented - Administration was directed to evaluate integration of curbside organics program to meet the provincial mandated deadline of 2025 and conduct a feasibility study of moving to automated collection for waste and consider integration of the organics program which will begin 2025 in addition to a number of other diversion actions.

At the March 7, 2022 Committee of the Whole Meeting, a presentation on the development of the City of Thunder Bay Organics (Green Bin) Diversion Program and the City's obligations under the Provincial Policy Statement on Food and Organic Waste was provided.

REFERENCE MATERIAL ATTACHED:

Attachment A – Development of an Organics Program Implementation Plan

PREPARED BY: JASON SHERBAND, MANAGER – SOLID WASTE AND RECYCLING SERVICES

THIS REPORT SIGNED AND VERIFIED BY: (NAME OF GENERAL MANAGER)	DATE:
Kerri Marshall, General Manager – Infrastructure & Operations	May 27, 2022

City of Thunder Bay:

Development of an Organics Diversion Program Implementation Plan



exp Services Inc.
1595 Clark Blvd
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T: +1.905.793.9800
F: +1.905.793.0641
www.exp.com

May 19, 2022

Disclaimer

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Executive Summary

In April of 2018, the Ministry of Environment Conservation and Parks (MECP) introduced its Food and Organic Waste Framework (Framework). The Framework included a Food and Organic Waste Action Plan (Plan) and Food and Organic Waste Policy Statement (Statement). Amongst the many obligations found in the Policy Statement are two requirements of particular relevance to the City of Thunder Bay (City). The Policy Statement requires municipalities in Northern Ontario with a population greater than 50,000 and density greater than or equal to 300 persons per km² to provide curbside collection of food and organic waste to single-family dwellings in the urban settlement area by 2025. Moreover, the program must achieve a 50% waste reduction and resource recovery of food and organic waste by that date.

This report includes recommendations for the development and implementation of a food and organic waste diversion (Green Bin) program to ensure compliance with the requirements of the Province's Policy Statement. The proposed program would service the City's single-family and multi-family dwellings as well as qualifying businesses taking a phased-in approach to the program's implementation. The report also includes recommendations for the optimization of the City's collection services and policies to minimize the cost of implementing the new program and ensure effective participation. To ensure the policy statement's diversion target is met and the program costs are optimized, the following recommendations, as detailed in Section 16 of this report, are proposed:

- 1) Expand current leaf and yard waste services in 2023.
- 2) Implement a curbside food and organic waste program for single-family dwellings in 2025.
- 3) Phase in Green Bin collection services for multi-family and local businesses over time.
- 4) Optimize garbage collection service to achieve diversion targets and reduce costs.
- 5) Hire necessary staff to support roll out of Green Bin services.
- 6) Implement automated cart-based collection of garbage and Green Bin materials.
- 7) Finalize program costs and design parameters as a next step.

The report also examines options for processing the collected organic waste while taking into consideration the implications of this new program on the City's landfilling operations and renewable energy partnership with Synergy North Inc. To ensure the City is consistent with the Policy Statement, future amendments to the City's official plan, waste collection and zoning by-laws may also be necessary. These recommendations are intended to support the City's climate change goals, reduce operational costs and ensure the province's food waste and organics diversion target will be met. The proposed changes are expected to increase the City's residential waste diversion level from 25% to 42% and reduce the City's climate change footprint by an estimated 5,380 tCO₂e per year.

Implementation of these recommendations will not be without financial impact on the City. Roll out of the proposed program is expected to increase the cost per household for waste management services by an average of \$33 per household or \$1.5 million per year between the proposed seven year (2022-2028) planning and implementation timeframe. Implementation of automated cart collection is, however, expected to reduce that program cost increase by almost \$827,000 per year or almost \$18 per household after implementation in 2025.

Table of Contents

1.	Background	1
2.	Ontario's Food and Organic Waste Framework.....	1
3.	Current Program Overview	3
3.1	Waste Disposal Operations.....	3
3.1.1	Garbage Collection.....	3
3.1.2	Thunder Bay Solid Waste and Recycling Facility.....	3
3.2	Waste Diversion Operations	4
3.2.1	Blue Bag Recycling Collection	4
3.2.2	Leaf & Yard Waste Collection.....	4
3.2.3	Additional Diversion Services.....	5
3.2.4	Waste Diversion Infrastructure.....	5
3.3	Current Collection Fleet	5
	Figure 1: Rear Packer	5
3.4	Staffing	6
	Figure 2: Solid Waste Management and Recycling Services Organization Chart	6
3.5	Contracted Services	7
	Table 1: Contracted Services.....	8
3.6	Current Operating Costs	8
4.	Waste Stream Analysis.....	9
	Chart 1: Residential Garbage Tonnage versus Population (2017-2021)	9
	Chart 2: Residential versus IC&I Total Waste Generation (2017-2021).....	10
5.	Food and Organic Waste Generation Estimates.....	10
	Chart 3: Food Waste in Residential Waste Stream (2017-2021 Average)	11
	Table 2: Collected Yard Waste Volumes (2018-2021).....	12
6.	Policy Statement Compliance	12
	Table 3: Policy Statement Requirement of 50% Diversion for Single & Multi-Family Sources	12
7.	Program Design Considerations to Meet the Policy Statement Obligations.....	12
7.1	Service Level Considerations.....	13
7.2	Options for Achieving the 50% Diversion	13
7.2.1	Expanded Yard Waste Collection	14

7.2.2	Green Bin Collection - Weekly	14
7.2.3	Weekly versus Every Other Week Garbage Collection	14
	Table 4: Impact of Garbage Collection Frequency on Green Bin Participation	15
7.2.4	Garbage Item Limits and “Pay as You Throw”	16
7.2.5	Acceptable Materials	16
	Table 5: Green Bin Programs – Acceptable Materials Comparison	17
7.2.6	Projected Diversion Rate of Recommended Options	17
	Table 6: Predicted Capture Rate of Green Bin Program with Expanded Yard Waste Program	18
	Table 7: Predicted Generation and Capture Rates with Green Bin Implementation Only	19
7.3	Other Program Design Considerations	19
7.3.1	Collection Containers	19
	Figure 3: Examples of Proposed New Garbage and Organics Containers	20
7.3.2	Container Liners	20
	Figure 4: Compostable Liners.....	21
7.3.3	Co-Collection with Yard Waste	21
7.3.4	Program Implementation and Communications	21
8.	Fleet Modifications and New Technology	22
8.1	Separate Trucks versus Co-collection	22
8.2	Lift Assists versus Automated Cart Based Collection Service	23
	Figure 5: Lift Assist (left) and Automated Collection (right)	23
8.2.1	Auto-cart Efficiencies	23
8.2.2	Cost Implications of Lift Assists versus Automated Cart Systems	24
8.3	Front End Loader Service	24
9.	Staffing Implications	25
10.	Processing Options.....	26
10.1	Home-Based Solutions.....	26
	Figure 6: The ‘FoodCycler’.....	27
10.2	Open Windrow Composting	27
	Figure 7: Open Windrow Composting.....	28
10.3	Aerated Static Piles and Membrane Covered Windrows	28
	Figure 8: Membrane Covered Windrow	29
	Figure 9: Positive and Negative Aeration.....	29

10.4	In-Vessel Aerobic Systems	30
10.5	Anaerobic Digestion.....	30
	Figure 10: Typical Wet Anaerobic Digestion Process Flow	31
10.6	WWTP Co-digestion	32
	Figure 11: Typical Pre-treatment System for Green Bin Waste.....	32
11.	Processing Capacity and SWRF Infrastructure Requirements	32
12.	Evaluation of Processing Options	33
12.1	Methodology.....	33
	Table 8: Evaluation Criteria and Scale.....	34
	Table 9: Technology Evaluation Scale and Weighting	35
12.2	Technology Assessment.....	36
12.2.1	Environmental Considerations.....	36
12.2.1.1	Greenhouse Gas Emissions.....	36
12.2.1.2	Diversion Potential.....	37
12.2.2	Social Considerations	37
12.2.2.1	Odour Potential.....	37
12.2.2.2	Customer/Resident Convenience	38
12.2.2.3	Traffic Impacts	38
12.2.3	Financial Considerations	38
12.2.3.1	Capital Cost	38
12.2.3.2	Operating Cost	39
12.2.4	Technical Considerations	39
12.2.4.1	Proven Technology	39
12.2.4.2	Scalability for Population Growth.....	40
12.2.4.3	Integration with Municipal Programs.....	40
12.2.4.4	Footprint	41
12.2.5	Risk Management Considerations	41
12.2.5.1	Compliance with Ontario Food and Organic Waste Policy Statement	41
12.2.5.2	Permits and Approvals.....	41
12.2.5.3	Ability to Meet Timeline	42
12.2.5.4	Technical Complexity	43
12.3	Evaluation Summary	43

Table 10: Weighted Score of Green Bin Processing Technologies.....	44
13. Environmental Sustainability Implications.....	44
13.1 Fleet Considerations	45
13.2 Processing Considerations	45
13.3 Impact of Proposed Technologies and Program on the City's Carbon Footprint	45
14. Financial Implications.....	46
Table 11: Summary of Anticipated Incremental Green Bin Program Implementation Costs.....	46
15. Program Critical Path	47
Table 12: Green Bin Program Timeline	48
16. Recommendations	48
17. Conclusions	50

1. Background

Located on Lake Superior, the City of Thunder Bay (City) is the most populous municipality in Northwestern Ontario and the second most populous municipality (after Greater Sudbury) across Northern Ontario. In 2016, the national census reported the City population as being 107,909. By comparison, the metropolitan area of Thunder Bay, which includes the City, the municipalities of Oliver Paipooonge, Neebing and Shuniah, the townships of, Conmee, O'Connor, and Gillies, and the Fort William First Nation had a population of 121,621 in the same census year. In recent years, the City and surrounding area's population has seen modest but consistent growth. Based on Statistics Canada population estimates, the population of the metropolitan area and City is averaging just under 2% growth per year. The City has a culturally diverse population and significant Indigenous population and is home to Confederation College and Lakehead University.

The City provides a range of waste collection, diversion and disposal services to both residents and local businesses. Waste collection services are offered to approximately 37,018 single-family households, 9,133 multi-family units located in 439 buildings, approximately 956 small businesses, and a range of municipal facilities and public spaces. Manual garbage collection is provided by City staff using a fleet of City owned vehicles. Manual 'blue bag' recycling (recycling) and leaf and yard waste (yard waste) collection is provided by private contractors. Garbage is disposed of at the City owned and operated Solid Waste and Recycling Facility (SWRF). Recycling is shipped to a local private Material Recycling Facility (MRF) and yard waste is composted at the City's SWRF. The City also has three depots that receive recycling from local residents including two in the City and one at the SWRF. The SWRF also receives a variety of additional materials such as household hazardous waste for diversion.

Waste volumes have been declining in recent years. In 2018, the City generated 104,090 tonnes of waste. By comparison, only 82,699 tonnes was generated in 2021. Of that quantity, 47,641 tonnes was generated by the residential sector and the City's current waste diversion programs diverted 11,697 tonnes of material to achieve a diversion rate of 25%. In March of 2014, the City commissioned development of its Comprehensive Solid Waste Management Strategy. Key amongst the various recommendations was development of an enhanced leaf and yard waste program and implementation of a food waste diversion (i.e., "Green Bin") program. This latter recommendation was broadly supported by the public showing 67% of respondents favouring the implementation of a Green Bin program. In addition to the Comprehensive Solid Waste Management Strategy, the City's EarthCare Thunder Bay Sustainability Plan 2014-2020, Climate-Forward City: Thunder Bay Net-Zero Strategy, 2020, Program and Services Review, Phase 2 Final Report, 2020 and One City, Growing Together Corporate Strategic Plan 2019-2022 were relied upon to inform the development of this plan.

2. Ontario's Food and Organic Waste Framework

Ontario's Food and Organic Waste Framework (Framework) was developed as a key component of the Province's Strategy for a Waste Free Ontario. The Framework is structured in two parts including the Food and Organic Waste Framework Action Plan (Action Plan), and the Food and Organic Waste Policy Statement (Policy Statement). As implied by its title, the Action Plan lays out a series of 17 proposed initiatives intended to:

- Reduce food and organic waste
- Recover resources from food and organic waste

- Support resource recovery infrastructure
- Promote beneficial uses of recovered organic resources

The majority of the action items focus on immediate opportunities (i.e., to be implemented between 2018 and 2020) to work with federal and provincial partners to facilitate the goals of the framework. Longer term objectives of significance include commitments to:

- amend the 3Rs Regulations to include food and organic waste to increase recovery from the Industrial Commercial & Institutional (IC&I) sector;
- ban food and organic waste from disposal sites;
- support recovery from multi-unit residential buildings;
- promote on and off-farm end-use soil amendments from recovered organic resources; and
- support development of renewable natural gas including consideration for linkages to food and organic waste.

Arguably the most significant implications of the Action Plan to the City are the Province's plans to ban food and organic waste disposal at waste disposal sites (e.g., landfills, incineration facilities) and support the beneficial use of recovered organic resources. The Action Plan contemplated developing, consulting on, and implementing a disposal ban regulation under the Environmental Protection Act with a phased in implementation starting as early as 2021. Public comment was sought by the Province in the fall of 2020 on proposed amendments to the Policy Statement but given the current global pandemic it is unclear what the government's current timeline or plans are.

By comparison, the Policy Statement issued pursuant to Section 11 of the Resource Recovery and Circular Economy Act, 2016 (RRCEA), supports the provincial vision of a circular economy and is an important tool to help move the province towards its climate change goals. Section 2 of the Policy Statement sets out specific obligations and targets for the diversion of food and organic waste from various persons or entities including certain municipalities, industrial and commercial facilities, multi-unit residential buildings, educational institutions and hospitals. Of particular note, policy 4.3 requires:

Municipalities in Northern Ontario that, as of the effective date, do not provide curbside collection of source separated food and organic waste shall provide curbside collection of food and organic waste to single-family dwellings in an urban settlement area within a local municipality if:

- The population of the local municipality is greater than 50,000 and the population density of the local municipality is greater than or equal to 300 persons per km².*

Furthermore, Section 2.1 requires that Municipalities in Northern Ontario that are subject to policy 4.3 achieve a "50% waste reduction and resource recovery of food and organic waste generated by single-family dwellings in urban settlement areas by 2025".

Policy 4.10 requires that "Multi-unit residential buildings shall provide collection of food and organic waste to their residents." Additionally, Section 2.1 requires that such buildings achieve a "50% waste reduction and resource recovery of food and organic waste generated at the building by 2025." While the Policy Statement does not make collection from multi-family buildings a responsibility of municipalities, consideration is given to inclusion of service to this portion of the City later on in this report.

The Policy Statement also requires that municipalities and other planning authorities ensure that official plans are consistent with the Policy Statement with amendment of official plans occurring within the

next scheduled update. Municipal zoning by-laws must also be amended within three years after the related official plan amendment. By-laws made under other acts related to waste reduction and resource recovery, as well as relevant prescribed instruments, must also be made consistent with the proposed Policy Statement within two years of the proposed Policy Statement coming into effect.

In summary, the Policy Statement will create several obligations for the City. In addition to the requirement that it implement a curbside, food and organic waste diversion program for single-family households and achieve a diversion level of 50% by no later than 2025, the City will also need to consider how it intends to process collected food and organic waste and whether it wishes to extend food and organic waste collection service to its multi-family and business properties.

3. Current Program Overview

The City provides a range of waste collection, diversion and disposal services to both residents and local businesses. Curbside services include garbage, blue bag recycling and yard waste collection. Additional services are offered at the City's Solid Waste and Recycling Facility.

3.1 Waste Disposal Operations

3.1.1 Garbage Collection

Single-family households are currently eligible for curbside collection of garbage, recycling and seasonal yard waste. Garbage is collected on a weekly basis (i.e., Tuesday to Friday) subject to a two-item limit with an allowable additional tagged (i.e., for a fee) item for overflow. An additional item is allowed free of charge after specific statutory holidays including New Years Day, Victoria Day and Labour Day. As noted, collection services are provided using a City owned and operated fleet of collection vehicles.

Multi-family buildings also receive weekly garbage collection services from the City, subject to a limit of 3.75 m³ (or 66 items) of waste per site. Property owners with additional collection needs may arrange for a second pick up from the City on a 'fee for service' basis and/or arrange for private collection services. Properties are added to the program on an 'as requested' basis and the City requires that garbage be stored in locked sheds on site.

The City provides garbage collection services to almost 40 municipal properties and approximately 956 local businesses. Municipal properties include various city buildings, works yards, community centres, arenas, pools and parks. Services to IC&I properties include weekly collection of no more than 66 items of waste and a 'fee for service' agreement for a second weekly pickup. Larger businesses, local universities, colleges, schools, hospital, nursing homes and City Hall arrange for private collection services due to the volumes involved. It should be noted that the City currently has two Business Improvement Areas (BIAs) including the Waterfront District BIA and the Fort William District BIA many of whom receive waste collection services from the City.

3.1.2 Thunder Bay Solid Waste and Recycling Facility

The City's primary waste management asset is the Thunder Bay Solid Waste and Recycling Facility (SWRF) located at 5405 Mapleward Blvd. The SWRF is operated by City staff and governed under

provincial Environmental Compliance Approval (ECA) No. A590106 which currently approves the use and operation of a 439 hectare waste disposal site. The site includes a 76.83 hectare landfilling area for the disposal of domestic and commercial solid non-hazardous industrial waste and currently has an estimated 20 years of remaining capacity.

Operating buildings on the site include an administration building for landfill operations and McIntyre Roads staff, a garage and maintenance shop housing landfill and roads equipment, a weigh scale building and an attendant shelter at the onsite transfer station. The SWRF has two sets of weigh scales including a single, 80 foot automated (i.e., RFID tag based) commercial account scale and a tandem set of 80 foot inbound and outbound weigh scales for the general public.

