City of Hamilton

CITY COUNCIL
AGENDA

22-015
Wednesday, June 22, 2022, 9:30 A.M.
Council Chambers
Hamilton City Hall
71 Main Street West

Call to Order

1. APPROVAL OF AGENDA

(Added Items, if applicable, will be noted with *)

2. DECLARATIONS OF INTEREST

3. APPROVAL OF MINUTES OF PREVIOUS MEETING

3.1. June 8, 2022

3.2. June 16, 2022

4. COMMUNICATIONS

4.1. Correspondence from the Municipal of Chatham-Kent requesting support for their resolution respecting Retirement Home Funding.

Recommendation: Be received.

4.2. Correspondence from the Town of Blue Mountains requesting support for their resolution respecting support for the inclusion of the mailing addresses of voters on the voter's lists provided to candidates.

Recommendation: Be received.

4.3. Correspondence from the Town of Aurora requesting support for their resolution calling on the House of Commons to support Member of Parliament Anji Dhillon's Private Member's Bill C-233, that will raise the level of education on domestic violence and

coercive control for federally appointed Judges.

Recommendation: Be received.

4.4. Correspondence from the Municipal Engineers Association stressing the importance of the role municipal engineers play in the successful operation of cities, counties, towns and townships across Ontario.

Recommendation: Be received.

4.5. Notice of Proposed Amendment to Education Development Charges By-law Hamilton-Wentworth Catholic District School Board.

Recommendation: Be received.

5. COMMITTEE REPORTS

5.1. City of Hamilton Integrity Commissioner’s Report Regarding Complaints Against Councillor Terry Whitehead, June 10, 2022

5.2. Board of Health Report 22-006 - June 13, 2022

5.3. Public Works Committee Report 22-010 - June 13, 2022

5.4. Planning Committee Report 22-010 - June 14, 2022

5.5. General Issues Committee Report 22-012 - June 15, 2022

5.6. Audit, Finance and Administration Committee Report 22-012 - June 16, 2022

5.7. Emergency and Community Services Committee Report 22-010 - June 16, 2022

5.8. Hamilton Enterprises Holding Corporation Shareholder Annual General Meeting Report 22-001, June 17, 2022

5.9. Hamilton Utilities Corporation Shareholder Annual General Meeting Report 22-002, June 17, 2022

5.10. STAFF REPORTS

a. Sub-Sections (a) and (c) of Report HSC22029(a) - Ukrainian Response Update and Request for Assistance (City Wide)

Sub-Sections (a) and (c) of Report HSC22029(a) were deferred from the June 8, 2022 Council meeting

6. MOTIONS

6.1. Amendment to Item 7 of General Issues Committee Report 21-009, respecting Motion - Disposition of the Biindigen Well Being Centre (Former St. Helen Catholic Elementary School Property at 785 Britannia) (Ward 4) (Item 14.2)

Please refer to Item 10.3 for Private & Confidential Appendices 'A' and 'B' to this item.

7. NOTICES OF MOTIONS

8. STATEMENT BY MEMBERS (non-debatable)

9. COUNCIL COMMUNICATION UPDATES

9.1. June 3, 2022 to June 16, 2022

10. PRIVATE AND CONFIDENTIAL

10.1. Closed Session Minutes - June 8, 2022

Pursuant to Section 9.1, Sub-sections (e), (f), (i) and (k) of the City's Procedural By-law 21-021, as amended, and Section 239(2), Sub-sections (e), (f), (i) and (k) of the *Ontario Municipal Act*, 2001, as amended, as the subject matter pertains to litigation or potential litigation, including matters before administrative tribunals, affecting the City or a local board; the receipt of advice that is subject to solicitor-client privilege, including communications necessary for that purpose; a trade secret or scientific, technical, commercial, financial or labour relations information, supplied in confidence to the municipality or local board, which, if disclosed, could reasonably be expected to prejudice significantly the competitive position or interfere significantly with the contractual or other negotiations of a person, group of persons or organization; and a position, plan, procedure, criteria or instruction to be applied to any negotiations carried on or to be carried on by or on behalf of the municipality or local board.

10.2. Closed Session Minutes - June 16, 2022

Pursuant to Section 9.1, Sub-sections (e) and (f) of the City's Procedural By-law 21-021, as amended, and Section 239(2), Sub-sections (e) and (f) of the *Ontario Municipal Act*, 2001, as amended, as the subject matter pertains to litigation or potential litigation, including matters before administrative tribunals, affecting the City or a local board and the receipt of advice that is subject to solicitor-client privilege, including communications necessary for that purpose.

10.3. Confidential Appendices 'A' and 'B; to Item 6.1

Pursuant to Section 9.1, Sub-section (c) of the City's Procedural By-law 21-021, and Section 239(2), Sub-section (c) of the *Ontario Municipal Act*, 2001, as amended, as the subject matter pertains to a proposed or pending acquisition or disposition of land for City purposes.

11. BY-LAWS AND CONFIRMING BY-LAW

11.1. 150

To Amend By-law No. 01-218, as amended, Being a By-law to Regulate On-Street Parking

Schedule 8 (No Parking Zones)

Schedule 12 (Permit Parking Zones)

Schedule 13 (No Stopping Zones)

Ward: 2, 3, 11, 13, 14

11.2. 151

To Establish City of Hamilton Land Described as Part of Lot 14, Concession 8 in the Geographic Township of Barton, designated as Part 4 on Plan 62R-12821, and Part 12 on Plan 62R-9741 Save and Except Part 18 on Plan 62R-15778 as Part of Dicenzo Drive

Ward: 8

11.3. 152 - WITHDRAWN

~~To Amend By-law No. 01-215, Being a By-law to Regulate Traffic~~

~~Schedule 2 (Speed Limits)~~

~~Schedule 3 (Flashing School Zones – Reduced Speed Limit)~~

~~Schedule 5 (Stop Sign Locations)~~

~~Schedule 9 (No Right Turn on Red)~~

~~Schedule 20 (Combined Foot & Bicycle Path)~~

~~Schedule 29 (Weight Restrictions on Bridges)~~

~~Schedule 31 (Designated Area – Reduced Speed – 40km/h Neighbourhoods)~~

~~Schedule 34 (Community Safety Zones)~~

~~Ward: 1, 2, 3, 4, 5, 6, 8, 9, 10, 11, 12, 13, 14, 15~~

11.4. 152

To Consolidate and Update Delegated Site Plan Control By-laws in the City of Hamilton

Ward: City Wide

11.5. 153

To Amend Zoning By-law No. 3692-92, Respecting Lands Located at 541 and 545 Fifty Road (Stoney Creek)

ZAC-21-045/25CDM-202120

Ward: 10

11.6. 154

To Amend Zoning By-law No. 6593 Respecting Lands Located at 16 Steven Street and Part of 436 King William Street, Hamilton

ZAC-22-019

Ward: 3

11.7. 155

To Amend Zoning By-law No. 6593 (former City of Hamilton), Respecting Housekeeping Amendments to Various Definitions and Certain Day Nursery Regulations

Ward: City Wide

CI-22-F

11.8. 156

To Amend Zoning By-law No. 464 (Glanbrook), Respecting Lands Located at 3140-3150 Binbrook Road

Ward: 11

CI-22-F

11.9. 158 - WITHDRAWN

~~Respecting Removal of Part Lot Control, Lot 4, Registered Plan No. 62M-1229, municipally known as 73 Aeropark Boulevard, Hamilton~~

~~Ward: 11~~

~~PLC-22-009~~

11.10. 157

A By-law to Delegate Authority During any Restricted Period following Nomination Day

Ward: City Wide

11.11. 158

Being a By-law Respecting Community Benefits Charges on Lands within the City of Hamilton

Ward: City Wide

11.12. 159

To Repeal and Replace By-law No. 22-065, To Impose a Sanitary Sewer Charge Upon Owners of Land Abutting Springbrook Ave from Approximately 24.5 metres South of Lockman Drive to Approximately 17 metres South of Regan Drive, in the City of Hamilton

Ward: 12

11.13. 160

Respecting Removal of Part Lot Control, Part of Lots 1 to 6, 9 to 51, 55, 56, 59 to 63, 65 to 84, and Part of Blocks 86 and 95 Registered Plan No. 62M-1280, for lands municipally known as 103, 104, 107, 108, 111, 112, 115, 119, 123, 127, 131, 135, 139, 143, 147, 150, 151, 154, 155, 159, 163, 167, 171, 175, 179, 183, 187, 191, 195, 199, 203, 207, 211, 215, 219, 223, 227, 231, 235, 239, 243, 247, 251, 255, 259, 271, 275, 279, 282, 283, 286, 287, 290, 291 Rockledge Drive and 128, 132, 133, 136, 137, 140, 141, 144, 148, 152, 156, 160, 164, 168, 172, 176, 180, 184, 188, 192, 196, 200, 204, Cittadella Boulevard, Glanbrook

PLC-22-002

Ward: 9

11.14. 161

Respecting Removal of Part Lot Control, Part of Lots 385 - 389, 408 – 475, 515 – 529 and Blocks 627 - 630, Registered Plan No. 62M-1266

PLC-22-010

Ward: 15

11.15. 162

To Adopt Official Plan Amendment No. 168 to the Urban Hamilton Official Plan Respecting 1107 Main Street West (Hamilton)

Ward: 1

11.16. 163

To Amend Zoning By-law No. 05-200, Respecting Lands Located at 1107 Main Street West

Ward: 1

11.17. 164

To Confirm the Proceedings of City Council

12. ADJOURNMENT

CITY COUNCIL
MINUTES 22-013

9:30 a.m.
June 8, 2022
Council Chamber
Hamilton City Hall
71 Main Street West

Present: Acting Mayor B. Johnson
Councillors M. Wilson, N. Nann, J.P. Danko, B. Clark, M. Pearson, A. VanderBeek, E. Pauls, S. Merulla, L. Ferguson, J. Farr, J. Partridge, T. Jackson and R. Powers.

Absent: Mayor F. Eisenberger - Personal
Councillor T. Whitehead - Personal

Acting Mayor B. Johnson called the meeting to order and recognized that Council is meeting on the traditional territories of the Erie, Neutral, HuronWendat, Haudenosaunee and Mississaugas. This land is covered by the Dish with One Spoon Wampum Belt Covenant, which was an agreement between the Haudenosaunee and Anishinaabek to share and care for the resources around the Great Lakes. It was further acknowledged that this land is covered by the Between the Lakes Purchase, 1792, between the Crown and the Mississaugas of the Credit First Nation. The City of Hamilton is home to many Indigenous people from across Turtle Island (North America) and it was recognized that we must do more to learn about the rich history of this land so that we can better understand our roles as residents, neighbours, partners and caretakers.

APPROVAL OF THE AGENDA

The Clerk advised of the following changes to the agenda:

4. COMMUNICATIONS

4.4 Correspondence respecting Applications for Official Plan Amendment and Zoning By-law Amendment for Lands Located at 1107 Main Street West, Hamilton (PED22098)(Ward 1):

(c) Dr. Sarah Sheehan

Recommendation: Be received and referred to the consideration of Item 7 of Planning Committee Report 22-009.

5. COMMITTEE REPORTS – STAFF REPORTS

5.8(a) Ukrainian Response Update and Request for Assistance (City Wide) (HSC22029(a))

7. NOTICES OF MOTION

7.1 The 2023 Battle of Stoney Creek Event

10. PRIVATE AND CONFIDENTIAL

10.3 Red Hill Valley Parkway Inquiry Update (LS19036(i)) (City Wide)

(Partridge/Farr)
That the agenda for the June 8, 2022 meeting of Council be approved, as amended.

Result: Motion CARRIED by a vote of 13 to 0, as follows:

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Ward 3 Councillor Nrinder Nann
YES - Ward 4 Councillor Sam Merulla
YES - Ward 5 Councillor Russ Powers
NOT PRESENT - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
NOT PRESENT - Mayor Fred Eisenberger
YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
YES - Ward 13 Councillor Arlene VanderBeek
YES - Ward 12 Councillor Lloyd Ferguson
YES - Deputy Mayor - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

DECLARATIONS OF INTEREST

Councillor B. Clark declared a disqualifying interest to Item 6 of Planning Committee Report 22-009 respecting the Application to Amend Stoney Creek Zoning By-law No. 3692-92 for Lands Located at 250-256 First Road West, Stoney Creek (PED22097) (Ward 9) (Item 9.2), as his son has a retail business interest with the principal of the planning consultant.

Councillor M. Pearson declared a disqualifying interest to Item 8 of the Planning Committee Report 22-009 respecting the Condominium Conversion Policy Review (PED22091) (City Wide) as she is a landlord of rental properties.

Councillor M. Pearson declared a disqualifying Interest to Item 3 of General Issues Report 22-011 respecting the Sub-sections (b) through (d) of Report FCS21017(b) - Vacant Home Tax in Hamilton, as she is a landlord of rental properties.

Councillor A. VanderBeek declared a disqualifying interest to Item 8 of the Planning Committee Report 22-009 respecting the Condominium Conversion Policy Review (PED22091) (City Wide) as she is a landlord of rental properties.

Councillor A. VanderBeek declared a disqualifying Interest to Item 3 of General Issues Report 22-011 respecting the Sub-sections (b) through (d) of Report FCS21017(b) - Vacant Home Tax in Hamilton, as she is a landlord of rental properties.

Councillor S. Merulla declared a disqualifying interest to Item 8 of the Planning Committee Report 22-009 respecting the Condominium Conversion Policy Review (PED22091) (City Wide) as he is a landlord of rental properties.

Councillor S. Merulla declared a disqualifying Interest to Item 3 of General Issues Report 22-011respecting the Sub-sections (b) through (d) of Report FCS21017(b) - Vacant Home Tax in Hamilton, as he is a landlord of rental properties.

APPROVAL OF MINUTES OF PREVIOUS MEETING

3.1 May 25, 2022

(Merulla/Jackson)
That the Minutes of the May 25, 2022 meeting of Council be approved, as presented.

Result: Motion CARRIED by a vote of 14 to 0, as follows:

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Ward 3 Councillor Nrinder Nann
YES - Ward 4 Councillor Sam Merulla
YES - Ward 5 Councillor Russ Powers
YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
NOT PRESENT - Mayor Fred Eisenberger
YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
YES - Ward 13 Councillor Arlene VanderBeek
YES - Ward 12 Councillor Lloyd Ferguson
YES - Deputy Mayor - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

COMMUNICATIONS

(Wilson/Pauls)
That Council Communications 4.1 to 4.6 be approved, ***as amended***, as follows:

4.1 Correspondence from the Municipality of Shuniah requesting support for the resolution requesting that the province increase Rural and Northern Education Fund(RNEF) to $50 Million.

Recommendation: Be received.

4.2 Correspondence from the Flamborough Chamber of Commerce, Hamilton Chamber of Commerce and the Stoney Creek Chamber of Commerce requesting an update on the status of the Open for Business Sub-Committee, and future intentions on addressing "Open for Business" issues.

Recommendation: Be received and referred to the General Manager of Planning and Economic Development for appropriate action.

4.3 Correspondence from the District of Muskoka to the Honourable Doug Ford, Premier of Ontario respecting the requirement for Ontario municipalities to conduct an annual practice exercise for a simulated emergency incident as prescribed by Regulation380/04.

Recommendation: Be received.

4.4 Correspondence respecting Applications for Official Plan Amendment and Zoning By-law Amendment for Lands Located at 1107 Main Street West, Hamilton (PED22098)(Ward 1):

(a) Dr. Lester Krames
(b) Rev. Loretta Jaunzarins
(c) Dr. Sarah Sheehan

Recommendation: Be received and referred to the consideration of Item 7 of Planning Committee Report 22-009.

4.5 Correspondence from the City of Kitchener requesting support for their resolution respecting the inclusion of energy performance tiers and timelines.

Recommendation: Be ***endorsed***.

4.6 Correspondence from Niagara Region requesting support for their resolution respecting Voluntary Russian Sanction Request.

Recommendation: Be received.

Result: Motion on the Communication Items, *as Amended*, CARRIED by a vote of 14 to 0, as follows:

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Ward 3 Councillor Nrinder Nann
YES - Ward 4 Councillor Sam Merulla
YES - Ward 5 Councillor Russ Powers
YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
NOT PRESENT - Mayor Fred Eisenberger
YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
YES - Ward 13 Councillor Arlene VanderBeek
YES - Ward 12 Councillor Lloyd Ferguson
YES - Deputy Mayor - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

(Wilson/Pauls)
That Council move into Committee of the Whole for consideration of the Committee Reports.

Result: Motion CARRIED by a vote of 14 to 0, as follows:

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Ward 3 Councillor Nrinder Nann
YES - Ward 4 Councillor Sam Merulla
YES - Ward 5 Councillor Russ Powers
YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
NOT PRESENT - Mayor Fred Eisenberger
YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
YES - Ward 13 Councillor Arlene VanderBeek
YES - Ward 12 Councillor Lloyd Ferguson
YES - Deputy Mayor - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

PUBLIC WORKS COMMITTEE REPORT 22-009

(Nann/Powers)
That Public Works Committee Report 22-009, being the meeting held on Monday, May 30, 2022, be received and the recommendations contained therein be approved.

Result: Motion on the Public Works Committee Report 22-009, CARRIED by a vote of 14 to 0, as follows:

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Ward 3 Councillor Nrinder Nann
YES - Ward 4 Councillor Sam Merulla
YES - Ward 5 Councillor Russ Powers
YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
NOT PRESENT - Mayor Fred Eisenberger
YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
YES - Ward 13 Councillor Arlene VanderBeek
YES - Ward 12 Councillor Lloyd Ferguson
YES - Deputy Mayor - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

PLANNING COMMITTEE REPORT 22-009

(Ferguson/Johnson)
That Planning Committee Report 22-009, being the meeting held on Tuesday, May 31, 2022, be received and the recommendations contained therein be approved.

At Council's request Item 5 was voted on separately, as follows:

5. Modifications and Updates to existing Secondary Dwelling Unit and Secondary Dwelling Unit – Detached Regulations (PED20093(c)) (City Wide) (Item 9.1)

(a) That City Initiative CI-20-E respecting the repealing and replacing of the Secondary Dwelling Unit and Secondary Dwelling Unit – Detached regulations in the Hamilton Zoning By-law No. 05-200 and the Zoning By-laws applicable to the Town of Ancaster, Town of Dundas, Town of Flamborough, Township of Glanbrook, City of Hamilton, and City of Stoney Creek, be approved on the following basis:

(i) That the Draft By-laws to amend Zoning By-law No. 05-200, the Town of Ancaster Zoning By-law No. 87-57, Town of Dundas Zoning By-law No. 3581-86, the Town of Flamborough Zoning By-law No. 90-145-Z, the Township of Glanbrook Zoning By-law No. 464, City of Hamilton Zoning By-law No. 6593, and the City of Stoney Creek Zoning By-law No. 3692-92, attached as Appendix "A" to Appendix "G", as amended,

to Report PED20093(c), which have been prepared in a form satisfactory to the City Solicitor, be enacted by City Council;

(ii) That the proposed changes in zoning are consistent with the Provincial Policy Statement (2020), conform with A Place to Grow: Growth Plan for the Greater Golden Horseshoe, 2019, as amended, and comply with the Rural and Urban Hamilton Official Plans.

(b) That the public submissions regarding this matter were received and considered by the Committee.

Result: Motion on Item 5 of Planning Committee Report 22-009, CARRIED by a vote of 12 to 2, as follows:

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Ward 3 Councillor Nrinder Nann
YES - Ward 4 Councillor Sam Merulla
YES - Ward 5 Councillor Russ Powers
NO - Ward 6 Councillor Tom Jackson
NO - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
NOT PRESENT - Mayor Fred Eisenberger
YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
YES - Ward 13 Councillor Arlene VanderBeek
YES - Ward 12 Councillor Lloyd Ferguson
YES - Deputy Mayor - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

Due to a declared conflict, Item 6 was voted on separately, as follows:

6. Application to Amend Stoney Creek Zoning By-law No. 3692-92 for Lands Located at 250-256 First Road West, Stoney Creek (PED22097) (Ward 9) (Item 9.2)

(a) That Zoning By-law Amendment Application ZAC-20-026, by UrbanSolutions Planning & Land Development Consultants Inc. on behalf of 256 First Road West Inc., for a change in zoning from the Neighbourhood Development “ND” Zone to the Multiple Residential “RM3-70(H)” Zone, Modified, Holding in order to permit 25 townhouse units for lands located at 250-256 First Road West, Stoney Creek, as shown on Appendix “A” attached to Report PED22097, be APPROVED on the following basis:

(i) That the draft By-law, attached as Appendix “B” to Report PED22097, which has been prepared in a form satisfactory to the City Solicitor, be enacted by City Council;

(ii) That the amending By-law apply the Holding Provision of Section 36(1) of the Planning Act, R.S.O. 1990 to the subject lands by introducing the Holding symbol 'H' as a suffix to the proposed zoning for the following:

(1) The Holding Provision for the Multiple Residential "RM3-70(H)" Zone, Modified, Holding, shall be removed when the following conditions have been met:

(a) That there is adequate sanitary service capacity available to the subject lands and that it can be demonstrated that there are appropriate sanitary sewer connections available to the subject lands, to the satisfaction of the Director of Growth Management;

(iii) That the proposed amendment is consistent with the Provincial Policy Statement (2020), conforms to the Growth Plan for the Greater Golden Horseshoe (2019, as amended) and complies with the Urban Hamilton Official Plan.

(b) That the public submissions regarding this matter were received and considered by the Committee.

Result: Motion on Item 6 of Planning Committee Report 22-009, CARRIED by a vote of 13 to 0, as follows:

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Ward 3 Councillor Nrinder Nann
YES - Ward 4 Councillor Sam Merulla
YES - Ward 5 Councillor Russ Powers
YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
NOT PRESENT - Mayor Fred Eisenberger
YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
YES - Ward 13 Councillor Arlene VanderBeek
YES - Ward 12 Councillor Lloyd Ferguson
YES - Deputy Mayor - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
CONFLICT - Ward 9 Councillor Brad Clark

Due to a declared conflict, Item 8 was voted on separately, as follows:

8. Condominium Conversion Policy Review (PED22091) (City Wide) (Outstanding Business List Item) (Item 10.1)

(a) That Planning Division and Legal Services Division Staff be authorized to consult with stakeholders and the public on:

(i) The proposed Official Plan Amendment attached as Appendix “A” to Report PED22091, relating to polices about conversion of rental housing to condominium tenure and demolition of rental housing;

(ii) The proposed Municipal Act By-law attached as “Appendix “B” to Report PED22091, to regulate the demolition and conversion of rental housing in the City of Hamilton;

(b) That Planning Division and Legal Services Staff be directed to report back to Planning Committee with final recommendations on the Official Plan Amendment and the Municipal Act By-law, with any modifications based on the results of the stakeholder and public consultation;

(c) That Item 18H be removed from the Planning Committee Outstanding Business List.

Result: Motion on Item 8 of Planning Committee Report 22-009, CARRIED by a vote of 11 to 0, as follows:

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Ward 3 Councillor Nrinder Nann
CONFLICT - Ward 4 Councillor Sam Merulla
YES - Ward 5 Councillor Russ Powers
YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
NOT PRESENT - Mayor Fred Eisenberger
YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
CONFLICT - Ward 13 Councillor Arlene VanderBeek
YES - Ward 12 Councillor Lloyd Ferguson
YES - Deputy Mayor - Ward 11 Councillor Brenda Johnson
CONFLICT - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

At Council’s request Items 9 (a), (b) and (c) were voted on separately, as follows:

9. Appeal to the Ontario Land Tribunal (OLT) for Lack of Decision on Urban Hamilton Official Plan Amendment Application UHOPA-20-003 and Zoning By-law Amendment Application ZAC-20-008 for Lands Located at 354 King Street West (LS21046(a)/PED21178(b)) (Ward 1) (Added Item 14.1)

(a) That closed session recommendations (a), (b), (c), and (d) to Report LS21046(a)/PED21178(b) be approved and remain confidential until made public coincident with staff’s presentation of the City’s position before the Ontario Land Tribunal;

Result: Motion on Item 9 (a) of Planning Committee Report 22-009, CARRIED by a vote of 12 to 2, as follows:

NO - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
NO - Ward 3 Councillor Nrinder Nann
YES - Ward 4 Councillor Sam Merulla
YES - Ward 5 Councillor Russ Powers
YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
NOT PRESENT - Mayor Fred Eisenberger
YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
YES - Ward 13 Councillor Arlene VanderBeek
YES - Ward 12 Councillor Lloyd Ferguson
YES - Deputy Mayor - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

9. Appeal to the Ontario Land Tribunal (OLT) for Lack of Decision on Urban Hamilton Official Plan Amendment Application UHOPA-20-003 and Zoning By-law Amendment Application ZAC-20-008 for Lands Located at 354 King Street West (LS21046(a)/PED21178(b)) (Ward 1) (Added Item 14.1)

(b) That Appendix “B” and Appendix “C” to Report LS21046(a)/PED21178(b)**,** be approved and remain confidential until made public coincident with staff’s presentation of the City’s position before the Ontario Land Tribunal; and

Result: Motion on Item 9 (b) of Planning Committee Report 22-009, CARRIED by a vote of 14 to 0, as follows:

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Ward 3 Councillor Nrinder Nann
YES - Ward 4 Councillor Sam Merulla
YES - Ward 5 Councillor Russ Powers
YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
NOT PRESENT - Mayor Fred Eisenberger
YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
YES - Ward 13 Councillor Arlene VanderBeek
YES - Ward 12 Councillor Lloyd Ferguson
YES - Deputy Mayor - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

9. Appeal to the Ontario Land Tribunal (OLT) for Lack of Decision on Urban Hamilton Official Plan Amendment Application UHOPA-20-003 and Zoning By-law Amendment Application ZAC-20-008 for Lands Located at 354 King Street West (LS21046(a)/PED21178(b)) (Ward 1) (Added Item 14.1)

(c) That the balance of Report LS21046(a)/PED21178(b), including Appendix "D" hereto, remain private and confidential.

Result: Motion on Item 9 (c) of Planning Committee Report 22-009, CARRIED by a vote of 14 to 0, as follows:

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Ward 3 Councillor Nrinder Nann
YES - Ward 4 Councillor Sam Merulla
YES - Ward 5 Councillor Russ Powers
YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
NOT PRESENT - Mayor Fred Eisenberger
YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
YES - Ward 13 Councillor Arlene VanderBeek
YES - Ward 12 Councillor Lloyd Ferguson
YES - Deputy Mayor - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

Result: Motion on the balance of Planning Committee Report 22-009, CARRIED by a vote of 14 to 0, as follows:

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Ward 3 Councillor Nrinder Nann
YES - Ward 4 Councillor Sam Merulla
YES - Ward 5 Councillor Russ Powers
YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
NOT PRESENT - Mayor Fred Eisenberger
YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
YES - Ward 13 Councillor Arlene VanderBeek
YES - Ward 12 Councillor Lloyd Ferguson
YES - Deputy Mayor - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

GENERAL ISSUES COMMITTEE REPORT 22-011

(Wilson/Pauls)
That General Issues Committee Report 22-011, being the meeting held on Wednesday, June 1, 2022, be received and the recommendations contained therein be approved.

(Danko/Ferguson)
That Item 5, of General Issues Committee Report 22-011, respecting Proposal to the Red Hill Valley Joint Stewardship Board for the Expansion of the Red Hill Valley Parkway – REVISED, be ***amended*** by adding sub-section (c) as follows:

(c) That staff report back to the General Issues Committee on the financial impacts of any ongoing assistance and support requested by the Red Hill Valley Joint Stewardship Board in its consideration of the proposal.

Result: *Amendment* to Item 5, of General Issues Committee Report 22-011, DEFEATED by a vote of 4 to 9, as follows:

NO - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
NO - Ward 3 Councillor Nrinder Nann
YES - Ward 4 Councillor Sam Merulla
NO - Ward 5 Councillor Russ Powers
NO - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
NOT PRESENT - Mayor Fred Eisenberger
NO - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
NO - Ward 13 Councillor Arlene VanderBeek
YES - Ward 12 Councillor Lloyd Ferguson
NO - Deputy Mayor - Ward 11 Councillor Brenda Johnson
NO - Ward 10 Councillor Maria Pearson
NO - Ward 9 Councillor Brad Clark

At Council's request Item 5 was voted on separately, as follows:

5. Proposal to the Red Hill Valley Joint Stewardship Board for the Expansion of the Red Hill Valley Parkway – REVISED (Item 11.1)

WHEREAS, on April 13, 2022 Council authorized staff to deliver a Proposal ("the Proposal") to the Red Hill Valley Joint Stewardship Board ("the JSB") to consider the proposed expansion of the Red Hill Valley Parkway;

WHEREAS, some preliminary work is being performed in order to assemble the information to be delivered to the JSB in the Proposal; and,

WHEREAS, the City wishes to ensure that it remains fully compliant with the requirements of the Haudenosaunee-Hamilton Red Hill sub-agreement on Joint Stewardship ("the Joint Stewardship Agreement"), including Paragraphs 7.2, 7.3, 7.4, 7.5, 7.12 and 9.9 thereof, respecting the delivery of the Proposal to the JSB;

THEREFORE, BE IT RESOLVED:

That staff be directed to suspend all further engineering and other work in connection with the proposed expansion of the Red Hill Valley Parkway, except for the following:

(a) In-progress technical work necessary to assemble, draft, deliver and present the Proposal as soon as practicable; and,

(b) Ongoing assistance and support to the city representatives of the Red Hill Valley Joint Stewardship Board in its consideration of the Proposal, or other work required to generally fulfill the related obligations of the City pursuant to the Joint Stewardship Agreement.

Result: Motion on Item 5 of General Issues Committee Report 22-011, CARRIED by a vote of 12 to 1, as follows:

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Ward 3 Councillor Nrinder Nann
NOT PRESENT - Ward 4 Councillor Sam Merulla
YES - Ward 5 Councillor Russ Powers
YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
NO - Ward 8 Councillor John-Paul Danko
NOT PRESENT - Mayor Fred Eisenberger
YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
YES - Ward 13 Councillor Arlene VanderBeek
YES - Ward 12 Councillor Lloyd Ferguson
YES - Deputy Mayor - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

Due to a declared conflict, Item 3 was voted on separately, as follows:

3. Sub-sections (b) through (d) of Report FCS21017(b) - Vacant Home Tax in Hamilton (Item 8.2)

(b) That the 2022 implementation costs estimated at $2,600,000 for the Vacant Home Tax be funded through an internal loan plus interest from the Investment Stabilization Reserve (110046) to be repaid from revenues collected from the program over a 5-year term;

(c) That the estimated gross annual operating costs of $2,200,000 for administration of the Vacant Home Tax Program and related 16 Full Time Equivalents (FTE), to be funded from revenues generated by the program.

(d) That the matter respecting Vacant Home Tax, be removed from the Outstanding Business List.

Result: Motion on Item 3 of General Issues Committee Report 22-011, CARRIED by a vote of 8 to 3, as follows:

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Ward 3 Councillor Nrinder Nann
NOT PRESENT - Ward 4 Councillor Sam Merulla
YES - Ward 5 Councillor Russ Powers
NO - Ward 6 Councillor Tom Jackson
NO - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
NOT PRESENT - Mayor Fred Eisenberger
YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
CONFLICT - Ward 13 Councillor Arlene VanderBeek
NO - Ward 12 Councillor Lloyd Ferguson
YES - Deputy Mayor - Ward 11 Councillor Brenda Johnson
CONFLICT - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

Result: Motion on the balance of General Issues Committee Report 22-011, CARRIED by a vote of 13 to 0, as follows:

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Ward 3 Councillor Nrinder Nann
NOT PRESENT - Ward 4 Councillor Sam Merulla
YES - Ward 5 Councillor Russ Powers
YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
NOT PRESENT - Mayor Fred Eisenberger
YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
YES - Ward 13 Councillor Arlene VanderBeek
YES - Ward 12 Councillor Lloyd Ferguson
YES - Deputy Mayor - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

SELECTION COMMITTEE REPORT 22-004

(Nann/Pearson)
That the Selection Committee Report 22-004, being the meeting held on Thursday, June 2, 2022, be received.

Result: Motion on Selection Committee Report 22-004, CARRIED by a vote of 13 to 0, as follows:

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Ward 3 Councillor Nrinder Nann
NOT PRESENT- Ward 4 Councillor Sam Merulla
YES - Ward 5 Councillor Russ Powers
YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
NOT PRESENT - Mayor Fred Eisenberger
YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
YES - Ward 13 Councillor Arlene VanderBeek
YES - Ward 12 Councillor Lloyd Ferguson
YES - Deputy Mayor - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

AUDIT, FINANCE AND ADMINISTRATION COMMITTEE REPORT 22-011

(Pearson/VanderBeek)
That Audit, Finance and Administration Committee Report 22-011, being the meeting held on Thursday, June 2, 2022, be received and the recommendations contained therein be approved.

At Council's request Item 4 (a) was voted on separately, as follows:

4. Governance Review Sub-Committee Report 22-002 - May 30, 2022 (Added Item 10.3)

(a) Amendment to By-law 16-288, Being a By-law to Establish and Govern the Office of Integrity Commissioner and Provide for the Resolution of Allegations of Contraventions of the Code of Conduct by Members of Council (Item 5.1)

WHEREAS, Council enacted a By-law to Establish and Govern the Office of Integrity Commissioner and Provide for the Resolution of Allegations of Contraventions of the Code of Conduct by Members of Council, being City of Hamilton By-law No.16-288;

WHEREAS, By-law 16-288 requires the complainant to pay to the City Clerk a refundable fee in the amount of $100.00 upon the filing of a Complaint;

WHEREAS, the refundable fee may penalize complainants from exercising their statutory rights, and may prevent legitimate complaints from being brought forward due to concerns about financial cost;

THEREFORE, BE IT RESOLVED:

That By-law 16-288, being a By-law to Establish and Govern the Office of Integrity Commissioner and Provide for the Resolution of Allegations of Contraventions of the Code of Conduct by Members of Council, be amended by deleting subsections 11.(6)(a), (b) and (c) as follows:

11. ~~(6)(a) A Complainant shall pay to the City Clerk a refundable fee in the amount of $100.00 upon the filing of a Complaint.~~
~~(b) The fee payable under paragraph 11(6)(a) shall be refunded to the Complainant when the Integrity Commissioner files their report, except where a Complaint is found to be frivolous, vexatious, or not made in good faith the fee shall not be refunded.~~
~~(c) Where a Complaint has been stayed, a Complainant may withdraw their Complaint and receive a refund of the fee~~

Result: Motion on Item 4 (a) of Audit, Finance and Administration Committee Report 22-011, CARRIED by a vote of 9 to 4, as follows:

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Ward 3 Councillor Nrinder Nann
NOT PRESENT - Ward 4 Councillor Sam Merulla
NO - Ward 5 Councillor Russ Powers
NO - Ward 6 Councillor Tom Jackson
NO - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
NOT PRESENT - Mayor Fred Eisenberger
YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
YES - Ward 13 Councillor Arlene VanderBeek
NO - Ward 12 Councillor Lloyd Ferguson
YES - Deputy Mayor - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

Result: Motion on the balance of Audit, Finance and Administration Committee Report 22-011, CARRIED by a vote of 13 to 0, as follows:

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Ward 3 Councillor Nrinder Nann
NOT PRESENT- Ward 4 Councillor Sam Merulla
YES - Ward 5 Councillor Russ Powers
YES - Ward 6 Councillor Tom Jackson

YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
NOT PRESENT - Mayor Fred Eisenberger
YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
YES - Ward 13 Councillor Arlene VanderBeek
YES - Ward 12 Councillor Lloyd Ferguson
YES - Deputy Mayor - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

EMERGENCY AND COMMUNITY SERVICES COMMITTEE REPORT 22-009

(Clark/Nann)
That Emergency and Community Services Committee Report 22-009, being the meeting held on Thursday, June 2, 2022, be received and the recommendations contained therein be approved.

Result: Motion on the Emergency and Community Services Committee Report 22-009, CARRIED by a vote of 13 to 0, as follows:

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Ward 3 Councillor Nrinder Nann
NOT PRESENT- Ward 4 Councillor Sam Merulla
YES - Ward 5 Councillor Russ Powers
YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
NOT PRESENT - Mayor Fred Eisenberger
YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
YES - Ward 13 Councillor Arlene VanderBeek
YES - Ward 12 Councillor Lloyd Ferguson
YES - Deputy Mayor - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

CITYHOUSING HAMILTON CORPORATION SHAREHOLDER ANNUAL GENERAL MEETING REPORT 22-001

(Wilson/Farr)
That Section 5.8(2) of the City's Procedural By-law 21-021, as Amended, which provides that a minimum of 2 days shall pass before the Report of a Standing Committee, the Selection Committee, or other Committee that reports directly to Council is presented to Council to provide adequate opportunity for review, be waived in order to consider the CityHousing Hamilton Corporation Shareholder Annual General Meeting Report 22-001.

Result: Motion CARRIED by a 2/3rds vote of 13 to 0, as follows:

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Ward 3 Councillor Nrinder Nann
NOT PRESENT- Ward 4 Councillor Sam Merulla
YES - Ward 5 Councillor Russ Powers
YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
NOT PRESENT - Mayor Fred Eisenberger
YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
YES - Ward 13 Councillor Arlene VanderBeek
YES - Ward 12 Councillor Lloyd Ferguson
YES - Deputy Mayor - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

(Wilson/Farr)
That CityHousing Hamilton Corporation Shareholder Annual General Meeting Report 22-001, being the meeting held on Tuesday, June 7, 2022, be received and the recommendations contained therein be approved.

(Farr/Wilson)
That Item 2(c) of CityHousing Hamilton Corporation Shareholder Report 22-001, be ***amended*** to read as follows:

2. Shareholder Resolutions

(c) COVID Deficit

(i) That the letter from the Corporation's Chief Financial Officer to the Sole Voting Member dated January 19, 2022 (attached hereto as Appendix "B" and hereinafter referred to as the "COVID Deficit Letter") be and the same is hereby received***; and***

~~***(ii) That the COVID Deficit Letter be forthwith referred to the City of Hamilton's General Manager of Corporate Services for further action.***~~

(ii) That the City of Hamilton provide funding to CHH for 2021 COVID-19 Expenses of $530,887.08 from the HSC operating budget.

Result: *Amendment* to Item 2 (c) of CityHousing Hamilton Corporation Shareholder Annual General Meeting Report 22-001, CARRIED by a vote of 13 to 0, as follows:

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Ward 3 Councillor Nrinder Nann

NOT PRESENT- Ward 4 Councillor Sam Merulla
YES - Ward 5 Councillor Russ Powers
YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
NOT PRESENT - Mayor Fred Eisenberger
YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
YES - Ward 13 Councillor Arlene VanderBeek
YES - Ward 12 Councillor Lloyd Ferguson
YES - Deputy Mayor - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

Result: Motion on the CityHousing Hamilton Corporation Shareholder Annual General Meeting Report 22-001, *As Amended*, CARRIED by a vote of 13 to 0, as follows:

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Ward 3 Councillor Nrinder Nann
NOT PRESENT- Ward 4 Councillor Sam Merulla
YES - Ward 5 Councillor Russ Powers
YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
NOT PRESENT - Mayor Fred Eisenberger
YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
YES - Ward 13 Councillor Arlene VanderBeek
YES - Ward 12 Councillor Lloyd Ferguson
YES - Deputy Mayor - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

STAFF REPORTS

5.8(a) Ukrainian Response Update and Request for Assistance (City Wide) (HSC22029(a))

(Partridge/Pauls)

(a) That staff be authorized to respond to supporting the Ukraine Crisis, including but not limited to short-term and temporary accommodations and wrap around supports with an estimated cost of $670,000 per month, to be charged to the Corporate Financials – Expenditures/Non-Program Dept Id;

(b) That staff be directed to pursue full recovery from senior levels of government for the costs associated with the City's response to the Ukraine Crisis, and that staff report back on the outcome of this undertaking;

(c) That the Mayor and City Clerk be authorized and directed to execute all documentation necessary to support the City's response to the Ukraine Crisis, with content acceptable to the General Manager, City Managers Office, and in a form satisfactory to the City Solicitor.

(Clark/Wilson)
That the recommendations respecting Report HSC22029(a), Ukrainian Response Update and Request for Assistance (City Wide) be ***amended***, by adding sub-section (d), as follows:

(d) That Council endorse Mayor Eisenberger, in concert with area Mayors, send correspondence to the Prime Minister, Deputy Prime Minister, Provincial Premier and Local MPPs, and MPs to assist Hamilton with the housing and support for Ukrainian refugees.

Result: *Amendment*, CARRIED by a vote of 12 to 0, as follows:

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
NOT PRESENT - Ward 3 Councillor Nrinder Nann
NOT PRESENT - Ward 4 Councillor Sam Merulla
YES - Ward 5 Councillor Russ Powers
YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
NOT PRESENT - Mayor Fred Eisenberger
YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
YES - Ward 13 Councillor Arlene VanderBeek
YES - Ward 12 Councillor Lloyd Ferguson
YES - Deputy Mayor - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

At Council's request, Sub-Sections (b) and (d) of Report HSC22029(a) respecting Ukrainian Response Update and Request for Assistance (City Wide), were voted on separately, as follows:

(b) That staff be directed to pursue full recovery from senior levels of government for the costs associated with the City's response to the Ukraine Crisis, and that staff report back on the outcome of this undertaking;

(d) That Council endorse Mayor Eisenberger, in concert with area Mayors, send correspondence to the Prime Minister, Deputy Prime Minister, Provincial Premier and Local MPPs, and MPs to assist Hamilton with the housing and support for Ukrainian refugees.

Result: Motion on Sub-Sections (b) and (d), CARRIED by a vote of 12 to 0, as follows:

YES - Ward 1 Councillor Maureen Wilson

YES - Ward 2 Councillor Jason Farr
NOT PRESENT - Ward 3 Councillor Nrinder Nann
NOT PRESENT - Ward 4 Councillor Sam Merulla
YES - Ward 5 Councillor Russ Powers
YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
NOT PRESENT - Mayor Fred Eisenberger
YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
YES - Ward 13 Councillor Arlene VanderBeek
YES - Ward 12 Councillor Lloyd Ferguson
YES - Deputy Mayor - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

(Clark/Danko)
That consideration of Sub-Sections (a) and (c) of Report HSC22029(a) respecting Ukrainian Response Update and Request for Assistance (City Wide) be deferred to the June 22, 2022 Council meeting.

Result: Motion on the Deferral of Sub-Sections (a) and (c), CARRIED by a vote of 12 to 0, as follows:

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
NOT PRESENT - Ward 3 Councillor Nrinder Nann
NOT PRESENT - Ward 4 Councillor Sam Merulla
YES - Ward 5 Councillor Russ Powers
YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
NOT PRESENT - Mayor Fred Eisenberger
YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
YES - Ward 13 Councillor Arlene VanderBeek
YES - Ward 12 Councillor Lloyd Ferguson
YES - Deputy Mayor - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

(Wilson/Pauls)
That Council rise from Committee of the Whole to consider the Committee Reports.

Result: Motion CARRIED by a vote of 12 to 0, as follows:

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
NOT PRESENT - Ward 3 Councillor Nrinder Nann
NOT PRESENT - Ward 4 Councillor Sam Merulla

YES - Ward 5 Councillor Russ Powers
YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
NOT PRESENT - Mayor Fred Eisenberger
YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
YES - Ward 13 Councillor Arlene VanderBeek
YES - Ward 12 Councillor Lloyd Ferguson
YES - Deputy Mayor - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

(Ferguson/Partridge)
That Council recess until 1:30 p.m.

Result: Motion CARRIED by a vote of 12 to 0, as follows:

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
NOT PRESENT - Ward 3 Councillor Nrinder Nann
NOT PRESENT - Ward 4 Councillor Sam Merulla
YES - Ward 5 Councillor Russ Powers
YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
NOT PRESENT - Mayor Fred Eisenberger
YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
YES - Ward 13 Councillor Arlene VanderBeek
YES - Ward 12 Councillor Lloyd Ferguson
YES - Deputy Mayor - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

MOTIONS

6.1 Amendments to Various Committees Terms of Reference due to Conflicts with the Procedural By-law

(Wilson/Pauls)
WHEREAS, “Committee” means a Standing Committee, Sub-Committee, Selection Committee or an Advisory Committee or Task Force established by Council from time to time and “Quorum” means the number of members required to be present at a meeting to validate the transactions of its business;

WHEREAS, the Procedural By-Law 21-021, A By-Law to Govern the Proceedings of Council and Committees of Council was amended on February 4, 2021 to provide Section 5.4 Quorum (1) The quorum for all Committees shall be a half of the membership rounded up to the nearest whole number;

WHEREAS, the Procedural By-Law 21-021, A By-Law to Govern the Proceedings of Council and Committees of Council states that the Committee Chair shall vote on any questions before the Committee and in the event of an equality of votes (tie vote) the Committee Chair will not have an extra casting vote and the question being voted upon is deemed lost;

WHEREAS, the Procedural By-Law 21-021, A By-Law to Govern the Proceedings of Council and Committees of Council states that no vote shall be taken by ballot or by any other method of secret voting and every vote so taken is of no effect, except where permitted by statute; and

WHEREAS, Council has not set term limits and has a policy for the filling of vacancies;

THEREFORE, BE IT RESOLVED:

(a) That the Terms of Reference for the following Committees of Council be ***amended*** by deleting the following sections of their Terms of Reference:

(i) AFFORDABLE HOUSING SITE SELECTION SUB-COMMITTEE

Quorum will consist of 50% plus one of the membership.

(ii) AIRPORT SUB-COMMITTEE

REPRESENTATION

A quorum shall be achieved when 50% plus one of the voting membership body is present. (3)

(iii) ARTS ADVISORY COMMISSION

2. TERMS OF MEMBERSHIP

2.0 Members are expected to serve a term that coincides with the term of Council, ***and may serve a maximum of two (2) consecutive terms.***

2.2 At the end of the second consecutive term, a member may reapply after an absence of at least one (1) year.

2.3 In the event that a vacancy occurs before the end of a term, Hamilton City Council may appoint a replacement on recommendation of the Commission.

6. DECISION-MAKING

6.0 Although the Commission should endeavor to reach decisions by consensus, when a vote is necessary a simple majority vote will carry the question. ***The Chair does not***

normally vote, but in the case of a tie vote, the Chair will cast the deciding vote.

6.1 Between scheduled meetings, should a decision be required, the Executive Committee will poll all Commission members and make an objective decision based on that poll. The decision will be communicated to all Commission members.

7. GUIDELINES FOR MEETINGS

7.1 A quorum consists of a majority of total Commission membership five (5 members).

7.2 If within 30 minutes of the time called for a meeting there is no quorum, the meeting will stand adjourned.

(iv) EXPANDING HOUSING AND SUPPORT SERVICES FOR WOMEN, NON-BINARY AND TRANSGENDER COMMUNITY SUB-COMMITTEE

Quorum: shall be a half of the membership rounded up to the nearest whole number (Section 5.4 (1) of By-law 18-270).

(v) FACILITY NAMING SUB-COMMITTEE

Voting and Attendance:

For purposes of voting, majority means more than half of the Sub-Committee members present and voting.
A quorum for the purposes of voting shall be 50% plus one (1) of the Sub-Committee members.

(vi) FOOD ADVISORY COMMITTEE

Quorum

Quorum consists of half the voting members plus one. In order to ensure a broad range of perspectives are included in discussions and decision making, this minimum threshold must include a representative from each of the food system components, plus a minimum of one member at large.

(vii) HAMILTON VETERANS COMMITTEE

Quorum:

Quorum will be 50 percent plus one of the current membership.

(viii) MULTI-YEAR BUDGET PLANNING SUB-COMMITTEE

Voting & Attendance:

For purposes of voting, majority means more than half of the members present and voting.

A quorum for the purposes of voting shall be 50% plus 1 of the members on the Committee.

(ix) NON-UNION COMPENSATION SUB-COMMITTEE

ORGANIZATION

The Non-Union Compensation Committee shall meet not less than two (2) times a year to coincide with the annual budget process. Special meetings may be convened at the discretion of the Chair. The Executive Director, Human Resources or the Manager, Compensation & Organization Design can also request a meeting of the Non-Union Compensation Committee. ***A quorum for any meeting will be three (3) members.*** The Executive Director, Human Resources, the Manager, Compensation & Organization Design, the City Manager, the General Manager of Finance & Corporate Services and any other staff deemed necessary shall also attend the meetings.

(x) PHYSICIAN RECRUITMENT AND RETENTION STEERING COMMITTEE

Governance:

Quorum is 4 out of 7 members.

(xi) PROCUREMENT SUB-COMMITTEE

REPRESENTATION

A quorum shall be achieved when 50% plus one of the voting membership body is present.

(xii) TRANSIT AREA RATING REVIEW SUB-COMMITTEE

Voting and Attendance

A quorum for the purposes of voting shall be 50% plus one of the members on the Sub-Committee.

(xiii) WEST HARBOUR DEVELOPMENT SUB-COMMITTEE

Voting and Attendance:

For purposes of voting, majority means more than half of the

Committee members present and voting.

A quorum for the purposes of voting shall be 50% plus one of the Sub-Committee members.

(b) That the Terms of Reference for the following Committee of Council be ***amended*** by deleting and replacing the wording of the following section of their Terms of Reference:

(i) CLEANLINESS AND SECURITY IN THE DOWNTOWN CORE TASK FORCE

Rules and Procedures:

The Task Force will meet at the request of the Chair and the proceedings of the Task Force shall be conducted as set out in ***~~Bourinot's Rules of Order~~ City's Procedural By-law.***

Result: Motion CARRIED by a vote of 13 to 0, as follows:

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Ward 3 Councillor Nrinder Nann
NOT PRESENT - Ward 4 Councillor Sam Merulla
YES - Ward 5 Councillor Russ Powers
YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
NOT PRESENT - Mayor Fred Eisenberger
YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
YES - Ward 13 Councillor Arlene VanderBeek
YES - Ward 12 Councillor Lloyd Ferguson
YES - Deputy Mayor - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

6.2 The 2023 Battle of Stoney Creek Event

(Powers/Pearson)
WHEREAS, the City of Hamilton is the owner and steward of Battlefield House Museum & Park National Historic Site

WHEREAS, the site was the location of the Battle of Stoney Creek on the night of 5-6 June 1813;

WHEREAS, there is a longstanding tradition of an annual event commemorating the site;

WHEREAS, as a result of COVID uncertainly during the planning period, the 2022 Battle of Stoney Creek event will not be held in person;

WHEREAS a 30-minute video Born in the Creek: a Battlefield House Museum & Park Retrospective is being produced for broadcast in summer 2022 that highlights Battlefield House Museum & Park and the Re-enactment of the Battle of Stoney Creek.

WHEREAS, the City of Hamilton desires that such events be aligned with City policies concerning equity, diversity and inclusion, inclusive of multiple perspectives and voices, educational in nature, respectful of varying perspectives on the historical events portrayed and provide economic impact for the enjoyment and benefit of the community;

THEREFORE, BE IT RESOLVED:

(a) That staff be directed to plan for the delivery of an in-person Battle of Stoney Creek***, in consultation with the Ward Councillor***, themed event in 2023 that includes re-enactment activities, and that the event portray, in a respectful and historically-accurate manner, all communities involved with and impacted by the battle including Indigenous peoples, settlers, military forces and ordinary citizens;

(b) That in preparation for this event staff be directed to consult with the public and key stakeholders on the scope, approach and programming of the event;

(c) That staff conduct an environmental scan of the current best-practice approaches to similar commemorative events and sites and share the results with participants in the consultation; and

(d) That staff be directed to report back to GIC with options for the 2023 event for direction.

Result: Motion CARRIED by a vote of 13 to 0, as follows:

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Ward 3 Councillor Nrinder Nann
NOT PRESENT - Ward 4 Councillor Sam Merulla
YES - Ward 5 Councillor Russ Powers
YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
NOT PRESENT - Mayor Fred Eisenberger
YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
YES - Ward 13 Councillor Arlene VanderBeek
YES - Ward 12 Councillor Lloyd Ferguson
YES - Deputy Mayor - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson

YES - Ward 9 Councillor Brad Clark

NOTICES OF MOTION

7.1 The 2023 Battle of Stoney Creek Event

(Powers/Clark)
That the rules of order be waived to allow for the introduction of a Motion respecting the 2023 Battle of Stoney Creek Event.

Result: Motion CARRIED by a 2/3rds vote of 13 to 0, as follows:

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Ward 3 Councillor Nrinder Nann
NOT PRESENT - Ward 4 Councillor Sam Merulla
YES - Ward 5 Councillor Russ Powers
YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
NOT PRESENT - Mayor Fred Eisenberger
YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
YES - Ward 13 Councillor Arlene VanderBeek
YES - Ward 12 Councillor Lloyd Ferguson
YES - Deputy Mayor - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

For further disposition of this matter, refer to Item 6.2

STATEMENTS BY MEMBERS

Members of Council used this opportunity to discuss matters of general interest.

COUNCIL COMMUNICATION UPDATES

(Wilson/Pauls)
That the listing of Council Communication Updates from May 20, 2022 to June 2, 2022, be received.

Result: Motion CARRIED by a vote of 12 to 0, as follows:

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Ward 3 Councillor Nrinder Nann
NOT PRESENT - Ward 4 Councillor Sam Merulla
YES - Ward 5 Councillor Russ Powers
YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko

NOT PRESENT - Mayor Fred Eisenberger
YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
YES - Ward 13 Councillor Arlene VanderBeek
NOT PRESENT - Ward 12 Councillor Lloyd Ferguson
YES - Deputy Mayor - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

PRIVATE AND CONFIDENTIAL

Council determined that discussion of Item 10.1 was not required in Closed Session; therefore, the matter was addressed in Open Session, as follows:

10.1 Closed Session Minutes – May 25, 2022

(Pearson/Jackson)
That the Closed Session Minutes dated May 25, 2022 be approved, as presented, and remain confidential.

Result: Motion CARRIED by a vote of 12 to 0, as follows:

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Ward 3 Councillor Nrinder Nann
NOT PRESENT - Ward 4 Councillor Sam Merulla
YES - Ward 5 Councillor Russ Powers
YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
NOT PRESENT - Mayor Fred Eisenberger
YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
YES - Ward 13 Councillor Arlene VanderBeek
NOT PRESENT - Ward 12 Councillor Lloyd Ferguson
YES - Deputy Mayor - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

Council determined that discussion of Item 10.2 was not required in Closed Session; therefore, the matter was addressed in Open Session, as follows:

10.2 Appointments to the Hamilton Waterfront Trust and Property Standards Committee

(Nann/Pearson)
(a) That the following citizen be appointed to the Hamilton Waterfront Trust for the remainder of the 2018-2022 Term of Council, effective June 9, 2022:

(i) Heidi Walker

(b) That the following citizen be appointed to the Property Standards Committee for the remainder of the 2018-2022 Term of Council, effective June 9, 2022:

(i) William Gerrior

Result: Motion CARRIED by a vote of 12 to 0, as follows:

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Ward 3 Councillor Nrinder Nann
NOT PRESENT - Ward 4 Councillor Sam Merulla
YES - Ward 5 Councillor Russ Powers
YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
NOT PRESENT - Mayor Fred Eisenberger
YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
YES - Ward 13 Councillor Arlene VanderBeek
NOT PRESENT - Ward 12 Councillor Lloyd Ferguson
YES - Deputy Mayor - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

(Danko/VanderBeek)
That Council move into Closed Session to consider Item 10.3 respecting the Red Hill Valley Parkway Inquiry Update (LS19036(i)) (City Wide), pursuant to Section 9.1, Sub-sections (e), (f), (i) and (k) of the City's Procedural By-law 21-021, as amended, and Section 239(2), Sub-sections (e), (f), (i) and (k) of the *Ontario Municipal Act*, 2001, as amended, as the subject matter pertains to litigation or potential litigation, including matters before administrative tribunals, affecting the City or a local board**;** the receipt of advice that is subject to solicitor-client privilege, including communications necessary for that purpose; a trade secret or scientific, technical, commercial, financial or labour relations information, supplied in confidence to the municipality or local board, which, if disclosed, could reasonably be expected to prejudice significantly the competitive position or interfere significantly with the contractual or other negotiations of a person, group of persons or organization; and a position, plan, procedure, criteria or instruction to be applied to any negotiations carried on or to be carried on by or on behalf of the municipality or local board.

Result: Motion CARRIED by a vote of 12 to 0, as follows:

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Ward 3 Councillor Nrinder Nann
NOT PRESENT - Ward 4 Councillor Sam Merulla
YES - Ward 5 Councillor Russ Powers
YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
NOT PRESENT - Mayor Fred Eisenberger

YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
YES - Ward 13 Councillor Arlene VanderBeek
NOT PRESENT - Ward 12 Councillor Lloyd Ferguson
YES - Deputy Mayor - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

10.3 Red Hill Valley Parkway Inquiry Update (LS19036(i)) (City Wide)

(Danko/Farr)

(a) That the direction provided to staff in Closed Session, respecting Report LS19036(l) - Red Hill Valley Parkway Inquiry Update, be approved; and

(b) That Report LS19036(l), respecting the Red Hill Valley Parkway Inquiry Update, remain confidential.

At Council's request, Sub-Sections (a) and (b), were voted on separately, as follows:

10.3 Red Hill Valley Parkway Inquiry Update (LS19036(i)) (City Wide)

(a) That the direction provided to staff in Closed Session, respecting Report LS19036(l) - Red Hill Valley Parkway Inquiry Update, be approved; and

Result: Motion on Item 10.3 (a), CARRIED by a vote of 7 to 4, as follows:

NO - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
NO - Ward 3 Councillor Nrinder Nann
NOT PRESENT - Ward 4 Councillor Sam Merulla
YES - Ward 5 Councillor Russ Powers
YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
NOT PRESENT - Mayor Fred Eisenberger
NO - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
NOT PRESENT - Ward 13 Councillor Arlene VanderBeek
NOT PRESENT - Ward 12 Councillor Lloyd Ferguson
YES - Deputy Mayor - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
NO - Ward 9 Councillor Brad Clark

10.3 Red Hill Valley Parkway Inquiry Update (LS19036(i)) (City Wide)

(b) That Report LS19036(l), respecting the Red Hill Valley Parkway Inquiry Update, remain confidential.

Result: Motion on 10.3 (b), CARRIED by a vote of 9 to 2, as follows:

YES - Ward 1 Councillor Maureen Wilson

YES - Ward 2 Councillor Jason Farr
YES - Ward 3 Councillor Nrinder Nann
NOT PRESENT - Ward 4 Councillor Sam Merulla
YES - Ward 5 Councillor Russ Powers
YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
NOT PRESENT - Mayor Fred Eisenberger
NO - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
NOT PRESENT - Ward 13 Councillor Arlene VanderBeek
YES - Ward 12 Councillor Lloyd Ferguson
YES - Deputy Mayor - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
NO - Ward 9 Councillor Brad Clark

BY-LAWS AND CONFIRMING BY-LAW

(Wilson/Pauls)
That Bills No. 22-126 to No. 22-148, be passed and that the Corporate Seal be affixed thereto, and that the By-laws, be numbered, be signed by the Mayor and the City Clerk to read as follows:

126 To Appoint a Drainage Superintendent
Ward: City Wide

127 To Amend By-law No. 01-218, as amended, Being a By-law to Regulate On-Street Parking
Schedule 4 (Special Events)
Schedule 8 (No Parking Zones)
Schedule 12 (Permit Parking Zones)
Schedule 13 (No Stopping Zones)
Ward: 3, 4, 9, 10, 12, 15

128 To Establish City of Hamilton Land Described as Parts 3 and 3 on Plan 62R-19793 and Part 1 on Plan 62R-21800 as Public Highway and as Part of Aquasanta Crescent and DiCenzo Drive, respectively
Ward: 7

129 To Amend City of Hamilton By-law No. 01-220, being a By-law to Regulate the Parking of Motor Vehicles on Private and Municipal Property and to amend City of Hamilton By-law No. 17-225, being a By-law to Establish a System of Administrative Penalties
Ward: City Wide

130 To Designate Lands Located at 110-122 King Street East, in the City of Hamilton as a Property of Cultural Heritage Value
Ward: 2

131 To Amend Zoning By-law No. 3692-92 (Stoney Creek) Respecting Lands Located at 250-256 First Road West
ZAC-20-026
Ward: 9

132 To Amend City of Hamilton Zoning By-law No. 05-200, Respecting Modifications and Updates to Secondary Dwelling Unit and Secondary Dwelling Unit-Detached Regulations
CI 20-E
Ward: City Wide

133 To Amend Zoning By-law No. 87-57 (Ancaster), Respecting Modifications and Updates to Secondary Dwelling Unit and Secondary Dwelling Unit-Detached Regulations
CI 20-E
Ward: City Wide

134 To Amend Zoning By-law No. 3581-86 (Dundas), Respecting Modifications and Updates to Secondary Dwelling Unit and Secondary Dwelling Unit-Detached Regulations
CI 20-E
Ward: City Wide

135 To Amend Zoning By-law No. 90-145-Z (Flamborough), Respecting Modifications and Updates to Secondary Dwelling Unit and Secondary Dwelling Unit-Detached Regulations
CI 20-E
Ward: City Wide

136 To Amend Zoning By-law No. 464 (Glanbrook), Respecting Modifications and Updates to Secondary Dwelling Unit and Secondary Dwelling Unit-Detached Regulations
CI 20-E
Ward: City Wide

137 To Amend Former City of Hamilton Zoning By-law No. 6593, Respecting Modifications and Updates to Secondary Dwelling Unit and Secondary Dwelling Unit-Detached Regulations
CI 20-E
Ward: City Wide

138 To Amend Zoning By-law No. 3692-92 (Stoney Creek), Respecting Modifications and Updates to Secondary Dwelling Unit and Secondary Dwelling Unit-Detached Regulations
CI 20-E
Ward: City Wide

139 To Designate Property Located at 289 Dundas Street East, Flamborough, City of Hamilton as Property of Cultural Heritage Value
Ward: 15

140 To Designate Property Located at 292 Dundas Street East, Flamborough, City of Hamilton as Property of Cultural Heritage Value
Ward: 15

141 To Designate Property Located at 298 Dundas Street East, Flamborough, City of Hamilton as Property of Cultural Heritage Value
Ward: 15

142 To Designate Property Located at 1 Main Street North, Flamborough, City of Hamilton as Property of Cultural Heritage Value
Ward: 15

143 To Designate Property Located at 134 Main Street South, Flamborough, City of Hamilton as Property of Cultural Heritage Value
Ward: 15

144 To Designate Property Located at 8 Margaret Street, Flamborough, City of Hamilton as Property of Cultural Heritage Value
Ward: 15

145 To Adopt Official Plan Amendment No. 167 to the Urban Hamilton Official Plan Respecting Municipal Comprehensive Review – Phase 1
Ward: City Wide

146 To Adopt Official Plan Amendment No. 34 to the Rural Hamilton Official Plan Respecting Municipal Comprehensive Review – Phase 1, Firm Boundary
Ward: City Wide

147 To Amend By-law No. 16-288, A By-law to Establish and Govern the Office of the Integrity Commissioner and Provide for the Resolution of Allegations of Contraventions of the Code of Conduct by Members of Council
Ward: City Wide

148 To Confirm the Proceedings of City Council

Result: Motion CARRIED by a vote of 11 to 0, as follows:

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Ward 3 Councillor Nrinder Nann
NOT PRESENT - Ward 4 Councillor Sam Merulla
YES - Ward 5 Councillor Russ Powers
YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
NOT PRESENT - Mayor Fred Eisenberger
YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
NOT PRESENT - Ward 13 Councillor Arlene VanderBeek
NOT PRESENT - Ward 12 Councillor Lloyd Ferguson

YES - Deputy Mayor - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

(Wilson/Nann)
That, there being no further business, City Council be adjourned at 4:40 p.m.

Result: Motion CARRIED by a vote of 11 to 0, as follows:

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Ward 3 Councillor Nrinder Nann
NOT PRESENT - Ward 4 Councillor Sam Merulla
YES - Ward 5 Councillor Russ Powers
YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
NOT PRESENT - Mayor Fred Eisenberger
YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
NOT PRESENT - Ward 13 Councillor Arlene VanderBeek
NOT PRESENT - Ward 12 Councillor Lloyd Ferguson
YES - Deputy Mayor - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

Respectfully submitted,

Acting Mayor Brenda Johnson

Andrea Holland
City Clerk

SPECIAL CITY COUNCIL
MINUTES 22-014

12:43 p.m.
June 16, 2022
Council Chambers
Hamilton City Hall, 71 Main Street West

Present: Mayor F. Eisenberger (Chair), Deputy Mayor B. Johnson Councillors M. Wilson, N. Nann, E. Pauls, B. Clark, J. Farr, M. Pearson, A. VanderBeek, J. Partridge and L. Ferguson

Absent: Councillors S. Merulla, T. Jackson, T. Whitehead and R. Powers – Personal

Councillor J.P. Danko – City Business

Mayor Eisenberger called the meeting to order and recognized that Council is meeting on the traditional territories of the Erie, Neutral, HuronWendat, Haudenosaunee and Mississaugas. This land is covered by the Dish with One Spoon Wampum Belt Covenant, which was an agreement between the Haudenosaunee and Anishinaabek to share and care for the resources around the Great Lakes. It was further acknowledged that this land is covered by the Between the Lakes Purchase, 1792, between the Crown and the Mississaugas of the Credit First Nation. The City of Hamilton is home to many Indigenous people from across Turtle Island (North America) and it was recognized that we must do more to learn about the rich history of this land so that we can better understand our roles as residents, neighbours, partners and caretakers.

APPROVAL OF THE AGENDA

The Clerk advised that there were no changes to the agenda.

(Ferguson/Partridge)
That the agenda for the June 16, 2022 Special meeting of Council be approved, as presented.

Result: Motion CARRIED by a vote of 11 to 0, as follows:

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Ward 3 Councillor Nrinder Nann
NOT PRESENT - Ward 4 Councillor Sam Merulla
NOT PRESENT - Ward 5 Councillor Russ Powers

NOT PRESENT - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
NOT PRESENT - Ward 8 Councillor John-Paul Danko
YES - Mayor Fred Eisenberger
YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
YES - Ward 13 Councillor Arlene VanderBeek
YES - Ward 12 Councillor Lloyd Ferguson
YES - Deputy Mayor - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES – Ward 9 Brad Clark

DECLARATIONS OF INTEREST

There were no declarations of interest.

MOTIONS

3.1 386 Wilcox Street Assessment Review Board Appeals – ARB Decision and Next Steps (FCS20093(a) / LS20029(a)) (City Wide)

(VanderBeek/Pearson)
That the consideration of Item 3.1, respecting Report FCS20093(a)/LS20029(a), 386 Wilcox Street Assessment Review Board Appeals – ARB Decision and Next Steps, be deferred until after Council rises from closed session.

Result: Motion CARRIED by a vote of 11 to 0, as follows:

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Ward 3 Councillor Nrinder Nann
NOT PRESENT - Ward 4 Councillor Sam Merulla
NOT PRESENT - Ward 5 Councillor Russ Powers
NOT PRESENT - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
NOT PRESENT - Ward 8 Councillor John-Paul Danko
YES - Mayor Fred Eisenberger
YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
YES - Ward 13 Councillor Arlene VanderBeek
YES - Ward 12 Councillor Lloyd Ferguson
YES - Deputy Mayor - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES – Ward 9 Brad Clark

PRIVATE AND CONFIDENTIAL

(Ferguson/Nann)
That Council move into Closed Session to consider Item 3.1, 386 Wilcox Street Assessment Review Board Appeals – ARB Decision and Next Steps (FCS20093(a)/LS20029(a)) (City

Wide), pursuant to Section 9.1, Sub-sections (e) and (f) of the City's Procedural By-law 21-021, as amended, and Section 239(2), Sub-sections (e) and (f) of the *Ontario Municipal Act*, 2001, as amended, as the subject matter pertains to litigation or potential litigation, including matters before administrative tribunals, affecting the City or a local board and the receipt of advice that is subject to solicitor-client privilege, including communications necessary for that purpose.

Result: Motion CARRIED by a vote of 11 to 0, as follows:

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Ward 3 Councillor Nrinder Nann
NOT PRESENT - Ward 4 Councillor Sam Merulla
NOT PRESENT - Ward 5 Councillor Russ Powers
NOT PRESENT - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
NOT PRESENT - Ward 8 Councillor John-Paul Danko
YES - Mayor Fred Eisenberger
YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
YES - Ward 13 Councillor Arlene VanderBeek
YES - Ward 12 Councillor Lloyd Ferguson
YES - Deputy Mayor - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES – Ward 9 Brad Clark

MOTIONS - CONTINUED

3.1 386 Wilcox Street Assessment Review Board Appeals – ARB Decision and Next Steps (FCS20093(a) / LS20029(a)) (City Wide) - CONTINUED

(Johnson/Pearson)

(a) That the directions to staff as per Confidential Appendix ‘A’ to this motion, be approved and released publicly following approval by Council, as follows:

(a) That Legal and Finance staff be directed to report back to the Audit, Finance and Administration Committee after the Assessment Review Board renders its decision regarding the City’s request to review of the Assessment Review Board decision dated May 17, 2022 respecting the assessment appeals for taxation years 2018-2022 for 386 Wilcox St, Hamilton (Roll Number 25-18-030-272-02600-0000) and advise if further instructions are required from Council regarding the Divisional Court appeal proceedings in respect of the Assessment Review Board’s decision.

(b) That the City Solicitor be authorized and directed to continue to pursue a Request for Review of the Assessment Review Board decision dated May 17, 2022 respecting the assessment appeals for taxation years 2018-2022 for 386 Wilcox St, Hamilton (Roll Number 25-18-030-272-02600-0000).

(c) That the City Solicitor be authorized and directed to continue appeal proceedings before the Divisional Court in respect of the decision of the Assessment Review Board dated May 17, 2022 and take all steps necessary in regards to an appeal.

(b) That Appendix "A" to Report FCS20093(a)/LS20029(a), be released publicly following approval by Council; and,

(c) That Report FCS20093(a)/LS20029(a) and Appendix "B', remain confidential.

Result: Motion CARRIED by a vote of 10 to 0, as follows:

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Ward 3 Councillor Nrinder Nann
NOT PRESENT - Ward 4 Councillor Sam Merulla
NOT PRESENT - Ward 5 Councillor Russ Powers
NOT PRESENT - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
NOT PRESENT - Ward 8 Councillor John-Paul Danko
YES - Mayor Fred Eisenberger
YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
YES - Ward 13 Councillor Arlene VanderBeek
NOT PRESENT - Ward 12 Councillor Lloyd Ferguson
YES - Deputy Mayor - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES – Ward 9 Brad Clark

CONFIRMING BY-LAW

(Johnson/Pearson)
That Bill No. 22-149, be passed and that the Corporate Seal be affixed thereto, and that the By-law, be numbered, be signed by the Mayor and the City Clerk to read as follows:

149 To Confirm the Proceedings of City Council

Result: Motion CARRIED by a vote of 10 to 0, as follows:

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Ward 3 Councillor Nrinder Nann
NOT PRESENT - Ward 4 Councillor Sam Merulla
NOT PRESENT - Ward 5 Councillor Russ Powers
NOT PRESENT - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
NOT PRESENT - Ward 8 Councillor John-Paul Danko
YES - Mayor Fred Eisenberger
YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead

YES - Ward 13 Councillor Arlene VanderBeek
NOT PRESENT - Ward 12 Councillor Lloyd Ferguson
YES - Deputy Mayor - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES – Ward 9 Brad Clark

(Johnson/Pearson)
That, there being no further business, City Council be adjourned at 1:42 p.m.

Result: Motion CARRIED by a vote of 10 to 0, as follows:

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Ward 3 Councillor Nrinder Nann
NOT PRESENT - Ward 4 Councillor Sam Merulla
NOT PRESENT - Ward 5 Councillor Russ Powers
NOT PRESENT - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
NOT PRESENT - Ward 8 Councillor John-Paul Danko
YES - Mayor Fred Eisenberger
YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
YES - Ward 13 Councillor Arlene VanderBeek
NOT PRESENT - Ward 12 Councillor Lloyd Ferguson
YES - Deputy Mayor - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES – Ward 9 Brad Clark

Respectfully submitted,

Mayor F. Eisenberger

Andrea Holland
City Clerk

4.1

Municipality of Chatham-Kent
Corporate Services
Municipal Governance
315 King Street West, P.O. Box 640
Chatham ON N7M 5K8

The Honourable Doug Ford,
premier@ontario.ca

Re: Retirement Home Funding

Please be advised the Council of the Municipality of Chatham-Kent, at its regular meeting passed the following resolution:

“Whereas there are 700 retirement homes in Ontario regulated by the Retirement Homes Regulatory Authority in accordance with the Retirement Homes Act; this includes the Residential Tenancies Act, the Occupational Health and Safety Act, the Ontario Fire Protection Act, the Personal Health Information Protection Act and College of Nurses standards;

And Whereas Retirement Homes are privately owned, renting private accommodation to seniors without access to public funding by the government the same way home care services and long term care homes do;

And Whereas currently 60% of these Ontario Retirement Homes, that are small facilities under 70 beds, are failing financially and/or are facing imminent closure risking loss of supportive, safe and secure environments for 60,000 retirement home residents in Ontario, as per Ontario Retirement Communities Association (ORCA);

And Whereas the cost of living in a retirement home is $1500 - $6000 a month which is significantly more expensive versus the cost of homecare services and/or long term care homes, as most assisted living/retirement homes do not provide personal care as a part of the basic fee; instead requiring residents to pay full cost of accommodation and any care services they require;

And Whereas home care services may be provided at no cost to resident “only if” appropriate level(s) of community service provider staffing is available;

And Whereas many Retirement Home residents or individuals in the community, who do not require long term care levels of service, are forced into long term beds due to extinguishing funds and/or lack of adequate financial means to pay for Retirement Home and/or required extra personal care services, inappropriately burdening limited long term care bed or acute hospital bed capacity;

And Whereas many seniors living in Retirement Homes and who experience worsening medical conditions, increased number of falls and overall increased frailty, often do “not” move onto long term care due to lack of long term bed availability and/or family preference, placing significant stress on Retirement Home staffing complements and financial resources;

And Whereas Retirement Homes have not been afforded recent government Nursing and/or PSW staff subsidies as provided to home care service providers and long term care homes;

And Whereas Retirement Homes have not been included in recent reduction of resident activity restrictions.

Therefore Be It Resolved that the Municipality of Chatham-Kent request that the Ontario Government:

1. Enable individuals in the community opportunity to apply for financial assistance from the Ministry of Seniors and Accessibility to help cover accommodation costs and/or required personal care service costs at Retirement Home level, similar to available funding assistance for home care services and long term care homes.

2. Recognize Retirement Homes as an essential community health care partner and implement an equitable service funding program that facilitates/enables Retirement Homes to safely care for residents who require significant personal care assistance while awaiting a long term care bed.

3. Afford equitable Nursing and PSW staffing subsidies retroactively across all divisions of the community health care provision sector, including Retirement Homes.

4. Allow for equitable resident activity levels across all divisions of the community health care provision sector, including Retirement Homes.

And further that this resolution be forwarded to the Premier of Ontario, the Ministry of Seniors and Accessibility and all Ontario municipalities.

If you have any questions or comments, please contact Judy Smith at ckclerk@chatham-kent.ca

Sincerely,

Judy Smith, CMO
Director Municipal Governance
Clerk /Freedom of Information Coordinator

C

Ministry of Seniors and Accessibility
Ontario Municipalities

The Town of The Blue Mountains
Council Meeting

4.2

Title: Mayor Soever Notice of Motion May 10, 2022

Date: Tuesday, May 24, 2022

Moved by: Mayor Soever

Seconded by: Councillor Hope

WHEREAS it is in the best interest of good government and the democratic process that all Ontarians have access to candidate information during the upcoming municipal elections; and,
WHEREAS the clerks of some municipalities do not supply the mailing addresses of voters on the voters list to candidates, thereby limiting the access of voters who have mailing addresses outside the municipality to candidate information, effectively disenfranchising them;
BE IT RESOLVED THAT the Council of the Town of The Blue Mountains expresses it support for the inclusion of the mailing addresses of voters on voter's lists provided to candidates;
AND THAT a copy of this resolution be sent to all municipalities in Ontario to ask for their support;
AND THAT a copy of this resolution be sent to the Premier of Ontario and the Minister of Municipal Affairs and Housing;
AND THAT a copy of this resolution be sent to the Canadian Civil Liberties Association

YES: 6 **NO: 0** **CONFLICT: 0** **ABSENT: 1**

The motion is Carried

YES: 6

Mayor Soever
Deputy Mayor Bordignon
Councillor Hope
Councillor Matrosovs
Councillor Sampson
Councillor Bill Abbotts

NO: 0

CONFLICT: 0

ABSENT: 1

Councillor Uram

4.3

Legislative Services
Michael de Rond
905-726-4771
clerks@aurora.ca

Town of Aurora
100 John West Way, Box 1000
Aurora, ON L4G 6J1

May 31, 2022

Delivered by email
justin.trudeau@parl.gc.ca
karina.gould@parl.gc.ca

The Right Honourable Justin Trudeau, P.C., M.P.
Prime Minister of Canada
80 Wellington Street
Ottawa, ON K1A 0A2

The Honourable Karina Gould, P.C., M.P.
Minister of Families, Children and Social Development
House of Commons
Ottawa, ON K1A 0A6

Dear Prime Minister Trudeau and Minister Gould:

Re: Town of Aurora Council Resolution of May 24, 2022
Motion 10.1 - Councillor Humfryes; Re: Private Member's Bill C-233 "Keira's Law"

Please be advised that this matter was considered by Council at its meeting held on May 24, 2022, and in this regard, Council adopted the following resolution:

> **Whereas violence against women is a Canadian public health crisis that demands urgent action; and**
>
> **Whereas one in four women experience domestic violence in their lifetime. One woman or girl is killed every other day, on average, somewhere in our country; and**
>
> **Whereas the most dangerous time for a victim of abuse is when she separates from her partner. According to research from the U.S. Centre for Disease Control and Prevention, when there is a history of coercive control, violence and a recent separation, a woman's risk of domestic homicide goes up 900 times; and**
>
> **Whereas the current Canadian court system is not equipped to protect women. According to the National Judicial Institute, there is no mandatory education for Judges on domestic violence. Judges need education on what constitutes domestic violence or coercive control. A formal education program would ensure**

another line of defense for victims, as well as preventing violence and abuse before it happens; and

Whereas the COVID-19 pandemic has only exacerbated the domestic violence crisis. Women's shelters and crisis centres have reported a marked increase in requests for services this year. The concerns for children are significant. According to recent research from The Children's Hospital of Eastern Ontario, doctors have seen more than double the number of babies with serious injuries as this time last year. These include head injuries, broken bones or in some cases death. Institutions across the country are reporting a similar trend; and

Whereas, according to Article 19 of the UN Convention on the Rights of the Child, children must be protected from "all forms of physical or mental violence, injury or abuse, neglect or negligent treatment, maltreatment or exploitation, including sexual abuse, while in the care of parent(s), legal guardian(s) or any other person who has care of the child." Our current family justice system often fails our children in this regard; and

Whereas, in worst case scenarios, children are killed by a violent parent. As reported by the Canadian Domestic Homicide Prevention Initiative, recent separation and domestic violence are the two biggest risk factors for domestic violence related child homicides; and

Whereas custody disputes are an additional risk factor. Each year in Canada, about 30 children are killed by a parent. Mothers are responsible about 40 per cent of the time, often due to postpartum depression or mental illness. In the 60 per cent of cases where fathers are the murderers, anger, jealousy or post-separation retaliatory revenge are the usual motivations; and

Whereas Keira's Law is named after four-year-old Keira Kagan, who was killed while in the custody of her father, in 2020; and

Whereas many cases of domestic violence are inappropriately labelled as "high conflict" in the family court system. According to research by Rachel Birnbaum, a Social Work Professor at the University of Western Ontario who specializes in child custody, approximately one third of cases called "high conflict" by the court had substantiated evidence of valid concerns about domestic violence. These cases must be recognized and treated differently by judges; and

Whereas voting in favour of "Keira's Law", contained in Private Member's Bill C-233, will not only protect victims of violence and children, it will save lives by

amending the *Judges Act* to establish seminars for judges on intimate partner violence and coercive control;

1. **Now Therefore Be It Hereby Resolved That Aurora Town Council calls upon the House of Commons to support Member of Parliament Anju Dhillon's Private Member's Bill C-233, that will raise the level of education on domestic violence and coercive control for federally appointed Judges; and**
2. **Be It Further Resolved That a copy of this resolution be sent to: The Right Honourable Justin Trudeau, Prime Minister of Canada; The Honourable Karina Gould, MP, Minister of Families, Children and Social Development; The Honourable Candice Bergen, Interim Leader of the Conservative Party of Canada; Yves-Francois Blanchet, MP, Leader of the Bloc Quebecois; Jagmeet Singh, MP, Leader of the New Democratic Party; MP Tony Van Bynen; and MP Leah Taylor Roy; and**
3. **Be It Further Resolved That a copy of this resolution be circulated to all Ontario municipalities and the Federation of Canadian Municipalities (FCM).**

The above is for your consideration and any attention deemed necessary.

Yours sincerely,

Michael de Rond
Town Clerk
The Corporation of the Town of Aurora

MdR/lb

Copy: Hon. Candice Bergen, M.P., Interim Leader of the Conservative Party of Canada
Yves-François Blanchet, M.P., Leader of the Bloc Québécois
Jagmeet Singh, M.P., Leader of the New Democratic Party of Canada
Tony Van Bynen, M.P. Newmarket—Aurora
Leah Taylor Roy, M.P. Aurora—Oak Ridges—Richmond Hill
Federation of Canadian Municipalities (FCM)
All Ontario municipalities

MUNICIPAL ENGINEERS ASSOCIATION

Office of the President
1525 Cornwall Road
Oakville ON
L6J 0B2

4.4

Jun 13, 2022

Municipal Councils of Ontario

Subject: The Retention of Professional Engineers at Ontario Municipalities

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The purpose of this letter is to stress the importance that municipal engineers play in the successful operation of cities, counties, towns, and townships across Ontario.

The Municipal Engineers Association (MEA) is a non-profit association representing the municipal engineering field in Ontario. We have a membership base of over 1,000 municipal engineers across Ontario who are employed as professional engineers at Ontario municipalities and other provincial agencies serving in the engineering/public works field.

We advocate for sustainable municipal infrastructure practices and our members provide significant input into the development of processes, standards, and specifications for use in municipal infrastructure systems such as drinking water delivery, wastewater collection and treatment, storm water management, waste management and transportation systems.

The MEA has been the proponent for the *Municipal Class Environmental Assessment* process since the mid-1980s. We are also a co-proponent of *Ontario Provincial Standards & Specifications* that many Ontario municipalities use when planning for and tendering municipal engineering projects.

There are a number of examples in various current legislation, where the use of a professional engineer is referenced. Key tasks include roles in transportation, natural resources, health and safety, consumer services, environment, tourism, agriculture, climate change, and energy. It is essential that municipalities consider the appointment of professional engineers, especially within the areas of engineering and public works, to afford municipal councils the appropriate due diligence toward public safety. Unfortunately, we are observing a concerning trend where this is no longer the case.

Professional engineers, through education and practical experience requirements, have the knowledge and foresight to not only understand the 'how' of an issue, but also understand the 'why' behind issues as well. Professional engineers are licensed to practice in Ontario through the *Professional Engineers Act* and are bound by statutory accountabilities, which includes a code of ethics. Under this code, professional engineers are required to act at all times with fidelity to public needs; professional engineers regard their duty to public welfare and safety as paramount.

Professional engineers also provide significant value to municipalities through their understanding of risk management, which assists in lowering exposure to claims against a municipality. With insurance premiums rising every year, it is prudent that municipalities appoint a professional engineer to guide these decision-making processes.

MUNICIPAL ENGINEERS ASSOCIATION

Office of the President
1525 Cornwall Road
Oakville ON
L6J 0B2

As of December 31, 2019, there were 57,134 practicing professional engineers licensed and practicing in the Province of Ontario. Of this number, only 136 professional engineers work for municipalities with a population of 50,000 or less. This represents only 0.2% of licensed and practicing Ontario Professional Engineers being employed by Ontario municipalities serving populations of less than 50,000. Many of these smaller municipalities have a Public Works/Engineering Department head and would benefit by appointing a Professional Engineer.

The vast majority of professional engineers working at Ontario municipalities are employed by larger urban centres having a population greater than 50,000.

For smaller municipalities that do not have the financial resources to employ a full-time professional engineer on their staff, the MEA recommends the appointment of a professional engineer through a licensed consulting firm so that your municipality may meet the needs only a professional engineer can provide.

We would also like to take this opportunity to promote membership in the MEA. There are Ontario municipalities that currently do not have representation in the MEA. If you have a professional engineer(s) on staff and they are not MEA members, we encourage your municipality to have them apply. The MEA offers members access to knowledge, learning and the ability to stay up to date with current industry practices. It truly is great value for a very nominal fee.

On behalf of the MEA, we thank you for taking time to review this letter. Should you have any questions, please reach out to the MEA's Executive Director, Dan Cozzi, P. Eng. at dan.cozzi@municipalengineers.on.ca.

Yours sincerely,

Jason Cole, P. Eng.,
MEA President 2021 - 2022

Hamilton-Wentworth Catholic District School Board
Believing, Achieving, Serving

NOTICE OF PROPOSED AMENDMENT TO EDUCATION DEVELOPMENT CHARGES BY-LAW HAMILTON-WENTWORTH CATHOLIC DISTRICT SCHOOL BOARD

Father Kyran Kennedy Catholic Education Centre, 90 Mulberry Street, Hamilton

TAKE NOTICE that on June 21, 2022 – 5PM, the Hamilton-Wentworth Catholic District School Board (the "Board") will consider passing a by-law to amend Hamilton-Wentworth Catholic District School Board Education Development Charges By-Law No. 2019, which came into effect on July 6, 2019, and applies to all non-exempt lands within the City of Hamilton. As such, a key map delineating the lands to which the by-law would apply is not required. The current by-law expires on July 5, 2024, unless replaced by the adoption of a successor EDC by-law as prescribed under Section 257.60 of the *Education Act*. The 2019 by-law is proposed to be amended to account for increased land values in the City of Hamilton and to incorporate changes made to O. Reg. 20/98 post by-law adoption.

The education development charge background study required under Section 257.61 of the Act (including the adopted EDC by-law and the amending by-law) is available at the Board's administrative offices during regular office hours and on the Board's website at https://www.hwcdsb.ca/board/policies.

The schedule of education development charges imposed by the 2019 by-law within the City of Hamilton is as follows. It is noted that the total 'Hamilton Board' rates shown below include charges imposed on behalf of the Hamilton-Wentworth District School Board. These rates remain in effect until July 5, 2022.

	Year 4 Current By-law Rates July 6, 2022 to July 5, 2023	Year 5 Current By-law Rates July 6, 2023 to July 5, 2024
Hamilton-Wentworth Catholic District School Board		
Residential EDC Rate per Dwelling Unit	$1,101	$1,101
Non-residential EDC Rate per Sq. Ft. of GFA	$0.35	$0.35
Total Hamilton Boards Residential EDC Rates	**$2,674**	**$2,674**
Total Hamilton Boards Non-Residential EDC Rates	**$0.82**	**$0.85**

The proposed amending by-law will increase the Year 4 and Year 5 by-law rates as shown below, commencing July 6, 2022. The revised HWCDSB calculated rate, based on recent land values, is also shown for information only.

	Year 4 Amended By-law Rates July 6, 2022 to July 5, 2023	Year 5 Amended By-law Rates July 6, 2023 to July 5, 2024	Revised HWCDSB Calculated Rate based on current land values
Hamilton-Wentworth Catholic District School Board			
Residential EDC Rate per Dwelling Unit	$1,401	$1,701	$2,523
Non-residential EDC Rate per Sq. Ft. of GFA	$0.45	$0.55	$0.81
Total Hamilton Boards Residential EDC Rates	**$2,974**	**$3,274**	**$4,096**
Total Hamilton Boards Non-Residential EDC Rates	**$0.92**	**$1.05**	**$1.31**

Copies of the proposed amending by-law and a brief explanation of the revised calculations can be found on the Board's website. All interested parties are invited to attend the public meeting. The Board would appreciate receiving written submissions one week prior to the Board meeting so that they may be distributed to trustees prior to the meeting. Submissions and requests to address the Board as a delegation should be submitted to:

Hamilton-Wentworth Catholic District School Board
Attention: Mrs. Paola Pace-Gubekjian, Associate Director of Corporate Services Email: pacep@hwcdsb.ca
90 Mulberry Street Hamilton, Ontario L8N 3R9 Tel: 905-525-2930, Ext. 2309, Fax: 905-525-2914

Patrick J. Daly
Chairperson of the Board

David Hansen
Director of Education

Principles
Integrity

City of Hamilton
Integrity Commissioner's Report
Regarding Complaints Against Councillor Terry Whitehead
June 10, 2022

Introductory Comments

[1] Principles Integrity has served as the Integrity Commissioner for the City of Hamilton since July 2018. We are also privileged to serve as Integrity Commissioner for a number of Ontario municipalities.

[2] The City of Hamilton has as part of its ethical framework a Code of Conduct which is the policy touchstone underlying the assessments conducted in this report. It represents the standard of conduct against which all members of Council are to be measured when there is an allegation of breach of the ethical responsibilities established under the Code of Conduct. The review mechanism contemplated by the Code, one which is required in all Ontario municipalities, is an inquiry/complaints process administered by an integrity commissioner.

[3] In this regard, we have assessed the information in this matter fairly, in an independent and neutral manner, and have provided an opportunity to the respondent named in this Report to respond to the allegations, and to review and provide comment on the preliminary findings.

November 10, 2021 Report to Council:

[4] It is necessary, at the outset of this Report, to clarify one element of its scope.

[5] The complaints in the matters which are the subject of this Report arose in the same time frame as a previous investigation involving Councillor Whitehead was being brought to a conclusion. On November 10, 2021 Council considered a report in which Councillor Whitehead's remuneration was suspended for 30 days and regarding which Council imposed additional remedial measures to constrain Councillor Whitehead's interactions with staff of the City:

> (i) That Councillor Whitehead be restricted in his communications with City staff, outside of his own office staff, to communicating only with the City Manager, General Managers or designate; City Solicitor and City Clerk for the remainder of the 2018 – 2022 Council term;

(ii) That Councillor Whitehead be obliged, during Council and Committee meetings, to confine his questions of staff by directing his questions to the Mayor or Chair and not directly addressing staff for the remainder of the 2018 – 2022 Council term; and

(iii) That Councillor Whitehead be relieved of his responsibilities as Chair and Vice Chair of Committees of Council and local boards for the remainder of the 2018 – 2022 Council term.

[6] The report was carried by a vote of 12 to 0. It should be noted that Councillor Whitehead has commenced a judicial review application with respect to the matter, which, based on the most recently available information, is to be heard no earlier than October of 2022. We are a party to the judicial review and will be vigorously defending it.

[7] Neither the findings in the November 2021 report or the judicial challenge to it have influenced our conclusion that the allegations in this Report have been substantiated.

[8] However, given our objective of achieving course correction when necessary, and based on the principles of progressive discipline, the sanction and Council's decision on the November 2021 report do have bearing on the imposition of additional sanctions arising from this Report.

The Complaint

[9] On December 22, 2021 we received a complaint filed on behalf of Council against Councillor Whitehead.

[10] The essence of the complaint was that Councillor Whitehead engaged in conduct contrary to the Code of Conduct when he:

- attended, unannounced, at the office of the City Clerk on November 4, 2021 (the day before publication of the Council Agenda) and proceeded to angrily criticize and challenge her role in processing a Complaint filed against Councillor Whitehead on November 12, 2020, which related to the bullying of an employee in the fall of 2020 (regarding which Councillor Whitehead has commenced the judicial review application referenced above);
- criticized and aggressively challenged the City Clerk's decision to place the Report before Council as she is required to do, under the Integrity Commissioner By-law;
- threatened the City Clerk with '*consequences*' for her role in processing the Complaint initially; and
- threatened the City Clerk with legal repercussions because of the litigation he would bring;

- left an unsolicited voicemail message for the Executive Director of Human Resources on November 5, 2021 advising that he had just learned she was '*instrumental*' in the Complaint of November 2020 with regard to his bullying of the employee, and in an implied threat, told her he "*had to do what he had to do*" but that "*he hoped she understood*" and there were "*no hard feelings*".

[11] It was alleged that this conduct contravened the Council Code of Conduct by:

- Intimidating employees whom he felt played a role in a complaint submitted through Human Resources, and

- Threatening legal action against staff as a result of the role they played in submitting the complaint and in placing the Integrity Commissioner's report on the Council agenda.

[12] The provisions of the Code of Conduct most applicable to the matter are:

> Section 11: Conduct Respecting City Employees
>
> 11.(4) It is the policy of the City that all persons be treated fairly in the workplace in an environment free of discrimination and of personal harassment and workplace violence. Accordingly:
>
> (c) every Member of Council shall:
> (i) treat other Members, City officers and employees, and members of the public, appropriately, and without bullying, abuse, intimidation…

[13] In the course of reviewing this complaint, we have also considered whether the Code of Conduct provisions with respect to prohibiting obstruction and reprisal are applicable to the conduct complained of:

> 13 (3) No Member of Council shall take a reprisal or make a threat of reprisal against a Complainant or any other person for providing information to the Integrity Commissioner.

[14] While in the midst of our investigation, on March 11, 2022 we received a new complaint alleging that Councillor Whitehead had again engaged in disrespectful, bullying and intimidating comments towards another Councillor and with respect to staff, during a Council meeting on February 9, 2022. The complaint was filed by the City of Hamilton's Human Resources Department on behalf of Councillor Partridge.

[15] We have consolidated both complaints in this report.

Process Followed for this Investigation

[16] In conducting this investigation, Principles *Integrity* applied the principles of procedural fairness and was guided by the complaint process set out under the Code of Conduct.

[17] This fair and balanced process includes the following elements:

- Reviewing the complaints to determine whether they are within scope and jurisdiction and in the public interest to pursue, including giving consideration to whether the complaints should be restated or narrowed, where this better reflects the public interest
- Notifying the Respondent, and providing him with an opportunity to respond in full to the allegations
- Reviewing the Code of Conduct, reports, recordings of archived meetings and other documentation including emails
- Conducting interviews of persons with information relevant to the issues under investigation
- Upon receiving a further complaint during the investigation, notifying the Respondent and providing him with an opportunity to respond to the new allegations
- Providing the Respondent, in early May, with the opportunity to review and provide comments to the Integrity Commissioner's Preliminary Findings Report, although none were received from him.

Background and Context:

[18] In the fall of 2020, a complaint filed against Councillor Whitehead resulted in sanctions being imposed against him based on findings that his conduct contravened the Code of Conduct.

[19] The complaint in that instance was formally filed with the Integrity Commissioner by management of the Human Resources Department, on behalf of the staff member who brought the issue of alleged harassment and bullying to their attention.

[20] The Recommendation Report in that investigation was provided to Councillor Whitehead on November 3, 2021, with a copy to the Clerk to be provided to November 10, 2021 Council meeting.

[21] The Clerk has responsibility for publication of the Council meeting agenda.

[22] The conduct alleging bullying and intimidation of the Clerk occurred on November 4, 2021, one day before publication of the November 10, 2021 Council agenda.

[23] The conduct alleging intimidation of the Executive Director of Human Resources occurred on the day of publication of the November 10, 2021 Council agenda.

[24] While the investigation was on-going, we received the March complaint arising out of conduct in the course of the February 9, 2022 Council meeting.

The Applicable Code of Conduct Provisions, and their Interpretation:

[25] The City of Hamilton Council Code of Conduct provides an ethical guide and framework for Members of Council for conduct and behavior which promotes confidence in the office which they hold as elected officials of municipal government.

[26] That Code of Conduct sets out as the Purpose:

> A legislated Code of Conduct helps to ensure that the Members of Council share a common basis for acceptable conduct. The Code of Conduct is not intended to replace personal ethics. The Code of Conduct:
>
> > serves to ensure public confidence that the City's elected representatives operate from a base of integrity, transparency, justice and courtesy.

[27] The provisions of the Code which are most relevant to our findings and analysis in this investigation are:

> Section 11: Conduct Respecting City Employees
>
> 11. (1) …
> (a) every Member of Council shall be respectful of the role of City officers and employees to provide service and advice based on political neutrality and objectivity, and without undue influence from any one or more Members of Council;
>
> (b) no Member of Council shall maliciously, falsely, negligently, recklessly, or otherwise improperly, injure the professional or ethical reputation, or the prospects or practice, of any one or more City employees; and

(c) every Member of Council shall show respect for the professional capacities and position of officers and employees of the City.

…

(3) No Member shall use, or attempt to use, the Member's authority or influence for the purpose of intimidating, threatening, coercing, or otherwise improperly influencing any City employee with the intent of interfering with that employee's duties, including the duty to disclose improper activity.

(4) It is the policy of the City that all persons be treated fairly in the workplace in an environment free of discrimination and of personal and sexual harassment and workplace violence.

Accordingly:

…

(b) no Member of Council shall harass or engage in acts of workplace violence towards another Member of Council, any City officer or employee, or any member of the public; and

(c) every Member of Council shall:

(i) treat other Members, City officers and employees, and members of the public, appropriately, and without bullying, abuse, intimidation or violence; and

(ii) make all reasonable efforts to ensure that his or her work environment is free from discrimination, harassment and violence.

13 (3) No Member of Council shall take a reprisal or make a threat of reprisal against a Complainant or any other person for providing information to the Integrity Commissioner.

Analysis:

Intimidating staff to prevent publication of complaint report

[28] When the Councillor attended at the office of the City Clerk on the morning of November 4, 2021, it was the day before publication of the Council Agenda.

[29] The Councillor attended unannounced, accompanied by his Administrative Assistant.

[30] Unbeknownst to the City Clerk, the Councillor was surreptitiously recording the meeting.

[31] The Councillor provided us with a copy of the audio recording.

[32] He submits that the recording of the conversation demonstrates a different narrative, one that contradicts the view of his interaction with the City Clerk as an attempt to intimidate her, to prevent her from carrying out her proper duties and obligations.

[33] A review of the recording of the private meeting makes it quite evident that his intention in attending at the Clerk's office was to challenge the Clerk, and to strong-arm the Clerk, in an effort to prevent her from placing the Report before Council.

[34] The meeting opens with the Councillor accusing the Clerk of failing to properly exercise her authority, that she ought to have refused to process the filing of the initial complaint at the outset.

[35] The Councillor then proceeded to debate the words of the by-law, claiming to have written it himself, and threatening her: "*I just want you to understand the consequences of your actions*".

[36] He advised that he was "*having fun*" because now he is "*a millionaire*" and that he is "*holding staff accountable for screwing up on a report…and staff should start looking, and reviewing what they did here …"*

[37] The Councillor accused the Clerk of failing to carry out a gatekeeper role, and insisted that the complaint filed by Human Resources should never have been signed off and accepted as a complaint.

[38] He proceeded to chastise and berate the Clerk about placing the Report on the Council agenda for the following week, despite the Clerk pointing out that she had no discretion under the by-law to do anything other than place it on the next Council agenda.

[39] Taken together, we find that his comments represent a blatant and improper attempt to try to block or prevent the Clerk from carrying out her obligations to provide the Recommendation Report to Council.

[40] Knowing that the Council Agenda would be made public the following day, his unannounced and unexpected visit can be seen as a pre-emptive strike to preclude the Clerk from fulfilling her obligation.

<u>Threatening legal action against staff for carrying out their responsibilities</u>

[41] The November 2020 complaint was formally filed by management staff in Human Resources, on behalf of an employee who brought them his complaint of harassment and bullying by a Member of Council.

[42] The City of Hamilton's *Procedure for Resolving Harassment and Discrimination Issues* contemplates that complaints of harassment raised with a manager or supervisor are to be brought to Human Resources; and that, where a Member of Council is alleged to be the harasser or bully, the Executive Director of Human Resources must refer the complaint to the Integrity Commissioner.

[43] On Friday November 5, 2021 at 4:16 pm the Councillor left a voice mail message for the Executive Director of Human Resources, as follows:

> *Oh hi Lora, hope everything's going well and hope you have a great weekend. I just got off the phone with my lawyer, a couple of lawyers actually. And as it turned out…I guess the consensus was very clearly, and profound, that you were instrumental in this process. I would have never guessed that. Anyway, I feel really bad. I was giving you the benefit. Anyway, I hope you understand that no hard feelings. I have to do what I have to do…*

[44] It was reasonable to perceive the voice mail message as threatening, implying as it did that the Councillor would be taking steps because the Executive Director played a role in referring the complaint to the Integrity Commissioner.

[45] During the course of this investigation, time was spent canvassing with the Councillor opportunities to resolve the complaint through circumspect acknowledgement, meaningful recognizance and genuine heartfelt apology.

[46] We advised the Councillor that, in our view, without a genuine acknowledgement demonstrating that he truly recognized and understood the negative impacts of his conduct on staff involved, and acknowledging that his actions were a clear attempt to intimidate and to improperly influence staff, a mere apology would fall far short of resolving the (at that point only) complaint.

[47] The Councillor insisted that he recognized and appreciated that his conduct towards the Clerk and the Executive Director reflected inappropriate and problematic behaviour.

[48] Exchanges occurred during February with the Councillor in which we sought to understand whether the Councillor fully comprehended the problematic nature of his hostile, aggressive conduct towards staff.

[49] Before we could arrive at a conclusion, we were contacted about the allegations of continued disrespectful and aggressive conduct occurring during the Council meeting of February 9, 2022.

Harassing Conduct During February 9, 2022 Council Meeting

[50] On March 11, 2022 a further complaint was filed against the Councillor, regarding alleged disrespectful, bullying and intimidating comments during the February 9, 2022 Council meeting.

[51] The complaint included transcribed comments from the on-line chat room conversation between Councillor Whitehead and Councillor Partridge.

[52] We understand that the Councillor seems to frequently experience technological difficulties connecting to electronic virtual meetings of Council and committees.

[53] While the Clerk plays a role administering these meetings, it is staff in the Information Technology Department who support the technology employed by the City in making such meetings possible.

[54] There is evidence that the Councillor makes accusations against the Clerk when he experiences such technological difficulties – when he cannot 'get into' meetings, and when he cannot get onto the speakers list.

[55] These accusations appear not to be warranted or well-founded; no other member seems to experience these difficulties.

[56] These comments are made publicly, in the course of meetings which are livestreamed.

[57] The Clerk experiences these statements as falsely blaming that department, or herself personally, for his technological challenges.

[58] On February 9, 2022 at approximately 1:57:41 into the recording of the meeting, the Councillor, after having trouble unmuting, began his comments criticizing the Clerk's staff for his technical difficulties.

[59] When the Mayor tried to curtail the criticism, the Councillor persisted, complaining that it's an on-going problem caused 'by Clerks error or operator error'. He then claimed he is being muted by Clerks.

[60] The Mayor stopped the Councillor, saying they would have somebody take another look at it as it is only Councillor Whitehead who experiences difficulties. The Councillor responded that they need to have a third party take a look at it, which can fairly be interpreted as impugning staff's trustworthiness or competence to do so.

[61] It was during that same Council meeting of February 9, 2022 that Councillor Whitehead was engaging in an on-line chat exchange with Councillor Partridge.

[62] In that exchange, Councillor Whitehead made comments in the on-line chat to Councillor Partridge which were harassing and intimidating.

[63] Councillor Whitehead's comments were threatening and aggressive: "*I thank you for your previous calls thanking me for defending you specially with councillor* [redacted]*, your contemptful comments should be of concern a little self reflection might help, believe me when I say throwing mud is not productive and certainly something you might want to rethink on some one that has nothing to lose!!!!!!!"*[1]

[64] He stated that the legal process he was pursuing would reveal that the current means of holding staff accountable was being eroded: *"…a process that now has been eroded by people like you!!!!"*

[65] We find that Councillor Whitehead's comments directed at a colleague in the on-line chat were aggressive and threatening towards her.

[66] She has shared that, although she is not often intimidated by others, she does feel some anxiety and stress about returning to 'in person' attendance at City Hall, given that her office is located directly across from Councillor Whitehead's.

Findings:

[67] We find that the complaints against the Councillor are substantiated.

[68] We find that the Councillor's interaction with the Clerk in her office on November 4, 2021 was a blatant attempt to prevent her from publishing the Recommendation Report – as she was obligated to do – on the up-coming Council agenda the next day.

[69] Leaving aside the ethical question of his surreptitious recording of the conversation, we find that his demeanour and conduct towards her was harassing and bullying, and his threats of '*consequences*' which would result from legal action are openly threatening.

[70] We find that the Councillor's conduct, confronting and challenging the Clerk in her office on November 4, 2021 in an effort to prevent publication of the Report, constituted harassment and intimidation against her, in contravention of the Code of Conduct.

[71] We find that the voice mail message for the Executive Director of Human Resources on November 5, 2021 constituted an attempt to intimidate her, in contravention of the Code of Conduct.

[1] Excerpt from chatroom conversation with spelling issues corrected

[72] We find that his conduct, in both instances, reflects conduct contrary to the Code of Conduct prohibiting reprisals:

> 13.(3) No Member of Council shall take a reprisal or make a threat of reprisal against a Complainant or any other person for providing information to the Integrity Commissioner.

[73] We find that the Councillor's continued criticisms of the Clerk, blaming technological issues only he is experiencing on the Clerk's office, constitutes harassing behaviour towards the Clerk which is contrary to the Code of Conduct.

[74] His comments in the on-line meeting chat room during that meeting demonstrate aggressive and intimidating conduct towards another member of Council, which was experienced by her as harassment.

Additional Observations:

[75] While conducting our investigation, further instances of conduct by Councillor Whitehead have been brought to our attention, most recently his conduct during the General Issues Committee meeting of April 20, 2022.

[76] Rather than circumspection and self-awareness, we observed that Councillor Whitehead's behaviour continues to be opening hostile, aggressive, argumentative, and generally disruptive to the conduct of the meeting.

[77] We are not oblivious to the Councillor's personal health struggles, which he has spoken about publicly on numerous occasions. If his personal health challenges prevent him from controlling himself in regard to aggressive and harassing behaviour towards others, then we encourage him to seek the professional medical support that is available to him.

[78] We do note other members of Council are now making greater effort to hold him accountable, curtail unwarranted criticism of staff, and prevent disruptions. Regardless of what underlies his behaviour, it is Council's responsibility to preserve and promote a workplace free of aggressive and harassing behaviours.

[79] An example of these greater efforts was observed on April 20, 2022.

[80] In responding to the repeated statements and accusations by Councillor Whitehead against the Clerk and other staff regarding the manner in which they managed delegations at Council, the City Manager, the General Manager of Corporate Services and the Executive Director of Human Resources provided a thorough and comprehensive explanation.

[81] When Councillor Whitehead persisted, and refused to apologize as directed by the Chair, the Mayor and other Councillors raised points of order. We repeat here only one portion of one of the points of order which expressed frustrations with Councillor Whitehead's conduct and behaviour at the meeting:

> *Throughout this meeting Councillor Whitehead has been repeatedly belligerent, insulting, disrespectful, disruptive and now is directly impinging the reputation of our staff. He's been in direct violation of numerous procedural by-law clauses, rules of debate, interrupting order, decorum… this can't continue…nobody can stand this…like Councillor Whitehead, stop. Thank you*.[2]

[82] It is important for Members to identify and call out bad behaviour when it occurs, and to demonstrate leadership in challenging the Councillor when he engages in disrespectful and harassing conduct.

[83] Council has the authority and the obligation duty to ensure a safe and respectful work environment for all staff, for members of Council and for the public.

Concluding Remarks and Recommendations:

[84] An important aspect of an Integrity Commissioner's investigation report, where a breach is substantiated, is to daylight the concern for Council and the public.

[85] As detailed above, we are of the view that the Councillor's conduct represents a breach of the provisions of the Code of Conduct and a continued pattern of behaviour for which he was previously sanctioned.

[86] In the circumstances of this investigation, the evidence reveals a repeated pattern of unacceptable bullying and harassing behaviour directed at particular staff. The evidence discloses that, even in the face of efforts by other members of Council to curtail this conduct, the Councillor persists in engaging in unacceptable behaviour.

[87] The Councillor has repeatedly and publicly referenced the personal health issues he is struggling with, and several individuals interviewed expressed concern for the Councillor's struggles with his own well-being, and ability to cope with the challenges of public service while grappling with personal health issues.

[88] While sympathetic to the Councillor's personal issues, the lack of appreciation of the personal and professional toll his behaviour has taken on others cannot be excused.

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[2] @ 6:25:50 in the recording of the April 20, 2022 General Issues Committee meeting

[89] Supports are available through the Human Resources Department, other City resources, his health providers, and his family.

[90] It is not sufficient to claim personal health issues – mental or physical – and then impose the impact or burden of his behaviours on staff – staff who have no ability to remove themselves or adequately respond when he turns on them.

[91] Given the continued conduct exhibited by the Councillor as substantiated through this investigation, we conclude that a further monetary sanction is warranted.

[92] As noted in our earlier report, a suspension of pay does not affect the Councillor's ability to attend meetings and fulfill their duties, but it does take away a portion of his salary, as a penalty for violation of the Code.

[93] The factors to be taken into consideration in determining a penalty ought to include proportionality and deterrence. We would add to this the concept of progressive discipline.

[94] Following receipt of our November 10, 2021 Report, we imposed a 30-day suspension of pay, and Council imposed remedial measures preventing the Councillor from communicating directly with staff below the General Manager level.

[95] We also recommended that Councillor Whitehead be obliged, during Council and committee meetings, to confine his questions of staff by only directing his questions to the Mayor or Chair and not directly to staff.

[96] We recognize that those chairing Council and committee meetings often exercise forbearance with respect to questions by members of Council, the number of times members are allowed to speak, time limits on speakers, and momentary misconduct (outburst, interruptions and the like).

[97] With respect to Councillor Whitehead, we recommend that the rules of procedure be strictly applied; that points of order and points of privilege be decided upon quickly and succinctly, and without debate; that the chairs of meetings continue to be diligent in maintaining order to control their meetings, curtail interruptions and curb undesirable behaviours, and that they be aware of the powers provided to them to do so in the procedure by-law, including:

> *8.4 Should a Member of Council persist in conducting themselves in a manner contrary to the rules set forth in subsection 8.1 after having been called to order by the Mayor or the Chair of the Committee, the Mayor or the Chair may order them to vacate the place the meeting is being held:*

(i) If the Member of Council apologizes, they may, by two-thirds majority vote of the Council or Committee members (excluding the member of Council or Committee in question), be permitted to remain at the meeting; and

(ii) Any Member of Council other than the member ordered to vacate the place the meeting is being held may appeal the Mayor's or Chair's ruling, and Council or Committee may overturn the Chair's ruling by two-thirds majority vote of the Council or Committee members (excluding the member of Council or Committee in question). An appeal is not in order once a vote under section 8.4 (i) has taken place.

(iii) exclusions from voting provided for in subsections 8.4(i) and (ii) shall apply notwithstanding any other provisions in the By-law that require a member of Council or Committee to vote.

Sanction:

[98] Having previously found complaints of harassment and bullying to be substantiated, and having previously, only 6 months ago, imposed a 30-day suspension of pay for such behaviours, and recognizing the principles of proportionality, deterrence and progressive discipline, we impose the sanction of suspension of Councillor Whitehead's remuneration for a period of 45 days commencing with the next pay period.

[99] Although not within our authority to impose, we strongly urge the Councillor to seek support which may be available to assist him in wrestling with the personal health challenges which burden him.

[100] We wish to conclude by publicly thanking the parties, members of Council and current and former staff who participated in our investigation. We express genuine appreciation for the sharing of time, knowledge and perspective by everyone concerned.

[101] We will be available to introduce this report and respond to questions during the Council meeting at which this report is considered.

BOARD OF HEALTH
MINUTES 22-006

9:30 a.m.
Monday, June 13, 2022
Due to COVID-19 and the closure of City Hall, this meeting was held virtually

Present:	Councillor M. Wilson (Vice-Chair), Councillors J. Farr, N. Nann, T. Jackson, R. Powers, E. Pauls, J.P. Danko, B. Clark, M. Pearson, B. Johnson, A. VanderBeek and J. Partridge
Absent with Regrets:	Mayor F. Eisenberger, Councillors, S. Merulla, L. Ferguson and T. Whitehead – Personal

THE FOLLOWING ITEMS WERE REFERRED TO COUNCIL FOR CONSIDERATION:

1. Communication Items (Items 5.1 to 5.3)

That the following Communication Items be approved as presented:

(a) Correspondence from the Ministry of Health respecting City of Hamilton Funding for Public Health Programs (Item 5.1)

Recommendation: Be received and referred to the Medical Officer of Health to receive, utilize, report and execute all related agreements and contracts, in accordance with existing signing authority.

(b) Correspondence from Peterborough Public Health, respecting the Extension of Ontario Regulation 116/20, Work Deployment Measures for Boards of Health (Item 5.2)

Recommendation: Be received

(c) Correspondence from the Association of Local Public Health Agencies respecting the Release of a Public Health Matters Video (Item 5.3)

Recommendation: Be received

2. Green Millen Trail Waterfront Assessment (BOH22004(a)) (City Wide) (Item 7.1)

That BOH22004(a) respecting Green Millen Trail Waterfront Assessment, be received.

3. Beach Water Quality and Blue Flag Eligibility (BOH22004(a)) (City Wide) (Item 7.2)

(a) That BOH22004(a), respecting Beach Water Quality and Blue Flag Eligibility, be received; and

(b) That staff be directed to identify the requirements and costs associated with having City of Hamilton beaches meet the requirements of the Blue Flag Program, with a report back to the Board of Health.

4. Harmonization of Income Eligibility for Dental Clients (BOH22008) (City Wide) (Item 10.1)

(a) That Public Health Services' financial eligibility criteria for Municipal Dental Clinic Services for adults 18 years of age and older, be updated to harmonize with the financial eligibility criteria adopted by Special Supports (Report HSC21026), which is the Statistics Canada Low Income Measure; and,

(b) That the financial eligibility application and approval process for Municipal Dental Clinic Services for adults 18 years of age and older, be integrated with the new online portal intake process for low income programs within the Healthy and Safe Communities Department (Report HSC20039) when it is implemented for Special Supports.

5. Public Health Services Organization Update (BOH22011) (City Wide) (Item 10.2)

(a) That the Board of Health authorize and direct the Medical Officer of Health to receive, utilize and report on the approved capital funding from the Ministry of Health to support improvements to the Ontario Seniors Dental Care Program; and

(b) That the Board of Health authorize and direct the Medical Officer of Health to increase the Public Health Services complement by 12.2 FTE in order to operationalize the improvements to the Ontario Seniors Dental Care Program.

6. Alcohol, Drug, & Gambling Services and Mental Health Outreach Program Budget 2022-2023 (BOH22012) (City Wide) (Item 10.3)

(b) That the 2022-2023 Alcohol, Drug, & Gambling Services Program's Choices and Changes budget, funded by the Ministry of Children, Community and Social Services be approved;

(c) That the 2022-2023 Alcohol, Drug, & Gambling Services Program's Other Funding Grants budget be approved, including a 2.09 FTE increase; and

(d) That the Medical Officer of Health or delegate be authorized and directed to receive, utilize, report on, and execute all service agreements and contracts, in a form satisfactory to the City Solicitor, required to give effect to all the 2022-2023 Alcohol, Drug & Gambling Services and Mental Health Street Outreach Program budgets approved in Report BOH22012.

7. Mental Health Outreach Program and Hamilton Public Library Partnership (BOH22009) (City Wide) (Added Item 10.4)

(a) That the Board of Health authorize and direct the Medical Officer of Health to:

(i) Receive, utilize and report on funding from the Hamilton Public Library for a 1.0FTE social work position in the Mental Health Outreach Program;

(ii) Increase the complement in the Mental Health Outreach Program by 1.0FTE, for the term of the collaborative agreement and the time of renewal; and,

(iii) Enter into an agreement between the City of Hamilton and the Hamilton Public Library for an ongoing social work position, satisfactory in form to the City Solicitor.

8. Nomination to the Central West Board of Health representative on the Association of Local Public Health Agencies (aLPHa) Board of Health Section Executive Committee and the Board of Directors for the 2022-2024 Term (Item 11.1)

That Councillor M. Wilson be nominated as the Central West Board of Health representative on Association of Local Public Health Agencies (aLPHa) Board of Health Section Executive Committee and the Board of Directors for the June 2022 to June 2024 term, contingent upon their re-election in the upcoming Municipal Election.

FOR INFORMATION:

(a) CEREMONIAL ACTIVITIES (Item 1)

There were no ceremonial activities.

(b) CHANGES TO THE AGENDA (Item 2)

The Committee Clerk advised the Board of the following changes to the agenda:

6. DELEGATION REQUESTS

6.1 Angelica Hasbon, respecting PED22008, Harmonization of Income Eligibility for Dental Clients

10. DISCUSSION ITEMS

10.4 Mental Health Outreach Program and Hamilton Public Library Partnership (BOH22009) (City Wide)

The agenda for the June 13, 2022 Board of Health was approved, as amended.

(c) DECLARATIONS OF INTEREST (Item 3)

None

(d) APPROVAL OF MINUTES OF PREVIOUS MEETING (Item 4)

(i) May 2, 2022 (Item 4.1)

The Minutes of May 2, 2022 was approved, as presented.

(e) DELEGATION REQUEST (Item 6)

(i) Angelica Hasbon, respecting PED22008, Harmonization of Income Eligibility for Dental Clients (for today's meeting (Added Item 6.1)

The delegation request from Angelica Hasbon, respecting PED22008, Harmonization of Income Eligibility for Dental Clients be approved, for today's meeting.

(f) CONSENT ITEM (Item 7)

(i) Beach Water Quality and Blue Flag Eligibility (BOH22004(a)) (City Wide) (Item 7.2)

Report BOH22004(a), respecting Beach Water Quality and Blue Flag Eligibility, wa received.

Report BOH22004(a) respecting Beach Water Quality and Blue Flag Eligibility (City Wide), was ***amended*** by adding the following sub-section (b):

(b) That staff be directed to identify the requirements and costs associated with having City of Hamilton beaches meet the requirements of the Blue Flag Program, with a report back to the Board of Health.

(g) STAFF PRESENTATIONS (Item 8)

(i) Overview of COVID-19 Activity in the City of Hamilton 11 Mar 2020 to Present (Item 8.2)

Michelle Baird, and Erin Rodenburg, Epidemiologist, provided the Board with an Overview of COVID-19 Activity in the City of Hamilton 11 Mar 2020 to present, with the aid of a PowerPoint presentation.

The Presentation respecting an Overview of COVID-19 Activity in the City of Hamilton 11 Mar 2020 to present, was received.

(h) DELEGATION (Item 9)

(i) Angelica Hasbon, respecting Report PED22008, Harmonization of Income Eligibility for Dental Clients (Added Item 9.1)

Angelica Hasbon addressed the Board respecting Report PED22008, Harmonization of Income Eligibility for Dental Clients.

The Delegation from Angelica Hasbon, respecting Report PED22008, Harmonization of Income Eligibility for Dental Clients, was received.

For further disposition of this matter, refer to Item 4

(i) DISCUSSION ITEMS (Item 10)

(i) Alcohol, Drug, & Gambling Services and Mental Health Outreach Program Budget 2022-2023 (BOH22012) (City Wide) (Item 10.3)

Sub-section (a) of Report BOH22012, respecting the Alcohol, Drug, & Gambling Services and Mental Health Outreach Program Budget 2022-2023, was DEFERRED to the August 10th meeting:

(a) That the 2022-2023 Alcohol, Drug, & Gambling Services and Community Mental Health Promotion program budgets, funded by Ontario Health, be approved, including:

(i) the net 0.6 FTE reduction for Alcohol, Drug & Gambling Services; and

(ii) the 0.65 FTE reduction for the Community Mental Health Promotion program budgets;

For further disposition of this matter, refer to Item 6

(j) GENERAL INFORMATION / OTHER BUSINESS (Item 13)

(i) Outstanding Business List for the Board of Health (Item 13.1)

There were no updates.

(k) ADJOURNMENT (Item 15)

There being no further business, the Board of Health adjourned at 11:31 a.m.

Respectfully submitted,

Councillor M. Wilson,
Vice-Chair, Board of Health

Loren Kolar
Legislative Coordinator
Office of the City Clerk

PUBLIC WORKS COMMITTEE
MINUTES 22-010
1:30 p.m.
Monday, June 13, 2022
Council Chambers
Hamilton City Hall
71 Main Street West

Present: Councillors N. Nann (Chair), R. Powers (Vice-Chair), J.P. Danko, J. Farr, L. Ferguson, T. Jackson, E. Pauls, M. Pearson and A. VanderBeek

Absent with Regrets: Councillor S. Merulla – Personal
Councillor T. Whitehead – Personal

Also Present: Councillors B. Clark and M. Wilson

THE PUBLIC WORKS COMMITTEE PRESENTS REPORT 22-010 AND RESPECTFULLY RECOMMENDS::

1. Sustainable Mobility Programs Annual Report 2021 (PED19124(c)) (City Wide) (Item 7.1)

That Report PED19124(c), respecting the Sustainable Mobility Programs Annual Report 2021, be received.

2. Ward 1 Multi-Modal Connections Review (PED22132) (Ward 1) (Outstanding Business List Item) (Item 7.2)

That Report PED22132, respecting the Ward 1 Multi-Modal Connections Review, be received.

3. Public Information Portal to Track Environmental Issues on City of Hamilton Projects (PW22049) (City Wide) (Outstanding Business List Item) (Item 7.3)

That Report PW22049, respecting the Public Information Portal to Track Environmental Issues on City of Hamilton Projects, be received.

4. Roxborough Park Redevelopment (Item 9.1)

That staff be directed to continue to work with the Developers, Nick Carnicelli, Sergio Manchia and David Horwood, Roxborough Park Inc., in attempt to resolve their concerns respecting the Roxborough Park Redevelopment and to work with their staff and the Ministry of Environment, Conservation and Parks and report back the appropriate Committee.

5. Stormwater Funding Review (FCS22043) (City Wide) (Outstanding Business List Item) (Item 10.1)

(a) That staff be authorized and directed to issue a Request for Proposals ("RFP") for Consulting Services to conduct a Stormwater Funding Review;

(b) That the Phase One cost of the Stormwater Funding Review, with an upset limit of $200,000, be funded from the Stormwater reserve (108010); and

(c) That staff report back to the General Issues Committee to provide Guiding Principles for consideration that will direct the evaluation of alternative stormwater rate funding structures as part of the Stormwater Funding Review.

6. PRESTO Operating Agreement Amendment (PW17033(g)) (City Wide) (Item 10.2)

(a) That the General Manager of Public Works, or their designate, be authorized and directed to execute, on behalf of the City, an amendment to the PRESTO Operating Agreement attached to Public Works Report 22-010 as Appendix "A" and in a form acceptable to the City Solicitor; and

(b) That the General Manager of Public Works, or their designate, be authorized and directed to execute, on behalf of the City, any additional documents required over the term of the PRESTO Operating Agreement, with content acceptable to the General Manager Public Works and in a form acceptable to the City Solicitor.

7. Waste Management Advisory Committee Terms of Reference (Waste Management Advisory Committee - Citizen Committee Report) (Item 10.4)

That the revised Waste Management Advisory Committee ("WMAC") Terms of Reference, attached as Appendix "B" to Public Works Report 22-010, be approved.

8. Hamilton Cycling Committee Terms of Reference and Roles, Responsibilities and Expectations of New Members (Hamilton Cycling Committee - Citizen Committee Report) (Item 10.5)

(a) That the Hamilton Cycling Committee Terms of Reference be approved, as amended; and

(b) That the Hamilton Cycling Committee Roles, Responsibilities and Expectations be approved.

9. Installation of Additional Transit Shelters (Ward 6) (Item 11.1) *(REVISED)*

WHEREAS, there is interest from Ward 6 Residents in continuing to have additional transit shelters installed at bus stops within the ward that currently do not have transit shelters;

WHEREAS, the Transit Division maintains a shelter request inventory and evaluates requested locations against a warrant scoring system;

WHEREAS, the Transit Division has determined that there are four outstanding locations within Ward 6 that have been deemed as feasible shelter locations based on scoring criteria; and

WHEREAS, the Transit Division will be prioritizing the use of Capital funding within the annual transit shelter and bus stop expansion programs from 2022 to 2024 to fund the upgrade and installation of bus stop pads to comply with the *Accessibility for Ontarians with Disabilities Act's* standards, with minimal investment going towards increasing the city-wide shelter inventory.

THEREFORE, BE IT RESOLVED:

(a) That staff be directed to install transit shelters, with construction to begin in 2022 and installation to be completed no later than 2023, at a cost of no more than $60,000, to be funded from the Ward 6 Area Rating Reserve (108056), at the following intersections:

(i) Stonechurch Road and Pritchard Road on the Northwest and Southwest corners;
(ii) Stonechurch Road and Nebo Road on the Northeast corner; and
(iii) Rymal Road and Pritchard Road on the Southwest corner.

(b) That $5,500 for the annual asset maintenance and repair of the four additional shelters be included in the Public Works Department, Transit Division's 2023 annual base Operating Budget; and

(c) That the Mayor and City Clerk be authorized and directed to execute any required agreement(s) and ancillary documents, with such terms and conditions in a form satisfactory to the City Solicitor.

10. Improvements to the Outdoor Fitness Area at Carpenter Park, 145 Eagleglen Way, **Hamilton (Ward 14) (Item 11.2)**

WHEREAS, Carpenter Park, 145 Eagleglen Way, Hamilton, has outdoor fitness assets to serve the community's recreation needs; and

WHEREAS, improving the existing safety surfacing of the fitness area from wood fibre to rubber surfacing would improve accessibility for residents.

THEREFORE, BE IT RESOLVED:

(a) That safety surfacing improvements be made to the existing outdoor fitness area at Carpenter Park, 145 Eagleglen Way, Hamilton, and be funded from the Ward 14 Special Capital Re-Investment Reserve Fund (#108064) at an upset limit, including contingency, not to exceed $75,000; and

(b) That the Mayor and City Clerk be authorized and directed and execute nay required agreement(s) and ancillary documents, with such terms and conditions in a form satisfactory to the City Solicitor.

11. Installation of Speed Cushions as a Traffic Calming Measure Eaglewood Drive (Ward 6) (Item 11.3)

WHEREAS, residents on Eaglewood Drive in Ward 6 have advocated for the installation of speed cushions to address roadway safety concerns as a result of speeding; and

WHEREAS, signatures were collected from residents resulting in support by 44 of 48 homes on Eaglewood Drive for the installation of speed cushions as a traffic calming measure.

THEREFORE, BE IT RESOLVED:

(a) That Transportation and Operations Maintenance staff be authorized and directed to install two speed cushions as a traffic calming measure on Eaglewood Drive between Royal Vista Drive and Sinena Avenue as part of the 2022 Traffic Calming Program's fall application;

(b) That all costs associated with the installation of two speed cushions as a traffic calming measure on Eaglewood Drive be funded the Ward 6 Capital

Re-Investment Reserve Fund (#108056) at an upset limit, including contingency, not to exceed $14,000; and

(c) That the Mayor and City Clerk be authorized and directed to execute any required agreement(s) and ancillary documents, with such terms and conditions in a form satisfactory to the City Solicitor.

12. Installation of Two Dynamic Speed Signs on Dundurn Street North (Ward 1) (Item 11.4)

WHEREAS, the City of Hamilton is committed to creating safe neighborhoods and vibrant communities through the Vision Zero Action Plan; and

WHEREAS, ensuring the safety of both pedestrians and motorists is a priority.

THEREFORE, BE IT RESOLVED:

(a) That staff be directed to purchase two Dynamic Speed Signs to be permanently installed on Dundurn Street North;

(b) That all costs associated with the purchase and installation two Dynamic Speed Signs on Dundurn Street North be funded from the Ward 1 Capital Re-Investment Reserve (#108051) at an upset limit, including contingency, not to exceed $20,000; and

(c) That the Mayor and City Clerk be authorized and directed to execute any required agreement(s) and ancillary documents, with such terms and conditions in a form satisfactory to the City Solicitor.

13. Expansion of the Legal Street Art Wall at Woodlands Park for the Concrete Canvas Street Art Festival (Ward 3) (Item 11.5)

WHEREAS, Woodlands Park is located at 501 Barton Street East, Hamilton, Ward 3;

WHEREAS, the Woodlands Park Legal Street Art Wall was piloted in September 2019 with the support of the Concrete Canvas Festival as part of the City's Graffiti Strategy;

WHEREAS, the Woodlands Park Legal Street Art Wall has been successful in deterring 'tagging' in the area and providing an opportunity for aspiring muralists to practice their art in a safe, creative, and educational space;

WHEREAS, the Concrete Canvas Street Art Festival, a multi-day street art festival at which local and internationally acclaimed artists alike create murals across

Hamilton, will take place July 18-24, 2022, in collaboration with the City of Hamilton; and

WHEREAS, the Concrete Canvas Street Art Festival has requested an expansion of the Legal Street Art Wall in the east end of Woodlands Park near Myler Street and Sanford Avenue to be launched as part of their 2022 Festival event in Woodlands Park to provide opportunities for young local artists who can be mentored and inspired by local and internally acclaimed artists as part of the Concrete Canvas Street Art Festival.

THEREFORE, BE IT RESOLVED:

(a) That a contribution of $25,000 be made for the purpose of expanding the Legal Street Art Wall in the east end of Woodlands Park near Myler Street and Sanford Avenue in Ward 3, for the Concrete Canvas Street Art Festival, as follows:

(i) $20,000 from the 2022 Ward 3 Area Rating Discretionary Fund (3301909300); and

(ii) $5,000 from the Ward 3 Cellular Tower & Ward-Specific Non-Property Tax Revenues Account (3301609603).

(b) That the Mayor and City Clerk be authorized and directed to approve and execute any and all required agreements and ancillary documents, with such terms and conditions in a form satisfactory to the City Solicitor.

14. Installation of a Speed Cushion as a Traffic Calming Measure on East 26th Street (Ward 7) (Item 11.6)

WHEREAS, residents on East 26th Street in Ward 7 have advocated for the installation of a speed cushion to address roadway safety concerns as a result of speeding; and

WHEREAS, signatures were collected from residents resulting in support by 11 of 23 homes on East 26th Street for the installation of a speed cushion as a traffic calming measure.

THEREFORE, BE IT RESOLVED:

(a) That Transportation and Operations Maintenance staff be authorized and directed to install one speed cushion as a traffic calming measure on East 26th Street between Queensdale Avenue East and Crockett Street as part of the 2022 Traffic Calming Program's fall application;

(b) That all costs associated with the installation of one speed cushion on East 26th Street between Queensdale Avenue East and Crockett Street be funded from the Ward 7 Capital Re-Investment Reserve (#108057), to be completed under contract # C15-12-22 at an upset limit, including contingency, not to exceed $7,000; and

(c) That the Mayor and City Clerk be authorized and directed to execute any required agreement(s) and ancillary documents, with such terms and conditions in a form satisfactory to the City Solicitor.

15. Installation of Salt Tolerant Perennials on the Medians on Paramount Drive, Hamilton (Ward 9) (Added Item 11.7)

WHEREAS, Paramount Drive is currently under construction which includes the installation of 28 medians planted with trees and sod;

WHEREAS, the design of the medians makes the mowing of sod challenging with current equipment; and

WHEREAS, the planting of perennials contributes to biodiversity and habitat across the City.

THEREFORE, BE IT RESOLVED:

(a) That staff be directed to change the design of the medians on Paramount Drive from sod to salt tolerant perennials to facilitate maintenance and contribute to biodiversity;

(b) That the supply and installation of salt tolerant perennials on the medians on Paramount Drive at a cost of $180,000 to be funded from the Ward 9 Minor Maintenance fund (#4031911609), be approved;

(c) That $15,050 and 0.16 FTE for annual maintenance of perennials on Paramount Drive medians, be added to the Environmental Services Division’s 2023 Operating budget; and

(d) That the Mayor and City Clerk be authorized and directed to approve and execute all required agreements and ancillary documents, with such terms and conditions in a form satisfactory to the City Solicitor.

16. Replacement of Tennis Courts at Bullock’s Corners Park, 40 Park Avenue, Hamilton (Ward 13) (Added Item 11.8)

WHEREAS, Bullock’s Corners Park, 40 Park Avenue, Hamilton, has three tennis court assets to serve the community’s recreation needs;

WHEREAS, the existing three tennis courts at Bullock's Corners Park have surpassed useful life cycle and require replacement; and

WHEREAS, the estimate for the replacement is $300,000.

THEREFORE, BE IT RESOLVED:

(a) That the three existing tennis courts at Bullock's Corners Park, 40 Park Avenue, Hamilton, be replaced, including demolition and reconstruction, to be funded from the Flamborough Capital Projects Account (#108032) at an upset limit, including contingency, not to exceed $150,000, and from the Ward 13 Non-Property Tax Revenue Account (#3301609613) at an upset limit, including contingency, not to exceed $150,000; and

(b) That the Mayor and City Clerk be authorized and directed to approve and execute all required agreements and ancillary documents, with such terms and conditions in a form satisfactory to the City Solicitor.

17. Installation of Pedestrian Crosswalk Improvements and Traffic Calming Measures (Ward 1) (Added Item 11.9)

WHEREAS, Vision Zero and Complete Streets principles are used in the City of Hamilton to provide a safer environment for all road users; and

WHEREAS, Ward 1 has seen an increase in roadway safety related incidents and consequently roadway safety related requests to take measures to increase roadway safety for all road users and particularly vulnerable road users including cyclists and pedestrians.

THEREFORE, BE IT RESOLVED:

(a) That Transportation Operations & Maintenance staff be directed to install a raised crosswalk and intersection geometric improvements to improve pedestrian crosswalk safety at the intersection of Charlton Avenue West and Kent Street at a cost, including contingency, not to exceed $45,000;

(b) That Transportation Operations & Maintenance staff be directed to install intersection geometric improvements to improve pedestrian crosswalk safety at the intersection of Glen Road and Bond Street North at the southerly, east leg intersection, at a cost, including contingency, not to exceed $22,000;

(c) That Transportation Operations & Maintenance staff be directed to install raised crosswalks and associated intersection geometric improvements, as

required, to improve pedestrian crosswalk safety at various entrances to Victoria Park, 500 King Street West, at a cost, including contingency not to exceed $150,000, at the following intersections:

(i) Strathcona Avenue North and Head Street;
(ii) Strathcona Avenue North and Lamoreaux Street;
(iii) Strathcona Avenue North and Florence Street; and
(iv) Florence Street and Inchbury Street.

(d) That Transportation Operations & Maintenance staff be directed to install traffic calming measures on an on-going and as requested basis working in alignment with Vision Zero and Complete Street principles and working on priorities in collaboration with the Ward 1 Office at an upset limit, including contingency, not to exceed $125,000;

(e) That all costs associated with the installation of Ward 1 raised crosswalks, associated intersection geometric improvements and traffic calming measures be funded from the Ward 1 Capital Re-Investment Reserve #108051; and

(f) That the Mayor and City Clerk be authorized and directed to execute any required agreement(s) and ancillary documents, with such terms and conditions in a form satisfactory to the City Solicitor.

18. Installation of Parkettes on Sanders Boulevard (Ward 1) (Added Item 11.10)

WHEREAS, Vision Zero and Complete Streets principles are used in the City of Hamilton to provide a safer environment for all road users;

WHEREAS, Sanders Boulevard residents have engaged the Ward 1 Office requesting parkette/rest stop facilities to encourage walking;

WHEREAS, Sanders Boulevard has a wide corridor proposing the unique ability to repurpose existing street space to encourage modes of transportation in alignment with Complete Street principles;

THEREFORE, BE IT RESOLVED:

(a) That Transportation Operations & Maintenance staff be authorized and directed to install two bumpout parkettes on Sanders Boulevard, working with the Ward 1 Councillor's Office to determine the appropriate locations, at a cost, including contingency, not to exceed $100,000, to be funded from the Ward 1 Capital Re-Investment Reserve #108051; and

(c) That the Mayor and City Clerk be authorized and directed to execute any

required agreement(s) and ancillary documents, with such terms and conditions in a form satisfactory to the City Solicitor.

FOR INFORMATION:

(a) CEREMONIAL ACTIVITIES (Item 1)

(i) Waste and Recycling Workers Week (Item 1.1)

Councillor Nann recognized Waste and Recycling Workers Week.

(ii) Municipal Waste Association's Promotion and Education Awards - Award of one Gold and two Silver Awards to Hamilton's Waste Management Division (Item 1.2)

Councillor Nann announced the award of one Gold and two Silver Awards to Hamilton's Waste Management Division by the Municipal Waste Association's Promotion and Education Awards.

(b) APPROVAL OF AGENDA (Item 2)

The Committee Clerk advised of the following changes to the agenda:

6. DELEGATION REQUESTS

6.1 Nick Carnicelli, Sergio Manchia and David Horwood, Roxborough Park Inc., respecting the Roxborough Park Redevelopment (for today's meeting)

12. NOTICES OF MOTION

12.1 Installation of Salt Tolerant Perennials on the Medians on Paramount Drive, Hamilton (Ward 9)

12.2 Replacement of Tennis Courts at Bullock's Corners Park, 40 Park Avenue, Hamilton (Ward 13)

The agenda for the June 13, 2022 Public Works Committee meeting was approved, as amended.

(c) DECLARATIONS OF INTEREST (Item 3)

There were no declarations of interest.

(d) APPROVAL OF MINUTES OF PREVIOUS MEETING (Item 4)

(i) May 30, 2022 (Item 4.1)

The Minutes of the May 30, 2022 meeting of the Public Works Committee were approved, as presented.

(e) DELEGATION REQUESTS (Item 6)

The following Delegation Request was approved for today's meeting:

(i) Nick Carnicelli, Sergio Manchia and David Horwood, Roxborough Park Inc., respecting the Roxborough Park Redevelopment (for today's meeting) (Item 6.1).

(f) CONSENT ITEMS (Item 7)

(i) Hamilton Cycling Committee Minutes – May 4, 2022 (Item 7.4)

The Hamilton Cycling Committee Minutes of May 4, 2022, were received.

(g) PUBLIC HEARINGS / DELEGATIONS (Item 9)

(i) Nick Carnicelli, Sergio Manchia and David Horwood, Roxborough Park Inc., respecting the Roxborough Park Redevelopment (for today's meeting) (Item 9.1)

Nick Carnicelli, Sergio Manchia and David Horwood, Roxborough Park Inc., addressed Committee respecting the Roxborough Park Redevelopment.

Nick Carnicelli, Sergio Manchia and David Horwood, Roxborough Park Inc., were granted an additional 5 minutes, beyond the 5-minute time limit, to complete their delegation respecting the Roxborough Park Redevelopment.

The delegation from Nick Carnicelli, Sergio Manchia and David Horwood, Roxborough Park Inc., respecting the Roxborough Park Redevelopment, was received.

For further disposition of this matter, refer to Item 4.

(h) DISCUSSION ITEMS (Item 10)

(i) White Brick Church Cemetery (PW22050) (Ward 12) (Item 10.3)

Report PW22050 respecting White Brick Church Cemetery was deferred to a future meeting of the Public Works Committee, until Councillor Ferguson has the opportunity to discuss staff's recommendations respecting the Cemetery with the Cemetery owners/operators and the Bereavement Authority of Ontario.

(ii) Hamilton Cycling Committee Terms of Reference and Roles, Responsibilities and Expectations of New Members (Hamilton Cycling Committee - Citizen Committee Report) (Item 10.5)

The Hamilton Cycling Committee Terms of Reference were ***amended*** by deleting wording from item (e) of the Meetings Section, as follows:

(e) Quorum must be achieved for a formal meeting to occur and be recorded~~; quorum is 50% of the current membership plus one (ex. 15 members - 8 quorum)~~

For disposition of this matter, refer to Item 4.

(i) MOTIONS

(i) Expansion of the Legal Street Art Wall at Woodlands Park for the Concrete Canvas Street Art Festival (Ward 3) (Item 11.5)

Councillor Nann relinquished the Chair to Councillor VanderBeek in order to introduce the Motion respecting Expansion of the Legal Street Art Wall at Woodlands Park for the Concrete Canvas Street Art Festival (Ward 3).

For disposition of this matter, refer to Item 13.

Councillor Nann assumed the Chair for the remainder of the meeting.

(j) NOTICES OF MOTION (Item 12)

(i) Installation of Salt Tolerant Perennials on the Medians on Paramount Drive, Hamilton (Ward 9) (Item 12.1)

The Rules of Order were waived to allow for the introduction of a Motion respecting Installation of Salt Tolerant Perennials on the Medians on Paramount Drive, Hamilton (Ward 9).

For disposition of this matter, refer to Item 15.

(ii) Replacement of Tennis Courts at Bullock's Corners Park, 40 Park Avenue, Hamilton (Ward 13) (Item 12.2)

The Rules of Order were waived to allow for the introduction of a Motion respecting Replacement of Tennis Courts at Bullock's Corners Park, 40 Park Avenue, Hamilton (Ward 13).

For disposition of this matter, refer to Item 16.

(iii) Installation of Pedestrian Crosswalk Improvements and Traffic Calming Measures (Ward 1) (Added Item 12.3)

The Rules of Order were waived to allow for the introduction of a Motion respecting Installation of Pedestrian Crosswalk Improvements and Traffic Calming Measures (Ward 1).

For disposition of this matter, refer to Item 17.

(iv) Installation of Parkettes on Sanders Boulevard (Ward 1) (Added Item 12.4)

The Rules of Order were waived to allow for the introduction of a Motion respecting Installation of Parkettes on Sanders Boulevard (Ward 1).

For disposition of this matter, refer to Item 18.

(k) GENERAL INFORMATION / OTHER BUSINESS (Item 13)

(i) Amendments to the Outstanding Business List (Item 13.1)

The following amendments to the Public Works Committee's Outstanding Business List, were approved.

(a) Items Considered Complete and Needing to be Removed: (Item 13.1(a)):

13.1(a)(a) Ward 1 Multi-Modal Connections Review
Addressed as Item 7.2 on today's agenda - Report PED22132 (Ward 1)
Item on OBL: ABD

13.1(a)(b) Stormwater Gap Evaluation

Addressed as Item 10.1 on today's agenda - Report FCS22043 (City Wide)
Item on OBL: ABM

13.1(a)(c) Public Information Portal to Track Environmental Issues on City of Hamilton Projects
Addressed as Item 7.3 on today's agenda – Report PW22049 (City Wide)
Item on OBL: ACD

(b) Items Requiring a New Due Date: (Item 13.1(b)):

13.1(b)(a) Redevelopment / Reuse of the former King George School Site, at 77 Gage Avenue North
Item on OBL: V
Current Due Date: July 9, 2022
Proposed New Due Date: March 1, 2023

13.1(b)(b) Free-Floating Carshare Pilot Program
Item on OBL: ABW
Current Due Date: Late Q2 2023
Proposed New Due Date: June 12, 2023

13.1(b)(c) Evaluation Criteria for Changes to the Approved Truck Route Network
Item on OBL: ACP
Current Due Date: Q3 2022
Proposed New Due Date: September 19, 2022

(l) ADJOURNMENT (Item 15)

There being no further business, the meeting adjourned at 4:05 p.m.

Respectfully submitted,

Councillor N. Nann, Chair,
Public Works Committee

Carrie McIntosh
Legislative Coordinator
Office of the City Clerk

MX Draft: April 14, 2022

FIRST AMENDING AGREEMENT

METROLINX

- and -

THE CITY OF HAMILTON

- and -

THE REGIONAL MUNICIPALITY OF YORK

- and -

THE CORPORATION OF THE CITY OF MISSISSAUGA

- and -

THE CORPORATION OF THE CITY OF BURLINGTON

- and -

THE CORPORATION OF THE CITY OF BRAMPTON

- and -

THE CORPORATION OF THE TOWN OF OAKVILLE

- and -

THE REGIONAL MUNICIPALITY OF DURHAM

WHEREAS, Metrolinx ("**Metrolinx**"), on the one hand, and the Corporation of the City of Brampton, the Corporation of the City of Burlington, The Regional Municipality of Durham, the City of Hamilton, the Corporation of the City of Mississauga, the Corporation of the Town of Oakville, and The Regional Municipality of York, on the other hand (each a "**Transit Agency**", and collectively, the "**Transit Agencies**") entered into the Operating Agreement for PRESTO on the 10th day of January, 2018 (the "**Operating Agreement**");

AND WHEREAS the parties are desirous of amending the Operating Agreement to reflect a revised risk-sharing model and amend other terms of the Operating Agreement that require amendment since the entering into the Operating Agreement;

NOW THEREFORE, in consideration of the mutual covenants herein and for other good and valuable consideration, the receipt and sufficiency of which are acknowledged by both Parties, the Parties hereby covenant and agree with each as follows

All references below that require amendment refers to the Operating Agreement sections and schedules attached thereto.

The following sections and schedules of the Operating Agreement are hereby amended and revised, and shall be effective upon the date of execution of this First Amending Agreement.
:

1 SPECIFIC AGREEMENTS

1.1 Limitation of Liability

(1) Section 12.2(h) "*Affect of Breach on Minimum Payment"* is amended and restated to read:

Metrolinx agrees that the aggregate Metrolinx Revenue Based Fee for purposes of Section 7.3(b) *[Minimum Payment Protection]* shall include the aggregate of the Fee Based on Lost Revenues for the Transit Agencies for that calendar year. Metrolinx further agrees that, with respect to Section 12.3(b), if the Actual Availability Percentage is greater than:

(i) 98.00% for E-Purse Fare Payment (transaction type 14 and any future transaction code(s) used for the same purpose) OR
(ii) 99.50% for Open Payment (transaction type 26 and any future transaction code(s) used for the same purpose),

But, in each case, less than 100.00%, the aggregate Metrolinx Revenue Based Fee for purposes of Section 7.3(b) *[Minimum Payment Protection]* shall also include the following amount on an aggregate basis, over that calendar year. The amount being equal to TLR X Metrolinx Revenue Based Fee. Each Transit Agency shall calculate all of the amounts it believes should be added to the Metrolinx Revenue Based Fee pursuant to this Section 12.2(h) and will provide such calculations to Metrolinx by February 1st of the succeeding year.

1.2 **Payment Device Service Availability CSL**

(1) Section 12.3(b)(ii) is amended and restated to read:

calculate all of the missed E-Purse Fare Payment transactions identified in step (i) above (the "**Total Missed E-Purse Taps**") for that calendar quarter, and all of the missed Open Payment transactions identified in step (i) above for that calendar quarter (the "**Total Missed Open Payment Taps**").

(2) Section 12.3(b)(iii) is amended and restated to read:

calculate and determine the total number of E-Purse Fare Payment transactions ("**Total Expected E-Purse Taps**") and the total number of Open Payment transactions ("**Total Expected Open Payment Taps**"), in each case, that would have occurred during that calendar quarter if the Payment Device Service Availability CSL was met at all times throughout the calendar quarter.

(3) Section 12.3(b)(iv) is amended and restated to read:

Calculate the “Actual Availability Percentage”, for:

(i) **E-Purse Fare Payment transactions**, which is equal to: [(Total Expected E-Purse Taps – Total Missed E-Purse Taps) / Total Expected E-Purse Taps] X 100.

(ii) **Open Payments transactions**, which is equal to: [(Total Expected Open Payments Taps – Total Missed Open Payments Taps) / Total Expected Open Payments Taps] X 100.

If the Actual Availability Percentage is:

A. greater than 98.00% for E-Purse Fare Payment transaction or greater than 99.50% for Open Payments transaction, that Transit Agency shall not be entitled to recover any lost revenues arising from, related to, or in connection with the failure of the Payment Device Service Availability CSL to be met.

B. less than 98.00% for E-Purse or less than 99.50% for Open Payments, that Transit Agency shall be entitled to recover lost revenues arising from, related to, or in connection with, the failure of the Payment Device Service Availability CSL to be met.

(4) Section 12.3(c) is amended and restated to read:

If, pursuant to Section 12.3(b)(iv)(B), a Transit Agency is entitled to recover lost revenues arising from, related to, or in connection with, the failure of the Payment Device Service Availability CSL to be met, and it chooses to seek compensation, it shall provide a Non-Performance Notice to Metrolinx detailing its claim, which notice shall include all of the information, data, calculations, and assumptions used by that Transit Agency in calculating and determining the Total Missed E-Purse Taps, the Total Missed Open Payment Taps, and the Total Expected E-Purse Taps, the Total Expected Open Payments Taps figures. If Metrolinx rejects the Non-Performance Notice, or any aspect of it, the matter shall be referred to dispute resolution in accordance with Article 15 [Dispute Resolution].

(5) Section 12.3 (d) is amended and restated to read:

The Non-Performance Notice shall also contain the dollar value of the lost revenues that a Transit Agency seeks to recover from Metrolinx (the “**Compensable Revenue Loss**”). The Parties agree that the Compensable Revenue Loss shall be calculated in the following manner for:

1. **E-Purse Fare Payment Transactions**:

(i) the Transit Agency shall calculate the “**Total Lost Revenue**” or “**TLR**”, which is equal to: (Total Missed E-Purse Taps X Average E-Purse Fare);

(ii) the Transit Agency shall calculate the “**Total Expected Revenue**” or “**TER**”, which is equal to: (Total Expected E-Purse Taps X Average E-Purse Fare)

(iii) Compensable Revenue Loss = [TLR – (TER X 2%)] X (100% – Metrolinx Revenue Based Fee), where:

A. Two percent (2%) is the amount of the expected revenue that the Transit Agency must lose before Metrolinx is liable (i.e., 100% – 98%)
B. The deduction relating to the Metrolinx Revenue Based Fee is based on Section 12.2(g) [Deduction of Metrolinx Revenue Based Fee]

2. **Open Payments Transactions**:

(i) the Transit Agency shall calculate the **"Total Lost Revenue**" or "**TLR**", which is equal to: (Total Missed Open Payments Taps X Average Open Payments Fare);
(ii) the Transit Agency shall calculate the "**Total Expected Revenue**" or "**TER**", which is equal to: (Total Expected Open Payments Taps X Average Open Payments Fare)
(iii) Compensable Revenue Loss = [TLR – (TER X 0.50%)] X (100% – Metrolinx Revenue Based Fee), where:

A. One-half percent (0.50%) is the amount of the expected revenue that the Transit Agency must lose before Metrolinx is liable (i.e., 100% – 99.50%)
B. The deduction relating to the Metrolinx Revenue Based Fee is based on Section 12.2(g) [Deduction of Metrolinx Revenue Based Fee]

2 GENERAL

2.1 Time shall be deemed to be of the essence in this First Amending Agreement.

2.2 Each Party agrees that it shall at any time and from time to time, at its own expense, execute and deliver such further documents and do such further acts and things as the other Party may reasonably request for the purpose of giving effect to this First Amending Agreement or carrying out the intention or facilitating the performance of the terms of this First Amending Agreement.

2.3 All other provisions in the Operating Agreement shall remain unamended.

2.4 All capitalized terms used but not defined herein shall have the meaning ascribed thereto in the Operating Agreement.

2.5 This First Amending Agreement is to be construed in accordance with and governed by the laws of the Province of Ontario. Any controversy or claim arising out of or relating to this Agreement or any breach thereof shall be settled in accordance with Dispute Resolution provisions as set out in Section 15 of the Operating Agreement.

2.6 If any provision of this First Amending Agreement as applied to either party in any circumstance is adjudged by a court to be invalid or unenforceable, this shall not affect any other provision of this Second Amending Agreement, the application of such provision in any other circumstance, or the validity or enforceability of this First Amending Agreement.

2.7 This First Amending Agreement may be signed in counterparts, in which case each counterpart shall constitute an original document and such counterparts, taken together, shall constitute one and the same instrument. The parties adopt any signatures received via fax or “pdf” format as original signatures.

IN WITNESS WHEREOF the parties have executed this First Amending Agreement as of _____, 2022.

METROLINX

Per: _____
Name:
Title:

Per: _____
Name:
Title:

THE CITY OF HAMILTON

Per: _____
Name:
Title:

Per: _____
Name:
Title:

THE REGIONAL MUNICIPALITY OF YORK

Per: _____
Name:
Title:

Per: _____
Name:
Title:

THE CORPORATION OF THE CITY OF MISSISSAUGA

Per: _____
Name:
Title:

Per: _____
Name:
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THE CORPORATION OF THE CITY OF BURLINGTON

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THE CORPORATION OF THE CITY OF BRAMPTON

Per: _____
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Per: _____
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Title:

THE CORPORATION OF THE TOWN OF OAKVILLE

Per: _____
Name:
Title:

Per: _____
Name:
Title:

THE REGIONAL MUNICIPALITY OF DURHAM

Per: _____
Name:
Title:

Per: _____
Name:
Title:

Hamilton

TERMS OF REFERENCE

Waste Management Advisory Committee

1. INTRODUCTION

1.1 Committee Name

Waste Management Advisory Committee (WMAC)

1.2 Statement of Purpose

To assist the City of Hamilton with the implementation of the 2012 Solid Waste Management Master Plan (SWMMP), 2020 SWMMP Action Items, and to discuss / make recommendations on other solid waste management initiatives.

1.3 Committee Mandate

The mandate of the Waste Management Advisory Committee shall be to:

a) Give overall guidance and direction during the implementation and maintenance of the City's long-term Solid Waste Management Master Plan,

b) Give overall guidance and direction during the preparation and implementation of other solid waste management initiatives; and

c) Advise Council through the Public Works Committee of the progress and to receive feedback, advice and direction, as appropriate.

1.4 Accountability

a) WMAC is a Volunteer Committee that advises Council through the Public Works Committee.

b) Members of the WMAC are responsible for complying with the Procedural By-law and the Advisory Committee Handbook.

2. COMMITTEE STRUCTURE

2.1 Membership

The Waste Management Advisory Committee shall be comprised of up to five (5) members, as follows:

a) Up to three members of City Council; and

b) Two citizen members.

2.2 Attendance and Vacancies

If a member is absent for three (3) meetings in a calendar year without approval from the WMAC, the member may be subject to replacement.

2.3 Term of Office

The membership term will coincide with the term of Council or until such time as successors are appointed by Council.

2.4 Representation

Quorum shall be 50% plus one, of the appointed Committee membership.

3. SUPPORT SERVICES

3.1 The City's Waste Management Division shall provide for the administrative costs of operating the Waste Management Advisory Committee, including the cost of meeting places and clerical support services.

3.2 The City's Waste Management Division shall provide the Waste Management Advisory Committee with reasonable access to the City's consultants and facility operators.

4. MEETINGS

4.1 The Waste Management Advisory Committee shall meet bi-monthly or at the call of the chair.

PLANNING COMMITTEE
REPORT
22-010

June 14, 2022
9:30 a.m.
Council Chambers, Hamilton City Hall
71 Main Street West

Present: Councillor B. Johnson (Chair)
Councillor L. Ferguson (1st Vice Chair),
Councillors M. Wilson (2nd Vice Chair),
J.P. Danko, J. Partridge, J. Farr, and M. Pearson

THE PLANNING COMMITTEE PRESENTS REPORT:

1. Active Official Plan Amendment, Zoning By-law Amendment, and Plan of Subdivision Applications (PED22127) (City Wide) (Item 7.1)

That Report PED22127 respecting the Active Official Plan Amendment, Zoning By-law Amendment, and Plan of Subdivision Applications, be received.

2. City of Hamilton's Response to Provincial Bill 109 – Implementation of Legislative Changes to Site Plan Approval (PED22112(a)) (City Wide) (Item 7.2)

(a) That By-laws No. 03-295 and No. 07-325 be repealed in their entirety;

(b) That the draft by-law regarding the legislative changes relating to site plan approval attached as Appendix “A” to Report PED22112(a), which has been prepared in a form satisfactory to the City Solicitor, be enacted by City Council.

3. Hamilton Municipal Heritage Committee Report 22-006 (Added Item 7.3)

(a) Cultural Heritage Assessment for 374 Jerseyville Road West, Ancaster (Ancaster High School) PED22113 (Ward 12) (Item 8.1)

That 374 Jerseyville Road West Ancaster and the properties in the broader area surrounding it as identified in Archaeological Services Inc.’s (ASI) Cultural Heritage Assessment, be added to the City’s Cultural Heritage Landscape Inventory and mapping as part of the Official Plan review exercise.

(b) Beasley Neighbourhood Inventory (PED22135) (Ward 2) (Item 8.2)

That staff be directed to list the properties identified in Appendix "A" to Report PED22135, as amended, and attached to Planning Committee Report 22-010 as Appendix "A", on the Municipal Heritage Register as non-designated properties that Council believes to be of cultural heritage value or interest in accordance with Section 27 of the Ontario Heritage Act.

(c) Inventory and Research Working Group Meeting Notes – April 25, 2022 (Added Item 10.1)

(i) 16 Steven St., Hamilton (The Pearl Company)

That the property located at 16 Steven St., Hamilton (The Pearl Company) be added to the Municipal Heritage Register due to its physical/design value as an early example of Hamilton's industrial architecture.

(ii) 115-117 George Street Hamilton

(a) That 115-117 George Street Hamilton, be added to Staff's Work Plan (low priority) for designation;

(b) That Staff be directed to work with the Property Owner during the development and construction process to conserve heritage attributes and use appropriate zoning procedures and site plan polices for conservation; and

(c) That Staff be directed to encourage the Property Owner to maintain a high level of property standards throughout the duration of the project to ensure the property is secured, protected and maintained to avoid demolition by neglect.

(iii) 374 Jerseyville Road West, Ancaster (Ancaster High School)

That the individual property at 374 Jerseyville Roast West, Ancaster (Ancaster High School), NOT be added to the Register, nor should it be added to Staff's Designation Workplan.

(c) That Item (j)(ii) in Hamilton Municipal Heritage Committee Report be amended as follows:

(ii) ~~Dofasco~~ Stelco Blast Furnace (Added Item 13.2)

The subject of the heritage importance of the ~~Dofasco~~ Stelco Blast Furnace was referred to the Inventory and Research Working Group for review, and report back to the Hamilton Municipal Heritage Committee.

4. Applications for a Rural Hamilton Official Plan Amendment and Zoning By-law Amendment for Lands Located at 5020 Tyneside Road, Glanbrook (PED22121) (Ward 11) (Item 9.1)

(a) That Rural Hamilton Official Plan Amendment Application RHOPA-21-015, by Landpro Planning Solutions c/o Adam Moote on behalf of Thomsen-Jung Farms Ltd., (Owner), to amend the Rural Hamilton Official Plan to establish a Special Policy Area within the "Agriculture" designation on the subject lands to permit a Consent Application for a lot severance with no frontage on a public road and to exempt the 122 metre maximum lot depth, for lands located at 5020 Tyneside Road, Glanbrook as shown on Appendix "A" attached to Report PED22121, be APPROVED on the following basis:

(i) That the draft Rural Hamilton Official Plan Amendment, attached as Appendix "B" to Report PED22121, which has been prepared in a form satisfactory to the City Solicitor, be enacted by Council;

(ii) That the proposed amendment is consistent with the Provincial Policy Statement (2020) and conforms to the Greenbelt Plan (2017);

(b) That Zoning By-law Amendment Application ZAC-21-032 by Landpro Planning Solutions c/o Adam Moote on behalf of Thomsen-Jung Farms Ltd., (Owner), for a change in zoning from Agriculture (A1) Zone, Conservation/Hazard Land-Rural (P7) Zone and Conservation/Hazard Land-Rural (P8) Zone to the Agriculture (A1, 118) Zone, Agriculture (A1, 777) Zone, Conservation/Hazard Land-Rural (P7, 777) Zone and Conservation/Hazard Land-Rural (P8, 777) Zone, in order to prohibit construction of a single detached dwelling and a residential care facility, and to recognize reduced lot width and no frontage on a public road, as required by the condition of Consent approval for lands located at 5020 Tyneside Road, as shown on Appendix "C" attached to Report PED22121, be APPROVED on the following basis:

(i) That the draft By-law, attached as Appendix "C" to Report PED22121, which has been prepared in a form satisfactory to the City Solicitor, be enacted by Council;

(ii) That the amending By-law be added to Schedule “C” of Zoning By-law No. 05-200;

(iii) That the proposed change in zoning is consistent with the Provincial Policy Statement (2020), conforms to the Greenbelt Plan (2017), and will comply with the Rural Hamilton Official Plan upon approval of Rural Hamilton Official Plan Amendment No. XX.

(c) That there were no public submissions received regarding this matter.

5. Applications for a Zoning By-law Amendment and Draft Plan of Condominium (Vacant) for lands located at 541-545 Fifty Road (PED22126) (Ward 10) (Item 9.2)

(a) That Zoning By-law Amendment Application ZAC-21-045, by IBI Group (c/o Jared Marcus) on behalf of Fifty Road Inc. (Owner), for a change in zoning from Rural Residential “RR” Zone and Neighbourhood Development “ND” Zone to Single Residential “R3-45” Zone, Modified, to permit 11 residential units for single detached dwellings and a private road as part of a Vacant Land Condominium for the lands located at 541 and 545 Fifty Road, as shown on Appendix “A” attached to Report PED22126, be APPROVED on the following basis:

(i) That the draft By-law, attached as Appendix “B” to Report PED22126 which has been prepared in a form satisfactory to the City Solicitor, be enacted by City Council;

(ii) That the proposed change in zoning is consistent with the Provincial Policy Statement (2020), and conforms to the Growth Plan for the Greater Golden Horseshoe (2019, as amended);

(iii) That the proposed change in zoning complies with the Urban Hamilton Official Plan;

(b) That Draft Plan of Condominium Application (Vacant Land) 25CDM-202120, by IBI Group (c/o Jared Marcus) on behalf of Fifty Road Inc. (Owner), to establish a Draft Plan of Condominium (Vacant Land) on lands located at 541 and 545 Fifty Road (Stoney Creek), as shown on Appendix “A”, attached to Report PED22126, be APPROVED subject to the following:

(i) That this approval apply to the Draft Plan of Condominium (Vacant Land) Application 25CDM-202120, prepared by IBI Group and certified by S.D. McLaren, O.L.S., dated September 1, 2021, consisting of 11 vacant land units for single detached dwellings, a private condominium road with associated sidewalks, 11 visitor

parking spaces, two barrier free parking spaces and centralized mailboxes, attached as Appendix “D” to Report PED22126, subject to the owner entering into a standard form condominium approval agreement as approved by City Council, and with Special Conditions attached as Appendix “E” to Report PED22126;

(ii) That Payment of Cash-in-Lieu or dedication of Parkland will be required, pursuant to Section 51 of the Planning Act, with the calculation for the payment to be based on the value of the lands on the day prior to the day of issuance of each building permit, all in accordance with the Financial Policies for Development and the City’s Parkland Dedication By-laws, as approved by Council;

(iii) In accordance with the City’s Comprehensive Development Guidelines and Financial Policies Manual (2017) there will be no cost sharing for this development.

(c) That the public submissions regarding this matter were received and considered by the Committee.

6. Application to Amend Zoning By-law No. 6593 for Lands Located at 16 Steven Street and part of 436 King William Street, Hamilton (PED22125) (Ward 3) (Item 9.3)

(a) That Zoning By-law Amendment Application ZAC-22-019, by T. Johns Consulting Group (c/o Diana Morris) on behalf of the Pearl Not-For-Profit Housing Corporation (c/o Brandon Gibson-DeGroote, Owner), for a change in zoning from the “D” (Urban Protected Residential – One and Two Family Dwellings, Etc.) District to the “DE-3/S-1820” (Multiple Dwellings) District, Modified, to permit the conversion of the existing three storey building into a 15 unit multiple dwelling with two parking spaces on lands located at 16 Steven Street and part of 436 King William Street (Hamilton), as shown on Appendix “A” attached to Report PED22125, be APPROVED on the following basis:

(i) That the draft By-law, attached as Appendix “B” to Report PED22125, which has been prepared in a form satisfactory to the City Solicitor, be enacted by City Council;

(ii) That the proposed change in zoning is consistent with the Provincial Policy Statement (2020), conforms to A Place to Grow: Growth Plan for the Greater Golden Horseshoe (2019), and will complies with the Urban Hamilton Official Plan;

(iii) That upon finalization of the amending By-law, the subject lands be redesignated from “Single and Double” to “High Density Apartments” in the Landsdale Neighbourhood Plan.

(b) That the public submissions regarding this matter were received and considered by the Committee.

7. Housekeeping Amendments to the Former City of Hamilton Zoning By-law No. 6593 and the Town of Glanbrook Zoning By-law No. 464 (PED22131) (City Wide) (Item 9.4)

(a) That approval be given to City Initiative CI 22-F for housekeeping amendments to the former City of Hamilton Zoning By-law No. 6593 on the following basis:

(i) That the Draft By-law, attached as Appendix “A” to Report PED22131, which has been prepared in a form satisfactory to the City Solicitor, be enacted by Council;

(ii) That the proposed changes in zoning are in conformity with the Urban Hamilton Official Plan (UHOP), Hamilton-Wentworth Regional Official Plan and City of Hamilton Official Plan;

(iii) That the proposed Zoning By-law Amendments are consistent with the Provincial Policy Statement (PPS), 2020 and conform to A Place to Grow: Growth Plan for the Greater Golden Horseshoe, 2019, as amended;

(b) That approval be given to City Initiative CI 22-F for a housekeeping amendment to the Town of Glanbrook Zoning By-law No. 464 on the following basis:

(i) That the Draft By-law, attached as Appendix “B” to Report PED22131, which has been prepared in a form satisfactory to the City Solicitor, be enacted by Council;

(ii) That the proposed changes in zoning are in conformity with the Urban Hamilton Official Plan (UHOP);

(iii) That the proposed Zoning By-law Amendment is consistent with the Provincial Policy Statement (PPS), 2020 and conforms to A Place to Grow: Growth Plan for the Greater Golden Horseshoe, 2019, as amended, and the Greenbelt Plan, 2017.

(c) That there were no public submissions received regarding this matter.

FOR INFORMATION:

(a) APPROVAL OF AGENDA (Item 2)

The Committee Clerk advised of the following changes to the agenda:

1. COMMUNICATION ITEMS (Item 5)

5.1 Matt Johnston, Urban Solutions, respecting a Minor Variance for Roxborough Park Subdivision

2. DELEGATION REQUESTS (Item 6)

6.1 Luca Giuliano respecting Jet Skis Launching from Bayfront Park (For today's meeting)

6.2 Marc Bader respecting the Cultural Heritage Designation of Ancaster High School grounds (Item 7.3) (For today's meeting)

6.3 Mark Giavedoni on behalf of the Hamilton-Wentworth District School Board respecting the Cultural Heritage Designation of the Ancaster High School grounds (Item 7.3) (For today's meeting)

3. CONSENT ITEMS (Item 7)

7.3 Hamilton Municipal Heritage Committee Report 22-006

The agenda for the June 14, 2022 Planning Committee meeting was approved, as amended.

(b) DECLARATIONS OF INTEREST (Item 3)

Councillor Danko declared a non-disqualifying interest with Items 6.2 Delegation Request from Marc Bader respecting Cultural Heritage Designation of Ancaster High School grounds, 6.3 Delegation Request from Mark Giavedoni respecting Cultural Heritage Designation of Ancaster High School grounds and 7.3 Hamilton Municipal Heritage Committee Report, Cultural Heritage Assessment for 374 Jerseyville Road West, Ancaster (Ancaster High School) PED22113 (Ward 12), as his spouse is employed by the Hamilton-Wentworth District School Board.

(c) APPROVAL OF MINUTES OF PREVIOUS MEETING (Item 4)

(i) May 31, 2022 (Item 4.1)

The Minutes of the May 31, 2022 meeting were approved, as presented.

(d) COMMUNICATIONS (Item 5)

(i) Matt Johnston, Urban Solutions, respecting a Minor Variance for Roxborough Park Subdivision (Added Item 5.1)

The correspondence from Matt Johnston, Urban Solutions, respecting a Minor Variance for Roxborough Park Subdivision, was DEFERRED to the July 5, 2022 Planning Committee meeting.

(e) DELEGATION REQUESTS (Item 6)

(i) Various Delegation Requests (Added Items 6.1 – 6.3) (For today's meeting)

The following Delegation Requests were approved for today's meeting:

(i) Luca Giuliano respecting Jet Skis Launching from Bayfront Park (Added Item 6.1) (To be heard before Item 9.1)

(ii) Marc Bader respecting the Cultural Heritage Designation of Ancaster High School grounds (Item 7.3) (Added Item 6.2) (To be heard before Item 7.3)

(iii) Mark Giavedoni on behalf of the Hamilton-Wentworth District School Board respecting the Cultural Heritage Designation of the Ancaster High School grounds (Item 7.3) (Added Item 6.3) (To be heard before Item 7.3)

(f) PUBLIC HEARINGS / DELEGATIONS (Item 9)

(i) Delegations respecting the Cultural Heritage Designation of Ancaster High School grounds (Added Item 7.3)

The following Delegations addressed the Committee respecting the Cultural Heritage Designation of Ancaster High School grounds (Item 7.3):

(i) Marc Bader (Added Item 9.5)
(ii) Mark Giavedoni, with the Hamilton-Wentworth District School Board (Added Item 9.6)

The following Delegations respecting the Cultural Heritage Designation of Ancaster High School grounds (Added Item 7.3), were received:

(i) Marc Bader (Added Item 9.5)

(ii) Mark Giavedoni, with the Hamilton-Wentworth District School Board (Added Item 9.6)

For disposition of this matter, refer to Item 3 and (g)(i).

(g) CONSENT ITEMS (Item 7)

(i) Hamilton Municipal Heritage Committee Report 22-006 (Added Item 7.3)

(a) Cultural Heritage Assessment for 374 Jerseyville Road West, Ancaster (Ancaster High School) PED22113 (Ward 12) (Item 8.1)

Upon Committee's request, Item 3(a) respecting Cultural Heritage Assessment for 374 Jerseyville Road West, Ancaster (Ancaster High School) PED22113 (Ward 12) (Item 8.1), was voted on separately.

For disposition of this matter, refer to Item 3(a).

(b) Beasley Neighbourhood Inventory (PED22135) (Ward 2) (Item 8.2)

Appendix "A" to Hamilton Municipal Heritage Committee Report 22-006 respecting the Beasley Neighbourhood Inventory, was ***amended*** by removing the following properties from the Beasley Neighbourhood Inventory:

- 210 Catharine Street North
- 286 Hughson Street North
- 203-213 James Street North
- 229, 235, 241, 245 and 274 James Street North
- 217 John Street North
- 164 Mary Street
- 198 Mary Street
- 197 Wellington Street North

Item (j)(ii) in Hamilton Municipal Heritage Committee Report was ***amended*** as follows:

(ii) ~~Dofasco~~ *Stelco* Blast Furnace (Added Item 13.2)

The subject of the heritage importance of the ~~Dofasco~~ ***Stelco*** Blast Furnace was referred to the Inventory and Research Working

Group for review, and report back to the Hamilton Municipal Heritage Committee.

For disposition of this matter, refer to Item 3.

(h) PUBLIC HEARINGS / DELEGATIONS (Item 9) - Continued

(i) Luca Giuliano respecting Jet Skis Launching from Bayfront Park (Added Item 6.1) (To be heard before Item 9.7)

Luca Giuliano addressed the Committee respecting Jet Skis Launching from Bayfront Park.

The Delegation from Luca Giuliano respecting Jet Skis Launching from Bayfront Park, was received.

In accordance with the *Planning Act*, Chair Johnson advised those viewing the meeting that the public had been advised of how to pre-register to be a delegate at the Public Meetings on today's agenda.

In accordance with the provisions of the *Planning Act*, Chair Johnson advised that if a person or public body does not make oral submissions at a public meeting or make written submissions to the Council of the City of Hamilton before Council makes a decision regarding the Development applications before the Committee today, the person or public body is not entitled to appeal the decision of the Council of the City of Hamilton to the Ontario Land Tribunal, and the person or public body may not be added as a party to the hearing of an appeal before the Ontario Land Tribunal unless, in the opinion of the Tribunal, there are reasonable grounds to do so.

Councillor Johnson relinquished the Chair to Councillor Ferguson.

(ii) Applications for a Rural Hamilton Official Plan Amendment and Zoning By-law Amendment for Lands Located at 5020 Tyneside Road, Glanbrook (PED22121) (Ward 11) (Item 9.1)

No members of the public were registered as delegations.

The staff presentation was waived.

Michael Sullivan with LandPro Planning Solutions, was in attendance and indicated support for the staff report.

The delegation from Michael Sullivan with LandPro Planning Solutions, was received.

The Chair called for public delegations in attendance and no members of the public came forward.

The public meeting was closed.

(a) That Rural Hamilton Official Plan Amendment Application RHOPA-21-015, by Landpro Planning Solutions c/o Adam Moote on behalf of Thomsen-Jung Farms Ltd., (Owner), to amend the Rural Hamilton Official Plan to establish a Special Policy Area within the "Agriculture" designation on the subject lands to permit a Consent Application for a lot severance with no frontage on a public road and to exempt the 122 metre maximum lot depth, for lands located at 5020 Tyneside Road, Glanbrook as shown on Appendix "A" attached to Report PED22121, be APPROVED on the following basis:

(i) That the draft Rural Hamilton Official Plan Amendment, attached as Appendix "B" to Report PED22121, which has been prepared in a form satisfactory to the City Solicitor, be enacted by Council;

(ii) That the proposed amendment is consistent with the Provincial Policy Statement (2020) and conforms to the Greenbelt Plan (2017);

(b) That Zoning By-law Amendment Application ZAC-21-032 by Landpro Planning Solutions c/o Adam Moote on behalf of Thomsen-Jung Farms Ltd., (Owner), for a change in zoning from Agriculture (A1) Zone, Conservation/Hazard Land-Rural (P7) Zone and Conservation/Hazard Land-Rural (P8) Zone to the Agriculture (A1, 118) Zone, Agriculture (A1, 777) Zone, Conservation/Hazard Land-Rural (P7, 777) Zone and Conservation/Hazard Land-Rural (P8, 777) Zone, in order to prohibit construction of a single detached dwelling and a residential care facility, and to recognize reduced lot width and no frontage on a public road, as required by the condition of Consent approval for lands located at 5020 Tyneside Road, as shown on Appendix "C" attached to Report PED22121, be APPROVED on the following basis:

(i) That the draft By-law, attached as Appendix "C" to Report PED22121, which has been prepared in a form satisfactory to the City Solicitor, be enacted by Council;

(ii) That the amending By-law be added to Schedule "C" of Zoning By-law No. 05-200;

(iii) That the proposed change in zoning is consistent with the Provincial Policy Statement (2020), conforms to the Greenbelt Plan (2017), and will comply with the Rural Hamilton Official Plan upon approval of Rural Hamilton Official Plan Amendment No. XX.

The recommendations in Report PED22121 were ***amended*** by adding the following sub-section (c):

(c) That there were no public submissions regarding this matter were received and considered by the Committee.

For disposition of this matter, refer to Item 4.

Councillor Johnson assumed the Chair.

(iii) Applications for a Zoning By-law Amendment and Draft Plan of Condominium (Vacant) for lands located at 541-545 Fifty Road (PED22126) (Ward 10) (Item 9.2)

No members of the public were registered as Delegations.

The staff presentation was waived.

John Ariens with IBI Group, was in attendance and indicated support for the staff report.

The delegation from John Ariens with IBI Group, was received.

The Chair called for public delegations in attendance and no members of the public came forward.

The public meeting was closed.

(a) That Zoning By-law Amendment Application ZAC-20-026, by UrbanSolutions Planning & Land Development Consultants Inc. on behalf of 256 First Road West Inc., for a change in zoning from the Neighbourhood Development “ND” Zone to the Multiple Residential “RM3-70(H)” Zone, Modified, Holding in order to permit 25 townhouse units for lands located at 250-256 First Road West, Stoney Creek, as shown on Appendix “A” attached to Report PED22097, be APPROVED on the following basis:

(i) That the draft By-law, attached as Appendix “B” to Report PED22097, which has been prepared in a form satisfactory to the City Solicitor, be enacted by City Council;

(ii) That the amending By-law apply the Holding Provision of Section 36(1) of the Planning Act, R.S.O. 1990 to the subject lands by introducing the Holding symbol ‘H’ as a suffix to the proposed zoning for the following:

(1) The Holding Provision for the Multiple Residential “RM3-70(H)” Zone, Modified, Holding, shall be removed when the following conditions have been met:

(a) That there is adequate sanitary service capacity available to the subject lands and that it can be demonstrated that there are appropriate sanitary sewer connections available to the subject lands, to the satisfaction of the Director of Growth Management;

(iii) That the proposed amendment is consistent with the Provincial Policy Statement (2020), conforms to the Growth Plan for the Greater Golden Horseshoe (2019, as amended) and complies with the Urban Hamilton Official Plan.

The recommendations in Report PED22126 were ***amended*** by adding the following sub-section (b):

(b) That the public submissions regarding this matter were received and considered by the Committee.

For disposition of this matter, refer to Item 5.

(iv) Application to Amend Zoning By-law No. 6593 for Lands Located at 16 Steven Street and part of 436 King William Street, Hamilton (PED22125) (Ward 3) (Item 9.3)

No members of the public were registered as Delegations.

The staff presentation was waived.

Diana Morris with T. Johns Consulting, was in attendance and indicated support for the staff report.

The delegation from Diana Morris with T. Johns Consulting, was received.

The Chair called for public delegations in attendance and no members of the public came forward.

The public meeting was closed.

(a) That Zoning By-law Amendment Application ZAC-22-019, by T. Johns Consulting Group (c/o Diana Morris) on behalf of the Pearl Not-For-Profit Housing Corporation (c/o Brandon Gibson-DeGroote, Owner), for a change in zoning from the "D" (Urban Protected Residential – One and Two Family Dwellings, Etc.) District to the "DE-3/S-1820" (Multiple Dwellings) District, Modified, to permit the conversion of the existing three storey building into a 15 unit multiple dwelling with two parking spaces on lands located at 16 Steven Street and part of 436 King William Street (Hamilton), as shown on Appendix "A" attached to Report PED22125, be APPROVED on the following basis:

(i) That the draft By-law, attached as Appendix "B" to Report PED22125, which has been prepared in a form satisfactory to the City Solicitor, be enacted by City Council;

(ii) That the proposed change in zoning is consistent with the Provincial Policy Statement (2020), conforms to A Place to Grow: Growth Plan for the Greater Golden Horseshoe (2019), and will complies with the Urban Hamilton Official Plan;

(iii) That upon finalization of the amending By-law, the subject lands be redesignated from "Single and Double" to "High Density Apartments" in the Landsdale Neighbourhood Plan.

The recommendations in Report PED22125 were ***amended*** by adding the following sub-section (b):

(b) That the public submissions regarding this matter were received and considered by the Committee.

For disposition of this matter, refer to Item 6.

(v) Housekeeping Amendments to the Former City of Hamilton Zoning By-law No. 6593 and the Town of Glanbrook Zoning By-law No. 464 (PED22131) (City Wide) (Item 9.4)

Emily Coe, Supervisor of Zoning, addressed the Committee with the aid of a PowerPoint presentation.

The staff presentation was received.

The Chair called for public delegations in attendance and no members of the public came forward.

The public meeting was closed.

(a) That approval be given to City Initiative CI 22-F for housekeeping amendments to the former City of Hamilton Zoning By-law No. 6593 on the following basis:

(i) That the Draft By-law, attached as Appendix “A” to Report PED22131, which has been prepared in a form satisfactory to the City Solicitor, be enacted by Council;

(ii) That the proposed changes in zoning are in conformity with the Urban Hamilton Official Plan (UHOP), Hamilton-Wentworth Regional Official Plan and City of Hamilton Official Plan;

(iii) That the proposed Zoning By-law Amendments are consistent with the Provincial Policy Statement (PPS), 2020 and conform to A Place to Grow: Growth Plan for the Greater Golden Horseshoe, 2019, as amended;

(b) That approval be given to City Initiative CI 22-F for a housekeeping amendment to the Town of Glanbrook Zoning By-law No. 464 on the following basis:

(i) That the Draft By-law, attached as Appendix “B” to Report PED22131, which has been prepared in a form satisfactory to the City Solicitor, be enacted by Council;

(ii) That the proposed changes in zoning are in conformity with the Urban Hamilton Official Plan (UHOP);

(iii) That the proposed Zoning By-law Amendment is consistent with the Provincial Policy Statement (PPS), 2020 and

conforms to A Place to Grow: Growth Plan for the Greater Golden Horseshoe, 2019, as amended, and the Greenbelt Plan, 2017.

The recommendations in Report PED22131 were ***amended*** by adding the following sub-section (c):

(c) That there were no public submissions received regarding this matter.

For disposition of this matter, refer to Item 7.

(i) PRIVATE AND CONFIDENTIAL (Item 14)

(i) Closed Session Minutes, May 31, 2022

(a) The Closed Session Minutes of the May 31, 2022 Planning Committee meeting, were approved; and

(b) The Closed Session Minutes of the May 31, 2022 Planning Committee meeting, are to remain confidential.

(j) ADJOURNMENT (Item 15)

There being no further business, the Planning Committee adjourned at 12:13 p.m.

_____
Councillor B. Johnson
Chair, Planning Committee

_____
Lisa Kelsey
Legislative Coordinator

Beasley Inventory - Map of Properties Recommended for Listing on the Register

Beasley Inventory – REVISED List of Properties Recommended for Listing on the Register (revised at Planning Committee, June 14, 2022)

Address	
11	BARTON ST E
23	BARTON ST E
27	BARTON ST E
28	BARTON ST E
29	BARTON ST E
32	BARTON ST E
37	BARTON ST E
50	BARTON ST E
52	BARTON ST E
54	BARTON ST E
56	BARTON ST E
57 - 61	BARTON ST E
62 - 74	BARTON ST E
73	BARTON ST E
75	BARTON ST E
77	BARTON ST E
79	BARTON ST E
80 - 92	BARTON ST E
81	BARTON ST E
83 - 83 1/2	BARTON ST E
85	BARTON ST E
101 - 105	BARTON ST E
107	BARTON ST E
108	BARTON ST E
110	BARTON ST E
112	BARTON ST E
117	BARTON ST E
130 - 140	BARTON ST E
144	BARTON ST E
73	CANNON ST E
99	CANNON ST E
101	CANNON ST E
103	CANNON ST E
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111	CANNON ST E
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Address	
115	CANNON ST E
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157	CATHARINE ST N
164	CATHARINE ST N
166	CATHARINE ST N
167	CATHARINE ST N
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169	CATHARINE ST N
170	CATHARINE ST N
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327	CATHARINE ST N
93	CATHCART ST
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240 - 242	JAMES ST N
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282	JAMES ST N
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315	MARY ST
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43	MURRAY ST E
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199	WELLINGTON ST N
203	WELLINGTON ST N

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GENERAL ISSUES COMMITTEE
REPORT 22-012

9:30 a.m.
June 15, 2022
Council Chambers, City Hall, 2nd Floor
71 Main Street West, Hamilton, Ontario

Present: Mayor F. Eisenberger, Deputy Mayor B. Johnson (Chair)
Councillors M. Wilson, J. Farr, N. Nann, R. Powers, E. Pauls, J.P. Danko, B Clark, M. Pearson, L. Ferguson, A. VanderBeek, J. Partridge

Absent: Councillors S. Merulla, T. Jackson, T. Whitehead – Personal

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THE GENERAL ISSUES COMMITTEE PRESENTS REPORT 22-012, AND RESPECTFULLY RECOMMENDS:

1. Correspondence from Robert Cooper, respecting Natural Science (Item 5.1)

That the correspondence from Robert Cooper, respecting Natural Science, be referred to the Board of Health for discussion.

2. 2022 Tim Hortons NHL Heritage Classic Update (PED22141) (City Wide) (Item 7.1)

That Report PED22141, respecting the 2022 Tim Hortons NHL Heritage Classic Update, be received.

3. 2021 Grey Cup Update (PED18234(g)) (City Wide) (Item 7.2)

That Report PED18234(g), respecting the 2021 Grey Cup Update, be received.

4. Core Asset Management Plan (PW22048) (City Wide) (Item 8.1)

(a) That the Corporate Asset Management Plan Overview and Core Asset Management Plans, attached as Appendices “A”, “B”, and “C” to Report

22-012, be approved, as required by Ontario Regulation 588/17: Asset Management for Municipal Infrastructure;

(b) That staff be authorized and directed to extend the office of Corporate Asset Management permanently, to be reviewed in 2025;

(c) That staff be directed to include costs associated with the continued operation of the Corporate Asset Management office, in the 2023 Capital and Operating Budgets for consideration; and,

(d) That the Mayor and the City's Government Relations Office be directed to advocate to both Federal and Provincial governments, as appropriate, for shared Core Assessment Management funding for the City of Hamilton.

5. Pilot Program, Partnership Between Hamilton Civic Museums and the Hamilton Public Library for Free Museum Admission (PED20069(a)) (City Wide) (Item 10.1)

(a) That staff be directed to extend the Pilot Program, Partnership Between Hamilton Civic Museums and the Hamilton Public Library for Free Museum Admission, for a period of two years, until March 25, 2024; and,

(b) That staff be directed to continue to monitor the impact of this program on Hamilton Civic Museums' revenue, attendance and visitor demographics and report back to the General Issues Committee for direction.