The site also has an active landfill gas collection system which was installed between 2009 and 2010 consisting of 104 vertical wells, 3 horizontal wells, lateral and header piping, condensate traps, an abstraction plant, a candlestick flare and a 3.2 megawatt power generation plant. The power generating plant is equipped with two Caterpillar G3520C engines and electricity generated from the plant is exported to the grid.

3.2 Waste Diversion Operations

3.2.1 Blue Bag Recycling Collection

Single-family household recycling is set out by residents in translucent blue or clear plastic bags and collected bi-weekly by GFL Environmental Inc. (GFL), under contract to the City, in a 'two-stream' format (i.e., recyclable containers are collected separately from paper and paper products). Cardboard is typically bundled for collection where there is sufficient quantity. There are no volume limits associated with recycling set outs from single-family households.

Multi-family buildings are also eligible to receive bi-weekly recycling collection services of unlimited volumes from each site. As with garbage collection for multi-family buildings, the City requires that recyclables be stored in locked sheds on site.

Residents can divert excess quantities of recycling at the SWRF or either of the City's two recycling depots located at Front Street. and Mountdale Avenue. The two sites in the City are operated six days per week by GFL utilizing front end loader (FEL) containers. It is noteworthy that, collectively, these sites receive significant traffic averaging an estimated 300 vehicles per day.

Local businesses are not eligible for City recycling services. The City does, however, provide recycling services to almost 30 different municipal properties including various community centres, golf courses, parks, works yards and public buildings. Collection is primarily done using rear packers supplemented with FEL service for large cardboard generators.

3.2.2 Leaf & Yard Waste Collection

Leaf and yard waste (excluding grass clippings) is collected curbside twice a year (i.e., once in the spring and once in the fall) from single-family and multi-family residences by GFL. Throughout the remainder of the year, leaf and yard waste can be dropped off at the SWRF composting facility at the regular tipping fee or collected as garbage at the curb. The City also operates nine seasonal sites throughout the

community where, for a three week period, it receives and chips Christmas trees. Pumpkins are collected seasonally at three collection sites between November 1st and November 10th of each year.

Businesses are not eligible for leaf and yard waste collection. Collection of leaf and yard waste generated at municipal buildings and public spaces is managed by other City departments or private haulers.

3.2.3 Additional Diversion Services

The City provides a range of supplemental diversion options for residents including depot based collection of tires, household hazardous waste (HHW), discarded electronics (e-waste), fluorescent tubes, and scrap metal including 'white goods' (e.g., CFC-free refrigerators, freezers, air conditioners). HHW, fluorescent tubes and e-waste is received at the City's HHW transfer facility located at the SWRF. Tires and scrap metal is received at the SWRF tire transfer station and public drop off area bins respectively.

3.2.4 Waste Diversion Infrastructure

In addition to the two recycling depots operated in the City, the SWRF also includes a recycling depot, HHW transfer facility, tire transfer station, and leaf and yard waste composting facility. The yard waste receiving area and compost pad has a 4.65 acre pad and is an open windrow composting operation licensed to receive 6,000 MT (i.e. metric tonne) per year.

Collected recyclables are delivered to, and processed at, GFL's local Materials Recycling Facility (MRF) at 3000 Highway 61, Slate River, Ontario.

3.3 Current Collection Fleet

The City's waste collection fleet consists of 15 International packers and one ½ tonne pickup. The packers range in age from 2007 to 2016 of which five are rear load packers (Figure 1) and 10 are side loading packers.

The fleet operates on a four-day week (Tuesday to Friday). Nine side loading trucks are dedicated to residential collection Tuesday to Thursday and eight on Friday. In addition, the City dedicates one rear loading packer to multi-family collection and two rear loading packers to IC&I collection. The ½ tonne pickup operates as a customer service vehicle collecting missed collections and locations the primary fleet is unable to collect from due to space constraints (e.g., narrow roadways). It averages 30-50 stops per day.

Figure 1: Rear Packer

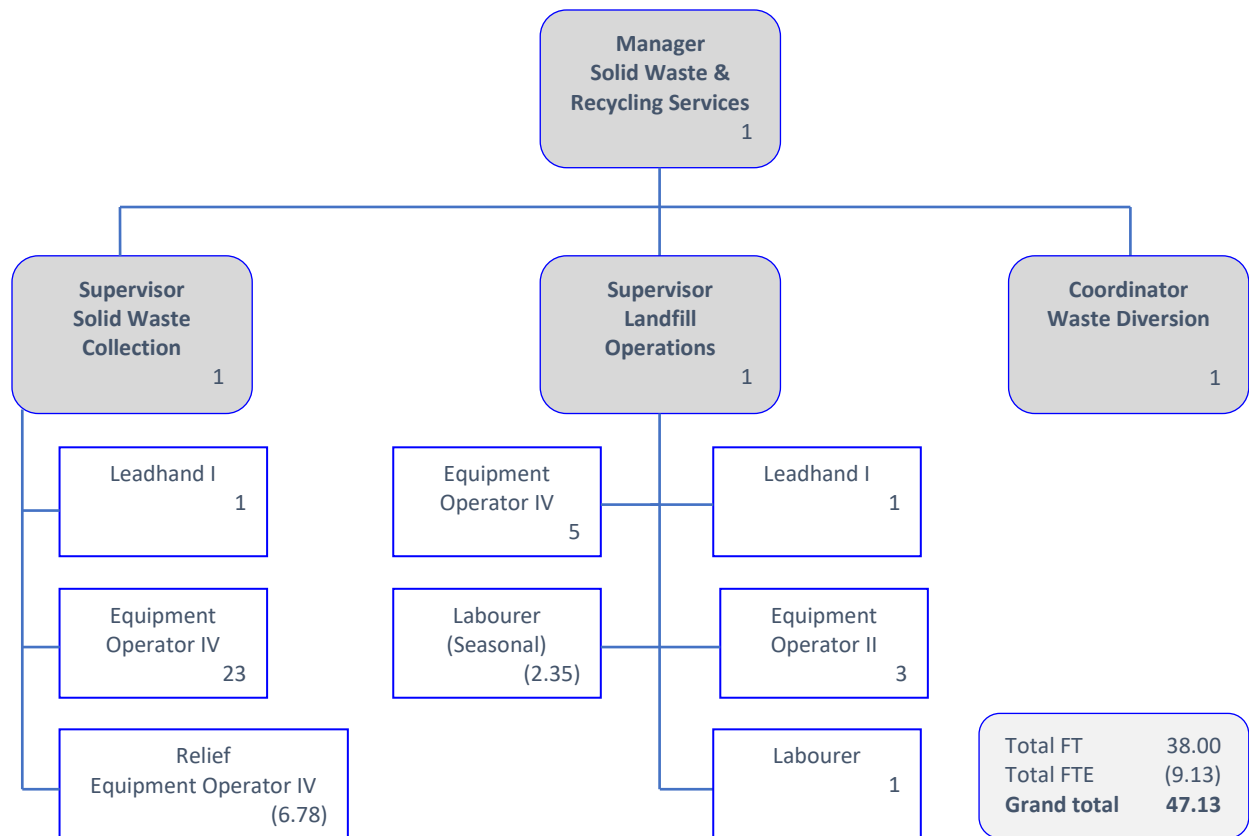


The City also maintains three spare vehicles and has ordered four new side loaders. Two vehicles arrived in 2022 and two are scheduled to arrive in 2023. Supply chain issues resulting from the current Covid 19 pandemic have delayed vehicle deliveries out as much as 24 months from the order date and increased costs dramatically. As a result, funds have been budgeted in 2022 for two new side loaders and one rear loader but delivery is not expected before 2024. The two vehicles delivered in 2022 are 'kitted' out to be automated cart (auto cart) capable subject to having the hydraulic arm purchased and installed. The latter two vehicles will come with arms already installed. City staff has confirmed that the vehicles scheduled for delivery in 2023 can also be retrofitted to incorporate split bodies as required to allow for separate compartmentalization of different waste streams. The solid waste collection unit's Supervisor and Leadhand also have dedicated pickup trucks.

3.4 Staffing

The City's Solid Waste and Recycling Services (Section) oversees the City's waste collection, diversion and landfill operations. The Section consists of a manager and two supervisors as noted in Figure 2. They are supported by a waste diversion coordinator who, amongst other duties, is responsible for day-to-day management of processing, collection and educational service contracts, statistical analysis and regulatory reporting. The Section includes a total of 38 full time (FT) staff and 9.13 full time equivalents (FTEs).

Figure 2: Solid Waste Management and Recycling Services Organization Chart



The City's waste collection staff include 23 full time operators and up to 15 relief operators (equivalent to 6.78 full time staff). Sixteen full time staff and two relief staff manage single-family household collection, an additional six full time staff manage multi-family and IC&I collection and the remaining full time staff operates the customer service pickup. The remaining relief operators cover off vacation and sick leave as required.

The solid waste collection unit is overseen by a Supervisor who is supported by a Leadhand. The Leadhand's primary responsibilities are intended to focus on direct support and guidance of the collection staff in the field with a portion of their time spent on administrative duties. The Section also receives indirect support from a number of other City departments to support its operations (e.g., Fleet, Clerks, Human Resources, Finance).

3.5 Contracted Services

The Section currently manages ten service contractors including GFL, Titan Contracting, Miller Environmental, Tim Walters Trucking and Equipment Rentals, Junk Away Inc., Mike Jewett Construction, Enviroshred, Rutter Urban Forestry and EcoSuperior.

GFL provides collection of recyclables and yard waste to the City's single-family and multi-family properties along with recycling collection from municipal buildings. They are also responsible for administering the City's event recycling program, operation of the City's two 'downtown' recycling depots and for processing of collected recyclables at their local MRF.

Junk Away operates under contract to the Section to collect items left illegally as litter (e.g., couches, brush and general garbage) and deliver them for disposal to the City landfill on an 'on demand' basis.

Tim Walters Trucking and Equipment Rentals provides rental of up to two landfill D7 bulldozers with skilled operators to assist with daily landfilling operations. Mike Jewett Construction provides one excavator rental with operator for landfill daily cover support.

Titan Contracting is responsible for grinding of yard waste at the City's SWRF and also manages the composting operations. Rutter provides seasonal tree chipping services at the City's temporary tree collection sites and mulch delivery to the SWRF.

Miller Environmental is responsible for operation of City's Household Hazardous Waste facility at the SWRF.

The Section maintains a contract with Enviroshred to provide secure on-site shredding services to the various City departments. EcoSuperior is unique in that it supports the City in the delivery of four key waste management educational programs and waste diversion related services.

The City has a long-term partnership with Synergy North Inc. (Thunder Bay Hydro Renewable Inc.) for the supply of landfill gas and operation of its power generation station.

Table 1: Contracted Services

Contractor	Service	Contract Term
EcoSuperior Environmental Programs	'Spring up to Clean up' litter campaign; Waste Reduction Week activities; school waste reduction education program; storefront sale of backyard composters	Annual purchase order
Enviroshred	Secure on-site shredding services.	Expires: March 31, 2023 Two 1yr renewal options
GFL	Single-family and multi-family recycling collection; Processing of collected recyclables; operation of the Front St. and Mountdale Ave. recycling depots	Start: July 1, 2020 7 yrs + two 1 yr renewal options Expires: Jun 30, 2027
GFL	Single-family and multi-family yard waste collection	Expires: April 30, 2023
Junk Away Inc.	Pick up/disposal of debris as it relates to items left illegally as litter (e.g. couches, brush and general garbage). On demand/as required.	Expires: December 31, 2022 Two 1 yr renewal options
Mike Jewett Construction	Provides one excavator rental with operator for landfill daily cover support.	Expires: September 30, 2023
Miller Environmental	Operation of HHW facility.	Expires: June 30, 2023
Rutter Urban Forestry	Christmas tree grinding at 9 seasonal municipal drop off sites and mulch delivery to City landfill.	Expires: December 25, 2022
Synergy North Inc.	Operation of landfill gas power generation station.	Expires: 2030
Tim Walters Trucking and Equipment Rentals	D7 bulldozer rental service with operator for assisting with daily landfill tip face operations.	Expires: September 30, 2022
Titan Contracting	Yard Waste grinding and composting operations at City SWRF.	Starts: May 1, 2021 3 yrs + two 1 yr renewal options Expires: April 30, 2024

3.6 Current Operating Costs

The City's waste management system is currently funded through several sources including tipping fees at the SWRF, property taxes, revenue from power generation, the sale of recyclables, and funding from operation of extended producer responsibility programs (e.g., diversion of recyclables, electronic waste and household hazardous waste). Landfill site operations are rate supported by tipping fee revenues. Collection services and waste diversion program operating and capital costs are supported through tax-based funding.

The City's waste management system has three primary activities including landfill operations, solid waste collection and solid waste diversion. The 2022 gross budget for these activities is \$10,049,000 with a projected net cost of \$5,226,000. Landfill operations represents the single largest gross expenditure (i.e., 29% of gross costs) and in 2020 the use of Federal-Provincial 'Safe Restart' funding was necessary to offset the negative impacts of the current economy downturn. Stabilization reserve funds were used in 2021 and are predicted to be necessary in 2022 to cover pandemic related short falls. Garbage and recycling collection represent the largest system costs (i.e., 57% of gross costs). It is

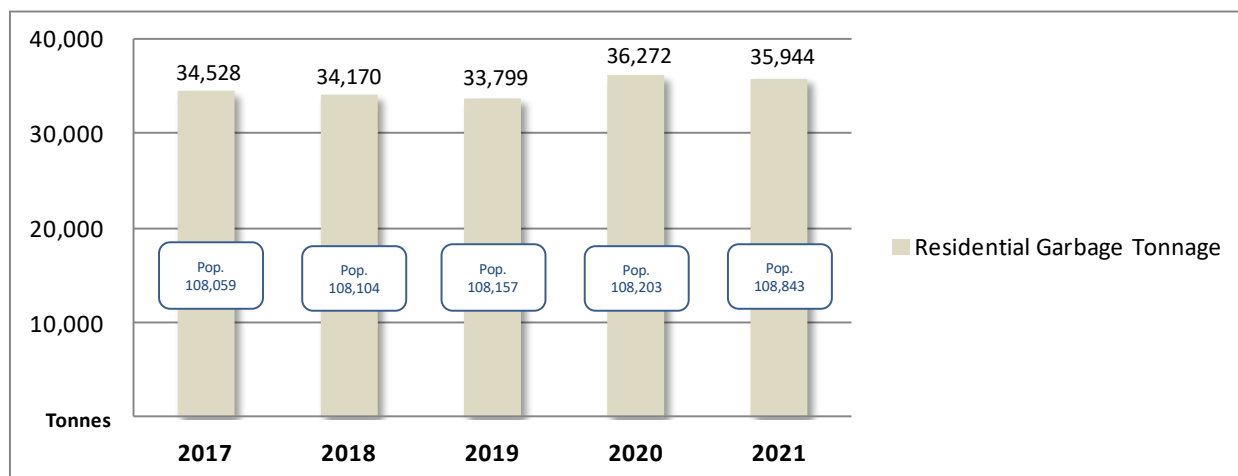
notable that labour represents a significant proportion of the Section's budget. In particular, labour represents 73% of the 2022 gross garbage collection budget.

It should also be noted that there are currently no tipping fees collected on household or commercial waste brought to the landfill site by the City's solid waste collection packers, which means disposal revenues from the landfill site are all drawn from residential and IC&I customers who bring their waste over the scales.

4. Waste Stream Analysis

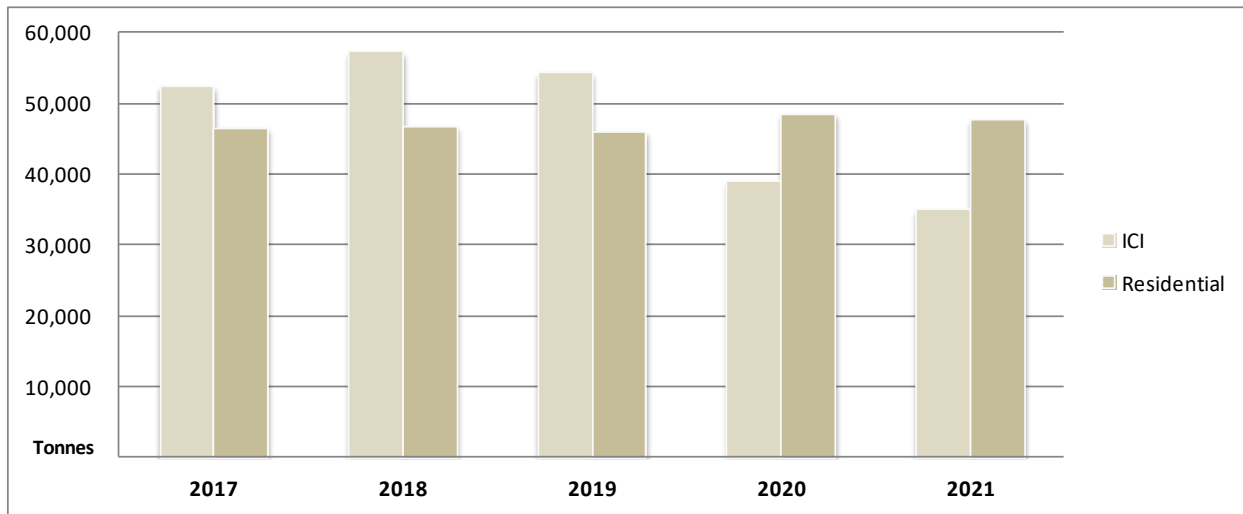
As previously noted, the City's population has remained relatively stable year over year. Chart 1 shows that residential garbage disposal quantities have trended consistently with the City's population except in 2020 and 2021. Between 2017 and 2019 there was a decline in tonnage of approximately 2% which is consistent with typical variances in yard waste volumes and the overall global trend to light weighting and reduction of consumer packaging. The noticeable increase in residential disposal in 2020 and 2021 can be directly attributed to the COVID 19 pandemic. Municipalities across Ontario reported similar increases due to travel restrictions and employees working from home.

Chart 1: Residential Garbage Tonnage versus Population (2017-2021)



By comparison, Chart 2 shows the marked negative impact of both the declining economic conditions of 2019 and the pandemic in 2020 and 2021 had on local businesses; many of whom were forced to curtail operations for much of both years. The extent to which these quantities will return to historical norms as the global economy recovers from the current pandemic is as of yet unknown.

Chart 2: Residential versus IC&I Total Waste Generation (2017-2021)



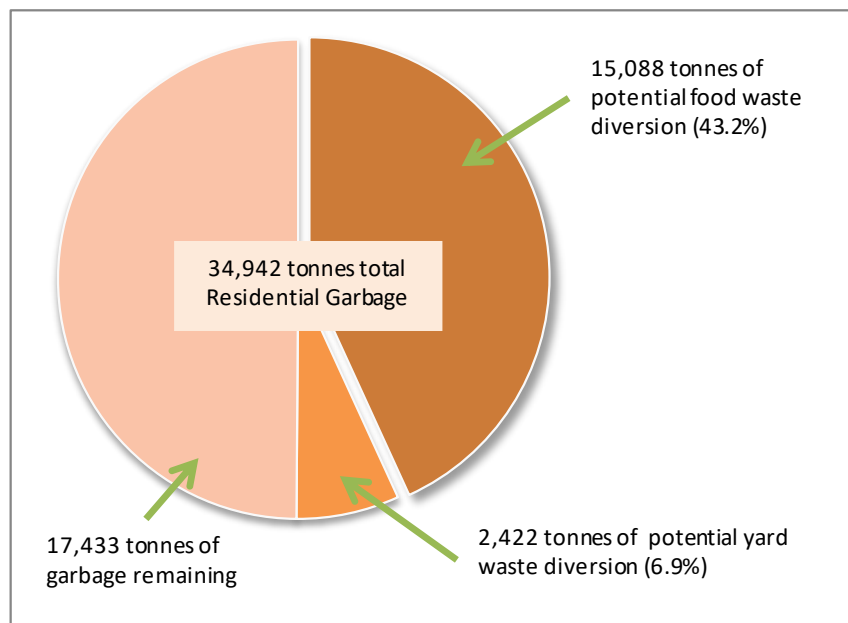
As noted, waste quantities from the residential sector have been relatively consistent and predictable prior to the pandemic. Data from the past five years show the City collected and/or received an average of 47,096 MT/yr of residential waste (i.e., including both garbage and recyclables). A review of the last five years of landfill data shows that quantities by material type have not changed dramatically with the exception of materials that normally vary by season or participation (e.g., yard waste).

Analysis of the City's residential waste composition also shows that garbage represented 74% (i.e., 34,942 MT/yr) of the reported total average annual residential waste quantity. The remaining 26% (i.e., 12,154 MT/yr) was diverted through the City's various waste diversion initiatives.

5. Food and Organic Waste Generation Estimates

Based on a four season waste composition study undertaken by AET Consulting Ltd. between 2018 and 2019, kitchen food waste represented 43.2% of curbside collected garbage which, based on an average landfilled quantity of 34,942 MT/yr, equates to 15,088 MT/yr of food waste.

Chart 3: Food Waste in Residential Waste Stream (2017-2021 Average)



It should be noted, however, that the study in question was based on curbside single-family households. In reality, garbage collected and landfilled by the City includes a mix of quantities from residential and multi-family sources. By comparison, multi-family households typically generate 8 to 10% less food waste than their single-family counterparts. As a consequence this preliminary estimate is likely overstated.

As previously noted, the City currently collects from approximately 37,018 single-family households and 9,133 multi-family units located in 439 buildings. Adjusting for the proportion of the population in multi-family dwellings and the lower food waste generation estimates for this group, it is expected that approximately 12,371 MT/yr of food waste is generated by single-family households and 2,717 MT/yr from multi-family households and would be potentially available for diversion.

By comparison, the March 2014 City of Thunder Bay Comprehensive Solid Waste Management Strategy (Waste Management Strategy) estimated there was 11,500 MT of food waste available for diversion. The lower number found in the Waste Management Strategy is likely due to assumptions made by its authors about the types of organics that might be collected and/or reasonable capture rates.

The AET study also identified that approximately 7% of the residential waste was leaf and yard waste suggesting there is an additional 2,422 MT/yr of yard waste available to be diverted from disposal. Yard waste volumes vary dramatically from one year to another. Historically, the City has diverted roughly 1,825 to 2,720 MT/yr (i.e., ~ 2,100 MT/yr on average) as shown in Table 2, which would suggest the City could divert an average of 4,500 MT/yr with an expanded program. This range is somewhat lower but consistent with the Waste Management Strategy which had predicted the City could capture approximately 5,800 MT of yard waste annually with an expanded leaf and yard waste collection program.

Table 2: Collected Yard Waste Volumes (2018-2021)

Year	Direct Drop Off at Site (leaf/yard waste)	Curbside Collection Spring	Curbside Collection Fall	Christmas Tree Program	Pumpkin Collection	Total
2018	1,599	558	500	34	27	2,718
2019	1,122	459	305	47	28	1,961
2020	881	591	435	18	30	1,955
2021	950	453	381	18	23	1,825

Note: Leaf and yard waste tonnages are approximations only

6. Policy Statement Compliance

As outlined in Section 2, the City is required to establish and provide a curbside food and organic waste collection program for single-family dwellings and divert 50% of its food and organic waste by 2025. In general, food waste consists of common materials such as kitchen scraps and discarded food. Organic waste represents a broader range of materials such as leaf and yard waste, pet waste, paper towels, tissue paper and other biodegradable materials.

While the City has an obligation to provide a curbside organics collection program, it can achieve the diversion goal through the collection of both food waste (aka Green Bin program) and yard waste. As noted in Section 5, a recent curbside waste composition study undertaken in the City suggests there is approximately 15,088 MT/yr of food and organic waste present in the curbside wastestream. The same waste composition study suggests the City generates approximately 4,500 MT of yard waste (including approx. 2,100 MT/yr currently being diverted). Assuming the single-family households generate 12,371 MT/yr and effectively all the available yard waste, the City would need to divert 8,435 MT/yr of food and organic waste to meet the provincial requirements. Should the City wish to assist multi-family property owners with their obligations under the Policy Statement, the City would likely need to divert approximately 9,794 MT/yr to ensure compliance with the provincial requirement.

Table 3: Policy Statement Requirement of 50% Diversion for Single & Multi-Family Sources

Source	Available Food & Organic Waste (Tonnes/yr)	Available Yard Waste (Tonnes/yr)	Policy Statement Obligation (Tonnes/yr)
Single Family Only	12,371	4,500	8,435
Single & Multi-Family	15,088	4,500	9,794

7. Program Design Considerations to Meet the Policy Statement Obligations

There are a number of parameters and options that will need to be considered in designing a program that meets the obligations of the Policy Statement. They include:

Service level considerations:

- Mandatory collection of food waste and yard waste from single-family households
- Optional collection of food waste and yard waste from multi-family households
- Optional collection of food waste and yard waste from local businesses

Options for achieving the 50% diversion target:

- Expanded yard waste collection;
- Weekly collection of food waste;
- Every other week garbage collection;
- Garbage item limits; and
- Types of acceptable organic waste

Other program design considerations:

- Co-collection of yard and food waste
- Choice of collection containers for containing food waste
- Use of new technologies such as automated cart collection

7.1 Service Level Considerations

As noted, the City must provide a curbside program collecting both food and organic waste from single-family households and achieve the required diversion rate. It does not, however, have to provide this service to multi-family households or local businesses and institutions. Those property owners are responsible for meeting their obligations under the Policy statement. Nonetheless, it is recognized the City currently provides garbage and blue bag collection service to both multi-family properties and garbage collection service to selected businesses. It is proposed therefore, that the City plan to provide Green Bin service to multi-family buildings no later than 2026. Delaying roll out of service to this group is proposed in order to allow staff time to ensure the successful launch of the curbside single-family collection service and give staff time to develop an appropriate service policy. This latter point is important because of issues with material storage and contamination which, if not considered carefully, could jeopardize the entire program.

It is further recommended that consideration be given to expanding Green Bin collection service to local businesses and institutions on a cost recovery basis after rollout of the residential program is complete. Expanding the program to include local businesses and institutions may allow for improvements in economies of scale on processing costs and even collection services.

This proposed approach will spread out the cost impact on the City's customers and give staff more time to refine delivery of the program.

7.2 Options for Achieving the 50% Diversion

Food waste diversion programs, more commonly known as Source Separated Organics (SSO) or Green Bin programs, are commonplace throughout southern Ontario and in many cities throughout Canada.

They have been in operation in the Greater Toronto Area (GTA) since 2002 and as of 2016, roughly 70% of Ontario's population had access to Green Bin service¹.

The programs in question collect a broad range of organic materials including yard waste, food waste, soiled paper, and pet waste but vary in how the materials are collected and what is included in their program. Food waste, because of its unique characteristics, is a challenging material to divert and many lessons have been learned by other communities suggesting implementation requires careful planning and effective communications. Numerous factors affect program performance. Key considerations include collection frequency, collection policies, materials collected, container selection and communications.

7.2.1 Expanded Yard Waste Collection

As noted in Section 5, the City currently diverts roughly 2,100 MT/yr of yard waste and both the Waste Management Strategy and AET waste compostion study identified that at least an additional 2,422 MT/yr of yard waste may be available for diversion from the residential wastestream. While the Policy Statement requires collection of both food and organic waste, expanding the City's yard waste collection program is the least expensive and easiest option available to partially meeting its diversion requirement.

Yard waste is significantly less expensive to process than food waste. Doubling the City's yard waste collection to four events annually from two, at a minimum, is expected to capture an additional 920 MT/yr (i.e., 3,035 MT/yr on average). Expansion of the yard waste collection services in 2023 is recommended to allow staff to assess the diversion potential of this option and reflect this information in upcoming collection and processing contracts. Negotiations would be required with the City's yard waste collection and processing contractors whose contracts end in 2023 (i.e., GFL – collection) and 2024 (i.e., Titan – processing) but is not expected to be an issue.

Expansion of the City's yard waste program to four collection events annually is expected to increase collection costs by approximately \$157,000 per annum and processing costs by \$5,000 per annum assuming an average cost of \$170/MT. Review of the service in subsequent years to consider further expansion or refinement is also recommended.

7.2.2 Green Bin Collection - Weekly

The Policy Statement does not specify a collection frequency for food waste collection. However, resident participation in Green Bin programs is driven primarily by convenience and the effective use of public policy. Almost all municipalities providing Green Bin service offer weekly collection to minimize the generation of unpleasant odours, sanitation issues, and attraction of vectors resulting from food storage in the household between collection cycles. Every other week Green Bin collection was tried in the past but faced strong public opposition, suffered from poor participation and is not expected to meet the diversion requirements of the City. Weekly collection is, therefore, recommended.

7.2.3 Weekly versus Every Other Week Garbage Collection

¹ Ontario Ministry of the Environment and Climate Change, 2017

Past experience throughout Ontario has also unequivocally demonstrated that residents will not fully participate in food waste diversion programs unless the program is accompanied by strict garbage set out limits. While bag or item limits can be useful to some extent, the better practice has been proven to be coupling weekly Green Bin collection with every other week garbage collection. This fact is borne out in capture rate data for the two types of programs. Communities with weekly garbage and Green Bin service will typically achieve capture rates of 80kg/household to 140kg/household whereas those providing every other week garbage and weekly Green Bin collection often divert as much as 110kg/household to 340kg/household as shown in Table 4.

Table 4: Impact of Garbage Collection Frequency on Green Bin Participation

Municipality	Kg/year Single-Family Households	Percentage Diversion of Total Residential Waste	Green Bin Sizes in Use (litres)	Garbage Collection Frequency
Guelph, City of	340	18%	80	Bi-weekly
Toronto, City of	340	20%	97	Bi-weekly
York, Region of	310	26%	45	Bi-weekly
St. Thomas, City of	300	23%	240*	Weekly
Ottawa, City of	260	22%	46, 80	Bi-weekly
Peel, Region of	180	12%	100	Bi-weekly
Waterloo, Region of	170	13%	46	Bi-weekly
Halton, Region of	160	14%	46	Bi-weekly
Dufferin, County	140	15%	46	Weekly
Durham, Region of	130	11%	46	Bi-weekly
Barrie, City of	110	8%	46	Bi-weekly
Simcoe County	90	9%	46	Bi-weekly
Hamilton, City of	80	6%	46, 120	Weekly
Kingston, City of	80	9%	80	Weekly
Niagara, Region of	70	6%	46	Bi-weekly

*St. Thomas co-collects yard waste and food waste in their green bin²

Of particular interest are the experiences of Sudbury, Waterloo and Niagara Regions. All three initially offered weekly garbage and Green Bin service only to switch to every other week garbage collection. In 2021 Sudbury switched to every other week garbage collection and saw an immediate 16% increase in Green Bin program participation. Waterloo switched in the spring of 2017 and saw an immediate 150% increase in food waste diversion, a 26% increase in yard waste diversion and a 5% increase in Blue Box recycling. Niagara Region, which was still offering weekly garbage collection at the time the data found in Table 4 was developed, switched to every other week garbage collection in 2021 and observed a 24% increase in food waste diversion and an 8% increase in Blue Box recycling.

² City of London, Civic Works Committee Report, November 17, 2020, Community Engagement on Green Bin Program Design

Every other week garbage collection does not generate a net savings since the same amount of waste is still being handled irrespective of which week it is collected in. However, when the City transitions out of provision of Blue Box (blue bag) service in July of 2024 as required under O.Reg 391/21, it will no longer be obliged to manage the cost of Blue Box (blue bag) recycling. As a result, it will be in the City's best interest to maximize the diversion of recyclables out of the residential garbage stream. It is recommended, therefore, that the City move to every other week garbage collection along with implementation of a Green Bin program in 2025 as a means of ensuring the success of the Green Bin program.

7.2.4 Garbage Item Limits and "Pay as You Throw"

The City currently permits a weekly set out limit of two items of waste per household with an allowable additional tagged (i.e., for a fee) item for overflow. Recognizing that over 43% of the garbage set out by residents consists of food waste and 7% is yard waste, implementation of a Green Bin program and an expanded yard waste collection program has the potential to cut garbage volumes by half. With this in mind, the City could combine implementation of a weekly Green Bin program with an expanded yard waste collection program along with a garbage set out of two items every other week without having any negative impact on its current level of service. Moreover, with the City's recent expansion of its blue bag program to include additional plastics, the majority of residents will produce far less than one item per week (i.e., two items every other week) of non-putrescible (i.e., non-organic) waste with no negative impact to the public on set out volumes.

Irrespective of whether the City moves to every other week garbage collection, it is recommended that the City reduce allowable item limits by 50% (1 item per week). Recognizing that some residents, such as those with large families, may continue to be challenged with strict volume limits, consideration should be given to continuing the City's policy of permitting residents to purchase tags for extra volumes of waste. Should there be a preference to allowing the continued use of bag or item tags, it is recommended that the City amend its waste collection by-law to require mandatory participation in waste diversion programs and consider adopting a clear garbage bag policy, at some point in the future, as a condition for receiving garbage collection services. This approach prevents residents from 'buying their way' out of participating in diversion programs. It should be noted that, while bag or item limits can be used as an alternative means of encouraging participation, every other week garbage collection has been demonstrated to be a more effective means of achieving participation in Green Bin programs.

7.2.5 Acceptable Materials

The types of materials accepted in a Green Bin program can impact both the quantity and quality of materials collected. As shown in Table 5, municipalities collecting quantities in excess of 250kg/household are typically collecting materials other than food waste in their Green Bin program. Top performing programs typically collect pet waste as part of their acceptable materials and may include diapers and sanitary products or have separate weekly collection for such materials. Inclusion of pet waste can increase organics diversion by an additional 20% and diapers by another 10%. Some municipalities, such as St. Thomas, allow their residents to include yard waste in their Green Bin program. Ultimately, the types of materials that can be accepted in a municipality's Green Bin program will be determined by their organic waste processor. It is recommended that the City prioritize a processing solution that includes pet waste and kitty litter in its process to maximize its diversion efforts.

Table 5: Green Bin Programs – Acceptable Materials Comparison³

Municipality	Food waste, soiled paper, cooking oils & grease, household plants	Pet Waste	Diapers, Sanitary Products	Yard Waste
Toronto, City of	✓	✓	✓	
York, Region of	✓	✓	✓	
Guelph, City of	✓	✓		
Niagara, Region of	✓	✓		
Ottawa, City of	✓	✓		✓
Simcoe, County	✓	✓		
St. Thomas, City of	✓	✓		✓
Waterloo, Region of	✓	✓		
Barrie, City of	✓			
Dufferin, County	✓			
Durham, Region of	✓			
Hamilton, City of	✓			
Halton, Region of	✓			
Kingston, City of	✓			✓
Peel, Region of	✓			

7.2.6 Projected Diversion Rate of Recommended Options

In summary, it is proposed that the City adopt the following recommendations:

- Expanded leaf and yard waste collection to four events per year
- Weekly Green Bin collection from single-family households
- Every other week garbage collection
- Garbage set out limit of three items per household every other week
- Green bin waste to include food, soiled paper, household plants and pet waste
- Weekly Green Bin collection from multi-family households no later than 2026
- Weekly Green Bin collection from local business and not-for-profits for future consideration

As noted in Section 7.2.1, an expanded yard waste collection program is expected to conservatively capture 3,035 MT/yr of yard waste.

Currently almost 20% of the residential dwellings serviced by the City are multi-family sites (i.e., 9,133 units). Multi-family properties are known to generate less food waste although exact generation rates vary by occupancy (e.g., retirement complex versus young families in rental units). Provincial waste composition studies suggest it is reasonable to assume the City's multi-family housing stock will generate 9% less food waste. Thus, as noted in Section 6, it is estimated that the City generates approximately 15,088 MT/yr of food waste from its single-family and multi-family residences combined.