6. Capital Projects Work-in-Progress Review Sub-Committee Report 22-002 – May 26, 2022 (Item 10.2)

(a) Capital Project Closing Report as of December 31, 2021 (FCS21080(b)) (City Wide) (Item 10.1)

(i) That the General Manager, Finance and Corporate Services, be authorized and directed to transfer a net amount of $314,962 to the Unallocated Capital Levy Reserve (108020) and draw $8,052 from other reserves, as outlined in Appendix "D" attached to Report 22-012;

(ii) That the General Manager, Finance and Corporate Services, be authorized and directed to close the completed and / or cancelled capital projects listed in Appendix "E" attached to Report 22-012, in accordance with the Capital Projects Closing and Monitoring Policy;

(iii) That Appendix “C” attached to Report FCS21080(b), Capital Projects Budget Appropriations for the period covering October 1, 2021 through December 31, 2021, be received as information;

(iv) That Appendix “F” attached to Report 22-012, Capital Projects Budget Appropriations of $250,000 or greater and Capital Project Reserve Funding Requiring Council Approval, be approved; and,

(v) That Appendix “G” attached to Report 22-012, Capital Projects Requiring a Budget Adjustment, be approved.

(b) Capital Projects Status Report as of December 31, 2021 (FCS21079(b)) (City Wide) (Item 10.2)

(i) That Appendix “A” to Report FCS21079(b), respecting Capital Projects Status Report – Tax Supported, as of December 31, 2021, be received;

(ii) That Appendix “B” to Report FCS21079(b), respecting Capital Projects Status Report – Rate Supported, as of December 31, 2021, be received; and,

(iii) That Confidential Appendix “C” to Report FCS21079(b), respecting Capital Projects Status Report as of December 31, 2021, be received and remain confidential.

7. Environmental Remediation and Site Enhancement (ERASE) Redevelopment Grant Application, 405 James Street North, Hamilton ERG-19-06 (PED22107/FCS22035) (Ward 2) (Item 10.3)

(a) That the terms for the Environmental Remediation and Site Enhancement (ERASE) Redevelopment Grant Program, being Appendix “B” to the ERASE Community Improvement Plan, be amended as outlined and highlighted in yellow in Appendix “H” attached to Report 22-012;

(b) That Environmental Remediation and Site Enhancement (ERASE) Redevelopment Grant (ERG) Program application ERG-19-06, submitted by CityHousing Hamilton Corporation (CHH), owner of the property at 405 James Street North, Hamilton (the site), for a Grant not to exceed $1,744,445, for estimated eligible building demolition costs, provided over a maximum of ten (10) years, be authorized and approved, in accordance with the terms and conditions of the ERASE Redevelopment Agreement and the following additional conditions:

(i) That approval of the Grant application be transferred from CityHousing Hamilton Corporation to Jamesville Redevelopment Limited Partnership (JRLP) if/when JRLP becomes the registered owner of the site; and,

(ii) That approval of the Grant shall not prejudice or fetter City Council's discretion with respect to any current or future *Planning Act* application(s) regarding the site, including, but not limited to, Official Plan and / or Zoning By-law amendment applications;

(c) That, subject to approval of Recommendation (b) of Report PED22107 / FCS22035, the General Manager of Planning and Economic Development Department be authorized and directed to execute, on behalf of the City, the Environmental Remediation and Site Enhancement (ERASE) Redevelopment Agreement together with any ancillary documentation required to give effect to the approval of Program application ERG-19-06 and the ERASE Redevelopment Grant to CityHousing Hamilton Corporation, owner of the property at 405 James Street North, Hamilton and / or the intended subsequent property owner being Jamesville Redevelopment Limited Partnership, at such time, as the proposed development has received, at minimum, conditional Site Plan approval and that such agreements and ancillary documentation be in a form satisfactory to the City Solicitor;

(d) That, subject to approval of Recommendations (b) and (c) of Report PED22107 / FCS22035, the General Manager of the Planning and Economic Development Department be authorized and directed to administer the ERASE Redevelopment Grant and the ERASE Redevelopment Agreement including, but not limited to, implementing any appropriate actions in respect of events of default and executing any appropriate amending agreements and ancillary documentation, all in accordance with the terms and conditions of the ERG Program, as approved by City Council and all in a form satisfactory to the City Solicitor; and,

(e) That, subject to approval of Recommendations (b) through (d) of Report PED22107 / FCS22035, the General Manager, Finance and Corporate Services, be authorized to execute, on behalf of the City, the City's ERASE Development Charge Deferral Agreement augmented by the additional terms and conditions outlined in Appendix "B" attached to Report PED22107 / FCS22035, in a form satisfactory to the City Solicitor.

8. Restricted Acts After Nomination Day Delegated Authority (City Wide) (CM22009) (Item 10.4)

That the By-Law to Delegate Authority during any Restricted Period following Nomination Day, attached as Appendix "A" to Report CM22009, which has been prepared in a form satisfactory to the City Solicitor, be enacted.

9. Revitalizing Hamilton Tax Increment Grant – 16 West Avenue South (PED22115) (Ward 3) (Item 10.5)

(a) That a Revitalizing Hamilton Tax Increment Grant Program (RHTIG) Application submitted by Crood Holdings Limited (Tal Dehtiar), for the property at 16 West Avenue South, Hamilton, estimated at $92,619.68 over a maximum of a four (4) year period, and based upon the incremental tax increase attributable to the redevelopment of 16 West Avenue South, Hamilton, be authorized and approved, in accordance with the terms and conditions of the RHTIG;

(b) That the Mayor and City Clerk be authorized and directed to execute a Grant Agreement together with any ancillary documentation required, to give effect to the Revitalizing Hamilton Tax Increment Grant Program for Crood Holdings Limited (Tal Dehtiar) for the property known as 16 West Avenue South, Hamilton, in a form satisfactory to the City Solicitor; and,

(c) That the General Manager of the Planning and Economic Development Department be authorized and directed to administer the Grant and Grant Agreement including, but not limited to, deciding on actions to take in respect of events of default and executing any Grant Amending Agreements, together with any ancillary amending documentation, if required, provided that the terms and conditions of the Revitalizing Hamilton Tax Increment Grant Program, as approved by City Council, are maintained.

10. Advisory Committee for Persons with Disabilities Report 22-006, May 24, 2022 (Item 10.6)

(a) Resignation of Paula Kilburn from the Outreach Working Group of the Advisory Committee for Persons with Disabilities (Item 7.3)

That the resignation of Paula Kilburn from the Outreach Working Group of the Advisory Committee for Persons with Disabilities, be received.

(b) Resignation of Kim Nolan from the Transportation Working Group of the Advisory Committee for Persons with Disabilities (Item 7.4)

That the resignation of Kim Nolan from the Transportation Working Group of the Advisory Committee for Persons with Disabilities, be received.

(c) Resignation of Paula Kilburn from the Strategic Planning Working Group of the Advisory Committee for Persons with Disabilities (Item 7.5)

That the resignation of Paula Kilburn from the Strategic Planning Working Group of the Advisory Committee for Persons with Disabilities, be received.

(d) Reimbursement for the Purchase of Plants as Get-Well Gifts (Item 11.1)

(i) That reimbursement to Aznive Mallett, in the amount of $37.26, including HST, for the purchase of plants from House of Flowers in Ancaster as get-well gifts for two members of the Advisory Committee for Persons with Disabilities, be approved; and,

(ii) That a plant be purchased for Patty Cameron on behalf of the Advisory Committee for Persons with Disabilities to express the Committee's condolences on her loss.

(e) Policies and Procedures to Rescue and Safely Transport Stranded Pedestrians and their Mobility Devices (Item 11.2)

That the following resolution be referred to staff for a report back to the General Issues Committee:

WHEREAS, there have been an alarming increase in encounters between pedestrians and vehicles in recent months;

WHEREAS, persons with disabilities, especially those who use mobility devices, are particularly vulnerable as pedestrians;

WHEREAS, persons who use mobility devices are susceptible to having their devices malfunction, stranding them in precarious traffic situations; and,

WHEREAS, the Advisory Committee for Persons with Disabilities (ACPD), have advised stakeholders including the Police Service, Fire Department, Paramedic Service, Hamilton Street Railway (HSR), Disabled and Aged Regional Transportation Service (DARTS), Taxicab Companies and Mobility Device Repair Contractors of the need for a coordinated rescue plan in the City of Hamilton for persons who experience an incapacitated mobility device.

THEREFORE, BE IT RESOLVED:

That staff be directed to investigate developing policies and procedures to rescue and safely transport stranded pedestrians and their mobility devices to an appropriate secure location.

(f) Advisory Committee for Persons with Disabilities Guidance to Hamilton BIA Communities on How to Make Outdoor Dining Locations Fully Accessible (Item 11.3)

WHEREAS, Council approved the Permanent Program for Temporary (seasonal) Outdoor dining Patios in the City of Hamilton, effective in 2022;

WHEREAS, the Temporary Outdoor dining Patios Program was made permanent by City Council in spite of the concern of the Advisory Committee for Persons with Disabilities (ACPD) that there were no specific provisions or obligations for outdoor dining facilities to be accessible and no prohibition to occupying pedestrian pathways; and

WHEREAS, there are opportunities to help make outdoor dining facilities accessible through consultation with the ACPD and its Accessible Outdoor Spaces and Parklands Working Group.

THEREFORE, BE IT RESOLVED:

(a) That the Advisory Committee for Persons with Disabilities (ACPD), in collaboration with the ACPD Outreach Working Group, work with staff to develop print materials, to come back to ACPD for approval, for dissemination to Hamilton BIA communities to provide guidance on how to ensure outdoor dining is fully accessible including space, facilities, amenities and services; and,

(b) That the Hamilton BIA communities be advised that the ACPD and its Accessible Outdoor Spaces and Parklands Working Group are available to establishments that have outdoor dining facilities should they require advice or guidance on how to make their

outdoor dining locations fully accessible including their space, facilities, amenities and services.

(g) Correspondence to the General Issues Committee Respecting Homeless Encampments (Item 11.4)

That the correspondence to the General Issues Committee from the Advisory Committee for Persons with Disabilities respecting Homeless Encampments attached as Appendix “A”, be approved.

(h) Invitation to Dr. Lovaye Kajiura, McMaster IMPACT Initiative, to Attend a Future Meeting of the Advisory Committee for Persons with Disabilities (Item 11.5)

WHEREAS, the McMaster IMPACT Initiative is an interdisciplinary collaboration that engages students and volunteer clients in a learning process whereby students come together to understand, appreciate and address challenges experienced by our aging population and people living with disabilities; and,

WHEREAS, Dr. Lovaye Kajiura is one of the co-leaders of the McMaster IMPACT Initiative;

THEREFORE, BE IT RESOLVED:

That Dr. Lovaye Kajiura be invited to attend a future meeting of the Advisory Committee for Persons with Disabilities to present respecting the McMaster IMPACT Initiative.

(i) Invitation to the Director of Transit, City of Hamilton, to Attend a Future Meeting of the Advisory Committee for Persons with Disabilities (Item 11.6)

WHEREAS, the Advisory Committee for Persons with Disabilities will benefit from meeting with the City of Hamilton’s Director of Transit to discuss topics of interest to the Advisory Committee for Persons with Disabilities related to Transit Services;

THEREFORE, BE IT RESOLVED:

That the City of Hamilton’s Director of Transit be invited to attend a future regular or special meeting of the Advisory Committee for Persons with

Disabilities to discuss topics of interest to the Committee related to Transit Services.

FOR INFORMATION:

(a) APPROVAL OF AGENDA (Item 2)

The Committee Clerk advised that there were no changes the agenda.

The agenda for the June 15, 2022 General Issues Committee meeting was approved, as presented.

(b) DECLARATIONS OF INTEREST (Item 3)

There were no declarations of interest.

(c) APPROVAL OF MINUTES OF PREVIOUS MEETINGS (Item 4)

(i) June 1, 2022 (Item 4.1)

The Minutes of the June 1, 2022 General Issues Committee meeting were approved, as presented.

(d) STAFF PRESENTATIONS (Item 8)

(i) Core Asset Management Plan (PW22048) (City Wide) (Item 8.1)

Patricia Leishman, Director, Corporate Asset Management, Public Works Department, provided a PowerPoint presentation respecting Report PW22048, Core Asset Management Plan, and answered questions of Committee.

The presentation, respecting Report PW22048, Core Asset Management Plan was received.

Report PW22048, respecting the Core Asset Management Plan, was amended by adding new sub-sections (b), (c) and (d), to read as follows:

(a) That the Corporate Asset Management Plan Overview and Core Asset Management Plans, attached as Appendices “A”, “B”, and “C” to Report

PW22048, be approved, as required by Ontario Regulation 588/17: Asset Management for Municipal Infrastructure;

(b) That staff be authorized and directed to extend the office of Corporate Asset Management permanently, to be reviewed in 2025;

(c) That staff be directed to include costs associated with the continued operation of the Corporate Asset Management office, in the 2023 Capital and Operating Budgets for consideration; and,

(d) That the Mayor and the City's Government Relations Office be directed to advocate to both Federal and Provincial governments, as appropriate, for shared Core Assessment Management funding for the City of Hamilton.

For disposition of this matter, please refer to Item 4.

(e) DISCUSSION ITEMS (Item 10)

(i) Advisory Committee for Persons with Disabilities Report 22-006, May 24, 2022 (Item 10.6)

The following resolution was referred to staff for a report back to the General Issues Committee:

(e) Policies and Procedures to Rescue and Safely Transport Stranded Pedestrians and their Mobility Devices (Item 11.2)

WHEREAS, there have been an alarming increase in encounters between pedestrians and vehicles in recent months;

WHEREAS, persons with disabilities, especially those who use mobility devices, are particularly vulnerable as pedestrians;

WHEREAS, persons who use mobility devices are susceptible to having their devices malfunction, stranding them in precarious traffic situations; and,

WHEREAS, the Advisory Committee for Persons with Disabilities (ACPD), have advised stakeholders including the Police Service, Fire Department, Paramedic Service, Hamilton Street Railway (HSR), Disabled and Aged Regional Transportation Service (DARTS), Taxicab Companies and Mobility Device Repair Contractors of the need for a coordinated rescue plan in the City of Hamilton for persons who experience an incapacitated mobility device.

THEREFORE, BE IT RESOLVED:

That staff be directed to investigate developing policies and procedures to rescue and safely transport stranded pedestrians and their mobility devices to an appropriate secure location.

For disposition of this matter, please refer to Item 10.

(f) GENERAL INFORMATION / OTHER BUSINESS (Item 13)

(i) Amendments to the Outstanding Business List (Item 13.1)

The following amendment to the General Issues Committee's Outstanding Business List was approved:

(1) Proposed New Due Dates: (Item 13.1.a)

(aa) Community Benefits Protocol Advisory Committee (Item 13.1.a.a.)
Current Due Date: June 15, 2022
Proposed New Due Date: August 8, 2022

(g) PRIVATE & CONFIDENTIAL (Item 14)

(i) Closed Session Minutes – June 1, 2022 (Item 14.1)

(a) The Closed Session Minutes of the June 1, 2022 General Issues Committee meeting were approved; and,

(b) The Closed Session Minutes of the June 1, 2022 General Issues Committee meeting shall remain confidential.

(h) ADJOURNMENT (Item 15)

There being no further business, the General Issues Committee adjourned at 12:19 p.m.

Respectfully submitted,

_____
Brenda Johnson, Deputy Mayor
Chair, General Issues Committee

_____
Stephanie Paparella
Legislative Coordinator,
Office of the City Clerk

CORPORATE ASSET MANAGEMENT PLAN OVERVIEW

Hamilton

CORPORATE ASSET MANAGEMENT PLAN OVERVIEW

EXECUTIVE SUMMARY

This is the first iteration of the Core Asset Management (AM) Plans completed by the Corporate Asset Management (CAM) office in partnership with over fifty asset owners and key stakeholders across the City. The intent of these first plans is to meet Ontario Regulation 588/17: Asset Management Planning for Municipal Infrastructure (O. Reg. 588/17) requirements including establishing the current levels of service, and setting a benchmark for the City's core assets (water, wastewater, stormwater, roads and engineered structures) in order to identify continuous improvement items for the next iteration of the AM Plans. The intent is also to support addressing findings from the Roads Value for Money Audit (AUD21006) report related to asset management.

A key output of an AM Plan is the infrastructure funding gap. Hamilton's current infrastructure position represents a social investment that has been built up progressively over the last 150 years predominantly due to underinvestment, including a lack of permanent infrastructure funding from senior levels of government, as well as large spikes of growth throughout the years. Hamilton's challenge is to determine how it will manage the gap over the long term to ensure that the City can continue to deliver its services sustainably today and across future generations.

Over the 10-year planning horizon Hamilton's funding gap for core assets is estimated to be $1,959 million or $195.9 million annually (see Table 1) with a low-medium data confidence. Moving forward, the City will continue to improve its asset lifecycle data, and this will allow for more informed choices as how best to mitigate any impacts and address the funding gap itself. This gap in funding future plans will be refined over the next three (3) years to improve the confidence and accuracy of the forecasts in alignment with O. Reg. 588/17 requirements and to present proposed levels of service and a funding strategy by 2025 for all City assets. There are no specific financial commitments required at this time from this AM Plan however findings from Report PW22048 will be used to inform the 2023 tax and rate supported budget process. It should be noted that this funding gap relates to core assets (water, wastewater, stormwater, roads and engineered structures) only and as additional asset classes are added to the program and the City applies asset management practices more robustly, it is expected that this gap will increase.

The total replacement cost for all core assets is approximately $21.3B. Overall, core assets are an average of Fair condition, and are an average of 28 years of age with 50% of service life remaining. However, the data confidence levels for these assets are shown as low to medium, indicating that as the City continues to improve data confidence for these assets, these values will change. By only having sufficient funding to renew assets at the above stated ratios, the City will be required to make difficult choices that could include a reduction of the level of service, ability to accept more risk and potentially higher costs to maintain assets. These choices could result in increased customer complaints, potential damage to the City's reputation and risk of fines or legal costs.

Over the next 3 years Hamilton will be updating the Long-Term Financial Plan (LTFP) to connect the current tax and rate financing strategies to the asset management plans and the levels of service Hamilton provides. This will be a critical task for Hamilton to assist with the undertaking of timely renewals, ensuring both legislative compliance (indicating that the City has no choice) and the continuation of services.

Table 1: Summary of Assets

Asset Category	Replacement Value (B)	Average Age (Years)	Average Condition	Renewal Funding Ratio	10 Year O&M & Renewal Funding Ratio	Funding Gap per year (M)	Funding Gap over 10 years (M)
Water	$4.3	34	Fair	75%	85%	$20	$202
Data Confidence	Low	Medium	Low	Low-Med	Low-Med	Low-Med	Low-Med
Wastewater	$7.3	30	Fair	46%	70%	$49.8	$498
Data Confidence	Low	Medium	Medium	Low-Med	Low-Med	Low-Med	Low-Med
Storm Water	$3.1	22	Good	9.5%	42%	$31	$312
Data Confidence	Medium	Medium	Low	Low-Med	Low-Med	Low-Med	Low-Med
Road Network	$5.1	16	Fair	14%	66%	$87	$866
Data Confidence	Low	Low	Medium	Low-Med	Low-Med	Low-Med	Low-Med
Engineered Structures	$1.5	33	Good	33%	67%	$8.1	$81
Data Confidence	Medium	Medium	Medium	Low-Med	Low-Med	Low-Med	Low-Med
TOTAL	**$21.3**					**$195.9**	**$1,959**

The AM plans detail how the City plans to manage and operate the assets at the current levels of service through managing its life cycle costs. These costs are categorized by life cycle phases which includes acquisition, operations, maintenance, renewal and disposal. Over the 10-year planning horizon Hamilton will acquire $1.728 billion worth of core assets and is expecting to invest $3.448 billion in operations and maintenance. Adding additional assets over time significantly impacts the operational and maintenance resources required to sustain the expected or mandatory level of service. It should be noted that a significant amount of operational and maintenance expenditures are mandatory due to legislative requirements and cannot simply be avoided or deferred. Additionally, over the 10-year planning horizon, Hamilton is expecting to invest $913 million in renewals for the five (5) assets covered under this AM Plan. Continually deferring renewals create risks of higher financial costs, decreased availability, and decreased satisfaction with asset performance. At this time Hamilton has minimal disposals planned for its core asset classes.

Data Confidence is referenced throughout the report based on asset management best practice and indicates how confident the City is in the data provided. If the data was obtained using reliable documentation or methodology, then the data has higher confidence than if it was

estimated. It was difficult to confirm the accuracy of the data, as such the confidence has predominately been estimated based on completeness. It is a continuous improvement item to continue to assess the data accuracy for assets and implement improvements.

Although the City considers condition as the preferred measurement for planning, many assets in the City do not yet have a process to determine condition. For assets where there was no known condition information, or inspections were not completed in a manner in which the conditions could be converted to a standardized scale, the condition was assumed based on remaining service life.

In January 2022, the CAM Office released its first two (2) surveys related to asset management for core assets on the Engage Hamilton Site (Roads and Water Services Review page). The number of survey respondents for this initial survey only represents a small portion of the population. Some key findings include that 54% of survey respondents rate the road surface as Poor or Very Poor while almost 79% felt safe using the roads in a motorized vehicle. 89% of survey respondents have not experienced an unplanned water service interruption while 87% feel that drinking water is somewhat safe to drink or better. The full results were used to assist with defining customer levels of service within each AM Plan. Future surveys will be released on a regular basis for each service area to ensure the City is continually receiving feedback on City services.

Since demand is not yet an extensive requirement in O.Reg 588/17 for the July 1, 2022 deadline, this section is not as robust as some other sections of the report. It is an obligation for the report by July 1,2025 and will be expanded in future iterations. Some key demand drivers identified throughout the AM Plans are population change, regulatory changes/obligations, changes in demographics, seasonal factors, consumer preferences and expectations, technological changes, economic factors and environmental awareness/commitments.

Navigating the climate crisis has been a key area of focus for the City of Hamilton, which is represented by historical efforts to understand the challenges that climate change poses to City assets. As part of this work, an inventory of projects/initiatives has been created and can be found in the Climate Change Adaptation sections of the AM Plans. There will be more robust incorporation of climate initiatives in future AM Plans.

Hamilton has begun to undergo a shift in how it evaluates risk in accordance with its infrastructure planning. While high level risks have been identified in the AM Plans, at this time, the City does not have sufficient data to present risks and trade-offs. This information will be presented in the 2025 AM Plan regarding proposed levels of service.

The CAM office recognizes the importance of continuous improvement as an essential part of the asset management journey. As the City embraces asset management practices, it is important to recognize that the City is early in this journey and will acknowledge findings through the Improvement Plan and future iterations of the AM Plans. Improvement findings include categories such as data inconsistencies (e.g. lack of asset registries, gaps, duplication, low

confidence, multiple sources, outdated), asset condition (lack of condition assessments, lack of process), lack of governance structure which impacts staff understanding their roles and responsibilities related to asset management and lack of clearly defined asset ownership. Condition was largely based on estimated service life for the majority of assets and as such, a low confidence level was assigned as age is not always an indicator of condition. In addition, replacement costs were based on in-house costs which were not always based on current market rates.

In summary, the CAM Office has made good progress in both the finalization of the Core AM Plans and the development of the Corporate Asset Management Program. Asset Management is a journey. Some great first steps have been taken in not only meeting the requirements under O.Reg 588/17 but also in developing a corporate wide asset management program that will support the City in making better informed decisions about our assets and the services that we provide.

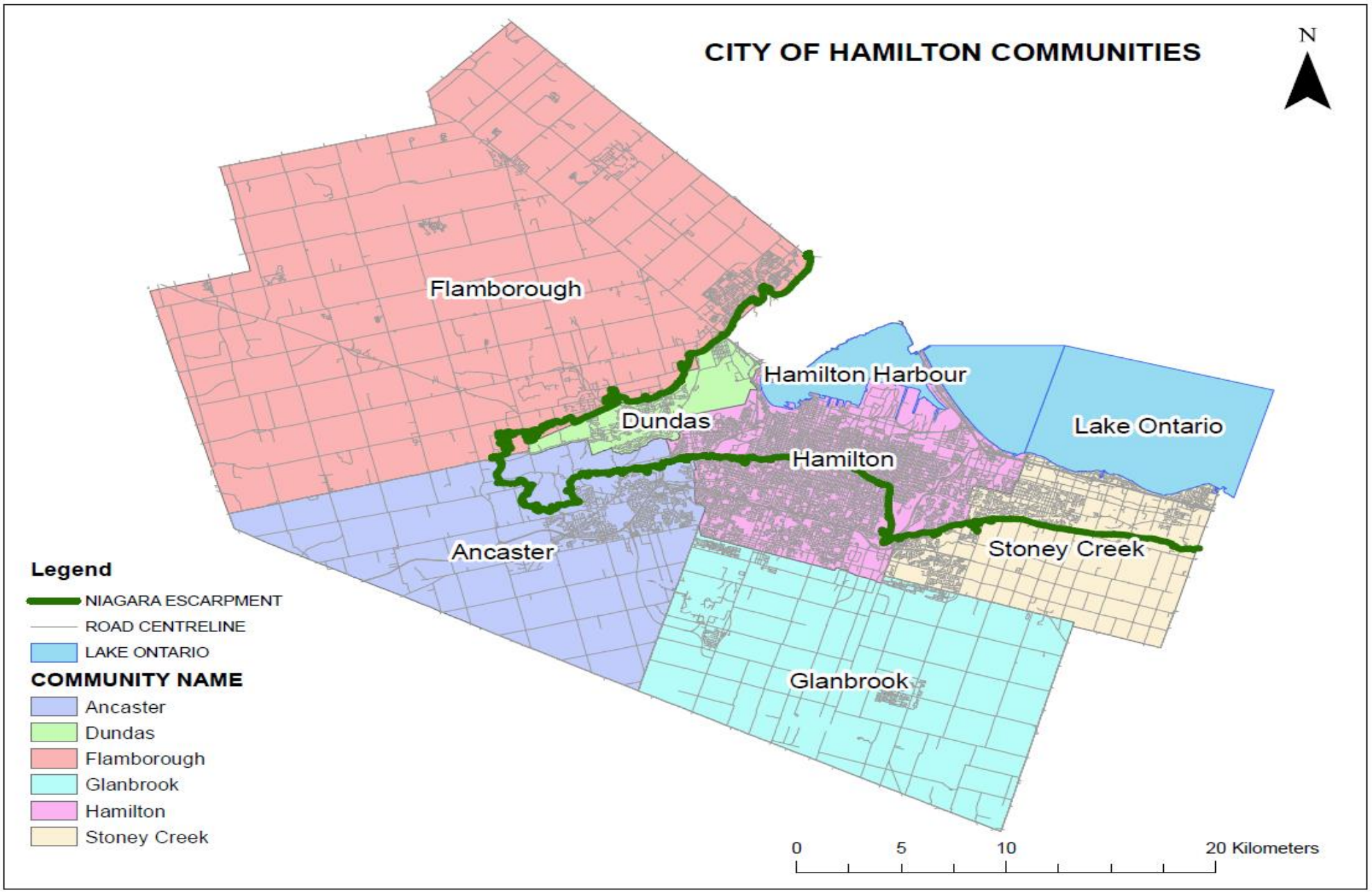
The CAM Office will continue to lead asset management through governance, expertise, monitoring, research support, reporting and assurance of consistent practices. Through the efforts of the CAM Office, enhanced asset management practices will become ingrained in the City’s culture at all levels of the corporation.

1.0 INTRODUCTION

The City of Hamilton is located on the western tip of Lake Ontario and has a population of approximately 570,000. The City is geologically unique as it is bisected by the Niagara escarpment which splits the City into upper and lower parts, and presents unique challenges with respect to transportation network connectivity and water works service delivery, which are the strategic levels focused on in this Core Asset Management Plan.

In 2001, the new City of Hamilton was formed with the amalgamation of Hamilton and its surrounding communities: Ancaster, Dundas, Flamborough, Glanbrook, and Stoney Creek. As a result, the City acquired many assets in varying condition, and with varying levels of documentation. The City has been working for the last 20 years to collect and compile data for our assets to improve decision making City wide and accomplish our vision of being the best place to raise a child and age successfully. The following map shows the City of Hamilton separated by the five (5) communities with major landmarks including the Niagara Escarpment, Hamilton Harbour and Lake Ontario.

It is important to note that the City has acquired core assets over the last 150 years which have required significant effort to operate, maintain, renew, and dispose, and the purpose of this plan is to quantify and compile these existing efforts and identify areas for improvement.


CITY OF HAMILTON COMMUNITIES
N
Flamborough
Hamilton Harbour
Dundas
Lake Ontario
Hamilton
Ancaster
Stoney Creek
Glanbrook
Legend
NIAGARA ESCARPMENT
ROAD CENTRELINE
LAKE ONTARIO
COMMUNITY NAME
Ancaster
Dundas
Flamborough
Glanbrook
Hamilton
Stoney Creek
0
5
10
20 Kilometers

2.0 SCOPE

This is the first iteration of the Core Asset Management Plans (AM Plan) completed by the Corporate Asset Management (CAM) office using the Federation of Canadian Municipalities (FCM) approach to asset management in partnership with the Institute of Public Works Engineering Australasia (IPWEA) and NAMS (National Asset Management System) Canada framework for asset management.

The intent of these first plans is to meet Ontario Regulation 588/17: Asset Management Planning for Municipal Infrastructure (O.Reg. 588/17) requirements listed below including establishing the current levels of service for core assets, and to establish a benchmark for the City's core assets in order to identify continuous improvement items for the next iteration of the AM Plans.

The City also acknowledges that GM Blue Plan assisted with the initial data collection for this report and the development of the O.Reg. 588/17 community and technical levels of service in the Core AM Plans.

3.0 DEFINITIONS

TERM	DEFINITION
Acquisitions	The activities to provide a higher level of service through either the construction of new assets, expanding an existing assets service capacity or assumption of donated assets.
Asset	An item, thing or entity that has potential or actual value to an organization. It can be tangible or intangible, financial, or non-financial and includes consideration of risks and liabilities**.**
Asset Management Plan	Document that specifies the activities, resources and timescales required for the asset network to achieve its objectives. Long-term plans (usually 10-25 years or more) that outline the asset activities and programs for each service area and resources applied to provide a defined level of services in the most cost effect way
Bridges	Structures which provide a roadway or walkway for the passage of vehicles, pedestrians or cyclists across an obstruction, gap or facility and are greater than or equal to 3 metres in span (Ministry of Transportation, 2008).
Critical Asset	Assets having potential to significantly impact on the achievement of Hamilton's objective and often refer to those assets necessary to provide services to critical customers. The assets that are likely to result in a more significant financial, environmental, and social costs in terms of impact These assets can be safety critical, environmentally critical or performance critical and can relate to legal, statutory, or regulatory requirements.
Culverts	Structures that provide an opening through soil typically as a channel/tunnel for water (e.g. stream, drainage) underneath a road or railway.
Customer	Any person who uses the asset/service or is affected by it. This definition does not require the person to be a ‘rate’ payer or contribute tax dollars to Hamilton.
Demand	The desire customers have for assets or services
Demand Management Actions	take to influence demand for services and assets. This can be done through either the supply side or the demand side. (Supply side - i.e. Minimize water leaks loss through leak detection. Demand side - i.e. Through pricing, regulation, education, and incentives)

TERM	DEFINITION
Disposal	Actions necessary to decommission assets that are no longer required.
Level of Service	Statements that describe the objectives or outputs of an organization or an activity it intends to deliver to its customers. Parameters include Safety, customer satisfaction, quality, quantity, capacity, reliability, responsiveness, environmental acceptability, cost, and availability
Lifecycle	The time that commences with the identification of the need for an asset and terminates with the decommissioning of the asset. 'Stages involved in the management of an asset Acquisition, Operations, Maintenance, Disposal, Renewal
Lifecycle Activity	The activities undertaken by the City to ensure an asset is reaches its intended useful life
Lifecycle Costs	The total cost of an asset throughout its life including planning, design, construction, acquisition, operation, maintenance, renewal, and disposal costs.
Linear assets	Assets which traverse multiple sites and are typically defined by length.
Maintenance	The ongoing management of deterioration. Activities Hamilton undertakes to retain an asset as near as practicable to its original conditions (excluding renewals). These activities do not increase the service life or potential however they slow down deterioration or delay when a renewal is necessary. These activities are grouped as either planned or reactive.
Major culverts	Culverts that have a span of 3 metres or larger.
Minor culverts	Culverts that span less than 3 metres. Refer to the Stormwater Section the AMP for information on minor culverts.
Major Retaining Walls	Structures that are considered retaining walls and are >2m in height considered part of an OSIM inspection
Minor Retaining Walls	Structures that are considered retaining walls, which are not considered part of an OSIM inspection
Operations	Regular activities to provide services at a specified standard which typically would include cleaning, inspections, security checks, grass cutting etc.
Overhead Sign Supports	Structures which support static signs (sign boards) or variable message sign systems

TERM	DEFINITION
Planned maintenance	Necessary activities that ensure the reliability or to achieve the useful life of an asset. These can be either periodic or preventative in nature.
Reactive maintenance	Immediate or emergency repairs required to return the asset to its desired condition
Renewal	The activities that return the assets service capability to a state which it had originally provided. This includes replacement or near total reconstruction of assets that are at the end of their lives.
Replacement cost	The cost Hamilton would have to pay to acquire an equivalent new asset with the same service potential on the reporting date
Resilience	The ability for Hamilton to withstand disruption, absorb disturbances, act effectively in a crisis, adapt to changing conditions including climate change, and grow over time.
Retaining Walls	Structures that hold back fill and are not connected to a bridge
Right of Way	A right of way is a type of easement granted over land for transportation purposes (e.g. road, sidewalk)
Risk – The effect of uncertainty	An effect is a deviation from the expected — positive or negative. Uncertainty is the state, even partial, of deficiency of information related to, understanding or knowledge of, an event, its consequence, or likelihood. Risk is often expressed in terms of a combination of the consequences of an event (including changes in circumstances) and the associated likelihood. In the context of the Risk Management standard- Effect of uncertainty on objectives.
Risk Management	Hamilton's coordinated activities to direct and control actions as well as inform decisions with regards to risk
Stormwater assets	Relate to the collection, transmission, treatment, retention, infiltration, control or disposal of stormwater**.**
Strategic Asset Management Policy (SAMP)	Document that details how Hamilton objectives are to be converted into asset management objectives, the approach and rules for creating all detailed asset management plans, defining all organizational definitions and how to integrate asset management organization wide to further support objectives and ensure informed decision making is possible.
Sustainability	A goal for how assets are to be managed. This represents meeting the needs of the future by balancing social, economic, cultural, and environmental outcomes and needs when making decisions today.

TERM	DEFINITION
Useful Life	The period of time Hamilton expects to be available for use. It it's the expected time between placing the asset into service and removing it from service.
Vertical assets	Assets which can only occupy one site and are typically within a building or a facility which may be comprised of multiple components.
Wastewater assets	Relate to the collection, transmission, treatment or disposal of wastewater, including any wastewater asset that from time to time manages stormwater.
Water assets	Relate to the collection, production, treatment, storage, supply or distribution of drinking water.

4.0 KEY STAKEHOLDERS

KEY STAKEHOLDER	ROLE IN ASSET MANAGEMENT PLAN
Customers/Public	- Participate in engagement to allow Hamilton to understand the communities desired level of service.
Mayor & Council	- Represent needs of community/shareholders, and - Review plan and consider recommendations in decision making.
City Manager & General Managers	- Support continuous improvement initiatives, and - Ensure service is sustainable. - Represent needs of community/shareholders, and - Review plan and consider recommendations in decision making.
Chief Road Official	- Asset owner for transportation assets, - Oversees asset management planning activities within their respective functional area with key outputs of operational and capital plans and budgets. - Sets service objectives and monitor's progress. - Allocate resources to meet planning objectives in providing services while managing risks, - Support continuous improvement initiatives, and - Ensure service is sustainable.
Director, Hamilton Water	- Asset owner for water, wastewater and stormwater assets, - Oversees asset management planning activities within their respective functional area with key outputs of operational and capital plans and budgets. - Sets service objectives and monitor's progress. - Allocate resources to meet planning objectives in providing services while managing risks, - Support continuous improvement initiatives, and - Ensure service is sustainable.
Director, Engineering Services	- Allocate resources to meet planning objectives in providing services while managing risks. - Support continuous improvement initiatives, and - Ensure service is sustainable.
Director, Transportation Operations & Maintenance (TOM)	- Allocate resources to meet planning objectives in providing services while managing risks, - Support continuous improvement initiatives, and - Ensure service is sustainable.
Director, Corporate Asset Management (CAM)	- Allocate resources to meet planning objectives in providing services while managing risks. - Creates a Corporate Asset Management Plan as a recognized and consistent tool for making business decisions related to forecasting and budgeting activities.

KEY STAKEHOLDER	ROLE IN ASSET MANAGEMENT PLAN
	- Coordinates approach and stewardship to align asset management planning with the City's financial plans, budget and other relevant Acts, policies, frameworks, and plans.
Field/Operational Staff	- Verify asset data and regularly monitor condition of the assets for public safety, - Provide operational and maintenance service to the assets, - Report to senior management any progress, deficiencies and effectiveness of operations and maintenance activities.
Province of Ontario	- Establishes Legislation for core assets.

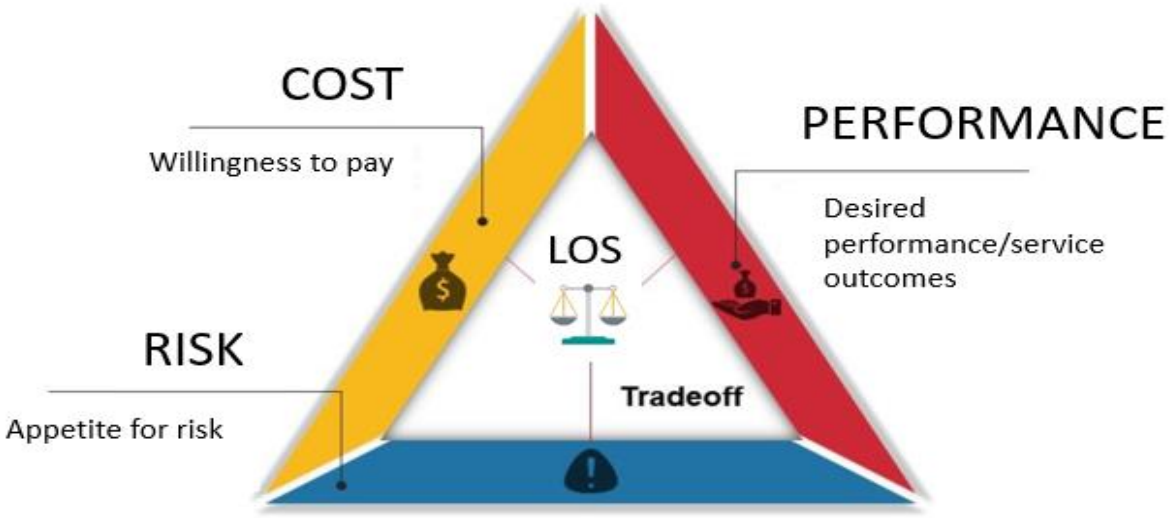
5.0 ASSET MANAGEMENT PLANNING

Asset management relates to the coordinated set of activities and practices an organization applies to achieve strategic objectives through balancing lifecycle costs, risks, and performance to deliver the agreed upon levels of service. In simpler terms, it is about making the right decisions so that the City is doing the right work, on the right asset, at the right time, for the right cost.

Historically, the City has viewed asset management from a lens of “managing assets” which involved specific activities such as completing inventories, performing condition assessments, completing lifecycle activities, and forecasting needs. While those activities are important parts of asset management, if the activities are not coordinated and strategic objectives are not defined, the City will experience disconnects between the activities being completed and the service needs expected by the customer.

These plans are intended to be a shift from “managing assets”, to a more holistic view of asset management where the City acts as a steward for assets that contribute to City services which are ultimately paid for and are in service for the customer. It is the City’s responsibility to manage costs, risks, and performance in the best interests of the customer, consult customers on their values with respect to these services, and use our technical expertise to set and achieve expectations, in the form of levels of service as shown below in Figure 1.

Figure 1 – Proposed Level of Service Approach



Many municipalities face similar challenges with their assets. Many assets’ have long useful lives which can continue through multiple generations, and these assets may cost a significant amount of money throughout their lifecycle. This means that one generation may build an asset

which does not require any substantial works in their lifetime but will lock in future generations with significant costs and risks. Considering the longevity of infrastructure assets in tandem with how the City only has a finite amount of money available to spend on an annual basis means that the City must have a plan in place to conduct and prioritize works so that we are setting up future generations for success. Some questions we are answering in these Asset Management Plans include:

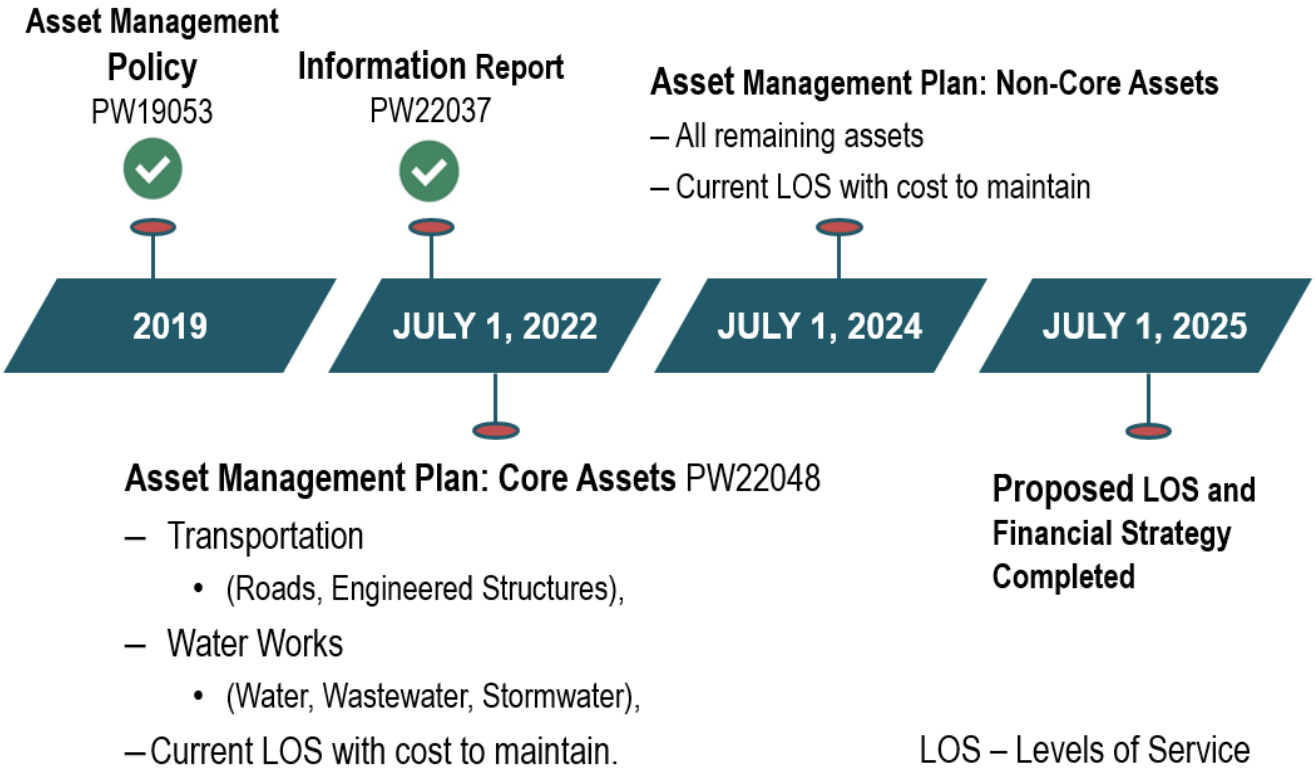
- What do we own?
- What condition is it in?
- Where is it?
- What needs to be done?
- What is it worth?
- When does the work need to be done by?
- Do we have sufficient resources to do the work?
- If we do not have sufficient resources, what are the consequences?
- Are we meeting minimum legislative requirements?
- What level of service are our assets providing?
- How are our assets performing?
- What are our demand requirements?
- How do we manage current and future risks?
- What are the costs required and how do we prioritize competing interests?
- Are there assets that are not needed?
- How successful are we at managing assets?
- Are there areas for improvement?

5.1 O.REG. 588/17 OVERVIEW

In January 2018, the province enacted O.Reg. 588/17: Asset Management Planning for Municipal Infrastructure, which was created under the 2015 Federal Infrastructure for Jobs and Prosperity Act. This regulation was created because the province recognized that many Ontario municipalities were facing similar issues with existing infrastructure degrading faster than it was being repaired or replaced. The goals of the regulation were to: standardize asset management plans, spread best practices among municipalities, and improve infrastructure planning in municipalities.

O. Reg. 588/17 prescribed the timelines and requirements municipalities were to complete for the Strategic Asset Management Policy (SAMP), and Asset Management Plans (AM Plans). The regulation separated the AM Plan requirements into core and non-core assets and current and proposed levels of service. Core assets were assets supporting the delivery of the following services: roads, bridges & culverts, water, wastewater, and stormwater. Non-core assets were deemed to be any other assets supporting all other City services. Current levels of service are defined as the level of service the City is currently delivering considering lifecycle costs, performance, and risk, and proposed levels of service are the levels of service the City will be proposing to provide. A brief snapshot of the timelines and requirements for each iteration of the AM Plan is shown below in Figure 2.

Figure 2 – O. Reg. 588/17 Timelines



These 2022 Core Asset Management Plans (AM Plan) is a continuation of the process set out in O.Reg. 588/17, which began with the 2019 Strategic Asset Management Policy, and includes information related to the current levels of service for core assets. The City will continue to proceed with achieving the timelines outlined in the figure above.

5.2 IPWEA & NAMS CANADA FRAMEWORK

Asset management regulations are not new globally, but they are new to Canada. Asset Management has been used globally by multiple governments especially in Australia and New Zealand. There are two (2) international standards that have evolved for asset management which are applied throughout the AM Plan documents: ISO 55000 –Asset Management Standard and ISO 31000 – Risk Management Standard.

The Federation of Canadian Municipalities (FCM) recognizes that there are globally recognized practices that best meet the requirements of O.Reg. 588/17 and therefore, these AM Plans follow the Institute of Public Works Engineering Australasia (IPWEA) and National Asset Management System (NAMS) Canada template and philosophy, while fulfilling the O.Reg. 588/17 timeline and requirements.

The five (5) key asset management principles for organizations to adopt through the IPWEA framework are included below. These principles will be adopted for all asset classes throughout the City:

1. Adopt a lifecycle approach – Apply a whole life methodology for managing infrastructure assets including acquisition, operations, maintenance, renewal and disposal;
2. Endorse evidence-based decision making – Utilize current infrastructure information to support asset planning and decisions;
3. Embrace continuous improvement practices – Implement and adopt asset management practices that formalize and document continuous improvement efforts across the organization;
4. Provide optimal value – Asset service levels will be clearly defined, communicated and fact-based on the realities of today; and,
5. Develop service knowledge – Developing this key competency across the organization will ensure Hamilton is able to balance costs, risk and performance and ensure long term sustainability is achieved.

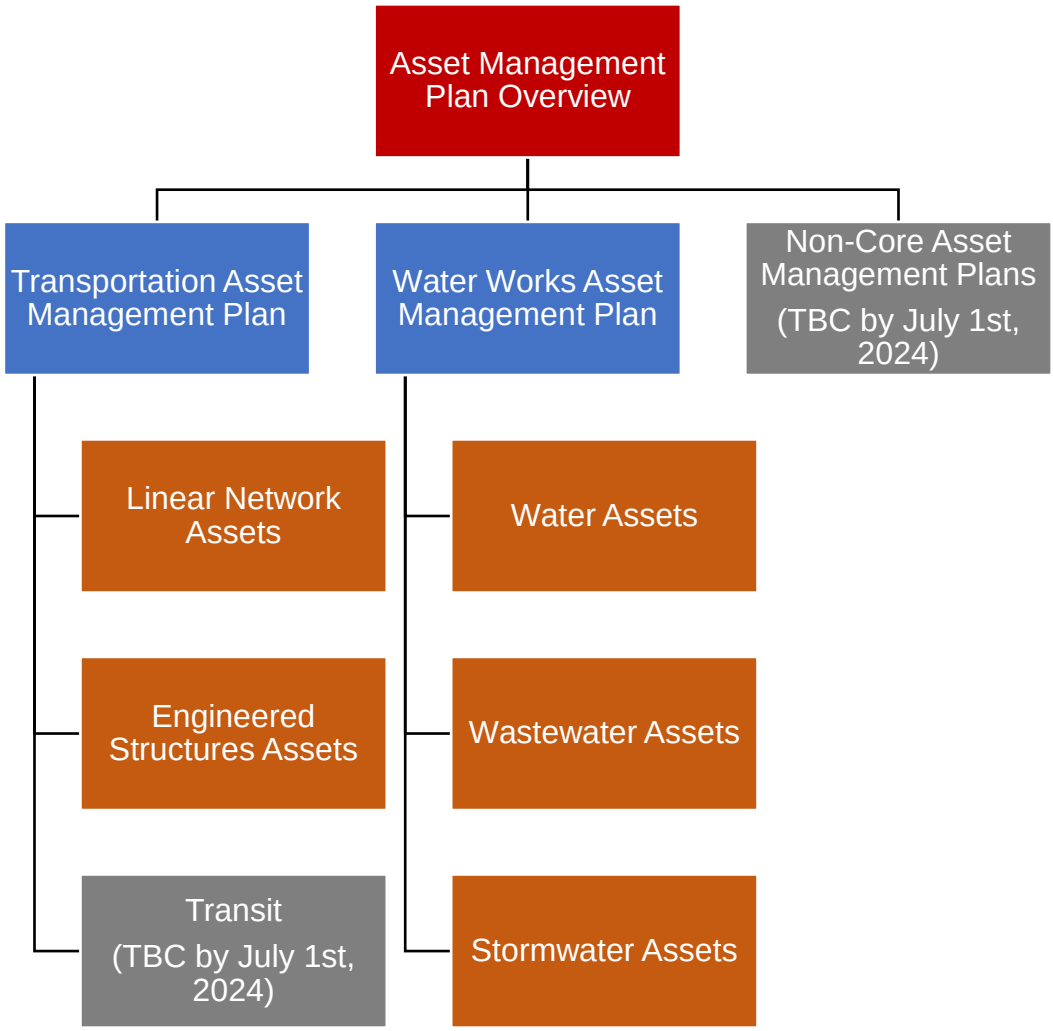
In addition, there are benefits to asset management across the organization, and these six (6) key benefits identified by IPWEA for asset management planning include:

1. Strong Governance and Accountability;
2. Improved Financial Efficiency;
3. More Effective and Sustainable Decisions;
4. Effective Risk Management;
5. Improved Social Outcomes; and,
6. Improved Customer Engagement.

5.3 ASSET MANAGEMENT PLAN NAVIGATION

Per Figure 3 below, the Asset Management Plan is composed of several detailed asset management plan documents which feed into this one Asset Management Plan Overview (AMP Overview). The AMP Overview provides context for all of the AM Plans, summarizes the City's general approach to asset management, and connects the AM Plans together by providing a summary of all the AM Plans completed to date. At the time of writing this report, there are currently three (3) reports including this AMP Overview, but as the City continues along the O.Reg. 588/17 timeline, more AM Plans will be added as shown below in Figure 3.

Figure 3 – Asset Management Plans Structure



5.4 STRATEGIC ALIGNMENT

The City's strategic goals and objectives are shaped by internal drivers such as Council approved strategies and plans, as well as external forces such as citizen expectations, and legislative and regulatory requirements. The specific legislative and regulatory requirements for service areas are provided in each AM Plan.

City objectives provide asset owners with direction regarding levels of service and asset investment priorities. This AM Plan will demonstrate how the City's objectives for core assets can influence levels of service and direct asset expenditures.

The relevant goals and objectives and how these are addressed in the Core AM Plan are summarized in Table 1.

Table 1: Goals and how these are addressed in this Plan

INTERNAL DRIVERS	GOAL	OBJECTIVE	HOW GOAL AND OBJECTIVES ARE ADDRESSED IN THE AM PLAN
Strategic Plan	Economic Prosperity & Growth	Services ensure communities are livable, sustainable, and vibrant, through the provision of infrastructure	The objective of the first iteration of the Core AM Plan is to quantify the current levels of service for core assets.
	Clean and Green	Hamilton is environmentally sustainable with a healthy balance of natural and urban spaces.	The AM Plans consider and identify risks and opportunities for climate change adaptation and resiliency.
	Community Engagement and Participation	Hamilton has an open, transparent and accessible approach to City government that engages with and empowers all citizens to be involved in their community.	The AM Plans engages our customers to understand service level values and expectations.
	Our People and Performance	Hamiltonians have a high level of trust and confidence in their City government.	The AM Plans strive to provide data driven evidence for effective decision making.

INTERNAL DRIVERS	GOAL	OBJECTIVE	HOW GOAL AND OBJECTIVES ARE ADDRESSED IN THE AM PLAN
	Built Environment & Infrastructure	Hamilton is supported by state-of-the-art infrastructure, transportation options, buildings and public spaces that create a dynamic City.	The AM Plans address levels of service associated with their assets.
2018-2022 Council Priorities	Climate Change	The City is committed to improving the health of Hamilton's population through the reduction and prevention of outdoor air pollutant exposure and the mitigation of and adaptation to climate change.	The AM Plans consider and identify risks and opportunities for climate change adaptation and resiliency.
	Multi-Modal Transportation	The City is committed to providing transportation options that meet legislated standards for both personal travel and goods movement in an accessible, convenient, efficient and affordable manner.	The Transportation AM Plan addresses levels of service associated with transportation assets.
	Equity, Diversity and Inclusion	The City is committed to creating and nurturing a city that is welcoming and inclusive.	Future iterations of the AM Plans will incorporate an EDI lens.
	Integrated Growth and Development	The City of Hamilton is committed to planning for and implementing infrastructure in a manner that manages growth in a way that minimizes impact and creates opportunities for both residential and business development, while ensuring the city's overall long-term sustainability.	The Core AM Plans address demand management for assets.
	Trust and Confidence in City Government	The City of Hamilton is committed to promoting an open approach to government. Ensuring public information is readily available and accessible, by promoting	The AM Plans strive to provide data driven evidence for effective decision making.

INTERNAL DRIVERS	GOAL	OBJECTIVE	HOW GOAL AND OBJECTIVES ARE ADDRESSED IN THE AM PLAN
		partnerships and by strengthening and improving its ability to consistently undertake coordinated, transparent and inclusive, evidence-based engagement practices, the City is committed to enabling residents, business owners and community stakeholders to become more involved in decision-making processes and find value in partnering and investing in City programs.	
	Fiscal Health and Financial Management	The City uses financial management tools to plan, direct, monitor, organize and control spending to ensure that the fiscal health of its finances, including its reserves and debt levels.	The AM Plans identify lifecycle needs and the infrastructure gap for assets.
Transportation Master Plan	Sustainable and Balanced Transportation	Integrate walking infrastructure needs into the City's 10 Year Capital Budget so that opportunities for seamless, lower-cost development of pedestrian infrastructure is captured.	The AM Plans identify lifecycle needs and the infrastructure gap for core assets.
	Economic Prosperity and Growth	Provide multi-modal access to/from and within employment lands	The AM Plans identify lifecycle needs and the infrastructure gap for core assets.
Climate Change Task Force	Sustainable Transportation	To change the modal split and investigate strategies so that more trips are taken by active and sustainable transportation than single use occupancy vehicles.	The AM Plans consider and identify risks and opportunities for climate change adaptation and resiliency.

INTERNAL DRIVERS	GOAL	OBJECTIVE	HOW GOAL AND OBJECTIVES ARE ADDRESSED IN THE AM PLAN
Public Works Business Plan 2019-2022	Climate Resiliency	To improve Hamilton's climate resiliency by decreasing our vulnerability to extreme weather, minimizing future damages, take advantage of opportunities, and better recover from future damages.	The AM Plans consider and identify risks and opportunities for climate change adaptation and resiliency.
Strategic Asset Management Policy	Prioritization	Ensure the City continues to provide public services in the road right-of-way, bridges, culverts, drinking water treatment & distribution, wastewater treatment & collection, and storm water systems at defined levels of service.	The objective of the first iteration of the AM Plan is to quantify the current levels of service for core assets.
		Take a long-term view in making asset decisions, especially considering the municipal life cycle of infrastructure assets from acquisition to disposal.	The AM Plans identify lifecycle needs and the infrastructure gap for core assets.
		Clearly identify and respect defined infrastructure priorities. A clearly defined hierarchy for infrastructure priorities is a critical foundation for an effective asset management plan, as priorities should inform investment decisions. Priorities will be further described in the AM Plan.	The objective of the first iteration of the AM Plan is to quantify the current levels of service for core assets.
	Transparency	Infrastructure planning and investment should be made on information that is evidence based, and, subject to any restrictions or prohibitions, on the basis of information that is	The AM Plans have been developed based on available information and evidence based with

INTERNAL DRIVERS	GOAL	OBJECTIVE	HOW GOAL AND OBJECTIVES ARE ADDRESSED IN THE AM PLAN
		either publicly available or is made available to the public.	full disclosure to the public.
		In cases where the City becomes aware of information that has implications for City infrastructure planning, this should be shared with relevant public agencies that may be affected.	
	Health, Safety and the Environment	Ensure health & safety of workers involved in the construction and maintenance of assets is protected.	The AM Plans take into account health, safety and the environment in the risk evaluation process and management of infrastructure lifecycle. The AM Plans consider and identify risks and opportunities for climate change adaptation and resiliency.
		Ensure infrastructure is designed to be resilient to the effects of climate change.	
		Minimize the impact of infrastructure on the environment	
		Respect and help maintain ecological and biodiversity.	
		Endeavour to make use of acceptable recycled materials.	
	Community Focus	Infrastructure planning and investment should promote economic competitiveness, productivity, job creation and training opportunities.	A primary goal of asset management planning is to hear the voice of the community through regular engagement surveys and other means. In all ways, the needs of the public will be considered in the development of
		Promote accessibility for persons with disabilities	
		Promote community benefits, being the supplementary social and economic benefits arising from an infrastructure project that are	

INTERNAL DRIVERS	GOAL	OBJECTIVE	HOW GOAL AND OBJECTIVES ARE ADDRESSED IN THE AM PLAN
		intended to improve the community well-being (creating jobs, improving public space, for example).	infrastructure that support our services.
		Consider the needs of the public by being mindful of the local demographic and economic trends (seniors, commuters, tourists, etc.).	
		Foster innovation by creating opportunities to make use of proven technologies, practices and services (especially those developed in Ontario).	
	Coordination	Be mindful of and align with the other City policies, Strategic Plan, and other plans and strategies in effect. A description of connected plans is provided in further detail in the Asset Management Plan.	This is shown in this table.

5.5 ASSET REGISTRY & HIERARCHY

An asset registry is a single data source which contains an inventory of asset data including attribute information for each individual asset. This attribute information includes a record for each individual asset including condition, age, replacement cost, and asset specific information (e.g. length, diameter, material etc.). At this time, the City does not have an asset registry for core assets but is currently working on implementing an Enterprise Asset Management System (EAM) for Public Works and has multiple systems to manage assets as explained in Section 7.2.3. The asset registry should be structured in the form of an asset hierarchy explained below.

An asset hierarchy provides a framework for structuring data in an information system to assist in collection of data, reporting information and making decisions. The City's asset hierarchy is a functional hierarchy, which means that the hierarchy has been established based on what the asset owner needs or wants the asset or system to do. Generally, assets and systems are organized according to their primary function.

For the AM Plan the asset hierarchy includes the strategic, service area, asset class and asset levels defined below in Table 2. This hierarchy was used for asset planning, financial reporting and service planning and delivery.

It is important to note that the asset hierarchy used in an enterprise asset management system such as the EAM project (explained in Section 7.2.3) will drill down in more detail to the component level of the asset (e.g. pump for a pump station, engine for a vehicle). Since the AM Plan is intended to be a high-level planning document, the asset hierarchy is only provided to the level required for this purpose.

Table 2 – Asset Hierarchy Definitions

HIERARCHY LEVEL	DEFINITION
Strategic	The Strategic level is defined in alignment with the City of Hamilton's corporate priorities and involves decisions from high level stakeholders. The Strategic level should not represent any physical objects i.e., Assets or Systems.
Service Area	The Service Area level identifies subsets of a Strategic level with unique function and service, as defined by the respective Division. Like the Strategic level, the Service Area level should not represent any physical objects i.e., Assets or Systems.
Asset Class	This level further separates the service area level into distinct levels. It is a system used to drill down the service provided within a service area level.

Asset	For the purposes of the asset hierarchy within the AM Plan, an asset is the lowest level where the City is reporting lifecycle activities.

The Strategic Levels that have been identified to contain core assets are Transportation and Water Works. The asset service hierarchies from strategic to the service area are shown below in Table 3. The hierarchy down to the asset level is provided at the beginning of each AM Plan and includes the service area level definitions.

Table 3: Asset Service Hierarchy

Strategic Level	Strategic Functional Definition	Service Area	Asset Class
Transportation	Provide safe, accessible, and efficient movement for people, goods, and services across the City.	Linear Network (Roads)	Road Pavement
			Active Transportation
			Traffic assets
		Engineered Structures	Engineered Structures
		Transit (Future Iteration by July 1st, 2025)	TBD
Water Works	Operate infrastructure that supports the supply of safe, clean drinking water, collection and treatment of wastewater, and collection of storm water.	Water	Vertical
			Linear
		Wastewater	Vertical
			Linear
		Stormwater	Vertical
			Linear

6.0 ASSET BACKGROUND INFORMATION

Throughout the AM Plans, background information includes information related to inventory, condition, replacement cost, and asset usage.

6.1 OVERALL SUMMARY OF ASSETS

An overall summary of the core assets defined in each AM Plan can be found below in Table 4. The total replacement cost for all core assets is approximately **$21.4B**. Overall, core assets are an average of **Fair** condition, and are an average of **27 years** with **52%** of service life remaining. However, it is evident that overall, the data confidence levels for these assets are shown as low to medium, indicating that as the City continues to improve data confidence for these assets, these values will change.

For detailed information for each service area, please refer to the Detailed Summary in each AM Plan.

Table 4 – Core Assets Summary

Strategic Level	Replacement Value	Average Age (% RSL)	Average Equivalent Condition
Transportation*	**$6.7B**	**25 years (49%)**	**3-Fair**
Data Confidence	Low	Low	Medium
Water Works	**$14.7B**	**29 years (54%)**	**3-Fair**
Data Confidence	Low	Medium	Medium
TOTAL	**$21.4B**	**27 years (52%)**	**3-Fair**

***Excluding Transit**

Data confidence is defined in Table 5. As previously mentioned, the data confidence is shown overall as low to medium. As indicated throughout the AM Plans, the City has completed many inventory projects, inspections and condition assessments over the last 20 years. However, it was also found that there is not yet an asset registry for many assets, resulting in many different inventory data sources with conflicting and missing information especially surrounding age data. Currently, there is also a lack of processes for documenting these inspections and assessments to be able to include them as part of the AM Plan. This means that condition was largely based on estimated service life (ESL) for the majority of assets which is a low confidence level as age is not always an indicator of condition. This also means since some assets' have a low

confidence in age data and no known condition data, condition was not able to be estimated for some assets and are shown to be unknown. This has been identified as a continuous improvement item.

In addition, replacement costs were based on in-house costs which were not always based on current market rates. Linear assets typically have a higher level of confidence in replacement costs because these assets are replaced more often. Vertical assets are not typically replaced as frequently and are often high cost assets which is why the replacement cost is often considered low. Improving the process for estimated replacement costs to use current market rates as often as possible has been identified as a continuous improvement item.

6.2 INVENTORY DATA

The information in the following sections indicates where the inventory data in the AM Plan reports were accessed from.

6.2.1 Key Existing Databases

The City maintains various databases to track asset inventory data. For core assets, the City of Hamilton currently manages asset data using the following systems shown below in Table 6. The City is in the process of implementing an EAM system which will consolidate all Public Works data into a single asset registry as explained in Section 6.5. Asset data for this report was collected from the database that was considered the most confident based on asset owner opinion.

Table 6 – Asset Databases

Database	Description	Data	Core Strategic Level
Infor Hansen Work Management System	Work management system used by various business units to store inventory data and manage work orders.	Information from ArcGIS database; Field inventory confirmations;	Transportation, Water Works
ESRI ArcGIS geodatabase	ArcGIS is a geographic information system (GIS) consisting of desktop, server and mobile applications used for storing, mapping and analyzing the City's infrastructure and geographic data.	Information from As Built drawings; Historically input assumed data that has not been verified; Inventories created using aerial data; Field inventory confirmations; Data provided by communities for information related to assets that were acquired during the 2001 amalgamation	Transportation, Water Works
Bridge Management System (BMS)	This tool manages bridge data, provides risk information for the asset, and engineering models and benefit/cost analysis to assist with project planning.	Consultant completed inventories	Transportation

6.2.2 Data Confidence

Data Confidence is referenced throughout the report and indicates how confident the City is in the data provided. If the data was obtained using reliable documentation or methodology, then the data has higher confidence than if it was estimated. At the time of writing the report, it was difficult to confirm the accuracy of the data, as such the confidence has predominately been estimated based on completeness and the current assumed accuracy. It is a continuous improvement item to continue to assess the data accuracy for assets and look for areas for improvement.

Table 5 – Data Confidence Grading Scale

Data Confidence Grading Scale		
Confidence Grade	**Reliability**	**Accuracy**
A - Very High	Data based on sound records, procedures, investigations and analysis, documented properly and agreed as the best method of assessment.	Dataset is complete and estimated to be accurate +/- 2%
B - High	Data based on sound records, procedures, investigations and analysis, documented properly but has minor shortcomings. For example, some of the data is old, some documentation is missing and/or reliance is placed on unconfirmed reports or some extrapolation.	Dataset is complete and estimated to be accurate +/- 10%
C - Medium	Data based on sound records, procedures, investigations and analysis which is incomplete or unsupported, or extrapolated from a limited sample for which grade A or B data are available.	Dataset is substantially complete but up to 50% extrapolated data and accuracy estimate +/- 25%
D - Low	Data is based on unconfirmed verbal reports and/or cursory inspections and analysis.	Dataset may not be fully complete, and most data is estimated or extrapolated. Accuracy +/- 40%
E - Very Low	None or very little data held.	Dataset does not exist or very little accuracy.

6.2.3 Enterprise Asset Management (EAM) System

After identifying eleven (11) different software systems currently used to track and manage over $20B in diverse and complex assets, the General Manager's Office in Public Works recognized in 2017 that a single Enterprise Asset Management System (EAM) system was required. Most of these systems were stand-alone solutions managing an individual section's infrastructure with no or limited integration with critical systems such as the Finance system, ESRI ArcGIS Mapping and other City systems.

The existing structure is also characterized by the following issues:

- Processes to manage assets and key work activities are not standardized across Public Works;
- Separate and non-integrated systems and tools;
- Some transfer of data between a small number of systems;
- Multiple versions of the same data, with inconsistencies;
- Multiple versions of data without data integrity;
- Low end-to-end process maturity across the asset lifecycle;
- Some areas managing data and work orders manually, with greater opportunity for error and degraded asset lifecycle, in addition to the associated inefficient manual processes; and,
- Difficulty and cost of providing transparency, repeatability and integrity of the information and consistency of decisions.

Public Works has a unique challenge collecting and managing asset related information due to the disparity between the existing systems and the limited ability of such systems to meet current needs. The current structure leaves most groups without access to aligned, unified and accurate data normally seen through an asset registry. A foundational piece to an EAM environment is the reliable and efficient access to unified and accurate data. This allows for better business process integration, timely decision making and streamlined process execution. A single, integrated EAM system will provide the ability to maintain data integrity across sections with the ability to mine data to improve performance and capital budget decisions. This would simplify and improve data integrity for reporting requirements for various parties and provide an asset registry for assets within the system. As well, streamlining and standardizing processes, designing workflows and hierarchies holistically throughout Public Works, and setting the asset hierarchies within standardized workflows within an integrated system, is a required foundational step in a successful asset management program. The hierarchy identified in Section 6.5 is the draft hierarchy for the EAM project.

In addition, an EAM system enables municipalities to develop comprehensive programs to manage the complete lifecycle of assets, including capital planning and prioritization, preventive, predictive, routine and unplanned maintenance and calibration, while improving the daily effectiveness of operations and technical staff. It also allows for better management of equipment and facilities to increase reliability and ensure compliance with laws, regulations and

industry-specific requirements. The ability to conduct advanced analytics to inform risk prioritization and capital funding priorities, and in some cases, allow some sections that are still paper based and manual to be updated and included in the data schemas is critical.

This prompted a feasibility study in 2018 which concluded that Public Works could reduce its technology footprint to only a few systems and resulted in receiving Council approval through Report PW19035/FCS19040 in January 2020 to proceed with Hexagon's Enterprise Asset Management (EAM) system over a 4-year implementation.

6.3 MUNICIPALITY'S APPROACH TO CONDITION

Condition is the preferred measurement for planning lifecycle activities to ensure assets deliver the agreed upon levels of service and reach their expected useful life. The City outlines the existing condition assessment methodology (if available) for each of the core assets in the Asset Management Plans.

6.3.1 Condition Scoring

Although the City considers condition as the preferred measurement for planning, many assets in the City do not yet have a process to determine condition. For assets where a condition program exists, and a condition score was output, those conditions were converted to the scale below in Table 7 and these conversions are shown in each section of the AM Plans.

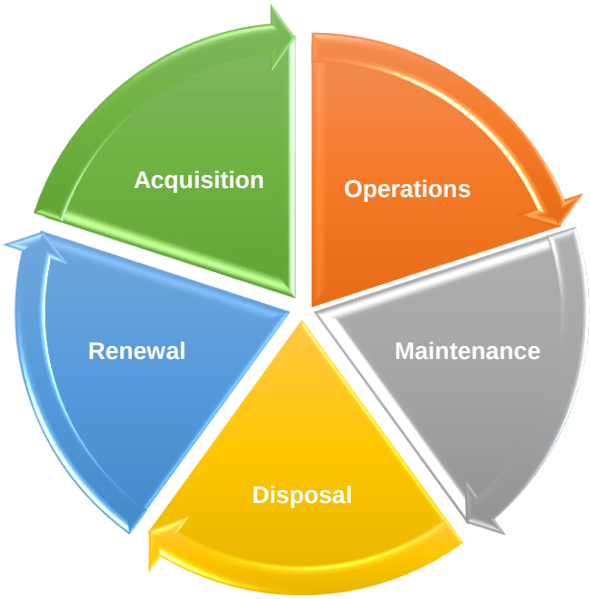
For assets where there was no known condition information, or inspections were not output in a way where the conditions could be converted, the condition was assumed based on remaining service life. In future, the City is investigating completing condition assessments for assets where no program exists. For some assets, condition assessments are not economical, but for many assets, regular inspections occur to ensure these assets are in working order. The City is investigations modifying these inspections to output a condition score.

Table 7 – Condition Scoring

EQUIVALENT CONDITION GRADING	CONDITION DESCRIPTION	% REMAINING SERVICE LIFE
1-Very Good	The asset is new, recently rehabilitated, or very well maintained. Preventative maintenance required only.	>79.5%
2-Good	The asset is adequate and has slight defects and shows signs of some deterioration that has no significant impact on asset's usage. Minor/preventative maintenance may be required.	69.5% – 79.4%
3-Fair	The asset is sound but has minor defects. Deterioration has some impact on asset's usage. Minor to significant maintenance is required.	39.5% - 69.4%
4-Poor	Asset has significant defects and deterioration. Deterioration has an impact on asset's usage. Rehabilitation or major maintenance required in the next year.	19.5% -39.4%
5-Very Poor	Asset has serious defects and deterioration. Asset is not fit for use. Urgent rehabilitation or closure required.	<19.4%

6.4 LIFECYCLE MANAGEMENT APPROACH

The lifecycle management plan details how the City plans to manage and operate the assets at the agreed levels of service through managing its life cycle costs. These costs are categorized by life cycle phases which includes acquisition, operations, maintenance, renewal and disposal.



Once Hamilton acquires an asset, the City then becomes obligated to fund the remaining lifecycle costs such as its operations, maintenance and likely inevitable renewal. These other lifecycle costs are far more significant than the initial construction or purchase cost and are often multigenerational. Since lifecycle costs are spread across multiple decades, it is essential that Hamilton approach its asset planning over the long term to ensure it effectively manages the asset and inform choices.

6.4.1 Acquisition Plan

Acquisitions are activities that either add new assets that did not exist before or improve an existing assets capability or function. The costs and activities that are included as part of the acquisitions and include: design, training, consulting, purchase costs and staff time to ensure the asset is ready for service and can be put into use. Hamilton acquires assets by either construction or through the assumption of assets through development agreements (i.e. donated assets). Typical acquisitions include:

- Extending water works services to unserviced areas;
- Expanding a road from 1 lane to 2 lanes;
- Assuming a storm water management pond from growth or development; and,
- Expanding a bridge to accommodate increased traffic volumes.

Over the ten-year planning horizon Hamilton will acquire $1.728 Billion dollars worth of core assets. Once assets are acquired, the City then becomes the stewards of these assets and is responsible for all ongoing costs for the assets' operation, continued maintenance, inevitable disposal and their likely renewal. It is critical for Hamilton to improve its understanding of the connection between acquisitions and what future costs will be incurred because of these acquisitions.

The City is reviewing its acquisition process through the regular updating of the AM Plans to ensure that it proactively understands what assets are being acquired over the planning period and to ensure they are considered and funded properly across their lifecycle. Improved knowledge of both constructed and donated assets will allow multiple departments across the City to plan for the assets properly such as:

- AM to forecast the long-term needs and obligations of the assets;
- Operations and maintenance can include the assets in their planned activities (inspections, legislative compliance activities); and,
- Finance can ensure that assets are properly captured and recognized appropriately (Audited Financial Statements, TCA process, Provincial reporting such as the FIR)

Figure 4 – Projected Acquired Assets

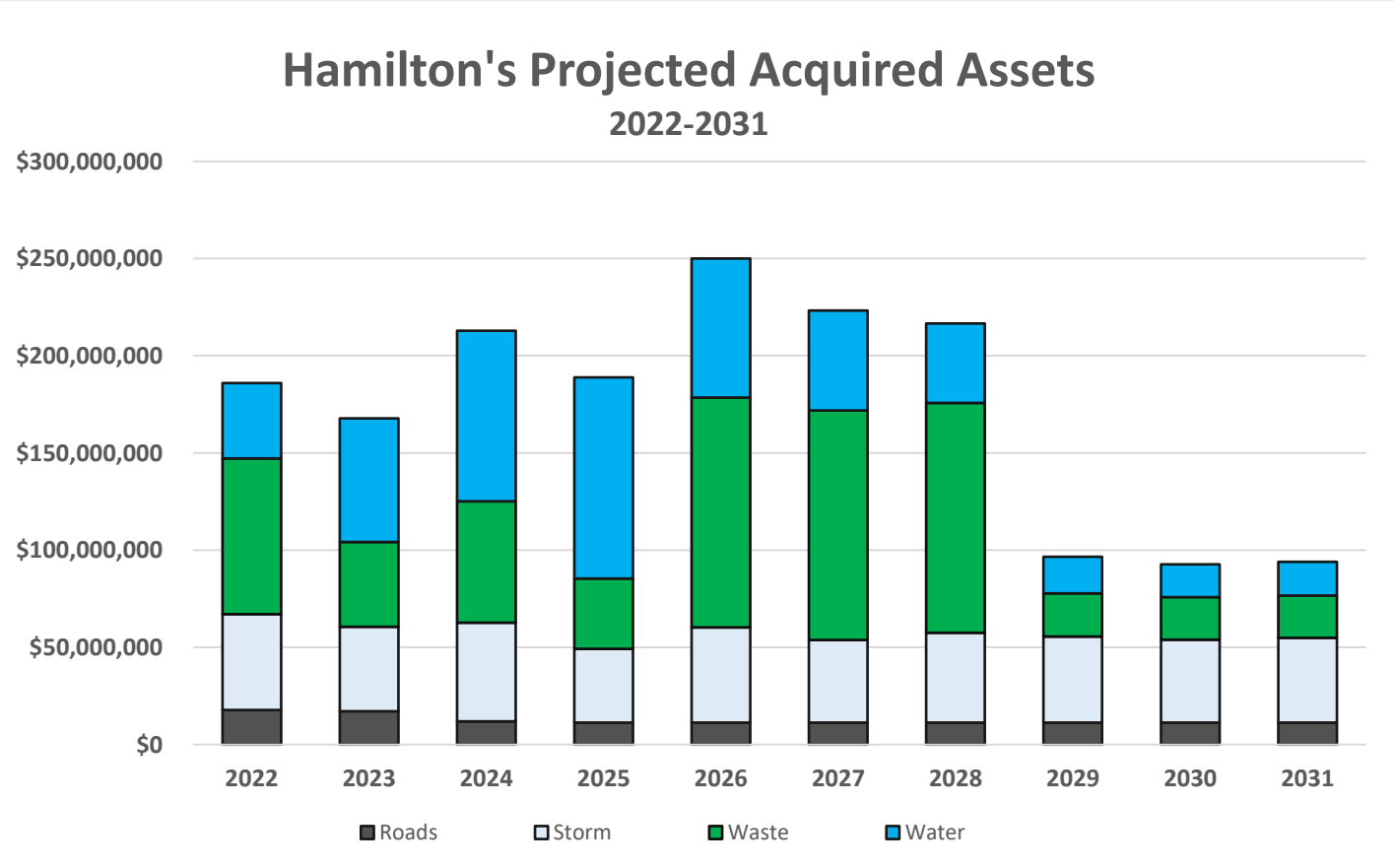


Figure 4 details the planned acquisitions for Hamilton's assets classes covered by these plans across the ten-year planning horizon (2022 – 2031) and includes both constructed and assumed assets. The most significant acquisitions come from the Water Works strategic level with $1.6 billion in acquisitions and Transportation is an additional $125.7 million of acquired assets. It is important to note that engineered structures are missing from this figure because at the time of writing the report there was insufficient data to complete the 10 years in the current forecast. Future iterations will include all known engineered structure acquisitions. All newly acquired assets require ongoing and significant funding to ensure that future levels of services can be maintained, and future generations can enjoy the level of service provided today.

The City has sufficient budget for its planned constructed acquisitions at this time. It will become critical to understand that through the construction or assumption of new assets, the City will be committing to funding the ongoing operations, maintenance and renewal costs which are very significant. The City will need to address what is considered affordable, how to best fund these ongoing costs as well as the costs to construct the while seeking the highest level of service possible.

Future AM Plans will focus on improving the understanding of Whole Life Costs and funding options however, at this time the plan is limited on those aspects. Expenditure on new assets and services will be accommodated in the long-term financial plan but only to the extent that there is available funding.

6.4.2 Operations & Maintenance Plan

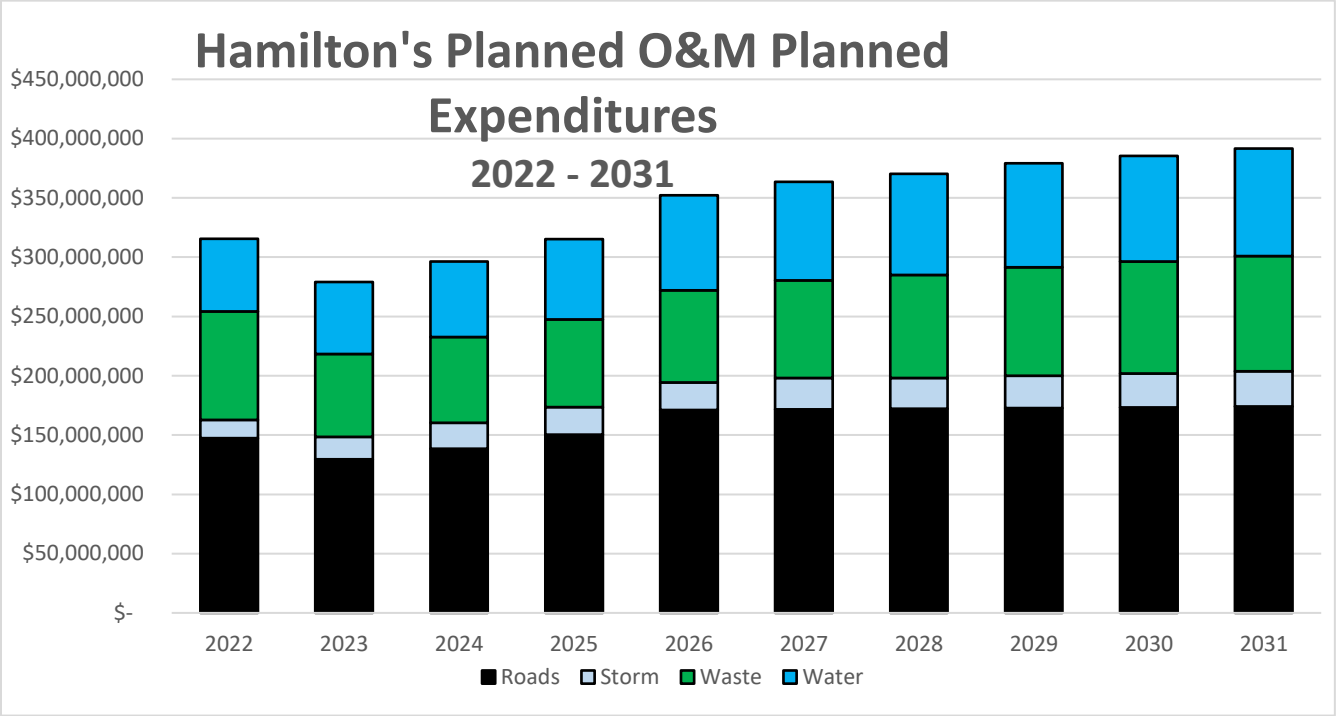
Operations and maintenance activities are an essential component to the lifecycle and are necessary to ensure that an asset is able to provide the service at its expected level. Without these necessary activities and interventions, the assets will not reach their expected useful life and will require costly renewals before their time. Hamilton will review and report on its operational and maintenance activities through the creation of future iterations of the AM Plans.

Operations include all regular activities to provide services. Examples of typical operational activities include snow ploughing, street sweeping, waterline flushing, biennial bridge inspections, and the necessary staffing resources to perform these and other activities.

Maintenance should be viewed as the ongoing management of deterioration. It includes all actions necessary for retaining or returning an asset as near as practicable to an appropriate service condition including regular ongoing day-to-day work necessary to keep assets operating. Examples of typical maintenance activities include pipe repairs, pothole repairs, bridge deck repairs, dredging storm water management ponds, equipment repairs along with appropriate staffing and material resources required to complete these works.

Proactively funding planned maintenance is always preferred compared to responding to high cost reactive maintenance. Hamilton will continue to review its maintenance planning to ensure it is maximizing its opportunities and investments and minimize the impacts and resources required for reactive maintenance.

Figure 5 – Planned Operations and Maintenance Expenditures



Over the 10-year planning horizon Hamilton is expecting to invest $3.5 billion in operations and maintenance for the 5 assets covered under the Core AM plan. Transportation will invest $1.6 billion to ensure roads are maintained at their current service level and Water Works will invest $1.85 billion to deliver their services at the current level.

Adding additional assets over time significantly impacts the operational and maintenance resources required to sustain the expected or mandatory level of service. It should be noted that a significant amount of operational and maintenance expenditures are mandatory due to legislative requirements and cannot simply be avoided or deferred.

Once an asset has been built, certain operational and maintenance costs are often considered 'locked in' with very little room for Hamilton to influence the mandatory activities. For example, if Hamilton builds 1 km of highway, it then becomes obligated by legislation to care for that section of road as prescribed by the Province. In this situation, Hamilton must follow the Minimum Maintenance Standards (MMS) and plough the road and repair potholes within specific timeframes which all requires resources that are in high demand.

There are operational and maintenance activities that Hamilton can influence once an asset has been constructed such as the frequency of cleaning or inspections as well as preventative maintenance programing. Hamilton will continue to identify and review its operational and maintenance lifecycle activities to ensure the optimal management of its assets.

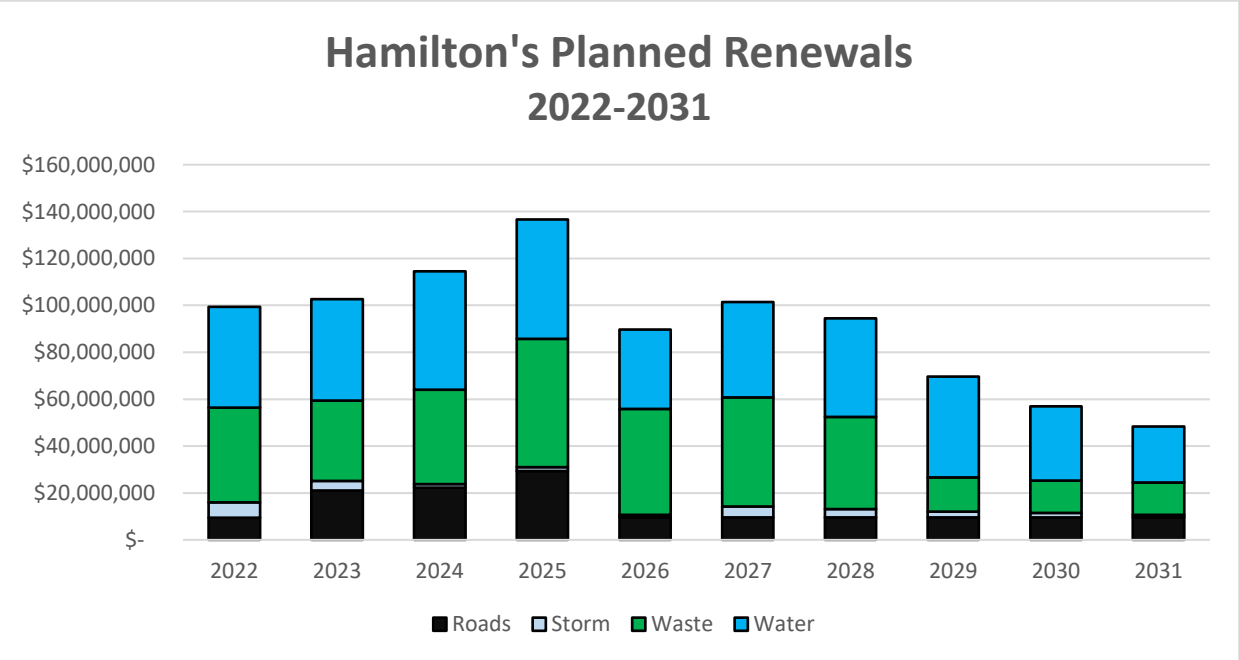
6.4.3 Renewal Plan

As infrastructure is used, it is normal to see a decline in its performance and inevitably, an asset will fail. Asset failure will create service interruptions and may pose a risk to public health and safety. Renewal activities replace an existing asset with an asset of similar type and purpose without changing its service capacity. This lifecycle activity is essential for the provision of service as no asset has an infinite service life. Without timely renewals, an asset typically requires extensive and high cost maintenance activities to ensure the asset can perform its intended function or possible disposal when maintenance efforts are no longer economically feasible.

Asset renewals are typically undertaken to either ensure the assets reliability or quality will meet the service requirements set out by the City. Renewal projects are often triggered by service quality failure and can often be prioritized by those that have the highest consequence of failure, have high usage, have high operational and maintenance costs and other deciding factors.

When renewals are programmed for the optimum time it ensures that services can continue with minimal interruption and that resources are optimized through the mitigation or avoidance of high cost maintenance and risk costs. Renewals being completed in a timely manner is critical to ensure that Hamilton can deliver its services over the long term at their expected level of service.

Figure 6 – Planned Renewals



Over the 10-year planning horizon, Hamilton is expecting to invest $913 Million in renewals for the five (5) assets covered under these AM Plans. Transportation will invest $139 Million to renew transportation assets to their current service level and Water Works will invest $774 Million

to renew existing assets. The forecasted costs above are consolidated from both the capital and operating budget.

Renewal investment is required to ensure the optimal delivery of service is possible. Continually deferring renewals create risks of higher financial costs, decreased availability, and decreased satisfaction with asset performance. Properly funded and timely renewals will ensure the assets perform as expected and it is recommended to continue to analyse asset renewals based on criticality and availability of funds for future AM Plans.

6.4.4 Disposal Plan

Disposal includes any activity associated with the disposal of a decommissioned asset including sale, possible closure of service, decommissioning, disposal of asset materials, or relocation. Disposals will occur when an asset reaches the end of its useful life. The end of its useful life can be determined by factors such as excessive operation and maintenance costs, regulatory changes, obsolescence or demand for the structure has diminished.

At this time Hamilton has minimal disposals planned for its core asset classes. Future iterations of the AM Plan will improve upon disposal reporting and planning options. Hamilton will provide a summary of the disposal costs and estimated reduction in annual operations and maintenance costs.

6.5 LEVEL OF SERVICE APPROACH

Levels of service (LOS) are measures for what Hamilton provides to its customers, residents and visitors. Service levels are best described as the link between providing the outcomes the community wants, and the way that Hamilton provides those services. Ideally, Hamilton should provide the levels of service that the current and future community both want and are prepared to pay for. Hamilton's approach to developing levels of service is found below.

6.5.1 Level of Service Development

Levels of service are created considering four (4) main components: customer values, level of service statements, customer performance, and technical performance as shown below in Table 8.

Table 8 – Level of Service Definitions

Concept	Definition
Customer Values	What the customer can expect from their tax dollar in "customer speak", and include: ▪ What aspects of the service is important to the customer; ▪ whether they see value in what is currently provided; and, ▪ the likely trend over time based on the current budget provision. These values are gathered using an engagement survey and are used to develop level of service statements.
Level of Service Statements	Level of service statements utilize objectives to spell out exactly what the customer can expect from their tax/rate dollars and tie the customer and technical levels of service together. The LOS statements describe the outputs Hamilton intends to deliver to customers and commonly relate to service attributes such as: quality, reliability, accessibility, affordability, quantity, responsiveness, timeliness.
Customer Performance Measures	Relate to how the customer feels about the service, and so these measurements can be tangible and intangible. These should also be written in "customer speak" and are considered in terms of three (3) factors: ▪ Condition - How good is the service? What is the condition or quality of the service?

Concept	Definition
	▪ Function - Is it suitable for its intended purpose? Is it the right service? ▪ Capacity/Usage - Is the service over or under used? Do we need more or less of these assets?
Technical Performance Measures	Relate to what the City does to deliver the services and are tangible measurements. These should be used internally to measure performance against service levels and are technical in nature. Technical service measures are linked to lifecycle activities and annual budgets covering Acquisition, Operation, Maintenance, Disposal, and Renewal.

6.5.2 Customer Engagement

The City of Hamilton strives to engage with its users to track satisfaction with Hamilton's assets and services to ensure that the City understands customer values and formulates the correct customer performance measures.

In January 2022, the City released its first two (2) surveys related to asset management for core assets on the Engage Hamilton, Roads and Water Services Review page.

These surveys were released individually as to not overwhelm survey respondents. The Corporate Asset Management Office intends to release surveys on a regular basis for each service area to ensure the City is continually receiving feedback on City services.

A summary of the number of submissions for each survey is found below in Table 9:

Table 9 – Summary of Survey Submissions

SURVEY NAME	TOTAL SUBMISSIONS
Roads, Bridges and Culvert Survey	279
Drinking water, Stormwater and Wastewater Survey	184

While these surveys were used to establish customer values and customer performance measures, it's important to note that the number of survey respondents only represents a small portion of the population. The City will continue to improve the marketing strategy to ensure these surveys reach a larger audience. This has been identified as a continuous improvement item.

The results of the survey can be found in Appendix A. These results were used to formulate the customer values and performance measures included in each AM Plan.

6.5.3 Performance Measurement

Historically, the City of Hamilton has identified measuring performance as a priority. In 2017 the Public Works Balanced Scorecard was implemented where metrics were created by senior management based on department priorities, with a motivator of “how do you know that you had a good day?” Data is entered by staff on a pre-determined frequency (e.g. monthly, quarterly) depending on the type of metric. The information from this tool was the starting point to develop the technical performance measures for this iteration of the plan.

However, it was found that the metrics currently in the scorecard typically focused on operations and maintenance lifecycle activities and were measuring how the City is performing in accordance with legislative requirements. Since there are additional lifecycle stages beyond operations and maintenance, and customer preferences and expectations do not always match minimum legislated requirements as discussed in the AMPs, this suggests that these metrics should be revisited for future iterations of the plan to confirm that they are reflecting the entire lifecycle of the assets as well as customer values. This has been identified as a continuous improvement item.

When creating and revising technical performance metrics, the City will be ensuring that SMART criteria are used. The acronym has been defined below:

LETTER	CRITERIA	DEFINITION
S	Specific	Provide a clear description of what needs to be achieved.
M	Measurable	Include a metric with a target that indicates success.
A	Attainable	Set a challenging but realistic target which is agreed to by those who must complete the task.
R	Relevant	Ensure the metric can be applied to known problems
T	Time-based	Establish clear timeframe for achieving the outcome.

6.6 FUTURE DEMAND MANAGEMENT APPROACH

In asset management, demand is defined as the desire customers have for assets or services they use and that they are willing to pay for. These are the desires for either: new assets or services or current assets. Hamilton's approach to demand management is found below.

Since demand is not yet an extensive requirement in O.Reg. 588/17 for the July 1st, 2022 deadline, the demand sections are not as robust as some other sections of the report, however, it is an obligation for the report by July 1st, 2025, and will therefore be expanded in future AMP iterations.

6.6.1 Demand Management

Demand for services is typically measured considering how many customers use the assets. In order to manage demand, the City must plan and take action to influence demand for services or usage of assets. In addition, demand will inevitably change over time and will impact the needs and desires of the community in terms of the quantity of services (e.g. assumption of assets due to development growth) and types of service required (e.g. different assets are required to meet consumer preference).

Some key demand drivers identified throughout the AM Plans are:

- Population Change;
- Regulatory Changes/Obligations;
- Changes in Demographics;
- Seasonal Factors;
- Consumer Preferences and Expectations;
- Technological Changes;
- Economic Factors; and,
- Environmental Awareness/Commitments.

6.6.2 Growth Projections

GM Blue Plan assisted with the Growth Projection analysis for the report. The 2019 Development Charge Background Study thoroughly assessed the impact of growth on demand and the resulting capital and significant operating expenditures that are anticipated for core assets to 2031. These forecasts, results and recommendations are used in the asset management discussions for each asset category.

Per Table 10 below, the City's population is anticipated to reach 614,943 by early 2029 and 636,080 by mid-2031, resulting in an increase of 65,046 and 86,183 persons, respectively, over the 10-year and longer term (2019 to 2031) forecast periods. A requirement per O. Reg. 588/17 was to include the Greater Golden Horseshoe (GGH) projections for Hamilton, which shows that

the population is expected to be approximately 820,000 by 2051. Total employment, including work at home and no fixed place of work (NFPOW) for Hamilton is anticipated to reach 285,130 by early-2029 and 300,000 by mid-2031. This represents an employment increase of 46,114 for the 10-year forecast period and 60,984 for the 2019 to 2031 forecast period. A requirement per O. Reg. 588/17 was to include the Greater Golden Horseshoe (GGH) projections for Hamilton, which shows that employment is expected to be approximately 360,000 by 2051.

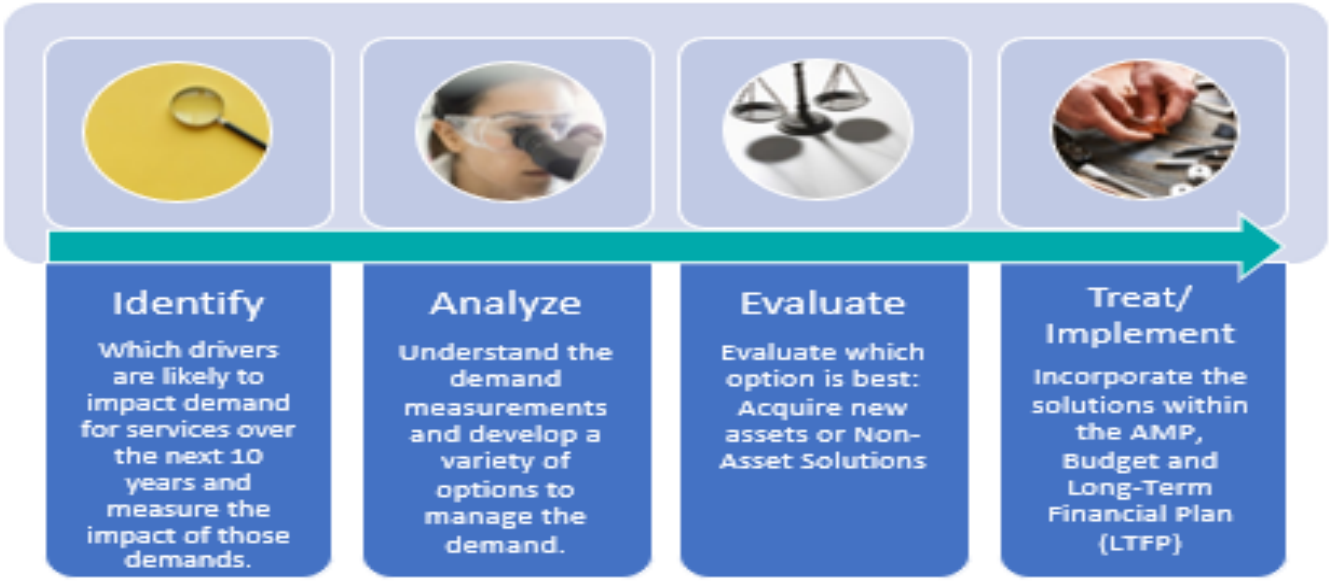
Table 10 – Population and Employment Projections

	2016	Early 2029	Mid 2031	2051
SOURCE	DC STUDY	DC STUDY	DC STUDY	GREATER GOLDEN HORSESHOE
Population	557,110	614,943	636,080	820,000
Employment	203,336	285,130	300,000	360,000

The 2031 DC Study numbers were used for population and employment drivers during the demand process.

6.6.3 Demand Management Process

When quantifying demand in the AM Plans, the four-step process shown below was used to develop a high-level demand management plan for key demand drivers identified for the service area. It is a continuous improvement item to identify additional demand drivers in future for the proposed levels of service requirement in O. Reg. 588/17 by July 1st, 2025.



6.7 CLIMATE CHANGE ADAPTATION APPROACH

Navigating the climate crisis has been a key area of focus for the City of Hamilton, which is represented by historical efforts to understand the challenges that climate change poses to City assets.

6.7.1 Background

In 2019, Hamilton City Council declared a climate change emergency and directed staff to form a Corporate Climate Change Task Force (CCCTF). The task force created overarching goals and areas of focus for both climate mitigation and adaptation and was the start of Hamilton's corporate-wide approach to reduce greenhouse gas (GHG) emissions, where the goal is to achieve net zero GHG emissions by 2050.

6.7.2 Asset Owner Response to Climate

In support of the CCTF, asset owners have responded by working to understand mitigation and adaptation opportunities. The goal is to increase our infrastructure's capacity to recover, adapt, and thrive in the face of adversity, chronic stresses and acute shocks that will be encountered in a future of changing climate conditions.

As part of this work, an inventory of projects/initiatives has been created and can be found in the Climate Change Adaptation sections of the AM Plans.

6.7.3 Asset Management Plan & Climate Change Adaptation

The impacts of climate change will likely have a significant impact on the assets the City manages and the services they provide. In the context of the asset management planning process, climate change can be considered as both a future demand and a risk.

Within the AM Plans, a high-level climate change management plan for key climate change drivers were identified for the service area and were considered as part of demand management. It is a continuous improvement to identify additional demand & climate change drivers in future for the proposed levels of service requirement in O. Reg. 588/17 by July 1st, 2025.

6.8 RISK MANAGEMENT APPROACH

With asset ownership comes inherent risk. Risk is defined as 'the effect of uncertainty on Hamilton's objectives'. Risk management is an essential component of effectively managing infrastructure assets. Hamilton will manage risk and opportunities through a formal risk analysis process. Through continuous application and expansion of the risk process Hamilton will ensure that it explicitly and continually considers risks to its objectives. This process will be completed as part of the AM planning process and will enable Hamilton to address risk proactively versus reactively.

The purpose of infrastructure risk management is to document the findings and recommendations resulting from the periodic identification, assessment and treatment of risks associated with providing services from infrastructure, using the fundamentals of International Standard ISO 31000:2018 Risk management – Principles and guidelines.

Risk in itself is dynamic, iterative, and responsive to change. To manage risk effectively, Hamilton will need to continuously monitor and consider risk to ensure the appropriate mitigation efforts are applied. By continuously monitoring risk Hamilton:

- Ensures evaluation of risk is an integral part of normal business process and part of the decision making process;
- Tailors its risk management to meet community needs and includes human, cultural and social factors;
- Ensures transparency in our decisions; and,
- Explicitly address the uncertainty that is incumbent on asset owners.

6.8.1 Risk Management Process

Hamilton has adopted an infrastructure-based risk process to ensure that all assets will be reviewed utilizing a standardized approach. This will ensure that Hamilton is able to measure and compare risks consistently across a broad spectrum of assets and services. The risk assessment process seeks to identify credible risks, the likelihood of the risk event occurring, the consequences should the event occur, development of a risk rating, evaluation of the risk and development of a risk treatment plan for non-acceptable risks.

An assessment of risks associated with delivery of service will identify risks that will result in loss or reduction in service, personal injury, environmental impacts, a 'financial shock', reputational impacts, or other consequences.

HAMILTON RISK REVIEW PROCESS

Each step in the risk review process ensures specific questions are answered and a decision is made on how to resolve or mitigate the known risk with identified costs.

6.8.2 Risk Assessment

To ensure a consistent approach to risk, Hamilton has standardized its scales for both consequence (Table 11) and likelihood (Table 12) below. Hamilton will continue to improve the scales and ensure that they accurately reflect what the City believes is appropriate to consider.

Hamilton will utilize standardized risk categories across the City with respect to its assets and services. The risk categories are:

- Injury/Human Safety;
- Legal/Legislative (included in risk evaluation criteria);
- Environmental;
- Interruption/Reduction of services;
- Social & Cultural Outcomes (included in risk evaluation criteria);
- Financial; and,
- Reputational.

Table 11 - Risk Consequence Scale

	REDUCTION / INTERRUPTION OF SERVICE	FINANCIAL	SAFETY	REPUTATION	ENVIRONMENTAL
1	Asset Failure - Little to No Interruption to service. (Few Customers)	< $2500	Potential for Minor Injury	Minimal to no concern	Negligible Impact (restored within 1 week)
2	Asset Failure - Minor Interruption to service. 4 Hours Downtime	$2.5K - $25K	Lost Time Incident, WSIB, Minor Injuries to few people	Internal Concerns	Minor Impact (Restored within 1 month)
3	Asset Failure - Serious Interruption to service. 4 - 24 Hours Downtime	$25k - 250K	Permanent Injury	Public Concerns, Phone calls, emails, council questions	Significant Short-Term Impact (up to 2 Months)
4	Asset Failure - Major Interruption to service. 1 Day-1 Week Downtime	$250K - $2.5 Million	Disabling Injury or Casualty	Local News, TV, Social Media	Significant Long-Term Impact (up to 1 Year)
5	Asset Failure - Catastrophic Interruption to service. > 1 Week of Downtime	> $2.5 Million	Multiple Casualties, Long Term Hospitalizations	National/International News Coverage	Major Long-Term Impact (< 1 year/permanent)

Critical risks are those assessed with 'Very High' (requiring immediate corrective action) and 'High' (requiring corrective action) risk ratings identified with the AM Plans. The residual risk and treatment costs of implementing the selected treatment plan will be incorporated into the next iteration of the plan.

Table 12 - Risk Likelihood Scale

Scoring	Description	Range
1	Very Unlikely	< 1 per 100 Years
2	Possible	1 in 100 to 1 in 10 Years
3	Infrequent	1 in 10 to 1 in 2 Years
4	Regular	1 in 2 years to 10 per Year
5	Common	Over 10 Times per Year

Hamilton will explicitly document its risk consideration within the AM Plan to demonstrate how the City actively considers risk with regards to its assets and the services that are provided to the community. Hamilton will utilize various risk measurements including impact, probability, frequency, and consequences of these risks to inform decisions and optimize choices by either reducing, removing, mitigating or accepting the risk. Hamilton will continuously monitor and report on risk through operational initiatives which include but are not limited to:

- Asset management planning process;
- Condition assessments; and,
- Regular staff inspection programs.

Hamilton will incorporate risk review into its asset management planning to ensure:

- Desired levels of service will be achieved through the balance of cost, risk and performance;
- Prioritized projects can be funded appropriately and within the required planned time;
- Hamilton is compliant with all regulatory and legislative obligations; and,
- Hamilton is continually monitoring risk to identify new and emerging risks as they present themselves and to measure the effectiveness of the City's mitigation efforts over time.

6.8.3 Current Risk

Hamilton has begun to undergo a shift in how it evaluates risk in accordance with its infrastructure planning. For this iteration of the AM Plan staff helped inform a high-level risk evaluation that was utilized to help staff become familiar with the formalized risk process and develop a basic risk profile for the asset classes covered within the plans. The plans currently identify:

- Which assets are deemed to be critical;
- Assessment of some know high level risks;
- Risk mitigation and control efforts; and,
- Resilience approach.

At this time, the City does not have sufficient data to present risks and tradeoffs. This information will be presented in the 2025 AM Plan regarding Proposed Levels of Service.

6.9 FINANCIAL MANAGEMENT APPROACH

Effective asset and financial management will enable Hamilton to ensure its asset networks will provide the appropriate level of service for the City to achieve its goals and objectives. Reporting to stakeholders on service and financial performance ensures the City is transparently fulfilling its stewardship accountabilities.

Creating a Long-Term Financial Plan(LTFP) the connects the Budget to the AMP is critical for the City to ensure that the various networks lifecycle activities such as renewals, operations, maintenance and acquisitions can and do happen at the optimal time. Hamilton is under increasing pressure to meet the wants and needs of its customer while keeping costs at an affordable level and maintaining its financial sustainability.

Without funding asset activities properly for its asset networks, the City will have difficult choices to make in the future which will include options such as higher cost reactive maintenance and operational costs, reduction of service and potential reputational damage.

Future iterations of the plan will ensure that Hamilton:

- Creates and utilizes a LTFP that connects the budget to the AM Plans;
- Provide accurate costs within the planning horizon (30 years);
- Detail the costs to ensure a defined level of service can be achieved;
- Plan how to manage the financial gap that currently exists; and,
- Detail what cannot be done and the effects of underfunding infrastructure.

The City will be seeking to fully incorporate its asset networks into the LTFP. Aligning the LTFP with the AM Plan is critical to ensure all the network's needs will be met while the City is finalizing a clear financial strategy with measurable financial targets. The financial projections will be improved as the discussion on desired levels of service and asset performance matures.

6.9.1 Asset Renewal Funding Ratio

A key sustainability indicator for Hamilton's asset management plan is the asset renewal funding ratio. This ratio is an effective approach to report on how the City is accommodating asset renewals in an optimal and cost-effective manner from a timing perspective and relative to financial constraints. This also includes the risk the City is prepared to accept and service levels it wishes to maintain. The target renewal funding ratio should ideally be between 90% - 110% over the entire planning period. A low result generally indicates that service levels may be achievable however the expenditures are below this level because Hamilton has many assets that compete for finite funding resources or has constraints with acceptable debt levels.

Table 13 illustrates the Asset Renewal Funding Ratio for each service area.

Table 13 – Asset Renewal Funding Ratio

Engineered Structures	33%
Road Network	14%
Storm Water	9.5%
Wastewater	46%
Water	75%

By only having sufficient funding to renew assets at the above stated ratios, the City will be required to make difficult trade off choices that could include:

- a reduction of the level of service and availability of assets;
- increased complaints and reduced customer satisfaction;
- increased reactive maintenance and renewal costs; and,
- damage to the City's reputation and risk of fines or legal costs.

The lack of renewal resources will be addressed in future AM Plan's while aligning the AM Plans to the LTFP. This will allow staff to develop options and long-term strategies to address the renewal rate. The City will review its renewal allocations once the entire inventory has been confirmed and amalgamated.

6.9.2 Infrastructure Gap

Hamilton's current infrastructure position represents a huge social investment that has been built up progressively over the last 150 years. Continued acquisitions over that time compounded with insufficient resources to keep up with the necessary required works has created a 'gap' of funding. This gap represents the difference between what Hamilton currently spends versus the amount of investment required to ensure the optimal delivery of services. Hamilton's financial 'gap' has built up over decades predominantly due to underinvestment, including a lack of permanent infrastructure funding from senior levels of government, as well as large spikes of growth throughout the years. Hamilton's challenge is to determine how it will manage the gap over the long term to ensure that they can continue to deliver its services sustainably today and across future generations.

Currently there is insufficient budget to address the large backlog of renewal work projected by the AM Plans. There is sufficient budget to address the majority of the ongoing operational and maintenance needs for the planning period however with the assumption of assets over time and their increased costs there may be impacts to the service itself. Without some adjustment to available funds or other lifecycle management decisions there will be insufficient budget to address all planned lifecycle activities.

Over the 10-year planning horizon Hamilton's funding gap for core assets is estimated to be $1,959 million or $195.8 million annually as shown in Table 14 below.

Table 14 – 10 Year Planning Funding Gap

SERVICE AREA	ANNUAL FUNDING GAP ($M)	10 YEAR FUNDING GAP ($M)
Engineered Structures	8.1	81
Road Network	86.6	866
Storm Water	31.1	311
Wastewater	49.8	498
Water	20.2	202
Total	$195.8	$1,958

The gap was calculated utilizing identified renewal needs and planned operations and maintenance.

As the City continues to develop condition profiles and necessary works are identified based on their condition, it is anticipated operation and maintenance forecasts will increase significantly.

Future iterations of the plan will include the needs of all lifecycle activities to ensure that a fulsome analysis of the true infrastructure gap can be projected. Hamilton needs to mature further in its asset management knowledge to ensure that it fully capture the needs of its assets throughout their lifecycles and can confidently project the gap. As data and process documentation improve over time, Hamilton will be able determine the best methods to manage the gap.

The options to manage the gap include:

- Maintain Status Quo;
- Continue to defer projects out;
- Dispose/close underutilized assets;
- Reduce the expected level of service; and,
- Increase funding allocations.

Other options include adjustments to current operational and maintenance practices, constructing assets differently, utilizing debt strategies and accepting more risk.

Without sufficient funding the City may have to defer necessary lifecycle activities. Deferring important lifecycle activities is never recommended. The City will benefit from allocating

sufficient resources to developing its long-term financial plan to ensure that over time the City can fully fund the necessary lifecycle activities which ensures the assets are compliant, safe and effectively deliver the service the customers need and desire.

The lack of funding allocated for the backlog of renewals and the necessary lifecycle activities creates an additional issue which is intergenerational equity. Each year that Hamilton defers lifecycle activities it pushes the ever-increasing financial burden on to future generations. It is imperative the City begin addressing the lack of consistent and necessary funding to ensure that intergenerational equity will be achieved. Over time, allocating sufficient funding on a consistent basis ensures that future generations will be able to enjoy the same standards of living being enjoyed today.

Over time the City will continue to improve its lifecycle data, and this will allow for informed choices as to how best to mitigate those impacts and how to address the funding gap itself. This gap in funding future plans will be refined over the next three (3) years and improve the confidence and accuracy of the forecasts.

6.9.3 Long Term Financial Plan (LTFP)

Over the next 3 years Hamilton will be updating the LTFP to connect the current funding allocation within the budget process directly to the asset management plans and the level of services Hamilton provides. This will be a critical task for Hamilton to assist with the undertaking of timely renewals, ensuring legislative compliance and assuring the continuation of services.

The LTFP seeks to accommodate ongoing funding of existing service's lifecycle costs as well as new services and assets as required. The plan itself will connect the revenues and income raised annually and the intended expenditures to ensure the provision of service can be achieved. The LTFP will inform the financial strategy and the likely consequences of diverting from the AM Plans proposed activities. The LTFP ultimately will allow Hamilton to:

- Model financial implications of various service level scenarios to help inform long term planning options;
- Determine a combination of proposals that best meets the needs of the community; and,
- Ensure ongoing financial sustainability and intergenerational equity;

The LTFP will be reviewed annually in conjunction with the budget process and throughout each iteration of every asset management plan.

6.9.4 Financial Targets

Hamilton needs to determine financial targets that are appropriate to achieving its objectives for its infrastructure assets and services. Hamilton will adopt 3 key financial indicators to measure and report on its efforts to deliver its services. The Asset Renewal Funding ratio is mentioned above and is included in this iteration of the plan. Future plans will include 2 additional ratios:

- Operating Surplus Ratio – Assesses Hamilton's Financial Performance
- Net Financial Liabilities Ratio – Assess the ability of Hamilton to utilize debt effectively

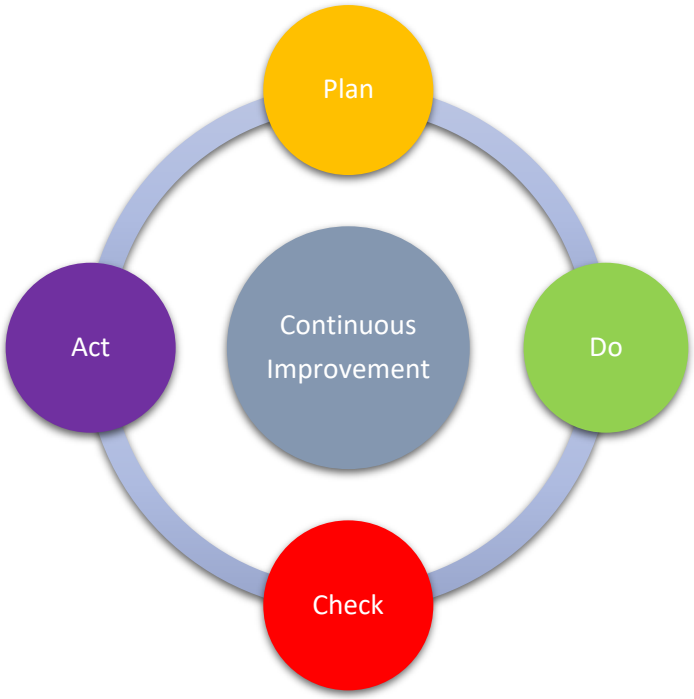
Hamilton has a fiduciary and social responsibility to ensure that it is meeting its financial obligations as it pertains to its assets and the services the City delivers. It must adopt a long-term view and endorse evidence-based decision making to ensure that:

1. Intergenerational Equity can be achieved;
2. Assets and services are affordable and deliver the desired level of service;
3. The infrastructure gap is effectively managed; and,
4. Good stewardship is assured.

Ultimately, the targets are intended to be planning tools and organizational goalposts to ensure Hamilton can monitor its financial performance and understand what financial tools it has at its disposals to manage the City Assets.

6.10 CONTINUOUS IMPROVEMENT & NEXT STEPS

The first AM Plan is a starting point to inform the City on what we own, how we manage it, when we will replace it, and the long-term costs and risks of ownership of these assets. By continuously developing our AM Plans, the City will realize the benefits of applying asset management principles across all service areas. The figure below shows the process for how the City proposes to perform continuous improvement over time.



The AM Plans have identified 100+ opportunities for improvement which will require further discussion and analysis to determine feasibility, resource requirements and alignment to current workplans. Future iterations of this AM Plan will provide updates on these improvement plans. Additional continuous improvement items will be identified in the AM Plan for Proposed Levels of Service due July 1st, 2025.

The section below outlines overall findings for continuous improvement across the AM Plans.

6.10.1 Asset Information Improvements

AM Plans start with the collection of data related to assets (e.g. location, condition, age etc.) called an asset registry. In many cases, registries do not exist or contain gaps (e.g. for many assets, age is not known). Data has been found to be outdated, duplicated and incomplete in some instances. A data confidence scale has been developed shown in Section 7.2.2 to quantify this issue, and data confidence values are presented for key numbers in the AM Plans. The

future implementation of the EAM system for Public Works described in Section 7.2.3 will aid with unifying and improving data integrity.

In addition, asset condition assessments are a key element in AM as without proper assessments, estimated service life (ESL) and age are used to approximate condition. This can result in grossly over or underestimating the actual condition leading to inaccurate forecasts. Similarly, with replacement costs, variation in data and the need to define a robust process has been identified as key areas of concern. The need for governance, consistency and process definition overall has been identified as important next steps and will occur through the development of the AM Program.

Finally, areas exist where asset ownership is unclear due to the complex nature of the City's many assets and their interconnectivity. Clarification will occur as AM governance and standardized processes are developed.

6.10.2 Level of Service Improvements

Level of Service (LOS) is critical for Asset Owners to understand. Currently, owners are learning about and beginning to embrace LOS and understand its connection to performance measurement.

Engagement with the community is paramount in understanding current service provision and desired future state, and the CAM office is proposing to release surveys regularly to continue to collect data to inform the plans. The number of survey respondents for this initial survey only represents a small portion of the population. The City will continue to improve the marketing strategy to ensure these surveys reach a larger audience.

Current technical performance metrics are typically measuring how the City is performing in accordance with legislative requirements for operations and maintenance lifecycle stages. Since there are additional lifecycle stages beyond operations and maintenance, and customer preferences and expectations do not always match minimum legislated requirements as discussed in the AM Plans, this suggests that these metrics should be revisited for future iterations of the plan to confirm that they are in fact reflecting customer values.

6.10.3 Demand & Risk Management Improvements

Since demand and risk management are not yet extensive requirements in O. Reg. 588/17 for the July 1st, 2022 deadline, these sections are not as robust as some other sections of the report,

but they are an obligation for the AMP by July 1st, 2025, and will be expanded on in future iterations of the report.

6.10.4 Financial Management Improvements

Currently, the City has identified a 10-year planning horizon to meet the requirements of O. Reg. 588/17. For future iterations of the AM Plan, the planning horizon will be increased to 30 years per standard AM practice. This ensures visibility to the horizon beyond the capital plan and provides greater transparency for the future.

As previously mentioned, since the replacement costs are at a low confidence level and the current infrastructure gap is largely based on the renewal requirement and backlog, the financials for the AM Plan are also at a low confidence level. As data improves, the financial projections will also improve. In addition, future iterations of the plan will ensure that Hamilton:

- Creates and utilizes a LTFP that connects the budget to the AM Plans;
- Provide more accurate costs within the planning horizon (30 years);
- Detail the costs to ensure a defined level of service can be achieved;
- Plan how to manage the financial gap that currently exists; and,
- Detail what cannot be done and the effects of underfunding infrastructure.

7.0 APPENDICES

7.1 Appendix “A” – Engage Hamilton Survey Results

- Appendix “A” – Engage Hamilton Survey Results (Roads and Water Services Service January 25 – February 18, 2022)

Appendix “A” – Engage Hamilton Survey Results
(Roads and Water Services Service January 25 – February 18, 2022)

Project Report

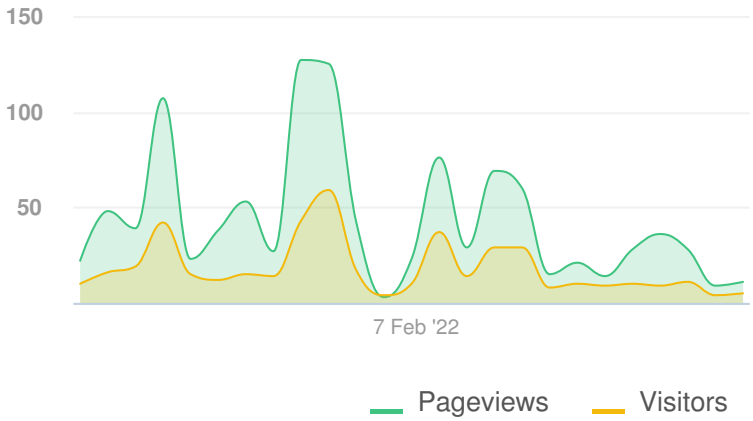
25 January 2022 - 18 February 2022

Engage Hamilton

Roads and Water Services Review

BANG THE TABLE engagementHQ

Visitors Summary



Highlights

TOTAL VISITS	MAX VISITORS PER DAY	NEW REGISTRATIONS
651	59	1

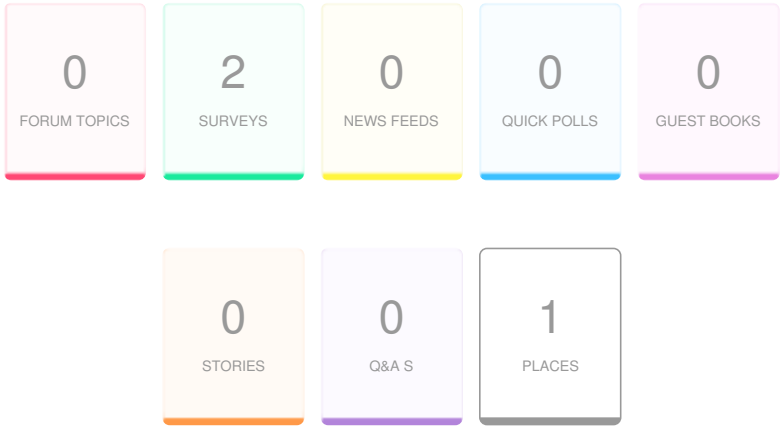
ENGAGED VISITORS	INFORMED VISITORS	AWARE VISITORS
355	424	569

Aware Participants	569
Aware Actions Performed	Participants
Visited a Project or Tool Page	569

Informed Participants	424
Informed Actions Performed	Participants
Viewed a video	0
Viewed a photo	0
Downloaded a document	0
Visited the Key Dates page	2
Visited an FAQ list Page	0
Visited Instagram Page	0
Visited Multiple Project Pages	71
Contributed to a tool (engaged)	355

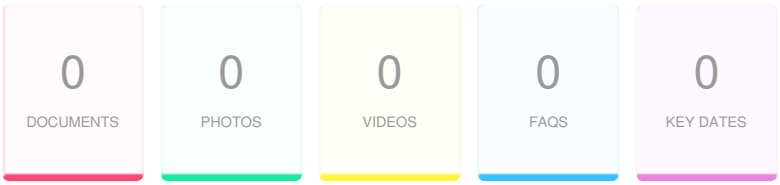
Engaged Participants	355		
Engaged Actions Performed	Registered	Unverified	Anonymous
Contributed on Forums	0	0	0
Participated in Surveys	13	1	332
Contributed to Newsfeeds	0	0	0
Participated in Quick Polls	0	0	0
Posted on Guestbooks	0	0	0
Contributed to Stories	0	0	0
Asked Questions	0	0	0
Placed Pins on Places	5	8	0
Contributed to Ideas	0	0	0

ENGAGEMENT TOOLS SUMMARY



Tool Type	Engagement Tool Name	Tool Status	Visitors	Contributors		
				Registered	Unverified	Anonymous
Place	Current Level of Service Map	Archived	41	5	8	0
Survey Tool	Asset Management - Roads, Bridges and Culverts	Archived	343	9	1	268
Survey Tool	Asset Management - Drinking water, Stormwater and Wastewater	Archived	227	8	1	174

INFORMATION WIDGET SUMMARY



Widget Type	Engagement Tool Name	Visitors	Views/Downloads
Key Dates	Key Date	2	2

ENGAGEMENT TOOL: PLACE

Current Level of Service Map

Visitors 41	Contributors 13	CONTRIBUTIONS 28

2022-01-26 13:56:47 -0500
MSchiau
CATEGORY
Road Condition Deficiency (e.g. pothole, severe cracking, guide rail issue)

Road Surface condition poor
Address: 15 Governor's Road, Hamilton, Ontario L9H 2R1, Canada

http://engage.hamilton.ca/roadswaterservices/maps/current-level-of-service-map?reporting=true#marker-83325

2022-01-26 13:59:21 -0500
MSchiau
CATEGORY
Traffic Deficiency (e.g. signal frequently out, sign missing)

Lighting Needed
Address: 92 Huntingwood Avenue, Hamilton, Ontario L9H 6X8, Canada

http://engage.hamilton.ca/roadswaterservices/maps/current-level-of-service-map?reporting=true#marker-83326

2022-01-26 14:02:24 -0500
MSchiau
CATEGORY
Traffic Deficiency (e.g. signal frequently out, sign missing)

Sidewalk lighting
Address: 492 Governor's Road, Hamilton, Ontario L9H 6Y7, Canada

http://engage.hamilton.ca/roadswaterservices/maps/current-level-of-service-map?reporting=true#marker-83327

2022-01-26 15:03:09 -0500
0987
CATEGORY
Road Condition Deficiency (e.g. pothole, severe cracking, guide rail issue)

Multiple cracks becoming potholes, fix the cracks before they become potholes. Gover nors rd needs a shave and pave now or it will require a full rebuild in a few years.
Address: 3430 Governor's Road, Hamilton, Ontario L0R 1T0, Canada

http://engage.hamilton.ca/roadswaterservices/maps/current-level-of-service-map?reporting=true#marker-83355

2022-02-02 10:43:09 -0500
Nico
CATEGORY
Road Condition Deficiency (e.g. pothole, severe cracking, guide rail issue)

Potholes and cracks
Address: 1141 Burlington Street East, Hamilton, Ontario L8L 0A5, Canada

http://engage.hamilton.ca/roadswaterservices/maps/current-level-of-service-map?reporting=true#marker-83637

2022-02-07 22:01:39 -0500
engaged66
CATEGORY
Reoccurring flooding (e.g. blocked culvert, drainage issue)

Storm water from Parkside Dr between Glen Rd. and Devon Pl. does not drain to swal es in Churchill Park
Address: 26 Parkside Drive, Hamilton, Ontario L8S 3Y1, Canada

http://engage.hamilton.ca/roadswaterservices/maps/current-level-of-service-map?reporting=true#marker-83916

2022-02-07 22:09:54 -0500
engaged66
CATEGORY
Road Condition Deficiency (e.g. pothole, severe cracking, guide rail issue)

Entrance to Churchill Park gravel path at corner Parkside Dr and Devon Pl is not bike fr iendly
Address: 48 Parkside Drive, Hamilton, Ontario L8S 3X5, Canada

http://engage.hamilton.ca/roadswaterservices/maps/current-level-of-service-map?reporting=true#marker-83917

ENGAGEMENT TOOL: PLACE

Current Level of Service Map

2022-02-08 21:58:39 -0500
engaged66
CATEGORY
Road Condition Deficiency (e.g. pothole, severe cracking, guide rail issue)

road shoulder is eroding
Address: 150 Macklin Street North, Hamilton, Ontario L8S 3S1, Canada

http://engage.hamilton.ca/roadswaterservices/maps/current-level-of-service-map?reporting=true#marker-83984

2022-02-10 10:43:05 -0500
M1
CATEGORY
Road Condition Deficiency (e.g. pothole, severe cracking, guide rail issue)

Surface discontinuity
Address: 452 Springbrook Avenue, Hamilton, Ontario L9K 0C1, Canada

http://engage.hamilton.ca/roadswaterservices/maps/current-level-of-service-map?reporting=true#marker-84044

2022-02-14 09:04:30 -0500
DeonS
CATEGORY
Road Condition Deficiency (e.g. pothole, severe cracking, guide rail issue)

Road shoulder at turn to Kirk dips and floods over with severe ice built up in winter even causing skidding into on coming traffic.
Address: 2860 Kirk Road, Binbrook, Ontario L0R 1C0, Canada

http://engage.hamilton.ca/roadswaterservices/maps/current-level-of-service-map?reporting=true#marker-84220

2022-02-14 09:10:19 -0500
DeonS
CATEGORY
Road Condition Deficiency (e.g. pothole, severe cracking, guide rail issue)

Severe potholes from conservation heavy truck traffic during repairs that ripped up asphalt on stretch of road with major safety concern as vehicles speed through this section and dip. Already had few vehicles break wheel wells with impacts.
Address: 5045 Harrison Road, Hamilton, Ontario L0R 1C0, Canada

http://engage.hamilton.ca/roadswaterservices/maps/current-level-of-service-map?reporting=true#marker-84221

2022-02-14 18:16:12 -0500
Waves
CATEGORY
Road Condition Deficiency (e.g. pothole, severe cracking, guide rail issue)

Center Road from 7Th Concession to Campbellivile Road. Pot holes uneven pavement, cracks, crumbling shoulders. Road need complete rebuild.
Address: 1571 Centre Road, Hamilton, Ontario L8N 2Z7, Canada

http://engage.hamilton.ca/roadswaterservices/maps/current-level-of-service-map?reporting=true#marker-84268

2022-02-14 18:19:03 -0500
Waves
CATEGORY
Road Condition Deficiency (e.g. pothole, severe cracking, guide rail issue)

From Highway 6 to MilburoughLine, Cracks, uneven pavement, pot holes pavement breaking up, Crumbling shoulders
Address: 228 Carlisle Road, Carlisle, Ontario L0R 1H2, Canada

http://engage.hamilton.ca/roadswaterservices/maps/current-level-of-service-map?reporting=true#marker-84269

2022-02-14 18:24:46 -0500
Waves

MainStreet waterdowm from Parkside to #5. Needs to be ground down and repaved. Steet is nothing but bumps and cracks.
Address: 50 John Street West, Hamilton, Ontario L8B 0E6, Canada

http://engage.hamilton.ca/roadswaterservices/maps/current-level-of-service-map?reporting=true#marker-84270

ENGAGEMENT TOOL: PLACE

Current Level of Service Map

2022-02-15 17:24:27 -0500
Andy
CATEGORY
Road Condition Deficiency (e.g. pothole, severe cracking, guide rail issue)

Potholes
Address: 553 Aberdeen Avenue, Hamilton, Ontario L8P 2S8, Canada

http://engage.hamilton.ca/roadswaterservices/maps/current-level-of-service-map?reporting=true#marker-84440

2022-02-16 16:09:02 -0500
David Hunt
CATEGORY
Road Condition Deficiency (e.g. pothole, severe cracking, guide rail issue)

Hatt St West of Market to Bond St is in terrible condition.
Address: 293 Hatt Street, Hamilton, Ontario L9H 2H5, Canada

http://engage.hamilton.ca/roadswaterservices/maps/current-level-of-service-map?reporting=true#marker-84558

2022-02-16 16:59:39 -0500
Alex .
CATEGORY
Reoccurring flooding (e.g. blocked culvert, drainage issue)

Icy sidewalks
Address: 4 Oldmill Road, Hamilton, Ontario L9G 5E2, Canada

http://engage.hamilton.ca/roadswaterservices/maps/current-level-of-service-map?reporting=true#marker-84563

2022-02-16 17:04:04 -0500
Alex .
CATEGORY
Road Condition Deficiency (e.g. pothole, severe cracking, guide rail issue)

No sidewalk
Address: 431 Hamilton Drive, Hamilton, Ontario L9G 2A9, Canada

http://engage.hamilton.ca/roadswaterservices/maps/current-level-of-service-map?reporting=true#marker-84564

2022-02-17 10:22:06 -0500
Josh765
CATEGORY
Road Condition Deficiency (e.g. pothole, severe cracking, guide rail issue)

Multiple deep potholes in the right most northbound lane
Address: 37 Dundurn Street South, Hamilton, Ontario L8P 4J9, Canada

http://engage.hamilton.ca/roadswaterservices/maps/current-level-of-service-map?reporting=true#marker-84669

2022-02-17 10:26:16 -0500
Josh765
CATEGORY
Road Condition Deficiency (e.g. pothole, severe cracking, guide rail issue)

Deep potholes
Address: 25 Fennell Avenue West, Hamilton, Ontario L9C 7V7, Canada

http://engage.hamilton.ca/roadswaterservices/maps/current-level-of-service-map?reporting=true#marker-84670

2022-02-18 13:44:43 -0500
jm1231
CATEGORY
Road Condition Deficiency (e.g. pothole, severe cracking, guide rail issue)

signage needed regarding bump in road at train tracks
Address: 199 Wentworth Street South, Hamilton, Ontario L8N 2Z6, Canada

http://engage.hamilton.ca/roadswaterservices/maps/current-level-of-service-map?reporting=true#marker-84871

ENGAGEMENT TOOL: PLACE

Current Level of Service Map

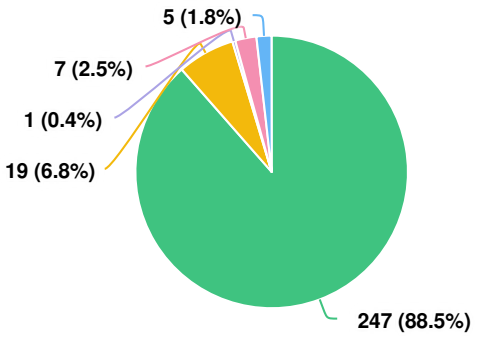
2022-02-18 15:03:16 -0500 Grahame CATEGORY Road Condition Deficiency (e.g. pothole, severe cracking, guide rail issue)	where the road crosses the railway tracks there is a significant grade change. If going more than 30 km per hour there is likelihood of hitting the asphalt. the speed on Wellin gton South is 50km until close to the tracks. then 40km with a badly placed sign too hig h to notice. no speed hump indicated Address: 199 Wentworth Street South, Hamilton, Ontario L8N 2Z6, Canada http://engage.hamilton.ca/roadswaterservices/maps/current-level-of-service-map?repo rting=true#marker-84876
2022-02-18 15:20:09 -0500 Grahame CATEGORY Traffic Deficiency (e.g. signal frequently out, sign missing)	No Right on Red sign going southbound Address: 103 Queen Street North, Hamilton, Ontario L8R 3K5, Canada http://engage.hamilton.ca/roadswaterservices/maps/current-level-of-service-map?repo rting=true#marker-84877
2022-02-18 15:25:11 -0500 Grahame CATEGORY Traffic Deficiency (e.g. signal frequently out, sign missing)	Speed change to 40KM beside school Address: 280 Locke Street South, Hamilton, Ontario L8P 4C1, Canada http://engage.hamilton.ca/roadswaterservices/maps/current-level-of-service-map?repo rting=true#marker-84878
2022-02-18 15:28:19 -0500 Grahame CATEGORY Reoccurring flooding (e.g. blocked culvert, drainage issue)	downspout emptying on sidewalk Address: 175 Locke Street South, Hamilton, Ontario L8P 4B2, Canada http://engage.hamilton.ca/roadswaterservices/maps/current-level-of-service-map?repo rting=true#marker-84879
2022-02-18 15:30:46 -0500 Grahame CATEGORY Reoccurring flooding (e.g. blocked culvert, drainage issue)	downspout emptying on sidewalk Address: 2 King Street East, Hamilton, Ontario L9H 1B8, Canada http://engage.hamilton.ca/roadswaterservices/maps/current-level-of-service-map?repo rting=true#marker-84880
2022-02-18 15:36:53 -0500 Grahame CATEGORY Traffic Deficiency (e.g. signal frequently out, sign missing)	speed limit signs Address: 222 Ferguson Avenue South, Hamilton, Ontario L8N 1Z7, Canada http://engage.hamilton.ca/roadswaterservices/maps/current-level-of-service-map?repo rting=true#marker-84881
2022-02-18 15:51:54 -0500 Grahame CATEGORY Reoccurring flooding (e.g. blocked culvert, drainage issue)	water over sidewalk from downspout Address: 53 Hyde Park Avenue, Hamilton, Ontario L8P 4M8, Canada http://engage.hamilton.ca/roadswaterservices/maps/current-level-of-service-map?repo rting=true#marker-84884

ENGAGEMENT TOOL: SURVEY TOOL

Asset Management - Roads, Bridges and Culverts

Visitors 343	Contributors 278	CONTRIBUTIONS 279

How would you best describe yourself?



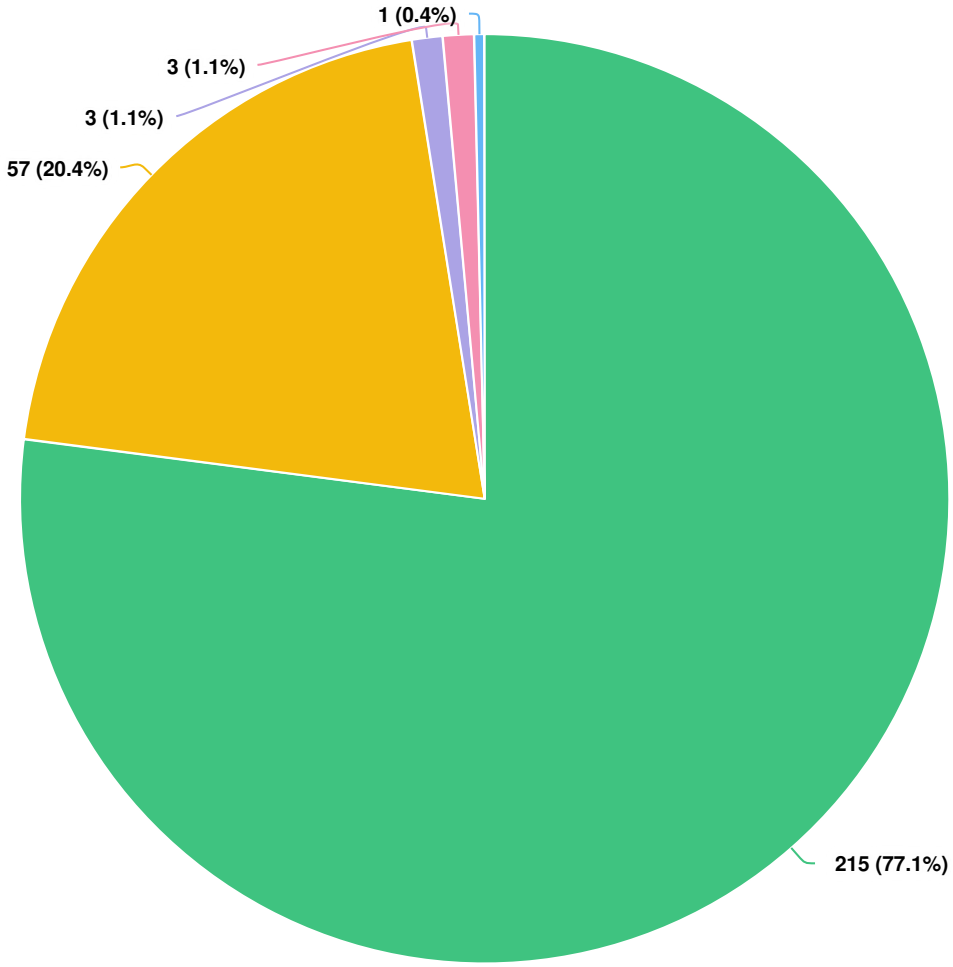
Question options

- I live in Hamilton
- I live in Hamilton and I also run a Hamilton-based business
- I don't live in Hamilton, but I run a Hamilton-based business
- I work in Hamilton (but I live somewhere else)
- Other (please specify)

Mandatory Question (279 response(s))

Question type: Dropdown Question

In the last 12 months, on average how often would you say you travelled on Hamilton's road network, using any mode of transportation? (walking, driving, riding, etc.)



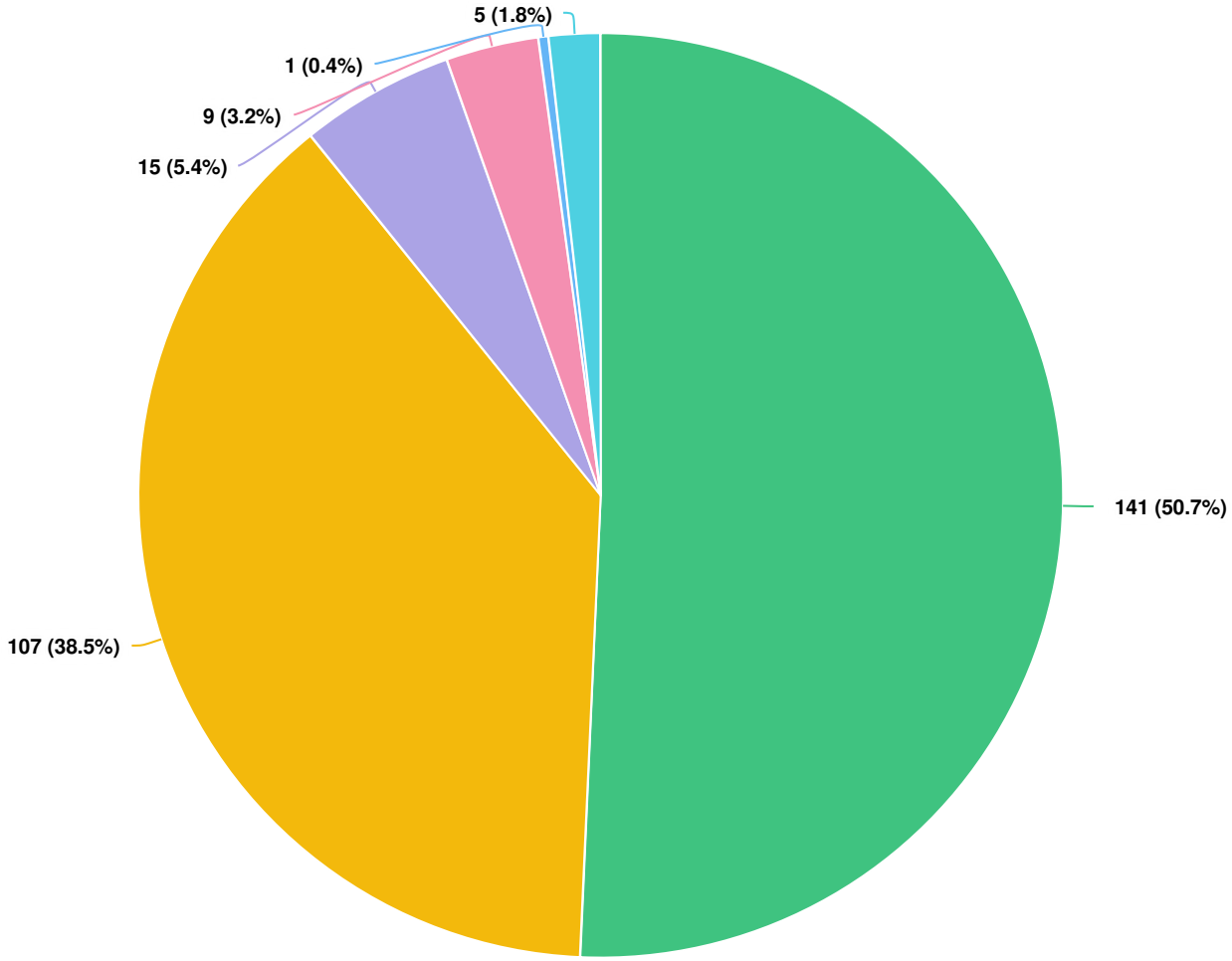
Question options

Every day | A few times a week | About once a week | A few times a month | Rarely

Mandatory Question (279 response(s))

Question type: Dropdown Question

How often do you drive in a motorized vehicle? (i.e. car, motorcycle, etc.)



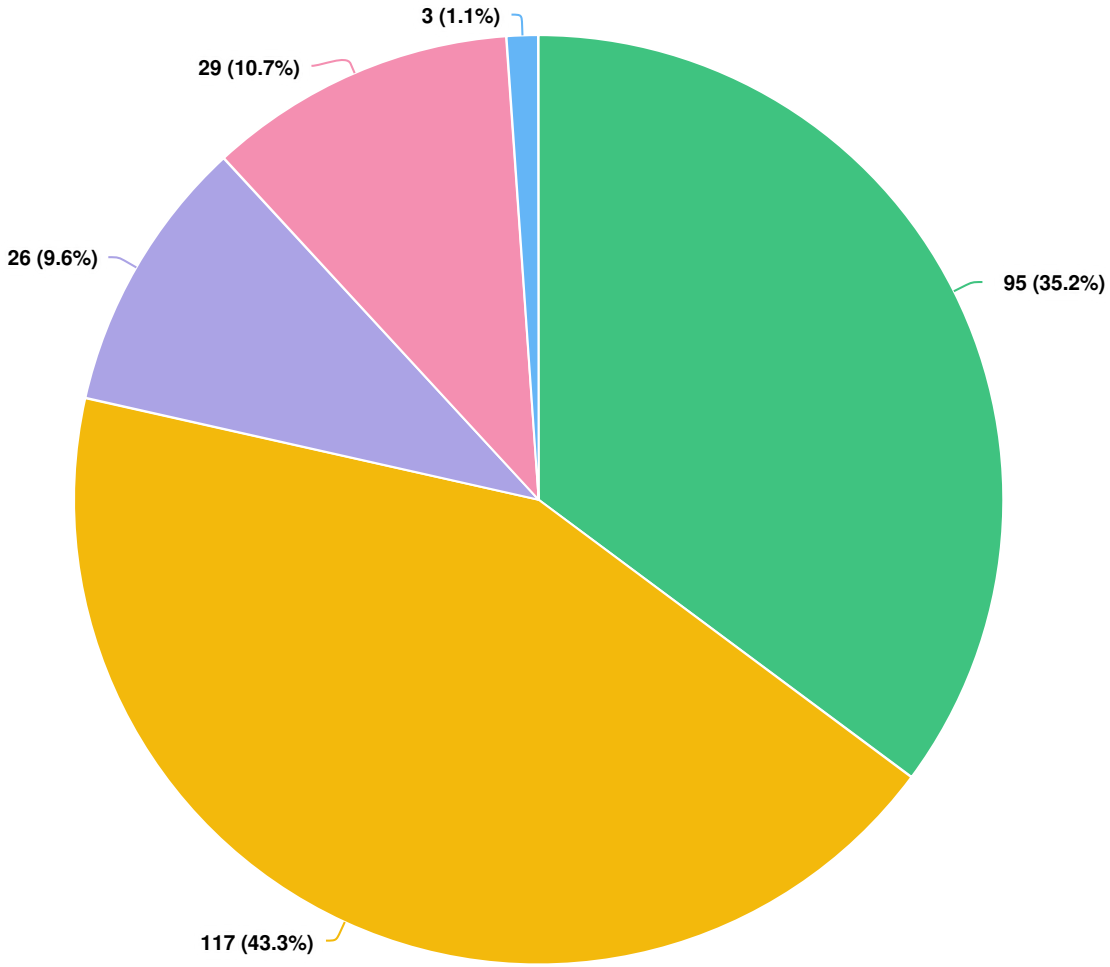
Question options

Every day | A few times a week | About once a week | A few times a month | Rarely | Never

Optional question (278 response(s), 1 skipped)

Question type: Dropdown Question

How safe do you feel using the roads while driving in a motorized vehicle?



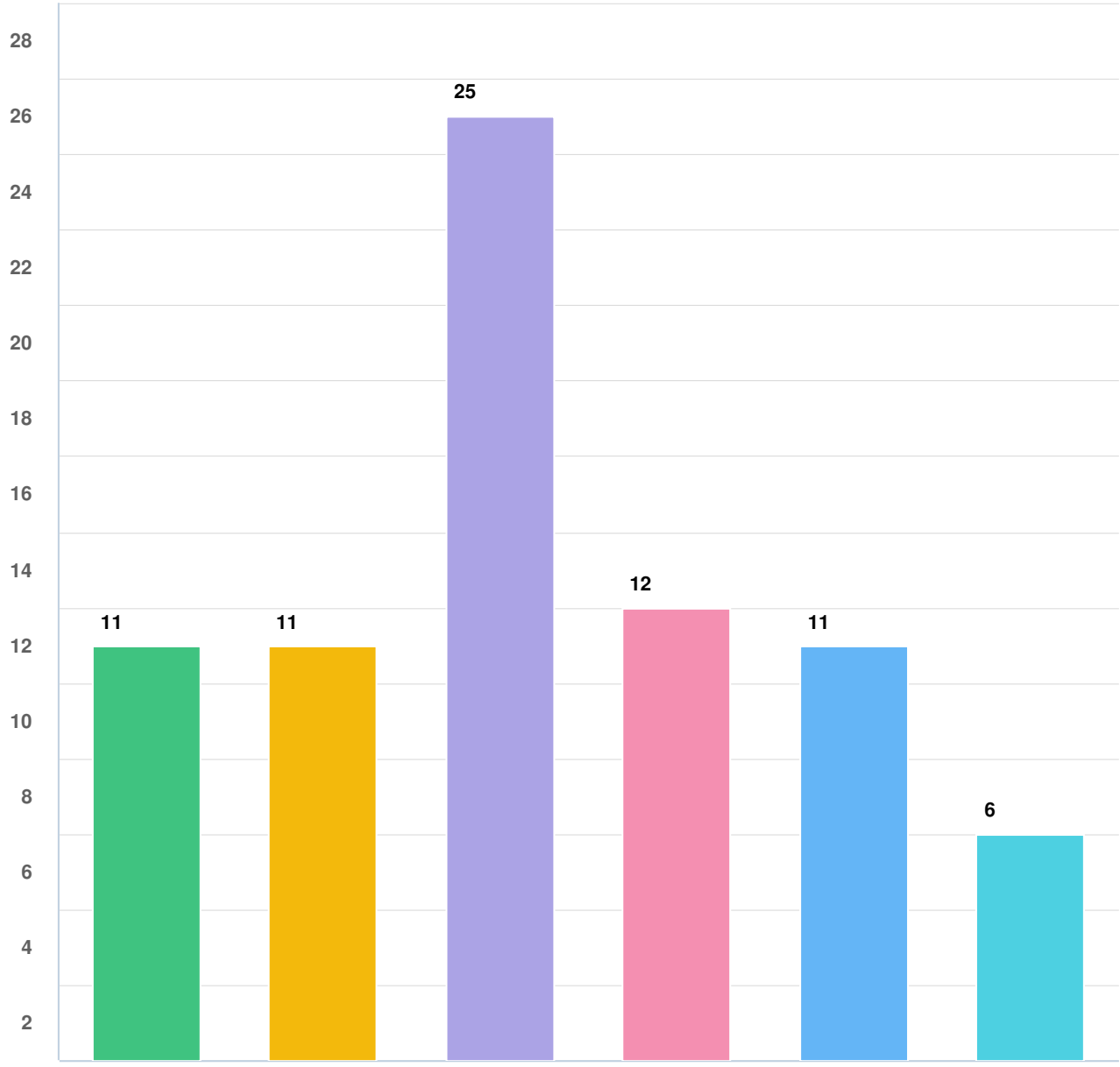
Question options

Very safe | Somewhat safe | Neutral | Somewhat unsafe | Very unsafe

Optional question (270 response(s), 9 skipped)

Question type: Dropdown Question

Select the top reasons you feel somewhat unsafe driving in a motorized vehicle



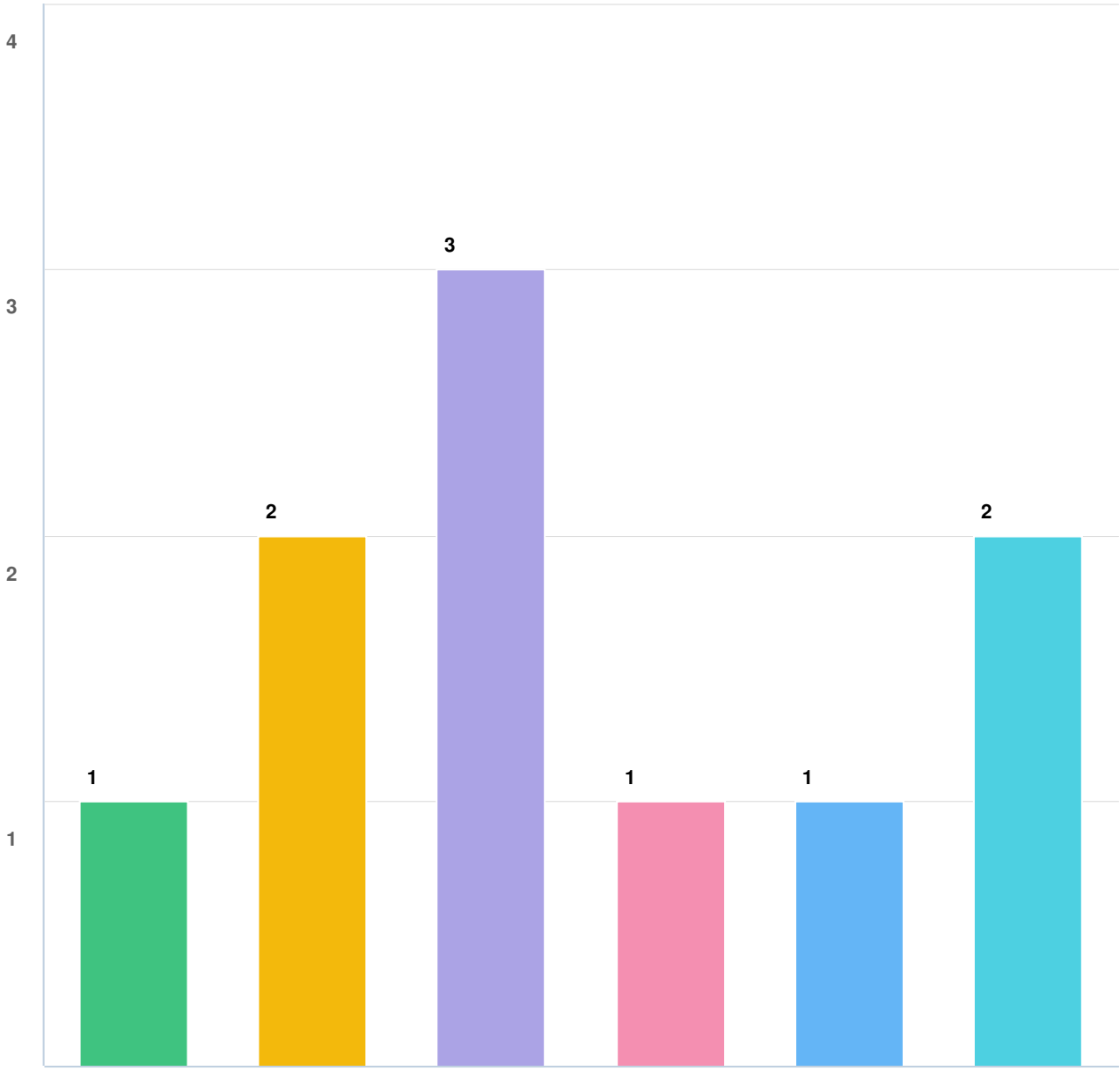
Question options

- Traffic/congestion (e.g. Too many cars, people, or bicycles in regular route etc.)
- Infrastructure Design (e.g. not enough safety features or separation, poor drainage, steep slope, slippery when wet etc.)
- Surface condition (e.g. significant cracking, potholes)
- Operational Issue (e.g. snow or ice not cleared, debris frequently not cleared)
- Poor connectivity (e.g. Bike lanes ending abruptly, sidewalks missing, curb cuts not available for mobility devices, roads frequently closed etc.)
- Other (please specify)

Optional question (29 response(s), 250 skipped)

Question type: Checkbox Question

Select the top reasons you feel very unsafe driving in a motorized vehicle



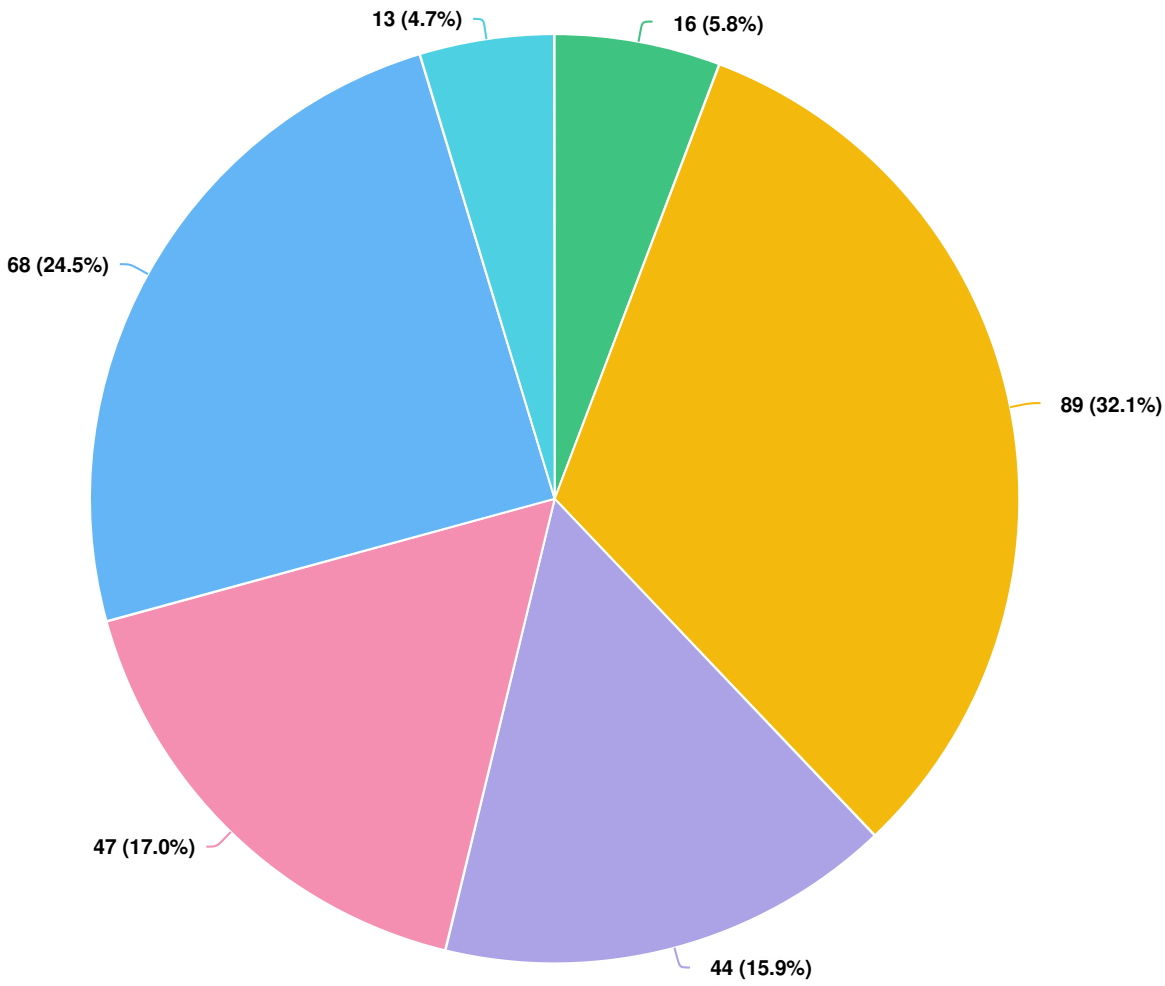
Question options

- Traffic/congestion (e.g. Too many cars, people, or bicycles in regular route etc.)
- Infrastructure Design (e.g. not enough safety features or separation, poor drainage, steep slope, slippery when wet etc.)
- Surface condition (e.g. significant cracking, potholes)
- Operational Issue (e.g. snow or ice not cleared, debris frequently not cleared)
- Poor connectivity (e.g. Bike lanes ending abruptly, sidewalks missing, curb cuts not available for mobility devices, roads frequently closed etc.)
- Other (please specify)

Optional question (3 response(s), 276 skipped)

Question type: Checkbox Question

How often do you ride as a passenger in a motorized vehicle? (i.e. car, motorcycle, etc.)



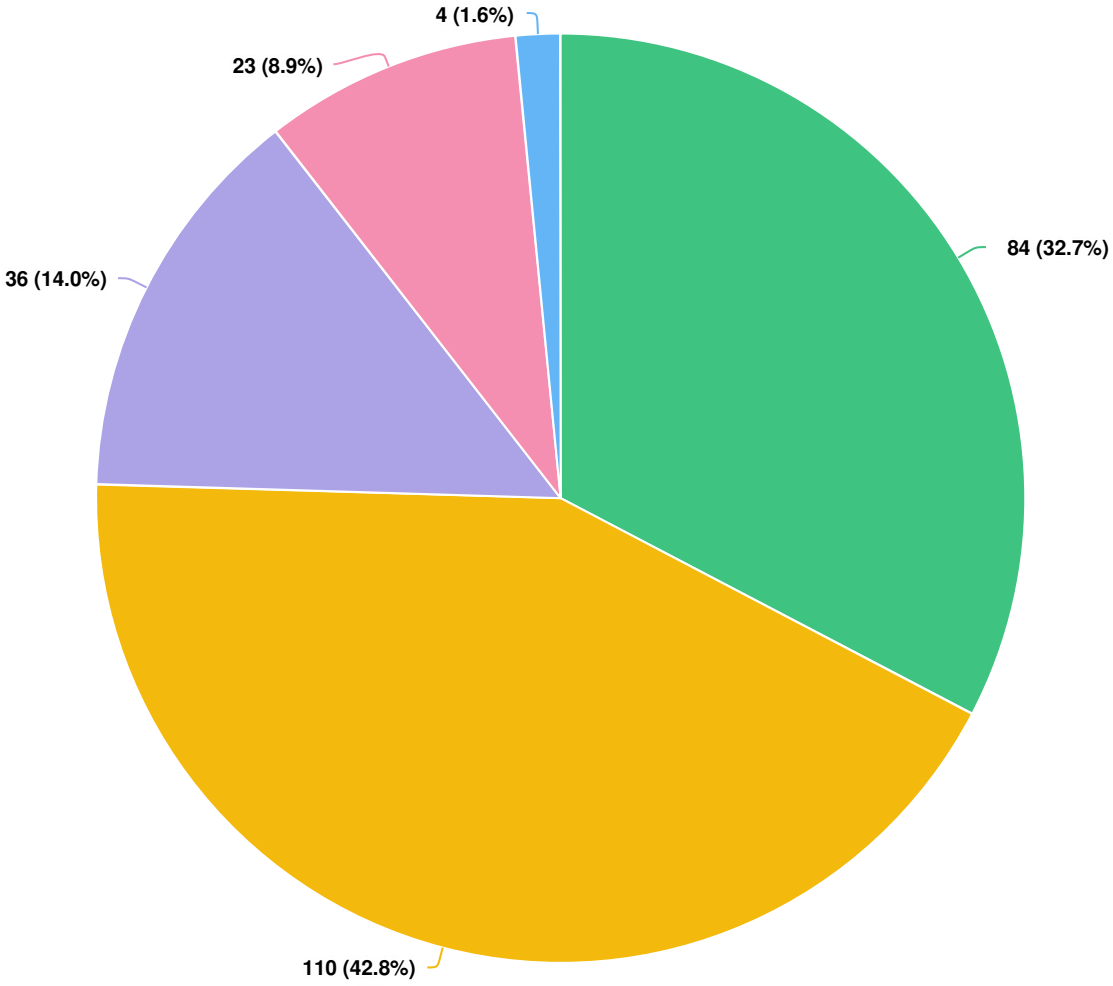
Question options

Every day | A few times a week | About once a week | A few times a month | Rarely | Never

Optional question (277 response(s), 2 skipped)

Question type: Dropdown Question

How safe do you feel using the roads while riding as a passenger in a motorized vehicle?



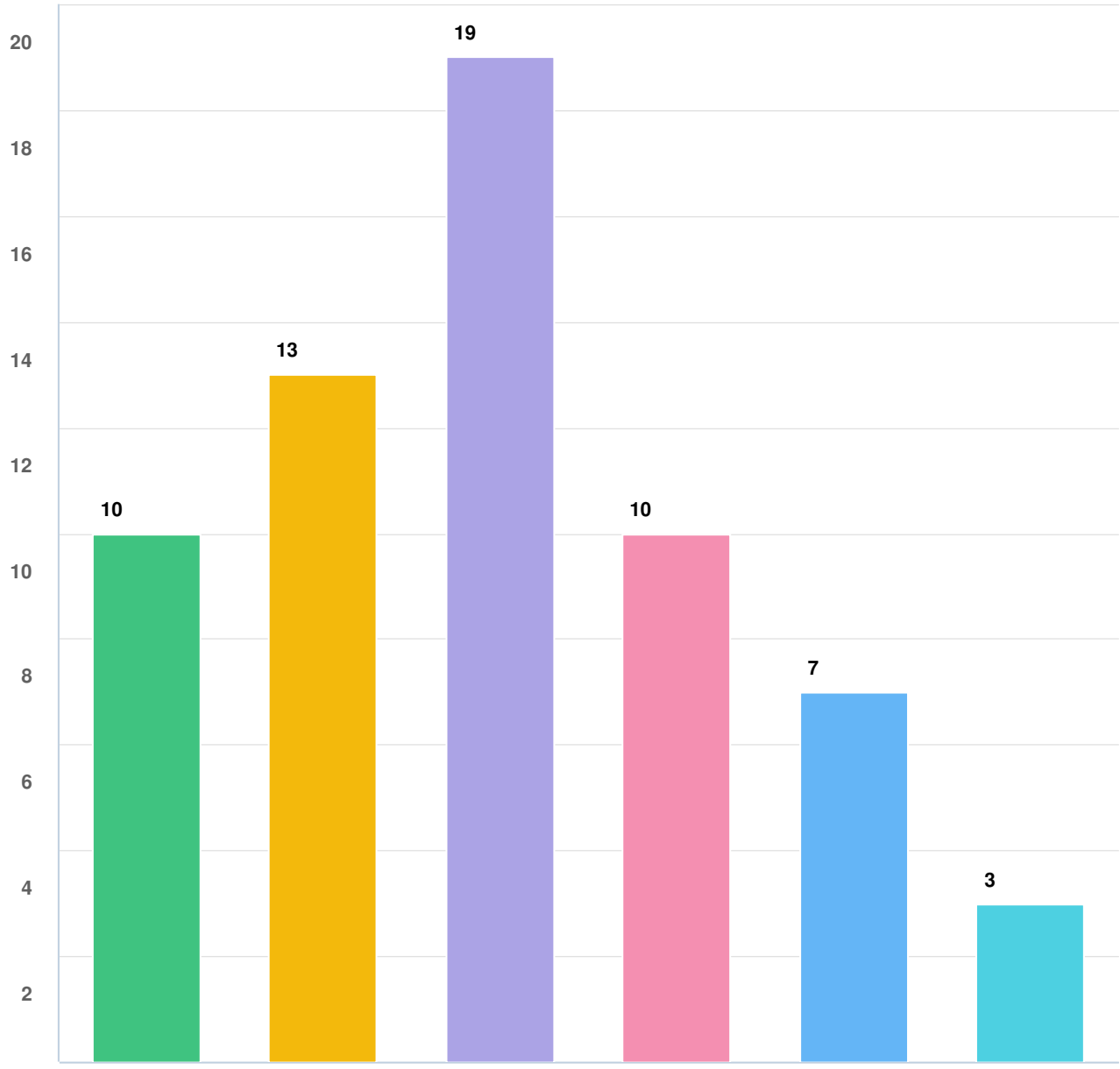
Question options

Very safe | Somewhat safe | Neutral | Somewhat unsafe | Very unsafe

Optional question (257 response(s), 22 skipped)

Question type: Dropdown Question

Select the top reasons you feel somewhat unsafe riding as a passenger in a motorized vehicle



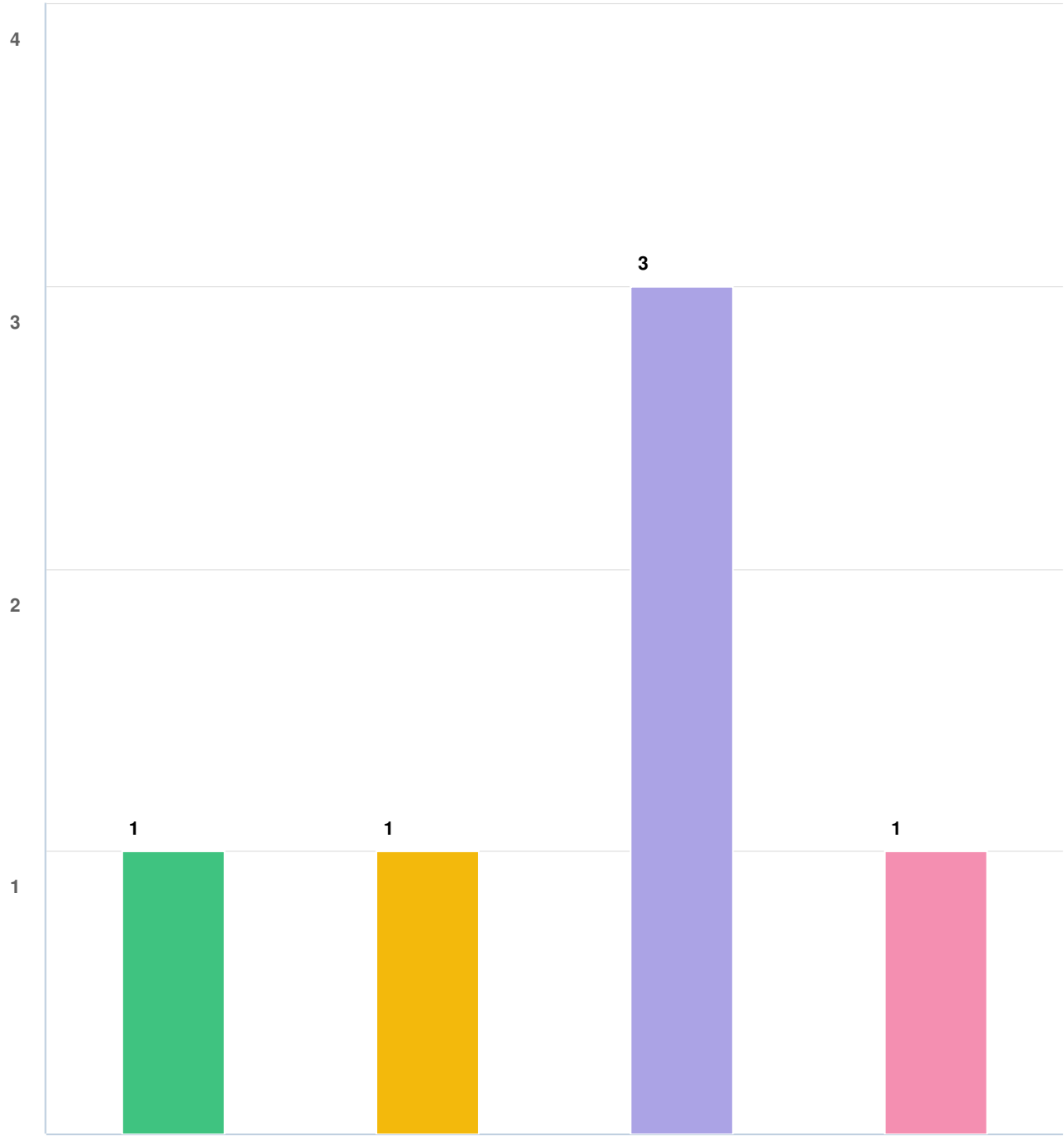
Question options

- Traffic/congestion (e.g. Too many cars, people, or bicycles in regular route etc.)
- Infrastructure Design (e.g. not enough safety features or separation, poor drainage, steep slope, slippery when wet etc.)
- Surface condition (e.g. significant cracking, potholes)
- Operational Issue (e.g. snow or ice not cleared, debris frequently not cleared)
- Poor connectivity (e.g. Bike lanes ending abruptly, sidewalks missing, curb cuts not available for mobility devices, roads frequently closed etc.)
- Other (please specify)

Optional question (23 response(s), 256 skipped)

Question type: Checkbox Question

Select the top reasons you feel very unsafe riding as a passenger in a motorized vehicle



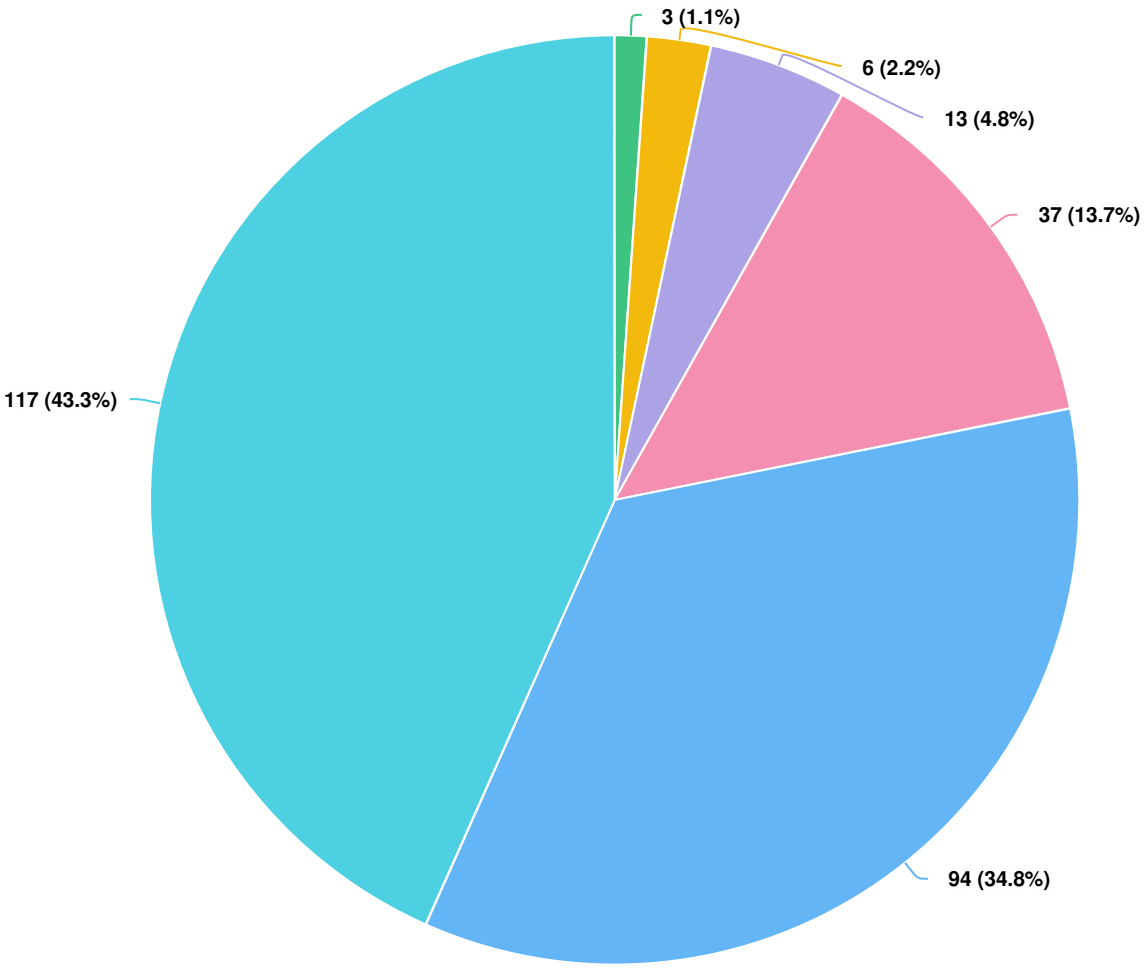
Question options

- Traffic/congestion (e.g. Too many cars, people, or bicycles in regular route etc.)
- Infrastructure Design (e.g. not enough safety features or separation, poor drainage, steep slope, slippery when wet etc.)
- Surface condition (e.g. significant cracking, potholes)
- Other (please specify)

Optional question (4 response(s), 275 skipped)

Question type: Checkbox Question

How often do you cycle through rural areas?



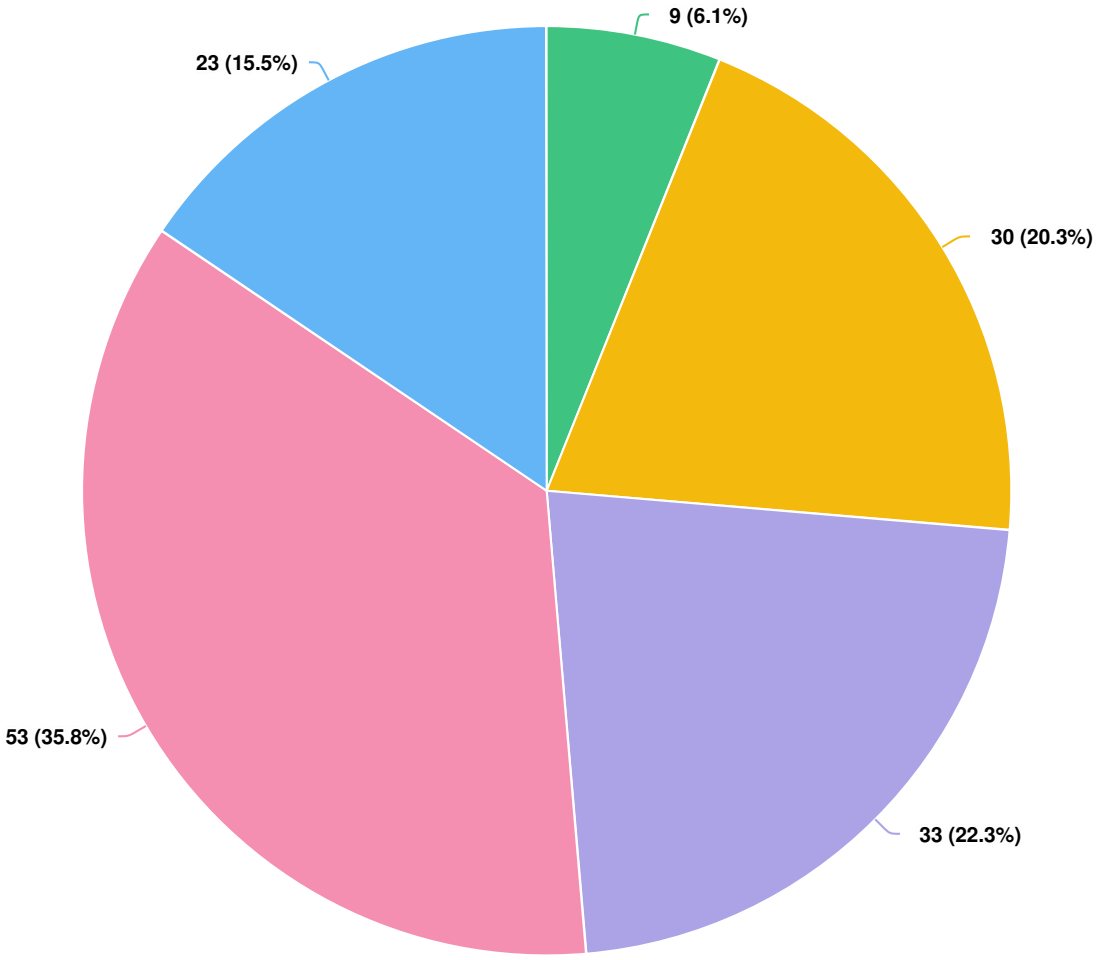
Question options

Every day | A few times a week | About once a week | A few times a month | Rarely | Never

Optional question (270 response(s), 9 skipped)

Question type: Dropdown Question

How safe do you feel while cycling through a rural area?



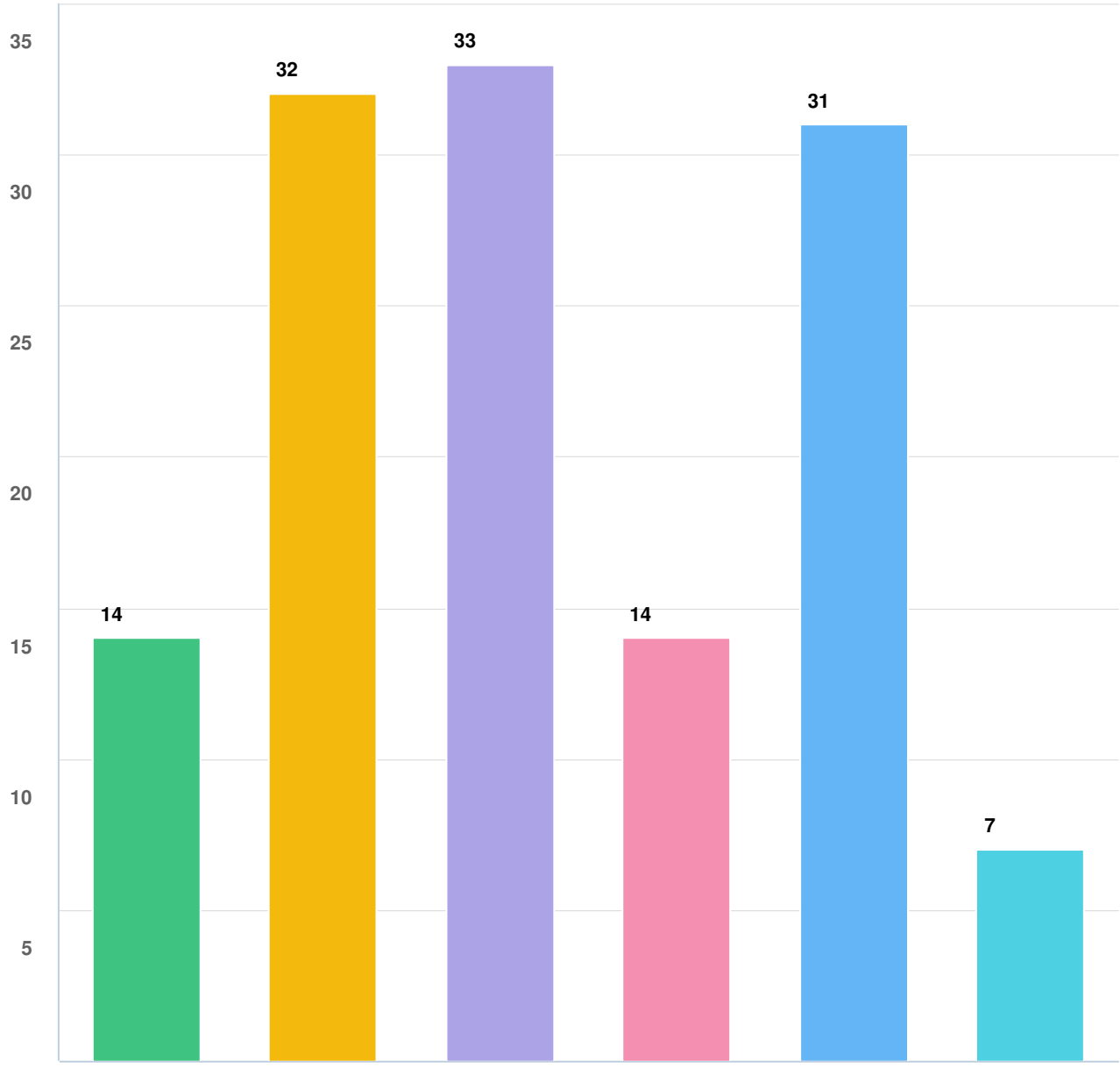
Question options

Very safe | Somewhat safe | Neutral | Somewhat unsafe | Very unsafe

Optional question (148 response(s), 131 skipped)

Question type: Dropdown Question

Select the top reasons you feel somewhat unsafe cycling through a rural areas



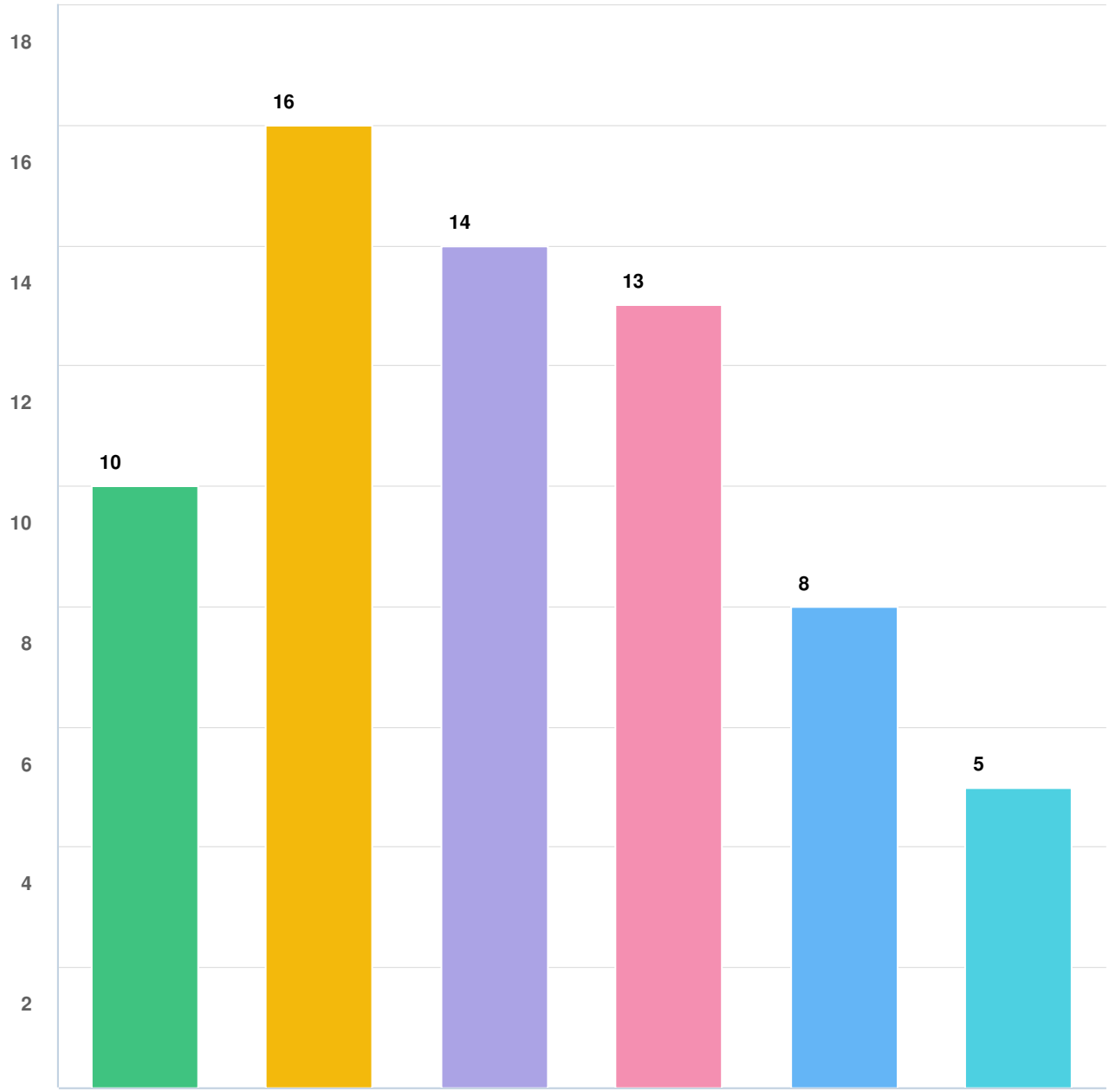
Question options

- Traffic/congestion (e.g. Too many cars, people, or bicycles in regular route etc.)
- Infrastructure Design (e.g. not enough safety features or separation, poor drainage, steep slope, slippery when wet etc.)
- Surface condition (e.g. significant cracking, potholes)
- Operational Issue (e.g. snow or ice not cleared, debris frequently not cleared)
- Poor connectivity (e.g. Bike lanes ending abruptly, sidewalks missing, curb cuts not available for mobility devices, roads frequently closed etc.)
- Other (please specify)

Optional question (53 response(s), 226 skipped)

Question type: Checkbox Question

Select the top reasons you feel very unsafe cycling through a rural areas



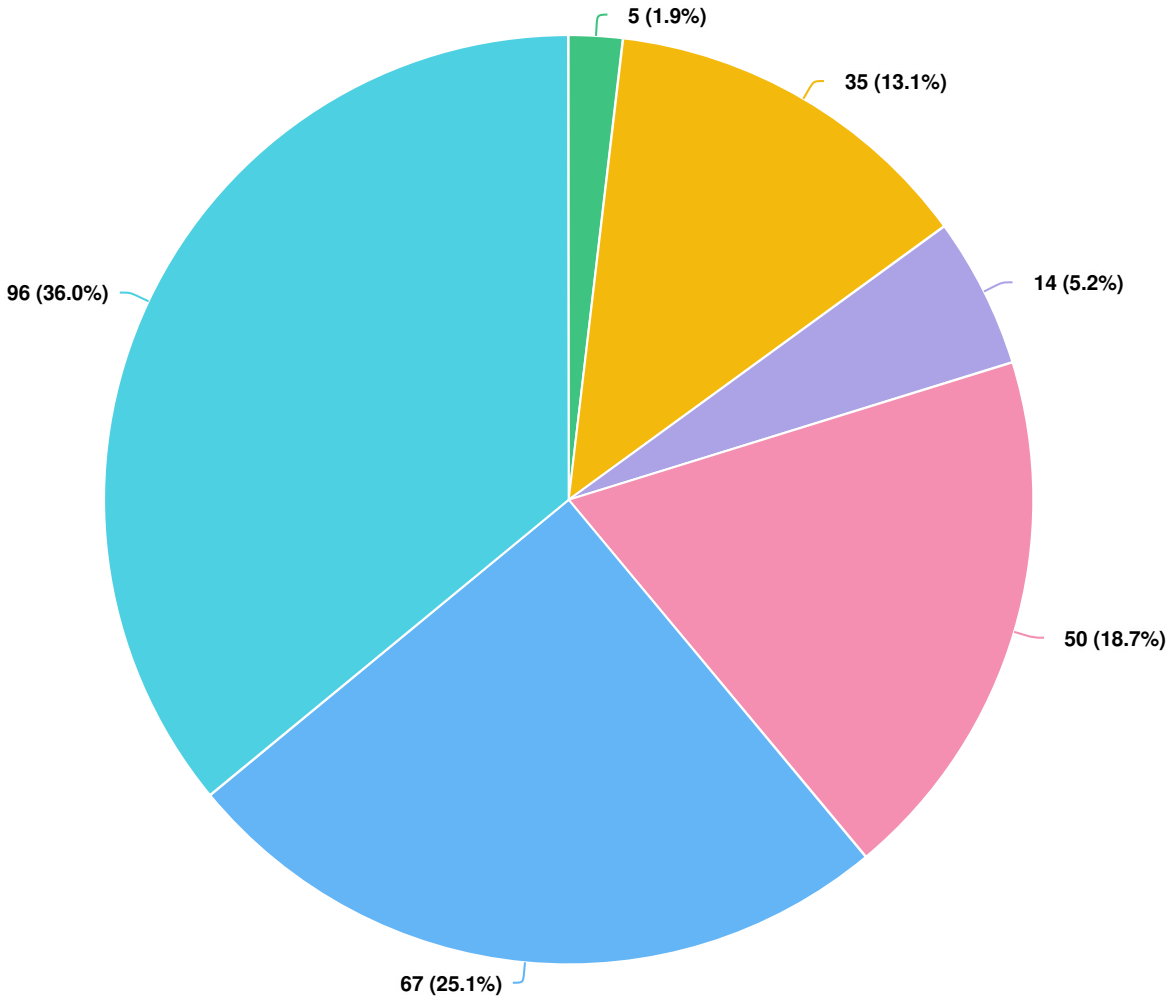
Question options

- Traffic/congestion (e.g. Too many cars, people, or bicycles in regular route etc.)
- Infrastructure Design (e.g. not enough safety features or separation, poor drainage, steep slope, slippery when wet etc.)
- Surface condition (e.g. significant cracking, potholes)
- Poor connectivity (e.g. Bike lanes ending abruptly, sidewalks missing, curb cuts not available for mobility devices, roads frequently closed etc.)
- Operational Issue (e.g. snow or ice not cleared, debris frequently not cleared)
- Other (please specify)

Optional question (23 response(s), 256 skipped)

Question type: Checkbox Question

How often do you cycle through urban areas?