³ City of London, Civic Works Committee Report, November 17, 2020, Community Engagement on Green Bin Program Design

However, it is unlikely that the City's future Green Bin waste processor will be able to receive diapers and incontinence products directly. As a result, at least 10% of this total available organic waste currently discarded by residents is expected to be ineligible for inclusion in the City's Green Bin program at this time. As a consequence, roughly 13,579 MT/yr is assumed to be available for diversion.

Past studies show Green Bin capture rates for single-families average between 55%-65% of available material depending on what incentives are used to encourage participation (e.g., every other week garbage service). Multi-family properties tend to have lower participation rates ranging between 15%-35% depending, again, on building demographics.

Based on these assumptions, the City could reasonably expect to divert approximately 6,680 MT/yr of food waste from its single-family households and an additional 660 MT/yr from its multi-family households. Combined with its current yard waste diversion program which collects an average of 2,100 MT/yr, this would amount to a diversion rate of approximately 9,440 MT/yr which would come close to meeting the calculated Policy Statement diversion requirement of 9,794 MT/yr as shown in Table 6.

However, as shown in Table 6, expanding the City's yard waste program as proposed and including every other week garbage collection, would allow the City to achieve the provincial diversion target without immediate implementation of multi-family Green Bin service. It is recommended, therefore, that implementation of multi-family Green Bin service be deferred until 2026 subject to council approval of the proposed yard waste collection service expansion.

Table 6: Predicted Capture Rate of Green Bin Program with Expanded Yard Waste Program

Housing Type	HHLDs*	Predicted Generation Rates (Tonnes/Yr)**	Anticipated Participation Rate***	Predicted Capture Rate (Tonnes/Yr)	Per capita Capture Rate (kg/hh/yr)	Provincial Target (Tonnes/Yr)
Single-Family	37,018	11,134	60%	6,680	180	
Multi-Family	9,133	2,445	27%	660	72	
Yard Waste	N/A	4,500	70%	3,150	N/A	
Total Single-Family only				9,830		8,435
Total including Multi-Family				10,491		9,794

*Households

**Excludes diapers and incontinence products

***Assumes every other week garbage collection

If, however, the City opts to retain its current weekly garbage collection service and defer expansion of its yard waste collection services, it is expected that it would divert approximately 6,079 MT/yr of combined food and yard waste and fail to meet the Policy Statement requirements as shown in Table 7.

Table 7: Predicted Generation and Capture Rates with Green Bin Implementation Only

Housing Type	HHLDs*	Predicted Generation Rates (Tonnes/Yr)**	Anticipated Participation Rate***	Predicted Capture Rate (Tonnes/Yr)	Per capita Capture Rate (kg/hh/yr)	Provincial Target (Tonnes/Yr)
Single-Family	37,018	11,134	30%	3,340	90	
Multi-Family	9,133	2,445	20%	489	54	
Yard Waste	N/A	4,500	50%	2,250	N/A	
Total Single-Family only				5,590		8,435
Total including Multi-Family				6,079		9,794

*Households

**Excludes diapers and incontinence products

***Assumes weekly garbage collection

7.3 Other Program Design Considerations

While the issues identified in Section 7.2 are key drivers of program diversion, there are a number of other issues that affect operating costs and public acceptance of Green Bin programs. They include factors such as collection containers, use of liners and co-collection of yard waste and food waste.

7.3.1 Collection Containers

For most municipal Green Bin programs, wheeled carts, commonly known as “Green Bins”, are provided to participating households along with a small (typically 7.5 litre) kitchen-sized food waste container (see Figure 3 for examples).

Green Bins can come installed with a locking mechanisms on them to prevent access by vectors such as raccoons. Green Bins can range in size from 45 litres to 240 litres. The largest capacity carts are normally offered in municipalities co-collecting leaf and yard waste with food waste. Weight is a significant factor in determining collection container size. An 80 litre Green Bin can easily exceed typical municipal health and safety policies and collection by-law weight restrictions (i.e., normally 22 kg max) if filled with high moisture content waste (e.g., fruit, grape pressings or pet waste). As a consequence, most collection fleets picking up larger Green Bins utilize trucks equipped with a mechanical lift device known as a lift assist. The largest capacity bins (i.e., 240 litre) would normally only be picked up by fully automated collection vehicles using a mechanical arm to lift and dump the containers.

These choices have significant financial implications to a municipality’s fleet and are discussed later in this report. Given that one 45 litre container is typically sufficient to meet the needs of the average householder, it is recommended that the City adopt this size of container as its program standard and provide additional containers on an ‘as needed’ basis. An exception to this recommendation would be if the City opted to move to automated cart collection in which case larger 80 litre bins would be more cost effective.

Figure 3: Examples of Proposed New Garbage and Organics Containers



7.3.2 Container Liners

As part of the City's plans to roll out a food diversion program, it will select a contractor to provide organics processing services or plan to build its own processing operations. The selected processing system and operating licence will ultimately determine the types of materials that can be included in the City's Green Bin program and any restrictions in collection methodology. Based on past experience in Ontario, it is likely that the contractor will not want, or be permitted by the Ministry of the Environment, Conservation and Parks (MECP), to accept food waste collected in plastic bags.

This limitation has two important impacts on the design of the City's Green Bin program:

1. It will prevent the City from collecting diapers and other sanitary products as part of its Green Bin program; and
2. It also means that food waste will need to be collected loose or with a non-plastic liner bag.

Most municipalities encourage their residents to use paper liners. This can take the form of lining a Green Bin with sheets of newspaper or paper bags that are designed to line the resident's Green Bin or kitchen food waste containers.

Some allow the use of certified compostable/biodegradable non-paper liners (see Figure 4 for examples of allowed certification logos). Use of the latter can be problematic because they can be difficult to differentiate from regular plastic grocery bags. However, restricting the use of liners to paper products can have a negative impact on participation rates, as most residents object to managing food waste in unlined containers and find the cost of paper bags to be an issue.

Allowing the use of compostable plastic bags inevitably results in some level of cross contamination with regular plastic bags, which may result in surcharges or fines from the composting facility or outright rejection of loads. In general, most Ontario municipalities opt to achieve higher levels of diversion by allowing residents to include both types of liners.

Should the City pursue this option, an additional promotion and education budget to educate residents and local stores on the correct types of bags should be considered for the program. It is recommended that input from the City's processing contractor be sought before a final decision is made.

Figure 4: Compostable Liners



Certified Compostable Logos

Certifies that the bag is made from plant-based material and is tested to ensure it can compost fully.

7.3.3 Co-Collection with Yard Waste

Food waste and other types of organic waste can have very high moisture levels as noted above, compared to leaf and yard waste. As a consequence, composting facilities managing food waste will often use large volumes of leaf and yard waste as a bulking agent. This fact has led some municipalities, as shown in Table 5 above, to co-collect food waste and yard waste. In other instances, municipalities opt to collect leaf and yard waste separately and may or may not transport it to their organics processing facility for use as a bulking agent. Generally, favourable processing costs can be obtained if a municipality commits both their food and yard waste to the same facility because of the symbiotic nature of the waste streams.

That said, it is usually more cost effective to collect leaf and yard waste separately because of the significant difference in processing costs between the two materials (i.e., food waste composting costs are typically three times that of leaf and yard waste). It is recommended that this issue be considered as part of discussions with vendors developing processing solutions for the City prior to finalizing program details such as bin size.

7.3.4 Program Implementation and Communications

Green Bin programs have been successfully launched in numerous communities to date throughout Ontario. The Waste Management Strategy plan also noted that the most recent public survey undertaken by the City *“found that 67% of respondents favour the implementation of an SSO collection program”*. It also noted that, *“One of the most common responses when residents were asked about the top issues with respect to waste management was that too much organic material is being landfilled.”*

Nonetheless, these programs represent a significant change in the way waste is managed in the household and as such require careful pre-planning to ensure public concerns are addressed effectively and a smooth roll out is achieved. Past experience shows that successful programs have involved high levels of public engagement in advance of the program launch and throughout the first year of operations. For this reason it will be necessary for the City to allocate additional staff resources to the development, implementation and ongoing maintenance of the new program as further described in Section 9 of this report.

An analysis of recent program launches by other municipalities suggests the City also set a preliminary budget of \$0.90 per household per year as a baseline communications budget over a five year period starting in 2024 to support the program launch. This is a conservative amount compared with the recommendations of the Waste Management Strategy which cited a KPMG best practices report⁴ recommending \$3 to \$4 per household for new program launches and an ongoing communications budget of \$1 per household. The City may also wish to consider the potential involvement of local partners like EcoSuperior and local schools in supporting communications about the new program and aiding in meeting elements of the Provincial policy statement related to the development of local food waste diversion options.

8. Fleet Modifications and New Technology

Roll out of a Green Bin diversion program will also have a dramatic impact on waste collection from single and multi-family households in the City. Green Bin collection is traditionally done using 45 litre carts and trucks fitted with either 'lift assist' tippers or automated collection arms. Mechanical assistance is necessary because the weight of the containers typically exceeds safe manual lifting limits.

Additionally, with the potential to divert over 30% of the residential waste currently collected by the City, consideration will need to be given to undertaking separate collection of the new waste stream or employment of split body vehicles to allow co-collection of garbage and Green Bin waste aboard the same truck but in separate compartments. Driver training will also be necessary irrespective of the selected collection system.

8.1 Separate Trucks versus Co-collection

The City currently collects garbage and blue bag recycling with separate fleets. Introduction of a third collection truck at the curb to collect Green Bin waste is an option but would run counter to the City's climate change policy goals and increase traffic congestion on City streets. Instead, it is proposed that the City begin purchasing split body side loading trucks that would allow for the co-collection of garbage and Green Bin waste, in separate compartments, onboard the same truck. Given that there is no change in the actual volume of waste being managed, there should be no need to change the number of trucks deployed by the City. Instead, it is recommended that split body trucks be procured by the City as it replaces its existing fleet in the coming years.

The City's waste collection fleet currently consists of 15 International packers and one ½ tonne dump box pickup truck. As noted in Section 3.3, the packers range in age from 2007 to 2016. It is anticipated that by the time the new Green Bin program is rolled out in 2025, all but two of the vehicles will have been replaced.

It should be noted that if the City commits to every other week garbage and weekly Green Bin collection, the varying collection schedules would require reworking existing collection routes and a period of adjustment by its collection crews. This exercise will also help with workload leveling across current routes and improve collection route efficiency.

⁴ Blue Box Program Enhancement and Best Practices Assessment Project, KPMG, 2007

8.2 Lift Assists versus Automated Cart Based Collection Service

Given that introduction of a Green Bin program necessitates use of carts with some sort of mechanical lift assist and that co-collection of garbage and Green Bin waste is the most likely collection methodology, a move to automated collection of garbage in carts should be considered.

Automated cart-based collection, or ‘auto-cart’ collection, is commonplace throughout much of the USA and Europe. It is becoming increasingly popular in Ontario with municipalities such as Toronto, Peel Region, Guelph, Timmins, Temiskaming Shores, Sault Ste. Marie and Bluewater Recycling Association having already made the switch. The benefits of auto-cart service include significant improvements in collection efficiency, worker safety and satisfaction, reductions in injuries and climate change impacts.

Figure 5: Lift Assist (left) and Automated Collection (right)⁵



Historically many municipalities have been reluctant to switch from manual collection because they collect Blue Box (blue bag) materials in a ‘two stream’ format (i.e., keeping fibres separate from containers). Switching to auto-cart collection typically involves shifting to ‘single stream’ Blue Box (blue bag) material collection (i.e., where the fibres and containers are fully co-mingled). For many municipalities doing so was not possible because their recycling facility was unable to accept co-mingled recyclables and single stream auto-cart programs exhibit high contamination problems.

However, the passage of O.Reg 391/21 will allow municipalities to transition out of the provision of residential recycling service across Ontario in the coming years. As municipalities prepare for this fundamental change in service, many are considering the opportunity to switch to auto-cart service for the continued collection of garbage and Green Bin materials. The City transitions out of the blue bag program in July of 2024 creating an ideal opportunity to roll out a fully automated Green Bin and garbage collection service in the following year.

8.2.1 Auto-cart Efficiencies

Auto-cart collection’s ability to achieve significantly greater collection efficiencies over manual collection is well documented. Typically, single operator collection trucks are capable of achieving 650-850 stops per day depending on the streetscape and housing density. The same driver operating an automated

⁵ <http://www.theglobeandmail.com/news/toronto/winningbidder-for-toronto-garbage-contract-no-stranger-to-controversy/article559012/>; <http://www.guelphmercury.com/newsstory/2790723-challenges-encountered-on-first-day-of-guelph-waste-cart-pick-up/>

collection vehicle in the same conditions can easily exceed a route efficiency of 1,100-1,500 stops per day. The City currently achieves an average of 1,100 stops per day but does so with two operators on each truck and overtime costs, on average, of \$50,000 per year. Moving to automated trucks would allow the Section to reduce its net operating costs by as much as 16% or almost \$827,000 per year.

More importantly, a transition to auto-cart collection would significantly improve the safety of its drivers. The waste management industry, as a whole, pays amongst the highest WSIB premiums of any industry in Ontario. Over the last five years, the City has incurred average costs of \$200,000 per year as a result of WSIB claims and these costs continue to rise. Eliminating the manual collection service will go a long way to reducing these costs and protecting the associated staff.

8.2.2 Cost Implications of Lift Assists versus Automated Cart Systems

Whether the City opts for manual split body trucks with lift assists or automated split body trucks with cart collection arms, the base cost of the truck remains the same. Split body trucks with lift assists cost approximately \$55,000 more per vehicle than standard body trucks. By comparison a truck equipped with an automated arm would be approximately \$80,000 more per vehicle. If the City were to convert its entire fleet of 15 trucks to automated collection, the one-time incremental difference in the cost of the two types of vehicles would be \$360,000 (i.e., \$40,000 per vehicle). However, as noted above, switching to automated collection is expected to result in a conservative savings of almost \$827,000 per year. While lift assists offer protection to staff from injury, they are slower to load and operate and could result in increased overtime costs.

The savings offered by moving to auto-cart collection are significant but must also be weighed against the significant upfront costs of buying additional carts for garbage for each household and upgraded Green Bin carts capable of being picked up by automated collection arms. Careful advanced planning of routes and driver training is also required to successfully launch an auto-cart program. The planning cycle for a City-wide program launch is typically two years and requires a significant capital outlay. Nonetheless, the savings opportunities for local taxpayers make this option worth considering.

It is recommended, therefore, that the City move to auto-cart based collection for organic waste and garbage in concert with the roll out of its Green Bin program and that a redeployment plan for affected staff be developed to minimize the negative impact on the City's collection workforce. This recommendation is consistent with the Waste Management Strategy and other past reports. Should the City commit to moving to auto-cart collection in 2025, it is also recommended all vehicles purchased in the interim be procured to be auto-cart ready to minimize retrofit requirements.

8.3 Front End Loader Service

The City currently requires that multi-family properties store their garbage and blue bag recycling in locked sheds. Multi-family properties are eligible to receive collection of up to 3.75 m³ (or 66 items) of waste per site at a time. Garbage is emptied manually by City staff, and recycling by the City's contractor, on the appropriate collection day.

Shed-based collection is not commonly practiced elsewhere in the waste industry but offers a number of benefits such as site security, vector control and protection from the elements. By comparison, standard practice in the industry is to provide front end loader (FEL) or cart-based service in this sort of environment. Should the City opt to provide Green Bin service to its multi-family properties,

consideration should be given to explore moving to FEL or cart-based service at the same time. A preliminary assessment of the City's multi-family garbage collection costs suggests there is opportunity to reduce operating costs and improve driver safety by eliminating direct handling of these sorts of waste volumes.

Recognizing that the City has required property owners to install these sheds at their cost as a condition of service, conversion to an FEL or cart-based system will require extensive discussion with affected property owners. It is recommended that the City develop an inventory of its multi-family properties prior to implementation of Green Bin service in the City, assess the potential savings of converting suitable properties to either form of automated service and report back to City council with recommendations on future garbage and organic waste collection standards for this sector. Consideration should also be given to reviewing local businesses serviced by the City to assess the potential of converting suitable properties over to FEL or cart-based collection service for the same reasons.

9. Staffing Implications

The City's Solid Waste and Recycling Services consists of a manager, two supervisors, a waste diversion coordinator and the associated operating staff as outlined in Section 3.4. Implementation of a Green Bin program and automated cart-based collection will require significant changes to how waste is currently managed throughout the City. The current organizational structure of Solid Waste and Recycling Services can not support the successful implementation and sustained operation of these new programs. As outlined in Section 7.3.4, different staffing roles are required to support the roll out and long-term success of the new programs including:

- One permanent full time Promotion & Education Coordinator to design, implement and maintain the ongoing communications that will be required to ensure success of our integrated solid waste system;
- One permanent full time Solid Waste Compliance Officer to support public compliance and proper ongoing curbside segregation of waste streams (and also address existing problems like sharps in the waste stream);
- One temporary full time Solid Waste Project Coordinator to assist in coordinating program development and implementation; and
- Two temporary full time Customer Service Advisory staff to assist with program rollout and respond to public questions/concerns.

The temporary full time positions are expected to be two to three year contracts subject to final decisions on the program design and implementation schedule.

These recommendations are consistent with the Waste Management Strategy which recommended hiring a promotion and education coordinator, by-law enforcement officer and support staff to assist with program implementation. The new roles are also consistent with other municipalities' experience in rolling out similar programs which has demonstrated that adequate resourcing is required for implementation and long-term success of solid waste programming. These findings are supported by waste diversion program performance data collected annually across the province which has shown a direct linkage between appropriate staffing resources and programs with high waste diversion and low contamination rates.