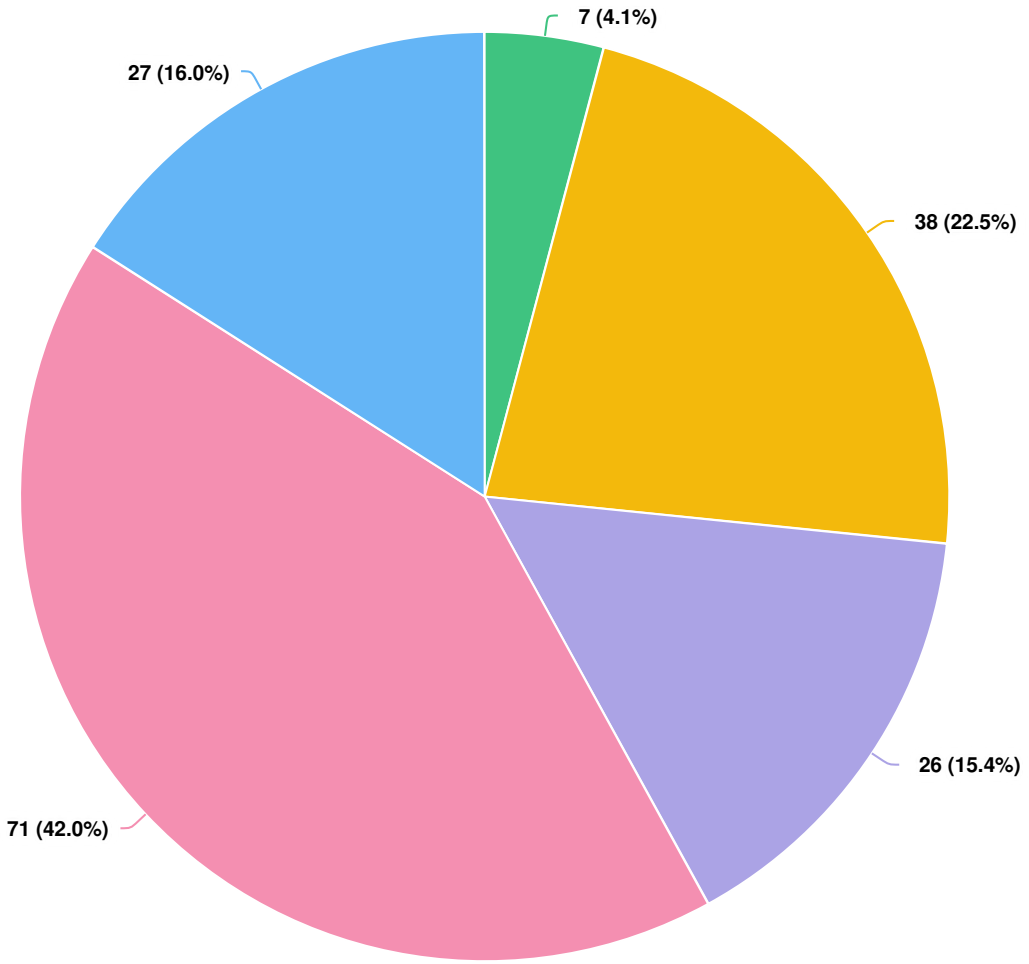
Question options

Every day | A few times a week | About once a week | A few times a month | Rarely | Never

Optional question (267 response(s), 12 skipped)

Question type: Dropdown Question

How safe do you feel while cycling through a urban area?



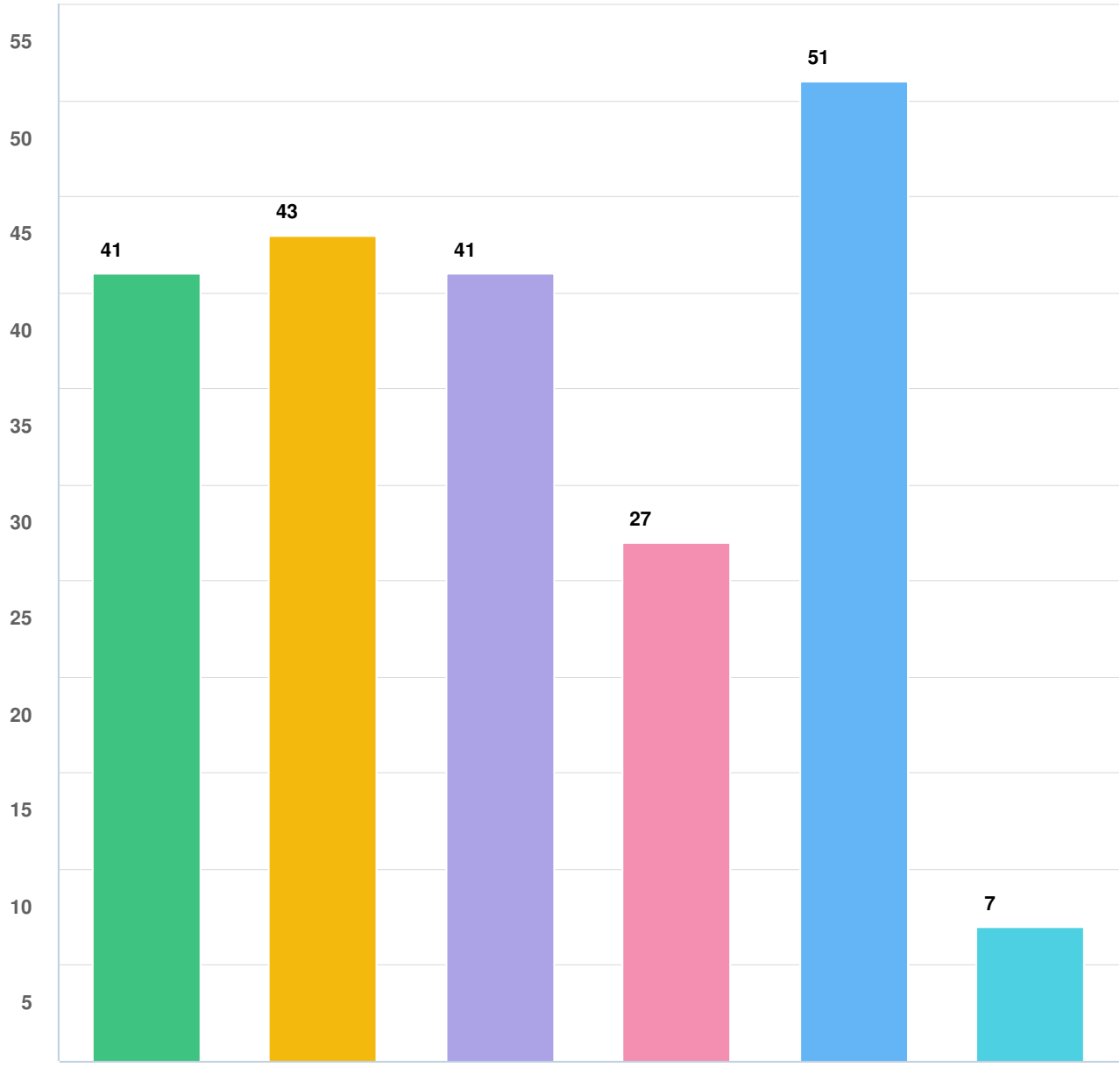
Question options

Very safe | Somewhat safe | Neutral | Somewhat unsafe | Very unsafe

Optional question (169 response(s), 110 skipped)

Question type: Dropdown Question

Select the top reasons you feel somewhat unsafe cycling through a urban areas



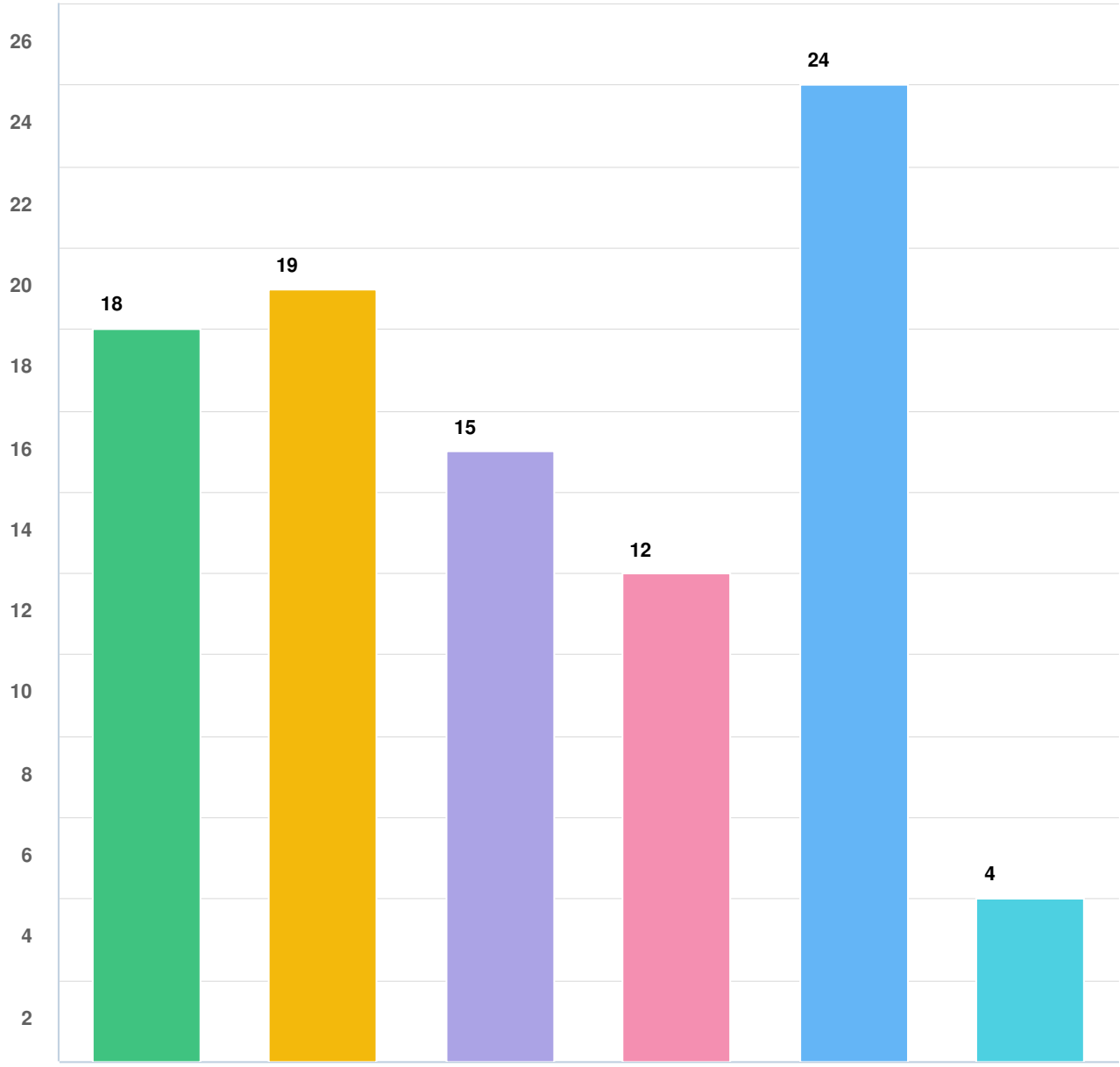
Question options

- Traffic/congestion (e.g. Too many cars, people, or bicycles in regular route etc.)
- Infrastructure Design (e.g. not enough safety features or separation, poor drainage, steep slope, slippery when wet etc.)
- Surface condition (e.g. significant cracking, potholes)
- Operational Issue (e.g. snow or ice not cleared, debris frequently not cleared)
- Poor connectivity (e.g. Bike lanes ending abruptly, sidewalks missing, curb cuts not available for mobility devices, roads frequently closed etc.)
- Other (please specify)

Optional question (71 response(s), 208 skipped)

Question type: Checkbox Question

Select the top reasons you feel very unsafe cycling through a urban areas



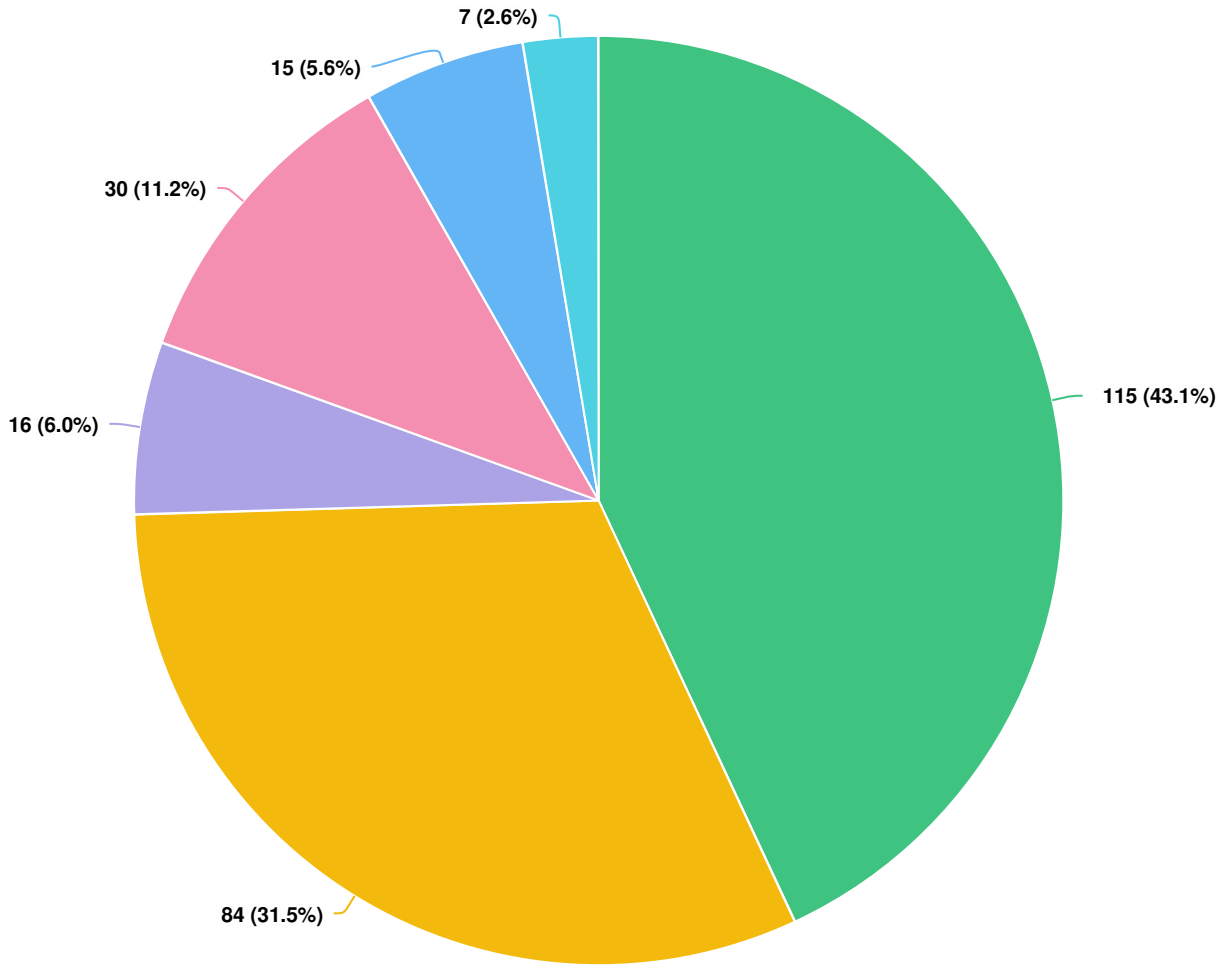
Question options

- Traffic/congestion (e.g. Too many cars, people, or bicycles in regular route etc.)
- Infrastructure Design (e.g. not enough safety features or separation, poor drainage, steep slope, slippery when wet etc.)
- Surface condition (e.g. significant cracking, potholes)
- Operational Issue (e.g. snow or ice not cleared, debris frequently not cleared)
- Poor connectivity (e.g. Bike lanes ending abruptly, sidewalks missing, curb cuts not available for mobility devices, roads frequently closed etc.)
- Other (please specify)

Optional question (27 response(s), 252 skipped)

Question type: Checkbox Question

How often do you walk using sidewalks or multi-use trails?



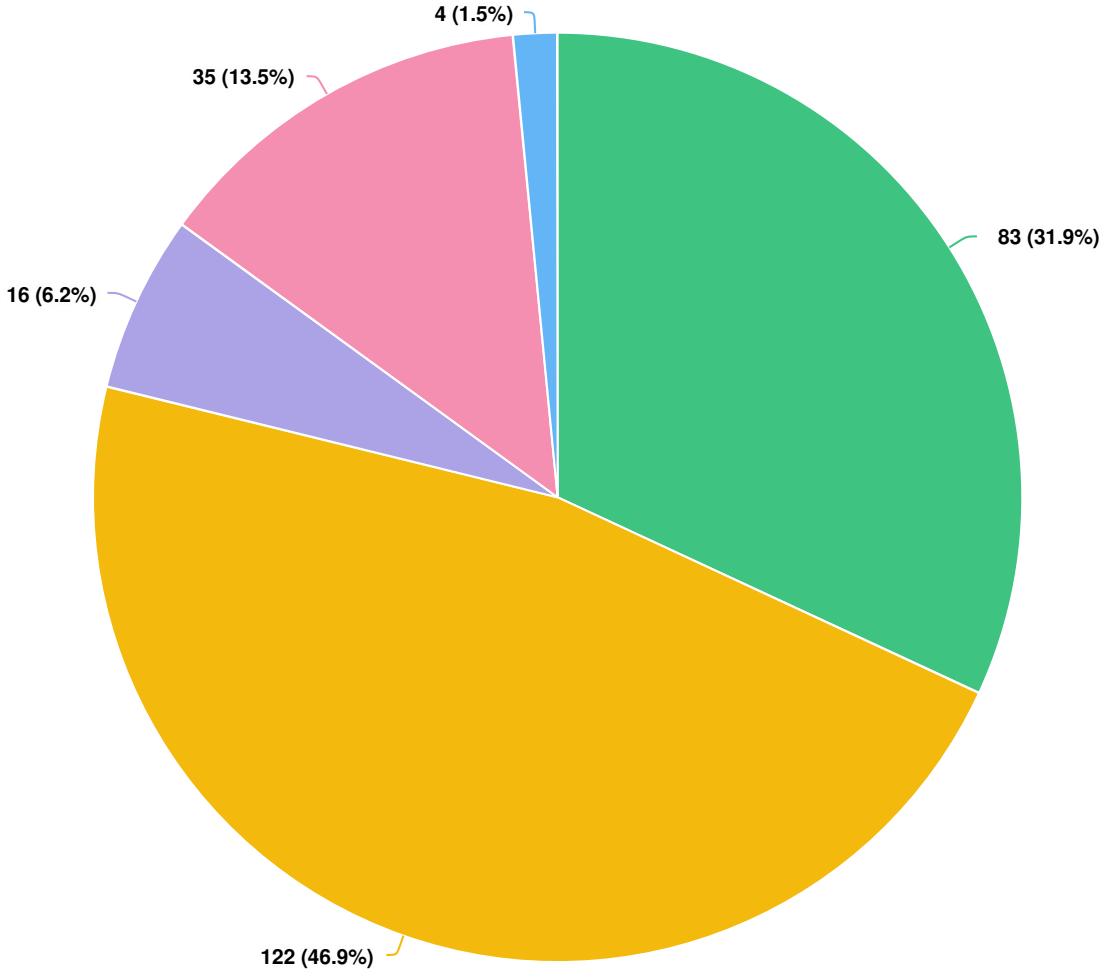
Question options

Every day | A few times a week | About once a week | A few times a month | Rarely | Never

Optional question (267 response(s), 12 skipped)

Question type: Dropdown Question

How safe do you feel while walking on sidewalks or multi-use trails?



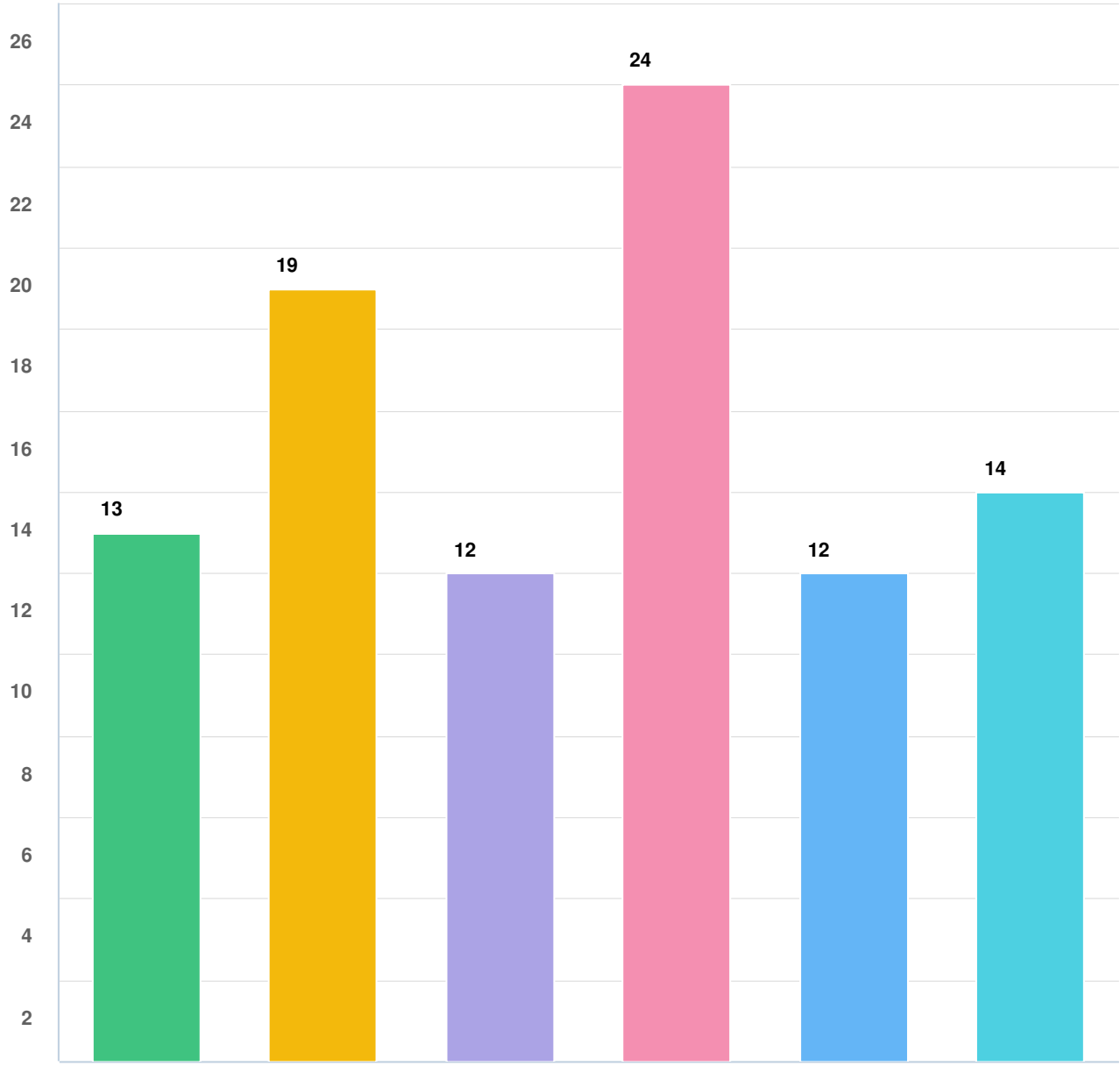
Question options

Very safe | Somewhat safe | Neutral | Somewhat unsafe | Very unsafe

Optional question (260 response(s), 19 skipped)

Question type: Dropdown Question

Select the top reasons you feel somewhat unsafe walking on sidewalks or multi-use trails



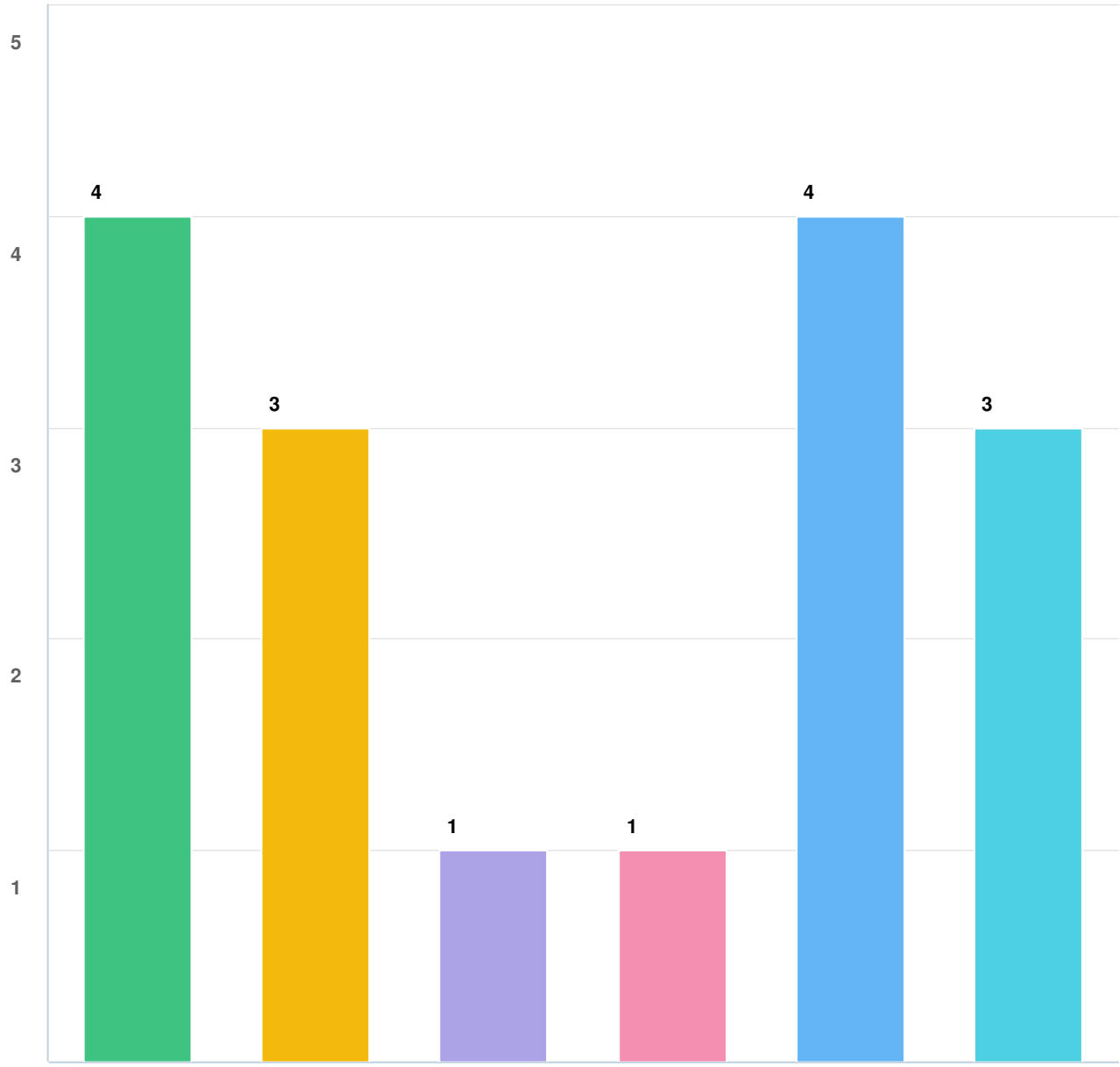
Question options

- Traffic/congestion (e.g. Too many cars, people, or bicycles in regular route etc.)
- Infrastructure Design (e.g. not enough safety features or separation, poor drainage, steep slope, slippery when wet etc.)
- Surface condition (e.g. significant cracking, potholes)
- Operational Issue (e.g. snow or ice not cleared, debris frequently not cleared)
- Poor connectivity (e.g. Bike lanes ending abruptly, sidewalks missing, curb cuts not available for mobility devices, roads frequently closed etc.)
- Other (please specify)

Optional question (35 response(s), 244 skipped)

Question type: Checkbox Question

Select the top reasons you feel very unsafe walking on sidewalks or multi-use trails



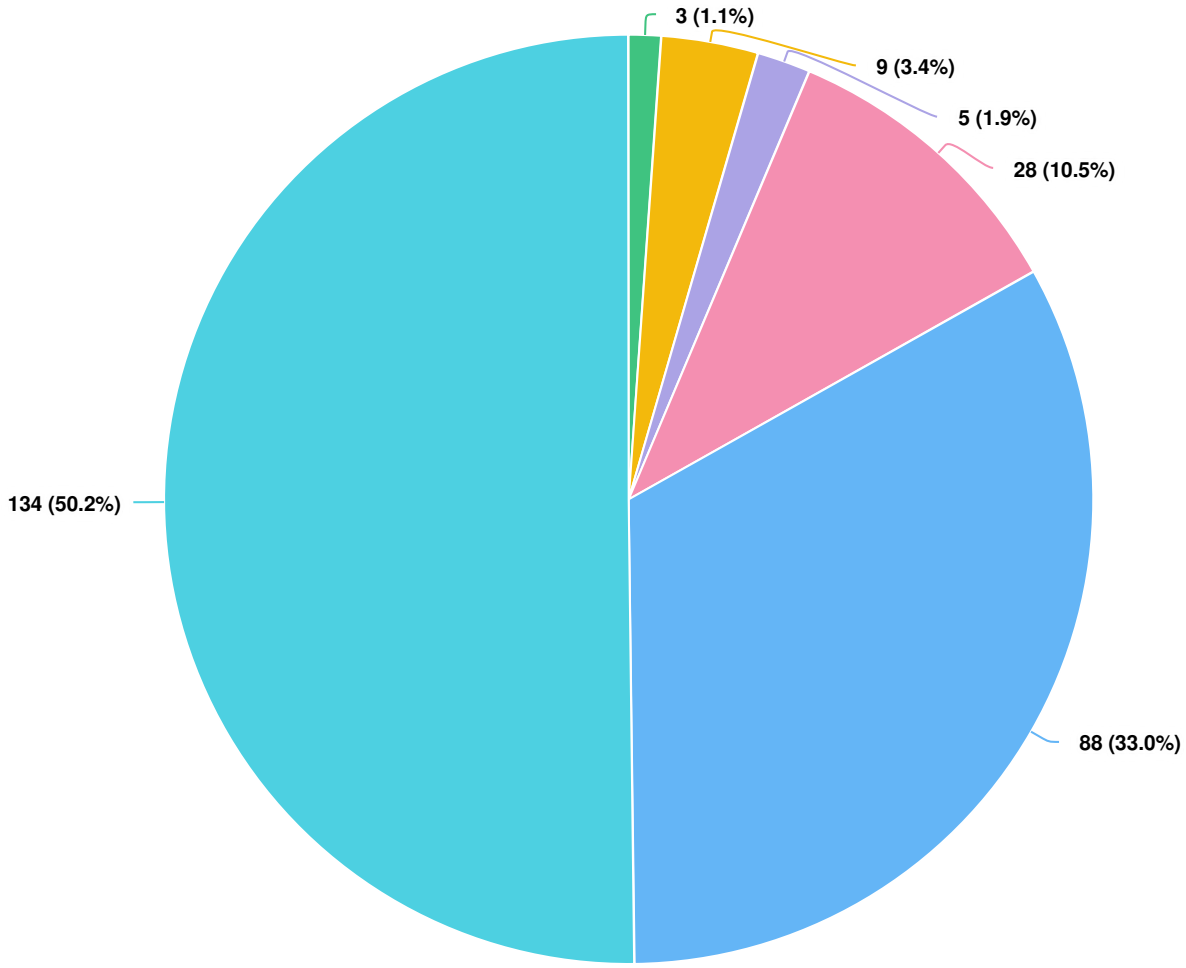
Question options

- Traffic/congestion (e.g. Too many cars, people, or bicycles in regular route etc.)
- Infrastructure Design (e.g. not enough safety features or separation, poor drainage, steep slope, slippery when wet etc.)
- Surface condition (e.g. significant cracking, potholes)
- Operational Issue (e.g. snow or ice not cleared, debris frequently not cleared)
- Poor connectivity (e.g. Bike lanes ending abruptly, sidewalks missing, curb cuts not available for mobility devices, roads frequently closed etc.)
- Other (please specify)

Optional question (4 response(s), 275 skipped)

Question type: Checkbox Question

How often do you ride public transportation?



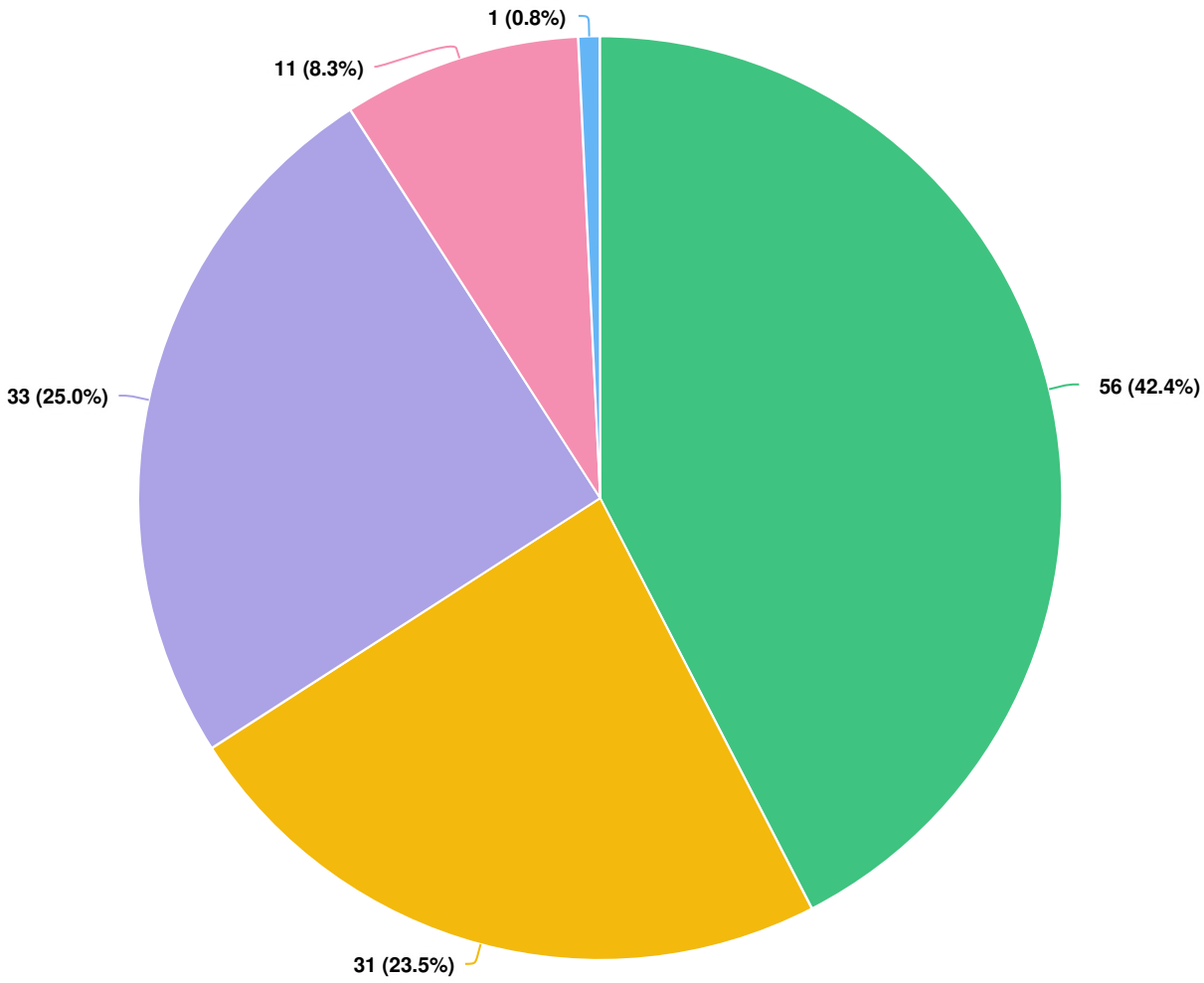
Question options

Every day | A few times a week | About once a week | A few times a month | Rarely | Never

Optional question (267 response(s), 12 skipped)

Question type: Dropdown Question

How safe do you feel using the roads while riding public transportation?



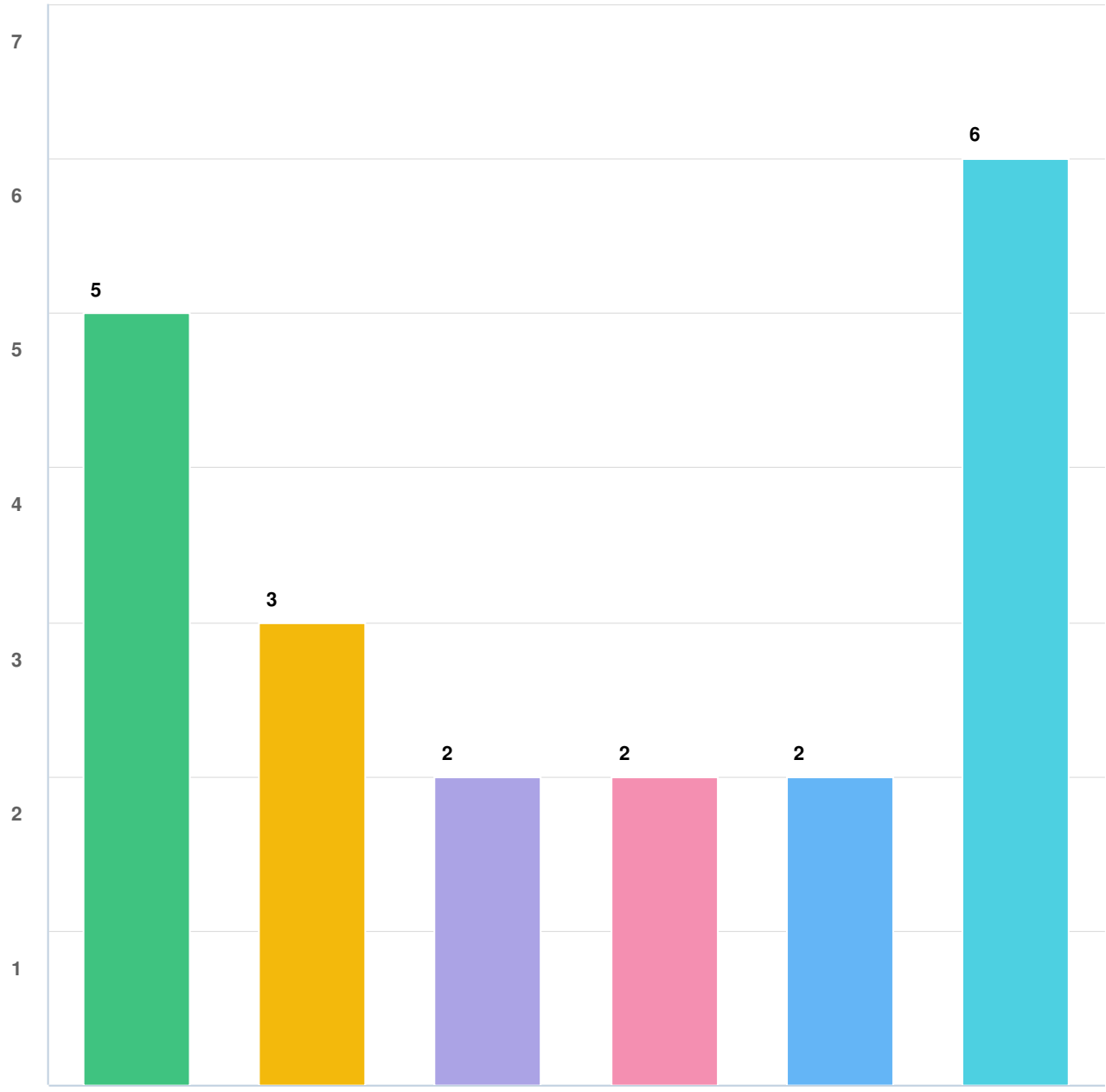
Question options

Very safe | Somewhat safe | Neutral | Somewhat unsafe | Very unsafe

Optional question (132 response(s), 147 skipped)

Question type: Dropdown Question

Select the top reasons you feel somewhat unsafe riding public transportation



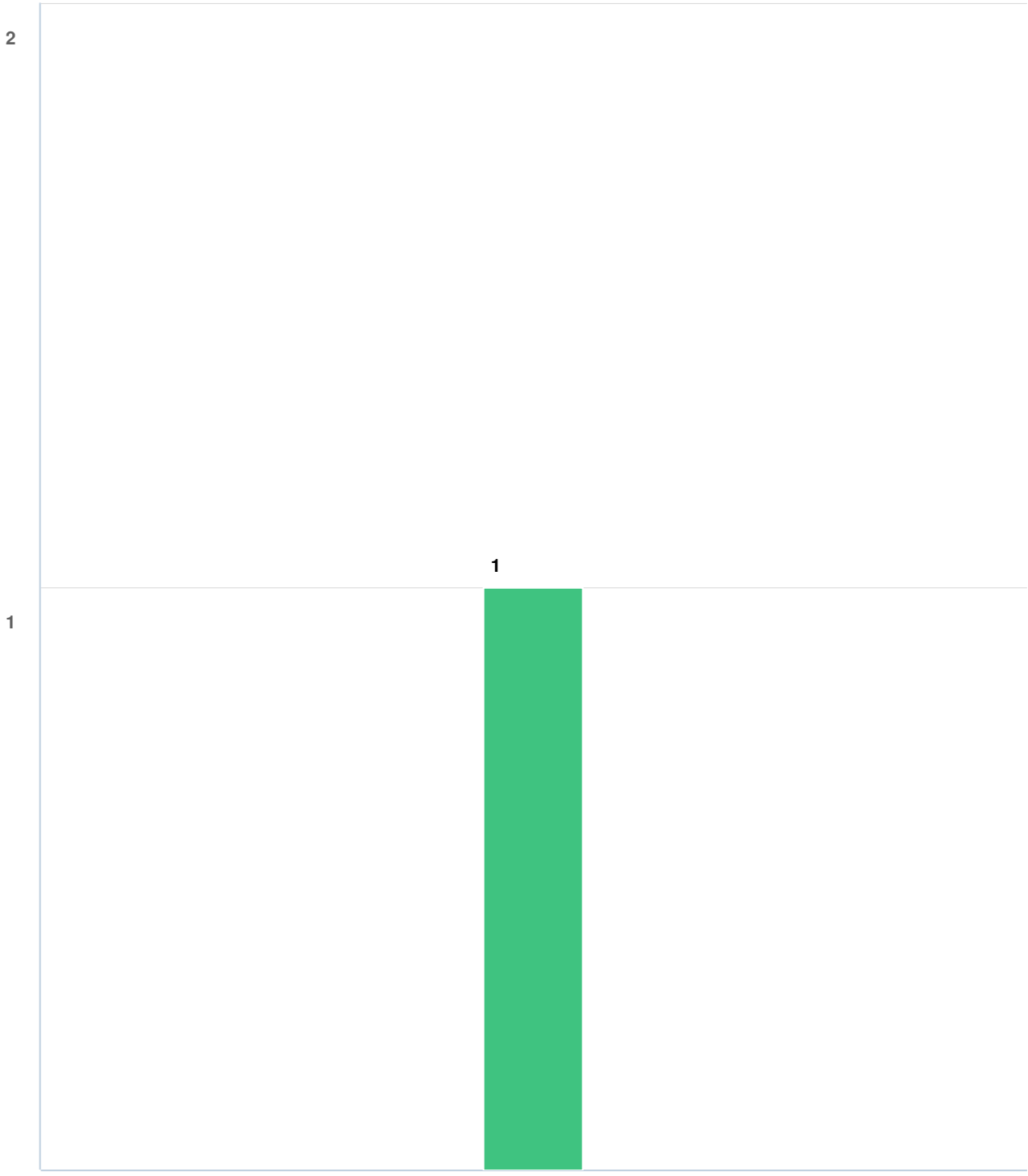
Question options

- Traffic/congestion (e.g. Too many cars, people, or bicycles in regular route etc.)
- Infrastructure Design (e.g. not enough safety features or separation, poor drainage, steep slope, slippery when wet etc.)
- Surface condition (e.g. significant cracking, potholes)
- Poor connectivity (e.g. Bike lanes ending abruptly, sidewalks missing, curb cuts not available for mobility devices, roads frequently closed etc.)
- Operational Issue (e.g. snow or ice not cleared, debris frequently not cleared)
- Other (please specify)

Optional question (10 response(s), 269 skipped)

Question type: Checkbox Question

Select the top reasons you feel very unsafe riding public transportation



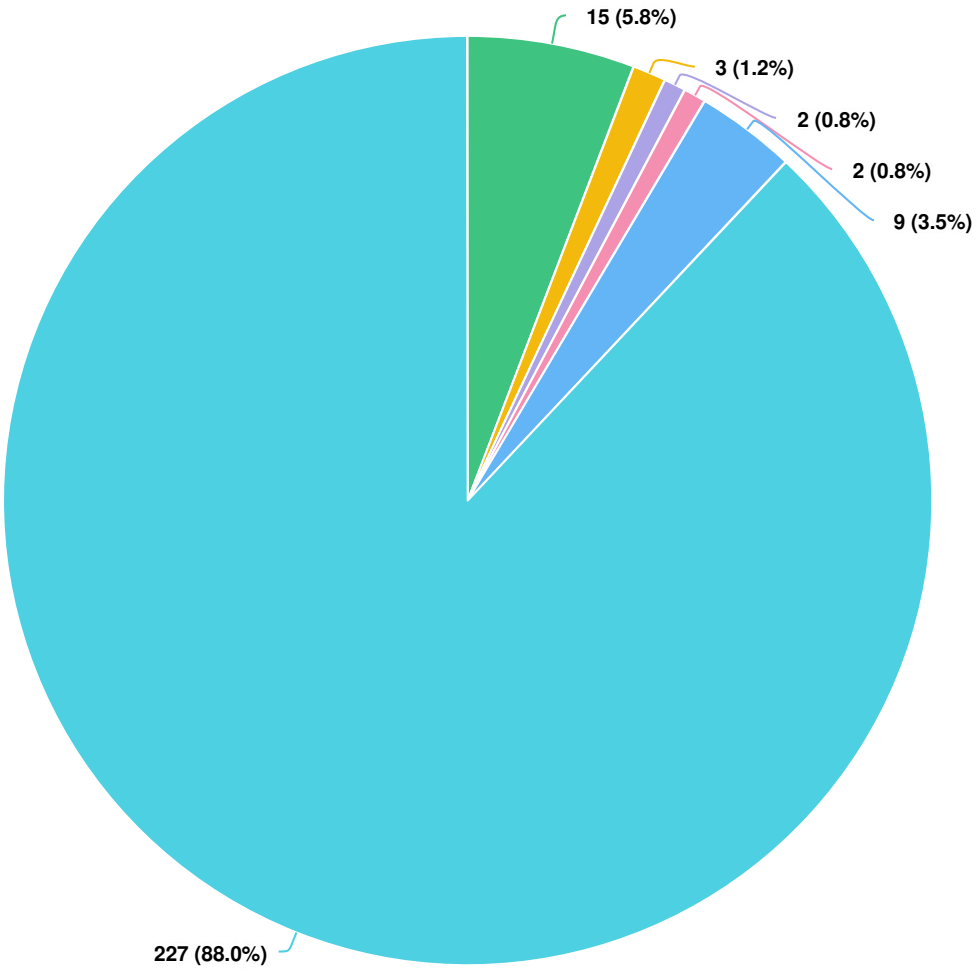
Question options

- Surface condition (e.g. significant cracking, potholes)

Optional question (1 response(s), 278 skipped)

Question type: Checkbox Question

How often do you use a mobility device?



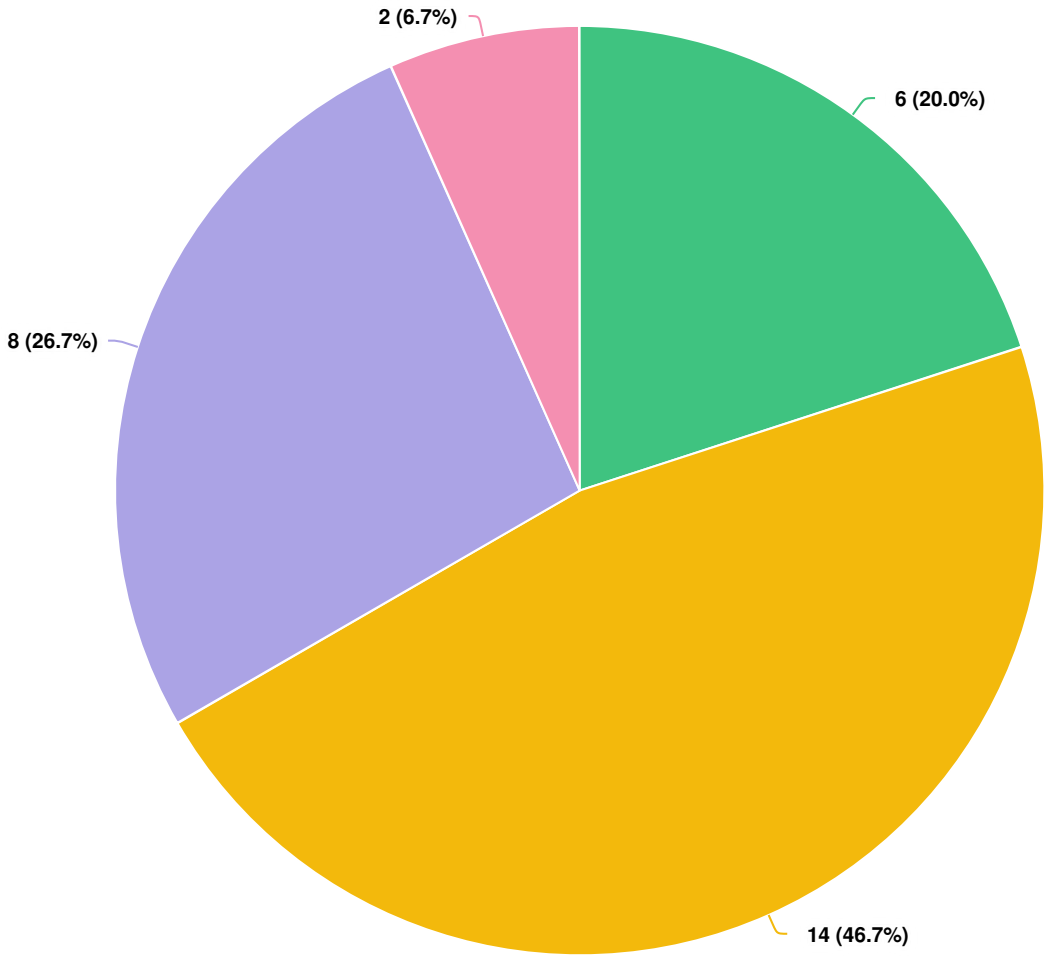
Question options

Every day | A few times a week | About once a week | A few times a month | Rarely | Never

Optional question (258 response(s), 21 skipped)

Question type: Dropdown Question

How safe do you feel using a mobility device on the City's transportation network? (including sidewalks, public transportation etc.)



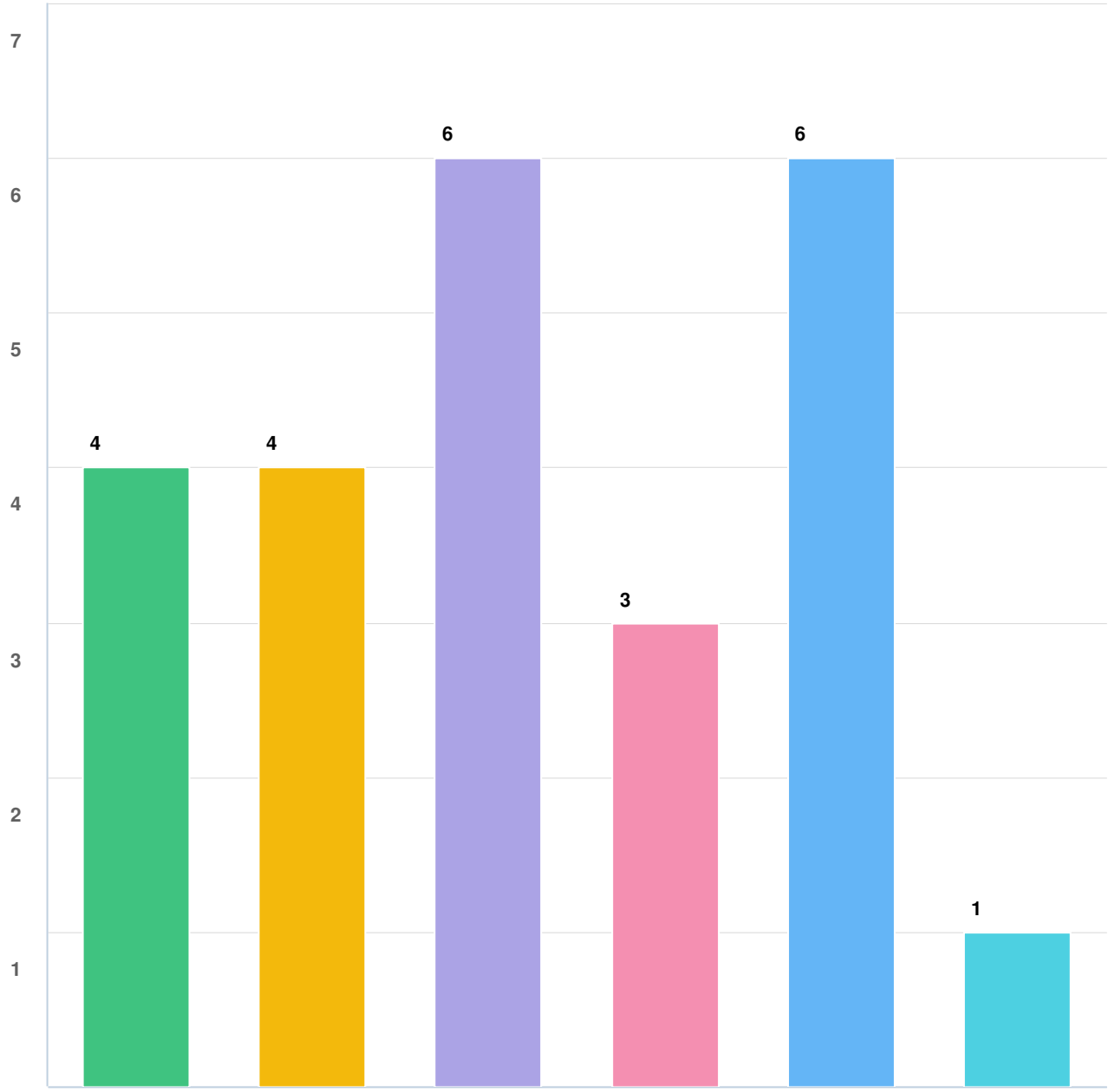
Question options

Somewhat safe Neutral Somewhat unsafe Very unsafe

Optional question (30 response(s), 249 skipped)

Question type: Dropdown Question

Select the top reasons you feel somewhat unsafe using a mobility device



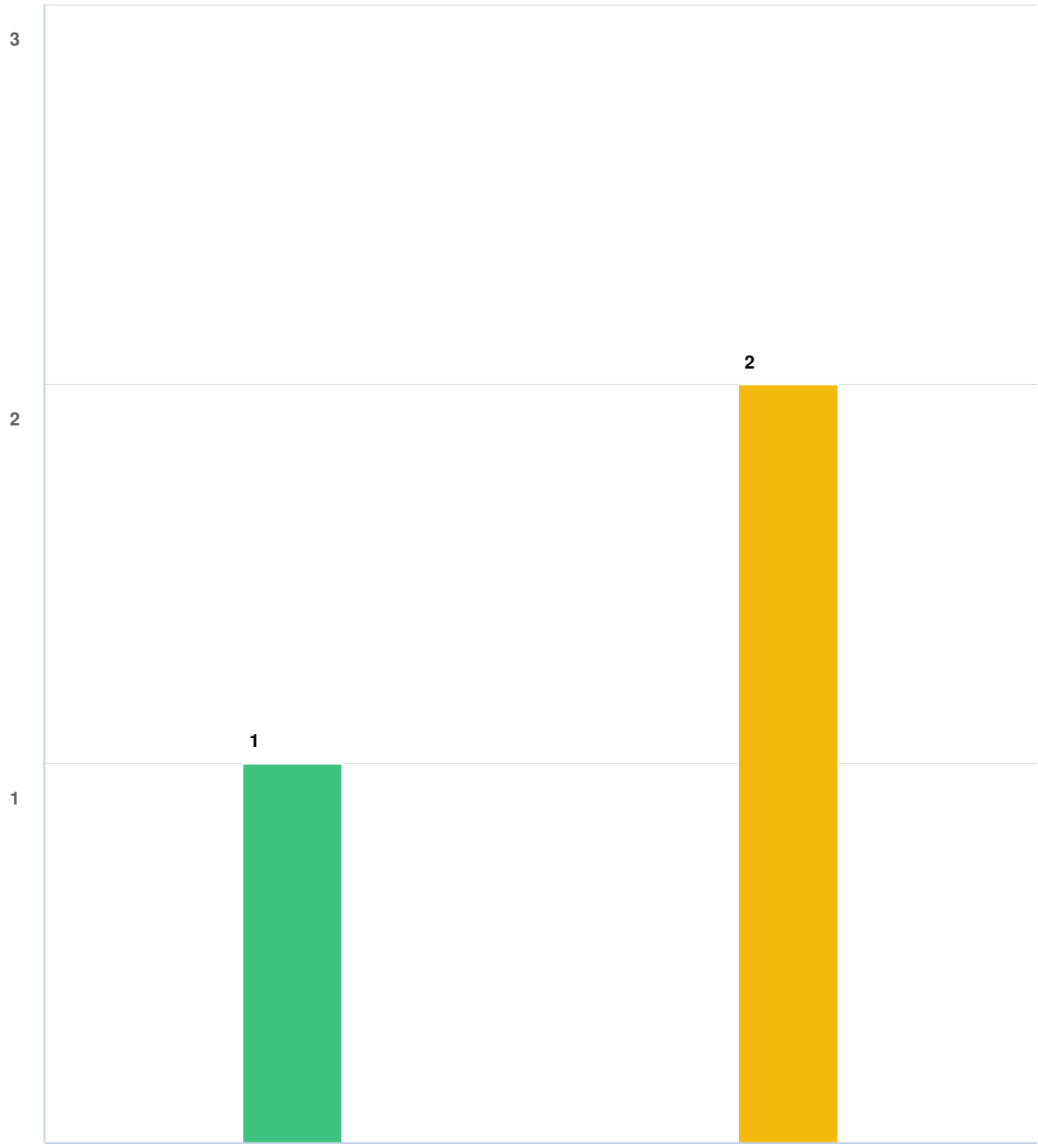
Question options

- Traffic/congestion (e.g. Too many cars, people, or bicycles in regular route etc.)
- Infrastructure Design (e.g. not enough safety features or separation, poor drainage, steep slope, slippery when wet etc.)
- Surface condition (e.g. significant cracking, potholes)
- Poor connectivity (e.g. Bike lanes ending abruptly, sidewalks missing, curb cuts not available for mobility devices, roads frequently closed etc.)
- Operational Issue (e.g. snow or ice not cleared, debris frequently not cleared)
- Other (please specify)

Optional question (8 response(s), 271 skipped)

Question type: Checkbox Question

Select the top reasons you feel very unsafe using a mobility device



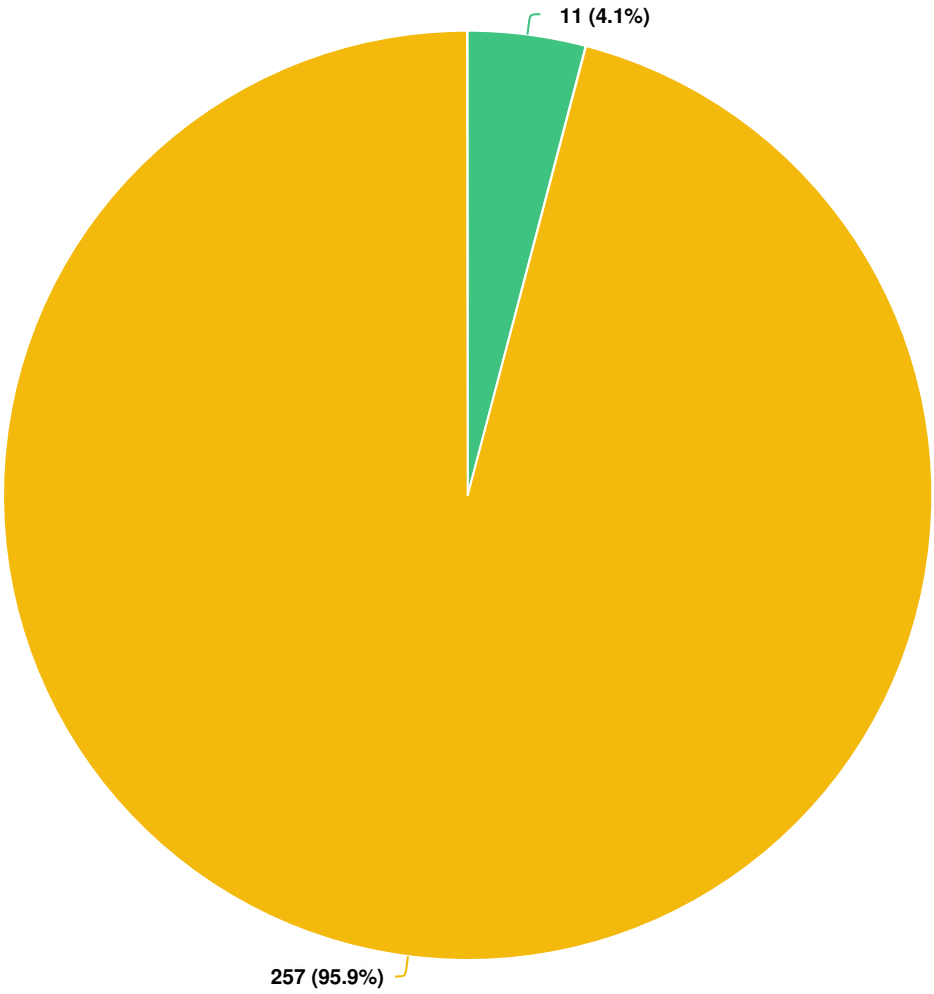
Question options

- Surface condition (e.g. significant cracking, potholes)
- Operational Issue (e.g. snow or ice not cleared, debris frequently not cleared)

Optional question (2 response(s), 277 skipped)

Question type: Checkbox Question

Do you use another mode of transportation?



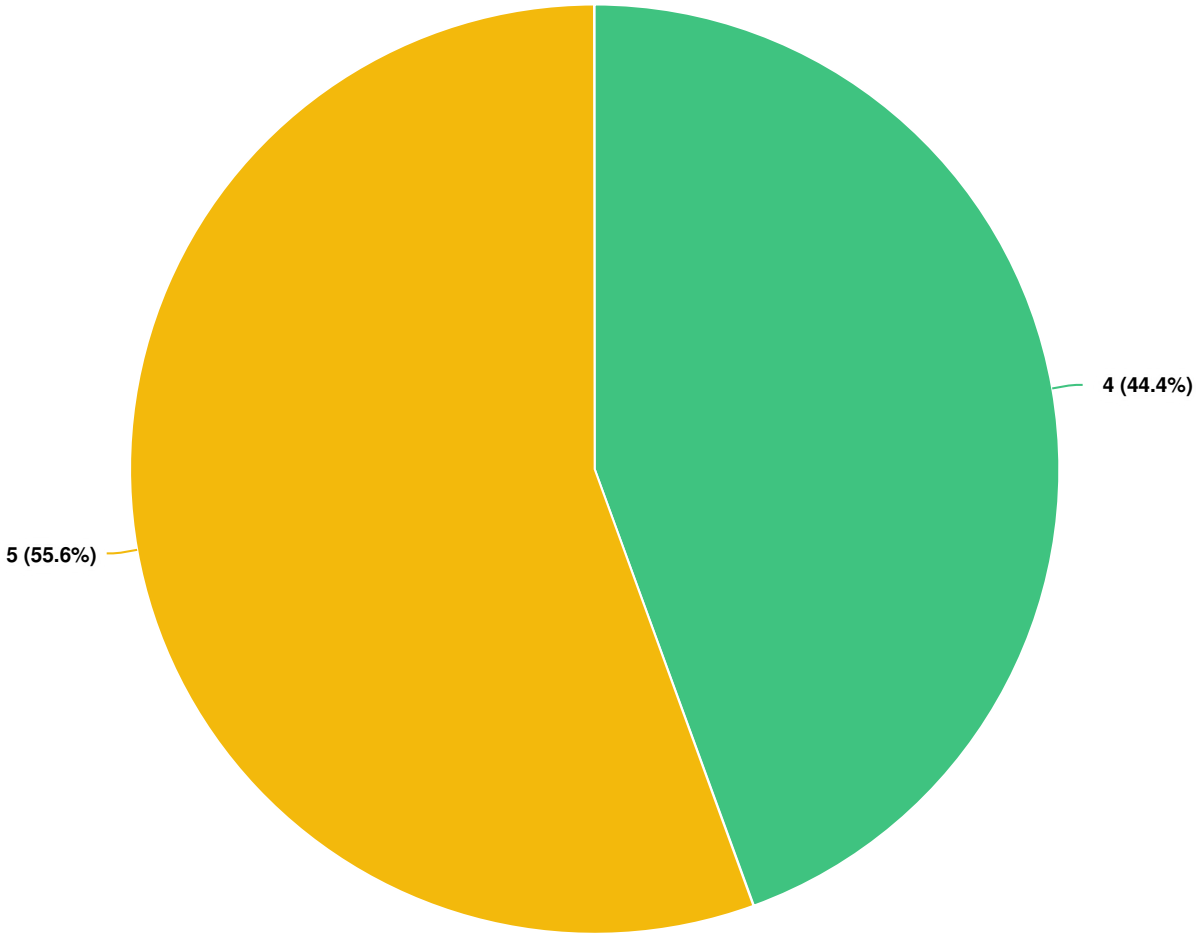
Question options

Yes No

Optional question (268 response(s), 11 skipped)

Question type: Dropdown Question

How often do you use that mode of transportation?



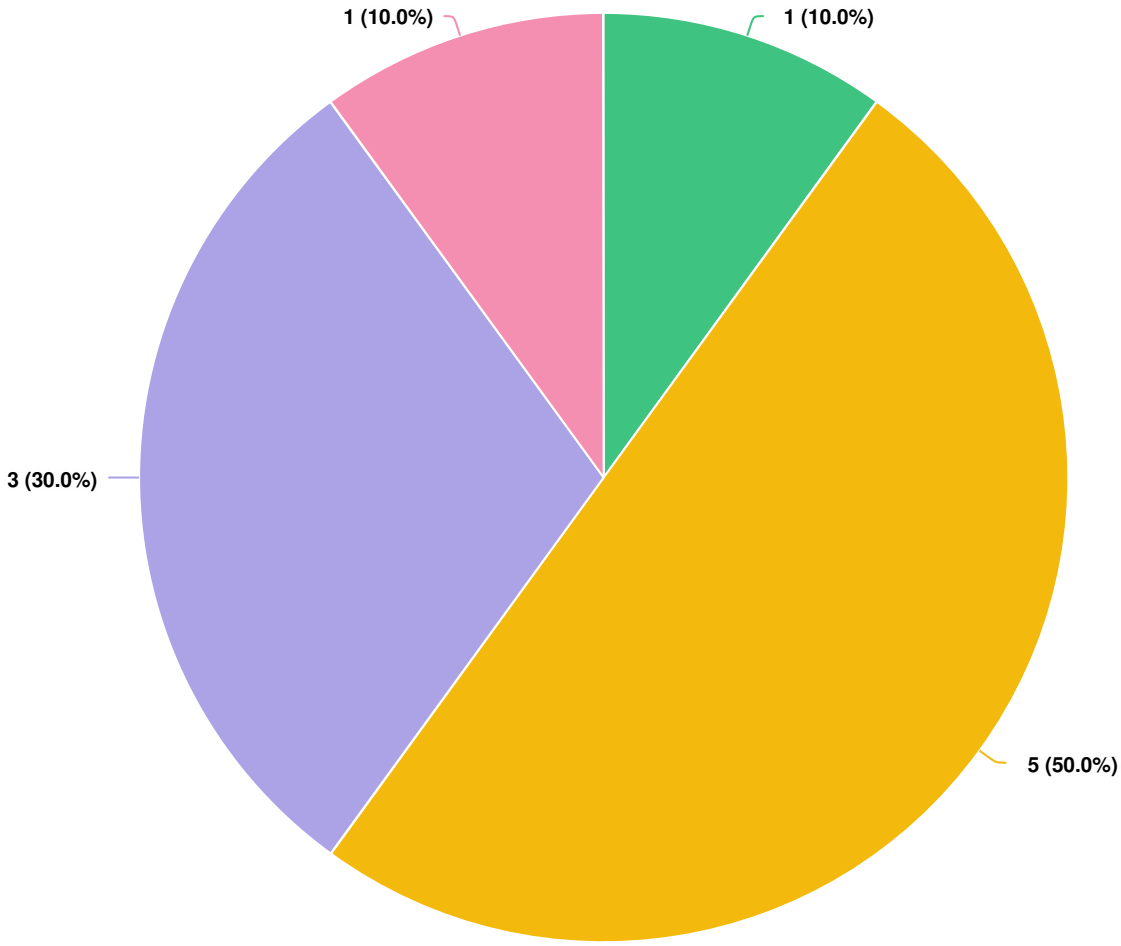
Question options

Every day A few times a week

Optional question (9 response(s), 270 skipped)

Question type: Dropdown Question

How safe do you feel using that mode of transportation on the road network?



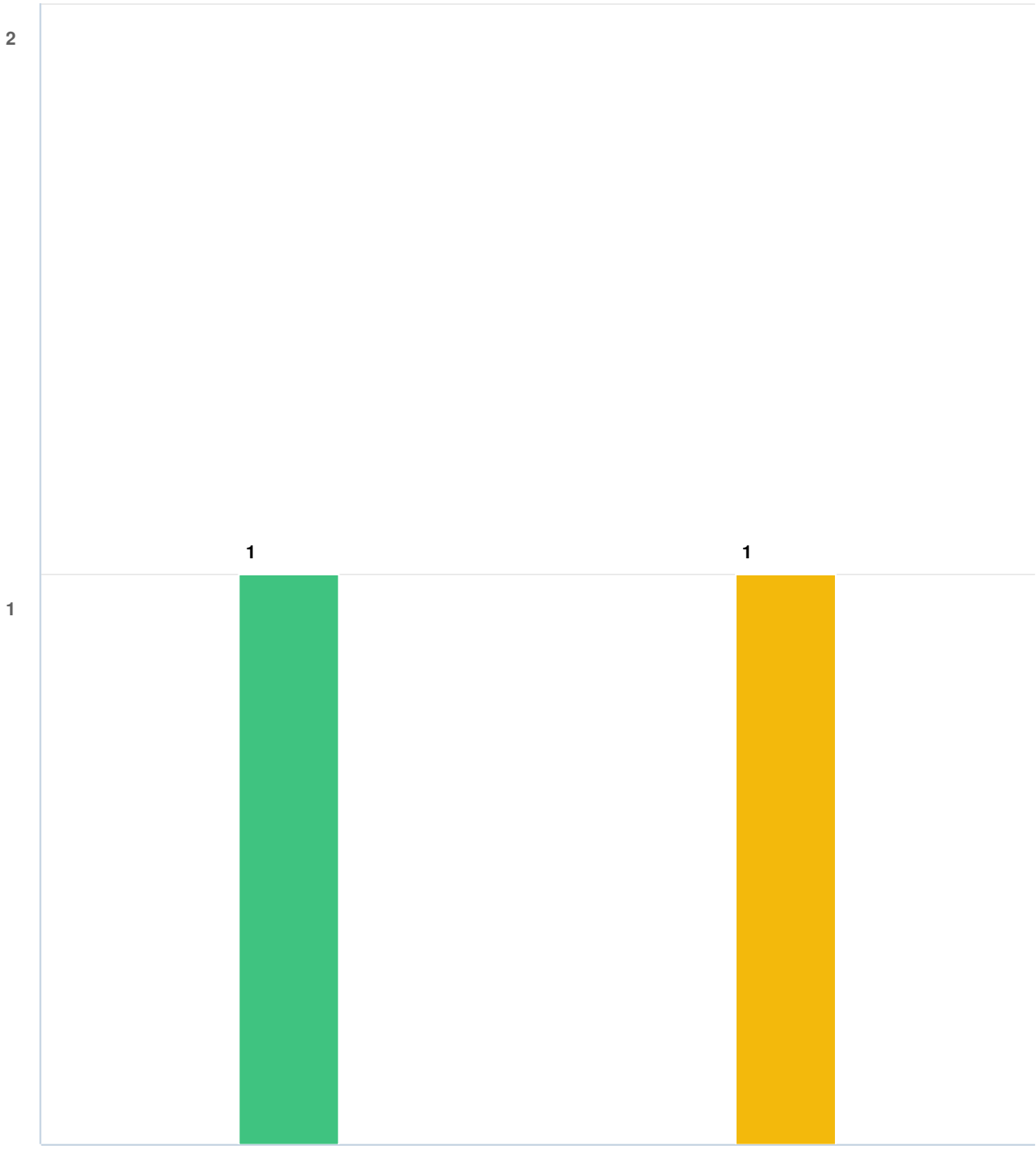
Question options

Very safe Somewhat safe Neutral Somewhat unsafe

Optional question (10 response(s), 269 skipped)

Question type: Dropdown Question

Select the top reasons you feel somewhat unsafe using that mode of transportation



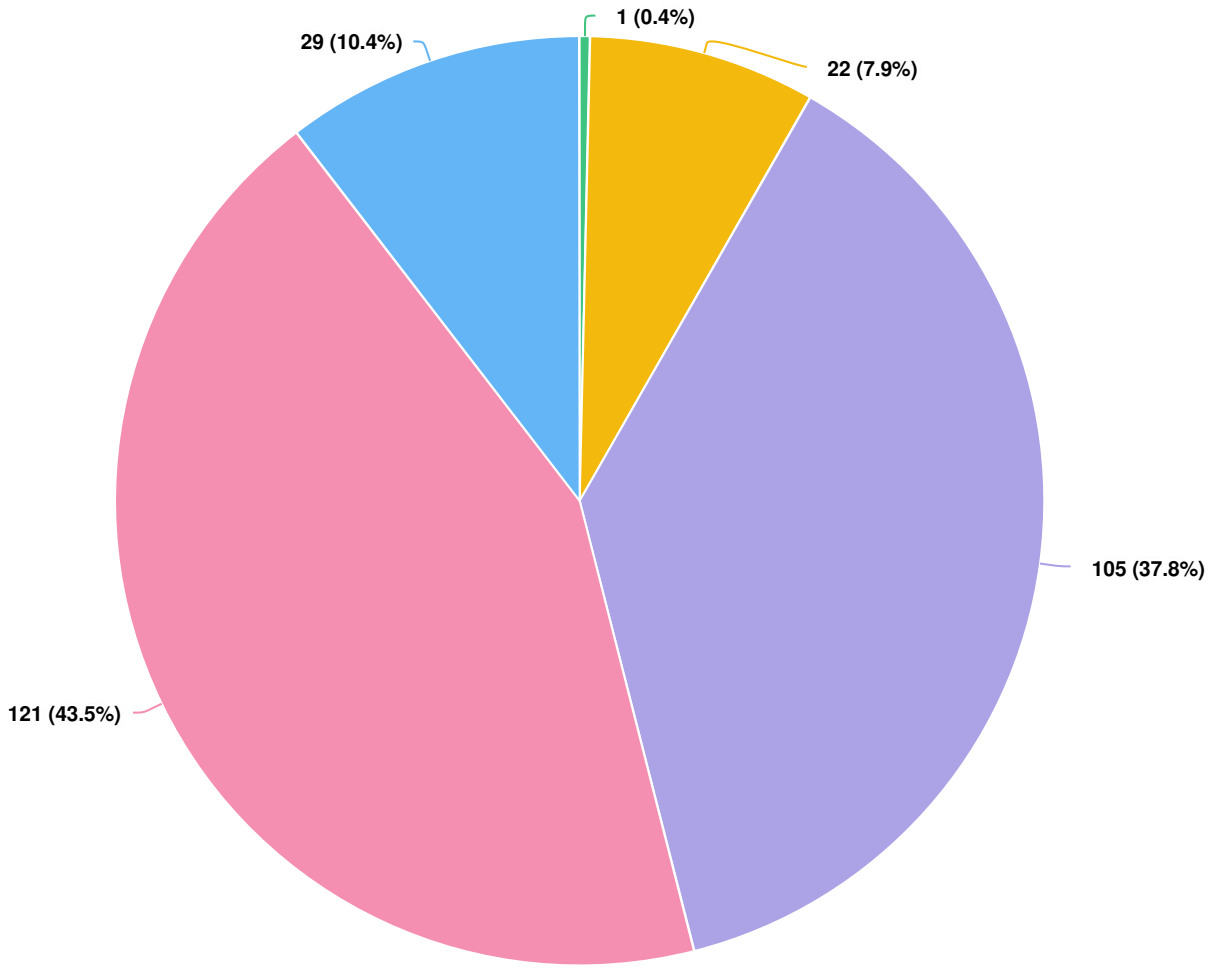
Question options

- Infrastructure Design (e.g. not enough safety features or separation, poor drainage, steep slope, slippery when wet etc.)
- Surface condition (e.g. significant cracking, potholes)

Optional question (1 response(s), 278 skipped)

Question type: Checkbox Question

Based on the images above, how would you rate the surface condition (quality) of the roads in Hamilton?



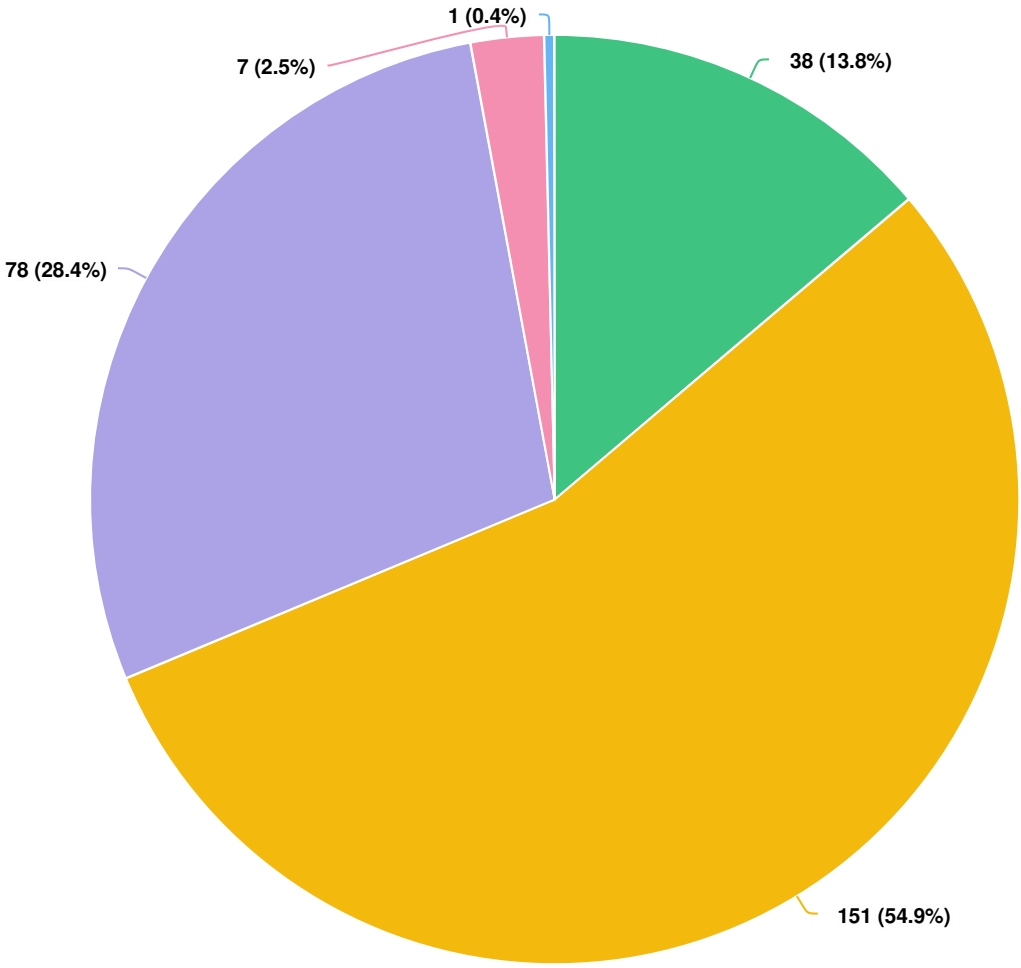
Question options

Very Good Good Fair Poor Very poor

Optional question (278 response(s), 1 skipped)

Question type: Dropdown Question

Based on the images above, what minimum surface condition (quality) of the roads would you like to see?



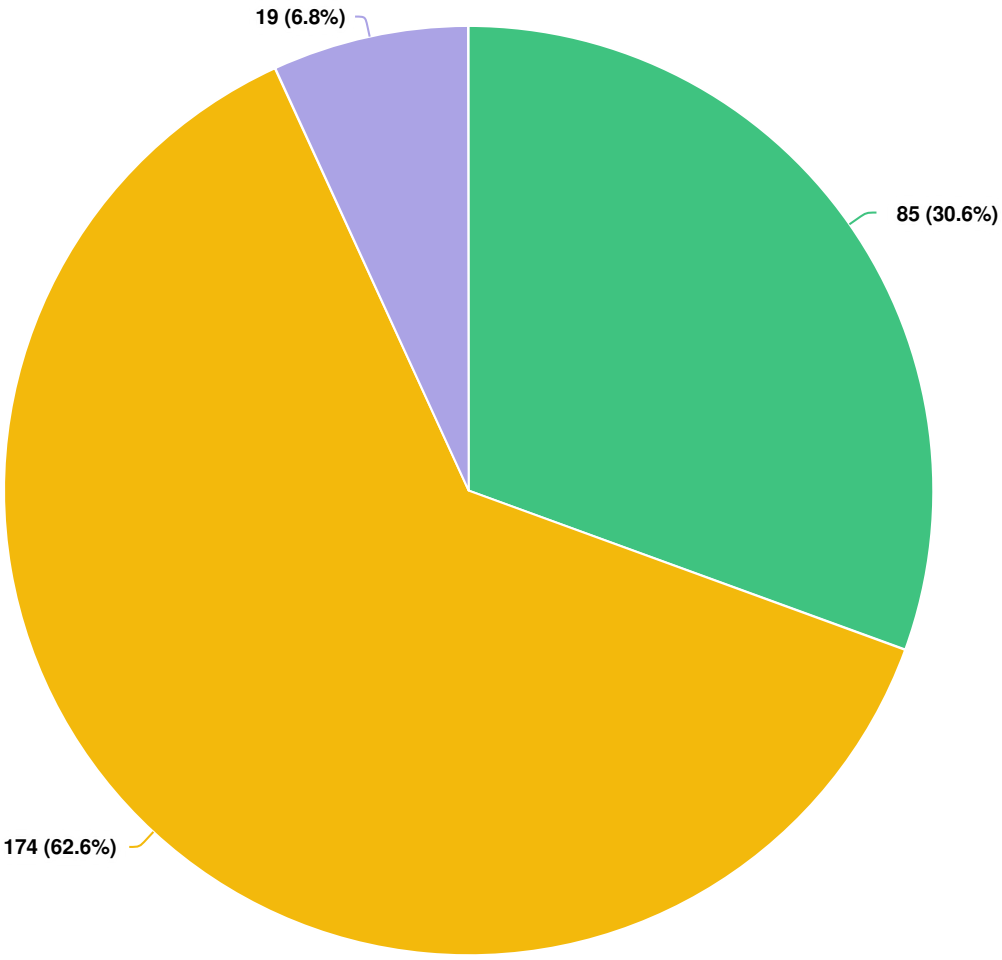
Question options

Very Good Good Fair Poor Very Poor

Optional question (275 response(s), 4 skipped)

Question type: Dropdown Question

Based on the images above, how would you rate the surface condition (quality) of the sidewalks in Hamilton?



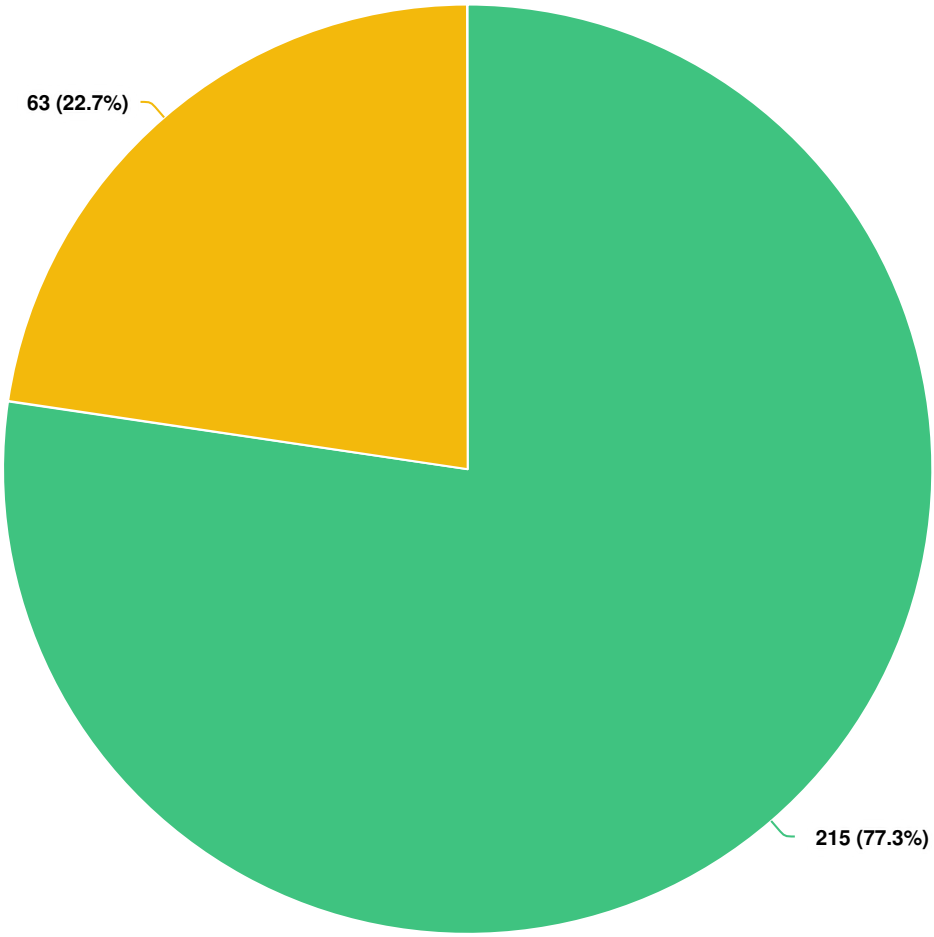
Question options

Good Fair Poor

Optional question (278 response(s), 1 skipped)

Question type: Dropdown Question

Based on the images above, what minimum surface condition (quality) of the sidewalks would you like to see?



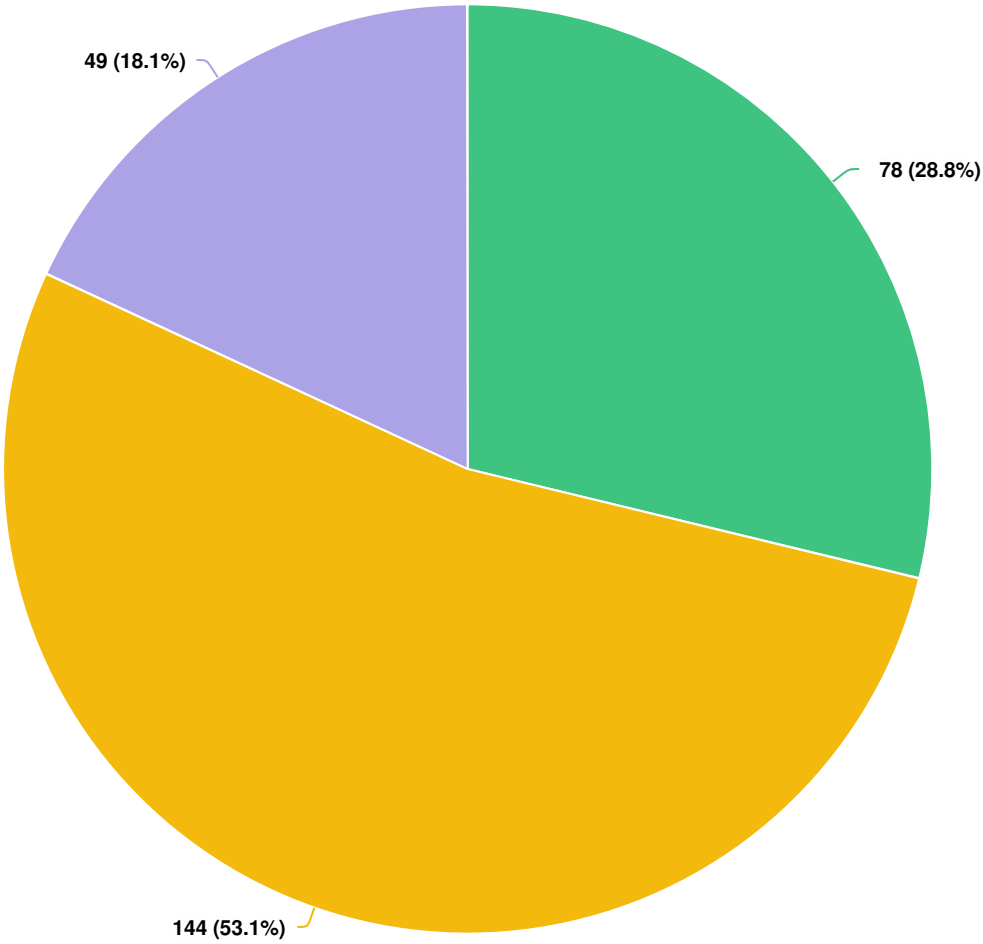
Question options

Good Fair

Optional question (278 response(s), 1 skipped)

Question type: Dropdown Question

Based on the images above, how would you rate the surface condition (quality) of the bike lanes in Hamilton?



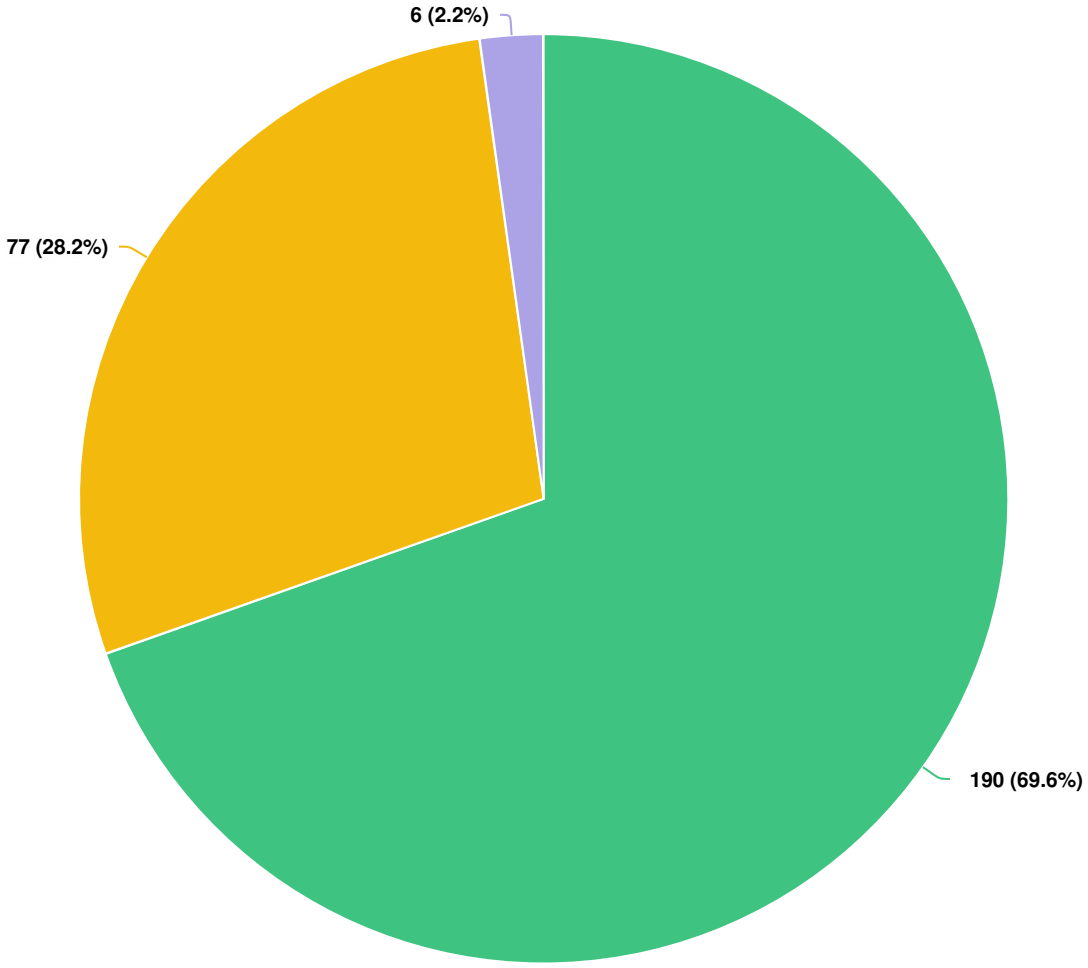
Question options

Good Fair Poor

Optional question (271 response(s), 8 skipped)

Question type: Dropdown Question

Based on the images above, what minimum surface condition (quality) of the bike lanes would you like to see?



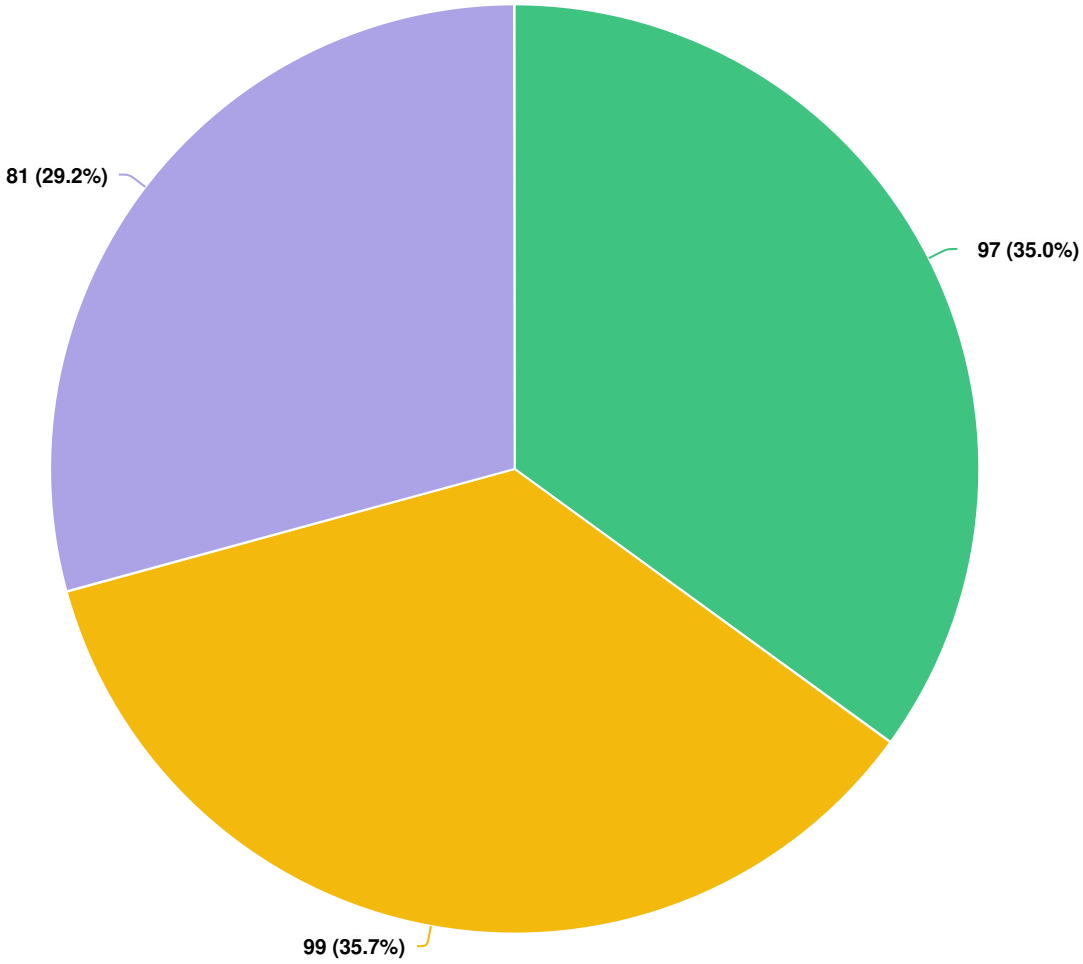
Question options

Good Fair Poor

Optional question (273 response(s), 6 skipped)

Question type: Dropdown Question

How do you feel about traffic or congestion in Hamilton?



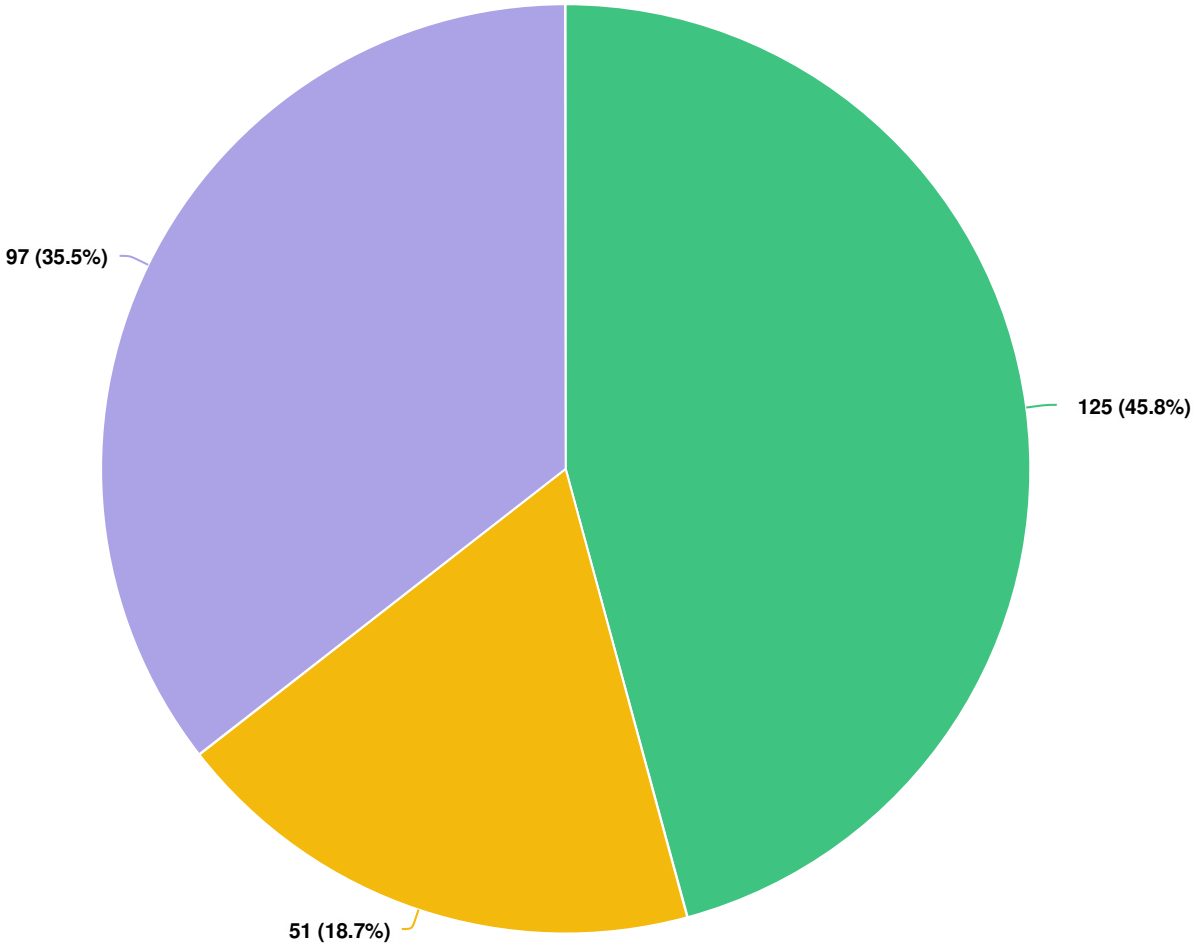
Question options

Traffic levels are acceptable | Neutral | Traffic levels are unacceptable

Optional question (277 response(s), 2 skipped)

Question type: Dropdown Question

How is your commute affected if one of the escarpment access routes is closed due to construction or a collision?



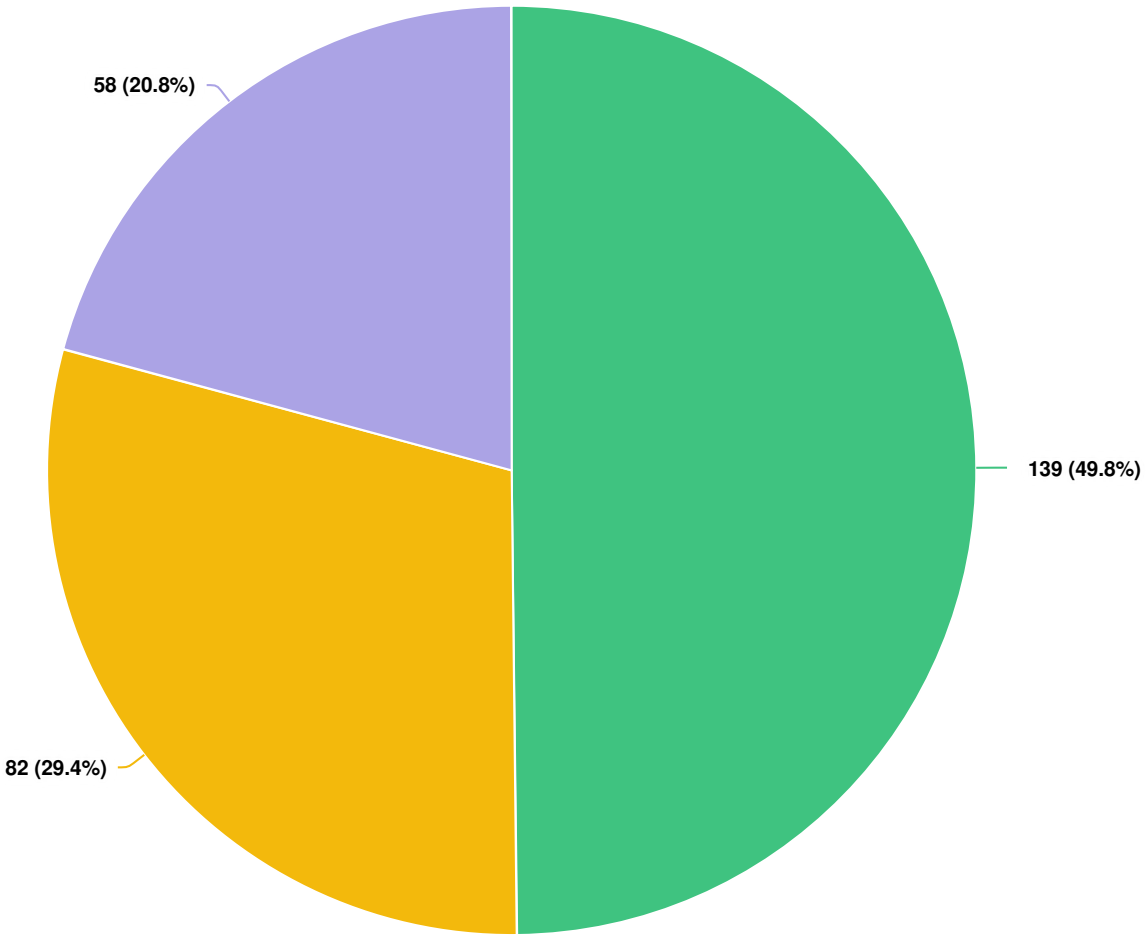
Question options

- My commute is not affected by escarpment access closures.
- Neutral
- My commute is affected by escarpment access closures.

Optional question (273 response(s), 6 skipped)

Question type: Dropdown Question

When road closures occur for maintenance or construction work, do you think the City provides ample notification (e.g. signage, updates through local media) to allow you to find alternate routes?



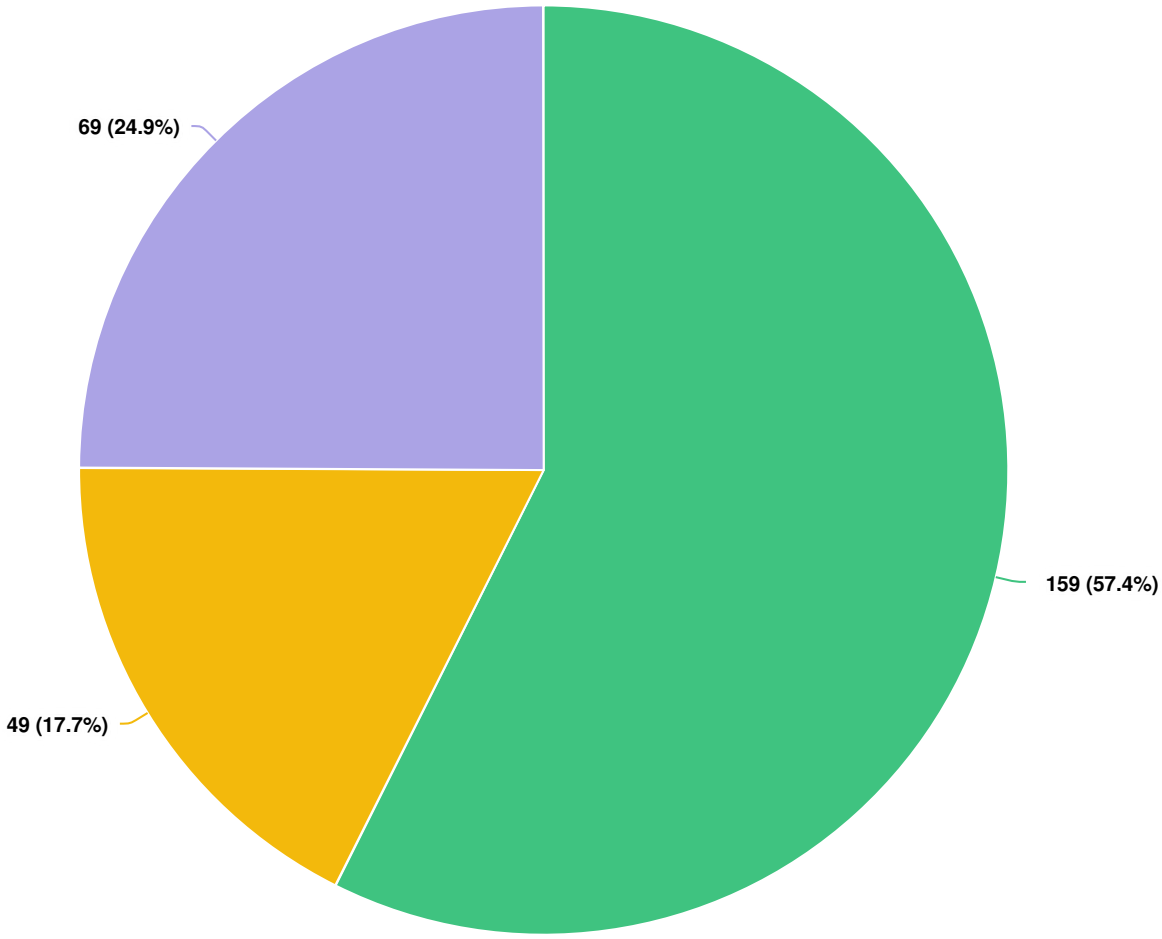
Question options

Yes, I think there is ample notice of road work. Neutral No, I do not think there is ample notice of road work.

Optional question (279 response(s), 0 skipped)

Question type: Dropdown Question

During a winter storm with at least 5cm of snow, do you think roads are plowed in a reasonable amount of time?



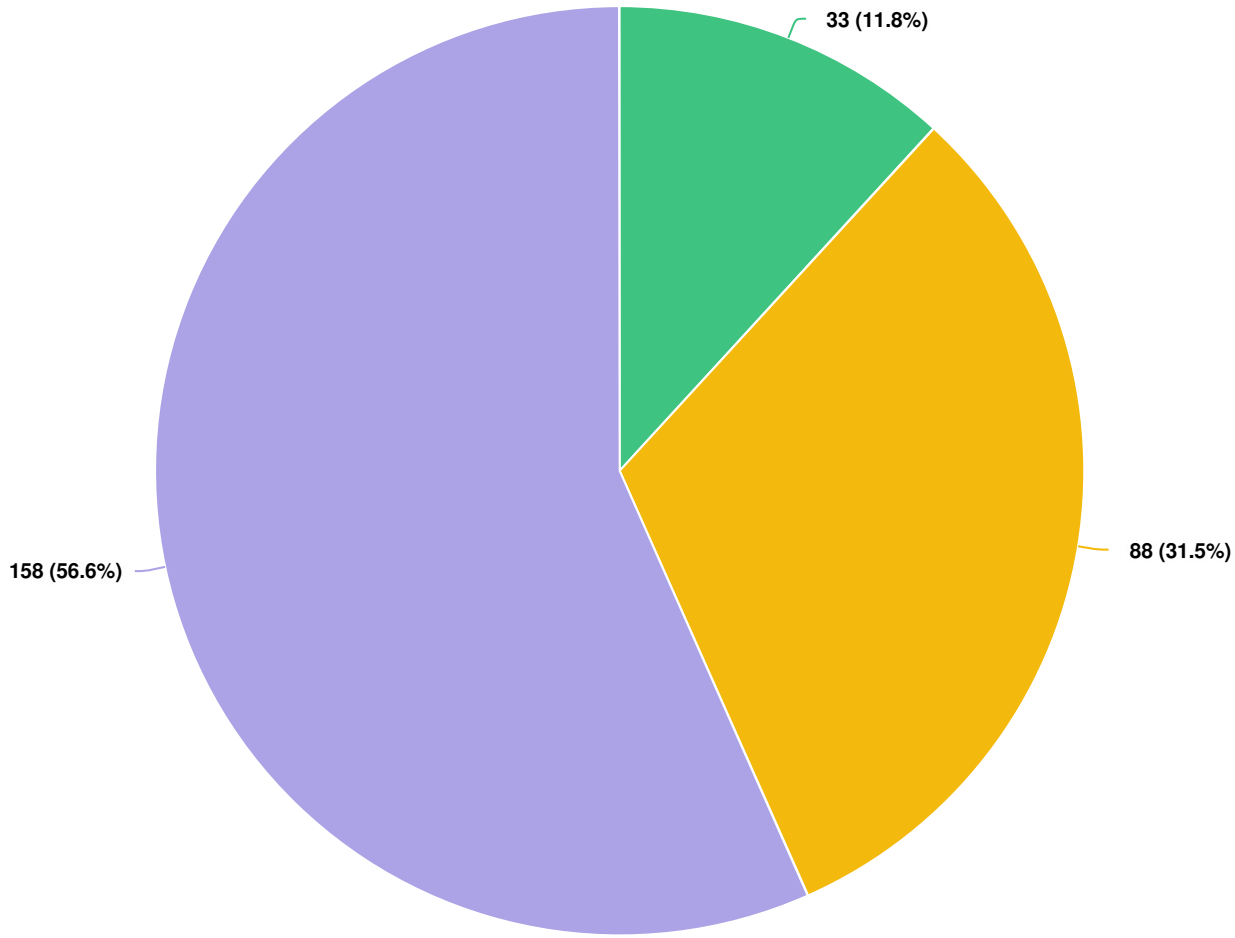
Question options

- Yes, I think the roads are plowed in a reasonable amount of time.
- Neutral
- No, I do not think the roads are plowed in a reasonable amount of time.

Optional question (277 response(s), 2 skipped)

Question type: Dropdown Question

Do you think potholes are fixed in a timely manner?



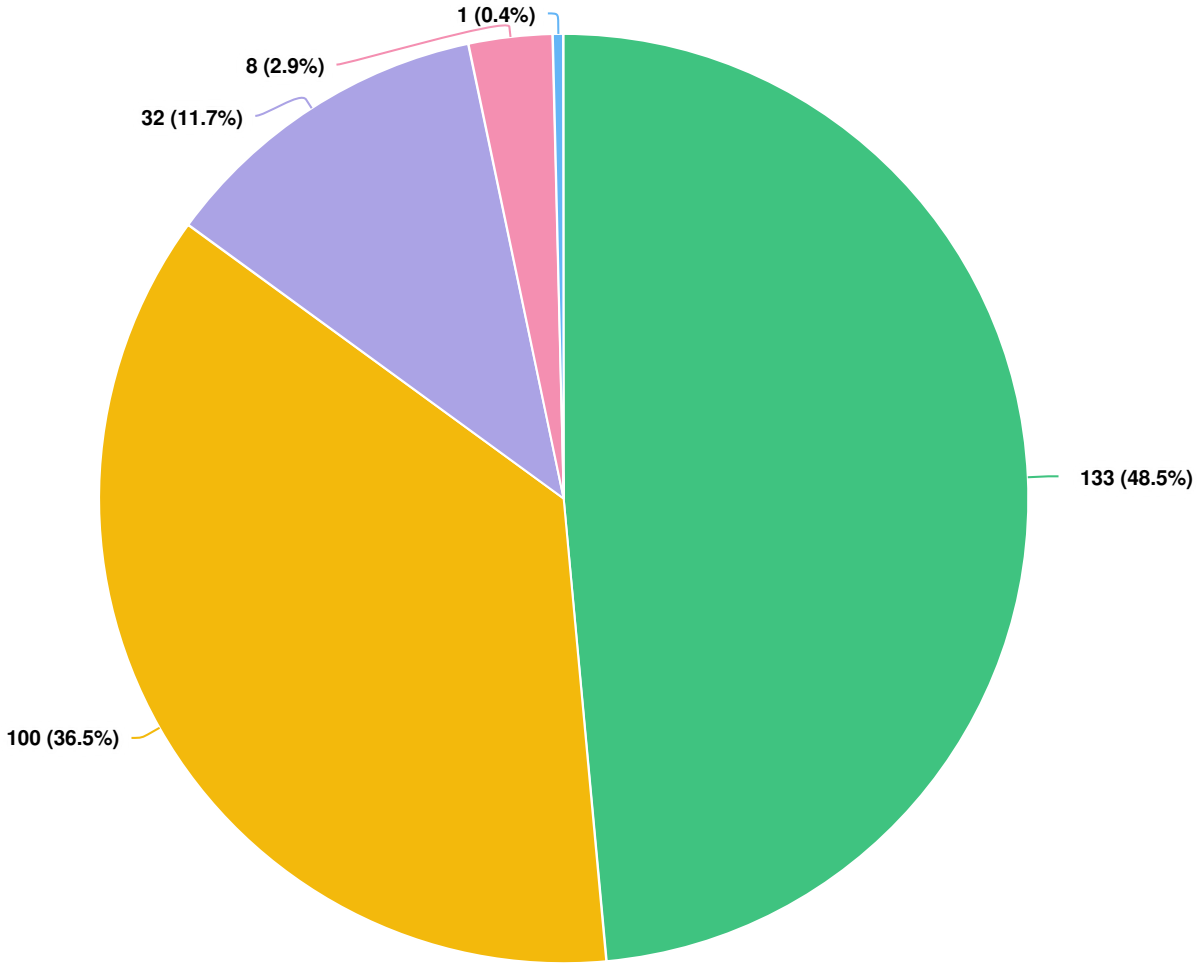
Question options

Yes, I think potholes are fixed in a timely manner. Neutral No, I do not think potholes are fixed in a timely manner

Optional question (279 response(s), 0 skipped)

Question type: Dropdown Question

Do you believe Hamilton's bridges and culverts are generally safe to travel over?



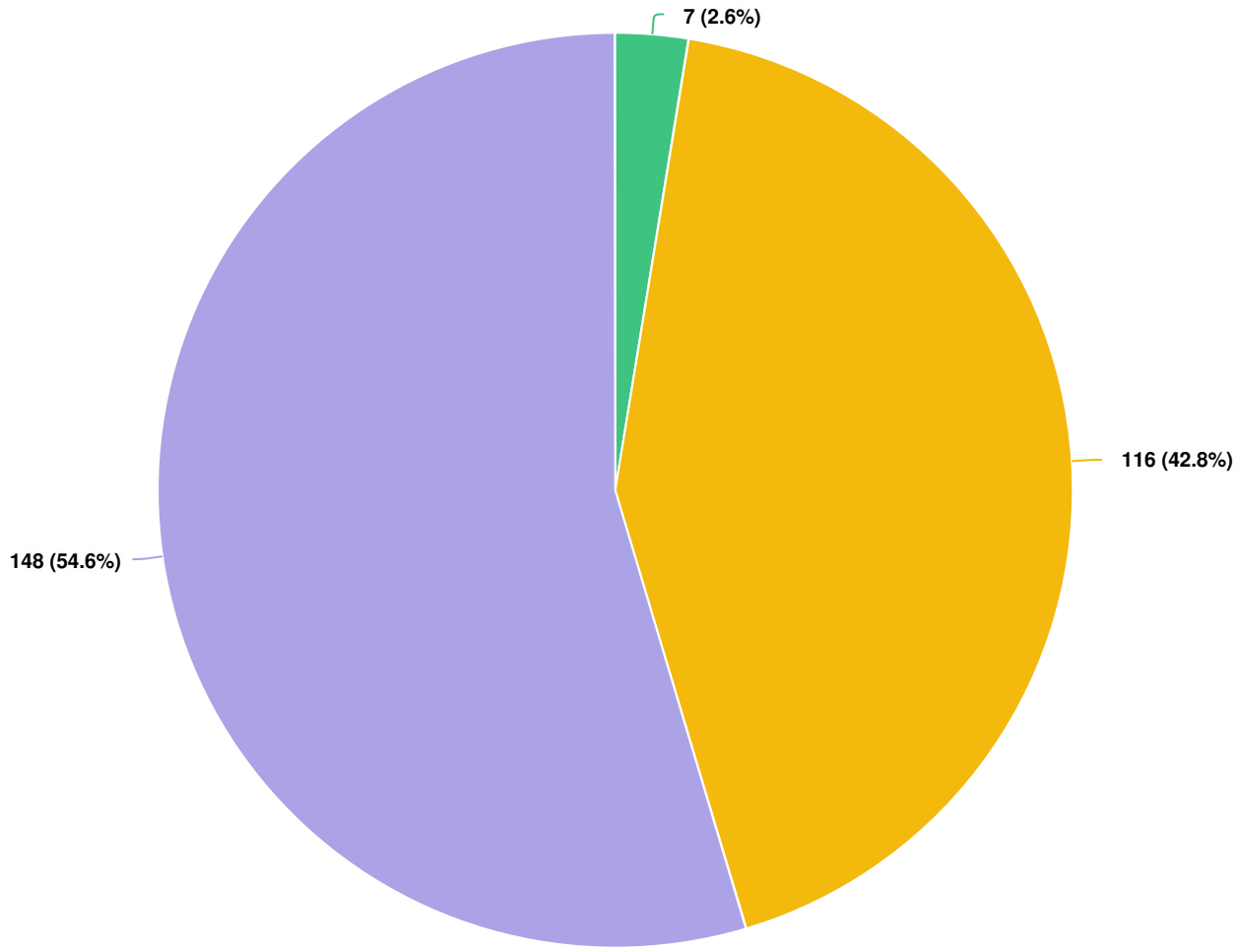
Question options

Very safe | Somewhat safe | Neutral | Somewhat Unsafe | Very Unsafe

Optional question (274 response(s), 5 skipped)

Question type: Dropdown Question

When traveling over the bridges and culverts in Hamilton do you feel they are generally in good condition?



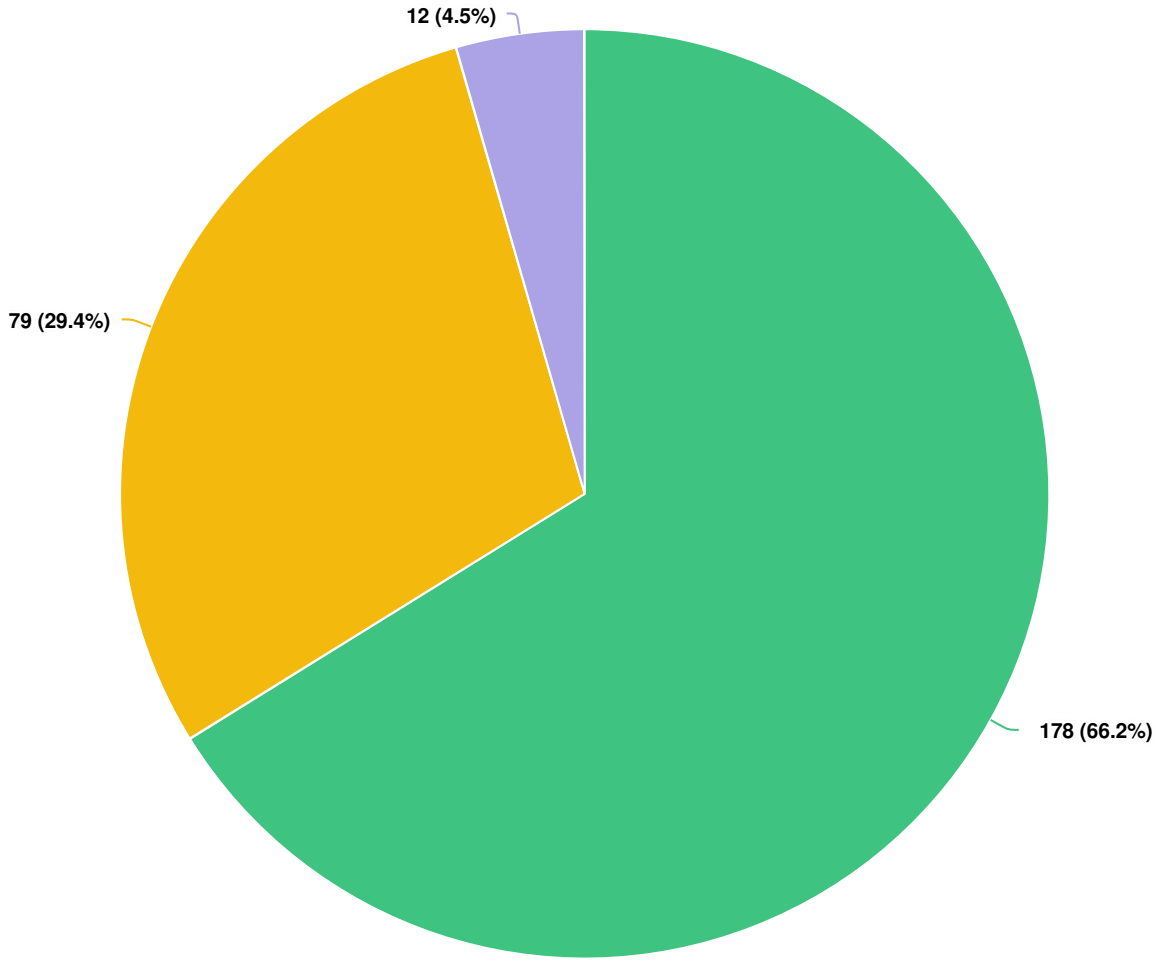
Question options

Poor Fair Good

Optional question (271 response(s), 8 skipped)

Question type: Dropdown Question

When traveling over the bridges and culverts in Hamilton do you feel there are traffic impacts leading up to the bridge?



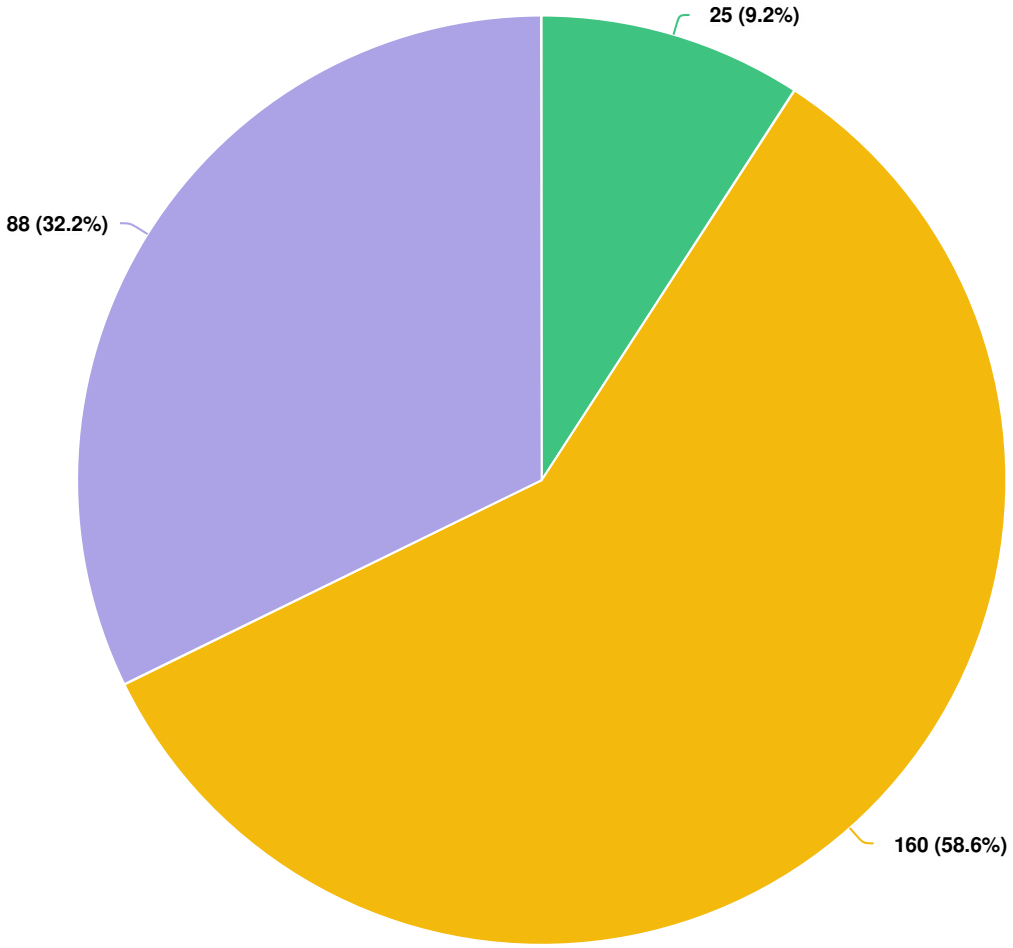
Question options

- Traffic levels are acceptable
- Traffic does affect my travel some of the time
- There are significant traffic issues around bridges/culverts

Optional question (269 response(s), 10 skipped)

Question type: Dropdown Question

Are there bridges (pedestrian and/or vehicular) that are currently closed that you would typically use if they were not closed?



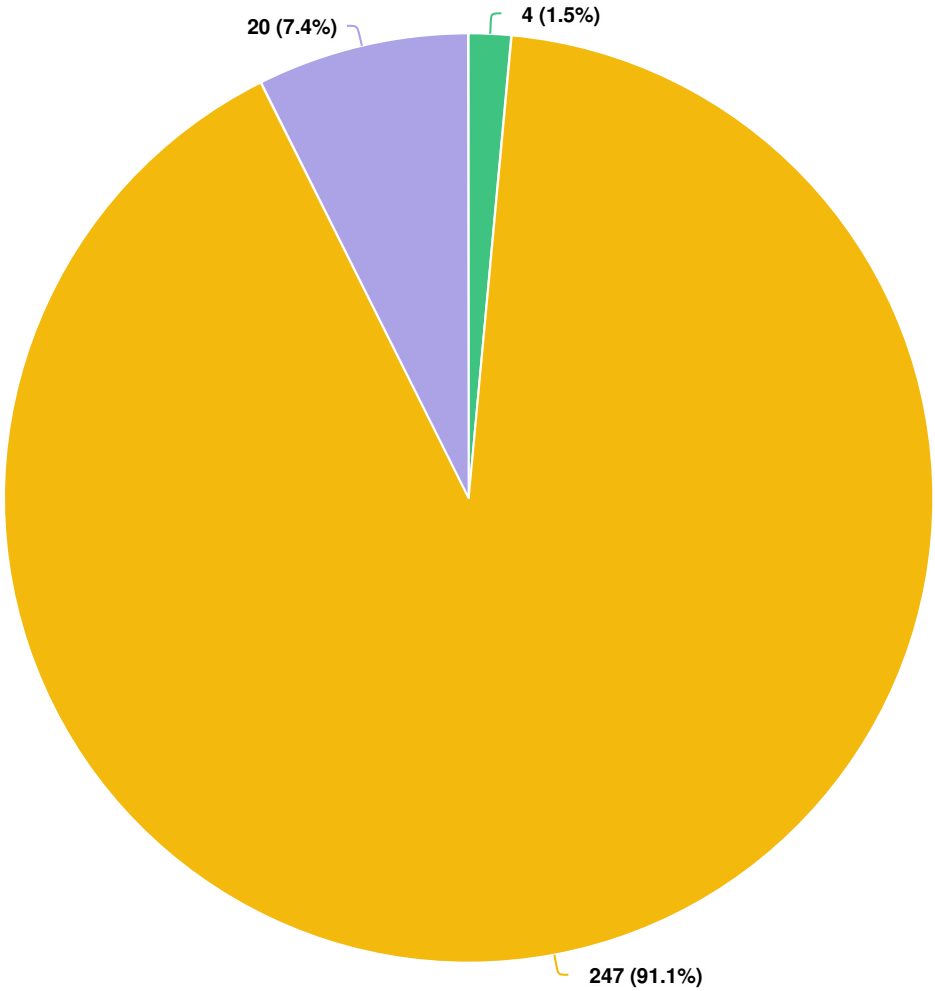
Question options

Yes No Not sure

Optional question (273 response(s), 6 skipped)

Question type: Dropdown Question

Are there any bridges or culverts that you do not use due to either height or weight restrictions?



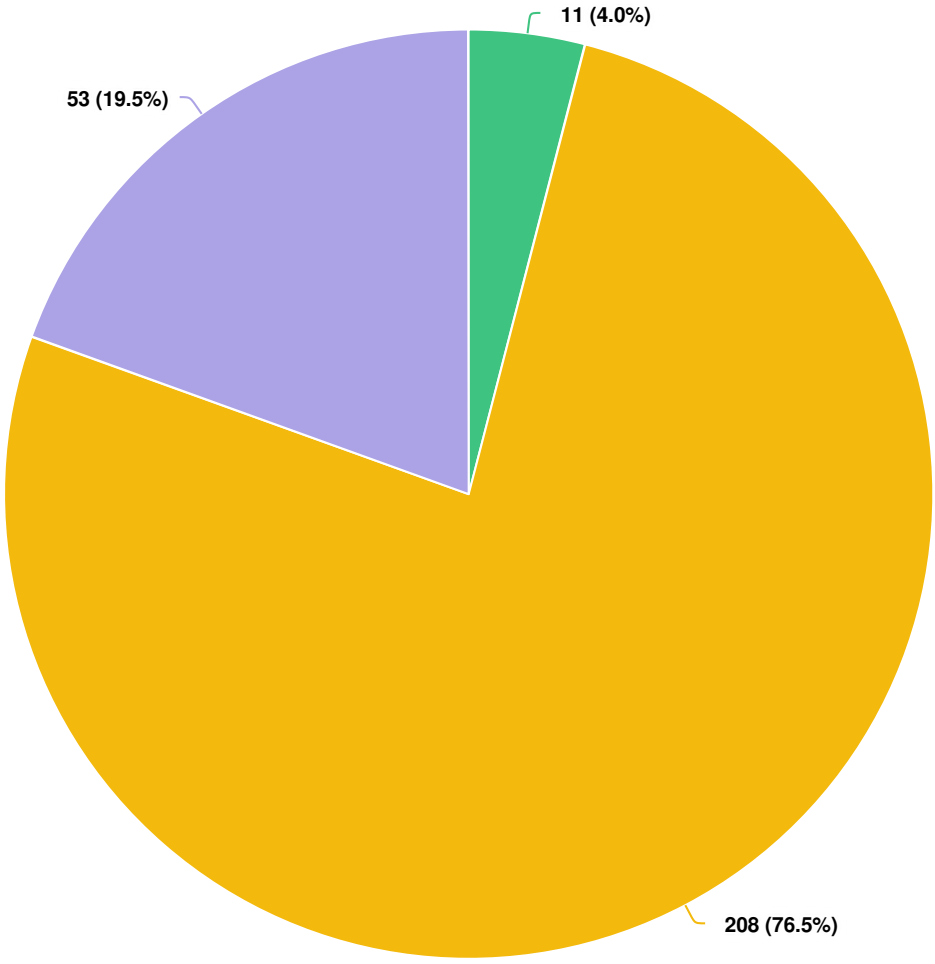
Question options

Yes No Not sure

Optional question (271 response(s), 8 skipped)

Question type: Dropdown Question

Do you know of any culverts that are either partially or completely blocked?



Question options

Yes No Not sure

Optional question (272 response(s), 7 skipped)

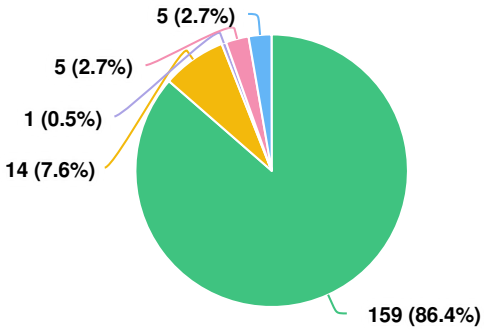
Question type: Dropdown Question

ENGAGEMENT TOOL: SURVEY TOOL

Asset Management - Drinking water, Stormwater and Wastewater

Visitors 227	Contributors 183	CONTRIBUTIONS 184

How would you best describe yourself?



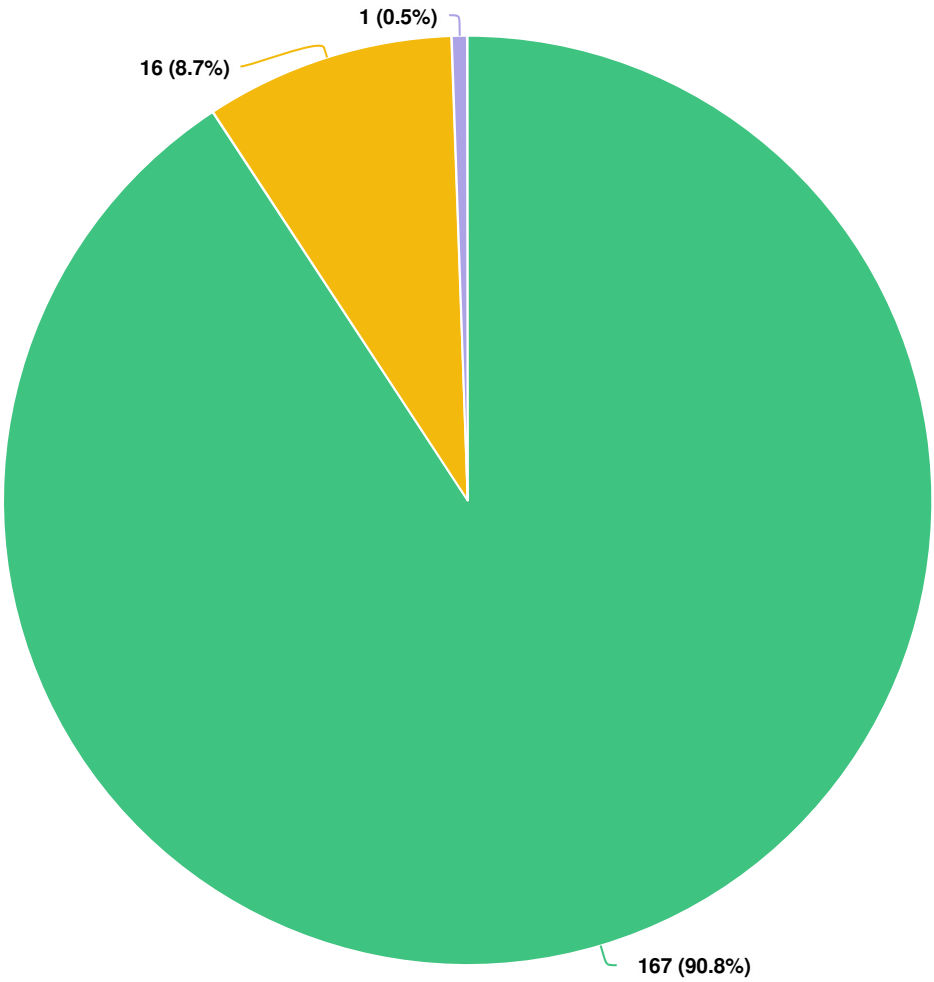
Question options

- I live in Hamilton
- I live in Hamilton and I also run a Hamilton-based business
- I don't live in Hamilton, but I run a Hamilton-based business
- I work in Hamilton (but I live somewhere else)
- Other (please specify)

Mandatory Question (184 response(s))

Question type: Dropdown Question

Are you connected to Hamilton's municipal water network?



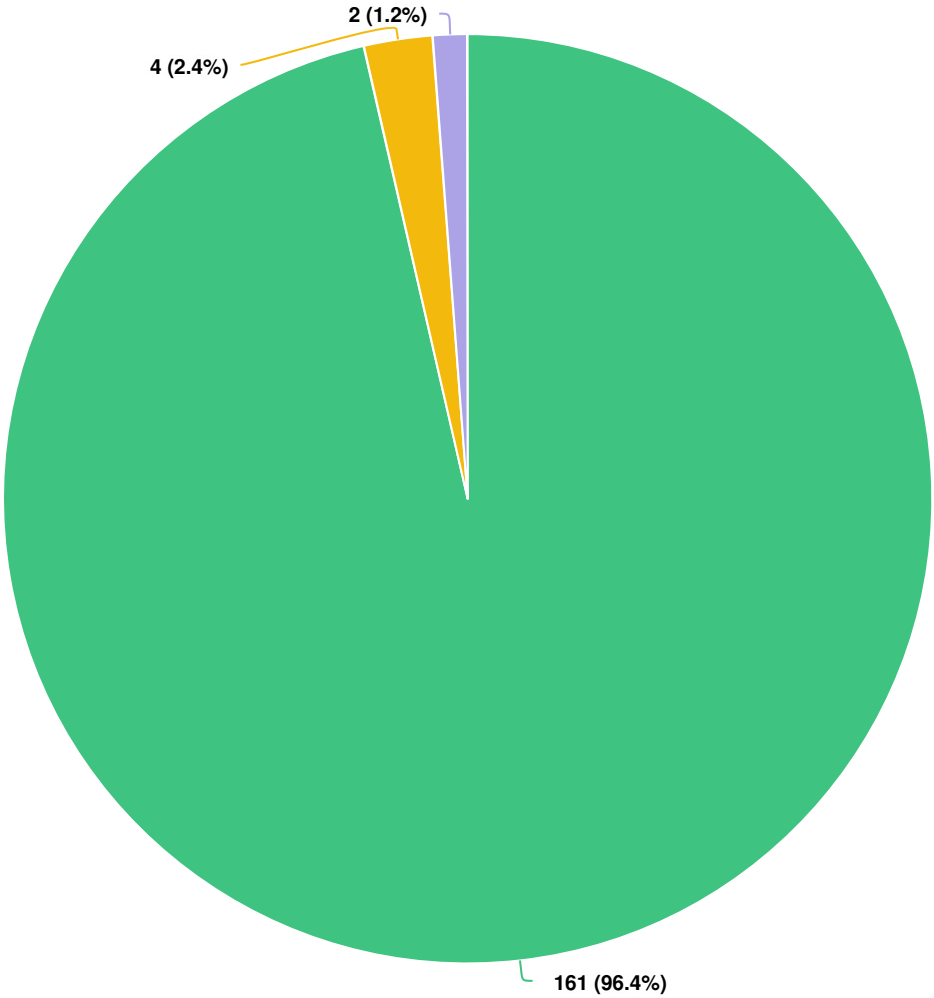
Question options

Yes No Not sure

Mandatory Question (184 response(s))

Question type: Dropdown Question

Do you feel that drinking water is readily available with minimal to no service interruptions?



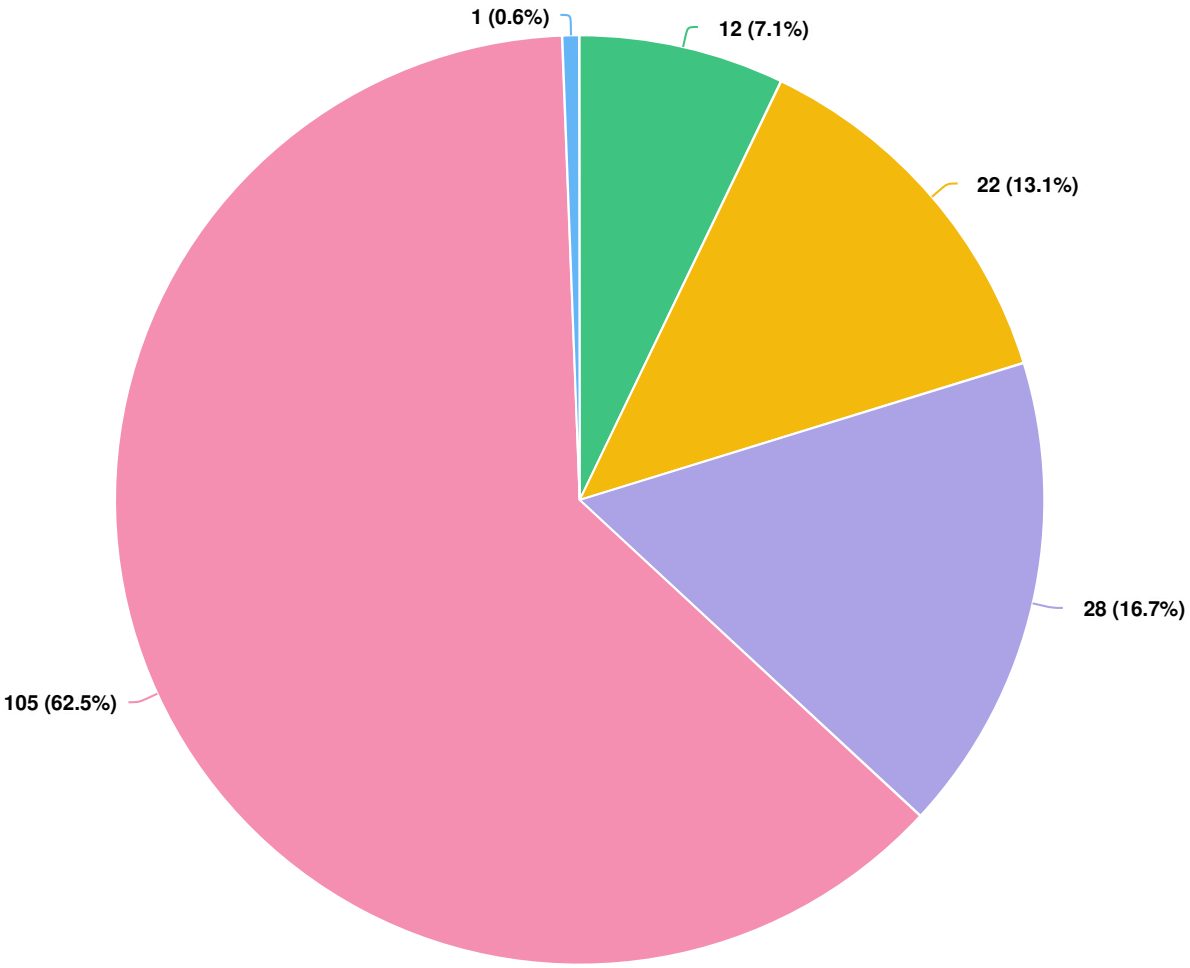
Question options

Yes No Not sure

Optional question (167 response(s), 17 skipped)

Question type: Dropdown Question

Does your drinking water from the tap ever have an unusual taste or odor?



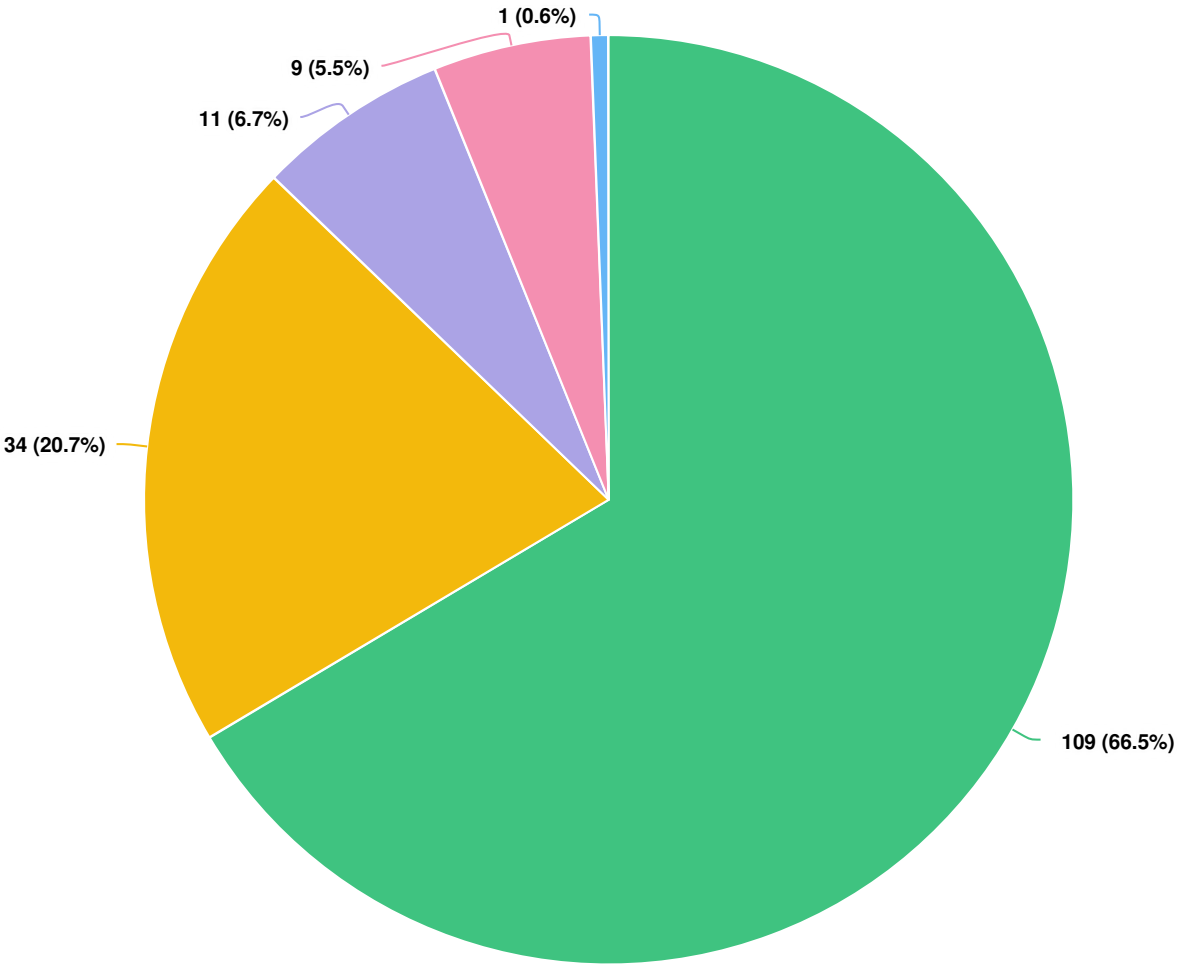
Question options

Unusual taste Unusual odour Both Neither Other (please specify)

Optional question (168 response(s), 16 skipped)

Question type: Dropdown Question

How safe do you feel the water from your tap is?



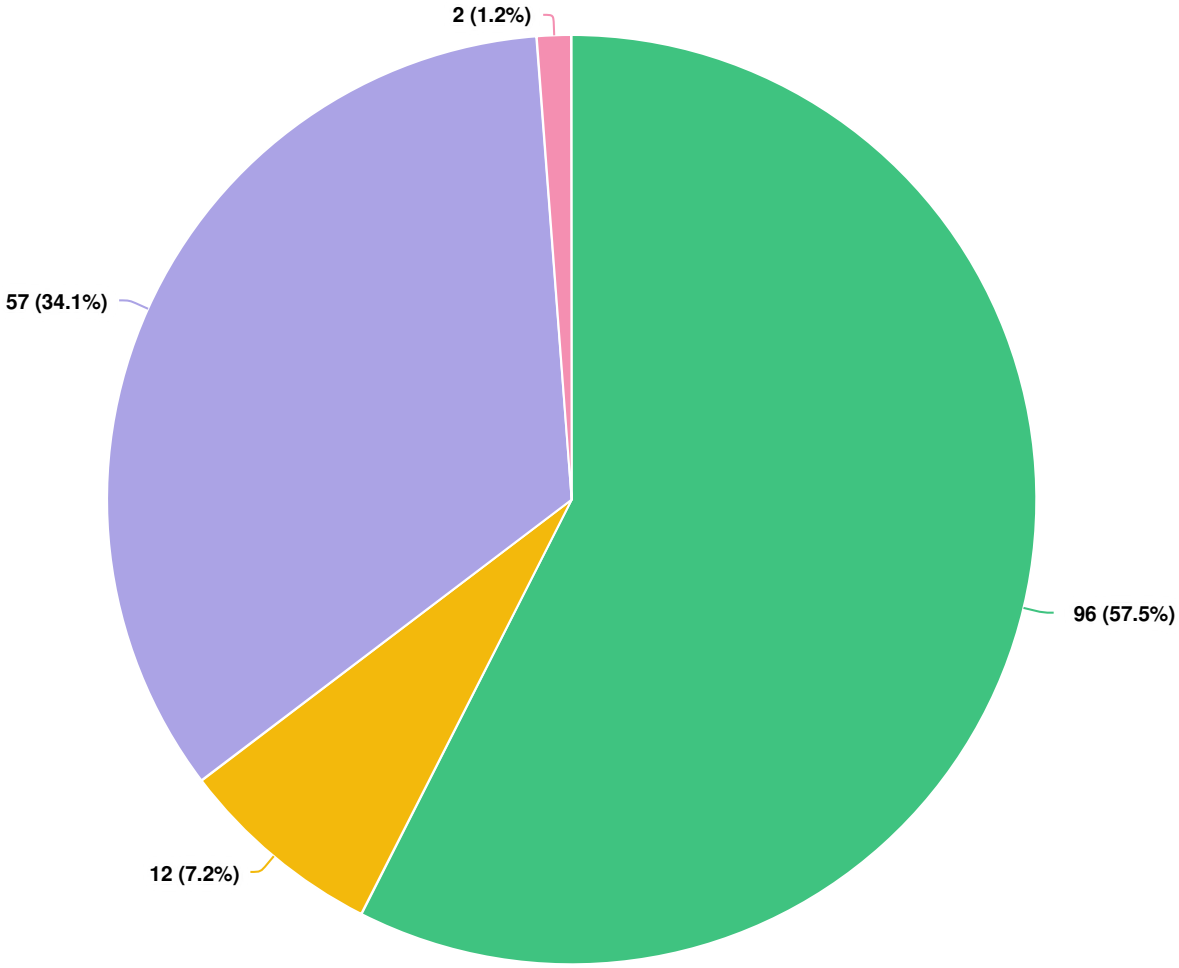
Question options

Very safe | Somewhat safe | Neutral | Not very safe | Not safe at all

Optional question (164 response(s), 20 skipped)

Question type: Dropdown Question

What is your preferred type of drinking water?



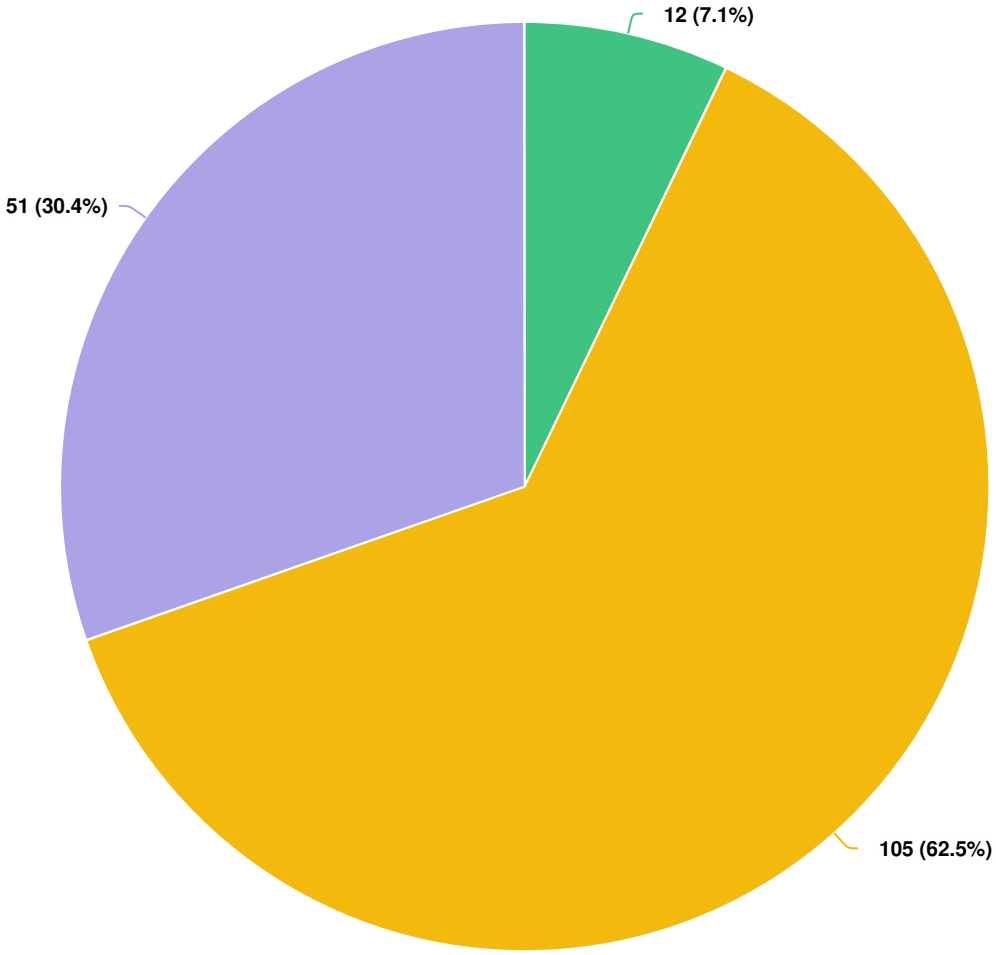
Question options

- Tap water
- Bottled water
- Filtered water (through fridge filtration, brita, reverse osmosis, etc.)
- Other (please specify)

Optional question (167 response(s), 17 skipped)

Question type: Dropdown Question

Do you know if your water is currently supplied to your residence by a lead service pipe?



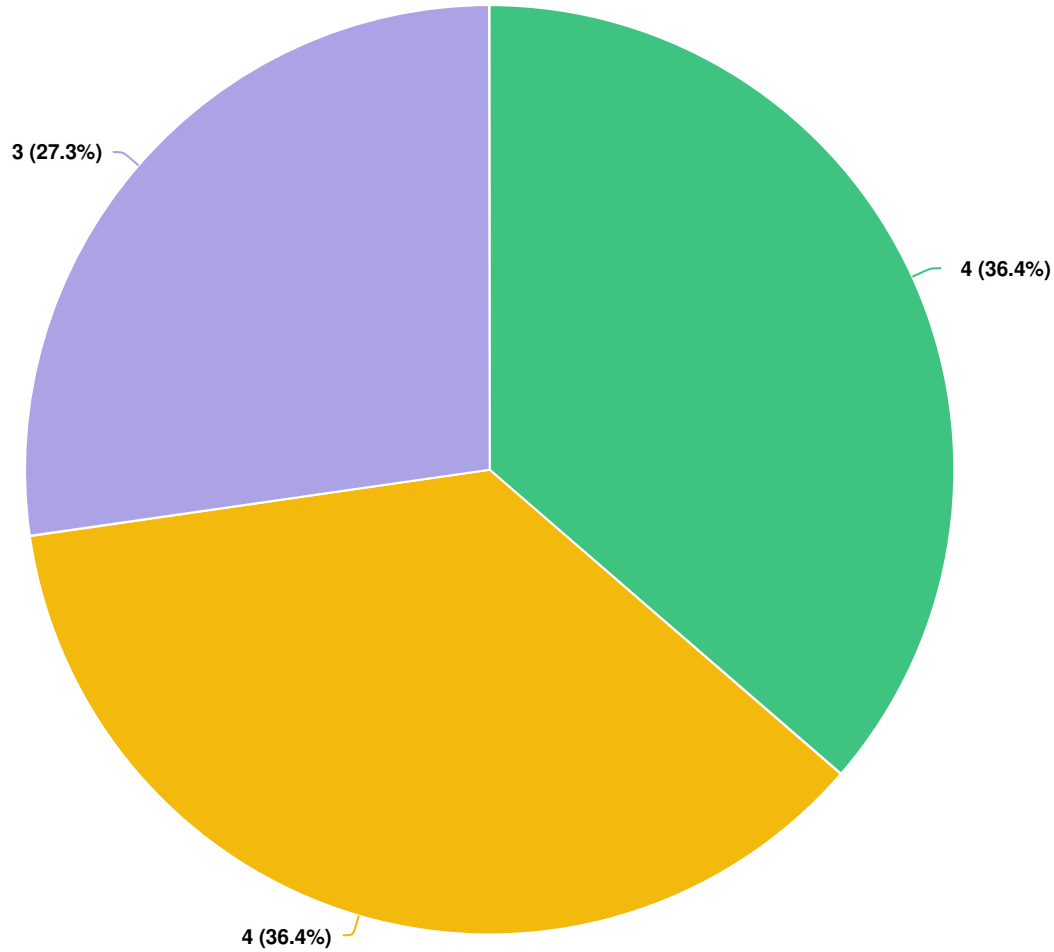
Question options

Yes No Not sure

Optional question (168 response(s), 16 skipped)

Question type: Dropdown Question

Do you anticipate switching it over?



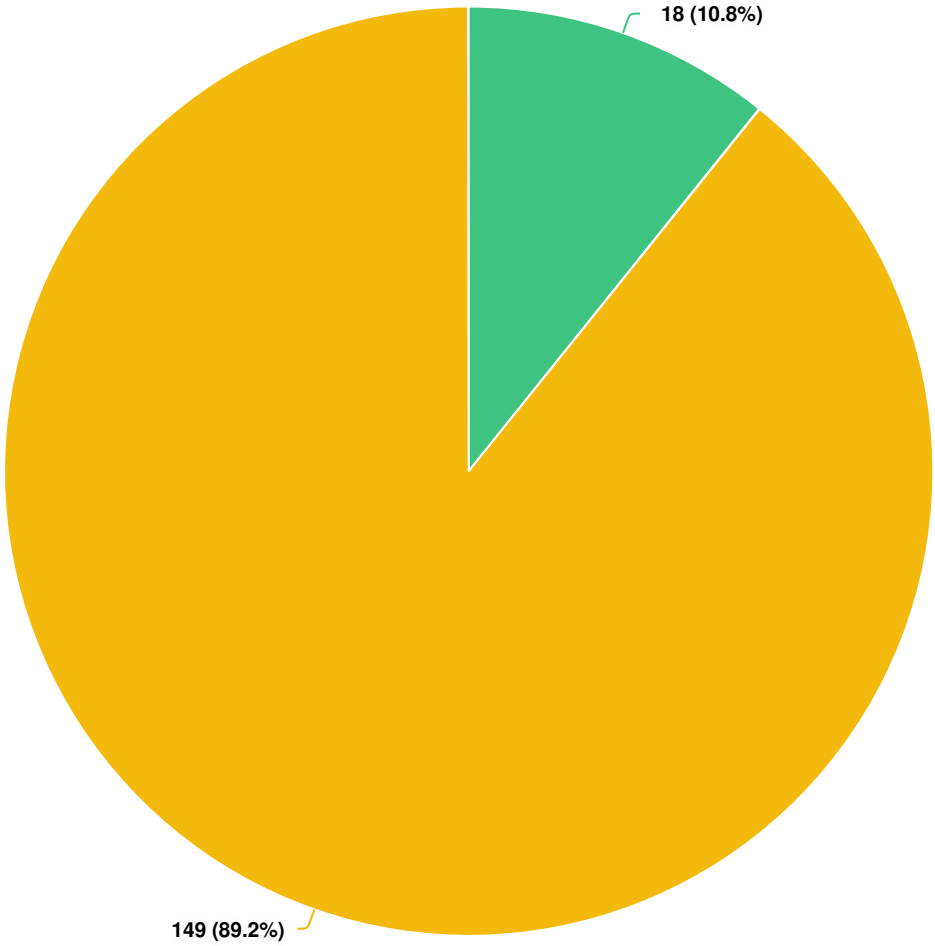
Question options

Yes, in 2022 Yes, within the next 3 years No plans to change it

Optional question (11 response(s), 173 skipped)

Question type: Dropdown Question

In the last 12 months has your household or business had an unplanned water service interruption (e.g. caused by a water main break)?



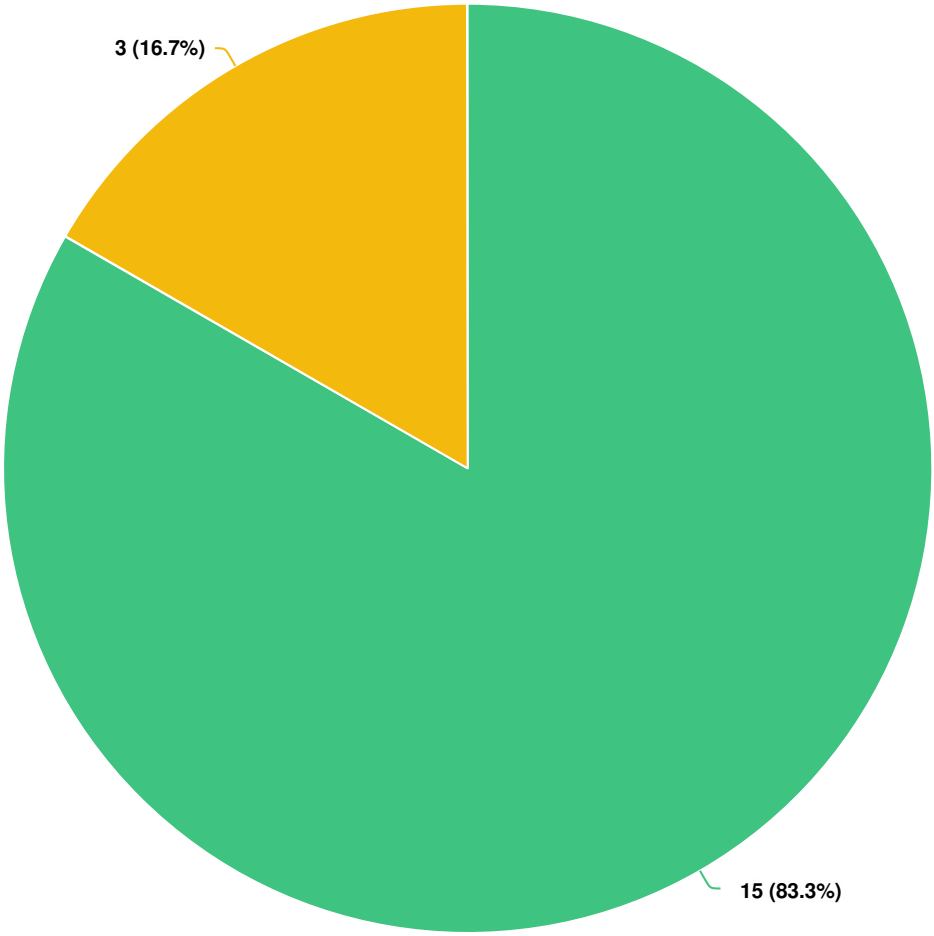
Question options

Yes No

Optional question (167 response(s), 17 skipped)

Question type: Dropdown Question

Do you feel the City responded quickly to resolve the issue in a timely manner?



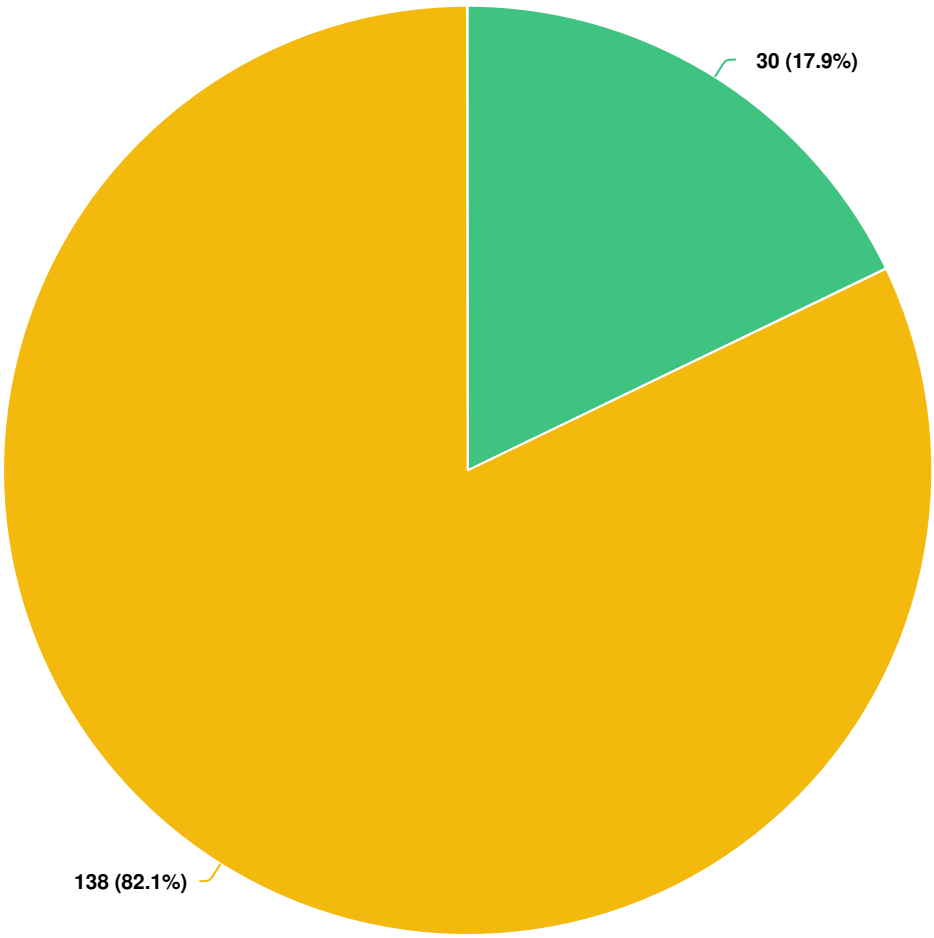
Question options

Yes No

Optional question (18 response(s), 166 skipped)

Question type: Dropdown Question

In the last 12 months has your household or business had a planned water service interruption (e.g. planned maintenance or servicing)?



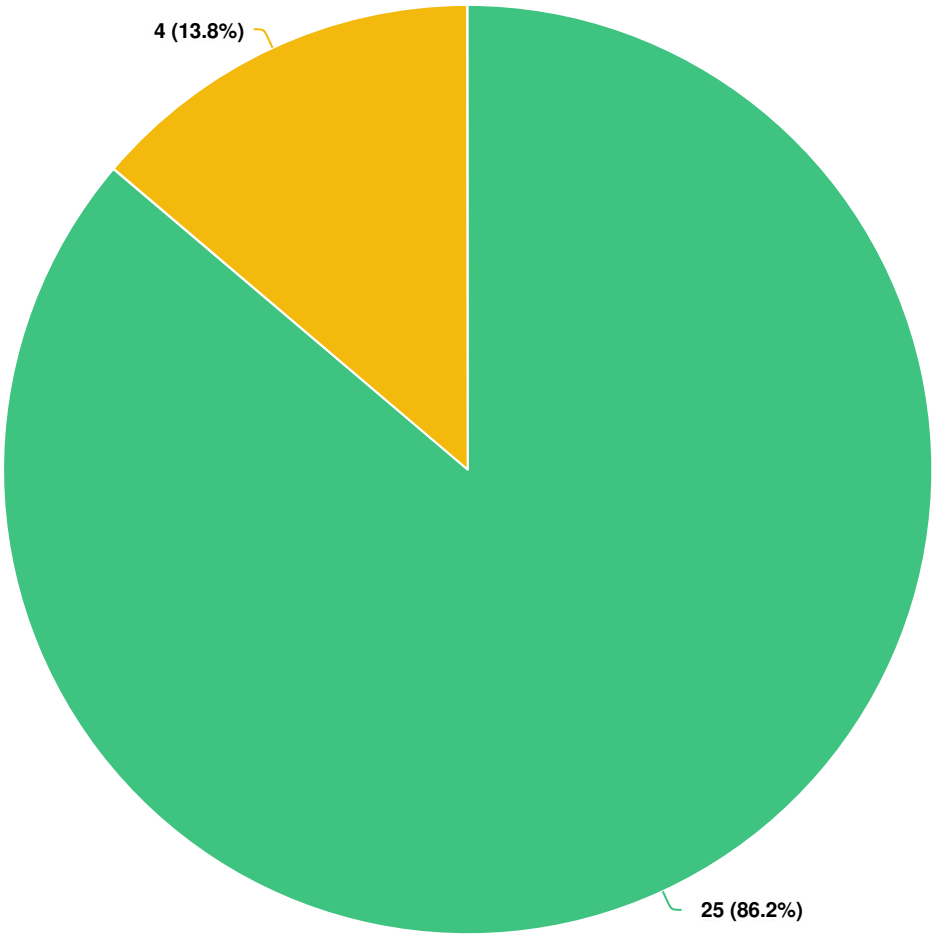
Question options

Yes No

Optional question (168 response(s), 16 skipped)

Question type: Dropdown Question

Did the City provide you with enough notice?



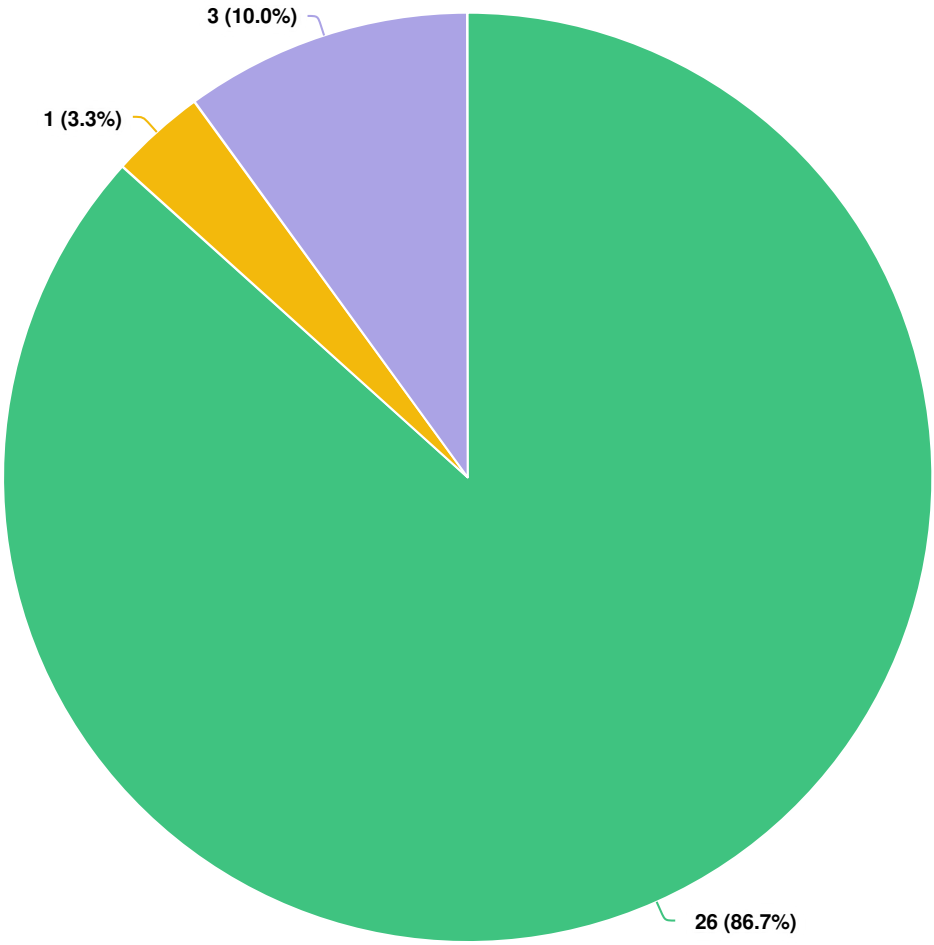
Question options

Yes No

Optional question (29 response(s), 155 skipped)

Question type: Dropdown Question

Did the City complete the work in the timeline outlined in the notice?



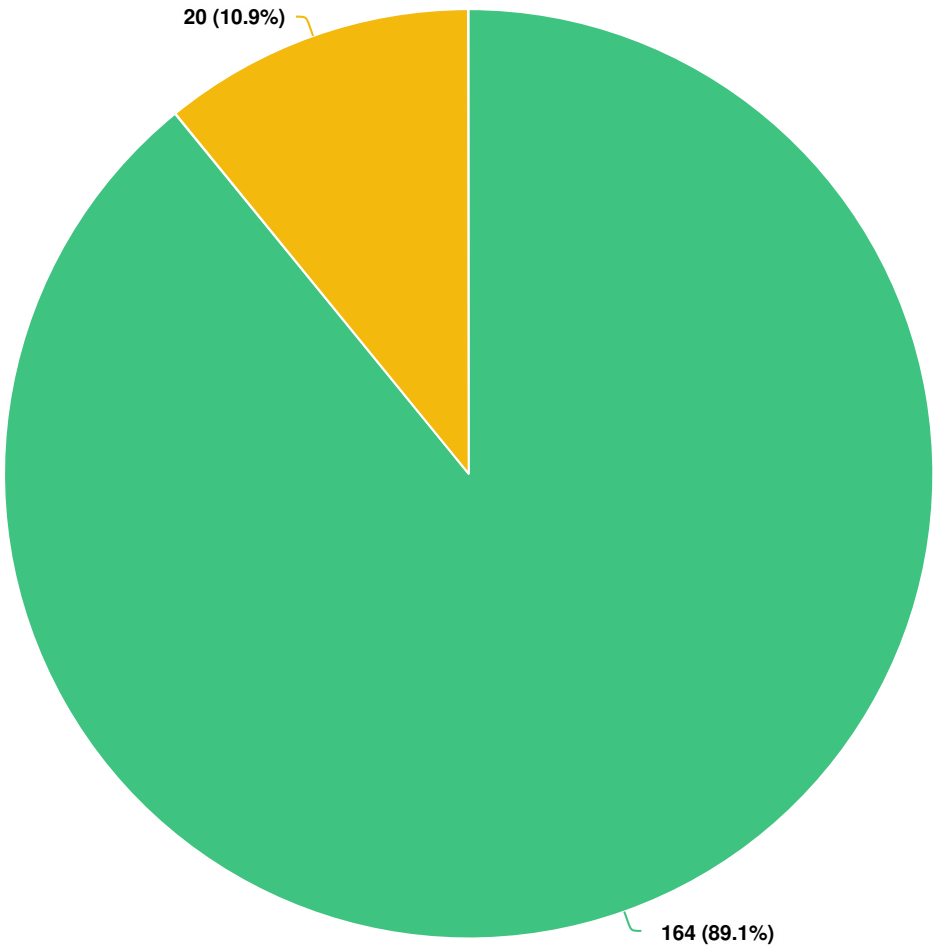
Question options

Yes No Not sure

Optional question (30 response(s), 154 skipped)

Question type: Dropdown Question

Are you connected to Hamilton’s sanitary wastewater service or do you have a private septic system?



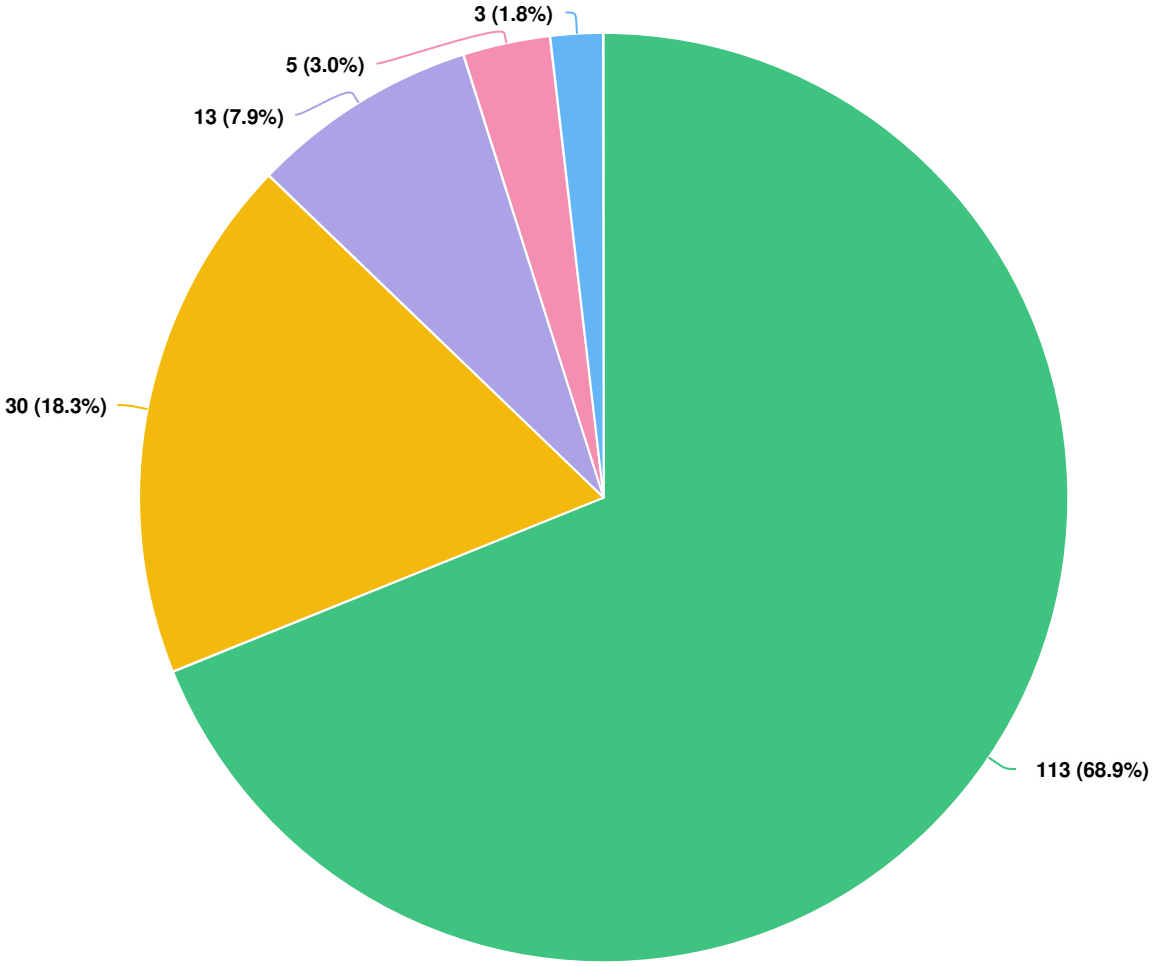
Question options

- I am connected to Hamilton’s sanitary wastewater service
- I have a private system like a septic tank

Mandatory Question (184 response(s))

Question type: Dropdown Question

How satisfied are you with the sanitary wastewater services you receive from Hamilton?