Despite the need for these new staffing roles, the proposed conversion to automated cart-based collection is projected to result in a net reduction of up to 5.34 FTEs in Solid Waste and Recycling Services. The main driver in this reduction is that automated cart collection only requires one driver per collection vehicle, as opposed to the current two-person crew required for manual collection. Detailed discussion will be required with the Human Resources and Corporate Safety Division and the union on these proposed changes.

10. Processing Options

Numerous technologies have been trialed to process various types of food and organic wastes. Generally, technologies fall into two categories including aerobic (decomposition in the presence of oxygen) and anaerobic (decomposition in the absence of oxygen) systems. Each has their advantages and disadvantages.

In the fall of 2021, the City released a Request for Information (RFI) to solicit information about technologies and capacity from prospective vendors. The City received feedback from vendors representing the primary types of composting technologies confirming their interest in providing a solution for the City.

The following section provides a brief overview of technologies outlined by the respondents and others that the City may wish to consider. Capital costs are presented as a cost per tonne (\$/MT) of annual design capacity (i.e., capital construction cost divided by the annual design capacity of the facility). Operating costs are presented as a cost per tonne (\$/MT) of Green Bin waste managed.

10.1 Home-Based Solutions

Home based solutions for food and organic waste traditionally involve methods such as backyard composting or more high-tech approaches such as garburators (in-sink grinders), vermicomposters and dehydrators. Garburators are not permitted under the City's sewer use by-law.

Backyard composting is using the natural process of decomposition to convert organic material into "humus", more commonly known as 'compost', which is a rich soil amendment. The City currently has a "Composting at Home" program which involves subsidization and distribution of backyard composters through EcoSuperior. This program distributes an average of 241 units per year and is estimated to divert approximately 1,992 tonnes of organic waste annually. Backyard composters are, however, limited in their efficacy because repeated studies have shown that residents rarely use them during the winter months. Additionally, composting certain food wastes (e.g., bones) in a home environment can be challenging.

Garburators were commonly used throughout the 60's and 70's. While ideal for apartment settings, they were found to cause significant problems to municipal wastewater collection and treatment systems. As a consequence, they have been banned in many parts of Canada including under the City's sewer use by-law.

Vermicomposters (composting using worms in a box) were offered to residents as an alternative. These systems, while technically viable, require close monitoring and only ever appealed to 2-3% of the population.

Food waste dehydrators are an example of a more 'high-tech' approach to managing food waste at home. This is still a somewhat new approach that to date has not been widely implemented in municipalities. Food waste is ground, aerated, heated and in some cases, compressed into a block. This process decomposes and sterilizes the food waste reducing the volume of food waste by about 90%. The resulting material can be used as a soil amendment⁶. As an example, FoodCycler offers its FC-50 for sale in partnership with Vitamix at a retail of \$450⁷.

Figure 6: The 'FoodCycler'⁸



Each of these technologies represents a viable means of managing certain food and organic wastes in a home setting. However, while the Policy Statement does allow for consideration of alternatives, it does prioritize curbside collection of a food and organic for single family homes. For this reason, it is recommended that the City focus on provision of a curbside collection system but promote the use of this class of options as an alternative for homeowners who are unable or unwilling to use a cart-based collection system.

10.2 Open Windrow Composting

Open windrow composting is one of the most common methods of processing solid organic waste in North America. Its prevalence is mainly due to its ability to manage a wide range of feedstocks with minimal infrastructure requirements and at a low operating cost. Windrow composting involves forming the feedstock into piles known as windrows approximately 30 metres long with a typical height of 2.5 metres and base of 4 metres. The composting process goes through two stages known as the active or 'thermophilic' phase followed by a less active stage known as the 'curing' phase. The compost is then screened to remove contaminants and produce a uniformly sized material for market.

⁶ FoodCycler. How it Works: The Science behind the Magic. <https://www.foodcycler.com/how-it-works>

⁷ Vitamix. https://www.vitamix.com/ca/en_us/shop/compact-food-recycling?COUPON=06-860&cjevent=20b69afa700f11ec825d1ccc0a82b82c&cjdata=MXxOfDB8WXww

⁸ FoodCycler Operating Manual. <https://www.foodcycler.com/how-it-works>

Windrows are commonly used for leaf and yard waste but can also be used for a range of food and organic waste. The City currently uses open windrow composting to manage its yard waste. Incorporation of food and organic waste does, however, introduce additional challenges in managing odour and run off (commonly known as leachate) and requires the availability of sufficient bulking material (such as yard waste) to mix with and ensure the right moisture levels are achieved.

Figure 7: Open Windrow Composting

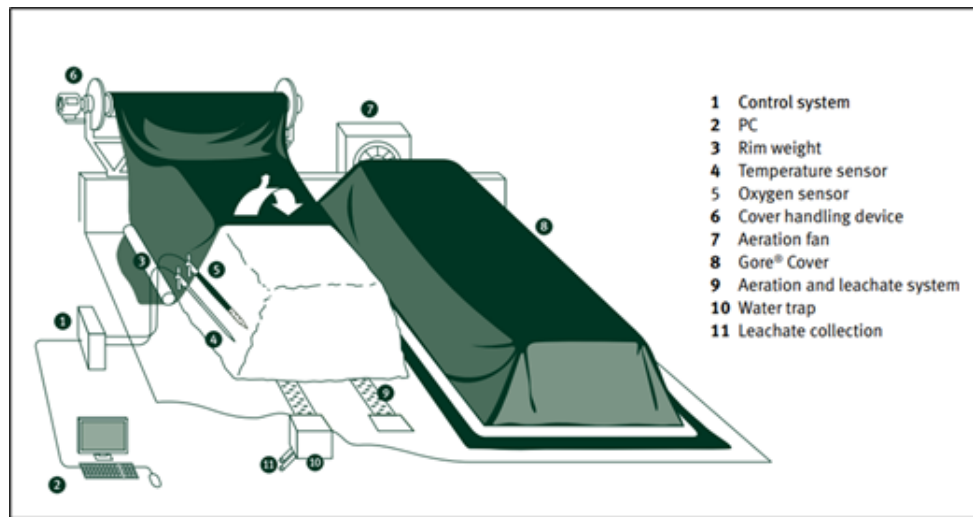


10.3 Aerated Static Piles and Membrane Covered Windrows

Similar to open windrow composting, aerated static pile or membrane covered windrow systems typically involve mixing Green Bin waste with ground yard waste and arranging it in either a series of piles or windrows overtop of a perforated concrete pad. Air is distributed by a blower and manifold through a network of pipes under the pad to force air up through the pile or windrow as shown in Figure 8. They often incorporate computerized monitoring and control equipment for oxygen, heat and moisture levels, as well as a collection system for water and leachate.

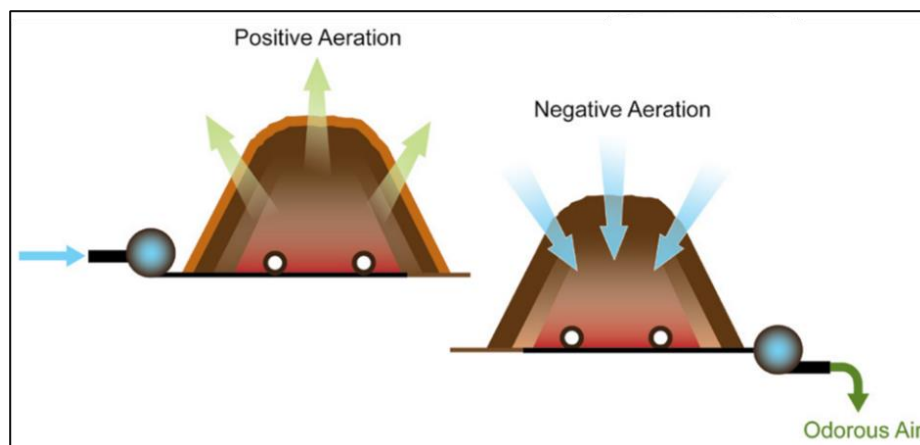
In more basic systems, the perforated piping is laid directly into the pile as it is built up. This approach is, however, significantly more labour intensive and is typically only used for small volume operations or where labour is inexpensive.

Figure 8: Membrane Covered Windrow⁹



Depending on the complexity of the system and type of material being composted, the piles may simply be covered with finished compost (see Figure 9) or a membrane to trap and contain odours from the decomposing material. Air flow can also be directed positively, negatively or bi-directionally to control fugitive odours and manage oxygen and moisture levels.

Figure 9: Positive and Negative Aeration¹⁰



Based on a literature review, the capital costs for typical food waste aerated static pile or windrow systems range from \$140 to \$180/MT of design capacity, subject to the size and complexity of the system. Operating costs for such a facility with an annual capacity of approximately 10,000 MT/yr or less would be in the order of \$45 to \$65/MT.

⁹ W. L. Gore & Associates. The Principle of Organic Waste treatment with GORE® Cover.
<https://www.gore.com/sites/g/files/ypypipe116/files/2016-04/gore-cover-composting-en.pdf>

¹⁰ Environment Canada. Technical Document on Municipal Solid Waste Organics Processing. 2013

10.4 In-Vessel Aerobic Systems

In-vessel composting systems typically process Green Bin waste within an enclosed system, such as a rotating drum, aerated box or tunnel, or aerated concrete channels within an enclosed building. These systems are normally modular in design but are typically used for larger volumes of Green Bin waste because they can be capital intensive compared to outdoor systems. They typically involve an intensive aerated composting phase lasting two to four weeks within the enclosed system followed by several months of standard open windrow composting outside to 'cure' or stabilize the resulting compost. Managing the initial, odorous phase of the composting process within an enclosed system has obvious benefits. It allows for optimal control of environmental conditions such as temperature, moisture, airflow and odours.

Aerobic channel systems include both static pile and actively turned systems. Static pile systems are very similar to outdoor aerated static piles except that the indoor systems consist of concrete channels three to 10 metres wide and upwards of 50 metres long with aerated concrete floors running the length of the channel and reside within a climate-controlled building. Actively turned systems have solid concrete floors in the channels and use a compost turning machine to turn the compost to aerate it. The compost turner will either be mounted on an overhead gantry crane or sit on rails running the length of the channel walls.

In some systems, the channels are replaced by a series of enclosed tunnels with airtight doors at either end to provide better climate and odour control. Given the level of capital investment required, this type of technology is more suitable for facilities that process more than 25,000 MT/yr.

Modular versions of these types of in-vessel systems use enclosed bins or containers. Organic waste is loaded into the container through doors located on either the top or side. Once filled, the containers are sealed and moved to an outdoor pad and connected to a stationary aeration system. Air is pumped into the base of the container and exhausted through the top. The exhausted air can then be collected and treated if desired. These systems are most appropriate for facilities that process less than 15,000 MT/yr but have a limited track record in managing municipal food waste.

The estimated capital cost for an in-vessel system is between \$330 to \$585/MT of annual design capacity, depending on the size and type of in-vessel system used. Operating costs tend to be in the range of \$50 to \$100/MT, with per tonne operating costs decreasing as tonnage increases due to economies of scale. Operating costs for such a facility with an annual capacity of approximately 10,000 MT/yr or less are estimated to be in the order of \$80 to \$100/MT.

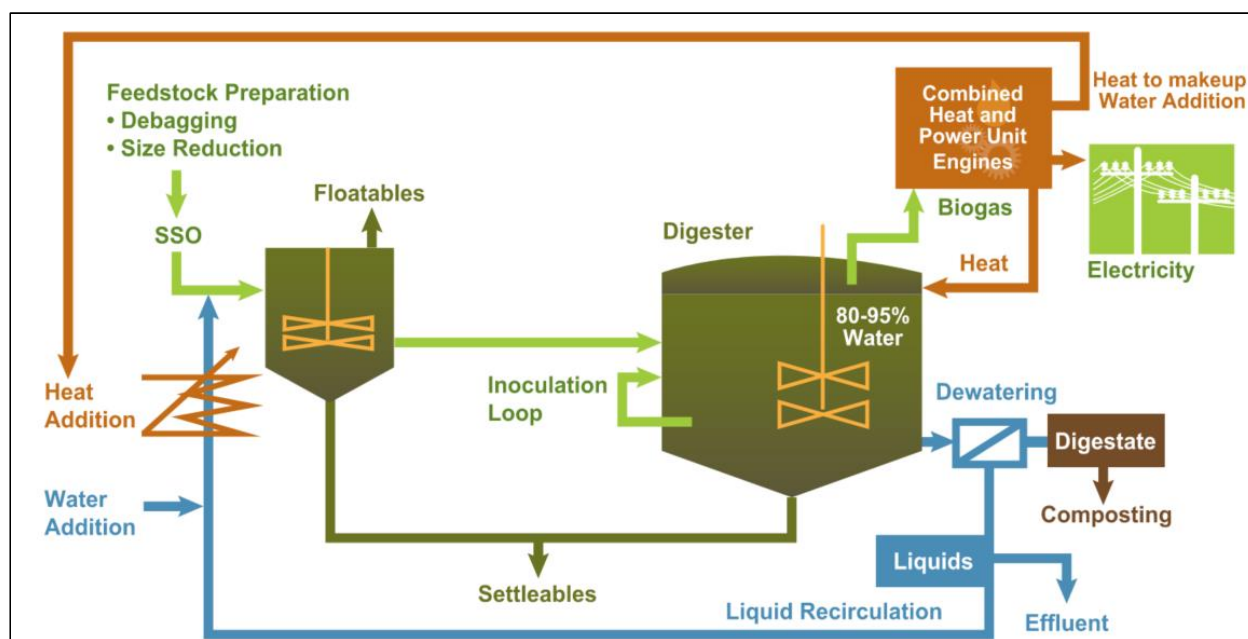
10.5 Anaerobic Digestion

Anaerobic digestion (AD) is a relatively new method for managing Green Bin waste but is the basis of standard sewage treatment operations. AD is a biological process where organic wastes are broken down by anaerobic microorganisms in the absence of, or low levels of, dissolved oxygen. Energy (in the form of heat and 'biogas') are outputs of anaerobic digestion. For every pound of organic matter digested, approximately 4 cubic metres of biogas are produced. Biogas can contain from 50% to 70% methane gas, depending on the type of material being digested. The remainder of the biogas consists of CO² and trace volumes of sulfur compounds. There are many different types of anaerobic digesters, and while the time required to completely process the waste can vary, this initial process typically has an

average duration of eight weeks. AD systems can be generally categorized into “Wet” or “Dry” systems. Wet (or low solids) AD systems typically operate at liquid to solids level of less than 10% solids. Dry AD systems have higher solids levels.

Figure 10 depicts a typical wet AD system. Green Bin feedstock is debugged (i.e., if collected in plastic bags) and shredded and fed into a mixing tank along with ‘make up’ water. Lightweight materials such as plastics are skimmed off while heavier materials such as glass and stones settle to the bottom and are removed prior to introduction of the slurry to the digestion process. The slurry is continuously stirred in the digester and biogas is removed from the tank and burnt to convert it to heat and ‘green’ energy. The processed waste liquid is dewatered to produce a semi-solid material called ‘digestate’. The liquid is then treated and discharged as effluent. The digestate is then either sent to landfill or a composting facility where it will need to be reprocessed with leaf and yard waste to produce a finished product. Direct land application is possible subject to provincial licensing restrictions and public acceptance. Currently the City’s digestate from its wastewater treatment plant (WWTP) is landfilled.

Figure 10: Typical Wet Anaerobic Digestion Process Flow¹¹



AD systems are popular because of their ability to handle a full range of Green Bin materials (including pet waste, diapers and incontinence products) and allow residents to use non-biodegradable plastic bags as container liners. Unfortunately, they are also the most expensive composting systems to build and operate and typically more cost competitive for quantities approaching 50,000 MT/yr.

The approximate capital cost for an AD system would be \$1,000 to \$1,500/MT of annual design capacity and operating costs would be in the range of \$100 to \$200/MT. It is expected that the capital and operating costs for a facility sized to meet the City’s requirements would be in the higher end of the cost range due to low economies of scale.

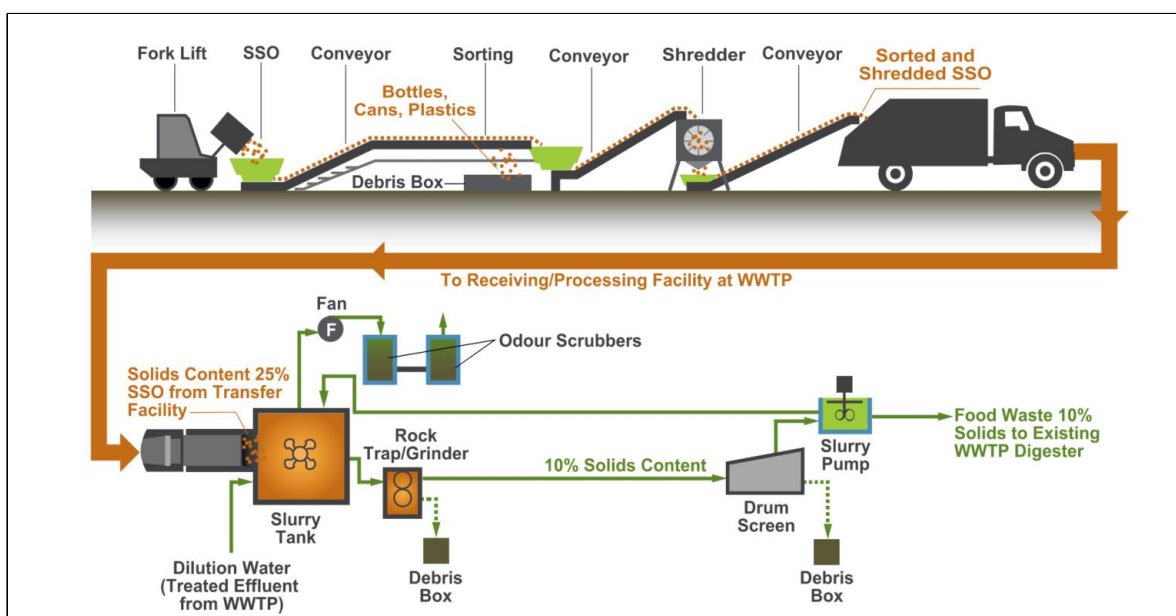
¹¹ Environment Canada, Technical Document on Municipal Solid Waste Organics Processing, 2013

10.6 WWTP Co-digestion

More recently, municipalities have been considering the feasibility of co-digesting Green Bin waste at their existing WWTPs. This option can be appealing if the WWTP has spare capacity as a means of minimizing capital construction costs. Subject to the capacity limits of the existing WWTP, such systems include equipment for the receiving, pre-treatment of the Green Bin waste and injection of the resulting slurry into the existing WWTP digester. Figure 11 illustrates a typical pretreatment system for Green Bin waste.

The capital cost to update a WWTP facility to accommodate food waste processing is estimated to be between \$10M to \$20M, or between \$1,000 to \$1,500/MT of design capacity with operating costs similar to that of an AD facility. It is expected that the capital and operating per tonne costs for a facility sized to meet the City's requirements would be in the higher end of the cost range due to low economies of scale.

Figure 11: Typical Pre-treatment System for Green Bin Waste¹²



11. Processing Capacity and SWRF Infrastructure Requirements

Based on the program design assumptions noted earlier, it is expected that the City will require a minimum of 7,300 MT/yr of food waste processing capacity to service its immediate single-family and multi-family needs. Should it expand service to local businesses and institutions, and with population growth, additional capacity may be required in the future.

Expansion of leaf and yard waste collection services is also expected to capture an additional 920 MT/yr of additional material which would need to be managed at the SWRF composting operations. The

¹² Environment Canada, Technical Document on Municipal Solid Waste Organics Processing, 2013

current operations are licensed to receive up to 6,000 MT/yr so accommodating additional quantities of yard waste at the City's SWRF would not be an issue subject to negotiation of costs with the current contractor.

As noted in Section 10.5, the choice of Green Bin processing technology that the City procures may result in the operator needing the City's leaf and yard waste for use as a bulking agent in their operation. If digestate from anaerobic treatment of Green Bin waste is to be accommodated at the SWRF, the current ECA would need to be amended to accommodate this operation on site. Similarly, operation and maintenance of the composting pad would need to be scaled up to accommodate the new volumes. Consideration may also need to be given to construction of a highway trailer loading ramp and pad if ground yard waste is to be shipped offsite for use as a bulking agent at the Green Bin processing facility. These issues will be a point of future discussions with prospective processing vendors to determine which option is the best.

Recognizing that the City landfills an average of 82,561 MT of waste per year, the proposed program has the potential to reduce landfill tonnages by over 10%. Institution of bag or item limits will also encourage diversion of blue bag materials, which could result in a further reduction in landfilling requirements. A review of landfill staffing and operational requirements in future years may be necessary. Additionally, should the City opt to move to automated cart collection, consideration will need to be given to operational considerations such as specialized truck maintenance and construction of purpose-built storage areas for carts at the SWRF.

12. Evaluation of Processing Options

12.1 Methodology

The various technology options were comparatively evaluated against a suite of weighted criteria that considered environmental, social, financial and technical factors as well as risk. This evaluation included:

- Providing a relative weighting of the various evaluation criteria based on their level of criticality in the decision making process;
- Assessment of the technology against each criteria;
- Assignment of a value on a scale of 1 to 5 for the technology based on the assessment; and
- Calculating the numerical score based on the weighting.

Table 8 presents the evaluation criteria and the definitions for the evaluation scale. Table 9 provides the relative weighting of the evaluation criteria with rationale.

An assessment of technologies based on the evaluation criteria is provided in Section 12.2.

Table 8: Evaluation Criteria and Scale

Criteria	Evaluation Scale				
	1 (Worst Performance)				5 (Best Performance)
Environmental					
GHG Emissions Reduction	Least emissions reduction				Most emissions reduction
Diversion Potential	Least diversion potential				Most diversion potential
Social					
Odour Avoidance	Greatest risk of odours				Least risk of odours
Customer Convenience	Least customer convenience				Greatest customer convenience
Traffic Impact Avoidance	Most traffic impacts				Least traffic impacts
Financial					
Capital Cost	Highest Cost per Annual Tonne Capacity				Least Cost per Annual Tonne Capacity
Operating Cost	Highest Cost per Annual Tonne				Least Cost per Annual Tonne
Technical					
Proven Technology	Not a proven technology / relatively new technology				Widely used technology
Scalability (for population growth)	Limited scalability; requires significant upgrades to scale				Very scalable; modular technology
Integration with Municipal Programs	Limited ability to integrate with other municipal programs				Able to integrate or integrate other municipal programs
Footprint	Large footprint required				Small footprint required
Risk Management					
Compliance with Policy Statement	Not fully compliant				Fully compliant
Approvals	Minimal approvals needed				Greatest level of approvals required
Ability to meet Timeline	Unable to meet diversion timeline				Comfortably able to meet timelines with little risk
Technical Complexity	High degree of complexity				Low degree of technical complexity

Table 9: Technology Evaluation Scale and Weighting

Criteria	Weighting (1 to 5)	Weighting Rationale
<i>Environmental</i>		
GHG Emissions Reduction	3	The potential for reducing greenhouse gas emissions is considered a very important component of this program.
Diversion Potential	3	The potential for diverting the most waste from disposal is considered a very important component of this program.
<i>Social</i>		
Odour Avoidance	3	Odours from a waste processing facility can be very disturbing to a community. As such, this criterion has an elevated level of importance.
Customer Convenience	3	Overcoming barriers to participation is a key element to the success of a Green Bin program. As such, this criterion has an elevated level of importance.
Traffic Impact Avoidance	1	The type of technology used will have little impact on potential traffic impacts, which would be expected to be minor. As such, this criterion has a relatively low weighting.
<i>Financial</i>		
Capital Cost	5	The affordability of the technology is a key factor in its suitability for the municipality. As such, this criterion has the maximum level of importance.
Operating Cost	5	The affordability of the technology is a key factor in its suitability for the municipality. As such, this criterion has the maximum level of importance.
<i>Technical</i>		
Proven Technology	3	To limit risk, the municipality wishes to use technologies that have a proven track record, including within Ontario. Widely used technology is a key factor in its suitability for the municipality. As such, this criterion has an elevated level of importance.
Scalability (for population growth)	1	Ability of the technology to accommodate future growth is important and is considered in the evaluation. However, given the opportunity to manage facility sizing during detailed design, this criterion is weighted relatively lower than the others.
Integration with Municipal Programs	1	Ability of the technology to integrate with other municipal programs is important and is considered in the evaluation. However, its weighting is relatively lower compared to the other criteria.
Footprint	1	The potential footprint of the technology is important and is considered in the evaluation. However, its weighting is relatively lower compared to the other criteria.
<i>Risk Management</i>		
Compliance with Policy Statement	5	The Municipality seeks to ensure compliance with the Province's Policy Statement. As such, the technology's ability to help ensure this compliance has the maximum level of importance.
Approvals	3	The quantity and complexity of required approvals can increase the length of time required for implementation as well as lead to increased design and engineering costs. As such, this criterion has an elevated level of importance.
Ability to meet Timeline	5	The ability for the technology to be implemented within the Municipality's desired timeline is critical. As such, this criterion has the maximum level of importance.
Technical Complexity	3	The complexity of the technology can increase the length of time required for implementation as well as lead to increased design and engineering costs. As such, this criterion has an elevated level of importance.

12.2 Technology Assessment

This section summarizes the assessment of the primary types of food and organic waste processing technologies considered in this report.

12.2.1 Environmental Considerations

12.2.1.1 Greenhouse Gas Emissions

Composting or digesting Green Bin waste in controlled conditions reduces greenhouse gas (GHG) emissions compared to landfilling. Organics disposed in landfill break down anaerobically and generate landfill gases, including methane gas. Methane is a potent GHG with 25 times as much global warming potential compared to carbon dioxide. Methane is known as a short-lived climate pollutant. As such, reducing the emission of short-lived climate pollutants can reduce the atmospheric levels of GHGs at a much quicker pace than comparable reductions from longer-lived GHGs. This means that actions that reduce these particular GHGs can have significant benefits for curbing near-term climate warming¹³.

The anticipated GHG reduction potential for home-based composting systems is low compared to the other options. While home-based technologies would avoid the GHG emissions that are generated by the transport of organics to a processing facility, the potential diversion through such an approach is likely to be less compared to a centralized approach. Therefore, a greater proportion of the City's organics would continue to be landfilled and potentially release methane emissions to the atmosphere even with the City's landfill gas collection system.

The anticipated GHG reduction potential is expected to be greater in a centralized Green Bin system because it has greater potential for diverting Green Bin waste from disposal. GHG reduction is greatest with anaerobic digestion or WWTP co-digestion as it allows for the capture and use of biogas and thus the offsetting of fossil fuels. Aerobic composting processes result in uncontrolled generation of carbon dioxide with limited potential for capture of emissions. Co-digestion at the City WWTP does have the potential to involve an additional trucking element to ship the resulting digestate to an aerobic composting facility or landspreading operation and would also potentially require separate haulage of the slurry and residue depending on the set up. This additional haulage would increase GHG emissions for this option. Similarly, any option involving setup of a facility outside of the City SWRF will involve additional trucking of collected materials and resultant residue.

Evaluation Results - GHG Emissions Reduction						
Home-based Solutions	Open Windrow	Aeration Static Pile/ Windrow	Membrane Covered Aeration Systems	In-vessel Aerobic Composting	Anaerobic Digestion	WWTP Co-digestion
1	2	2	3	3	5	4

¹³ Environment Canada. Greenhouse gas emissions: drivers and impacts. <https://www.canada.ca/en/environment-climate-change/services/environmental-indicators/greenhouse-gas-emissions-drivers-impacts.html>.

12.2.1.2 Diversion Potential

Of the various technologies under consideration, the home-based composting methods are expected to have the lowest diversion potential because of the voluntary nature of their use. Diversion through backyard composting would rely heavily on participation which would wane during winter months. Meat and bone scraps also cannot be processed in many home-based systems.

A centralized composting program using any of the aerobic and anaerobic technologies described above would have a greater diversion potential than home-based systems as they could potentially allow a municipality to compost a broader spectrum of organic waste such as pet waste and diapers.

Evaluation Results - Diversion Potential						
Home-based Solutions	Open Windrow	Aeration Static Pile/ Windrow	Membrane Covered Aeration Systems	In-vessel Aerobic Composting	Anaerobic Digestion	WWTP Co-digestion
1	3	3	3	3	5*	5*

* The score of 5 is based on the assumption that the resulting digestate from these technologies is successfully diverted from landfill.

12.2.2 Social Considerations

12.2.2.1 Odour Potential

Green Bin waste processing has significant potential to produce odours if managed incorrectly. Home-based approaches such as backyard composting can produce odours if the feedstock mix is unbalanced or if there is insufficient aeration. While the level of odour generation would not impact the broader neighbourhood, it can solicit complaints and discourage participation.

Windrow and static pile composting systems also have the potential for odour issues, particularly during the turning of windrows. These impacts can be mitigated through proper operational procedures and by siting of the processing site away from possible receptors (e.g., households). Membrane covered systems are less likely to generate odours because their design typically includes an emissions collection and treatment system such as a 'biofilter'.

The enclosed nature of in-vessel and digestion technologies tend to lower the risk of odours escaping from the composting or digestion process. Additionally, these facilities often have odour control systems to minimize the risk of fugitive odours but these sites can still generate odours and site location is a key factor in odour management. Co-digestion at the City WWTP does have the potential to involve an additional trucking element to ship the resulting digestate to an aerobic composting facility or landspreading operation which could result in additional odour generating potential. An AD facility may also have similar trucking requirements depending on how the digestate is disposed.

Evaluation Results - Odour Avoidance						
Home-based Solutions	Open Windrow	Aeration Static Pile/ Windrow	Membrane Covered Aeration Systems	In-vessel Aerobic Composting	Anaerobic Digestion	WWTP Co-digestion
2	3	3	4	4	5	4

12.2.2.2 Customer/Resident Convenience

Waste diversion programs require a level of convenience for the resident or “customer” to be successful. Home-based systems require active participation by homeowners and, as a result, tend to appeal to a limited portion of the population. Backyard composters, for example, are known to generally not be used during winter months. Curbside collection systems based on weekly collection are common throughout Ontario and are generally found to be the most convenient option for managing Green Bin wastes. Anaerobic digestion and co-digestion options offer the added convenience of potentially being able to accept diapers.

Evaluation Result - Customer/Resident Convenience						
Home-based Solutions	Open Windrow	Aeration Static Pile/ Windrow	Membrane Covered Aeration Systems	In-vessel Aerobic Composting	Anaerobic Digestion	WWTP Co-digestion
1	3	3	3	3	4	4

12.2.2.3 Traffic Impacts

Home-based technologies would not have any traffic impacts as the food waste would be managed on the homeowner’s property. Co-collection of Green Bin waste with garbage would also mitigate any potential implications associated with a curbside collection program. Haulage of the collected materials to the associated processing facility does have the potential to have traffic impacts but cannot be fully evaluated until the City selects a vendor and processing site location. AD facilities and co-digestion at the City WWTP have the potential to involve additional trucking elements to ship the resulting digestate to an aerobic composting facility or landspreading operation and residue to the landfill.

Evaluation Results - Traffic Impacts						
Home-based Solutions	Open Windrow	Aeration Static Pile/ Windrow	Membrane Covered Aeration Systems	In-vessel Aerobic Composting	Anaerobic Digestion	WWTP Co-digestion
5	4	4	4	4	4	3

12.2.3 Financial Considerations

12.2.3.1 Capital Cost

The capital costs for the home-based solutions are high relatively compared with certain other technologies under consideration on a cost per tonne diverted basis. For example, the estimated capital cost of distributing a dehydrator to 75% of households is approximately \$14.5M. The anticipated lifespan of the appliance is unclear. It is, however, reasonable to assume that they will have a similar lifespan to most household appliances after which a second capital investment will be required.

Capital costs are lowest for the windrow-type technologies, generally in the order of \$150/MT of annual design capacity. Capital costs are moderate for in-vessel type technologies, ranging between \$300 to \$585/MT of annual design capacity. The digestion technologies would have the highest capital cost, ranging between \$1,000 to \$1,500/MT of annual design capacity. In all cases, the range depends largely on the design capacity and is generally lower with larger scale facilities. The small volume of organic

waste available from the City is expected to cause these systems to be built out at the high end of their cost bands.

Evaluation Results - Capital Cost						
Home-based Solutions	Open Windrow	Aeration Static Pile/ Windrow	Membrane Covered Aeration Systems	In-vessel Aerobic Composting	Anaerobic Digestion	WWTP Co-digestion
1	5	5	5	3	1	1

12.2.3.2 Operating Cost

Operating costs for home-based solutions are the lowest of the systems under consideration because they rely on the resident to undertake the work. In all other cases, costs are incurred by the City for both collection and processing. Operating costs for windrow-type technologies are generally low (\$50 to \$200/MT).

Operating costs for membrane-covered and in-vessel aerobic composting systems are generally higher than windrow-type technologies due to the operational and maintenance requirements of the facility but become more cost competitive in larger capacity operations. Digestion type technologies generally have a higher operational cost (\$100 to \$200/MT) than the other technologies because of the complexity of their operations. The small volume of organic waste available from the City is expected to cause these systems to operate at the high end of their respective cost bands.

Evaluation Results - Operating Costs						
Home-based Solutions	Open Windrow	Aeration Static Pile/ Windrow	Membrane Covered Aeration Systems	In-vessel Aerobic Composting	Anaerobic Digestion	WWTP Co-digestion
5	4	4	3	3	1	1

12.2.4 Technical Considerations

12.2.4.1 Proven Technology

Home-based technologies such as backyard composting are well-established practices within their inherent limitations. Food dehydrators and similar in-house options are relatively new technologies but pilots in the surrounding communities of Thunder Bay are reportedly generating positive results.

With the exception of WWTP co-digestion, the technologies under review are all commonly used for managing Green Bin waste. The open windrow, however, is more suitable for leaf and yard waste rather than household organics. WWTP co-digestion is a known practice but has not been widely implemented in Ontario.

Evaluation Results - Proven Technology						
Home-based Solutions	Open Windrow	Aeration Static Pile/ Windrow	Membrane Covered Aeration Systems	In-vessel Aerobic Composting	Anaerobic Digestion	WWTP Co-digestion
4	3	5	5	5	5	3

12.2.4.2 Scalability for Population Growth

Home-base practices can certainly be scaled to meet the homeowner's needs provided their property or household has sufficient space.

Windrow composting operations can be easily scaled up subject to possible space constraint issues since they require the largest footprint of the various options. Static pile and membrane-covered systems have similar issues but benefit from the flexibility of their design and slightly smaller footprint. The modular nature of most in-vessel aerobic composting technologies make this type of technology well suited for scalability.

Anaerobic digester and co-digestion options generally have some degree of modularity to their design but their complexity makes expansion more complicated. This concern can be mitigated through appropriate capacity planning during the design process.

Evaluation Results - Scalability						
Home-based Solutions	Open Windrow	Aeration Static Pile/ Windrow	Membrane Covered Aeration Systems	In-vessel Aerobic Composting	Anaerobic Digestion	WWTP Co-digestion
4	4	4	5	5	3	3

12.2.4.3 Integration with Municipal Programs

Home-based solutions have good potential for integration with existing municipal programs as a complimentary option. Technologies such as food dehydrators and worm composting have potential for use in certain types of housing such as multi-residential buildings but are not likely to be viable solutions for the City's IC&I sector.