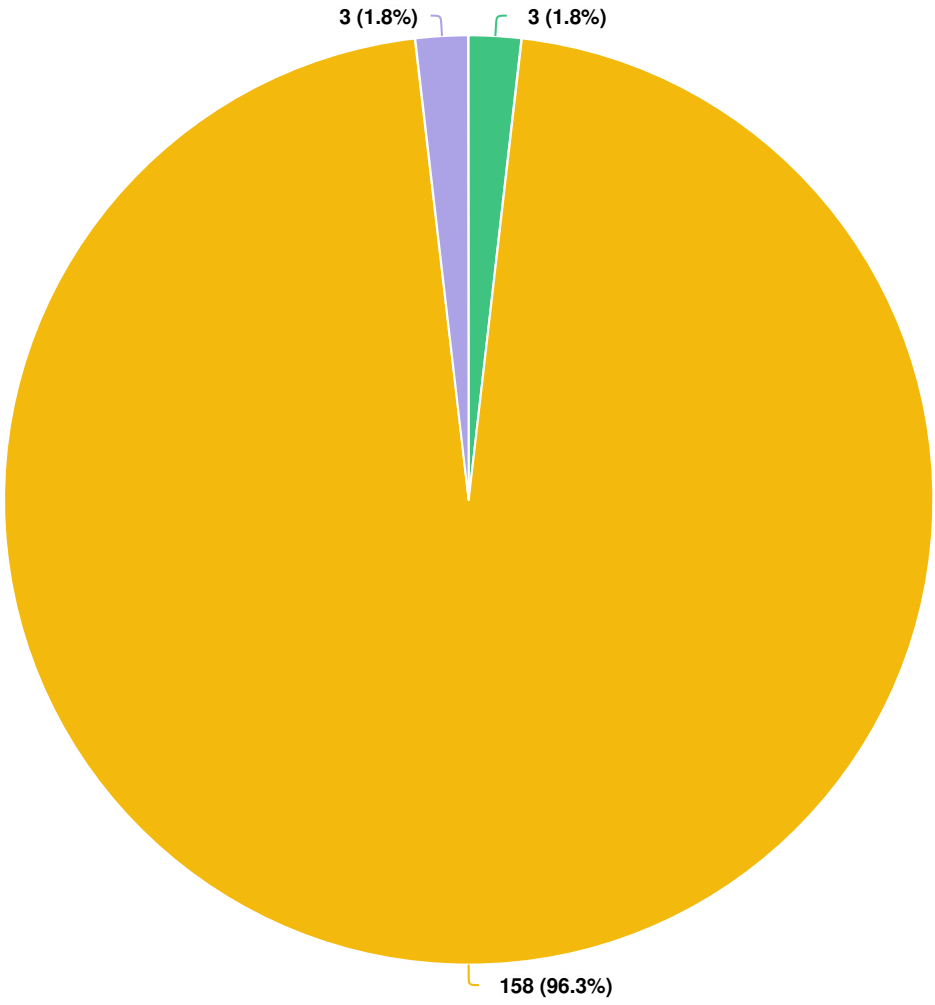
Question options

Very satisfied | Somewhat satisfied | Neutral | Somewhat unsatisfied | Very unsatisfied

Optional question (164 response(s), 20 skipped)

Question type: Dropdown Question

In the last 12 months have you had a sewer back up on your property due to city owned infrastructure?



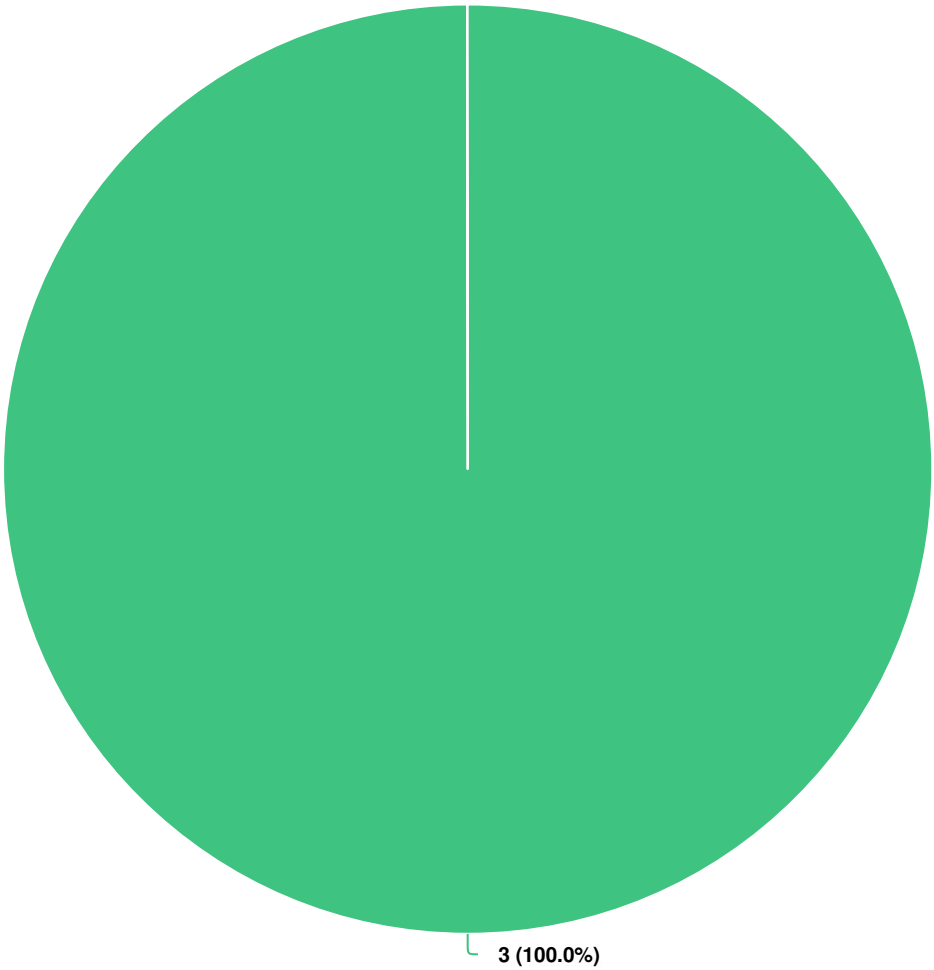
Question options

Yes No Not sure

Optional question (164 response(s), 20 skipped)

Question type: Dropdown Question

Do you feel the City responded quickly to resolve the issue in a timely manner?



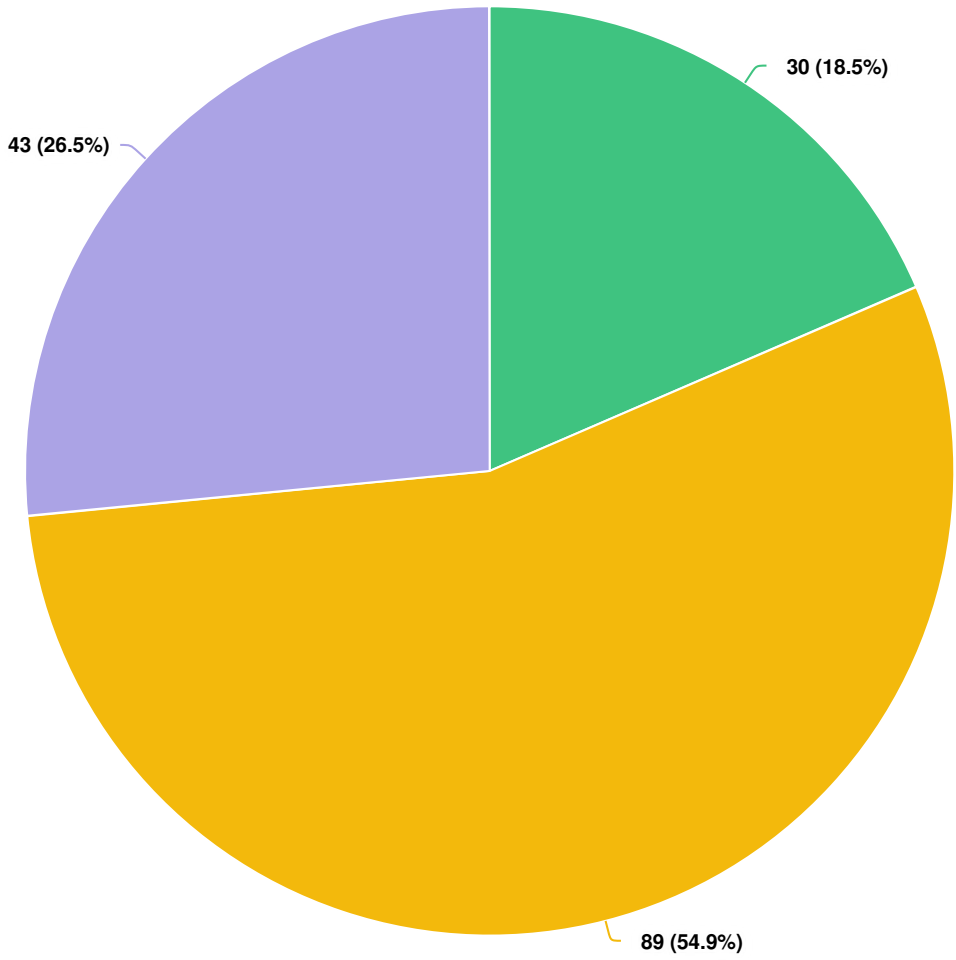
Question options

No

Optional question (3 response(s), 181 skipped)

Question type: Dropdown Question

Do you have a backwater valve?



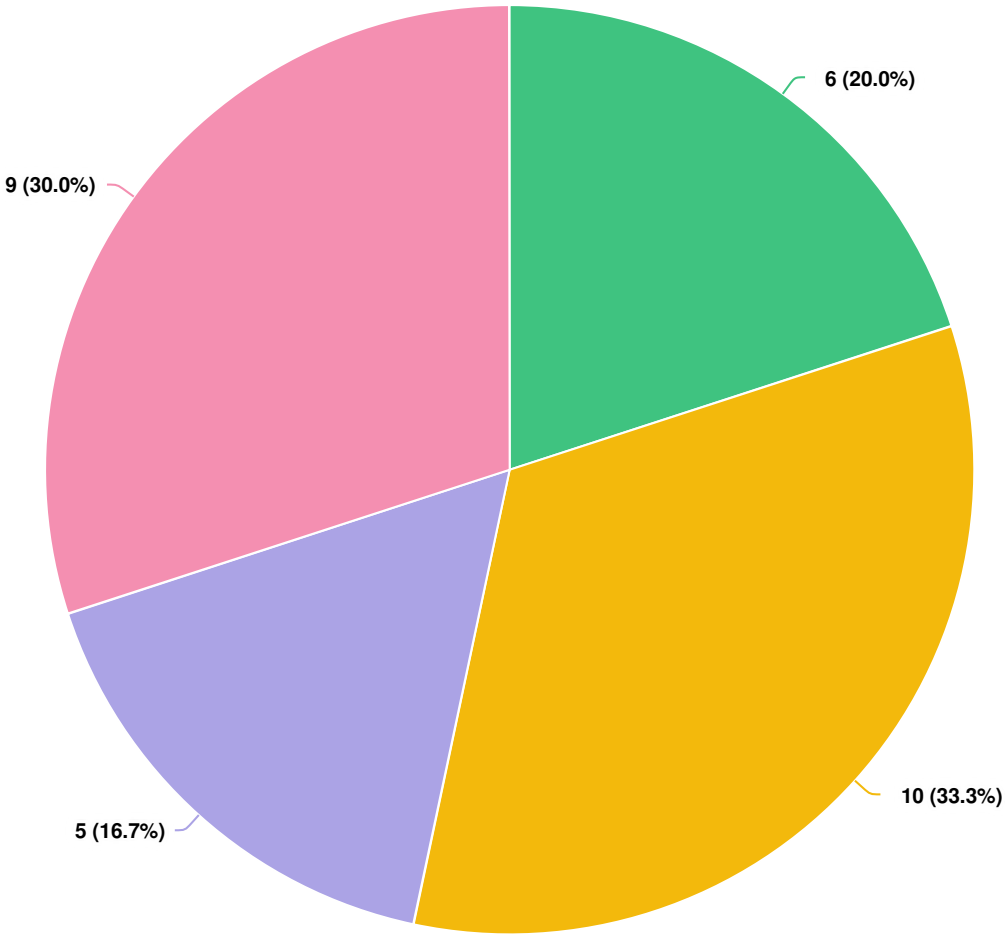
Question options

Yes No Not sure

Optional question (162 response(s), 22 skipped)

Question type: Dropdown Question

How often do you maintain/clean your backwater valve?



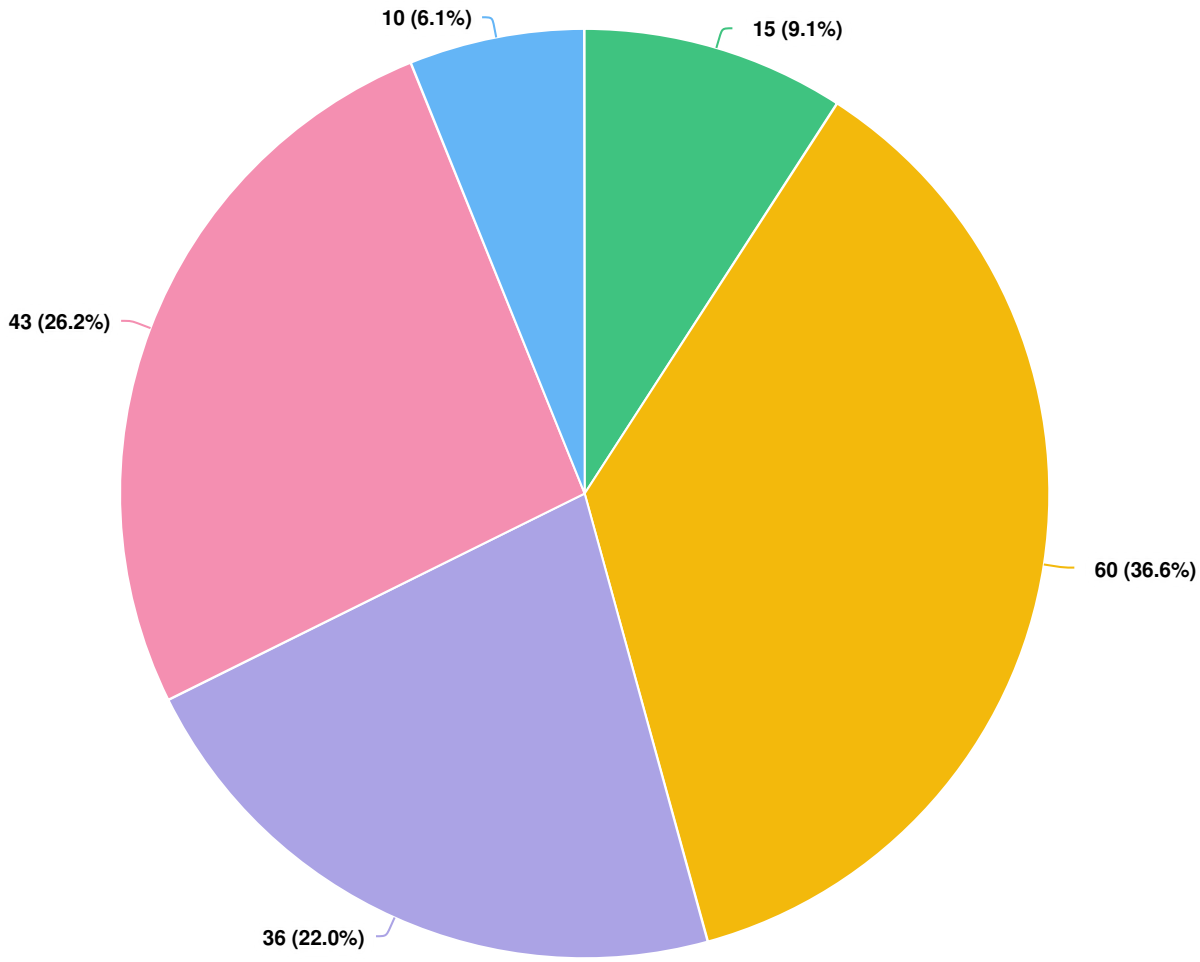
Question options

Two or more time per year Once per year Once every few years Never

Optional question (30 response(s), 154 skipped)

Question type: Dropdown Question

Are you concerned about having a sewer back up on your property?



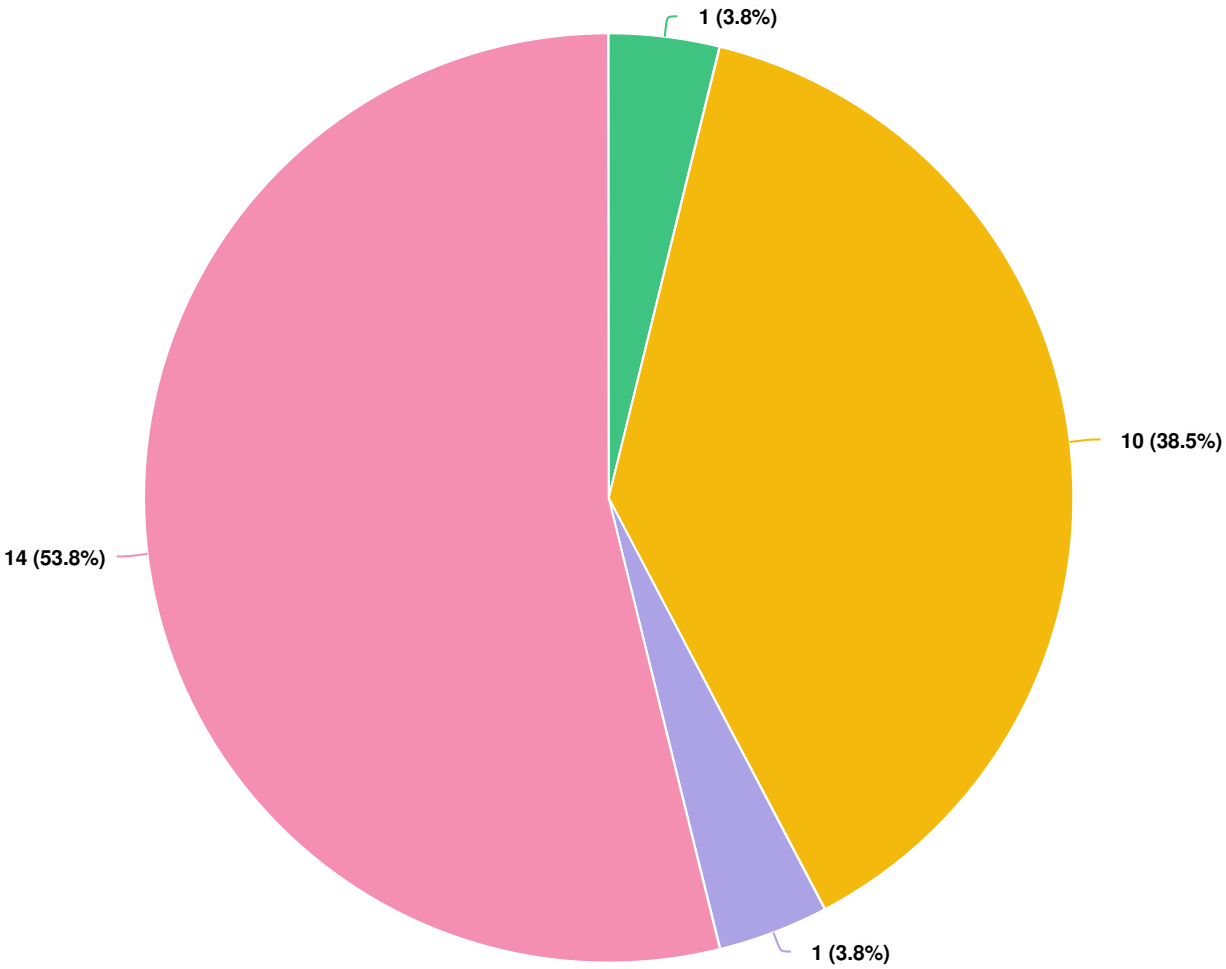
Question options

Very concerned | Somewhat concerned | Neutral | Not very concerned | Not concerned at all

Optional question (164 response(s), 20 skipped)

Question type: Dropdown Question

Why are you somewhat concerned?



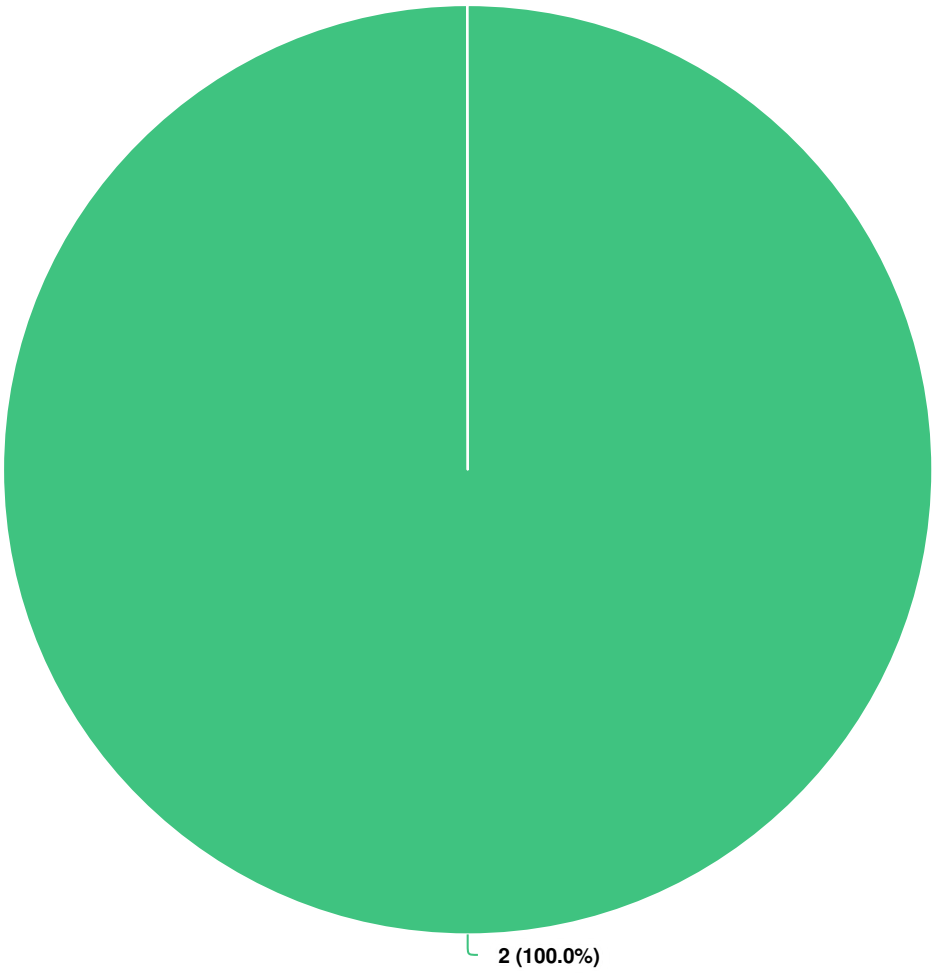
Question options

- Had issues previously
- Aging infrastructure
- Neighbour has had issues
- Other (please specify)

Optional question (26 response(s), 158 skipped)

Question type: Dropdown Question

Why are you very concerned?



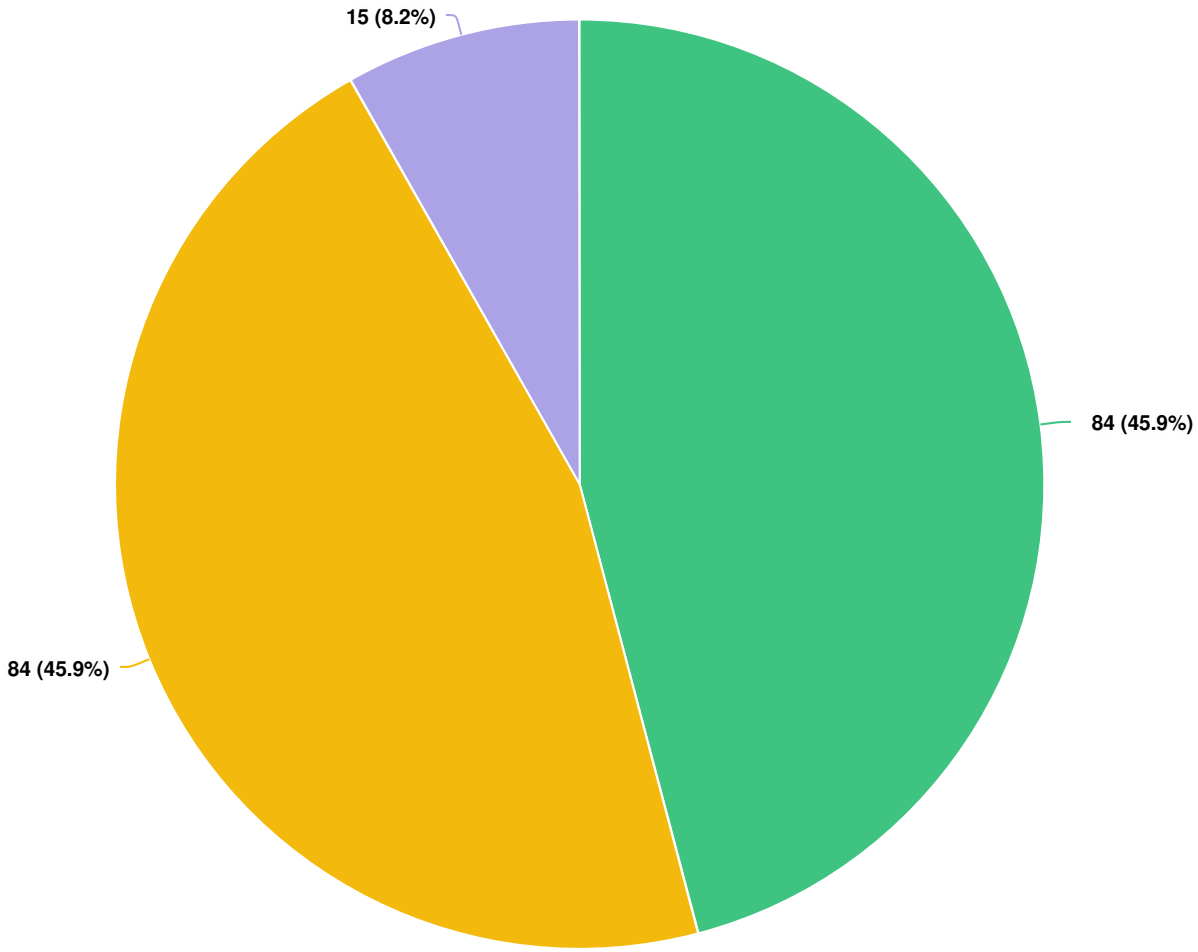
Question options

- Other (please specify)

Optional question (2 response(s), 182 skipped)

Question type: Dropdown Question

Have you ever noticed odour issues anywhere in the City related to wastewater services?



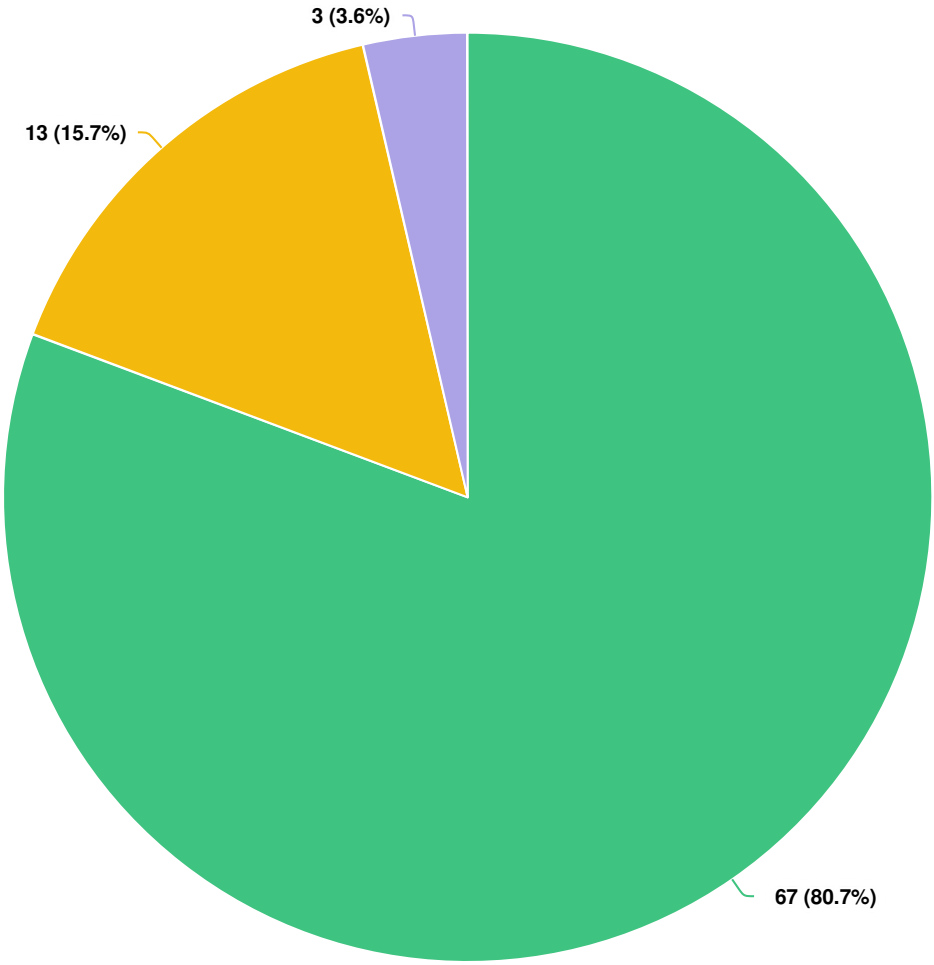
Question options

Yes No Not sure

Optional question (183 response(s), 1 skipped)

Question type: Dropdown Question

How often have these issues occurred?



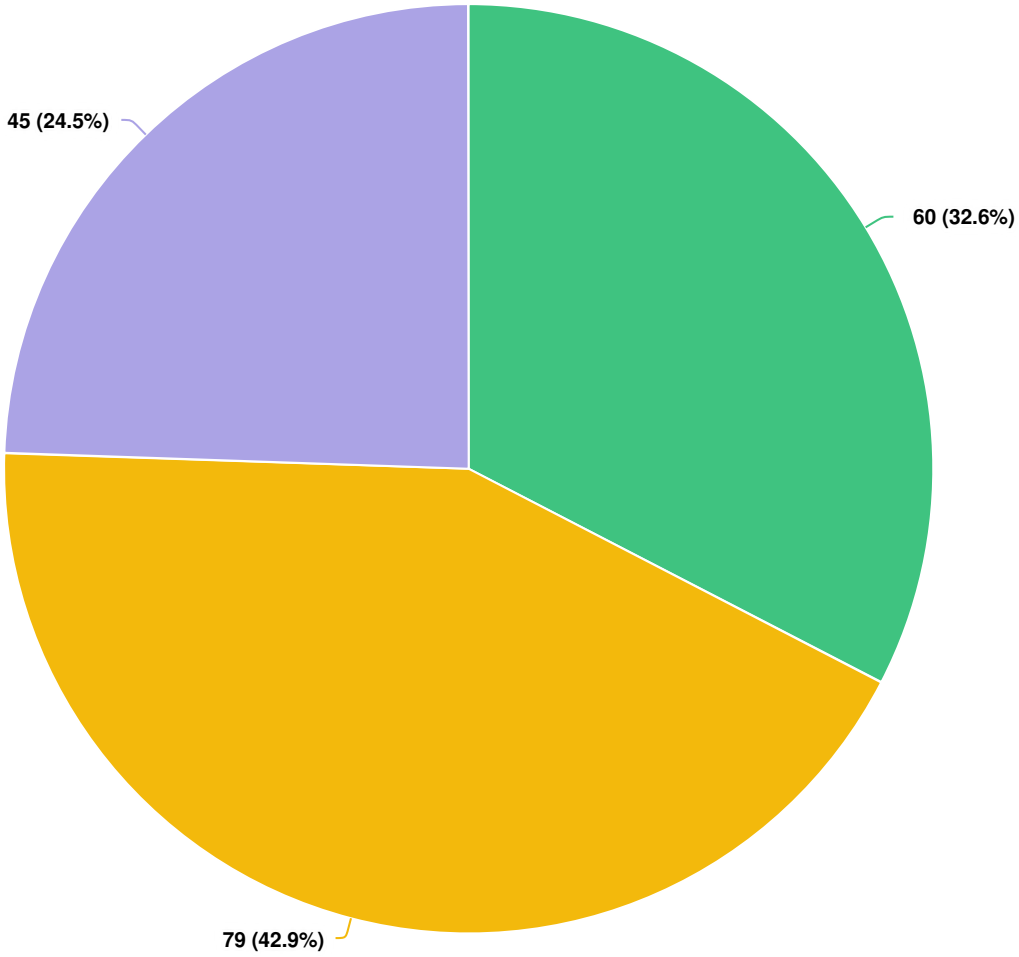
Question options

- Two or more time per year
- Once per year
- Once every few years

Optional question (83 response(s), 101 skipped)

Question type: Dropdown Question

Do you feel that Hamilton behaves responsibly when returning wastewater back to the environment?



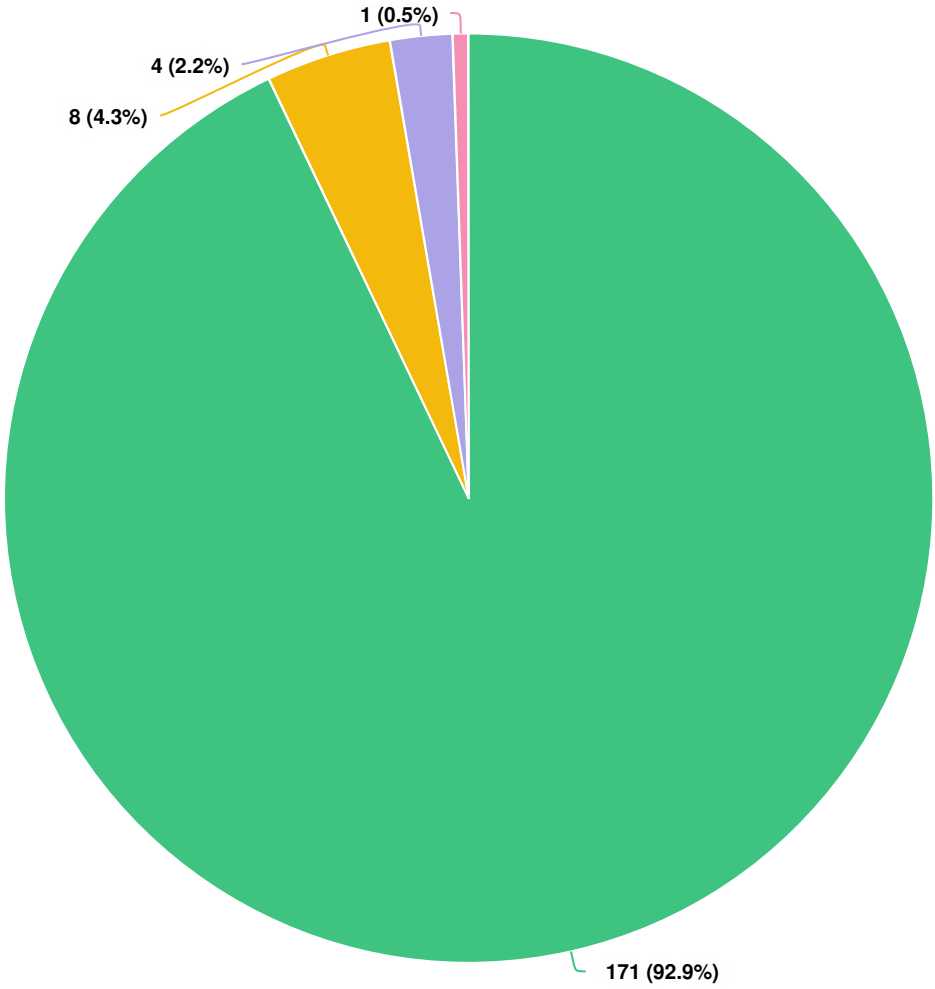
Question options

Yes No Not sure

Optional question (184 response(s), 0 skipped)

Question type: Dropdown Question

In the last 12 months how often have you had to delay or cancel travel due to roads being flooded or closed due to too much water?



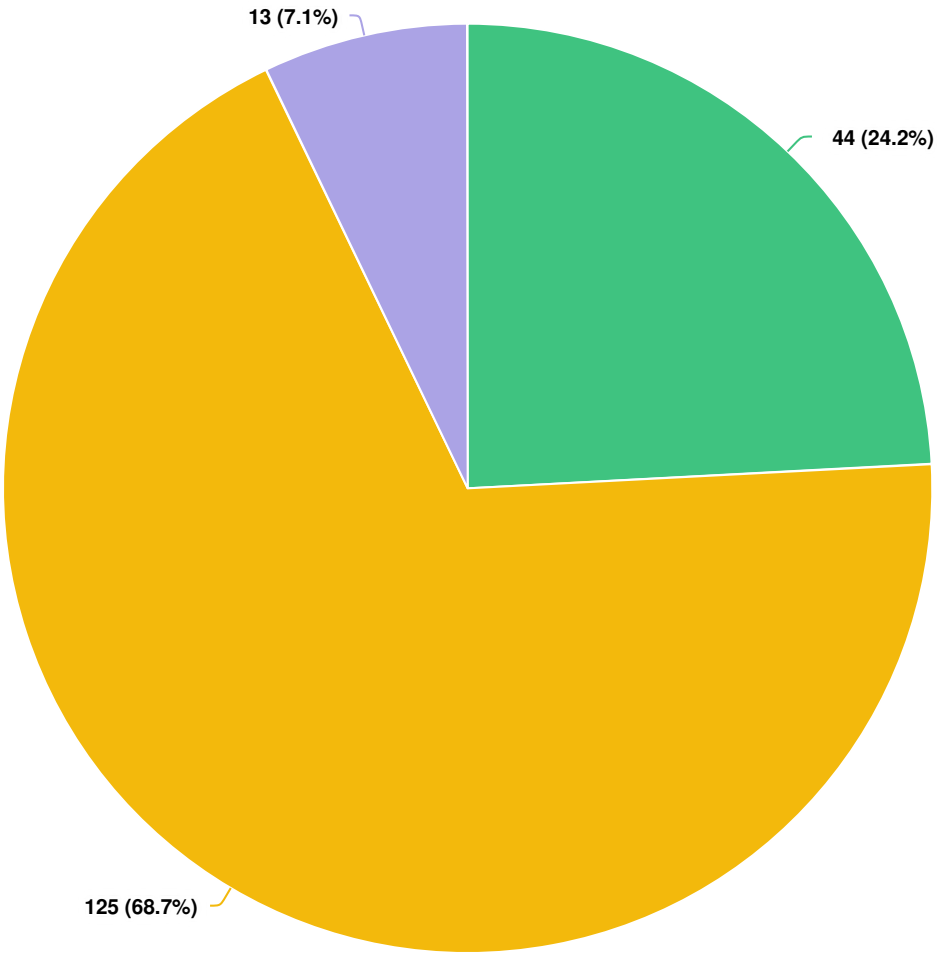
Question options

Never | Once a year | Less than 5 times a year | More than 5 times a year

Mandatory Question (184 response(s))

Question type: Dropdown Question

Do you have a sump pump?



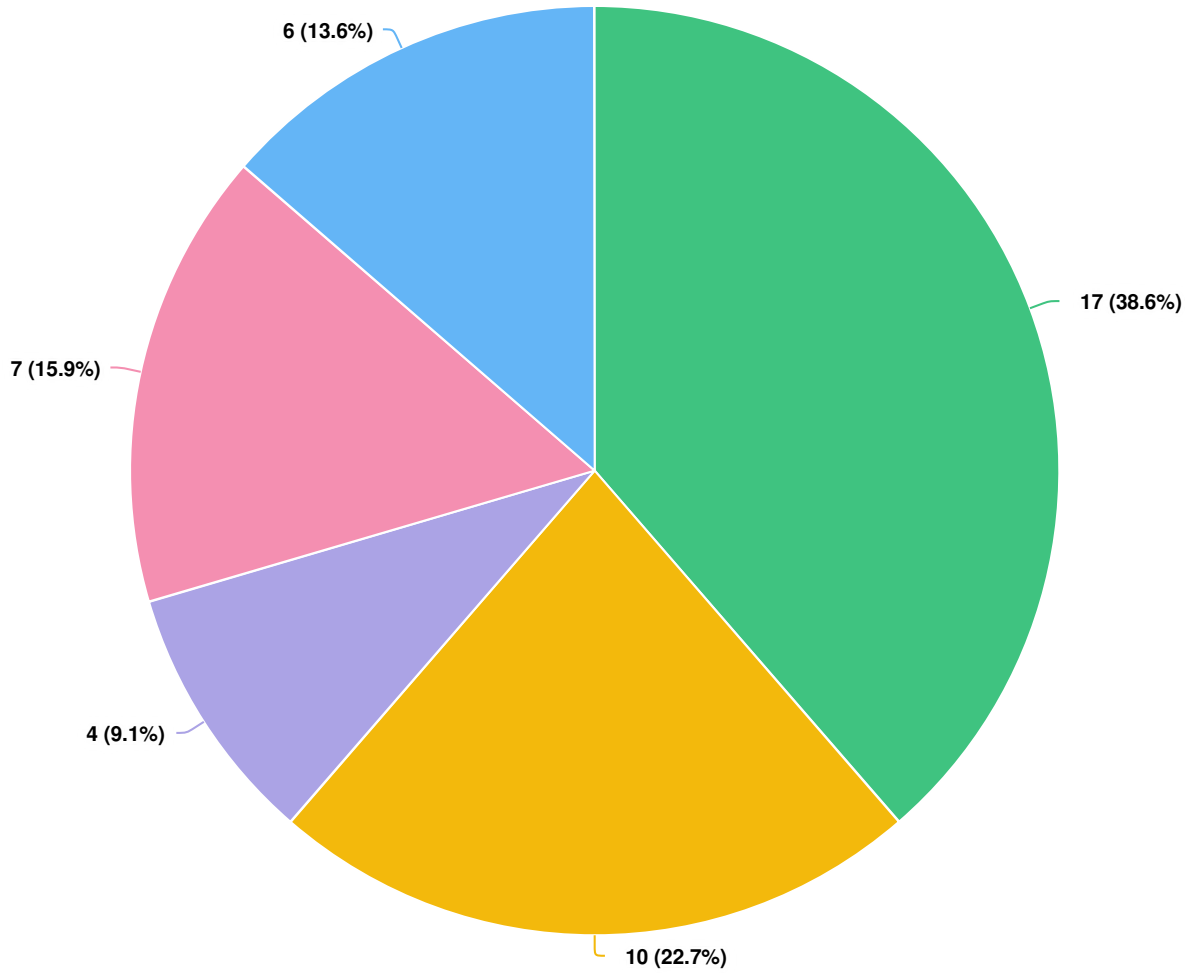
Question options

Yes No Not sure

Optional question (182 response(s), 2 skipped)

Question type: Dropdown Question

During heavy rainfall how often would you say your sump pump runs on average?



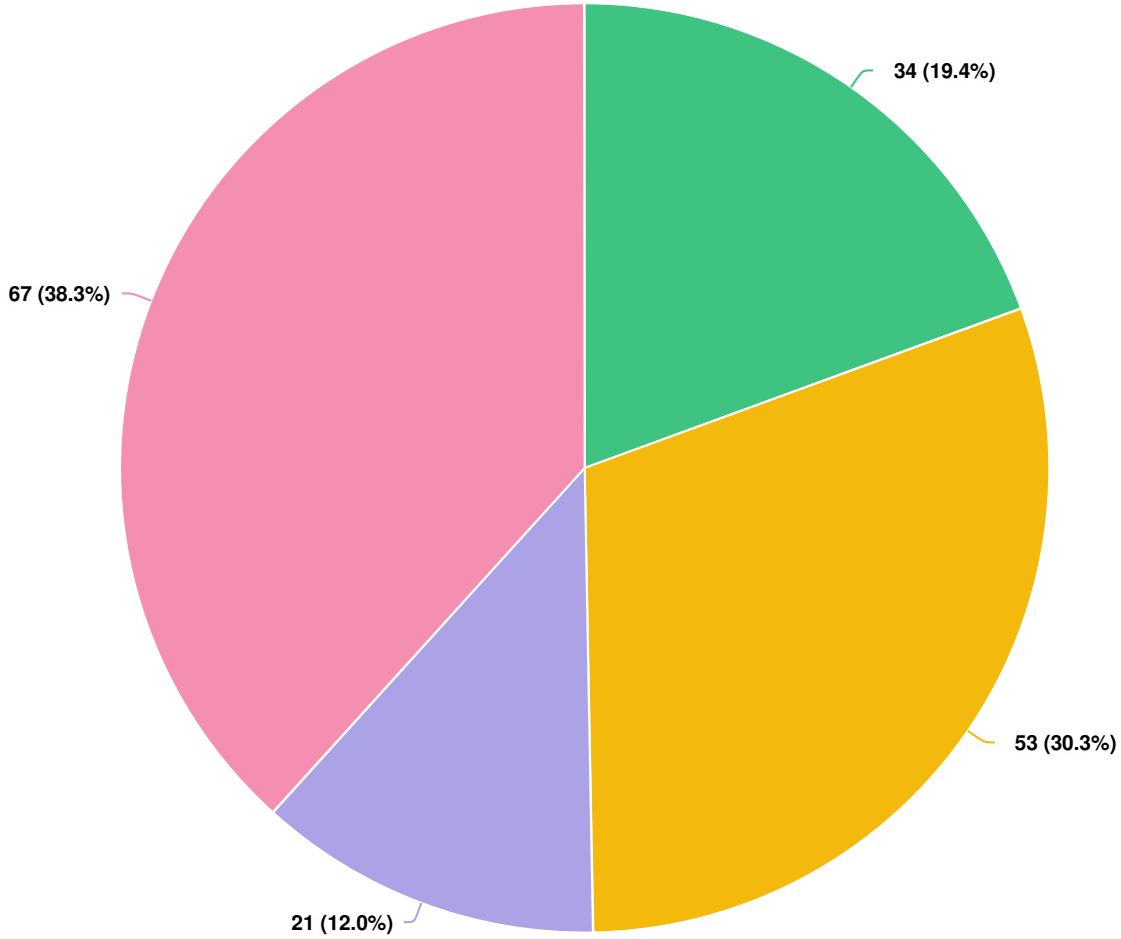
Question options

I don't notice it
Less than 30 minutes
Less than an hour
Between one and three hours
Seems like it's always on

Optional question (44 response(s), 140 skipped)

Question type: Dropdown Question

Does your property have a buried sewer, municipal drain or ditch?



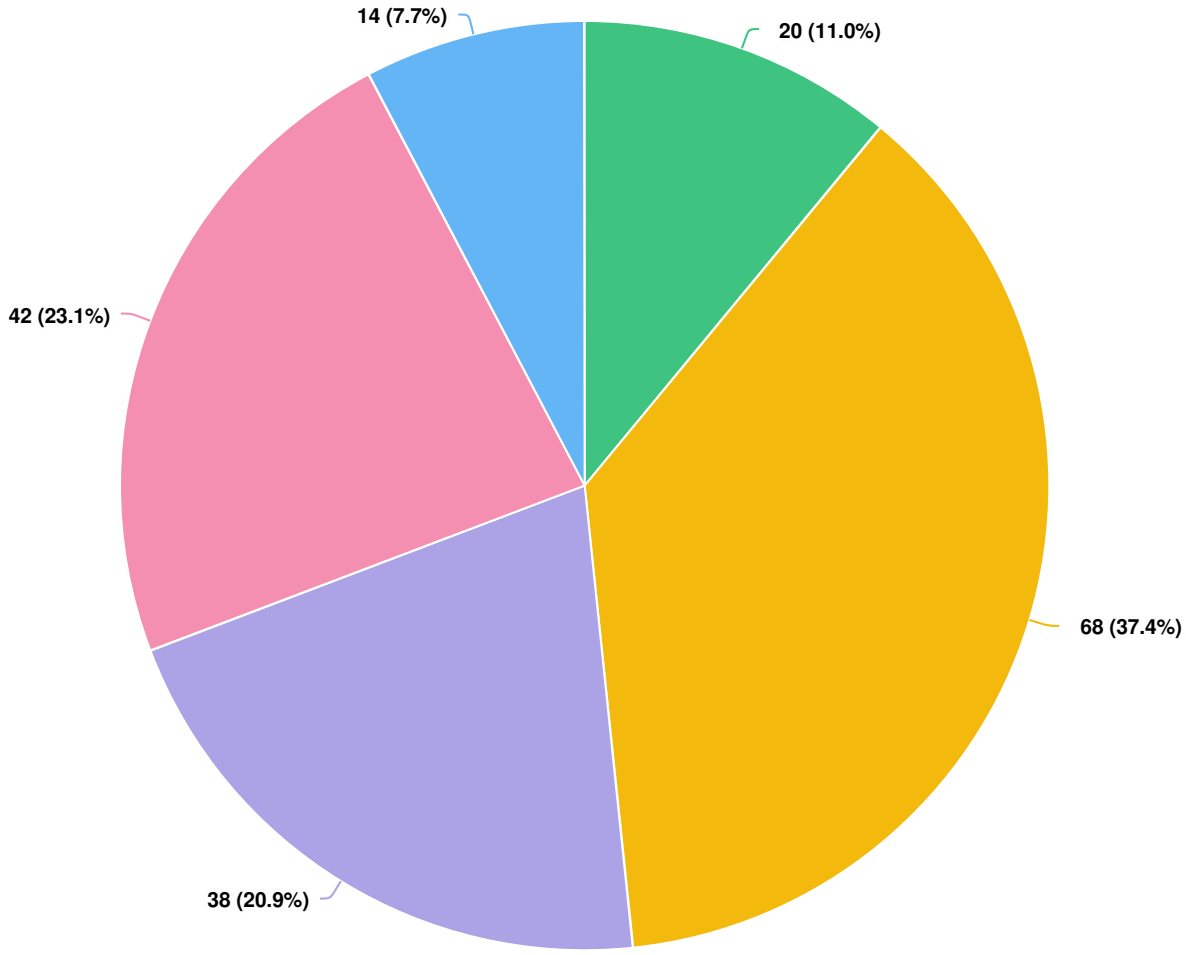
Question options

Municipal drain Buried sewer Ditch Not sure

Optional question (175 response(s), 9 skipped)

Question type: Dropdown Question

Are you concerned about flooding on your residential property, business, or local roads?



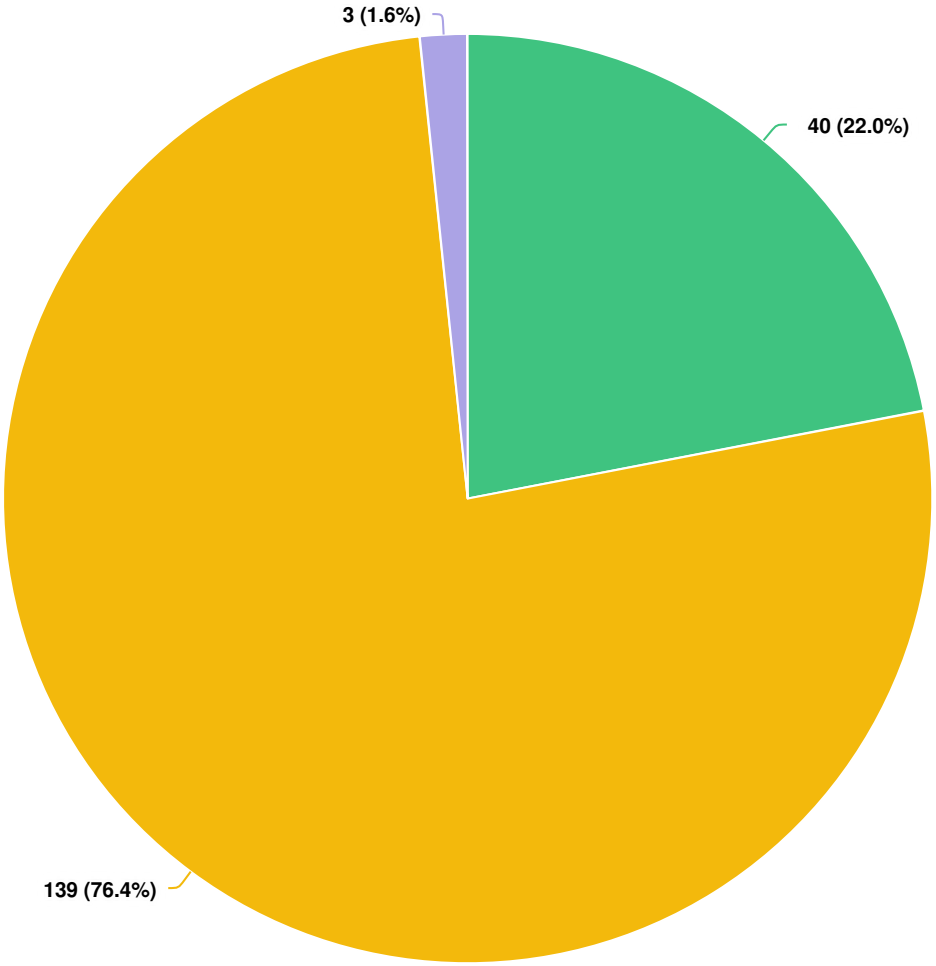
Question options

Very concerned | Somewhat concerned | Neutral | Not very concerned | Not concerned at all

Optional question (182 response(s), 2 skipped)

Question type: Dropdown Question

Have you personally experienced flooding impacts on your property?



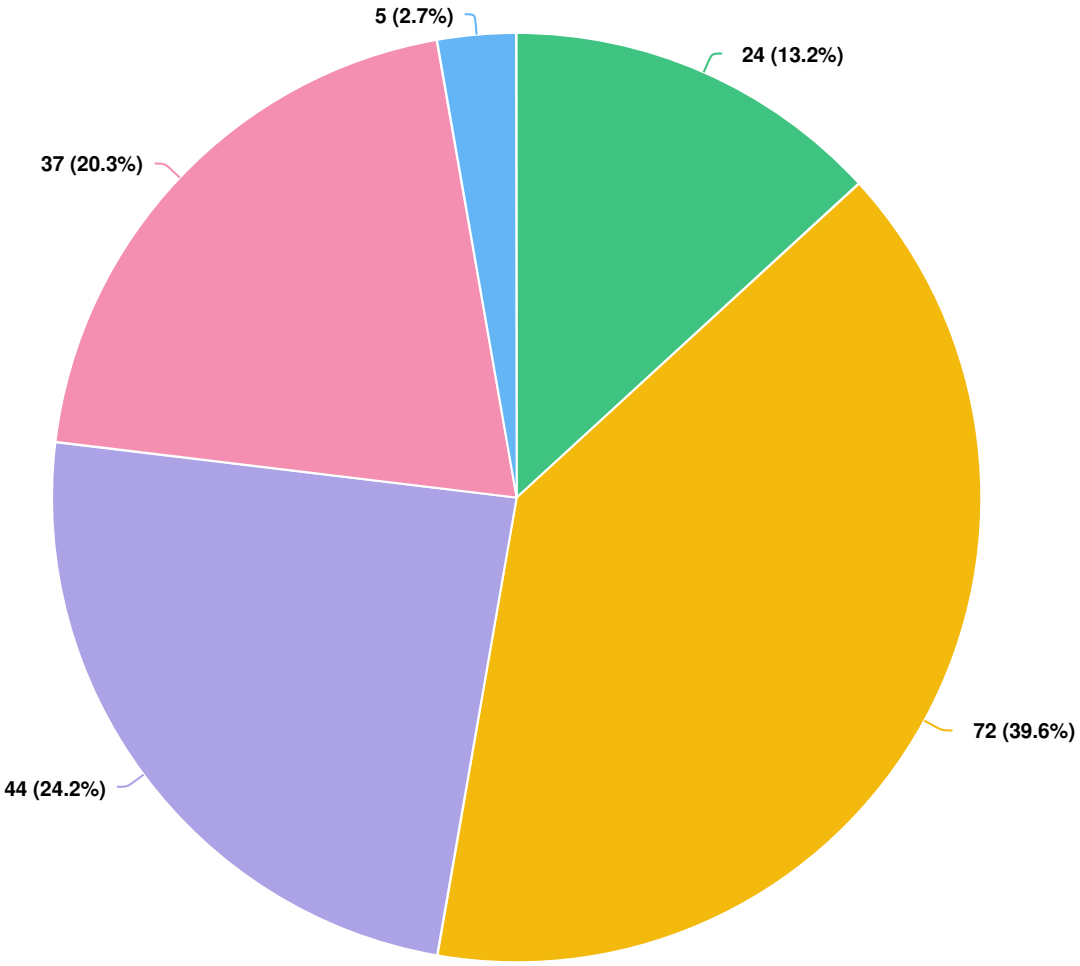
Question options

Yes No Not sure

Optional question (182 response(s), 2 skipped)

Question type: Dropdown Question

In the event of citywide flooding due to a significant storm, how confident are you that the City of Hamilton will respond quickly and help residents and businesses recover?



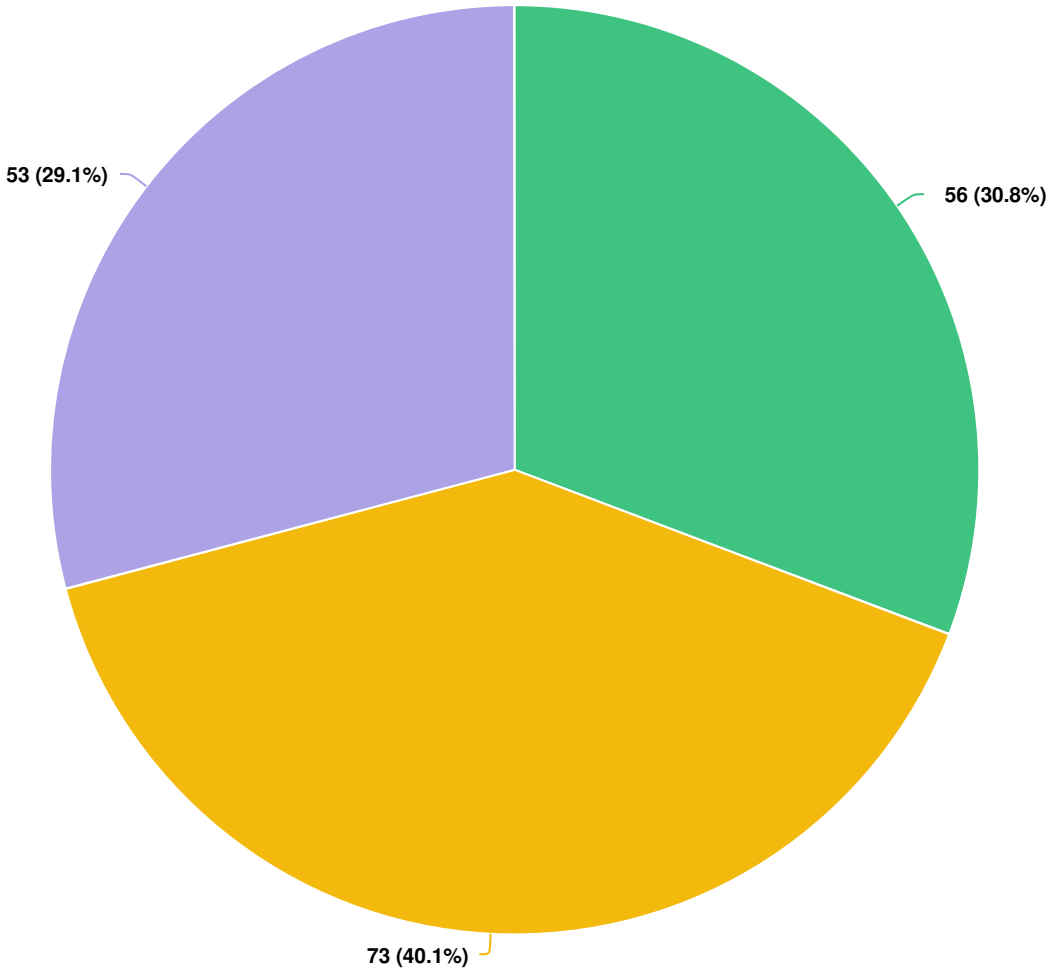
Question options

Very confident | Somewhat confident | Neutral | Not very confident | Not confident at all

Optional question (182 response(s), 2 skipped)

Question type: Dropdown Question

Do you feel that Hamilton behaves responsibly when returning stormwater back to the environment?



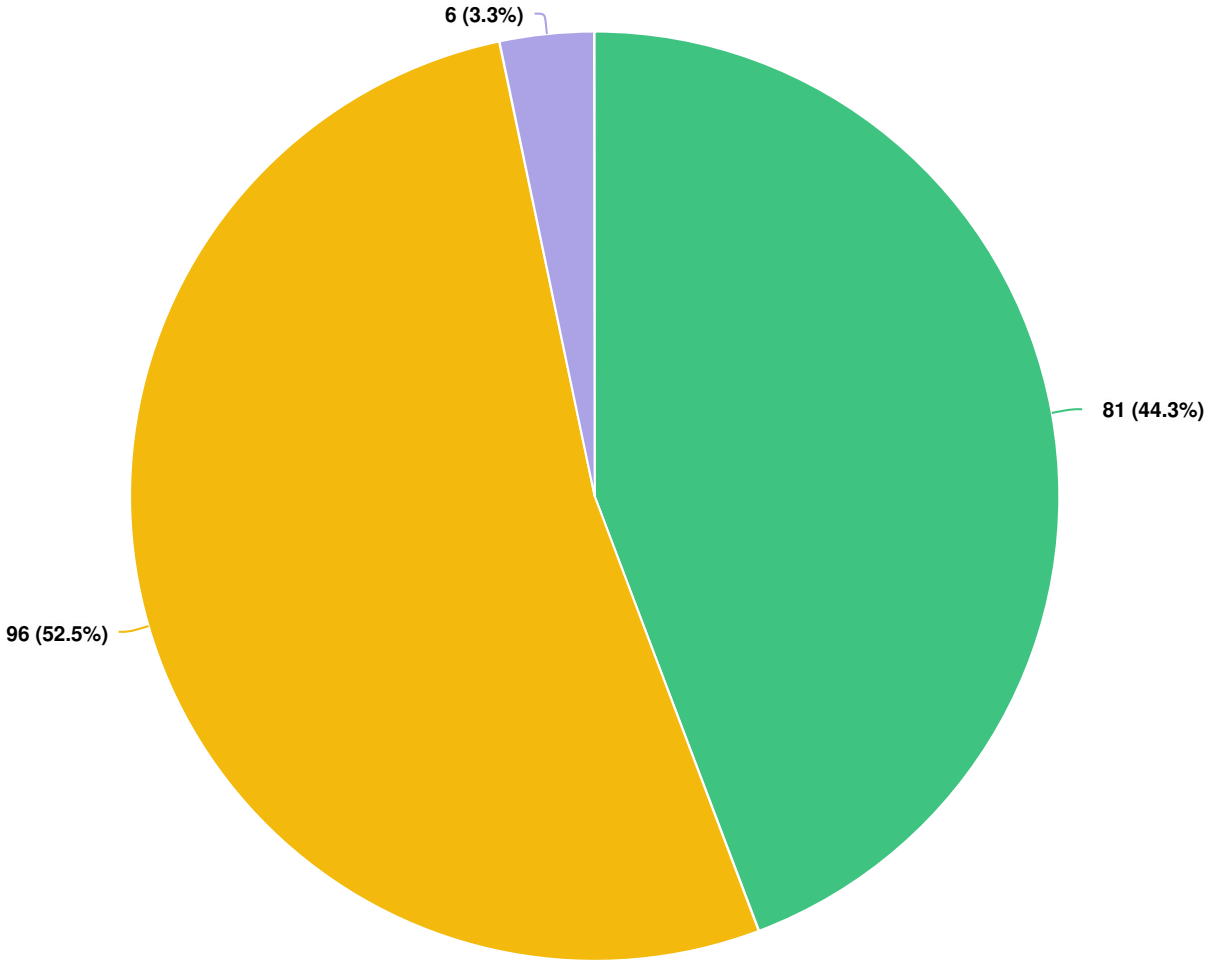
Question options

Yes No Not sure

Optional question (182 response(s), 2 skipped)

Question type: Dropdown Question

Have you or are you in the process of completing a project on your property to reduce stormwater runoff (e.g. rain barrel, downspout disconnection, permeable pavement etc.)?



Question options

Yes No Not sure

Optional question (183 response(s), 1 skipped)

Question type: Dropdown Question

2022

Transportation Asset Management Plan

Hamilton

TRANSPORTATION ASSET MANAGEMENT PLAN

1.0 TRANSPORTATION INTRODUCTION

The purpose of this Asset Management Plan (AM Plan) is to identify the intended asset management (AM) programs for assets delivering the City of Hamilton's Transportation services. The City of Hamilton (the City) will identify these programs based on its understanding of the current service level requirements, and the current ability of the network to meet those requirements.

For a high level summary of the assets covered in this AM Plan refer to Table 3. For detailed summaries of assets, please refer to Table 5 and Table 31. As shown, the core Transportation assets included in this plan have a total replacement value of **$6.68B**.

1.1 SCOPE

The infrastructure assets covered by this AM Plan include assets which are part of the City's overall transportation system. At this time, this AM Plan includes road linear and engineered structure assets, which were considered core assets under Ontario Regulation 588/17 (O.Reg. 588/17).

In addition, as mentioned in Section 6.2 of the AMP Overview, these AM Plans were completed using the Federation of Canadian Municipalities (FCM) approach to asset management in partnership with the Institute of Public Works Engineering Australasia (IPWEA) and NAMS (National Asset Management System) Canada framework for asset management to fulfill the O.Reg. 588/17 timeline and requirements. It is important to note that this is the first iteration of the Transportation AM Plan completed by the Corporate Asset Management (CAM) office using this framework for asset management, and so this plan differs greatly from the 2014 Asset Management Plan. The majority of data in this plan is the data available as of December 2021 - January 2022.

Before July 1st, 2025, this plan will be updated to include the proposed service level requirements for these assets in accordance with the O.Reg. 588/17.

The intent of the AM Plans are also to respond to the findings of the City Auditor. On June 16, 2021 the Office of the City Auditor presented the Roads Value for Money Audit (AUD21006) report to the Audit, Finance and Administration Committee. The audit report identified 25 recommendations, 7 of which relate directly to Asset Management.

1.2 SUPPLEMENTARY INFORMATION

The AM Plan is to be read with other City planning documents. This should include the Strategic Asset Management Policy (SAMP) along with other key planning documents including:

- Asset Management Plan Overview;
- The City of Hamilton Urban & Rural Official Plans;
- Transportation Master Plan;
    - Cycling Master Plan;
    - Pedestrian Mobility Plan
- Hamilton Complete Streets Design Guidelines;
- Truck Route Master Plan.

Key stakeholders in the preparation and implementation of this AM Plan are shown in section 5 of the AMP Overview.

1.3 LEGISLATIVE REQUIREMENTS

There are many legislative requirements relating to the management of Transportation assets. The most significant legislative requirements that impact the delivery of transportation services are outlined in Table 1. These requirements are considered throughout the report, and where pertinent, are included in the levels of service measurements.

Table 1: Legislative Requirements

LEGISLATION	REGULATION	REQUIREMENT
Highway Traffic Act, R.S.O. 1990, c.H.8	**O. Reg. 472/10: Standards for Bridges**	Mandatory standards, procedures and guidelines for design, inspections, construction and rehabilitiation. Mandates OSIM biennial inspections.
	O. Reg. 104/97: Standards for Bridges	Prescribes that every bridge shall be kept safe and in good repair.
Ontario Municipal Act	**O.Reg. 239/02: Minimum Maintenance Standards for Municipal Highways**	Prescribes mandatory timelines for bridge & culvert deck repair and rehabilition.
Ontario Municipal Act	**O.Reg. 239/02: Minimum Maintenance Standards for Municipal Highways**	Assists municipal governments with being responsible and accountable and gives power and duties for the purpose of providing good government. Regulation defines Technical Levels of Service and response times for winter maintenance, pothole repair etc.
Environmental Protections Act, R.S.O. 1990, c. E.19	**O.Reg. 406/19: On-Site and Excess Soil Management** **O.Reg. 675/98: Classification and Exemption of Spills and Reporting of Discharges**	To provide protection and conservation of the natural environment. O.Reg. 406/19 Provides rules for soil management and excess quality standards. O.Reg. 657/98: Defines the City''s mandatory duty as an owner or controller to clean up a spilled pollutant it is responsible for. The City must do everything practicable to prevent and eliminate the negative effects from a spill,

Table 1: Legislative Requirements		
LEGISLATION	**REGULATION**	**REQUIREMENT**
		including restore the natural environment to its original state. This is enforceable by the Minister of the Environment and Conservation and Parks.
Highway Traffic Act, R.S.O. 1990, c.H.8	**R.R.O. 1990, Reg. 615: Signs** **O.Reg. 398/19: Automated Speed Enforcement** **O.Reg 402/16: Pedestrian Crossover Signs** **R.R.O. 1990, Reg. 619: Speed Limits**	Provides instructions for all matters related to highway traffic within Ontario.
Accessibility for Ontarians with Disabilities Act, 2005, S.O. 2005, c.11	**Part IV.1 Design of Public Spaces Standards (Accessibility Standards for the Build Environment)**	An Ontario law mandating that organizations must follow standards to become more accessible to people with disabilities. Accessible transportation and public spaces ensure that people can move around their communities.
Drainage Act, R.S.O. 1990, c. D.17		Provides a procedure for the construction, improvement and maintenance of drainage works.
Railway Safety Act, 1995, c. 32	**Grade Crossing Regulations**	Regulations and requirements for public and private crossings, filing a railway crossing agreement, sightlines, blocked crossings, train whistling.

Table 1: Legislative Requirements		
LEGISLATION	**REGULATION**	**REQUIREMENT**
Electricity Act, 1998, SO 1998, c. 15		Ensure the adequacy, safety, sustainability and reliability of electricity supply in Ontario through responsible planning and management of electricity resources, supply and demand. Applies to street lighting, traffic signal infrastructure and all other electrically connected City assets.

1.4 ASSET HIERARCHY

An asset hierarchy provides a framework for structuring data in an information system to assist in collection of data, reporting information and making decisions. As outlined in Section 6.5 of the AMP Overview, the City's functional hierarchy includes the strategic, tactical, asset class, and asset levels used for asset planning and financial reporting as well as service planning and delivery.

O.Reg. 588/17 defines core transportation assets as road, bridge and culvert assets. However, the City's functional hierarchy groups assets based on their function to the transportation network. The City has used the asset service hierarchy described in Table 2 to determine which additional assets should be reported in this Transportation AM Plan.

The strategic levels are defined in Section 6.5 of the AMP Overview, and the service areas included in this report are defined in Table 2 below. The service area hierarchies used in this report which outline the included assets are defined in Table 2 and Table 30.

Currently this plan includes assets related to the following service areas: Road Linear, Engineered Structures, and Administration because they relate to the core assets defined in O.Reg. 588/17. Transit assets have not yet been included in this plan because they are not considered a core asset per O.Reg. 588/17 and will be included in future iterations of this plan.

Table 2: Asset Service Area Hierarchy

STRATEGIC LEVEL	SERVICE AREA	FUNCTIONAL RESPONSIBILITIES
Transportation	Road Linear	The transportation distribution network for the safe, accessible, and efficient movement of people, goods, and services across the City. Includes road pavement, active transportation, and traffic assets.
	Engineered Structures	Physical structural support of the transportation distribution network such as bridges, major culverts, and retaining walls.

1.5 OVERALL SUMMARY OF TRANSPORTATION ASSETS

The overall summary of transportation assets is shown in Table 3. It is evident that transportation assets have a total replacement value of **$6.68B** and are in an average of **Fair** condition. In addition, the average age of these assets is **25 years** with **49%** of useful life remaining. However, the overall data confidence for the transportation service area is **low to medium**, and so these numbers may change drastically in future iterations of the plan. Data confidence is explained throughout the report and is defined in Section 7.2.2 of the AMP Overview.

Table 3: Summary Of Assets Covered By This Plan
***Weighted Average**

SERVICE AREA	REPLACEMENT VALUE	AVERAGE AGE (% RSL)	AVERAGE OCI/BCI	AVERAGE EQUIVALENT CONDITION
Road Linear	$5.15 B	16 years (45%)	63.8*	3-Fair*
Data Confidence	Low	Low	Medium	Medium
Engineered Structures	$1.53 B	33 years (51%)	72.7	2-Good*
Data Confidence	Medium	Medium	Medium	Medium
TOTAL	$6.68 B	25 years (49%)	N/A	3-Fair*
Data Confidence	***Low***	***Low***	***Medium***	***Medium***

2022

ROADS ASSET MANAGEMENT PLAN

Hamilton

Roads Service Area

Description

Assets within the road linear service area are built to enable safe, effective and efficient transportation within the City. They are built to enable a safe, accessible and efficient transportation system for the movement of people, goods and services within the City. The road linear service area is separated into Road Pavement, Active Transportation and Traffic.

Replacement Value **$5.2 Billion**

Average Asset Condition

Did you know?

- Hamilton has over 69 thousand traffic signs and nearly 45 thousand streetlights it needs to monitor to ensure safe travel.
- On average Hamilton will assume 10 km of new roads annually over the next 10 years

Critical Asset Summary

Critical Assets	Quantity	Replacement Cost	Average Condition	Stewardship Measures
Roads	**6,548 km**	**$3.9 billion**	**Fair**	**96%** of MMS potholes were repaired within mandatory time-lines in 2021
Sidewalks	**2,501 km**	**$563 million**	**Good**	All sidewalks are inspected **Annually**
Signalized Intersections	**659 Intersection**	**$103 million**	**Poor**	All Signalized intersections are Inspected **Annually**

Data Confidence

Financial Facts

Hamilton will acquire **$124 million** dollars worth of assets over the next 10 years.

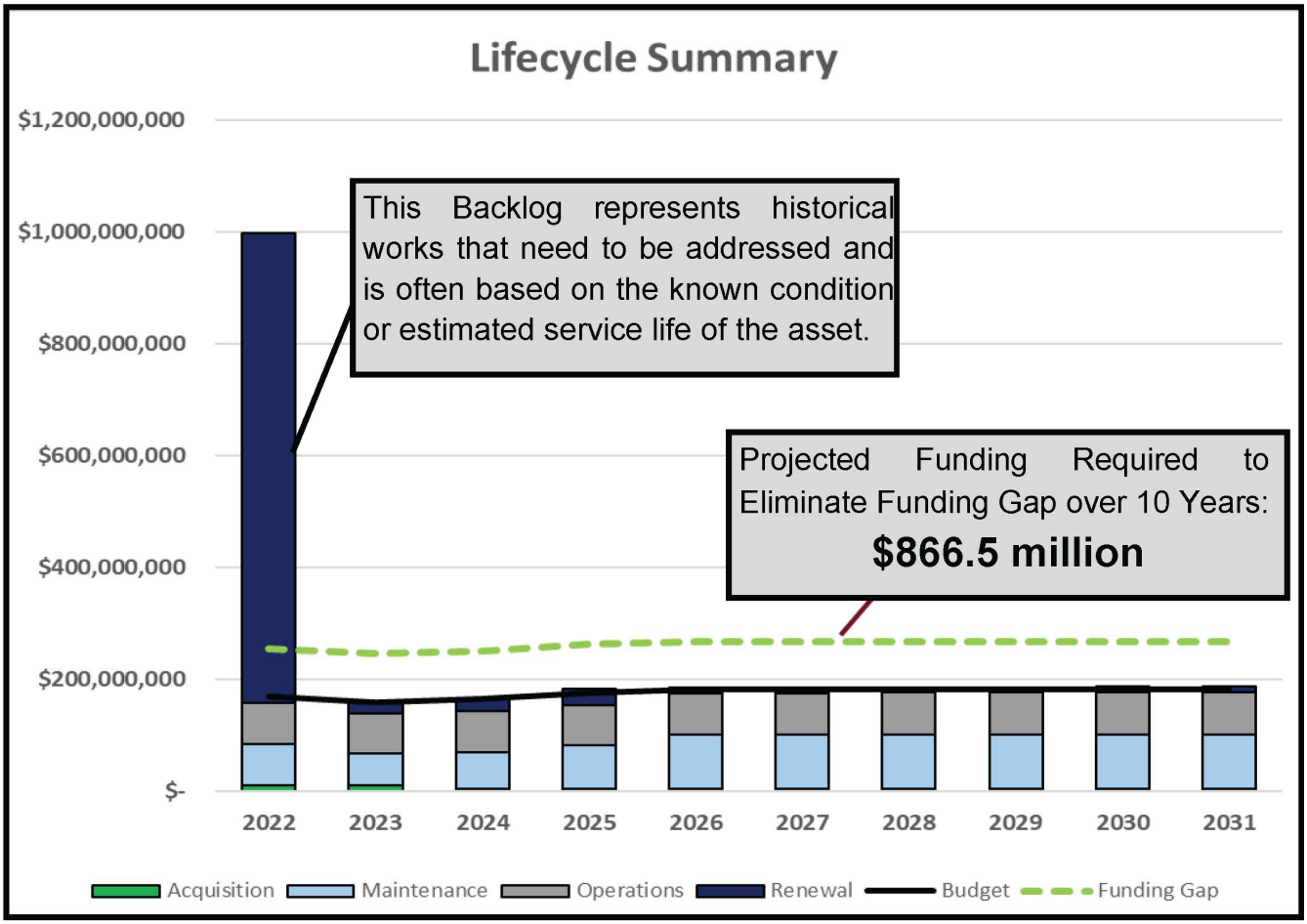
Hamilton will invest **$1.6 billion** to operate & maintain Road assets over

Did you know?

- Hamilton patrols each road weekly to proactively locate and repair problems
- Hamilton proactively inspects all of its 2,500 km's of sidewalks annually to look for and repair defects.

Financial Indicators

Type of Indicator	Measurement	Explanation
Asset Renewal Funding Ratio	**13.8%** (Target should be 90—110%)	The ratio demonstrates the rate which the city renews its Road network assets
10 Year O&M Forecast	**66.3%** (Target should be 100 %)	The **%** of funding allocated compared to what needs to be spent
Annual Infrastructure Gap	**$87 million**	The difference between what is spent and what should be spent



2.0 ROAD LINEAR

Assets within the road linear service area are built to enable safe, effective and efficient transportation within the City. Ultimately, these assets support broader communities' benefits such as agriculture, education, healthcare and the economy. These assets serve the various needs of the pedestrians, cyclists, emergency vehicles, agricultural vehicles, heavy transportation, and commuters and have been acquired by the City over multiple decades and vary greatly in design, construction material, expected life and purpose.

The road linear service area has been broken down into three (3) categories for this section of the AM Plan: Road Pavement, Active Transportation and Traffic, and are defined below:

- **Road Pavement** - refers to the road pavement broken down by the functional class of the road since pavement designs and levels of service differ based on the functional class.
- **Active Transportation** – describes infrastructure which facilitates human-powered forms of travel.
- **Traffic Network** – refers to assets which contribute to traffic control and safety in the right of way (ROW).

The asset class hierarchy outlining assets included in this section is shown below in Table 4.

Table 4: Asset Class Hierarchy

SERVICE AREA	ROAD LINEAR			
ASSET CLASS	**ROAD PAVEMENT**	**ACTIVE TRANSPORTATION**	**TRAFFIC NETWORK**	**ADMINISTRATION**
Asset	Expressway	ROW Bicycle Lanes	Signalized Intersections & Mid-block Crossings	Yards
	Urban Arterial Major	Sidewalks (including ROW Multi-Use Pathways)	Traffic Signs	Vehicles
	Urban Arterial Minor		Guide Rails	
	Urban Collector		Noise Walls & Fencing	
	Urban Local		Pedestrian Crossovers	
	Rural Arterial		Streetlight Luminaires	
	Rural Collector		Streetlight Poles	

Table 4: Asset Class Hierarchy				
SERVICE AREA	**ROAD LINEAR**			
ASSET CLASS	**ROAD PAVEMENT**	**ACTIVE TRANSPORTATION**	**TRAFFIC NETWORK**	**ADMINISTRATION**
	Rural Local		Traffic Medians	
	Assumed Alleyways			

2.1 BACKGROUND

The information in this section is intended to give a snapshot in time of the current state of the road linear service area by providing a detailed summary and analysis of existing inventory information as of January 2022 including age profile, condition methodology, condition profile, and asset usage and performance for each of the assets, and will provide the necessary background for the remainder of the plan.

2.1.1 Detailed Summary of Assets

Table 5 displays the detailed summary of assets for the road linear service area. The sources for this data are a combination of data included in the City's database information. It is important to note that inventory information does change often, and that this is a snapshot of information available as of January 2022. The replacement values for all assets were calculated based on unit costs provided and are based on a combination of internally developed estimating sheets and market values. The average Overall Condition Index (OCI) was calculated from the last 2019 assessment to encompass maintenance improvements and are deteriorated to the end of 2021. The average OCI is weighted by lane length.

It is evident that the City owns approximately **$5.15B** in road assets which are on average in **Fair** condition. Assets are an average of **16 years** in age which is **45%** of the average remaining service life (RSL). For most assets this means that the City should be completing preventative, preservation and minor maintenance activities per the inspection reports as well as operating activities (e.g. inspection, cleaning) to prevent any premature failures.

The Corporate Asset Management (CAM) Office acknowledges that some works and projects are being completed on an ongoing basis and that some of the noted deficiencies may already be completed at the time of publication. In addition, the assets included below are assets that are assumed and in service at the time of writing. Finally, it is possible that there are assets that may not be owned by Public Works which may be considered wastewater assets which may be missing from this inventory. This has been identified as a continuous improvement Item in Table 29.

Table 5: Detailed Summary of Assets for Road Linear Service Area
***Weighted Average**

ASSET CATEGORY	NUMBER OF ASSETS	REPLACEMENT VALUE	AVERAGE AGE (% RSL)	AVERAGE OCI	AVERAGE EQUIVALENT CONDITION
ROAD PAVEMENT (INCL CURBS)*					
Expressway	133.05 km	$101.20 M	18 years (49%)	74.50	2-Good
Urban Arterial Major	974.79 km	$671.09 M	33 years (6%)	64.37	3-Fair
Urban Arterial Minor	393.91 km	$287.44 M	32 years (8%)	63.08	3-Fair
Urban Collector	826.23 km	$617.02 M	31 years (12%)	60.38	3-Fair
Urban Local	2,015.43 km	$1.541 B	29 years (18%)	60.69	3-Fair
Rural Arterial	180.44 km	$117.43 M	No data	69.38	3-Fair
Rural Collector	1,196.51 km	$449.76 M	No data	68.88	3-Fair
Rural Local	797.28 km	$199.78 M	24 years (32%)	63.96	3-Fair
Data Confidence	High	Low	Very Low	Medium	Medium
Assumed Alleyways	30 km	$2.272 M	No data	N/A	3-Fair
Data Confidence	Low	Low	Very Low	N/A	Medium
SUBTOTAL	**6,548 km**	**$3.987 B**	**28 years (21%)**	**63.78***	**3-Fair***
Data Confidence	**High**	**Low**	**Very Low**	**Medium**	**Medium**

ACTIVE TRANSPORTATION NETWORK**				
ASSET CATEGORY	**NUMBER OF ASSETS**	**REPLACEMENT VALUE**	**AVERAGE AGE (% RSL)**	**AVERAGE EQUIVALENT CONDITION**
Sidewalks	2,501 km	$563.21 M	15 years (69%)	2-Good
Data Confidence	Medium	Low	Very Low	Medium
On-Street Bicycle Lanes	244 km	$25.2 M	4 years (88%)	1-Very Good
Data Confidence	Low	Low	Very Low	Very Low
	SUBTOTAL	$588.41 M	10 years (23%)	2-Good*
	Data Confidence	Low	Very Low	Medium

TRAFFIC NETWORK***				
Guide Rails	151.14 km	$12.92 M	No Data	No Data
Data Confidence	Medium	Low	Very Low	Very Low
Noise Wall & Fencing	43.03 km	$18.65 M	26 years (47%)	3-Fair
Data Confidence	High	Medium	Medium	Medium
PXO	280	$4.2 M	4 years (75%)	2-Good
Data Confidence	High	Medium	Medium	Low
Signalized Intersection and mid-block (incl Cameras, Radios)	659	$103.26 M	36 years (0%)	4-Poor
Data Confidence	Very High	Low	High	Low
Signs (incl Dynamic Speed Sign, Flashers)	69,317	$50.65 M	7 years (51%)	3-Fair
Data Confidence	Medium	Low	Very Low	Very Low
Streetlight Luminaire	45,272	$45.27 M	6 years (72%)	2-Good
Data Confidence	High	Medium	High	High
Streetlight Pole	21,075	$94.84 M	29 years (43%)	1-Very Good
Data Confidence	High	Medium	Medium	High
Traffic Medians	No Data	No Data	No Data	No Data
Data Confidence	Very Low	Very Low	Medium	Very Low
	SUBTOTAL	$329.79 M	18 years (36%)	3-Fair*
	Data Confidence	Low	Medium	Medium

ADMINISTRATION				
ASSET CATEGORY	**NUMBER OF ASSETS**	**REPLACEMENT VALUE**	**AVERAGE AGE (% RSL)**	**AVERAGE EQUIVALENT CONDITION**
Vehicles	403	$62.82 M	8 years (20%)	3-Fair
Data Confidence	High	Medium	High	Low
Yards	16	$180.06 M	No Data	No Data
Data Confidence	Medium	Low	Very Low	Very Low
	SUBTOTAL	$242.82 M	8 years (20%)	3-Fair*
	Data Confidence	Low	Medium	Low
	TOTAL	**$5.15B**	**16 years (45%)**	**3-Fair***
	Data Confidence	Low	Low	Medium

Historically, age data has not been collected for many assets, and is therefore shown to be low confidence on average, but staff have begun to collect this data as new assets are installed (e.g. bicycle lanes). In addition, it was found that some created inventories, and replacement value repositories are not maintained regularly (e.g. guide rails). A process to collect and update data should be investigated and has been identified as a continuous improvement item in Table 29. In addition, unknown quantity assets will also be captured in future inspection programs. Improving inventory information for assets with lower confidence have been noted in Table 29.

It was found while assessing the inventory data that asset owners are typically inspecting road linear assets through the Minimum Maintenance Standards (MMS) regulation, and these inspections could be altered to encompass additional data collection and condition information, which has been identified as a continuous improvement item in Table 29, and may assist with improving the data confidence issues posed above.

Finally, the functional class designation for road pavements requires investigation as it has been identified that there are some roads that may have changed functional classes since this data was originally created. With the adoption of the new Truck Master Plan, some functional classes may change. A Road Classification and Right of Way study is currently being undertaken to review the functional classes, but this has been noted in Table 29 continuous improvement plan.

Please refer to the AMP Overview for a detailed description of data confidence.

2.1.2 Asset Condition Grading

Condition is the preferred measurement for planning lifecycle activities to ensure assets reach their expected useful life. Since condition scores are reported using different scales and ranges depending on the asset, Table 6 below shows how each rating was converted to a standardized 5-point condition category so that the condition could be reported consistently across the AM Plan. A continuous improvement item identified in Table 29, is to review existing internal condition assessments and ensure they are revised to report on the same 5-point scale with equivalent descriptions.

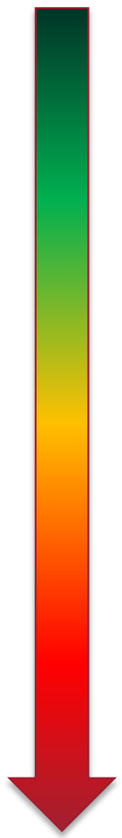


TABLE 6: CONDITION CONVERSION TABLE

EQUIVALENT CONDITION GRADING CATEGORY	CONDITION DESCRIPTION	% REMAINING SERVICE LIFE	OCI RESULT	SIDEWALK INSPECTION	NOISE WALL, FENCING CONDITION ASSESSMENT RESULT	STREETLIGHT POLE CONDITION ASSESSMENT RESULT
1-Very Good	The asset is new, recently rehabilitated, or very well maintained. Preventative maintenance required only.	>79.5%	86 – 100	No deficiencies	N/A	1-Very Good
2-Good	The asset is adequate and has slight defects and shows signs of some deterioration that has no significant impact on asset's usage. Minor/preventative maintenance may be required.	69.5% – 79.4%	71 – 85	MMS deficiencies = 0 and <= 10 Non-MMS deficiencies	Good	2-Good
3-Fair	The asset is sound but has minor defects. Deterioration has some impact on asset's usage. Minor to significant maintenance is required.	39.5% - 69.4%	56 – 70	MMS deficiencies = 0 and >10 Non-MMS deficiencies	Fair	3-Fair
4-Poor	Asset has significant defects and deterioration. Deterioration has an impact on asset's usage. Rehabilitation or major maintenance required in the next year.	19.5% -39.4%	41 – 55	MMS deficiencies>0 and =<10 Non-MMS deficiencies	Poor	4-Poor
5-Very Poor	Asset has serious defects and deterioration. Asset is not fit for use. Urgent rehabilitation or closure required.	<19.4%	0 - 40	MMS deficiencies>0 and >10 Non-MMS deficiencies	N/A	5-Very Poor

The following conversion assumptions were made:

- For assets where a condition assessment was not completed, but age information was known, the condition was based on the % of remaining service life.
- OCI Result conversion was based on ranges provided by a consultant;
- Sidewalk inspections collect deficiencies that are identified as MMS or non-MMS deficiencies. Since MMS is a legislated inspection, these defects are treated as more severe than non-MMS. In future this inspection program methodology should be revised to output a condition score.
  For noise walls and fencing the condition assessment is on a 3-point condition scale ranging from Good to Poor, which could not be converted to a 5-point condition scale at this time.

The background information for road pavement is included below and includes an age profile, the condition methodology used, the condition profile, and asset usage and performance.

2.1.3 Road Pavement

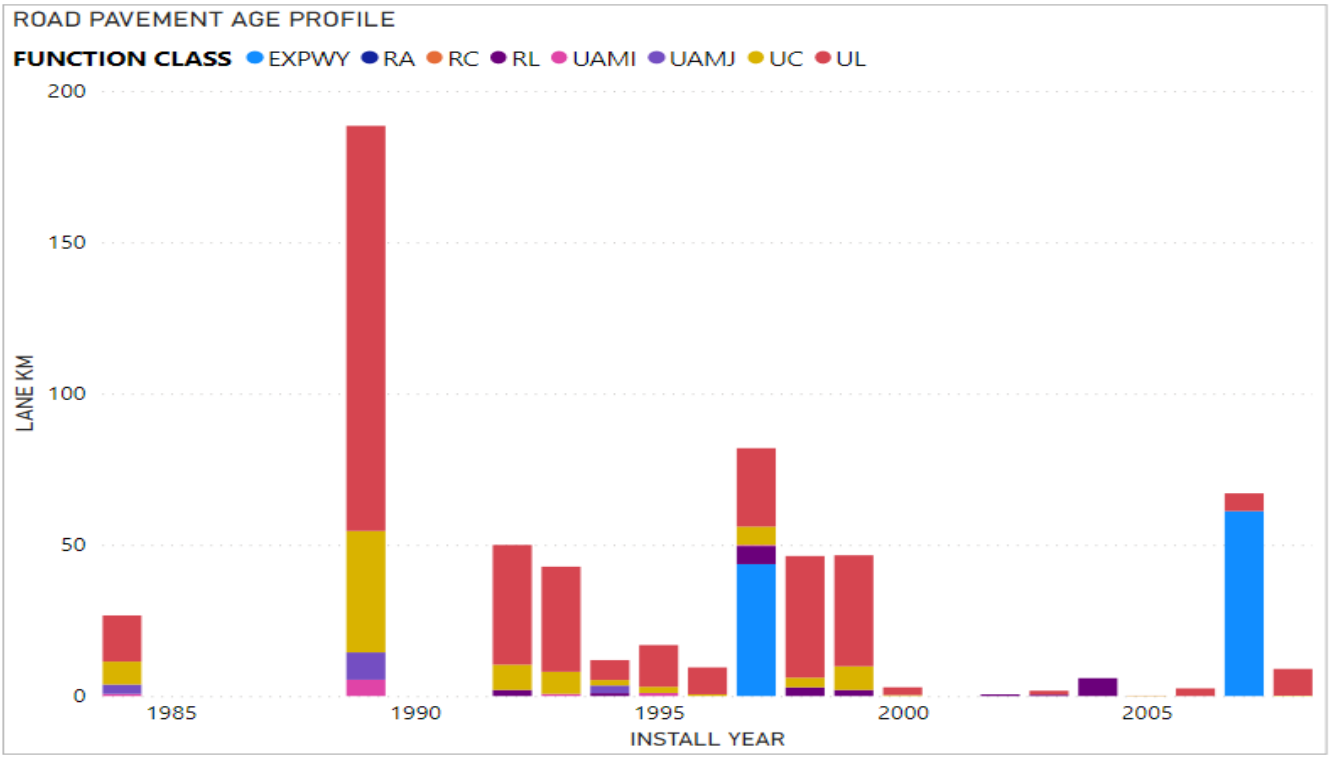
2.1.3.1 Age Profile

The age of an asset is an important consideration in the asset management process as it can be used for planning purposes as typically assets have an ESL where they can be planned for replacement.

The age profile for the road pavement asset class is shown in Figure 1. Age data for road pavement has historically not been collected, and so the figure below only represents approximately 9% of the City lane kms. The data confidence associated with this data is therefore very low and as such, it is difficult to make any age-based conclusions. However, it is evident that the City's expressways were constructed in 1997 (Lincoln M. Alexander Parkway) and 2007 (Red Hill Valley Parkway).

It has been identified as a continuous improvement item in Table 29 to improve the process for adding construction dates into the PMS to improve the completeness of this data over time.

Figure 1: Road Pavement Age Profile



2.1.3.2 Condition Methodology

Condition assessments for road pavement does not have a provincial standard. As such, it's largely dependent on the municipality's discretion for what methodology is used to determine the pavement condition index (PCI).

At the time of writing this AM Plan, the City of Hamilton is using a metric called Overall Condition Index (OCI) which is a function of a weighted calculation using a calculated Roughness Index (RI) and calculated Surface Condition Index (SCI). The RI is a calculated value that represents the overall roughness of the pavement and the SCI is a calculated value that represents the overall distresses identified in the pavement. The City will be completing a condition assessment of the entire road network beginning in 2022 and into 2023. The asset inspection frequency will be completed based on the function class of the road as shown in Table 7**.** As stated in section 2.1.2, often because condition assessment programs differ between assets there are different condition score outputs and standards which have been converted to the 5-point AM Plan scale as shown in Table 6.

Table 7: Inspection and Condition Information			
ASSET	**INSPECTION FREQUENCY**	**LAST INSPECTION**	**CONDITION SCORE OUTPUT**
Expressways & Arterial Roads	2-year cycle	2019	Overall Condition Index (OCI)
Collector & Local Roads	4-year cycle		

One of the recommendations of the 2021 Roads Value for Money Audit was to investigate the way the City is calculating the condition of the road pavement. At this time, the City is investigating altering the condition assessment methodology to explore more representative methodologies which has been identified in Table 29 in the continuous improvement section.

The City is currently working with a consultant to investigate the following:

- Altering the RI and SCI weighting in the existing OCI calculation;
- Altering the way RI and SCI are calculated (e.g. how many data inputs should be considered for SCI? What is the conversion scale for RI?);
- Adding an additional Structural Adequacy Index (SAI) to the OCI calculation to output a score similar to what some municipalities refer to as Pavement Quality Index (PQI); and
- Cost implications with incorporating SAI into road pavement inspection. Potentially start by requiring this factor for major functional classes or road segments with heavy truck traffic.

Therefore, the data confidence associated with road pavement has been brought down to a Medium confidence level since the City is investigating improving the current methodology, but recognizes that the existing OCI values may be used as an indicator of overall condition for many roadways for intervention planning.

In addition, the City is also currently developing a preservation strategy to use the OCI to determine what intervention actions are recommended to take place on the road. At this time, this table is still in draft form, and has not yet been formally adopted. Therefore, it is an example of the intervention strategies that are currently being investigated and have been used in this AM Plan to project potential forecasts in section 2.7.2. The draft table showing possible interventions based on the road material is shown below in Table 8.

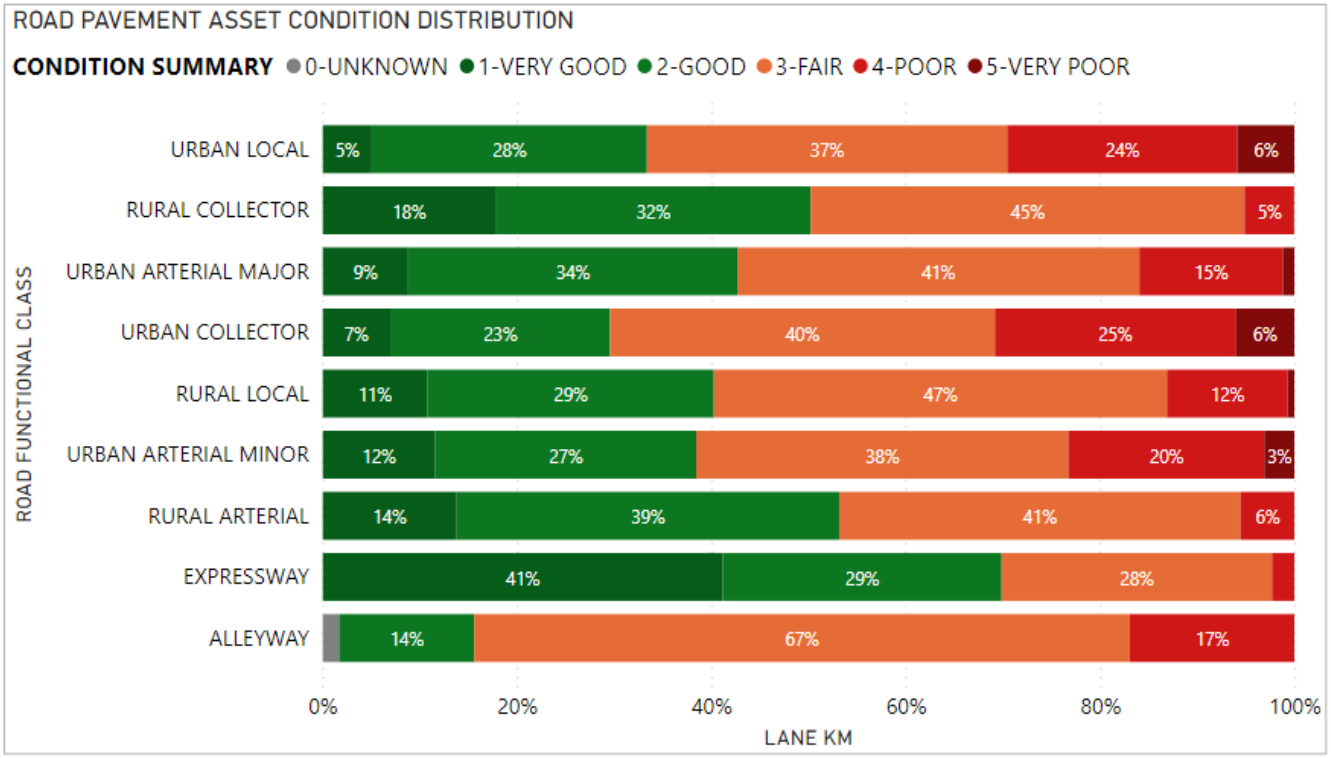
Table 8: Draft Intervention Strategies					
	OCI RANGE				
	1-VERY GOOD 86 - 100	2-GOOD 71 - 85	3-FAIR 56 - 70	4-POOR 41 - 55	5-VERY POOR 0 - 40
Treatment Category	Candidate for localized preventive maintenance	Candidate for generalized preventative maintenance	Candidate for minor rehabilitation	Candidate for major rehabilitation	Candidate for reconstruction
Material	**Potential Intervention**				
Asphalt Concrete	crack sealing	crack sealing, surface treatment	minor resurfacing “shave and pave”, major pothole repair	reduce asphalt to granular or concrete base, repair base, and repave	full replacement including base
Brick	remove and replace small area of paving stones	remove and replace small area of paving stones	remove and replace small area of paving stones	remove, regrade, and replace small area of paving stones	full replacement including base
Composite	crack sealing	crack sealing, surface treatment	minor resurfacing “shave and pave”, major pothole repair	reduce asphalt to granular or concrete base, repair base, and repave	full replacement including base
Gravel	n/a	blade surface, add material and compact	cut, add material, and shape road	cut, add material, and shape road	cut, add material, shape road, and construct ditches
Open Graded Cold Mix	crack sealing	crack sealing, surface treatment	single surface treatment without ditching	double surface treatment with ditching	surface treated reconstruction
Portland Cement Concrete	joint sealing	joint sealing, localized patching	diamond grinding, asphalt overlay	slab replacement	reconstruction
Surface Treated	patching/padding	patching/padding	single surface treatment without ditching	double surface treatment with ditching	pulverize and double surface treatment with ditching

2.1.3.3 Asset Condition Profile

The condition profile of the City's assets is shown in Figure 2. As mentioned in section 2.1.2, the original condition grades were converted to a standardized condition category for report consistency.

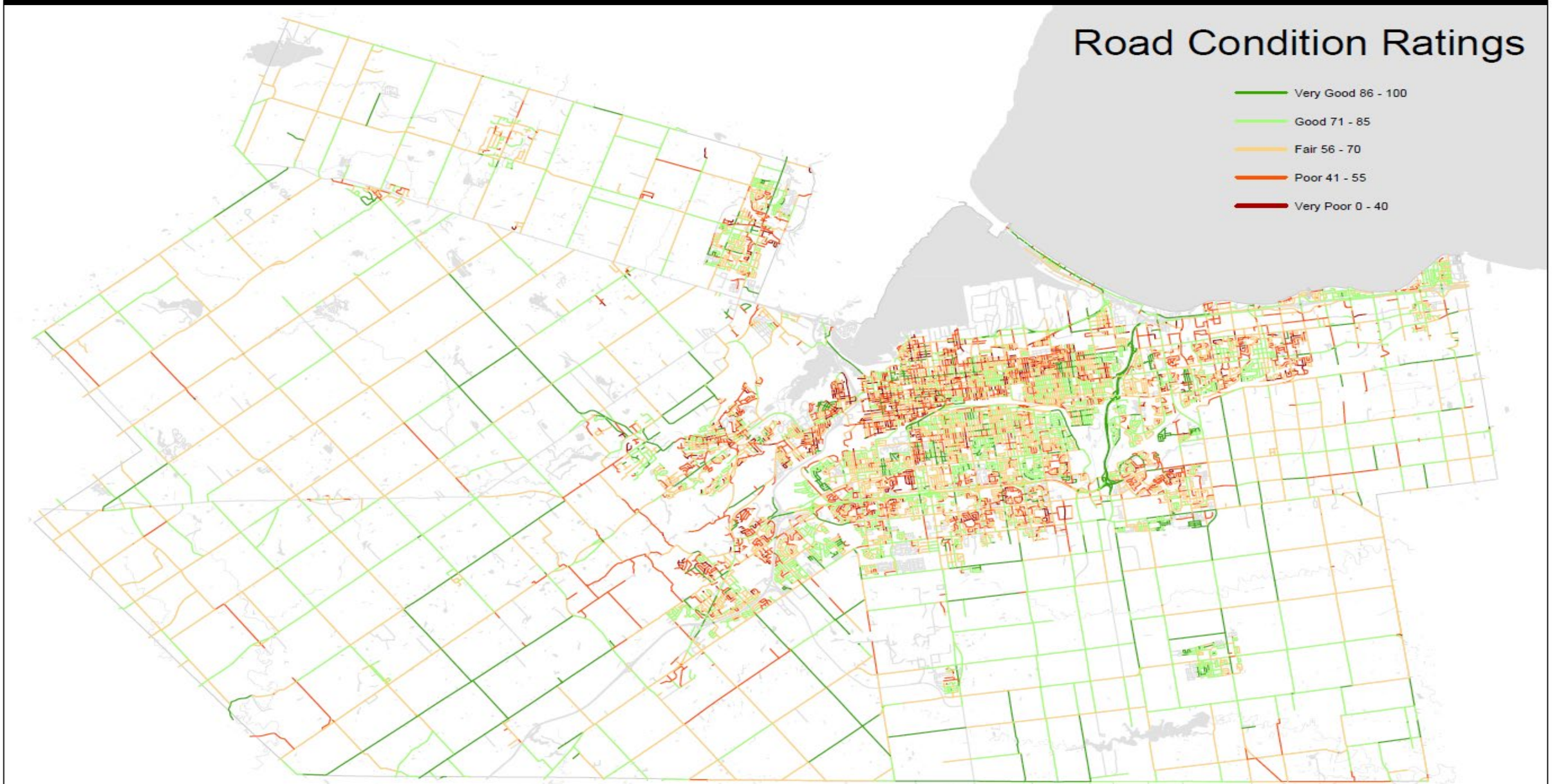
The graph below is distributed by lane km of the road network. It is evident that the City's road network is in Fair condition, but expressways are kept at an average Good condition. As explained in Section 2.1.1, the data confidence for this condition profile is currently medium.

Figure 2: Road Pavement Asset Condition Distribution



In addition, Figure 3 shows a map of the City by OCI. Although the City has kept roads on average in Fair condition. Areas of the City may experience roads at a lower condition than the average. It is clear based on Figure 3 that the lower City is an area where renewal activities should be prioritized as many of the poor major arterial roads have many segments that show Poor condition.

Figure 3: Map of Hamilton Roads by Condition. For Online Map Click Here.



2.1.3.4 Asset Usage and Performance

Assets are generally provided to meet design standards where available. However, there are often insufficient resources to address all known deficiencies.

The largest performance issues with road pavement involve disrupted network connectivity and very poor condition significantly affecting road performance. The known service performance deficiencies in Table 9 were identified using staff input.

Table 9: Known Service Performance Deficiencies

ASSET	LOCATION	SERVICE DEFICIENCY	DESCRIPTION OF DEFICIENCY
Road Pavement	**Urban Major Arterial Roads Various Locations**	Very Poor Condition	Road segment identified as Very Poor during the road condition assessment
	York Road at CN Rail	Drainage near outlet causing erosion.	Sinkhole causing drainage and erosion issues. Will be fixed in 2022.
	1759 Safari Road	Road Closed	Road flooded. Waiting on approval to replace culverts (Roads) and raise the road (Engineering)
	Wilson St	One-Way Street	Currently there is a mismatch in programming between the Wilson Street scope elements: two-way conversion versus reconstruction. The road is planned to be converted from one way to two way in 2023.

The background information for active transportation is included below and includes an age profile, the condition methodology used, the condition profile, and asset usage and performance.

2.1.4 Active Transportation

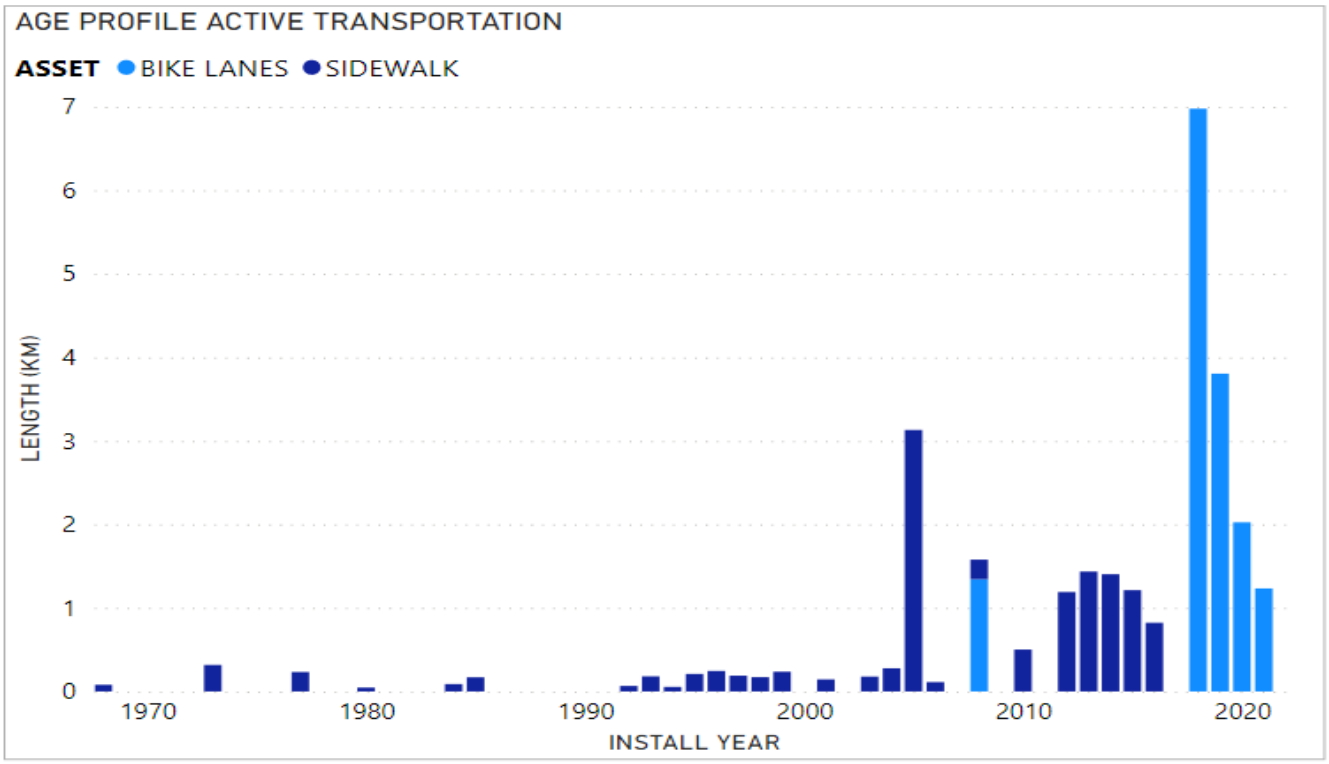
2.1.4.1 Age Profile

The age of an asset is an important consideration in the asset management process as it can be used for planning purposes as typically assets have an ESL where they can be planned for replacement.

The age profile of active transportation assets are shown in Figure 4. Similar to road pavement, age information for sidewalks and bicycle lanes has not historically been collected. It is estimated that the City only has age data for around 1% of City sidewalks, and 12% of bicycle lanes. As such, the data confidence for age data is very low for these assets. The sidewalk data could

normally be extrapolated from road pavement, but as stated, the data completeness for road pavement is also at a very low status. However, the City has begun inputting age data for new bicycle lane assets which is evident in the spikes in bicycle lane data from 2018-2021. This is a continuous improvement item to improve the process for documenting road pavement construction dates which should also encompass new sidewalks and bicycle lanes.

Figure 4: Age Profile Active Transportation



2.1.4.2 Condition Methodology

Sidewalks are heavily regulated through the MMS but there is not yet a standard for inspections for bicycle lanes. Table 10 below summarizes the inspection information for these assets.

It is important to note that the City is exceeding the MMS requirement for sidewalk inspections, completing them annually instead of on a 16-month cycle. A continuous improvement item identified in Table 29 is to have the annual sidewalk inspections output a condition grade as part of the inspection as well as to collect missing asset information where possible.

For ROW bicycle lanes, the MMS inspection requirements are typically the same as for roads excluding snow clearing/sweeping requirements, and currently the City considers these assets at the same level of service as road pavement. However, ROW bicycle lanes inspections may need to be investigated more specifically as bicycles can require a different level of service than motor vehicles. A suggested continuous improvement item identified in Table 29 is to incorporate

specific criteria for bicycle lane inspections into the road pavement inspections or to establish an inspection program once the asset reaches a certain age.

As stated in section 2.1.2, often because condition assessment programs differ between assets there are different condition score outputs and standards which have been converted to the 5-point AM Plan scale as shown in Table 6.

Table 10: Inspection Information

ASSET	REQUIRED INSPECTION FREQUENCY	INSPECTION FREQUENCY	LAST INSPECTION	INSPECTION STANDARDS	CONDITION SCORE OUTPUT
Sidewalk	16 months	Annual	2021	O.Reg 239/02: Minimum Maintenance Standard	Number of deficiencies MMS and non-MMS
ROW Bicycle Lanes	Currently considered as part of road pavement	Currently considered as part of road pavement	Currently considered as part of road pavement	Currently considered as part of road pavement	Assumed based on age.

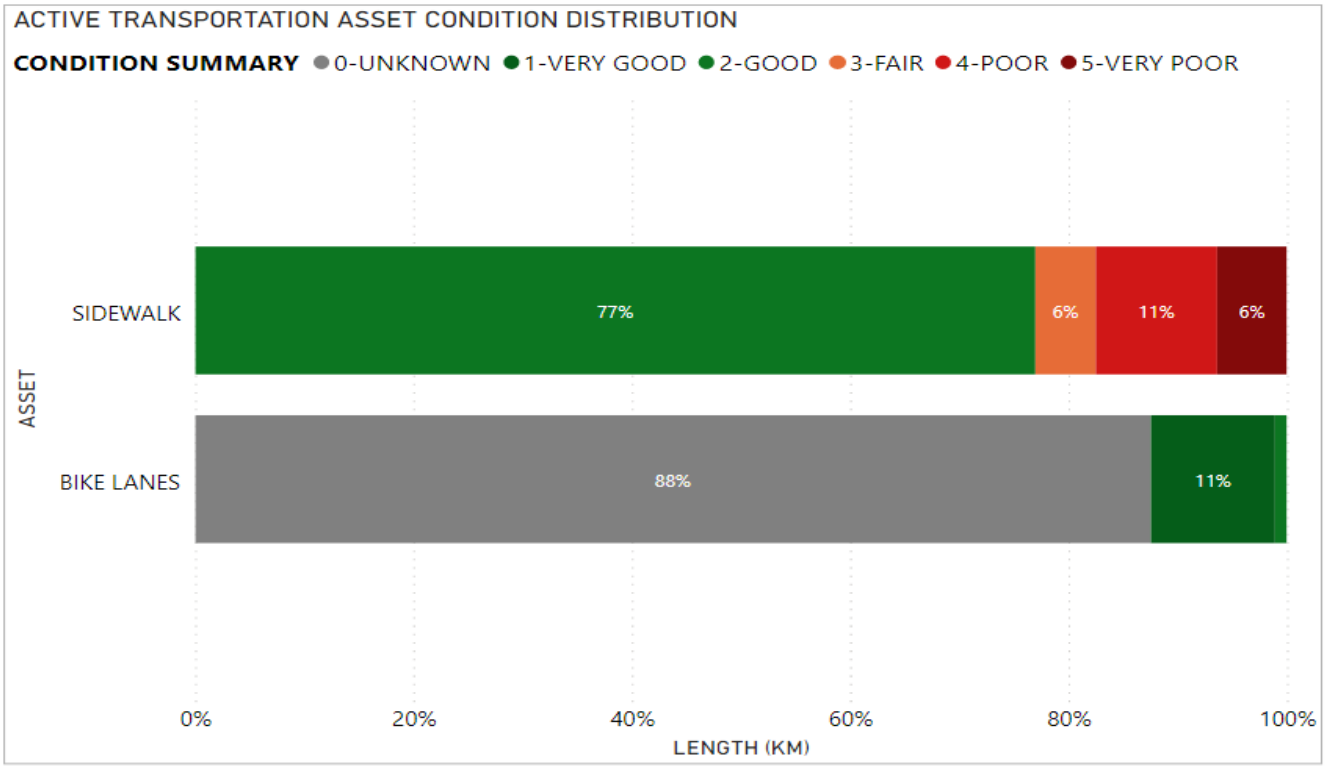
2.1.4.3 Asset Condition Profile

The condition profile of the City's assets is shown in Figure 5. As mentioned in Section 2.1.2, the original condition grades were converted to a standardized condition category for report consistency.

As stated in Table 10, the sidewalk condition is based on the number of MMS & Non-MMS deficiencies, and is considered a medium confidence level, but this methodology should be refined in future AM Plans. Based on this condition methodology, sidewalks are typically in Good condition.

Since the age information was missing for bicycle lanes, and there is no inspection program, the majority of the bike lanes condition is unknown. Since this is typically a newer asset, it is anticipated the condition of this asset is likely in Good to Fair condition. However, the condition of bicycle lanes can also depend on the condition of the road pavement and should be investigated further.

Figure 5: Active Transportation Asset Condition Distribution



2.1.4.4 Asset Usage and Performance

Assets are generally provided to meet design standards where available. However, there are often insufficient resources to address all known deficiencies.

Service deficiencies with the Active Transportation network typically involve disruptions in connectivity. The City is identifying areas in the active transportation network to improve connectivity and the service deficiencies in Table 11 were identified using staff input.

Table 11: Known Service Performance Deficiencies

ASSET	LOCATION	SERVICE DEFICIENCY	DESCRIPTION OF DEFICIENCY
Sidewalks	Winona Road (Hwy 8 to Barton Street) Stonechurch Road (Upper Red Hill Pkwy to Anchor Road) Nebo Road (Rymal Road to Stonechurch Road) Frances Avenue (Grays Road to Teal)	Sidewalk gap	No sidewalk alongside road in areas where pedestrians frequent.

Table 11: Known Service Performance Deficiencies			
ASSET	**LOCATION**	**SERVICE DEFICIENCY**	**DESCRIPTION OF DEFICIENCY**
	Barton St (Lake Avenue to Grays Road) Various Business Parks		
Bicycle Lanes	Various Locations (e.g. Victoria Avenue, John Street North)	Infrastructure Design	Bicycle lane ends abruptly.
	Lawrence Road	Deteriorating Shoulder	Deteriorating shoulder preventing bicycle lanes from being added.

The background information for traffic network assets is included below and includes an age profile, the condition methodology used, the condition profile, and asset usage and performance.

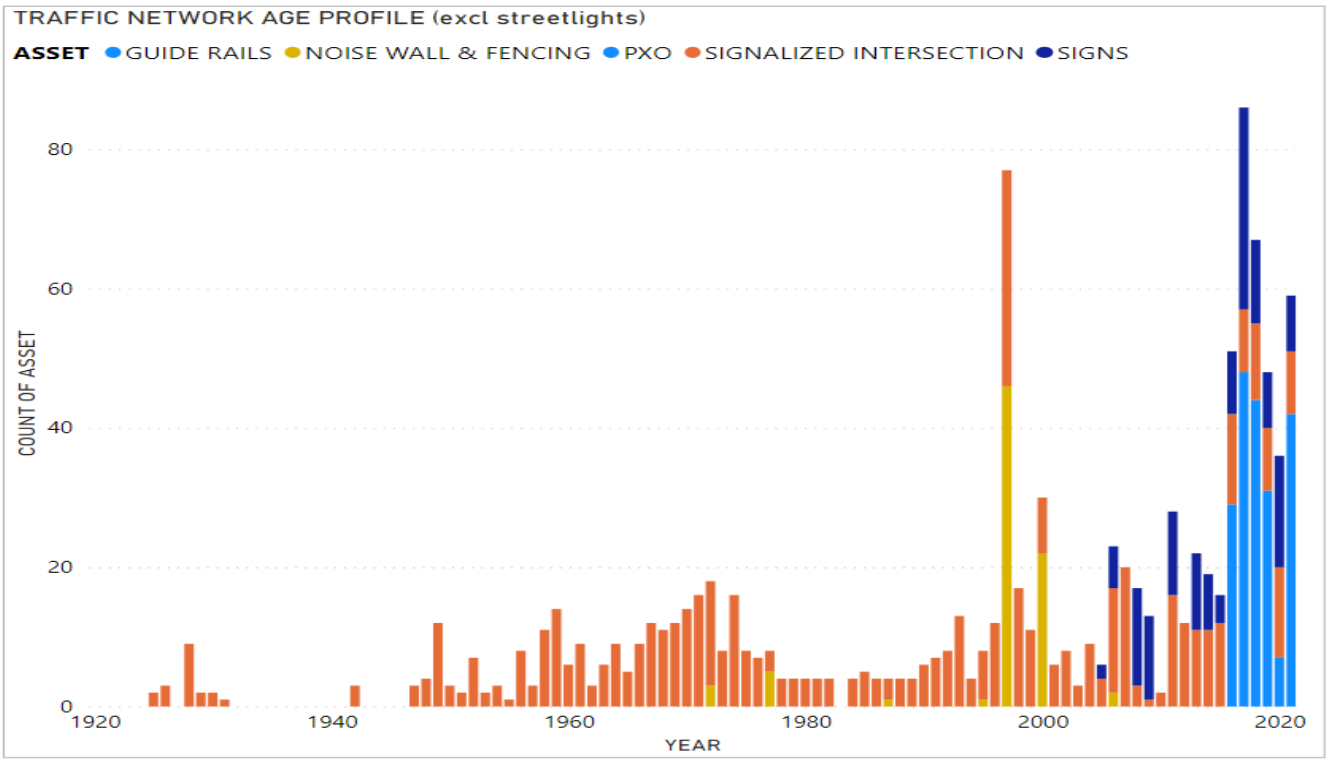
2.1.5 Traffic Network

2.1.5.1 Age Profile

The age of an asset is an important consideration in the asset management process as it can be used for planning purposes as typically assets have an ESL where they can be planned for replacement.

The age profile of most of the traffic network assets are shown in Figure 6. Streetlight poles and luminaires were separated from the remainder of the traffic network for legibility of the graph since the magnitude of quantities were vastly different and can be found in Figure 7.

Figure 6: Traffic Network Age Profile



GUIDE RAILS

Currently, there is no age data associated with guide rails in the inventory database. When the road pavement age data confidence is improved, many guide rails ages could be estimated based on the age of the road. As previously stated, the road pavement age data is also at a very low confidence level.

NOISE WALL & FENCING

Currently, age data for 72% of assets is included in the Geographic Information System (GIS) database. Since this data was created during a formal inventorying process, the accuracy of the collected data is high, but since it only represents 72% of the dataset, the overall data confidence is medium for these assets. The spike in the installation of noise walls in 1997 is due to the construction of the Lincoln M Alexander Parkway, but with an ESL of 50 years, replacement will likely not be required until 2047.

PEDESTRIAN CROSSWALK (PXO)

Based on the profile above, pedestrian crosswalks are typically a new asset added over the last 5 years. Therefore, the accuracy in the available age data is high. However, there is currently age data in the GIS database for only 72% of the assets, and so it is considered an overall medium data confidence level.

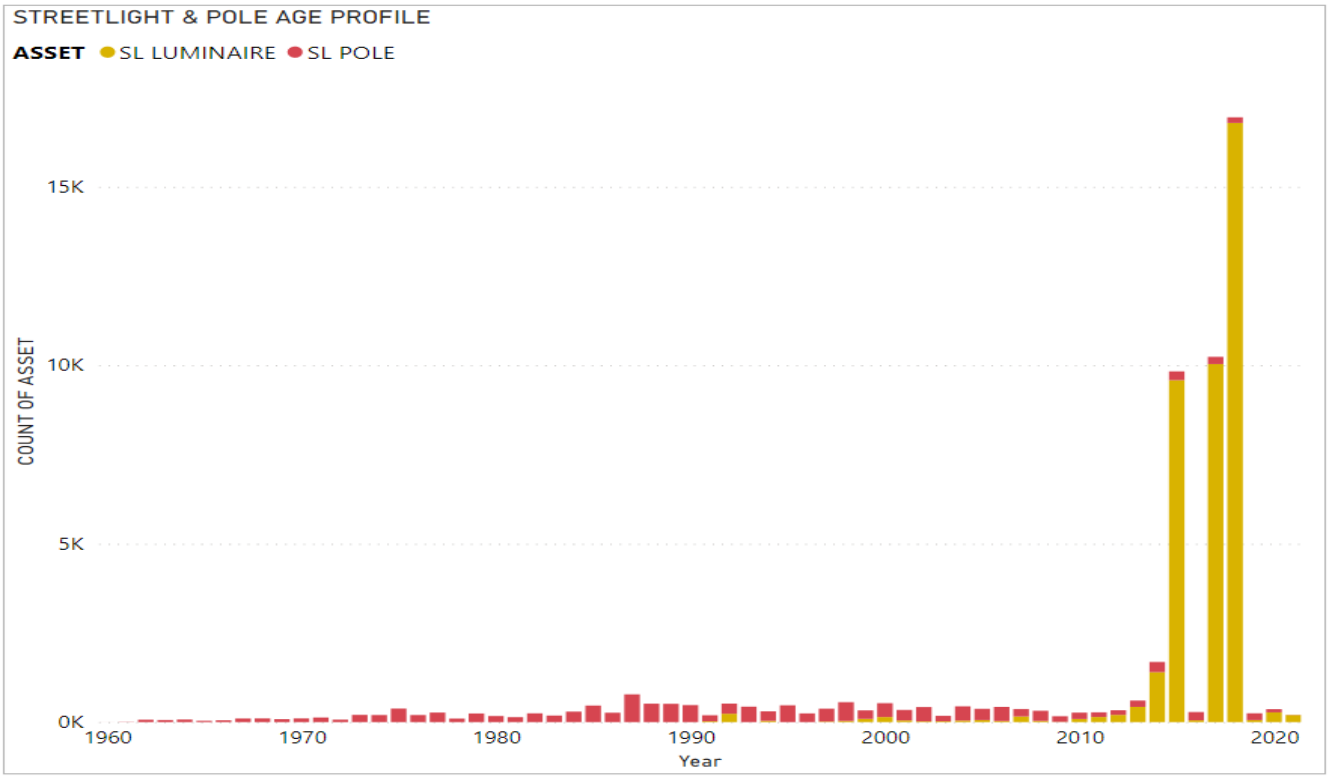
SIGNALIZED INTERSECTIONS

There are no significant spikes in installation dates for signalized intersections, and assets have been added steadily since 1925. However, it is shown to be an aging asset since approximately 66% of assets are beyond the ESL of 20 years. Currently, 95% of age data was populated in the internal database, but there has not yet been a determination on the accuracy of the data. As such, these are currently assumed to be a high confidence level, but this may change as data continues to be verified. This data suggests that many signalized intersections should be planned for renewal over the next 10 years.

TRAFFIC SIGNS

It is evident that very minimal age data exists for signs in the GIS database, resulting in the age profile being considered very low confidence. However, since signs are typically removed and replaced often, age data often is typically not a reliable indicator of condition. Signs can deteriorate based on many factors including weather, vehicular accident, graffiti. etc. They are also typically a low value asset that can be replaced with internal staff at a low cost.

Figure 7: Streetlight & Pole Age Profile



STREETLIGHT LUMINAIRES

It is evident that there is a spike in luminaire installations in 2015, 2017, and 2018. This is because the City has been converting high pressure sodium (HPS) luminaries into light emitting diode (LED) luminaires to improve energy efficiency City-wide and is in accordance with our

climate change goals. These dates also correspond with the first large scale inventory and condition assessments completed for streetlights in 2016. Since LED luminaries typically have an ESL of 20 years, these assets will not require replacement until 2035. However, since there is a spike in installations, the City should plan for a large-scale replacement at this time.

STREETLIGHT POLES

Streetlight poles are typically within the ESL of 50 years, with only 4% of assets exceeding the ESL and no spike associated with these assets. Since a formal inventory was completed, the City is confident in the accuracy of the collected age data. However, approximately 30% of assets do not have age data populated in the GIS database and therefore, the age data is considered to be a medium confidence level.

2.1.5.2 Condition Methodology

A table showing inspection information including frequency, required standards, and condition score outputs from these inspections are shown below in Table 12. As stated in Section 2.1.2, often because condition assessment programs differ between assets there are different condition score outputs and standards which have been converted to the 5-point AM Plan scale as shown in Table 6.

Table 12: Inspection Information

ASSET	REQUIRED INSPECTION FREQUENCY (MMS)	INSPECTION FREQUENCY	LAST INSPECTION	INSPECTION STANDARDS	CONDITION SCORE OUTPUT
Noise Walls & Fencing	N/A	Ad Hoc	2013	N/A	3-point scale
Signalized Intersection	16 months	Annually	2021	OTM Traffic Manual & MMS	N/A, assumed based on age
Pedestrian Crossover (PXO)	16 months	Annually	2021	OTM Traffic Manual & MMS	N/A, assumed based on age.
Guide Rails	N/A	Ad Hoc	2013	N/A	N/A, no age data
Traffic Signs	16 months	Annually	2021	OTM Traffic Manual & MMS	N/A, assumed based on age
Streetlight Poles	N/A	Every 3 to 8 years depending on current	2021	Residual Strength of Deteriorated Light Poles in	5-point scale

Table 12: Inspection Information					
ASSET	REQUIRED INSPECTION FREQUENCY (MMS)	INSPECTION FREQUENCY	LAST INSPECTION	INSPECTION STANDARDS	CONDITION SCORE OUTPUT
		condition rating		the City of Hamilton Report	
Luminaires	16 months	Annually	2021	OTM Traffic Manual & MMS	N/A, assumed based on age/operating hours.

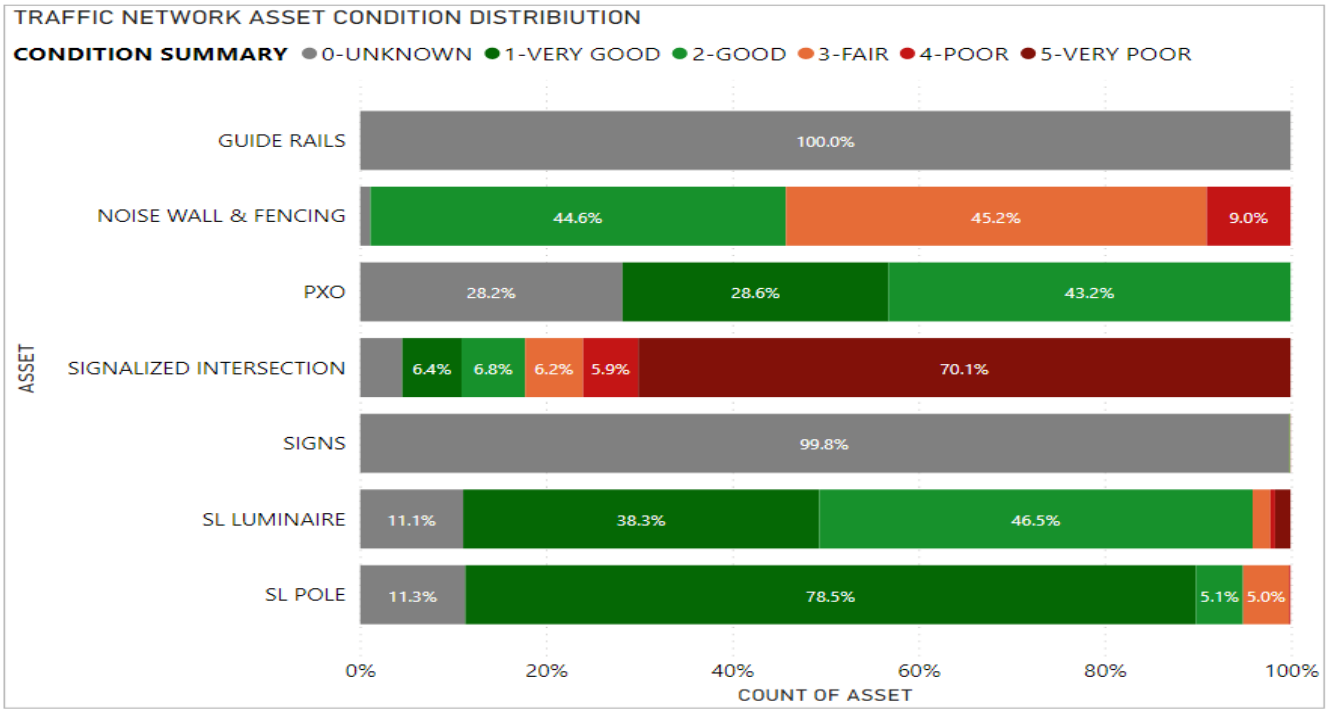
As shown above, most traffic network assets are regulated through the MMS and the City is typically completing internal inspections on a cycle exceeding the MMS. If an MMS requirement is present, the City tracks these activities as part of the technical levels of service using the balanced scorecard referenced in the AMP Overview and are presented in Table 21. The City does complete inspections per the MMS, but often these inspections do not output a condition score. If a condition score was not outputted, the asset's condition was estimated based on age and was given a low or very low confidence level in condition as a result depending on the availability of age data. Investigating adding condition scores to these inspections has been identified as a continuous improvement item in Table 29.

Some assets do not have inspection programs that are legislated, but the City may complete condition assessments on these assets if they are deemed to be required (i.e. noise walls & fencing, streetlight poles). Although a noise wall & fencing condition assessment was completed in 2013, the data is almost 10 years old and has therefore been reduced to a medium confidence. A condition assessment is currently being completed on these assets. Streetlight poles assessments are completed on a regular cycle and 88% of assets had condition data available and so they have a high confidence level as a result. The only traffic network asset that does not yet have a regular inspection or condition assessment program are guide rails which are typically reactively inspected after a vehicular accident. An inventory was completed on guide rails in 2013, but a condition score was not output during the inspection. Investigating completing a guide rail condition assessment has been identified as a continuous improvement item in Table 29.

2.1.5.3 Asset Condition Profile

The condition profile of the City's assets is shown in Figure 8. As mentioned in Section 2.1.2, the original condition grades were converted to a standardized condition category for report consistency.

Figure 8: Traffic Network Asset Condition Distribution



SIGNALIZED INTERSECTION

Since signalized intersections are an aging asset, and at this time the condition is based on age, these assets are shown to be in average Poor condition. This does not necessarily reflect reality as age data does not represent upgrades that may have occurred on these assets, and also doesn't yet encompass the results from the inspection program.

PEDESTRIAN CROSSWALKS (PXO)

Pedestrian Crosswalks (PXO) are also based on age and are shown to be in Good condition as they are a new asset. However, as previously mentioned, the City does complete inspections on these assets to ensure they are in working order.

STREETLIGHT POLES & LUMINAIRES

Streetlight poles were evaluated based on the 5-point scale produced from the latest condition assessment and luminaires were evaluated based on age/operating hours. No condition information was provided for luminaires from this assessment because they are new assets, but as previously mentioned, these are inspected per MMS. Currently approximately 87% of poles have been assessed for condition and therefore, there is a high data confidence associated with this asset.

NOISE WALLS & FENCING

Based on the data below, noise walls and fencing are shown to be in overall Fair condition. Since this data is based on a snapshot in time from 2013, this data is a medium confidence level, and a condition assessment is currently being completed for these assets in 2022.

GUIDE RAILS & TRAFFIC SIGNS

As previously stated, although there are inspections completed for the majority of assets, these inspection programs do not yet output an overall condition score. In addition, many of the traffic network assets have low confidence age data and therefore, the condition of these cannot be estimated based on the estimated service life. For example, guide rails were not able to be evaluated for condition based on age based data, and signs were evaluated for condition on an extremely small sample size. It is a continuous improvement item to incorporate a condition output in the annual traffic sign inspection and to investigate the creation of a guide rail condition assessment.

2.1.5.4 Asset Usage and Performance

Assets are generally provided to meet design standards where available. However, there are often insufficient resources to address all known deficiencies.

The largest performance issues with traffic network assets involve assets not functioning as intended.

The service deficiencies in Table 13 were identified using staff input.

Table 13: Known Service Performance Deficiencies

ASSET	LOCATION	SERVICE DEFICIENCY	DESCRIPTION OF DEFICIENCY
PXO	Various Locations powered with solar panels	Outage	Solar panel does not receive enough solar light energy or battery storage is too small and does not turn on
Guide Rails	Various Locations	Old Design	Many guide rails are from old design standards and should be replaced to new design standards.

2.1.6 Administration

At this time, administration assets such as facilities and vehicles have been included in the AM Plan in a very limited capacity to ensure the replacement value has been encompassed since these assets are assisting in the delivery of the transportation service. More details related to these assets will be included in future iterations of the plan.

2.2 LIFECYCLE MANAGEMENT PLAN

The lifecycle management plan details how the City plans to manage these assets at the agreed levels of service and at the accepted lifecycle costs.

2.2.1 Acquisition Plan

Acquisition reflects new assets that did not previously exist or works which will upgrade or improve an existing asset beyond its current capacity. They may result from growth, demand, legal obligations or social or environmental needs. Transportation assets can either be donated through development agreements to the City or through the construction of new assets which are mostly related to population growth.

CURRENT PROJECT DRIVERS – 10 YEAR PLANNING HORIZON

The City prioritizes capital projects based on various drivers to help determine ranking for project priorities and investment decisions. As part of future AM Plans, the City will be continuing to develop its understanding of how projects are prioritized and ensures that multiple factors are being considered to drive investment decisions in the next iteration of the AM Plan. These drivers will include legal compliance, risk mitigation, O&M impacts, growth impacts, health and safety, reputation and others. These drivers should be reviewed during each iteration of the AM Plan to ensure they are appropriate and effective in informing decision making.

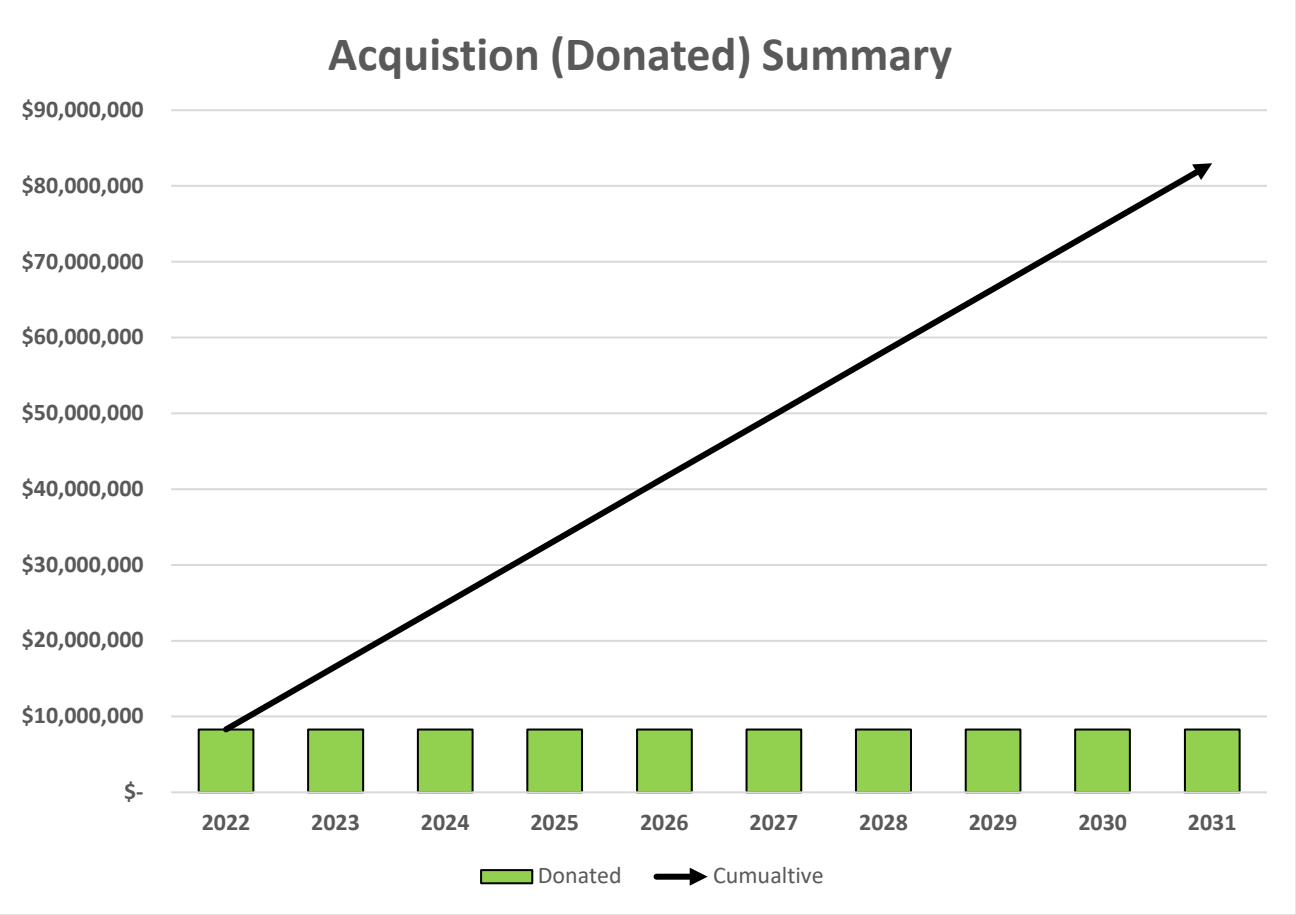
SELECTION CRITERIA

Proposed acquisition of new assets and upgrade of existing assets are identified from various sources such as community requests, proposals identified by strategic plans or partnerships with others. Potential upgrade and new works should be reviewed to verify that they are essential to the City's needs. Proposed upgrade and new work analysis should also include the development of a preliminary renewal estimate to ensure that the services are sustainable over the longer term. Verified proposals can then be ranked by priority and available funds and scheduled in future works programs.

SUMMARY OF FUTURE DONATED ASSET ACQUISITION COSTS

Forecast acquisition asset costs are summarized in Figure 11 and show the cumulative effect of asset assumptions over the next 10-year planning period.

Figure 9: Acquisition (Donated) Summary
All Figures Are In 2021 Dollars.



Annually on average, the City assumes over **$8,300,000** of donated transportation assets through subdivision agreements or other development agreements. These assets include approximately **10 km's** of roads, **1,000** road safety signs, **100** streetlights and multiples traffic apparatuses. The City is reviewing its donated asset assumption process to ensure that it proactively understands what assets are being donated annually to ensure they are appropriately planned for. This will allow multiple departments across the City to plan for the assets properly such as:

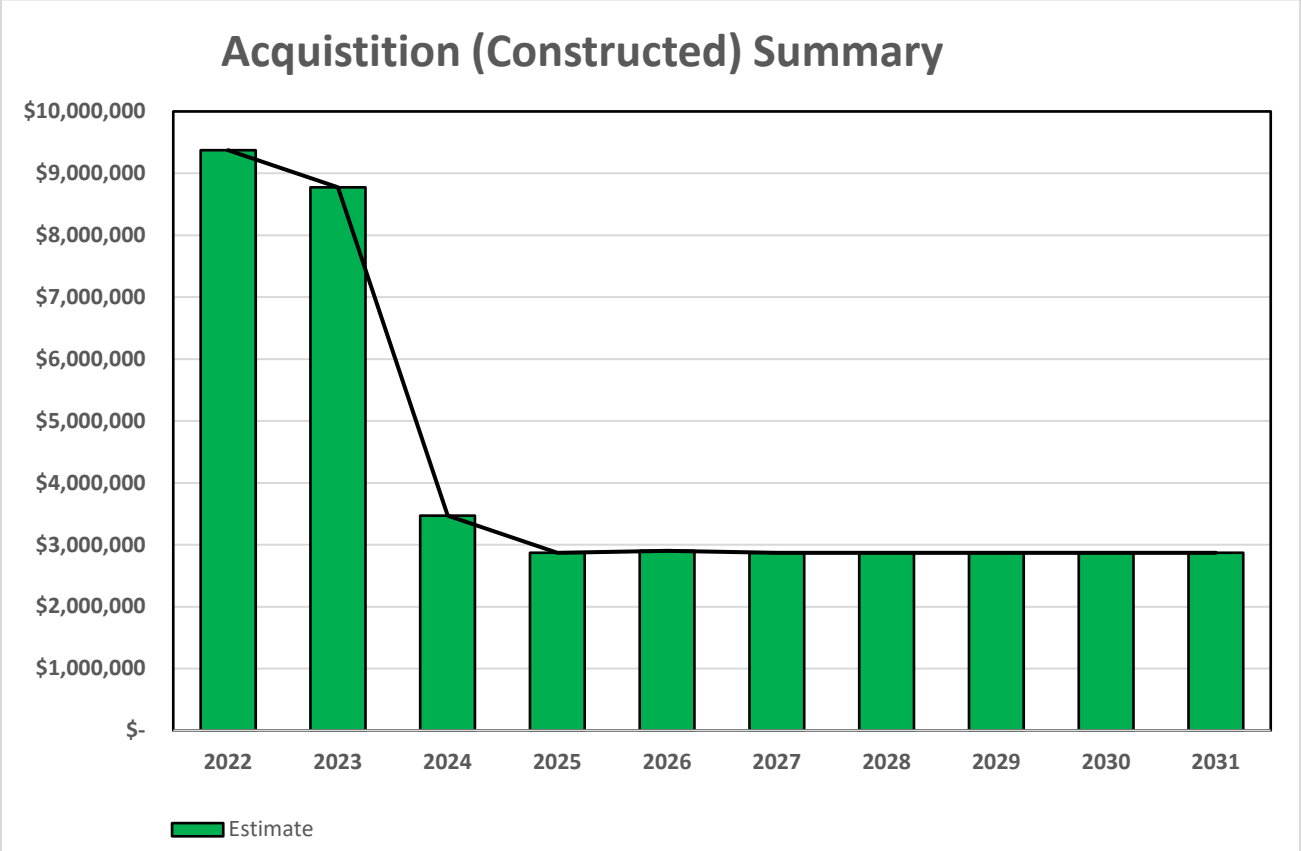
- AM to forecast the long-term needs and obligations of the assets
- Operations and maintenance can include the assets in their planned activities (inspections, legislative compliance activities)
- Finance can ensure that assets are properly captured and recognized appropriately (Audited Financial Statements, TCA process, Provincial reporting such as the FIR)

The City will need to ensure the required data is updated frequently and to a single source to ensure that all the departments have access to the data they require in a timely manner. Once transportation assets are assumed, the City then becomes the stewards of these assets and is

responsible for all ongoing costs for the asset's operation, continued maintenance, inevitable disposal and their likely renewal.

Construction costs are often only **10-15 %** of an asset's whole life costs. When development assets are donated to the City, they then becomes obligated to fund the remaining costs. Over the next ten-year planning period the City anticipates receiving **$83,000,000** of donated assets which, would then obligate the City to fund the remaining costs over the donated assets ESL.

Figure 10: Acquisition (Constructed) Summary
All Figure Values Are Shown In 2021 Dollars.



Over the next 10 Year planning period the City will acquire approximately **$41,597,000** of constructed assets which can either be new assets which did not exist before or expansion of assets when they are to be replaced. Major acquisition expenditures over the next ten years include:

- **$4.5 million** for traffic signal modernization
- **$6 million** for durable pavement markings
- **$6.83 million** for AM system implementations and
- **$2.5 million** dollar for the infill street lighting program

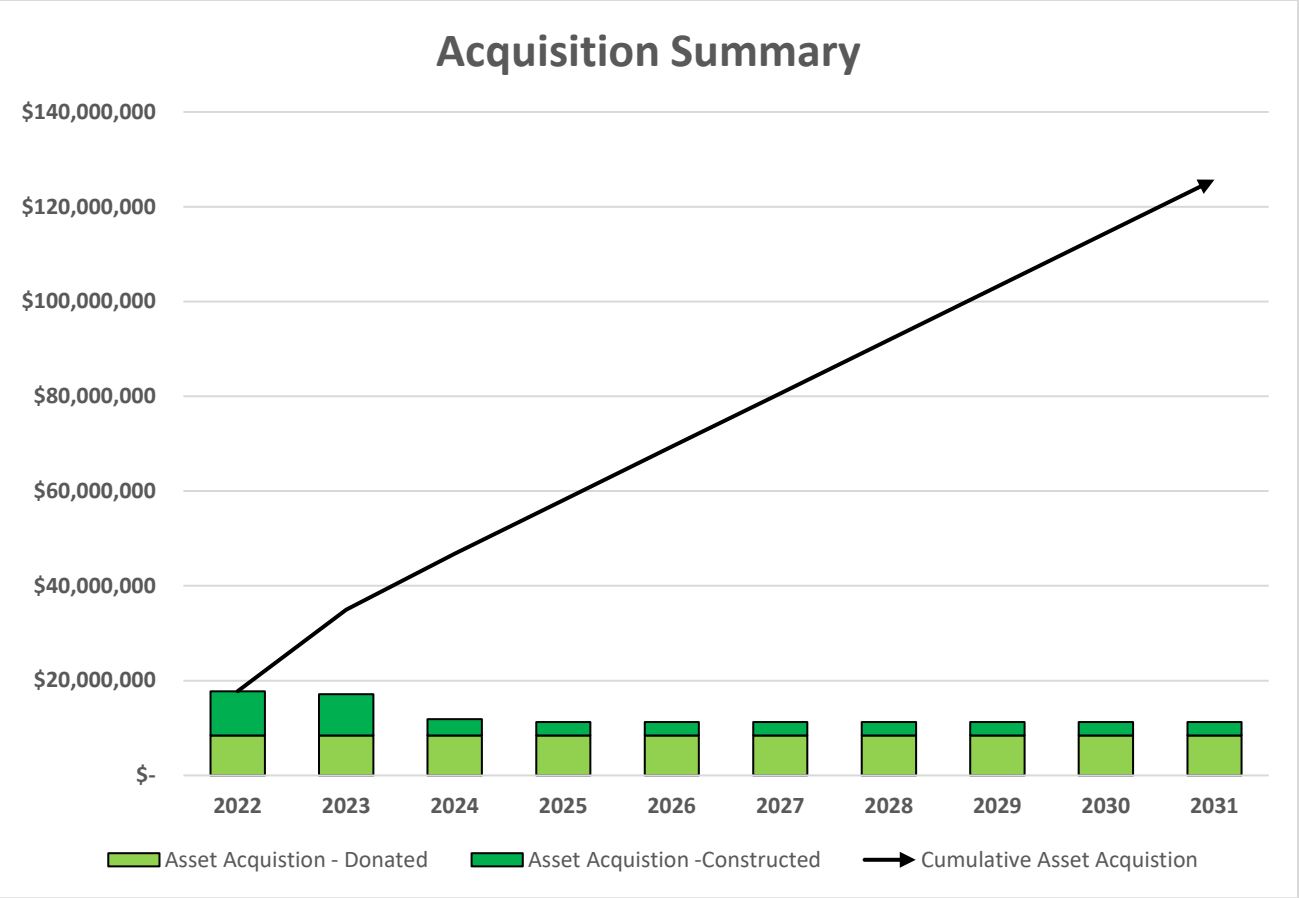
The majority of the constructed assets costs peak between 2022-2024 and after that there is only minimal construction of assets. The lack of acquired assets from 2025-2031 is due to a

lack of data and limited forecasting ability at this time and not from the likelihood of actual construction projects. As AM knowledge, practices and abilities mature within the City then in all likelihood there will be significant projects with equally significant costs that will appear within the later years of the 10-year planning horizon.

The City has sufficient budget for its planned constructed acquisitions at this time however this does not address future asset needs that may need to be constructed to ensure service levels are maintained over the long term. With competing needs for resources across the entire city there will be a need to investigate tradeoffs and design options to further optimize asset decisions and ensure intergenerational equity can be achieved.

Hamilton will continue to monitor its constructed assets annually and update the AM Plan when new information becomes available.

Figure 11: Acquisition Summary
All Figure Values Are Shown In 2021 Dollars.



When Hamilton commits to constructing new assets, the municipality must be prepared to fund future operations, maintenance and renewal costs. Hamilton must also account for future depreciation when reviewing long term sustainability. When reviewing the long-term impacts of asset acquisition, it is useful to consider the cumulative value of the acquired assets being taken

on by Hamilton. The cumulative value of all acquisition work, including assets that are constructed and contributed shown in Figure 5.4.2. above.

Over the next 10 Year planning period Hamilton will acquire approximately **$124,000,000** of Road network assets.

Hamilton has sufficient budget for its planned constructed acquisitions at this time. It will become critical to understand that through the construction or assumption of new assets, the City will be committing to funding the ongoing operations, maintenance and renewal costs which are very significant. Hamilton will need to address how to best fund these ongoing costs as well as the costs to construct the assets while seeking the highest level of service possible.

Future AM Plans will focus on improving the understanding of Whole Life Costs and funding options. However, at this time the plan is limited on those aspects. Expenditure on new assets and services will be accommodated in the long-term financial plan but only to the extent that there is available funding.

2.2.2 Operations and Maintenance Plan

Operations include all regular activities to provide services. Daily, weekly, seasonal and annual activities are undertaken by staff to ensure the assets perform within acceptable parameters and to monitor the condition of the assets for safety and regulatory reasons. Examples of typical operational activities include snow clearing, street sweeping, road patrol, grading/dust control, sign or road inspections, utility costs and the necessary staffing resources to perform these activities.

Some of the major operational investments over the next 10 years include:

- **$45 million** allocated for support from Engineering Services Division
- **$7.2 million** allocated for Geotechnical Investigation Program
- **$11.9 million** allocated for Vision Zero operational initiatives

Maintenance should be viewed as the ongoing management of deterioration. The purpose of planned maintenance is to ensure that the correct interventions are applied to assets in a proactive manner and to ensure it reaches its intended useful life. Maintenance does not significantly extend the useful life of the asset but allows assets to reach their intended useful life by returning the assets to a desired condition.

Examples of typical maintenance activities include pothole repairs, surface treatments, crack sealing, signal repairs, equipment repairs along with appropriate staffing and material resources required to perform these activities.

Major maintenance projects the City plans to continuously manage over the next 10 years include:

- **$17.5 million** allocated for asphalt repair as part of the LINC rehabilitation
- **$27.9 million** allocated for Arterial Asset Preservation Program
- **$26 million** allocated for asphalt preventative maintenance & improvement

Proactively planning maintenance significantly reduces the occurrence of reactive maintenance which is always linked to a higher risk to human safety and higher financial costs. The City needs to plan and properly fund its maintenance to ensure the transportation network is reliable and can achieve the desired level of service.

Major investments in road maintenance over the planning horizon are costly but necessary to ensuring roads can achieve their intended useful life. Below is a table of major planned maintenance for **2022 – 2024.**

Table 14:	**Major Maintenance Projects**	
YEAR	**2022-2024 PLANNED MAJOR MAINTENANCE PROJECTS**	**BUDGET (M)**
2022	Sections of Scenic Drive and on Concession Street	$10
	Asphalt preventative program	$2.3
	Strathearne – Mohawk to Chateau Crt.	$1.9
	Clairmont Access – Inverness to Main Street.	$2.5
	Other Maintenance Projects	$16
2023	Asphalt preventative program	$2.5
	Sections of Upper Wentworth	$2.1
	Clairmont Access – Inverness to Main Street.	$2.5
	Other Maintenance Projects	$8.8
2024	Asphalt repair – Section of the LINC	$2.0
	Sections of Strathearne	$3.3
	Various Roads (Pinelands, Teal, Greensfield)	$2.7
	Other Maintenance Projects	$15.8

From **2025 – 2031** the City will invest an additional **$340.1 million** for various projects across the City. These investments for maintenance are intended to allow these assts to reach their estimated service life and minimize reactive maintenance costs. It should be acknowledged that these forecasted costs do not yet fully include the recommended works that need to be undertaken to ensure the entire inventory of assets will achieve their desired service lives and level of service.

Deferred maintenance (i.e. works that are identified for maintenance activities but unable to be completed due to available resources) will be included in the infrastructure risk management plan in future iterations once those works have been identified and prioritized.

The major lifecycle activities per asset with their accompanying 2021 costs (if known) are shown below in Table 15.

Table 15: Operation And Maintenance Summary

ASSET	LIFECYCLE STAGE	LIFECYCLE ACTIVITY	FREQUENCY	2021 COST	UNIT
Road Pavement	Maintenance	Repair	Ad Hoc/Per MMS	$1,100,000	per year
	Operation	Patrol	Per MMS	$692,000	per year
	Operation	Snow Clearing	Per MMS/Council LOS	$22,200,000	per year
	Operation	Sweeping	Ad Hoc/Council LOS	$2,100,000	per year
	Maintenance	Pothole Repair	Per MMS	$2,955,000	per year
	Maintenance	Crack Sealing	Ad Hoc	$100,000	per year
	Maintenance	Surface Treatment	Ad Hoc	$1,590,000	per year
	Maintenance	Bonded Wearing Course	Ad Hoc	$1,590,000	per year
	Maintenance	Ditching	Ad Hoc	$618,000	per year
	Maintenance	Culvert Rehabilitation (<3M)	Ad Hoc	$724,000	per year
	Maintenance	CB Cleaning	Once every 3 years, and as required	$752,000	per year
	Maintenance	Shoulder Rehabilitation	Ad Hoc	$158,000	per year
	Operation	Pavement Marking Inspection	Annual	Unknown	

Table 15: Operation And Maintenance Summary					
ASSET	**LIFECYCLE STAGE**	**LIFECYCLE ACTIVITY**	**FREQUENCY**	**2021 COST**	**UNIT**
Bicycle Lane	Operation	Snow Removal	Per MMS	Not tracked separate from road pavement	
	Operation	Sweeping	Ad Hoc/Council LOS	Not tracked separate from road pavement	
	Maintenance	Pothole Repair	Per MMS	Not tracked separate from road pavement	
	Maintenance	Crack Repair	Ad Hoc	Not tracked separate from road pavement	
	Maintenance	Barrier Repair	Ad Hoc	Not tracked separate from road pavement	
	Operation	Signal Inspection	18 months	Not tracked separate from road pavement	
	Maintenance	Signal Repair	Ad Hoc	Not tracked separate from road pavement	
	Maintenance	Sign Repair	18 months	Not tracked separate from road pavement	
	Operation	Sign Inspection	Ad Hoc	Not tracked separate from road pavement	
	Operation	Lane Inspection	Ad Hoc	Not tracked separate from	

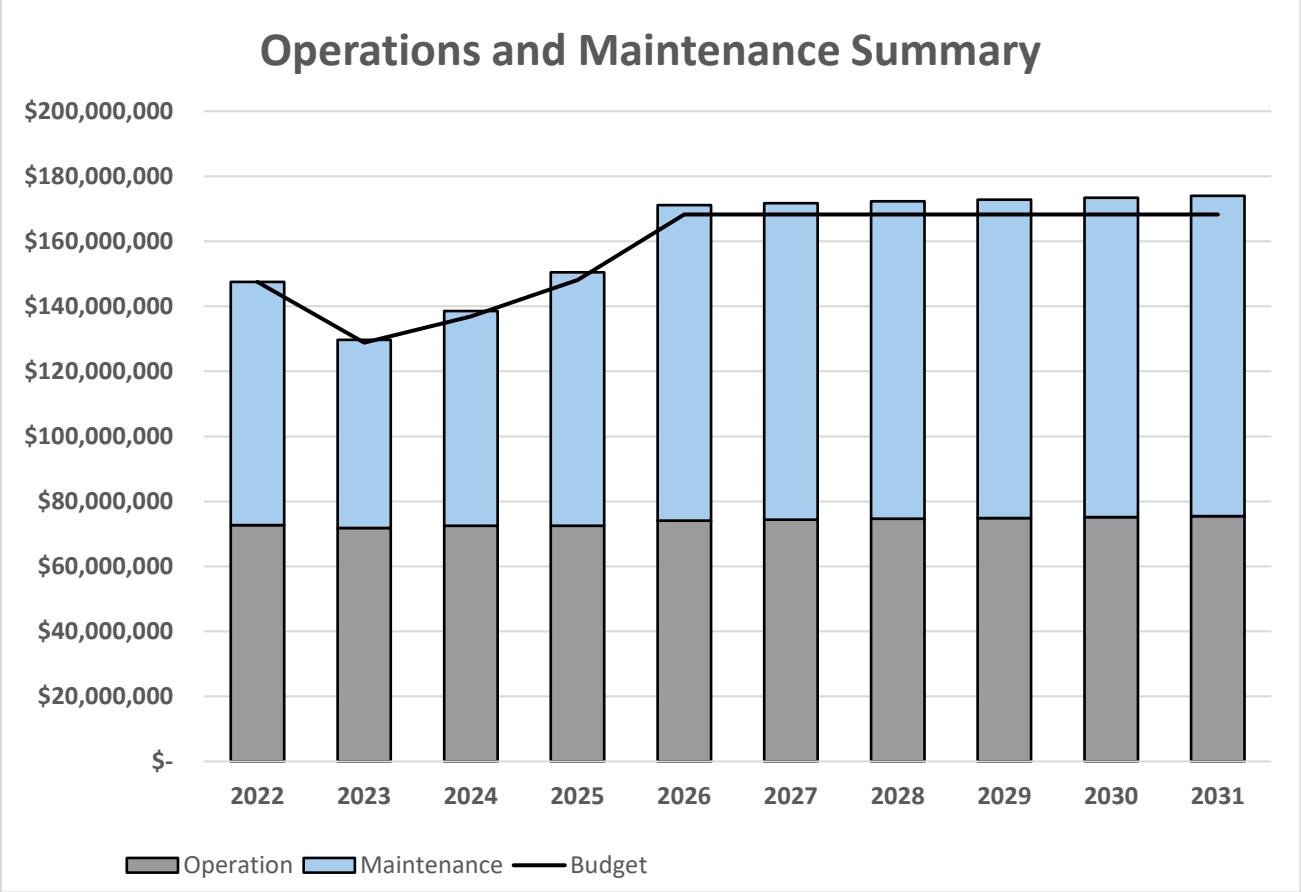
Table 15: Operation And Maintenance Summary					
ASSET	**LIFECYCLE STAGE**	**LIFECYCLE ACTIVITY**	**FREQUENCY**	**2021 COST**	**UNIT**
				road pavement	
Sidewalk	Operation	Snow Clearing	Per MMS / Council LOS	$1,955,000	per year
	Operation	Inspection	Annually	$80,000	per year
	Maintenance	General Repair	Per MMS / Ad Hoc	$6,100,000	per year
Guide Rail	Maintenance	Repair	Ad Hoc	$400,000	per year
Signalized Intersection	Operation	Inspection	Annually	$170,400	per year
	Maintenance	Repair	Ad Hoc	$1,507,000	per year
Luminaires	Maintenance	HPS Re-lamping	Annual	$37,500	per year
	Maintenance	MH Re-lamping	3 year cycle	$60,000	per cycle
	Maintenance	Arm Maintenance/Rewires	Annual	$30,000	per year
	Operation	Energy	Annual	$3,300,000	per year
	Operation	Night Patrol	Annual	$12,250	per year
Streetlight Poles	Maintenance	MVA Replacements	annual	$100,000	per year
	Maintenance	Painting & Straightening	annual	$30,000	per year
Dynamic Speed Signs	Operation	Installation / Removal	Monthly	$157,000	Per year
Traffic Sign	Operations	Inspection	Annually	$230,000	Per year
Pedestrian Crossover	Operations	Inspection	Annually	Not tracked separately	

Table 15: Operation And Maintenance Summary					
ASSET	**LIFECYCLE STAGE**	**LIFECYCLE ACTIVITY**	**FREQUENCY**	**2021 COST**	**UNIT**
				from traffic signals	
Noise Wall & Fencing	Maintenance	Repair	Ad Hoc	$80,000	Per year

Assessment and priority of reactive maintenance is undertaken by staff using experience and judgement.

Forecast operations and maintenance costs vary in relation to the total value of the asset registry. When additional assets are acquired, the future operations and maintenance costs are forecast to increase. When assets are disposed of the forecast operation and maintenance costs are reduced. Figure 12 shows the forecast operations and maintenance costs relative to the proposed operations and maintenance Planned Budget.

Figure 12: Operations and Maintenance Summary
All Figure Values Are Shown In 2021 Dollars.



The forecast costs include all costs from both the capital and operating budget. Asset managment focuses on how taxpayer or ratepayer dollars are invested by lifecycle activities and not by budget allocation since both budgets contain various lifecycle activities, they must both be consolidated for the AM Plans.

The forecast of operations and maintenance costs are increasing steadily over time and it is clear, the City has insufficient budget to achieve all of the works required to ensure that assets will be able to achieve their estimated service life at the desired level of service. It is anticipated that at the current budget levels there will be insufficient budget to address all operating and maintenance needs over the 10-year planning horizon. The graph above illustrates that without increased funding or changes to lifecycle activities there is a significant shortage of funding which will lead to:

- Higher cost reactive maintenance;
- Possible reduction to the availability of the assets;
- Impacts to private property; and,
- Increased financial and reputational risk

This shortfall is primarily due to the significant number of assets that are donated through subdivision agreements annually. Adding additional assets over time significantly impacts the operational and maintenance resources required to sustain the expected or mandatory level of service. It should be noted that a significant amount of operational and maintenance expenditures are mandatory due to legislative requirements and cannot simply be avoided or deferred.

As the City continues to develop condition profiles and necessary works are identified based on their condition, it is anticipated this operation and maintenance forecasts will increase significantly. Where maintenance budget allocations will result in a lesser level of service, the service consequences and risks have been identified and are highlighted in the Risk Section 2.6. Future iterations of this plan will provide a more thorough analysis of operations and maintenance costs including types of expenditures for training, mandatory certifications, insurance, staffing costs and requirements, equipment and maintenance activities.

2.2.3 Renewal Plan

Renewal is major works which does not increase the assets design capacity but restores, rehabilitates, replaces, or renews an existing asset to its original service potential. Works over and above restoring an asset to original service potential is considered to be an acquisition resulting in additional future operations and maintenance costs

Asset renewals are typically undertaken to either ensure the assets reliability or quality will meet the service requirements set out by the City. Renewal projects are often triggered by service quality failure and can often be prioritized by those that have the highest consequence of failure, have high usage, have high operational and maintenance costs and other deciding factors.

The typical useful lives of assets used to develop projected asset renewal forecasts are shown in Table 16 and are based on estimated design life for this iteration. Future iterations of the plan

will focus on the Lifecycle approach to ESL which can vary greatly from design life. Asset useful lives were last reviewed in 2022 however they will be reviewed annually until their accuracy reflects the City's current practices.

Table 16: Useful Lives of Assets

ASSET (SUB)CATEGORY	USEFUL LIFE (YEARS)
Road Pavement	35
Sidewalk	50
Bicycle Lanes	35
Noise Walls & Fencing	50
Signs	15
Streetlight Pole	50
Streetlight Luminaire	20
Signalized Intersection	20
Pedestrian Crossover (PXO)	15
Guide Rails	30
Vehicles	9.5

The estimates for renewals in this AM Plan were based on the register method which utilizes the data from the City's asset registry to analyse all available lifecycle information and then determine the optimal timing for renewals.

RENEWAL RANKING CRITERIA

Asset renewal is typically undertaken to either:

- Ensure the reliability of the existing infrastructure to deliver the service it was constructed to facilitate (e.g. replacing a bridge that has a load limit), or
- To ensure the infrastructure is of sufficient quality to meet the service requirements (e.g. condition of a culvert).[1]

[1] IPWEA, 2015, IIMM, Sec 3.4.4, p 3|91.

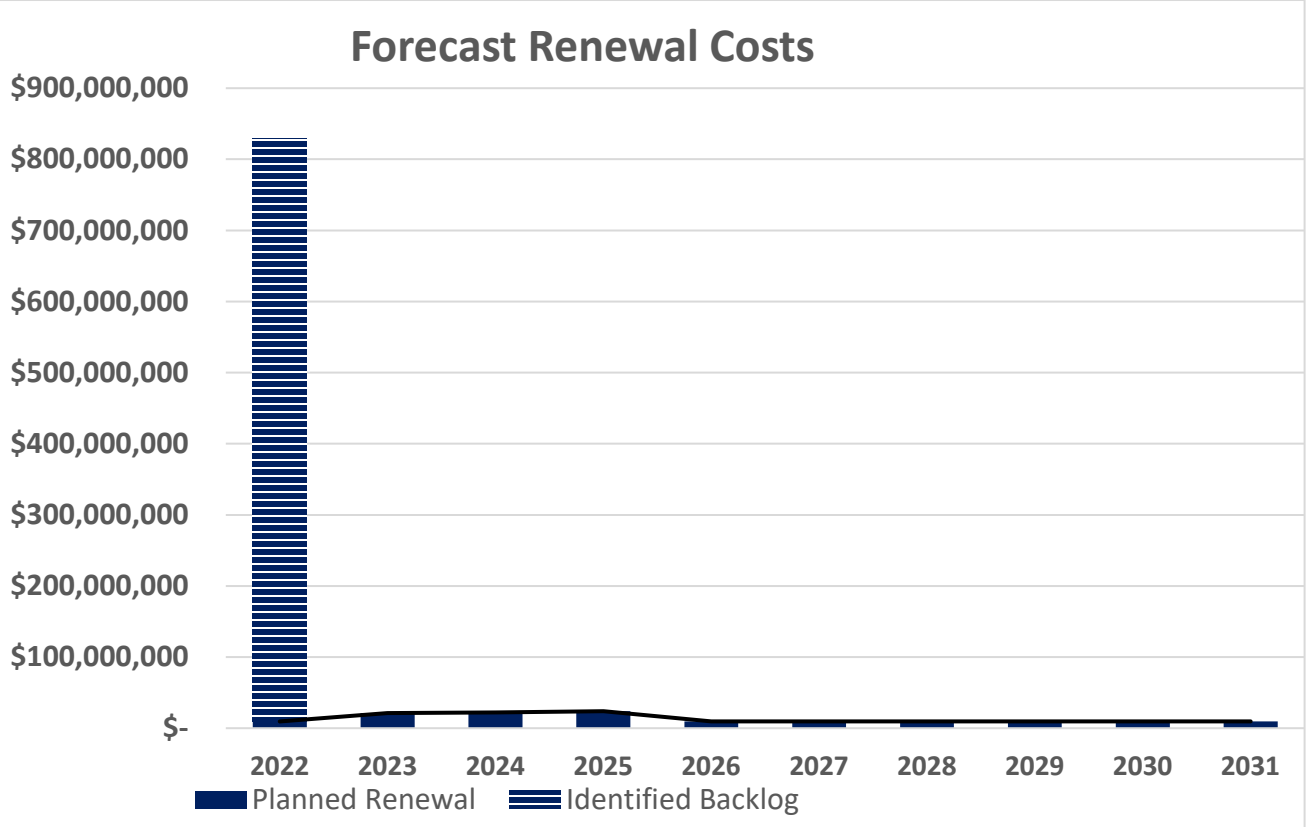
It is possible to prioritize renewals by identifying assets or asset groups that:

- Have a high consequence of failure,
- Have high use and subsequent impact on users would be significant,
- Have higher than expected operational or maintenance costs, and
- Have potential to reduce life cycle costs by replacement with a modern equivalent asset that would provide the equivalent service.[2]

SUMMARY OF FUTURE RENEWAL COSTS

Forecast renewal costs are projected to increase over time if the asset stock increases. The forecast costs associated with renewals are shown relative to the proposed renewal budget in Figure 13.

Figure 13: Forecast Renewal Costs
All Figure Values Are Shown In 2021 Dollars.



The significant amount highlighted in 2022 represents the cumulative backlog of deferred work needed to be completed that has been either identified through its current estimated condition or age per Table 6 when condition was not available. This back log represents nearly

[2] Based on IPWEA, 2015, IIMM, Sec 3.4.5, p 3|97.

$820,000,000 of deferred works that have accumulated over multiple decades and for and have created a significant backlog of necessary works.

Deferred renewals (assets identified for renewal and not funded) are included and identified within the risk management plan. Prioritization of these projects will need to be funded and managed over time to ensure renewal occurs at the optimal time.

There is sufficient budget to support the planned projects only. Without additional funding the backlog will remain and continue to grow as future projects outside of the 10-year planning horizon continue to move forward into the 10-year scope. Continued deferrals of projects will lead to significantly higher operational and maintenance costs and will affect the availability of services in the future.

The expected renewal works over the 10-year planning horizon include **$9.75 million** dollars in **2022** for road sections such as Marion Street and Dundas Street as well as **$1 million** for sidewalk renewals across the City. In **2023** the City will invest **$3.3 million** to renew Arvin Avenue as well as **$5.7 million** renewing sections of Barton Street, **$3.5 million** for select sections of Cannon Street and **$1 million** on sidewalk renewals. **2024** will see the City invest **$4.4 million** to renew Scenic Drive from Chateau Court to Upper Paradise Road, **$4.5 million** for sections of Mohawk Road, streetlights as well as sections of roads along Mohawk Road.

Deferring renewals create risks of higher financial costs, decreased availability, and decreased satisfaction with asset performance. Ultimately, continuously deferring renewals works ensures Hamilton will not achieve intergenerational equality. If Hamilton continues to push out necessary renewals, there is a high risk that future generations will be unable to maintain the level of service the customers currently enjoy. It will burden future generations with significant costs that inevitably they will be unable to sustain.

Properly funded and timely renewals will ensure the assets perform as expected and it is recommended to continue to analyze asset renewals based on criticality and availability of funds for future AM Plans.

2.2.4 Disposal Plan

Disposal includes any activity associated with the disposal of a decommissioned asset including sale, demolition or relocation. At the time of writing this AM Plan, there were no road assets identified for disposal.

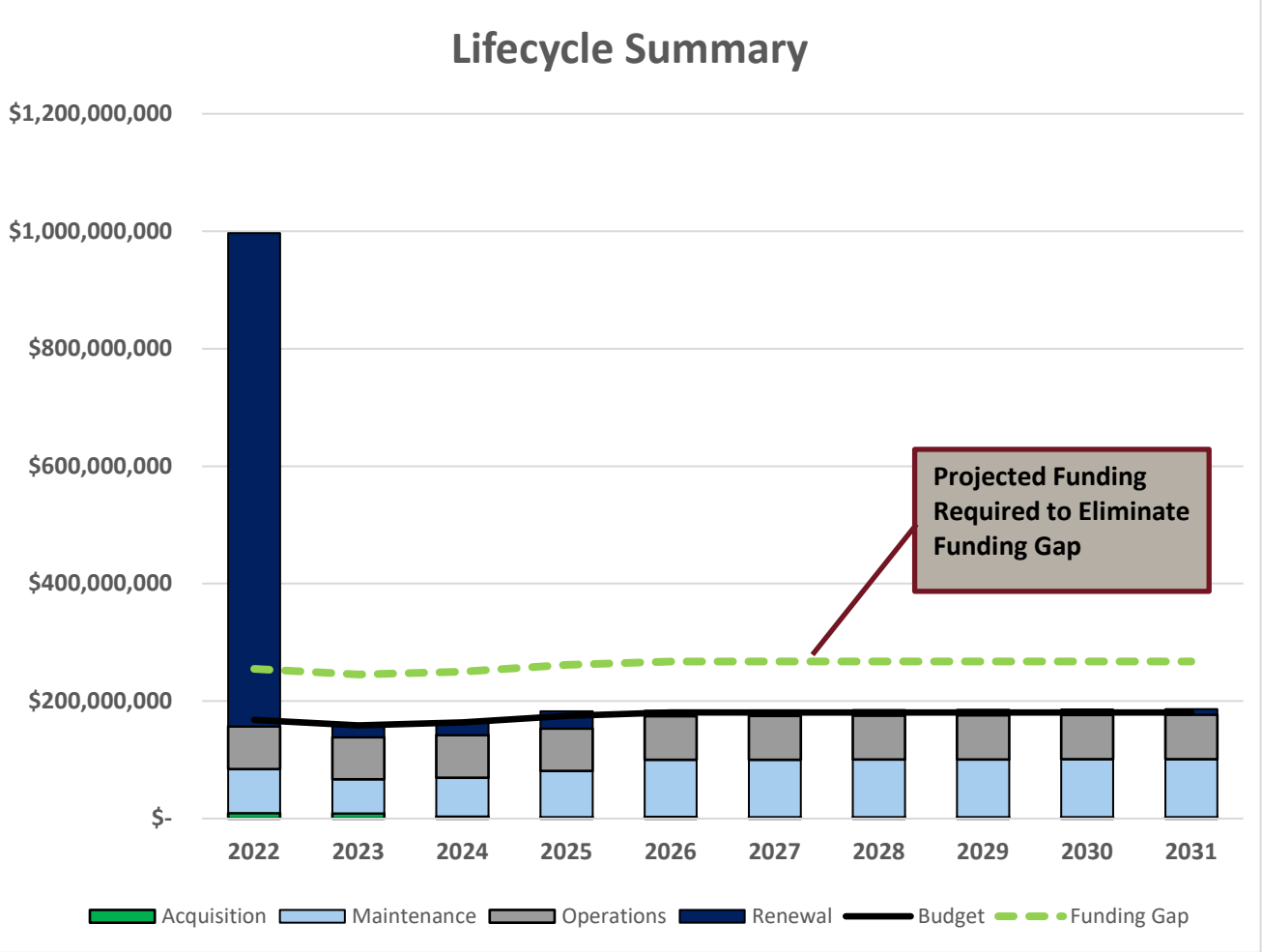
At this time the City does not separate its disposal costs and activities and combines them with its renewal planning. This has been identified as a continuous improvement and will be separated out for the next iteration for the AM Plan.

SUMMARY OF ASSET FORECAST COSTS

The financial projections from this asset plan are shown in Figure 14. These projections include forecast costs for acquisition, operation, maintenance, renewal, and disposal. These forecast costs are shown relative to the proposed budget.

The bars in the graphs represent the forecast costs needed to minimize the life cycle costs associated with the service provision. The proposed budget line indicates the estimate of available funding. The gap between the forecast work and the proposed budget is the basis of the discussion on achieving balance between costs, levels of service and risk to achieve the best value outcome.

Figure 14: All Figure Values Are Shown In 2021 Dollars.



There is sufficient budget to address most of the planned operational and maintenance activities for the planning period. However, with the assumption of assets and their increased costs over time then there may be impacts to the service itself. Without some adjustment to available funds or other lifecycle management decisions there will be insufficient budget to address all planned lifecycle activities.

Hamilton currently has insufficient budget to address the large backlog of renewal work projected by the plan over the 10 year horizon When deferring of renewals occurs Hamilton runs the risk of higher cost reactive maintenance, service interruptions, decreased satisfaction, harm to its reputation along with other risk costs such as legal fees. Deferring renewals is not the optimal

recommendation and Hamilton would benefit from seeking out long term financing strategies to enable a more rapid renewal plan.

Without sufficient funding the City has little option but to defer these necessary lifecycle activities. Deferring important lifecycle activities is never recommended. The City will benefit from allocating sufficient resources to developing its long-term financial plan to ensure that over time the City can fully fund the necessary lifecycle activities. Funding these activities helps to ensure the assets are compliant, safe and effectively deliver the service the customers need and desire.

Renewing at a greater rate and increasing major maintenance projects would allow Hamilton to mitigate ever decreasing road conditions proactively. With over 6,400 km's of roads to manage it is imperative that Hamilton optimize its renewal and major maintenance planning so that over time, high cost reactive maintenance will be avoided or deferred to a later date.

The lack of funding allocated for the backlog of renewals and the necessary lifecycle activities creates an additional issue which is intergenerational equity. Each year the City defers necessary lifecycle activities it pushes the ever-increasing financial burden on to future generations. It is imperative the City begin addressing the lack of consistent and necessary funding to ensure that intergenerational equity will be achieved. Over time, allocating sufficient funding on a consistent basis ensures that future generations will be able to enjoy the same standards being enjoyed today.

Over time the City will continue to improve its lifecycle data, and this will allow for informed choices as how best to mitigate those impacts and how to address the funding gap itself. This gap in funding future plans will be refined over the next 3 years and improve the confidence and accuracy of the forecasts

2.3 MANDATORY O.REG. 588/17 LEVELS OF SERVICE

As previously mentioned, the City is developing this AM Plan in accordance with O.Reg. 588/17 requirements. Table 4 in O.Reg. 588/17 identifies specific metrics that must be reported in the AM Plan for road assets for the purposes of comparison amongst municipalities. These metrics are required to be reported, and so they have been separated from the municipally defined levels of service described in Section 2.4. These metrics are divided into community and technical levels of service.

2.3.1 O.Reg. 588/17 Community Levels of Service

The community levels of service that the City is required to report on in order to meet the provincial level of service requirement are reported below:

Scope
Description, which may include maps, of the road network in the municipality and its level of connectivity.

Different areas of the City have different levels of connectivity. The City is made up of six (6) communities: Hamilton, Stoney Creek, Dundas, Glanbrook, Ancaster, Flamborough. All communities have major routes connecting these communities from east to west and north to south.

EAST AND WEST

In the lower City, Main Street/Queenston Road and King Street are one way streets which become two lanes at various points and are 2 to 5 lanes wide and traverse the entire lower City providing the major connectivity route from east to west for vehicular traffic connecting Dundas to Stoney Creek. In Stoney Creek, Main Street East connects to Queenston Road at Strathearne Avenue, and in Dundas, Main Street West branches out to Osler Drive. In the west end of the City, these connect the City to the 403 East Bound and West Bound, and in the east end of the City, these connect to the Red Hill Valley Parkway allowing access to the Queen Elizabeth Way (QEW). This is the route that the future Light-Rail Transit (LRT) will be following, which will be elaborated on when Transit is added to this AM Plan. The 403 East and West connect to Hwy 6 North and South which connect the other communities to Flamborough and Glanbrook.

In addition, the Cannon Street cycle track provides the east to west urban bicycle connectivity in the lower City from Britannia Avenue to York Boulevard to Plains Road West.

In the upper City, the Lincoln M. Alexander Parkway (The Linc) provides the major east to west connection connecting upper Stoney Creek to Ancaster. The westbound Linc connects the City to the 403 East and 403 West, and the eastbound route eventually becomes the Red Hill Valley Pkwy which connects the north and south at the east end of the City also providing access to the QEW. The 403 East and West connect to Hwy 6 which connects the other communities to Flamborough and Glanbrook.

NORTH AND SOUTH

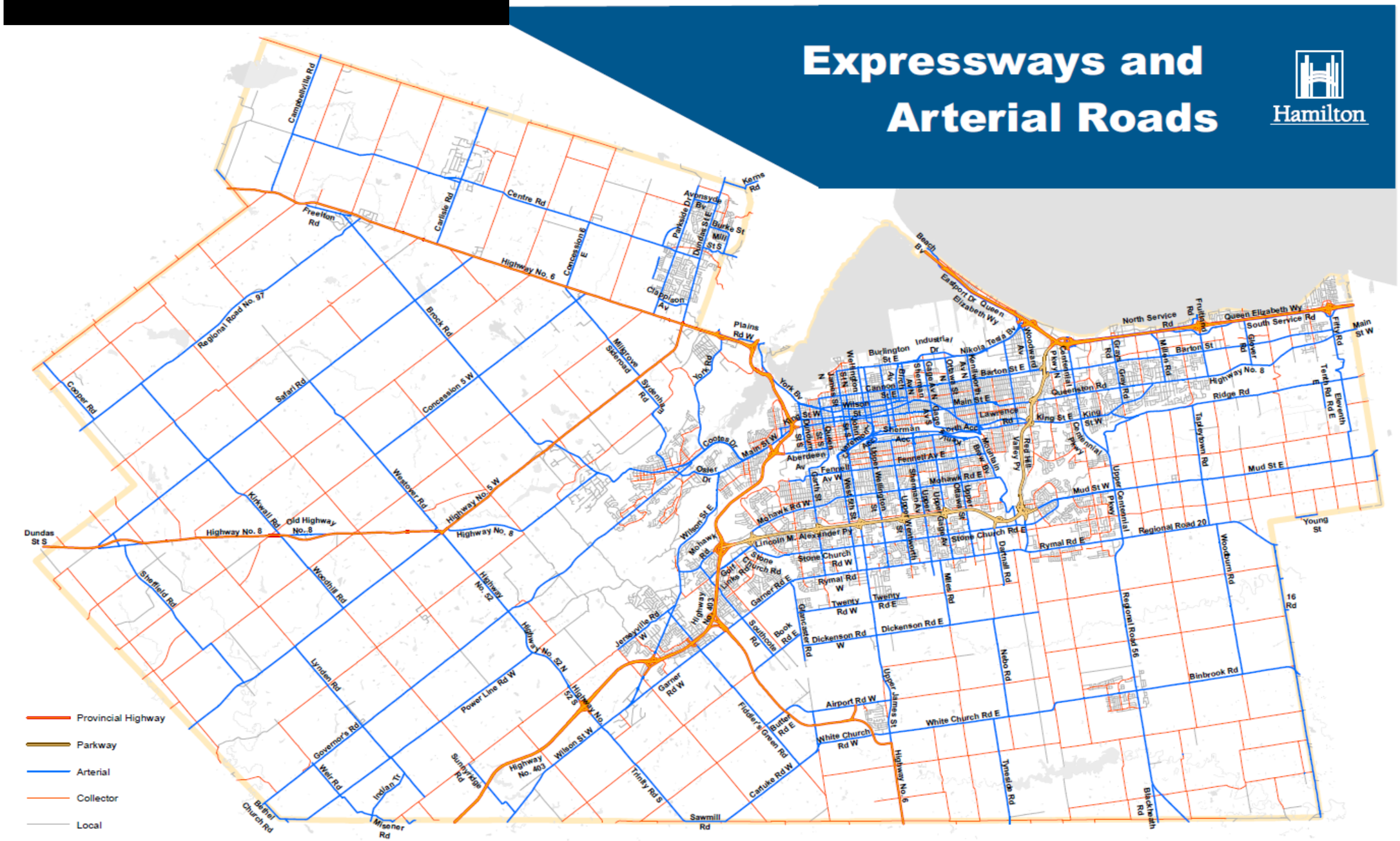
In terms of north and south connections, the City has a unique connectivity issue in the form of the Niagara escarpment which creates a major elevation change separating Hamilton into the lower City and the upper City (sometimes referred to as the Mountain). There are eighteen (18) accesses including major ones such as Claremont, Sherman, Kenilworth, Jolly Cut, Queen Street, and Wilson Street that allow the lower City access to the upper City. Closures associated with these accesses can create major connectivity issues City wide. Unfortunately, since the escarpment itself requires maintenance activities to reduce or treat erosion of the escarpment face, which may create road closure situations, this creates a unique connectivity problem requiring planning and sometimes affecting the level of service. The Niagara escarpment is considered a natural asset, which falls under the non-core asset umbrella, and will be addressed in future plans.