Any of the aerobic composting technologies could be easily integrated into the City's existing yard waste composting operation. This approach would minimize the need to ship materials elsewhere if the Green Bin waste was co-collected with garbage since both materials would be hauled to the City's landfill. The City's yard waste would also be required as a feedstock for the composting process making this approach particularly appealing.

The digestion technologies would not be suitable for the management of yard waste and would, therefore, require separate processing. Co-digestion of Green Bin waste at the City's WWTP would potentially allow for its integration into the City's wastewater treatment system. City staff responsible for the WWTP have indicated the facility is at capacity. Expansion of the system would, therefore, be necessary to accommodate the additional material volumes. As noted earlier, the resultant digestate would still need to be managed separately as it cannot be landfilled if these options are to comply with the Provincial Policy Statement.

Evaluation Results - Integration with Municipal Programs						
Home-based Solutions	Open Windrow	Aeration Static Pile/ Windrow	Membrane Covered Aeration Systems	In-vessel Aerobic Composting	Anaerobic Digestion	WWTP Co-digestion
3	5	5	5	5	3	4

12.2.4.4 Footprint

Home-based technologies require minimal footprint subject to their limited ability to manage the full range of materials requiring diversion under a food and organic waste diversion program.

Windrow composting systems tend to require the largest footprint of the technologies being reviewed as noted under Scalability considerations. Static pile and membrane-covered aerated systems require a somewhat smaller footprint. In-vessel aerobic composting technologies have a similar footprint or larger compared to a membrane-covered system depending on the specific technology used and any required infrastructure. Digestion technologies tend to have the smallest footprint but if the resulting digestate needs to be aerobically composted afterwards, the resulting footprint can end up being comparable.

Evaluation Results - Footprint						
Home-based Solutions	Open Windrow	Aeration Static Pile/ Windrow	Membrane Covered Aeration Systems	In-vessel Aerobic Composting	Anaerobic Digestion	WWTP Co-digestion
5	1	1	4	3	3	3

12.2.5 Risk Management Considerations

12.2.5.1 Compliance with Ontario Food and Organic Waste Policy Statement

As noted earlier in this report, the Policy Statement requires that the City provide curbside collection for food and organic waste to single-family dwellings in the urban settlement area and achieve 50% waste reduction and resource recovery of food and organic waste by 2025. It does, however, allow for the use of alternative systems provided the same diversion level can be achieved. Unfortunately, there is an absence of curbside performance data on the efficacy of home-based solutions as the sole means of diverting Green Bin waste at a municipal or city level.

As previously noted, the Policy Statement requires diversion of 50% of the available food and organic waste. Managed correctly the various aerobic and anaerobic technologies should be able to produce a finished product that can be diverted from landfill. Anaerobic systems and options involving co-digestion at the WWTP produce a digestate which may require additional treatment and/or permitting to be diverted to beneficial use.

Evaluation Results - Compliance with Ontario Food and Organic Waste Policy Statement						
Home-based Solutions	Open Windrow	Aeration Static Pile/ Windrow	Membrane Covered Aeration Systems	In-vessel Aerobic Composting	Anaerobic Digestion	WWTP Co-digestion
1	5	5	5	5	4	4

12.2.5.2 Permits and Approvals

Home-based solutions generally do not require any permits or approvals making them one of the easiest options to implement.

All of the other technologies under review will require a valid Environmental Compliance Approval (ECA) from the Ministry of Environment, Conservation and Parks (MECP). As part of the ECA application review process, the Ministry would consider the following objectives for composting facility management:

- Prevention and control of off-site environmental impacts, especially odour, water contamination, dust, noise and vermin and vectors;
- Protection of public health;
- Prevention of emergency situations;
- Anticipation of seasonal effects that may impact the composting process; and
- Production of compost that meets the Ontario Compost Quality Standards¹⁴.

Studies and documentation that describe how a composting facility siting and design will meet these objectives (e.g., design and operations plan, contingency plan, odour impact assessment) would be required as part of the ECA application. Generally, the simpler options, such as open windrow systems and technologies that can be sited at existing waste management facilities, will be easier to get permitted provided there are no pre-existing issues at those locations.

Evaluation Results - Permits and Approvals						
Home-based Solutions	Open Windrow	Aeration Static Pile/ Windrow	Membrane Covered Aeration Systems	In-vessel Aerobic Composting	Anaerobic Digestion	WWTP Co-digestion
5	1	1	1	1	1	1

12.2.5.3 Ability to Meet Timeline

Roll out of one or more home-based options as a supplementary program is not expected to be an issue, subject to resident interest given that the City already provides subsidized backyard composters through EcoSuperior.

The windrow-style technologies have the greatest potential to meet the City's timelines as the capital construction requirements are not complex. Potential integration with the City's existing composting operations may aid in meeting this timeline, however, the technical feasibility of this would need to be further examined.

Both in-vessel aerobic composting and the digestion technologies should be able to meet the City's timelines barring any unforeseen delays. The need to undertake feasibility studies and risk of unforeseen delays associated with getting required approvals and undertaking construction amidst a pandemic, however, makes these higher risk options.

Evaluation Results - Ability to Meet Timeline						
Home-based Solutions	Open Windrow	Aeration Static Pile/ Windrow	Membrane Covered Aeration Systems	In-vessel Aerobic Composting	Anaerobic Digestion	WWTP Co-digestion
1	5	5	5	4	3	3

¹⁴ Government of Ontario. Guideline for the production of compost in Ontario.
<https://www.ontario.ca/page/guideline-production-compost-ontario>.

12.2.5.4 Technical Complexity

Technical complexity increases the risk of implementation delay and operational failure. The windrow-style aerobic composting technologies have the least technical complexity of the technologies being reviewed. In-vessel aerobic composting has increased technical complexity compared to the windrow methods, followed by the digestion technologies which are most complex. Home-based solutions are also of limited technical complexity from the perspective of design and operation requirements of the City.

Evaluation Results - Technical Complexity						
Home-based Solutions	Open Windrow	Aeration Static Pile/ Windrow	Membrane Covered Aeration Systems	In-vessel Aerobic Composting	Anaerobic Digestion	WWTP Co-digestion
5	5	4	4	3	2	1

12.3 Evaluation Summary

As outlined in Section 12.1 Methodology, the scores for each technology are multiplied by the assigned weighting for the relevant criterion to arrive at a weighted score. Table 10 presents the weighted scores of each technology for each criterion and in total. The technology with the highest score is the membrane-covered aeration system, followed by the open windrow and aerated static pile systems.

Based on the review, the advantages of the membrane-covered aeration system include:

- avoids generation of methane and controls fugitive emissions better than open windrows;
- capital and operating costs are reasonable based on the anticipated processing volumes;
- proven technology and commonly used in Ontario;
- can be easily integrated into the City's composting operations;
- good flexibility with respect to the required footprint and scalability; and
- low technical complexity should help to ensure the design, approvals and construction process will occur within the City's required timeline.

Table 10: Weighted Score of Green Bin Processing Technologies

Criteria	Home-based Solutions	Open Windrow	Aeration Static Pile/ Windrow	Membrane Covered Aeration Systems	In-vessel Aerobic Composting	Anaerobic Digestion	WWTP Co-digestion
Environmental							
GHG Emissions Reduction	3	6	6	9	9	15	12
Diversion Potential	3	9	9	9	9	15	15
Social							
Odour Avoidance	6	9	9	12	12	15	12
Customer Convenience	3	9	9	9	9	12	12
Traffic Impact Avoidance	5	4	4	4	4	4	3
Financial							
Capital Cost	5	25	25	25	15	5	5
Operating Cost	25	20	20	15	15	5	5
Technical							
Proven Technology	12	9	15	15	15	15	9
Scalability (for population growth)	4	4	4	5	5	3	3
Integration with Municipal Programs	3	5	5	5	5	3	4
Footprint	5	1	1	4	3	3	3
Risk Management							
Compliance with FOW Policy Statement	5	25	25	25	25	20	20
Permits and Approvals	15	3	3	3	3	3	3
Ability to meet Timeline	5	25	25	25	20	15	15
Technical Complexity	15	15	12	12	9	6	3
Total Score	114	169	172	177	158	139	124

13. Environmental Sustainability Implications

The City has produced a number of strategies and plans focusing on climate change, energy conservation and environmental sustainability. These initiatives are broadly supported through the City's current Strategic Plan. Introduction of a Green Bin program in the City has the potential to help the City meet its goals as outlined in its Net-Zero Strategy and Sustainability Plan. The City's Net-Zero

Strategy, in particular, supported the use of anaerobic digestion as a means of diverting the City's organic waste and improving its carbon footprint. Review of the City's various policies and plans also suggests that implementation of a Green Bin diversion program and use of new waste collection technologies (e.g., automated cart collection) would be consistent with, and support, the City's climate change and strategic objectives.

13.1 Fleet Considerations

Several of the City's strategies and plans also make note of the opportunities to consider changes to the City's fleet as a means of reducing its carbon footprint. The Net-Zero Strategy recommends that 100% of heavy-duty commercial vehicles be converted to low-carbon fuels by 2040 and the municipal fleet be converted to 100% electrical powered vehicles within the same time frame. While alternative use fuels are still in their infancy for waste collection, it is recommended that consideration be given to piloting their use as the City's waste collection fleet as trucks are replaced at end of life.

13.2 Processing Considerations

The City currently hauls garbage and yard waste to its SWRF. Co-collection of Green Bin waste and garbage is proposed to avoid any increase in traffic and GHG emissions from collection activities. Processing options which can be built and operated at the SWRF would, similarly, avoid any additional hauling costs associated with delivering the Green Bin waste to a separate location.

Of the technologies considered in Section 10, the aerobic composting systems represent the lowest cost options for the quantities of Green Bin and yard waste the City anticipates diverting and are most easily integrated into the City's existing yard waste composting operations. They do not, however, provide any sort of green energy or carbon offset unlike the anaerobic digestion options. Nonetheless, the anaerobic digestion options would require separate diversion and management of the resulting digestate from their systems in order to be compliant with the requirements of the Policy Statement. This likely involves separate co-composting of the digestate with the City's yard waste or landspreading of the material if a suitable host site can be found. Management of the digestate adds cost and complexity to these options and additional GHG emissions which must be accounted for if considered.

13.3 Impact of Proposed Technologies and Program on the City's Carbon Footprint

In January 2020, the City declared a climate emergency and set an ambitious goal of becoming net-zero by 2050. Since then it has been implementing a Community Energy and Emissions Plan (CEEP). The City has been inventorying and monitoring its greenhouse gas (GHG) emissions for several years and waste management is known to be a key contributor to the City's overall emissions profile. Waste emissions include both emissions produced from solid waste and wastewater treated at the central wastewater plant. In 2016, waste emissions were estimated to be 48 ktCO₂e and were projected to increase to 65 ktCO₂e by 2050.

In anticipation of development of a food and organic waste diversion program, emissions from the City's current solid waste management program were reviewed and updated. A summary of current gas emissions from the landfilling and collection of waste and subsequent capture and treatment of landfill gas can be found in Appendix A. Appendix A also summarizes the change in emissions from the impact of implementation of a Green Bin program on landfill and waste hauling activities. There is the potential

to further reduce these emissions subject to the selection of processing technologies and operating site. At a minimum, it is expected that implementation of a Green Bin program will reduce the City's carbon footprint by 5,380 tCO₂e per year.

14. Financial Implications

Table 11 summarizes anticipated incremental costs of rolling out a Green Bin program to: single family households in 2025, multi-family households in 2026 and the provision of two additional leaf and yard waste collection events per year starting in 2023. Table 11 also summarizes the cost of transitioning to automated cart-based collection starting in 2025.

Implementation of Green Bin program costs are expected to peak in 2025 at an average cost of almost \$47 per household driven largely by the on-boarding of program staff, purchase and delivery of containers and initial processing costs. Post implementation program costs are expected to average \$1.5 million per year or \$33 per household as shown in 2028. Addition of the two yard waste collection events would increase this cost by \$3.50 per household. Converting to automated cart-based collection results in an incremental cost impact of \$3.8 million between 2022-2025 largely driven by the capital cost of upgraded trucks, Green Bins and purchase of garbage carts. As previously noted, this initiative results in a projected saving of \$827,000 per year for a projected pay back of under six years.

Table 11: Summary of Anticipated Incremental Green Bin Program Implementation Costs

Green Bin Program	2022	2023	2024	2025	2026	2027	2028
Administration							
Temporary staff		\$61,435	\$170,112	\$309,806	\$319,100	\$95,191	
Permanent staff			\$171,848	\$227,451	\$234,274	\$241,303	\$248,542
Communications Campaign			\$18,509	\$97,112	\$50,596	\$21,657	\$18,460
Waste & Participation Audits				\$20,000	\$20,000	\$10,000	
Single Family Implementation Costs							
Containers - Green Bin, Kitchen Catcher			\$1,092,031				
Container Delivery				\$222,108			
Manual Collection Vehicle Upgrades	\$195,000	\$330,000					
Driver Training			\$10,000				
SSO Processing				\$999,450	\$1,029,434	\$1,060,317	\$1,092,126
Multi-Family Implementation Costs							
Containers - Green Bin, Kitchen Catcher				\$269,424			
Container Delivery					\$54,798		
Manual Collection Vehicle Upgrades					\$55,000		
SSO Processing					\$121,140	\$124,774	\$128,517
Sub Total	\$195,000	\$391,435	\$1,462,500	\$2,145,350	\$1,884,342	\$1,553,241	\$1,487,646

Expanded Yard Waste Collection Service	2022	2023	2024	2025	2026	2027	2028
Two Additional Collection Days per Year		\$156,646	\$159,779	\$162,974	\$166,234	\$169,559	\$172,950
Yard Waste Processing		\$5,000	\$5,100	\$5,202	\$5,306	\$5,412	\$5,520
Sub Total		\$161,646	\$164,879	\$168,176	\$171,540	\$174,971	\$178,470

Auto Cart Program	2022	2023	2024	2025	2026	2027	2028
Administration							
Supplemental P&E			\$27,764	\$41,585	\$22,954	\$13,821	\$11,538
Single Family Implementation Costs							
Garbage Carts			\$2,480,206				
Container Delivery (Garbage Cart & Green Bins)				\$37,018			
Auto Cart Green Bin			\$962,468				
Upgrade nine curbside trucks with hydraulic arm	\$100,000	\$150,000					
Multi-Family Implementation Costs							
Garbage Carts				\$611,911			
Container Delivery (Garbage Cart & Green Bins)					\$9,133		
Auto Cart Green Bin				\$237,458			
Cost Savings							
Conversion to Auto Cart				(\$826,788)	(\$851,592)	(\$877,139)	(\$903,454)
Sub Total	\$100,000	\$150,000	\$3,470,438	\$101,184	(\$819,505)	(\$863,318)	(\$891,916)

Grand Total	\$295,000	\$703,081	\$5,097,817	\$2,414,710	\$1,236,377	\$864,894	\$774,200
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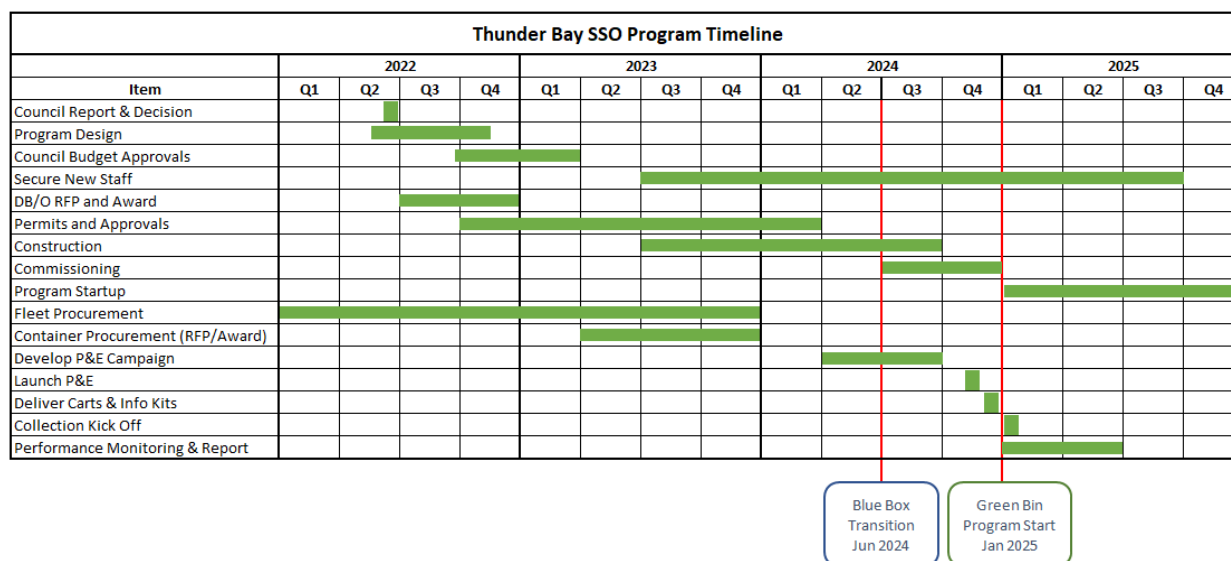
Note: assumes CPI rate of 3% annually

15. Program Critical Path

Planning for complex programs such as Green Bin or auto-cart service is normally initiated a minimum of two years in advance of the launch date. This period allows for adequate time to undertake critical work such as: advance review of streetscapes and properties, route planning, policy and licensing review and amendment, communications planning, public consultation, negotiation with and procurement of contractors. Recognizing that there is no operational Green Bin facility in close proximity to the City, time will also be needed to procure a contractor to either build a facility for the City or provide capacity at a private site. Preliminary feedback received from respondents to the RFI indicated that the City's requirement to have a functional Green Bin processing facility operational by 2025 was possible

provided contracts could be executed in 2022. With this in mind, Table 12 outlines a proposed timeline for program development and delivery.