The Red Hill Valley Parkway also provides a north to south connection on the east end of the City connecting upper Stoney Creek to lower Stoney Creek.

In addition, the Bay Street cycle track provides the north to south urban bicycle connectivity in the lower City, and the new Keddy Access Trail along the Claremont Access provides the major urban bike route connectivity from upper City to the lower City.

Figure 15 shows the Hamilton road network colour coded by functional class.

Figure 15: Expressways and Arterial Roads



Quality

1. Description or images that illustrate the different levels of road class pavement condition.

Table 17 shows photos taken from the last inspection of each road functional class for each OCI condition range. It is evident from this table that different functional road classes may output different OCI scores even when the pavement visually appears to be in different condition. For instance, an expressway segment may output a similar OCI value to an Urban Local road segment even if the expressway visually appears to have less surface distresses. This is because vehicles travel faster over the expressway which emphasizes the Roughness Index described in Section 2.1.3.2. In addition, it is evident that there are no photos of the expressway functional class in Very Poor condition and this is because the City does not allow these segments to reach Very Poor condition because they are considered a critical asset, and they are kept in average Good condition.

Table 17: OCI Ranges and Condition Descriptions

Condition Category	OCI Range	Condition Description	Functional Class							
			Expressway	Urban Arterial Major	Urban Arterial Minor	Urban Collector	Urban Local	Rural Arterial	Rural Collector	Rural Local
Very Good	86 - 100	The road is well maintained, in good condition, new or recently rehabilitated.								
		Road generally shows little to no surface distresses, with good rideability.	OCI =100	OCI = 91	OCI = 93	OCI = 88	OCI = 91	OCI = 88	OCI = 91	OCI =87
			Candidate for localized preventive maintenace							
Good	71 – 85	The road is adequate. It is acceptable and generally within the mid-stage of its expected service life.								
		Road generally shows some low severity surface distresses, with fair to good rideability.	OCI = 78	OCI = 76	OCI = 81	OCI = 77	OCI = 76	OCI = 81	OCI = 83	OCI = 77
			Candidate for generalized preventative maintenance							
Fair	56 – 70	The road requires attention. It shows signs of deterioration and some elements exhibit deficiencies.								
		Road generally shows low to moderate surface distresses, with poor to good rideability.	OCI = 67	OCI = 65	OCI = 64	OCI = 63	OCI = 62	OCI = 66	OCI = 65	OCI = 63
			Candidate for minor rehabilitation							
Poor	41 – 55	There is an increasing potential for the road condition to affect the service it provides. The road is approaching the end of its service life, the condition is below the standard and a large portion of the road surface exhibits significant deterioration.								
		Road generally shows moderate to severe surface distresses over a large portion of the surface area, with	OCI = 54	OCI = 49	OCI = 49	OCI = 50	OCI = 45	OCI = 51	OCI = 48	OCI = 48
			Candidate for major rehabilitation							
Very Poor	0 – 40	The road is near or beyond its expected service life and shows widespread signs of advanced deterioration.	N/A							
		Road generally shows moderate to severe distresses over most of the surface area, with very poor to fair	OCI = N/A	OCI =36	OCI = 35	OCI = 31	OCI = 23	OCI = 38	OCI = 36	OCI = 30
			Candiate for reconstruction							

2.3.2 O.Reg. 588/17 Technical Levels of Service

In addition, there are technical levels of service that the City is required to report on in order to meet the provincial level of service requirement. These quantitative metrics are reported below in Table 18. A map of the road network by OCI is shown in Figure 3 located in Section 2.1.3.3.

Table 18: Technical Levels of Service

SERVICE ATTRIBUTE	TECHNICAL LEVELS OF SERVICE	MEASURE
Scope	Number of lane-kilometres of each of arterial roads, collector roads and local roads as a proportion of square kilometres of land area of the municipality.	Expressway: 0.1 Arterial: 1.4 Collector: 1.8 Local: 2.4
Quality	1. For paved roads in the municipality, the average pavement condition index value.	OCI: 63.78 (Fair)
	2. For unpaved roads in the municipality, the average surface condition (e.g. excellent, good, fair or poor).	OCI: 47.46 (Poor)

2.4 MUNICIPALLY DEFINED LEVELS OF SERVICE

Levels of service are measures for what the City provides to its customers, residents, and visitors. Service levels are best described as the link between providing the outcomes the community desires, and the way that the City provides those services. Service levels defined in three ways, customer values, customer levels of service and technical levels of service which are outlined in this section. An explanation for how these were developed is provided in Section 7.5 of the AMP Overview.

2.4.1 Customer Values

Customer values are what the customer can expect from their tax dollar in "customer speak" which outline what is important to the customer, whether they see value in the service, and the expected trend based on the 10-year budget. These values are used to develop the level of service statements.

To develop these customer values, as stated in the AMP Overview, a Customer Engagement Survey was released in January 2022 on the Engage Hamilton platform. The survey received 279 submissions and contained 24 questions related to road asset service delivery. The survey results can be found in Appendix "A" in the AMP Overview. While these surveys were used to establish customer values and customer performance measures, it's important to note that the number of survey respondents only represents a small portion of the population. The future intent is to release this survey on a regular basis to measure the trends in customer satisfaction and ensure that the City is providing the agreed level of service as well as to improve the marketing strategy to receive more responses. This has been noted in Table 29 in the continuous improvement section.

Table 19: Customer Values

SERVICE OBJECTIVE:			
CUSTOMER VALUES	**CUSTOMER SATISFACTION MEASURE**	**CURRENT FEEDBACK**	**EXPECTED TREND BASED ON PLANNED BUDGET (10-YEAR HORIZON)**
Road, sidewalk, and bicycle lanes should be kept in good condition.	Annual Customer Engagement Survey	Survey respondents feel the roads are in Poor to Very Poor condition and sidewalks and bicycle lanes are in Fair condition.	Slight decrease

Table 19: Customer Values			
SERVICE OBJECTIVE:			
CUSTOMER VALUES	**CUSTOMER SATISFACTION MEASURE**	**CURRENT FEEDBACK**	**EXPECTED TREND BASED ON PLANNED BUDGET (10-YEAR HORIZON)**
Any road deficiencies should be repaired quickly.	Annual Customer Engagement Survey	Many survey respondents felt potholes should be repaired more quickly.	Maintain
Roads and sidewalks should be cleared quickly after a snowfall.	Annual Customer Engagement Survey	Many survey respondents felt roads were cleared in a reasonable amount of time after a snow event.	Maintain
Roads should feel safe to travel on.	Annual Customer Engagement Survey	Most survey respondents felt safe using the roads in a motor vehicle but did not feel safe cycling in urban areas.	Maintain
Good connectivity should be maintained.	Annual Customer Engagement Survey	Many survey respondents are affected during an escarpment access closure (36%). The City should continue proactively completing preventative maintenance on the escarpment face.	Slight decrease

2.4.2 Customer Levels of Service

Ultimately customer performance measures are the measures that the City will use to assess whether it is delivering the level of service the customers desire. Customer level of service measurements relate to how the customer feels about the City's road linear assets in terms of their quality, reliability, accessibility, responsiveness, sustainability and over course, their cost. The City will continue to measure these customer levels of service to ensure a clear understanding on how the customers feel about the services and the value for their tax dollars.

The Customer Levels of Service are considered in terms of:

Condition	How good is the service? What is the condition or quality of the service?
Function	Is it suitable for its intended purpose? Is it the right service?
Capacity/Use	Is the service over or under used? Do we need more or less of these assets?

In Table 20 under each of the service measures types (Condition, Function, Capacity/Use) there is a summary of the performance measure being used, the current performance, and the expected performance based on the current budget allocation.

Table 20: Customer Levels of Service					
TYPE OF MEASURE	**LEVEL OF SERVICE STATEMENT**	**SOURCE**	**PERFORMANCE MEASURE**	**CURRENT PERFORMANCE**	**EXPECTED TREND BASED ON PLANNED BUDGET**
Condition	Ensure transportation network assets are kept in safe and acceptable repair, and issues are resolved in a timely manner.	Annual Customer Engagement Survey	53.9% of survey respondents rate road surface condition as Poor or Very Poor.	Unsatisfied	Maintain
			62.6% of survey respondents rate the surface condition of sidewalks as Fair.	Unsatisfied	Maintain
			53.1% of survey respondents rate the surface condition of bicycle lanes as Fair.	Unsatisfied	Maintain
			78.5% of survey respondents feel safe using the roads in a motorized vehicle	Fairly Satisfied	Maintain
			58.1% of survey respondents felt unsafe cycling on urban roads	Unsatisfied	Maintain
			78.8% of survey respondents felt safe using sidewalks or multi-use trails	Fairly Satisfied	Maintain
			56.6% of survey respondents thought potholes were not fixed in a reasonable amount of time	Unsatisfied	Maintain
			Confidence levels	Medium	
		Road Inspection Report	Average condition of expressway	Good	Maintain
			Average overall road network condition	Fair	Slight Decrease
			Confidence levels	Medium	
		Annual Sidewalk Inspection	Average sidewalk condition	Good	Maintain
			Confidence levels	Medium	
Function	Ensure good traffic flow and connectivity are maintained.	Annual Customer Engagement Survey	70.7% of survey respondents felt traffic congestion was acceptable or neutral in the City	Satisfied	Slight Decrease
			79.2% of survey respondents felt there is ample notice for road work or were neutral	Satisfied	Maintain
			57.4% of survey respondents thought roads were plowed in a reasonable amount of time after a significant snow event	Satisfied	Maintain
			Confidence levels	Medium	
Capacity	Ensure transportation network is providing and encouraging multi-modal transportation	Annual Customer Engagement Survey	94.6% of survey respondents drive in a motorized vehicle at least once a week	Very Frequently	Unknown
			8.1% of survey respondents cycle through rural areas at least once a week	Infrequently	Unknown
			20.2% of survey respondents cycle through urban areas at least once a week	Somewhat Infrequently	Unknown
			80.6% of survey respondents walk using sidewalks or multi-use trails at least once a week	Frequently	Unknown
			Confidence levels	Medium	

2.4.1 Technical Levels of Service

Technical levels of service are operational or technical measures of performance, which measure how the City plans to achieve the desired customer outcomes and demonstrate effective performance, compliance and management. The metrics should demonstrate how the City delivers its services in alignment with its customer values; and should be viewed as possible levers to impact and influence the Customer Levels of Service. The City will measure specific lifecycle activities to demonstrate how the City is performing on delivering the desired level of service as well as to influence how customer perceive the services they receive from the assets.

Technical service measures are linked to the activities and annual budgets covering Acquisition, Operation, Maintenance, and Renewal. Asset owners and managers create, implement and control technical service levels to influence the service outcomes.[3]

Table 21 shows the activities expected to be provided under the current 10 year Planned Budget allocation and the Forecast activity requirements being recommended in this AM Plan.

Table 21: Technical Levels of Service

LIFECYCLE ACTIVITY	LEVEL OF SERVICE STATEMENT	ACTIVITY MEASURE	CURRENT PERFORMANCE*	TARGET**	RECOMMENDED PERFORMANCE ***
Operation	Ensure transportation network assets are kept in safe and acceptable repair, and issues are resolved in a timely manner.	% road patrol compliance to MMS standards	95.05%	100%	100%
		% of Monthly Street Light Inspections Completed to Council Approved Standards	100%	100%	100%
		% of sidewalk inspections completed annually	100%	100%	100%
		# Signal Inspections Completed to MMS Standards	672	550	100%
		# of Annual Signal Conflict Monitor Inspections Completed to MMS Standards	399	250	100%
		% of sign inspections completed on time to MMS Standards	85.42%	100%	100%

[3] IPWEA, 2015, IIMM, p 2|28.

Table 21: Technical Levels of Service					
LIFECYCLE ACTIVITY	**LEVEL OF SERVICE STATEMENT**	**ACTIVITY MEASURE**	**CURRENT PERFORMANCE***	**TARGET****	**RECOMMENDED PERFORMANCE *****
		# 2021 on-road fatal injury traffic collisions	16	0	0
		Budget	$72,263,296		$73,497,640
Maintenance*	Ensure transportation network assets are kept in safe and acceptable repair, and issues are resolved in a timely manner.	Overall Road OCI	63.78	65	65
		% potholes repaired to MMS standards	95.92%	100%	100%
		% of pavement surface cracks repaired to MMS standards	100%	100%	100%
		% of sidewalks repaired to MMS standards	100%	100%	100%
		% of shoulder drop offs repaired to MMS standards	100%	100%	100%
		% of surface discontinuities repaired to MMS standards	95.83%	100%	100%
		% Signal Deficiencies Addressed to MMS Standards	98.36%	100%	100%
		% signs repaired on time to MMS Standards	74.96%	100%	100%
		Budget	**$84,807,304**		**$87,275,976**

Note: * Current activities related to Planned Budget.
**** Current internal target**
***** Expected performance related to forecast lifecycle costs.**

It is important to monitor the service levels regularly as circumstances can and do change. Current performance is based on existing resource provision and work efficiencies. It is acknowledged changing circumstances such as technology and customer priorities will change over time.

At this time, the technical levels of service focus on operations and maintenance lifecycle activities and are typically measuring how the City is performing in accordance with the MMS. It is evident that the City is typically meeting these standards with a few exceptions. However, customer preferences and expectations do not always match minimum legislated requirements, which is discussed in Section 2.4.2.

A future continuous improvement item is to add additional level of service metrics which measure technical levels of service at other lifecycle stages (i.e. acquisition, renewal, disposal), as well as ensure the performance measurements are in line with customer values. In addition, as the City's asset management maturity increases, and with the implementation of the Enterprise Asset Management (EAM) project mentioned in the AMP Overview, the City will also have more capacity to measure additional metrics.

In addition, the Alleyway Management Strategy adopted in November 2019 explains that the City currently delivers a low level of service (LOS) for these assets which involves not including alleyways in capital renewals and only completing operational activities on a reactive basis. The Strategy also identified medium and high LOS scenarios which have broken down the lifecycle management strategies by a defined hierarchy class based on usage. The City has continued to deliver alleyways on a low LOS scenario, but should investigate improving the LOS for the A and B hierarchy classes defined in the Strategy as well as incorporate technical levels of service for this asset if it is adopted. This has been identified as a continuous improvement item in Table 29.

2.4.2 Level of Service Summary

At this time, the City's technical metrics for the road linear service area is based on the MMS. It is evident per Table 21 that the City is typically meeting these standards with a few exceptions. However, customer preferences and expectations do not always match minimum legislated requirements, which is discussed below.

CONDITION

Based on Table 20 above, survey respondents were unsatisfied with the condition of the road network, even though at this time the City is currently maintaining the road network at a Fair condition per the current level of service, and is only one point (64 out of 65) away from achieving the technical target. This shows there is currently a mismatch between the City and the customer as to the level of service that is expected with respect to road condition. Although, it is important to note that as discussed in Section 2.1.3.2, the City is revising the OCI model, and these condition values may change.

Furthermore, per Figure 3, many sections on the main arterial roads on Main and King St which act as the main connection between the lower City from west to east and east to west are shown to be in poor to very poor condition. The City typically maintains expressways at an average Good condition because they are major transportation routes, and so the City should investigate identifying these major arterial roads as critical assets and increasing the minimum average condition for these roads.

In addition, it was shown that many survey respondents have concerns with the number of potholes they experience while driving on the road network and think they should be repaired faster. Although the City repaired approximately 96% of potholes per the MMS size and depth within the required timeframe based on the functional class, it appears that customers may expect a higher level of service than the minimum requirement.

Therefore, it is imperative that the City investigate improving the level of service with respect to road condition and maintenance, and provide customers with the necessary information on the additional cost and resources required to improve the level of service, and whether they are interested in paying more for this higher level of service.

FUNCTION

Based on Table 20, most survey respondents felt that roads were cleared in a reasonable amount of time after a snowfall. However, survey respondents who felt unsafe using sidewalks or multi-use trails with or without a mobility device cited an operational issue as the reason why they felt unsafe. Although the City has recently contracted out a service to clear sidewalks downtown, at this time, most sidewalks are not cleared by the City and are cleared by property owners.

Therefore, expectations and the monetary amount required to increase this level of service must be communicated clearly to the public, and technical metrics associated with snow clearing should be added to the balanced scorecard.

CAPACITY

Based on Table 20, many survey respondents felt unsafe cycling on urban roads and the most common reason was infrastructure design. Since the City is working towards improving the active transportation network, and survey respondents feel unsafe due to infrastructure design, the usage of bicycle lanes likely could be increased if more safety features were added.

The City should also investigate providing separation in areas where it does not exist, and increasing cycling route connectivity, and communicating the monetary amount required to increase this level of service. In addition, technical metrics associated with bicycle lanes should be added to the balanced scorecard to ensure the City levels of service are matching customer values.

2.5 FUTURE DEMAND

The ability for the City to be able to predict future demand for services enables the City to plan ahead and identify the best way of meeting the current demand while being responsive to inevitable changes in demand. Demand will inevitably change over time and will impact the needs and desires of the community in terms of the quantity of services (assumption of assets due to development growth) and types of service required (alternative pavement options or traffic calming devices)

Demand is defined as the desire customers have for assets or services and that they are willing to pay for. These desires are for either new assets/services or current assets.

Since demand is not yet an extensive requirement in O.Reg. 588/17 for the July 1st, 2022 deadline, this section is not as robust as some other sections of the report, but is an obligation for the report by July 1st, 2025, and will be expanded on in future iterations of the report.

2.5.1 Demand Drivers

For the road linear service area, the key drivers are population change, climate change, and customer preferences and expectations. A future continuous improvement item is to identify additional demand drivers.

In addition, the City is moving towards a “Complete Streets” model, and is currently developing a Complete, Livable, Better (CLB) Streets Design Manual, which will likely affect future demand. The intent is to build streets that are safer for all road users including pedestrians, cyclists, transit users, drivers, and people of all ages and abilities.

2.5.2 Demand Forecasts

The high level present position and projections for demand drivers that may impact future service delivery and use of assets have been identified and documented in Table 22. At this time, specific projections have not been calculated and will be updated in the 2025 AM Plan per the timelines stated in the AMP Overview. In addition, growth projections have been shown in the AMP Overview.

2.5.3 Demand Impact and Demand Management Plan

The impact of demand drivers that may affect future service delivery and use of assets are shown in Table 22.

Demand for new services will be managed through a combination of managing existing assets, upgrading of existing assets and providing new assets to meet demand and demand management. Demand management practices can include non-asset solutions, insuring against risks, and managing failures.

Opportunities identified to date for demand management are shown in Table 22. Climate change adaptation is included in Table 23. Further opportunities will be developed in future revisions of this AM Plan, as identified in Table 29 in the continuous improvement section.

Table 22: Demand Management Plan

DEMAND DRIVER	CURRENT POSITION	PROJECTION	IMPACT ON SERVICES	DEMAND MANAGEMENT PLAN
Customer Preferences and Expectations	The City is responsible for sidewalks along transit routes and city owned property.	The level of service may increase in the future.	Increased costs to deliver service. May require more staffing.	Service may be contracted out, property taxes would reflect new levels of service.
Regulations	Status quo soil management regulations.	Soil management regulation changes Jan 2022	Increased costs, Increased oversight, Possible fines	Staff training; Implement tracking tool; Hire new staff to track soil; Repurpose soil

2.5.4 Asset Programs to Meet Demand

The new assets required to meet demand may be acquired, donated or constructed. At this time there approximately 100 km of road planned over the 10-year planning horizon. Acquiring new assets would commit the City to ongoing operations, maintenance and renewal costs for the period that the service provided from the assets is required.

2.5.5 Climate Change Adaptation

The impacts of climate change may have a significant impact on the assets we manage and the services they provide. In the context of the Asset Management Planning process climate change can be considered as both a future demand and a risk.

Climate change impacts on assets will vary depending on the location and the type of services provided, as will the way in which those impacts are responded to and managed.[4]

As a minimum the City must consider how to manage our existing assets given potential climate change impacts for our region.

[4] IPWEA Practice Note 12.1 Climate Change Impacts on the Useful Life of Infrastructure

Risk and opportunities identified to date are shown in Table 23. This is a continuous process and will be updated in the 2025 AM Plan per the timelines outlined in the AMP Overview.

Table 23: Managing the Impact of Climate Change on Assets and Services

CLIMATE CHANGE DESCRIPTION	PROJECTED CHANGE	POTENTIAL IMPACT ON ASSETS AND SERVICES	MANAGEMENT
GHG Emissions	Increased GHG emissions due to increased demand for transportation.	Increased GHG emissions contribute to climate change.	Investigate opportunities to change the modal split; Invest in sustainable transportation so that the increase in transportation demand will not be predominately single use occupancy vehicles.
Storm Events	Increased frequency of large storm events which may overwhelm the stormwater system.	Delays in transportation network may occur if road asset is flooded in large storm event.	Prioritize replacements; Planning for sufficient funds to implement plans; Model stormwater network to ensure capacity; Investigate problem areas.

Additionally, the way in which the City constructs new assets should recognize that there is opportunity to build in resilience to climate change impacts. Building resilience can have the following benefits:

- Assets will withstand the impacts of climate change;
- Services can be sustained; and
- Assets that can endure may potentially lower the lifecycle cost and reduce their carbon footprint

Table 24 summarizes some asset climate change resilience projects the City is currently pursuing.

Table 24: Building Asset Resilience to Climate Change			
PROJECT	**PROJECT DESCRIPTION**	**CLIMATE CHANGE IMPACT**	**BUILD RESILIENCE IN NEW WORKS**
LAMP Project	LED street lighting retrofit, 38,874 street lights converted to LED	Older light bulbs lead to wasted energy which increases GHG emissions.	To increase the number of new and existing high-performance state-of-the-art assets that improve energy efficiency and adapt to a changing climate
Complete Liveable Better Streets Manual	Following the approval of the City-Wide Transportation Master Plan (2017) prepare the Complete Liveable Better Streets Manual for designing and construction of future roadways in the City.	Continued emphasis on single occupancy vehicles will lead to an increase in GHG emissions.	To change the modal split and investigate strategies so that more trips are taken by active and sustainable transportation than single use occupancy vehicles
Roadway Redesign	Through various construction projects - existing roadways are designed to prioritize multi-modal transportation such as transit, cycling and walking.		
Vision Zero	Vision Zero encourages active modes of transportation by addressing road safety for vulnerable road users of all ages and abilities – reducing Hamilton's contribution to climate change and encouraging a healthy lifestyle.		
Bicycle Boulevard (Neighbourhood Greenways) Program	To upgrade existing bicycle infrastructure with improved protection measures for cycle tracks and at intersections at strategic locations.		
Hatt Street Bikeway	Implementation of bike lanes on Hatt Street from John Street to Baldwin Street		

Table 24: Building Asset Resilience to Climate Change			
PROJECT	**PROJECT DESCRIPTION**	**CLIMATE CHANGE IMPACT**	**BUILD RESILIENCE IN NEW WORKS**
Frid Street Extension - Chatham to Longwood	New 3 lane roadway with bike lanes. 2019 DC Background Study Item -124 - 95% Growth		
On Street Bike Facilities	To create and improve cycling infrastructure through the implementation and maintenance of on and off road paths, lanes, signed routes and cycling infrastructure.		
Hunter Street Cycle Track	Install planned bicycle lanes with barrier curb (MacNab to Catharine), related signal works, and resurfacing (James to Catharine).		
Bike Lane Maintenance	Maintenance of bike lanes with in the City to (total of 206.5km of bikes lanes) to encourage the use of non vehicular transportation which reduces GHG emission		
Continued emphasis on single occupancy vehicles will lead to an increase in GHG emissions.	To change the modal split and investigate strategies so that more trips are taken by active and sustainable transportation than single use occupancy vehicles		

The impact of climate change on assets is a new and complex discussion and further opportunities will be developed in future revisions of this AM Plan.

2.6 RISK MANAGEMENT

The purpose of infrastructure risk management is to document the findings and recommendations resulting from the periodic identification, assessment and treatment of risks associated with providing services from infrastructure, using the fundamentals of International Standard ISO 31000:2018 Risk management – Principles and guidelines.

Risk Management is defined in ISO 31000:2018 as: 'coordinated activities to direct and control with regard to risk'[5].

The City is developing and implementing a formalized risk assessment process to identify risks associated with service delivery and to implement proactive strategies to mitigate risk to tolerable levels. The risk assessment process identifies credible risks associated with service delivery and will identify risks that will result in loss or reduction in service, personal injury, environmental impacts, a 'financial shock', reputational impacts, or other consequences.

The risk assessment process identifies credible risks, the likelihood of those risks occurring, and the consequences should the event occur. The City utilizes two risk assessment methods to determine risk along with subject matter expert opinion to inform the prioritization. Hamilton is further developing its risk assessment maturity with the inclusion of a risk rating, evaluation of the risks and development of a risk treatment plan for those risks that are deemed to be non-acceptable in the next iteration of the plan.

2.6.1 Critical Assets

Critical assets are defined as those which have a high consequence of failure causing significant loss or reduction of service. Critical assets have been identified and along with their typical failure mode, and the impact on service delivery, are summarized in Table 25. Failure modes may include physical failure, collapse or essential service interruption.

Table 25: Critical Assets

CRITICAL ASSET(S)	FAILURE MODE	IMPACT
Expressway/Major Arterial Roads	Physical Failure, Essential Service Interruption	Injury Service Interruption Financial Reputational
Signalized Intersections	Essential Service Interruption	Service Interruption Financial Injury

[5] ISO 31000:2009, p 2

By identifying critical assets and failure modes an organization can ensure that investigative activities, condition inspection programs, maintenance and capital expenditure plans are targeted at critical assets.

2.6.2 Risk Assessment

The risk assessment process identifies credible risks, the likelihood of the risk event occurring, the consequences should the event occur, development of a risk rating, evaluation of the risk and development of a risk treatment plan for non-acceptable risks.

An assessment of risks associated with service delivery will identify risks that will result in loss or reduction in service, personal injury, environmental impacts, a 'financial shock', reputational impacts, or other consequences.

Critical risks are those assessed with 'Very High' (requiring immediate corrective action) and 'High' (requiring corrective action) risk ratings identified in the Infrastructure Risk Management Plan. The residual risk and treatment costs of implementing the selected treatment plan is shown in Table 6.2. It is essential that these critical risks and costs are reported to management. Additional risks will be developed in future iterations of the plan and is identified in Table 29 in the Continuous Improvement Section the plan.

Table 26: Risks And Treatment Plans
Note * The Residual Risk Is The Risk Remaining After The Selected Risk Treatment Plan Is Implemented.

SERVICE OR ASSET AT RISK	WHAT CAN HAPPEN	RISK RATING	RISK TREATMENT PLAN	RESIDUAL RISK *	TREATMENT COSTS
Road Pavement Line Markings	Faded, not repainted	High	Regular line marking inspections. Hire contractor for line marking services.	Low	$100,000
Solar Powered PXOs	Batteries can drain out of charge, beacons do not light up due to undersized solar panel.	Very High	Install large solar panels & batteries or hard-wire to electrical grid power source.	Medium / Low	$4,500/Unit
Regulatory / Warning Signs	Sign can go missing and left unreplaced	High	Continue road patrol. Create location based asset registry. Report monitored daily	Low	$50,000

2.6.3 Infrastructure Resilience Approach

The resilience of our critical infrastructure is vital to the ongoing provision of services to customers. To adapt to changing conditions the City needs to understand its capacity to 'withstand a given level of stress or demand', and to respond to possible disruptions to ensure continuity of service. An example would be how the transportation network operates during times of peak usage (3 busiest days of the year). We do not currently measure our resilience in service delivery and this will be included in the next iteration of the AM Plan.

Resilience covers the capacity of the City to withstand any service disruptions, act appropriately and effectively in a crisis, absorb shocks and disturbances as well as adapting to ever changing conditions. Resilience is built on aspects such as response and recovery planning, financial capacity, climate change risk, assessment and crisis leadership.

2.6.4 Service and Risk Trade-Offs

The decisions made in AM Plans are based on the objective to achieve the optimum benefits from the available resources. At this time, the City does not have sufficient data to present risks and tradeoffs. This information will be presented in the 2025 AM Plans regarding proposed levels of service per the timelines outlined in the AMP Overview.

2.7 FINANCIAL SUMMARY

This section contains the financial requirements resulting from the information presented in the previous sections of this AM Plan. Effective asset and financial management will enable the City to ensure its Transportation network provides the appropriate level of service for the City to achieve its goals and objectives. Reporting to stakeholders on service and financial performance ensures the City is transparently fulfilling its stewardship accountabilities.

Long-Term financial planning (LTFP) is critical for the City to ensure the networks lifecycle activities such as renewals, operations, maintenance, and acquisitions can happen at the optimal time. The City is under increasing pressure to meet the wants and needs of its customer while keeping costs at an affordable level and maintaining its financial sustainability.

Without funding asset activities properly for its Transportation network; the City will have difficult choices to make in the future which will include options such as higher costs reactive maintenance and operational costs, reduction of service and potential reputational damage.

Aligning the LTFP with the AM Plan is critical to ensure the all of the networks needs will be met while the City is finalizing a clear financial strategy with measurable financial targets. The financial projections will be improved as the discussion on desired levels of service and asset performance matures.

2.7.1 Sustainability of Service Delivery

There are two key indicators of sustainable service delivery that are considered within the AM Plan for this service area. The two indicators are the:

- asset renewal funding ratio (proposed renewal budget for the next 10 years / forecast renewal costs for next 10 years); and,
- medium term forecast costs/proposed budget (over 10 years of the planning period).

ASSET RENEWAL FUNDING RATIO

Asset Renewal Funding Ratio[6] **13.84%**

The Asset Renewal Funding Ratio is used to determine if the City is accommodating asset renewals in an **optimal** and **cost effective** manner from a timing perspective and relative to financial constrains, the risk the City is prepared to accept and targeted service levels it wishes to maintain. The target renewal funding ratio should be ideally between **90% - 110%** over the entire planning period. A low indicator result generally indicates that service levels are achievable however the expenditures are below this level because the City is reluctant to fund the necessary work or prefers to maintain low levels of debt.

Over the next ten (10) years the City expects to have **13.84%** of the funds required for the optimal renewal of assets. This is a significantly low number and should be addressed through this plan

[6] AIFMM, 2015, Version 1.0, Financial Sustainability Indicator 3, Sec 2.6, p 9.

in the next iteration. By only having sufficient funding to renew **13.84%** of the required assets in the appropriate timing it will inevitably require difficult trade off choices that could include:

- A significant reduction of the level of service and availability of assets;
- Increased complaints and reduced customer satisfaction;
- Substantially increased reactive maintenance and renewal costs; and,
- Damage to the City's reputation and risk of fines or legal costs.

The lack of renewal resources will be addressed in future AM Plan's while aligning the plan to the LTFP. This will allow staff to develop options and long-term strategies to address the renewal rate. The City will review its renewal allocations once the entire inventory has been confirmed and amalgamated.

The Asset Renewal Funding Ratio is an important indicator and illustrates that over the next 10 years we expect to have **13.84 %** of the funds required for the optimal renewal of assets.

MEDIUM TERM – 10 YEAR FINANCIAL PLANNING PERIOD

This AM Plan identifies the forecast operations, maintenance and renewal costs required to provide an agreed level of service to the community over a 10 year period. This provides input into 10 year financial and funding plans aimed at providing the required services in a sustainable manner.

This forecast work can be compared to the proposed budget over the first 10 years of the planning period to identify any funding shortfall.

The forecast operations, maintenance and renewal costs over the 10 year planning period is **$257,153,344** on average per year. Over time as improved information becomes available it is anticipated to see this number increase. In future AM Plans, staff will connect the operational and maintenance needs to the forecasts, and this will result in a significantly higher cost than is outlined here.

The proposed (budget) operations, maintenance and renewal funding is **$170,496,096** on average per year giving a 10 year funding shortfall of **$86,657,240** per year or **$866,572,400** over the 10 year planning period. This indicates that **66.3%** of the forecast costs needed to provide the services documented in this AM Plan are accommodated in the proposed budget. Note, these calculations exclude acquired assets (if any).

Providing sustainable services from infrastructure requires the management of service levels, risks, forecast outlays and financing to achieve a financial indicator of approximately **1.0** for the first years of the AM Plan and ideally over the 10 year life of the Long-Term Financial Plan.

2.7.2 Forecast Costs (Outlays) For the Long-Term Financial Plan

Table 27 shows the forecast costs (outlays) required for consideration in the 10 year long-term financial plan.

Providing services in a financially sustainable manner requires a balance between the forecast outlays required to deliver the agreed service levels with the planned budget allocations in the operational and capital budget. The City will begin developing its long-term financial plan (LTFP) to incorporate both the operational and capital budget information and help align the LTFP to the AM Plan which is critical for effective asset management planning.

A gap between the forecast outlays and the amounts allocated in the financial plan indicates further work is required on reviewing service levels in the AM Plan (including possibly revising the long-term financial plan).

The City will manage the 'gap' by continuing to develop this AM Plan to provide guidance on future service levels and resources required to provide these services in consultation with the community. Options to manage the gap include reduction and closure of low use assets, increased funding allocations, reduce the expected level of service, utilize debt based funding over the long term, adjustments to lifecycle activities, improved renewals and multiple other options or combinations of options.

These options will be explored in the next AM Plan and the City will provide analysis and options for Council to consider going forward.

Table 27: Forecast Costs (Outlays) For the Long-Term Financial Plan
Forecast Costs Are Shown In 2021 Dollar Values.

YEAR	ACQUISITION	OPERATION	MAINTENANCE	RENEWAL	DISPOSAL
2022	$9,304,000	$72,686,000	$74,809,000	$839,707,968	0
2023	$8,775,000	$71,777,288	$57,922,292	$ 21,080,000	0
2024	$3,470,000	$72,531,608	$66,058,608	$ 22,310,000	0
2025	$2,870,000	$72,478,296	$77,972,296	$ 29,391,000	0
2026	$2,900,000	$74,059,984	$97,085,152	$ 9,580,000	0
2027	$2,870,000	$74,342,424	$97,367,592	$ 9,580,000	0
2028	$2,870,000	$74,624,120	$97,649,288	$ 9,580,000	0
2029	$2,870,000	$74,905,808	$97,930,976	$ 9,580,000	0
2030	$2,870,000	$75,187,496	$98,212,664	$ 9,580,000	0
2031	$2,870,000	$75,469,192	$98,494,360	$ 9,580,000	0

2.7.3 Funding Strategy

The proposed funding for assets is outlined in the City's operational budget and 10 year capital budget.

These operational and capital budgets determines how funding will be provided, whereas the AM Plan typically communicates how and when this will be spent, along with the service and risk consequences. Future iterations of the AM plan will provide service delivery options and alternatives to optimize limited financial resources.

2.7.4 Valuation Forecasts

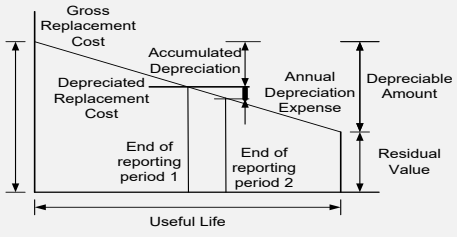
Asset values are forecast to increase as additional assets are added into service.

Additional assets will add to the operations and maintenance needs in the longer term. Additional assets will also require additional costs due to future renewals. Any additional assets will also add to future depreciation forecasts. Any disposals of assets would decrease the operations and maintenance needs in the longer term and removes the high costs renewal obligations. At this time, it is not possible to separate the disposal costs from the renewal or maintenance costs however this will be improved for the next iteration of the plan.

2.7.5 Asset Valuations

The best available estimate of the value of assets included in this AM Plan are shown below. The assets are valued at estimated replacement costs:

Replacement Cost (Current/Gross)	**$5,135,000,000**
Depreciable Amount	**$5,135,000,000**
Depreciated Replacement Cost[7]	**$3,211,000,000**
Depreciation	**$ 130,980,000**



[7] Also reported as Written Down Value, Carrying or Net Book Value.

The current replacement cost is the most common valuation approach for specialized infrastructure assets. The methodology includes establishing a comprehensive asset registry, assessing replacement costs (based on market pricing for the modern equivalent assets) and useful lives, determining the appropriate depreciation method, testing for impairments, and determining remaining useful life.

As the City matures its asset data, it is highly likely that these valuations will fluctuate significantly over the next 3 years and they should increase over time based on improved market equivalent costs

2.7.6 Key Assumptions Made in Financial Forecasts

In compiling this AM Plan, it was necessary to make some assumptions. This section details the key assumptions made in the development of this AM plan and should provide readers with an understanding of the level of confidence in the data behind the financial forecasts.

Key assumptions made in this AM Plan are:

- Operational forecasts are based on current budget allocations and are the basis for the projections for the 10-year horizon and do not address other operational needs not yet identified;
- Maintenance forecasts are based on current budget allocations and do not identify asset needs at this time. It is solely based on planned activities;
- 1.47% p.a. has been added to maintenance forecasts to accommodate for donated assets assumed over the 10-year planning horizon; and,
- 1.42 % p.a has been added to operational forecasts to accommodate for donated assets assumed over the 10-year planning horizon.

2.7.7 Forecast Reliability and Confidence

The forecast costs, proposed budgets, and valuation projections in this AM Plan are based on the best available data. For effective asset and financial management, it is critical that the information is current and accurate. Data confidence is defined in the AMP Overview.

Table 28: Data Confidence Assessment for Data Used in Am Plan

DATA	CONFIDENCE ASSESSMENT	COMMENT
Demand drivers	Low	Growth Demand Driver data is considered high confidence while other drivers require further investigation. All drivers require annual monitoring
Growth projections	Low	Population Data is of high confidence. Current growth projection will need to be vetted and improved.

Table 28: Data Confidence Assessment for Data Used in Am Plan		
DATA	**CONFIDENCE ASSESSMENT**	**COMMENT**
Acquisition forecast	Medium	Currently based on 2019 DC study and SME opinion. Improvement to the model is required and identified in the continuous improvement section of the AM Plan
Operation forecast	Low	Currently budget based and requires future improvement to ensure allocation is accurate
Maintenance forecast	Low	Currently budget based and requires future improvement to ensure allocation is accurate
Renewal forecast - Asset values	Low	Valuation will need to be reviewed as they are mixture of historical costs and future based estimates of replacement costs.
- Asset useful lives	Low	Based on SME opinion. Continuous improvement required to ensure data is vetted and ensure it aligns with Hamilton's actual practices
- Condition modelling	Medium	Mixture of assessment methods. Requires standardization along with predictable timelines for assessments
Disposal forecast	Low	Current disposal information is rolled into renewal. Continuous improvements are required to ensure accurate data is available.

The estimated confidence level for and reliability of data used in this AM Plan is considered to be a **Low -Medium** confidence level.

2.8 PLAN IMPROVEMENT AND MONITORING

2.8.1 Status of Asset Management Practices[8]

ACCOUNTING AND FINANCIAL DATA SOURCES

This AM Plan utilizes accounting and financial data. The sources of the data are:

- 2022 Capital & Operating Budgets;
- 2021 Tender Documents (various);
- Asset Management Data Collection Templates;
- Audited Financial Statements and Government Reporting (FIR, TCA etc);
- Financial Exports from internal financial systems; and,
- Historical cost and estimates of budget allocation based on SME experience.

ASSET MANAGEMENT DATA SOURCES

This AM Plan also utilizes asset management data. The sources of the data are:

- Data extracts from various city applications and management software;
- Asset Management Data Collection Templates;
- Tender documents, subdivision agreements and projected growth forecasts as well as internal reports;
- Condition assessments;
- Subject matter Expert Opinion and Anecdotal Information; and,
- Reports from the mandatory biennial inspection, operational & maintenance activities internal reports.

2.8.2 Improvement Plan

It is important that the City recognize areas of the AM Plan and planning processes that require future improvements to ensure both effective asset management and informed decision making. The tasks listed below are essential to improving the AM Plan and the City's ability to make evidence based and informed decisions. These improvements span from improved lifecycle activities, improved financial planning and to plans to physically improve the assets.

The Improvement plan table 29 below highlights proposed improvement items that will require further discussion and analysis to determine feasibility, resource requirements and alignment to current workplans. Future iterations of this AM Plan will provide updates on these improvement plans.

[8] ISO 55000 Refers to this as the Asset Management System

Table 29: Improvement Plan
***p.a – per annum**

TASK	TASK	RESPONSIBILITY	RESOURCES REQUIRED	TIMELINE
1.	Review OCI Methodology and provide recommendations for best practice.	Chief Road Official, Consultant	**$3,000** Internal staff time	**1 year** 2022
2.	Improve annual engagement survey process to optimize engagement and respondents.	CAM, TOM, Communications	**$7,500** (Annual) **$30,000** (Total) Internal staff time	**4 Years** 2022-2025
3.	Review current demand drivers and identify additional drivers to be utilized within the plan.	CAM, TOM, Economic Development, Environmental Services	**$3,000** Internal staff time	**Annually**
4.	Standardize and develop risk management knowledge along with supporting documentation.	CAM, TOM, Continuous Improvement & Quality	**$12,500** (Annual) **$25,000** (Total)	**2 Years** 2022-2023
5.	Integrate condition data collection into routine inspections for various assets such as sidewalks, bicycle lanes, traffic signs, and traffic signals.	CAM, TOM	**$10,000** (Annual) **$20,000** (Total) Internal Staff Time	**2 Years** (2022-2023)
6.	Review and verify data from various systems such as Hansen and GIS before importing into EAM.	TOM, Engineering Services	**$17,500** (Annual) **$35,000** (Total) Internal Staff Time	**2 Years** (2022-2023)
7.	Standardize condition assessment outcomes and timed deliverables for future condition assessments.	TOM, CAM, Engineering Services	**$6,000 p.a.** **$18,000** (Total) Internal Staff Time	**3 Years** (2022-2024)
8.	Review and verify functional classes for roads.	Transportation Planning, CAM	**$5,000 p.a.** **$10,000 total** Internal Staff time	**2 Years** (2022-2023)

Table 29: Improvement Plan
***p.a – per annum**

TASK	TASK	RESPONSIBILITY	RESOURCES REQUIRED	TIMELINE
9.	Revisit level of service for assumed alleyways.	Chief Road Official, TOM, CAM	**$5,000 p.a.** **$10,000 total** Internal Staff time	**2 Years** (2022-2023)
10.	Complete guide rail condition assessment.	TOM, CAM	**$150,000 p.a** **$450,000 total** Internal Staff time, tender process, consultant	**3 Years** (2022-2024)
11.	Review Balanced Scorecard reporting and ensure data and assumptions are consistent with ministry and City reporting and develop additional technical metrics.	Chief Road Official, TOM, CAM	**$5,000 p.a.** **$25,000** total Internal Staff time	**5 Years** (2022-2026)
12.	Develop a Long-Term Financial Plan to connect the budgeting process to the AM planning process.	CAM, TOM, Finance	**$15,000 p.a** **$60,000 Total** Internal Staff Time	**4 Years** (2022-2025)
13.	Improve asset replacement costs by vetting with current market prices instead of historical costs/estimates or internal models.	CAM, TOM, Finance	**$10,000 p.a.**	**Annual**
14.	Review Capital planning process and categorize projects by lifecycle activities.	CAM, TOM, Finance, Engineering Services	**$4,000 p.a.**	**Annual**
15.	Identify transportation assets in other divisions and incorporate into next AM Plan.	CAM, Chief Road Official, TOM	**$10,000 p.a.** **$30,000 Total** Internal Staff Time	**3 Years** (2022-2024)
16.	Improve process for collecting and inputting inventory data into databases.	Chief Road Official, TOM, Continuous Improvement,	**$5,000 p.a.** **$15,000 total** Internal Staff time	**3 Years** (2022-2023)

Table 29: Improvement Plan
***p.a – per annum**

TASK	TASK	RESPONSIBILITY	RESOURCES REQUIRED	TIMELINE
		Engineering Services		
17.	Separate disposal costs and renewal activities	CAM, TOM, Finance, Engineering Services	**$10,000 p.a. $30,000 Total** Internal Staff Time	**3 Years** (2022-2024)
18.	Analyze operational budget to improve AM allocations for lifecycle activities.	CAM, TOM, Finance, Engineering Services	**$10,000 p.a. $40,000 Total** Internal Staff Time	**4 Years** (2022-2025)
19.	Analyze maintenance activities to identify future needs and recommended actions.	CAM, TOM, Finance, Engineering Services	**$6,000 p.a. $24,000 Total** Internal Staff Time	**4 Years** (2022-2025)
20.	Develop Renewal forecasting prioritization to optimize resources and ensure level of services can be maintained.	CAM, TOM, Finance, Engineering Services	**$10,000 p.a. $30,000 Total** Internal Staff Time	**3 Years** (2022-2024)

2.8.3 Monitoring and Review Procedures

This AM Plan will be reviewed during the annual budget planning process and revised to show any material changes in service levels, risks, forecast costs and proposed budgets as a result of budget decisions.

The AM Plan will be reviewed and updated on a regular basis to ensure it represents the current service level, asset values, forecast operations, maintenance, renewals, acquisition and asset disposal costs and planned budgets. These forecast costs and proposed budget will be incorporated into the Long-Term Financial Plan once completed.

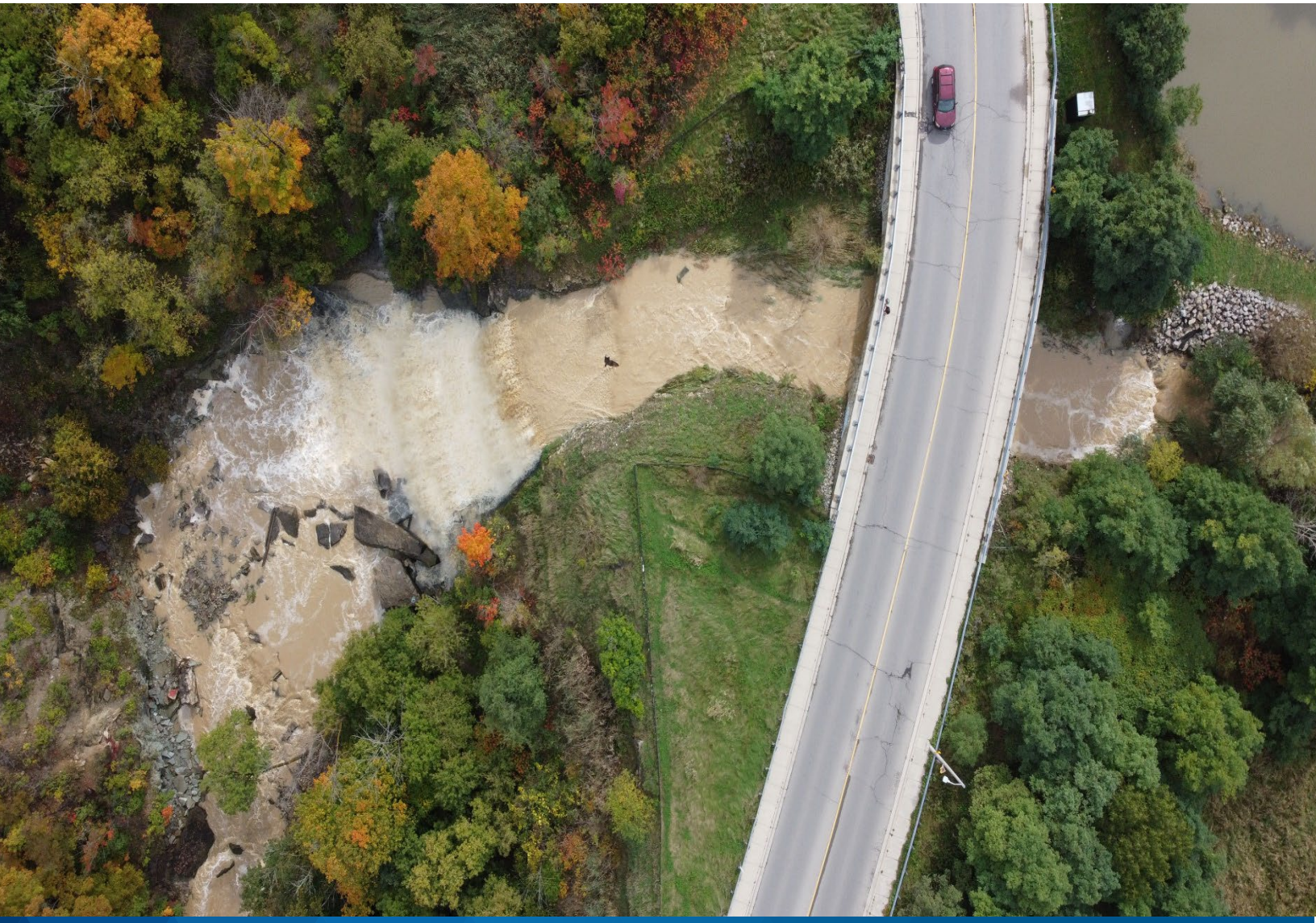
2.8.4 Performance Measures

The effectiveness of this AM Plan can be measured in the following ways:

- The degree to which the required forecast costs identified in this AM Plan are incorporated into the long-term financial plan;
- The degree to which the 1-10 year detailed works programs, budgets, business plans and corporate structures consider the 'global' works program trends provided by the AM Plan;
- The degree to which the existing and projected service levels and service consequences, risks and residual risks are incorporated into the Strategic Planning documents and associated plans; and
- The Asset Renewal Funding Ratio achieving the Organizational target (this target is often 90 – 100%).

2022

Engineered Structures Asset Management Plan



Hamilton

Engineered Structures Service Area

Description

Engineered structures are built to enable a safe, accessible and efficient transportation system for the movement of people, goods and services within the City, and include bridges, major culverts, retaining walls, and overhead sign support structures.

Replacement Value 1.5 Billion

Average Asset Condition

Did you know?

- Hamilton has over 9.6 km's of bridge decking that is part of the road network
- Every day drivers take 1.6 million trips across Hamilton's bridges and the most travelled are the expressway bridges
- Over the next ten years Hamilton will be constructing 3 new bridges

Critical Asset Summary

Critical Assets	Quantity	Replacement Cost	Average Condition	Stewardship Measures
Bridges	**166**	**$ 1.3 billion**	**Good**	All bridge are inspected **Biennially**
Culverts	**233 Major Culverts**	**$167 million**	**Good**	All culverts are inspected **Biennially**
Overhead Sign Structures	**46**	**$6.1 million**	**Good**	OSSS's are inspected on a **4-year Cycle**

Data Confidence

Very Low — Very High

Financial Facts

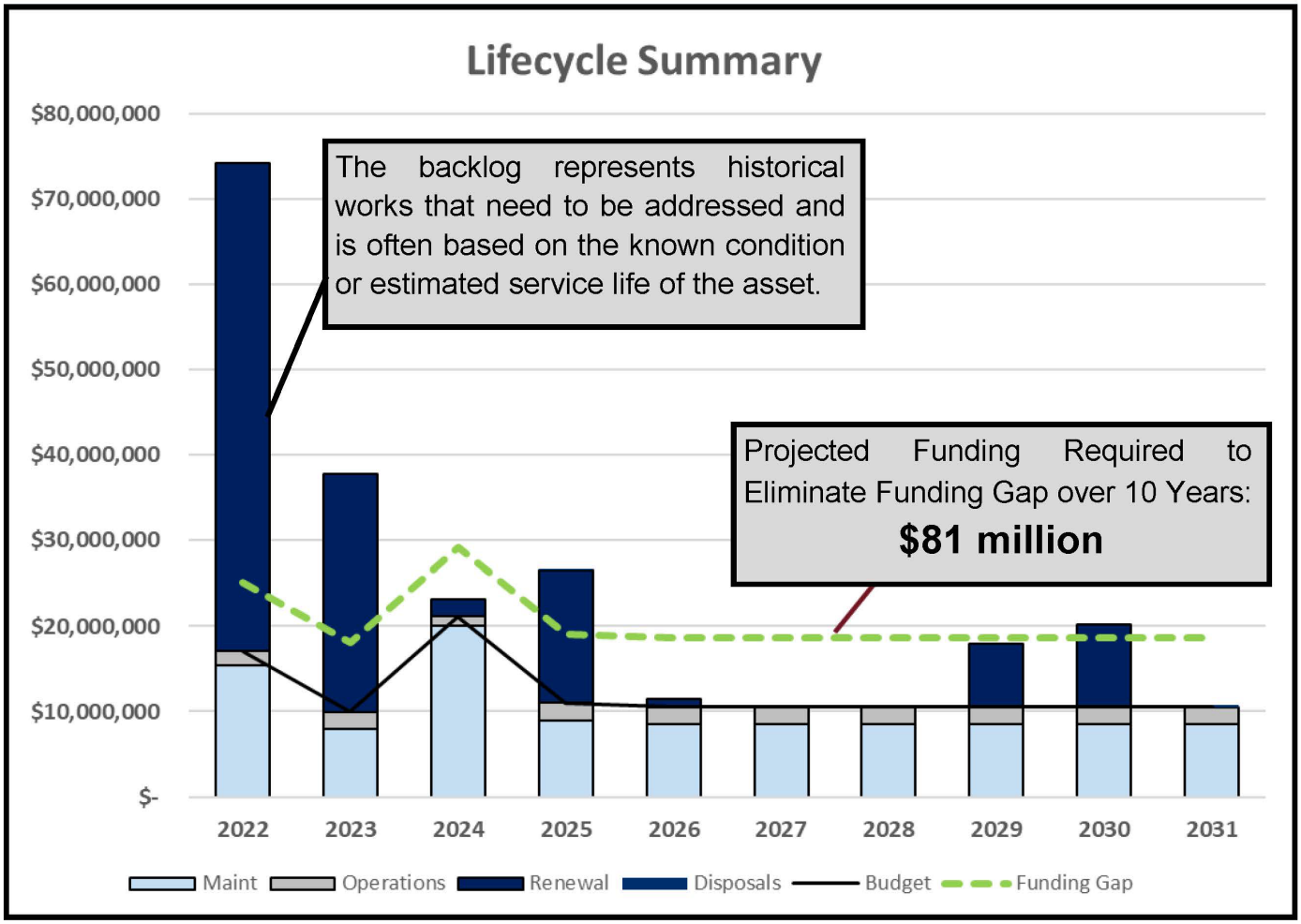
- Hamilton will invest **$122 million** to operate & maintain engineered structures over the next ten years (2022— 2031).
- Hamilton spends **$310 thousand** annually inspecting Bridge and Culverts (>3m) to ensure they are safe for travel and use.

Did you know?

- It is a Provincial obligation for Hamilton to inspect all of its bridges and culverts (>3m) biennially to ensure they are safe.
- Hamilton is disposing 9 of its substandard Overhead Sign Support Structures in 2023.

Financial Indicators

Type of Indicator	Measurement	Explanation
Asset Renewal Funding Ratio	**32.9%** (Target 90—110% on Average)	The ratio demonstrates the rate which the city renews its Engineered structure assets
10 Year O&M Forecast	**66.7%** (Target should be 100 %)	The **%** of funding allocated compared to what needs to be spent
Annual Infrastructure Gap	**$8.1 million**	The difference between what is spent and what should be spent



3.0 ENGINEERED STRUCTURES

Engineered structures are built to enable a safe, accessible and efficient transportation system for the movement of people, goods and services within the City. These assets support broader communities' benefits such as agriculture, education, healthcare, and the economy. These structures serve the various needs of the pedestrians, cyclists, emergency vehicles, agricultural equipment, commercial trucks, and commuter vehicles. These assets have been acquired by the City over multiple decades and they vary greatly in design, construction material, expected life and purpose.

Engineered structure assets include a variety of structures , and for this iteration of the AM Plan, include the assets below in the service area asset hierarchy in Table 30. Minor culverts (< three (3) metre span) are included in the Stormwater section of the Water Works AM Plan.

The service area asset hierarchy outlining assets included in this section is shown below in Table 30. It is important to note that engineered structures is both a service area and an asset class in this AM Plan.

SERVICE AREA	ENGINEERED STRUCTURES
ASSET CLASS	ENGINEERED STRUCTURES
Asset	Bridges Major Culverts > 3m Major and Minor Retaining Walls Overhead Sign Support Structures (OSSS)

3.1 BACKGROUND

The information in this section is intended to give a snapshot in time of the current state of the engineered structures service area by providing a detailed summary and analysis of existing information as of December 2021, and will provide the necessary background for the remainder of the report. At this time, this section of the AM Plan encompasses engineered structures in the right of way (ROW) which contribute to the Transportation service. However, there are other engineered structures outside of the ROW throughout the City which are not included in this plan because the data was not available at the time of writing the report. This has been identified in Table 50 in the continuous improvement section.

3.1.1 Detailed Summary of Assets

Table 31 displays the detailed summary of assets for the engineered structures service area.

The City owns approximately **$1.53 billion** of engineered structure assets which are, on average to be considered in **Good** condition. The average age of the assets is **33** years which is approximately halfway through their remaining service life (RSL). For most assets this means that the City should be completing preventative and minor maintenance activities per the inspection reports as well as operating activities (e.g. inspection, cleaning) to prevent any premature failures and high cost reactive maintenance. It is anticipated that as the data confidence increases for these assets that the total replacement cost will also increase. Please refer to the AMP Overview for a detailed description of data confidence.

The Corporate Asset Management department acknowledges that some works and projects are being completed on an ongoing basis and that some of the noted deficiencies may already be completed at the time of publication. In addition, the assets included below are assets that are assumed and in service at the time of writing. Table 31 summarizes the information available as of December 2021.

Table 31: Detailed Summary of Assets for Engineered Structures Service area *Weighted Average					
ASSET CATEGORY	**NUMBER OF ASSETS**	**REPLACEMENT VALUE**	**AVERAGE AGE (% RSL)**	**AVERAGE BCI / SSR**	**AVERAGE EQUIVALENT CONDITION**
ENGINEERED STRUCTURES					
Bridges	166	$1265.1 M	43 years (43%)	74.7	2-Good
Data Confidence	Medium	Medium	Medium	Medium	Medium
Major Culverts	233	$167.41 M	47 years (38%)	71.2	2-Good
Data Confidence	Medium	Medium	Medium	Medium	Medium
Overhead Sign Supports	46	$6.11	20 years (67%)	94.0	2- Good
Data Confidence	Very High	High	Low	N/A	Very High
Major Retaining Walls	511	$95.85 M	23 years (62%)	N/A	3-Fair
Data Confidence	Medium	High	Low	N/A	Medium
Minor Retaining Walls	No Data	No Data	No Data	No Data	No Data
Data Confidence	Very Low	Very Low	Very Low	Very Low	Very Low
TOTAL	**956**	**$1.534 B**	**33 years (51%)**	**72.7 (BCI)**	**2-Good***
Data Confidence	**Medium**	**Medium**	**Medium**	**Medium**	**Medium**

BRIDGES & MAJOR CULVERTS

Since the amalgamation in 2001, the City acquired bridge and major culvert assets which were not documented in a formal inventory. For the last 20 years, the City has been creating an inventory of right of way (ROW) bridges and culverts as well as completing condition assessments on these assets. While the City adds these “orphaned” bridges and culverts into the inventory whenever they are found, it is still possible that there are bridges or culverts in the City that have not been located which are typically found in old, low traffic ROWs. In addition, there are brand new assets in developments that may not get entered into the inventory immediately due to gaps in the transfer of assets process. Therefore, the City has identified the need to establish a new process to update inventory data when assets are replaced, or new assets are acquired and have identified this as a continuous improvement item in Table 50 of the report.

It was also confirmed during the writing of the report that there are City owned bridge and culvert assets outside of the right of way in other asset classes (e.g. Parks, Golf Courses, etc.) that are not evaluated as part of the OSIM inspections conducted by Engineering Services. These assets are managed by other groups in the City and will be added to the AM Plans in future. It is important to note that these missing assets should be encompassed under core assets per O.Reg. 588/17, but the data was not available at the time of writing the report. As a result, data confidence has been identified as medium for bridge and major culvert assets. This has also been noted in Table 50 in the continuous improvement section of the report.

RETAINING WALLS

The major retaining walls inventory has previously been of a low data confidence, and the City has been working over the last decade to improve the confidence. In 2013, the City started completing inspections, but only encompassed the known retaining walls at the time (approximately 170). In 2015, the City continued inspections on additional located retaining walls (approximately 310). These assets included private assets because the City was unaware of ownership and have been working to confirm ownership on these assets. The retaining walls included in this report are assets that the City has assumed (511). Over the last few years, the City has located more major retaining walls and have completed condition assessments from an ad hoc perspective. In 2021, an inspection was completed on critical retaining walls and more retaining walls have been located, which have not yet been encompassed in this report. As a result, major retaining walls have a medium data confidence because new retaining wall assets have been identified in the most recent assessment, and the City is continuing to find new assets. These items have been noted in Table 50 in the continuous improvement section of the report. At this time, minor retaining walls data is not available, and repairs are typically done on a reactive basis.

A common issue the City encounters with retaining walls is that residents may unknowingly build retaining walls in the ROW. When properties exchange ownership, property owners may assume these were City-built structures and expect the City to repair these structures. Retaining walls less than 600mm do not require a permit and so this is often an issue with minor retaining walls where, as mentioned above, the City does not have a formal inventory. This creates a situation

where the City could be expected to complete reactive repairs on private retaining walls because there is no ownership documentation. The City should therefore investigate creating an inventory of minor retaining walls, confirm ownership of existing minor retaining walls, investigate adding retaining walls <600mm to building permit requirements, and potentially investigate an operational change where Road Patrol staff are instructed to look for newly constructed retaining walls. These items have been noted in Table 50 in the Continuous Improvement section of the report.

OVERHEAD SIGN SUPPORT STRUCTURES (OSSS)

OSSS also typically have a very high to high data confidence excluding the age fields which have low to very low data populated.

3.1.2 Asset Condition Grading

Condition is the measurement of the City's engineered structures health and informs the City of their ability to perform their intended function. Condition information is critical to actively managing the preservation of these structures as it will inform which operational and maintenance activities are optimal as well as the structures renewal schedule. By continuously monitoring the condition it allows the City to proactively plan for lifecycle activities over the long term and ensure these structures are resilient and future friendly.

Condition is the preferred measurement for planning lifecycle activities to ensure assets deliver the agreed upon levels of service and reach their expected useful life. Depending on the type of asset; condition scores are reported using various scales and ranges. Table 32, details how each rating was converted to a standardized condition category so that the condition could be reported consistently across the AM Plans.

Table 32: Condition Grading System

EQUIVALENT CONDITION GRADING	CONDITION DESCRIPTION	% REMAINING SERVICE LIFE	BRIDGE CONDITION INDEX (BCI)	RETAINING WALL CONDITION	SIGN SUPPORT RATING (SSR)
1- Very Good	The asset is new, recently rehabilitated, or very well maintained. Preventative maintenance required only.	>79.5%	80.5 – 100	N/A	94.5 – 100
2- Good	The asset is adequate and has slight defects and shows signs of some deterioration that has no significant impact on asset's usage. Minor/preventative maintenance may be required.	69.5% – 79.4%	70.5 – 80.4	Good	74.5 – 94.4
3- Fair	The asset is sound but has minor defects. Deterioration has some impact on asset's usage. Minor to significant maintenance is required.	39.5% - 69.4%	59.5 – 70.4	Fair	40.5 – 74.4
4- Poor	Asset has significant defects and deterioration. Deterioration has an impact on asset's usage. Rehabilitation or major maintenance required in the next year.	19.5% -39.4%	50.1 – 59.4	Poor	20.5 – 40.4
5- Very Poor	Asset has serious defects and deterioration. Asset is not fit for use. Urgent rehabilitation or closure required.	<19.4%	0 – 50.0	N/A	0 – 20.4

The following conversion assumptions were made:

- For assets where a condition assessment was not completed, but age information was known, the condition was based on the % of remaining service life;
- For bridges and major culverts (>3m) results of the inspection are used to develop a Bridge Condition Index (BCI) for each structure which is on a 0-100 number scale. This is originally on a 3-point condition scale (Good to Poor) per the MTO[9], but has been converted to a 5-point condition scale (Very Good to Very Poor). It is important to note that the index is used to plan maintenance and repairs and does not indicate the safety of a bridge;
- For OSSS, the results of the inspection are to develop a Structural Support Rating (SSR) which is also on a 0-100 number scale, which was originally on a 4-point condition scale (Excellent to Poor)[10] but has been converted to a 5-point scale (Very Good to Very Poor) for this AM Plan; and,
- For retaining walls, the condition assessment is on a 3-point condition scale ranging from Good to Poor, which could not be converted to a 5-point condition scale at this time.

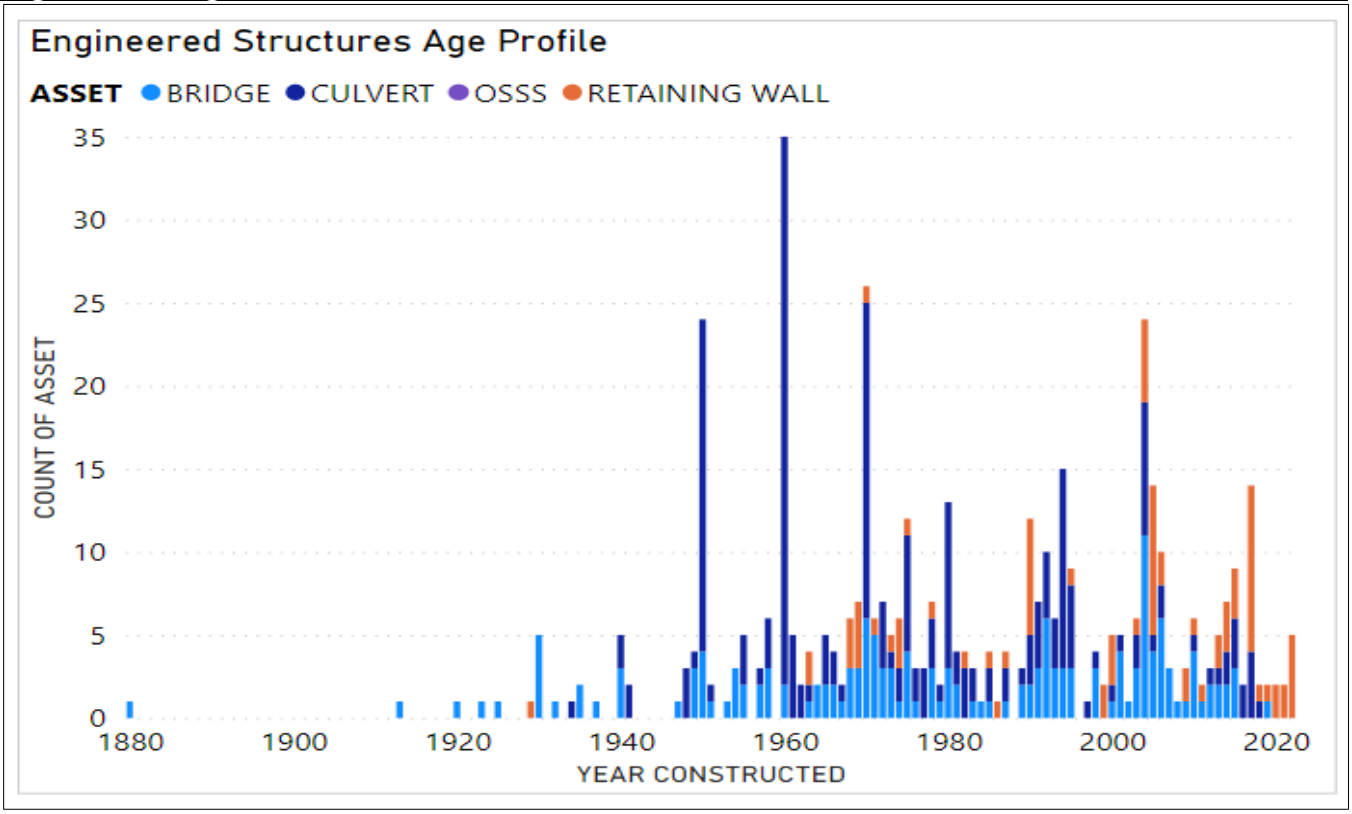
3.1.3 Age Profile

The age of an asset is an important consideration in the asset management process as it can be used for planning purposes as typically assets have an estimated service life where they can be planned for replacement. As a result, age can be used as an indicator of condition when condition data is not available. Per Table 32, when condition data is not available for these assets, the condition has been estimated based on age.

The age profile for engineered structures are shown in Figure16. An analysis of the age profile is provided below for each asset.

[9] MTO, 2015
[10] Ministry of Transportation, 2002

Figure 16: Engineered Structures Profile



BRIDGES

The average age for a bridge in the City is estimated to be 43 years, and with an estimated service life (ESL) of 75 years. This means on average there is 43% of service life remaining. It is important to note that the ESL is not the design life of the structure, and operations and maintenance activities largely determine if the structures reach the ESL before requiring major rehabilitation. Since the City has not had the resources to complete all operating activities on all bridges, some bridges may not reach the anticipated ESL, emphasizing the importance of the regular inspection program.

Per Figure 16, the oldest bridge in the City was constructed in 1880. This bridge is a pedestrian rail trail bridge and no longer supports vehicular traffic. There are no significant peaks with respect to bridge installation years.

As previously stated, during City amalgamation the City acquired many new bridges and culverts with varying degrees of inventory information. For bridges that have drawings associated with them, the age information is high confidence, but many bridges are estimated, and so although bridge age information has been populated, overall, the age data is of medium confidence.

MAJOR CULVERTS

The average age for a culvert in the City is 47 years, and with an estimated service life (ESL) of 75 years, this means on average there is 37% of service life remaining.

Per Figure 16 above, it is evident that peak culvert installations occurred between 1950 and 1970, peaking during 1960. With an average estimated service life of 75 years, there may be a spike in culvert renewals in 2035, which should be recognized during financial forecasting. This iteration of the AM Plan includes a ten (10) - year forecast horizon however this will be extended out further in the next iteration.

Similar to above, many culverts' construction dates have been estimated, but have been populated where drawings are available. It is important to note that installation years, where unknown, are assumed by approximate decade and so the installation years indicated in this figure are accurate to +/- ten (10) years . As a result, although age information has been populated it is overall of a medium data confidence level.

OVERHEAD SIGN SUPPORT STRUCTURES

At this time, age data was not available for overhead sign support structures. This has been identified as a continuous improvement item in Table 50. However, it is estimated that on average these assets are 20 years old since these assets are predominately on the Lincoln M. Alexander Parkway and the Red Hill Valley Parkway which were built 25 and 15 years ago respectively.

Typically, the asset's estimated service life is 60 years, which means most structures have 67% of remaining service life, however design standards have changed for many of the older structures, and so these will be replaced when inspections indicate critical components are beginning to corrode, emphasizing the importance of regular inspections. In addition, some assets are being proactively disposed as discussed in Section 3.2.4.

RETAINING WALLS

Currently there is minimal age data for major retaining walls with only 17% of assets having age information and unknown data accuracy and so it is considered to be of low data confidence. This has been identified as a continuous improvement item in Table 50.

Based on this minimal information, the average age for major retaining walls is 23 years, with an estimated service life of 60 years. This results in an average 62% of service life remaining.

As previously mentioned, there is currently no data available for minor retaining walls.

3.1.4 Asset Condition Methodology

Engineered structures are heavily regulated through the Ministry of Transportation (MTO) and there are required formal condition assessments that are legislated for each of the asset types with different inspection methodologies, manuals, frequencies, and condition scoring as shown in Table 33.

Table 33: Inspection and Condition Information
***Data in report is 2019/2020 as that was the data available at the time of writing**

ASSET	INSPECTION FREQUENCY	RECOMMENDED CYCLE	LAST INSPECTION	INSPECTION STANDARDS	CONDITION SCORE OUTPUT
Bridges, Major Culverts	Two (2) -year cycle	Two (2) - year cycle	2020 / 2021*	Ontario Structural Inspection Manual	Bridge Condition Index (BCI)
Overhead Sign Support Structures	Four (4) -year cycle	Two (2) - year cycle (Older aluminum supports)	2019	Ontario Sign Support Inspection Manual (OSSIM)	Sign Support Rating (SSR)
		Four (4) - year cycle (Newer steel and aluminum hybrid supports)	2019		
Major Retaining Walls	Ad Hoc	Two (2) - year cycle	2013, 2015, 2021	Ontario Structural Inspection Manual	3-Point Scale (Good, Fair, Poor)

BRIDGES & MAJOR CULVERTS

For bridges, and major culverts (>three (3) metres), condition assessments are conducted on a two (2) -year cycle using the Ontario Structure Inspection Manual (OSIM) and the City completes inspections annually on half the inventory to achieve the mandatory two (2)-year cycle. For the purposes of this report, the condition of the structure is based on the Bridge Condition Index (BCI) calculated based on the inspection. The formula for BCI is as follows:

$$BCI = \frac{Current\ Value}{Replacement\ Value} \times 100$$

The current value is a weighted sum of element costs and the replacement value is the sum of all element costs. Since this formula is based on unit costs for various elements of the bridge, the BCI is an indicator of condition based on financial factors and does not indicate the safety of the structure. For example, a structure can have a low BCI, but be considered safe because the major elements are functioning as intended, or a BCI can be high, but have a critical element which is deficient making the bridge unsafe. This issue is especially common with major culverts where there are typically few elements and so any deficiencies in the structure can greatly affect the BCI score. The safety of the structure is determined by the bridge engineer consultant during the biennial inspections.

During the OSIM inspection, the bridge engineer consultant identifies key performance deficiencies for bridge and major culvert elements and provides recommendations. The City works with the bridge engineer to investigate those deficiencies to determine the safety of the structure. In addition, the City uses factors in addition to the BCI to forecast bridge replacements/repairs. These include the BCU (Bridge Criticality and Urgency) and the element criticality scores. These scores are calculated using a series of criteria established by an external consultant, Stantec, through the Bridge Management System (BMS) software that the City uses to plan repairs and maintenance. The City requests reports from the consultant on a regular basis to update risk modelling and budget forecasting. The City uses these reports as a starting point for planning purposes.

For railway structures, rail authorities (i.e. CPR, CNR) complete their own assessments using their own standards, but do not provide these results to the City. For shared structures with another municipality, the City receives annual updates as to shared costs if the other municipality is considered the primary owner.

A continuous improvement item is to document the process for forecasting bridge & major culvert repairs. In addition, as part of the OSIM inspections, the City does not currently receive an overall summary report identifying the bridge consultant's methodology and overall OSIM findings. The City does receive updated inventory data, forecasted works, and a report outlining priority repairs. However, an overall summary report identifying key findings is a suggested continuous improvement item as it consolidates the bridge consultant's assumptions and provides the City with referenceable action items beyond a database input. These have been identified as continuous improvement items in Table 50.

RETAINING WALLS

In 2018, retaining walls were encompassed into the OSIM by the MTO with a recommended 2-year inspection cycle. Since then the City has been working to add more major retaining walls into the inventory to improve the program. The City completed a condition assessment for critical retaining walls in 2021. However, as a result of COVID-19 and lack of resourcing, the City has not yet achieved the 2018 requirement to complete major retaining walls' condition assessments on a 2-year cycle. Condition data in this report is a combination of condition assessment information from 2013 – 2020, but more major retaining walls have potentially been located during the 2021 inspection which have not yet been encompassed in this report. The retaining walls included in this report are assets that the City has assumed (511), and the data confidence for condition is medium as a result. The condition output is on a 3-point scale of Good, Fair, and Poor following guidelines in the OSIM Manual. Where condition data was unknown, and age data was known, the City has based the condition on ESL.

Therefore, the City is working on investigating completing all major retaining walls on a two (2) - year cycle to follow recommendations from the OSIM. This has been identified as a continuous improvement item in Table 50.

OVERHEAD SIGN SUPPORT STRUCTURES

Overhead sign support structures (OSSS) are to be inspected on either a two or four-year cycle depending on the type of sign support per the Ontario Sign Support Inspection Manual (OSSIM)[11]. Currently, the City is inspecting all supports on a four (4) - year cycle, however, the City is intending on disposing of all older supports in 2022.

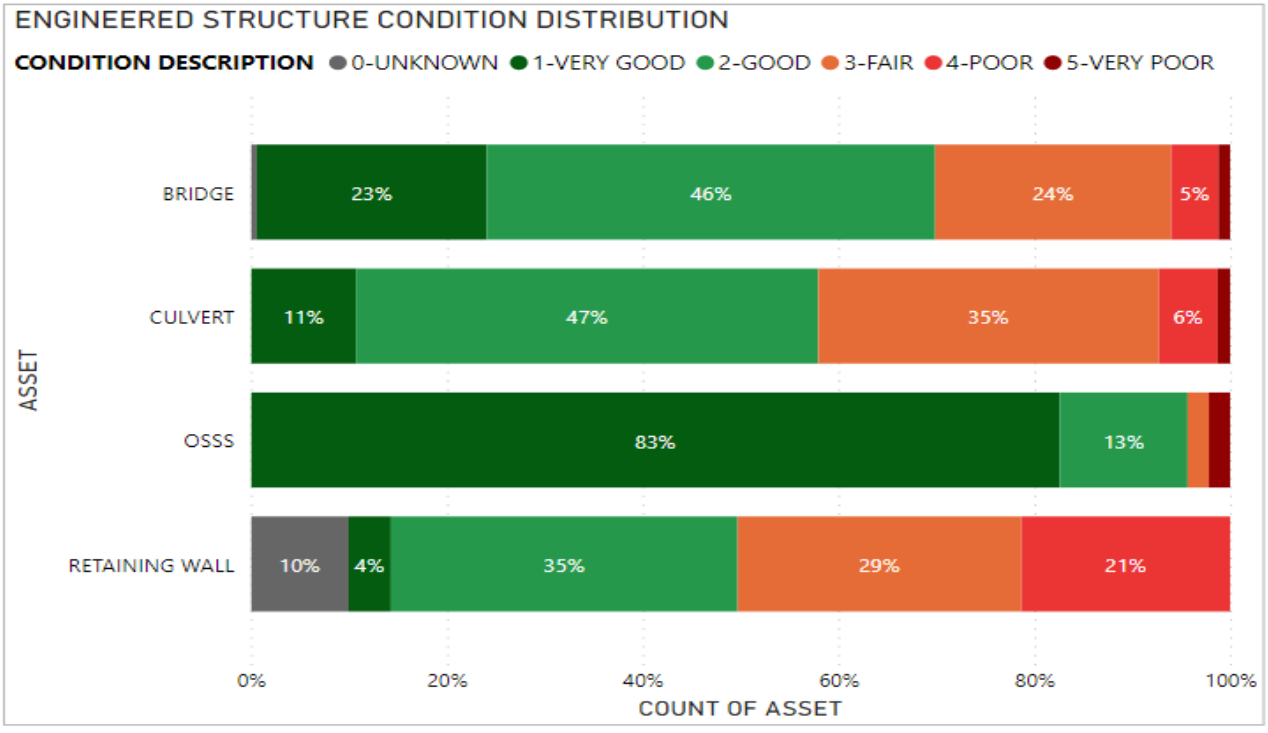
The reason these older supports require more frequent inspection is because design standards have changed for OSSS, and critical elements of the support may not reach the ESL. Since the supports are difficult to repair on site and require a full removal of the structure to repair, a disposal or full replacement is typically more cost effective.

3.1.5 Asset Condition Profile

The condition profile of the City's assets is shown in Figure 17. As mentioned in Section 3.1.2, the original condition grades were converted to a standardized condition category for report consistency.

It is important to note that the condition profile is a snapshot in time from when the condition assessments were completed, and there have been assets which have been replaced since these assessments were completed.

Figure 17: Engineered Structure Condition Distribution



[11] MTO, 2020

BRIDGES

The average condition of the City's bridges are considered 'Good' and range from 43 to 100 on the BCI condition scale. Very poor bridges may show cracking, delamination, railing issues, scaling and other deficiencies which can pose hazards to vehicle and pedestrians and affect load carrying capacity. Two (2) bridges are considered in Very Poor condition ratings. Current service performance deficiencies are identified in Section 3.1.6.

There is one (1) pedestrian bridge which was recently located in an old right of way and has not yet been encompassed in the City's OSIM inspection. Therefore, it is shown to have an Unknown condition because it cannot be estimated based on service life as the construction year is also unknown. This bridge has a closed status at the time of writing this report and will be assessed in the next OSIM inspection.

The data accuracy is considered very high because a condition assessment was completed, however the data completeness is unknown because there are assets outside of the ROW missing from the inventory. As a result, the data confidence is estimated to be at a medium level.

For more information on how the condition affects the use of the bridge, please refer to Section 3.1.6.

CULVERTS

The average condition for major culverts is considered 'Good' with an average BCI score of 71 and range from 11 to 100 on the BCI condition scale. Typical deficiencies are related to guard rail/barriers and undermining. As previously mentioned, major culverts typically have few elements and so any deficiencies in the structure can greatly affect the BCI score even though the structure may be safe to cross, and so often a poor BCI score does not affect the usage of the structure. However, the culvert with a BCI of 11 was replaced in 2020.

Similar to bridges, the data accuracy is considered very high because a condition assessment was completed, however the data completeness is unknown because there are assets outside of the ROW missing from the inventory. As a result, the data confidence is at a medium level.

For more information on how the condition affects the use of the culvert, please refer to Section 3.1.6

OVERHEAD SIGN SUPPORT STRUCTURES

The average SSR condition rating for overhead sign support structures is 94.02, which is considered 'Good' and structures range from 0 to 100, with the majority in 'Very Good' condition. Typical deficiencies include loose bolts, catwalk requiring removal, broken clamps, missing cover plates, and missing drain holes. The data completeness and accuracy are considered very high for these assets.

One (1) OSSS was given a Very Poor rating which is considered a performance deficiency. Current service performance deficiencies are identified in Section 3.1.6.

RETAINING WALLS

Major retaining walls are currently evaluated on a 3 - point scale from Good to Poor. Currently, 17% of known major retaining walls identified in the inventory do not have condition ratings. Typical deficiencies with poor retaining walls have settlement issues and excessive deformations. As previously explained in Section 3.1.4, the City is investigating completing these condition assessments on a biennial cycle as per the OSIM, which will encompass these unknown asset conditions.

If age data was available, these unknown assets were estimated based on ESL, but 10% of assets did not have age data available and therefore are shown to be in unknown condition. The condition data is considered to be medium data confidence for these assets because the condition data is out of date for many assets as previously discussed in Section 3.1.4.

3.1.6 Asset Usage and Performance

Assets are generally provided to meet design standards where available. However, there are often insufficient resources to address all known deficiencies.

The largest performance issues with engineered structures involve disrupted network connectivity and condition. Table 34 below identifies bridges or major culverts where the bridge status is currently identified as closed, a loading restriction exists, or the very poor condition status should be investigated. A closed bridge status refers to a bridge or major culvert which is not open to vehicular or pedestrian traffic. For the purposes of this report, very poor condition is a BCI <50.0, and for OSSS, SSR <20.4.

The below service deficiencies in Table 34 were identified from the most recent inspection reports as well as staff input. Since some assets have been rehabilitated since the last inspection, the table below may not show all of the very poor condition of bridges & culverts identified in Figure 17.

Table 34: Known Service Performance Deficiencies

ASSET	ASSET NO	LOCATION	TYPE	SERVICE DEFICIENCY	DESCRIPTION OF DEFICIENCY
Bridge	33	Foxden Road, Flamborough	Pedestrian	Closed Status, Loading Restriction	Bridge is located on a closed ROW. Maximum 10 tonnes, but bridge is closed. Will be considered for disposal.

Table 34: Known Service Performance Deficiencies					
ASSET	**ASSET NO**	**LOCATION**	**TYPE**	**SERVICE DEFICIENCY**	**DESCRIPTION OF DEFICIENCY**
	331	Birch Avenue, Hamilton	Rail - Decommissioned	Closed Status	Retired CPR asset which was purchased and will be disposed.
	476	Formerly Hall Road, Glanbrook	Pedestrian	Closed Status	Bridge is located on an old ROW. Hall Rd was relocated with a new bridge. This bridge is being considered for disposal.
	457	Bailey Bridge – Valley Inn Road	Pedestrian	Temporary Closed Status	Under Construction in 2021, re-opened in 2022
	248	Spencer Creek Bridge, Dundas	Vehicular	Temporary Closed Status	Under Construction
	427	Pedestrian Pass – Haldibrook Road, Glanbrook	Pedestrian	Very Poor Condition	Bridge is on a boundary road and maintained by Haldimand Region, and the City is responsible for 50%. City will follow up.
	297	Cotton Mill Bridge, Hamilton	Vehicular	Loading Restriction	Maximum 54 tonnes, signage in place
	346	Carlisle Bridge, Flamborough	Vehicular	Loading Restriction	Maximum 16 tonnes, signage in place
Culvert	19	Norman Rd, Flamborough	Vehicular	Loading Restriction	Maximum 15 tonnes, signage in place
OSSS	OS050	Industrial Drive Wilcox Street Local Access	Cantilever – Non-Standard	Very Poor Condition	Impact damage, severed arms and missing sign board

BRIDGES

Currently five (5) bridges are closed. Two (2) bridges are closed due to construction, which were previously identified to be in Very Poor condition. While a bridge being under construction is a temporary service deficiency, it is an interruption of service and so it has been included in this table. The three (3) other bridges which are closed and not under construction are being considered for disposal. In addition, three (3) vehicular bridges have loading restrictions at this time.

The City recognizes that a continuous improvement action is required to investigate the boundary agreement for Bridge 31 to ensure that its lifecycle activities are being appropriately budgeted. Additionally, Schedule 29 By-Law which details which bridges have load restrictions requires updating. Staff provided up to date loading restrictions for this AM Plan.

MAJOR CULVERTS

One (1) major culvert has a loading restriction.

OSSS

As previously mentioned, one (1) OSSS was given a very poor condition rating during the inspection. In response it was made safe and is under consideration for disposal.

3.1.7 Asset Specific Information

To assist with the analysis and provide some context to readers of the report, pertinent asset specific information is presented below. Different structures have different maintenance requirements and so it is imperative for the City to be aware of the different types of structures in our inventory to ensure the effective lifecycle management of these assets can be undertaken.

BRIDGES

Figure 18 shows the different bridge structure types which exist in the City. The most common bridge is an I-beam/Girder bridge, an example is shown in Figure 19.

Figure 18: Bridges by Structure Type

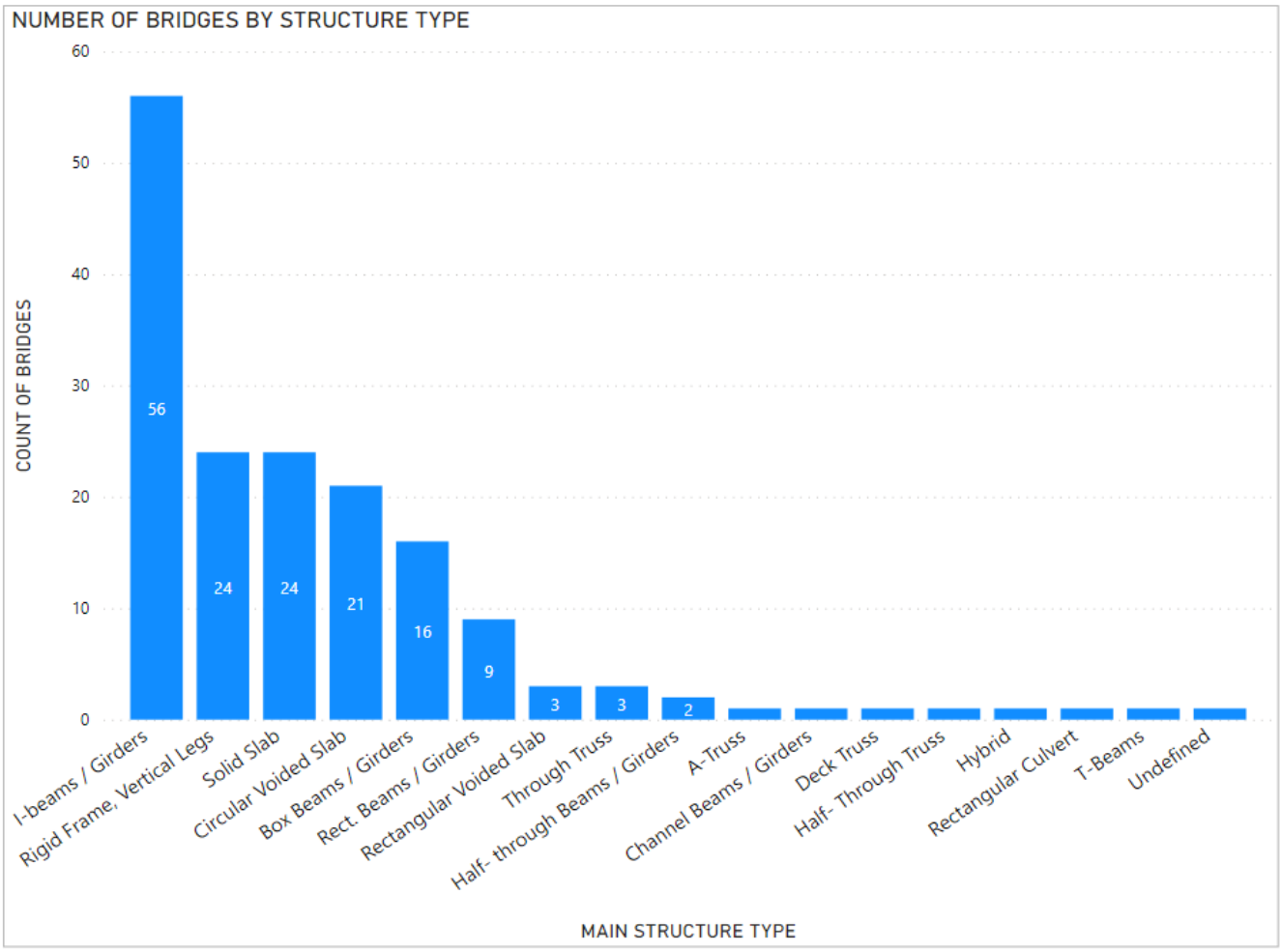


Figure 19: Example of an I-Beam / Girder Bridge on York Blvd

CULVERTS

Figure 20 shows the different major culvert structure types which the City is responsible for. The most common major culvert is a rectangular culvert, an example is shown in Figure 21.

Figure 20: Major Culverts by Structure Type

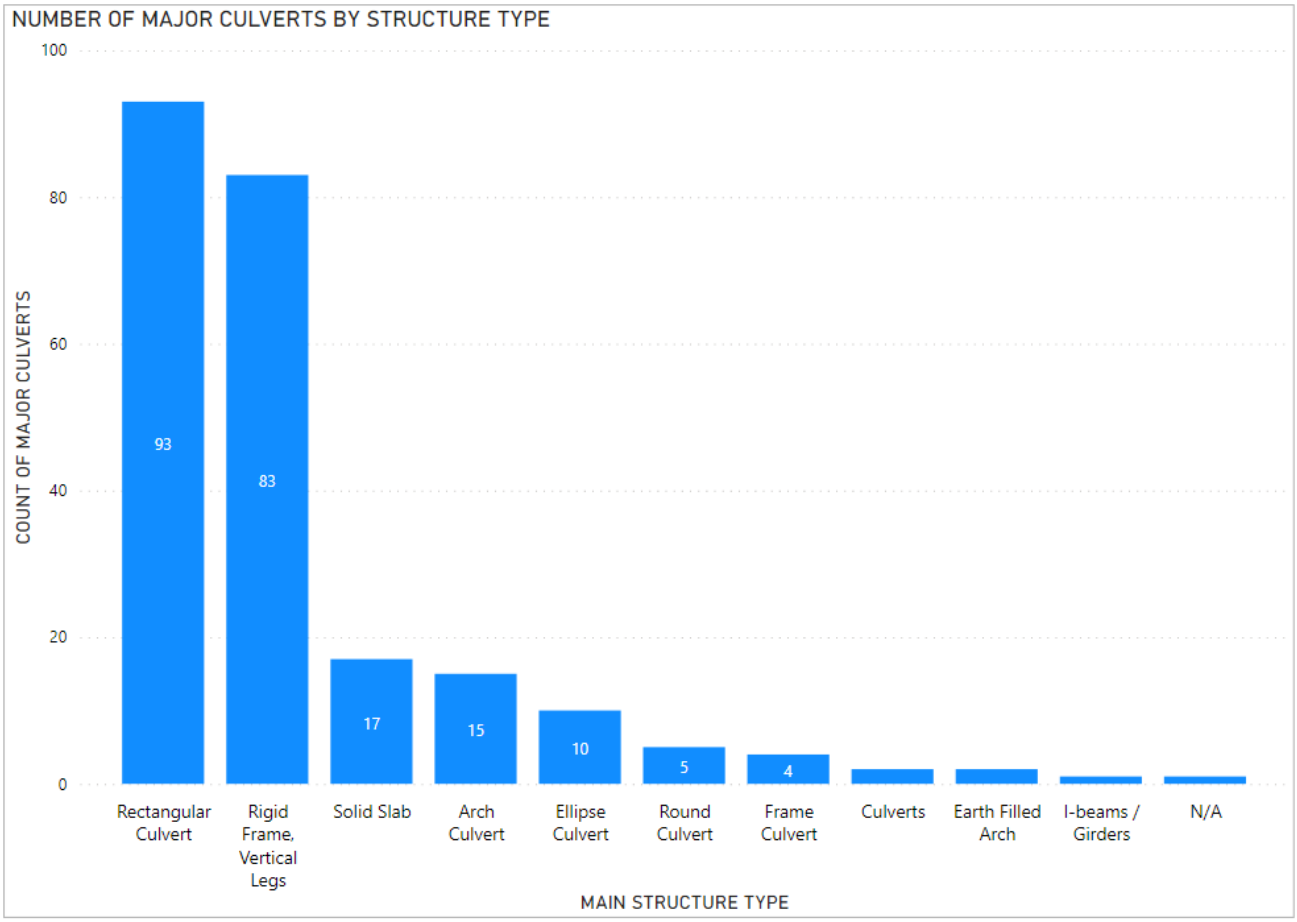


Figure 21: Example of a Culvert

RETAINING WALL

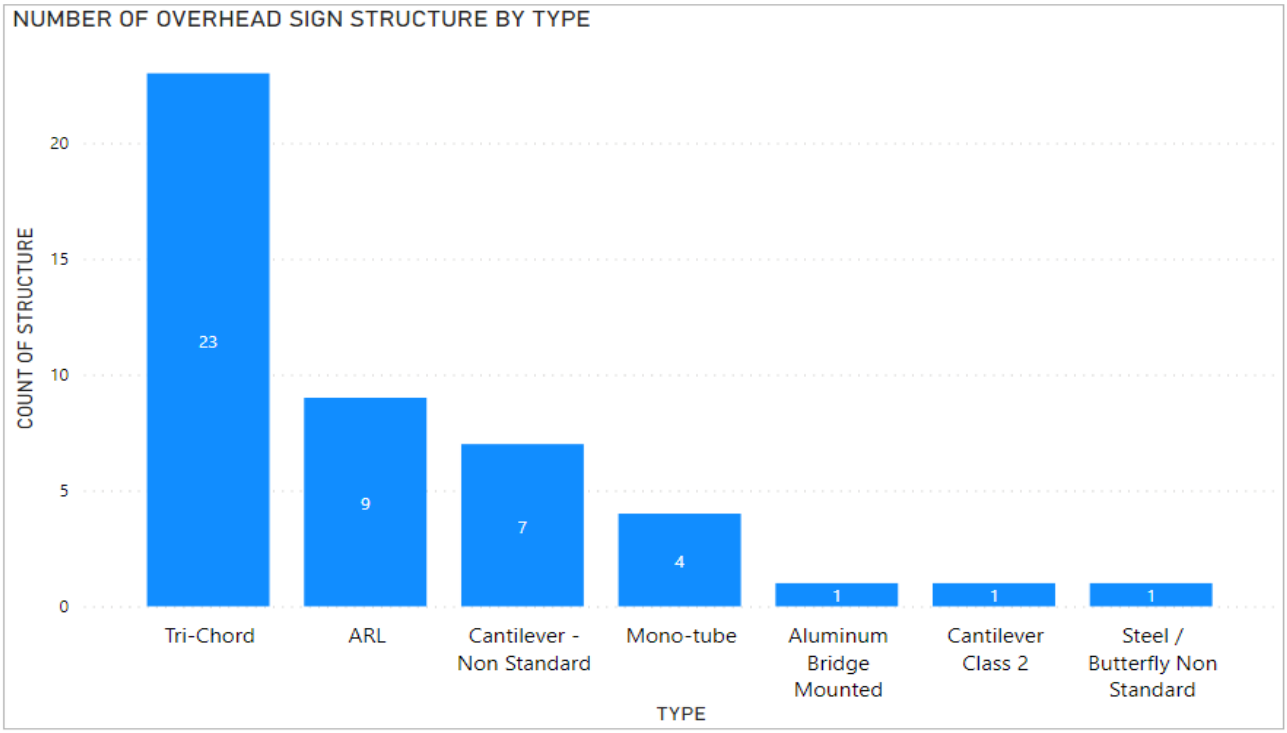
At this time, it is difficult to effectively group the types of retaining walls in the City inventory and a continuous improvement item has been actioned to improve the data quality. An image of a retaining wall in the City is shown below (Figure 22).

Figure 22: Example of a Major Retaining Wall on James St South

OSSS

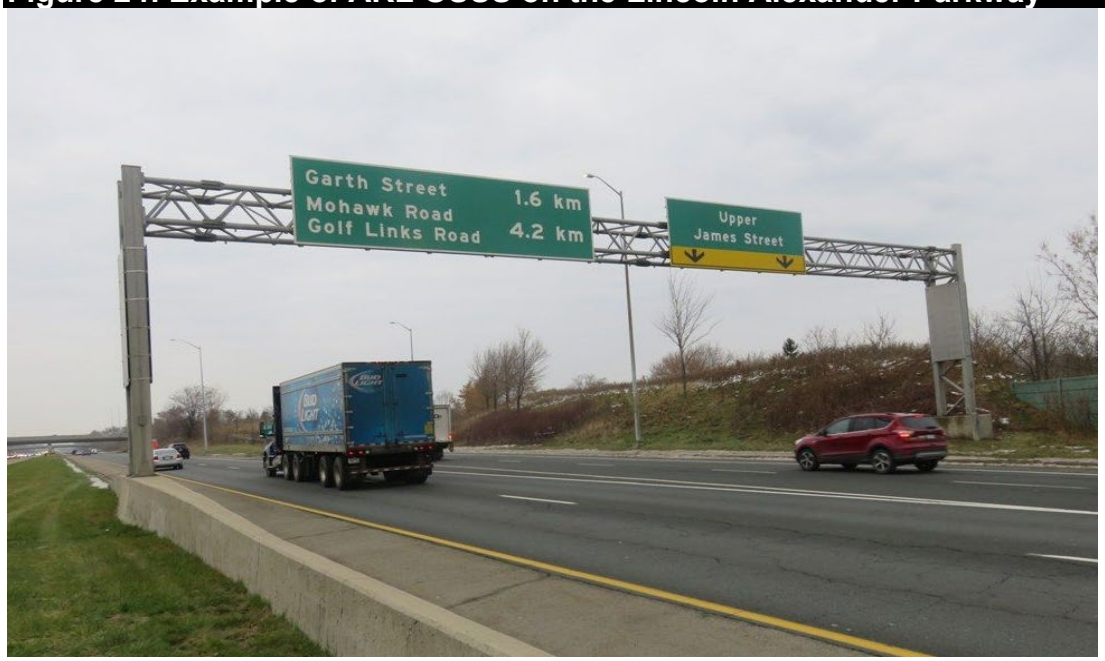
Figure 23 shows the different types of overhead sign support structures which exist in the City with the most common support type being a tri-chord structure.

Figure 23: Overhead Sign Support Structure by Type



The older sign support referenced in Section 3.1.4 which requires more frequent inspection applies to the Aluminum Rectangular Leg (ARL) structure type shown below in Figure 24. These older aluminium structures are common on the Lincoln M Alexander Parkway, and all nine (9) of these structures are scheduled for disposal in 2022 as shown in Table 38.

Figure 24: Example of ARL OSSS on the Lincoln Alexander Parkway



3.2 LIFECYCLE MANAGEMENT PLAN

The lifecycle management plan details how the City plans to manage these assets at the agreed levels of service at the accepted lifecycle costs.

3.2.1 Acquisition Plan

Acquisition reflects new assets that did not previously exist or works which will upgrade or improve an existing asset beyond its current capacity. They may result from growth, demand, social or environmental needs. Assets are donated to the City through development agreements or through the City constructing assets to meet broader program or community needs.

SELECTION CRITERIA

Proposed acquisition of new assets, and upgrade of existing assets, are identified from various sources such as community requests, proposals identified by strategic plans, growth, or partnerships with others. Potential upgrade and new works should be reviewed to verify that they are essential to the entities needs. Proposed upgrade and new work analysis should also include the development of a preliminary renewal estimate to ensure that the services are sustainable over the longer term. Verified proposals can then be ranked by priority and available funds and scheduled in future works programs.

CURRENT ACQUISITIONS

At this time Hamilton has bridge construction projects planned for Waterdown Road, Sam Lawrence ROW bridge and a pedestrian bridge at limedridge across the LINC. At the time of writing this report there was limited availability of some information and so there may be other planned bridge projects not yet acknowledged within this AM Plan. Hamilton will seek to consolidate its bridge information across multiple divisions for the next iteration of the AM Plan.

SUMMARY OF FUTURE ASSET ACQUISITION COSTS

When the City commits to acquiring new assets, they must be prepared to fund future operations, maintenance, disposal, and renewal costs. They must also account for future depreciation when reviewing long term sustainability. The City will continue to monitor this annually and update the AM plan when new information becomes available.

3.2.2 Operations and Maintenance Plan

The City's operational and maintenance activities are centered on ensuring that engineered structures are consistently considered in good working order. Daily, weekly, seasonal, and annual activities are undertaken by staff to ensure the assets perform within acceptable parameters and to monitor the condition of the assets for safety and regulatory reasons.

OPERATIONS: This lifecycle activity includes regular actions to ensure the ongoing availability of the service such as winter mitigation, regulatory condition inspections, bridge cleaning, monitoring climate events and drain cleaning.

MONITOR CLIMATE EVENTS

As part of the City's road network, these assets are monitored on a consistent basis for events that can affect the use of the assets. The City regularly monitors weather/climate risks that may require the public to be updated as to the condition and usability of the assets. Staff respond to events such as washouts, flooding, extreme freezing, and regular seasonal weather conditions.

WINTER MITIGATION FOR THE ROAD NETWORK

The Province provides a minimum standard for winter operations such as snow plowing, mitigation efforts (e.g. salt, ice prevention and treatment), monitor for closure events and posting temporary warning signs when necessary. Winter road work for bridges and culverts are integrated with all other road network assets as they are considered part of the overall transportation network.

BRIDGE/CULVERT CLEANING

Bridge or Culvert cleaning occurs in the spring after winter maintenance activities such as salting/sanding/spraying have ceased for the season. The winter maintenance treatments (chlorides) need to be cleaned from the roadway surfaces, expansion joints, bearing seats and other components to minimize the deterioration of these structural elements and maximum the useful service life of the assets.

REGULATORY COMPLIANCE & CONTINUOUS MONITORING

Through legislation, the Province provides standards of care for bridge and culvert assets as well as the timing for biennial inspection to be performed by qualified engineers. The biennial inspection informs the AM Plan with bridge and culvert renewal data and itemizes suggested minor and major planned maintenance activities that will allow these structures to achieve their intended useful live. On average The City invests **$525 thousand** annually to inspect its engineered structures and ensure their safety and inform the City of recommended planned maintenance activities.

MAINTENANCE: This lifecycle activity should be viewed as the ongoing management of deterioration. The purpose of planned maintenance is to ensure that the correct interventions are applied to assets in a proactive manner and to ensure it reaches its intended useful life. Maintenance does not significantly extend the useful life of the asset but allows assets to reach their intended useful life by returning the assets to a desired condition.

Proactively planning maintenance significantly reduces the occurrence of reactive maintenance which is always linked to a higher risk to human safety and higher financial costs. The City needs to plan and properly fund its maintenance to ensure the engineered structures are reliable and achieve their desired level of service.

Maintenance includes all actions necessary for retaining an asset as near as practicable to the appropriate service condition and includes activities such as approach repairs, deck repairs, joint repairs, erosion control, handrail repairs, surface sealing or gabion basket repairs . Examples of typical operations and maintenance activities with their accompanying 2021 costs (if known) are shown in Table 35.

Table 35: 2022-2024 Planned Maintenance		
YEAR	**MAINTENANCE**	**BUDGET (M)**
2022	#403 – Southcote – Garner	$3.0
	#404 – Harrison Road	$1.4
	#159 – Regional Road 56	$1.3
	Other Maintenance Projects	$9.3
2023	#126 – Regional Road 56	$1.3
	#189 – Regional Road 56	$0.9
	Other Maintenance Projects	$5.7
2024	#451 – Highway 5 East	$4.9
	#329 – Burlington St East	$3.6
	#330 – Birch Ave.	$7.0
	Other Maintenance Projects	$4.6

From **2025** to **2031** the City will invest an additional **$60 million** for various maintenance projects across the City. These investments are intended to allow these assets to reach their estimated service life and minimize reactive maintenance costs. It should be acknowledged that these forecasted costs do not fully include the recommended works that need to be undertaken to ensure the entire inventory of assets will achieve their desired services lives and level of service.

Currently unit costs associated with these activities are mostly unknown, which is a future continuous improvement item presented in Table 50 in the Continuous Improvement section. In addition, there is no dedicated funding for OSSS other than for condition assessments and this concern has also been identified in the continuous improvement section.

Table 36: Lifecycle Activities				
ASSET	**LIFECYCLE STAGE**	**LIFECYCLE ACTIVITY**	**FREQUENCY**	**2021 COST**
Bridges, Major culverts (>3m)	Operation	Cleaning	Annually	Unknown
		Inlet/Outlet Cleaning	After rain event	Unknown
		Drain Cleaning	Annually	Unknown
		Animal Control	Ad Hoc	Unknown

Table 36: Lifecycle Activities				
ASSET	**LIFECYCLE STAGE**	**LIFECYCLE ACTIVITY**	**FREQUENCY**	**2021 COST**
		OSIM Inspection	2 - year cycle	$300,000 per annum
	Maintenance	Material Repairs (Steel, Concrete, Timber)	Ad Hoc	Unknown
		Bridge Surface Repair	Ad Hoc	Unknown
		Expansion Joint Repair	Ad Hoc	Unknown
		Railing Repair	Ad Hoc	Unknown
		Route and Seal	Ad Hoc	Unknown
		Painting	Ad Hoc	Unknown
		Component Maintenance (Bearing, Cathodic Protection)	Ad Hoc	Unknown
		Erosion Control	Ad Hoc	Unknown
		Minor Component Replacement (Railing, Bearing)	Ad Hoc	Unknown
Retaining Wall	Operation	Graffiti Control	Ad Hoc	Unknown
		OSIM Inspection (>2m)	2 - year cycle	Included above.
		Non-OSIM Inspection (<2m)	Ad Hoc	Unknown
	Maintenance	Material Repair (Concrete, Wood, Steel, Masonry)	Ad Hoc	Unknown
		Gabion Basket Repair	Ad Hoc	Unknown
Overhead Sign Support Structures	Operation	Inspection	2- or 4 - year cycle	$149,950

At this time, many operational and maintenance activities are not being completed on all bridges/culverts at the suggested interval due to budget and resourcing constraints. When operational and maintenance activities are not completed in a timely and consistent manner it may lead to high cost reactive maintenance, a greater risk to public safety and reputational damage to the City.

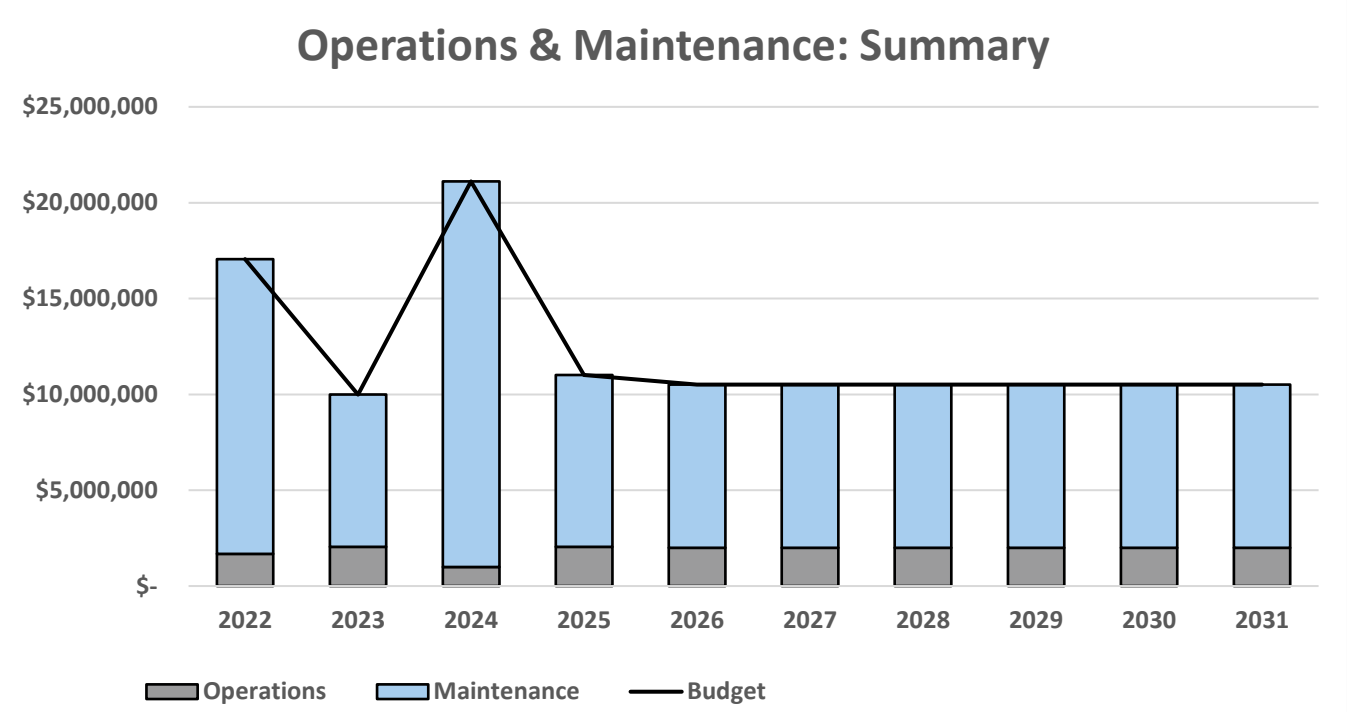
When the City completes the necessary operational and maintenance activities, high cost reactive repairs can be prevented. For example, cleaning drains at the appropriate time annually will lead to less erosion of piers and this will ensure the assets reach their estimated service life. This need has been identified as a risk in the Section 3.6. Currently, assessment and priority of reactive maintenance is undertaken by staff using subject matter expert experience and judgement. Any reactive repairs are completed by City staff. The City is investigating options to add necessary resources as well as retaining a contractor to complete these operational and maintenance activities.

The City does complete the regulated inspections for Bridges and Culverts and is meeting its regulatory responsibilities for those assets.

SUMMARY OF FORECAST OPERATIONS AND MAINTENANCE COSTS

Forecast operations and maintenance costs are expected to vary in relation to the total value of the asset registry. If additional assets are acquired, the future operations and maintenance costs are forecast to increase. If assets are disposed of, the forecast operation and maintenance costs are expected to decrease. Figure 25 shows the forecast operations and maintenance costs relative to the proposed operations and maintenance Planned Budget.

Figure 25: Operations and Maintenance Summary
All figure values are shown in 2021 dollars.



The forecast costs include all costs from both the capital and operating budget. Asset management focuses on how taxpayer or ratepayer dollars are invested by lifecycle activities and not by budget allocation since both budgets contain various lifecycle activities, they must both be consolidated for the AM Plans.

The City is providing sufficient budget for planned operation and maintenance works only. It is clear from the analysis of recommended works needing completion, the City has insufficient budget to achieve all of the works required to ensure that assets will be able to achieve their estimated service life at the desired level of service. The City will address the operational and maintenance shortfalls and forecasted costs for the next iteration of the plan as there was insufficient data to develop reliable forecasts at the time of writing this report.

As the City continues to develop condition profiles and necessary works are identified based on their condition, it is anticipated this operation and maintenance forecasts will increase significantly. Where maintenance budget allocations will result in a lesser level of service, the service consequences and risks have been identified and are highlighted in the Risk Section 3.6. Future iterations of this plan will provide a much more thorough analysis of operations and maintenance costs including types of expenditures for training, mandatory certifications, insurance, staffing costs and requirements, equipment and maintenance activities

3.2.3 Renewal Plan

Renewal is major works which does not increase the assets design capacity but restores, rehabilitates, replaces, or renews an existing asset to its original service potential. Works over and above restoring an asset to original service potential is considered to be an acquisition resulting in additional future operations and maintenance costs.

Engineered structure renewals are typically undertaken to either ensure the assets reliability or quality will meet the service requirements set out by the City. Renewal projects are often triggered by service quality failure and can often be prioritized by those that have the highest consequence of failure, have high usage, have high operational and maintenance costs and other deciding factors.

The typical useful lives of assets used to develop projected asset renewal forecasts are shown in Table 37, and are based on estimated design life for this iteration. Future iterations of the plan will focus on the Lifecycle approach to estimated service life which can vary greatly from design life. Asset useful lives were last reviewed in 2022 and will be reviewed in 2023.

Table 37: Useful Lives Assets

ASSET (SUB)CATEGORY	USEFUL LIFE
Bridges	75 years
Major Culverts (>3m)	75 Years
Retaining Walls	60 Years
Overhead Sign Support Structures	60 Years

The estimates for renewals in this AM Plan were based on the register method which utilizes the detailed listing of The City's asset inventory and all available lifecycle information to determine the optimal timing for renewals.

RENEWAL RANKING CRITERIA

Asset renewal is typically undertaken to either:

- Ensure the reliability of the existing infrastructure to deliver the service it was constructed to facilitate (e.g. replacing a bridge that has a load limit); or,
- To ensure the infrastructure is of sufficient quality to meet the service requirements (e.g. condition of a culvert). [12]

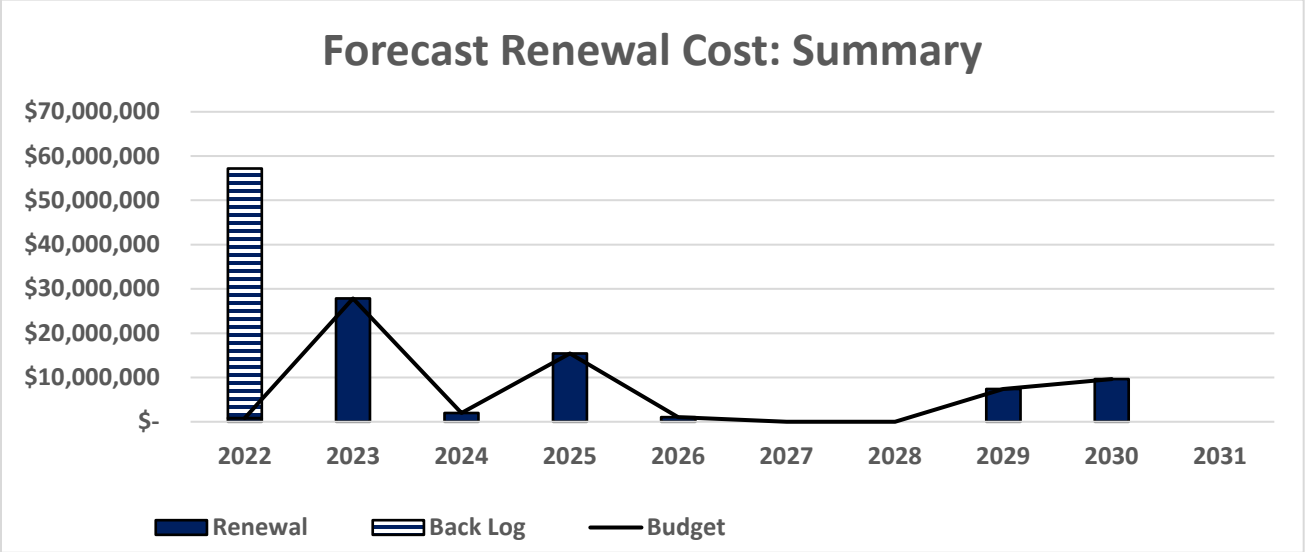
It is possible to prioritize renewals by identifying assets or asset groups that:

- Have a high consequence of failure;
- Have high use and subsequent impact on users would be significant;
- Have higher than expected operational or maintenance costs; and,
- Have potential to reduce life cycle costs by replacement with a modern equivalent asset that would provide the equivalent service. [13]

SUMMARY OF FUTURE RENEWAL COSTS

Forecast renewal costs are projected to increase over time if the asset inventory increases. The forecast costs associated with renewals are shown relative to the proposed renewal budget in Figure 26.

Figure 26: Forecast Renewal Costs
All Figure Values Are Shown In 2021 Dollars.



[12] IPWEA, 2015, IIMM, Sec 3.4.4, p 3|91.
[13] Based on IPWEA, 2015, IIMM, Sec 3.4.5, p 3|97.

The forecasted renewal costs are age based for this iteration of the AM Plan and as such there is a significant backlog of renewal work listed. For the next AM Plan, the City will be moving to a condition-based approach for its renewal planning as it provides a more accurate picture to manage these assets.

Deferring renewals create risks of higher financial costs, decreased availability, and decreased satisfaction with asset performance. Ultimately, continuously deferring renewals works ensures The City will not achieve intergenerational equality. If the City continues to push out necessary renewals, there is a high risk that future generations will be unable to maintain the level of service the customers currently enjoy. It will burden future generations with such significant costs that inevitably they will be unable to sustain them.

Properly funded and timely renewals will ensure the assets perform as expected and it is recommended to continue to analyze asset renewals based on criticality and availability of funds for future AM Plans.

3.2.4 Disposal Plan

Disposal includes any activity associated with the disposal of a decommissioned asset including sale, possible closure of service, decommissioning, disposal of asset materials, or relocation. Disposals will occur when an engineered structure reaches the end of its useful life. The end of its useful life can be determined by factors such as excessive operation and maintenance costs, regulatory changes, obsolesce or demand for the structure has fallen.

Assets identified for possible decommissioning and disposal are shown in Table 38. A summary of the disposal costs and estimated reductions in annual operations and maintenance of disposing of the assets are also outlined in Table 38. Any costs or revenue gained from asset disposals is included in future iterations of the plan and the long-term financial plan.

At this time there are three (3) disposals planned over the ten-year planning horizon for bridges and major culverts, and nine (9) disposals are planned for OSSS. Bridge 33 will change ownership and as such alleviates the City from the responsibilities of ongoing lifecycle costs. Bridge 476 will be programed for disposal over the planning period and will also eliminate many ongoing operational and maintenance costs along with the significant renewal costs required to keep the bridge in working condition.

Table 38: Assets Identified for Disposal

ASSET	REASON FOR DISPOSAL	TIMING	DISPOSAL COSTS	OPERATIONS & MAINTENANCE ANNUAL SAVINGS
Bridge 033 Foxden Rd	Change of Ownership	By 2025	$50,000	$4,000

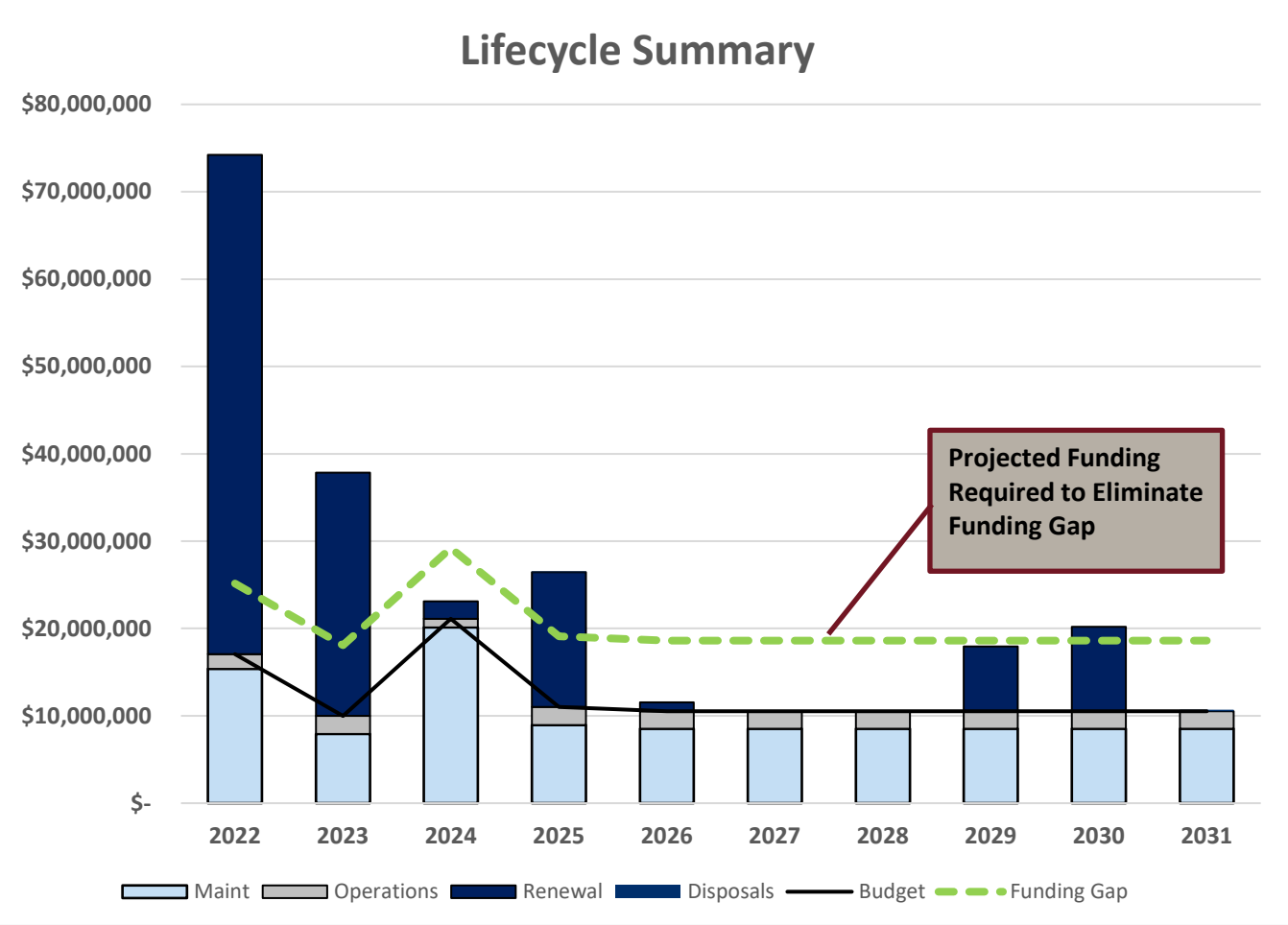
Table 38: Assets Identified for Disposal				
ASSET	REASON FOR DISPOSAL	TIMING	DISPOSAL COSTS	OPERATIONS & MAINTENANCE ANNUAL SAVINGS
Bridge 476 Formerly Hall Rd	Bridge at end of useful life and it is not essential	By 2031	$200,000	$4,500
Bridge 331 Birch Ave	Retired CPR asset which was purchased and will be disposed.	By 2024	$135,000	$3,100
9 OSSS (ARL) structures along the Linc	Asset Deficiencies require removal	By 2023	$425,000	$35,000

SUMMARY OF ASSET FORECAST COSTS

The financial projections from this asset plan are shown in Figure 27. These projections include forecast costs for acquisition, operation, maintenance, renewal, and disposal. These forecast costs are shown relative to the proposed budget.

The bars in the graph represent the forecast costs needed to minimize the life cycle costs associated with the service provision. The proposed budget line indicates the estimate of available funding. The gap between the forecast work and the proposed budget is the basis of the discussion on achieving balance between costs, levels of service and risk to achieve the best value outcome.

Figure 27: Lifecycle Summary
All figure values are shown in 2021 dollars.



The City has allocated budget planned for operational and maintenance activities requirements over the 10-year planning horizon however there is insufficient budget to complete the necessary renewal works nor is there sufficient budget to complete all the recommended operational and maintenance works. When deferring either operations, maintenance or renewal works occur, the City runs the risk of significantly higher reactive costs, service interruptions, decreased satisfaction, harm to its reputation along with other risk costs such as legal fees.

Without sufficient funding the City has little option but to defer these necessary lifecycle activities. Deferring important lifecycle activities is never recommended. The City will benefit from allocating sufficient resources to developing its long-term financial plan to ensure that over time the City can fully fund the necessary lifecycle activities. Funding these activities helps to ensure the assets are compliant, safe, and effectively deliver the service the customers need and desire.

The lack of funding allocated for the backlog of renewals and the necessary lifecycle activities creates an additional issue which is intergenerational equity. Each year the City defers necessary lifecycle activities it pushes the ever-increasing financial burden on to future generations. It is imperative the City begin addressing the lack of consistent and necessary

funding to ensure that intergenerational equity will be achieved. Over time, allocating sufficient funding on a consistent basis ensures that future generations will be able to enjoy the same standards being enjoyed today.

Over time the City will continue to improve its lifecycle data and this will allow for informed choices as how best to mitigate those impacts and how to address the funding gap itself. This gap in funding in future plans will be refined over the next 3 years and improve the confidence and accuracy of the forecasts.

3.3 MANDATORY BRIDGE & CULVERT LEVELS OF SERVICE

As previously mentioned, the City is developing this AM Plan to be in accordance with O.Reg. 588/17 requirements. Table 5 in O.Reg. 588/17 identifies specific metrics that must be reported in the AM Plan for Bridges and Culverts. These metrics are divided into community and technical levels of service. Since core assets only encompass bridges and culverts, there are not mandatory O.Reg. 588/17 levels of service for OSSS or retaining walls.

3.3.1 O.Reg. 588/17 Community Levels of Service

Per Table 5 in O.Reg. 588/17, there are community levels of service that the City is required to report on in order to meet the provincial level of service requirement. These qualitative metrics are reported below.

SCOPE

1. Description of the traffic that is supported by municipal bridges (e.g., heavy transport vehicles, motor vehicles, emergency vehicles, pedestrians, cyclists).

City bridges are designed in accordance with the standard and requirements of the Bridge Design Code at the time of construction. The City owns three (3) types of bridges: Vehicular, Railway, and Pedestrian bridges.

- Vehicular bridges or culverts have been designed to carry heavy transport vehicles, motor vehicles, emergency vehicles, pedestrians, mobility aids, and cyclists wherever possible;
- Railway bridges have been designed for railway usage only and do not support other vehicular types. However, some previous rail bridges have been converted to pedestrian (e.g. Rail Trail); and,
- Pedestrian bridges or culverts have been designed to carry pedestrians, mobility aids, cyclists, and maintenance vehicles.

The City is actively pursuing opportunities to offer multi-modal transportation options and continues to invest in pedestrian and cycling connectivity through the rehabilitation and new construction of pedestrian bridges as explained in Section 3.2.3.

QUALITY

2. *Description or images of the condition of bridges and how this would affect use of the bridges.*

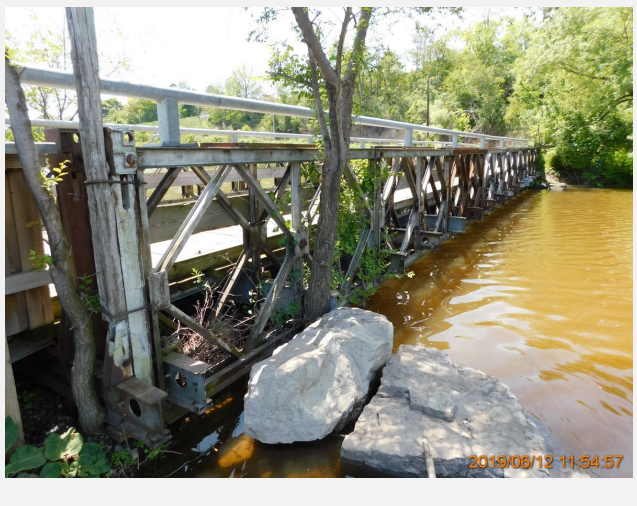
Photos of bridges within the indicated BCI range are shown in Figure 28. Bridge assets range in BCI from 43 to 100. The description of each BCI range can be found in Table 32. High criticality bridges show cracking, delamination, railing issues, scaling and other deficiencies which can pose vehicle/pedestrian hazards, and affect load carrying capacity.

Typically, if a bridge is in Very Good to Poor condition the asset continues to operate and provide service to the public with operations and maintenance activities being completed on the asset in accordance with the OSIM findings. Depending on the findings of an inspection the usage may be modified such as changing a vehicular bridge into a pedestrian bridge. If the bridge is deemed unsafe for pedestrian and vehicular access, the structure will be closed

with clear signage prohibiting the use of the bridge and the asset will be evaluated for renewal or disposal.

If the asset reaches Very Poor status, the bridge is closed immediately while the City assesses the safety of the structure, and determines what reactive repair, rehabilitation or disposal actions to take. If a bridge is closed, it is considered a service performance deficiency. Current service performance deficiencies are identified in Section 3.1.6. An image of a bridge in the 5 condition categories are shown below in Figure 28.

Figure 28: Bridge Conditions

CONDITION	ELEVATION	UNDERSIDE (SOFFIT)
Very Good		
Good		
Fair		
Poor		
Very Poor		

3. *Description or images of the condition of culverts and how this would affect use of the culverts.*

Photos of culverts within the indicated BCI range are shown in Figure 29. Major culvert assets range in BCI from 11 to 100. The description of each BCI range can be found in Table 32. High criticality culverts have deficiencies such as undermining foundation, corrosion, spalling and delamination.

Typically, if a culvert is in Very Good to Poor condition the asset continues to operate and provide service to the public with operations and maintenance activities being completed on the asset in accordance with the OSIM findings. Depending on the findings of an inspection the usage may be modified such as changing a vehicular culvert into a pedestrian culvert. If the culvert is deemed unsafe for pedestrian and vehicular access, the structure will be closed with clear signage prohibiting the use of the culvert and the asset will be evaluated for renewal or disposal.

If the asset reaches Very Poor status, the culvert is closed immediately while the City assesses the safety of the structure and determines what reactive repair, rehabilitation or disposal actions to take and is considered a service performance deficiency. Current service performance deficiencies are identified in Section 3.1.6.

Images of culverts from very good *to very poor condition* based on the BCI value is shown in Figure 29.

Figure 29: Major Culvert Conditions

Condition	Elevation	Inside (Barrel)
Very Good		
Good		
Fair		
Poor		
Very Poor		

3.3.2 O.Reg. 588/17 Technical Levels of Service

In addition, there are technical levels of service that the City is required to report on in order to meet the provincial level of service requirement. These quantitative metrics are reported in Table 39.

Table 39: Technical Levels of Service

SERVICE ATTRIBUTE	TECHNICAL LEVELS OF SERVICE	MEASURE
Scope	Percentage of bridges in the municipality with loading or dimensional restrictions.	2.4%
Quality	1. For bridges in the municipality, the average bridge condition index value.	74.7
	2. For structural culverts in the municipality, the average bridge condition index value.	71.2

The Scope service attribute contains information related to loading or dimensional restrictions. Currently four (4) bridges have loading restrictions which are included under service performance deficiencies in Table 34.

The quality service attribute contains information related to the Bridge Condition Index (BCI) which is explained in Section 3.1.2.

3.4 MUNICIPALLY DEFINED LEVELS OF SERVICE

Levels of service are measures for what the City provides to its customers, residents, and visitors. Service levels are best described as the link between providing the outcomes the community desires, and the way that The City provides those services. Service levels defined in three ways, customer values, customer levels of service and technical levels of service which are outlined in this section. An explanation for how these were developed is provided in Section 7.5 of the AMP Overview.

3.4.1 Customer Values

Customer values are what the customer can expect from their tax dollar in "customer speak" which outline what is important to the customer, whether they see value in the service, and the expected trend based on the 10-year budget. These values are used to develop the level of service statements.

To develop these customer values, as stated in the AMP Overview, a Customer Engagement Survey was released in January 2022 on the Engage Hamilton platform. The survey received 279 submissions and contained 6 questions related to bridge and major culvert service delivery. The survey results can be found in Appendix A in the AMP Overview. While these surveys were used to establish customer values and customer performance measures, it's important to note that the number of survey respondents only represents a small portion of the population.

The future intent is to release this survey on a regular basis to measure the trends in customer satisfaction and ensure that the City is providing the agreed level of service as well as improve the marketing strategy to receive more responses. This has been noted in Table 50 in the Continuous Improvement section.

Table 40: Customer Values

CUSTOMER VALUES	CUSTOMER SATISFACTION MEASURE	CURRENT FEEDBACK	EXPECTED TREND BASED ON PLANNED BUDGET (10-YEAR HORIZON)
Bridges feel safe to cross	Annual Customer Engagement Survey	Survey respondents generally feel that bridges are safe to travel over. There are some comments with respect to increasing maintenance on bridges/culverts.	Expected to maintain trend
Bridge is open when they want to use it	Annual Customer Engagement Survey	Survey respondents generally feel that bridges are open when they want to use them, however, there were a few comments on the Dundas Hwy 8 bridge being closed.	Expected to maintain trend

Table 40: Customer Values			
CUSTOMER VALUES	**CUSTOMER SATISFACTION MEASURE**	**CURRENT FEEDBACK**	**EXPECTED TREND BASED ON PLANNED BUDGET (10-YEAR HORIZON)**
Culverts operate appropriately and are free from blockages	Annual Customer Engagement Survey	Survey respondents generally feel that there aren't culverts that are frequently blocked.	Expected to maintain trend

3.4.2 Customer Levels of Service

Ultimately customer performance measures are the measures that the City will use to assess whether it is delivering the level of service the customers desire. Customer level of service measurements relate to how the customer feels about the City's engineered structures in terms of their quality, reliability, accessibility, responsiveness, sustainability and over course, their cost. The City will continue to measure these customer levels of service to ensure a clear understanding on how the customers feel about the services and the value for their tax dollars.

The Customer Levels of Service are considered in terms of:

Condition	How good is the service? What is the condition or quality of the service?
Function	Is it suitable for its intended purpose? Is it the right service?
Capacity/Use	Is the service over or under used? Do we need more or less of these assets?

In Table 41 under each of the service measures types (Condition, Function, Capacity/Use) there is a summary of the performance measure being used, the current performance, and the expected performance based on the current budget allocation.

Table 41: Customer Levels of Service

TYPE OF MEASURE	LEVEL OF SERVICE	SOURCE	PERFORMANCE MEASURE	CURRENT PERFORMANCE	EXPECTED TREND BASED ON PLANNED BUDGET
Condition	Ensure engineered structures are kept in safe and good repair.	Annual Customer Engagement Survey	97.4% of survey respondents feel bridges are generally in Fair condition or better.	Satisfied	Maintain Satisfied
			85% of survey respondents feel bridges and culverts are somewhat safe to very safe to travel over.	Fairly Satisfied	Maintain Fairly Satisfied
			Confidence levels	Medium	
		OSIM Inspection Report	Average Condition of Bridges	Good	Slight Decrease
			Average Condition of Major Culverts	Good	Slight Decrease
			Average Condition of Retaining Walls	Fair	Slight Decrease
			Confidence levels	High	
		SSIG Report	Average Condition of Overhead Sign Support Structures	Good	Maintain Good
			Confidence levels	High	
Function	Ensure engineered structures are meeting program needs.	Annual Customer Engagement Survey	76.5% of survey respondents don't know of any culverts that are partially or completely blocked.	Fairly Satisfied	Maintain Fairly Satisfied
			90.8% of survey respondents indicate there are no bridges that are currently closed they would typically use.	Very Satisfied	Maintain Very Satisfied
			Confidence levels	Medium	
		Staff Input	Bridges along major transportation routes are generally open.	Good	Slight Decrease
		Staff Input	Overhead Sign Support Structures along major transportation routes are in service.	Good	Maintain Good
			Confidence levels	Low	
Capacity	Ensure engineered structures' usage is within design capacity.	Annual Customer Engagement Survey	98.5% of survey respondents don't have concerns with bridges' height or weight restrictions.	Very Satisfied	Maintain Very Satisfied
			66.2% of survey respondents generally feel traffic levels leading up to bridges are acceptable.	Satisfied	Slight Decrease
			Confidence levels	Medium	
		Staff Input	Open bridges are used frequently.	Unknown	
			Confidence levels	Low	

3.4.3 Technical Levels of Service

Technical levels of service are operational or technical measures of performance, which measure how the City plans to achieve the desired customer outcomes and demonstrate effective performance, compliance and management. The metrics should demonstrate how effectively The City delivers its services in alignment with its customer values; and should be viewed as possible levers to impact and influence the Customer Levels of Service. The City will measure specific lifecycle activities to demonstrate how the City is performing on delivering the desired level of service as well as to influence how customers perceive the services they receive from the assets.

Technical service measures are linked to the activities and annual budgets covering Acquisition, Operation, Maintenance, and Renewal. Asset owners and managers create, implement and control technical service levels to influence the service outcomes

Table 42 shows the activities expected to be provided under the current plan with targets and recommended performance.

Table 42: Technical Levels of Service

LIFECYCLE ACTIVITY	PURPOSE OF ACTIVITY	ACTIVITY MEASURE	CURRENT PERFORMANCE *	TARGET **	RECOMMENDED PERFORMANCE ***
Acquisition	Ensure engineered structures are meeting program needs.	Number of planned pedestrian bridge new or improvement projects	1	N/A	N/A
Operation	Ensure engineered structures are kept in safe and good repair.	Percentage of legislated inspections completed for bridges > 3m	110	190	N/A
		Number of bridges with loading restrictions	4	4	4
Maintenance		% of bridge deck spalls repaired to	100%	100%	100%

Table 42: Technical Levels of Service					
LIFECYCLE ACTIVITY	PURPOSE OF ACTIVITY	ACTIVITY MEASURE	CURRENT PERFORMANCE *	TARGET **	RECOMMENDED PERFORMANCE ***
		MMS standards			
		Number of culverts with known flooding/channel blockage issues	24	0	0
		Number of bridges in Very Poor condition	2	0	0
		Number of culverts in Very Poor condition	2	0	0

It is important to monitor the service levels regularly as circumstances can and do change. Current performance is based on existing resource provision and work efficiencies. It is acknowledged changing circumstances such as technology and customer priorities will change over time.

3.4.4 Level of Service Summary

At this time, the City's technical metrics for the engineered structures service area is based on OSIM and MMS requirements. It is evident per Table 42 that the City is typically meeting these standards. The explanation below is intended to explain how the customer and technical levels of service relate to each other.

CONDITION

Based on the customer performance measures, survey respondents felt that bridges and culverts were in Fair or better condition which was deemed to be considered satisfied. The majority also felt that bridges were a minimum of somewhat safe to cross. When comparing this to the technical levels of service, the City has completed 100% of MMS requirements and has completed the legislated inspections. This suggests that the activities that the City is performing meets the customer expectations of the service.

FUNCTION

Survey respondents appeared to be satisfied with the function of bridges and culverts. The majority of survey respondents were not aware of any blocked culverts and most did not find that there were bridges that were closed that they typically used. Those who identified that there was a bridge they wanted to use that was closed, were typically referring to bridges which were closed due to construction and are temporary service deficiencies. This suggests that the activities that the City is performing meets the customer expectations of the service.

CAPACITY

Most survey respondents did not have any concerns with bridge height or weight restrictions, and many felt traffic levels leading up to a bridge were acceptable. Currently there are four (4) bridges with weight restrictions, but since currently most survey respondents are not concerned with these restrictions it suggests the level of service for those bridges meets program needs.

3.5 FUTURE DEMAND

The ability for the City to be able to predict future demand for services enables the City to plan ahead and identify the best way of meeting that demand while being responsive to changes in demand. Demand will inevitably change over time and will impact the needs and desires of the community in terms of the quantity of services (more bridges to growing communities) and types of service required (larger bridges for increased traffic volumes).

Demand is defined as the desire customers have for assets or services and that they are willing to pay for. These desires are for either new assets/services or current assets.

Since demand is not yet an extensive requirement in O.Reg. 588/17 for the July 1st, 2022 deadline, this section is not as robust as some other sections of the report, but is an obligation for the report by July 1st, 2025, and will be expanded on in future iterations of the report.

3.5.1 Demand Drivers

For the engineered structures service area, the key drivers are population change, climate change, and customer preferences and expectations. A future continuous improvement item is to identify additional demand drivers since this was not the focus of this AM Plan.

3.5.2 Demand Forecasts

The high level present position and projections for demand drivers that may impact future service delivery and use of assets have been identified and documented in Table 43. These projections are based on the Greater Golden Horseshoe projections and the Development Charges Background Study.

Growth projections have been shown in the AMP Overview.

3.5.3 Demand Impact and Demand Management Plan

The impact of demand drivers that may affect future service delivery and use of assets are shown in Table 43.

Demand for new services will be managed through a combination of managing and/or upgrading of existing assets and providing new assets to meet demand and demand management. Demand management practices can include non-asset solutions, management of risks and failure mitigation.

Opportunities identified to date for demand management are shown in Table 43. Climate change adaptation is included in Table 44. Further opportunities will be developed in future revisions of this AM Plan, as identified in Table 50 in the Continuous Improvement Section.

Table 43: Demand Management Plan				
DEMAND DRIVER	**CURRENT POSITION**	**PROJECTION**	**IMPACT ON SERVICES**	**DEMAND MANAGEMENT PLAN**
Customer preferences and expectations	Bridges prioritize vehicular traffic.	Bridges will need to begin to prioritize multi-modal traffic as well as LRT.	Ensure enough space in the bridge ROW to accommodate multi-modal traffic.	Complete Transportation Master Plans: Plan for redesign or upgrade of bridges and culverts to accommodate additional space required.
Population Change	573,000 (2021)	636,080 (2031)	Increased population will increase demand on transportation network.	Complete Transportation Master Plans; Redesign or upgrade bridges and culverts to accommodate increased traffic; Invest in sustainable transportation so that the increase in transportation demand will not be predominately single use occupancy vehicles.
Employment Population Change	192,704 (2019 - Excluding Work from Home)	244,839 (2031 – Excluding Work from Home)	Increased commuters may increase demand on transportation network.	Complete Transportation Master Plans; Plan for redesign or upgrade bridges and culverts to accommodate increased traffic; Invest in sustainable transportation so that the increase in transportation demand will not be predominately single use occupancy vehicles.

3.5.4 Asset Programs to Meet Demand

The new assets required to meet demand may be acquired, donated or constructed. At this time there are no plans for new assets over the ten (10) - year planning horizon. Acquiring new assets would commit the City to ongoing operations, maintenance and renewal costs for the period that the service provided from the assets is required.

3.5.5 Climate Change Adaptation

The impacts of climate change may have a significant impact on the assets we manage and the services they provide. In the context of the asset management planning process, climate change can be considered as both a future demand and a risk.

Climate change impacts on assets will vary depending on the location and the type of services provided, as will the way in which those impacts are responded to and managed.[14]

As a minimum the City must consider how to manage our existing assets given potential climate change impacts for our region.

Risk and opportunities identified to date are shown in Table 44. This is a continuous process and will be updated in the 2025 AM Plans per the timelines outlined in the AMP Overview.

Table 44: Managing the Impact of Climate Change on Assets and Services

CLIMATE CHANGE DESCRIPTION	PROJECTED CHANGE	POTENTIAL IMPACT ON ASSETS AND SERVICES	MANAGEMENT
Storm Events	Increased frequency of large storm events which may overwhelm the stormwater system.	Deck height of bridges may need to be raised requiring a redesign. Culverts may need to be resized. Delays in transportation network may occur if road asset is flooded in large storm event or if damage occurs to bridge/culvert asset requiring repairs.	Draft culvert standards policy: Redesign or upsize existing culverts and bridges when renewals occur; Prioritize replacements; Planning for sufficient funds to implement plans; Model stormwater network to ensure capacity; Investigate problem areas.
GHG Emissions	Increased GHG emissions due to increased demand for transportation.	Increased GHG emissions contribute to climate change	Investigate opportunities to change the modal split; Invest in sustainable transportation so that the increase in transportation demand will not be predominately single use occupancy vehicles.

[14] IPWEA Practice Note 12.1 Climate Change Impacts on the Useful Life of Infrastructure

Additionally, the way in which the City constructs new assets should recognize that there is opportunity to build in resilience to climate change impacts. Building resilience can have the following benefits:

- Assets will withstand the impacts of climate change;
- Services can be sustained; and,
- Assets that can endure may potentially lower the lifecycle cost and reduce their carbon footprint.

Table 45 summarizes some asset climate change resilience projects the City is currently pursuing.

Table 45: Building Asset Resilience to Climate Change

PROJECT	PROJECT DESCRIPTION	CLIMATE CHANGE IMPACT	BUILD RESILIENCE IN NEW WORKS
Strathcona Pedestrian Bridge	Installation of multi-use trail connecting crossing over CN lands to connect Locke St. to the Waterfront Trail.	Due to increased demand for transportation infrastructure, it is anticipated there will be more vehicles in the road network. If these vehicles are mostly single occupancy vehicles, GHG emissions will increase in the City.	To change the modal split and investigate strategies so that more trips are taken by active and sustainable transportation than single use occupancy vehicles.
Pedestrian Bridge Replacement & Repair Program	Repair or replace pedestrian bridges within our parks that are in poor condition.	Due to increased demand for transportation infrastructure, it is anticipated there will be more vehicles in the road network. If these vehicles are mostly single occupancy vehicles, GHG emissions will increase in the City.	To change the modal split and investigate strategies so that more trips are taken by active and sustainable transportation than single use occupancy vehicles.
Stormwater Infrastructure Upgrades	Ongoing work on upgrading stormwater infrastructure (e.g. bridges, culverts, etc.) to increase capacity	It is anticipated that larger storm events will happen more frequently affect water levels under bridges and capacity levels of culverts.	To improve the City's climate resiliency by designing future assets to mitigate their vulnerability to extreme weather, minimizing future damages, and take advantage of opportunities i.e. grants.

The impact of climate change on assets is a new and complex discussion and further opportunities will be developed in future revisions of this AM Plan.

3.6 RISK MANAGEMENT

The purpose of infrastructure risk management is to document the findings and recommendations resulting from the periodic identification, assessment and treatment of risks associated with providing services from infrastructure, using the fundamentals of International Standard ISO 31000:2018 Risk management – Principles and guidelines.

Risk Management is defined in ISO 31000:2018 as: 'coordinated activities to direct and control with regard to risk'[15].

The City is developing and implementing a formalized risk assessment process to identify risk associated with service delivery and to implement proactive strategies to mitigate risk to tolerable levels. The risk assessment process identifies credible risks associated with service delivery and will identify risks that will result in loss or reduction in service, personal injury, environmental impacts, a 'financial shock', reputational impacts, or other consequences.

The risk assessment process identifies credible risks, the likelihood of those risks occurring, and the consequences should the event occur. For its bridge and culvert assets, the City utilizes two risk assessment methods to determine risk along with subject matter expert opinion to inform the prioritization.

Since the City is further developing its risk assessment maturity with the inclusion of a risk rating, evaluation of the risks and development of a risk treatment plan for those risks that are deemed to be non-acceptable in the next iteration of the plan.

Risk Assessment is not yet an extensive requirement in O.Reg. 588/17 for the July 1st, 2022 deadline. As a result, this section is not as robust as some other sections of the report, but is an obligation for the report by July 1st, 2025, and will be expanded on in future iterations of the report.

3.6.1 Critical Assets

Critical assets are defined as those which have a high consequence of failure causing significant loss or reduction of service. Critical assets have been identified and along with their typical failure mode, and the impact on service delivery, are summarized in Table 46. Failure modes may include physical failure, collapse or essential service interruption.

[15] ISO 31000:2009, p 2

Table 46: Critical Assets		
CRITICAL ASSET(S)	**FAILURE MODE**	**IMPACT**
High Criticality Bridges/Major Culverts	Collapse	Injury Service Interruption Financial Reputational Environmental
High Criticality Bridges/ Major Culverts	Major Blockage	Service Interruption Financial Injury Reputational Environmental

By identifying critical assets and failure modes, an organization can ensure that investigative activities, condition inspection programs, maintenance and capital expenditure plans are targeted at critical assets.

3.6.2 Risk Assessment

The risk assessment process identifies credible risks, the likelihood of the risk event occurring, the consequences should the event occur, development of a risk rating, evaluation of the risk and development of a risk treatment plan for non-acceptable risks.

An assessment of risks associated with service delivery will identify risks that will result in loss or reduction in service, personal injury, environmental impacts, a 'financial shock', reputational impacts, or other consequences.

Critical risks are those assessed with 'Very High' (requiring immediate corrective action) and 'High' (requiring corrective action) risk ratings and will be identified in the Infrastructure Risk Management Plan in future iterations. The residual risk and treatment costs (if available) of implementing the selected treatment plan is shown in Table 47. It is essential that these critical risks and costs are reported to management. Additional risks will be developed in future iterations of the plan and is identified in Table 50 in the Continuous Improvement Section the plan.

Table 47: Risks and Treatment Plans
Note * The Residual Risk Is The Risk Remaining After The Selected Risk Treatment Plan Is Implemented.

SERVICE OR ASSET AT RISK	WHAT CAN HAPPEN	RISK RATING	RISK TREATMENT PLAN	RESIDUAL RISK *	TREATMENT COSTS
Bridge & Culvert	Pier damage due to vehicular collision	Very High	Installed crash attenuators, sand barrels, signage Maintain regular inspection of roadside.	High	TBD
Bridge & Culvert	Concrete deck damage due to water infiltration from potholes.	Very High	Biennial inspections; Road Patrol Inspection; Complete operational activities on bridges & culverts either internally or contractually.	Medium	$310,000 Annually
Bridge & Culvert	Collapse of bridge due to stress from overweight vehicle.	High	Coordinate overweight permits with Hamilton Police & MTO. Adequate signage. Request enforcement, weight scales.	Medium	TBD
Bridge & Culvert	Pier erosion due to drainage system not being maintained	High	Complete operational activities on bridges & culverts either internally or contractually.	Low	TBD
Unassumed Bridge & Culvert	Bridge or culvert fails due to no maintenance or inspection program, and City is liable because ownership unclear	High	Confirm ownership and responsibility of asset. Add assets to OSIM program.	Low	TBD
Unassumed Minor Retaining Wall	Retaining wall fails due to no maintenance or inspection program, and City is liable because ownership unclear	High	Create inventory of retaining walls and confirm ownership; Internal inspection program for owned assets.	Medium	TBD

3.6.3 Infrastructure Resilience Approach

The resilience of our critical infrastructure is vital to the ongoing provision of services to customers. To adapt to changing conditions the City needs to understand its capacity to 'withstand a given level of stress or demand', and to respond to possible disruptions to ensure continuity of service. An example would be how engineered structures operate during their peak usage. We do not currently measure our resilience in service delivery and this will be included in the next iteration of the AM Plan.

Resilience covers the capacity of the City to withstand any service disruptions, act appropriately and effectively in a crisis, absorb shocks and disturbances as well as adapting to ever changing conditions. Resilience is built on aspects such as response and recovery planning, financial capacity, climate change, risk assessment and crisis leadership.

3.6.4 Service and Risk Trade-Offs

The decisions made in AM Plans are based on the objective to achieve the optimum benefits from the available resources. The City does not have sufficient data to present risks and tradeoffs. This information will be presented in the 2025 AM Plans regarding Proposed Levels of Service per the timelines outlined in the AMP Overview.

3.6.5 Financial Summary

This section contains the financial requirements resulting from the information presented in the previous sections of this AM Plan. Effective asset and financial management will enable the City to ensure its engineered structures provide the appropriate level of service for the City to achieve its goals and objectives. Reporting to stakeholders on service and financial performance ensures the City is transparently fulfilling its stewardship accountabilities.

Long-Term financial planning (LTFP) is critical for the City to ensure its engineered structures lifecycle activities such as renewals, operations, maintenance, and acquisitions can happen at the optimal time. The City is under increasing pressure to meet the wants and needs of its customer while keeping costs at an affordable level and maintaining its financial sustainability.

Without funding asset activities properly for its engineered structures, the City will have difficult choices to make in the future which will include options such as higher costs reactive maintenance and operational costs, reduction of service and potential reputational damage.

The City will be seeking to incorporate its engineered structures into the LTFP. Aligning the LTFP with the AM Plan is critical to ensure the engineered structures needs will be met while the City is finalizing a clear financial strategy with measurable financial targets. The financial projections will be improved as the discussion on desired levels of service and asset performance matures.

3.6.6 Sustainability of Service Delivery

This AM Plan focuses on two key financial indicators of sustainable service delivery that are considered within the AM Plan for this service area. These indicators are used to monitor and assess financial performance over the planning period. The two indicators are the:

- asset renewal funding ratio (proposed renewal budget for the next ten (10) - years / forecast renewal costs for next ten (10) - years); and,
- medium term forecast costs/proposed budget (over 10 years of the planning period).

ASSET RENEWAL FUNDING RATIO

Asset Renewal Funding Ratio[16] **32.86%**

The Asset Renewal Funding Ratio is used to determine if the City is accommodating asset renewals in an **optimal** and **cost effective** manner from a timing perspective and relative to financial constrains, the risk the City is prepared to accept and service levels it wishes to maintain. Ideally the target renewal funding ratio should be ideally between **90% - 110%** over the entire planning period. A low indicator result generally indicates that service levels are achievable however the expenditures are below this level because the City is reluctant to fund the necessary work or prefers to maintain low levels of debt.

Over the next ten (10) years the City expects to have **32.86%** of the funds required for the optimal renewal of assets. By only having sufficient funding to renew **32.86%** of the required assets in the appropriate timing it will inevitably require difficult trade off choices that could include:

- A reduction of the level of service and availability of assets
- Increased complaints and reduced customer satisfaction
- Increased reactive maintenance and renewal costs and,
- Damage to the City's reputation and risk of fines or legal costs

The historical lack of renewal funding resources will be addressed in future AM Plan's while aligning the plan to the LTFP. This will allow staff to develop options and long-term strategies to address the renewal rate. The City will review its renewal allocations once the entire inventory has been confirmed and amalgamated.

The Asset Renewal Funding Ratio is an important indicator and illustrates that over the next 10 years we expect to have **32.86 %** of the funds required for the optimal renewal of assets.

MEDIUM TERM – TEN (10) - YEAR FINANCIAL PLANNING PERIOD

This AM Plan identifies the forecast operations, maintenance and renewal costs required to provide an agreed level of service to the community over a ten (10) – year period. This provides input into ten (10) - year financial and funding plans aimed at providing the required services in a sustainable manner.

[16] AIFMM, 2015, Version 1.0, Financial Sustainability Indicator 3, Sec 2.6, p 9.

This forecast work can be compared to the proposed budget over the first ten (10) - years of the planning period to identify any funding shortfall.

The forecast operations, maintenance and renewal costs over the ten (10) - year planning period is **$24,281,410** on average per year. Over time as improved information becomes available it is anticipated to see this number increase. In future AM Plans, staff will connect the operational and maintenance needs to the forecasts, and this will result in a significantly higher cost than is outlined here.

The proposed (budget) operations, maintenance and renewal funding is **$16,186,100** on average per year giving a ten (10) - year funding shortfall of **$8,095,310** per year or **$80,953,100** in total over the ten year planning period. This indicates that **66.66%** of the forecast costs needed to provide the services documented in this AM Plan are accommodated in the proposed budget. Note, this calculation excludes acquired assets (if any).

Providing sustainable services from infrastructure requires the management of service levels, risks, forecast outlays and financing to achieve a financial indicator of approximately one (1.0) for the first years of the AM Plan and ideally over the ten (10) - year life of the Long-Term Financial Plan.

3.6.7 Forecast Costs (Outlays) for the Long-Term Financial Plan

Table 48 shows the forecast costs (outlays) required for consideration in the ten (10)-year long-term financial plan.

Providing services in a financially sustainable manner requires a balance between the forecast outlays required to deliver the agreed service levels with the planned budget allocations in the operational and capital budget. The City will begin developing its long-term financial plan (LTFP) to incorporate both the operational and capital budget information and help align the LTFP to the AM Plan which is critical for effective asset management planning.

A gap between the recommended forecast outlays and the amounts allocated in the operational and capital budgets indicates further work is required on reviewing service levels in the AM Plan.

The City will manage the ‘gap’ by continuing to develop this AM Plan to provide guidance on future service levels and resources required to provide these services in consultation with the community. Options to manage the gap include reduction and closure of low use assets, increased funding allocations, reduce the expected level of service, utilize debt based funding over the long term, adjustments to lifecycle activities, improved renewals and multiple other options or combinations of options.

These options will be explored in the next AM Plan and the City will provide analysis and options for Council to consider going forward.

Table 48: Forecast Costs (Outlays) For the Long-Term Financial Plan Forecast Costs Are Shown In 2021-Dollar Values.					
YEAR	ACQUISITION	OPERATION	MAINTENANCE	RENEWAL	DISPOSAL
2022	0	$1,670,000	$15,377,000	$57,168,028	
2023	0	$2,050,000	$7,938,000	$27,841,490	$425,000
2024	0	$1,000,000	$20,110,000	$2,014,039	$135,000
2025	0	$2,050,000	$8,960,000	$15,442,533	$50,000
2026	0	$1,987,000	$8,526,500	$1,030,651	
2027	0	$1,987,000	$8,526,500	$0	
2028	0	$1,987,000	$8,526,500	$0	
2029	0	$1,987,000	$8,526,500	$7,416,129	
2030	0	$1,987,000	$8,526,500	$9,665,233	
2031	0	$1,987,000	$8,526,500	$0	$200,00

3.6.8 Funding Strategy

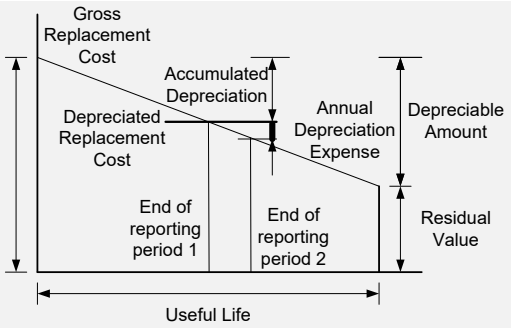
The proposed funding for assets is outlined in the City's operational budget and ten (10) - year capital budget.

These operational and capital budgets determine how funding will be provided, whereas the AM Plan typically communicates how and when this will be spent, along with the service and risk consequences. Future iterations of the AM Plan will provide service delivery options and alternatives to optimize limited financial resources.

3.6.9 Asset Valuations

The best available estimate of the value of assets included in this AM Plan are shown below. The assets are valued at estimated replacement costs:

Replacement Cost (Current/Gross)	$1,543,540,541
Depreciable Amount	$1,543,540,541
Depreciated Replacement Cost[17]	$ 775,648,704
Depreciation	$ 20,953,100



The current replacement cost is the most common valuation approach for specialized infrastructure assets such as engineered structures. The methodology includes establishing a comprehensive asset registry, assessing replacement costs (based on market pricing for the modern equivalent assets) and useful lives, determining the appropriate depreciation method, testing for impairments, and determining remaining useful life.

As the City matures its asset data, it is highly likely that these valuations will fluctuate significantly over the next 3 years and they should increase over time based on improved market equivalent costs.

3.6.10 Valuation Forecast

Asset values are forecast to increase as projections improve and can be validated as market pricing. The net valuations will increase significantly despite some assets being programmed for disposal that will be removed from the register over the 10-year planning horizon.

Any additional assets will add to the operations and maintenance needs in the longer term and would also require additional costs due to future renewals obligations. Any additional assets will also add to future depreciation forecasts. Any disposals of assets would decrease the operations and maintenance needs in the longer term and removes the high costs renewal obligations.

Currently there are bridges planned to be acquired acquired within the 10-year planning horizon however with limited availability of data it cannont be accurately projected at this point. This will be improved for the next iteration of the AM Plan.

[17] Also reported as Written Down Value, Carrying or Net Book Value.

3.6.11 Key Assumption Made in Financial Forecasts

In compiling this AM Plan, it was necessary to make some assumptions. This section details the key assumptions made in the development of this AM Plan, and should provide readers with an understanding of the level of confidence in the data behind the financial forecasts.

Key assumptions made in this AM Plan are:

- Operational forecasts are based on current budget allocations and are the basis for the 10-year horizon projections;
- Maintenance forecasts are based on current budget allocations and do not identify asset needs at this time. It is solely based on planned activities; and,
- Replacement costs were based on historical costing and engineer estimates. They were also made without costing what the asset would be replaced with in the future.

3.6.12 Forecast Reliability and Confidence

The forecast costs, proposed budgets, and valuation projections in this AM Plan are based on the best available data. For effective asset and financial management, it is critical that the information is current and accurate. Data confidence is classified on a A - E level scale[18] in accordance with Table in the AMP overview.

The estimated confidence level for and reliability of data used in this AM Plan is shown in Table 49.

Table 49: Data Confidence for Data Used in The AM Plan

DATA	CONFIDENCE ASSESSMENT	COMMENT
Demand Drivers	Low	Growth Demand Driver data is considered high confidence. Other drivers will require further investigation, and all require annual monitoring.
Growth Projections	Low	Population Data is of high confidence.
Acquisition Forecast	High	None planned within the ten (10) -Year horizon. The City will continue to monitor growth projections annually for acquisitions.
Operation Forecast	Medium	Future costs have been extrapolated from existing budget allocations and projected out by system growth modelling.
Maintenance Forecast	High	Maintenance activities are informed by the Bridge Condition Assessments.

[18] IPWEA, 2015, IIMM, Table 2.4.6, p 2|71.

Table 49: Data Confidence for Data Used in The AM Plan		
DATA	**CONFIDENCE ASSESSMENT**	**COMMENT**
Renewal Forecast - Asset Values	Low	Valuations will need to be updated to ensure the City has accurate costs to replace.
- Asset Useful Lives	Medium	Subject matter expert opinion and Bridge Condition Inspection modelling.
- Condition Modelling	Medium	Biennial Engineer Inspection informs the model. Will review modelling.
Disposal Forecast	Medium	Formalized process and priorities are being developed

The estimated confidence level for and reliability of data used in this AM Plan is considered to be a **Medium** confidence level.

3.7 PLAN IMPROVEMENT & MONITORING

3.7.1 Status of Asset Management Practices

ACCOUNTING AND FINANCIAL DATA SOURCES

This AM Plan utilizes accounting and financial data. The sources of the data are:

- 2021 Capital & Operating Budget;
- 2021 Tender Documents (various);
- Asset Management Data Collection templates;
- Audited Financial Statements and Government Reporting (FIR, TCA etc);
- Financial Exports from internal financial systems; and,
- Historical cost and estimates of budget allocation based on SME experience.

ASSET MANAGEMENT DATA SOURCES

This AM Plan also utilizes asset management data. The sources of the data are:

- Data extracts from various city applications and management software;
- Asset Management Data Collection Templates;
- Tender documents, subdivision agreements and projected growth forecasts as well as internal reports;
- Condition assessments;
- Subject matter Expert Opinion and Anecdotal Information; and,
- Reports from the mandatory biennial inspection, operational & maintenance activities internal reports.

3.7.2 Improvement Plan

It is important that the City recognize areas of the AM Plan and planning process that require future improvements to ensure effective asset management and informed decision making. The tasks listed below are essential to improving the plans and the City's ability to make evidence based and informed decisions. These improvements span from improved lifecycle activities, improved financial planning and to plans to physically improve the assets.

The Improvement Plan Table 50 below highlights proposed improvement items that will require further discussion and analysis to determine feasibility, resource requirements and alignment to current workplans. Future iterations of this AM Plan will provide updates on these improvement plans.

Table 50: Improvement Plan				
#	TASK	RESPONSIBILITY	RESOURCES REQUIRED	TIMELINE
1.	Complete update of major retaining wall inventory and confirm ownership.	CAM, Engineering Services,	$80,000 per annum $240,000 Total Tender Process Internal staff time	3 Years 2022 - 2024
2.	Complete condition assessment for older aluminum supports on a two-year cycle per the OSSIM.	CAM, Engineering Services,	$40,000 per annum Total Tender Process Internal staff time	3 Years 2022 - 2023
3.	Develop a Long-Term Financial Plan to connect the budgeting process to AM planning and ensure sustainable funding is achieved.	CAM, Engineering Services, Finance	$15,000 per annum $60,000 Total Internal Staff Time	4 Years 2022-2025
4.	Complete a lifecycle needs assessment to ensure funding gap is accurate and current and ensure funding requirements are understood.	CAM, Engineering Services, Finance, TOM	$40,000 per annum $120,000 Total Internal staff time	3 Years 2022 - 2024
5.	Incorporate missing bridges, major culverts and other engineered structures from other asset classes (e.g. Parks, Cemeteries, Golf Courses) into future AM Plan. This is to ensure inventory is accurate and all regulatory obligations are being met.	CAM, Engineering Services, Finance, TOM, Parks, Cemeteries, Recreation	$20,000 per annum $60,000 Total Internal staff time	3 Years 2022 - 2024
6.	Create inventory of minor retaining walls, confirm ownership, investigate operational change, and incorporate findings into AM Plan.	CAM, Engineering Services	$125,000 (Annual) $250,000 (Total) Tender Process Internal staff time	3 Years 2022 - 2024
7.	Update Age data for Retaining Walls and OSSS.	CAM, Engineering Services	$2,000 (Annual) $6,000 Total Internal staff time	3 Years 2022-2024
8.	Review Condition Assessment deliverables for engineered structures and align with AM practices.	CAM, Engineering Services	$4,000 (Annual) $8,000 (Total) Internal staff time	2 Years 2022 - 2023
9.	Review operating & maintenance activities and procedures for bridges, and options for contracting out services.	CAM, Engineering Services	$5,000 Internal staff time	Annually
10.	Develop new process to update data when Engineered Structure assets are replaced or new assets are acquired.	CAM, Engineering Services Continuous improvement,	$2,000 (Annual) $6,000 Total Internal staff time	3 Years 2022-2024
11.	Update Replacement Costs based on Market Pricing information and O&M Costs based on actual costs.	CAM, Engineering Services, TOM	$3,500 (Annual) Internal staff time	Annually (Perpetual)
12.	Review assets recommended for renewal and ensure planned forecasts and replacement costs are updated with type of asset it would be replaced with.	CAM, Engineering Services	$3,000 p.a. $6,000 Total Internal Staff Time	2 Years 2022-2023
13.	Review and update Schedule 29 By law to capture updated bridge & culvert load restrictions.	Engineering Services, Clerks	$1,500 p.a. $3,000 Total Internal Staff Time	2 Years 2022-2023
14.	Improve annual engagement survey process to optimize engagement and respondents.	CAM, Engineering Services, Communications	$7,500 (Annual) $37,500 (Total) Internal staff time	5 Years 2022-2027
15.	Improve demand driver knowledge and identify additional drivers to be utilized within the plan.	CAM, Engineering Services, Economic Development, Environmental Services	$3,000 Internal staff time	Annually
16.	Develop and improve risk management knowledge along with supporting documentation.	CAM, Engineering Services, Continuous Improvement	$12,500 (Annual) $25,000 (Total)	2 Years 2022-2023
17.	Investigate renewal needs for bridges with boundary agreements and incorporate into budget.	CAM, Engineering Services	$3,000 p.a. $6,000 Total Internal Staff Time	2 Years 2022-2023
18.	Investigate O&M activities and funding allocation for OSSS	CAM, TOM	$3,000 per annum $6,000 Total Internal Staff Time	2 Years 2022-2023

3.7.3 Monitoring and Review Procedures

This AM Plan will be reviewed during the annual budget planning process and revised to show any material changes in service levels, risks, forecast costs and proposed budgets as a result of budget decisions.

The AM Plan will be reviewed and updated on a regular basis to ensure it represents the current service level, asset values, forecast operations, maintenance, renewals, acquisition and asset disposal costs and planned budgets. These forecast costs and proposed budget will be incorporated into the Long-Term Financial Plan once completed.

3.7.4 Performance Measures

The effectiveness of this AM Plan can be measured in the following ways:

- The degree to which the required forecast costs identified in this AM Plan are incorporated into the long-term financial plan;
- The degree to which the 1-10-year detailed works programs, budgets, business plans and corporate structures consider the 'global' works program trends provided by the AM Plan;
- The degree to which the existing and projected service levels and service consequences, risks and residual risks are incorporated into the Strategic Planning documents and associated plans; and,
- The Asset Renewal Funding Ratio achieving the Organisational target (this target is often 90 – 100%).

4.0 REFERENCES

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2022
Waterworks Asset Management Plan

Hamilton

WATERWORKS ASSET MANAGEMENT PLAN

WATERWORKS INTRODUCTION

The purpose of this Asset Management Plan (AM Plan) is to identify the intended asset management (AM) programs for assets delivering the City of Hamilton's Waterworks services. The City of Hamilton (City) will identify these programs based on the City's understanding of the current service level requirements, and the current ability of the network to meet those requirements. Before July 1, 2025 this plan will be updated to include the proposed service level requirements.

The infrastructure assets covered by this Asset Management Plan (AM Plan) include assets which are part of the City's Waterworks network. At this time, this AM Plan includes Water, Wastewater and Stormwater assets, which were considered Core Assets under Ontario Regulation 588/17 (O.Reg. 588/17).

For a high level summary of the assets covered in this AM Plan refer to Table 5. For detailed summaries of assets, please refer to Table 8, Table 35 and Table 60.

The infrastructure assets included in this plan have a total replacement value of $14.7 billion as shown in Table 5.

1.1 Scope

The infrastructure assets covered by this AM Plan include assets which are part of the City of Hamilton's Waterworks system. At this time, this AM Plan includes water, wastewater, and stormwater assets, which are considered core assets under Ontario Regulation 588/17 (O.Reg. 588/17).

In addition, as mentioned in Section 6.2 of the AMP Overview, these AM Plans were completed using the Federation of Canadian Municipalities (FCM) approach to asset management in partnership with the Institute of Public Works Engineering Australasia (IPWEA) and National Asset Management System (NAMS) Canada template and philosophy, and also fulfill the O.Reg. 588/17 timeline and requirements. It is important to note that this is the first iteration of the Waterworks AM Plan completed by the Corporate Asset Management (CAM) office using this framework for asset management, and as such this plan differs greatly from the 2014 Asset Management Plan. The majority of data in this plan is the data available as of January 2022.

Before July 1st, 2025, this plan will be updated to include the proposed service level requirements for these assets in accordance with the O.Reg 588/17.

1.2 Supplementary Information

The AM Plan is to be read with other City planning documents. This should include the Strategic Asset Management Policy (SAMP) along with other key planning documents including:

- Asset Management Plan Overview;
- W/WW/SW City Wide Master Plan;
- Development Charge background study

Key stakeholders in the preparation and implementation of this AM Plan are shown in section 5 of the AMP Overview.

1.3 Legislative Requirements

Table 1: Water Legislative Requirements

LEGISLATION	REGULATIONS	PURPOSE
Safe Drinking Water Act, 2002	**O. Reg. 205/18: Municipal Residential Drinking Water Systems in Source Protection Areas**	This act recognizes that the people of Ontario are entitled to expect their drinking water to be safe and controls the regulation of drinking water systems and drinking water testing.
	O. Reg. 453/07: Financial Plans	
	O. Reg. 229/07: Service of Documents	
	O. Reg. 188/07: Licensing of Municipal Drinking Water Systems	
	O. Reg. 242/05: Compliance and Enforcement	
	O. Reg. 128/04: Certification of Drinking Water System Operators and Water Quality Analysts	
	O. Reg. 248/03: Drinking Water Testing Services	
	O. Reg. 172/03: Definitions of 'Deficiency' and 'Municipal Drinking Water System'	
	O. Reg. 171/03: Definitions of Words and Expressions Used in the Act	
	O. Reg. 170/03: Drinking Water Systems	
	O. Reg. 169/03: Ontario Drinking Water Quality Standards	

Table 1: Water Legislative Requirements		
LEGISLATION	**REGULATIONS**	**PURPOSE**
Clean Water Act 2006	**O. Reg. 288/07 Source Protection Committees**	The purpose of the Act is to protect existing and future sources of drinking water.
	O. Reg. 287/07: General	
	O. Reg. 284/07: Source Protection Areas and Regions	
	O. Reg. 231/07: Service of Documents	
	O. Reg. 288/07 Source Protection Committees	
Ontario Water Resources Act	**O.Reg 450/07 Charges for Industrial and Commercial Water Users**	
	O.Reg 387/04 Water Taking and Transfer	
	R.R.O. 1990, Reg. 903: Wells	
	O.Reg 450/07 Charges for Industrial and Commercial Water Users	
Canadian Environmental Protection Act		An Act respecting pollution prevention and the protection of the environment and human health in order to contribute to sustainable development
Canada Water Act		An Act to provide for the management of the water resources of Canada, including research and the planning and implementation of programs relating to the conservation, development and utilization of water resources

Table 1: Water Legislative Requirements		
LEGISLATION	**REGULATIONS**	**PURPOSE**
2020 Watermain disinfection procedure	**This watermain disinfection procedure is a supporting document for Ontario legislation and regulations related to Drinking Water.** **Part of O.Reg. 170/03**	For watermains, including temporary watermains, that are added to, modified, re-aligned, replaced or extended within a Drinking Water System, Operating Authorities shall ensure that the requirements of ANSI/AWWA Standard C651 are followed as modified by this procedure.
Drinking Water Quality Management Standard	**The DWQMS sets out a framework for the operating authority and the owner of a drinking water system to develop a QMS that is relevant and appropriate for the system.** **The DWQMS contains elements of both the ISO 9001 standard with respect to management systems and the hazard analysis and critical control points (HACCP) standard with respect to product safety. The DWQMS also incorporates the HACCP approach to risk assessment and reflects the multi-barrier approach for drinking water safety.**	The DWQMS approach emphasizes the importance of: ▪ A proactive and preventative approach to management strategies that identify and manage risks to public health Establishing and documenting management procedures ▪ Clearly identifying roles and responsibilities ▪ continual improvement of your management system

Table 2: Wastewater Legislative Requirements	
LEGISLATION	**PURPOSE**
Environmental Protection Act	Environmental legislation aimed at preventing pollution and protecting the environment and human health.
Clean Water Act, 2006	The purpose of this Act is to protect existing and future sources of drinking water.
Fisheries Act	The purpose of this Act is to provide a framework for the proper management and control of fisheries and the conservation and protection of fish and fish habitat, including by preventing pollution.
MECP Design Guidelines	Guidelines for the design, disinfection, and evaluation of sewage works.
Ontario Water Resources Act	To provide for the conservation, protection and management of Ontario's waters and for their efficient and sustainable use, in order to promote Ontario's long-term environmental, social and economic well-being

Table 3: Stormwater Legislative Requirements	
LEGISLATION	**PURPOSE**
Drainage Act, R.S.O. 1990, c. D.17	Provides a procedure whereby the municipality may, provide a legal outlet for surface and subsurface waters from a landowner.
Ontario Water Resources Act, R.S.O. 1990, c. O.40	To provide for the conservation, protection and management of Ontario's waters and for their efficient and sustainable use, in order to promote Ontario's long-term environmental, social and economic well-being
Canadian Environmental Protection Act, 1999	An Act respecting pollution prevention and the protection of the environment and human health in order to contribute to sustainable development
Fisheries Act	The purpose of this Act is to provide a framework for the proper management and control of fisheries and the conservation and protection of fish and fish habitat, including by preventing pollution.
Species at Risk Act (S.C. 2002, c. 29)	An act to protect wildlife species at risk, and/or provide for the recovery of wildlife species at risk.

Table 3: Stormwater Legislative Requirements	
LEGISLATION	**PURPOSE**
Environmental Protection Act, R.S.O. 1990, c. E.19	Environmental legislation aimed at preventing pollution and protecting the environment and human health.
Endangered Species Act, 2007, S.O. 2007, c. 6	An Act with identifies and protects species at risk and promotes stewardship activities for these species.

1.4 Asset Hierarchy

An asset hierarchy provides a framework for structuring data in an information system to assist in collection of data, reporting information and making decisions. As outlined in Section 6.5 of the AMP Overview, the City's functional hierarchy includes the strategic service area, asset class, and asset levels used for asset planning and financial reporting as well as service planning and delivery.

The strategic levels are defined in Section 6.5 of the AMP Overview, and the service areas included in this report are defined in Table 4 below. The service area hierarchies used in this report which outline the included assets are defined in Table 2 and Table 3 in the AMP Overview.

Currently this plan includes assets related to the following service areas: Water, Wastewater, Stormwater, and Administration because they relate to the core assets defined in O.Reg. 588/17.The asset service hierarchy is shown is Table 1.

Table 4: Asset Service Area Hierarchy

Strategic Level	Service Area	Functional Responsibilities
Waterworks	**Water**	Supply and distribution of clean, safe drinking water to all properties within Hamilton that are connected to the municipal supply. This includes all support activities that are performed in order to achieve this service. Separated into linear, vertical, and administrative assets.
	Wastewater	Collect and treat wastewater from all properties within Hamilton that are connected to municipal sewers. Include all support activities that are performed in order to achieve this service. Separated into linear, vertical, and administrative assets.
	Stormwater	Collect, monitor, and transmit storm and surface water within Hamilton either to the natural environment, or to a wastewater treatment facility. Separated into linear, vertical, and administrative assets.

1.5 Overall Summary of Assets

For the purposes of this AM Plan, the asset categories are defined using the O.Reg. 588/17 definitions as follows:

- Water assets - relate to the collection, production, treatment, storage, supply or distribution of drinking water;
- Wastewater assets - relate to the collection, transmission, treatment or disposal of wastewater, including any wastewater asset that from time to time manages stormwater; and,
- Stormwater assets relate to the collection, transmission, treatment, retention, infiltration, control or disposal of stormwater.

The overall summary of waterworks assets is shown in Table 5. Waterworks assets have a total replacement value of **$14.7B** and are in an average of **Fair** condition. In addition, the average age of these assets is **29 years** with **54%** of useful life remaining. However, the overall data confidence for the waterworks strategic level is **low to medium**, and so these numbers may change drastically in future iterations of the plan. Data confidence is explained throughout the report and is defined in Section 7.2.2 of the AMP Overview.

Table 5: Summary of Assets

ASSET CATEGORY	REPLACEMENT VALUE	AVERAGE AGE (% RSL)	AVERAGE EQUIVALENT CONDITION
Water	$4.25B	34 years (45%)	3-Fair
Data Confidence	Low	Medium	Low
Wastewater	$7.25B	30 years (34%)	3-Fair
Data Confidence	Low	Medium	Medium
Stormwater	$3.14B	22 years (73%)	2-Good
Data Confidence	Low	High	Medium
TOTAL	**$14.7B**	**29 years (54%)**	**3-Fair**
Data Confidence	**Low**	**Medium**	**Medium**

2022

Water Asset Management Plan

Hamilton

WATER SERVICE AREA

Description

The water network distributes drinking water to its customers across the City and its objective is to deliver safe, clean drinking water on demand to all connections 24 hours a day. These assets involve assets related to the collection, production, treatment, storage, supply or distribution of drinking water.

Replacement Value $4.3 Billion

Average Asset Condition

Did You Know?

- In 2021, the Woodward WTP treated and distributed approximately **78,000 ML** for **569,000** customers which is equivalent to **39 billion, 2-litre bottles** at a rate of **$0.004 a bottle** for a house-hold that uses 1000-litres of water per month.
- The population is expected to increase to **636,000 by 2031** and so plant upgrades are being completed to improve capacity and perfor-mance.

Critical Asset Summary

Critical Assets	Quantity	Replacement Cost	Condition	Stewardship Measures
Water Treatment Plant	1	$1.0 billion	Poor	**# of instances Chlorine is below/ above target at the WTP** **8**
Pump Station	18	$125.3 million	Good	**Inspection Frequency** **Weekly**
Wells & Well Stations	8 wells 6 stations	$21.9 million	Fair Good	**# Drinking Water Advisories** **0**
Watermain	2,129 km	$1.6 billion	Fair	**Emergency breaks repaired within 2 days** **100%**

Data Confidence

VERY HIGH | MEDIUM | VERY LOW

FINANCIAL FACTS

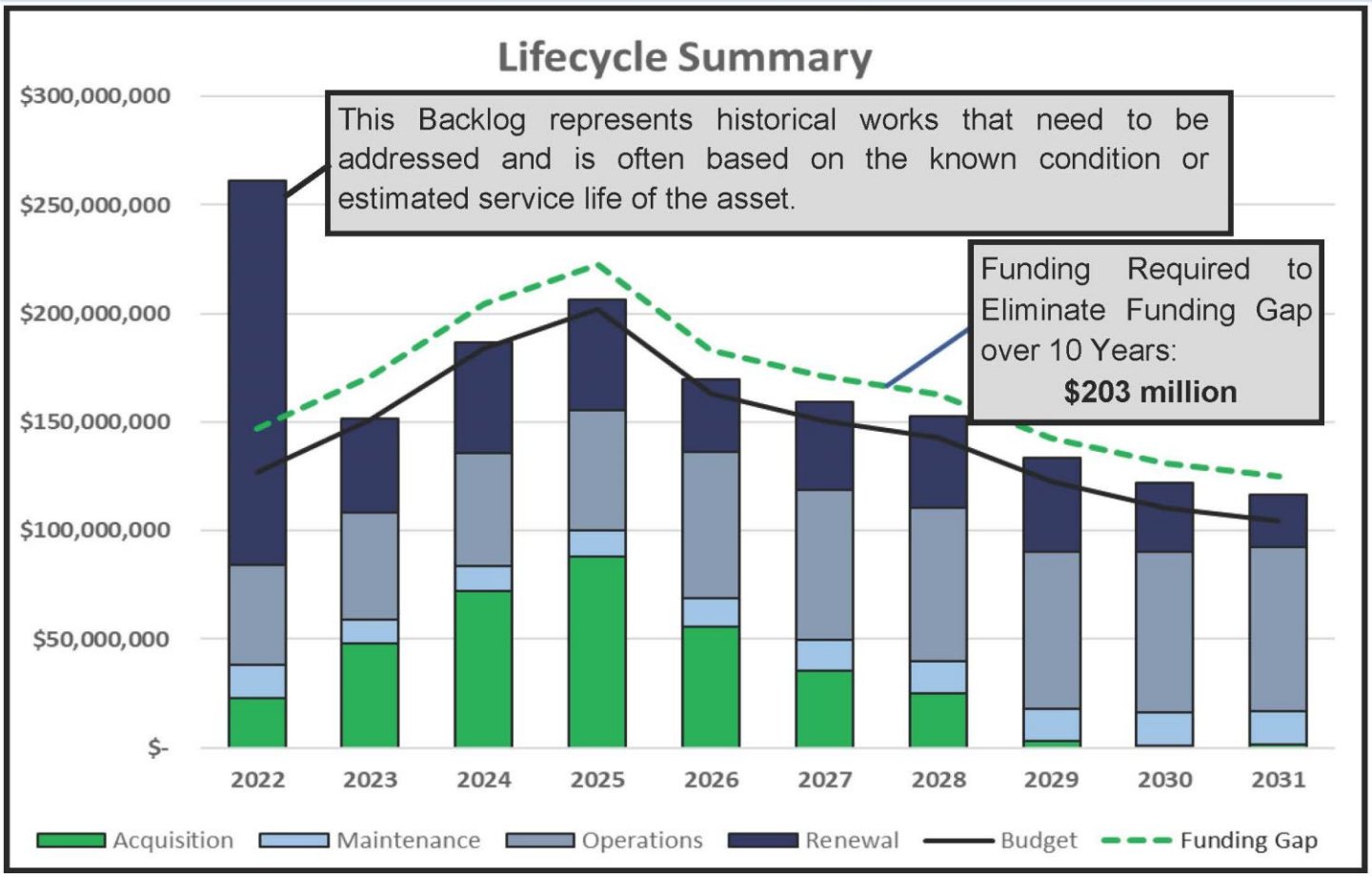
- Hamilton will receive **$512 million** dollars worth of assets over the next 10 years.
- Hamilton will invest on average **$769 million** to operate, maintain Water assets over the next ten years.

DID YOU KNOW?

- The City completes condition assessments on critical trunk watermain to reduce the chance of a critical watermain break.
- The City has a loan program to replace lead water services throughout the City.

FINANCIAL INDICATORS

Type of Indicator	Measurement	Explanation
Asset Renewal Ratio	**74.9%**	This ratio demonstrates the rate the city renews its Water Assets.
10 Year O&M Forecast	**84.5%**	The % of funding allocated compared to what needs to be spent.
Annual Infrastructure Gap	**$20 million**	The difference between what is being spent and what should be spent.



2.0 WATER ASSETS

The water network distributes water to its customers across the City and its objective is to deliver safe, clean drinking water on demand to all connections 24 hours a day, seven days a week. Clean water supports residents, businesses such as restaurants and public institutions such as schools and hospitals. The water system provides direct benefit and value to its customers whether they are residential, commercial or industrial customers as well as providing a larger Public Health benefit to the community.

Water assets relate to the collection, production, treatment, storage, supply or distribution of the drinking water service. For this iteration of the AM Plan, water assets include linear and vertical assets.

Vertical assets are assets which can only occupy one site and are typically within a building or a facility which may be comprised of multiple components. Linear assets are assets which traverse multiple sites and are often defined by length and also encompass components that are considered part of the linear network.

The asset hierarchy outlining assets included in this section is shown below in Table 6.

TABLE 6: ASSET CLASS HIERARCHY

VERTICAL ASSETS	LINEAR ASSETS	ADMINISTRATIVE
Water Treatment Plant	Trunk Watermain	Facilities (included in WTP)
Booster Stations	Local Watermain	Vehicles
Underground Reservoirs	Water Services	Lab Equipment
Elevated Water Towers	Hydrants	SCADA
Wells & Well Stations	Major (>400mm) Valves	
Water Filling Stations	Minor (<400mm) Valves	
	Water Meters	
	Sampling Stations	

2.1 BACKGROUND

This AM Plan is intended to communicate the requirements for the sustainable delivery of services through the management of assets, compliance with regulatory requirements and required funding to provide the appropriate levels of service over the 2022 – 2031 planning period. The assets covered by this plan include the major components required to deliver effective water services to the City's customers.

The City acquired significant amounts of water network assets through amalgamation in 2001. These aging assets were included into the City's water inventory and were in varied condition when acquired. Once amalgamated, any aging assets or deficient assets became the responsibility of Hamilton Water and created several new challenges that needed to be taken into consideration and planned for.

The information in the water section of the plan is intended to give a snapshot in time of the current state of the water asset class by providing the necessary background, detailed summary and analysis of existing information.

The City currently operates and maintains five (5) drinking water systems and subsystems as listed below in Table 7. The largest system is the Hamilton System which is made up of two subsystems; Woodward and Fifty Road. The Woodward subsystem draws its water from Lake Ontario and serves the majority of the City's population, and the Fifty Road subsystem distributes water from the Town of Grimsby. In addition, there are four (4) systems which draw water from the ground using drinking water wells & well stations.

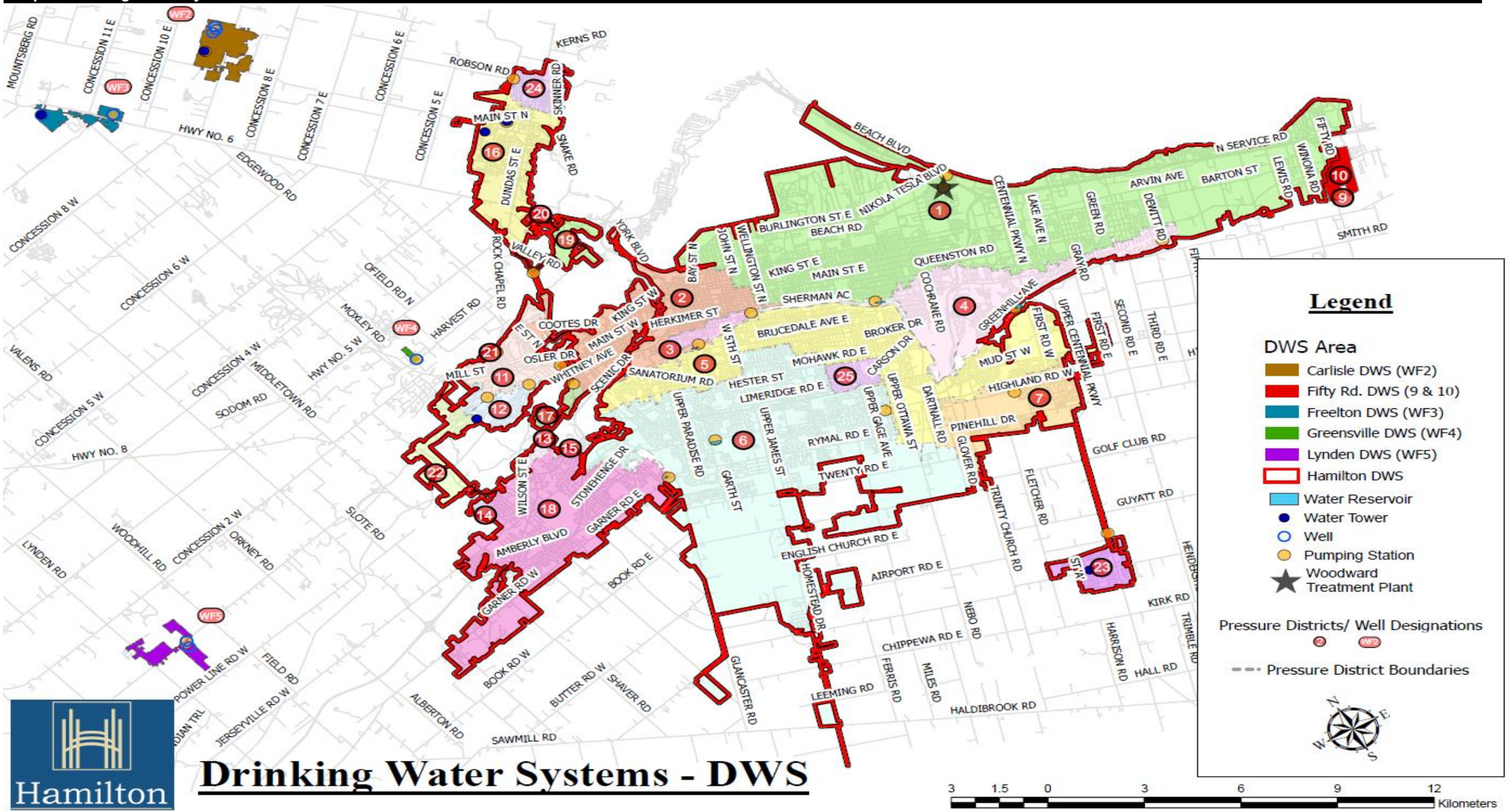
For the purposes of this report all water assets are presented together as they contribute to the overall drinking water service, but these systems and subsystems may be referenced. For a map of these systems, please refer to Map 1.

Table 7: Drinking Water Systems and Subsystems

Drinking Water System/Subsystem	Population Served	Water Source
Hamilton System / Woodward Subsystem	569,353 (2021 Census)	Lake Ontario
Hamilton System / Fifty Road Subsystem	201	Town of Grimsby
Freelton System	804	Ground water
Greensville System	108	Ground water

Table 7: Drinking Water Systems and Subsystems		
Drinking Water System/Subsystem	**Population Served**	**Water Source**
Carlisle System	1833	Ground water
Lynden System	393	Ground water

Map 1: Drinking Water Systems



2.1.1 Detailed Summary of Assets

Table 8 below displays the detailed summary of assets for the water asset class. At the time of writing, no inventory data was available for water chambers, and so they are not encompassed in this iteration of the AM Plan. In addition, it is possible that there are assets that may not be owned by Public Works which may be considered drinking water assets which may be missing from this inventory. This has been identified as a Continuous Improvement Item in Table 32.

The City owns approximately **$4.25B** in water assets which are on average in **Fair** condition. Overall, assets are an average of **34 years** in age which is **45%** of the average overall remaining service life (RSL). The data below is a combination of data from various sources as there is not yet an asset registry containing all inventory information in one data source. Examples of data sources which were used for this iteration of the Core AM Plans are stated in the AMP Overview. The lack of an asset registry is a continuous improvement item in Table 32. The City must plan to complete a detailed review of this data and create data standards in order to improve overall data quality.

For most assets, Fair condition means that the City should be planning to complete minor to moderate maintenance activities to ensure the assets reach their intended useful lives since assets begin to experience deterioration affecting asset usage at this stage as indicated in Table 8.

Table 8: Detailed Summary of Assets
***Weighted Average**

ASSET CATEGORY	NUMBER OF ASSETS	REPLACEMENT VALUE	AVERAGE AGE (% RSL)	AVERAGE EQUIVALENT CONDITION
VERTICAL ASSETS				
Water Treatment Plant (incl Admin Facilities)	1	$1.00B	91 years (0%)	4-Poor
Data Confidence	High	Low	Medium	Very Low
Well Station	6	$17.15M	30 years (51%)	2-Good
Data Confidence	High	Medium	High	Medium
Production Wells	8	$4.783M	32 years (57%)	3-Fair
Data Confidence	High	Medium	High	Low
Underground Reservoir	12	$305.2M	53 years (30%)	2-Good
Data Confidence	High	Low	High	Medium
Booster Stations	18	$125.3M	40 years (33%)	2-Good
Data Confidence	High	Low	High	Medium
Elevated Tower	6	$28.54M	24 years (52%)	2-Good
Data Confidence	High	Low	High	Medium
Filling Station	2	$681.7K	18 years (64%)	2-Good
Data Confidence	High	Low	High	Medium
	SUBTOTAL	**$1.48B**	**41 years (33%)**	**3-Fair***
	Data Confidence	**Low**	**High**	**Medium**
LINEAR ASSETS				
Trunk Watermain (>=450mm)	185.54 km	$281.42M	60 years (36%)	3-Fair
Data Confidence	High	Medium	Medium	Low
Local Watermain (<450mm)	1,943.65 km	$1.347B	44 years (45%)	3-Fair
Data Confidence	High	Medium	Medium	Low
Water Service	146,276	$643.61M	25 years (69%)	2-Good
Data Confidence	Medium	Low	Medium	Low
Water Meter	157,596	$66.98M	13 years (48%)	3-Fair
Data Confidence	High	Low	Very High	Low
Hydrants (incl Automatic Flushing Units)	13,724	$164.69M	26 years (68%)	2-Good
Data Confidence	Very High	Medium	Medium	Low
Major Valves (>=400mm)	1,376	$103.38M	22 years (71%)	2-Good
Data Confidence	Medium	Low	Medium	Low
Minor Valves (>400mm)	21,383	$131.11M	21 years (71%)	2-Good
Data Confidence	Medium	Low	Medium	Low
Sampling Station	33	$264K	3 years (94%)	1-Very Good
Data Confidence	High	Medium	Medium	Low
Chambers	No Data	No Data	No Data	No Data
Data Confidence	Very Low	Very Low	Very Low	Very Low
	SUBTOTAL	**$2.74B**	**27 years (62%)**	**3-Fair***
	Data Confidence	**Medium**	**Medium**	**Low**
Administrative				
Vehicles	144	$12.47M	7 years (28%)	3-Fair
Data Confidence	High	Medium	High	Low
Lab Equipment (incl IT)	N/A	$3.45M	8 years (63%)	3-Fair
Data Confidence	High	Medium	Medium	Low
SCADA	N/A	$15.0M	N/A	N/A
Data Confidence	N/A	Very Low	N/A	N/A
	SUBTOTAL	**$30.9M**	**7 years (52%)**	**3-Fair***
	Data Confidence	**Medium**	**Medium**	**Low**
	TOTAL	**$4.25B**	**34 years* (45%)***	**3-Fair***
	Data Confidence	**Low**	**Medium**	**Low**

The City has one (1) Water Treatment Plant (WTP) which services the majority of the population through the Woodward subsystem as shown in Table 7. The Woodward WTP has several complex processes that run throughout several facilities but has been simplified into one (1) asset for ease of reporting for this first iteration of the AM Plan. A Continuous Improvement item in Table 32 is to improve the reporting for the WTP for future iterations of the AM Plan to provide more details on the specific processes it undertakes. The WTP is the single largest value water asset in the City and has been estimated at **$1.0B** with a low data confidence level due to the complexity of the plant.

The data confidence for vertical assets is typically high due to the asset's locations being above ground and able to be visually confirmed easily. The confidence is not yet considered Very High due to multiple data sources which showed conflicting quantities and registry information. There has been a continuous improvement item identified to confirm data across all data sets and unify the data into a single source for future reference.

Due to the lack of current data, the complexity of vertical assets and the low frequency of asset replacements, it is difficult to achieve a high data confidence for replacement cost for this iteration of the plan. Future plans will improve on the current replacement cost values, and so the data confidence is considered low for these assets. Age, condition information and data confidence are presented in Section 2.2.4.

For linear assets, the data confidence for number of assets is considered to be high because of active data management. However, these assets are typically more challenging to confirm as they are generally buried infrastructure that cannot simply be visually verified (excluding hydrants and sampling stations). Due to these limitations there are some assets such as water services where the quantities are of a lesser confidence. The number of water meters should be almost equal to the number of services, and so it is estimated that there are approximately 11,000 water services not documented in the system. This is not an asset that historically was tracked and monitored consistently. Staff are actively working on confirming these connections and these are being added to the system as the data is collected. In addition, water meter data has a few known scenarios in ICI & multi-residential properties that would inflate the number of assets.

Linear assets are replaced much more frequently than vertical assets and as such the replacement costs generally have a higher confidence level and are often close to the approximate market rates. However, improving asset replacement costs by updating current market prices regularly instead of historical costs/estimates or internal models has been identified as a Continuous Improvement Item in Table 32.

The City has included its administrative assets (e.g. vehicles, laboratory equipment, software and administrative facilities) in a limited capacity for this iteration of the AM Plan so that the replacement costs are beginning to be recognized in the report. These assets contribute to the overall drinking water service; however, these have not yet been completed at a detailed level and will be encompassed in more detail before the 2025 iteration of the plan. It is important to

note that the administrative facilities for the Waterworks Strategic Level are encompassed in the replacement cost of the WTP.

Please refer to the AMP Overview Section 7.2.2 for a detailed description of data confidence.

2.1.2 Asset Condition Grading

Condition refers to the physical state of the water assets and are a measure of the physical integrity of these assets or components and is the preferred measurement for planning lifecycle activities to ensure assets reach their expected useful life. Since condition scores are reported using different scales and ranges depending on the asset, Table 9 below shows how each rating was converted to a standardized 5-point condition category so that the condition could be reported consistently across the AM Plan. A continuous improvement item identified in Table 32, is to review existing internal condition assessments and ensure they are revised to report on the same 5-point scale with equivalent descriptions.

TABLE 9: CONDITION GRADING EQUIVALENT

EQUIVALENT CONDITION GRADING	CONDITION DESCRIPTION	% REMAINING SERVICE LIFE	WATERMAIN (TRUNK /LOCAL)	VERTICAL ASSETS CONDITION RATING
1 Very Good	The asset is new, recently rehabilitated, or very well maintained. Preventative maintenance required only.	>79.5%	Total Breaks = 0, Default to % RSL	1-Very Good
2 Good	The asset is adequate but has slight defects and some deterioration. Deterioration has no significant impact on asset's usage. Minor maintenance may be required in addition to preventative maintenance.	69.5% – 79.4%	Total Breaks = 0, Default to % RSL	2-Good
3 Fair	The asset is sound but has minor defects. Deterioration is beginning to have an impact on asset's usage. Minor to significant maintenance is required.	39.5% - 69.4%	Breaks in 5 years = 0 AND Total Breaks > 0, OR % RSL (worse score)	3-Fair
4 Poor	Asset has significant defects and deterioration. Deterioration has an impact on asset's usage. Rehabilitation or major maintenance required in the next year.	19.5% -39.4%	Breaks in 5 years > 0 OR % RSL (worse score)	4-Poor
5 Very Poor	Asset has serious defects with significant defects and deterioration. Asset is not fit for use. Urgent rehabilitation or closure required.	<19.4%	Breaks in 5 years > 3 OR or % RSL (worse score)	5-Very Poor

The following conversion assumptions were made:

- Water Treatment Plant (WTP) condition was based on subject expert opinion based on the condition descriptions provided above;
- Watermain condition for both trunk and local were based on a combination of breaks and age;
- Vertical assets' Level 2 Condition Assessments are based on a 5-point scale which was considered equivalent to the AM Plan 5-point scale; and,
- For assets where a condition assessment was not completed or a final condition score was not assigned, but age information was known, the condition was based on the % of remaining service life.

2.1.3 Vertical

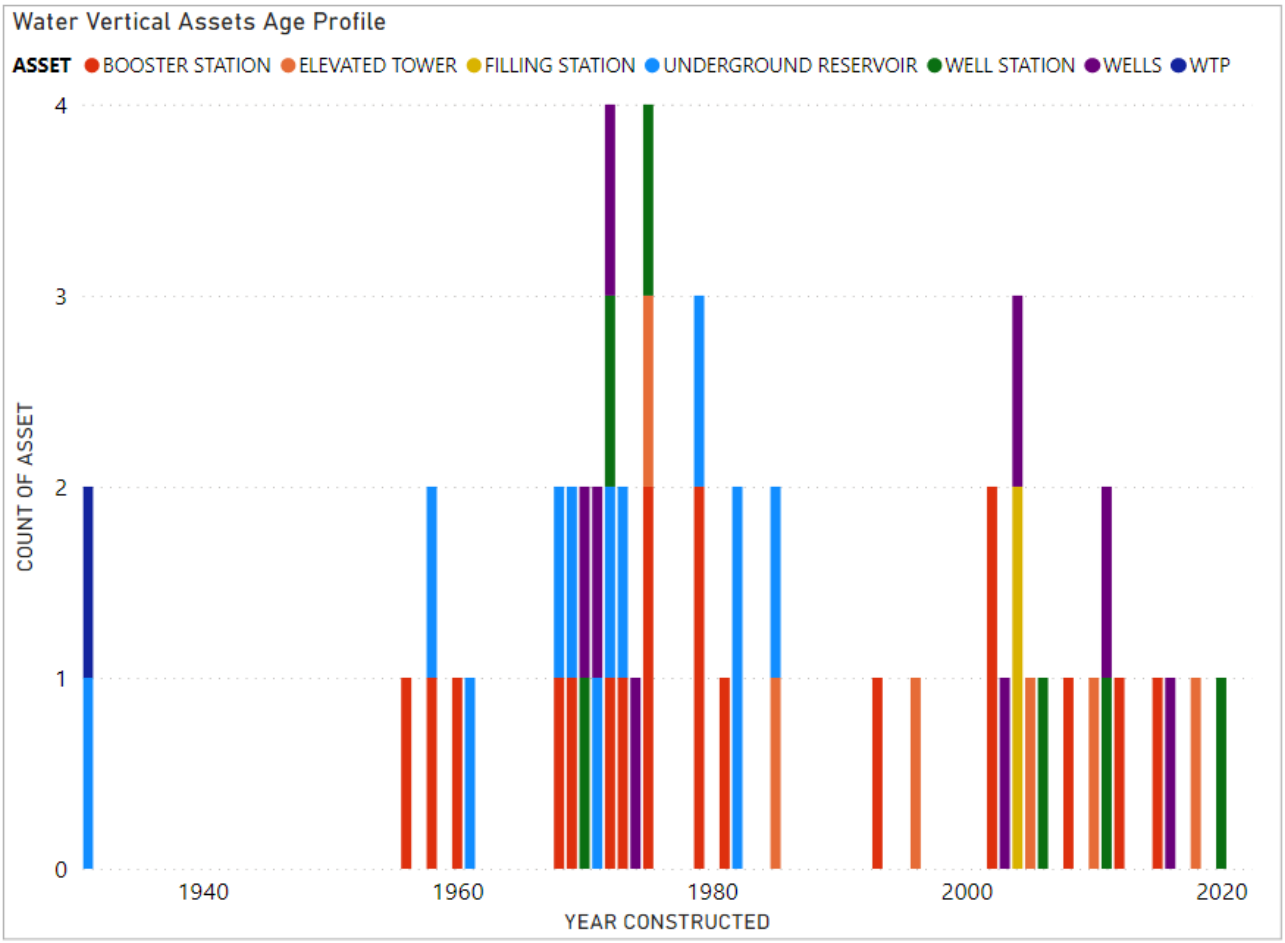
The background information for water vertical assets is included below and includes an age profile, the condition methodology used, the condition profile, and asset usage and performance.

2.1.3.1 Age Profile

The age of an asset is an important consideration in the asset management planning process especially for assets that will not receive a typical condition grading through inspections. Some lower cost or lower criticality assets can be planned for renewal based on age as a proxy for condition or until other condition methodologies are established. It should be noted that if a water assets' condition is based on age, it is typically considered to be of a lower confidence level.

The age profile of the water vertical assets is shown in Figure 1. An analysis of the age profile is provided below. For vertical assets, the data confidence for age is typically high because this information was collected using an inventory process.

Figure 1: Water Vertical Assets Age Profile



WATER TREATMENT PLANT (WTP)

The City's Water Treatment Plant (WTP) is approximately 91 years old which exceeds the design life (60 years) of the original plant. This however does not reflect the significant upgrades that have been completed over the lifecycle of the plant which have extended the life of the plant well past its design life. Future iterations of the AM Plan will ensure that the WTP is analyzed more fulsomely to ensure the City is better able to analyze the plants estimated service life. The age data confidence is considered medium because there are many assets as part of the WTP and this is only representing the initial construction date.

BOOSTER STATIONS

The majority of booster stations in the City were constructed from 1955 – 1980. The estimated service life (ESL) of a booster station is estimated to be 60 years. Three (3) booster stations are currently beyond their ESL and an additional three (3) stations will exceed their ESL in the next ten years. After an asset has reached its ESL it should be monitored with an increased

frequency to ensure the asset is performing as expected and to determine if the ESL for the asset type should be extended.

ELEVATED TOWERS

Elevated towers are a relatively new asset compared to other vertical water assets, with the oldest asset being constructed in 1975. The ESL of an elevated tower is 50 years, and so the oldest asset is approaching its ESL, but has been assessed as being in good condition from the last condition assessment.

UNDERGROUND RESERVOIR

The oldest reservoir in the City was built in 1931, had a major upgrade in 2012 and was reported to be in good condition per the last condition assessment. The second oldest reservoir which is approaching its ESL had a major upgrade in 2017 and was also reported to be in good condition per the last condition assessment. The remainder of the assets were built from 1961 – 1985. The ESL for a reservoir has been estimated at 75 years, and so while these assets will not reach their ESL in the next 10 years, condition assessments should continue so that preventative work can be completed to avoid reactive repairs on this aging piece of infrastructure.

WELL & WELL STATION

Typically, wells are drilled before or during the construction of a well station which explains why they are not always constructed at the same time in Figure 1. Historically, these assets have been reported together, but have been separated in the report because they are distinct assets with different ESLs. In addition, some well stations are serviced by two (2) wells. Wells and well stations are generally newer pieces of infrastructure with the oldest well and station being constructed in 1970. Wells' ESL are considered to be 75 years, while the well station ESL is typically considered to be 60 years. Therefore, the oldest well station is beyond its ESL, but had a major upgrade completed in 2014, and no other well station is beyond its ESL.

FILLING STATION

The City has two (2) filling stations which were constructed in 2004 and had major upgrades in 2011. It is estimated that filling stations have an ESL of 50 years, and so based on age, it is not anticipated that these will require any major work in the next 10 years.

2.1.3.2 Condition Methodology

For treatment plants, there is no formal condition assessment process, and for the purposes of this report the condition has been identified by subject matter experts at the City based on various available condition information as well as the condition descriptions presented in Table 10. Condition assessments for various components have been completed on the plant as deemed necessary. However, a formal condition assessment program should be identified by process on a pre-determined cycle. This has been identified as a continuous improvement item in Table 32.

For other vertical assets, the City typically undertakes three (3) different levels of condition assessments for vertical assets as indicated in a 2015 Technical Memorandum completed by CH2M Hill as defined below in Table 10. Historically, the City had a target of 10 years for vertical assets, but it was recommended to complete Level 1 inspections regularly to prioritize Level 2 inspections. However, the City has not fully implemented this approach, and has focused on completing Level 2 inspections.

Table 10: Condition Descriptions

INSPECTION LEVEL	DESCRIPTION	TARGET FREQUENCY	ACTUAL FREQUENCY
1	High level inspection at the facility level for stated lifecycle categories and is used to inform the Level 1 risk assessment and the lifecycle analysis.	1 to 2 years	N/A
2	More detailed condition grade assessed at the assembly level and is used to inform the Level 2 risk assessment and as a more detailed input to the lifecycle analysis. Data captured through a formalized asset inspection, typically conducted by external resources.	Dependent on Level 1 findings, or target of 10 years.	17-year cycle
3	Detailed investigation, where shown to be cost-effective.	Undertaken as required	N/A

A combination of six (6) Level 2 condition assessments for water & wastewater vertical assets are completed annually excluding the treatment plants. Typically, this is an even distribution resulting in three (3) Level 2 condition assessments being completed annually for water vertical assets, which means on average vertical assessments are completed on an approximate 17-year cycle. However, sometimes more or less water assets are included depending on priority. The priority assets have been identified by staff using information from audits completed in 2003 and 2012 as well as staff input. At this time, the process for selection is not formally documented, and so this has been identified as a continuous improvement item. Another continuous improvement item would be to achieve the Level 2 condition assessments on vertical assets on a minimum 10-year cycle if Level 1 assessments continue to not occur to ensure that the City is aware of upcoming forecast requirements, which is approximately another five (5) assessments per year.

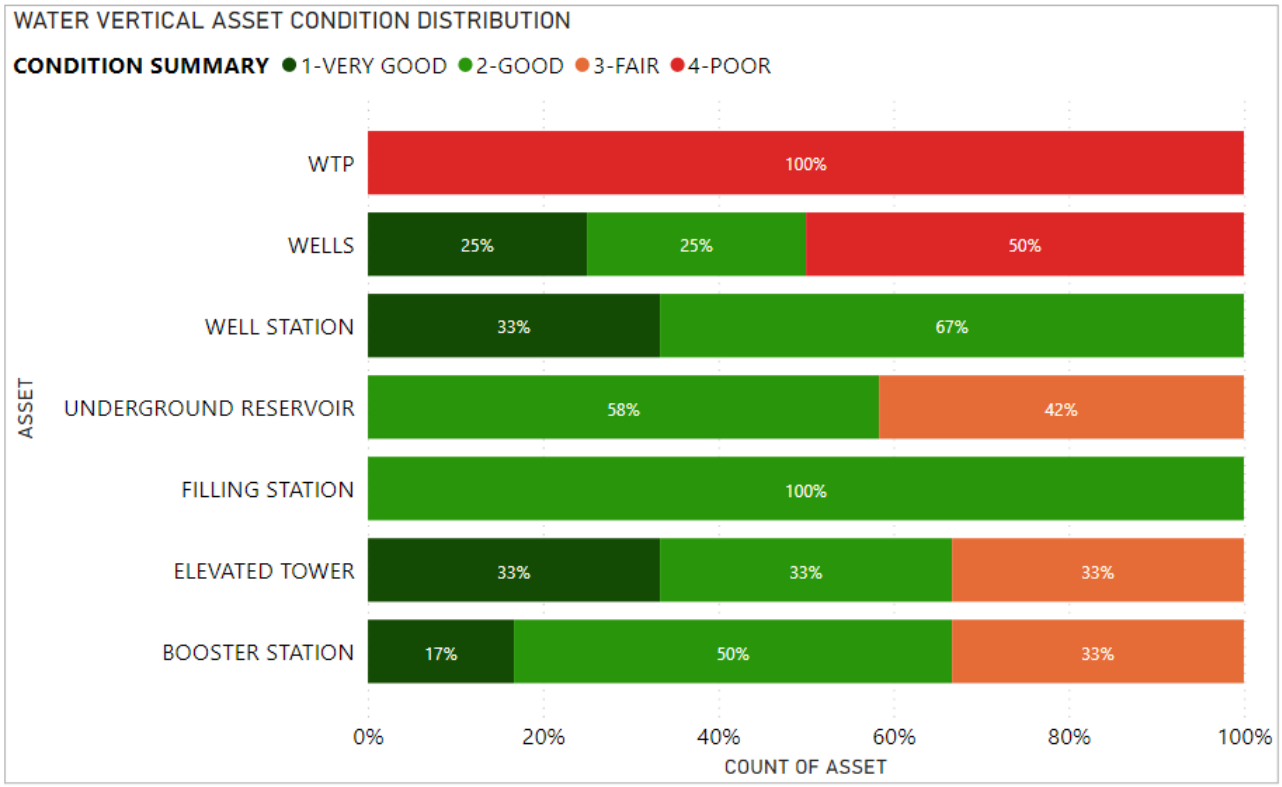
While wells do have an assessment program, the program does not output a condition score and so wells' condition have been reported based on age. This has been identified as a continuous improvement item in Table 32.

Finally, condition assessments should begin on any new facility within a determined timeline after being constructed, possibly 10-15 years into its lifecycle. These have been identified as continuous improvement items in Table 32.

2.1.3.3 Asset Condition Profile

The condition profile of the City's assets is shown in Figure 2. As mentioned in Section 1.1.2, the original condition grades were converted to a standardized condition category for report consistency.

Figure 2: Water Vertical Asset Condition Distribution



WATER TREATMENT PLANT

Based on subject area experts and the descriptions provided in Table 9, overall, the WTP is considered to be in overall Poor condition.

The Woodward Water Treatment Plant has component processes of varying ages and states of repair. Within the last 15 years a number of new or rehabilitated processes have been

constructed including new corrosion control and fluoride buildings, reconstruction of the filter building structure and significant improvements to the highlift building and associated assets. Several other processes have significant deterioration and are approaching or are at the end of their useful life. These include the chlorination building, the intake structures, components of the pre-treatment and filtration processes, high lift pump impellers and the clearwell. A capital project is currently in the proposal development phase to address many of these issues. Construction is anticipated to begin in 2025.

A condition assessment program should be implemented to proactively identify areas of concern to avoid the WTP from reaching a very poor condition level.

As stated previously, the WTP is a complex asset, and so the condition rating is currently at a low confidence level because there are a lot of components to consider. The plant is composed of five (5) major processes: Low Lift, Pre-Treatment, Filtration, Treatment, and High Lift. At this time, some components in these processes are considered to be in good to poor condition. The poor condition rating is due to some key deficiencies that are affecting the performance of the plant from the operator's perspective. Since the WTP is the most expensive water asset, there is significant expenditure required to bring this asset up to an acceptable condition.

OTHER VERTICAL ASSETS

Based on the most recent condition assessments, vertical assets are typically in good condition. As stated in Section 1.1.2, the frequency at which these inspections occur should be investigated further as they do not match the target frequencies. As a result of the frequency of inspections, the data confidence associated with the condition of these assets is medium.

Since condition assessments are completed on booster stations, these booster stations are known to be in good to fair condition, and a major upgrade was completed on one (1) of these stations in 2017. However, over the next 10 years, an additional three (3) booster stations will exceed their ESL, which shows the importance of completing condition assessments on these assets regularly and performing upgrades and preventative operations and maintenance activities so that these assets reach their ESL without major reactive repairs.

In addition, wells are inspected but the inspections do not output a final score. Therefore, the conditions of wells have been estimated based on age and so it is likely the Poor condition wells shown above are in better condition. This has been identified as a continuous improvement item in Table 32.

2.1.3.4 Asset Usage and Performance

Assets are generally provided to meet design standards where available. However, there are often insufficient resources to address all known deficiencies.

The largest performance issues with vertical water assets involve degradation of components. The service deficiencies in Table 11 below were identified using staff input.

Table 11: Known Service Performance Deficiencies			
ASSET	**LOCATION**	**SERVICE DEFICIENCY**	**DESCRIPTION OF DEFICIENCY**
Reservoir	Scenic	Leaks	Leaking expansion joints which require replacement. Project currently underway.
Booster Station	Garner	Electrical upgrades required	Electrical system is beyond service life and requires replacement.
Reservoir	Various	Upgrade required	Many reservoirs have common inlet/outlet and no mixing capability causing issues with chlorine residual.
WTP	Chlorine Building	Structural Deficiency	Structural deficiencies requiring attention.
WTP	Filter Underdrains	Deficiency	Upgrades are required.
WTP	Backwash System	Poor Performance	Upgrades may be required.
WTP	Sedimentation Tanks	Settlement Issues	Settlement issues may reduce capacity at plant, upgrades may be required.

2.1.4 Linear

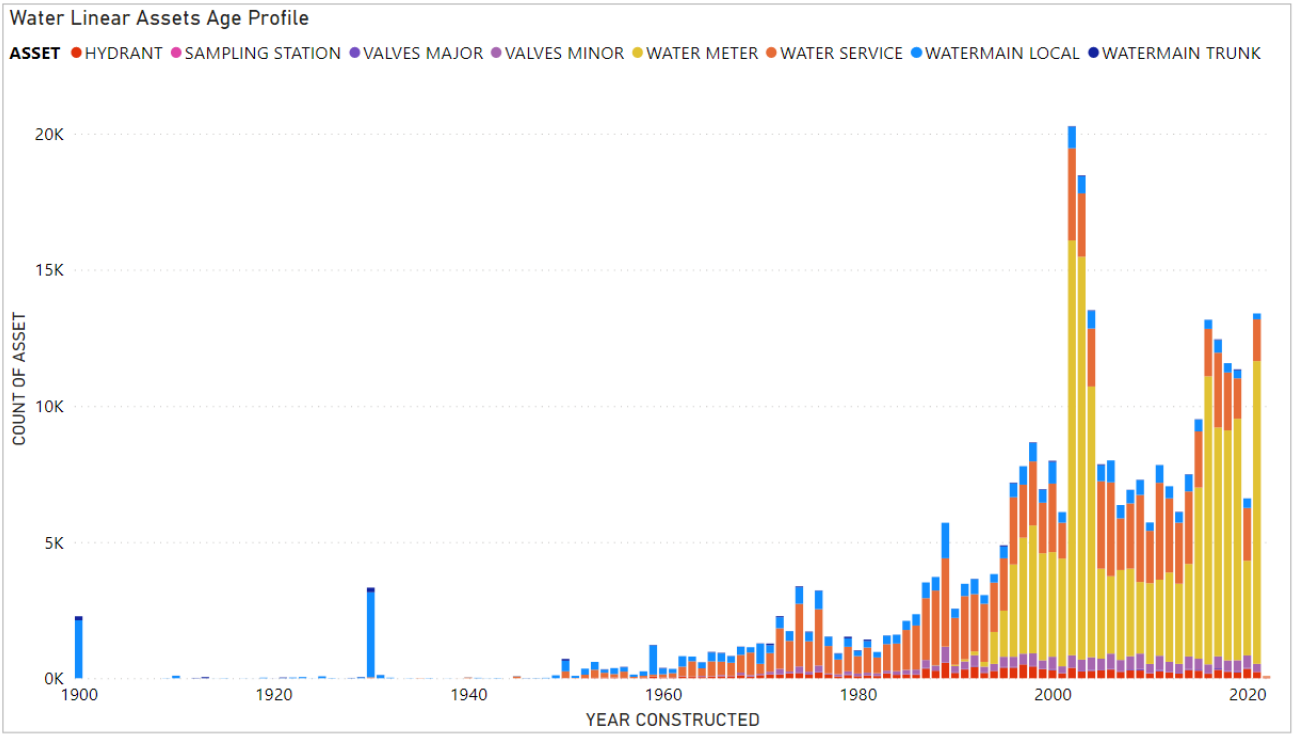
The background information for water linear assets is included below and includes an age profile, the condition methodology used, the condition profile, and asset usage and performance.

2.1.4.1 Age Profile

The age of an asset is an important consideration in the asset management process as it can be used for planning purposes as typically assets have an estimated service life where they can be planned for replacement.

The age profile of the water linear assets are shown in Figure 3. An analysis of the age profile is provided below for each asset.

Figure 3: Water Linear Assets Age Profile



There are common years where asset age is typically assumed when age is unknown. This typically includes decade and mid-decade, and so large spikes may occur in 1900, 1930, 1950, 1955 etc.

WATERMAIN

For legibility of the graph, the water linear assets have been shown since 1900. There are a small number of trunk and local watermain segments that predate 1900 with the earliest installation date being 1860, indicating that local and trunk watermains are the oldest linear water assets in the City.

The average age for trunk and local watermain in the City is 60 and 44 years respectively. With an average estimated service life (ESL) of 94 and 80 years, on average there is 36% and 45% of service life remaining respectively. The condition of watermains is partially based on age. The age data confidence for watermain is considered to be Medium as this information is typically populated, but the accuracy of the data appears to contain assumptions based on the spikes by decade.

WATER SERVICE

Based on Figure 3, water services have typically been installed gradually over time with no significant spikes. This data is considered to be medium confidence with 72% of data populated with unknown accuracy. As this data set is large, 40,000 records do not have age data, which is significant, and should be investigated. For the known data, water services are 25 years old and

with an ESL of 80 years there is approximately 69% of service life remaining. The condition of the water services has been estimated based on age.

WATER METER

Based on Figure 3, water meters are a relatively new asset, with assets typically installed after 1994, which is mostly consistent with the ESL of 25 years for these assets. The data confidence for this asset is very high with most records being populated for age, and the accuracy is also likely high because these assets are attached to billing. The average age of these assets is 13 years indicating that on average 48% of service life is remaining. However, the oldest meter in the database was installed in 1977, and approximately 6700 water meters are beyond the ESL of 25 years, and so the City should investigate replacing these old meters. The condition of the water meters has been estimated based on age.

MAJOR / MINOR VALVES

Valves are another asset without any associated spikes. These assets are on average 22 years old, and with an ESL of 75 years there is 71% of useful life remaining. This data is considered to be at a medium confidence level with 74% of data populated resulting in approximately 6000 valves without associated age data and unknown accuracy.

HYDRANT

Hydrants are another asset without any significant spikes. Hydrants were typically installed after 1951. There are three (3) hydrants installed in the 1930s and 1940s which should be investigated as they are beyond the ESL of 80 years. On average these assets are 26 years old which means there is typically 68% of service life remaining. The data confidence for hydrants are considered to be medium as this information is typically populated, although the source of this data may be estimated.

SAMPLING STATION

Since there are only 33 sampling stations, it is difficult to view these in Figure 3. However, this asset is generally new with an average age of 3 years which means the asset typically has 94% of useful life remaining. The age data confidence for sampling stations is considered to be medium as this information is likely accurate because these assets are new, but only 76% of age information is populated.

2.1.4.2 Condition Methodology

The inspection frequency and condition score output for each linear asset is found below in Table 12. An analysis for each asset is found below.

Table 12: Inspections and Condition Information		
ASSET	**INSPECTION FREQUENCY**	**CONDITION SCORE OUTPUT**
Trunk Watermain	Based on priority	None, used age and breaks
Local Watermain	None	None, used age and breaks
Hydrants	Annual	None, used age
Major Valves	1-year cycle	None, used age
Minor Valves	3-year cycle	None, used age
Water Services	Ad Hoc	None, used age
Water Meters	Ad Hoc	None, used age

Due to limitations associated with asset location and pressurized pipes, linear asset conditions are typically based on estimated service life as explained below.

WATERMAIN

Watermains cannot easily have CCTV inspections completed like gravity mains because the pipes are under pressure, and so the pipes would have to be temporarily taken out of service to complete the inspections. In addition, there are not maintenance holes for watermains, and so finding access points to insert a CCTV camera can also be a challenge and CCTV cameras can only traverse a maximum length. There are condition assessment options for watermains where technology can be inserted into a pressurized pipe for an indeterminate length, but these methodologies are often cost prohibitive network wide and are only completed on critical assets such as trunk watermains.

In 2008, a desktop analysis was completed on the watermains in the network where a criticality score was assigned to each pipe segment. Inspections are prioritized based on these scores. Since pipes are different materials and sizes, different technologies and methodologies must be used which include electromagnetic (Pipe Diver (concrete), See Snake (metal)), ultrasonic, and acoustic (SmartBall, Sahara) inspections. Since 2011, the City has been completing inspections on trunk watermains, and to date has completed 44.5 km which is 24% of the trunk system. The City completes approximately 6km of trunk main inspections a year resulting in it taking 31 years to complete assessments on all trunk watermains. The target frequency is 10 to 15 years.

This suggests that the City should investigate increasing the amount of trunk watermain inspected by at least another 6km annually to meet this target. This has been identified as a continuous improvement item in Table 32. In addition, historically these inspections have not produced a final condition score and have been used to locate areas of concern to take the required action to prevent breaks. Another continuous improvement item is to investigate assigning a score to these lengths of watermain based on the output from these condition assessments. The City also collects data on soil and outside cast iron conditions at opportunistic times to predict the condition of surrounding infrastructure and has done so at 30 locations across the City. This could be used to assist with developing a condition score as well.

Therefore, although the City does complete assessments on critical watermains, there is not yet a process to convert these assessments into a condition score. For the purposes of estimating condition, watermain condition is based on a combination of ESL and number of breaks per Table 12.

It's important to note that age-based conditions are not necessarily representative of the actual condition of the pipe, and as previously mentioned, completing condition assessments of the network is cost prohibitive. Therefore, the City is investigating a new watermain condition model which involves multiple criteria (e.g. age, breaks, soil type, c-factor, pipe deterioration curve etc.) to improve the condition profile for the next iteration of the report.

WATER SERVICES

No condition program exists at this time, and condition was estimated on age.

VALVES

Major and minor valves are inspected and exercised on a varied cycle depending on size. If during a valve inspection, a valve has been determined to have failed, valves may be repaired on site. If a repair cannot be done, minor valves may be replaced on-site and major valves would be put onto a replacement schedule. For the purposes of estimating condition, the valve conditions are based on estimated remaining service life as shown in Table 12.

WATER METERS

Water meters are typically located within private property and cannot be inspected regularly. For the purposes of estimating condition, the water meter conditions are based on estimated remaining service life as shown in Table 12.

HYDRANTS

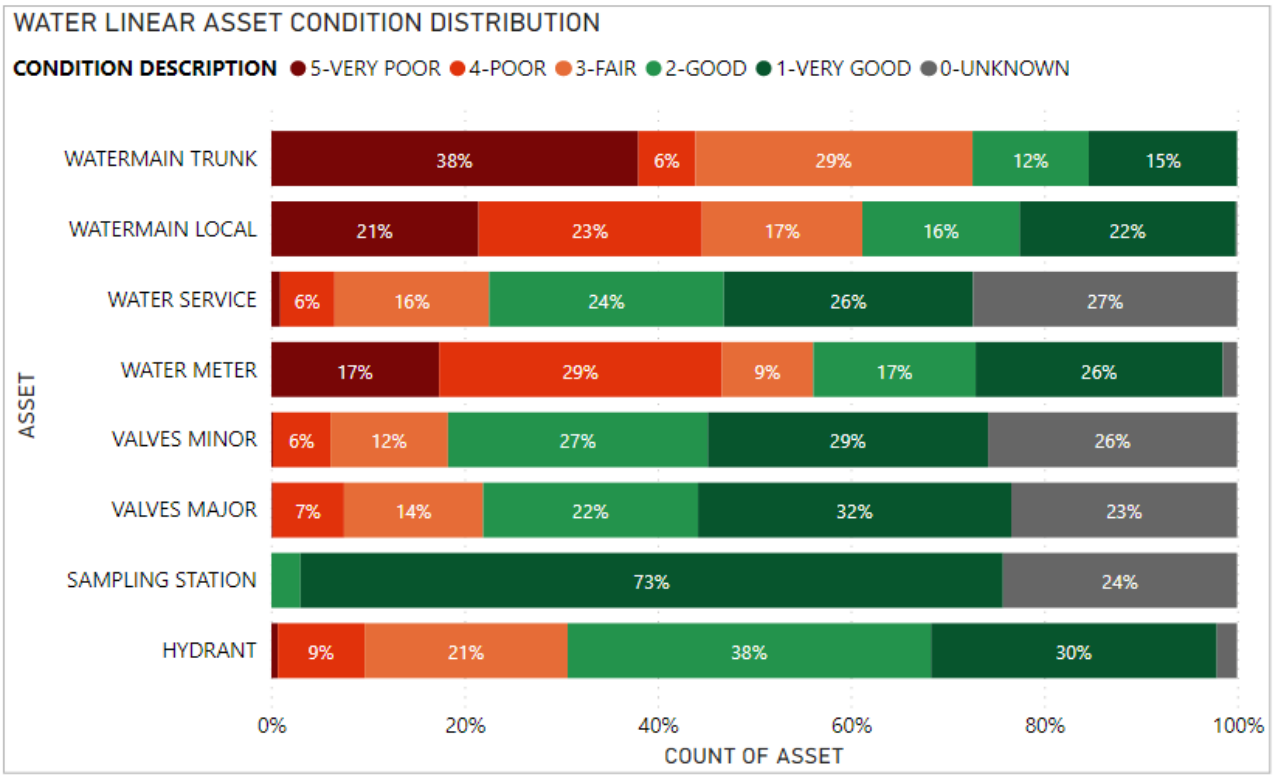
Hydrants have legislated inspections which must occur annually. However, these inspections are typically to ensure the assets are in working order but are not currently formal condition

assessments which output a condition score. A future continuous improvement item is to incorporate a condition score into these inspections which has been identified in Table 32 in the Continuous Improvement section. For the purposes of estimating condition, the hydrant conditions are based on estimated remaining service life as shown in Figure 3 although based on the inspections all hydrants are in good working order.

2.1.4.3 Asset Condition Profile

The condition profile of the City's assets is shown in Figure 4. As mentioned in Section 1.1.2, the original condition grades were converted to a standardized condition category for report consistency.

Figure 4: Asset Condition Profile



WATERMAIN

Per Figure 4 above, trunk and local watermain are in an average of Fair condition. As mentioned in Section 1.1.2, although there is a condition assessment program using electromagnetic, ultrasonic, or acoustic methodologies for 24% of trunk watermain, there is not yet a process for outputting a condition rating from this number. As a result, the information above for both trunk and local watermain is based on a combination of age and number of breaks per Table 12. The City prioritizes breaks over age for renewals, but for this analysis both were considered as

number of breaks was determined to be too conservative of an estimate of poor condition watermain. For planning purposes, it is important to consider the ESL of the pipe material.

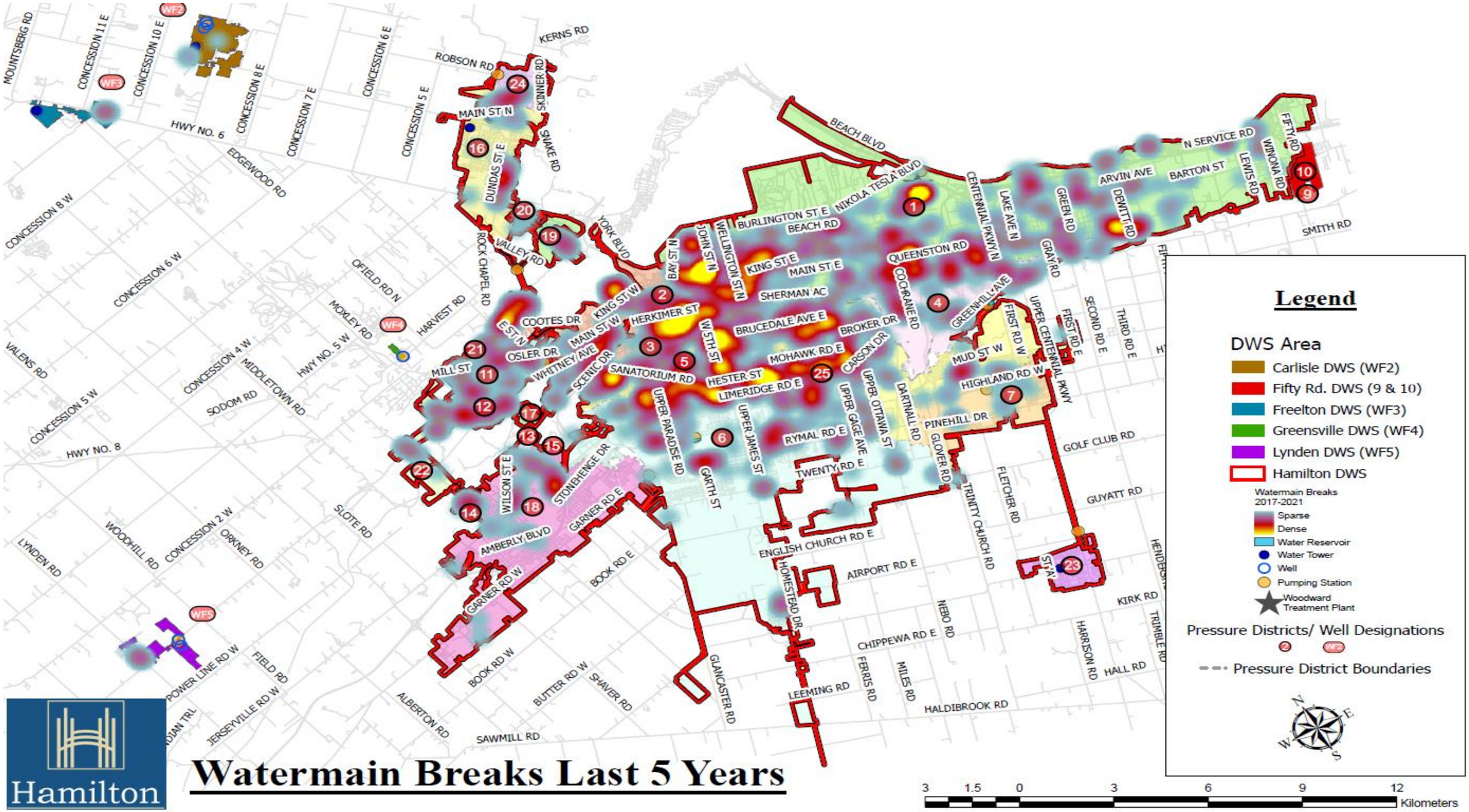
However, there are limitations to this approach. It is evident in Figure 4 above that 38% of trunk watermains are shown to be in Very Poor condition but this does not necessarily reflect reality. The results of the completed condition assessments have shown that the trunk watermains which have been assessed typically do not have extensive distresses. As a result, the condition is at a low data confidence level.

Map 2 below shows a heat map of watermain breaks over the 5 years. This figure is a snapshot in time and does not necessarily represent the condition of the entire network, but it is evident that watermain breaks have been occurring City wide. However, there is a concentration of breaks occurred in areas with older infrastructure especially in the upper city north of Limeridge Road and the lower city west of Wellington Street North, with a few pockets in Dundas and Stoney Creek. These areas should be investigated further for renewals. This figure shows that the City has been experiencing watermain breaks in areas with older infrastructure. There are limitations to this map because it does not show the type of break which can be due to a variety of factors unrelated to the condition of the pipe (e.g. temperature, breaks at the joint). However, since breaks is the main indicator of condition that the City uses to plan renewals, this map does show that there could be a relationship between age, location and the ability to predict breaks, and all of these can be indicators of condition for watermain.

OTHER LINEAR ASSETS

The remaining linear assets' conditions are estimated based on age where known. The majority of these assets are shown to be in good condition excluding water meters which are in fair condition. This shows that most assets are within their ESL and so the City should continue preventative operations and maintenance activities. The City is currently moving toward using a Smart Meter process, and so it is likely worthwhile to delay replacing some water meters until this program is fully implemented. In addition, as indicated in Section 2.1.1.6, many of these assets including valves, hydrants, and sampling stations have inspection programs which do not yet output overall condition scores, which should be investigated.

Map 2: Watermain Breaks Last 5 Years



2.1.4.4 Asset Usage and Performance

Assets are generally provided to meet design standards where available. However, there are often insufficient resources to address all known deficiencies.

The largest performance issues with water involve issues with water quality and service disruptions.

The below service deficiencies in Table 13 were identified from the most recent inspection reports as well as staff input.

Table 13: Known Service Performance Deficiencies

ASSET	LOCATION	SERVICE DEFICIENCY	DESCRIPTION OF DEFICIENCY
Watermain	Various Locations farther from Water Treatment Plant	Low chlorine residuals	Due to climate change, Lake Ontario is staying warmer into the year and customers are using less water to irrigate their properties. When low residuals are confirmed, the event is logged and the watermain is flushed.
Watermain / Storage	Various Locations especially areas with unlined cast iron watermain and pressure district boundaries	Fire Flow Deficiencies (Low Pressure)	Areas of the system have lower fire flow and/or pitot pressure readings than optimal and require additional investigation.
Fire Hydrants	Various Locations	Substandard fire hydrant	Hydrant is substandard, includes 2-port, lead port, no secondary valve, no breakaway flange.
Watermain	Pressure District Boundaries	Target Pressure Deficiencies	Pressure is too low or too high and not at City target.
Large Valves	Various Locations	Poor Condition	Some large valves are broken in an open position and require replacement.

Table 13: Known Service Performance Deficiencies			
ASSET	**LOCATION**	**SERVICE DEFICIENCY**	**DESCRIPTION OF DEFICIENCY**
Water Treatment Plant	Chlorine level	Renewal activities will allow for the reduction of chlorine and reduce costs associated with renewing carbon filters	High chlorine use increased the renewal timing for high cost carbon filters. The renewal project will ensure these high cost items last significantly longer

2.1.5 Administrative

Administrative assets are assets which contribute to the water service but are not water assets. These include vehicles, laboratory equipment, software and administrative facilities. Administrative facilities replacement costs have been incorporated as part of the WTP cost.

As previously mentioned, the City has included these assets in a limited capacity so that the replacement costs are incorporated in the report since these assets contribute to the overall drinking water service, however, these have not yet been completed at a detailed level because they are not defined as part of the O.Reg. 588/17 definition of a water asset. These will be encompassed in more detail before the 2025 iteration of the plan.

2.2 LIFECYCLE MANAGEMENT PLAN

The lifecycle management plan details how the City plans to manage and operate the assets at the agreed levels of service while managing life cycle costs.

2.2.1 Acquisition Plan

Acquisition reflects new assets that did not previously exist or works which will upgrade or improve an existing asset beyond its current capacity. They may result from growth, demand, legal obligations and social or environmental needs. Water assets are generally donated to the City through development agreements process directly related to growth.

CURRENT PROJECT DRIVERS – 10 YEAR PLANNING HORIZON

Hamilton Water currently prioritizes capital projects as per the drivers listed below. These drivers help to determine a ranking priority for projects and ensure that multiple factors are being considered to drive investment decisions. These drivers should be reviewed each iteration of the AM Plan to ensure they are appropriate and effective in informing decision making.

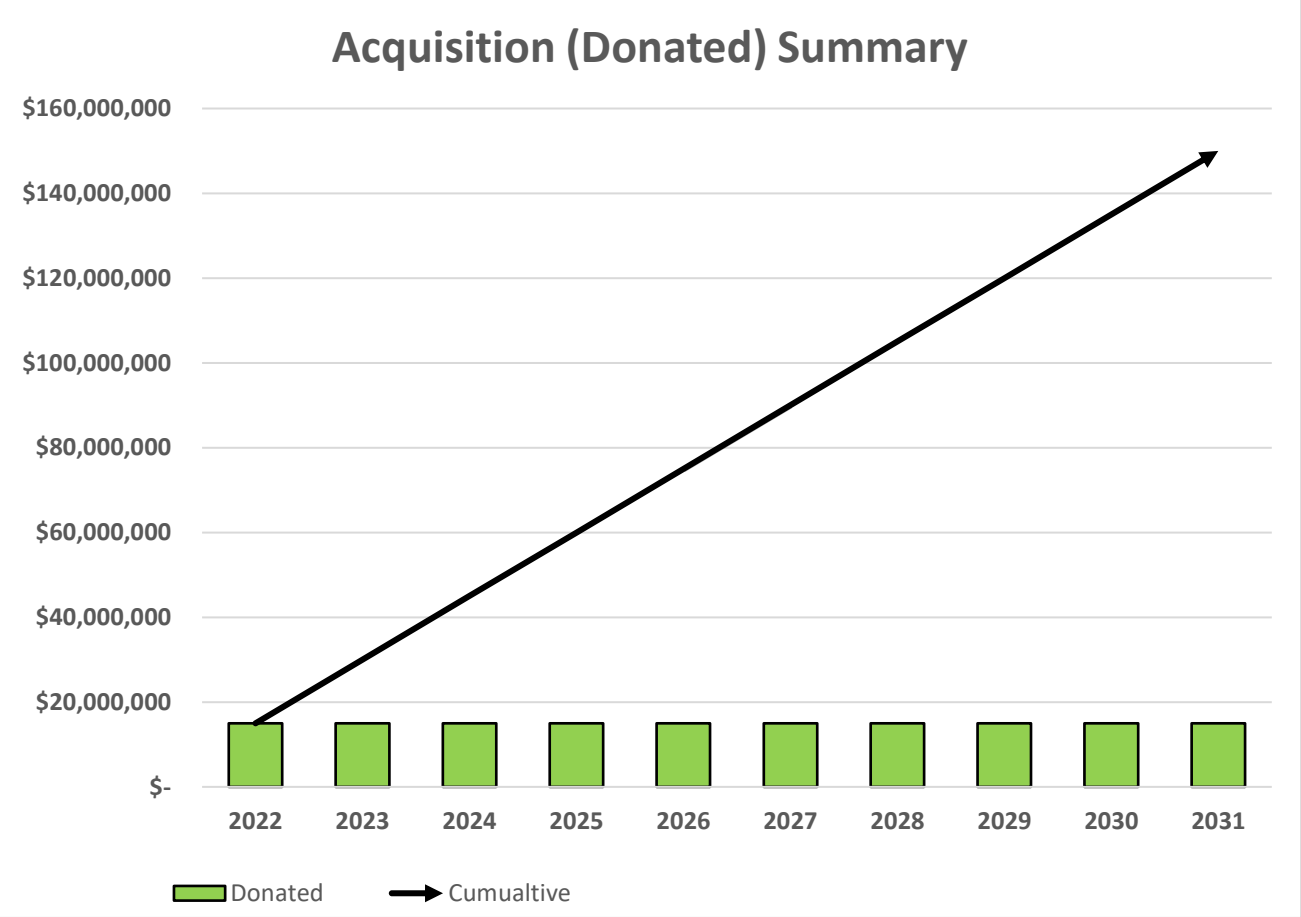
Table 14: Drivers for 10 Year Planned Projects

DRIVER	% OF PLANNED PROJECTS (10 YEAR HORIZON)
Legal Compliance	20%
Coordination, Funding, Budgeting	25%
Risk Mitigation	25%
Health and Safety	10%
Operating and Maintenance Impacts	10%
Development Growth	10%
Total	**100%**

Forecast acquisition asset costs are summarized in Figure 5 and shown relative to the proposed acquisition budget.

DONATED ASSETS

Figure 5: Acquisition (Donated) Summary
All figures are in 2021 dollars.



Annually on average, the City assumes over **$15,000,000** of donated Water assets through subdivision agreements or other development agreements. These assets annually on average include **9 km's** of watermains, **1,500** new water service connections and water meters, **63** valves and **50** fire hydrants. The City is reviewing its donated asset assumption process to ensure that it proactively understands what assets are being donated annually and can ensure they are planned for properly. This will allow multiple departments to plan for the assets properly such as:

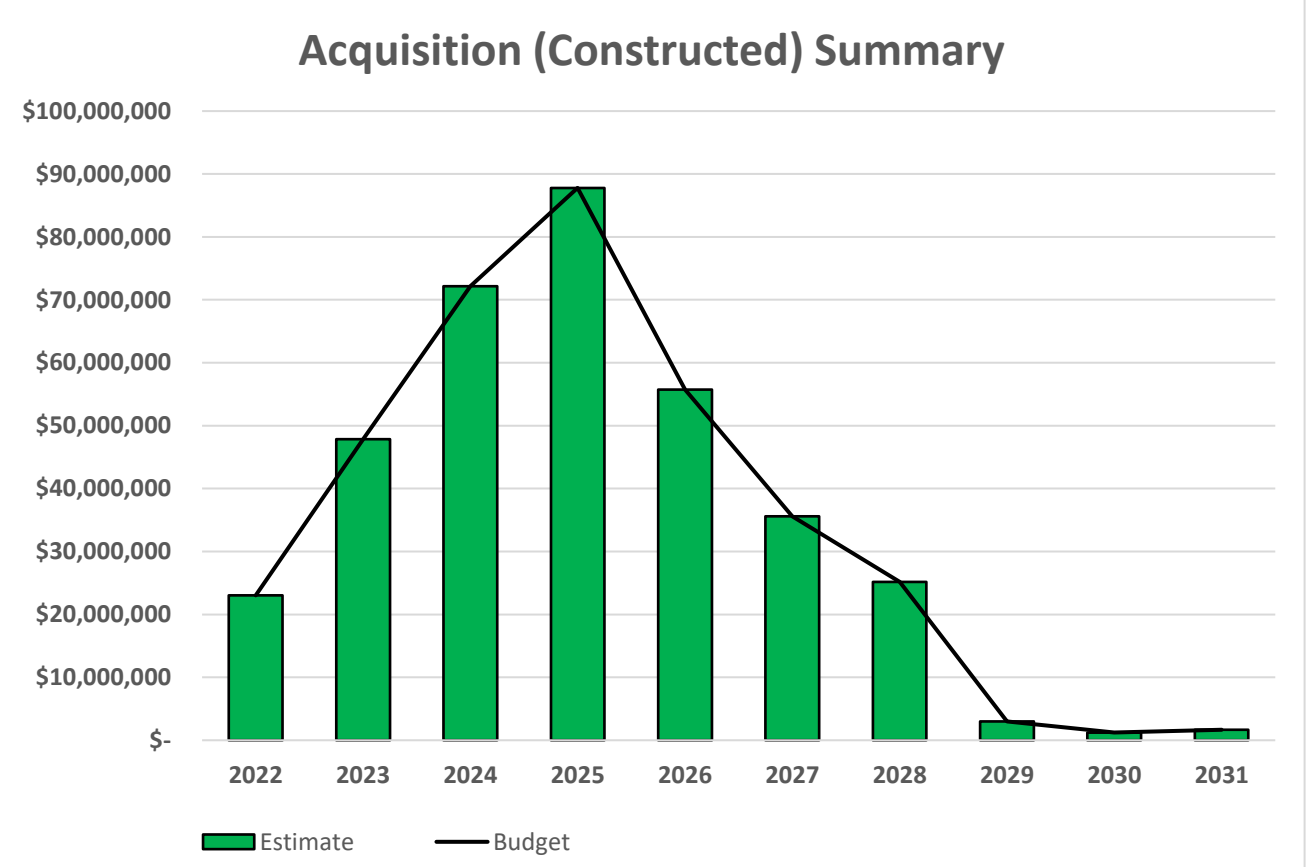
- AM to forecast the long-term needs and obligations of the assets;
- Operations and maintenance can include the assets in their planned activities (inspections, legislative compliance activities); and,
- Finance can ensure that assets are properly captured and recognized appropriately (Audited Financial Statements, TCA process, Provincial reporting such as the FIR).

Once the Water assets are assumed, Hamilton Water then becomes the stewards of these assets and is responsible for all ongoing costs for the asset's operation, continued maintenance, inevitable disposal and their likely renewal.

Construction costs are often only **10-15 %** of an asset's whole life costs. When development assets are donated to Hamilton, then the City becomes obligated to fund the remaining whole life costs. Over the next ten-year planning period the City anticipates receiving **$150,000,000** of donated assets which, would then obligate ratepayers to fund the remaining lifecycle costs over the donated assets ESL.

The City has internal design standards, inspection practices as well as assessment which are intended to ensure the assets that are being donated to the City through subdivision agreements are in excellent condition before assumption. The City should continue to review its assumption process to ensure that the City is receiving high quality and appropriately sized donated assets to defer lifecycle activities as much as possible.

Figure 6: Acquisition (Constructed) Summary
All figure values are shown in 2021 dollars.



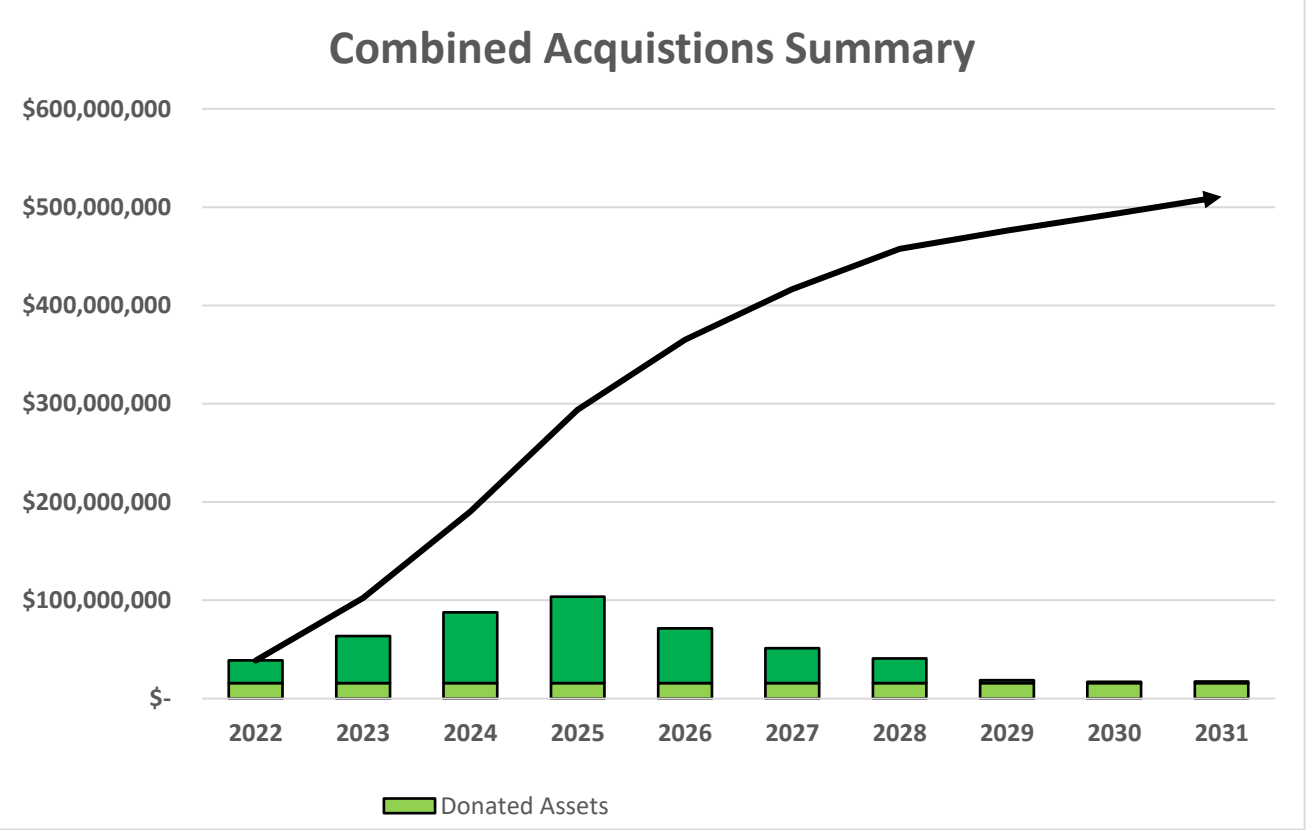
When the City commits to new assets, the municipality must be prepared to fund future operations, maintenance and renewal costs. The City must also account for future depreciation when reviewing long term sustainability. When reviewing the long-term impacts of asset

acquisition, it is useful to consider the cumulative value of the acquired assets being taken on by the Entity. The cumulative value of all acquisition work, including assets that are constructed and contributed shown in Figure 7.

Over the next 10 Year planning period the City will construct approximately **$361,174,000** of constructed assets which can either be new assets which did not exist before or expansion of assets when they are to be replaced . Major acquisition expenditures over the next ten years include:

- **$24 million** for Reservoir works, **$43** million for Water Meter Installations
- **$54 million** for Pumping Stations upgrades
- **$146** million dollar expansion to the Water Treatment Plant.

Figure 7: Combined Acquisition Summary
All figure values are shown in 2021 dollars.



SUMMARY OF ASSET FORECAST COSTS

Over the next ten (10) – years, the City expects to acquire nearly **$512 Million** dollars of water assets.

The City has sufficient budget for its planned constructed acquisitions at this time. It will become critical to understand that through the construction or assumption of new assets, the City will be

committing to funding the ongoing operations, maintenance and renewal costs which are very significant. The City will need to address how to best fund these ongoing costs as well as the costs to construct the assets while seeking the highest level of service possible.

Future AM Plans will focus on improving the understanding of Whole Life costs and funding options however at this time the plan is limited on those aspects. Expenditure on new assets and services will be accommodated in the long-term financial plan but only to the extent that there is available funding.

2.2.2 Operations and Maintenance Plan

Operations include all regular activities to provide services. Daily, weekly, seasonal, and annual activities are undertaken by staff to ensure the assets perform within acceptable parameters and to monitor the condition of the assets for safety and regulatory reasons. Examples of typical operational activities include cleaning, sample collection, quality testing, inspections, utility costs and the necessary staffing resources to perform these activities.

Maintenance should be viewed as the ongoing management of deterioration. The purpose of planned maintenance is to ensure that the correct interventions are applied to assets in a proactive manner and to ensure it reaches its intended useful life. Maintenance does not significantly extend the useful life of the asset but allows assets to reach their intended useful life by returning the assets to a desired condition.

Proactively planning maintenance significantly reduces the occurrence of reactive maintenance which is always linked to a higher risk to human safety and higher financial costs. The City needs to plan and properly fund its maintenance to ensure the engineered structures are reliable and achieve their desired level of service.

Maintenance includes all actions necessary for retaining an asset as near as practicable to an appropriate service condition including regular ongoing day-to-day work necessary to keep assets operating. Examples of typical maintenance activities include pipe repairs, service repairs, pump maintenance, equipment repairs along with appropriate staffing and material resources.

Some of the major maintenance projects Hamilton plans to undertake over the next 10 years include:

- **$56 million** allocated for Road Cut restoration program
- **$24.5 million** allocated for reactive maintenance (water valves, hydrants etc)
- **$2.5 million** allocated for Water Utility structure works

Assessment and priority of reactive maintenance is undertaken by staff using experience and judgement

2.2.3 Vertical

The major operating and maintenance lifecycle activities per vertical asset with their accompanying 2021 costs (if known) are shown below in Table 15.

Table 15: Vertical - Operations and Maintenance Summary

ASSET	LIFECYCLE STAGE	LIFECYCLE ACTIVITY	2021 ANNUAL COST
Water Treatment Plant	Operation	Inspection, Optimization, Preventative measures	$6,671,284
		Calibration & Verification	$89,794
	Maintenance	Preventative Maintenance	$16,457
		Reactive Maintenance	$396,372
Booster Stations	Operations	Inspections, Preventative measures	$8,371,077
		Calibration & Verification	$54,758
	Maintenance	Preventative Maintenance	$15,078
		Reactive Maintenance	$111,349
PRV Chambers	Operation	Preventative Operations	$15,827
Reservoirs & Towers	Operations	Inspections. Preventative measures	$387,461
		Calibration & Verification	$17,595
	Maintenance	Preventative Maintenance	$2,415
		Reactive Maintenance	$23,450
Wells	Operations	Inspections, Preventative measures	$89,301
		Calibration & Verification	$26,840
	Maintenance	Preventative Maintenance	$14,874
		Reactive Maintenance	$55,198
		Total Annual Cost	**$16,359,130**

The above table was created by categorizing work order descriptions into lifecycle activities, but the work order descriptions did not always provide a clear distinction regarding the purpose of the activities. Therefore, it is likely there are some errors in the above table for how the amounts are allocated especially regarded preventative and reactive maintenance allocations. However, the total annual cost is accurate for what was spent on vertical assets for operations and

maintenance activities in total. This is a continuous improvement item which will be addressed through the EAM project, which is described in the AMP Overview.

2.2.4 Linear

The major operating and maintenance lifecycle activities per linear asset with their accompanying 2021 costs (if known) are shown below in Table 16.

Figure 16: Linear - Operations and Maintenance Summary

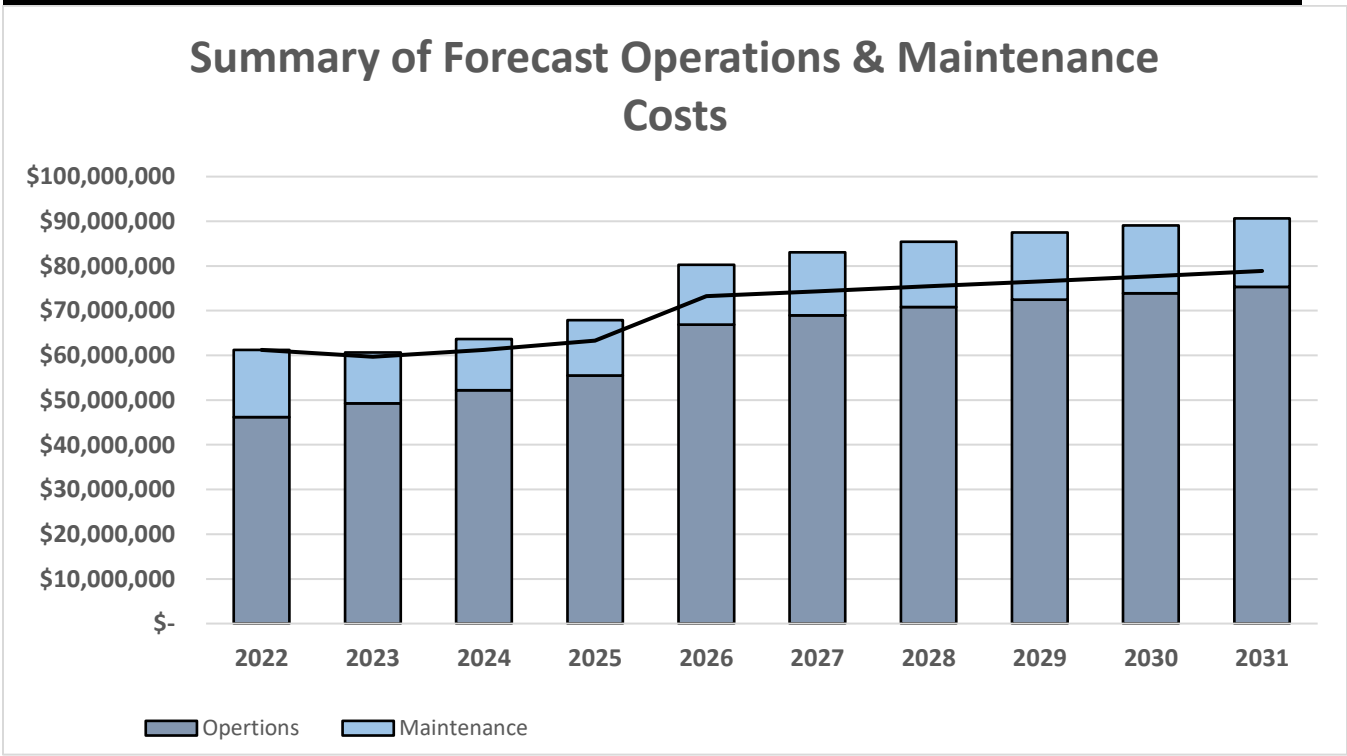
ASSET	LIFECYCLE STAGE	LIFECYCLE ACTIVITY	FREQUENCY	2021 COST	UNIT
Watermain	Operation	Flushing	Annual	$59.00	per unit
	Maintenance	Repair Program	Ad Hoc	$10,000	per unit
Water Service	Operation	Inspection	Ad Hoc	$59.00	per unit
	Maintenance	Repair Program	Ad Hoc	$800.00	per unit
		Reactive Maintenance	Ad Hoc	$2,500	per unit
Water Meters >38mm	Operation	Testing/ Calibration	5-year cycle	$250,000	per year
	Maintenance	Repair			
Hydrants	Operation	Flushing	Annual	$59.00	per unit
		Automatic Flushing Unit Inspection	Biannual	$118.00	per unit
		Hydrant Flow	3 year cycle	$195,000.00	per year
		Hydrant Code	Annually	$195,000.00	per year
		Painting	Every 5 Years	$160,000.00	per year
	Maintenance	Repair Program	Ad Hoc	$1,000.00	per unit
		Reactive Maintenance	Ad Hoc	$9,000.00	per unit
Valves	Operation	Exercising & Inspection <400mm	3 year cycle	$59.00	per unit

Figure 16: Linear - Operations and Maintenance Summary

ASSET	LIFECYCLE STAGE	LIFECYCLE ACTIVITY	FREQUENCY	2021 COST	UNIT
		Exercising & Inspection >400mm	Annually	$59.00	per unit
	Maintenance	Repair Program	Ad Hoc	$500.00	per unit
		Reactive Maintenance (<400mm)	Ad Hoc	$8,000.00	Per Unit

Forecast operations and maintenance costs vary in relation to the total value of the asset registry. When additional assets are acquired, the future operations and maintenance costs are forecast to increase. When assets are disposed of the forecast operation and maintenance costs are reduced. Figure 8 shows the forecast operations and maintenance costs relative to the proposed operations and maintenance Planned Budget.

Figure 8: Summary of Forecast Operations and Maintenance Costs



The forecast of operations and maintenance costs are increasing steadily over time and it is clear, the City has insufficient budget to achieve all of the works required to ensure that assets will be able to achieve their estimated service life at the desired level of service. It is anticipated that at the current budget levels there will be insufficient budget to address all operating and maintenance needs over the 10-year planning horizon. The graph above illustrates that without increased funding or changes to lifecycle activities there is a significant shortage of funding which will lead to:

- Higher cost reactive maintenance;
- Possible reduction to the availability of the assets;
- Impacts to private property; and,
- Increased financial and reputational risk.

The shortfall is primarily due to the significant number of assets that are donated through subdivision agreements annually and insufficient funding allocations over an extended period of time. Every year that Hamilton adds additional assets without properly funding the necessary lifecycle activities, staff's ability to sustain the assets to expected or mandatory level of service can be significantly impacted. It should be noted that there are mandatory operational and maintenance expenditures due to legislative requirements and cannot and should not simply be avoided or deferred.

The forecast costs include all costs from both the Capital and Operating budget. Asset management focuses on how taxpayer or ratepayer dollars are invested by lifecycle activities and not by budget allocation since both budgets contain various lifecycle activities, they must both be consolidated for the AM Plans.

As the City continues to develop condition profiles and necessary works are identified based on their condition, it is anticipated operation and maintenance forecasts will increase significantly. Where budget allocations will result in a lesser level of service, the service consequences and risks will be identified and are highlighted in the Risk Section 2.6.

Deferred maintenance (i.e. works that are identified for maintenance activities but unable to be completed due to available resources) will be included in the infrastructure risk management plan for the next iteration.

Future iterations of this plan will provide a much more thorough analysis of operations and maintenance costs including types of expenditures for training, mandatory certifications, insurance, staffing costs and requirements, equipment and maintenance activities.

2.2.5 Renewal Plan

Renewal is major works which does not increase the assets design capacity but restores, rehabilitates, replaces or renews an existing asset to its original service potential. Works over and above restoring an asset to original service potential is considered to be an acquisition resulting in additional future operations and maintenance costs.

Asset renewals are typically undertaken to either ensure the assets reliability or quality will meet the service requirements set out by the City. Renewal projects are often triggered by service quality failure and can often be prioritized by those that have the highest consequence of failure, have high usage, have high operational and maintenance costs and other deciding factors.

The typical useful lives of assets used to develop projected asset renewal forecasts are shown in Table 17 and are based on estimated design life for this iteration. Future iterations of the plan will focus on the Lifecycle approach to ESL which can vary greatly from design life. Asset useful lives were last reviewed in 2022 however they will be reviewed annually until their accuracy reflects the City's current practices.

TABLE 17: Useful Life of Assets

ASSET (SUB)CATEGORY	EXPECTED USEFUL LIFE
Water Mains	80
Hydrants	50
Services	80
Booster Stations	60
Water Treatment Plant	60
Sampling Stations	50
Water Towers	50
SCADA System	15
Water Meters	25
Wells	75
Well Pumping Stations	60
Valves	80
Vehicles	7 or 8

The estimates for renewals in this AM Plan were based on the register method which utilizes the detailed listing of Hamilton's asset inventory and all available lifecycle information to determine the optimal timing for renewals.

RENEWAL RANKING CRITERIA

Asset renewal is typically undertaken to either:

- Ensure the reliability of the existing infrastructure to deliver the service it was constructed to facilitate (e.g. replacing a bridge that has a load limit); or,
- To ensure the infrastructure is of sufficient quality to meet the service requirements (e.g. condition of a culvert).[1]

Future methodologies will be developed to optimize and prioritize renewals by identifying assets or asset groups that:

- Have a high consequence of failure;
- Have high use and subsequent impact on users would be significant;
- Have higher than expected operational or maintenance costs; and,
- Have potential to reduce life cycle costs by replacement with a modern equivalent asset that would provide the equivalent service.[2]

The ranking criteria used to determine priority of identified renewal proposals is detailed in Table 18.

TABLE 18: Renewal Priority Ranking Criteria

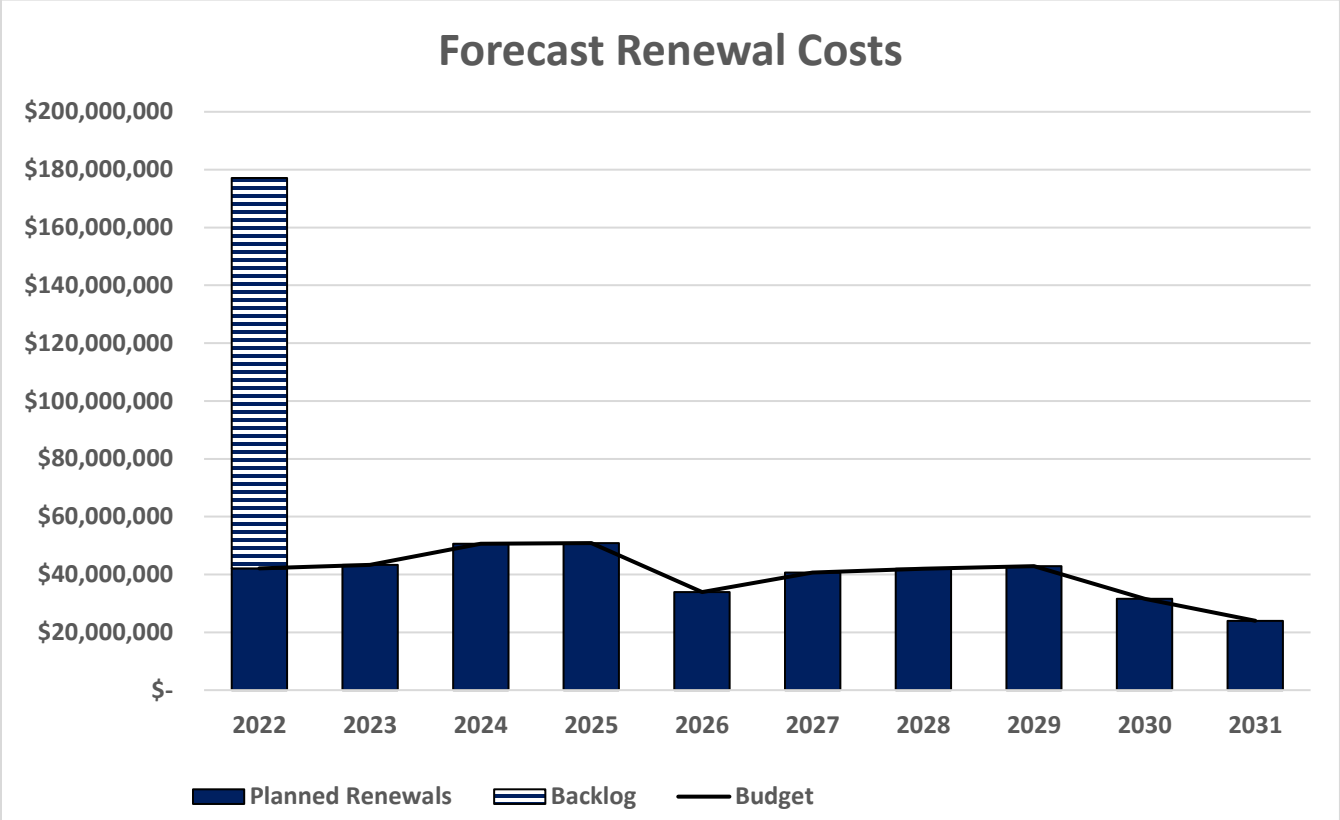
CRITERIA	WEIGHTING
Regulatory / Legal Compliance	20%
Co-ordination – Funding and Budgeting	25%
Risk Mitigation	25%
Health & Safety (Users & Staff)	10%
Lifecycle Impacts (Operations & Maintenance)	10%
Demand Driver (Growth)	10%
Total	**100%**

SUMMARY OF FUTURE RENEWAL COSTS

Forecast renewal costs are projected to increase over time if the asset stock increases. The forecast costs associated with renewals are shown relative to the proposed renewal budget in Figure 19.

[1] IPWEA, 2015, IIMM, Sec 3.4.4, p 3|91.
[2] Based on IPWEA, 2015, IIMM, Sec 3.4.5, p 3|97.

Figure 19: Forecast Renewal Costs
All figure values are shown in 2021 dollars.



The significant amount highlighted in 2022 represents the cumulative backlog of deferred work to be completed that has been either identified through its current estimated condition or age per Table 9 when condition was not available. Deferred renewal (assets identified for renewal and not scheduled) are included and identified within the risk management plan. Prioritization of these projects will need to be managed over time to ensure these can be addressed and that future renewals can occur at the optimal time.

There is only sufficient budget to support the planned projects at this time and without additional funding the backlog will remain and future projects outside of the 10-year planning horizon will continue to move forward into the 10-year scope. Continued deferrals of projects will lead to significantly higher operational and maintenance costs and will affect the availability of services in the future.

Forecasted renewals over the ten (10) – year planning horizon include select watermain replacements, water treatment plant renewals and water meter replacements. In 2022 the City will invest nearly $43.0 million to renewal assets such as **$5.3 million** for watermain structural relining, **$4.3 million** for water meter renewals and over **$7.1 million** for watermain renewals in sections of Burlington road, Concession & Mountain Brow and various other locations. In 2023 the City will invest **$43.3 million** to renew assets such as **$6.2 million** for watermain relining, **$10.0 million** renewing watermain along Barton from Sherman to Ottawa and an additional **$4.3 million** in water meter replacements. In 2024, the City will invest nearly **$15.6 million** in

watermain renewals with **$6.0 million** of that being allocated to Upper Centennial from Rymal to Mud. It will also invest **$6.4 million** to renew the Chlorine Chemical Building at the Water treatment plant.

Other major renewals over the 10 year planning horizon includes over **$200** Million of renewal initiatives at the water treatment plant as well as plant works at 2 booster stations, annual watermain lining, valve replacements, SCADA Components, lab improvements as and focused work on multiple reservoirs.

Deferring renewals create risks of higher financial costs, decreased availability, and decreased satisfaction with asset performance. Ultimately, continuously deferring renewals works ensures Hamilton will not achieve intergenerational equality. If Hamilton continues to push out necessary renewals, there is a high risk that future generations will be unable to maintain the level of service the customers currently enjoy. It will burden future generations with such significant costs that inevitably they will be unable to sustain them.

Properly funded and timely renewals will ensure the assets perform as expected and it is recommended to continue to analyze asset renewals based on criticality and availability of funds for future AM Plans.

2.2.6 Disposal Plan

Disposal includes any activity associated with the disposal of a decommissioned asset including sale, possible closure of service, decommissioning, disposal of asset materials, or relocation. Disposals will occur when an asset reaches the end of its useful life. The end of its useful life can be determined by factors such as excessive operation and maintenance costs, regulatory changes, obsolesce or demand for the structure has fallen.

Assets identified for possible decommissioning and disposal are shown in Table 20. A summary of the disposal costs and estimated reductions in annual operations and maintenance of disposing of the assets are also outlined in Table 20. Any costs or revenue gained from asset disposals is included in future iterations of the plan and the long-term financial plan.

TABLE 20: Assets Identified for Disposal

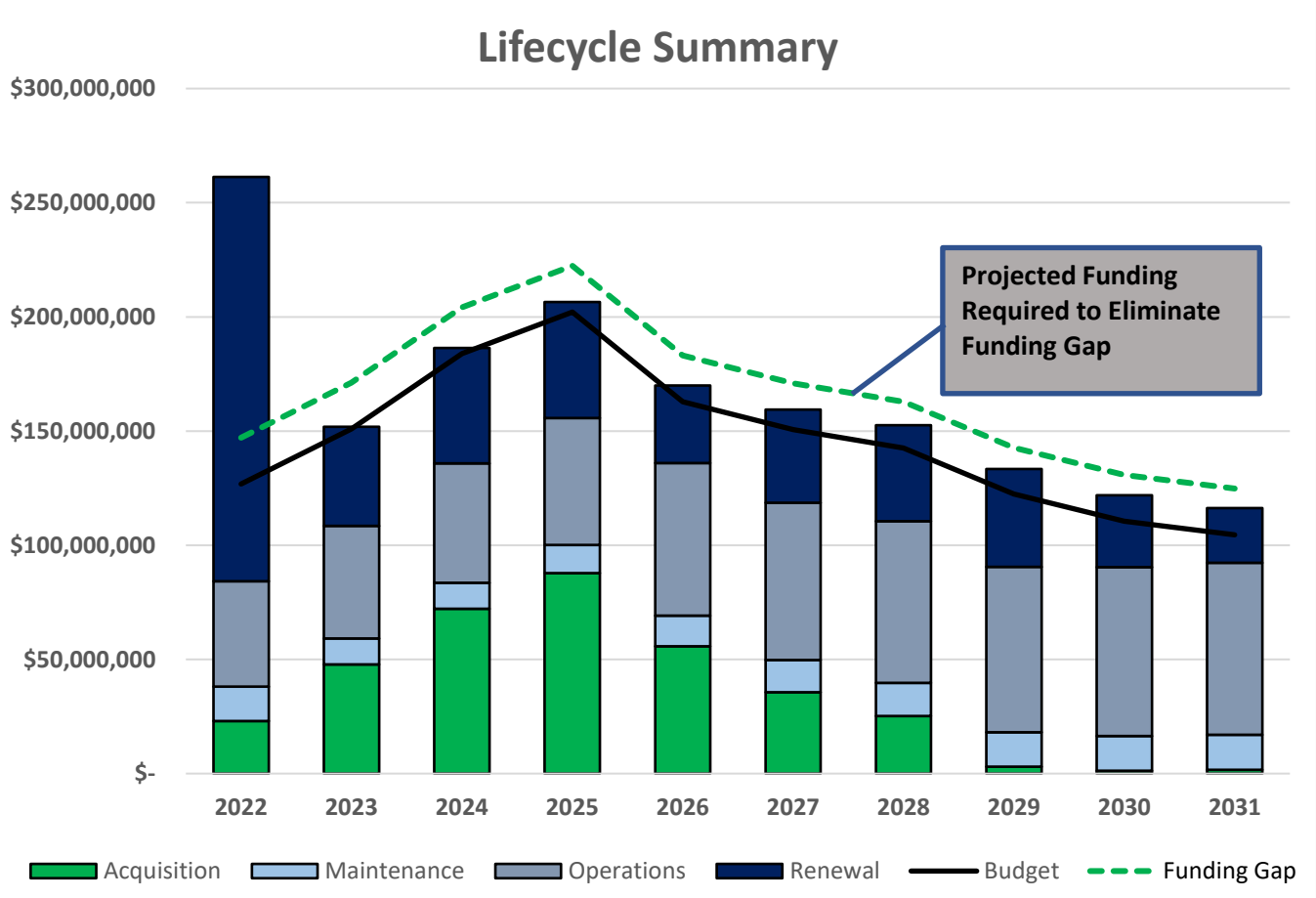
ASSET	REASON FOR DISPOSAL	TIMING	DISPOSAL COSTS	OPERATIONS & MAINTENANCE ANNUAL SAVINGS
Chlorine Building	End of Life	2028	$500,000	Undetermined
Greenhill Booster Station	End of Life	2029-2030	$800,000	Undetermined

SUMMARY OF ASSET FORECAST COSTS

The financial projections from this AM Plan are shown in Figure 9. These projections include forecast costs for acquisition, operation, maintenance, renewal, and disposal. These forecast costs are shown relative to the proposed budget.

The bars in the graphs represent the forecast costs needed to minimize the life cycle costs associated with the service provision. The proposed budget line indicates the estimate of available funding. The gap between the forecast work and the proposed budget is the basis of the discussion on achieving balance between costs, levels of service and risk to achieve the best value outcome.

Figure 9: Lifecycle Summary
All figure values are shown in 2021 dollars.



Currently there is insufficient budget to address the large backlog of renewal work projected by the plan. There is sufficient budget to address ongoing operational and maintenance needs for most of the planning period however with the assumption of assets over time and their increased costs there may be impacts to the service itself as illustrated by Figure 9. Without some adjustment to available funds or other lifecycle management decisions there will be insufficient budget to address all planned lifecycle activities.

Allocating sufficient resources is imperative to managing asset throughout their lifecycle. This can include funding for lifecycle activities, sufficient staffing, increased asset knowledge, improved planning, contracted services, additional equipment or vehicles to ensure that Hamilton is optimizing its lifecycle approach.

Without sufficient funding the City has little option but to defer these necessary lifecycle activities. Deferring important lifecycle activities is never recommended. The City will benefit from allocating sufficient resources to developing its long-term financial plan to ensure that over time the City can fully fund the necessary lifecycle activities. Funding these activities helps to ensure the assets are compliant, safe and effectively deliver the service the customers need and desire.

The lack of funding allocated for the backlog of renewals and the necessary lifecycle activities creates an additional issue which is intergenerational equity. Each year the City defers necessary lifecycle activities it pushes the ever-increasing financial burden on to future generations. It is imperative the City begin addressing the lack of consistent and necessary funding to ensure that intergenerational equity will be achieved. Over time, allocating sufficient funding on a consistent basis ensures that future generations will be able to enjoy the same standards being enjoyed today.

Over time the City will continue to improve its lifecycle data, and this will allow for informed choices as how best to mitigate those impacts and how to address the funding gap itself. This gap in funding future plans will be refined over the next 3 years and improve the confidence and accuracy of the forecasts.

2.3 MANDATORY O. REG. 588/17 LEVELS OF SERVICE

As previously mentioned, the City is developing this AM Plan to be in accordance with O.Reg 588/17 requirements. Table 1 in O.Reg. 588/17 identifies specific metrics that must be reported in the AM Plan for water assets. These metrics are required to be reported and have been separated from the municipally defined levels of service described in Section 2.4. These metrics are divided into community and technical levels of service and are detailed below.

2.3.1 Mandatory O. Reg. 588/*17* Community Levels of Service

Per Table 1 in O. Reg. 588/17, there are community levels of service that the City is required to report on in order to meet the provincial level of service requirement. These metrics are required to be reported, and so they have been separated from the customer levels of service described in Section 2.4.2. These qualitative metrics are reported below.

Scope

1. Description, which may include maps, of the user groups or areas of the municipality that are connected to the municipal water system.

Most properties within the City's urban area are connected to the municipal drinking water system. These urban properties include residential, industrial, commercial and institutional uses. Communities not within the urban area may be part of a water system with a communal well or may use their own private well.

As stated in Section 2.1, the City currently operates and maintains five (5) different drinking water systems. The largest system is the the Hamilton drinking water system which is made up of two subsystems; Woodward and Fifty Road. The Woodward subsystem draws its water from Lake Ontario and serves the majority of the the City's population, and the Fifty Road subsystem distributes water from the Town of Grimsby. In addition, there are four (4) systems which draw water from the ground using drinking water wells. A map of the subsystems can be found in MAP 1.

2. Description, which may include maps, of the user groups or areas of the municipality that have fire flow.

Most properties within the City's urban area are connected to the Hamilton drinking water system which includes fire flow. Urban properties include residential, industrial, commercial and institutional uses. It is important to note that there are areas where fire flow deficiencies may exist within the urban system which will be investigated in future iterations of this AM Plan.

Rural areas in the City which are not part of the Hamilton system typically do not have fire flow and would be serviced using rural fire fighting techniques. The Hamilton Fire Department has received "Superior Tanker Shuttle" accreditation by Fire Underwriter Survey (FUS) for the non-hydrant areas in the City, which is considered as equivalent to hydrant protection. But this will be further investigated in the future Emergency Services AM Plan.

Reliability

1. Description of boil water advisories and service interruptions.

The City did not have any boil water advisories (BWA) in 2021, however, the City did lift a longstanding drinking water advisory (DWA) in the Lynden system in 2021. The residents of Lynden had been under a precautionary drinking water advisory since September 2011 due to lead contamination from the communal well. The City drilled a new well, built a new treatment facility in Lynden which was commissioned in 2020, and completed other system improvements to the linear assets.

After the treated water from the new facility passed all required testing for a full year, City Public Health Services advised that the DWA could be lifted.

2.3.2 Mandatory O. Reg. 588/17 Technical Levels of Service

In addition, per Table 5 in O. Reg. 588/17, there are technical levels of service that the City is required to report on in order to meet the provincial level of service requirement. These quantitative metrics are reported below.

Table 21: Mandatory Technical Levels of Service

SERVICE ATTRIBUTE	TECHNICAL LEVELS OF SERVICE	MEASURE
Scope	**1**. Percentage of properties connected to the municipal water system.	90.4% of 162,308 properties
	2. Percentage of properties where fire flow is available.	89.7% of 162,308 properties
Reliability	**1**. The number of connection-days* per year where a boil water advisory notice is in place compared to the total number of properties connected to the municipal water system.	0 connection days of 146,857 connected properties
	2. The number of connection-days* per year due to water main breaks compared to the total number of properties connected to the municipal water system.	1,305** connection days of 146,857 connected properties

*Connection-days are defined as “the number of properties connected to a municipal system that are affected by a service issue, multiplied by the number of days on which those properties are affected by the service issue”.

**261 breaks, and assumed 30 properties multiplied by 0.167 days (four (4) hours) to resolve each break

Service interruptions typically occur due to an unplanned watermain break or due to planned maintenance. Typically, these events are resolved within ten (10) hours. In addition, the City implemented a full-scale leak detection program in 2021 which proactively finds watermain leaks in the system which may not be obvious (e.g. leaks in areas with good soil drainage) and schedules these break repairs. It is estimated that this is a cost avoidance for the City of $530,000 annually in water treatment costs.

2.4 MUNICIPALLY DEFINED LEVELS OF SERVICE

Levels of service are measures for what the City provides to its customers, residents, and visitors.

Service levels are best described as the link between providing the outcomes the community desires, and the way that the City provides those services. Service levels are defined in three ways, customer values, customer levels of service and technical levels of service which are outlined in this section.

2.4.1 Customer Values

Customer values are what the customer can expect from their tax dollar in “customer speak”. These values are used to develop level of service statements.

Customer Values indicate:

- what aspects of the service is important to the customer;
- whether they see value in what is currently provided; and,
- the likely trend over time based on the current budget provision.

To develop these customer values, as stated in the AMP Overview, a Customer Engagement Survey was released in January 2022 on the Engage Hamilton platform. The survey received 184 submissions and contained 17 questions related to drinking water service delivery. The survey results can be found in Appendix “A” in the AMP Overview. While these surveys were used to establish customer values and customer performance measures, it’s important to note that the number of survey respondents only represents a small portion of the population.

The future intent is to release this survey on an annual basis to measure the trends in customer satisfaction and ensure that the City is providing the agreed level of service as well as to improve the marketing strategy to receive more responses. This has been noted in Table 32 in the Continuous Improvement section.

TABLE 22: Customer Values
SERVICE OBJECTIVE:

CUSTOMER VALUES	CUSTOMER SATISFACTION MEASURE	CURRENT FEEDBACK	EXPECTED TREND BASED ON PLANNED BUDGET
Water is safe to drink	Annual Customer Engagement Survey	Survey respondents generally feel that the water in Hamilton is somewhat safe to drink or better.	Expected to Maintain
Water looks and tastes good	Annual Customer Engagement Survey	There have been a significant portion of survey respondents who have experienced drinking water which had an unusual colour and/or odour.	Expected to Maintain
Water is available when I need it	Annual Customer Engagement Survey	The majority of survey respondents did not have an unplanned service interruption in the last year.	Expected to Maintain
Water coming out of the tap is a good pressure.	N/A	No feedback at this time via the survey, but pressure complaints were received and are documented in the technical levels of service and will be added to future surveys.	

2.4.2 Customer Levels of Service

Ultimately customer performance measures are the measures that the City will use to assess whether it is delivering the level of service the customers desire. Customer level of service measurements relate to how the customer feels about the City's water network in terms of their quality, reliability, accessibility, responsiveness, sustainability and over course, it's cost. The City will continue to measure these customer levels of service to ensure a clear understanding on how the customers feel about the services and the value for their rate dollars.

The Customer Levels of Service are considered in terms of:

Condition	How good is the service? What is the condition or quality of the service?
Function	Is it suitable for its intended purpose? Is it the right service?
Capacity/Use	Is the service over or under used? Do we need more or less of these assets?

In Table 23 under each of the service measures types (Condition, Function, Capacity/Use) there is a summary of the performance measure being used, the current performance, and the expected performance based on the current budget allocation.

Table 23: Customer Levels of Service

TYPE OF MEASURE	LEVEL OF SERVICE	SOURCE	PERFORMANCE MEASURE	CURRENT PERFORMANCE	EXPECTED TREND BASED ON PLANNED BUDGET
Condition	Provide reliable drinking water services with minimal service interruptions.	Annual Customer Engagement Survey	89.2% of survey respondents have not experienced an unplanned service interruption in the last year	Fairly Satisfied	Slight Decrease
			83.3% of survey respondents that have had an unplanned service interruption indicate the issue was resolved in a timely manner	Fairly Satisfied	Maintain Fairly Satisfied
		Confidence levels			
	Ensure water assets are kept in acceptable repair.	Condition Assessment Report	Condition of WTP	Poor	
		Confidence levels			
		Condition Assessment Report	Average condition of booster stations	Good	
		Confidence levels			
			Average condition of Wells	Fair	
		Condition Assessment Report	Average condition of Well Stations	Good	
		Confidence levels			
		Condition Assessment Report	Average Condition of Storage	Good	
		Confidence levels			
		Estimated based on age and breaks	Estimated condition of trunk watermain	Fair	
		Estimated based on age and breaks	Estimated condition of local watermain	Fair	
		Confidence levels		Medium	
		Confidence levels			
Function	Provide safe and palatable drinking water.	Annual Customer Engagement Survey	87.2% of survey respondents feel that drinking water is somewhat safe to drink or better.	Fairly Satisfied	Maintain Fairly Satisfied
			37.5% of survey respondents have a lead service or are unsure if they have a lead service.	Unsatisfied	Maintain Unsatisfied
			36.9% of survey respondents have experienced tap water that has an unusual odour and/or colour	Unsatisfied	Maintain current level
		Confidence levels			
Capacity	Ensure drinking water is accessible and the design capacity supports fire protection.	Annual Customer Engagement Survey	57.5% of survey respondents drink unfiltered tap water	Satisfied	Maintain current level
			90.8% of survey respondents are connected to Hamilton's municipal network.	High	Maintain current level
		Confidence levels			

2.4.3 Technical Levels of Service

Technical levels of service are operational or technical measures of performance, which measure how the City plans to achieve the desired customer outcomes and demonstrate effective performance, compliance and management. The metrics should demonstrate how effectively Hamilton delivers its services in alignment with its customer values; and should be viewed as possible levers to impact and influence the Customer Levels of Service. Hamilton will measure specific lifecycle activities to demonstrate how Hamilton is performing on delivering the desired level of service as well as to influence how customer perceive the services they receive from the assets.

Technical service measures are linked to the activities and annual budgets covering Acquisition, Operation, Maintenance, and Renewal.

Service and asset managers plan, implement and control technical service levels to influence the service outcomes.[3]

Table 24 shows the activities expected to be provided under the current 10 year planned budget allocation, and the forecast activity requirements being recommended in this AM Plan.

[3] IPWEA, 2015, IIMM, p 2|28.

Table 24: Technical Levels of Service

LIFECYCLE ACTIVITY	PURPOSE OF ACTIVITY	ACTIVITY MEASURE	CURRENT PERFORMANCE (2021)*	TARGET	RECOMMENDED PERFORMANCE **
Operation	Ensure water assets are kept in acceptable repair.	% Completion Flow & Code Annual Program % of plan	95%	100%	100%
		% Completion of valve inspections & exercising for annual program % of Plan	99%	100%	*100 %*
	Provide safe and palatable drinking water.	# of instances Chlorine is below/above target concentration at the WTP	8	0	0
		# of instances Fluoride is below/above target concentration at the WTP	3	0	0
		# of instances Orthophosphate is below/above target concentration at the WTP	12	0	0
		# Water Quality Complaints	558	No Data	No Data
		% of Water Quality Complaints investigated by City	100%	100%	100%
		% of Water Quality Complaints Requiring Intervention	46%	No Data	No Data
		Number Confirmed AWQIs	11	0	0
		Budget			
Maintenance	Provide reliable drinking water services with minimal service interruptions.	% of emergency above hydrant inspection / repairs completed within 15 days	100%	100%	100%
		% of scheduled above hydrant inspection / repairs completed within 45 days	98.29%	100%	100%
		% of emergency watermain repairs within 2 days	100%	100%	100%
		% of emergency valve repairs/replacement/installation/cleaning within 2 days	*100%*	100%	100%
		% of emergency water service line repairs/replacement/cleaning within 2 days	95.125%	100%	100%
		# Low pressure complaints	252	No Data	No Data
	Ensure water assets are kept in acceptable repair.	# Emergency watermain breaks	177	No Data	No Data
		# Scheduled watermain breaks	84	No Data	No Data
		Budget			
Renewal	Provide reliable drinking water services with minimal service interruptions.	% of emergency hydrant replacement within 2 days	*100*	100%	100%
		% of scheduled hydrant replacement within 70 days	79.3%	100%	100%
	Ensure water assets are kept in acceptable repair.	Length (km/yr) CIPP watermain rehabilitation	*5*	No Data	No Data
		Length (km) watermain replaced	*4*	No Data	No Data

Note: * Current activities related to Planned Budget.
***** Expected performance related to forecast lifecycle costs.***

It is important to monitor the service levels regularly as circumstances can and do change. Current performance is based on existing resource provision and work efficiencies. It is acknowledged changing circumstances such as technology and customer priorities will change over time.

At this time, many of the existing technical metrics do not have a target. These metrics should be improved to include a target to be in line with SMART objectives identified in the AMP Overview.

As the City's asset management maturity increases, and with the implementation of the EAM project mentioned in the AMP Overview in Section 7.2.3, the City will also have more capacity to measure additional metrics. In addition, the City should investigate the BIMA scorecard further to ensure data and assumptions are consistent with ministry and City reporting.

2.4.4 Level of Service Summary

At this time, the City's technical metrics for Water assets are typically based on meeting regulatory and legislative requirements include Environmental Compliance Agreements (ECAs). It is evident per Table 24 that the City is typically meeting these standards with a few exceptions. However, customer preferences and expectations do not always match minimum legislated requirements, which is discussed below. As mentioned in Section 2.4.2, while these surveys were used to establish customer values and customer performance measures, it's important to note that the number of survey respondents currently only represents a small portion of the population.

CONDITION

The majority of survey respondents had not had an unplanned service interruption, and if a service interruption did occur, they were typically satisfied with the time it took to resolve the issue. This indicates that customers are very satisfied at this time with the condition of the assets. When this is compared to the technical metrics, the City is typically meeting the targets for resolving planned and emergency interruptions within 2 days, however, typically issues are resolved with 4 hours, and so these metrics should be revised to reflect the levels of service the City is providing.

FUNCTION

The majority of survey respondents indicated that they thought the City drinking water was safe, which was considered to be very satisfied. However, some survey respondents were unsatisfied with the palatability of the water and experienced water with an unusual colour or odour. Per the technical levels of service, the City investigated 100% of the 558 water quality complaints received by residents, but only identified 11 adverse water quality incidents (ADWQIs), meaning most of these complaints were not out of compliance. The City will investigate adding additional metrics to quantify the reason for these complaints to ensure the cause for complaints is properly quantified which has been identified as a continuous improvement item in Table 32.

Some survey respondents also reported that they had lead water services, which can pose a health risk. The City has been actively contacting customers that likely have a lead service, and offers a loan program to assist customers with getting these service lines replaced, and should investigate quantifying this as a technical metric, which has been identified as a continuous improvement item in Table 32.

CAPACITY

At this time, there were not any key findings associated with the water capacity with respect to customer levels of service, but the majority of survey respondents were shown to be connected to the municipal wastewater system, which is expected.

However, the City could consider adding additional sampling stations to improve the ability to test for AWQIs throughout the water network, which has been identified as a continuous improvement item in Table 32.

2.5 FUTURE DEMAND

The ability for the City to be able to predict future demand for services enables the City to plan ahead and identify the best way of meeting the current demand while being responsive to inevitable changes in demand. Demand will inevitably change over time and will impact the needs and desires of the community in terms of the quantity of services (more communities connecting to the service) and types of service required (larger facilities to process increased volumes).

Demand is defined as the desire customers have for assets or services and that they are willing to pay for. These desires are for either new assets/services or current assets.

Since demand is not yet an extensive requirement in O.Reg 588/17 for the July 1st, 2022 deadline, this section is not as robust as some other sections of the report, but is an obligation for the report by July 1st, 2025, and will be expanded on in future iterations of the report.

2.5.1 Demand Drivers

For water, the key drivers are population change, climate change, legislative requirements and customer preferences and expectations. A future continuous improvement item is to identify additional demand drivers.

2.5.2 Demand Forecasts

The high level present position and projections for demand drivers that may impact future service delivery and use of assets have been identified and documented in Table 25. At this time, specific projections have not been calculated and will be updated in the 2025 AM Plan per the timelines stated in the AMP Overview. Growth projections have been shown in the AMP Overview.

2.5.3 Demand Impact and Demand Management Plan

The impact of demand drivers that may affect future service delivery and use of assets are shown in Table 25.

Demand for new services will be managed through a combination of managing existing assets, upgrading of existing assets and providing new assets to meet demand and demand management. Demand management practices can include non-asset solutions, insuring against risks, and managing failures.

Opportunities identified to date for demand management are shown in Table 25 while climate change adaptation is separately addressed in Table 26. Further opportunities will be developed in future revisions of this AM Plan, as identified in Table 32 in the Continuous Improvement Section.

Table 25: Demand Management Plan				
DEMAND DRIVER	**CURRENT POSITION**	**PROJECTION**	**IMPACT ON SERVICES**	**DEMAND MANAGEMENT PLAN**
Population Change	573,000 (2021)	636,080 (2031)	Greater production capacity at WTP	Increase budget due to increased costs for treatment. New staff may be required for legislative compliance. Investigate possible plant upgrades where required. Adjust budgets, long-term financial plan, and AM Plan.
Population Change	573,000 (2021)	636,080 (2031)	Not enough storage to accommodate change. New storage sites may be required.	Investigate need for new water towers or reservoirs. Adjust budgets, long-term financial plan, and AM Plan
Population Change	573,000 (2021)	636,080 (2031)	More watermain required.	Investigate need for new samplings stations and storage. New staff may be required for legislative compliance. Adjust budgets, long-term financial plan, and AM Plan.
Technological Changes	Standard water meters installed.	Smart meters to be installed.	Not enough staff to accommodate change, equipment purchase is required.	New staff may be required for legislative compliance. Adjust budgets, long-term financial plan, and AM Plan.

2.5.4 Asset Programs to Meet Demand

The new assets required to meet demand may be acquired, donated or constructed. Additional assets are discussed in Section 2.2.1.

Acquiring new assets will commit the City to ongoing operations, maintenance and renewal costs for the period that the service provided from the assets is required. These future costs are identified and considered in developing forecasts of future operations, maintenance and renewal costs for inclusion in the long-term financial plan.

2.5.5 Climate Change Adaptation

The impacts of climate change may have a significant impact on the assets we manage and the services they provide. In the context of the asset management planning process, climate change can be considered as both a future demand and a risk.

Climate change impacts on assets will vary depending on the location and the type of services provided, as will the way in which those impacts are responded to and managed.[4]

As a minimum the City must consider how to manage our existing assets given potential climate change impacts for our region.

Risk and opportunities identified to date are shown in Table 4.5.1. This is a continuous process and will be updated in the 2025 AM Plan per the timelines outlined in the AMP Overview.

TABLE 26: Managing the Impact of Climate Change on Assets and Services

CLIMATE CHANGE DESCRIPTION	PROJECTED CHANGE	POTENTIAL IMPACT ON ASSETS AND SERVICES	MANAGEMENT
Global temperatures increase.	Lake Ontario's temperature will continue to increase.	More difficult for the City to maintain chlorine residuals since chlorine reacts faster at higher temperatures. Pipe corrosion increases at higher temperature.	Continue regular testing for water quality. Conduct a study to verify the optimal chlorination strategy for the Woodward subsystem.
Increased Severe Storms Causing High Lake Water Turbidity	More events or prolonged events of high turbidity raw water.	Reduced treatment capacity to ensure adequate disinfection.	Monitoring of weather forecasts and adjusting storage levels accordingly.

[4] IPWEA Practice Note 12.1 Climate Change Impacts on the Useful Life of Infrastructure

TABLE 26: Managing the Impact of Climate Change on Assets and Services			
CLIMATE CHANGE DESCRIPTION	**PROJECTED CHANGE**	**POTENTIAL IMPACT ON ASSETS AND SERVICES**	**MANAGEMENT**
			Real-time monitoring of turbidity and adjusting treatment processes accordingly. Upgrading treatment processes to more effectively treat high turbidity water.
Global Temperatures Increase	Increased internal building temperatures	Heat sensitive equipment such as VFDs at risk of damage resulting in reduced pumping capacity, increased maintenance & repair costs.	Manage HVAC to maintain acceptable temperature levels.
Global Temperatures Increase	Drought Conditions	Increase demand on water supply may impact storage levels for firefighting. Water Taking restrictions may imposed by Provincial Government.	Outdoor Water use restrictions. Expansion of treatment/supply capabilities to meet projected demands.
Increased Polar Vortex Events	Extreme Cold for Prolonged Periods of Time	Extreme cold and frost can lead to an increase of frozen water service lines and an increase in watermain breaks.	Continue to install water assets to the standard highlighted by the City of Hamilton.

Additionally, the way in which the City constructs new assets should recognize that there is opportunity to build in resilience to climate change impacts. Building resilience can have the following benefits:

- Assets will withstand the impacts of climate change;
- Services can be sustained; and
- Assets that can endure may potentially lower the lifecycle cost and reduce their carbon footprint

Table 27 summarizes some asset climate change resilience projects the City is currently pursuing.

Table 27: Building Asset Resilience to Climate Change

PROJECT	PROJECT DESCRIPTION	CLIMATE CHANGE IMPACT	BUILD RESILIENCE IN NEW WORKS
Water Distribution Leak Detection Project	Purchase of leak detection equipment. Reduction of pumping and reduction in water plan production.	Leaks in the water distribution system lead to wasted energy at the WTP which increases GHG emissions and increases draw on source water.	To increase the number of new and existing high performance state-of-the-art assets that improve energy efficiency and adapt to a changing climate.
Booster Station Upgrades	Upgrades increasing energy efficiency of equipment at various stations.	Old technology at facilities leads to wasted energy which increases GHG emissions.	To increase the number of new and existing high performance state-of-the-art buildings that improve energy efficiency and adapt to a changing climate.
New Lynden Water System	All new building, well, and reservoir including energy efficient equipment.	Old technology at facilities leads to wasted energy which increases GHG emissions.	To increase the number of new and existing high performance state-of-the-art buildings that improve energy efficiency and adapt to a changing climate.

Table 27: Building Asset Resilience to Climate Change			
PROJECT	**PROJECT DESCRIPTION**	**CLIMATE CHANGE IMPACT**	**BUILD RESILIENCE IN NEW WORKS**
Woodward Water Treatment Facility – Phase 1	Upgrades increasing energy efficiency of equipment at the WTP.	Old technology at facilities leads to wasted energy which increases GHG emissions.	To increase the number of new and existing high performance state-of-the-art buildings that improve energy efficiency and adapt to a changing climate.
AMI Implementation	Install Advanced Metering Infrastructure (AMI) technology on all water meters sized 38mm and above and all water meters located within Hamilton's well based systems.	Currently these meters are read manually which creates GHG emissions from the vehicular travel to the site. And also delays in identifying and resolving meter and billing issues.	To increase the number of new and existing high performance state-of-the-art assets that improve energy efficiency and adapt to a changing climate.
Anti-stagnation Valve Program	Implementation of anti-stagnation valves in the water distribution system to reduce flow and energy cost from the water stations. Decrease in energy consumption at water stations.	Old technology at facilities leads to wasted energy which increases GHG emissions.	To increase the number of new and existing high performance state-of-the-art assets that improve energy efficiency and adapt to a changing climate.
Service Depth Standards	New standards for service depth of frozen services from 1.6m to 1.8m this requires watermain depths to be lowered to 1.8m as well.	Climate change will increase extreme weather causing colder climates which means more watermain breaks due to colder temps.	To improve Hamilton's climate resiliency by decreasing our vulnerability to extreme weather, minimizing future damages, take advantage of opportunities, and better recover from future damages.

Table 27: Building Asset Resilience to Climate Change			
PROJECT	**PROJECT DESCRIPTION**	**CLIMATE CHANGE IMPACT**	**BUILD RESILIENCE IN NEW WORKS**
Children's Water Festival	Support and Coordination of the annual Children's Water Festival. Educate children about importance of water quality and conservation.	The City is a steward of the infrastructure built and needs to ensure future generations are educated about climate change's effects on our infrastructure.	To ensure all our work promotes equity, diversity, health and inclusion and improves collaboration and consultation with all marginalized groups, including local Indigenous Peoples.
Master Plan Update	Identify infrastructure needs related to growth. Guiding policy item related to GHG emission reduction.	The City is a steward of the infrastructure built and needs to ensure future generations are educated about climate change's effects on our infrastructure.	To improve Hamilton's climate resiliency by decreasing our vulnerability to extreme weather, minimizing future damages, take advantage of opportunities, and better recover from future damages.

The impact of climate change on assets is a new and complex discussion and further opportunities will be developed in future revisions of this AM Plan.

2.6 RISK MANAGEMENT

The purpose of infrastructure risk management is to document the findings and recommendations resulting from the periodic identification, assessment and treatment of risks associated with providing services from infrastructure, using the fundamentals of International Standard ISO 31000:2018 Risk management – Principles and guidelines.

Risk Management is defined in ISO 31000:2018 as: 'coordinated activities to direct and control with regard to risk[5].

The City is developing and implementing a formalized risk assessment process to identify risk associated with service delivery and to implement proactive strategies to mitigate risk to tolerable levels. The risk assessment process identifies credible risks associated with service delivery and will identify risks that will result in loss or reduction in service, personal injury, environmental impacts, a 'financial shock', reputational impacts, or other consequences.

The risk assessment process identifies credible risks, the likelihood of those risks occurring, and the consequences should the event occur. The City is further developing its risk assessment maturity with the inclusion of a risk rating, evaluation of the risks and development of a risk treatment plan for those risks that are deemed to be non-acceptable in the next iteration of the plan.

2.6.1 Critical Assets

Critical assets are defined as those which have a high consequence of failure causing significant loss or reduction of service. Critical assets have been identified and along with their typical failure mode, and the impact on service delivery, are summarized in Table 28. Failure modes may include physical failure, collapse or essential service interruption.

Table 28: Critical Assets

Critical Asset(s)	Failure Mode	Impact
Water Treatment Plant	Essential Service Interruption	Water not available for customers.
Wells/Reservoirs	Contamination	Water not available for customers. Boil or drinking water advisory may be issued.
Well & Booster Stations	Essential Service Interruption	Water not available for customers.
Critical Trunk Watermain	Essential Service Interruption / Surrounding asset damage	Water not available for customers, and critical route disrupted.

[5] ISO 31000:2009, p 2

Table 28: Critical Assets		
Critical Asset(s)	**Failure Mode**	**Impact**
SCADA	System failure	Water not available for customers.

By identifying critical assets and failure modes the City can ensure that investigative activities, condition inspection programs, maintenance and capital expenditure plans are targeted at critical assets.

2.6.2 Risk Assessment

The risk assessment process identifies credible risks, the likelihood of the risk event occurring, the consequences should the event occur, development of a risk rating, evaluation of the risk and development of a risk treatment plan for non-acceptable risks.

An assessment of risks associated with service delivery will identify risks that will result in loss or reduction in service, personal injury, environmental impacts, a 'financial shock', reputational impacts, or other consequences.

Critical risks are those assessed with 'Very High' (requiring immediate corrective action) and 'High' (requiring corrective action) risk ratings identified in the Infrastructure Risk Management Plan. The residual risk and treatment costs of implementing the selected treatment plan is shown in Table 6.2. It is essential that these critical risks and costs are reported to management. Additional risks will be developed in future iterations of the plan and is identified in Table 32 in the Continuous Improvement Section of the plan.

TABLE 29: Risks and Existing Controls			
SERVICE OR ASSET AT RISK	**WHAT CAN HAPPEN**	**RISK RATING**	**EXISTING CONTROLS**
Booster Station	Power failure at station causing service interruption.	Very High	Back-up generators installed at stations, or capability for a mobile generator to provide back-up power. Routine maintenance on electrical switchgear and load testing of generator.
Well Station	Equipment failure causing service interruption or contamination.	Very High	Regular station checks and verification by operators.
Critical Trunk Watermain	Breakage	High	Condition Assessment. Construction Controls. Pump control.
Reservoir	Contamination	High	Routine cleaning and internal inspections. Soil Testing. Water Quality Testing.
SCADA	Cyber attack	Very High	Weekly, monthly checks. IT Security protection.
Service Pipes	Lead contamination	High	Lead sampling program with accompanying service pipe replacements and orthophosphate treatment for corrosion control.

2.6.3 Infrastructure Resilience Approach

The resilience of our critical infrastructure is vital to the ongoing provision of services to customers. To adapt to changing conditions, the City needs to understand its capacity to 'withstand a given level of stress or demand', and to respond to possible disruptions to ensure continuity of service.

Resilience has been considered within the planning, operations, and maintenance programs for the City's water systems for more than two decades. Resilience is a consideration in the Master Planning process for the water system, within project staging and construction approvals, and within operations and maintenance programs. Staff are well trained and standard operating procedures are in place to mitigate service disruptions and significant emergencies. An example would be how Water assets operate during their peak usage. We do not currently measure our resilience in service delivery and will be included in the next iteration of the AM Plan.

Resilience covers the capacity of the City to withstand any service disruptions, act appropriately and effectively in a crisis, absorb shocks and disturbances as well as adapting to ever changing conditions. Resilience is built on aspects such as response and recovery planning, financial capacity, climate change risk assessment and crisis leadership.

2.6.4 Service and Risk Trade-Offs

The decisions made in AM Plans are based on the objective to achieve the optimum benefits from the available resources. At this time, the City does not have sufficient data to present risks and tradeoffs. This information will be presented in the 2025 AM Plan regarding Proposed Levels of Service per the timelines outlined in the AMP Overview.

2.7 FINANCIAL SUMMARY

This section contains the financial requirements resulting from the information presented in the previous sections of this AM Plan. Effective asset and financial management will enable the City to ensure its water network provides the appropriate level of service for the City to achieve its goals and objectives. Reporting to stakeholders on service and financial performance ensures the City is transparently fulfilling its stewardship accountabilities.

Due to legislative requirements, Hamilton Water has an existing long-term financial plan that has been the basis for its capital programming and outline some operational needs. AM will seek to improve on existing data and ensure it aligns to the Asset Management Plan. Long-Term financial planning (LTFP) is critical for the City to ensure the networks lifecycle activities such as renewals, operations, maintenance and acquisitions can happen at the optimal time. The City is under increasing pressure to meet the wants and needs of its customers while keeping costs at an affordable level and maintaining its financial sustainability.

Without funding asset activities properly for its water network; the City will have difficult choices to make in the future which will include options such as higher cost reactive maintenance and operational costs, reduction of service and potential reputational damage.

The City will be seeking to incorporate its water network asset planning into a corporate wide LTFP. Aligning the LTFP with the AM Plan is critical to ensure the all of the networks needs will be met while the City is finalizing a clear financial strategy with measurable financial targets. The financial projections will be improved as the discussion on desired levels of service and asset performance matures.

2.7.1 Sustainability of Service Delivery

There are two key indicators of sustainable service delivery that are considered in the AM Plan for this service area. The two (2) indicators are the:

- asset renewal funding ratio (proposed renewal budget for the next ten (10) – years / forecast renewal costs for next ten (10) – years); and,
- medium term forecast costs/proposed budget (over ten (10) – years of the planning period).

ASSET RENEWAL FUNDING RATIO

Asset Renewal Funding Ratio[6] **74.86%**

The Asset Renewal Funding Ratio is used to determine if the City is accommodating asset renewals in an **optimal** and **cost effective** manner from a timing perspective and relative

[6] AIFMM, 2015, Version 1.0, Financial Sustainability Indicator 3, Sec 2.6, p 9.

to financial constraints, the risk the City is prepared to accept and service levels it wishes to maintain. Ideally the target renewal funding ratio should be between **90% - 110%** over the entire planning period. A low indicator result generally indicates that service levels are achievable however the expenditures are below this level because the City is challenged to fund the necessary work or has historical preferences or constraints that prevent Hamilton from utilizing additional debt.

Over the next ten (10) years the City expects to have **74.86%** of the funds required for the optimal renewal of assets. By only having sufficient funding to renew **74.86%** of the required assets in the appropriate timing it will inevitably require difficult trade off choices that could include;

- a reduction of the level of service and availability of assets;
- increased complaints and reduced customer satisfaction;
- increased reactive maintenance and renewal costs; and,
- damage to the City's reputation and risk of fines or legal costs.

The lack of renewal resources has been noted in previous reports and plans and will also be addressed in future AM Plan's while aligning the plan to the LTFP. This will allow staff to develop options and long-term strategies to address the renewal rate. The City will review its renewal allocations once the entire inventory has been confirmed and amalgamated.

MEDIUM TERM – TEN (10) – YEAR FINANCIAL PLANNING PERIOD

This AM Plan identifies the forecast operations, maintenance and renewal costs required to provide an agreed level of service to the community over a 10 year period. This provides input into 10 year financial and funding plans aimed at providing the required services in a sustainable manner. As the City continues to develop condition profiles and necessary works are identified based on their condition, it is anticipated operation and maintenance forecasts will increase significantly.

This forecast work can be compared to the proposed budget over the first 10 years of the planning period to identify any funding shortfall.

The forecast operations, maintenance and renewal costs over the 10 year planning period is **$130,654,616** on average per year.

The proposed (budget) operations, maintenance and renewal funding is **$110,381,096** on average per year giving a ten (10) – year funding shortfall of **$20,273,520** per year or **$202,735,200 in total** over the ten (10) – year planning period. This indicates that **84.48%** of the forecast costs needed to provide the services documented in this AM Plan are accommodated in the proposed budget. Note, these calculations exclude acquired assets.

Funding an annual funding shortfall or funding 'gap' of **$20,273,520** per year cannot be addressed in a single year and has not been incorporated as identified within this plan into any existing plan or budget. The gap will require vetting, planning and resources to begin to incorporate gap management into the future budgets. This gap will need to be

managed over time to reduce it in a sustainable manner and limit financial shock to customers. Options for managing the gap include;

- Financing strategies – increased funding, block funding for specific lifecycle activities, long term debt utilization
- Adjustments to lifecycle activities – increase/decrease maintenance or operations, increase/decrease frequency of renewals, limit acquisitions or dispose of underutilized assets
- Influence level of service expectations or demand drivers

These options and others will allow Hamilton to ensure the gap is managed appropriately and ensure the level of service outcomes the customers desire.

Providing sustainable services from infrastructure requires the management of service levels, risks, forecast outlays and financing to achieve a financial indicator of approximately 1.0 for the first years of the AM Plan and ideally over the 10 year life of the Long-Term Financial Plan.

2.7.2 Forecast Costs (Outlays) For the Long-Term Financial Plan

Table 30 shows the forecast costs (outlays) required for consideration in the 10 year long-term financial plan.

Providing services in a financially sustainable manner requires a balance between the forecast outlays required to deliver the agreed service levels with the planned budget allocations in the operational and capital budget. The City will begin developing its long-term financial plan (LTFP) to incorporate both the operational and capital budget information and help align the LTFP to the AM Plan which is critical for effective asset management planning.

A gap between the recommended forecast outlays and the amounts allocated in the operational and capital budgets indicates further work is required on reviewing service levels in the AM Plan.

The City will manage the ‘gap’ by continuing to develop this AM Plan to provide guidance on future service levels and resources required to provide these services in consultation with the community. Options to manage the gap include reduction and closure of low use assets, increased funding allocations, reduce the expected level of service, utilize debt based funding over the long term, adjustments to lifecycle activities, improved renewals and multiple other options or combinations of options. These options will be explored in the next AM Plan and the City will provide analysis and options for Council to consider going forward.

Table 30: Forecast Costs (Outlays) for the Long-Term Financial Plan
Forecast Costs are shown in 2021 Dollar Values

YEAR	ACQUISITION	OPERATION	MAINTENANCE	RENEWAL	DISPOSAL	TOTAL
2022	$23,015,000	$46,185,012	$15,045,000	$42,105,000	$440,000	$126,790,016
2023	$47,855,000	$48,752,168	$10,950,000	$43,340,000	0	$150,897,168
2024	$72,142,496	$50,768,096	$10,450,000	$50,620,000	0	$183,980,592
2025	$87,788,000	$52,865,984	$10,450,000	$50,860,000	$150,000	$202,113,984
2026	$55,728,000	$62,828,804	$10,450,000	$33,889,540	0	$162,896,352
2027	$35,568,000	$63,907,272	$10,450,000	$40,709,632	0	$150,634,912
2028	$25,143,000	$65,007,304	$10,450,000	$42,029,792	0	$142,630,096
2029	$3,007,667	$66,129,344	$10,450,000	$42,894,000	0	$122,481,008
2030	$1,232,667	$67,273,816	$10,450,000	$31,609,000	0	$110,565,480
2031	$1,664,167	$68,441,184	$10,450,000	$23,999,990	0	$104,555,344

2.7.3 Funding Strategy

The proposed funding for assets is outlined in the City's operational budget and ten (10) – year capital budget.

These operational and capital budgets determine how funding will be provided, whereas the AM Plan typically communicates how and when this will be spent, along with the service and risk consequences. Future iterations of the AM Plan will provide service delivery options and alternatives to optimize limited financial resources.

2.7.4 Valuation Forecasts

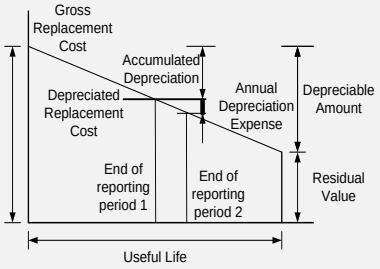
Asset values are forecast to increase as projections improve and can be validated as market pricing. The net valuations will increase significantly despite some assets being programmed for disposal that will be removed from the register over the ten (10) – year planning horizon.

Any additional assets will add to the operations and maintenance needs in the longer term and would also require additional costs due to future renewals obligations. Any additional assets will also add to future depreciation forecasts. Any disposals of assets would decrease the operations and maintenance needs in the longer term and removes the high costs renewal obligations.

2.7.5 Asset Valuations

The best available estimate of the value of assets included in this AM Plan are shown below. The assets are valued at estimated replacement costs:

Replacement Cost (Current/Gross)	4,250,000,000
Depreciable Amount	4,250,000,000
Depreciated Replacement Cost[7]	$2,133,500,000
Depreciation	$ 52,487,500



The current replacement cost is the most common valuation approach for specialized infrastructure assets such as infrastructure water assets. The methodology includes establishing a comprehensive asset registry, assessing replacement costs (based on market pricing for the modern equivalent assets) and useful lives, determining the

[7] Also reported as Written Down Value, Carrying or Net Book Value.

appropriate depreciation method, testing for impairments, and determining remaining useful life.
As the City matures its asset data, it is highly likely that these valuations will fluctuate significantly over the next three (3) years and they should increase over time based on improved market equivalent costs.

2.7.6 Key Assumptions Made in Financial Forecasts

In compiling this AM Plan, it was necessary to make some assumptions. This section details the key assumptions made in the development of this AM Plan and should provide readers with an understanding of the level of confidence in the data behind the financial forecasts.

Key assumptions made in this AM Plan are:

- Operational forecasts are based on current budget allocations and are the basis for the projections for the 10-year horizon and do not address other operational needs not yet identified;
- Maintenance forecasts are based on current budget allocations and do not identify all asset needs at this time. It is solely based on planned activities;
- 1% p.a. has been added to maintenance forecasts to accommodate for donated assets assumed over the 10-year planning horizon;
- 1.31 % p.a has been added to operational forecasts to accommodate for donated assets assumed over the 10-year planning horizon; and,
- Replacement costs were based on historical costing and engineering estimates. They were also made without determining what the asset would be replaced with in the future.

2.7.7 Forecast Reliability and Confidence

The forecast costs, proposed budgets, and valuation projections in this AM Plan are based on the best available data. For effective asset and financial management, it is critical that the information is current and accurate. Data confidence is defined in the AMP Overview.

The estimated confidence level for and reliability of data used in this AM Plan is shown in Table 31.

Table 31: Data Confidence Assessment for Data used in AM Plan

DATA	CONFIDENCE ASSESSMENT	COMMENT
Demand drivers	Medium	Further investigation is required to better understand demand drivers
Growth projections	Medium	Current growth projections will need to be vetted an improved. Continuous improvements are required and identified
Acquisition forecast	Medium	Currently based on 2019 DC study and SME opinion. Continuous improvements are required and identified
Operation forecast	Medium	Currently budget based and requires future improvement to ensure allocation is accurate
Maintenance forecast	Medium	Currently budget based and requires future improvement to ensure allocation is accurate
Renewal forecast - Asset values	Medium	Currently budget based and requires future improvements to further identify specifi needs
- Asset useful lives	Low	Based on SME opinion. Continuous improvement required to ensure data is vetted and ensure it aligns with Hamilton's actual practices
- Condition modelling	Low	Mixture of assessment methods. Requires standardization along with predictable timelines for assessments
Disposal forecast	Low	Current disposal information is rolled into renewal. Continuous improvements are required to ensure accurate data is available.

The estimated confidence level for and reliability of data used in this AM Plan is considered to be a **Medium** confidence level.

2.8 PLAN IMPROVEMENT AND MONITORING

2.8.1 Status of Asset Management Practices[8]

ACCOUNTING AND FINANCIAL DATA SOURCES

This AM Plan utilizes accounting and financial data. The sources of the data are:

- 2022 Capital & Operating Budgets;
- 2021 Tender Documents (various);
- Asset Management Data Collection Templates;
- Audited Financial Statements and Government Reporting (FIR, TCA etc);
- Financial Exports from internal financial systems; and,
- Historical cost and estimates of budget allocation based on SME experience.

ASSET MANAGEMENT DATA SOURCES

This AM Plan also utilizes asset management data. The sources of the data are:

- Data extracts from various City applications and management software
- Asset Management Data Collection Templates;
- Tender documents, subdivision agreements and projected growth forecasts as well as internal reports;
- Condition assessments;
- Subject matter expert opinion and anecdotal information; and,
- Reports from the mandatory biennial inspection, operational & maintenance activities internal reports.

2.8.2 Improvement Plan

It is important that Hamilton recognize areas of the AM Plan and planning process that require future improvements to ensure the effective management of the water network assets and inform decision making. The tasks listed below are essential to improving the plans and Hamilton's ability to make evidence based and informed decisions. These improvements span from improved lifecycle activities, improved financial planning, improve data quality and to plans to physically improve the assets. The Improvement plan in table 32 highlights proposed improvement items that will require further discussion and analysis to determine feasibility, resource requirements and alignment to current workplans. Future iterations of this AM Plan will provide updates on these improvement plans.

[8] ISO 55000 Refers to this as the Asset Management System

Table 32: Improvement Plan
***p.a – per annum**

TASK	TASK	RESPONSIBILITY	RESOURCES REQUIRED	DRAFT TIMELINE
1	Collect and confirm data from databases before it goes into EAM including spatial referencing and possible Collector Apps.	**Hamilton Water**	**$40,000 p.a.** **$120,000 Total** Internal Staff Time	**3 Years** (2022-2024)
2	Develop a Long-Term Financial Plan to connect the budgeting process to the AM planning process.	**CAM, Hamilton Water, Finance**	**$15,000 p.a** **$60,000 Total** Internal Staff Time	**4 Years** (2022-2025)
3	Standardize condition assessments for critical watermains & establish more frequent timeline to complete.	**CAM, Infrastructure Renewal**	**$10,000** Internal Staff Time	**2 Years** (2022-2023)
4	Plan condition assessments for vertical assets on a regular cycle	**CAM, Hamilton Water**	**$11,000** Internal Staff Time	**1 Year** (2022)
5	Complete condition assessments on WTP.	**CAM, Hamilton Water**	**$250,000 Total** Internal Staff, Tender Process Specialty Assessor	**3 Years** (2022-2024)
6	Integrate collection of condition data into routine inspections for hydrants, wells and valves.	**CAM, Hamilton Water**	**$20,000** Internal Staff Time	**2 Years** (2022-2023)
7	Review & improve condition assessment assumptions for local watermain.	**CAM, Hamilton Water**	**$6,000 p.a.** Internal Staff Time	**2 Years** (2022-2023)
8	Standardize condition assessment outcomes and timed deliverables.	**CAM, Hamilton Water**	**$6,000 p.a.** Internal Staff Time	**3 Years** (2022-2024)
9	Improve annual engagement survey process to optimize engagement and respondents.	**CAM, Hamilton Water, Communications**	**$35,000** Internal Staff Time	**4 Years** (2022-2025)

Table 32: Improvement Plan
***p.a – per annum**

TASK	TASK	RESPONSIBILITY	RESOURCES REQUIRED	DRAFT TIMELINE
10	Identify additional risks and identify trade-offs for what cannot be achieved.	**CAM, Hamilton Water**	**$5,000** Internal Staff Time	**Annual**
11	Improve data confidence levels for asset register.	**CAM, Hamilton Water**	**10,000 p.a. $50,000 Total** Internal Staff Time	**5 Years** (2022-2026)
12	Improve Growth projection data and modelling for next AM Plan iteration.	**CAM, Hamilton Water, Economic Development**	**$6,000 p.a.** Internal Staff Time	**2 Years** (2022-2023)
13	Develop and implement an annual demand review process to ensure sufficient knowledge is available to inform future planning.	**CAM, Hamilton Water, Economic Development**	**$35,000 Total** Internal Staff Time	**2 Years** (2022-2023)
14	Analyze operational budget to improve AM allocations for lifecycle activities.	**CAM, Hamilton Water, Finance**	**$10,000 p.a. $30,000 Total** Internal Staff Time	**3 Years** (2022-2024)
15	Analyze maintenance activities to identify future needs and recommended actions.	**CAM, Hamilton Water,**	**$10,000 p.a. $40,000 Total** Internal Staff Time	**4 Years** (2022-2025)
16	Develop Renewal forecasting prioritization to optimize resources and ensure level of services can be maintained.	**CAM, Hamilton Water,**	**$6,000 p.a. $44,000 Total** Internal Staff Time	**4 Years** (2022-2025)
17	Review Useful Life assumptions to ensure they align with actual Hamilton practices.	**CAM, Hamilton Water,**	**$8,000 p.a. $16,000 Total** Internal Staff Time	**2 Years** (2022-2023)
18	Review disposal costs and separate from renewal costs.	**CAM, Hamilton Water,**	**$10,000 p.a. $40,000 Total** Internal Staff Time	**4 Years** (2022-2025)
19	Review BIMA Scorecard reporting and ensure data and	**CAM, Hamilton Water,**	**$2,500 p.a. $5,000 Total**	**2 Years** (2022-2023)

Table 32: Improvement Plan
***p.a – per annum**

TASK	TASK	RESPONSIBILITY	RESOURCES REQUIRED	DRAFT TIMELINE
	assumptions are consistent with ministry and City reporting and investigate additional technical metrics (e.g. water quality and lead complaints)	**Continuous Improvement**	Internal Staff Time	
20	Investigate need for additional sampling stations.	**CAM, Hamilton Water**	**$2,400 p.a.** **$4,800 Total** Internal Staff Time	**2 Years** (2022-2023)
21	Further develop vertical asset knowledge for future iterations of AM Plans.	**CAM, Hamilton Water,**	**$50,000 p.a.** **$150,000 p.a.** Internal Staff Time, Tender Process	**3 Years** (2022-2024)
22	Improve asset replacement costs by vetting with current market prices instead of historical costs/estimates or internal models.	**CAM, Hamilton Water, Finance**	**$30,000 p.a.** **$90,000 Total** Internal Staff Time	**3 Years** (2022-2024)
23	Identify water assets in other divisions and incorporate into next AM Plan.	**CAM, Hamilton Water,**	**$10,000 p.a.** **$30,000 Total** Internal Staff Time	**3 Years** (2022-2024)
24	Ensure new technical metrics are considering different lifecycle stages (e.g. acquisition, disposal)	**CAM, Hamilton Water,**	**$2,000 p.a** **$6.000 Total** Internal Staff Time	3 Years (2022-2024)

2.8.3 Monitoring and Review Procedures

This AM Plan will be reviewed during the annual budget planning process and revised to show any material changes in service levels, risks, forecast costs and proposed budgets as a result of budget decisions.

The AM Plan will be reviewed and updated on a regular basis to ensure it represents the current service level, asset values, forecast operations, maintenance, renewals, acquisition and asset disposal costs and planned budgets. These forecast costs and proposed budget will be incorporated into the Long-Term Financial Plan once completed.

2.8.4 Performance Measures

The effectiveness of this AM Plan can be measured in the following ways:

- The degree to which the required forecast costs identified in this AM Plan are incorporated into the long-term financial plan;
- The degree to which the 1-10 year detailed works programs, budgets, business plans and corporate structures consider the 'global' works program trends provided by the AM Plan;
- The degree to which the existing and projected service levels and service consequences, risks and residual risks are incorporated into the Strategic Planning documents and associated plans;
- The Asset Renewal Funding Ratio achieving the Organisational target (this target is often 90 – 100%).

2022 Wastewater Asset Management Plan

Hamilton

WASTEWATER SERVICE AREA

Description

The wastewater network collects wastewater from its customers across the City and conveys it for treatment before it is returned to the natural watercourse. These assets relate to the collection, transmission, treatment or disposal of wastewater, including any wastewater asset that from time to time manages stormwater.

Replacement Value $7.3 Billion

Average Asset Condition

Did You Know?

- In 2021, the Woodward and Dundas WWTPs together collected and treated approximately **76,200 ML** for **510,000** customers which is equivalent to **16 billion** toilet flushes.
- The population is expected to increase to **636,000 by 2031** and so plant upgrades are being completed to improve capacity and performance.

Critical Asset Summary

Critical Assets	Quantity	Replacement Cost	Condition	Stewardship Measures
Wastewater Treatment Plant	2	$3.2 billion	Fair	**# of bypasses at Woodward WWTP in 2021** **23**
Pump Station	71	$181.2 million	Fair	**% completed monthly inspections in 2021** **92.12%**
CSO Tanks	9	$222.9 million	Fair	**# of CSO tank overflow events in 2021** **27**
Gravity Main	1,798 km	$2.4 billion	Good	**Length of sewermain lined in 2021** **22.3 km**

Data Confidence

VERY HIGH | MEDIUM | VERY LOW

FINANCIAL FACTS

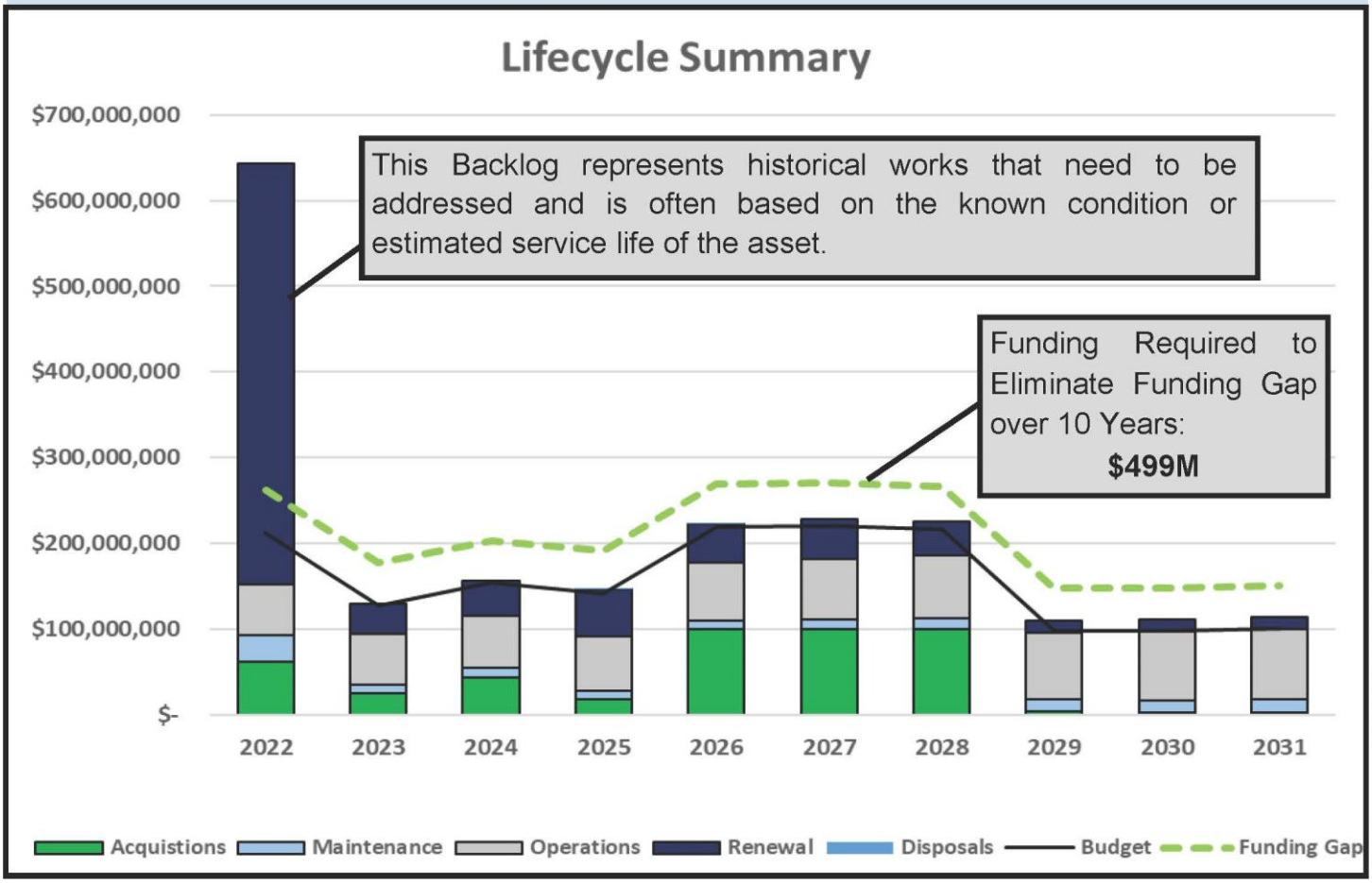
- Hamilton will receive **$440 million** dollars worth of assets over the next 10 years.
- Hamilton will invest on average **$838 million** to operate, maintain wastewater assets over the next ten years.

DID YOU KNOW?

- The City completes condition assessments on critical sewermain to reduce the chance of a critical mainline failure.
- CSO Tanks hold wastewater during heavy rain events to avoid backups and bypasses.

FINANCIAL INDICATORS

Type of Indicator	Measurement	Explanation
Asset Renewal Ratio	**45.7%**	This ratio demonstrates the rate the city renews its Wastewater Assets.
10 Year O&M Forecast	**69.4%**	The % of funding allocated compared to what needs to be spent.
Annual Infrastructure Gap	**$50 Million**	The difference between what is being spent and what should be spent.



3.0 WASTEWATER ASSETS

The wastewater network collects wastewater from its customers across the City and conveys it for treatment before it is returned to the natural watercourse. The service objective is to provide reliable wastewater services to its customers 24 hours a day and 7 days a week. A reliable wastewater network service provides both direct and indirect benefits ensuring good public health to the broader community.

Wastewater assets relate to the collection, transmission, treatment or disposal of wastewater, including any wastewater asset that from time to time manages stormwater. For this iteration of the AM Plan the wastewater asset hierarchy is grouped into linear and vertical assets. Vertical assets are assets that can only occupy one site and are typically within a building or a facility which may be comprised of other multiple components. Linear assets are assets which traverse horizontally and are often defined by length but also encompass components that are considered part of the linear network.

The asset class asset hierarchy outlining assets included in this section is shown below in Table 33.

Table 33: Asset Hierarchy

VERTICAL ASSETS	LINEAR ASSETS	ADMINISTRATIVE
Wastewater Treatment Plants	Combined Sewer Main	Vehicles
Combined Sewer Overflow (CSO) Tanks	Separated Gravity Sewer Main	SCADA
Lift Stations	Interceptor	
	Forcemain	
	Maintenance Hole	
	Odour Control Unit	
	Control Gates	
	Valves	
	Sewer Laterals	

3.1 BACKGROUND

This AM Plan is intended to communicate the requirements for the sustainable delivery of services through the management of assets, compliance with regulatory requirements and required funding to provide the appropriate levels of service over the 2022 – 2031 planning period.

The information in the wastewater section of the plan is intended to give a snapshot in time of the current state of the wastewater service area by providing a detailed summary and analysis of existing information, and will provide the necessary background for the remainder of the report.

Due to the age of the City, significant portions (32%) of the wastewater system consist of combined sewer mains (the lower City and also on the escarpment north of Mohawk Road) as shown in Map 3. Combined sewer main refers to pipes where wastewater (sanitary) and stormwater are carried in the same pipe. The City's wastewater system is therefore more complex than many municipalities because during significant wet weather events, the City's wastewater system can reach capacity causing diluted wastewater to enter the natural watercourses through combined sewer overflows or WWTP bypasses. These wet weather events are anticipated to become more significant and frequent due to climate change as indicated in Section 3.5.5. The City has been working to reduce combined sewer overflows and WWTP bypasses for more than 30 years with total investments exceeding $550 million.

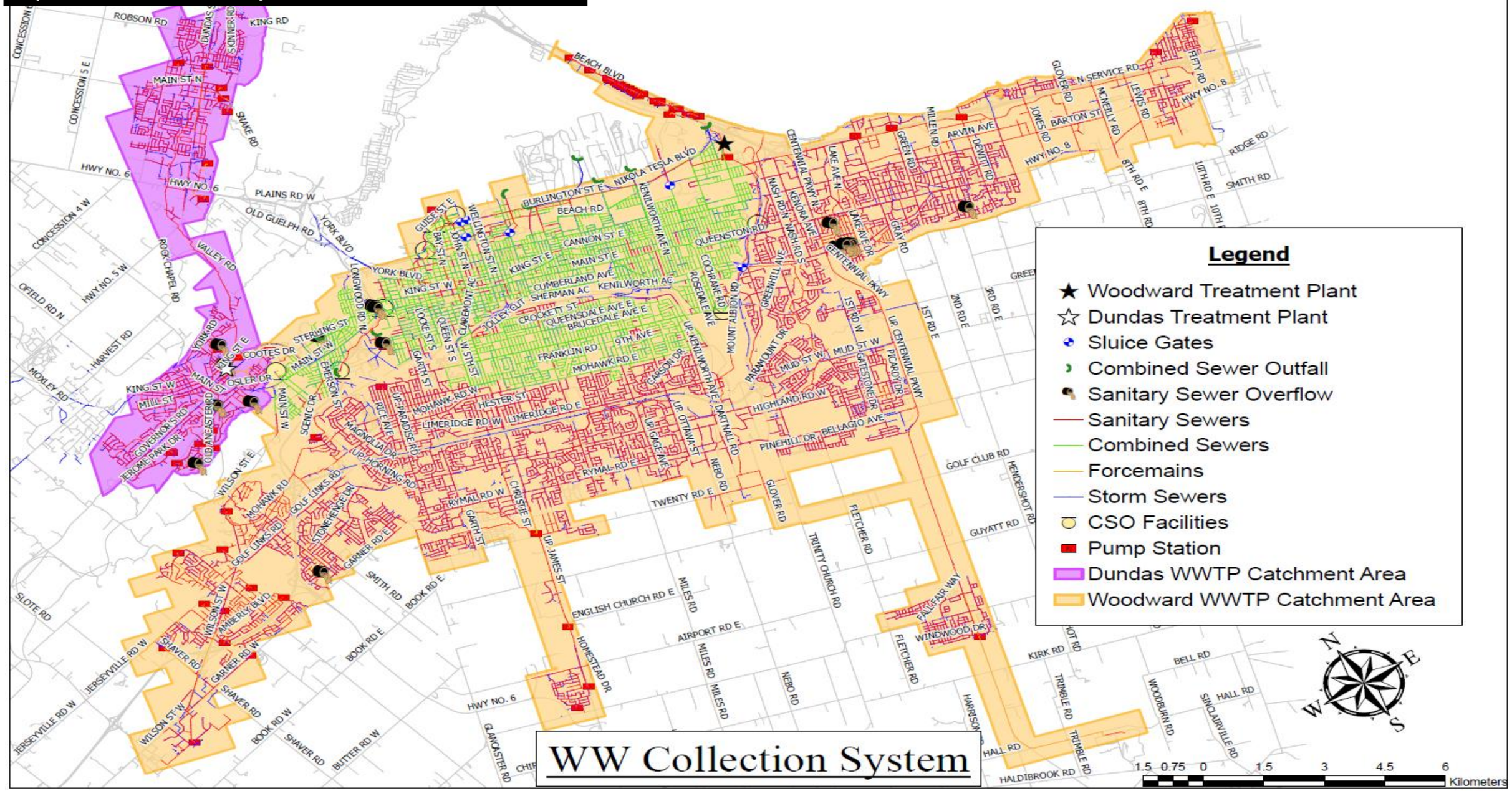
The City acquired significant amounts of wastewater network assets through amalgamation in 2001. These aging assets were included into the City's wastewater inventory and were in varied condition and held various collection capacity when acquired. Once amalgamated, any aging assets or deficient assets became the responsibility of Hamilton Water and created several new challenges that will need to be taken into consideration and planned.

The City also operates and maintains two (2) Wastewater Treatment Plants (WWTPs), Woodward and Dundas, which service different areas of the City, and are referred to as catchment areas below in Table 34 and Map 3. Map 3 also shows the locations of the major vertical assets and mains. The Woodward WWTP catchment area services the majority of the population, and the Dundas WWTP catchment services areas in Dundas and Waterdown. Residents not found on this map are typically treating wastewater on their own properties using private septic systems.

Table 34: Catchment Areas

Wastewater Catchment Area	Population Served
Woodward	465,000
Dundas	45,000

Map 3 – Wastewater Collection System



3.1.1 Detailed Summary of Assets

Table 35 below displays the detailed summary of assets for the wastewater service area. In addition, it is possible that there are assets that may not be owned by Public Works which may be considered wastewater assets which may be missing from this inventory. This has been identified as a Continuous Improvement Item in Table 58.

The City owns approximately **$7.25B** in wastewater assets which are in an average of **Fair** condition. Overall, assets are an average of **30 years** in age which indicated there is on average **34%** of remaining service life (RSL). The data below is a combination of data from various sources as there is not yet an asset registry containing all inventory information in one data source. Examples of data sources which were used for this iteration of the Core AM Plans are stated in the AMP Overview. The lack of an asset registry is a continuous improvement item in Table 58. The City must plan to complete a detailed review of this data and create data standards in order to improve overall data quality.

For most assets, Fair condition means that the City should be planning to complete minor to moderate maintenance activities to ensure the assets reach their intended useful lives since assets begin to experience deterioration affecting asset usage at this stage as indicated in Table 35.

Table 35: Detailed Summary of Assets
***Weighted Average**

Asset Category	Number of Assets	Replacement Value	Average Age (% RSL)	Average Equivalent Condition
Vertical Assets				
Wastewater Treatment Plant	2	$3.20B	66 years (0%)	3-Fair*
Data Confidence	High	Low	Medium	Low
Lift Stations	71	$181.24M	34 years (44%)	3-Fair
Data Confidence	High	Low	High	Medium
Combined System Overflow Tanks	9	$222.86M	22 years (44%)	3-Fair
Data Confidence	High	Low	High	Medium
	SUBTOTAL	**$3.604B**	**41 years (24%)**	**3-Fair***
	Data Confidence	**Low**	**High**	**Medium**
Linear Assets				
Separated Trunk Wastewater Main	217.14 km	$739.41M	39 years (60%)	2-Good
Data Confidence	High	Medium	Medium	Medium
Separated Local Wastewater Main	977.39 km	$410.21M	40 years (55%)	2-Good
Data Confidence	High	Medium	Medium	Medium
Combined Main	568.37 km	$710.86M	84 years (4%)	2-Good
Data Confidence	High	Medium	Medium	Medium
Interceptor	34.63 km	$519.38M	63 years (37%)	2-Good
Data Confidence	High	Medium	Medium	Medium
Forcemain	46.49 km	$45.24M	31 years (62%)	2-Good
Data Confidence	High	Medium	High	Low
Valves	130	$355.2K	16 years (80%)	2-Good
Data Confidence	Low	Low	High	Low
Maintenance Hole	25,897	$535.61M	54 years (33%)	3-Fair
Data Confidence	High	Low	Medium	Low
Sewer Lateral	134,202	$671.01M	13 years (78%)	2-Good
Data Confidence	Low	Low	Very Low	Very Low
Odour Control Unit	7	$525K	1 year (98%)	1-Very Good
Data Confidence	High	High	Low	Low
Control Gates	7	$350K	27 years (46%)	3-Fair
Data Confidence	High	Low	Very High	Low
	SUBTOTAL	**$3.632B**	**44 years (42%)**	**2-Good***
	Data Confidence	**Medium**	**Medium**	**Medium**
Administrative				
Vehicles	47	$2.331M	7 years (29%)	3-Fair
Data Confidence	High	High	High	Low
SCADA	N/A	$15.0M	N/A	N/A
Data Confidence	N/A	Low	N/A	N/A
	SUBTOTAL	**$17.331M**	**7 years (29%)**	**3-Fair**
	Data Confidence	**Medium**	**High**	**Low**
	TOTAL	**$7.254B**	**30 years (34%)**	**3-Fair***
	Data Confidence	**Low**	**Medium**	**Medium**

The City has two (2) Wastewater Treatment Plants (WWTP). The Woodward plant services the majority of the population as shown in Table 34. Both WWTPs have several complex processes that run throughout several facilities but have been simplified into two (2) assets for ease of reporting for this first iteration of the AM Plan. A Continuous Improvement item in Table 58 is to improve the reporting for the WWTP for future iterations of the AM Plan to provide more details on the specific processes it undertakes. The WWTPs are the single largest value wastewater assets in the City and has been estimated at **$3.2B** with a low data confidence level due to the complexity of the plant.

The data confidence for number of vertical assets is typically high due to the asset's locations being above ground and able to be visually confirmed easily. The confidence is not yet considered Very High due to multiple data sources which showed conflicting quantities and registry information. There has been a continuous improvement item identified to confirm data across all data sets and unify the data into a single source to reference from in the future.
Due to the lack of current data, the complexity of vertical assets and the low frequency of asset replacements, it is difficult to achieve a high data confidence for replacement cost for this iteration of the plan. Future plans will improve on the current replacement cost values, and so the data confidence is considered low for these assets. Age and condition information and data confidence is presented in Table 35.

For linear assets, the data confidence for number of assets is considered to be high because of active data management. These assets are typically more challenging to confirm as they are generally buried infrastructure that cannot simply be visually verified. Due to these limitations there are some assets such as sewer laterals where the quantities are of a lesser confidence.

Linear assets are replaced much more frequently than vertical assets and as such the replacement costs generally have a higher confidence level and are often close to the approximate market rates. However, improving asset replacement costs by updating current market prices regularly instead of historical costs/estimates or internal models has been identified as a Continuous Improvement Item in Table 58.

The City has included its administrative assets (e.g. vehicles, software, etc.) in a limited capacity for this iteration of the AM Plan so that the replacement costs are beginning to be recognized in the report. These assets contribute to the overall wastewater service however, these have not yet been completed at a detailed level and will be encompassed in more detail before the 2025 iteration of the plan. Administrative facilities are included as part of the WTP replacement cost and support the entire Waterworks Strategive Level.

Please refer to the AMP Overview for a detailed description of data confidence.

3.1.2 Asset Condition Grading

Condition refers to the physical state of the wastewater assets and are a measure of the physical integrity of these assets or components, and is the preferred measurement for planning lifecycle activities to ensure assets reach their expected useful life. Since condition scores are reported

using different scales and ranges depending on the asset, Table 36 below shows how each rating was converted to a standardized 5-point condition category so that the condition could be reported consistently across the AM Plan. A continuous improvement item identified in Table 58, is to review existing internal condition assessments and ensure they are revised to report on the same 5-point scale with equivalent descriptions.

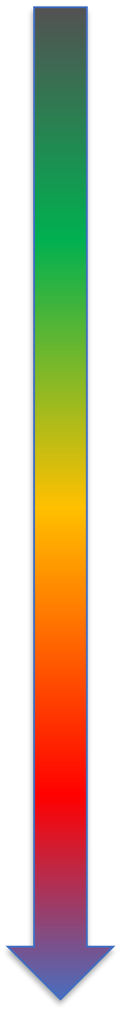


Table 36: Condition Grading System

Equivalent Condition Grading	Condition Description	% Remaining Service Life	Combined, Wastewater & Interceptor Main	Vertical Assets Condition Rating
1-Very Good	The asset is new, recently rehabilitated, or very well maintained. Preventative maintenance required only.	>79.5%	PACP Score = 1; If PACP unknown, WRC Structural Score =1; If both unknown: RSL	1-Very Good
2-Good	The asset is adequate and has slight defects and shows signs of some deterioration that has no significant impact on asset's usage. Minor/preventative maintenance may be required.	69.5% – 79.4%	PACP Score = 2; If PACP unknown, WRC Structural Score =2 or Lined Pipe; If all unknown: RSL	2-Good
3-Fair	The asset is sound but has minor defects. Deterioration has some impact on asset's usage. Minor to significant maintenance is required.	39.5% - 69.4%	PACP Score = 3; If PACP unknown, WRC Structural Score =3; If all unknown: RSL	3-Fair
4-Poor	Asset has significant defects and deterioration. Deterioration has an impact on asset's usage. Rehabilitation or major maintenance required in the next year.	19.5% -39.4%	PACP Score = 4; If PACP unknown, WRC Structural Score =4; If all unknown: RSL	4-Poor
5-Very Poor	Asset has serious defects and deterioration. Asset is not fit for use. Urgent rehabilitation or closure required.	<19.4%	PACP Score = 5; If PACP unknown, WRC Structural Score =5; If all unknown: RSL	5-Very Poor

The following conversion assumptions were made:

- Wastewater Treatment Plant (WWTP) condition was based on subject expert opinion based on the condition descriptions provided above;
- Vertical assets' Level 2 Condition Assessments are based on a 5-point scale which was considered equivalent to the AMP 5-point scale; and
- Pipes were based on a combination of PACP and WRC scores where known, where the PACP score was prioritized over the WRC Score.
- If pipe was indicated to have been lined CIPPS, then the condition was assumed to be 2-Good.
- If PACP was unknown, and WRC score was 6, indicating an incomplete inspection, the condition was based on % of remaining service life.
- For assets where a condition assessment was not completed, but age information was known, the condition was based on the % of remaining service life.

3.1.3 Vertical

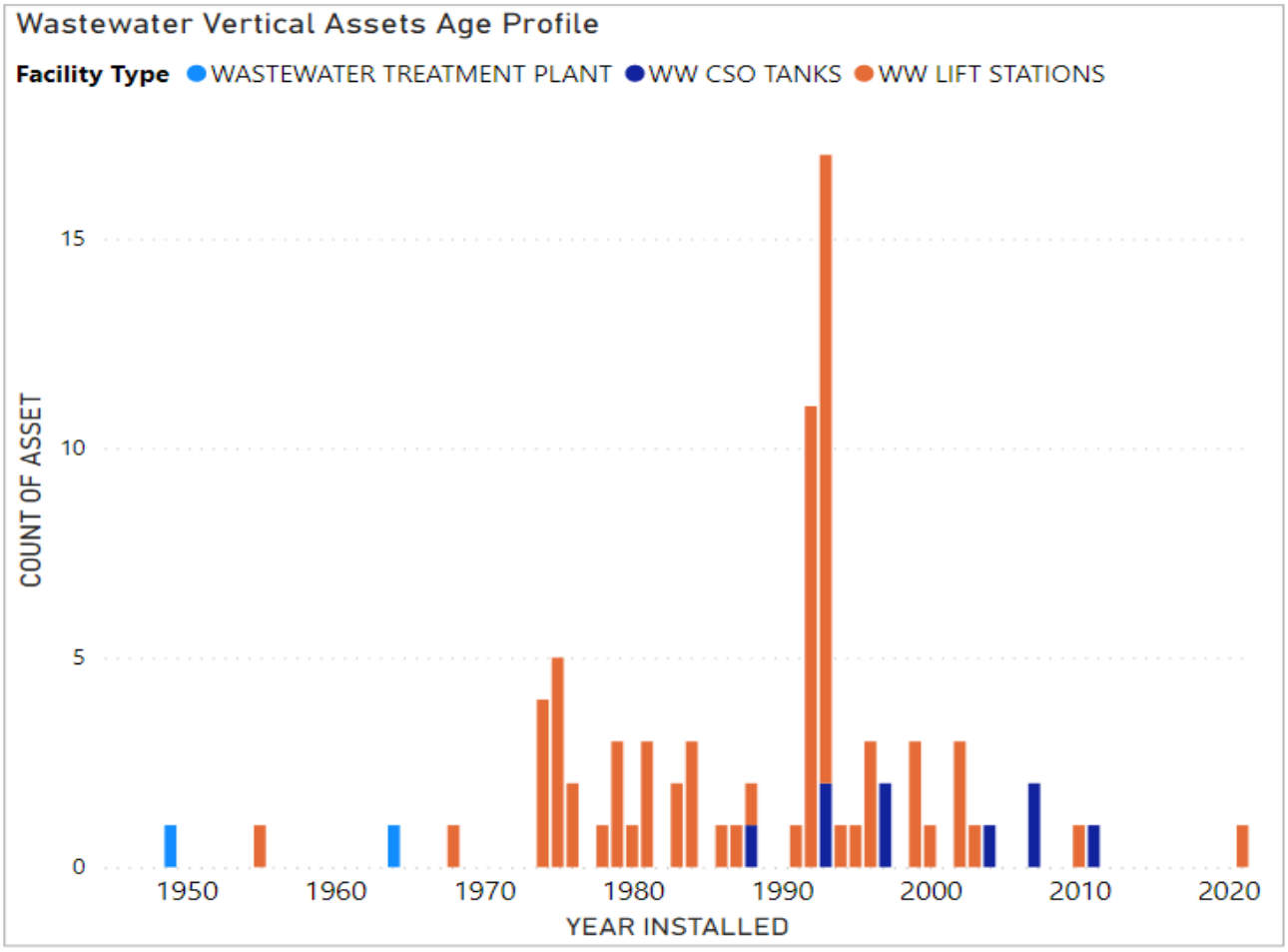
The background information for wastewater vertical assets is below and includes an age profile, the condition methodology used, the condition profile, and asset usage and performance.

3.1.3.1 Age Profile

The age of an asset is an important consideration in the asset management planning process especially for assets that will not receive a typical condition grading through inspections. Some lower cost or lower criticality assets can be planned for renewal based on age as a proxy for condition or until other condition methodologies are established. It should be noted that if a wastewater assets' condition is based on age, it is typically considered to be of a lower confidence level.

The age profile of the wastewater vertical assets are shown in Figure 10. An analysis of the age profile is provided below. For vertical assets, the age information confidence is typically high because this information was collected using an inventory process.

Figure 10: Wastewater Vertical Assets Age Profile



WASTEWATER TREATMENT PLANT (WWTP)

The Woodward WWTP is approximately 58 years old which is approaching the design life of the original plant which is estimated to be 60 years. The Dundas WWTP is approximately 73 years old which has exceeded the design life of 60 years. However, these age estimates do not reflect the significant upgrades that have been completed over the lifecycle of the plant which have extended the life of the plant well past its design life. Future iterations of the plan will ensure that the WWTPs are analyzed more fulsomely to ensure the City is better able to analyze the plants' estimated service life. The age data confidence is medium because there are many assets as part of the WWTP and this is only representing the initial construction date.

LIFT STATIONS

The majority of lift stations in the City were constructed from 1974 – 2000, with a spike in acquisitions in 1992/1993. The estimated service life (ESL) of a booster station is estimated to be 60 years old, and one (1) booster station is currently beyond its estimated service life and one (1) additional station will exceed its ESL in the next ten years. After an asset has reached its ESL it should be monitored with an increased frequency to ensure the asset is performing as

expected and to determine if the ESL for the asset type should be extended. The age data confidence is high because assets are populated and the data is likely accurate.

COMBINED SEWER OVERFLOW (CSO) TANKS

Approximately two (2) CSO tanks have been constructed per decade since 1988, and as the ESL for a CSO tank is estimated to be 40 years, none of the CSO tanks have yet reached their useful life. The age data confidence is high because assets are populated and the data is likely accurate.

3.1.3.2 Condition Methodology

For treatment plants, there is no formal condition assessment process for the entire plant, and for the purposes of this report the condition has been identified by subject matter experts at the City based on various available condition information as well as the condition descriptions presented in Table 37. Condition assessments for various components have been completed on the plant as deemed necessary. However, a formal condition assessment program should be identified by process on a pre-determined cycle, which should be investigated further. This has been identified as a continuous improvement item in Table 58.

For other vertical assets, the City typically undertakes three (3) different levels of condition assessments as defined below in Table 37. Historically, the City had a target of 10 years for vertical assets, but it was recommended to complete Level 1 inspections regularly to prioritize Level 2 inspections. However, the City has not fully implemented this approach and has focused on completing Level 2 inspections instead.

At this time, the City has not been completing Level 1 inspections. The City should investigate completing Level 1 internal assessments as part of existing operations to ensure works are up to date and to prioritize Level 2 condition assessments in case performance deficiencies are flagged by staff.

TABLE 37: Condition Descriptions

INSPECTION LEVEL	DESCRIPTION	TARGET FREQUENCY	ACTUAL FREQUENCY
1	High level inspection at the facility level for stated lifecycle categories and is used to inform the Level 1 risk assessment and the lifecycle analysis.	1 to 2 years	N/A
2	More detailed condition grade assessed at the assembly level and is used to inform the Level 2 risk assessment and as a more detailed input to the lifecycle analysis. Data captured through a formalized asset inspection, typically conducted by external resources.	Dependent on Level 1 findings, or target of 10 years.	27-year cycle

TABLE 37: Condition Descriptions			
INSPECTION LEVEL	**DESCRIPTION**	**TARGET FREQUENCY**	**ACTUAL FREQUENCY**
3	Detailed investigation, where shown to be cost-effective.	Undertaken as required	N/A

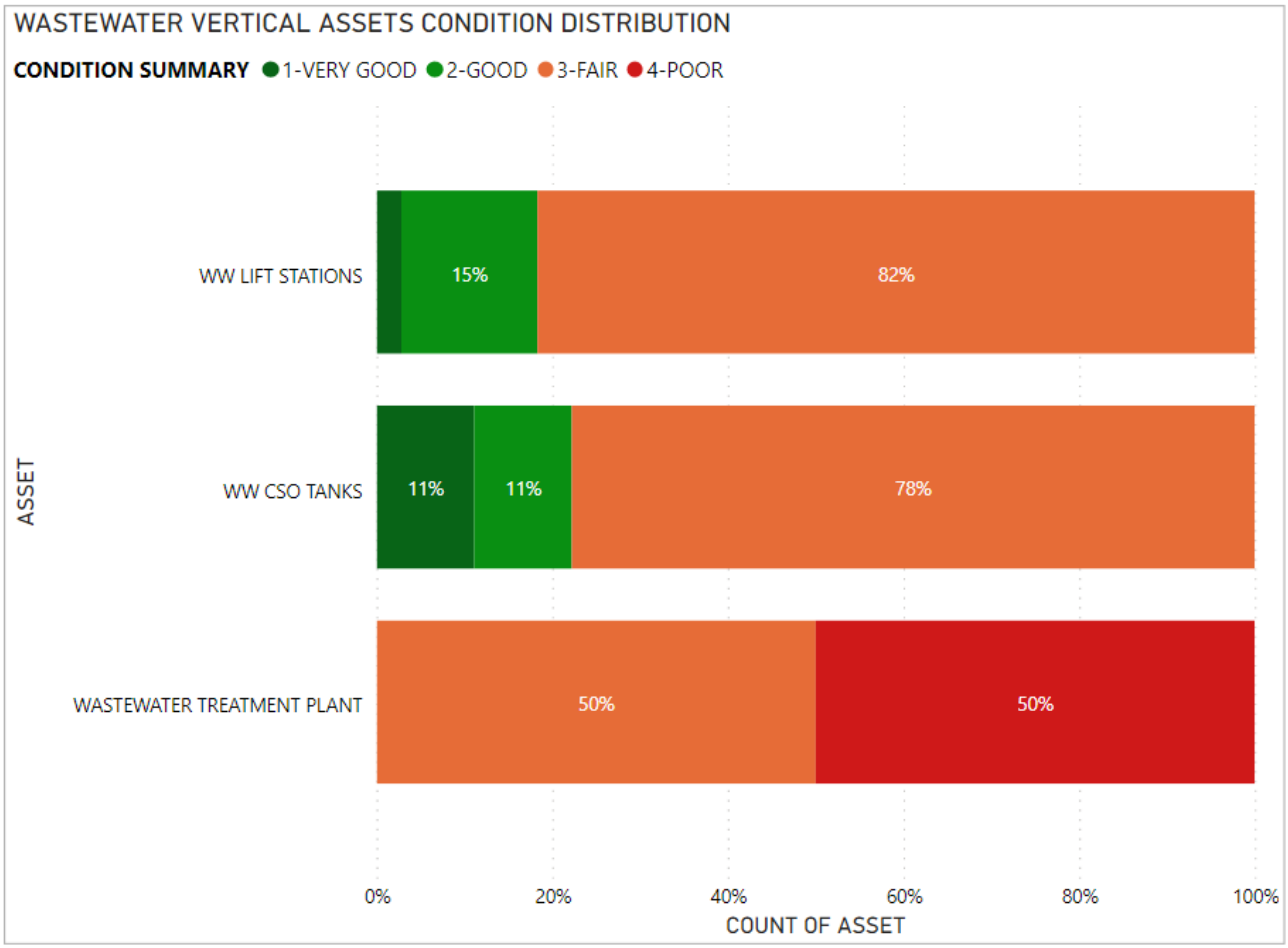
A combination of six (6) Level 2 condition assessments for water & wastewater vertical assets are completed annually excluding the treatment plants. Typically, this is an even distribution with three (3) Level 2 condition assessments completed annually for wastewater vertical assets. However, sometimes more or less water assets are included depending on priority. This means on average vertical assessments are completed on an approximate 27-year cycle. The priority assets have been identified by staff using information from audits completed in 2003 and 2012 as well as staff input. At this time, the process for selection is not formally documented, as such this has been identified as a continuous improvement item. Another continuous improvement item would be to achieve the Level 2 condition assessments on vertical assets on a minimum 10-year cycle if Level 1 assessments continue to not occur to ensure that the City is aware of upcoming forecast requirements, which is approximately another five (5) assessments per year.

Finally, condition assessments should begin on any new facility within a determined timeline after being constructed, possibly 10-15 years into its lifecycle. This has been identified as a continuous improvement item in Table 58.

3.1.3.3 Asset Condition Profile

The condition profile of the City's assets is shown in Figure 11. As mentioned in Section 3.1.2. The original condition grades were converted to a standardized condition category for reporting consistency.

Figure 11: Asset Condition Profile



WWTP

Based on subject area experts and the definitions provided in Table 37, Woodward WWTP infrastructure is considered to be in Fair condition as it is generally sound with some minor defects. This is considered for be of low data confidence because it was estimated based on staff opinion. The plant has recently had several process upgrades and facility replacements including a new Main Pumping Station, Electrical Power and Distribution system replacement, fully rehabilitated South Secondary treatment plant and addition of a new Tertiary treatment process. However, there are a number of process areas that have had condition assessments completed and do require significant rehabilitation and maintenance over the next few years, specifically the north secondary treatment process, north and south digester complexes and the middle primary clarifier tanks/galleries. Condition assessments have been completed for the Digesters, Primary Clarifiers 1-8, and North Secondary Treatment Plant, but the City has identified additional areas that would benefit from a condition assessment including the Headworks, North and South Aeration, and some other smaller systems (e.g. Boilers).

However, the Dundas WWTP infrastructure is considered to be in Poor condition due to significant deterioration as well as major parts of the plant processes and structures reaching

the end of their normal service life. An assessment and Facility Plan were completed on the Dundas WWTP in February 2015. It was determined from the findings of the assessment that due to the age and condition of Plant A, the treatment train needs to be replaced within the next 3 to 5 year period, which has already passed. Furthermore, Plant B and other auxiliary process tankage, including sludge storage, tertiary process and phosphorous chemical systems were also approaching the end of their life cycle. The Dundas WWTP provides a high level of treatment for both phosphorus and ammonia. The existing secondary process can achieve almost complete ammonia removal but is not designed to remove total nitrogen. In order for the Dundas WWTP to achieve that draft HHRAP removal targets for phosphorous and total nitrogen, the entire secondary treatment process would require replacement with a membrane bioreactor or equivalent technology. This would involve integration of the existing Plant B aeration tanks retrofitted to an Modified Ludzack-Ettinger (MLE) Activated Sludge Processconfiguration for enhanced nitrogen removal coupled with membranes designed to provide Best Available Techniques (BAT) tertiary phosphorus removal (a process to achieve low phosphorus concentrations and/or total nitrogen removal). The upgrade project for replacement fo the Dundas WWTP with a new facility with higher levels of treatment is currently unfunded.

LIFT STATIONS

Since condition assessments are completed on lift stations, these stations are known to be in overall Fair condition. However, some of these condition assessments are older and so the data confidence for condition is medium. Major upgrades have been completed on many of these stations since construction. However, some lift stations are beginning to approach their ESL, which shows the importance of completing condition assessments on these assets regularly and performing upgrades and preventative operations and maintenance activities so that these assets reach their ESL without major reactive repairs.

CSO TANKS

Based on condition assessment information, CSO tanks are in overall Fair condition. However, some of these condition assessments are older and so the data confidence for condition is medium. If the condition had been based on age, some assets that have been identified to be in Fair condition would have been assumed to be in Good condition. This shows the importance of completing condition assessments on these assets regularly and performing upgrades and preventative operations and maintenance activities so that these assets reach their ESL without major reactive repairs.

3.1.3.4 Asset Usage and Performance

Assets are generally provided to meet design standards where available. However, there are often insufficient resources to address all known deficiencies.

The largest performance issues with vertical wastewater assets involve combined sewer overflows, odours, and degradation of components. The service deficiencies in Table 38 below were identified using staff input.

Table 38: Known Service Performance Deficiencies			
Asset	**Location**	**Service Deficiency**	**Description of Deficiency**
WWTP	Woodward	Bypass incidents during major storm events	When the WWTP has reached capacity during a stormwater event, a bypass is often required so that regulated treatment capacity is not exceeded, and to ensure the plant does not become damaged.
WWTP	Woodward	Odour Complaints	Odours from the plant are often due to the biosolids handling process that is operated by a third party contractor, and improvement actions are ongoing.
CSO Tank	Main/King Cootes Paradise	Leakage of wastewater into surrounding environment	Inaccuracies in facility operational guidance documents and SCADA system programming (related to the CSO tank bypass gate) resulted in an undetected discharge to Cootes Paradise. The facility issues have since been fixed.
CSO Tanks	Various Locations	Overflows during major storm events	When CSO tank has reached capacity during a stormwater event, the combined sewer outflow overflows into the natural watercourse.
Lift Station	Various Locations	Accelerated degradation of components	Harsh operating conditions can cause components to degrade faster than expected.
CSO Tanks	Various Locations	Accelerated degradation of components	Harsh operating conditions can cause components to degrade faster than expected.

3.1.4 Linear

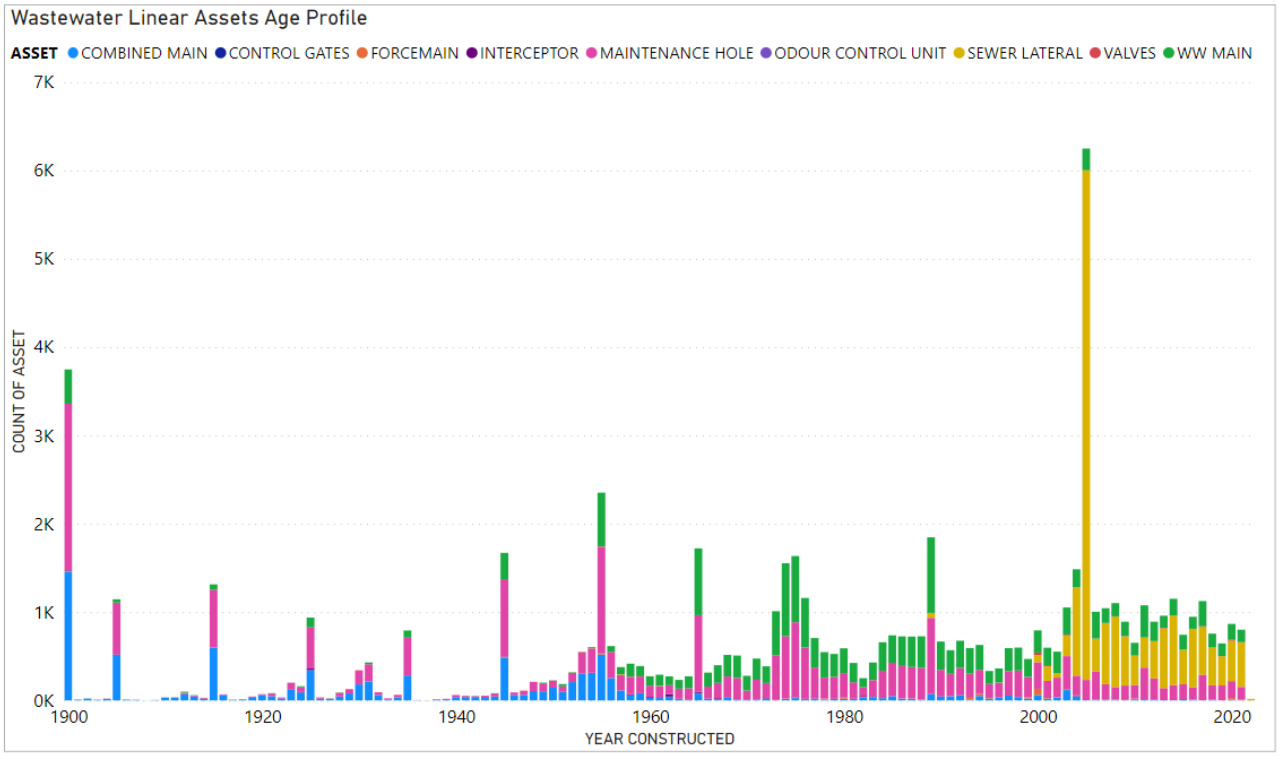
The background information for wastewater linear assets is included below and includes an age profile, the condition methodology used, the condition profile, and asset usage and performance.

3.1.4.1 Age Profile

The age of an asset is an important consideration in the asset management process as it can be used for planning purposes as typically assets have an ESL where they can be planned for replacement.

The age profile of the wastewater linear assets are shown in Figure 12. An analysis of the age profile is provided below for each asset.

Figure 12: Wastewater Linear Assets Age Profile



When age is unknown, there are common years where asset age is typically assumed. This typically includes decade and mid-decade, and so large spikes are seen in many assets in 1900, 1915, 1925, 1935, 1945, 1955, 1965, 1990 etc.

COMBINED MAIN

For legibility of the graph, the wastewater linear assets have been shown since 1900. There are a small number of combined sewer segments that predate 1900 with the earliest installation date being 1855, indicating that combined sewers are aging assets as they are the oldest linear wastewater assets in the City. Combined sewer construction was eliminated (except for replacement/rehabilitation of existing sewers) around 1955 when separated WW main construction became the standard.

The average age for combined main in the City is 84 years, and with an average estimated service life (ESL) of 87 years. This means on average there is 4% of service life remaining. The

condition of combined sewer is typically based on a condition assessment program, but if assessments had not been completed were based on age. The age data confidence for combined main is considered to be Medium as this information is typically populated, but the accuracy of the data appears to contain assumptions based on the spikes by decade.

SEPARATED WASTEWATER MAIN (WW MAIN)

Separated wastewater main is typically a newer linear asset than combined sewers as shown above and were typically installed after 1955. This is in line with historic practices as explained above as typically older municipalities began with a combined sewer network before best practice shifted to a separated sewer system. There are a few segments that pre-date 1955, but these pipe dates are likely estimated as they occur regularly every 10 years or were previously considered combined main but were later repurposed as separated WW main.

The average age for separated trunk and local wastewater main is 39 and 40 years respectively which with an average ESL of 97 and 89 years means there is 60% and 55% of the useful life remaining. The condition of separated wastewater sewer is typically based on a condition assessment program, but if assessments had not been completed were based on age. The age data confidence for wastewater main is considered to be Medium as this information is typically populated, but the accuracy of the data appears to contain assumptions based on the spikes by decade.

INTERCEPTOR

Interceptor's are difficult to view on the graph above because there are less of these assets in the City compared to some of the other linear assets. However, there is a steady distribution of interceptor acquisitions with a peak in 1962. Interceptors have an average ESL of 100 years and approximately 3 km of pipe have exceeded this value which is approximately 9% of interceptors. The condition of interceptors is typically based on inspection programs where available but is estimated based on age where condition information is unavailable.

The average age for interceptors is 63 years which indicates there is 37% of service life remaining. The age data confidence for interceptors is considered to be Medium as this information is typically populated, but the accuracy of the data appears to contain assumptions.

FORCEMAIN

Forcemains are difficult to view on the graph above because there are less of these assets in the City compared to some of the other linear assets. However, there is a steady distribution of forcemain acquisitions with a peak in 2000.

The average age for forcemain is 31 years and with an ESL of 81 years, this means there is 62% of service life remaining. The age data confidence for forcemain is considered to be High as this information is typically populated, although the source of this data may be estimated. Since condition is based on age for this asset, this also affects the condition profile shown in Figure 13.

MAINTENANCE HOLES

Maintenance holes have typically been acquired at a steady distribution over the last 100 years with a peak in 1900. This peak is due to estimated values for year of construction/acquisition.

The average age of maintenance holes is 54 years, and with an ESL of 80 years, this indicates there is typically 33% of useful life remaining. The age data confidence for maintenance holes is considered to be Medium as this information is typically populated, but the accuracy of the data appears to contain assumptions based on the spikes by decade.