Table 12: Green Bin Program Timeline



16. Recommendations

The provincial Policy Statement requires that the City provide curbside food and organic waste collection services to single-family dwellings by 2025 and achieve a diversion rate of 50% for this waste stream. In order to ensure the provincial diversion target is met, the following recommendations are proposed:

1) Expand Current Leaf and Yard Waste Services in 2023

Expand the City's leaf and yard waste collection program from the current level of two events per year to a total of four collection events beginning in 2023 to provide staff with sufficient time to assess the efficacy of this service level enhancement prior to launch of the required Green Bin program.

Consider further expansion or refinement of the leaf and yard waste collection service in subsequent years, as required, to ensure the City achieves its required diversion target under the provincial Policy Statement.

2) Implement a Curbside Green Bin Program in 2025

Design and implement a curbside food and organic waste collection program with the following key components based on proven best practices:

- Weekly curbside Green Bin collection;
- Bins and kitchen containers to be provided to residents free of charge by the City;
- Residents to be permitted to use paper and certified compostable liners in bins and kitchen containers;
- Allowable materials to include pet waste and kitty litter;

- Diapers and incontinence products be excluded unless the City's selected processing solution is capable of receiving such material; and
- Future collection vehicles be procured with split body compartments to accommodate co-collection of garbage and Green Bin materials.

3) Phase in Green Bin Collection Services Over Time

Roll out of Green Bin waste collection services to City residents and businesses based on the following schedule:

- Provision to curbside single-family households in 2025;
- Provision to multi-family properties no later than 2026; and
- Provision to local businesses and institutions for future consideration;

4) Optimize Garbage Collection Service to Achieve Required Diversion Targets and Reduce Costs

Amend garbage services as follows:

- Reduce collection to three items of garbage every other week to ensure participation in diversion programs;
- Residents be permitted to set out one additional garbage bag or item every other week subject to purchase of a bag or item tag from the City for the selected bag or item;
- The City to amend its waste collection by-law to reflect the new program and require mandatory participation in waste diversion programs; and
- Direct staff to explore development of a clear garbage bag policy for set out of overflow volumes used in conjunction with bag tags.

5) Hire Staff to Support Roll out of Green Bin Services

Hire necessary staff to support the implementation and long term success of the new program:

- One permanent full time Promotion & Education Coordinator to design, implement and maintain the ongoing communications that will be required to ensure success of our integrated solid waste system;
- One permanent full time Solid Waste Compliance Officer to support public compliance and proper ongoing curbside segregation of waste streams (and also address existing problems like sharps in the waste stream);
- One temporary full time Solid Waste Project Coordinator to assist in coordinating program development and implementation; and
- Two temporary full time Customer Service Advisory staff to assist with program rollout and respond to public questions/concerns.

6) Implement Automated Cart-Based Collection of Garbage and Green Bin Materials

Convert to automated cart-based collection of garbage and Green Bin materials from single-family households starting in 2025 to reduce operating costs based on the following parameters:

- Provision of garbage and Green Bin auto-carts to residents free of charge by the City;
- Collection vehicles purchased between 2023 and 2025 to be spec'd to be auto-cart ready;
- Consideration be given to piloting the use of electric collection vehicles as trucks are replaced at end of life;

- Review and optimize collection vehicle routing;
- Development of a redeployment plan for affected staff in cooperation with the City Human Resources and Corporate Safety Division and the union; and
- Direct staff to review multi-family properties and current service levels to assess cost benefit of shifting to auto-cart, Front End Loader or other technologies to reduce collection costs and report back to Council with recommendations of future service policy to this sector.

7) Finalize Program Costs and Design Parameters as a Next Step

Finally, it is recommended that Council direct staff to release an RFP for the procurement of an aerobic Green Bin processing solution based on the requirements of this report, finalize program costs and design parameters and report back to Council with the results.

17. Conclusions

The recommendations included in this report are intended to ensure the City achieves compliance with the provincial Policy Statement. They are also intended to ensure equitable service levels are provided to residents and businesses while options such as the adoption of an automated cart-based collection program will help mitigate the long term cost of the required Green Bin program. While the proposed recommendations will have significant financial and social implications for the City, they will also allow the City to make significant progress towards its stated environmental goals.

Appendix A

Comparison of Pre & Post Green Bin Program Implementation on the Current Greenhouse Gas (GHG) Emission Profile for the City of Thunder Bay's Landfill and Waste Collection System																	
Program	Commercial Landfilled Waste (tonnes) ⁴	Residential Landfilled Waste (tonnes) ⁴	Total Waste (tonnes) ⁴	Commercial Diverted Waste (tonnes) ⁴	Commercial Diverted Waste (%)	Residential Diverted waste (tonnes) ⁴	Residential Diverted waste (%)	Total Diverted Waste (tonnes) ⁴	Total Diverted Waste (%)	Landfill Waste GHG (tCO2e) ^{1,2}	Number of Collection Trucks	Truck Efficiency (km/ltr) ⁶	Total Kilometers Traveled	Waste Transport GHG (tCO2e) ^{1,2}	Gas Capture (m3)/day ⁷	Gas GHG (Removed) ^{1,3} (tCO2e)	Total GHG Emissions (tCO2e) ¹
Current Program Operations ⁵	39,026	48,504	87,530	5,073	13.00%	13,568	27.97%	18,641	21.30%	112,092	13	2.008	102,800	525	38,465	30,000	82,617
Green Bin Program Implementation ⁸	39,026	48,504	87,530	5,073	13.00%	20,904	43.10%	25,977	29.68%	107,395	13	2.008	102,800	525	38,465	30,000	77,920
Notes:																	
1. Greenhouse gas emissions are primarily characterized as tonnes (tCO2e), Kilotonnes (Kt) or Megatonnes (Mt) of carbon dioxide equivalents (KtCO2e) (a Mt is a thousand Kt). 1 MtCO2 = 1,000,000 tCO2e, 1 KtCO2e = 1,000 tCO2e																	
2. Greenhouse gas emissions for waste and transportation were derived from the ICLEI April 2018 report. Waste was used in whole and transportation was calculated as ~20% of the total.																	
3. Greenhouse gas emissions for methane gas removed is based upon the landfill Golder Associates testing report from February 2006. This value was not escalated and is left at a conservative number.																	
4. Waste generation and diversion rates were derived from the City of Thunder Bay 2020 Landfill Annual Report dated April 1, 2021.																	
5. Current program operations is based upon the reports from the City (April 2018 report by ICLEI) and focused on total waste received, how much of that waste was diverted, the transportation of that waste to the City landfill and methane production at that landfill.																	
6. Trucking efficiency derived from "Fuel Consumption, Emissions Estimation, and Emissions Cost Estimates Using Global Positioning Data" article by Betsy J. Agar , Brian W. Baetz & Bruce G. Wilson																	
7. No reduction in gas production is expected to occur until 3 to 5 years after introduction of the new organic waste diversion program. From ATSDR [Agency for Toxic Substances and Disease Registry] - Landfill Gas Basics.																	
8. Assumes 0% population growth for comparative purposes.																	

MEMORANDUM

TO: Mayor Mauro and Members of City Council

FROM: Councillor A. Foulds, Chair – EarthCare Advisory Committee

DATE: June 14, 2022

RE: **Food and Organic Waste Diversion Program – Letter of Support**

At their June 14 meeting, the EarthCare Advisory Committee of Council passed the following resolution:

With respect to the Food and Organic Waste Diversion Program (R 24/2022) being presented to City Council on June 27, 2022;

THAT the EarthCare Advisory Committee endorses the Food and Organic Waste Diversion Program, recognizing that this program supports many of the goals and objectives of Thunder Bay's EarthCare Sustainability Plan and Net-Zero Strategy.

AND THAT the City of Thunder Bay continually assess emerging technological advances, including but not limited to, anaerobic digestion and fleet electrification, and take advantage of opportunities that would accelerate our movement towards Net-Zero.

The proposed Food and Organic Waste Diversion (Green Bin) Program is a significant, and welcomed, step towards a more sustainable solid waste management program. This program directly supports the Waste action within the Sustainability Plan to investigate implementing a curbside organic collection program. In addition, the creation of a Green Bin program was identified as a medium term (2023-2025) priority action within the Net-Zero Strategy's five-year implementation plan.

When organic waste is disposed at the landfill, it decomposes and produces methane gas. Methane is a powerful greenhouse gas that is 28-34 times more potent than carbon dioxide (CO₂). Some of this methane is captured by the existing landfill gas capture system, however, due to low capture rates, much of this gas escapes into the air. A Green Bin program is an effective way to reduce methane emissions as it removes organic waste from the landfill and processes it in a different way.

The Green Bin Program recommends an aerobic processing solution. Aerobic processing, or composting, manages the decomposition of organic waste to reduce or prevent the release of methane. Composting will still result in the release of CO₂ but at a reduced rate. The anticipated reduction in greenhouse gas emissions from implementing this solution (5,380 tCO₂e) is a step in the right direction.

The Net-Zero Strategy envisions that organic waste is rerouted to an anaerobic digester. Anaerobic digesters capture methane from organic waste and convert it to renewable natural gas that can then be used to generate electricity and heat, or as a potential fuel for specialized vehicles. This processing option also results in greenhouse gas emissions but was recommended in the Net-Zero Strategy due to the potential to use captured methane to offset fossil fuels in other sectors. The feasibility study completed during the development of the Implementation Plan advised against this processing method due to high upfront capital costs and low organic waste tonnage.

Although anaerobic digestion is not feasible at this time, it may become a feasible option in the future, as waste diversion rates increase and the institutional and commercial sector partnerships are explored. The EarthCare Advisory Committee recommends that the City of Thunder Bay be open to future possibilities, such as anaerobic digestion or the electrification of the fleet, as exists in other municipalities and as it becomes feasible in order to take advantage of new technological opportunities that can increase organic waste diversion, optimize waste processing, and accelerate our movement towards Net-Zero.

The EarthCare Advisory Committee endorses the Food and Organic Waste Diversion Program, knowing it will move the City closer to meeting its goals and objectives under the EarthCare Sustainability Plan and Net-Zero Strategy.

Sincerely,



Councillor A. Foulds, Chair
EarthCare Advisory Committee

cc: K. Marshall – General Manager – Infrastructure & Operations
S. Stevenson, Sustainability Coordinator – Infrastructure & Operations
L. Grace – Administrative Assistant – Environment Division

Corporate Report

DEPARTMENT/ DIVISION	Infrastructure & Operations - Engineering & Operations	REPORT	R 99/2022
DATE PREPARED	05/19/2022	FILE	
MEETING DATE	06/27/2022 (mm/dd/yyyy)		
SUBJECT	Contract 10, 2022 - Hot-In-Place Asphalt Paving		

RECOMMENDATION

WITH RESPECT to Report R 99/2022 (Infrastructure & Operations – Engineering & Operations), we recommend that Contract 10, 2022 for Hot-In-Place Asphalt Paving be awarded to Pioneer Construction Inc., which submitted a tender in the amount of \$1,258,553.04 (inclusive of HST); it being noted that the amount shown is based on estimated quantities; final payment for this Contract will be based on measured quantities for the completed work;

AND THAT the General Manager of Infrastructure and Operations report significant variations in the Contract quantities to City Council;

AND THAT the Mayor and Clerk be authorized to sign all documentation related to this matter;

AND THAT any necessary By-laws be presented to City Council for ratification.

LINK TO STRATEGIC PLAN

This report directly supports ‘Our Priorities’ of the 2019-2022 Corporate Strategic Plan, through renewal of City infrastructure. This project includes the rehabilitation of the pavement surface on several City streets based on Engineering’s asset management plan.

EXECUTIVE SUMMARY

This report recommends Contract No. 10, 2022 for Hot-In-Place Asphalt Paving which involves repaving of various streets within the City of Thunder Bay, be awarded to the only bidder, Pioneer Construction Inc. The 2022 General Capital Reserve Fund will be used to fund this work, as directed by Council.

DISCUSSION

As a result of the call for tenders, one (1) response as listed below was received for Contract

10, 2022 – Hot-In-Place Asphalt Paving. The tendered cost includes the applicable HST. The bid has been checked for mathematical errors and no errors found.

CONTRACTOR	OPENING BID
Pioneer Construction	\$1,258,553.04

The pre-tender estimate for this contract was \$898,892.40 based on Hot-In-Place paving for the full scope of the project.

The tender submission was reviewed against historical pricing for this type of work. Administration confirms the pricing is competitive in comparison to past pricing, while allowing for inflationary increases to the fuel and asphalt cement indexes.

The Tender received was based on Hot-In-Place asphalt paving technology for the city streets and conventional mill and paving of smaller sections of streets that are located within the Confederation College property.

Hot-In-Place asphalt paving is an in-place recycled asphalt resurfacing process that involves heating and scarifying an existing asphalt pavement surface, mixing in a rejuvenator and fine aggregate and then placing and compacting the mixture in one continuous operation.

The conventional mill and pave process involves partial depth removal of the existing asphalt pavement, and placing one (1) new layer of asphalt pavement.

The work associated with this Contract includes approximately 45,000 square metres of asphalt pavement that will be resurfaced utilizing a hot-in-place recycling process on Churchill Drive, John Street Road, Kingsway Street, and Sibley Drive. Miscellaneous repairs to curb and gutter, catch basins, and maintenance holes are also part of the work.

Pioneer submitted the only tender for this contract using the Hot-In-Place asphalt paving technology and conventional mill and pave alternative for the Confederation College streets. Pioneer has previously completed similar work for the Ontario Ministry of Transportation and has successfully completed asphalt resurfacing contracts for the City in the past. Administration recommends this firm is qualified to undertake the work.

The work is expected to be completed between July and September of this construction season and will take an estimated four (4) to six (6) weeks.

At the May 2, 2022 Council meeting, Council provided direction to use \$1.8M from the General Capital Reserve, available from the 2021 year end positive variance, to fund the Hot-In-Place contract, as well as \$1M in crack sealing and miscellaneous patching. Although the Hot-In-Place contract came in over estimate, it is recommended to proceed with the full scope of work, which will see the renewal of four collector / arterial streets, and reduce the extent of miscellaneous patching completed.

FINANCIAL IMPLICATION

The 2022 General Capital Reserve includes sufficient funding for this recycled asphalt paving work. Confederation College is providing the funding for the streets being resurfaced within their property, estimated at \$150,000. It is recommended that all work proceed.

The following financial breakdown is provided:

Projected Costs	Breakdown
Contract Tendered Price:	\$1,258,553.04
Less HST Rebate:	<u>\$125,187.05</u>
Subtotal:	\$1,133,365.99
Engineering and Other City Costs:	<u>\$60,000.00</u>
TOTAL COST:	\$1,193,365.99

This contract includes a contingency allowance for work that is unforeseen. These funds can only be expended with the approval of the General Manager of Infrastructure and Operations.

CONCLUSION

It is concluded that Contract 10, 2022 be awarded to the low bidder Pioneer Construction Inc. and that all work should proceed.

BACKGROUND

The 2022 Capital Budget, Corporate Report 1/2022 (Corporate Services and Long Term Care – Financial Services) Proposed 2022 Operating and Capital Budget, includes tax base funding, Federal Gas Tax and EIRP funding for asphalt rehabilitation on various streets within the city.

Memorandum from Director – Engineering Kayla Dixon, dated April 21, 2022 recommended the 2022 Capital Budget be revised to manage the asphalt rehabilitation budget within the approved capital envelopes. Funds from the Hot-in-place project were reallocated to other priority infrastructure renewal projects that were impacted by increased market costs.

Memorandum from Mayor Bill Mauro dated April 26, 2022 recommended Administration complete the work associated with Hot-in-place resurfacing and larger miscellaneous patching of arterials and collectors using the General Capital Reserve to fund the work.

Infrastructure and Operations Department asset management plan incorporates a pavement management system developed in 2000 which is used as a tool to help Administration prioritize roadwork.

REFERENCE MATERIAL ATTACHED:

None.

PREPARED BY: Matthew Miedema, P. Eng., Project Engineer

THIS REPORT SIGNED AND VERIFIED BY: (NAME OF GENERAL MANAGER)	DATE:
Kerri Marshall, General Manager – Infrastructure & Operations	June 20, 2022



MEETING DATE 06/27/2022 (mm/dd/yyyy)

SUBJECT Contract 11, 2022 - Multi-Use Trails and Parks

SUMMARY

Report R 96/2022 (Infrastructure & Operations - Engineering & Operations) relative to the above noted. (Distributed Separately)



MEETING DATE 06/27/2022 (mm/dd/yyyy)

SUBJECT Outstanding List for Administrative Services as of June 14, 2022

SUMMARY

Memorandum from City Clerk Krista Power, dated June 14, 2022 providing the Administrative Services Outstanding Items List, for information.

ATTACHMENTS

1 K Power Memo dated June 14 2022

Memorandum

Office of the City Clerk
Fax: 623-5468
Telephone: 625-2230

TO: Mayor & Council

FROM: Krista Power, City Clerk

DATE: June 14, 2022

SUBJECT: Outstanding List for Administrative Services as of June 14, 2022.
Committee of the Whole – June 27, 2022

The following items are on the outstanding list for Administrative Services:

Reference Number	Department/Division	Outstanding Item Subject	Resolution Report Back Date – (on or before)	Revised Report Back Date – (on or before)
2009-028-ADM	Corporate Services & Long Term Care / Financial Services	Landfill Gas Generation Project	Apr-12	Dec-22-2025
2018-009-ADM	City Manager's Office / Corporate Strategic Services	Clean, Green and Beautiful Policy Review	No date included in resolution	July-25-2022
2020-049-ADM	City Manager's Office / Office of the City Clerk	Committee Meals	Report back when 75% of Committees are meeting in person	
2021-104-ADM	City Manager's Office / Human Resources & Corporate Safety	Work Life Initiatives - Policy (Work from Home)	Jun-27-2022	Aug-22-2022
2022-103-DEV	City Manager's Office	Conversion Therapy Resolution	Sept-12-2022	