SEWER LATERALS

Sewer laterals are shown above to be newer assets with installations typically occurring after 2000 with a spike in 2005. However, this data is not accurate as sewer laterals have historically not been formally inventoried as they are not considered to be a City-owned asset. However, since the City typically completes work on these assets, the City has begun collecting inventory information. Only 12% of age data for known laterals was populated a the time of writing.

Since the AM Plan can only present the data that is available, sewer laterals are shown to be an average of 13 years old with 78% useful life remaining with Very Low confidence. Since condition is based on age for this asset, this also affects the condition profile shown in Figure 13.

VALVES

These assets are also difficult to view on the graph above because the quantities of valves are small compared to other linear assets. The average age of valves is 16 years, and with an ESL of 80 years, this indicates there is typically 80% of useful life remaining. The age data confidence for valves is considered to be High as this information is typically populated, and is likely accurate. Since condition is based on age for this asset, this also affects the condition profile shown in Figure 13.

ODOUR CONTROL UNITS

These assets are also difficult to view on the graph above because the quantities of odour control units is small compared to other linear assets. These assets are very new having been constructed in the last year and typically has 98% of service life remaining, but are considered a low confidence level because many dates haven’t been populated in the database.

CONTROL GATES

These assets are also difficult to view on the graph above because the quantities of control gates are small compared to other linear assets. All seven (7) control gates have age data associated with them, and is known to be accurate showing that there is Very High data confidence associated with these assets. Since the condition is based on age for these assets, this also affects the profile below.

Since the AM Plan can only present the data that is available, control gates are shown to be an average of 27 years which is within the ESL of 50 years. However, three (3) control gates are beyond their service lives which is shown in the condition profile in Figure 13.

3.1.4.2 Condition Methodology

The inspection frequency and condition score output for each linear asset is found below in Table 39. An analysis for each asset is found below.

Table 39: Inspection Frequency

ASSET	INSPECTION FREQUENCY	CONDITION SCORE OUTPUT
Sewer Main	Based on priority	Combination of inspection & age data
Forcemain	None	None, used age
Maintenance Holes	Ad Hoc	None, used age
Valves	None	None, used age
Sewer Laterals	Ad Hoc	None, used age
Control Gates	Annual	None, used age
Ocour Control Unit	None	None, used age

GRAVITY MAIN (INCLUDING COMBINED MAIN, SEPARATED WASTEWATER MAIN, AND INTERCEPTORS)

Since gravity mains are not under pressure and there are maintenance hole access points along the pipe segments, it is easier and more cost effective to inspect these assets than it is to inspect pressurized pipes such as forcemains and watermains. The City completes CCTV (Closed Circuit Television) inspections on these assets which involves sending a robot with a camera to inspect the inside of the pipe to determine any defects or rehabilitation needs. The results of the CCTV inspections assign a structural score to the pipe segment which the City uses to prioritize sewer lining and/or renewal. The City assesses pipes based on the defined criticality of the pipe but does not yet have a cycle to assess all pipes at a specified frequency, and not all pipes have been assessed. This has been identified as a continuous improvement item in Table 58.

FORCEMAIN

Due to limitations associated with asset location and pressurized pipes, forcemains do not yet have an inspection program and conditions are typically based on estimated service life. The City does complete inspections using various technologies on critical watermain pipes and the

City should investigate completing similar assessments on forcemains since they can have rapid deterioration from corrosive gases and are suject to pressure transients and other forces that cause leaks and breaks. This has been identified as a continuous improvement item in Table 58.

MAINTENANCE HOLES

Historically, the City completed visual camera inspections of many maintenance holes, but these inspections did not output a condition score. These assessments are no longer being completed but the collected data should be reviewed, and a condition score should be approximated. This has been identified as a continuous improvement item in Table 58. For this AM Plan, the condition has been based on age.

VALVES

Wastewater valves are typically valves as part of a forcemain. Since the risk of exercising these valves is high due to the harsh environment causing premature failures and no redundancy in the forcemain, there is no valve exercising program, and valves are typically left open. For the purposes of estimating condition, the valve conditions are based on estimated remaining service life as shown in Table 39.

SEWER LATERALS

As previously explained, sewer laterals are not considered a City-owned asset. However, often the City is called when a resident has an issue with the sewer lateral and the City will reactively inspect the pipe as a result of these calls. If the City inspects the pipe and determines any issues are the fault of the City (e.g. City tree roots blocked the lateral), the City will provide the resident with a grant as part of the Sewer Lateral Management Program, or if the issue is on City property and may damage public infrastructure, the City will pay for the replacement of the pipe. Since this happens often, the City should investigate responsibilities for this asset and improve the inventory data. This has been identified as a continuous improvement item in Table 58.

CONTROL GATES

At this time, there is no condition assessment program for these assets, however, there is an inspection program which does not yet output a condition score. This has been identified as a continuous improvement item in Table 58.

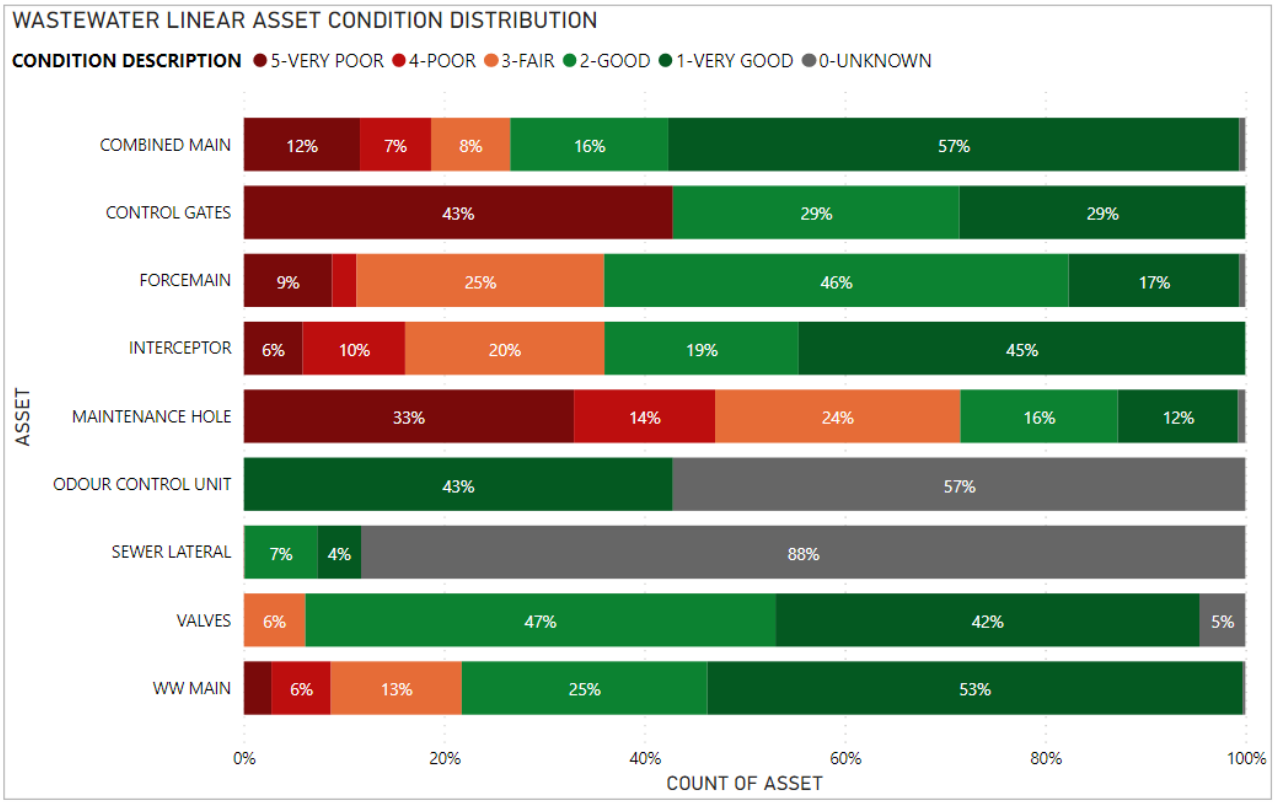
ODOUR CONTROL UNITS

For odour control units, this should eventually begin but because the assets are new, it is not yet a priority.

3.1.4.3 Asset Condition Profile

The condition profile of the City's assets is shown in Figure 13. As mentioned in Section 3.1.2, the original condition grades were converted to a standardized condition category for report consistency.

Figure 13: Asset Condition Profile



GRAVITY MAIN (INCLUDING COMBINED MAIN, SEPARATED WASTEWATER MAIN, AND INTERCEPTORS)

Based on a combination of condition and age data, these assets are shown to be on average, in Good condition. As stated above, there is a condition assessment program for gravity main. However, at this time not all assets have been encompassed into the assessment program. Therefore, the data confidence is shown to be Medium as it is a combination of very high data confidence and low to medium confidence methodologies.

This profile shows the importance of completing condition assessments on these assets. If these assets had been estimated based on age, they would typically show an average of Fair to Very Poor condition based on the remaining service life of the asset and would have been prematurely scheduled for renewals. In addition, some of these pipes may have been lined, but still show an older age profile even though the City considers these to be the equivalent of a new pipe. This should be accounted for in the data for future iterations of the AM Plan.

OTHER LINEAR ASSETS

The remaining linear assets' conditions are estimated based on age where known. As previously stated, age is not the best indicator of condition but is used when condition information is unavailable or difficult to obtain. A detailed analysis for the age profile of these assets can be found in Section 3.1.4.1. In addition, most assets are shown to be in Good condition, excluding maintenance holes which are an asset with a fairly even distribution of Good to Poor assets. There is Low confidence in sewer laterals because there are many unknown ages within this data. As previously stated, a continuous improvement item is to complete condition assessments on the wastewater control gates as age-based information is showing many of these assets to be in very poor condition.

3.1.4.4 Asset Usage and Performance

Assets are generally provided to meet design standards where available. However, there are often insufficient resources to address all known deficiencies.

The largest performance issues with linear wastewater assets involve combined sewer overflows, odours, and degradation of components.

The service deficiencies in Table 40 below were identified from the most recent inspection reports as well as staff input.

Table 40: Known Service Performance Deficiencies

Asset	Location	Service Deficiency	Description of Deficiency
Sewer	Various Locations	Odour Issues	Odours from sewer releasing into private property's basements or through maintenance holes into City streets.
Combined Sewer	Various Locations	Overflows	Overflows from outfalls during storm events
Forcemain	Various Locations	Corrosion	Hydrogen sulfide formation in air pockets in pipes causing premature corrosion in pipe wall.
Control Gates	Various Locations	Accelerated degradation of components	Harsh operating conditions can cause components to degrade faster than expected.

3.1.5 Administrative

Administrative assets are assets which contribute to the wastewater service but are not wastewater assets. These include vehicles, testing equipment, software and administrative facilities. Administrative facilities replacement costs have been incorporated as part of the WTP cost.

As previously mentioned, the City has included these assets in a limited capacity so that the replacement costs are incorporated in the report since these assets contribute to the overall wastewater service. However, these have not yet been completed at a detailed level because they are not defined as part of the O.Reg. 588/17 definition of a wastewater asset. These will be encompassed in more detail before the 2025 iteration of the AM Plan.

3.2 LIFECYCLE MANAGEMENT PLAN

The lifecycle management plan details how the City plans to manage and operate the assets at the agreed levels of service while managing life cycle costs.

3.2.1 Acquisition Plan

Acquisition reflects new assets that did not previously exist or works which will upgrade or improve an existing asset beyond its current capacity. They may result from growth, demand, legal obligations or social or environmental needs. Wastewater assets are generally donated to the City through the development agreements process directly related to growth.

CURRENT PROJECT DRIVERS – 10 YEAR PLANNING HORIZON

Hamilton Water currently prioritizes capital projects as per the drivers listed below. These drivers help to determine a ranking priority for projects and ensures that multiple factors are being considered to drive investment decisions. These drivers should be reviewed during each iteration of the AM Plan to ensure they are appropriate and effective in informing decision making.

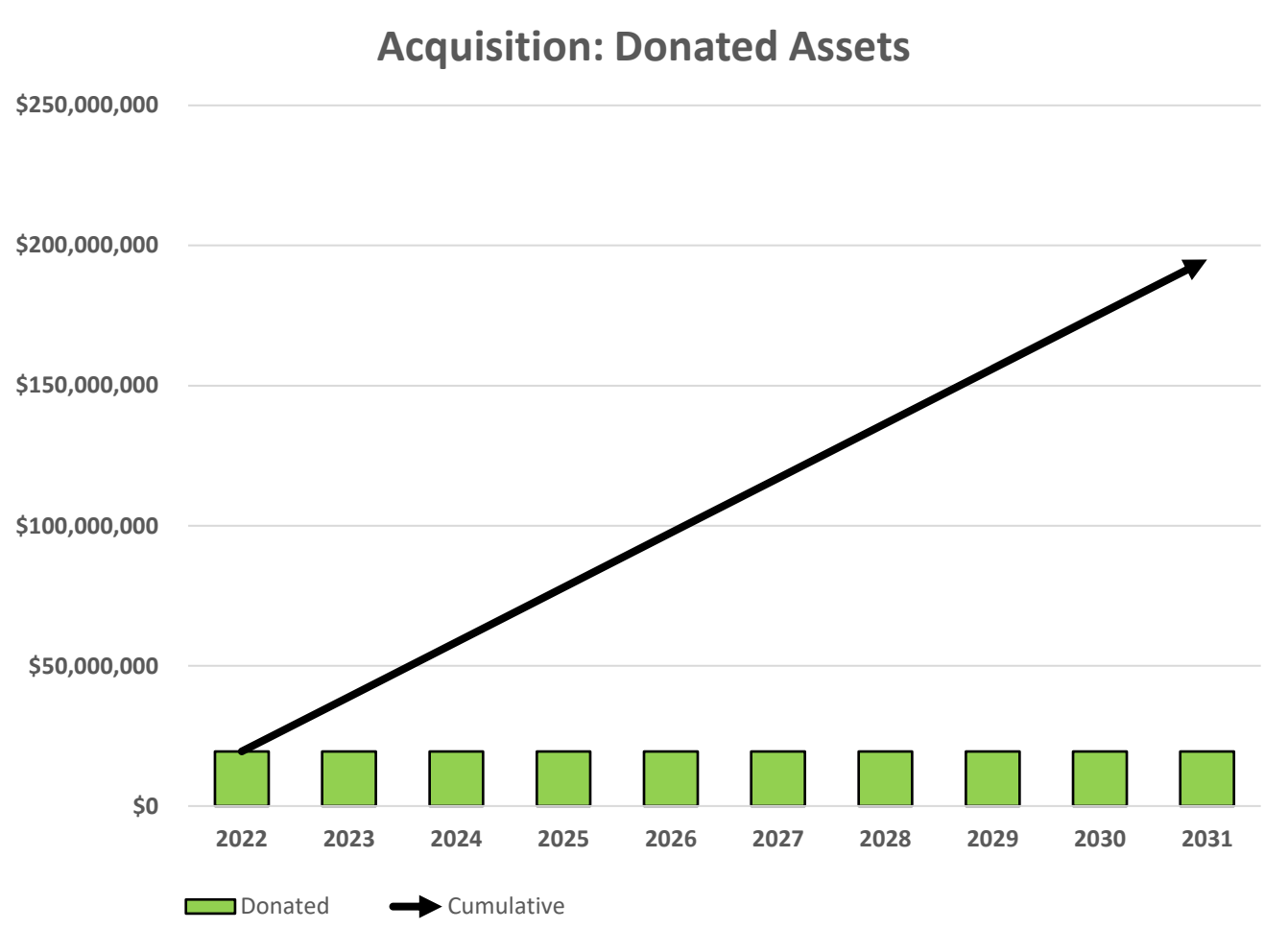
Table 41: Acquired Assets Priority Ranking Criteria

Driver	% of Planned Projects (10 Year Horizon)
Legal Compliance	20%
Coordination, Funding, Budgeting	25%
Risk Mitigation	25%
Health and Safety	10%
Operating and Maintenance Impacts	10%
Development Growth	10%
Total	**100%**

SUMMARY OF FUTURE ASSET ACQUISITION COSTS

Forecast acquisition asset costs are summarized in Figure 16 and shown relative to the proposed acquisition budget.

Figure 14: Acquisition Donated Assets
All figures are in 2021 dollars.



Annually, on average, the City assumes over **$19,500,000** of donated assets through subdivision agreements or other development agreements. These assets include approximately 9 km's of sanitary mains, **1,500** new wastewater service connections, **140** maintenance holes and nearly **$500,000** in valves. The City is reviewing its donated asset assumption process to ensure that it proactively understands what assets are being donated annually to ensure they are planned for properly. This will allow multiple departments across the City to plan for the assets properly such as:

- AM to forecast the long-term needs and obligations of the assets;
- Operations and maintenance can include the assets in their planned activities (inspections, legislative compliance activities); and,
- Finance can ensure that assets are properly captured and recognized appropriately (Audited Financial Statements, TCA process, Provincial reporting such as the FIR)

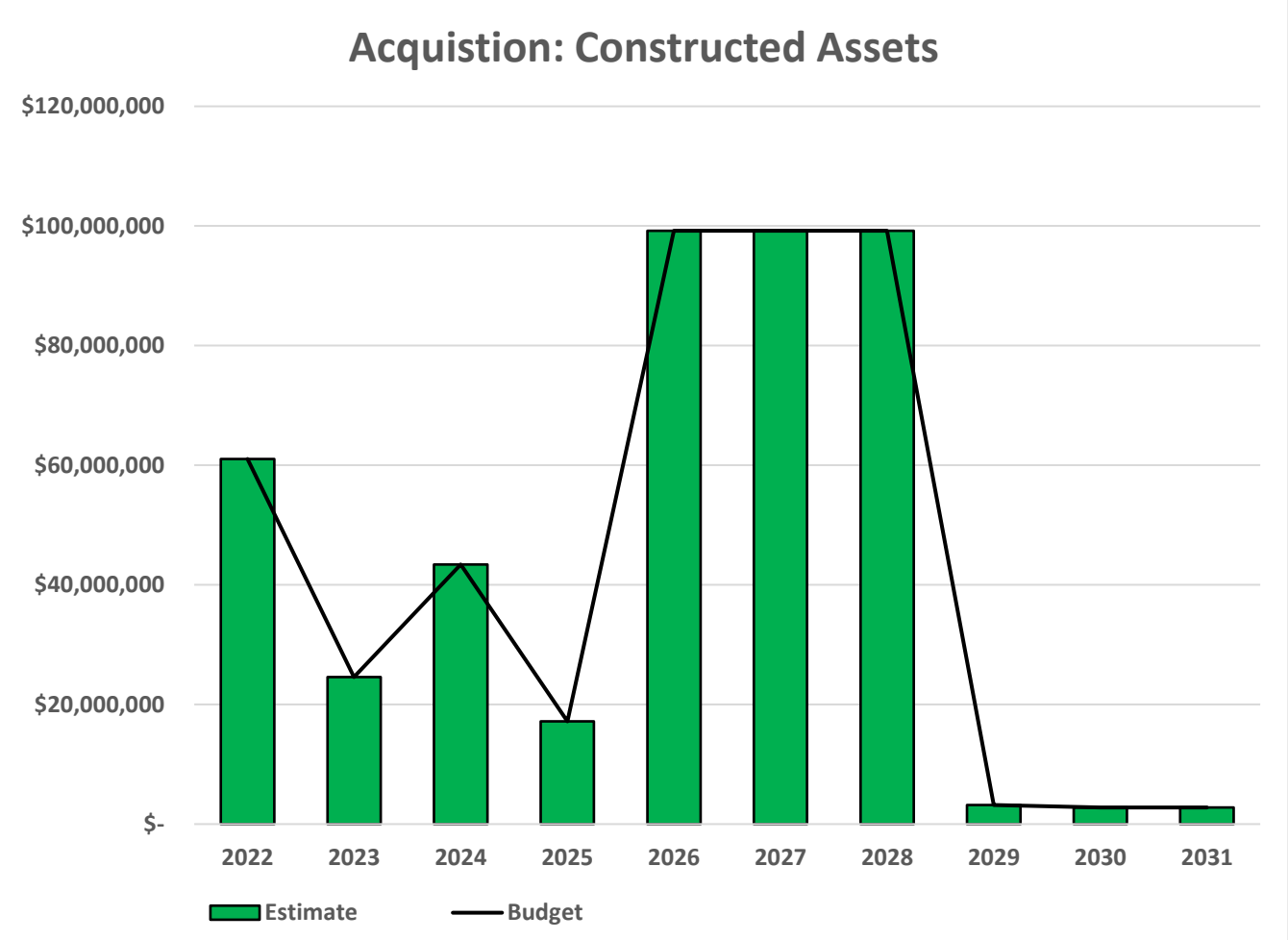
The City will need to ensure the required data is updated frequently and to a single source to ensure that all the departments have access to the data they require in a timely manner. Once Wastewater assets are assumed, the City then becomes the stewards of these assets and is

responsible for all ongoing costs for the assets operation, continued maintenance, inevitable disposal and their likely renewal.

Construction costs are often only **10-15 %** of an asset's whole life costs. When development assets are donated to the City, the City then becomes obligated to fund the remaining whole life costs. Over the next ten-year planning period the City anticipates ***receiving*** **$195,000,000** of donated assets which, would then obligate the City to fund the remaining lifecycle costs over the donated assets ESL.

Hamilton has internal design standards, inspection practices as well as assessment which are intended to ensure the assets that are being donated to the City through subdivision agreements are in excellent condition before assumption. The City should continue to review its assumption process to ensure that the City is receiving high quality and appropriately sized donated assets to defer lifecycle activities as much as possible.

Figure 15: Acquisition (Constructed) Summary
All figure values are shown in 2021 dollars.



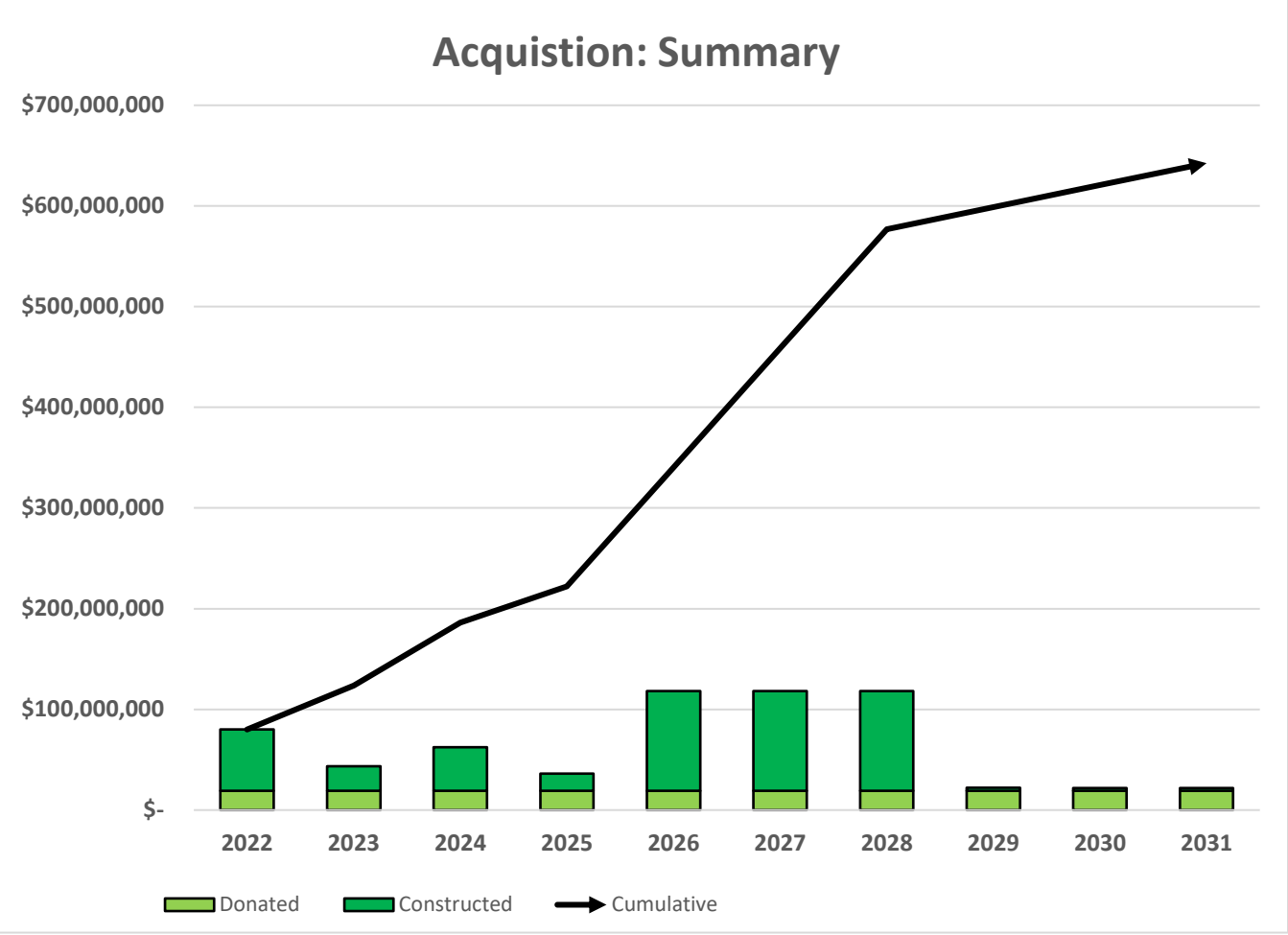
When the City commits to new assets, the municipality must be prepared to fund future operations, maintenance and renewal costs. The City must also account for future depreciation when reviewing long term sustainability. When reviewing the long-term impacts of asset acquisition, it is useful to consider the cumulative value of the acquired assets being taken on by Hamilton. The cumulative value of all acquisition work, including assets that are constructed and contributed are shown in Figure 16.

Over the next 10 Year planning period, the City will acquire approximately **$439,597,000** of constructed assets which can either be new assets which did not exist previously, or expansion of assets when they are to be replaced. Major acquisition expenditures over the next ten years include;

- **$10.6 million** for a new haulage receiving station to be completed by **2025**
- **$313** million for Woodward Treatment Plant Expansion by the end of **2028**
- **$7.5 million** for a Centralized operations centre
- **$77.6 million** for Trunk Sewers along Dickenson Rd.

The bulk of these constructed asset costs peak between 2026 – 2028 and after that it appears that there will only be minimal construction of assets. The lack of acquired constructed assets between 2029 – 2031 is due to lack of data and limited forecasting ability currently. As AM knowledge, practices and abilities mature within the City then in all likelihood there will be significant projects with significant costs that will appear within later years of the 10-year horizon.

Figure 16: Acquisition Summary
All figure values are shown in 2021 dollars.



SUMMARY OF ASSET FORECAST COSTS

Over the next ten years the City expects to acquire nearly $**642.8 million** dollars of Wastewater assets.

The City has sufficient budget for its planned constructed acquisitions at this time. It will become critical to understand that through the construction or assumption of new assets, the City will be committing to funding the ongoing operations, maintenance and renewal costs which are very significant. The City will need to address how to best fund these ongoing costs as well as the costs to construct the assets while seeking the highest level of service possible.

Future AM Plans will focus on improving the understanding of Whole Life Costs and funding options. However, at this time the plan is limited on those aspects. Expenditure on new assets and services will be accommodated in the long-term financial plan but only to the extent that there is available funding.

3.2.2 Operations and Maintenance Plan

Operations include all regular activities to provide services. Daily, weekly, seasonal, and annual activities are undertaken by staff to ensure the assets perform within acceptable parameters and to monitor the condition of the assets for safety and regulatory reasons. Examples of typical operational activities include cleaning, sample collection, quality testing, inspections, utility costs and the necessary staffing resources to perform these activities.

Maintenance should be viewed as the ongoing management of deterioration. The purpose of planned maintenance is to ensure that the correct interventions are applied to assets in a proactive manner and to ensure it reaches its intended useful life. Maintenance does not significantly extend the useful life of the asset but allows assets to reach their intended useful life by returning the assets to a desired condition.

Proactively planning maintenance significantly reduces the occurrence of reactive maintenance which is always linked to a higher risk to human safety and higher financial costs. The City needs to plan and properly fund its maintenance to ensure the engineered structures are reliable and achieve their desired level of service.

Maintenance includes all actions necessary for retaining an asset as near as practicable to an appropriate service condition including regular ongoing day-to-day work necessary to keep assets operating. Examples of typical maintenance activities include pipe repairs, service repairs, pump maintenance, equipment repairs along with appropriate staffing and material resources.

Some of the major mainteanance projects Hamilton plans to undertake over the next 10 years include:

- **$35.5 Million** for sewer lateral management program
- **$3 Million** allocated for reactive repairs for cross connections
- **13.25 Million** acllocated for Pier 25 Dredging – Windermere Basin

Assessment and priority of reactive maintenance is undertaken by staff using experience and judgement

3.2.3 Vertical Lifecycle Activities

The major operating and maintenance lifecycle activities per vertical asset with their accompanying 2021 costs (if known) are shown below in Table 42.

Table 42: Vertical Lifecycle Activities

Asset	Lifecycle Stage	Lifecycle Activity	2021 Annual Cost
Combined Sewer Overflow Tank	Operations	Calibration & Verification	$5,380
		Inspection & Operations	$102,900
	Maintenance	Preventative Maintenance	$14,390
		Reactive Maintenance	$293,780
Dundas WWTP	Operations	Calibration & Verification	$4,200
		Inspection & Operations	$306,760
		Maintenance	$110,900
Woodward WWTP	Operations	Calibration & Verification	$24,610
		Operations & Inspection	$12,417,830
		Cleaning & Flushing	$6,530
		Lubrication	$7,330
	Maintenance	Preventative Maintenance	$9,360
		Reactive Maintenance	$1,420,600
Lift Stations	Operations	Calibration & Verification	$3,210
		Inspection & Operations	$1,056,700
	Maintenance	Preventative Maintenance	$18,460
		Reactive Maintenance	$163,940
Misc Wastewater	Operations	Preventative Operations	$3,800
	Maintenance	Preventative Maintenance	$1,300
		Reactive Maintenance	$38,810
		Total Annual Cost	**$16,000,930**

3.2.4 Linear Lifecycle Activities

The major operating and maintenance lifecycle activities per linear asset with their accompanying 2021 costs (if known) are shown below in Table 43.

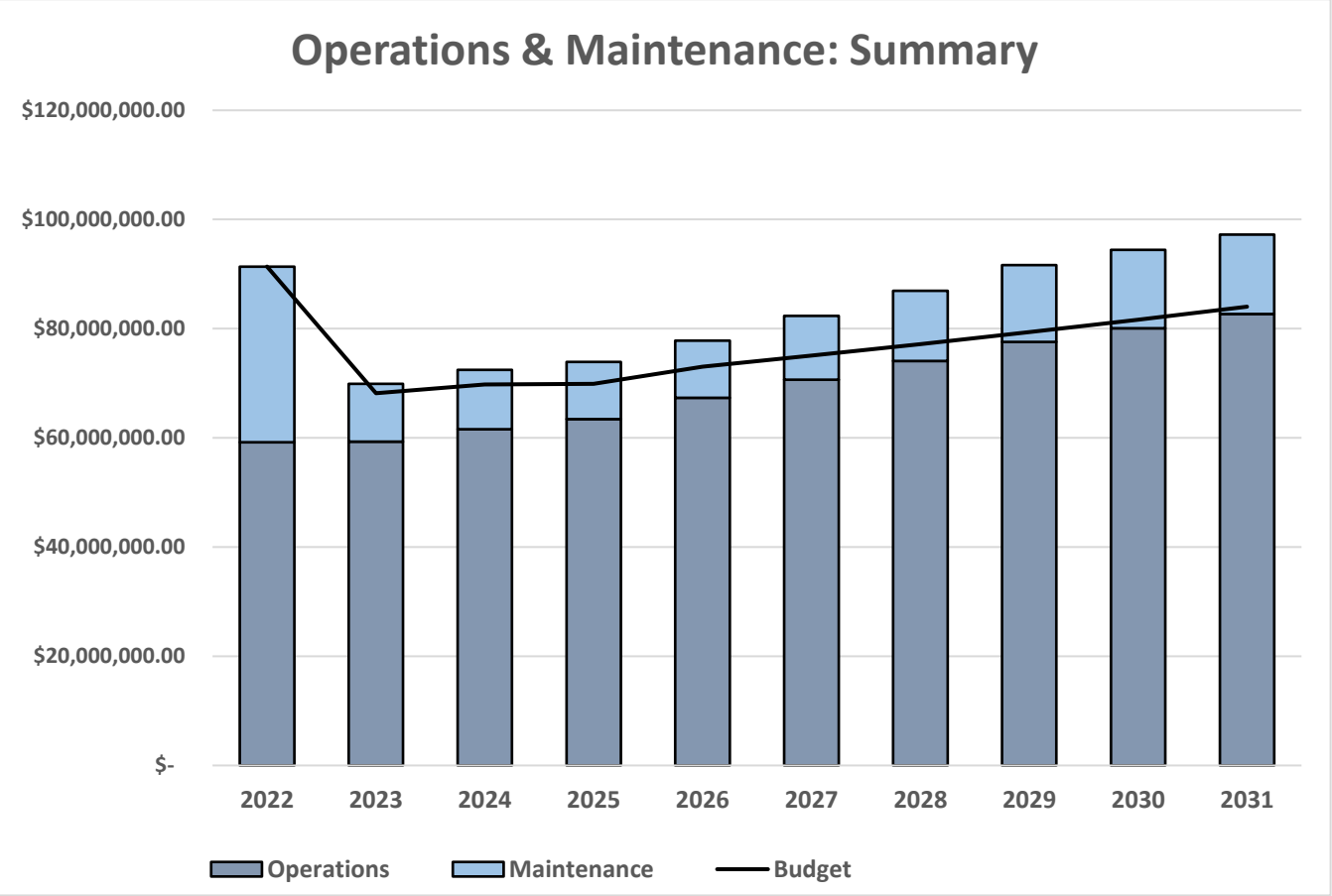
Table 43: Linear Lifecycle Activities

Asset	Lifecycle Stage	Lifecycle Activity	Frequency	2021 Cost	Unit
Sewer Main	Operation	Condition Assessment	Planned	$15-30	per metre
		Cleaning	Ad Hoc	$10,000	per instance
	Maintenance	Spot Repair	Ad Hoc	$40,000	per instance
Forcemain	Operation	Swabbing	Ad Hoc	$10,000	per instance
	Maintenance	Repair	Ad Hoc	$40,000	per instance
Odour Control Unit	Operation	Inspection	6 months	$ 61	per instance
	Maintenance	Change Media Filter	Ad Hoc	$ 1061	per instance
Maintenance Holes	Operation	Inspection	Ad Hoc	$ 50 – $ 71	per unit
	Operation	Condition Assessment - Zoom Camera	Ad Hoc	$ 50	per unit
	Maintenance	Frame & Cover Resets	Ad Hoc	$ 250,000	per year
	Maintenance	Grout Sealing	Ad Hoc	$ 3,000	per unit
	Maintenance	Ladder Rung Repair	Ad Hoc	$ 300	per unit
	Maintenance	Benching	Ad Hoc	$ 1500	per unit
Sewer Laterals	Operation	Cleaning	Ad Hoc	$ 500	ls
	Renewal	Lining	Ad Hoc	$ 456	per m
	Renewal	Replacement	Ad Hoc	$ 8000	per lateral
	Operation	Reactive Inspection	Ad Hoc	$ 500	ls
	Operation	Planned Inspection	Ad Hoc	$159	per lateral

When the City completes necessary operational and maintenance activities, high cost reactive repairs can be prevented, and this will ensure the assets reach their ESL. Currently, assessment and priority of reactive maintenance is undertaken by staff using subject matter expert experience and judgement.

Forecast operations and maintenance costs vary in relation to the total value of the asset registry. When additional assets are acquired, the future operations and maintenance costs are forecast to increase. When assets are disposed of the forecast operation and maintenance costs are reduced. Figure 17 shows the forecast operations and maintenance costs relative to the proposed operations and maintenance Planned Budget.

Figure 17: Operations and Maintenance Summary
All figure values are shown in 2021 dollars.



The forecast costs include all costs from both the Capital and Operating budget. AM focuses on how taxpayer or ratepayer dollars are invested by lifecycle activities and not by budget allocation since both budgets contain various lifecycle activities they must both be consolidated for the AM plans.

The forecast of operations and maintenance costs are increasing steadily over time and it is clear, the City has insufficient budget to achieve all of the works required to ensure that assets will be able to achieve their estimated service life at the desired level of service**.** It is anticipated that at the current budget levels there will be insufficient budget to address all operating and maintenance needs over the 10-year planning horizon. The peak in 2022 is due to the investment of **$13.2 million** for the Pier 25 dredging and other major planned maintenance activities.

The graph above illustrates that without increased funding or changes to lifecycle activities there is a significant shortage of funding which will lead to:

- Higher cost reactive maintenance;
- Possible reduction to the availability of the assets;
- Impacts to private property; and,
- Increased financial and reputational risk.

The shortfall is primarily due to the significant number of assets that are donated through subdivision agreements annually and insufficient funding allocations over an extended period of time. Every year that Hamilton adds additional assets without properly funding the necessary lifecycle activities, staff's ability to sustain the assets to expected or mandatory level of service can be significantly impacted. It should be noted that there are mandatory operational and maintenance expenditures due to legislative requirements and cannot and should not simply be avoided or deferred.

As the City continues to develop condition profiles and necessary works are identified based on their condition, it is anticipated operation and maintenance forecasts will increase significantly. Where budget allocations will result in a lesser level of service, the service consequences and risks will be identified and are highlighted in the Risk Section 3.7. Deferred maintenance (i.e. works that are identified for maintenance activities but unable to be completed due to available resources) will be included in the infrastructure risk management plan for the next iteration.

Future iterations of this plan will provide a much more thorough analysis of operations and maintenance costs including types of expenditures for training, mandatory certifications, insurance, staffing costs and requirements, equipment and maintenance activities.

3.2.5 Renewal Plan

Renewal is major works which does not increase the assets design capacity but restores, rehabilitates, replaces or renews an existing asset to its original service potential. Works over and above restoring an asset to original service potential is considered to be an acquisition resulting in additional future operations and maintenance costs.

Asset renewals are typically undertaken to either ensure the assets reliability or quality will meet the service requirements set out by the City. Renewal projects are often triggered by service quality failure and can often be prioritized by those that have the highest consequence of failure, have high usage, have high operational and maintenance costs and other deciding factors.

The typical useful lives of assets used to develop projected asset renewal forecasts are shown in Table 44 and are based on estimated design life for this iteration. Future iterations of the plan will focus on the Lifecycle approach to ESL which can vary greatly from design life. Asset useful lives were last reviewed in 2022 however they will be reviewed annually until their accuracy reflects the City's current practices.

Table 44: Useful Lives of Assets	
Asset (Sub)Category	**Useful life**
Wastewater Treatment Plant	60
Lift Stations	60
Combined System Overflow Tanks	40
Trunk Mains	97
Local Mains	89
Combined Mains	87
Interceptors	100
Vehicles	7 or 8
Forcemains	81
Valves	80
Maintenance Holes	100
Control Gates	50
Sewer Laterals	60

The estimates for renewals in this AM Plan were based on the register method which utilizes the data from the City's asset registry to analyse all available lifecycle information and then determine the optimal timing for renewals.

RENEWAL RANKING CRITERIA

Asset renewal is typically undertaken to either:

- Ensure the reliability of the existing infrastructure to deliver the service it was constructed to facilitate (e.g. replacing a bridge that has a load limit); or
- To ensure the infrastructure is of sufficient quality to meet the service requirements (e.g. condition of a culvert).[9]
- It is possible to prioritise renewals by identifying assets or asset groups that:
- Have a high consequence of failure;
- Have high use and subsequent impact on users would be significant;
- Have higher than expected operational or maintenance costs; and,
- Have potential to reduce life cycle costs by replacement with a modern equivalent asset that would provide the equivalent service.[10]

[9] IPWEA, 2015, IIMM, Sec 3.4.4, p 3|91.

[10] Based on IPWEA, 2015, IIMM, Sec 3.4.5, p 3|97.

The ranking criteria used to determine priority of identified renewal proposals is detailed in Table 45.

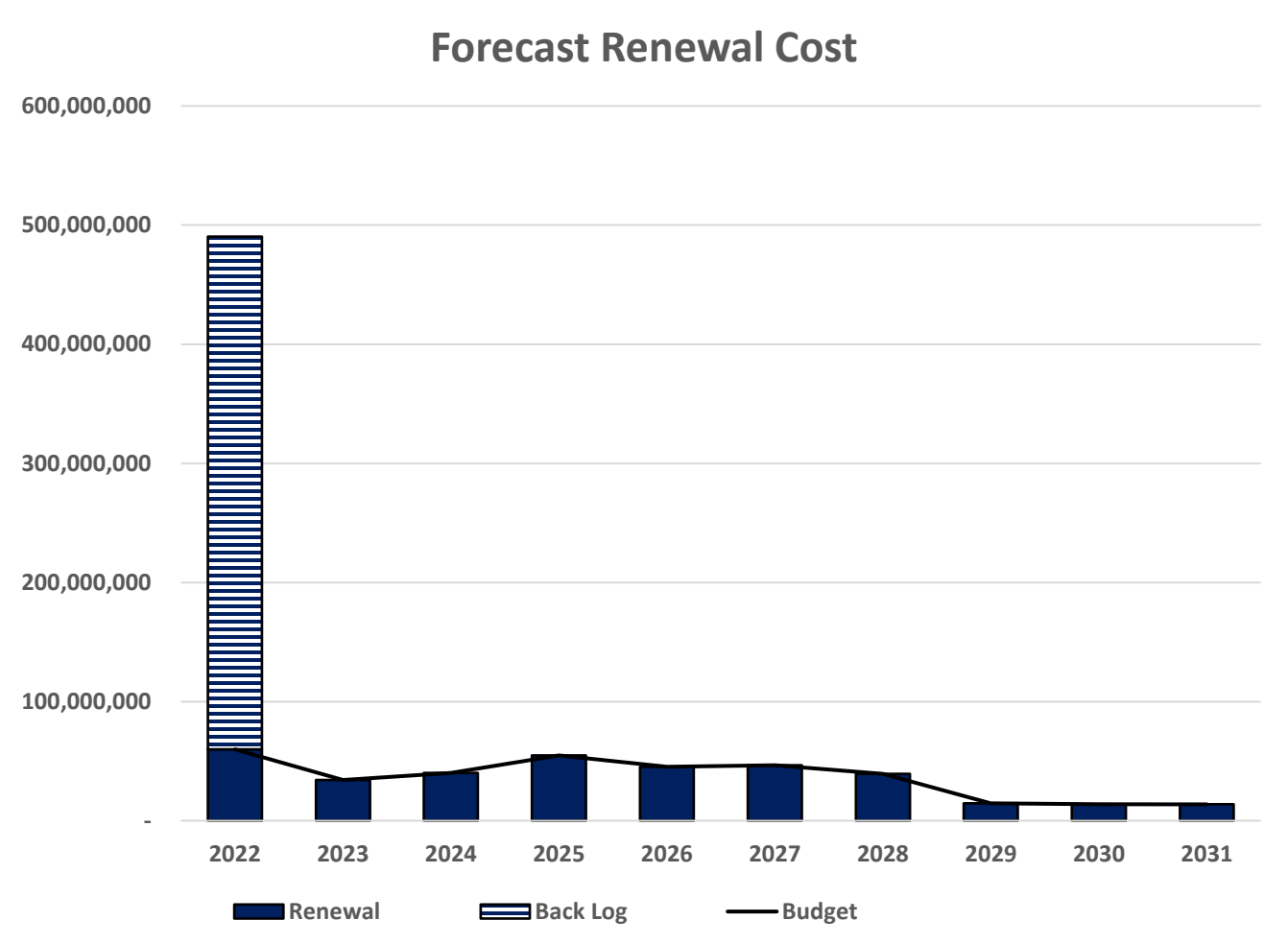
Table 45: Renewal Priority Ranking Criteria

Criteria	Weighting
Regulatory / Legal Compliance	20%
Co-ordination – Funding and Budgeting	25%
Risk Mitigation	25%
Health & Safety (Users & Staff)	10%
Lifecycle Impacts (Operations & Maintenance)	10%
Demand Driver (Growth)	10%
Total	**100%**

SUMMARY OF FUTURE RENEWAL COSTS

Forecast renewal costs are projected to increase over time if the asset stock increases. The forecast costs associated with renewals are shown relative to the proposed renewal budget in Figure 18.

Figure 18: Wastewater Asset Forecast Renewal Costs
All figure values are shown in 2021 dollars.



The significant amount highlighted in 2022 represents the cumulative backlog of deferred work needed to be completed that has been either identified through its current estimated condition or age per Table 39 when condition was not available. Deferred renewal (assets identified for renewal and not scheduled in capital works programs) are included and identified within the risk management plan. Prioritization of these projects will need to be funded and managed over time to ensure renewal occurs at the optimal time.

There is only sufficient budget to support the planned projects only and without additional funding the backlog will remain and continue to grow as future projects outside of the 10-year planning horizon continue to move forward into the 10-year scope. Continued deferrals of projects will lead to significantly higher operational and maintenance costs and will affect the availability of services in the future.

Forecasted renewals over the 10-year planning horizon include select sewer lateral replacements along Strathearne Avenue as well as main replacements along sections of Melvin Avenue, Marion Street and Fairfield Avenue in 2022. In 2023 the City will renew **$3.1 Million** of

Sewer laterals as well as **$4 Million** for network lining, **$3.35 Million** for Rockcliffe pumping station and **$4.7 Million** to complete the **$13.6 Million dollar** renewal of digesters 3 & 5 at the Woodward treatment plant. In 2024 the City will invest **$6 Million** for a secondary digestor at the Woodward plant**, $5.9 Million** to continue th e renew the North digester complex ($15.25 million total) as well as continued upgrades to the Environmental Lab. Other major renewals over the 10-year planning horizon include **$28.2 million** of renewals to the Dundas WWTP, **$44.5 million** for system relining's, **$36.6 million** for Sewer lateral replacements, **$8 million** for interceptor renewals, **$27 million** for primary clarifiers as well as continued renewals for SCADA components.

Deferring renewals create risks of higher financial costs, decreased availability, and decreased satisfaction with asset performance. Ultimately, continuously deferring renewals works ensures Hamilton will not achieve intergenerational equality. If Hamilton continues to push out necessary renewals, there is a high risk that future generations will be unable to maintain the level of service the customers currently enjoy. It will burden future generations with such significant costs that inevitably they will be unable to sustain them.

Properly funded and timely renewals will ensure the assets perform as expected and it is recommended to continue to analyze asset renewals based on criticality and availability of funds for future AM Plans.

3.2.6 Disposal Plan

Disposal includes any activity associated with the disposal of a decommissioned asset including sale, possible closure of service, decommissioning, disposal of asset materials, or relocation. Disposals will occur when an asset reaches the end of its useful life. The end of its useful life can be determined by factors such as excessive operation and maintenance costs, regulatory changes, obsolescence or demand for the structure has fallen.

Assets identified for possible decommissioning and disposal are shown in Table 46. A summary of the disposal costs and estimated reductions in annual operations and maintenance of disposing of the assets are also outlined. Any costs or revenue gained from asset disposals is included in future iterations of the AM Plan and the long-term financial plan.

Table 46: Assets Identified for Disposal

Asset	Reason for Disposal	Timing	Disposal Costs	Operations & Maintenance Annual Savings
Aberdeen Sewage Pumping Station	End of Life	2026	$1,310,000	$15,000

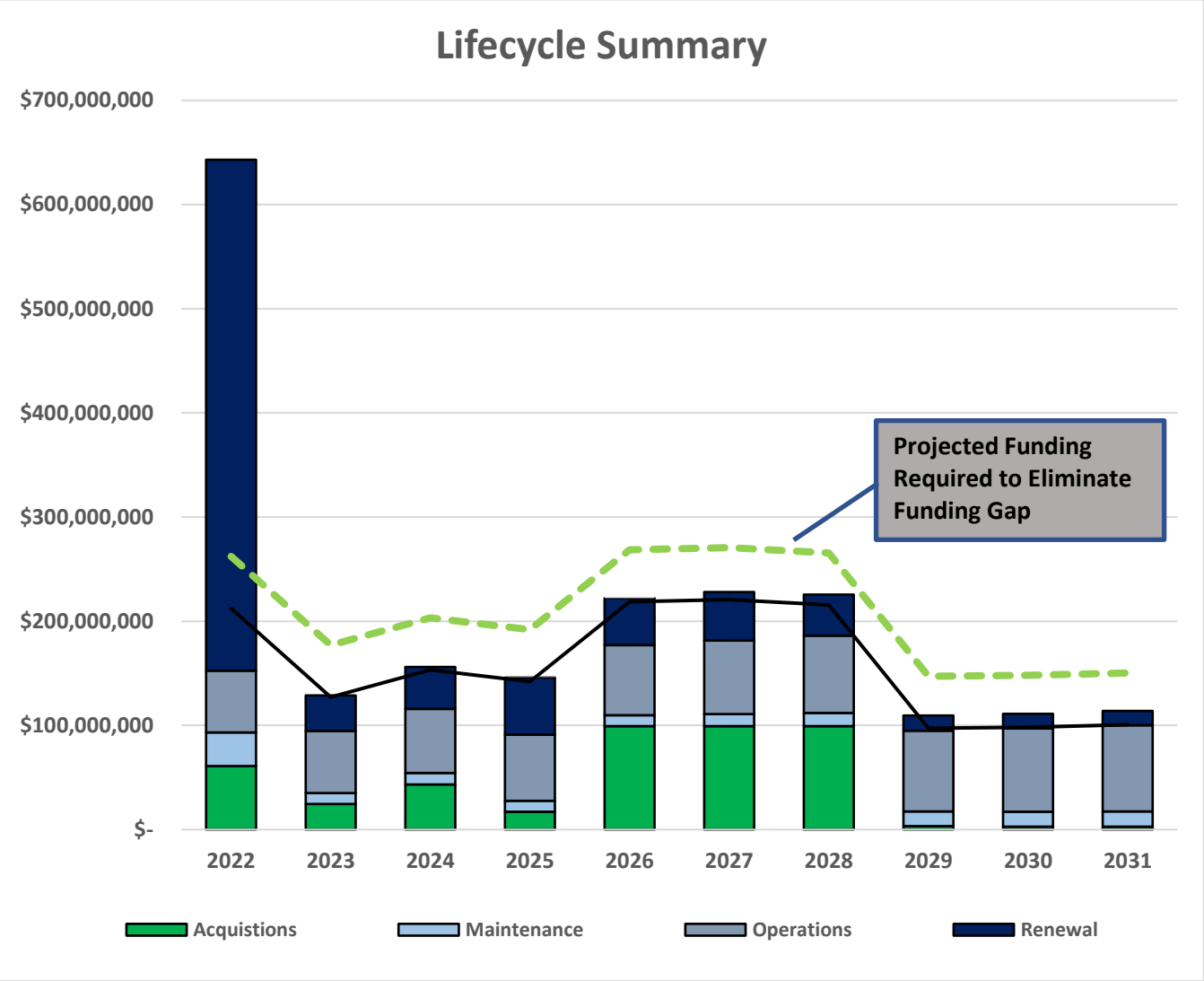
Table 46: Assets Identified for Disposal				
Asset	**Reason for Disposal**	**Timing**	**Disposal Costs**	**Operations & Maintenance Annual Savings**
Woodward WWTP Standby Bldg.	End of Life. New Power Centre installed	2022	$150,000	$3,000

SUMMARY OF ASSET FORECAST COSTS

The financial projections from this AM Plan are shown in Figure 19. These projections include forecast costs for acquisition, operation, maintenance, renewal, and disposal. These forecast costs are shown relative to the proposed budget.

The bars in the graphs represent the forecast costs needed to minimize the life cycle costs associated with the service provision. The proposed budget line indicates the estimate of available funding. The gap between the forecast work and the proposed budget is the basis of the discussion on achieving balance between costs, levels of service and risk to achieve the best value outcome.

Figure 19: Lifecycle Summary
All figure values are shown in 2021 dollars.



Currently there is insufficient budget to address the large backlog of renewal work projected by the plan. There is sufficient budget to address ongoing operational and maintenance needs for most of the planning period however with the assumption of assets over time and their increased costs there may be impacts to the service itself as illustrated by Figure 19. Without some adjustment to available funds or other lifecycle management decisions there will be insufficient budget to address all planned lifecycle activities.

Allocating sufficient resources is imperative to managing asset throughout their lifecycle. This can include funding for lifecycle activities, sufficient staffing, increased asset knowledge, improved planning, contracted services, additional equipment or vehicles to ensure that Hamilton is optimizing its lifecycle approach.

Without sufficient funding the City has little option but to defer these necessary lifecycle activities. Deferring important lifecycle activities is never recommended. The City will benefit from allocating sufficient resources to developing its long-term financial plan to ensure that over time the City can fully fund the necessary lifecycle activities. Funding these activities helps to ensure the assets are compliant, safe and effectively deliver the service the customers need and desire.

The lack of funding allocated for the backlog of renewals and the necessary lifecycle activities creates an additional issue which is intergenerational equity. Each year the City defers necessary lifecycle activities it pushes the ever-increasing financial burden on to future generations. It is imperative the City begin addressing the lack of consistent and necessary funding to ensure that intergenerational equity will be achieved. Over time, allocating sufficient funding on a consistent basis ensures that future generations will be able to enjoy the same standards being enjoyed today.

Over time the City will continue to improve its lifecycle data, and this will allow for informed choices as how best to mitigate those impacts and how to address the funding gap itself. This gap in funding future plans will be refined over the next three (3) years and improve the confidence and accuracy of the forecasts.

3.3 MANDATORY O.REG. 588/17 LEVELS OF SERVICE

Per Table 2 in O. Reg. 588/17, there are community levels of service that the City is required to report on in order to meet the provincial level of service requirement. These metrics are required to be reported, and so they have been separated from the customer levels of service described in Section 3.4.2. These qualitative metrics are reported below.

3.3.1 Mandatory O.Reg. 588/17 Community Levels of Service

Per Table 2 in O.Reg. 588/17, there are community levels of service that the City is required to report on in order to meet the provincial level of service requirement. These metrics are required to be reported, and so they have been separated from the customer levels of service described in Section 3.4.2. These qualitative metrics are reported below.

Scope:

1. Description, which may include maps, of the user groups or areas of the municipality that are connected to the municipal wastewater system

Most properties within the City's urban area are connected to the municipal wastewater system. Similar, to the water system, these urban properties include residential, industrial, commercial and institutional uses. Communities not within the urban area are likely treating wastewater using private septic systems.

There are two (2) wastewater treatment plants at the City which service different communities. A map of the wastewater catchment areas and the population serviced can be found in Section 3.1.

As previously mentioned, 32% of the City's wastewater linear network is combined sewer, which is a legacy system, and refers to pipes where wastewater and stormwater are collected in the same pipe. Modern areas of the City have separated sewers meaning that wastewater and stormwater are collected in separate pipes, and the City is working toward separating combined sewers where possible. Areas serviced by a combined sewer are also shown in Section 3.1. It has been identified as a Continuous Improvement item in Table 58 to continue to identify separating combined sewers as part of the renewal process.

Reliability

1. Description of how combined sewers in the municipal wastewater system are designed with overflow structures in place which allow overflow during storm events to prevent backups into homes.

During periods of heavy rainfall, snowmelt, or elevated lake levels the combined sewers are inundated with large volumes of stormwater that can exceed the capacity of the pipes. To avoid basement flooding and backups into homes, existing combined sewers have combined sewer overflows (CSOs), which relieve overloaded combined sewers into an adjacent storm sewer or receiving water bodies. Sewer overflows exist on both combined sewers and on separated sewers. Many overflows have been retroactively installed after basement flooding experiences. The design varies greatly among the overflow locations. The Hamilton Harbour Remedial Action Plan and the Pollution Prevention and Control Plan (PPCP) detail overflow locations along with characterizing each overflow site and setting priorities/strategies for remediation.

The City also has nine (9) combined sewer overflow tanks (CSOs). The purpose of these CSO tanks is to protect the system against surcharges and overflows during wet weather events by holding the untreated wastewater until the WWTPs have capacity to treat it. The CSO tanks are also necessary to protect the treatment plant against hydraulic overloading that could upset the sewage treatment processes. These tanks also contain overflow pipes which overflow into the natural watercourses during significant wet weather events. Water samples are regularly taken at these overflow locations. Additionally, overflow pump stations also exist in limited areas, and function when the wastewater system is at capacity and there is flooding risk to homes. These pump stations send wastewater to the storm sewer to be released into the environment.

Despite, these overflows, these events can still overwhelm the WWTPs resulting in a temporary bypass of certain treatment processes, and these bypasses are seasonally disinfected. WWTP operators monitor incoming flows and make operational adjustments to the treatment processes as required. To protect the plant from infrastructure damage, prevent flooding, and maintain compliance with the WWTP Environmental Compliance Approval (ECA) the WWTP operator will initiate a bypass event.

Flows from the Dundas WWTP are carefully controlled and flows exceeding the plant's capacity are directed to the Woodward WWTP rather than initiating a bypass at Dundas.

In 2021, all bypass events at the Woodward WWTP were the result of wet weather that generated flows in excess of the WWTP's treatment capacity. All bypasses are promptly reported to the Ministry of Environment, Conservation, and Parks (MECP) Spills Action Centre and to Public Health Services as required by the regulations. In 2021, there were 23 bypasses at the Woodward WWTP.

1. Description of the frequency and volume of overflows in combined sewers in the municipal wastewater system that occur in habitable areas or beaches

Overflows are triggered by wet weather (rainfall) events or snow melt. Frequency and volumes vary from site to site, based on intensity and duration of the wet weather event. Bypasses and overflows are reported online by type, volume and duration of each event.

In 2021 there were 149 known total events as shown in Table 47. The vast majority of these events are through uncontrolled and unmonitored sewer regulator structures. Many CSO assets do not have flow/volume monitoring, and the annual CSO events and volumes are estimated using a computer model. Projects are underway to install flow/volume monitoring at additional locations, but it is impractical to try to monitor every location where combined or sanitary sewage can overlow to the storm sewer system and make its way to the natural environment. Computer models will remain an important tool for CSO reporting in the future.

In addition, water at swimmable beaches is tested at a minimum of once a week during the swimming season for E. coli bacteria and residents are advised not to swim in these areas after a heavy rainfall. CSO outfalls are clearly labelled with signage.

2. Description of how stormwater can get into sanitary sewers in the municipal wastewater system, causing sewage to overflow into streets or backup into homes.

In addition to a storm event causing the combined sewers to exceed design capacity causing sewage overflows, there are other possible ways where inflow and infiltration (I&I) can make its way into the wastewater system.

Examples of situations where infiltration can occur include: defective joints, holes, and cracks in gravity main pipes can allow groundwater infiltration. This is particularly a concern at low elevation points in the system (e.g. pump stations, private infrastructure).

Examples of situations where inflow can occur include illegal sump pump, downspout, directed surface water flows, and drain connections where unanticipated stormwater is added to the system.

3. Description of how sanitary sewers in the municipal wastewater system are designed to be resilient to avoid events described above in item 3.

Inflow & infiltration (I&I) studies have been conducted to quantify the expected amount of I&I, and rain gauges exist at various locations throughout the City to monitor rainfall. The City has used this information to establish design standards to convey flows under ultimate conditions, and design sheets for capacity. In addition, supervisors have the ability to monitor the system during wet weather events to optimize storage within the system and minimize overflows.

As indicated in item 1 above, overflow structures have also been designed to avoid events described in item 3 above.

4. Description of the effluent that is discharged from sewage treatment plants in the municipal wastewater system.

The Ministry of Environment, Conservation and Parks (MECP) issues Environmental Compliance Approvals (ECAs) to wastewater treatment facilities in the province, which outlines the effluent limits that the City must be in compliance with. The effluent from the active treatment facilities in the City has documented compliance limits, objectives, and actual performance. The effluent criteria include but are not limited to effluent flow rates, and various quality parameters such as suspended solids and E. coli.

In 2021, the Woodward and Dundas WWTPs did not have any instances where effluent was not compliant with regulatory standards.

3.3.2 Mandatory O.Reg. 588/17 Technical Levels of Service

In addition, per Table 5 in O.Reg. 588/17, there are technical levels of service that the City is required to report on in order to meet the provincial level of service requirement. These quantitative metrics are reported below.

Table 47: Mandatory Technical Levels of Service

Service Attribute	Technical levels of service	Measure
Scope	**1.** Percentage of properties connected to the municipal wastewater system.	83% of 162,308 properties

Table 47: Mandatory Technical Levels of Service		
Service Attribute	**Technical levels of service**	**Measure**
Reliability	**1.** The number of events per year where combined sewer flow in the municipal wastewater system exceeds system capacity compared to the total number of properties connected to the municipal wastewater system.	149 events of 134,202 connected properties
	2. The number of connection-days* per year due to wastewater backups compared to the total number of properties connected to the municipal wastewater system.	446** connection days of 134,202 connected properties
	3. The number of effluent violations per year due to wastewater discharge compared to the total number of properties connected to the municipal wastewater system.	0

*Connection-days are defined as “the number of properties connected to a municipal system that are affected by a service issue, multiplied by the number of days on which those properties are affected by the service issue”.

**782 backups for single lateral connections, and 22 main line back-ups assuming five (5) properties each, multiplied by 0.5 days (12 hours) to resolve

3.4 MUNICIPALLY DEFINED LEVELS OF SERVICE

Levels of service are measures for what the City provides to its customers, residents, and visitors. Service levels are best described as the link between providing the outcomes the community desires, and the way that the City provides those services. Service levels are defined in three ways, customer values, customer levels of service and technical levels of service which are outlined in this section.

3.4.1 Customer Values

Customer values are what the customer can expect from their tax dollar in “customer speak”. These values are used to develop level of service statements.

Customer Values indicate:

- what aspects of the service is important to the customer;
- whether they see value in what is currently provided; and,
- the likely trend over time based on the current budget provision.

To develop these customer values, as stated in the AMP Overview, a Customer Engagement Survey was released in January 2022 on the Engage Hamilton platform. The survey received 184 submissions and contained 14 questions related to wastewater service delivery. The survey results can be found in Appendix “A” of the AMP Overview. While these surveys were used to establish customer values and customer performance measures, it’s important to note that the number of survey respondents only represents a small portion of the population.

The future intent is to release this survey on an annual basis to measure the trends in customer satisfaction and ensure that the City is providing the agreed level of service as well as to improve the marketing strategy to receive more responses. This has been noted in Table 58 in the Continuous Improvement section.

Table 48: Customer Values Service Objective			
Customer Values	**Customer Satisfaction Measure**	**Current Feedback**	**Expected Trend Based on Planned Budget**
Sewer backup does not occur in my home	Annual Customer Engagement Survey	The vast majority of survey respondents did not experience a sewer back-up in the past year. Though many respondents were concerned with the possibility of it happening due to aging infrastructure and climate change.	Maintain
No sewage odour in the air or in my home	Annual Customer Engagement Survey	A number of survey respondents have noticed odour issues related to wastewater in the City two or more times per year.	Maintain
No sewage discharge into environmental areas	Annual Customer Engagement Survey	A number of survey respondents do not think that the City behaves responsibly when returning wastewater back into the environment.	Maintain

3.4.2 Customer Levels of Service

Ultimately customer performance measures are the measures that the City will use to assess whether it is delivering the level of service the customers desire. Customer level of service measurements relate to how the customer feels about the City's water network in terms of their quality, reliability, accessibility, responsiveness, sustainability and over course, it's cost. The City will continue to measure these customer levels of service to ensure a clear understanding on how the customers feel about the services and the value for their rate dollars.

The Customer Levels of Service are considered in terms of:

Condition	How good is the service? What is the condition or quality of the service?
Function	Is it suitable for its intended purpose? Is it the right service?
Capacity/Use	Is the service over or under used? Do we need more or less of these assets?

In Table 49 under each of the service measures types (Condition, Function, Capacity/Use) there is a summary of the performance measure being used, the current performance, and the expected performance based on the current budget allocation.

Table 49: Customer Levels of Service

Type of Measure	Level of Service	Source	Performance Measure	Current Performance	Expected Trend Based on Planned Budget
Condition	Provide reliable wastewater services with minimal sewer back-ups.	Annual Customer Engagement Survey	96.3% of survey respondents had not had a sewer back-up in the last 12 months	Very Satisfied	Maintain
			45.7% of survey respondents were concerned with a sewer back-up occurring on their property	Unsatisfied	Maintain
		Confidence levels		**Medium**	
		Unknown	Average condition of WWTPs	Unknown	
		Confidence levels		**Very Low**	
		Condition Assessment	Average condition of lift station	Fair	Maintain
		Confidence levels		**Medium**	
		Combination of Inspection & Age Based	Average estimated condition of combined main	Good	Maintain
		Combination of Inspection & Age Based	Average estimated condition of wastewater main	Good	Maintain
		Confidence levels		**Medium**	
Function	Ensure wastewater is being collected and treated responsibly with minimal odour issues.	Annual Customer Engagement Survey	87.2% of survey respondents are satisfied with the wastewater services they receive.	Fairly satisfied	Maintain
			45.9% of survey respondents have noticed odour issues in the City related to wastewater	Unsatisfied	Maintain
			42.9% of survey respondents do not think Hamilton behaves responsibly when returning wastewater back to the environment	Unsatisfied	Slight Decrease
		Confidence levels		**Medium**	
		Customer BIMA Metric	15 odour complaints received from Woodward WWTP	Unsatisfied	Maintain
		Hansen	136 sewer odour complaints	Unsatisfied	Maintain
		Confidence levels		**Medium**	
Capacity	Ensure wastewater assets are used and within design capacity.	Annual Customer Engagement Survey	89.1% of survey respondents are connected to Hamilton's wastewater network.	High	Maintain
		Confidence levels		**Medium**	

3.4.3 Technical Levels of Service

Technical levels of service are operational or technical measures of performance, which measure how the City plans to achieve the desired customer outcomes and demonstrate effective performance, compliance and management. The metrics should demonstrate how effectively Hamilton delivers its services in alignment with its customer values; and should be viewed as possible levers to impact and influence the Customer Levels of Service. Hamilton will measure specific lifecycle activities to demonstrate how Hamilton is performing on delivering the desired level of service as well as to influence how customer perceive the services they receive from the assets.

Technical service measures are linked to the activities and annual budgets covering Acquisition, Operation, Maintenance, and Renewal.

Service and asset managers plan, implement and control technical service levels to influence the service outcomes.

Table 50 shows the activities expected to be provided under the current 10 year Planned Budget allocation, and the Forecast activity requirements being recommended in this AM Plan.

Table 50: Technical Levels of Service

LIFECYCLE ACTIVITY	PURPOSE OF ACTIVITY	ACTIVITY MEASURE	CURRENT PERFORMANCE*	TARGET	RECOMMENDED PERFORMANCE **
Acquisition	Ensure wastewater assets are used and within design capacity.	% Main Wastewater Pump Station Construction Progress to Date at Woodward WWTP	90	No Data	100%
		% Tertiary Treatment Construction Progress to Date at Woodward WWTP	75.75	No Data	100%
		# WW / Storm Substantially Complete Projects	19	No Data	No Data
		Budget	**$42,742,500**		**$42,742,500**
Operation	Ensure wastewater is being collected and treated responsibly with minimal odour issues.	# of Main Line Sewer Back-ups	22	No Data	No Data
		# Lateral Back-up Investigations	782	No Data	No Data
		# of Sewer Odour Investigations	136	No Data	No Data
		% of sewer odour investigations started within 12 hrs - 80%	94.5%	80%	80%
		% completion monthly outstation inspections	92.12%	80%	80%
		% Conducted required sampling as per the Woodward ECA (EME sampling only)	100%	100%	100%
		# of Raw WWTP Wastewater Samples Collected (4232)	24	24	24
		# of STP FE WWTP Samples Collected (4233)	887	No Data	No Data
		Active Sewer Discharge Permits (2646)	287	No Data	No Data
		Mainline sewers inspected per year (4253)	107 km	100	100
		Woodward WWTP Volume treated wastewater (ML) (2853)	73,332.08	No Data	No Data
		Dundas WWTP Volume treated wastewater (ML) (2854)	2,868.01	No Data	No Data
		METRIC - Total Weight Biosolids Produced (Tonnes) (2874)	21,133.95	No Data	No Data
		Number of CSO tank overflow events	27	No Data	No Data
		Number of CSO outfall overflow events	85	No Data	No Data
		Number of overflow lift station overflow events	14	No Data	No Data
		% of CSO overflows with monitors	15%	No Data	No Data

Table 50: Technical Levels of Service					
LIFECYCLE ACTIVITY	**PURPOSE OF ACTIVITY**	**ACTIVITY MEASURE**	**CURRENT PERFORMANCE***	**TARGET**	**RECOMMENDED PERFORMANCE ****
		Total ML of wastewater overflowed into natural watercourse in 2021	4,059.84	No Data	No Data
		Number of laterals inspected per year (4254)	2664	2200	2200
		Budget	**$49,442,892**		**$49,442,892**
Maintenance	Provide reliable wastewater services with minimal sewer back-ups.	# of Sewer Lateral Repair / Replacement Emergency & Scheduled	422	No Data	No Data
		% of emergency sewer repairs/replacement within 2 days - 100%	100%	100%	100%
		% of scheduled sewer lateral repairs/replacement within 45 days - 80%	98.92	80%	80%
		% of scheduled sewer repairs/replacement within 45 days - 80%	97.58	80%	80%
Renewal	Provide reliable wastewater services with minimal sewer back-ups.	Sewer laterals CIPP rehabilitation count/yr	500	No Data	No Data
		Sewermain CIPP rehabilitation km/yr	23.3 km	No Data	No Data
		Budget	**$34,284,500**		**$79,284,496**
Note: * Current activities related to Planned Budget. ** Expected performance related to forecast lifecycle costs. * B**					

It is important to monitor the service levels regularly as circumstances can and do change. Current performance is based on existing resource provision and work efficiencies. It is acknowledged changing circumstances such as technology and customer priorities will change over time.

At this time, many of the existing technical metrics do not have a target. These metrics should be improved to include a target to be in line with SMART objectives identified in the AMP Overview.

As the City's asset management maturity increases, and with the implementation of the EAM project mentioned in Section 7.2.3 of the AMP Overview, the City will also have more capacity to measure additional metrics. In addition, the City should investigate the BIMA scorecard further to ensure data and assumptions are consistent with ministry and City reporting. In addition, often times wastewater and stormwater metrics have been reported together, and these should be separated for ease of reporting which has been identified as a continuous improvement item.

3.4.4 Level of Service Analysis

At this time, the City's technical metrics for Wastewater assets are based on meeting regulatory and legislative requirements including Environmental Compliance Approvals (ECAs). It is evident per Table 50 that the City is typically meeting these standards with a few exceptions. However, customer preferences and expectations do not always match minimum legislated requirements, which is discussed below. As mentioned in Section 3.4.2, while these surveys were used to establish customer values and customer performance measures, it's important to note that the number of survey respondents currently only represents a small portion of the population.

CONDITION

The majority of survey respondents had not had a sewer back-up in 12 months and were considered to be very satisfied with the service. However, many survey respondents appeared to be concerned with possible sewer back-ups, and cited condition and climate change as reasons they were concerned with the possibility of a back-up.

As shown throughout the report, the condition of the main lines (e.g. combined, separated and interceptor) are typically in Good condition. Per the technical level of service table, the most frequent cause of sewer back-ups is with an individual home's lateral connection (782 instances), and not with main line infrastructure (22 instances). These issues can be at the fault of a deficient sewer lateral (e.g. tree roots, condition, settlement). The City investigates these issues typically within 12 hours, although technical metrics show the target as 2 days. The City will also investigate allocating more specific metrics for this issue which has been identified as a continuous improvement item in Table 58.

FUNCTION

The majority of survey respondents indicated they were satisfied with the wastewater services they received. However, many survey respondents indicated they had noticed sewage odours throughout the City on a few occasions and were considered to be unsatisfied with this level of service. Per the technical levels of service table, although odour complaints did occur, the City did respond to all of these complaints, and responded to 95% of these complaints within 24 hours which exceeds the City target of 80%. The City will continue to investigate odour complaints and investigate opportunities to prevent these complaints from occurring. The City will also investigate allocating more specific metrics for this issue which has been identified as a continuous improvement item in Table 58.

In addition, many survey respondents felt that the City was not responsible when returning wastewater back into the natural watercourse. As explained throughout the report, the City is working toward improving the legacy combined sewer system to reduce the frequency of combined sewer overflows. The technical levels of service show the number of overflow events and where these events have occurred. This data is publicly available on the website. However, it's important to note that these overflows do protect the system as well as properties in the City

connected to combined sewers from back-ups and it is a complex problem. As previously mentioned, the City has spent more than 30 years working to improve the system with total investments exceeding $550 million and will be continuing to improve the system over time.

CAPACITY

At this time, there were not any key findings associated with the wastewater capacity with respect to customer levels of service but the majority of survey respondents were shown to be connected to the municipal wastewater system, which is expected.

Although, there are some areas where the City could investigate capacity from a technical aspect to align with customer values. To quantify the volume of water exiting the outfalls, the City is in the process of acquiring monitoring at additional overflow locations. In the interim, Hamilton generates an annual report that uses the wastewater system model to compute event based overflow volumes for every CSO outfall (where there is no volumetric monitroring). The City has completed a Flooding & Drainage Improvement study to develop a long-term strategy to reduce and eliminate combined sewer overflows. This conceptual study will be presented to PWC in July. Finally, the City could also investigate adding additional odour control units in areas deemed to be hot spots for odour complaints.

3.5 FUTURE DEMAND

The ability for the City to be able to predict future demand for services enables the City to plan ahead and identify the best way of meeting the current demand while being responsive to inevitable changes in demand. Demand will inevitably change over time and will impact the needs and desires of the community in terms of the quantity of services (more communities connecting to the service) and types of service required (larger facilities to process increased volumes).

Demand is defined as the desire customers have for assets or services and that they are willing to pay for. These desires are for either new assets/services or current assets.

3.5.1 Demand Drivers

For wastewater, the key drivers are population change, climate change, technological changes, legislative requirements and customer preferences and expectations. A future continuous improvement item is to identify additional demand drivers.

3.5.2 Demand Forecasts

The high level present position and projections for demand drivers that may impact future service delivery and use of assets have been identified and documented in Table 51. At this time, specific projections have not been calculated and will be updated in the 2025 AM Plan per the timelines stated in the AMP Overview. Growth projections have been shown in the AMP Overview.

3.5.3 Demand Impact and Demand Management Plan

The impact of demand drivers that may affect future service delivery and use of assets are shown in Table 51.

Demand for new services will be managed through a combination of managing existing assets, upgrading of existing assets and providing new assets to meet demand and demand management. Demand management practices can include non-asset solutions, insuring against risks, and managing failures.

Opportunities identified to date for demand management are shown in Table 51. Climate change adaptation is included in Table 52. Further opportunities will be developed in future revisions of this AM Plan, as identified in Table 58 in the Continuous Improvement Section.

Table 51: Demand Management Plan				
DEMAND DRIVER	**CURRENT POSITION**	**PROJECTION**	**IMPACT ON SERVICES**	**DEMAND MANAGEMENT PLAN**
Population Change	573,000 (2021)	636,080 (2031)	Greater treatment capacity at WWTP.	Increase budget due to increased costs for treatment. New staff may be required for legislative compliance. Adjust budgets, long-term financial plan, and AM Plan. Construction on Woodward WWTP is currently scheduled to commence in 2026 and be completed in 2030.
Population Change	573,000 (2021)	636,080 (2031)	More WW main required.	Investigate need for new lift stations. New staff may be required for legislative compliance. Adjust budgets, long-term financial plan, and AM Plan. These needs are being investigated by the Water, Wastewater and Stormwater Masterplan which will be completed in early 2023.
Customer Preferences and Expectations	Existing private properties not on a Hamilton wastewater catchment may desire to join system.	More properties connected to Hamilton wastewater catchment.	Additional connections require operations, maintenance and renewals.	Future extensions would be required, and pipe capacities would need to be assessed. New staff may be required for legislative requirements. Adjust budgets, long-term financial plan, and AM plan.

3.5.4 Asset Programs to meet Demand

The new assets required to meet demand may be acquired, donated or constructed. Additional assets are discussed in Section 3.2.1.

Acquiring new assets will commit the City to ongoing operations, maintenance and renewal costs for the period that the service provided from the assets is required. These future costs are identified and considered in developing forecasts of future operations, maintenance and renewal costs for inclusion in the long-term financial plan.

3.5.5 Climate Change Adaptation

The impacts of climate change may have a significant impact on the assets we manage and the services they provide. In the context of the asset management planning process, climate change can be considered as both a future demand and a risk.

Climate change impacts on assets will vary depending on the location and the type of services provided, as will the way in which those impacts are responded to and managed.[11]

As a minimum the City must consider how to manage our existing assets given potential climate change impacts for our region.

Risk and opportunities identified to date are shown in Table 52. This is a continuous process and will be updated in the 2025 AM Plan per the timelines outlined in the AMP Overview.

Table 52: Managing the Impact of Climate Change on Assets and Services

CLIMATE CHANGE DESCRIPTION	PROJECTED CHANGE	POTENTIAL IMPACT ON ASSETS AND SERVICES	MANAGEMENT
Increased wet weather events	Increased demand on combined sewer system.	Wastewater system at capacity causing more combined sewer overflows into natural watercourse.	Monitor overflows and bypasses. Develop plans to mitigate the increased demand (e.g. increased wet weather treatment capacity, additional wet weather storage capacity, or removal of wet weather flow from the combined sewer system).

[11] IPWEA Practice Note 12.1 Climate Change Impacts on the Useful Life of Infrastructure

Additionally, the way in which the City constructs new assets should recognize that there is opportunity to build in resilience to climate change impacts. Building resilience can have the following benefits:

- Assets will withstand the impacts of climate change;
- Services can be sustained; and,
- Assets that can endure may potentially lower the lifecycle cost and reduce their carbon footprint.

Table 53 summarizes some asset climate change resilience projects the City is currently pursuing.

Table 53: Building Asset Resilience to Climate Change

PROJECT	PROJECT DESCRIPTION	CLIMATE CHANGE IMPACT	BUILD RESILIENCE IN NEW WORKS
West Mountain Inflow & Infiltration (I/I) Study	Quantify I/I generated in West Mountain service areas.	I/I will increase as wet weather events increase due to climate change and may increase likelihood of basement flooding.	To improve Hamilton's climate resiliency by decreasing our vulnerability to extreme weather, minimizing future damages, take advantage of opportunities, and better recover from future damages.
Lift Station Upgrades	Upgrades increasing energy efficiency of equipment at various stations as well as increased capacity.	Old technology at facilities leads to wasted energy which increases GHG emissions, in addition increased capacity provides additional resilience.	To increase the number of new and existing high performance state-of-the-art buildings that improve energy efficiency and adapt to a changing climate.
Combined Sewer Upgrades	Ongoing work to upgrade the capacity and separate combined sewer infrastructure.	Significant wet weather events which may increase due to climate change may cause combined sewers to overflow more often into natural watercourses.	To improve Hamilton's climate resiliency by decreasing our vulnerability to extreme weather, minimizing future damages, take advantage of opportunities, and better recover from future damages.
WWTP Expansions	Expand treatment capacity at WWTPs for additional wet weather flow capacity.	Significant wet weather events which may increase due to climate change may cause WWTP to reach capacity and bypass wastewater into natural watercourse more often.	To improve Hamilton's climate resiliency by decreasing our vulnerability to extreme weather, minimizing future damages, take advantage of opportunities, and better recover from future damages.
Sewer Pipe Flow Monitoring	Monitors reveal whether wastewater sewers are receiving substantial amounts of rainwater inflow and groundwater infiltration (I/I) which can result in flooding.	Significant wet weather events which may increase due to climate change may cause the combined sewer system to reach capacity.	To improve Hamilton's climate resiliency by decreasing our vulnerability to extreme weather, minimizing future damages, take advantage of opportunities, and better recover from future damages.
Back Water Valves for Outfalls	Installation of back water valves at all CSO outfall locations. Mitigation/diversion of wet weather flows from the environment.	Significant wet weather events which may increase due to climate change may cause the combined sewer system to reach capacity.	To improve Hamilton's climate resiliency by decreasing our vulnerability to extreme weather, minimizing future damages, take advantage of opportunities, and better recover from future damages.
CCTV Inspections	Lateral CCTV Inspections, CCTV & Zoom Camera Inspections - proactive with inspections to help determine structural condition of pipes, presence of blockages,	Significant wet weather events which may increase due to climate change may cause the combined sewer system to reach capacity.	To improve Hamilton's climate resiliency by decreasing our vulnerability to extreme weather, minimizing future damages, take advantage of opportunities, and better recover from future damages.
Cured in Place Pipe Rehabilitation Program	Cured in Place Pipe (CIPP) Rehabilitation Program - when initiated, helps prevent infiltration and exfiltration's of water from the sewer system.	I/I will increase if wet weather events increase due to climate change and will increase likelihood of basement flooding.	To improve Hamilton's climate resiliency by decreasing our vulnerability to extreme weather, minimizing future damages, take advantage of opportunities, and better recover from future damages.
Children's Water Festival	Support and Coordination of the annual Children's Water Festival. Educate children about importance of water quality and conservation.	The City is a steward of the infrastructure built and needs to ensure future generations are educated about climate change’s effects on our infrastructure.	To ensure all our work promotes equity, diversity, health and inclusion and improves collaboration and consultation with all marginalized groups, including local Indigenous Peoples.
Master Plan Update	Identify infrastructure needs related to growth. Guiding policy item related to GHG emission reduction.	Population increases and increased wet weather events will change the design capacity of the system, and so the City needs to plan accordingly.	To improve Hamilton's climate resiliency by decreasing our vulnerability to extreme weather, minimizing future damages, take advantage of opportunities, and better recover from future damages.
Flooding and Drainage Improvement Framework	Master study to identify existing performance of the City's combined sewer network and to identify system enhancements to reduce the risk of basement flooding.	Develop a long range plan to improve the performance of the combined sewer network and to reduce basement flooding during wet weather.	To improve Hamilton's climate resiliency by decreasing our vulnerability to extreme weather, minimizing future damages, take advantage of opportunities, and better recover from future damages.

The impact of climate change on assets is a new and complex discussion and further opportunities will be developed in future revisions of this AM Plan.

3.6 RISK MANAGEMENT

The purpose of infrastructure risk management is to document the findings and recommendations resulting from the periodic identification, assessment and treatment of risks associated with providing services from infrastructure, using the fundamentals of International Standard ISO 31000:2018 Risk management – Principles and guidelines.

Risk Management is defined in ISO 31000:2018 as: 'coordinated activities to direct and control with regard to risk[12].

The City is developing and implementing a formalized risk assessment process to identify risk associated with service delivery and to implement proactive strategies to mitigate risk to tolerable levels. The risk assessment process identifies credible risks associated with service delivery and will identify risks that will result in loss or reduction in service, personal injury, environmental impacts, a 'financial shock', reputational impacts, or other consequences.

The risk assessment process identifies credible risks, the likelihood of those risks occurring, and the consequences should the event occur. The City is further developing its risk assessment maturity with the inclusion of a risk rating, evaluation of the risks and development of a risk treatment plan for those risks that are deemed to be non-acceptable in the next iteration of the AM Plan.

3.6.1 Critical Assets

Critical assets are defined as those which have a high consequence of failure causing significant loss or reduction of service. Critical assets have been identified and along with their typical failure mode, and the impact on service delivery, are summarized in Table 54. Failure modes may include physical failure, collapse or essential service interruption.

Table 54: Critical Assets

CRITICAL ASSET(S)	FAILURE MODE	IMPACT
Wastewater Treatment Plants	Essential Service Interruption Contamination	Untreated wastewater returns to the environment and degrades Hamilton Harbour and the integrated natural ecosystems.
Lift Station	Essential service interruption Contamination	Wet well overflows resulting in wastewater spills and property damage caused by back-ups.
Critical Combined / Wastewater Main	Physical Failure	Sewer backups resulting in wastewater spills and property damage caused by back-ups.

[12] ISO 31000:2009, p 2

Table 54: Critical Assets		
CRITICAL ASSET(S)	**FAILURE MODE**	**IMPACT**
CSO	Physical failure	CSO tank leaks and degrades Hamilton Harbour and the integrated natural ecosystems.
SCADA	System Failure	Essential service interruption to WWTP and lift stations causing above failures.

By identifying critical assets and failure modes an organization can ensure that investigative activities, condition inspection programs, maintenance and capital expenditure plans are targeted at critical assets.

3.6.2 Risk Assessment

The risk assessment process identifies credible risks, the likelihood of the risk event occurring, the consequences should the event occur, development of a risk rating, evaluation of the risk and development of a risk treatment plan for non-acceptable risks.

An assessment of risks associated with service delivery will identify risks that will result in loss or reduction in service, personal injury, environmental impacts, a ‘financial shock’, reputational impacts, or other consequences.

Critical risks are those assessed with ‘Very High’ (requiring immediate corrective action) and ‘High’ (requiring corrective action) risk ratings identified in the Infrastructure Risk Management Plan. The residual risk and treatment costs of implementing the selected treatment plan is shown in Table 55. It is essential that these critical risks and costs are reported to management. Additional risks will be developed in future iterations of the plan and is identified in Table 58 in the Continuous Improvement Section the plan.

Table 55: Risks and Existing Controls
Note * The residual risk is the risk remaining after the selected risk treatment plan is implemented.

SERVICE OR ASSET AT RISK	WHAT CAN HAPPEN	RISK RATING	EXISTING CONTROLS
WWTP	Plant reaches capacity due to significant wet weather event.	High	Bypasses exist at each treatment level to bypass plant when necessary.
Lift Station	Pump failure or station reaches capacity.	High	Monthly station checks and verifications by operators. Overflows at station. Contingency planning. Emergency SOPs.
Critical WW, Interceptor, or Combined Main	Blockage due to structural failure, oils or debris	High	Inspections occur based on priority.
Forcemain	Break due to pressure transient, aging pipe, sewer gas build up.	High	Emergency sewer repair contract. Some forcemains have a redundancy (e.g. twinned).

3.6.3 Infrastructure Resilience Approach

The resilience of our critical infrastructure is vital to the ongoing provision of services to customers. To adapt to changing conditions the City needs to understand its capacity to 'withstand a given level of stress or demand', and to respond to possible disruptions to ensure continuity of service. An example would be how wastewater assets operate during their peak usage. We do not currently measure our resilience in service delivery and will be included in the next iteration of the AM Plan.

Resilience covers the capacity of the City to withstand any service disruptions, act appropriately and effectively in a crisis, absorb shocks and disturbances as well as adapting to ever changing conditions. Resilience is built on aspects such as response and recovery planning, financial capacity, climate change, risk assessment and crisis leadership.

3.6.4 Service and Risk Trade-Offs

The decisions made in AM Plans are based on the objective to achieve the optimum benefits from the available resources. At this time, the City does not have sufficient data to present risks and tradeoffs. This information will be presented in the **2025** AM Plan regarding Proposed Levels of Service per the timelines outlined in the AMP Overview.

3.7 FINANCIAL SUMMARY

This section contains the financial requirements resulting from the information presented in the previous sections of this AM Plan. Effective asset and financial management will enable the City to ensure its wastewater network provides the appropriate level of service for the City to achieve its goals and objectives. Reporting to stakeholders on service and financial performance ensures the City is transparently fulfilling its stewardship accountabilities.

Long-Term financial planning (LTFP) is critical for the City to ensure the networks lifecycle activities such as renewals, operations, maintenance and acquisitions can happen at the optimal time. The City is under increasing pressure to meet the wants and needs of its customer while keeping costs at an affordable level and maintaining its financial sustainability.

Without funding asset activities properly for its wastewater network; the City will have difficult choices to make in the future which will include options such as higher cost reactive maintenance and operational costs, reduction of service and potential reputational damage.

The City will be seeking to fully incorporate its wastewater network into the LTFP. Aligning the LTFP with the AM Plan is critical to ensure the all the networks needs will be met while the City is finalizing a clear financial strategy with measurable financial targets. The financial projections will be improved as the discussion on desired levels of service and asset performance matures.

3.7.1 Sustainability of service delivery

There are two key indicators of sustainable service delivery that are considered in the AM Plan for this service area. The two indicators are the:

- asset renewal funding ratio (proposed renewal budget for the next 10 years / forecast renewal costs for next 10 years); and,
- medium term forecast costs/proposed budget (over 10 years of the planning period).

ASSET RENEWAL FUNDING RATIO

Asset Renewal Funding Ratio[13] **45.7**%

The Asset Renewal Funding Ratio is used to determine if the City is accommodating asset renewals in an **optimal** and **cost effective** manner from a timing perspective and relative to financial constrains, the risk the City is prepared to accept and service levels it wishes to maintain. Ideally the target renewal funding ratio should be ideally between **90% - 110%** over the entire planning period. A low indicator result generally indicates that service levels are achievable however the expenditures are below this level because the City is challenged to fund the necessary work or has historical preferences or constraints that prevent Hamilton from utilizing additional debt.

[13] AIFMM, 2015, Version 1.0, Financial Sustainability Indicator 3, Sec 2.6, p 9.

Over the next 10 years the City expects to have **45.7%** of the funds required for the optimal renewal of assets. By only having sufficient funding to renew **45.7%** of the required assets in the appropriate timing it will inevitably require difficult trade off choices that could include:

- a reduction of the level of service and availability of assets;
- increased complaints and reduced customer satisfaction;
- increased reactive maintenance and renewal costs; and,
- damage to the City's reputation and risk of fines or legal costs.

The lack of renewal resources will be addressed in future AM Plan's while aligning the plan to the LTFP. This will allow staff to develop options and long-term strategies to address the renewal rate. The City will review its renewal allocations once the entire inventory has been confirmed and amalgamated.

MEDIUM TERM – TEN (10) - YEAR FINANCIAL PLANNING PERIOD

This AM Plan identifies the forecast operations, maintenance and renewal costs required to provide an agreed level of service to the community over a ten (10) - year period. This provides input into ten (10) - year financial and funding plans aimed at providing the required services in a sustainable manner. As the City continues to develop condition profiles and necessary works are identified based on their condition, it is anticipated operation and maintenance forecasts will increase significantly.

This forecast work can be compared to the proposed budget over the first ten (10) - years of the planning period to identify any funding shortfall.

The forecast operations, maintenance and renewal costs over the ten (10) - year planning period is **$163,083,936** on average per year.

The proposed (budget) operations, maintenance and renewal funding is **$113,198,976** on average per year giving a ten (10) - year funding **shortfall** of **$49,884,956** per year or **$498,849,560** in total over the ten year planning period . This indicates that **69.41%** of the forecast costs needed to provide the services documented in this AM Plan are accommodated in the proposed budget. Note, these calculations exclude acquired assets.

Funding an annual funding shortfall or funding 'gap' of **$49,884,956** per year cannot be addressed in a single year and has not been incorporated as identified within this plan into any existing plan. The Gap will require vetting, planning and resources to begin to incorporate gap management into the future budgets. This gap will need to be managed over time to reduce it in a sustainable manner and limit financial shock to customers. Options for managing the gap include;

- Financing strategies – increased funding, block funding for specific lifecycle activities, long term debt utilization
- Adjustments to lifecyle activites – increase/deacrease maintenance or operations, increase/decrease frequency of renewals, limit acquisitions or dispose of underutilized assets

- Influence level of service expectations or demand drivers

These options and others will allow Hamilton to ensure the gap is managed appropriately and ensure the level of service ouctomes the customers desire.

Providing sustainable services from infrastructure requires the management of service levels, risks, forecast outlays and financing to achieve a financial indicator of approximately 1.0 for the first years of the AM Plan and ideally over the ten (10) - year life of the Long-Term Financial Plan.

3.7.2 Forecast Costs (Outlays) For the Long-Term Financial Plan

Table 56 shows the forecast costs (outlays) required for consideration in the ten (10) - year long-term financial plan.

Providing services in a financially sustainable manner requires a balance between the forecast outlays required to deliver the agreed service levels with the planned budget allocations in the operational and capital budget. The City will begin developing its long-term financial plan (LTFP) to incorporate both the operational and capital budget information and help align the LTFP to the AM Plan which is critical for effective asset management planning.

A gap between the recommended forecast outlays and the amounts allocated in the operational and capital budgets indicates further work is required on reviewing service levels in the AM Plan.

The City will manage the ‘gap’ by continuing to develop this AM Plan to provide guidance on future service levels and resources required to provide these services in consultation with the community. Options to manage the gap include reduction and closure of low use assets, increased funding allocations, reduce the expected level of service, utilize debt based funding over the long term, adjustments to lifecycle activities, improved renewals and multiple other options or combinations of options. These options will be explored in the next AM Plan and the City will provide analysis and options for Council to consider going forward.

Table 56: Forecast Costs (Outlays) for the Long-Term Financial Plan
Forecast costs are shown in 2021 dollar values.

YEAR	ACQUISITION	OPERATION	MAINTENANCE	RENEWAL	DISPOSAL	TOTAL
2022	$61,038,000	$59,194,776	$32,185,000	$59,908,000	0	$212,325,776
2023	$24,590,000	$58,426,964	$9,750,000	$34,275,000	0	$127,041,968
2024	$43,395,000	$60,198,444	$9,600,000	$40,210,000	0	$153,403,440
2025	$17,170,000	$61,421,980	$8,500,000	$54,785,000	$110,000	$141,986,976
2026	$99,194,664	$64,897,460	$8,158,000	$45,158,332	$1,190,000	$218,598,464
2027	$99,194,664	$66,923,880	$8,158,000	$46,448,332	0	$220,724,880
2028	$99,194,664	$69,031,352	$8,158,000	$39,328,332	0	$215,712,352
2029	$31,900,00	$71,223,128	$8,158,000	$14,670,000	0	$97,241,128
2030	$2,770,000	$73,502,576	$8,158,000	$13,805,000	0	$98,235,576
2031	$2,770,000	$75,873,200	$8,158,000	$13,725,000	0	$100,526,200

3.7.3 Funding Strategy

The proposed funding for assets is outlined in the City's operational budget and ten (10) - year capital budget.

These operational and capital budgets determine how funding will be provided, whereas the AM Plan typically communicates how and when this will be spent, along with the service and risk consequences. Future iterations of the AM Plan will provide service delivery options and alternatives to optimize limited financial resources.

3.7.4 Valuation Forecasts

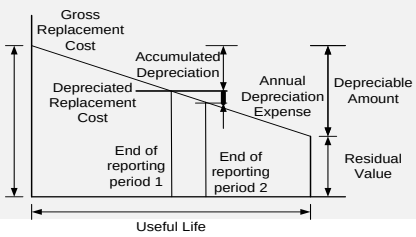
Asset values are forecast to increase as projections improve and can be validated as market pricing. The net valuations will increase significantly despite some assets being programmed for disposal that will be removed from the register over the ten (10) – year planning horizon.

Any additional assets will add to the operations and maintenance needs in the longer term and would also require additional costs due to future renewals obligations. Any additional assets will also add to future depreciation forecasts. Any disposals of assets would decrease the operations and maintenance needs in the longer term and removes the high costs renewal obligations.

3.7.5 Asset Valuations

The best available estimate of the value of assets included in this AM Plan are shown below. The assets are valued at estimated replacement costs:

Replacement Cost (Current/Gross)	$7,254,000,000
Depreciable Amount	$7,254,000,000
Depreciated Replacement Cost[14]	$4,134,922,240
Depreciation	$ 118,148,849



The current replacement cost is the most common valuation approach for specialized infrastructure assets such as infrastructure waste water assets. The methodology includes establishing a comprehensive asset registry, assessing replacement costs (based on market pricing for the modern equivalent assets), determining the appropriate depreciation method, testing for impairments, and determining remaining useful life.

3.7.6 Key Assumptions Made in Financial Forecasts

In compiling this AM Plan, it was necessary to make some assumptions. This section details the key assumptions made in the development of this AM Plan and should provide readers with an understanding of the level of confidence in the data behind the financial forecasts.

Key assumptions made in this AM Plan are:

- Operational forecasts are based on current budget allocations and are the basis for the projections for the 10-year horizon and do not address other operational needs not yet identified;
- Maintenance forecasts are based on current budget allocations and do not identify all asset needs at this time. It is solely based on planned activities;
- 1% p.a. has been added to maintenance forecasts to accommodate for donated assets assumed over the 10-year planning horizon;

[14] Also reported as Written Down Value, Carrying or Net Book Value.

- 1.03 % p.a has been added to operational forecasts to accommodate for donated assets assumed over the 10-year planning horizon; and,
- Replacement costs were based on historical costing and engineering estimates. They were also made without determining what the asset would be replaced with in the future.

3.7.7 Forecast Reliability and Confidence

The forecast costs, proposed budgets, and valuation projections in this AM Plan are based on the best available data. For effective asset and financial management, it is critical that the information is current and accurate. Data confidence is defined in the AMP Overview.

The estimated confidence level for and reliability of data used in this AM Plan is shown in Table 57.

Table 57: Data Confidence Assessment for Data used in AM Plan

DATA	CONFIDENCE ASSESSMENT	COMMENT
Demand drivers	Medium	Further investigation is required to better understand demand drivers
Growth projections	Medium	Current growth projections will need to be vetted an improved. Continuous improvements are required and identified
Acquisition forecast	Medium	Currently based on 2019 DC study and SME opinion. Continuous improvements are required and identified
Operation forecast	Medium	Currently budget based and requires future improvement to ensure allocation is accurate
Maintenance forecast	Medium	Currently budget based and requires future improvement to ensure allocation is accurate
Renewal forecast - Asset values	Medium	Currently budget based and requires future improvements to further identify specific needs
- Asset useful lives	Low	Based on SME opinion. Continuous improvement required to ensure data is vetted and ensure it aligns with Hamilton's actual practices
- Condition modelling	Low	Mixture of assessment methods. Requires standardization along with predictable timelines for assessments
Disposal forecast	Low	Current disposal information is rolled into renewal. Continuous improvements are required to ensure accurate data is available.

The estimated confidence level for and reliability of data used in this AM Plan is considered to be a **Medium** confidence level.

3.8 PLAN IMPROVEMENT AND MONITORING

3.8.1 Status of Asset Management Practices[15]

ACCOUNTING AND FINANCIAL DATA SOURCES

This AM Plan utilizes accounting and financial data. The sources of the data:

- 2022 Capital & Operating Budgets;
- 2021 Tender Documents (various);
- Asset Management Data Collection Templates;
- Audited Financial Statements and Government Reporting (FIR, TCA etc);
- Financial Exports from internal financial systems; and,
- Historical cost and estimates of budget allocation based on SME experience.

ASSET MANAGEMENT DATA SOURCES

This AM Plan also utilizes asset management data. The sources of the data are:

- Data extracts from various city applications and management software;
- Asset Management Data Collection Templates;
- Tender documents, subdivision agreements and projected growth forecasts as well as internal reports;
- Condition assessments;
- Subject matter expert opinion and anecdotal information; and,
- Reports from the mandatory biennial inspection, operational & maintenance activities internal reports

3.8.2 Improvement Plan

It is important that the City recognize areas of the AM Plan and planning process that require future improvements to ensure the effective management of the wastewater network assets and to inform decision making. The tasks listed below are essential to improving the AM Plan and the City's ability to make evidence based and informed decisions. These improvements span from improved lifecycle activities, improved financial planning, improved data quality as well as plans to physically improve the assets. The Continuous Improvement plan table below highlights proposed continuous improvement items that will require further discussion and analysis to determine feasibility, resource requirements and alignment to current workplans. Future iterations of this AM Plan will provide updates on these continuous improvement plans. The improvement plan generated from this AM Plan is shown in Table 58.

[15] ISO 55000 Refers to this as the Asset Management System

Table 58: Improvement Plan
*** p.a – per annum**

TASK	TASK	RESPONSIBILITY	RESOURCES REQUIRED	DRAFT TIMELINE
1	Collect and confirm data from databases before it goes into EAM including spatial referencing and possible Collector Apps.	**Hamilton Water**	**$40,000 p.a. $120,000 Total** Internal Staff Time	**3 Years** (2022-2024)
2	Develop a Long Term Financial Plan to connect the budgeting process to AM planning.	**CAM, Hamilton Water, Finance**	**$15,000 p.a $60,000 Total** Internal Staff Time	**4 Years** (2022-2025)
3	Complete condition assessments on WWTPs.	**CAM, Hamilton Water,**	**$250,000 Total** Internal Staff, Tender Process Specialty Assessor	**3 Years** (2022-2024)
4	Investigate modifying control gates inspection to incorporate condition score.	**CAM, Hamilton Water,**	**$10,000 Total**	**2 Years** (2022-2023)
5	Standardize condition assessments for critical wastewater main, combined main, interceptor and forcemain and establish timeline to complete system wide assessment.	**CAM, Hamilton Water, Infrastructure Renewal**	**$10,000 p.a. $20,000 Total** Internal Staff Time	**2 Years** (2022-2023)
6	Plan condition assessments for vertical assets on a regular cycle (e.g. 10 years).	**CAM, Hamilton Water,**	**$11,000** Internal Staff Time	**1 Year** (2022)
9	Standardize condition assessment outcomes and timed deliverables.	**CAM, Hamilton Water,**	**$6,000 p.a. $18,000 Total** Internal Staff Time	**3 Years** (2022-2024)
10	Improve data confidence levels for asset register.	**CAM, Hamilton Water,**	**10,000 p.a. $50,000 Total** Internal Staff Time	**5 Years** (2022-2026)

Table 58: Improvement Plan
*** p.a – per annum**

TASK	TASK	RESPONSIBILITY	RESOURCES REQUIRED	DRAFT TIMELINE
11	Improve Growth projection data and modelling for next AM Plan iteration.	**CAM, Hamilton Water, Ec. Dev**	**$6,000 p.a. $12,000 Total** Internal Staff Time	**2 Years** (2022-2023)
12	Develop and implement an annual demand review process to ensure sufficient knowledge is available to inform future planning.	**CAM, Hamilton Water, Ec. Dev**	**$17,500 $35,000 Total** Internal Staff Time	**2 Years** (2022-2023)
13	Analyze operational budget to improve AM allocations for lifecycle activities.	**CAM, Hamilton Water, Finance**	**$10,000 p.a. $30,000 Total** Internal Staff Time	**3 Years** (2022-2024)
14	Analyze maintenance activities to identify future needs and recommended actions.	**CAM, Hamilton Water**	**$10,000 p.a. $40,000 Total** Internal Staff Time	**4 Years** (2022-2025)
15	Develop Renewal forecasting prioritization to optimize resources and ensure level of services can be maintained.	**CAM, Hamilton Water**	**$6,000 p.a. $24,000 Total** Internal Staff Time	**4 Years** (2022-2025)
16	Improve annual engagement survey process to optimize engagement and respondents.	**CAM, Hamilton Water, Communications**	**$35,000 p.a. $140,000 Total** Internal Staff Time	**4 Years** (2022-2025)
17	Review BIMA Scorecard reporting and ensure data and assumptions are consistent with ministry and City reporting and develop additional technical metrics.	**CAM, Hamilton Water, Continuous Improvement**	**$2,500 p.a. $5,000 Total** Internal Staff Time	**2 Years** (2022-2023)
18	Standardize and develop risk management knowledge along with supporting documentation.	**CAM, Engineering Services, Continuous Improvement**	**$12,500 p.a. $25,000 Total** Internal Staff Time	**2 Years** (2022-2023)

Table 58: Improvement Plan
*** p.a – per annum**

TASK	TASK	RESPONSIBILITY	RESOURCES REQUIRED	DRAFT TIMELINE
19	Identify wastewater assets in other divisions and incorporate into next AM Plan.	**CAM, Hamilton Water**	**$10,000 p.a. $30,000 Total** Internal Staff Time	**3 Years** (2022-2024)
20	Investigate sewer laterals repair/replacement procedure for private residence as City does not own asset but acts as asset owner.	**CAM, Hamilton Water**	**$4,000 p.a. $8,000 Total** Internal Staff Time	**2 Years** (2022-2023)
21	Further develop vertical asset knowledge for future iterations of AM Plans.	**CAM, Hamilton Water**	**$50,000 p.a. $150,000 p.a.** Internal Staff Time, Tender Process	**3 Years** (2022-2024)
22	Identify opportunities to separate combined sewer system through renewal activities.	**CAM, Hamilton Water**	**$3,000 p.a. $9,000 p.a.** Internal Staff Time	**3 Years** (2022-2024)
23	Improve asset replacement costs by vetting with current market prices instead of historical costs/estimates or internal models.	**CAM, Hamilton Water, Finance**	**$30,000 p.a. $90,000 Total** Internal Staff Time	**3 Years** (2022-2024)
24	Refine acquisition model to ensure projections are accurate and updated.	**CAM, Hamilton Water, Ec.Dev., Finance**	**$7,000 p.a.** Internal Staff Resources	**Annual**
25	Investigate adding additional odour control units in hot spots.	**CAM, Hamilton Water**	**$5,000** Internal Staff Time	**3 Years** (2022-2024)
26	Incorporate forcemain into watermain inspection program	**CAM, Hamilton Water**	**$200,000 p.a.**	**2 years (2022-2023)**
27	Review maintenance hole inspections to output condition score	**CAM, Engineering Services**	**$6,000 p.a. $24,000 Total** Internal Staff Time	**4 Years** (2022-2025)

Table 58: Improvement Plan * p.a – per annum				
TASK	**TASK**	**RESPONSIBILITY**	**RESOURCES REQUIRED**	**DRAFT TIMELINE**
28	Separate & validate wastewater technical metrics reported in the BIMA tool	**CAM, Hamilton Water**	$5,000 p.a Internal Staff Time	Annual
29	Ensure new technical metrics are considering different lifecycle stages (e.g. acquisition, disposal)	**CAM, Hamilton Water**	$2,000 p.a $6.000 Total Internal Staff Time	3 Years (2022-2024)

3.8.3 Monitoring and Review Procedures

This AM Plan will be reviewed during the annual budget planning process and revised to show any material changes in service levels, risks, forecast costs and proposed budgets as a result of budget decisions.

The AM Plan will be reviewed and updated on a regular basis to ensure it represents the current service level, asset values, forecast operations, maintenance, renewals, acquisition and asset disposal costs and planned budgets. These forecast costs and proposed budget will be incorporated into the Long-Term Financial Plan once completed.

3.8.4 Performance Measures

The effectiveness of this AM Plan can be measured in the following ways:

- The degree to which the required forecast costs identified in this AM Plan are incorporated into the long-term financial plan;
- The degree to which the 1-10 year detailed works programs, budgets, business plans and corporate structures consider the 'global' works program trends provided by the AM Plan;
- The degree to which the existing and projected service levels and service consequences, risks and residual risks are incorporated into the Strategic Planning documents and associated plans; and,
- The Asset Renewal Funding Ratio achieving the Organizational target (this target is often 90 – 100%)

2022 Stormwater Asset Management Plan

Hamilton

STORMWATER SERVICE AREA

Description

The stormwater network collects stormwater from rooftops, roads, ditches, and other impervious surfaces across the City and conveys it to the natural watercourse. These assets relate to the collection, transmission, treatment, retention, infiltration, control or disposal of stormwater.

Replacement Value $3.1 Billion

Average Asset Condition

Did You Know?

- Replacing grass or gardens on your property with asphalt or concrete can increase the demand on the stormwater network.
- Low Impact Developments (LIDs) are systems that allow for infiltration or storage of stormwater. Solutions can include rain barrels and gardens.

Critical Asset Summary

Critical Assets	Quantity	Replacement Cost	Condition	Stewardship Measures
Stormwater Management ponds	119	$179 million	Good	% of Ponds inspected in 2021 **100%**
Pump Station	2	$9.52 million	Very Good	Inspection Frequency **Monthly**
Gravity Main	1,263 km	$1.8 billion	Good	km's of Main Inspected in 2021 **78 km**

Data Confidence

VERY HIGH | MEDIUM | VERY LOW

FINANCIAL FACTS

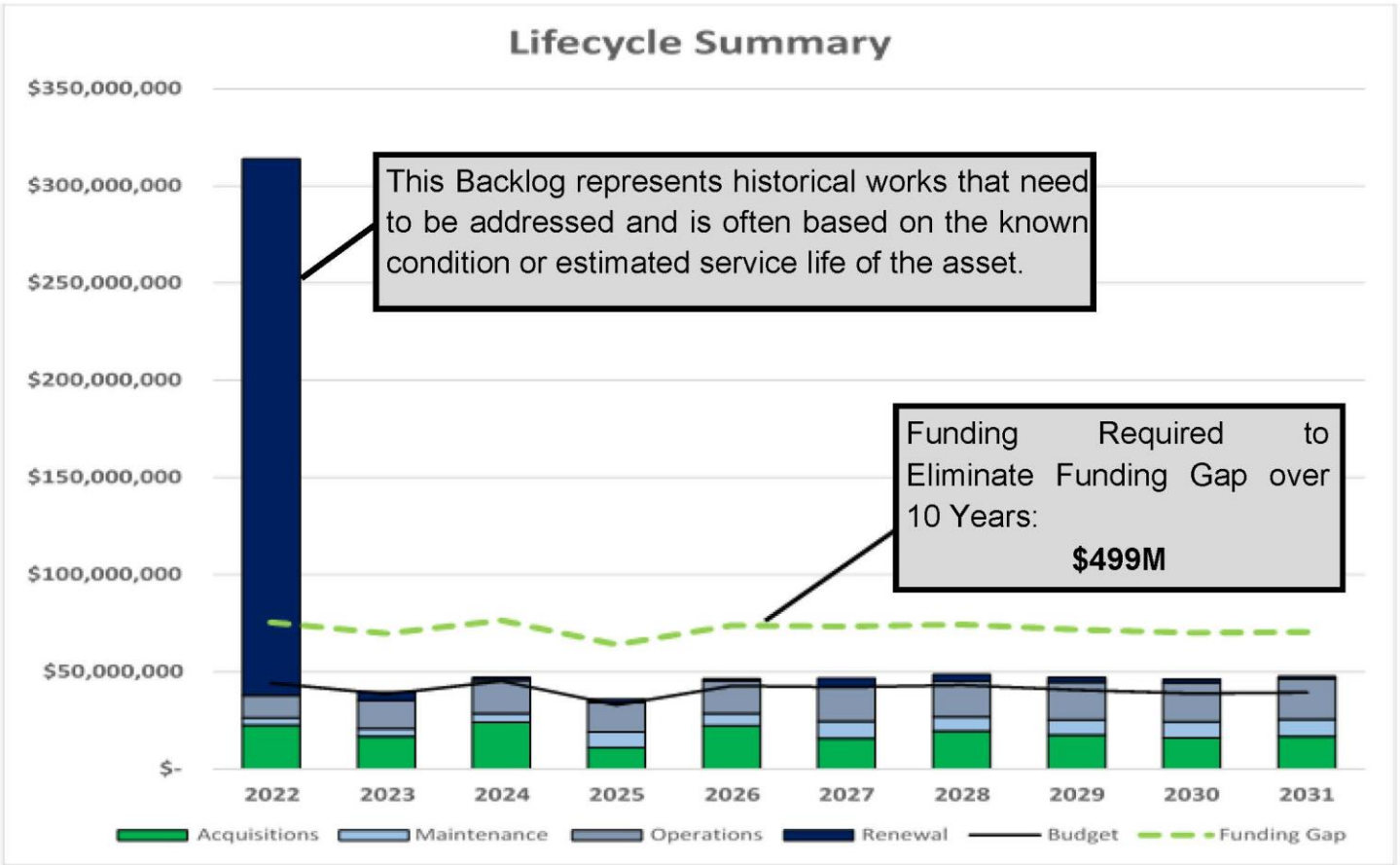
- Hamilton will receive **$451 million** dollars worth of assets over the next 10 years.
- Hamilton will invest on average **$239 million** to operate, maintain Stormwater assets over the next ten year.

DID YOU KNOW?

- Stormwater Management Ponds reduce the risk of flooding throughout the community by storing water.
- The City is completing stormwater modelling to mitigate flooding risks.

FINANCIAL INDICATORS

Type of Indicator	Measurement	Explanation
Asset Renewal Ratio	**9.49%**	This ratio demonstrates the rate the city renews its Stormwater Assets
10 Year O&M Forecast	**43%**	The % of funding allocated compared to what needs to be spent
Annual Infrastructure Gap	**$31 million**	The difference between what is being spent and what should be spent



4.0 STORMWATER ASSETS

The stormwater network collects stormwater from rooftops, roads, ditches, and other surfaces across the City and conveys it to the natural watercourse. The service objective is to provide reliable stormwater services by preventing flooding. A reliable stormwater network service provides both direct and indirect benefits ensuring good public health to the broader community. For this iteration of the AM Plan, stormwater assets include linear and vertical assets.

Stormwater assets relate to the collection, transmission, treatment, retention, infiltration, control or disposal of stormwater. For this iteration of the AM Plan the stormwater asset class hierarchy is grouped into linear and vertical assets. Vertical assets are assets that can only occupy one site and are typically within a building or a facility which may be comprised of other multiple components. Linear assets are assets which traverse horizontally and are often defined by length but also encompass components that are considered part of the linear network. It is important to note that watercourses and shorelines can also be considered Stormwater assets, but these will be included in the Natural Assets AM Plan which will be included in the 2024 iteration of the AM Plan.

The asset class asset hierarchy outlining assets included in this section is shown below in Table 59.

Table 59: Asset Class Hierarchy

VERTICAL ASSETS	LINEAR ASSETS
Pump Station	Trunk Main
Flood Control Structure	Local Main
Flood Control Gate	Minor Culverts
Stormwater Management (SW) Ponds	Catchbasins (CB)
	Catchbasin Maintenance Holes (CBMH)
	Maintenance Holes (MH)
	Oil and Grit Separators
	Inlets
	Outfalls
	Ditches
	Swales (No Data)
	Low Impact Development (LID) (No Data)

4.1 BACKGROUND

This AM Plan is intended to communicate the requirements for the sustainable delivery of services through the management of assets, compliance with regulatory requirements and required funding to provide the appropriate levels of service over the 2022 – 2031 planning period. The infrastructure assets covered by this plan include the major components required to deliver effective stormwater services to the City's customers.

The information in the stormwater section of the plan is intended to give a snapshot in time of the current state of the stormwater service area by providing the necessary background, detailed summary, and analysis of existing information.

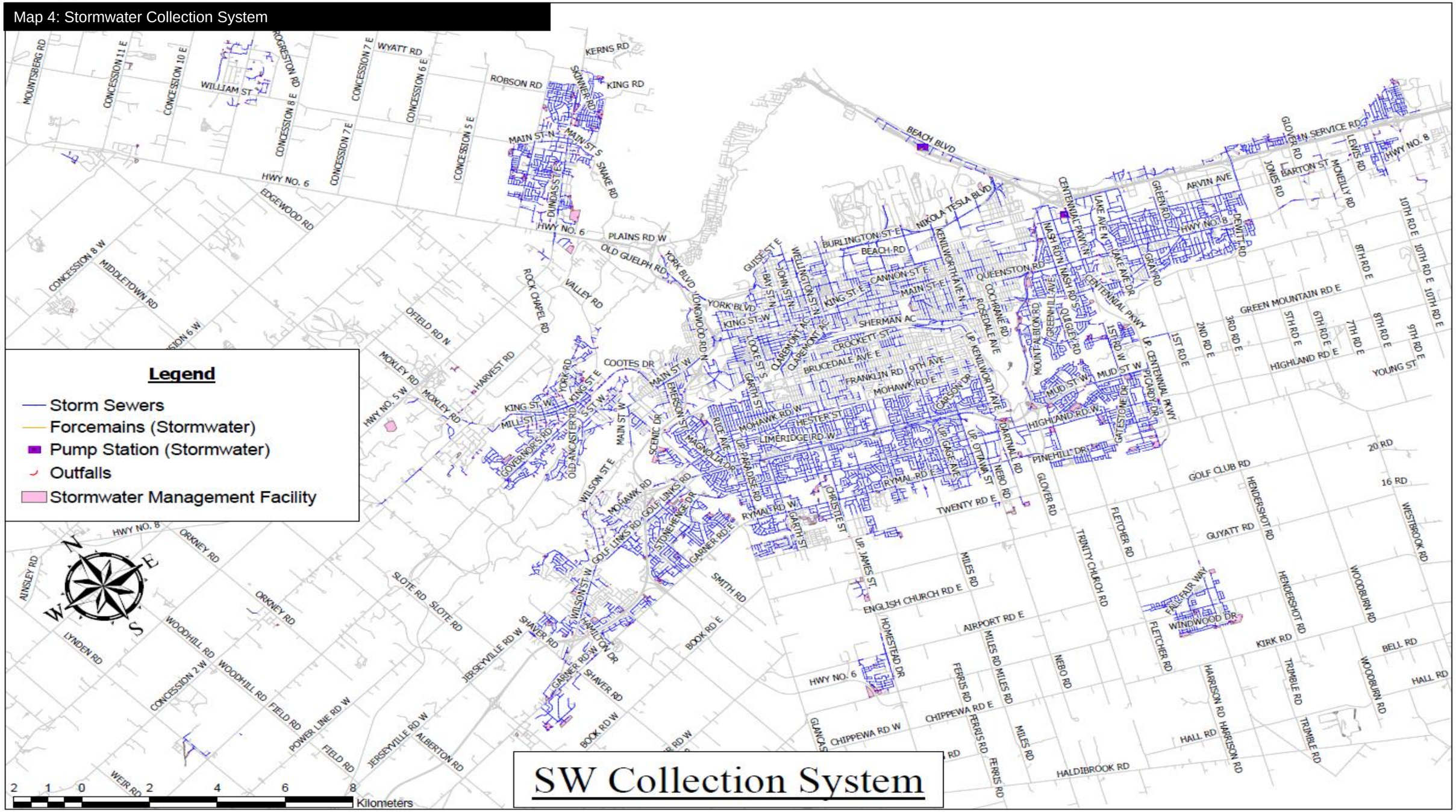
As mentioned in the wastewater section, there are combined sewer mains in the lower and upper City which carry a combination of wastewater and stormwater. The combined sewer infrastructure was considered part of the wastewater section, and so this section includes assets that exclusively manage stormwater (i.e. separated stormwater system). A map of the separated stormwater network and infrastructure is shown below in Map 4.

The City acquired significant amounts of stormwater network assets through amalgamation in 2001. These assets were included into the City's stormwater inventory and were in varied condition and held various collection capacity when acquired. Once amalgamated, any aging assets or deficient assets became the City's responsibility and created several new challenges that will need to be taken into consideration when planning.

The separated stormwater system is common in newer areas of the City such as Stoney Creek east of the Red Hill Valley Parkway, upper Hamilton south of Mohawk Road, and areas in Dundas and Ancaster. However, it is evident in the figure below that there are older areas of the City where combined sewers have been converted to a partially separated storm sewer (in these areas combined sewers have been separated, but often the separated storm sewer discharges into a combined sewer because there is no available outlet to a natural watercourse). In most rural communities, including Glanbrook and Flamborough, stormwater is typically carried to the natural watercourse via ditches and municipal drains, which are not shown on the map below.

Typically, stormwater (excluding stormwater from combined sewers) is released into the natural watercourse without any treatment because stormwater is composed of surface runoff from rain events, and as such does not require specific treatment in the same way as for drinking water and wastewater. However, to reduce any oil and grit from the road network and facilities infiltrating into the natural watercourse, there are assets such as oil and grit separators and stormwater ponds which are designed to settle out grit and collect oil before it is released into surrounding watercourses.

Map 4: Stormwater Collection System



4.1.1 Detailed Summary of Assets

Table 60 below displays the detailed summary of assets for the stormwater service area. In addition, it is possible that there are assets that may not be owned by Public Works which may be considered stormwater assets which may be missing from this inventory. In addition, LiDAR technology could be used to obtain more accurate information on ditches and swales and assist with modelling. This has been identified as a Continuous Improvement Item in Table 82.

The City of Hamilton owns approximately **$3.1B** in stormwater assets which are on average in **Good** condition. For most assets, Good condition means that the City should be completing preventative maintenance activities per the inspection reports as well as operating activities (e.g. inspection, cleaning) to ensure the assets reach their intended useful lives.

Assets are an average of **22 years** in age which means there is an average of **73%** of remaining service life (RSL). Since the separated stormwater asset class is relatively new in comparison to other core asset classes, many assets have not had the same level of inventory control and condition assessment programming. This will be investigated in future iterations of the AM Plan.

The data below is a combination of data from various sources as there is not yet an asset registry containing all inventory information in one data source. Examples of data sources which were used for this iteration of the Core AM Plans are stated in the AMP Overview.

The lack of an asset registry is a continuous improvement item in Table 82. The City must plan to complete a detailed review of this data and create data standards in order to improve overall data quality. Currently, there is no data for swales or low impact developments (LIDs) and so these have not been included as part of this plan. Ditches have been included at a limited capacity since a map was created based on aerial imagery without any attributes.

Table 60: Detailed Summary of Assets
***Weighted Average**

ASSET CATEGORY	NUMBER OF ASSETS	REPLACEMENT VALUE	AVERAGE AGE (% RSL)	AVERAGE EQUIVALENT CONDITION
VERTICAL ASSETS				
Pump Stations	2	$9.52M	8 years (87%)	1-Very Good
Data Confidence	Very High	Medium	Very High	Low
Flood Control Structure	1	$5.0M	No Data	No Data
Data Confidence	Very High	Low	Very Low	Very Low
Flood Control Gate	1	$2.5M	No Data	No Data
Data Confidence	Very High	Low	Very Low	Very Low
SWM Pond (excl wetlands)	119	$178.5M	24 years (76%)	2-Good
Data Confidence	Medium	Low	Medium	Low
	SUBTOTAL	**$195.52M**	**16 years (80%)**	**2-Good***
	Data Confidence	**Low**	**Medium**	**Low**
LINEAR ASSETS				
Trunk Stormwater Main (>600mm diameter)	607.79 km	$1.084B	39 years (60%)	2-Good
Data Confidence	High	Medium	Medium	Medium
Local Stormwater Main (<600mm diameter)	655.70 km	$702.07M	39 years (58%)	2-Good
Data Confidence	High	Medium	Medium	Medium
Catchbasin	49,882	$460.18M	No Data	2-Good
Data Confidence	Medium	Low	Very Low	Low
Maintenance Hole	20,307	$203.07M	40 years (60%)	2-Good
Data Confidence	Medium	Low	Medium	Low
Catchbasin Maintenance Hole	1,101	$11.01M	51 years (49%)	3-Fair
Data Confidence	Medium	Low	Medium	Low
Oil and Grit Separator (OGS)	84	$3.36M	15 years (41%)	3-Fair
Data Confidence	High	Low	High	Low
Storm Sewer Lateral	No data	No data	No data	No data
Data Confidence	Very Low	Very Low	Very Low	Very Low
Minor Culvert	3,448	$172.40M	4 years (92%)	3-Fair
Data Confidence	Medium	Low	Low	High
Inlet	515	$25.75M	26 years (67%)	2-Good
Data Confidence	Medium	Low	Medium	Low
Outfall	917	$45.85M	34 years (57%)	3-Fair
Data Confidence	Medium	Low	Medium	Low
Ditches	1,603.04 km	$240.46M	No Data	No Data
Data Confidence	Low	Low	Very Low	Very Low
Low Impact Development (LID)	No Data	No Data	No Data	No Data
Data Confidence	Very Low	Very Low	Very Low	Very Low
Swales	No Data	No Data	No Data	No Data
Data Confidence	Very Low	Very Low	Very Low	Very Low
	SUBTOTAL	**$2.949B**	**28 years (81%)**	**2-Good***
	Data Confidence	**Medium**	**Medium**	**Low**
	TOTAL	**$3.144B**	**22 years (73%)**	**2-Good***
	Data Confidence	**Medium**	**Medium**	**Low**

The data confidence for number of vertical assets is typically very high due to the asset's locations being above ground and able to be visually confirmed easily. The confidence for stormwater ponds is Medium as there are likely stormwater ponds in new developments that have not yet been incorporated into the existing inventory. There has been a continuous improvement item identified to confirm data across all data sets and unify the data into a single source to reference from in the future. In addition, another identified Continuous Improvement item in Table 82 is to improve the reporting for vertical assets for future iterations of the AM Plan to provide more details on the specific processes they undertake.

Due to the lack of current data, the complexity of vertical assets and the low frequency of asset replacements, it is difficult to achieve a high data confidence for replacement cost for this iteration of the plan. However, improving asset replacement costs by updating current market prices regularly instead of historical costs/estimates or internal models has been identified as a Continuous Improvement Item in Table 82. Age and condition information and data confidence is presented in Table 60.
For linear assets, the data confidence for number of assets is typically Low to Medium. Since many of these assets are newer and are not as stringently regulated as other core assets, there are not formal inventories for all stormwater linear assets. A future improvement in data would be to complete inventories of assets where no or limited data is available (e.g. sewer laterals, ditches, swales, and low impact developments (LIDs)).

These improvements have been noted in Table 82 in the Continuous Improvement section of the report. Please refer to the AMP Overview for a detailed description of data confidence.

4.1.2 Asset Condition Grading

Condition refers to the physical state of the wastewater assets and are a measure of the physical integrity of these assets or components, and is the preferred measurement for planning lifecycle activities to ensure assets reach their expected useful life. Since condition scores are reported using different scales and ranges depending on the asset, Table 61 below shows how each rating was converted to a standardized 5-point condition category so that the condition could be reported consistently across the AM Plan. A continuous improvement item identified in Table 82, is to review existing internal condition assessments and ensure they are revised to report on the same 5-point scale with equivalent descriptions.

Table 61: Condition Grading System

EQUIVALENT CONDITION GRADING	CONDITION DESCRIPTION	% REMAINING SERVICE LIFE	STORM MAIN	MINOR CULVERTS CONDITION	CATCHBASIN
1-Very Good	The asset is new, recently rehabilitated, or very well maintained. Preventative maintenance required only.	>79.5%	PACP Score = 1; If PACP unknown, WRC Structural Score =1; If both unknown: RSL	Maximum Condition Score = 0 during inspection	N/A
2-Good	The asset is adequate and has slight defects and shows signs of some deterioration that has no significant impact on asset's usage. Minor/preventative maintenance may be required.	59.5% – 79.4%	PACP Score = 2; If PACP unknown, WRC Structural Score =2 or Lined Pipe; If all unknown: RSL	Maximum Condition Score =1 during inspection	Good
3-Fair	The asset is sound but has minor defects. Deterioration has some impact on asset's usage. Minor to significant maintenance is required.	39.5% - 59.4%	PACP Score = 3; If PACP unknown, WRC Structural Score =3; If all unknown: RSL	Maximum Condition Score = 2 during inspection	Fair
4-Poor	Asset has significant defects and deterioration. Deterioration has an impact on asset's usage. Rehabilitation or major maintenance required in the next year.	19.5% -39.4%	PACP Score = 4; If PACP unknown, WRC Structural Score =4; If all unknown: RSL	Maximum Condition Score = 3 or culvert was identified as maybe needing a replacement during inspection.	Poor
5-Very Poor	Asset has serious defects and deterioration. Asset is not fit for use. Urgent rehabilitation or closure required.	<19.4%	PACP Score = 5; If PACP unknown, WRC Structural Score =5; If all unknown: RSL	Maximum Condition = 4 or culvert was identified as needing replacement in inspection.	N/A

The following conversion assumptions were made:

- Pipes were based on a combination of PACP and WRC scores where known, where the PACP score was prioritized over the WRC Score.
- If pipe was indicated to have been lined CIPPS, then the condition was assumed to be 2-Good.
- If PACP was unknown, and WRC score was 6, indicating an incomplete inspection, the condition was based on % of remaining service life.
- Minor culverts' condition was based on the worst score for a culvert component.
- Catchbasins' condition was on the existing condition scoring in the database.
- For assets where a condition assessment was not completed, but age information was known, the condition was based on the % of remaining service life.

4.1.3 Vertical

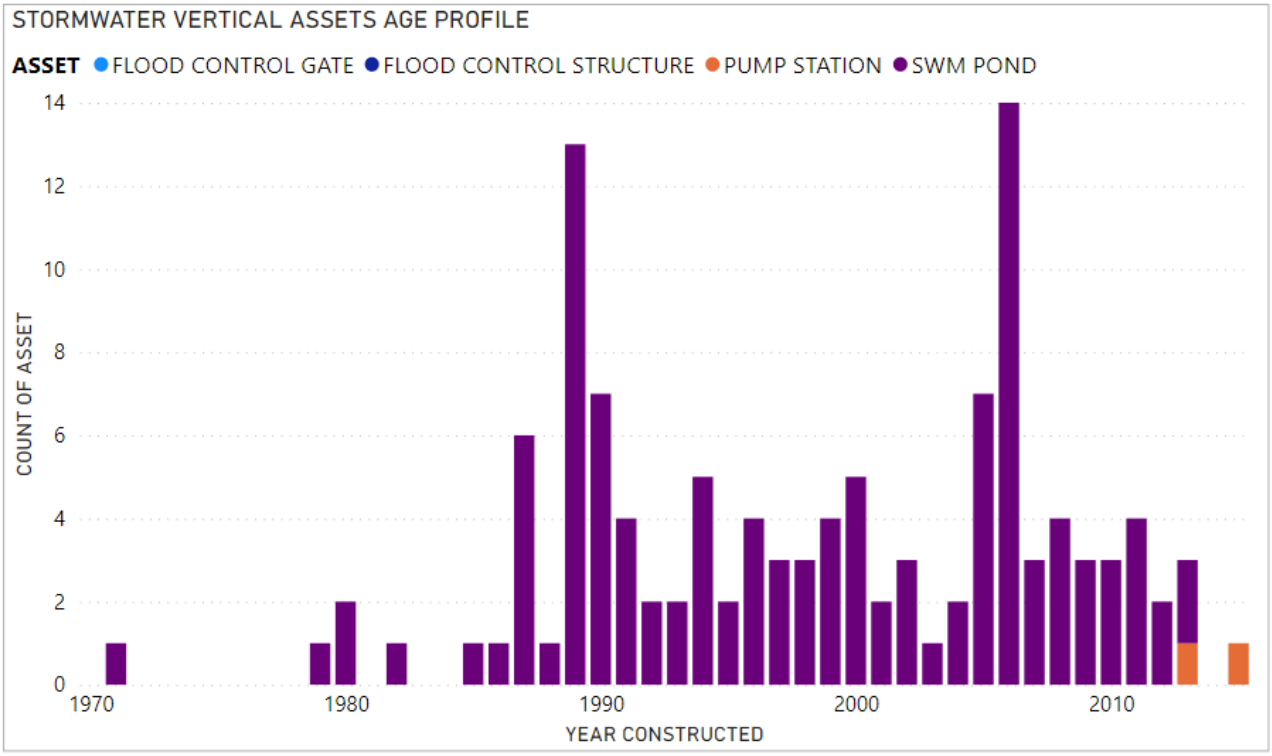
The background information for stormwater vertical assets is below and includes an age profile, the condition methodology used, the condition profile, and asset usage and performance.

4.1.3.1 Age Profile

The age of an asset is an important consideration in the asset management planning process especially for assets that will not receive a typical condition grading through inspections. Some lower cost or lower criticality assets can be planned for renewal based on age as a proxy for condition or until other condition methodologies are established. It should be noted that if a stormwater assets' condition is based on age, it is typically considered to be of a lower confidence level.

The age profile of stormwater vertical assets are shown in Figure 20. An analysis of the age profile is provided below.

Figure 20: Stormwater Vertical Assets Age Profile



STORMWATER PONDS

It is evident that there are spikes in the installation of stormwater (SW) ponds in 1989 and 2006, meaning that there may be a spike in major maintenance requirements in 2031 since full dredging activities are completed on a 25-year cycle per Table 67. In addition, the SW ponds included in the AM Plan are assumed ponds only. There are additional unassumed SW ponds that exist in the City which are not yet the City's responsibility. These will be assumed in future and therefore, may have additional maintenance requirements for which the City is not yet aware. As a result, the age information is considered Medium confidence, even though the dataset is mostly complete.

On average stormwater ponds are 24 years old and have an estimated service life of 100 years and 76% of service life remaining. At this time, there are no SW ponds which have exceeded their service life.

PUMP STATIONS

At this time there are two (2) pump stations which are new assets, with 87% of service life remaining.

FLOOD CONTROL ASSETS

At this time, there is no age data available for the age of flood control assets.

4.1.3.2 Condition Methodology

The inspection frequency, and condition score output for vertical assets is found below in Table 62. An analysis for each asset is found below.

Table 62: Inspection and Condition Information

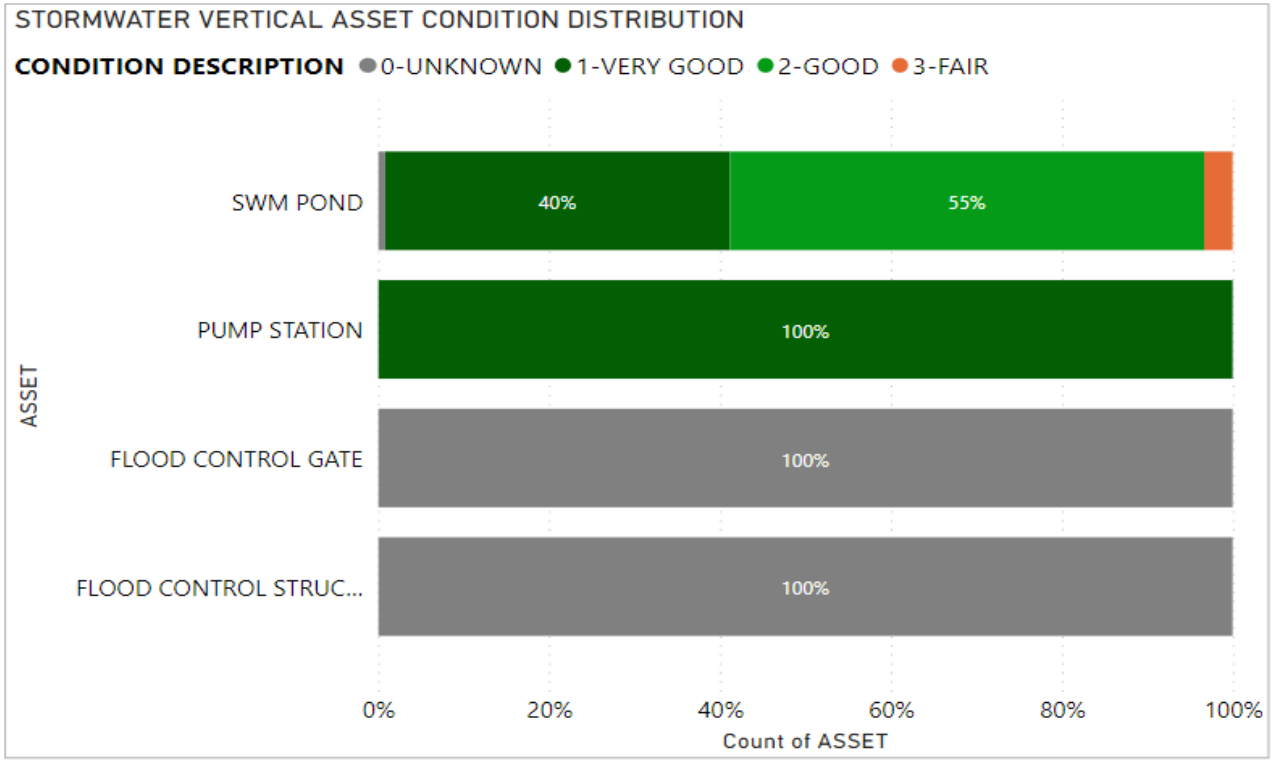
Asset	Inspection Frequency	Condition Score Output
Pump Station	N/A	None – used age
Stormwater Pond	Annually, Ad Hoc	None – used age
Flood Control Structure / Gate	N/A	N/A

Condition assessments for vertical assets are not completed on a regular cycle at this time. A continuous improvement item would be to complete asset condition assessments for pump stations using a similar methodology and frequency as booster and lift stations for water and wastewater assets. Since these assets are new, there has not yet been a need to complete an assessment, but condition assessments should begin on any new facility within a determined timeline after being constructed, possibly 10-15 years into its lifecycle. In addition, stormwater ponds are inspected on an annual basis, but do not output an overall condition score which should be investigated in future. Finally, at this time, flood control assets have not had condition assessments completed and this should be investigated. These items have been identified in Table 82 of the Continuous Improvement section.

4.1.3.3 Asset Condition Profile

The condition profile of the City's assets is shown in Figure 21. As mentioned in Section 4.1.2, the original condition grades were converted to a standardized condition category for report consistency.

Figure 21: Stormwater Vertical Asset Condition Distribution



Based on age data, vertical stormwater assets are typically in Good condition. This is because they are typically early in their useful life. At this time, there is no age or condition data available for flood control assets and therefore they are shown to be of unknown condition.

As previously stated, continuous improvement items have been identified to complete condition assessments for pump stations and flood control assets and to encompass condition scores into existing inspections for stormwater ponds to estimate condition.

4.1.3.4 Asset Usage and Performance

Assets are generally provided to meet design standards where available. However, there are often insufficient resources to address all known deficiencies.

The largest performance issues with vertical stormwater assets involve assets not functioning optimally. The service deficiencies in Table 63 below were identified using staff input.

Table 63: Known Service Performance Deficiencies			
ASSET	**LOCATION**	**SERVICE DEFICIENCY**	**DESCRIPTION OF DEFICIENCY**
Stormwater Pond	Various Locations	Reduced capacity	Backlog of ponds needing cleanout
Flood Gate	Davis Creek	Not functional	Electrical wiring stolen from station and requiring replacement.
Pump Stations	Grafton, Centennial	No emergency power	In the case of power outage, station will not function.

4.1.4 Linear

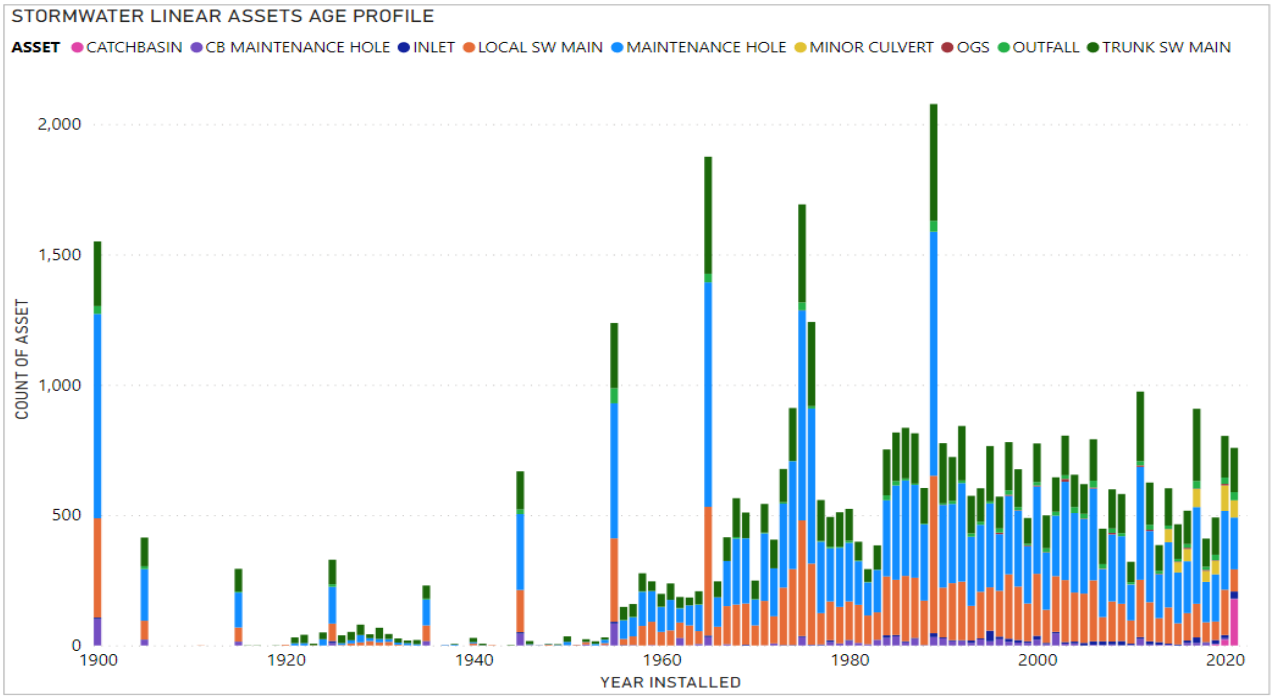
The background information for stormwater linear assets is included below and includes an age profile, the condition methodology used, the condition profile, and asset usage and performance.

4.1.4.1 Age Profile

The age of an asset is an important consideration in the asset management process as it can be used for planning purposes as typically assets have an ESL where they can be planned for replacement.

The age profile of the stormwater linear assets are shown in Figure 22. An analysis of the age profile is provided below for each asset.

Figure 22: Stormwater Linear Assets Age Profile



STORMWATER GRAVITY MAIN (INCLUDING TRUNK AND LOCAL)

Separated stormwater gravity mains began to be installed just before 1960, as best practices changed, and the City began to prioritize separating wastewater and stormwater sewers around this timeframe. The mains installed before this date, have likely been assumed by decade which is why spikes are shown in 1900, 1905, 1915, 1925, 1935, 1945, 1955 and 1965.

The average age for separated trunk and local wastewater main is 39 years with an average ESL of 97 and 93 years resulting in 60% and 58% of the useful life remaining respectively. The condition of storm sewers is typically based on a condition assessment program but if assessments have not been completed, condition was based on age. The age data confidence for stormwater main is considered to be Medium as this information is typically populated, although the source of this data may be estimated.

MAINTENANCE HOLES

Maintenance holes have typically been acquired at a steady distribution over the last 100 years with a peak in 1900. This peak is typically due to estimated values for construction.

The average age of maintenance holes is 40 years, and with an ESL of 100 years, this indicates there is typically 60% of useful life remaining. The age data confidence for maintenance holes is considered to be Medium as this information is typically populated, although the source of this data may be estimated.

CATCHBASIN

Catchbasins are at a very low confidence level since age data was mostly not populated. The current dataset for catchbasins has shown these to be a new asset (installed from 2019 – 2022) which is known to not be accurate. The City will continue to collect or estimate age data on catchbasins.

CATCHBASIN MAINTENANCE HOLE

Catchbasin maintenance holes have typically been acquired at a steady distribution over the last 100 plus years with a peak in 1900. This peak is likely due to estimated values for construction.

The average age of catchbasin maintenance holes is 51 years, and with an ESL of 100 years, this indicates there is typically 49% of useful life remaining. The age data confidence for catch basin maintenance holes is considered to be Medium as this information is typically populated, although some of the source data may be estimated.

INLET

Inlets have typically been acquired at a steady distribution over the last 100 years with a peak in 1995.

The average age of inlets is 26 years, and with an ESL of 80 years, this indicates there is typically 67% of useful life remaining. The age data confidence for inlets is considered to be Medium as this information is typically populated, although the source of this data may be estimated.

OUTFALL

Outfalls have typically been acquired at a steady distribution over the last 100 years with a peak in 1955.

The average age of outfalls is 34 years, and with an ESL of 80 years, this indicates there is typically 57% of useful life remaining. The age data confidence for outfalls is considered to be Medium as this information is typically populated, although the source of this data may be estimated.

MINOR CULVERT

Minor culverts are at a low confidence level since age data was mostly not populated. The current dataset for minor culverts has shown these to be a new asset (installed from 2007 – 2022) which is known to not be accurate.

Since the AM Plan can only present the data that is available, minor culverts are shown to be an average of 4 years old with 92% of service life remaining, which is not accurate.

OIL & GRIT SEPARATOR (OGS)

Oil & grit separators (OGS) are shown to be a relatively new asset, with the first asset being installed in 1975, but the majority being installed after 1990 with a peak in 2003. With an ESL of 25 years, it is possible there may be a spike in renewals for these assets in 2028.

The average age of OGS is 15 years, and with an ESL of 25 years, there is typically 41% of service life remaining. The age data confidence for OGS is considered to be High as this information is typically populated, and the accuracy is thought to be high..

DITCHES

As previously mentioned, there is no age data available for ditches, and so they have not been analyzed based on age.

4.1.4.2 Condition Methodology

The inspection frequency and condition score output for each linear asset is found below in Table 64. An analysis for each asset is found below.

Table 64: Inspection and Condition Information

ASSET	INSPECTION FREQUENCY	CONDITION SCORE OUTPUT
Sewer Main	Based on priority	Combination of inspection & age data
Minor Culverts	5-year cycle	Outputs scores from 0 (Very Good) – 4 (Very Poor) for each component and side of the culvert.
OGS	Monthly	None, used age
Inlet/Outfall	Annually & Ad Hoc	None, used age
Catchbasin	3-year cycle	Structural Cleaning score outputs Good, Fair, Poor.
Maintenance Hole, Catchbasin Maintenance Hole	Ad Hoc	None, used age

SEWER MAIN

Since gravity sewer mains are not under pressure and there are maintenance hole access points along the pipe segments, it is easier and more cost effective to inspect these assets than it is to inspect pressurized pipes such as forcemains and watermains. The City completes CCTV (Closed Circuit Television) inspections on these assets which involves sending a robot with a camera to inspect the inside of the pipe to determine any defects or rehabilitation needs. The results of the CCTV inspections assign a structural score to the pipe segment which the City uses to prioritize sewer lining and/or replacement. The City assesses pipes based on the defined criticality of the pipe but does not yet have a cycle to assess all pipes at a specified frequency, and not all pipes have been assessed. This has been identified as a continuous improvement item in Table 82.

MINOR CULVERTS

Minor culverts are assessed on a five (5) year cycle, where multiple components of the culverts are assessed separately and the condition of the culvert is differentiated by the side of the culvert. A continuous improvement item identified in Table 82 is to improve the inspection program to output an overall condition score.

CATCHBASINS

Catchbasins are inspected in on a three (3) year cycle. These inspections output a structural cleaning score of Good, Fair or Poor which was used to approximate condition for this report. A continuous improvement item identified in Table 82 is to improve the inspection program to be on a 5-point condition scale to be consistent with the majority of the City's condition assessment programs.

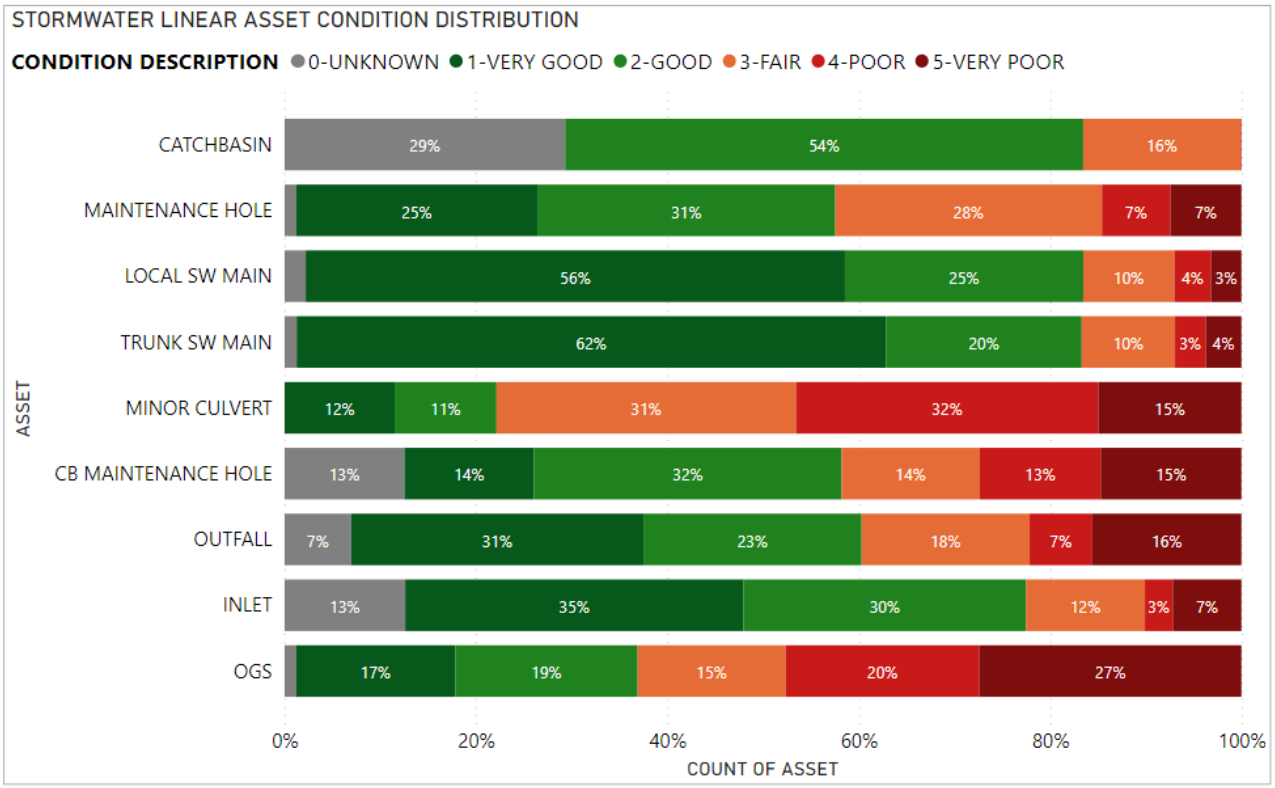
OTHER ASSETS

Other linear assets' conditions were based on age. Some of these assets are inspected regularly as shown, but these inspections do not output a condition score. A continuous improvement item identified in Table 82 is to improve the inspection program to output an overall condition score.

4.1.4.3 Asset Condition Profile

The condition profile of the City's assets is shown in Figure 23. As mentioned in Section 4.1.2, the original condition grades were converted to a standardized condition category for report consistency.

Figure 23: Stormwater Linear Asset Condition Distribution



GRAVITY MAIN (INCLUDING TRUNK AND LOCAL)

Based on a combination of condition and age data, these assets are shown to be on average, in Good condition. As stated above, there is a condition assessment program for gravity mains. However, at this time not all assets have been encompassed into the assessment program. Therefore, the data confidence is shown to be Medium as it is a combination of very high data confidence and low confidence methodologies.

MINOR CULVERT

Based on an assumed methodology to calculate overall condition from the assessment data, minor culverts are in overall Fair condition. The data confidence is considered to be High because the majority of culverts had condition data available.

CATCHBASIN

Based on available condition data populated in the data set, catchbasins are shown to generally be in Good condition, although not all assets have been included. The data confidence is considered to be Medium because 70% of catchbasins had condition data available. Where condition data was unavailable, age was used. However, as previously mentioned, the age data is of Very Low confidence. Therefore 29% of catchbasins are shown as unknown for condition.

OTHER LINEAR ASSETS

The remaining linear assets' conditions are estimated based on age where known and are shown to generally be in Good condition. As previously stated, age is not the best indicator of condition but is used when condition information is unavailable or difficult to obtain. A detailed analysis for the age profile of these assets can be found in Section 4.1.9. Many of these assets are inspected on a regular basis as shown in Table 64, but these inspections do not output condition scores which has been identified as a continuous improvement item in Table 82.

4.1.4.4 Asset Usage and Performance

Assets are generally provided to meet design standards where available. However, there are often insufficient resources to address all known deficiencies.

The largest performance issues with linear stormwater assets involve assets not functioning optimally. The below service deficiencies in Table 65 were identified using staff input.

Table 65: Known Service Performance Deficiencies			
ASSET	**LOCATION**	**SERVICE DEFICIENCY**	**DESCRIPTION OF DEFICIENCY**
Collection System	All outlets, Beach Blvd	Periodic lake levels higher than outfall location	Catchbasin surcharges during high lake levels and causes road flooding.
Minor Culvert	Alma Street	Culvert damaged, plate on road, routine maintenance required	Culvert replaced in 2022, routine disruptions in the area.
Outfall	Various Locations	Poor condition	Corrugated pipe outfall, outside of right of way, and difficult to access
Gravity main	Various Locations	Very Poor condition	Pipes are shown to be in very poor condition and may require replacement.

4.1.5 Administrative

Administrative assets are assets which contribute to the stormwater service but are not stormwater assets. These include vehicles, software and administrative facilities. These assets are shared with water and wastewater and have been included under administrative assets for these asset classes for this iteration of the AM Plan.

4.2 LIFECYCLE MANAGEMENT PLAN

The lifecycle management plan details how the City of Hamilton plans to manage and operate the assets at the agreed levels of service while managing life cycle costs.

4.2.1 Acquisition Plan

Acquisition reflects new assets that did not previously exist or works which will upgrade or improve an existing asset beyond its existing capacity. They may result from growth, demand, legal obligations or social or environmental needs. Stormwater assets are generally donated to the City of Hamilton through the development agreements process directly related to growth.

CURRENT PROJECT DRIVERS – 10 YEAR PLANNING HORIZON

Hamilton Water currently prioritizes capital projects as per the drivers listed below. These drivers help to determine a ranking priority for projects and ensures that multiple factors are being considered to drive investment decisions. These drivers should be reviewed during each iteration of the AM Plan to ensure they are appropriate and effective in informing decision making.

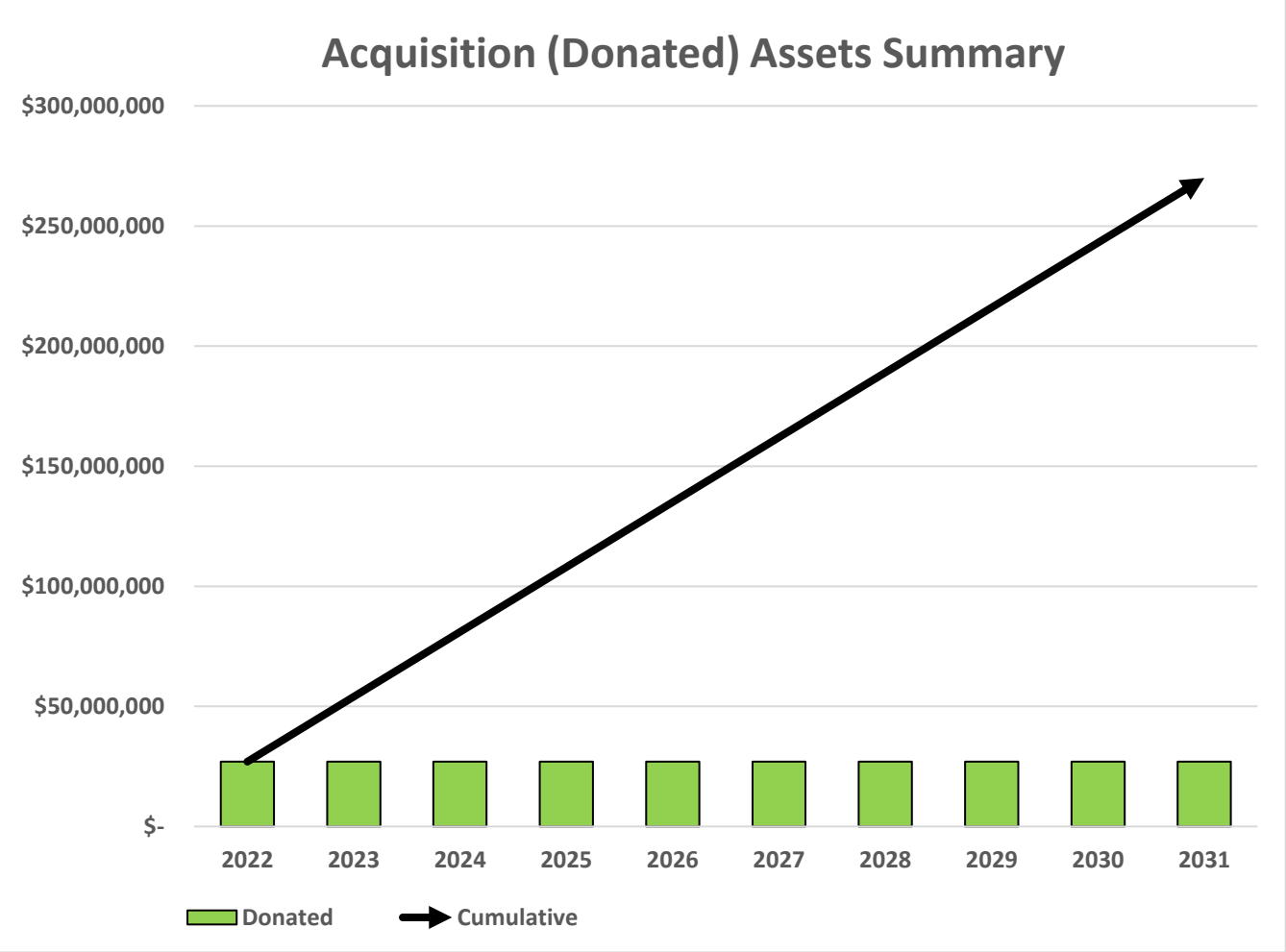
Table 66: Acquired Assets Priority Ranking Criteria

Criteria	Weighting
Legal Compliance	20%
Coordination, Funding, Budgeting	25%
Risk Mitigation	25%
Health and Safety	10%
Operating and Maintenance Impacts	10%
Development Growth	10%
Total	**100%**

SUMMARY OF FUTURE ASSET ACQUISITION COSTS

Forecast acquisition asset costs are summarized in Figure 26 and show the cumulative effect of asset assumptions over the next 10-year planning period.

Figure 24: Acquisition (Donated) Assets Summary
All figures are in 2021 dollars.



Annually, on average, the City of Hamilton will assume over **$27,000,000** of donated assets through subdivision agreements or other development agreements. These assets include approximately **9** km's of storm sewer mains, **1,500** new stormwater laterals, **144** maintenance holes, **6** ponds/facilities and **117** catch basins every year. Hamilton is reviewing its donated asset assumption process to ensure that it proactively understands what assets are being donated annually to ensure they are planned for effectively. This will allow multiple departments across the City to plan for the assets properly such as:

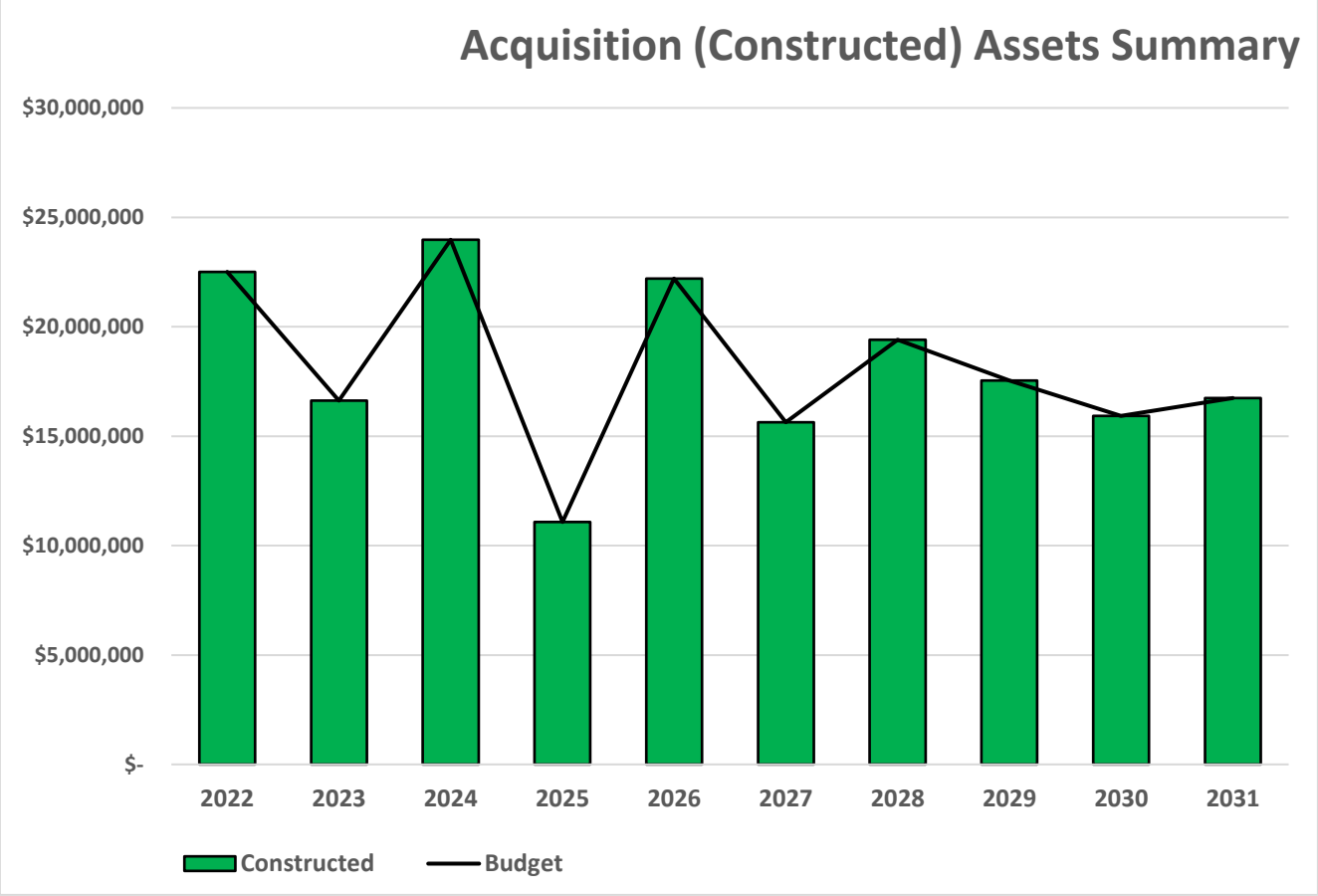
- Forecast the long-term needs and obligations of the assets;
- Operations and maintenance can include the assets in their planned activities (inspections, legislative compliance activities); and,
- Finance can ensure that assets are properly captured and recognized appropriately (Audited Financial Statements, TCA process, Provincial reporting such as the FIR).

The City will need to ensure the required data is updated frequently and to a single source to ensure that all the departments have access to the data they require in a timely manner. Once stormwater assets are assumed, Hamilton then becomes the stewards of these assets and is responsible for all ongoing costs for the asset's operation, continued maintenance, inevitable disposal and their likely renewal.

Construction costs are often only **10-15 %** of an asset's whole life costs. When development assets are donated to Hamilton, the City then becomes obligated to fund the remaining whole life costs. Over the next ten-year planning period Hamilton anticipates ***receiving*** **$270,000,000** of donated assets which, would then obligate Hamilton to fund the remaining costs over the donated assets ESL.

The City has internal design standards, inspection practices as well as assessment which are intended to ensure the assets that are being donated to the City through subdivision agreements are in excellent condition before assumption. The City should continue to review its assumption process to ensure that the City is receiving high quality and appropriately sized donated assets to defer lifecycle activities as much as possible.

Figure 25: Acquisition (Constructed) Assets Summary
All figures are in 2021 dollars.



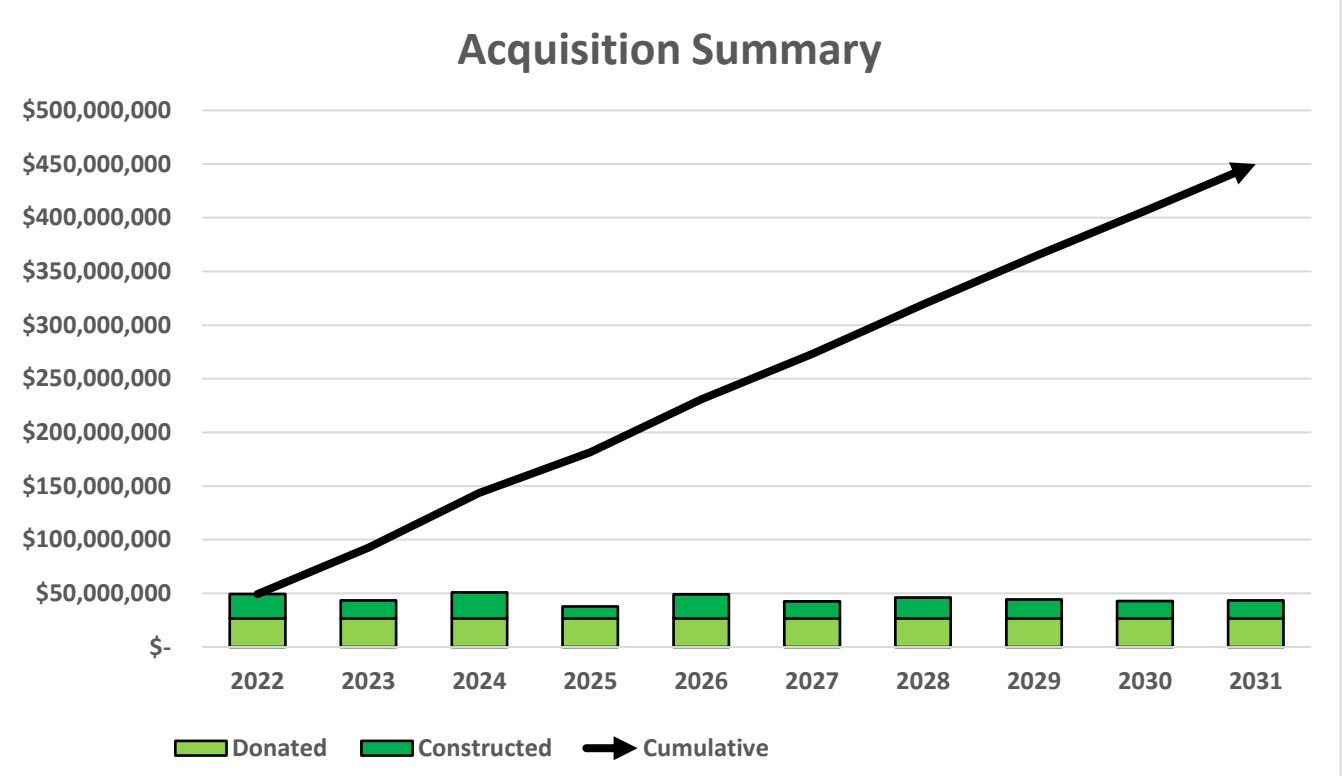
When Hamilton commits to new assets, the municipality must be prepared to fund future operations, maintenance and renewal costs. Hamilton must also account for future depreciation when reviewing long term sustainability. When reviewing the long-term impacts of asset acquisition, it is useful to consider the cumulative value of the acquired assets being taken on by the City. The cumulative value of all acquisition work, including assets that are constructed and contributed shown in Figure 26.

Over the next 10-year planning period Hamilton will acquire approximately **$181,645,000** of constructed assets which can either be new assets which did not exist before or expansion of assets when they are to be replaced. Major acquisition expenditures over the next ten years include;

- **$16 million** for new Beach Strip pumping stations
- **$12.6** million for the Parkside and Kipling stormwater facility
- **$67.5 million** to address flooding and drainage plans, and
- **$19.6** million dollars for connecting development areas

Hamilton has sufficient budget planned for its planned constructed acquisitions at this time however this does not address future asset needs that may need to be constructed to ensure service levels are maintained over the long term. With competing needs for resources across the entire city there will be a need to investigate tradeoffs and design options to further optimize asset decisions and ensure intergenerational equity can be achieved.

Figure 25: Acquisition (Constructed) Assets Summary
All figures are in 2021 dollars.



It is anticipated that Hamilton will acquire **$451,645,000** of new stormwater assets over the next ten years. This is a significant amount of assets that will require funding and resources far into the future and should be planned for over the long term.

It will become critical to understand that either the construction or assumption of new assets will commit the City to the funding of ongoing operations, maintenance and renewal costs which are significant. Hamilton will need to address how it is best to fund these ongoing costs as well as the costs to construct the assets while seeking the highest level of service possible.

Future AM Plans will focus on improving the understanding of Whole Life Costs and funding options. However, at this time the plan is limited on those aspects. Expenditure on new assets and services will be accommodated in the long-term financial plan but only to the extent that there is available funding.

4.2.2 Operations and Maintenance Plan

Operations include all regular activities to provide services. Daily, weekly, seasonal and annual activities are undertaken by staff to ensure the assets perform within acceptable parameters and to monitor the condition of the assets for safety and regulatory reasons. Examples of typical operational activities include catch basin cleaning, water sample collection, quality testing, inspections, utility costs and the necessary staffing resources to perform these activities.
Some of the major operational investments over the next 10 years include:

- **$17 million** allocated for support from Engineering Services Division;
- **$3 million** allocated for storm sewer network planning; and,
- **$2.6 million** allocated for Hamilton's Shoreline Protection Program.

Maintenance should be viewed as the ongoing management of deterioration. The purpose of planned maintenance is to ensure that the correct interventions are applied to assets in a proactive manner and to ensure it reaches its intended useful life. Maintenance does not significantly extend the useful life of the asset but allows assets to reach their intended useful life by returning the assets to a desired condition.

Proactively planning maintenance significantly reduces the occurrence of reactive maintenance which is always linked to a higher risk to human safety and higher financial costs. The City needs to plan and properly fund its maintenance to ensure the stormwater network is reliable and can achieve their desired level of service.

Maintenance includes all actions necessary for retaining an asset as near as practicable to an appropriate service condition including regular ongoing day-to-day work necessary to keep assets operating. Examples of typical maintenance activities include pipe repairs, pond dredging, catch basin repairs, equipment repairs along with appropriate staffing and material resources.

Major maintenance projects Hamilton plans to undertake over the next 10 years include:

- **$16 million** allocated for the right of way drainage program;
- **$10.3 million** allocated for Hamilton's Watercourse Erosion Rehabilitation program; and,
- **$14.1 million** allocated for Storm Water Facility maintenance.

4.2.3 Vertical Lifecycle Activities

The major operating and maintenance lifecycle activities per vertical asset with their accompanying 2021 costs (if known) are shown below in Table 67.

Table 67: Vertical Lifecycle Activities

ASSET	LIFECYCLE STAGE	LIFECYCLE ACTIVITY	FREQUENCY	2021 COST	UNIT
Pump Station	Operation	Inspection	Monthly	$639.54	annually
		Calibration	Ad Hoc	$73.34	annually
	Maintenance	Preventative Maintenance	Seasonal/ Annual	$195.03	annually
		Reactive Maintenance	Ad Hoc	$2,095.07	annually
Wet SWM Ponds	Operation	Sediment Depth Surveys	5-year cycle	$100,000.00	annually
		Water Level Monitoring	5 year cycle	$75,000.00	annually
	Maintenance	Full Dredging	25-year cycle	$1,650,000.00	annually
		Forebay Dredging	10-year cycle		
All SWM Ponds	Operation	Grass Cutting	6x per year	$110,000.00	annually
		Litter Collection	2x per year		
		Compliance Inspections	annually	$236.00	per unit
		Rainfall Inspections	ad hoc	$118.00	per unit
		Control Device Inspections	annually	$118.00	per unit
		Water Quality Sampling	6x per year	$60,000.00	annually
	Maintenance	Invasive Species Management	ad hoc	$450,000.00	annually
		Minor Repairs	ad hoc	$5,000.00	annually
		Sign Replacement	ad hoc	$10,000.00	annually
		Fencing Replacement	ad hoc	$50,000.00	annually
		Entry Treatment Replacement	ad hoc	$100,000.00	annually
		Administrative Tasks	annually	$675,000.00	annually
Flood Control Structure / Gate	Maintenance	Minor Repairs	ad hoc	$20,000	annually
	Operation	Rainfall Inspections	ad hoc	$118.00	per occurrence

When the City completes necessary operational and maintenance activities, high cost reactive repairs can be prevented, and this will ensure the assets reach their ESL.

4.2.4 Linear Lifecycle Activities

The major operating and maintenance lifecycle activities per linear asset with their accompanying 2021 costs (if known) are shown below in Table 68.

Table 68: Linear Lifecycle Activities

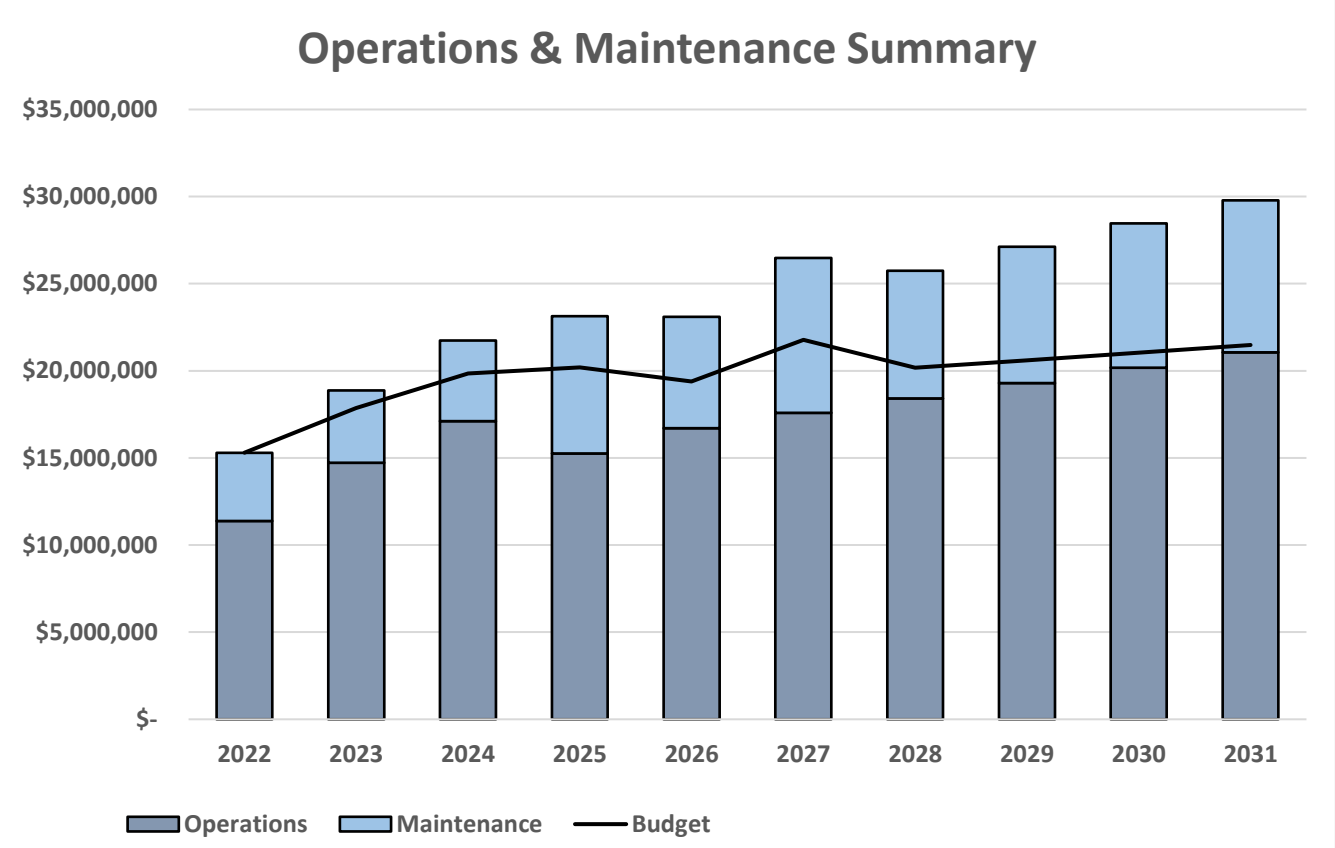
ASSET	LIFECYCLE STAGE	LIFECYCLE ACTIVITY	FREQUENCY	2021 COST	UNIT
Minor Culvert	Operation	Inspection	5 year cycle	$15,000.00	per year
		Cleaning	Ad Hoc	$1,000.00	Per instance
	Maintenance	Ditching	Ad Hoc	$500.00	Per instance
		Repair	Ad Hoc	No data	
Swales	Maintenance	Minor Maintenance	Ad Hoc	No data	
Catchbasins	Operation	Inspection	Ad Hoc	$61.00	Per instance
		Cleaning	Ad Hoc	$250.00	Per instance
OGS	Operation	Inspection Program	Monthly	$30.00	Per instance
		Cleaning	Ad Hoc	$450.00	Per instance
Inlet/Outfalls	Operation	Inspection	Annually	$30.00	Per instance
		Cleaning	Ad Hoc	$450.00	Per instance
	Maintenance	Minor Repairs	Ad Hoc	$2,000.00	Per instance

Assessment and priority of reactive maintenance is undertaken by staff using experience and judgement.

SUMMARY OF FORECAST OPERATIONS AND MAINTENANCE COSTS

Due to ongoing acquisitions the current operational and maintenance budget levels are considered to be inadequate to meet estimated service levels. Ongoing acquisitions from donated assets will require Hamilton to review its funding availability in the short term to ensure long term impacts can be mitigated.

Figure 27: Operations and Maintenance Summary
All figure values are shown in 2021 dollars.



The forecast of operations and maintenance costs are increasing steadily over time and it is clear, the City has insufficient budget to achieve all of the works required to ensure that assets will be able to achieve their estimated service life at the desired level of service. It is anticipated that at the current budget levels there will be insufficient budget to address all operating and maintenance needs over the 10-year planning horizon. The graph above illustrates that without increased funding or changes to lifecycle activities there is a significant shortage of funding which will lead to:

- Higher cost reactive maintenance;
- Possible reduction to the availability of the assets;
- Impacts to private property; and,
- Increased financial and reputational risk.

The shortfall is primarily due to the significant number of assets that are donated through subdivision agreements annually and insufficient funding allocations over an extended period of time. Every year that Hamilton adds additional assets without properly funding the necessary lifecycle activities, staff's ability to sustain the assets to expected or mandatory level of service can be significantly impacted. It should be noted that there are mandatory operational and

maintenance expenditures due to legislative requirements and cannot and should not simply be avoided or deferred.

The forecast costs include all costs from both the Capital and Operating budget. Asset management focuses on how taxpayer or ratepayer dollars are invested by lifecycle activities and not by budget allocation since both budgets contain various lifecycle activities they must both be consolidated for the AM Plans.

As the City continues to develop condition profiles and necessary works are identified based on their condition, it is anticipated operation and maintenance forecasts will increase significantly. Where budget allocations will result in a lesser level of service, the service consequences and risks will be identified and are highlighted in the Risk Section 4.5.

Deferred maintenance (i.e. works that are identified for maintenance activities but unable to be completed due to available resources) will be included in the infrastructure risk management plan for the next iteration.

Future iterations of this plan will provide a much more thorough analysis of operations and maintenance costs including types of expenditures for training, mandatory certifications, insurance, staffing costs and requirements, equipment and maintenance activities.

4.2.5 Renewal Plan

Renewal is major works which does not increase the assets design capacity but restores, rehabilitates, replaces or renews an existing asset to its original service potential. Works over and above restoring an asset to original service potential is considered to be an acquisition resulting in additional future operations and maintenance costs.

Stormwater asset renewals are typically undertaken to either ensure the assets reliability or quality will meet the service requirements set out by the City. Renewal projects are often triggered by service quality failure and can often be prioritized by those that have the highest consequence of failure, have high usage, have high operational and maintenance costs and other deciding factors.

The typical useful lives of assets used to develop projected asset renewal forecasts are shown in Table 69 and are based on estimated design life for this iteration. Future iterations of the plan will focus on the Lifecycle approach to ESL which can vary greatly from design life. Asset useful lives were last reviewed in 2022 however they will be reviewed annually until their accuracy reflects the City’s current practices.

Table 69: Useful Lives of Assets	
ASSET (SUB)CATEGORY	**AVERAGE USEFUL LIFE**
Pump Station	60 years
SWM Pond	100 years
Flood Control Gate/Structure	80 years
Local SW Main	94 years
Trunk SW Main	98 years
Inlet, Outfall	80 years
Catchbasin, Maintenance Hole,	100 years
Oil & Grit Separator (OGS)	25 years
Minor Culvert	50 years

The estimates for renewals in this AM Plan were based on the register method which utilizes the detailed listing of Hamilton's asset inventory and all available lifecycle information to determine the optimal timing for renewals

RENEWAL RANKING CRITERIA

Asset renewal is typically undertaken to either:

- Ensure the reliability of the existing infrastructure to deliver the service it was constructed to facilitate (e.g. replacing a bridge that has a load limit), or
- To ensure the infrastructure is of sufficient quality to meet the service requirements (e.g. condition of a culvert).[16]

It is possible to prioritise renewals by identifying assets or asset groups that:

- Have a high consequence of failure,
- Have high use and subsequent impact on users would be significant,
- Have higher than expected operational or maintenance costs, and
- Have potential to reduce life cycle costs by replacement with a modern equivalent asset that would provide the equivalent service.[17]

The ranking criteria used to determine priority of identified renewal proposals is detailed in Table 70.

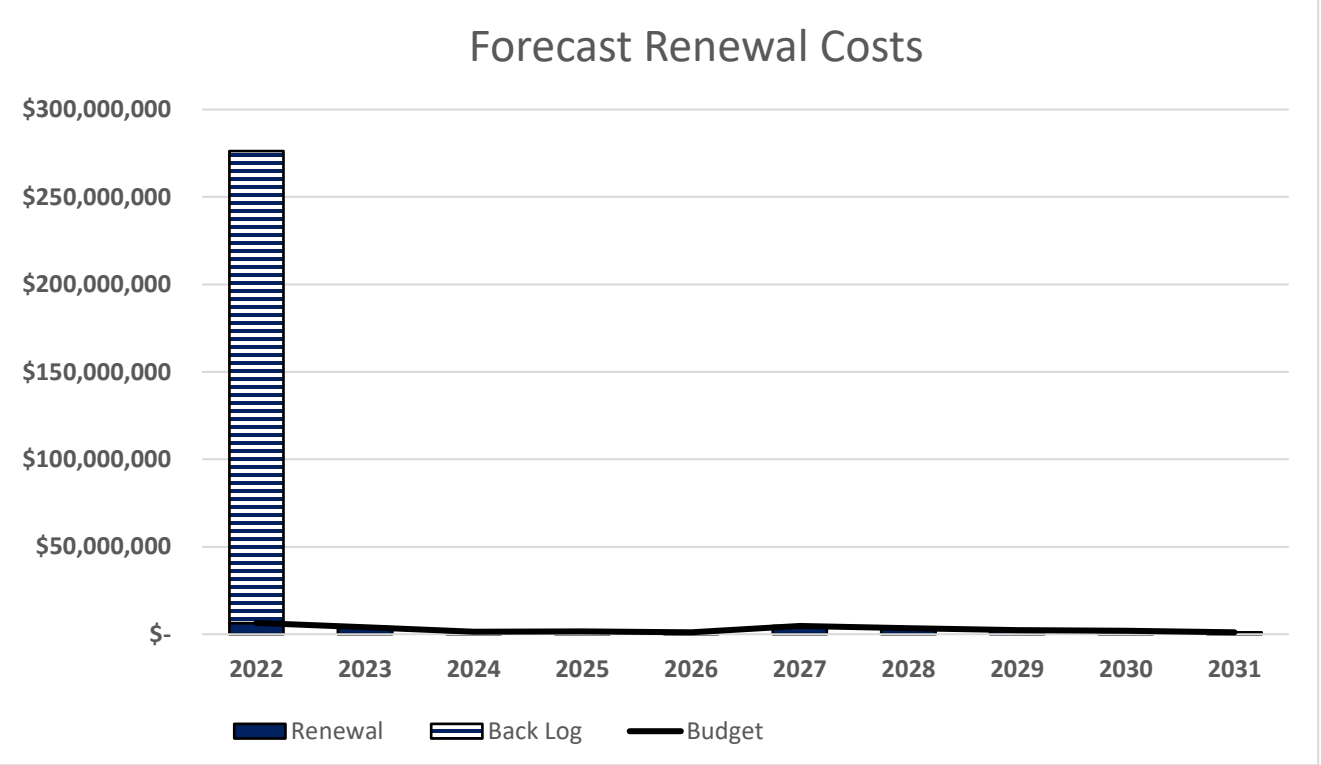
[16] IPWEA, 2015, IIMM, Sec 3.4.4, p 3|91.
[17] Based on IPWEA, 2015, IIMM, Sec 3.4.5, p 3|97.

Table 70: Renewal Priority Ranking Criteria	
CRITERIA	**WEIGHTING**
Regulatory / Legal Compliance	20%
Co-ordination – Funding and Budgeting	25%
Risk Mitigation	25%
Health & Safety (Users & Staff)	10%
Lifecycle Impacts (Operations & Maintenance)	10%
Demand Driver (Growth)	10%
Total	**100%**

SUMMARY OF FUTURE RENEWAL COSTS

Forecast renewal costs are projected to increase over time if the asset stock increases. The forecast costs associated with renewals are shown relative to the proposed renewal budget in Figure 28.

Figure 28: Forecast Renewal Costs
All figure values are shown in 2021 dollars.



The significant amount highlighted in 2022 represents the cumulative backlog of deferred work to be completed that has been either identified through its current estimated condition or age per Table 61 when condition was not available. This back log represents nearly **$272,000,000** of deferred works. Deferred renewal (assets identified for renewal and not funded) are included and identified within the risk management plan. Prioritization of these projects will need to be managed over time to ensure renewal occurs at the optimal time.

There is sufficient budget to support the **planned** projects only. Without additional funding the **backlog** will remain and continue to grow as future projects outside of the 10-year planning horizon continue to move forward into the 10 years scope. Continued deferrals of projects will lead to significantly higher operational and reactive maintenance costs and will affect the availability of services in the future. Hamilton has allocated **$28.3 million** dollars for future renewal projects which includes **$3.2** million for renewals in Westdale North neighborhood, **$6.5 million** for watercourse and drainage channel projects and **$5.5 million** for Catch Basin renewals.

Deferring renewals create risks of higher financial costs, decreased availability, and decreased satisfaction with asset performance. Ultimately, continuously deferring renewals works ensures Hamilton will not achieve intergenerational equality. If Hamilton continues to push out necessary renewals, there is a high risk that future generations will be unable to maintain the level of service the customers currently enjoy. It will burden future generations with such significant costs that inevitably they will be unable to sustain them.

Properly funded and timely renewals will ensure the assets perform as expected and it is recommended to continue to analyze asset renewals based on criticality and availability of funds for future AM Plans.

4.2.6 Disposal Plan

Disposal includes any activity associated with the disposal of a decommissioned asset including sale, possible closure of service, decommissioning, disposal of asset materials, or relocation. Disposals will occur when an asset reaches the end of its useful life. The end of its useful life can be determined by factors such as excessive operation and maintenance costs, regulatory changes, obsolesce or demand for the structure has fallen.

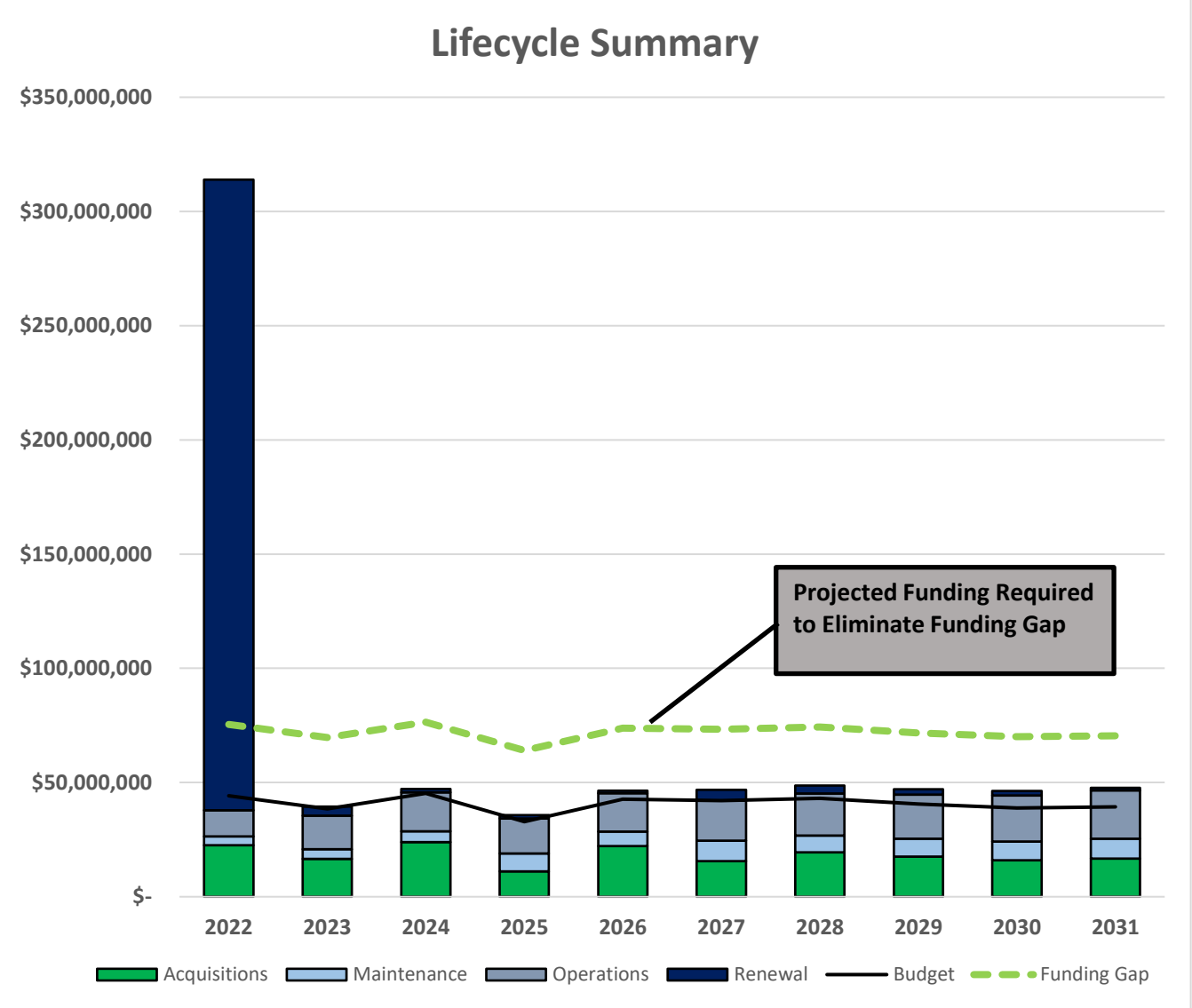
In future plans assets identified for possible decommissioning will be summarized withing this section of the plan. Hamilton will provide summary of the disposal costs and estimated reductions in annual operations and maintenance of disposing of the assets are also outlined. Any costs or revenue gained from asset disposals is included in future iterations of the AM Plan and the long-term financial plan.

SUMMARY OF ASSET FORECAST COSTS

The financial projections from this asset plan are shown in Figure 29. These projections include forecast costs for acquisition, operation, maintenance, renewal, and disposal. These forecast costs are shown relative to the proposed budget.

The bars in the graphs represent the forecast costs required to minimize the life cycle costs associated with the service provision. The proposed budget line indicates the estimate of available funding. The gap between the forecast work and the proposed budget is the basis of the discussion on achieving balance between costs, levels of service and risk to achieve the best value outcome.

Figure 29: Lifecycle Summary
All figure values are shown in 2021 dollars.



Currently there is insufficient budget to address the large backlog of renewal work projected by the plan. There is sufficient budget to address most of the ongoing operational and maintenance activities for the planning period however with the significant assumption of assets over time and their increased costs there may be impacts to the service itself as illustrated by Figure 29. Without some adjustment to available funds or other lifecycle management decisions there will be insufficient budget to address all planned lifecycle activities.

Allocating sufficient resources is imperative to managing asset throughout their lifecycle. This can include funding for lifecycle activities, sufficient staffing, increased asset knowledge, improved planning, contracted services, additional equipment or vehicles to ensure that Hamilton is optimizing its lifecycle approach.

Without sufficient funding the City has little option but to defer these necessary lifecycle activities. Deferring important lifecycle activities is never recommended. The City will benefit from allocating sufficient resources to developing its long-term financial plan to ensure that over time the City can fully fund the necessary lifecycle activities. Funding these activities helps to ensure the assets are compliant, safe and effectively deliver the service the customers need and desire.

The lack of funding allocated for the backlog of renewals and the necessary lifecycle activities creates an additional issue which is intergenerational equity. Each year the City defers necessary lifecycle activities it pushes the ever-increasing financial burden on to future generations. It is imperative the City begin addressing the lack of consistent and necessary funding to ensure that intergenerational equity will be achieved. Over time, allocating sufficient funding on a consistent basis ensures that future generations will be able to enjoy the same standards being enjoyed today.

Over time the City will continue to improve its lifecycle data, and this will allow for informed choices as how best to mitigate those impacts and how to address the funding gap itself. This gap in funding in future plans will be refined over the next 3 years and improve the confidence and accuracy of the forecasts.

4.3 MANDATORY O.REG. 588/17 LEVELS OF SERVICE

Table 1 in O.Reg. 588/17 identifies specific metrics that must be reported in the AM Plan for stormwater assets. These metrics are divided into community and technical levels of service and are provided below.

4.3.1 Mandatory O.Reg. 588/17 Community Levels of Service

Per Table 3 in O.Reg. 588/17, there are community levels of service that the City is required to report on in order to meet the provincial level of service requirement. These metrics are required to be reported, and so they have been separated from the customer levels of service described in Section 4.3.2. These qualitative metrics are reported below.

Scope

1. Description, which may include maps, of the user groups or areas of the municipality that are protected from flooding, including the extent of the protection provided by the municipal stormwater management system.

Areas of the City are protected from flooding through a variety of City infrastructure. In urban areas, underground storm infrastructure (i.e. stormwater main) provides some degree of flooding protection to private properties and flooding of the road allowance. Stormwater facilities and structures, including wet ponds, low impact development structures and storage facilities also allow the City to lower the risk and impacts of flooding. In rural areas, roadside ditches manage road flooding and may offer some property flooding protection, and municipal drains provide formal drainage and flooding considerations. Map 4 in Section 4.1 shows the areas of the City which have separated storm sewers and also shows the location of the stormwater ponds (Stormwater Management Facilities).

4.3.2 Mandatory O.Reg 588/17 Technical Levels of Service

In addition, per Table 3 in O.Reg 588/17, there are technical levels of service that the City is required to report on in order to meet the provincial level of service requirement. These quantitative metrics are reported below.

Table 71: Mandatory Technical Levels of Service

SERVICE ATTRIBUTE	TECHNICAL LEVELS OF SERVICE	MEASURE
Scope	**1.** Percentage of properties in municipality resilient to a 100-year storm.	95%
	2. Percentage of the municipal stormwater management system resilient to a 5-year storm.	89%

In theory, all City properties connected to the stormwater drainage system should currently be protected from a 100-year storm. However, there are known flooding issues in the City which have not yet been quantified. Therefore, the number above is an estimate which will be updated when the stormwater modelling for the City's storm system is complete.

In addition, the current City-wide criteria is for minor system conveyance to be designed for a 5-year return period, however many legacy systems remain throughout the City especially in Ancaster, Dundas and Flamborough.

4.4 MUNICIPALLY DEFINED LEVELS OF SERVICE

Levels of service are measures for what Hamilton provides to its customers, residents, and visitors. Service levels are best described as the link between providing the outcomes the community desires, and the way that Hamilton provides those services. Service levels defined in three ways, customer values, customer levels of service and technical levels of service which are outlined in this section.

4.4.1 Customer Values

Customer values are what the customer can expect from their tax dollar in “customer speak”. These values are used to develop level of service statements.

Customer Values indicate:

- what aspects of the service is important to the customer;
- whether they see value in what is currently provided; and,
- the likely trend over time based on the current budget provision.

To develop these customer values, as stated in the AMP Overview, a Customer Engagement Survey was released in January 2022 on the Engage Hamilton platform. The survey received 184 submissions and contained 14 questions related to stormwater service delivery. The survey results can be found in Appendix “A” in the AMP Overview. While these surveys were used to establish customer values and customer performance measures, it’s important to note that the number of survey respondents only represents a small portion of the population.

The future intent is to release this survey on an annual basis to measure the trends in customer satisfaction and ensure that the City is providing the agreed level of service as well as to improve the marketing strategy to receive more responses. This has been noted in Table 82 in the Continuous Improvement section.

Table 72: Customer Values Service Objective:			
CUSTOMER VALUES	**CUSTOMER SATISFACTION MEASURE**	**CURRENT FEEDBACK**	**EXPECTED TREND BASED ON PLANNED BUDGET**
Streets and properties don't flood	Annual Customer Engagement Survey	Most survey respondents had not had flooding on their properties or had to detour due to flooding on roads, but many survey respondents were concerned with future flooding.	Maintain Trend
Stormwater is returned to the natural watercourse responsibly.	Annual Customer Engagement Survey	Many survey respondents did not think the City was responsible about returning stormwater back to the environment.	Maintain Trend

4.4.2 Customer Levels of Service

The Customer Levels of Service are considered in terms of:

Condition	How good is the service? What is the condition or quality of the service?
Function	Is it suitable for its intended purpose? Is it the right service?
Capacity/Use	Is the service over or under used? Do we need more or less of these assets?

In Table 73 under each of the service measures types (Condition, Function, Capacity/Use) there is a summary of the performance measure being used, the current performance, and the expected performance based on the current budget allocation.

Table 73: Customer Levels of Service					
TYPE OF MEASURE	**LEVEL OF SERVICE**	**SOURCE**	**PERFORMANCE MEASURE**	**CURRENT PERFORMANCE**	**EXPECTED TREND BASED ON PLANNED BUDGET**
Condition	Provide reliable stormwater services with minimum flooding.	Annual Customer Engagement Survey	76.4% of survey respondents have not experienced flooding impacts on their property	Fairly Satisfied	Maintain Trend
			48.4% of survey respondents are concerned with flooding on their property	Unsatisfied	Trending downwards
			76.4% of survey respondents have not experienced flooding impacts on their property	Fairly Satisfied	Maintain Trend
			92.9% of survey respondents did not have to delay or cancel plans due to roads flooding	Very Satisfied	Maintain Trend
			Confidence levels	Medium	
		Age-based	Average condition of pump stations	Very Good	Trending downwards
		Age-based	Average condition of stormwater ponds	Good	Maintain Trend
			Confidence levels	Low	
		Age & Condition Based	Average condition of stormwater main	Good	Maintain Trend
			Confidence levels	Medium	
		Unknown	Average condition of flood control gate/structure	Unknown	Trending downwards
			Confidence levels	Very Low	
Function	Ensure stormwater is being collected responsibly.	Annual Customer Engagement Survey	40.1% of survey respondents do not think that Hamilton behaves responsibly when returning stormwater back to the environment	Unsatisfied	Maintain Trend
			Confidence levels	Medium	
Capacity	Ensure stormwater assets are used and within design capacity.	Annual Customer Engagement Survey	30.3% of survey respondents were connected to the storm sewer	Low	Maintain Trend
			Confidence levels	Medium	

4.4.3 Technical Levels of Service

Technical levels of service are operational or technical measures of performance, which measure how the City plans to achieve the desired customer outcomes and demonstrate effective performance, compliance and management. The metrics should demonstrate how effectively Hamilton delivers its services in alignment with its customer values; and should be viewed as possible levers to impact and influence the Customer Levels of Service. Hamilton will measure specific lifecycle activities to demonstrate how Hamilton is performing on delivering the desired level of service as well as to influence how customer perceive the services they receive from the assets.

Technical service measures are linked to the activities and annual budgets covering Acquisition, Operation, Maintenance, and Renewal.

Service and asset managers plan, implement and control technical service levels to influence the service outcomes.

Table 74 shows the activities expected to be provided under the current 10 year Planned Budget allocation, and the Forecast activity requirements being recommended in this AM Plan.

Table 74: Technical Levels of Service					
LIFECYCLE ACTIVITY	**PURPOSE OF ACTIVITY**	**ACTIVITY MEASURE**	**CURRENT PERFORMANCE***	**TARGET**	**RECOMMENDED PERFORMANCE ****
Acquisition	Ensure stormwater assets are used and within design capacity.	% of stormwater ponds inspected before assumption	100%	100%	100%
Operation	Provide reliable stormwater services with minimum flooding.	METRIC -# of Oil & Grit Interceptor Inspections	862	No Data	No Data
		Mainline sewers inspected per year	78 km	100	100
		% of stormwater pond inspections completed	100%	100	100%
		% Watercourse erosion inspection per year	No Data	33%	33%
		# inlet/outlet inspections completed	2,267	No Data	No Data
Maintenance	Provide reliable stormwater services with minimum flooding.	% of stormwater ponds cleaned out versus ponds requiring clean out	No Data	No Data	No Data
Renewal	Provide reliable stormwater services with minimum flooding.	Sewermain CIPP rehabilitation km/yr (4113)	4.5 km	No Data	No Data
Note: * Current activities related to Planned Budget. ** Expected performance related to forecast lifecycle costs.					

It is important to monitor the service levels regularly as circumstances can and do change. Current performance is based on existing resource provision and work efficiencies. It is acknowledged changing circumstances such as technology and customer priorities will change over time.

As the City's asset management maturity increases, and with the implementation of the EAM project mentioned in the AMP Overview, the City will also have more capacity to measure additional metrics. In addition, the City should investigate the balanced scorecard further to ensure data and assumptions are consistent with ministry and City reporting. This has been identified as a continuous improvement item in Table 82. In addition, often times wastewater and stormwater metrics have been reported together, and these should be separated for ease of reporting which has been identified as a continuous improvement item.

4.4.4 Levels of Service Summary

At this time, the City's technical metrics for stormwater assets are not as robust as for other core service areas. This will improve as the City continues to mature in asset management. As mentioned in Section 3.4.2, while these surveys were used to establish customer values and customer performance measures, it's important to note that the number of survey respondents currently only represents a small portion of the population.

CONDITION

Survey respondents appeared to be overall satisfied with the stormwater services they were provided. The majority of survey respondents had not had flooding on their properties and had not had to cancel travel plans due to road flooding. However, there were respondents who were concerned with the possibility of future flooding on their properties. Survey respondents who indicated flooding had occurred on their property typically referenced basement flooding associated with snow melt, faulty sump pumps, grading issues, or heavy rain events. These types of events are not typically the result of City infrastructure, although sometimes heavy rain events do cause some of these issues – however as shown in the technical metrics approximately 2200 inspections and clean outs (if required) were completed on inlets/outlets in the City to ensure they were functioning as intended. As shown throughout the report, the separated storm sewer network is typically maintained in Good condition, and the City is completing inspections and renewals for priority stormwater main. Additional technical metrics should be explored for stormwater for future iterations of the report and has been identified in Table 82 as a Continuous Improvement item.

FUNCTION

Many survey respondents did not feel that the City was responsible when returning stormwater back into the natural watercourse. As previously mentioned, best practice is not to disinfect stormwater before being returned to the environment since it is not of poor water quality, but as shown in the technical levels of service the City does complete the required inspections for stormwater ponds and oil & grit separators (OGS) which settle out grit and remove oil to prevent pollution.

CAPACITY

At this time, there were no key findings associated with stormwater capacity with respect to customer or technical levels of service. Few survey respondents were shown to be connected to the municipal stormwater system, which is expected since most residents do not have a storm lateral.

4.5 FUTURE DEMAND

The ability for Hamilton to be able to predict future demand for services enables the City to plan ahead and identify the best way of meeting the current demand while being responsive to inevitable changes in demand. Demand will inevitably change over time and will impact the needs and desires of the community in terms of the quantity of services (more communities connecting to the service) and types of service required (larger facilities to process increased volumes).

Demand is defined as the desire customers have for assets or services and that they are willing to pay for. These desires are for either new assets/services or current assets.

Since demand is not yet an extensive requirement in O.Reg 588/17 for the July 1st, 2022 deadline, this section is not as robust as some other sections of the report, but is an obligation for the report by July 1st, 2025, and will be expanded on in future iterations of the report.

4.5.1 Demand Drivers

For stormwater, the key drivers are population change, climate change and customer preferences and expectations. A future continuous improvement item is to identify and incorporate any additional demand drivers.

4.5.2 Demand Forecasts

The high level present position and projections for demand drivers that may impact future service delivery and use of assets have been identified and documented in Table 75. At this time, specific projections have not been calculated and will be updated in the 2025 AM Plan as per the timelines stated in the AMP Overview. Growth projections have been shown in the AMP Overview.

4.5.3 Demand Impact and Demand Management Plan

The impact of demand drivers that may affect future service delivery and use of assets are shown in Table 75.

Demand for new services will be managed through a combination of managing existing assets, upgrading of existing assets and providing new assets to meet demand and demand management. Demand management practices can include non-asset solutions, insuring against risks, and managing failures.

Opportunities identified to date for demand management are shown in Table 75. Climate change adaptation is included in Table 76. Further opportunities will be developed in future revisions of this AM Plan, as identified in Table 82 in the Continuous Improvement Section.

Table 75: Demand Management Plan				
DEMAND DRIVER	**CURRENT POSITION**	**PROJECTION**	**IMPACT ON SERVICES**	**DEMAND MANAGEMENT PLAN**
Population Change	573,000 (2021)	660,000 (2031)	More SW main required	Investigate need for new pump stations. New staff may be required for legislative compliance. Adjust budgets, long-term financial plan, and AM Plan.
Population Change	573,000 (2021)	660,000 (2031)	More SWM Ponds required	Acquisitions through subdivision agreements. Impacts to budget, LTFP and Staffing
Customer Preferences & Expectations	Most rural roads have rural cross sections (e.g. ditches)	Rural roads converted to urban cross section (e.g. curbs and stormwater pipes)	Reduced infiltration of stormwater increasing flow to downstream facilities.	Educate customers on benefits of ditches. Complete models of stormwater network and run models before urbanizing road.
Customer Preferences & Expectations	Homeowners have areas for infiltration on property (e.g. grass)	Homeowners converting lot with more impervious surfaces (e.g. driveways)	Reduced infiltration of stormwater increasing flow to downstream facilities.	Dedicated SW Rate Program based on impervious surface. Incentive programs for LIDs.

4.5.4 Asset Programs to meet Demand

The new assets required to meet demand may be acquired, donated or constructed. Additional assets are discussed in 4.2.1.

Acquiring new assets will commit the City of Hamilton to ongoing operations, maintenance and renewal costs for the period that the service provided from the assets is required. These future costs are identified and considered in developing forecasts of future operations, maintenance and renewal costs for inclusion in the long-term financial plan.

4.5.5 Climate Change Adaptation

The impacts of climate change may have a significant impact on the assets we manage and the services they provide. In the context of the asset management planning process, climate change can be considered as both a future demand and a risk.
Climate change impacts on assets will vary depending on the location and the type of services provided, as will the way in which those impacts are responded to and managed.[18]

As a minimum the City must consider how to manage our existing assets given potential climate change impacts for our region.

Risk and opportunities identified to date are shown in Table 76. This is a continuous process and will be updated in the 2025 AM Plan per the timelines outlined in the AMP Overview.

Table 76: Managing the Impact of Climate Change on Assets and Services

CLIMATE CHANGE DESCRIPTION	PROJECTED CHANGE	POTENTIAL IMPACT ON ASSETS AND SERVICES	MANAGEMENT
Increased wet weather events.	Increased demand on storm sewer system.	Stormwater system at capacity causing more overflows into natural watercourse or flooding.	Model combined sewer network and upgrade pipe size or separate sewers.

Additionally, the way in which the City constructs new assets should recognize that there is opportunity to build in resilience to climate change impacts. Building resilience can have the following benefits:

- Assets will withstand the impacts of climate change;
- Services can be sustained; and
- Assets that can endure may potentially lower the lifecycle cost and reduce their carbon footprint

Table 77 summarizes some asset climate change resilience projects the City is currently pursuing.

[18] IPWEA Practice Note 12.1 Climate Change Impacts on the Useful Life of Infrastructure

Table 77: Building Asset Resilience to Climate Change

PROJECT	PROJECT DESCRIPTION	CLIMATE CHANGE IMPACT	BUILD RESILIENCE IN NEW WORKS
Rain Gauges Monitoring Program	Operate a rain gauge network in the City of Hamilton.	Significant wet weather events which are increasing due to climate change will cause sewers to overflow more often into natural watercourse and increase risk of basement flooding.	To improve Hamilton's climate resiliency by decreasing our vulnerability to extreme weather, minimizing future damages, take advantage of opportunities, and better recover from future damages.
Rosedale Neighborhood Flood Protection Works	EA study for the control of surface water flows to mitigate basement flooding in the Rosedale Neighborhood.		
Stormwater Management Pond Retrofits	Condition assessment and analysis on the operating performance of four existing SWM ponds which will quantify operating performance and recommend enhancements.		
Rain Barrels	Rain-barrel sale; encourage use of rain barrels through outreach program		
Downspout Disconnection Program	Downspout Disconnection Program - This pilot program was implemented as an effort to provide some immediate relief against flooding basements during major rain storms for selected volunteer homes		
Stormwater Computer Models	Development of Stormwater Computer Models - A robust and calibrated computer model can predict the location within a collection system where the capacity will be exceeded when modelling increased rain fall events		
Bioretention Swales	Integrate bio retention swales into new roadway/boulevard construction		
LID Solutions in Parks	Storm Water Management - included some LID solutions in parks.		
Beach Strip SW Pump Station	Environmental Assessment to Identify Preferred Flood Mitigating Solutions for Beach neighbourhood flooding and elevated Lake Ontario water levels.	Frequency and extent of floods is increasing due to higher Lake Ontario water levels, driven in part by climate change	
Backflow Device Installation	Installation of new backflow devices in the city's sewer system, which are designed to prevent lake and harbour water from entering sewers during extreme storms, and therefore lessen basement flooding		
Stormwater Funding Restructuring	Report presented to Council which proposed to restructure the funding mechanism to separate the stormwater rate from water rate.	Increased wet weather events and higher lake levels means that stormwater will become a larger part of City budget and must be budgeted accordingly.	

The impact of climate change on assets is a new and complex discussion and further opportunities will be developed in future revisions of this AM Plan.

4.6 RISK MANAGEMENT

The purpose of infrastructure risk management is to document the findings and recommendations resulting from the periodic identification, assessment and treatment of risks associated with providing services from infrastructure, using the fundamentals of International Standard ISO 31000:2018 Risk management – Principles and guidelines.
Risk Management is defined in ISO 31000:2018 as: 'coordinated activities to direct and control with regard to risk[19].

Hamilton is developing and implementing a formalized risk assessment process to identify risk associated with service delivery and to implement proactive strategies to mitigate risk to tolerable levels. The risk assessment process identifies credible risks associated with service delivery and will identify risks that will result in loss or reduction in service, personal injury, environmental impacts, a 'financial shock', reputational impacts, or other consequences.

The risk assessment process identifies credible risks, the likelihood of those risks occurring, and the consequences should the event occur. For its bridge and culvert assets Hamilton utilizes two risk assessment methods to determine risk along with subject matter expert opinion to inform the prioritization. The City is further developing its risk assessment maturity with the inclusion of a risk rating, evaluation of the risks and development of a risk treatment plan for those risks that are deemed to be non-acceptable in the next iteration of the plan.

Risk Assessment is not yet an extensive requirement in O.Reg. 588/17 for the July 1st, 2022 deadline. As a result, this section is not as robust as some other sections of the report, but is an obligation for the report by July 1st, 2025, and will be expanded on in future iterations of the report.

4.6.1 Critical Assets

Critical assets are defined as those which have a high consequence of failure causing significant loss or reduction of service. Critical assets have been identified and along with their typical failure mode, and the impact on service delivery, are summarized in Table 78. Failure modes may include physical failure, service interruptions or lack of availability.

Table 78: Critical Assets

CRITICAL ASSET(S)	FAILURE MODE	IMPACT
Pump Station	Essential service interruption	Overflow of wet well or gravity main causing flooding.

[19] ISO 31000:2009, p 2

Table 78: Critical Assets		
CRITICAL ASSET(S)	**FAILURE MODE**	**IMPACT**
Storm Water Management Pond	Physical Failure	Contaminants don't settle out and pollutes watercourse and/or pipes reach capacity causing flooding.
Critical Stormwater Main	Physical Failure	Storm backup might occur at catchbasins or laterals and flood streets/properties.
SCADA	Essential service interruption	System failure causing service interruption to pump station

By identifying critical assets and failure modes an organization can ensure that investigative activities, condition inspection programs, maintenance and capital expenditure plans are targeted at critical assets.

4.6.2 Risk Assessment

The risk assessment process identifies credible risks, the likelihood of the risk event occurring, the consequences should the event occur, development of a risk rating, evaluation of the risk and development of a risk treatment plan for non-acceptable risks.

An assessment of risks associated with service delivery will identify risks that will result in loss or reduction in service, personal injury, environmental impacts, a 'financial shock', reputational impacts, or other consequences.

Critical risks are those assessed with 'Very High' (requiring immediate corrective action) and 'High' (requiring corrective action) risk ratings identified in the Infrastructure Risk Management Plan. The residual risk and treatment costs of implementing the selected treatment plan is shown in Table 6.2. It is essential that these critical risks and costs are reported to management. Additional risks will be developed in future iterations of the plan and is identified in Table 82 in the Continuous Improvement Section the plan.

Table 79: Risks and Existing Controls			
SERVICE OR ASSET AT RISK	**WHAT CAN HAPPEN**	**RISK RATING**	**EXISTING CONTROLS**
Stormwater network	Lack of comprehensive stormwater model so City cannot predict where flooding may occur	Very High	Modelling is currently being completed.
Orphan Stormwater Asset	Asset fails due to no maintenance or inspection program	High	None
SWM Pond	Pipe Blockage	High	Control Structure Inspections; Compliance Inspections; Rainfall Inspections
SWM Pond	Invasive species reduce storage capacity (e.g. phragmites, goldfish)	High	Contract works; Educate public on not discarding pets
Low Impact Development	Lack of lot level controls on LIDs necessary to support intensification leads to assets not effectively managing stormwater	High	None
Critical Stormwater Main	Blockage due to structural failure or debris	High	CCTV inspection program
Pump Station	Pump failure or station reaches capacity.	High	Monthly station checks and verifications by operators

4.6.3 Infrastructure Resilience Approach

The resilience of our critical infrastructure is vital to the ongoing provision of services to customers. To adapt to changing conditions Hamilton needs to understand its capacity to 'withstand a given level of stress or demand', and to respond to possible disruptions to ensure continuity of service. An example would be how the storm water management ponds perform during the most significant storm water events during a given year. We do not currently measure our resilience in service delivery and will be included in the next iteration of the AM Plan.

Resilience covers the capacity of Hamilton to withstand any service disruptions, act appropriately and effectively in a crisis, absorb shocks and disturbances as well as adapting to ever changing conditions. Resilience is built on aspects such as response and recovery planning, financial capacity, climate change, risk assessment and crisis leadership.

4.6.4 Service and Risk Trade-Offs

The decisions made in AM Plans are based on the objective to achieve the optimum benefits from the available resources. At this time, the City does not have sufficient data to present risks and tradeoffs. This information will be presented in the **2025** AM Plan regarding Proposed Levels of Service per the timelines outlined in the AMP Overview.

4.6.5 Financial Summary

This section contains the financial requirements resulting from the information presented in the previous sections of this AM Plan. Effective asset and financial management will enable Hamilton to ensure its storm water network provides the appropriate level of service for the City to achieve its goals and objectives. Reporting to stakeholders on service and financial performance ensures Hamilton is transparently fulfilling its stewardship accountabilities.

Long-Term financial planning (LTFP) is critical for Hamilton to ensure the stormwater network's lifecycle activities such as renewals, operations, maintenance and acquisitions can happen at the optimal time. Hamilton is under increasing pressure to meet the wants and needs of its customer while keeping costs at an affordable level and maintaining its financial sustainability.

Without funding asset activities properly for its storm water network; Hamilton will have difficult choices to make in the future which will include options such as higher cost reactive maintenance and operational costs, reduction of service and potential reputational damage.

Hamilton will be seeking to fully incorporate its storm water network into the LTFP. Aligning the LTFP with the AM Plan is critical to ensure the all the networks needs will be met while the City is finalizing a clear financial strategy with measurable financial targets. The financial projections will be improved as the discussion on desired levels of service and asset performance matures.

4.6.6 Sustainability of Service Delivery

There are two key indicators of sustainable service delivery that are considered in the AM Plan for this service area. These indicators are used to monitor and assess financial performance over the planning period. The two indicators are the:

- asset renewal funding ratio (proposed renewal budget for the next 10 years / forecast renewal costs for next 10 years), and
- medium term forecast costs/proposed budget (over 10 years of the planning period).

ASSET RENEWAL FUNDING RATIO

Asset Renewal Funding Ratio[20] **9.49**%

The Asset Renewal Funding Ratio is used to determine if Hamilton is accommodating asset renewals in an **optimal** and **cost effective** manner from a timing perspective and relative to financial constrains, the risk Hamilton is prepared to accept and service levels it wishes to maintain. The target renewal funding ratio should be ideally between **90% - 110%** over the entire planning period. A low indicator result generally indicates that service levels are achievable however the expenditures are below this level because Hamilton is reluctant to fund the necessary work or prefers to maintain low levels of debt.

Over the next 10 years Hamilton expects to have **9.49%** of the funds required for the optimal renewal of assets. By only having sufficient funding to renew **9.49%** of the required assets in the appropriate timing it will inevitably require difficult trade off choices that could include:

- a reduction of the level of service and availability of assets;
- increased complaints and reduced customer satisfaction;
- increased reactive maintenance and renewal costs;
- damage to the City's reputation and risk of fines or legal costs; and,
- property damage and increased pollutants entering the watercourse

The historical lack of renewal funding resources will be addressed in future AM Plan's while aligning the plan to the LTFP. This will allow staff to develop options and long-term strategies to address the renewal rate. Hamilton will review its renewal allocations once the entire inventory has been confirmed and amalgamated.

The Asset Renewal Funding Ratio is an important indicator and illustrates that over the next 10 years we expect to have **9.49 %** of the funds required for the optimal renewal of assets.

MEDIUM TERM → 10-YEAR FINANCIAL PLANNING PERIOD

This AM Plan identifies the forecast operations, maintenance and renewal costs required to provide an agreed level of service to the community over a 10 year period. This provides input into 10 year financial and funding plans aimed at providing the required services in a sustainable manner.

This forecast work can be compared to the proposed budget over the first 10 years of the planning period to identify any funding shortfall.

The forecast operations, maintenance and renewal costs over the 10 year planning period is **$53,766,052** on average per year.

[20] AIFMM, 2015, Version 1.0, Financial Sustainability Indicator 3, Sec 2.6, p 9.

The proposed (budget) operations, maintenance and renewal funding is **$22,596,378** on average per year giving a 10 year funding **shortfall** of **$31,169,674** per year or **$311,696,740** in total over the ten year planning period. This indicates that **42.03%** of the forecast costs needed to provide the services documented in this AM Plan are accommodated in the proposed budget. Note, these calculations exclude acquired assets.

Funding an annual funding shortfall or funding 'gap' of **$31,169,6746** per year cannot be addressed in a single year and has not been incorporated as identified within this plan into any existing plan. The Gap will require vetting, planning and resources to begin to incorporate gap management into the future budgets. This gap will need to be managed over time to reduce it in a sustainable manner and limit financial shock to customers. Options for managing the gap include;

- Financing strategies – increased funding, block funding for specific lifecycle activities, long term debt utilization;
- Adjustments to lifecyle activites – increase/deacrease maintenance or operations, increase/decrease frequency of renewals, limit acquisitions or dispose of underutilized assets; and,
- Influence level of service expectations or demand drivers

These options and others will allow Hamilton to ensure the gap is managed appropriately and ensure the level of service ouctomes the customers desire.

Providing sustainable services from infrastructure requires the management of service levels, risks, forecast outlays and financing to achieve a financial indicator of approximately 1.0 for the first years of the AM Plan and ideally over the 10 year life of the Long-Term Financial Plan.

4.6.7 Forecast Costs (Outlays) For the Long-Term Financial Plan

Table 80 shows the forecast costs (outlays) required for consideration in the 10-year long-term financial plan.

Providing services in a financially sustainable manner requires a balance between the forecast outlays required to deliver the agreed service levels with the planned budget allocations in the operational and capital budget. Hamilton will begin developing its long-term financial plan (LTFP) to incorporate both the operational and capital budget information and help align the LTFP to the AM Plan which is critical for effective asset management planning.

A gap between the recommended forecast outlays and the amounts allocated in the operational and capital budgets indicates further work is required on reviewing service levels in the AM Plan.

Hamilton will manage the 'gap' by continuing to develop this AM Plan to provide guidance on future service levels and resources required to provide these services in consultation with the community. Options to manage the gap include reduction and closure of low use assets, increased funding allocations, reduce the expected level of service, utilize debt based funding

over the long term, adjustments to lifecycle activities, improved renewals and multiple other options or combinations of options.

These options will be explored in the next AM Plan and Hamilton will provide analysis and options for Council to consider going forward. Table 80: Forecast Costs (Outlays) for the Long-Term Financial Plan

Table 80: Forecast Costs (Outlays) for the Long-Term Financial Plan
Forecast costs are shown in 2021 dollar values.

YEAR	ACQUISITION	OPERATION	MAINTENANCE	RENEWAL	DISPOSAL	TOTAL
2022	$22,500,000	$11,381,345	$3,920,000	$64,55,000	0	$44,256,344
2023	$16,630,000	$14,222,998	$3,650,000	$40,10,000	0	$38,513,000
2024	$23,975,000	$16,189,918	$3,650,000	$14,50,000	0	$45,264,920
2025	$11,080,000	$13,826,635	$6,370,000	$15,80,000	0	$32,856,636
2026	$22,202,000	$14,899,700	$4,490,000	$11,00,000	0	$42,691,700
2027	$15,642,000	$15,287,688	$6,490,000	$46,90,000	0	$42,109,688
2028	$19,412,000	$15,691,196	$4,490,000	$35,10,000	0	$43,103,196
2029	$17,542,000	$16,110,844	$4,490,000	$24,30,000	0	$40,572,844
2030	$15,922,000	$16,547,287	$4,490,000	$19,50,000	0	$38,909,288
2031	$16,742,000	$17,001,168	$4,490,000	$11,00,000	0	$39,333,168

4.6.8 Funding Strategy

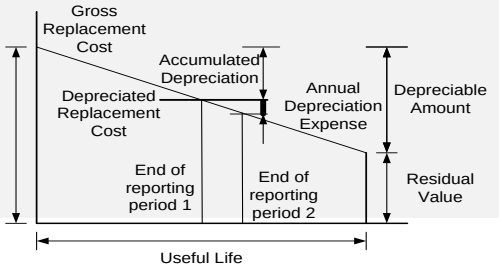
The proposed funding for assets is outlined in Hamilton's operational budget and ten (10) - year capital budget.

The financial strategy of Hamilton determines how funding will be provided, whereas the AM Plan communicates how and when this will be spent, along with the service and risk consequences of various service alternatives. Future iterations of the AM Plan will provide service delivery options and alternatives to optimize limited financial resources.

4.6.9 Asset Valuations

The best available estimate of the value of assets included in this AM Plan are shown below. The assets are valued at estimated replacement costs:

Replacement Cost (Current/Gross)	$3,100,000,000
Depreciable Amount	$3,100,000,000
Depreciated Replacement Cost[21]	$2,189,000,000
Depreciation	$ 51,054,900



The current replacement cost is the most common valuation approach for specialized infrastructure assets. The methodology includes establishing a comprehensive asset registry, assessing replacement costs (based on market pricing for the modern equivalent assets) and useful lives, determining the appropriate depreciation method, testing for impairments, and determining remaining useful life.

As the City matures its asset data, it is highly likely that these valuations will fluctuate significantly over the next 3 years and they should increase over time based on improved market equivalent costs

4.6.10 Valuation forecast

Asset values are forecast to increase as projections improve and can be validated as market pricing. The net valuations will increase significantly despite some assets being programmed for disposal that will be removed from the register over the ten (10) – year planning horizon.

Any additional assets will add to the operations and maintenance needs in the longer term and would also require additional costs due to future renewals obligations. Any additional assets will also add to future depreciation forecasts. Any disposals of assets would decrease the operations and maintenance needs in the longer term and removes the high costs renewal obligations.

[21] Also reported as Written Down Value, Carrying or Net Book Value.

4.6.11 Key Assumptions Made in Financial Forecasts

In compiling this AM Plan, it was necessary to make some assumptions. This section details the key assumptions made in the development of this AM Plan and should provide readers with an understanding of the level of confidence in the data behind the financial forecasts.

Key assumptions made in this AM Plan are:

- Operational forecasts are based on current budget allocations and are the basis for the projections for the 10-year horizon and do not address other operational needs not yet identified;
- Maintenance forecasts are based on current budget allocations and do not identify asset needs at this time. These forecasts are solely based on planned activities;
- 1.04 % p.a. has been added to maintenance forecasts to accommodate for donated assets assumed over the 10-year planning horizon; and,
- 1.00 % p.a has been added to operational forecasts to accommodate for donated assets assumed over the 10-year planning horizon.

4.6.12 Forecast Reliability and Confidence

The forecast costs, proposed budgets, and valuation projections in this AM Plan are based on the best available data. For effective asset and financial management, it is critical that the information is current and accurate. Data confidence is classified on a A - E level scale[22] in accordance with Table 5 in the AMP overview.
The estimated confidence level for and reliability of data used in this AM Plan is shown in Table 81.

Table 81: Data Confidence Assessment for Data used in AM Plan

DATA	CONFIDENCE ASSESSMENT	COMMENT
Demand drivers	Medium	Further investigation is required to better understand demand drivers.
Growth projections	Medium	Current growth projections will need to be vetted and improved. This is identified under continuous improvement initiatives.
Acquisition forecast	Medium	Currently based on 2019 DC study and SME opinion. Continuous improvements are required and identified.
Operation forecast	Medium	Currently budget based and requires future improvements to ensure allocation is accurate.
Maintenance forecast	Medium	Currently budget based and requires future improvements to ensure allocation is accurate.

[22] IPWEA, 2015, IIMM, Table 2.4.6, p 2|71.

Table 81: Data Confidence Assessment for Data used in AM Plan		
DATA	**CONFIDENCE ASSESSMENT**	**COMMENT**
Renewal forecast - Asset values	Low	Currently based on estimates and historical costs. These need to be improved to market prices.
- Asset useful lives	Low	Based on SME opinion. Continuous improvement required to ensure data is vetted and ensure it reflects Hamilton's actual practices.
- Condition modelling	Low	Mixture of assessment methods. Requires standardization along with predictable timelines for assessments.
Disposal forecast	Low	Current disposal information is rolled into renewal. Continuous improvements are required to ensure accurate data is available.

The estimated confidence level for and reliability of data used in this AM Plan is considered to be of **Low to Medium** confidence level.

4.7 PLAN IMPROVEMENT AND MONITORING

4.7.1 Status of Asset Management Practices[23]

ACCOUNTING AND FINANCIAL DATA SOURCES

This AM Plan utilizes accounting and financial data. The sources of the data:

- 2022 Capital & Operating Budgets;
- 2021 Tender Documents (various);
- Asset Management Data Collection Templates;
- Audited Financial Statements and Government Reporting (FIR, TCA etc);
- Financial Exports from internal financial systems; and,
- Historical cost and estimates of budget allocation based on SME experience.

ASSET MANAGEMENT DATA SOURCES

This AM Plan also utilizes asset management data. The sources of the data are:

- Data extracts from various city applications and management software;
- Asset Management Data Collection Templates;
- Tender documents, subdivision agreements and projected growth forecasts as well as internal reports;
- Condition Assessments;
- SOP's, Subject matter expert opinion and anecdotal information; and,
- Reports from the mandatory biennial inspection, operational & maintenance activities internal reports.

4.7.2 Improvement Plan

It is important that Hamilton recognize areas of the AM Plan and planning process that require future improvements to ensure the effective management of the stormwater network assets and to inform decision making. The tasks listed below are essential to improving the AM Plan and Hamilton's ability to make evidence based and informed decisions. These improvements span from improved lifecycle activities, improved financial planning, improved data quality as well as plans to physically improve the assets.

Each year Hamilton will revisit these planned activities and report on progress made. The Continuous Improvement plan table below highlights proposed continuous improvement items that will require further discussion and analysis to determine feasibility, resource requirements and alignment to current workplans. The Improvement plans in Table 32 highlights proposed improvement items that will require further discussion and analysis to determine feasibility,

[23] ISO 55000 Refers to this as the Asset Management System

resource requirements and alignment to current workplans. Future iterations of this AM Plan will provide updates on these improvement plans.

Table 82: Improvement Plan
*** p.a – per annum**

TASK	TASK	RESPONSIBILITY	RESOURCES REQUIRED	DRAFT TIMELINE
1.	Collect and verify data from systems (GIS, Hansen, etc.) before integrating into EAM	Hamilton Water	$40,000 p.a. $120,000 Total Internal Staff Time	3 Years (2022-2024)
2.	Develop a Long-Term Financial Plan to connect the budgeting process to AM planning	CAM, Hamilton Water, Finance	$15,000 p.a. $60,000 Total Internal Staff Time	4 Years (2022-2025)
3.	Complete condition assessments on pump stations and flood control structure/gates. Implement on a consistent cycle/methodology.	CAM, Hamilton Water	$84,000 p.a. $252,000 Total Internal Staff, Tender Process Specialty Assessor	3 Years (2022-2024)
4.	Standardize condition assessments for stormwater main and establish program and timeline to complete system wide assessment	CAM, Hamilton Water, Infrastructure Renewal l	$10,000 p.a. $20,000 Total Internal Staff Time	2 Years (2022-2023)
5.	Complete stormwater modelling to assess capacity of system and identify areas of concern.	CAM, Hamilton Water	$150,000 p.a. $450,000 Total Internal Staff time, Tender Process, External Assessment	3 Years (2022-2024)
6.	Investigate LIDAR technology to create inventory for swales and ditches	CAM, TOM	$100,000 p.a. $500,000 Total Internal Staff time, Tender	5 Years (2022-2026)

Table 82: Improvement Plan
*** p.a – per annum**

TASK	TASK	RESPONSIBILITY	RESOURCES REQUIRED	DRAFT TIMELINE
			Process, External Assessment	
7.	Create inventory of low impact developments (LID) , ditches, swales, laterals in the City	CAM, Hamilton Water	$50,000 p.a. $150,000 Total Internal Staff time, Tender Process, External Vendors	3 Years (2022-2024)
8.	Modify existing inspection programs to output condition scores (SWM Ponds, minor culverts, OGS, Inlet/Outfalls)	CAM, Hamilton Water	$20,000 p.a. $60,000 Total Internal Staff Time	3 Years (2022-2024)
9.	Establish condition assessment programs for all maintenance holes, and catchbasins	CAM, Hamilton Water	$5,000 p.a. $10,000 Total Internal Staff Time	2 Years (2022-2023)
10.	Standardize condition assessment outcomes and timed deliverables	Engineering Services, TOM, CAM	$6,000 p.a. $18,000 Total Internal Staff Time	3 Years (2022-2024)
11.	Improve data confidence levels for asset register especially for assets with low data confidence (e.g. sewer laterals)	CAM, Hamilton Water	10,000 p.a. $50,000 Total Internal Staff Time	5 Years (2022-2026)
12.	Improve Growth projection data and modelling for next AM Plan iteration	CAM, Hamilton Water, Ec. Dev	$6,000 p.a. $12,000 Total Internal Staff Time	2 Years (2022-2023)
13.	Develop and implement an annual demand review process to ensure sufficient	CAM, Hamilton Water, EC. Dev	$17,500 $35,000 Total Internal Staff Time	2 Years (2022-2023)

Table 82: Improvement Plan
*** p.a – per annum**

TASK	TASK	RESPONSIBILITY	RESOURCES REQUIRED	DRAFT TIMELINE
	knowledge is available to inform future planning			
14.	Analyze operational budget to improve AM allocations for lifecycle activities	CAM, Hamilton Water, Finance	$10,000 p.a. $30,000 Total Internal Staff Time	3 Years (2022-2024)
15.	Analyze maintenance activities to identify future needs and recommended actions	CAM, Hamilton Water	$10,000 p.a. $40,000 Total Internal Staff Time	4 Years (2022-2025)
16.	Develop Renewal forecasting prioritization to optimize resources and ensure level of services can be maintained	CAM, Hamilton Water	$6,000 p.a. $24,000 Total Internal Staff Time	4 Years (2022-2025)
17.	Improve annual engagement survey process to optimize engagement and respondents	CAM, Hamilton Water, Communications	$35,000 p.a. $140,000 Total Internal Staff Time	4 Years (2022-2025)
18.	Review BIMA Scorecard reporting and ensure data and assumptions are consistent with ministry and City reporting and develop additional technical metrics.	CAM, Hamilton Water, Continuous Improvement	$2,500 p.a. $5,000 Total Internal Staff Time	2 Years (2022-2023)
19.	Standardize and develop risk management knowledge along with supporting documentation	CAM, Engineering Services, Continuous Improvement & Quality	$12,500 p.a. $25,000 Total Internal Staff Time	2 Years (2022-2023)
20.	Identify stormwater assets in other divisions and incorporate into next AM Plan	CAM, Hamilton Water	$10,000 p.a. $30,000 Total Internal Staff Time	3 Years (2022-2024)

Table 82: Improvement Plan
*** p.a – per annum**

TASK	TASK	RESPONSIBILITY	RESOURCES REQUIRED	DRAFT TIMELINE
21.	Investigate sewer laterals repair/replacement procedure for private residence as City does not own asset but acts as asset owner	CAM, Hamilton Water	$4,000 p.a. $8,000 Total Internal Staff Time	2 Years (2022-2023)
22.	Further develop vertical asset knowledge for future iterations of AM Plans	CAM, Hamilton Water	$50,000 p.a. $150,000 p.a. Internal Staff Time, Tender Process	3 Years (2022-2024)
23.	Improve asset replacement costs by vetting with current market prices instead of historical costs/estimates or internal models	CAM, Hamilton Water, Finance	$30,000 p.a. $90,000 Total Internal Staff Time	3 Years (2022-2024)
24.	Refine acquisition model to ensure projections are accurate and updated	CAM, Hamilton Water, Ec.Dev., Finance	$7,000 p.a. Internal Staff Resources	Annual
25.	Implement additional technical metrics for SWM ponds and minor culverts	CAM, TOM	$5,000 p.a Internal Staff Time	Annual
26.	Separate & validate stormwater technical metrics reported in the BIMA tool	CAM, Hamilton Water	$5,000 p.a Internal Staff Time	Annual
27.	Ensure new technical metrics are considering different lifecycle stages (e.g. acquisition, disposal)	CAM, Hamilton Water	$2,000 p.a $6.000 Total Internal Staff Time	3 Years (2022-2024)

4.7.3 Monitoring and Review Procedures

This AM Plan will be reviewed during the annual budget planning process and revised to show any material changes in service levels, risks, forecast costs and proposed budgets as a result of budget decisions.

The AM Plan will be reviewed and updated on a regular basis to ensure it represents the current service level, asset values, forecast operations, maintenance, renewals, acquisition and asset disposal costs and planned budgets. These forecast costs and proposed budget will be incorporated into the Long-Term Financial Plan once completed.

4.7.4 Performance Measures

The effectiveness of this AM Plan can be measured in the following ways:

- The degree to which the required forecast costs identified in this AM Plan are incorporated into the long-term financial plan,
- The degree to which the 1-10 year detailed works programs, budgets, business plans and corporate structures consider the 'global' works program trends provided by the AM Plan,
- The degree to which the existing and projected service levels and service consequences, risks and residual risks are incorporated into the Strategic Planning documents and associated plans,
- The Asset Renewal Funding Ratio achieving the Organisational target (this target is often 90 – 100%).

REFERENCES

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CITY OF HAMILTON
CAPITAL PROJECT CLOSINGS
AS OF DECEMBER 31, 2021
Projects impacting the Unallocated Capital Levy Reserve and Other Sources

Year Approved	ProjectID	Description	Surplus/ (Deficit) ($)	Reserve	Description
Projects requiring funds					
2008	4140846106	Parkside Hills - Phase 1A	(62,389.26)	108020	Unalloc Capital Levy
2017	7101758002	Alexander Park Spraypad	(4,469.34)	108020	Unalloc Capital Levy
2018	3541841123	Ancaster Tennis Bubble	(3,640.56)	108020	Unalloc Capital Levy
2018	6731841822	Riverdale HUB	(19.95)	108020	Unalloc Capital Levy
2019	3541955001	Program Yard Capital Renewal	(8,715.39)	108020	Unalloc Capital Levy
			(79,234.50)		
Projects returning funds				108020	Unalloc Capital Levy
2015	4031555215	Highway 403 Ramp Studies	888.25	108020	Unalloc Capital Levy
2015	4401556506	Vincent Massey Park Development	44,179.41	108020	Unalloc Capital Levy
2016	7101654610	Carlisle & Beverly Arena Accessibility Upgrades & Expansion	7,068.61	108020	Unalloc Capital Levy
2017	3541741013	Program - Firestations Facility Upgrade	7,454.23	108020	Unalloc Capital Levy
2017	7101741701	Program - Community Halls Retrofits	5,371.11	108020	Unalloc Capital Levy
2018	4401856815	Caterini Park (Binbrook)	13,556.36	108020	Unalloc Capital Levy
2018	7101854806	Dundas Lawn Bowling Club Imprv	21,041.26	108020	Unalloc Capital Levy
2018	7101854815	Westoby Parking Resurfacing	41,359.64	108020	Unalloc Capital Levy
2019	3501957001	Corp Trunk Radio Upgrade	163,645.84	108020	Unalloc Capital Levy
2019	7401941603	Multi Agency Training Centre - Facility Upgrades	35,488.89	108020	Unalloc Capital Levy
2020	4032020048	Durable Pavement Markings	3,069.79	108020	Unalloc Capital Levy
2020	4032041042	District West - Dundas Changeroom & Meeting Room Improvements	4,257.39		
				108020	Unalloc Capital Levy
2020	4032058001	Consultation and Accommodation	2,046.22	108020	Unalloc Capital Levy
2020	4032080001	Creekside Drive Developer Road	8,036.81	108020	Unalloc Capital Levy
2020	4452053444	Tree Planting Program	1,979.89	108020	Unalloc Capital Levy
2020	4662016102	Traffic Calming	13,351.32	108020	Unalloc Capital Levy
2021	4662120140	New bump-outs at Barton & Lottridge and Barton & Barnesdale	21,401.79	108020	Unalloc Capital Levy
			394,196.81		
Net impact to the Unallocated Capital Levy Reserve			**314,962.31**		
Projects requiring funds					
2021	7642151102	Automated CPR Units	(8,052.25)	100033	EMS Equipment Reserve
Net impact to Other Reserves			**(8,052.25)**		
Total Net impact to the Unallocated Capital Levy Reserve & Other Reserves			**306,910.06**		

CITY OF HAMILTON
CAPITAL PROJECTS' CLOSING SCHEDULE
AS OF DECEMBER 31, 2021

YEAR APPROVED	PROJECT ID	DESCRIPTION	APPROVED BUDGET ($)	REVENUES ($)	EXPENDITURES ($)	PROJECT SURPLUS/ (DEFICIT) ($)	% SPENT
			a	b	c	d = b - c	e=c/a
UNALLOCATED CAPITAL LEVY RESERVE							
2008	4140846106	Parkside Hills - Phase 1A	603,300.00	603,300.00	665,689.26	-62,389.26	110.3%
2015	4031555215	Highway 403 Ramp Studies	64,440.00	64,453.15	63,564.90	888.25	98.6%
2015	4401556506	Vincent Massey Park Development	624,000.00	624,000.00	579,820.59	44,179.41	92.9%
2016	7101654610	Carlisle & Beverly Arena Accessibility Upgrades & Expansion	790,000.00	790,150.00	783,081.39	7,068.61	99.1%
2017	3541741013	Program - Firestations Facility Upgrade	132,000.00	132,000.00	124,545.77	7,454.23	94.4%
2017	7101741701	Program - Community Halls Retrofits	85,000.00	91,028.85	85,657.74	5,371.11	100.8%
2017	7101758002	Alexander Park Spraypad	771,598.00	632,221.00	636,690.34	-4,469.34	82.5%
2018	3541841123	Ancaster Tennis Bubble	60,000.00	60,000.00	63,640.56	-3,640.56	106.1%
2018	4401856815	Caterini Park (Binbrook)	477,000.00	477,000.00	463,443.64	13,556.36	97.2%
2018	6731841822	Riverdale HUB	2,400,821.00	2,400,821.00	2,400,840.95	-19.95	100.0%
2018	7101854806	Dundas Lawn Bowling Club Imprv	175,000.00	175,000.00	153,958.74	21,041.26	88.0%
2018	7101854815	Westoby Parking Resurfacing	388,000.00	388,000.00	346,640.36	41,359.64	89.3%
2019	3501957001	Corp Trunk Radio Upgrade	5,566,283.00	5,566,283.00	5,402,637.16	163,645.84	97.1%
2019	3541955001	Program Yard Capital Renewal	91,097.78	91,097.78	99,813.17	-8,715.39	109.6%
2019	7401941603	Multi Agency Training Centre - Facility Upgrades	250,000.00	250,000.00	214,511.11	35,488.89	85.8%
2020	4032020048	Durable Pavement Markings	5,000.00	5,000.00	1,930.21	3,069.79	38.6%
2020	4032041042	District West - Dundas Changeroom & Meeting Room Improvements	20,000.00	20,000.00	15,742.61	4,257.39	78.7%
2020	4032058001	Consultation and Accommodation	4,000.00	4,000.00	1,953.78	2,046.22	48.8%
2020	4032080001	Creekside Drive Developer Road	198,000.00	198,893.81	190,857.00	8,036.81	96.4%
2020	4452053444	Tree Planting Program	1,345,000.00	1,345,000.00	1,343,020.11	1,979.89	99.9%
2020	4662016102	Traffic Calming	225,000.00	225,000.00	211,648.68	13,351.32	94.1%
2021	4662120140	New bump-outs at Barton & Lottridge and Barton & Barnesdale	60,000.00	60,000.00	38,598.21	21,401.79	64.3%
TOTAL FUNDS TO UNALLOCATED CAPITAL LEVY (22)			**14,335,539.78**	**14,203,248.59**	**13,888,286.28**	**314,962.31**	**96.9%**
OTHER PROGRAM SPECIFIC RESERVES							
2021	7642151102	Automated CPR Units	500,000.00	500,000.00	508,052.25	-8,052.25	101.6%
TOTAL FUNDS FROM PROGRAM SPECIFIC RESERVES (1)			**500,000.00**	**500,000.00**	**508,052.25**	**-8,052.25**	**101.6%**
DELAYED/CANCELLED PROJECTS							
2017	4141746100	City Share of Servicing Costs under Subdivision Agreements	1,207,894.64	0.00	0.00	0.00	0.0%
2017	5141796011	Intensification Infrastructure Upgrades Program - Water	200,000.00	0.00	0.00	0.00	0.0%
2018	4031855815	South Mountain Arterial Study (SMATS)	0.00	0.00	0.00	0.00	0.0%
2019	4031955985	Highway 403 Connections Study	0.00	0.00	0.00	0.00	0.0%
2019	5121951900	Waste Collection Equipment - Downtown/BIA	165,000.00	0.00	0.00	0.00	0.0%
2019	6731941113	COCHI - Transitional Ops Yr 3	0.00	0.00	0.00	0.00	0.0%
2020	3542010555	2020 Chargebacks - Facilities	0.00	0.00	0.00	0.00	0.0%
2020	3722051000	Commonwealth Square Timber Railing Replacement	0.00	0.00	0.00	0.00	0.0%
2020	4032011777	Pavement Degradation Funds	0.00	0.00	0.00	0.00	0.0%
2020	4032049555	QA-QC Service Contract Program	0.00	0.00	0.00	0.00	0.0%
2020	4242009305	Birch Avenue Greenspace	2,000.00	0.00	0.00	0.00	0.0%
2020	5142049555	QA-QC Service Contract Program	0.00	0.00	0.00	0.00	0.0%
2020	5162060302	Emergency Repairs - Cross Connections Program	0.00	0.00	0.00	0.00	0.0%
2020	5162060533	Trenchless Manhole Rehabilitation	0.00	0.00	0.00	0.00	0.0%
2020	5162060576	Sewer Lateral Condition Assessment Program	0.00	0.00	0.00	0.00	0.0%
2020	5182017549	Concrete Box Culvert Rehab/Repair - T.O.M.	0.00	0.00	0.00	0.00	0.0%
2021	4242109101	Hydro poles outlets - Locke St	5,000.00	0.00	0.00	0.00	0.0%
2021	4242109803	William Connell Park WiFi	99,000.00	0.00	0.00	0.00	0.0%
2021	4402110555	2021 Chargebacks- Open Space	0.00	0.00	0.00	0.00	0.0%
2021	4662120526	New Intersection Pedestrian Signal (IPS) - Barton St and Milton Ave	0.00	0.00	0.00	0.00	0.0%
2021	4662120527	New Intersection Pedestrian Signal (IPS) - Sherman Ave and Dunsmure Rd	0.00	0.00	0.00	0.00	0.0%
2021	4662120528	New Intersection Pedestrian Signal (IPS) - Wentworth & King William (near	0.00	0.00	0.00	0.00	0.0%
2021	4662220008	New Traffic Signal Installation Program	0.00	0.00	0.00	0.00	0.0%

CITY OF HAMILTON
CAPITAL PROJECTS' CLOSING SCHEDULE
AS OF DECEMBER 31, 2021

YEAR APPROVED	PROJECT ID	DESCRIPTION	APPROVED BUDGET ($)	REVENUES ($)	EXPENDITURES ($)	PROJECT SURPLUS/ (DEFICIT) ($)	% SPENT
			a	b	c	d = b - c	e=c/a
2021	4902141202	York Parkade Fire Door and Window Replacement	100,000.00	0.00	0.00	0.00	0.0%
2021	5162171311	Highway 8 - Bond to Woodleys Lane	0.00	0.00	0.00	0.00	0.0%
TOTAL DELAYED/CANCELLED PROJECTS (25)			**206,000.00**	**0.00**	**0.00**	**0.00**	**0.0%**
COMPLETED PROJECTS							
CORPORATE SERVICES DEPARTMENT(Tax Budget)							
Information Technology							
2013	3501357303	GIS Upgrades	390,000.00	387,628.82	387,628.82	0.00	99.4%
CORPORATE PROJECTS DEPARTMENT (Tax Budget)							
Councillor Infrastructure Program							
2017	4241709105	Water Bottle Filling Stations	196,000.00	123,155.08	123,155.08	0.00	62.8%
2017	4241709201	AR - Ferguson Ave N - Simcoe to Burlington (W2 A/R)	1,400,000.00	1,386,785.69	1,386,785.69	0.00	99.1%
2017	4241709403	Kenilworth Christmas Wreaths	30,145.00	28,042.06	28,042.06	0.00	93.0%
2018	4241809305	Pedestrian Crossing - Victoria Ave N at Copeland	75,000.00	35,154.80	35,154.80	0.00	46.9%
2019	4241909143	RA Riddell & Gilkson Prk Imprv	120,000.00	115,450.40	115,450.40	0.00	96.2%
2019	4241909201	Robinson Speed Cushion	60,000.00	50,437.26	50,437.26	0.00	84.1%
2019	4241909230	Hess Village Lighting	20,000.00	17,960.68	17,960.68	0.00	89.8%
2019	4241909216	Eastwood Park Playground	126,000.00	120,775.11	120,775.11	0.00	95.9%
2019	4241909409	Rosedale Playground Imprv	200,000.00	181,725.71	181,725.71	0.00	90.9%
2019	4241909603	Mohawk Sports Park Lighting	300,000.00	179,605.42	179,605.42	0.00	59.9%
2019	4241909702	Confidential - 155 Macassa Feasibility Inv	28,489.81	28,489.81	28,489.81	0.00	100.0%
2019	4241909703	TB McQuesten Prk Entrace	98,500.00	75,281.77	75,281.77	0.00	76.4%
2020	4242009141	Sir Allan MacNab Tennis Court	40,000.00	39,686.48	39,686.48	0.00	99.2%
2020	4242009203	Gum Removal Kit	6,000.00	5,339.97	5,339.97	0.00	89.0%
2020	4242009402	AR Rosedale Court	100,000.00	82,243.59	82,243.59	0.00	82.2%
2021	4242109201	Ferguson St - shrubs & baskets	18,000.00	6,432.39	6,432.39	0.00	35.7%
2021	4242109304	Lucy Park security fence	60,000.00	40,187.23	40,187.23	0.00	67.0%
2021	4242109901	Summit Park Pathway Connection	10,000.00	3,877.43	3,877.43	0.00	38.8%
OUTSIDE BOARDS AND ANGENCIES (Tax Budget)							
City Housing							
2016	6181641602	City Housing Contribution	1,500,000.00	1,499,999.80	1,499,999.80	0.00	100.0%
2016	6181641603	Repairs-W7 City Housing Units	814,682.00	864,504.00	864,504.00	0.00	106.1%
2019	6181941602	Unit Retrofits/Bay/Cannon Development	500,000.00	500,000.00	500,000.00	0.00	100.0%
Healthy & Safe Communities (Tax Budget)							
Housing Services							
2015	6731541504	IAH Extension - Admin	1,526,600.00	1,526,600.26	1,526,600.26	0.00	100.0%
2015	6731541505	IAH Extension - Rental Housing	13,450,000.00	13,450,000.00	13,450,000.00	0.00	100.0%
2016	6731641603	Capital Infrastructure Emergency Shelters	13,558,030.00	13,558,030.00	13,558,030.00	0.00	100.0%
Children's Services and Neighbourhood Development							
2018	6731841800	Red Hill Family Centre Reno	841,834.00	607,365.11	607,365.11	0.00	72.1%
2019	6501941901	Biindigen Roof Project	590,000.00	375,285.64	375,285.64	0.00	63.6%
2020	6792041001	Bernie Morelli Fam Centre Reno	510,000.00	408,964.36	408,964.36	0.00	80.2%
Hamilton Fire Department							
2019	7401951600	Annual Fire Equipment Replacement	1,268,000.00	1,077,489.69	1,077,489.69	0.00	85.0%

CITY OF HAMILTON
CAPITAL PROJECTS' CLOSING SCHEDULE
AS OF DECEMBER 31, 2021

YEAR APPROVED	PROJECT ID	DESCRIPTION	APPROVED BUDGET ($)	REVENUES ($)	EXPENDITURES ($)	PROJECT SURPLUS/ (DEFICIT) ($)	% SPENT
			a	b	c	d = b - c	e=c/a
Hamilton Paramedic Service							
2021	7642151100	Annual Vehicle Replacement	2,113,000.00	1,839,701.10	1,839,701.10	0.00	87.1%
2021	7642151101	Annual Equipment Replacement	274,000.00	226,395.10	226,395.10	0.00	82.6%
2021	7642151104	Community Paramedicine Long Term Care	0.00	284,115.95	284,115.95	0.00	0.0%
Recreation							
2021	7102154701	ASAC - Pickleball Courts	110,000.00	97,230.00	97,230.00	0.00	88.4%
Planning & Economic Development (Tax Budget)							
Growth Management & Economic Development							
2003	3620374100	SC-Strm Drainage Watercourse 7	7,590,004.17	5,097,577.96	5,097,577.96	0.00	67.2%
2007	3620707690	North Glanbrook Industrial Business Park	4,197,500.00	4,536,795.46	4,536,795.46	0.00	108.1%
2007	4030780741	Binbrook Rd Roundabout	761,144.03	691,648.15	691,648.15	0.00	90.9%
2009	4140946100	2009-City Share of Servicing Costs	578,274.29	362,917.20	362,917.20	0.00	62.8%
2010	4141046108	Meadowlands of Ancaster - Ph 9	214,435.53	214,435.53	214,435.53	0.00	100.0%
2011	4031180583	Upper Mnt Albion Urbanization	134,000.00	34,622.54	34,622.54	0.00	25.8%
2012	4141246110	Summit Park Ph 7 Internal Wrks	312,000.00	280,374.39	280,374.39	0.00	89.9%
2013	4031380386	Parkside Dr Urbanization - Phase 1	6,865,000.00	6,862,122.84	6,862,122.84	0.00	100.0%
2013	4031380387	Roundabout @ Isaac Brock and First Street	690,498.91	690,587.03	690,587.03	0.00	100.0%
2014	4141446105	Heritage Commons	85,000.00	80,565.83	80,565.83	0.00	94.8%
2015	3621555700	2015-2019 Econ Dev Strategy	75,000.00	75,000.00	75,000.00	0.00	100.0%
2016	4141646102	Ancaster Wooodlands Subd	156,669.61	156,669.61	156,669.61	0.00	100.0%
2016	4141646106	Winona Crossing	15,141.47	15,141.47	15,141.47	0.00	100.0%
2016	4141646107	Fairground West	405,685.63	405,685.63	405,685.63	0.00	100.0%
2017	4141746107	Red Hill Ph 1 and 2	1,864,493.38	1,748,387.01	1,748,387.01	0.00	93.8%
2018	4141846104	Orlick Aeropark Ph 1 Watermain	80,029.35	80,029.35	80,029.35	0.00	100.0%
2018	4401856801	Confidential - RE1801	8,130,000.00	5,817,323.36	5,817,323.36	0.00	71.6%
2019	3561950120	Confidential - RE1900	2,162,407.19	2,162,407.19	2,162,407.19	0.00	100.0%
2020	4142046101	Upper Sherman Extension	551,258.89	496,002.45	496,002.45	0.00	90.0%
2020	4142046104	555 Sanatorium Road Dev	30,101.59	30,101.59	30,101.59	0.00	100.0%
Transportation, Planning & Parking							
2014	4041417125	Cannon Bi-Directnl Cycle Trck	889,006.28	889,006.28	889,006.28	0.00	100.0%
2019	4901955900	Parking Master Plan Consultant	200,000.00	198,191.00	198,191.00	0.00	99.1%
2021	4032117054	Hatt Street Bikeway	113,956.43	113,956.43	113,956.43	0.00	100.0%
Public Works (Tax Budget)							
Transportation Operations & Maintenance							
2019	4031910012	Railway Roadway Crossings Rehabilitation Program	84,000.00	84,000.00	84,000.00	0.00	100.0%
2019	4661920019	Traffic Controller Replacement Program	345,000.00	345,000.00	345,000.00	0.00	100.0%
2020	4032041762	Yard Facility Maintenance and Improvement Program	98,000.00	98,000.00	98,000.00	0.00	100.0%
2020	4662015820	Traffic Counts Program	122,518.33	122,518.33	122,518.33	0.00	100.0%
2020	4662020011	Traffic Signal Upgrades	381,000.00	381,000.00	381,000.00	0.00	100.0%
2020	4662020017	Traffic Signal LED Lighting Upgrade Program	50,000.00	50,000.00	50,000.00	0.00	100.0%
2020	4662020024	New Traffic Signal - Glanair at Upper James	390,655.23	390,655.23	390,655.23	0.00	100.0%
2020	4662020720	Plastic Pavement Marking Rehabilitation	400,000.00	400,000.00	400,000.00	0.00	100.0%
Transit Division							
2013	5301384001	Rapid Transit - Quick Wins	11,993,000.00	8,690,832.58	8,690,832.58	0.00	72.5%

CITY OF HAMILTON
CAPITAL PROJECTS' CLOSING SCHEDULE
AS OF DECEMBER 31, 2021

YEAR APPROVED	PROJECT ID	DESCRIPTION	APPROVED BUDGET ($)	REVENUES ($)	EXPENDITURES ($)	PROJECT SURPLUS/ (DEFICIT) ($)	% SPENT
			a	b	c	d = b - c	e=c/a
Waste Management							
2016	5121655610	2020 Waste System Planning	759,843.26	715,238.72	715,238.72	0.00	94.1%
2020	5122051001	Waste Management By-Law - Support Fleet Acquisition	87,509.70	87,509.70	87,509.70	0.00	100.0%
2020	5122051002	Waste Collections - Safe-Stop Trailer Attenuator	31,361.47	31,361.47	31,361.47	0.00	100.0%
2020	5122094000	Transfer Station/CRC Maintenance & Capital Improvement Program	215,272.78	215,272.78	215,272.78	0.00	100.0%
Energy, Fleet & Facilities							
2012	7101254201	Scott Park - Bernie Morelli Recreation Centre (BMRC-NSC)	24,557,420.21	24,557,420.21	24,557,420.21	0.00	100.0%
2014	3541441401	Provincial Offences Administration Offices	37,387,998.00	37,631,807.52	37,631,807.52	0.00	100.7%
2015	3541541510	Control Ctre & Automation Upgr	456,324.73	456,309.48	456,309.48	0.00	100.0%
2016	3541641648	Program - Parking Lot Rehabilitation	344,617.29	344,617.29	344,617.29	0.00	100.0%
2016	7101641701	Program - Community Halls Retrofits	423,979.63	423,969.63	423,969.63	0.00	100.0%
2016	7101649601	Bernie Arbour Stadium - Upgrades	290,014.85	290,014.85	290,014.85	0.00	100.0%
2016	7101654612	Bobby Kerr & Trenholme Park Washroom Facilities	1,048,732.13	1,058,732.13	1,058,732.13	0.00	101.0%
2017	3541741603	Central Library Window Replacement	3,526,262.23	3,526,262.23	3,526,262.23	0.00	100.0%
2017	3721741600	Commonwealth Square & Summer's Lane	173,275.16	173,275.16	173,275.16	0.00	100.0%
2017	7101754701	Glanbrook Arena Elevator	819,831.05	750,622.05	750,622.05	0.00	91.6%
2018	7101854807	Dundas Valley Community Park Improvement & Pavillion Feasibility	148,852.53	148,852.53	148,852.53	0.00	100.0%
2019	3541941532	Program - Facility Capital Maintenance	357,076.15	356,988.60	356,988.60	0.00	100.0%
2019	3541941631	Program - Facilities Security	243,732.86	243,732.86	243,732.86	0.00	100.0%
2019	3541941901	Capital Lifecycle Renewal - Hamilton Farmer's Market	672,706.79	672,706.79	672,706.79	0.00	100.0%
2019	7101941701	Program - Community Halls Retrofits	76,932.64	76,932.64	76,932.64	0.00	100.0%
2019	7101954105	Program - Park & Fieldhouse Retrofits	74,664.38	74,664.38	74,664.38	0.00	100.0%
2020	3542041005	City Hall 5th & 6th Floor Renovations	201,497.84	201,497.84	201,497.84	0.00	100.0%
2020	4942051004	Street Sweeper Purchase	750,000.00	760,025.79	760,025.79	0.00	101.3%
Engineering Services							
2016	4031611610	Council Priority - Ward 10 Minor Rehabilitation	432,210.32	432,210.32	432,210.32	0.00	100.0%
2018	4661820540	Traffic Signal Modernization Coordinated with Construction	262,000.00	261,077.02	261,077.02	0.00	99.6%
2019	4031914405	Contaminated Soil & Rock Disposal Program	367,000.00	367,000.00	367,000.00	0.00	100.0%
2019	4031918218	OSIM Bridge, Culvert, Retaining Wall & Overhead Sign Inspections	50,000.00	50,000.00	50,000.00	0.00	100.0%
2019	4031918219	Structural Investigations and Reports	10,000.00	10,000.00	10,000.00	0.00	100.0%
2020	4032001099	Engineering Services Staffing Costs - Road	3,685,000.00	3,685,000.00	3,685,000.00	0.00	100.0%
2020	4032018218	OSIM Bridge, Culvert, Retaining Wall & Overhead Sign Inspections	230,000.00	230,000.00	230,000.00	0.00	100.0%
2020	4032019106	Hillcrest - Chedoke to end	244,041.91	244,041.91	244,041.91	0.00	100.0%
2020	4032055522	State of the Infrastructure - Asset Management	200,000.00	200,000.00	200,000.00	0.00	100.0%
2020	4042010004	Escarpment Slope & Appurtenance Stabilization Program	864,000.00	864,000.00	864,000.00	0.00	100.0%
Environmental Services							
2014	4451451004	Gage Park Tropical House	5,671,500.00	5,646,654.98	5,646,654.98	0.00	99.6%
2015	4401556504	Trails Master Plan Programming	415,300.00	415,193.22	415,193.22	0.00	100.0%
2019	4401941001	Cemetery Building Repairs	96,916.13	96,916.13	96,916.13	0.00	100.0%
2020	4402049101	Park Pathway Resurfacing Program	228,681.23	288,681.23	288,681.23	0.00	126.2%
Planning & Economic Development (Rate Budget)							
Growth Management & Economic Development							
2014	5141480480	Cormorant Rd Watermain Extension	500,000.00	389,584.84	389,584.84	0.00	77.9%
2016	5141680683	RHBP - Twenty Road East - Nebo Road to 900m westerly	601,015.57	254,352.19	254,352.19	0.00	42.3%
2009	5180955943	Grids Related Secondary Plan & SWM MP/Class EA	25,563.81	25,563.81	25,563.81	0.00	100.0%
2009	5180980980	SWMP Program	2,745,019.46	2,791,019.46	2,791,019.46	0.00	101.7%
2009	5180980983	SWMP - H8 - North of Rymal at Quarry	1,742,070.48	1,742,070.48	1,742,070.48	0.00	100.0%
2011	5181180090	Annual Storm Water Management Program	7,264,053.16	7,090,853.62	7,090,853.62	0.00	97.6%

CITY OF HAMILTON
CAPITAL PROJECTS' CLOSING SCHEDULE
AS OF DECEMBER 31, 2021

YEAR APPROVED	PROJECT ID	DESCRIPTION	APPROVED BUDGET ($)	REVENUES ($)	EXPENDITURES ($)	PROJECT SURPLUS/ (DEFICIT) ($)	% SPENT
			a	b	c	d = b - c	e=c/a
2012	5181280280	SWMP - A20 - Limestone Manor	570,000.00	411,456.52	411,456.52	0.00	72.2%
2013	5181380090	Storm Water Management Program	2,983,521.83	2,204,438.97	2,204,438.97	0.00	73.9%
2015	5181580090	Storm Water Management Program	4,837,541.49	5,063,316.75	5,063,316.75	0.00	104.7%
2017	5181780785	RHBP - Dartnall - Stone Church to Rymal	1,070,154.67	1,070,154.67	1,070,154.67	0.00	100.0%
2018	5181880870	Lewis Rd Culvert - approximately 200m n/o Barton	660,000.00	628,679.92	628,679.92	0.00	95.3%
Public Works (Rate Budget)							
Waterworks Regular Program							
2018	5141851810	Fleet Additions	1,698,000.00	1,698,000.00	1,698,000.00	0.00	100.0%
2018	5141860577	Metallic Watermain Condition Assessment Program	515,000.00	577,318.77	577,318.77	0.00	112.1%
2019	5141911101	Road Cut Restoration Program	3,505,440.78	3,505,440.78	3,505,440.78	0.00	100.0%
2020	5142001099	Engineering Services Staffing Costs - Water	4,236,000.00	4,236,000.00	4,236,000.00	0.00	100.0%
2020	5142011101	Road Cut Restoration Program	4,335,000.00	4,335,000.00	4,335,000.00	0.00	100.0%
2020	5142057626	Critical Watermain Inspection Program	529,000.00	529,000.00	529,000.00	0.00	100.0%
2020	5142060080	Valve Replacement Program	2,530,000.00	2,530,000.00	2,530,000.00	0.00	100.0%
2020	5142060750	Unscheduled Valve, Hydrant, Watermain & Misc Water Replace Program	3,000,000.00	3,123,832.71	3,123,832.71	0.00	104.1%
2020	5142062073	Field Data Systems Program	10,000.00	10,000.00	10,000.00	0.00	100.0%
2020	5142062078	Substandard Water Service Replacement Program	2,750,000.00	2,750,000.00	2,750,000.00	0.00	100.0%
2020	5142071306	Hillcrest - Chedoke to end	94,000.00	93,557.95	93,557.95	0.00	99.5%
Wastewater Regular Program							
2018	5161860575	Mainline Sewer Condition Assessment Program	770,000.00	1,089,156.05	1,089,156.05	0.00	141.4%
2019	5161911101	Road Cut Restoration Program	1,440,000.00	1,440,000.00	1,440,000.00	0.00	100.0%
2019	5161960302	Emergency Repairs - Cross Connections Program	220,000.00	220,000.00	220,000.00	0.00	100.0%
2019	5161960574	Capital Programming Sewer Inspection & Assessment	400,000.00	400,000.00	400,000.00	0.00	100.0%
2019	5161960577	Mainline Sewer Condition Assessment for Compliance & Regulations	48,000.00	48,000.00	48,000.00	0.00	100.0%
2019	5161960820	Open Cut Repairs for CIPP Program	400,000.00	435,124.60	435,124.60	0.00	108.8%
2019	5161971015	Sewer Lateral Replacement for Co-ordinated Projects	270,000.00	295,000.00	295,000.00	0.00	109.3%
2020	5162001099	Engineering Services Staffing Costs - Wastewater	4,122,000.00	4,122,000.00	4,122,000.00	0.00	100.0%
2020	5162011101	Road Cut Restoration Program	1,645,000.00	1,645,000.00	1,645,000.00	0.00	100.0%
2020	5162055878	Forcemain Condition Assessment Program	26,000.00	26,000.00	26,000.00	0.00	100.0%
2020	5162060574	Capital Programming Sewer Inspection & Assessment	230,000.00	230,000.00	230,000.00	0.00	100.0%
2020	5162061444	Sewer Lateral Replace/Rehab Program	3,080,000.00	3,080,000.00	3,080,000.00	0.00	100.0%
2020	5162071015	Sewer Lateral Replacement for Co-ordinated Projects	165,000.00	165,000.00	165,000.00	0.00	100.0%
Storm Sewers Regular Program							
2013	5181380377	Arvin Avenue - McNeilly Road to 350m westerly	540,000.00	345,313.18	345,313.18	0.00	63.9%
2015	5181555077	Zoom Camera Inspection - Data Component	726,172.40	726,172.40	726,172.40	0.00	100.0%
2019	5181917549	Concrete Box Culvert Rehabilitation/Repair (< 3.0m span)	58,608.79	58,608.79	58,608.79	0.00	100.0%
2019	5181974950	Watercourse and Drainage Channel Maintenance	35,000.00	35,000.00	35,000.00	0.00	100.0%
TOTAL COMPLETED PROJECTS (140)			**236,081,778.83**	**225,834,101.07**	**225,834,101.07**	**0.00**	**95.7%**
GRAND TOTAL COMPLETED/CANCELLED PROJECTS (188)			**251,123,318.61**	**240,537,349.66**	**240,230,439.60**	**306,910.06**	**95.7%**

CITY OF HAMILTON
CAPITAL PROJECTS BUDGET APPROPRIATIONS OF $250,000 OR GREATER AND CAPITAL PROJECT RESERVE FUNDING REQUIRING COUNCIL APPROVAL
FOR THE PERIOD COVERING OCTOBER 1, 2021 TO DECEMBER 31, 2021

Appropriated/ Transferred From	Description	Appropriated/ Transferred To	Description	Amount ($)	Council Approval / Comments	Comments
Healthy & Safe Communities						
Hamilton Fire Department						
7402051102	Hazmat Foam Response Apparatus	7402051101	Annual Vehicle Replacement	**300,000.00**		Transfer of funds from a project with an expected surplus to a project that requires funding to offset the current deficit.
Healthy & Safe Communities Total				**$ 300,000.00**		
Planning & Economic Development (Tax Budget)						
Economic Development						
4030780746	Binbrook Community Core Improvements	4030780741	Binbrook Rd Roundabout	**311,144.03**		Project 4030780741 has been completed and currently has a deficit as a result of uncollected revenues of approximately $70,000 and additional expenditures of approximately $240,000. Appropriation from a project with an expected surplus is required.
5181980090	Storm Water Management Program	3620374100	SC-Strm Drainage Watercourse 7	**2,364,004.17**		3620374100 is a dated project that was approved through the capital budget from 2003-2005. The funding sources were not clearly defined and the revenues that were budgeted as cost recoveries from developers were never collected resulting in a large deficit. Appropriation is required to eliminate the deficit and close project 3620374100.
Planning & Economic Development Department (Tax Budget) Total				**$ 2,675,148.20**		
Planning & Economic Development (Rate Budget)						
Growth Management						
5141680683	RHBP - Twenty Road East - Nebo Road to 900m westerly	5161096011	2010 Intnsificatn Infra Upgrad	**308,984.43**		Project 5141680683 has been completed with a surplus. Funds are required to offset deficit in project 5161096011.
5181380090	Storm Water Management Program	5180980980	SWMP Program	**445,019.46**		Both projects are completed. Appropriation is required to clear deficit before project closure.
5181380090	Storm Water Management Program	5180980983	SWMP - H8 - North of Rymal at Quarry	**252,070.48**		Both projects are completed. Appropriation is required to clear deficit before project closure.
Planning & Economic Development Department (Rate Budget) Total				**$ 1,006,074.37**		
Project Totals				**$ 3,981,222.57**		

CITY OF HAMILTON
CAPITAL PROJECTS REQUIRING A BUDGET ADJUSTMENT
AS OF DECEMBER 31, 2021

Recommendations

Project	Description	Amount ($)	Comment
Healthy & Safe Communities			
Hamilton Fire Department			
7402051101	Annual Vehicle Replacement	$ 45,456.13	Unbudgeted Vehicle Sales.
Housing Services			
2051255204	Neighbourhood Strategy	$ 965,139.00	Unbudgeted donations and receipt of grants for the urban farm from Hamilton Community Foundation.
Planning & Economic Development			
Economic Development			
3621708900	Economic Development Initiatives	$ 36,738.59	Additional grant revenue and cost recoveries.
Tourism & Culture			
7201858702	Confidential - TC1801	$ 200,000.00	Unbudgeted sponsorship revenue.
7201941903	Gage House Porch and Exterior Cladding	$ 75,003.00	Additional grant revenue received.
7202058202	Collections Management	$ 100,000.00	Additional grant revenue received.
Public Works (Tax)			
Energy Fleet and Facilities			
7101854810	Durand Washroom Facility	$ 30,000.00	Donation money received.
7101954905	Sackville Hill Senior Expansion & Lifecycle Renewal	$ 100,000.00	Donation money received.
Engineering Services			
4031911606	Council Priority - Ward 6 Minor Rehabilitation	$ 71,867.50	Funds received from developer.
4411606002	Real Estate Disposition	$ 17,075.80	Cost recoveries.
4411806105	Police Marine Facility Replacement	$ 46,760.75	Fees collected.
Environmental Services			
4400756755	Joe Sams Leisure Park	$ 30,000.00	Donation money received.
4401951700	Small Equipment Replacement (Reserve) Program	$ 48,293.23	Sale of old equipment.
4401952600	Playground Lifecycle Replacement Program	$ 57,000.00	Donation money received.
4451953444	Tree Planting Program	$ 337,314.72	Transfer from Forestry Deferred Revenues to assist with tree plantings relating to new subdivisions.
4452153444	Tree Planting Program	$ 319,712.40	Transfer from Forestry Deferred Revenues to assist with tree plantings relating to new subdivisions.

CITY OF HAMILTON
CAPITAL PROJECTS REQUIRING A BUDGET ADJUSTMENT
AS OF DECEMBER 31, 2021

Recommendations

Project	Description	Amount ($)	Comment
Transportation Operations & Maintenance			
4032011224	Sidewalk Rehabilitation Program – 2020	$ 28,000.00	Funds received from developer.
4032117677	Preventative Asphalt Road Maintenance Program	$ 257,465.70	Third party billings.
4661920008	New Traffic Signal Installation Program	$ 482,000.00	Third party billings.
Public Works (Rate)			
Waterworks Regular Program			
5141455425	Concrete Pipe Condition Assessment – 2014	$ 21,302.88	Additional grant revenue received.
5141555555	City Wide Groundwater Model	$ 60,000.00	Third party billings.
5141766713	Water Maintenance Capital Program	$ 59,396.16	Cost recoveries.
5142055851	Water Efficiency Plan – 2020	$ 11,822.10	Unbudgeted sales.
5142160750	Unscheduled Valve, Hydrant etc. - 2021/22	$ 596,540.22	Cost recoveries.
Wastewater Regular Program			
5162160390	Wastewater System Lining Program - 2021/22	$ 200,000.00	Funds received from developer.
5162161740	Unscheduled Manhole & Sewermain - 2021/22	$ 17,808.04	Cost recoveries.
Storm Sewers Regular Program			
5181206222	West Harbour (Setting Sail) Main Basin - New Floating Breakwater	$ 215,662.45	Third party contributions.
5182117152	Right of Way Drainage Program	$ 59,709.59	Third party billings.
Total Budget Increase		**$ 4,490,068.26**	

APPENDIX A

8.2 ERASE Redevelopment Grant Program (ERG)

8.2.1 Purpose

The purpose of this program is to alleviate a serious financial impediment to brownfield redevelopment efforts, namely the large tax increase that can result when a brownfield property is redeveloped. The intent of the ERG is to encourage environmental remediation, rehabilitation, redevelopment and adaptive re-use of brownfield sites. Therefore, only those brownfield redevelopment projects that result in an increase in property assessment and taxes will be eligible for funding under the ERG. The ERG also leverages public sector investment and encourages development that would otherwise not take place without this incentive program.

8.2.2 Program Description

The ERG is a tax-increment based program that will provide a financial incentive in the form of a grant to help offset the cost of environmental remediation and rehabilitation of brownfield properties where redevelopment results in a re-valuation and tax increase on these properties. The applicant will initially pay for the entire cost of the remediation and redevelopment project. Once the municipality receives the first full calendar year of newly assessed property taxes that result from the development, the municipality will reimburse the applicant in the form of an annual grant equivalent to 80% of the increase in City taxes that result from redevelopment. Each year, the property owner must first pay taxes owing and then the approved applicant will receive the grant. In no case will the total amount of the grant provided under this program exceed the value of the approved eligible program costs. Also, in no case, will the total amount of the grants provided under this program, and the Tax Assistance Program (TAP) (8.3) exceed the estimated eligible program costs as approved by City Council.

The grant provided under the ERG will equal 80% of the increase in the City portion of property taxes. The remaining 20% of the increase in the City portion of property taxes will be dedicated to the ERASE Municipal Acquisition and Partnership Program (MAPP).

The grants may be received by the property owner in conjunction with any other available municipal program except for other tax increment financing programs.

Assignment of a grant under this Program is not permitted except where the grant is to be assigned to the City of Hamilton as payment towards a loan under the Downtown Hamilton/West Harbourfront Remediation Loan Program for the same project.

The grant will be earned by the applicant if they have met all terms and conditions of the Program and the property and property owner are in good standing with the City in terms of all City By-laws that apply to the property and project, all laws that govern the construction and development of the project and the payment of all taxes during the

development *stage* and for any portion of the property retained by the property owner after remediation and redevelopment are complete. The annual grant to the applicant will be pro-rated if an appeal has been filed with the Municipal Property Assessment Corporation (MPAC) by any of the condominium unit owners. The grant for condominium units that are under appeal will not be released until the appeals are settled through the Assessment Review Board.

For developments containing condominium units, the first-year grant is payable during the calendar year in which 75% of the condominium units within the project are reassessed by MPAC and the property owner(s) have paid in full the new taxes for one (1) calendar year. For non-condominium developments, the first-year grant is payable during the calendar year in which the redevelopment project is complete, the property has been reassessed by MPAC and the property owner has paid in full the new taxes for one (1) calendar year.

Grant payments under the ERG Program will cease at such time as whichever of the following comes first:

a) Total grant payments provided under this program equal the approved and accepted eligible costs have been reimbursed; or,

b) 10 annual payments have been provided.

The ERG is an application-based program. As early as possible in the development approvals process, a property owner will register their intent to participate in the program by filing an ERG Application with the Economic Development Division. Before accepting this application, the Economic Development Division will screen the application to ensure that it is for a property within the designated ERASE Community Improvement Project Area (CIPA) and the application meets the eligibility requirements.

Applications that are not within the ERASE CIPA or applications that clearly do not meet the eligibility requirements will not be accepted. Acceptance of the application by the Economic Development Division in no way implies grant approval.

Applications will be processed and approved on a first come, first serve basis. Review and evaluation of the application and supporting materials against program eligibility requirements will be done by City staff. The applicant participating in the ERG program must enter into an agreement with the City. This Agreement will specify the terms and conditions of the grant and will include terms and conditions in addition to those contained in this Appendix "B" as determined by the City Solicitor and General Manager of Planning and Economic Development (GM). All ERG applications and agreements will be subject to approval by City Council or Council's designate.

The amount of City taxes ("base rate") will be determined before commencement of the project. The increase in the municipal portion of real property taxes (or "municipal tax increment") will be calculated as the difference between the base rate and the amount of City taxes levied as a result of reassessed by the Municipal Property Assessment Corporation (MPAC) following project completion. The municipal tax increment will be used to fund the grant. This program does not exempt property owners from an

increase/decrease in municipal taxes due to a general tax rate increase/decrease, or a change in assessment for any other reason.

For eligible sites where environmental remediation is proposed, the applicant shall obtain and submit to the City a Phase II ESA and/or Risk Assessment and a Remedial Action Plan undertaken by a Qualified Person that:

a) Identifies the extent and provides a cost estimate for the environmental remediation of the eligible property; and,

b) Contains a detailed work plan and budget for said environmental remediation.

For eligible sites where the removal and/or abatement of designated substances and/or hazardous materials is proposed, the applicant shall obtain and submit to the City:

a) A Designated Substances and Hazardous Materials Survey which identifies the presence, extent and need for the removal and/or abatement of such substances/materials in accordance with the *Occupation Health and Safety Act*, Ontario Regulation 278/05 (where applicable) and to the City's satisfaction; and,

b) A detailed work plan and cost estimate.

For eligible sites where the removal, replacement and/or upgrade of capacity for existing on-site infrastructure (water services, sanitary sewers and storm sewers) and/or building demolition is proposed, the applicant shall obtain and submit to the City:

a) Any applicable engineering/servicing reports identifying the need for the removal, replacement and/or upgrade of on-site infrastructure; and,

b) A detailed work plan and cost estimate for the demolition and/or removal, replacement and/or upgrade of on-site infrastructure.

The actual component costs for all eligible cost items will be supplied to the City upon completion of the project. Payment of the grant will be based on the City's review, satisfaction and acceptance of all reports, paid invoices and documentation which is submitted outlining the full scope and cost of the work completed. Any and all of these costs may be subject to audit, at the expense of the property owner. The grant may be reduced or cancelled if the eligible work is not completed, not completed as approved and/or where documentation/invoicing of said costs is not provided to the City's satisfaction.

If during the course of the work, the scope of the work changes, or actual costs are greater or less than estimated costs, the City reserves the right to increase or decrease the total amount of the grant. The annual grant payment will be based on the actual increase in property taxes as calculated, based on the actual reassessment by MPAC following project completion and receipt of an RSC.

The City may discontinue the ERG Program at any time. However, participants in the ERG Program with applications and agreements that were approved prior the closing of the program will continue to receive grant payments as determined through their ERG Agreement with the City. The City is not responsible for any costs incurred by the property

owner in any way relating to the program, including without limitation, costs incurred in anticipation of a grant.

It should be noted that peer-reviewed Risk Assessments are to be permitted in situations where a RSC is not required by the Ministry of Environment, Conservation and Parks (MOECP) (i.e. not moving to a more sensitive land use).

Finally, for the purposes of clarity a 'project' consists of the redevelopment site. The redevelopment site may include multiple properties with more than municipal address.

8.2.3 Eligibility Requirements

All owners of properties within the ERASE Community Improvement Project Area are eligible to apply for funding under this program, subject to meeting the general program requirements in Section 8.0, the following eligibility requirements, and subject to availability of funding as approved by Council:

a) An application for the ERG must be submitted to the Economic Development Department prior to the commencement of any works and prior to application for building permit (Program is not retroactive);

b) Such application shall include reports, plans, estimates, contracts and other details as may be required to satisfy the City with respect to the eligible costs of the project and conformity of the project with the ERASE CIP;

c) The applicant shall obtain and submit to the City a Phase II ESA and/or Risk Assessment and Remedial Action Plan undertaken by a Qualified Person that:

   i) identifies the extent and provides a cost estimate for the environmental remediation of the eligible property; and,

   ii) contains a detailed work plan and budget for said environmental remediation.

d) As a condition of the grant application, the City may require the applicant to submit a Business Plan, with said Plan to the City's satisfaction;

e) The property shall be redeveloped such that the amount of work undertaken is sufficient to at a minimum result in an increase in the assessed value of the property;

f) The total value of the grant provided under this program shall not exceed the total value of work done under eligible program costs;

g) Eligible program costs include the following:

   i) environmental remediation (i.e., the cost of any action taken to reduce the concentration of contaminants on, in or under the eligible property to

permit a Record of Site Condition (RSC) to be filed for the proposed use by a Qualified Person, including costs of preparing and filing of an RSC and Certificate of Property Use (CPU), cost of clean fill, grading and compaction to replace contaminated soils;

Eligible environmental remediation costs do not include construction/development costs that would be required regardless of the presence of contamination.

ii) Phase II ESAs, Risk Assessments and Remedial Action Plans not covered by the ERASE Study Grant program;

iii) installing environmental and/or engineering controls/works, as specified in the Remedial Work Plan and/or Risk Assessment and/or CPU;

iv) monitoring, maintaining and operating environmental and/or engineering controls/works related to environmental remediation, as specified in the Remedial Action Plan and/or Risk Assessment and/or CPU;

v) Industrial/Office Reuse Feasibility Study (Area 2 only)

vi) Designated Substances and Hazardous Material Survey and their removal and abatement in accordance with the *Occupational Health and Safety Act* and Ontario Regulation 278/05 (where applicable) in the Older Industrial Area (Area 2);

vii) Designated Substances and Hazardous Material Survey and their removal and abatement in accordance with the *Occupational Health and Safety Act* and Ontario Regulation 278/05 (where applicable) in current/closed Institutional use buildings across the CIPA;

viii) Designated Substances and Hazardous Material Survey and their removal and abatement in accordance with the *Occupational Health and Safety Act* and Ontario Regulation 278/05 (where applicable) as part of the rehabilitation and restoration of heritage buildings/properties designated under Part IV or V of the *Ontario Heritage Act* across the CIPA; and

ix) In addition to the above, the following costs may also be considered eligible when incurred on a site requiring remediation/rehabilitation and located in the applicable geographic area:

A. the following Leadership in Energy and Environmental Design (LEED) Program components up to a maximum of 50% as per the City of Hamilton's LEED Grant Program (LGP) to achieve LEED certification under the LEED rating system by the Canadian Green Building Council – CaGBC:

- incremental construction costs;
- consultation costs;
- energy modeling; and
- certification fees.

B. demolition costs not covered by demolition charge credits (Areas 2 and 3 only);

C. the removal, replacement and/or upgrade of capacity for existing infrastructure (water services, sanitary sewers and storm sewers) up to a maximum of 25% of the cost of said improvement provided the improvement is located on the property and will support the rehabilitation and reuse of the property (Areas 2 and 3 only);

D. certain relocation/removal costs for existing and operating industrial manufacturing and transportation uses, where such costs relate to or contribute directly to the actual remediation and rehabilitation of the site (Areas 2 and 3 only);

h) Notwithstanding 8.2.3 g), costs shall not be considered to be eligible if incurred prior to the date an application has been submitted under this program and accepted by the City with the exception of studies which were the subject of an approved ERASE Study Grant (ESG) Program (8.1) application. The total of the grant provided under this Program in combination with any tax assistance provided under the Tax Assistance Program (TAP) (8.3) shall not exceed the total approved eligible costs. Previous grant payments provided under the ESG Program for studies which are also to be accepted as eligible costs under this program will be deducted from the approved eligible costs;

i) To be eligible under this program, costs must be incurred by the property owner as identified on the submitted program application accepted by the City;

j) Actual costs for any or all of the items in eligible program costs above may be subject to audit by the City, at the expense of the property owner;

k) All property owners participating in this program will be required to enter into an agreement with the City which will specify the terms and conditions of the grant;

l) All ERG applications must be approved by City Council or City Council's designate;

m) The property owner shall be required to submit one of the following prior to a grant being paid under this program:

i) a Record of Site Condition ("RSC") conforming to the latest Ontario Regulation 153/04 standards and prepared by a Qualified Person to the Environmental Site Registry under section 168.4 of the *Environmental Protection Act* and shall submit to the City an acknowledgement of receipt of the RSC by the MOECP; or

ii) where the submission of a signed RSC is not required under the *Environmental Protection Act* to permit the brownfield redevelopment, and provided that the owner of the property within the ERASE Community Improvement Project Area undertakes a Risk Assessment and remediates the property to a standard that would enable the owner to submit a RSC,

the property owner may instead provide the City with a Risk Assessment prepared by a Qualified Person for Risk Assessments (as defined in the *Environmental Protection Act* and Ontario Regulation 153/04, as amended), subject to a peer-review by a Qualified Person for Risk Assessment, who is acceptable to the City. This peer-review must certify that the property has been remediated to the appropriate levels for the proposed use in accordance with the Risk Assessment, to the satisfaction of the City. The cost of the peer-review will be an eligible cost under this program;

n) The City reserves the right to require the submission, to the City's satisfaction, of environmental reports and documentation showing the subject property has been remediated to the appropriate levels for the proposed use;

o) If a building(s) erected on a property participating in this Program is demolished before the grant period expires, the remainder of the monies to be paid out under the grant shall be forfeited;

p) The improvements made to buildings and/or land shall be made pursuant to a Building Permit, constructed in accordance with the Ontario Building Code, and in compliance with all applicable Official Plan, Zoning By-Law and Site Plan Control requirements and approvals;

q) Outstanding work orders and/or orders or requests to comply from the City must be satisfactorily addressed prior to grant approval;

r) No grant is to be paid out until the project is completed. Alternatively, subject to written approval by the Director of Economic Development, a percentage of the total grant payment may be provided for phased developments based on the number of phases completed and proportional to the eligible costs incurred in each completed phase. Such partial payments shall be limited to those projects where the incremental tax increase for individual development phase can be determined to the City's satisfaction; and,

s) Work on the portion of the Project that is at or above grade shall commence no longer than five (5) years from the date an application under this program was approved by City Council (or City Council's designate) and the Project and all eligible works shall be completed and the project capable of being fully occupied within 10 years from the date an application under this program approved by City Council (or City Council's designate). Where a project consists of multiple phases, consideration may be provided for an extended project completion and occupancy period at the sole absolute and unfettered discretion of City Council.

Eighty-percent (80%) of the municipal portion of the tax increment will be reimbursed to the property owner in the form of a grant, while the remaining 20% of the tax increment will be dedicated to the ERASE Municipal Acquisition and Partnership Program (see Section 8.5).

8.2.4 Administration

The Economic Development Division will be responsible for administering the ERG, in consultation with other division/departments as necessary. Applications shall be submitted to the Economic Development Division and shall be accompanied by a Phase II ESA and/or Risk Assessment and Remedial Action Plan undertaken by a Qualified Person (as defined under Ontario Regulation 153/04) and/or Designated Substances and Hazardous Materials Survey (where applicable). For sites undertaking environmental remediation, the work plan and cost estimate shall be in the form of a Remedial Action Plan prepared by a Qualified Person. Said work plan and cost estimate will be supported by a Phase II ESA and/or Risk Assessment undertaken by a Qualified Person. Studies/plans submitted shall:

a) Identify the extent of the environmental remediation and any installation, monitoring, maintaining and operating environmental and/or engineering controls/works required for the eligible property; and,

b) Provide a detailed work plan and cost estimate for said environmental remediation which includes the installation, monitoring, maintaining and operating environmental and/or engineering controls/works.

For other non-remediation eligible works under this program, a written contractor's estimate shall be provided which shall be supported by any applicable studies (such as Designated Substances and Hazardous Materials Survey) to the City's satisfaction. The City may also require the submission of a Business Plan for the proposed development.

In addition, a cost estimate for all eligible LEED program component costs by a LEED certified specialist must be provided.

Applicants will be required to have a pre-application consultation meeting with City staff in order to determine program eligibility, proposed scope of work, project timing, etc.

Before accepting an application, City staff will screen the application. If the application is not within the community improvement project area or the application clearly does not meet the program eligibility requirements, the application will not be accepted.

Acceptance of the application by the City in no way implies grant approval.

Program eligibility will be determined by the Economic Development Division, in consultation with other divisions/departments as necessary. Applications will be recommended for approval only if they meet the criteria specified in this Plan and any other requirements of the City including that the property and property owner are in good standing with the City in terms of all City By-laws that apply to the property and project, all laws that govern the construction and development of the project and the payment of all taxes.

In instances where an applicant cannot satisfy staff with all necessary eligible cost estimates and required back-up documentation, staff reserves the right to consider an application as part of a two-step application and approval process, with the ultimate

approval residing with City Council.

Where an ERG application has been submitted by a property owner and accepted by the City but not yet approved by City Council (or City Council's designate), and the subject property(s) are transferred to a new property owner, the City may permit the transfer or assignment of the application, and any eligible costs incurred from the original date of application, to the new owner at the sole, absolute and unfettered discretion of the GM. An assignment or transfer may require the assignee or transferee to submit an application, assignment or transfer agreement and/or such other documents as determined by the GM in their sole, absolute and unfettered discretion.

A recommendation on the ERG Application (including estimated eligible costs) will be forwarded to City Council (or Council's designate) for consideration.

A Program application may be denied by City Council if the development that is the subject of the grant application is not supported by City Council notwithstanding any approval of *Planning Act* applications by any other authority including, but not limited to, the Local Planning Appeal Tribunal or the Minister of Municipal Affairs and Housing, and that City Council's decision on the Program application will not fetter its discretion on *Planning Act* applications.

City Council's approval of a Program application can provide for a reduced grant amount so that no grant is payable in respect of any portion of the development that is the subject of the grant application which City Council does not support notwithstanding any approval of *Planning Act* applications by any other authority including, but not limited to, the Local Planning Appeal Tribunal or the Minister of Municipal Affairs and Housing, and that City Council's decision on the Program application will not fetter its discretion on *Planning Act* applications. In such cases, the applicant shall be required to provide additional supporting documentation, at the applicant's own expense, to support the providing of financial assistance in accordance with City Council's approval/direction, including but not limited to, all MPAC post development assessment estimates required by the City.

The applicant participating in the ERG program must enter into an agreement with the City which will be forwarded to the applicant for signature once City Council (or Council's designate) approves the ERG Application. Once the applicant has signed the agreement, the agreement will then be executed by City officials and a copy will be provided to the applicant. The City may require the applicant to register the agreement on title immediately upon execution of the agreement. This agreement will identify events of default whereby upon its occurrence, and for so long as the default continues, the City shall be entitled to remedies including but not limited to ceasing or delaying the release of grant payments without notice to the owner and any obligation of the City to make a grant payment or provide accommodation under the ERG Agreement shall cease. In addition, the City may declare, by notice to the owner, that any grant payments already made to be forthwith due and payable as determined by the General Manager of Planning and Economic Development in their sole, absolute and unfettered discretion.

For sites subject to environmental remediation, the property owner shall submit to the

MOECP a signed Record of Site Condition (RSC) prepared by a Qualified Person, and the property owner shall submit to the City an acknowledgement of receipt of the RSC by the MOECP. The City reserves the right to require the submission to the City's satisfaction, of environmental reports and documentation showing the subject property has been remediated to the appropriate levels for the proposed use. The RSC filed with the MOECP must conform to the latest Ontario Regulation 153/04 standards. Where the submission of a signed RSC is not required under the *Environmental Protection Act* to permit the brownfield redevelopment and provided that the owner of the property within the ERASE Community Improvement Project Area undertakes a Risk Assessment and remediates the property to a standard that would enable the owner to submit a RSC, the property owner may instead provide the City with a Risk Assessment prepared by a Qualified Person for Risk Assessments (as defined in the *Environmental Protection Act* and Ontario Regulation 153/04, as amended), subject to a peer-review by a Qualified Person for Risk Assessments, who is acceptable to the City. This peer-review must certify that the property has been remediated to the appropriate levels for the proposed use in accordance with the Risk Assessment, to the satisfaction of the City. The cost of the peer-review will be an eligible cost.

Once the development project is complete and the property has been reassessed by MPAC, the property owner will be sent a new tax bill. After the property owner has paid in full the new taxes for one (1) calendar year, the City will check to see that the property is not in tax arrears and that the property is still in conformity with the terms of the ERG Agreement. The City will calculate the actual tax increment and grant payment. The City will then issue payment of the grant in the form of a cheque in the amount specified as per the calculation of the actual grant payment. If the property is severed into multiple parcels or lots or if there is a conveyance of part of the property (all referred to as severed parcels) prior to the first full year of reassessment resulting from the completion of the project. the property taxes used to calculate the grant shall be the sum of the amount which is the lesser of the post-project municipal property taxes or the municipal property taxes payable for the year for which a grant payment is being made, for all the severed parcels but for the initial grant payment means the amount which equals the sum of the post-project municipal property taxes for the severed parcels.

A grant will not be made unless a written request for the grant payment has been made by the owner in the year in which the grant payment is payable. If a written request has not be made for grant payment in the year in which it is payable but all other conditions for its payment have been satisfied, the grant payment shall accrue and be payable together with any other grant payments for which a written request has not been made until such time as a written request has been made and upon such written request the grant payment shall equal the sum of the accrued and previously unrequested grant payments. If a request for the initial grant payment is not made within three (3) years of the year in which the first-years' grant is payable the agreement shall terminate and without limiting the generality of the foregoing the City shall not be obligated to make any grant payments.

Notwithstanding any other term or condition of this program, where an application has been approved by City Council, the application and the associated approval, including the assignment of any eligible costs incurred by the Council approved applicant since the date

of application submission, may be assigned to a future intended owner of the subject site(s) only in such instance where the registered owner of the site(s) at the time of Council approval was the City of Hamilton, CityHousing Hamilton Corporation or any other entity wholly owned by the City of Hamilton and where the assignment will further facilitate the remediation and redevelopment of a site and/or support the achievement of strategic City priorities/objectives. It is understood that one effect of such an assignment shall be that the future intended site owner will assume all requirements and obligations required under the program and become the recipient of any future grant payments which may be eligible under the Program at such time as they become the registered site owner.

A request to assign the application shall be submitted in writing to the City by the existing site owner and the Council approved applicant with accompanying rationale and be subject to approval by City Council in its sole discretion. The future intended site owner shall be subject to all applicable due diligence required under this program, including, but not limited to, applicable corporate title and litigation searches, to the satisfaction of the City prior to the assignment being considered by City Council. An assignment or transfer may require that the assignee or transferee submit an application, assignment or transfer agreement and/or such other documents as determined by the GM of Planning and Economic Development in their sole, absolute and unfettered discretion.

AUDIT, FINANCE AND ADMINISTRATION COMMITTEE REPORT 22-012

9:30 a.m.
June 16, 2022
Council Chambers
Hamilton City Hall

Present: Councillors M. Pearson (Chair), B. Clark, L. Ferguson, B. Johnson, R. Powers, A. VanderBeek and M. Wilson

THE AUDIT, FINANCE AND ADMINISTRATION COMMITTEE PRESENTS REPORT 22-012 AND RESPECTFULLY RECOMMENDS:

1. 2021 City of Hamilton Financial Report and Audited Financial Statements (FCS22044) (City Wide) (Item 10.1)

That the 2021 City of Hamilton Financial Report and Audited Financial Statements, attached as Appendix "A" to Audit, Finance and Administration Committee Report 22-012, be approved.

2. Post-Traumatic Stress Disorder (HUR22007) (City Wide) (Item 7.1)

That Report HUR22007, respecting the Post-Traumatic Stress Disorder, be received.

3. 2022 First Quarter Emergency and Non-competitive Procurement Report (FCS22046) (City Wide) (Item 7.2)

That Report FCS22046, respecting the 2022 First Quarter Emergency and Non-competitive Procurement Report, be received.

4. 2022 First Quarter Non-compliance with the Procurement Policy Report (FCS22047) (City Wide) (Item 7.3)

That Report FCS22047, respecting the 2022 First Quarter Non-compliance with the Procurement Policy Report, be received.

5. 2022 First Quarter Request for Tenders and Proposals Report (FCS22048) (City Wide) (Item 7.4)

That Report FCS22048, respecting the 2022 First Quarter Request for Tenders and Proposals Report, be received.

6. Community Benefits Charge Strategy (FCS22015(b)) (City Wide) (Item 8.1)

(a) That the 2022 City of Hamilton Community Benefits Charge Strategy, attached as Appendix "B" to Audit, Finance and Administration Committee Report 22-012 dated June 2, 2022, be approved;

(b) That a Community Benefits Charge in the amount of 4% of the market value of land be implemented against for eligible development to pay for capital costs of facilities, services and matters in compliance with the *Planning Act, R.S.O. 1990*;

(c) That a Reserve Fund entitled "Community Benefits Charge Reserve Fund" be established for all Community Benefits Charge collections, as per Policy included in Appendix "C" to Audit, Finance and Administration Committee Report 22-012;

(d) That a Reserve Fund entitled "Development Charges - Community Benefits Charge Transition Reserve Fund" be established for previously collected Airport and Parking services, as per Policy included in Appendix "C" to Audit, Finance and Administration Committee Report 22-012; and,

(e) That Appendix "B" attached to Report FCS22015(b) respecting the 2022 Community Benefits Charge By-law, prepared in a form satisfactory to the City Solicitor, be passed and enacted.

7. Treasurer's Write-off of Taxes under Section 354 of the *Municipal Act, 2001* (FCS22049 / LS22024) (City Wide) (Item 10.2)

That property taxes in the amount of $144,857.19 for 221 York Boulevard, Hamilton (Roll #2518 020 124 505000 0000) be written off under section 354 of the *Municipal Act, 2001.*

8. Development Charge Demolition Credit Extension Request for Hamilton Central Business Park (Studebaker Place and Ferrie Street, formerly 440 Victoria Avenue North) (FCS17067(a)) (City Wide) (Item 10.3)

(a) That the request for the City Development Charges (DC) demolition credits (623,140 square feet in total) for Hamilton Central Business Park (Studebaker Place and Ferrie Street, formerly 440 Victoria Avenue North) to be extended for three years until July 26, 2025 (310,631.39 square feet) and September 6, 2025 (312,508.61 square feet), be denied; and,

(b) That the subject matter regarding the "Correspondence from Paul Paradis, Ross & McBride LLP, respecting a request for extension of Development Charge Demolition Credits, Hamilton Central Business Park – formerly 440 Victoria Avenue North now Studebaker Place and Ferris Street – DCR Holdings Inc.", be identified as complete and removed from the Audit, Finance and Administration Committee Outstanding Business List.

9. Standardization of Cloudflare Enterprise Suite of Products for Corporate Information Technology (FCS22051) (City Wide) (Item 10.4)

(a) That Council approve the standardization of Cloudflare Enterprise Suite of Products manufactured by Cloudflare, pursuant to Procurement Policy #14 – Standardization for a period of five years from the date of Council approval; and,

(b) That the General Manager, Corporate Services Department be authorized to negotiate, enter-into and execute any required Contract and any ancillary documents required to give effect thereto with Cloudflare approved retailer, in a form satisfactory to the City Solicitor.

10. Liability Insurance Coverage Extension (LS22026) (City Wide) (Item 10.5)

(a) That the Liability Insurance coverage be extended for the term June 1, 2022 to December 1, 2022 through the City's Broker Arthur J. Gallagher Canada Ltd. and the Insurer Marsh Canada Ltd. at a cost of $2,190,861 (net of applicable taxes) and be funded through the 2022 Risk Management Services Budget;

(b) That the General Manager, Finance and Corporate Services, be authorized and directed to execute all associated documents related to the extension of Liability Insurance coverage for the term June 1, 2022 to December 1, 2022, through Arthur J. Gallagher Canada Ltd. And Marsh Canada Ltd., on behalf of the City of Hamilton; and

(c) That the 2022 budget shortfall of $686,976.68 be funded from the Tax Stabilization Reserve (110046).

11. City Enrichment Fund Budget Request (Item 11.1) (Revised with the inclusion of a friendly *amendment*)

WHEREAS, the City Enrichment Fund is the overall name for the City of Hamilton's municipal investment in a wide range of program areas that supports the City's strategic plan;

WHEREAS, the fund comprises 6 Program Areas (Agriculture, Arts, Communities, Culture & Heritage, Community Services, Environment, Sports & Active Lifestyles) with funding streams and categories;

WHEREAS, the last budget increase to the City Enrichment Fund was approved in 2019, to bring total budget allocation to $6,088,340; and,

WHEREAS, the 2022 request from applicants totalled $9,858,419; total value of eligible requests based on 2022 applications totalled $8,110,633; funding allocation was capped at $6,088,340 or 75% of the total request;

THEREFORE, BE IT RESOLVED:

(a) That an increase to the City Enrichment Fund be forwarded for consideration to the 2023 Budget submission; and,

(b) That staff include in their report to the 2023 Budget submission, a history of the number of grant recipients that have been removed from the roll, have moved on to other funding, have self-sustained funding, and how many have been continuously receiving funds over the term.

12. Assessment of 386 Wilcox St, Hamilton for the 2023 Taxation Year (Item 11.2)

WHEREAS, the Municipal Property Assessment Corporation (MPAC) reassessed the property at 386 Wilcox St, Hamilton (Roll Number 25-18-030-272-02600-0000) as a special purpose property, thereby reducing the assessed value from $86,449,000 to $44,994,000, effective the 2018 taxation year;

WHEREAS, the reduction in the assessed value from $86,449,000 to $44,994,000 solely pertained to the assessment attributed to 411.6 acres of land that form part of the property from an assessed land rate of $100,805 per acre to $100 per acre;

WHEREAS, the City of Hamilton appealed MPAC's decision to reduce the assessment of the property to the Assessment Review Board (ARB);

WHEREAS, on May 17, 2022 the ARB issued its decision, ruling in favour of MPAC's land rate of $100 per acre for the 411.6 acres of land in accordance with the assessment returned by MPAC;

WHEREAS, the property, comprised of 806.2 acres (inclusive of the 411.6 acres that were subject to the ARB appeal), transacted for $518M on June 1, 2022;

AND WHEREAS, MPAC's keying cut-off for the December 2022 Assessment Roll (to be used for the 2023 taxation year) is October 2022.

THEREFORE, BE IT RESOLVED:

That staff be directed to meet with MPAC before October 2022 to ensure that the assessed value to be returned on the December 2022 Assessment Roll (for the 2023 taxation year) for 386 Wilcox St, Hamilton (Roll Number 25-18-030-272-02600-0000) reflects the June 2022 sales transaction.

FOR INFORMATION:

(a) CHANGES TO THE AGENDA (Item 2)

The Committee Clerk advised of the following changes to the agenda:

5. COMMUNICATIONS (Item 5)

5.1 Correspondence from David Bronskill, Goodmans LLP, respecting Item 8.1 Community Benefits Charge Strategy - 41-61 Wilson Street and 97, 99 and 117 John Street North

Recommendation: Be received and referred to consideration of Item 8.1.

5.2 Correspondence from Lou Piriano, Realtors Association of Hamilton-Burlington, respecting Item 8.1 Community Benefits Charge Strategy

Recommendation: Be received and referred to consideration of Item 8.1.

6. DELEGATION REQUESTS (Item 6)

6.1 Michelle Diplock and Daryl Keleher, West End Home Builder's Association, respecting Item 8.1 - Community Benefits Charge Strategy (For today's meeting)

6.2 Brent Marshall on behalf of Wahed Al-Jabry, Hamilton Downtown Mosque, respecting their support of City staff's recommendations in Item 10.2 (For today's meeting)

6.3 Alex Bishop, on behalf of DCR Holdings Inc and Harlo Capital, respecting Item 10.3 (For today's meeting)

CHANGE TO THE ORDER OF ITEMS:

Due to a scheduling conflict, Items 10.1 respecting Report FCS22049 / LS22024, Treasurer's Write-off of Taxes under Section 354 of the *Municipal Act, 2001* and 14.2 respecting FCS20093(a) / LS20029(a), 386 Wilcox Street Assessment Review Board Appeals – ARB Decision and Next Steps are to be moved up on the agenda to be considered immediately following the consideration of the Delegations Requests (Item 6).

The agenda for the June 16, 2022 Audit, Finance and Administration Committee meeting was approved, as amended.

(b) DECLARATIONS OF INTEREST (Item 3)

There were no declarations of interest.

(c) APPROVAL OF MINUTES OF PREVIOUS MEETING (Item 4)

(i) June 2, 2022 (Item 4.1)

The Minutes of the June 2, 2022 meeting of the Audit, Finance and Administration Committee were approved, as presented.

(d) COMMUNICATIONS (Item 5)

The following Communications Items were received and referred to consideration of Item 8.1 – Community Benefits Charge Strategy (FCS22015(b)):

(i) Correspondence from David Bronskill, Goodmans LLP, respecting Item 8.1 Community Benefits Charge Strategy - 41-61 Wilson Street and 97, 99 and 117 John Street North (Added Item 5.1)

(ii) Correspondence from Lou Piriano, Realtors Association of Hamilton-Burlington, respecting Item 8.1 Community Benefits Charge Strategy (Added Item 5.2)

(e) DELEGATION REQUESTS (Item 6)

The following Delegation Requests were approved for today's meeting:

(i) Michelle Diplock and Daryl Keleher, West End Home Builder's Association, respecting Item 8.1 - Community Benefits Charge Strategy (Added Item 6.1)

(ii) Brent Marshall on behalf of Wahed Al-Jabry, Hamilton Downtown Mosque, respecting their support of City staff's recommendations in Item 10.2 (For today's meeting) (Added Item 6.2)

(iii) Alex Bishop, on behalf of DCR Holdings Inc and Harlo Capital, respecting Item 10.3 (Added Item 6.3)

(f) PRIVATE AND CONFIDENTIAL (Item 14)

(i) 386 Wilcox Street Assessment Review Board Appeals – ARB Decision and Next Steps (FCS20093(a) / LS20029(a)) (City Wide) (Item 14.2)

Legal Consultant John L. O'Kane was permitted to attend the Closed Session portion of the meeting with respect to Report FCS20093(a) / LS20029(a), 386 Wilcox Street Assessment Review Board Appeals – ARB Decision and Next Steps.

(ii) That the Committee move into Closed Session respecting Item 14.2 respecting FCS20093(a) / LS20029(a), 386 Wilcox Street Assessment Review Board Appeals – ARB Decision and Next Steps, pursuant to Section 9.1, Sub-sections (e) and (f) of the City's Procedural By-law 21-021, as amended, and Section 239(2), Sub-sections (e) and (f) of the *Ontario Municipal Act, 2001*, as amended, as the subject matter pertains to litigation or potential litigation, including matters before administrative tribunals, affecting the municipality or local board; and advice that is subject to solicitor-client privilege, including communications necessary for that purpose.

(iii) 386 Wilcox Street Assessment Review Board Appeals – ARB Decision and Next Steps (FCS20093(a) / LS20029(a)) (City Wide) (Item 14.2)

(a) That the directions to staff in Closed Session, be approved and released publicly following approval by Council;

(b) That Appendix "A" to Report FCS20093(a)/LS20029(a), be released publicly following approval by Council; and,

(c) That Report FCS20093(a)/LS20029(a) and Appendix "B', remain confidential.

This matter was put forward at the Special Council meeting of June 16, 2022 for consideration.

(g) STAFF PRESENTATIONS (Item 8)

(i) Community Benefits Charge Strategy (FCS22015(b)) (City Wide) (Item 8.1)

Brian McMullen, Director - Financial Planning and Administration and Policy, introduced Gary Scanlan, Watson and Associates, who addressed the Committee with a presentation on the Community Benefits Charge Strategy.

The presentation respecting the Community Benefits Charge Strategy, was received.

For further disposition of this matter, refer to Items 6 and (h)(i).

(h) DELEGATIONS (Item 9)

(i) Delegations Respecting Item 8.1, Community Benefits Charge Strategy (FCS22015(b)) (City Wide)

The following delegations addressed Committee respecting Item 8.1, the Community Benefits Charge Strategy (FCS22015(b)) (City Wide):

(a) Karl Andrus, Hamilton Community Benefits Network (HCBN) (Item 9.1)

(b) Michelle Diplock and Daryl Keleher, West End Home Builder's Association (Added Item 9.2)

The following Delegations respecting Item 8.1, the Community Benefits Charge Strategy (FCS22015(b)) (City Wide), were received:

(a) Karl Andrus, Hamilton Community Benefits Network (HCBN) (Item 9.1)

(b) Michelle Diplock and Daryl Keleher, West End Home Builder's Association (Added Item 9.2)

For further disposition of this matter, refer to Items 6 and (g)(i).

(ii) Brent Marshall on behalf of Wahed Al-Jabry, Hamilton Downtown Mosque, respecting their support of City staff's recommendations in Item 10.2, Treasurer's Write-off of Taxes under Section 354 of the *Municipal Act, 2001* (FCS22049 / LS22024) (Added Item 9.3)

Brent Marshall on behalf of Wahed Al-Jabry, Hamilton Downtown Mosque, addressed the Committee respecting their support of City staff's recommendations in Item 10.2, Treasurer's Write-off of Taxes under Section 354 of the *Municipal Act, 2001* (FCS22049 / LS22024).

The presentation from Brent Marshall on behalf of Wahed Al-Jabry, Hamilton Downtown Mosque, respecting their support of City staff's recommendations in Item 10.2, Treasurer's Write-off of Taxes under Section 354 of the *Municipal Act, 2001* (FCS22049 / LS22024), was received.

For disposition of this matter, refer to Item 7.

(iii) Alex Bishop, on behalf of DCR Holdings Inc and Harlo Capital, respecting Item 10.3, Development Charge Demolition Credit Extension Request for Hamilton Central Business Park (Studebaker Place and Ferrie Street, formerly 440 Victoria Avenue North) (Added Item 9.4)

Alex Bishop, on behalf of DCR Holdings Inc and Harlo Capital, addressed the Committee respecting Item 10.3, Development Charge Demolition Credit Extension Request for Hamilton Central Business Park (Studebaker Place and Ferrie Street, formerly 440 Victoria Avenue North) (FCS17067(a)).

The presentation from Alex Bishop, on behalf of DCR Holdings Inc and Harlo Capital, respecting Item 10.3, Development Charge Demolition Credit Extension Request for Hamilton Central Business Park (Studebaker Place and Ferrie Street, formerly 440 Victoria Avenue North) (FCS17067(a)), was received.

For disposition of this matter, refer to Item 8.

(i) MOTIONS (Item 11)

(i) Assessment of 386 Wilcox St, Hamilton for the 2023 Taxation Year (Item 11.2)

Councillor Pearson relinquished the Chair to introduce her motion.

For disposition of this matter, refer to Item 12.

Councillor Pearson assumed the Chair.

(j) PRIVATE AND CONFIDENTIAL (Item 14) (Continued)

Committee determined that discussion of Item 14.1 was not required in Closed Session, therefore, the item was addressed in Open Session, as follows:

(i) Closed Minutes – June 2, 2022 (Item 14.1)

(a) The Closed Session Minutes of the June 2, 2022 Audit, Finance and Administration Committee meeting, were approved as presented; and,

(b) The Closed Session Minutes of the June 2, 2022 Audit, Finance and Administration Committee meeting, remain confidential.

(k) ADJOURNMENT (Item 15)

There being no further business, the Audit, Finance and Administration Committee adjourned at 12:32 p.m.

Respectfully submitted,

Councillor Pearson, Chair
Audit, Finance and Administration Committee

Angela McRae
Legislative Coordinator
Office of the City Clerk

Hamilton

FINANCIAL REPORT

2021

City of Hamilton
71 Main Street West
Hamilton, Ontario
L8P 4Y5

City of Hamilton
Financial Report
2021

Contents

Accommodations for Readers with Disabilities

In accordance with the Ontario Human Rights Code, Ontarians with Disabilities Act, 2001 (ODA) and Accessibility for Ontarians with Disabilities Act, 2005 (AODA), the City of Hamilton will accommodate for readers with a disability upon request.

Section 1

City of Hamilton
Five Year Financial and Statistical Review
2021

City of Hamilton
Five Year Financial and Statistical Review (unaudited)
(All amounts are reported in thousands of dollars except statistical information, ratios and per capita figures)

	2021	2020	2019	2018	2017
Operating Revenue					
Taxation	$ 985,972	$ 957,739	$ 917,126	$ 888,229	$ 876,880
Government grants and contributions	536,264	521,305	447,833	454,774	394,785
User charges	344,086	329,316	372,145	347,637	334,974
Development charges and subdivider contributions	68,541	33,693	60,646	119,703	50,313
Donated tangible capital assets	28,812	8,494	21,715	46,862	18,217
Investment and dividend income	37,639	33,545	37,598	31,101	28,070
Net income from Government Business Enterprises	13,097	10,726	11,262	24,285	134,914
Other	131,674	120,526	128,764	137,476	131,383
	2,146,085	2,015,344	1,997,089	2,050,067	1,969,536
Operating Expenses by Function					
General government	$ 95,277	$ 68,079	$ 66,626	$ 80,025	$ 70,733
Protection services	357,517	341,243	330,258	324,227	312,564
Transportation services	338,618	322,651	337,719	320,005	326,274
Environmental services	283,556	251,828	252,778	284,271	239,488
Health services	153,396	126,930	106,057	102,868	99,125
Social and family services	342,493	333,523	309,361	316,819	315,218
Social housing	124,830	110,063	97,131	105,893	105,141
Recreation and cultural services	164,238	149,932	176,949	172,965	169,029
Planning and development	63,316	56,382	52,263	56,785	53,455
	1,923,241	1,760,631	1,729,142	1,763,858	1,691,027
Net Operating Revenue or Annual Surplus from Operations	222,844	254,713	267,947	286,209	278,509

Note: Amounts reported may have been restated from previous amounts presented to conform to 2021 Public Sector Accounting Board (PSAB) standards.

City of Hamilton
Five Year Financial and Statistical Review (unaudited)
(All amounts are reported in thousands of dollars except statistical information, ratios and per capita figures)

	2021	2020	2019	2018	2017
Taxation					
Taxation from real property	$ 1,164,870	$ 1,146,798	$ 1,102,694	$ 1,071,092	$ 1,056,723
Taxation from other governments/payments in lieu of taxes	$ 17,508	$ 16,900	$ 16,551	$ 16,256	17,042
Taxation collected on behalf of school boards	(196,406)	(205,959)	(202,119)	(199,119)	(196,885)
Net taxes available for municipal purposes	985,972	957,739	917,126	888,229	876,880
Tax Levies					
City portion	$ 954,419	$ 924,159	$ 886,787	$ 857,981	$ 845,392
School Board portion	193,426	202,808	198,980	196,082	193,714
	1,147,845	1,126,967	1,085,767	1,054,063	1,039,106
Tax arrears					
Taxes receivable	$ 81,750	$ 85,023	$ 86,309	$ 80,972	$ 77,918
Taxes receivable per capita	140	147	149	141	138
Taxes receivable as a percentage of current years' levies	7.1%	7.5%	7.9%	7.7%	7.5%
Unweighted Taxable Assessment					
Residential	$ 71,929,405	$ 70,762,154	$ 66,000,132	$ 61,518,082	$ 57,306,633
Non-Residential	9,676,235	9,620,270	9,069,880	8,442,007	7,908,588
	81,605,640	80,382,424	75,070,012	69,960,089	65,215,221
Weighted Taxable Assessment					
Residential	$ 74,704,344	$ 73,713,509	$ 69,119,831	$ 64,745,624	$ 61,208,842
Non-Residential	20,954,969	20,946,399	19,641,077	18,379,207	17,376,301
	95,659,313	94,659,908	88,760,908	83,124,831	78,585,143
Residential vs Non-Residential Percentage of Total Weighted Taxable Assessment					
Residential	78%	78%	78%	78%	78%
Non-Residential	22%	22%	22%	22%	22%
Taxable Assessment Growth (weighted)	1.2%	1.2%	1.2%	1.6%	1.4%

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City of Hamilton
Five Year Financial and Statistical Review (unaudited)
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	2021	2020	2019	2018	2017
Operating Expenses by Object					
Salaries, wages and employee benefits	$ 862,369	$ 819,188	$ 797,631	$ 780,052	$ 755,403
Interest on long term liabilities	11,486	12,416	13,767	12,677	13,442
Materials	245,947	203,045	203,308	207,682	218,037
Contracted services	375,195	282,168	309,634	341,931	275,361
Rents and financial expenses	35,968	36,080	31,084	34,550	42,421
External transfers	176,015	193,667	168,471	190,538	194,241
Amortization of tangible capital assets	216,261	214,067	205,247	196,428	192,122
	1,923,241	1,760,631	1,729,142	1,763,858	1,691,027
Operating Expenses as Percentage of Total					
Salaries, wages and employee benefits	44.8%	46.5%	46.1%	44.2%	44.7%
Interest on long term liabilities	0.6%	0.7%	0.8%	0.7%	0.8%
Materials	12.8%	11.6%	11.8%	11.8%	12.9%
Contracted services	19.5%	16.0%	18.0%	19.5%	16.3%
Rents and financial expenses	1.9%	2.0%	1.8%	2.0%	2.5%
External transfers	9.2%	11.0%	9.7%	10.8%	11.5%
Amortization of tangible capital assets	11.2%	12.2%	11.8%	11.0%	11.3%
	100.0%	100.0%	100.0%	100.0%	100.0%
Long Term Liabilities					
Long Term Liabilities incurred by the City	$ 401,143	$ 436,289	$ 432,709	$ 484,891	$ 418,145
Long Term Debt incurred by the City for which other entities have assumed responsibility	-	-	-	-	-
	401,143	436,289	432,709	484,891	418,145
Long Term Liabilities					
Housing operations	$ 48,882	$ 40,991	$ 46,967	$ 52,803	$ 58,508
City operations	352,261	395,298	385,742	432,088	359,637
	401,143	436,289	432,709	484,891	418,145
Long term liabilities as a % of Reserves and Capital Surplus	46.80%	49.80%	51.60%	57.30%	58.60%

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City of Hamilton
Five Year Financial and Statistical Review (unaudited)
(All amounts are reported in thousands of dollars except statistical information, ratios and per capita figures)

	2021	2020	2019	2018	2017
Tangible Capital Assets					
General					
Land	$ 442,267	$ 403,879	$ 387,321	$ 357,211	$ 333,818
Land improvements	202,950	181,506	167,237	157,312	152,325
Buildings	821,383	829,290	815,472	817,598	756,160
Vehicles	140,537	138,937	148,259	137,501	128,600
Computer hardware and software	17,694	18,698	19,499	13,572	11,821
Other	104,261	92,062	93,335	95,871	99,540
Infrastructure					-
Roads	1,307,472	1,315,237	1,310,342	1,293,193	1,261,223
Bridges and structures	177,730	181,098	181,896	184,387	183,422
Water and wastewater facilities	448,041	416,470	395,495	398,743	403,647
Underground and other networks	2,066,026	2,021,641	1,986,865	1,861,011	1,789,334
Net Book Value	5,728,361	5,598,818	5,505,721	5,316,399	5,119,890
Assets under construction	720,255	604,146	425,067	360,182	309,974
	6,448,616	6,202,964	5,930,788	5,676,581	5,429,864
Accumulated Surplus or Municipal Financial Position					
Reserves and reserve funds					
Reserves	$ 611,750	$ 623,966	$ 612,513	$ 660,380	$ 697,931
Hamilton Future Fund	63,848	58,466	52,963	48,635	44,322
	675,598	682,432	665,476	709,015	742,253
Capital surplus	$ 180,850	$ 193,769	$ 173,857	$ 136,894	$ (28,137)
Operating surplus	74,546	83,987	74,118	88,433	1,498
Investment in Government Business Enterprises	321,183	319,823	323,851	329,237	356,098
Investment in tangible capital assets	5,894,721	5,629,066	5,393,649	5,102,640	4,995,441
Unfunded liabilities - Employee future benefits	(372,130)	(363,419)	(348,328)	(348,832)	(343,679)
Unfunded liabilities - Solid waste landfill sites	(78,272)	(65,148)	(71,420)	(71,559)	(24,174)
Unfunded liabilities - Environmental	(7,308)	(15,400)	-	-	-
	6,689,188	6,465,110	6,211,203	5,945,828	5,699,300

Note: Amounts reported may have been restated from previous amounts presented to conform to 2021 Public Sector Accounting Board (PSAB) standards.

City of Hamilton
Five Year Financial and Statistical Review (unaudited)
(All amounts are reported in thousands of dollars except statistical information, ratios and per capita figures)

	2021	2020	2019	2018	2017
Statistical Information					
Population	584,000	578,000	579,000	572,575	563,480
Households	242,185	237,420	237,200	234,655	227,641
Area in hectares	112,840	112,840	112,775	112,775	112,775
Building Permit Values	$2,128,166,392	$1,383,480,564	$1,408,521,764	$1,264,757,129	$1,364,145,419
Housing Starts	1,564	1,406	1,438	1,135	1,340
Residential Units - Building Permits	5,494	4,507	5,012	5,808	6,053
Average Monthly Social Assistance Case Load	9,118	11,034	11,248	11,884	12,807
Continuous Full Time Employees	6,890	6,919	6,841	6,724	6,664

Note: Amounts reported may have been restated from previous amounts presented to conform to 2021 Public Sector Accounting Board (PSAB) standards.

Section 2

City of Hamilton
Consolidated Financial Statements
2021

Contents

Independent Auditors' Report

<<NOTE: The Independent Auditors' Report will be inserted after the Financial Report is approved by the Audit, Finance and Administration Committee. >>

Independent Auditors' Report

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Independent Auditors' Report

<<NOTE: The Independent Auditors' Report will be inserted after the Financial Report is approved by the Audit, Finance and Administration Committee. >>

	2021	2020
Financial assets		
Cash and cash equivalents (Note 3)	**$ 473,967**	$ 459,178
Taxes receivable	**81,750**	85,023
Accounts receivable	**144,390**	139,157
Other assets	**1,421**	1,428
Long term receivables (Note 4)	**53,405**	42,237
Portfolio investments (Note 3)	**1,171,734**	1,022,899
Investment in Government Business Enterprises (Note 5)	**321,183**	319,823
Total financial assets	**$ 2,247,850**	$ 2,069,745
Liabilities		
Accounts payable and accrued liabilities	**$ 436,642**	$ 390,003
Deferred revenue - general	**105,713**	87,143
Deferred revenue - obligatory reserve funds (Note 6 & 7)	**617,918**	470,579
Long term liabilities – municipal operations (Note 8)	**352,261**	395,298
Long term liabilities – housing corporation (Note 9)	**48,882**	40,991
Employee future benefits and other obligations (Note 10 & 11)	**396,733**	387,950
Solid waste landfill liabilities (Note 12)	**78,272**	65,148
Total liabilities	**2,036,421**	1,837,112
Net financial assets	**$ 211,429**	$ 232,633
Non-financial assets		
Tangible capital assets (Note 21)	**$ 6,448,616**	$ 6,202,964
Inventories	**19,528**	19,394
Prepaid expenses	**9,615**	10,119
Total non-financial assets	**6,477,759**	6,232,477
Accumulated surplus (Note 13)	**$ 6,689,188**	$ 6,465,110

Contractual obligations (Note 17)

Contractual rights (Note 18)

Contingent liabilities (Note 20)

COVID-19 (Note 25)

See accompanying notes to the consolidated financial statements.

	Budget 2021 (Note 24)	**Actual 2021**	Actual 2020
Revenue			
Taxation (Note 15)	$ 984,546	**$ 985,972**	$ 957,739
Government grants and contributions (Note 16)	597,521	**536,264**	521,305
User charges, licences and fines	363,050	**344,086**	329,316
Developer contributions earned	72,093	**68,541**	33,693
Donated tangible capital assets	28,812	**28,812**	8,494
Investment and dividend income	46,755	**37,639**	33,545
Net income from Government Business Enterprises (Note 5)	-	**13,097**	10,726
Other	108,863	**131,674**	120,526
Total revenue	2,201,640	**2,146,085**	2,015,344
Expenses			
General government	$ 74,589	**$ 95,277**	$ 68,079
Protection services	348,768	**357,517**	341,243
Transportation services	364,611	**338,618**	322,651
Environmental services	282,979	**283,556**	251,828
Health services	140,712	**153,396**	126,930
Social and family services	341,751	**342,493**	333,523
Social housing	115,235	**124,830**	110,063
Recreation and cultural services	179,813	**164,238**	149,932
Planning and development	66,315	**63,316**	56,382
Total expenses	1,914,773	**1,923,241**	1,760,631
Annual Surplus	$ 286,867	**$ 222,844**	$ 254,713
Accumulated surplus			
Beginning of year	$ 6,465,110	**$ 6,465,110**	$ 6,211,203
Other comprehensive loss and other Government Business Enterprises (Note 5)	-	**1,234**	(806)
End of year	$ 6,751,977	**$ 6,689,188**	$ 6,465,110

See accompanying notes to the consolidated financial statements.

	Budget 2021 (Note 24)	**Actual 2021**	Actual 2020
Operating activities			
Annual surplus	$ 286,867	**$ 222,844**	$ 254,713
Other comprehensive loss of Government Business Enterprises	-	**1,234**	(806)
Acquisition of tangible capital assets	(692,241)	**(447,314)**	(487,876)
Loss on disposition of tangible capital assets	14,012	**14,212**	10,127
Amortization of tangible capital assets	216,262	**216,262**	214,067
Donated tangible capital assets	(28,811)	**(28,812)**	(8,494)
Change in inventories	-	**(134)**	(3,722)
Change in prepaid expenses	-	**504**	(2,758)
Change in financial assets	(203,911)	**(21,204)**	(24,749)
Net financial assets Beginning of year	232,633	**232,633**	257,382
End of year	$ 28,722	**$ 211,429**	$ 232,633

See accompanying notes to the consolidated financial statements.

	2021	2020
Operating activities		
Annual surplus	**$ 222,844**	$ 254,713
Increase in taxes receivable	**3,273**	1,286
Increase in accounts receivable	**(5,233)**	(7,925)
Increase in other assets	**7**	45
Increase in accounts payable and accrued liabilities	**46,639**	50,173
Increase in deferred revenue - general	**18,570**	44,601
Increase in deferred revenue - obligatory reserve fund	**147,339**	139,301
Increase in inventories	**(134)**	(3,722)
Decrease in prepaid expenses	**504**	(2,758)
Non-cash activities		
Amortization of tangible capital assets	**216,262**	214,067
Donated tangible capital assets	**(28,812)**	(8,494)
Loss on disposition of tangible capital assets	**14,212**	10,127
Net income from Government Business Enterprises	**(13,097)**	(10,726)
Change in employee future benefits and other obligations	**8,783**	15,255
Change in solid waste landfill liabilities	**13,124**	(6,272)
	644,281	689,671
Investing activities		
Increase in portfolio investments	**(148,835)**	47,009
Decrease in long term receivables	**(11,168)**	5,142
Dividends received from Government Business Enterprises	**12,971**	51,934
Issuance of share capital	**-**	(37,986)
	(147,032)	66,099
Financing activities		
Long term debt issued – housing corporation	**13,918**	51,705
Long term liability – municipal operations	**2,678**	-
Debt principal repayment – municipal operations	**(45,112)**	(41,530)
Lease obligation payment – municipal operations	**(603)**	(619)
Debt principal repayment – housing corporation	**(6,027)**	(5,976)
	(35,146)	3,580
Capital activities		
Purchase of tangible capital assets	**(447,316)**	(487,876)
Net increase in cash and cash equivalents	**14,789**	271,474
Cash and cash equivalents		
Beginning of year	**459,178**	187,704
End of year	**$ 473,967**	$ 459,178

See accompanying notes to the consolidated financial statements.

1. Significant accounting policies

The Consolidated Financial Statements of the City of Hamilton ("City") are prepared by management in accordance with Canadian public sector accounting standards, as recommended by the Public Sector Accounting Board ("PSAB") of the Chartered Professional Accountants of Canada.

Significant accounting policies adopted by the City are as follows:

(a) Reporting entity

(i) The consolidated financial statements reflect the assets, liabilities, revenues, expenses, changes in accumulated surplus, changes in net financial assets of the reporting entity. The consolidated financial statements include the activities of all committees of Council and the following boards and enterprises which are under the control of and accountable to Council:

Hamilton Police Services Board
The Hamilton Public Library Board
The Hamilton Street Railway Company
CityHousing Hamilton Corporation
Hamilton Business Improvement Areas including Ancaster BIA, Barton Street Village BIA, Concession Street BIA, Downtown Hamilton BIA, Dundas BIA, International Village BIA, Locke Street BIA, Downtown Stoney Creek BIA, Ottawa Street BIA, Waterdown BIA, and Westdale BIA
Flamborough Recreation Sub-Committees
Confederation Park
Hamilton Farmers Market

Interdepartmental and organizational transactions and balances are eliminated.

CityHousing Hamilton Corporation was incorporated as Hamilton Housing Corporation on January 1, 2001 as a result of the provincial legislation, Social Housing Reform Act 2000, which transferred the operation of various local housing authorities to municipalities. The City of Hamilton assumed social housing responsibilities on December 1, 2001. The share capital of CityHousing Hamilton Corporation is 100% owned by the City of Hamilton and a separate Board of Directors has been established to provide oversight responsibilities for the Corporation.

CityHousing Hamilton Corporation has been consolidated on a line-by-line basis after conforming with the City's accounting principles after eliminating inter-organizational transactions and balances.

Hamilton Utilities Corporation ("H.U.C."), Hamilton Enterprises Holdings Corporation ("H.E.H.C.O.") and Hamilton Renewable Power Inc. ("H.R.P.I.") are subsidiary corporations of the City and are accounted for on a modified equity basis, consistent with the generally accepted accounting treatment for government business enterprises (Note 5). Under the modified equity basis, the business enterprise's accounting principles are not adjusted to conform to those of the City and inter-organizational transactions and balances are not eliminated.

City of Hamilton trust fund assets that are administered for the benefit of external parties are excluded from the consolidated financial statements. Separate financial statements have been prepared.

1. Significant accounting policies (continued)

(a) Reporting entity (continued)

Cemetery trust, and general trust funds administered by the City amounting to $22,668,000 (2020 - $21,373,000) have not been included in the Consolidated Statement of Financial Position nor have these operations been included in the Consolidated Statement of Operations. Homes for the Aged trust funds administered by the City amounting to $407,000 (2020 - $413,000) have not been included in the Consolidated Statement of Financial Position nor have these operations been included in the Consolidated Statement of Operations.

(i) The financial activities of certain entities associated with the City of Hamilton are not consolidated. The City's contributions to these entities are recorded in the Consolidated Statement of Operations. The entities that are not consolidated are as follows:

Hamilton Region Conservation Authority
Disabled and Aged Regional Transit System
The Hamilton Municipal Retirement Fund
The Hamilton-Wentworth Retirement Fund
The Pension Fund of the Employees of the Hamilton Street Railway
Township of Glanbrook Non-Profit Housing Corporation

(ii) The taxation, other revenues, expenses, assets and liabilities with respect to the operations of various school boards are not reflected in the consolidated financial statements.

(b) Basis of accounting

Revenues are recorded on the accrual basis of accounting, whereby revenues are recognized as they are earned and measurable. Expenses are recognized in the period goods and services are acquired and a liability is incurred.

(c) Use of estimates

The preparation of financial statements in accordance with Canadian public sector accounting standards requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements, and the reported amounts of revenues and expenses during the reporting period. Significant estimates include assumptions used in estimating provisions for allowance for doubtful accounts, donated tangible capital assets, solid waste landfill liabilities, liabilities for contaminated sites, and in performing actuarial valuations of employee future benefit obligations.

Where estimation uncertainty exists, the financial statements have been prepared within reasonable limits of materiality. Actual results could differ from those estimates.

(d) Cash, cash equivalents

Cash and cash equivalents include cash on hand, cash held in financial institutions and temporary investments with maturities of 365 days or less. Investments are valued at cost and are written down when there is a decrease in value.

(e) Portfolio investments

Portfolio investments mainly comprise of federal, provincial and municipal government bonds and deposit notes and short-term instruments of financial institutions. Portfolio investments are valued at cost less any amounts written off to reflect an other than temporary decline in value.

1. Significant accounting policies (continued)

(f) Deferred revenue – obligatory reserve funds

Receipts which are restricted by legislation of senior governments or by agreement with external parties are in nature restricted revenues and are reported as deferred revenues. When qualifying expenses are incurred, deferred revenues are recognized into revenue in the fiscal period they are expended.

(g) Employee future benefits and other obligations

Employee future benefits and other obligations for retirement, post employment and pension benefits are reported in the Consolidated Statement of Financial Position. The accrued benefit obligations are determined using management's best estimates of expected investment yields, wage and salary escalation, mortality rates, termination and retirement ages. The actuarial gain or loss is amortized over the expected average remaining life expectancy of the members of the employee groups.

(h) Tangible capital assets

Tangible capital assets are recorded at cost which includes all amounts directly attributable to acquisition, construction, development or betterment of the asset. Donated and/or contributed assets are capitalized and recorded at their estimated fair value upon acquisition and recognized in revenue. Leased tangible capital assets are valued at the present value of the future minimum lease payments. Certain tangible capital assets for which historical cost information is not available have been recorded at current replacement cost deflated by a relevant inflation factor.

Amortization for road linear assets is calculated on a consumption basis using road deterioration curves. All other tangible capital assets are amortized on a straight-line basis over their estimated useful lives. One half of the annual amortization is recorded as amortization expense in the year of acquisition or construction and in the year of disposal. Estimated useful lives range from 2 years to 100 years as follows:

General - Land improvements	20 to 75 years
General - Buildings	20 to 40 years
General - Vehicles	2 to 20 years
General – Computer hardware and software	3 to 5 years
General – Other – Machinery and equipment	2 to 100 years
Infrastructure – Bridges and other structures	40 to 75 years
Infrastructure – Water and wastewater facilities	20 to 40 years
Infrastructure – Water, wastewater, storm and road linear	18 to 100 years

The City has leased tangible capital assets which are amortized over the term of the lease, ranging from 5 to 50 years. The cost, accumulated amortization, net book value and amortization expense have been reported in these consolidated financial statements.

Assets under construction are not amortized until the asset is ready for use. All interest on debt incurred during construction of related tangible capital assets is expensed in operations in the year incurred. Works of art and historic treasures are not recorded as assets in these consolidated financial statements.

(i) Inventories

Inventories held for consumption or use are valued at the lower of cost and net realizable value.

1. Significant accounting policies (continued)

(j) Government transfers

Government transfers are recognized as revenue in the financial statements when the transfer is authorized, any eligibility criteria are met, and a reasonable estimate of the amount can be made except, when and to the extent that, stipulations by the transferor give rise to an obligation that meet the definition of a liability. Government transfers that meet the definition of a liability are recognized as revenue as the liability is extinguished.

(k) Long term receivables

Long term receivables are valued at cost. Recoverability is assessed annually, and a valuation allowance is recorded when recoverability has been impaired. Long term receivables are written off when they are no longer recoverable. Recoveries of long term receivables previously written off are recognized in the year received. Interest revenue is recognized as it is earned. Long term receivables with significant concessionary terms are reported as an expense on the Consolidated Statement of Operations. Long term receivables are reported in Note 4.

(l) Tax revenue

Taxes receivable and tax revenue are recognized when they meet the definition of an asset, the tax is authorized, and the taxable event has occurred.

(m) Landfill Liability

The Ontario Environmental Protection Act (the “Act”) sets out the regulatory requirements for the closure and maintenance of landfill sites. Under the Act, the City is required to provide for closure and post-closure care of solid waste landfill sites. The costs related to these obligations are provided for all inactive landfill sites and active landfill sites based on usage.

(n) Contaminated Sites

Contamination is a result of contamination being introduced into air, soil, water or sediment of a chemical, organic or radioactive material or live organism that exceeds an environmental standard. The liability is recorded net of any expected recoveries. A liability for remediation of contaminated sites is recognized when all the following criteria are met:

(i) an environmental standard exists
(ii) contamination exceeds the environmental standard
(iii) the City is directly responsible or accepts responsibility
(iv) it is expected that future economic benefits will be given up; and
(v) a reasonable estimate of the amount can be made.

The liability is estimated based upon information that is available when the financial statements are prepared. It is based upon the costs directly attributable to the remediation activities required using a present value measurement technique.

(o) Related parties disclosure

A related party exists when one party has the ability to exercise control or shared control over the other. Related parties include key management personnel, their close family members and the entities they control or have shared control over. Related party transactions are disclosed if they occurred at a value different from that which would have been arrived at if parties were unrelated and the transaction has material effect on the consolidated financial statements. As at December 31, 2021, there are no such related party transactions to disclose.

1. Significant accounting policies (continued)

(p) Contingent assets

Contingent assets are possible assets arising from existing conditions or situations involving uncertainty which will be ultimately resolved when one of more future events occur that are not within the government's control. Disclosure of a contingent asset is required under this standard when the occurrence of a confirming future event is likely. As at December 31, 2021, there are no such contingent assets to disclose.

(q) Contractual rights

Contractual rights requires the disclosure of information in regards to future rights to economic resources arising from contracts or agreements that will result in a future economic benefit. Such disclosure includes the nature, extent and timing of contractual rights. The City is involved with various contracts and agreements arising in the ordinary course of business. This results in contractual rights to economic resources. Contractual rights are reported in Note 18.

(r) Assets

The assets standard provides additional guidance on the definition of assets and what is meant by economic resources, control, past transactions and events and from which future economic benefits are to be obtained. For the year ended December 31, 2021, all material assets have been disclosed and reported within this definition.

(s) Inter-Entity transactions

Inter-entity transactions standard provides guidance on how to account for and report transactions between public sector entities that comprises a governments reporting entity. This section provides guidance for the measurement of these transactions. All City transactions are recorded at the exchange amount, being the amount agreed to by both parties. For the year ended December 31, 2021, there were no material inter-entity transactions to disclose.

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2. Adoption of new accounting standards

The following are upcoming standard and amendment changes that will be effective in future periods. They have not been applied to the 2021 consolidated financial statements. Management is still assessing the impact to the City's future financial statements and the extent of the impact is still not known at this point.

(a) PS 1201, Financial Statement Presentation

Introduces a new statement of remeasurement gains and losses. The new statement will report: unrealized foreign exchange gains or losses, fair value remeasurements and other comprehensive income (OCI) from GBEs / GBPs. This standard is effective for fiscal years beginning on or after April 1, 2022 (the City's December 31, 2023 year-end) and must be adopted simultaneously with PS 3450-Financial Instruments and PS2601-Foreign Currency Translation.

(b) PS 2601, Foreign Currency Translation

Requires foreign exchange translation gains and losses to be reported in the statement of remeasurement gains and losses. This standard is effective for fiscal periods beginning on or after April 1, 2022 (the City's December 31, 2023 year-end).

2. Adoption of new accounting standards (continued)

(c) PS 3280, Asset Retirement Obligations

Establishes a framework for recognition, measurement, presentation and disclosure of legal obligations associated with retirement of tangible capital assets in productive use. Legally obligated costs associated with the retirement of capital assets will be accounted for over the life of the asset, as opposed to at time the retirement occurs. This section is effective for fiscal years beginning on or after April 1, 2022 (The City's December 31, 2023 year-end).

(d) PS 3400, Revenue

Establishes a framework for recognition, measurement and reporting revenues that arise from transactions that include performance obligations (revenue recognized as performance obligations are satisfied) and transactions that do not have performance obligations (revenue recognized at realizable value). This section is effective for fiscal years beginning on or after April 1, 2023 (The City's December 31, 2024 year-end).

(e) PS 3450, Financial Instruments

Provides guidance on recognition, measurement, presentation and disclosure of financial instruments and introduces fair value measurement for a number of financial instruments including derivatives. This standard is effective for fiscal periods beginning on or after April 1, 2022 (the City's December 31, 2023 year-end).

(f) PS 3041 Portfolio Investments

Provides guidance on how to account for investments in organizations that do not form part of the government reporting entity. Such investments are normally in equity instruments or debt instruments issued by the investee. This section is effective for fiscal years beginning on or after April 1, 2022 (The City's December 31, 2023 year-end).

(g) Public Sector Guideline 8, Purchased Intangible

Allows public sector entities to recognize intangible purchased through an exchange transaction. This guideline is effective for fiscal years beginning on or after April 1, 2023 (the City's December 31, 2024 year-end).

(h) PS 3160 Public Private Partnership

This Section establishes standards on accounting for public private partnerships between public and private sector entities where the public sector entity procures infrastructure using a private sector partner. This section is effective for fiscal years beginning on or after April 1, 2023 (the City's December 31, 2024 year-end).

3. Cash and cash equivalents and portfolio investments

		2021		2020
Cash and cash equivalents are comprised of:				
Cash on hand	**$**	**133**	$	130
Cash held in banks		**467,491**		452,713
Temporary investments		**6,343**		6,335
	$	**473,967**	$	459,178
Portfolio investments are comprised of:				
Unrestricted investments	**$**	**489,968**	$	493,854
Designated investments (obligatory reserve funds)		**617,918**		470,579
Designated investments (Hamilton Future Fund)		**63,848**		58,466
	$	**1,171,734**	$	1,022,899

Portfolio investments have a market value of $1,151,442,000 (2020 - $1,094,766,000). The City has purchased $3,446,000 (2020 - $6,504,000) of its own debentures which have not been cancelled. This investment in its own debenture is included in portfolio investments on the consolidated statement of financial position. The gross amounts of these debentures is $348,063,000 (2020 - $393,175,000)

4. Long term receivables

The City has long-term receivables in the amount of $53,405,000 (2020 - $42,237,000). The long-term receivables are comprised of:

		2021		2020
Development charge deferral agreements	**$**	**41,575**	$	26,658
Mortgages receivable:				
Downtown convert to rent program		**-**		4,784
Hamilton Enterprises Holding Corporation		**5,832**		6,156
Sheraton Hotel loan		**462**		610
Other City loan programs		**3,898**		3,424
Loans to other agencies and organizations		**3,547**		3,091
Less: Provision for loans with concessionary terms		**(1,909)**		(2,486)
	$	**53,405**	$	42,237

Development charge deferral agreements and mortgage receivables are loans which are secured by property, with interest rates varying from 0% to 5.56% and terms of one year to thirty years.

Loans to other agencies and organizations include loans to Hamilton Conservation Authority, Catholic Children's Aid Society, Winona Peach Festival, Redeemer University College, the Bob Kemp Hospice, Canadian Football Hall of Fame, Rosedale tennis Club with interest rates varying from 0% to 4.92% for terms of up to thirty years.

5. Investment in Government Business Enterprises

Hamilton Utilities Corporation, Hamilton Enterprises Holdings Corporation and Hamilton Renewable Power Inc. are subsidiary corporations of the City and are accounted for on a modified equity basis, consistent with the generally accepted accounting treatment for government business enterprises.

In compliance with provincial legislation enacted to restructure the electrical industry in Ontario, the Hamilton Utilities Corporation ("H.U.C.") was incorporated on June 1, 2000. All of the assets and liabilities of the predecessor hydro-electric systems were transferred to H.U.C. During 2004, Hamilton Hydro Energy Inc. was established with the City's acceptance of a dividend in kind in the form of one common share from H.U.C. Effective June 1, 2005, the articles of incorporation reflected the amendment of a name change to Hamilton Renewable Power Inc. ("H.R.P.I."). On December 18, 2017 Hamilton Enterprises Holdings Corporation ("H.E.H.C.O.") was incorporated.

The amounts related to government business enterprises as reported in the Consolidated Statement of Operations for 2021 and 2020 is as reported by the Hamilton Utilities Corporation, Hamilton Enterprises Corporation and Hamilton Renewable Power Inc.

		2021		2020
Net income from H.U.C.	**$**	**16,132**	$	13,473
Net loss from H.E.H.C.O.		**(2,770)**		(2,681)
Net loss from H.R.P.I.		**(265)**		(66)
	$	**13,097**	$	10,726

The City's investment in Government Business Enterprises is reported in the Consolidated Statement of Financial Position as:

		2021		2020
Investment in H.U.C.	**$**	**292,615**	$	288,242
Investment in H.E.H.C.O.		**29,272**		32,020
Investment in H.R.P.I.		**(704)**		(439)
	$	**321,183**	$	319,823

The change in investment in Government Business Enterprises is allocated as follows:

		2021		2020
Investment in Government Business Enterprises at January 1	**$**	**319,823**	$	323,851
Net income during the year		**13,097**		10,726
Other comprehensive loss		**1,234**		(806)
Dividends		**(12,971)**		(51,934)
Issuance of capital		**-**		37,986
Investment in Government Business Enterprises at December 31	**$**	**321,183**	$	319,823

5. Investment in Government Business Enterprises (continued)

The following table provides condensed supplementary financial information for Hamilton Utilities Corporation reported by H.U.C. at December 31,2021 and December 31, 2020 respectively.

		2021		2020
Financial Position				
Current assets	**$**	**49**	$	72
Notes receivable from Corporation		**16,212**		13,786
Due from related parties		**-**		2,426
Future payments in lieu of income taxes		**448**		473
Investment in Alectra Holdings Inc.		**356,107**		350,198
Total assets	**$**	**372,816**	$	366,955
Current liabilities				
(including current portion of long term debt)		**14**		8
Non-current liabilities		**69,408**		67,926
Total liabilities		**69,422**		67,934
Change in equity on restructuring		**10,779**		10,779
Shareholder's equity	**$**	**292,615**	$	288,242
Results of operations				
Revenues	**$**	**156**	$	156
Operating expenses		**(184)**		(188)
Equity income in Alectra Holdings Inc.		**17,668**		13,147
Financing expenses		**(6)**		(5)
Other income		**7**		12
Equity earnings from operations		**17,641**		13,122
Recovery of taxes		**(1,509)**		351
Net income before other comprehensive income		**16,132**		13,473
Other comprehensive loss		**1,212**		(693)
Net income	**$**	**17,344**	$	12,780
Dividends paid		**12,971**		51,792

5. Investment in Government Business Enterprises (continued)

H.U.C. transactions with corporations under common control:

As part of the H.U.C. restructuring in 2018, certain notes receivable were recognized as a result of the sale of shares of the Corporation's previous subsidiaries. During 2020, the Corporation executed the remaining restructuring steps approved by the Ministry of Finance with its sole shareholder. As a result, notes receivable totalling $37,986 were formally assigned to the City by way of a dividend in-kind. The amounts remaining from the initial notes receivable established on restructuring over and above the fair value for the shares agreed upon at the date of restructuring remain receivable as at December 31, 2020 and 2021.

During the year ended December 31, 2020, long-term receivables related to a loan between the corporation and HCE Energy ("HCE") a corporation under common control relating to HCE's acquisition of the City of Hamilton's Central Utilities Plant (“CUP”). The long-term borrowings were a loan between the City and the Corporation relating to HCE's acquisition of the City's CUP.

Prior to December 31, 2020, the Corporation and the City, along with HCE formally entered into an assignment agreement to transfer both the remaining long-term receivable in the amount of $6,156 and long-term borrowing in the amount of $6,156 to the City and HCE respectively, As at December 31, 2020, the Corporation has no further contractual right to cash flows from long-term receivables and no obligation to settle long-term borrowings with the City. The settlement transaction comprised of long-term debt forgiveness and the transfer of long-term receivable with related parties have been recognized.

Amounts owing to and from corporations under common control are non-interest bearing with no fixed terms of repayment.

5. Investment in Government Business Enterprises (continued)

The following table provides condensed supplementary financial information for Hamilton Enterprises Holding Corporation reported by H.E.H.C.O. at December 31, 2021 and December 31, 2020 respectively.

		2021		2020
Financial Position				
Current assets	**$**	**8,269**	$	9,442
Capital assets		**47,381**		51,618
Other assets		**5,159**		5,418
Future payments in lieu of income taxes		**5,243**		5,209
Total assets		**66,052**		71,687
Current liabilities				
(including current portion of long term debt)		**19,235**		20,786
Non-current liabilities		**28,645**		29,962
Total liabilities		**47,880**		50,748
Shareholder's deficit				
Non-controlling interest		**59**		78
Opening equity		**(11,159)**		(11,159)
Total shareholder's deficit	**$**	**29,272**	$	32,020
Results of operations				
Revenues	**$**	**18,133**	$	15,527
Operating expenses		**(20,277)**		(16,533)
Financing expense		**(917)**		(1,365)
Other income		**24**		19
Equity earnings from operations		**(3,037)**		(2,352)
Payment / recovery of taxes		**(248)**		334
Loss for the year		**(2,789)**		(2,686)
Non-controlling interest of a subsidiary		**19**		5
Net loss before other comprehensive income		**(2,770)**		(2,681)
Other comprehensive income		**22**		(113)
Net loss	**$**	**(2,748)**	$	(2,794)
Issuance of share capital		**-**		37,986

5. Investment in Government Business Enterprises (continued)

H.E.H.C.O. transactions with corporations under common control

During the prior year, the H.E.H.C.O. settled outstanding notes payable that originated as part of the corporate reorganization in 2018. As part of the settlement, the H.E.H.C.O., H.U.C. and the City agreed to settle the notes in the amount of $37,986, which represents the value of notes payable in exchange for shares transferred during the reorganization for the H.E.H.C.O. subsidiaries. The remaining amounts of notes payable not settled in 2020 remain outstanding with the related parties as summarized above.

Amounts owing to and from corporations under common control are non-interest bearing and have no fixed terms of repayment.

H.E.H.C.O. amounts owing to corporations under common control:

Amounts owing to corporations under common control totaling $5,832 (2020 - $6,156), previously owed to H.U.C. and now owing to the City of Hamilton are due December 31 ,2039, bearing interest as at fixed interest rate of 4.06% throughout the term of the loan. The loan is payable in annual principal repayments of $324 plus interest. The amounts owing to the City relate to the Corporations' acquisition of the City of Hamilton's' CUP.

During the prior year, the amounts owing to H.U.C. were formally assigned to the City who accepted the assignment of borrowings and the Corporation is now remitting principal and interest payments directly to the City.

The borrowing are secured by the assets of the CUP with a net book value of $9,034 (2020 - $9,273) with a cross-company guarantee provided by a corporation under common control.

Interest expense for the long-term borrowings was $210 (2020 - $229). Principal payments on the long-term borrowings and receivables are due as follows:

		2021
2022	**$**	**324**
2023		**324**
2024		**324**
2025		**324**
2026		**324**
Thereafter		**4,212**
	$	**5,832**

5. Investment in Government Business Enterprises (continued)

		2021		2020
Financial Position				
Current assets	**$**	**1,503**	$	1,325
Capital assets		**4,542**		5,090
Other assets		**32**		32
Total assets		**6,077**		6,447
Current liabilities				
(Including current portion of long term debt)		**603**		642
Future payment in lieu of taxes		**178**		244
Total liabilities		**781**		886
Shareholder's equity		**6,000**		6,000
Net deficit	**$**	**(704)**	$	(439)
Results of operations				
Revenues	**$**	**2,435**	$	2,900
Expenses		**(2,700)**		(2,966)
Net Loss	**$**	**(265)**	$	(66)
Dividends paid		**-**		142

Government Business Enterprises - related party transactions

The following summarizes the Corporations related party transactions with Government Business Enterprises for the year ended December 31.

		2021		2020
Revenue				
Dividend revenue from H.U.C.	**$**	**12,971**	$	51,792
Dividend revenue from H.R.P.I.		**-**		142
Property and other taxes received by the City from H.U.C.		**537**		532
Sale of Methane to H.R.P.I.		**734**		794
Expenditures				
Hydro purchased by the City from H.E.H.C.O.		**36,762**		34,224
Thermal Energy purchased from H.R.P.I.		**241**		274
Assets				
Accounts receivable from H.R.P.I.		**446**		429
Long term receivable from H.E.H.C.O.		**5,508**		6,156

6. Deferred revenue – obligatory reserve funds

The deferred revenue – obligatory reserve funds, reported on the consolidated statement of financial position, are made up of the following:

		2021		2020
Development charge reserve funds	**$**	**373,591**	$	285,420
Recreational land dedicated under the Planning Act		**70,102**		66,934
Gasoline tax revenue: Provincial		**20,092**		19,220
Canada Community-Building Fund (Federal Gas Tax)		**104,319**		59,101
Building Permit Revenue		**28,048**		24,613
Other (Main Street Revitalization)		**7**		15
Safe Restart Agreement (SRA): Municipal & Transit Funding		**21,759**		15,276
	$	**617,918**	$	470,579

7. Deferred revenue – obligatory reserve funds

The deferred revenue – obligatory reserve funds, reported on the consolidated statement of financial position, are made up of the following:

		2021		2020
Balance at January 1	**$**	**470,579**	$	331,278
Add:				
Developer and other contributions		**163,612**		183,211
Interest earned		**11,051**		7,385
Provincial and Federal Funding		**125,674**		52,770
		300,337		243,366
Less:				
Contributions used in operating and capital funds		**152,998**		104,065
Balance at December 31	**$**	**617,918**	$	470,579

8. Long term liabilities – municipal operations

(a) The long term liabilities – municipal operations consists of long term debt for serial debentures and loans that mature in the years 2022 to 2044 with interest rates varying between 0.50% and 5.05% and obligations for leased tangible capital assets with payments from 2022 to 2051 at a discount rate of 5%. The balance of long term liabilities consists of the following:

		2021		2020
Long term liabilities incurred by the City	**$**	**348,063**	$	393,175
Long term liabilities for leased tangible capital assets incurred by the City		**4,198**		2,123
Net long term liabilities	**$**	**352,261**	$	395,298

8. Long term liabilities – municipal operations (continued)

(b) Of the $348,063,000 long term debt incurred by the City (2020 - $393,175,000) certain principal payments do not represent a burden on general City revenue, as they are to be recovered in future years from other sources.

The total long-term debt is to be recovered from the following:

		2021		2020
General Revenue	**$**	**231,779**	$	263,815
Water & Wastewater user charges		**116,284**		129,360
	$	**348,063**	$	393,175

(c) The total City principal repayments of long term debt in each of the next five years and thereafter are due as follows:

	General Revenues	Water & Wastewater User Charges	**Total 2021**
2022	$ 32,454	$ 13,081	**$ 45,535**
2023	27,232	13,028	**40,260**
2024	25,070	12,971	**38,041**
2025	25,145	12,971	**38,116**
2026	20,024	12,971	**32,995**
2027 and thereafter	101,854	51,262	**153,116**
Total	$ 231,778	$ 116,284	**$ 348,063**

(d) The total City principal repayments of leased tangible capital assets in each of the next five years and thereafter are due as follows:

	2021
2021	**$ 330**
2022	**330**
2023	**330**
2024	**330**
2025	**330**
2026 and thereafter	**2,548**
Total	**$ 4,198**

(e) Total repayments and interest charges for the year for long term debt are as follows:

		2021		2020
Principal repayments	**$**	**45,112**	$	41,530
Interest expense		**10,218**		10,958
	$	**55,330**	$	52,488

(f) Total repayments and interest charges for the year for leased tangible capital assets are as follows:

		2021		2020
Principal repayments	**$**	**603**	$	619
Interest expense		**240**		267
	$	**843**	$	886

9. Long term debt – housing corporation

(a) The balance of long term debt – housing corporations reported on the Consolidated Statement of Financial Position represents capital assets of the CityHousing Hamilton that are financed by mortgages. The mortgages mature in the years 2022 to 2040 with interest rates varying between 0% and 5.83%. The mortgage obligations for CityHousing Hamilton are $48,882,000 (2020 - $40,991,000).

(b) The principal repayments of these mortgages in each of the next five years and thereafter are as follows:

		2021
2022	**$**	**13,545**
2023		**4,320**
2024		**8,378**
2025		**3,403**
2026		**2,437**
2027 and thereafter		**16,799**
	$	**48,882**

(c) Total repayments and interest charges for the year for long term debt - housing corporations are as follows:

		2021		2020
Principal repayments	**$**	**6,027**	$	5,976
Interest expense		**1,029**		1,191
	$	**7,056**	$	7,167

(d) Other long term debt incurred by the City of Hamilton's housing corporations, representing capital assets financed by debentures issued by the Ontario Housing Corporation of $3,583,000 (2020 - $5,966,000), is not included in the Consolidated Statement of Financial Position. The Social Housing Reform Act, 2000 transferred the ownership and responsibility for the administration of Province of Ontario public housing to the City of Hamilton as a local housing corporation. The transfer, effective January 1, 2001, included land and buildings at no cost. The servicing of long term debt remains the obligation of the Province of Ontario.

10. Employee future benefits and other obligations

The City provides certain employee benefits that require funding in future periods. An estimate of these liabilities has been recorded in the Consolidated Statement of Financial Position. These amounts are summarized as follows:

	2021	2020
Accrued Benefit Obligation		
Sick leave benefit plan (a)	**$ 62,692**	$ 60,015
Long term disability (b)	**44,975**	43,676
Workplace safety and insurance board liabilities (WSIB) (c)	**132,478**	128,967
Retirement benefits (d)	**170,423**	168,449
Vacation benefits (e)	**27,031**	27,212
Pension benefit plans (f)	**(40,311)**	(34,366)
	397,288	393,953
Net unamortized actuarial loss	**(9,596)**	(11,803)
Valuation allowance	**9,041**	5,800
Accrued Liability	**$ 396,733**	$ 387,950

The City has established reserves for some of these liabilities totalling $82,141,000 (2020 - $74,278,000) as described in the following notes.

The continuity of employee future benefits and other obligations are summarized as follows:

	2021	2020
Liability for Employee Future Benefits and Other Obligations balance at beginning of the year	**$ 387,950**	$ 372,695
Plan amendment per actuarial valuation	**3,242**	11,930
Benefit expense	**38,842**	36,920
Interest expense	**12,693**	12,612
Amortization of actuarial loss on accrued benefit obligations	**5,835**	5,600
Amortization of actuarial gain on earnings on pension assets	**(6,253)**	(5,952)
Benefit payments	**(45,576)**	(45,855)
Liability for Employee Future Benefits and Other Obligations balance at end of the year	**$ 396,733**	$ 387,950

10. Employee future benefits and other obligations (continued)

The expenses related to these employee benefits and other obligations are reported in the Consolidated Statement of Operations. These expenses are summarized as follows:

	2021	2020
Plan amendment per actuarial valuation	**$ 3,242**	$ 11,930
Benefit expense	**38,842**	36,920
Interest expense	**12,693**	12,612
Amortization of net actuarial loss	**(418)**	(351)
	$ 54,359	$ 61,111

Actuarial valuations are performed on post employment, retirement benefits and pension benefits to provide estimates of the accrued benefit obligations. These estimates are based on a number of assumptions about future events including interest rates, inflation rates, salary and wage increases, medical and dental cost increases and mortality. The assumptions are determined at the time of the actuarial valuations and are reviewed annually. Consequently, different assumptions may be used as follows:

	Discount Rate	Return on Assets	Inflation Rate	Payroll Increases	Dental Increases	Life Expectancy (Years)
Vested sick leave	3.25%	NA	2.0%	3.0%	NA	15
Long term disability	3.00%	NA	2.0%	3.0%	NA	8.0
Workplace safety and insurance	3.50%	NA	2.0%	3.0%	NA	10.0
Retirement Benefits Health and Dental	3.50%	NA	2.0%	3.0%	4.0%	12
Pensions Benefits (non-OMERS)	3.70%	3.70%	2.0%	NA (1)	NA	7 to 9

Notes:

(1) There is no estimate for future salary and wage increases in the non-OMERS pension plans as the active employees have been transferred to OMERS.

(a) Liability for sick leave benefit plans

The City provides a sick leave benefit plan for certain employee groups. Under the sick leave benefit plan of the City, unused sick leave can accumulate, and employees may become entitled to a cash payment when they leave the City's employment. An actuarial valuation as at December 31, 2020 has estimated the accrued benefit obligation at $62,692,000 (2020 – $60,015,000). Changes in valuation assumptions have resulted in an increase in the liability to $62,692,000 from the expected liability of $62,022,000. The actuarial loss as at December 31, 2021 of $670,000 is being amortized over 15 years, which is the expected average remaining life expectancy of the members of the employee groups. Reserves established to provide for this liability are included on the Consolidated Statement of Financial Position in the amount of $12,111,000 (2020 - $9,570,000).

(b) Liability for long term disability

The City provides benefits in the event of total disability for certain employee groups. An actuarial valuation of the City's self-insured long-term disability program as at December 31, 2020 has estimated the accrued benefit obligation at $44,975,000 (2020 - $43,676,000). Changes in valuation assumptions have resulted in an increase in the liability of $44,975,000 from the expected liability of $32,997,000. The actuarial loss as at December 31, 2021 of $11,978,000 is being amortized over 8.0 years, which is the expected average remaining life expectancy of the members of the employee groups. Reserves established to provide for this liability are included on the Consolidated Statement of Financial Position in the amount of $15,806,000 (2020 - $15,044,000).

10. **Employee future benefits and other obligations** (continued)

(c) Liability for workplace safety and insurance

The City is liable for compensation related to workplace injuries as stipulated by the Workplace Safety & Insurance Act. An actuarial valuation as at December 31, 2020 estimated the accrued benefit obligation for workplace safety & insurance existing claims and future pension awards at $132,478,000 (2020 - $128,967,000). Changes in valuation assumptions have resulted in an increase in the liability to $132,478,000 from the expected liability of $107,708,000. The actuarial loss of $24,770,000 is being amortized over 10.0 years, which is the expected average remaining life expectancy of the plan members in various groups. Reserves established to provide for this liability are included on the Consolidated Statement of Financial Position in the amount of $41,618,000 (2020 - $41,329,000).

(d) Liability for retirement benefits

The City provides certain health, dental and life insurance benefits between the time an employee retires under the Ontario Municipal Employees Retirement System (OMERS) or the normal retirement age and up to the age of 65 years. An actuarial valuation at December 31, 2020 estimated the accrued benefit obligation at $170,423,000 (2020 - $168,449,000). Changes in valuation assumptions have resulted in an increase in liability to $170,423,000 from the expected liability of $149,133,000. The actuarial loss of $21,290,000 is being amortized over 12 years, which is the expected average remaining life expectancy of the plan members in various groups. The City has $7,993,000 (2020 - $7,682,000) set aside in the Consolidated Statement of Financial Position to assist with this liability.

(e) Liability for vacation benefits

The City is liable for vacation days earned by its employees as at December 31, 2021 but not taken until a later date. The liability as at December 31, 2021 has been estimated at $27,031,000 (2020 - $27,212,000), of which $16,609,000 is funded by City departments' budgets (2020 - $16,577,000) Reserves established to provide for this liability are included on the Consolidated Statement of Financial Position in the amount of $641,000 (2020 - $1,610,000), and the remaining liability of $9,781,000 is unfunded (2020 - $9,025,000).

(f) Liability for pensions benefit plans

In addition to the Ontario Municipal Employees Retirement System (OMERS) described in Note 11, the City also provides pension benefits under three other plans. The actuarial valuations for Hamilton-Wentworth Retirement Fund, Hamilton Street Railway Retirement Fund and Hamilton Municipal Retirement Fund at December 31, 2019 estimated the combined accrued benefit asset of the pension plans at $40,311,000 from $34,366,000 in 2020. Changes in valuation resulted in an asset of $40,311,000 from an expected liability of $17,842,000. The actuarial gain of $58,153,000 is being amortized over 7.0 to 9.0 years, which is the expected average remaining life expectancy of the plan members. Reserves established to provide for this liability are included on the Consolidated Statement of Financial Position in the amount of $11,965,000 (2020 - $6,725,000).

11. Pension agreements

(a) Ontario Municipal Employees Retirement System

The City makes contributions to the Ontario Municipal Employees Retirement System (OMERS), which is a multi-employer plan, on behalf of approximately 7,316 members of City staff and councillors. The plan is a defined benefit plan, which specifies the amount of retirement benefit to be received by employees, based on the length of credited service and average earnings.

The latest actuarial valuation as at December 31, 2021 indicates a "going concern" Actuarial Deficit based on the plan's current member and employer contribution rates. Contributions were made in the 2021 calendar year at rates ranging from 9.0% to 15.8% depending on the member's designated retirement age and level of earnings. As a result $61,070,000 (2020 - $61,086,000) was contributed to the OMERS plan for current service.

As OMERS is a multi-employer pension plan, any pension plan surpluses or deficits are a joint responsibility of all Ontario municipalities and their employees. The OMERS primary pension plan has a deficit of $3.1 billion as of December 31, 2021 (2020 - $3.2 billion)

(b) Other pension plans – Hamilton-Wentworth Retirement Fund, Hamilton Municipal Retirement Fund, and Hamilton Street Railway Retirement Fund.

Approximately 296 current employees and 933 former employees of the City are members of three defined benefit plans; Hamilton-Wentworth, Hamilton Municipal and the Hamilton Street Railway Retirement Funds and are current or future beneficiaries under their terms and conditions. Actuarial valuations of the pension plans for funding purposes are required under the Pension Benefits Act every three years. The actuarial valuations of the pension plans for accounting purposes provide different results than the valuations for funding purposes. For funding purposes, one of the pension plans is in a surplus position and the other two plans are in a deficit position.

The actuarial valuations for these pension plans are based on a number of assumptions about future events including mortality, inflation and interest rates. The two plans with deficits are paying a number of amortization schedules that will be completed over a period ranging from two to fifteen years.

The accrued pension liability reported in the Consolidated statement of Financial Position is comprised as follows:

		2021		2020
Accrued pension benefit obligation	**$**	**322,674**	$	309,881
Pension plan assets		**(362,985)**		(344,247)
Other assets		**(40,311)**		(34,366)
Unamortized actuarial gain		**49,113**		55,908
Accrued pension liability		**8,802**		21,542
Valuation allowance		**9,041**		5,800
Adjusted accrued pension liability	**$**	**17,843**	$	27,342

11. Pension agreements (continued)

The actuarial gain or loss on pension fund assets and the actuarial gain or loss on accrued pension benefits obligations are comprised as follows:

		2021		2020
Expected pension fund assets at the end of year	**$**	**337,259**	$	331,800
Actual pension fund assets at end of year		**362,985**		344,247
Actuarial gain on pension fund assets		**25,726**		12,447
Expected accrued pension benefit obligation at end of year				
Actual accrued pension benefit obligation at end of year		**299,572**		326,203
Accrued pension benefit obligation		**322,674**		309,881
Actuarial (loss) gain on accrued pension benefit obligation	**$**	**(23,102)**	$	16,322

The expense related to the pension plans are comprised as follows:

		2021		2020
Amortization of net actuarial loss on accrued pension benefit obligation	**$**	**(2,653)**	$	(162)
Amortization of net actuarial loss on pension plan assets		**(6,766)**		(5,407)
Net amortization		**(9,419)**		(5,569)
Interest on average accrued pension benefit obligation	**$**	**13,119**	$	14,455
Expected return on average pension plan assets		**(14,670)**		(14,608)
Net interest		**(1,551)**		(153)
Change in valuation allowance		**3,241**		2,806
Total expenses	**$**	**(7,729)**	$	(2,916)

Payment of $1,770,200 (2020 - $3,555,201) have been applied to reduce the Hamilton - Wentworth and Hamilton Street Railway plans' deficit as actuarially determined for funding purposes. The pension deficit for the pension plans as at December 31, 2021 will be funded by the City with payments as follows:

		2021
2022	**$**	**1,890**
2023		**1,956**
2024		**1,956**
2025		**1,956**
2026 and thereafter		**9,780**
Total	**$**	**17,538**

12. Solid waste landfill liabilities

The City owns and operates one open landfill site and it owns and maintains twelve (12) closed landfill sites.

The active landfill site in the Glanbrook community was opened in 1980 covering 220 hectares over three phases with a capacity of 14,824,000 cubic metres of waste. The total capacity has been broken into three Phases, with Phase 1 having a capacity of 8,403,000, Phase 2 having a capacity of 4,855,000 cubic metres and Phase 3 having a capacity of 1,566,000 cubic metres. As at December 31, 2018 landfilling has ceased in Phase 1 and is occurring in Phase 2. Approximately 295,000 cubic metres of un-utilized or recovered (due to site settlement) capacity had been retained at Phase 1 representing 3.5% of its theoretical approved capacity. This is intended for use in the event of an emergency or extended lack of access into Phase 2. For the purpose of financial considerations Phase 1 should be treated as being “at capacity” although the intent is to eventually utilize the retained air space. Filling was initiated at Phase 2 in mid-December 2018 and therefore as of December 31, 2021 still retained an estimated 4,266,000 cubic meters of capacity. It is estimated Phase 2 will reach its capacity and close in 2046. Construction of Phase 3 has not been initiated. It is estimated that the site will reach full capacity and close in 2055.

In 2021 approximately 43% of waste generated was diverted from landfills (2020 - 42%).

The closure costs for the open Glanbrook landfill site and post closure care costs for the closed sites are based upon management estimates, adjusted by an inflation rate of 2.5%. These costs are then discounted back to December 31, 2021 using a discount factor of 3.5%. Post closure care for the Glanbrook site is estimated to be required for 50 years from the date of closure of each phase. Studies continue to be undertaken to assess the liability associated with the City’s closed landfill sites and the estimates will be updated as new information arises.

Estimated expenses for closure and post-closure care are $86,199,000 (2020 - $72,676,000). The expenses remaining to be recognized are $7,927,000 (2020 - $7,528,000). The liability of $78,272,000 (2020 - $65,148,000) for closure of the operational site and post closure care of the closed sites has been reported on the Consolidated Statement of Financial Position. A reserve of $1,275,000 (2020 - $1,249,000) was established to finance the future cost for closed landfill sites.

13. Accumulated Surplus

The accumulated surplus balance is comprised of balances in reserves and discretionary reserve funds, operating surplus, capital surplus, unfunded liabilities to be recovered in the future, investment in government business enterprises and investment in tangible capital assets.

		2021		2020
Reserves and discretionary reserve funds set aside for specific purposes by Council are comprised of the following:				
Working funds		**116,740**	$	94,122
Contingencies		**1,038**		1,017
Replacement of equipment		**58,853**		53,344
Sick leave (Note 10)		**12,111**		9,570
Workplace Safety and Insurance Board (WSIB) (Note 10)		**41,618**		41,329
Pension plans (Note 10)		**11,965**		6,725
Tax stabilization		**41,309**		65,917
General government		**22,907**		21,140
Protection services		**1,637**		1,332
Transportation services		**24,380**		25,911
Environmental services		**138,908**		167,911
Health and social services		**10,403**		5,846
Recreation and cultural services		**24,162**		19,868
Planning and development		**3,702**		7,896
Other unallocated		**102,017**		102,038
Hamilton Future Fund (Note 14)		**63,848**		58,466
Total reserves and discretionary reserve funds	**$**	**675,598**	$	682,432
Operating surplus				
Flamborough recreation sub-committees	**$**	**280**	$	251
Business improvement areas		**1,354**		1,333
Housing operations		**72,769**		82,203
Confederation Park operations		**143**		200
Total operating surplus	**$**	**74,546**	$	83,987
Capital surplus				
Municipal operations	**$**	**82,795**	$	119,817
Housing operations		**98,055**		73,952
Total capital surplus	**$**	**180,850**	$	193,769
Unfunded liabilities				
Employee benefit obligations	**$**	**(372,130)**	$	(363,419)
Solid Waste landfill liabilities		**(78,272)**		(65,148)
Environmental liability		**(7,308)**		(15,400)
Total unfunded liabilities	**$**	**(457,710)**	$	(443,967)
Investment in Government Business Enterprises (Note 5)	**$**	**321,183**	$	319,823
Investment in tangible capital assets	**$**	**5,894,721**	$	5,629,066
Accumulated surplus	**$**	**6,689,188**	$	6,465,110

14. Hamilton Future Fund

The Hamilton Future Fund was established by the Council of the City of Hamilton in 2002 from the proceeds from Hamilton Utilities Corporation of the net assets owed to the City upon restructuring of the electrical industry. The Hamilton Future Fund is used to create and protect a permanent legacy for current and future generations of Hamiltonians to enjoy economic prosperity and improved quality of life.

The continuity of the Hamilton Future Fund is as follows:

	2021	2020
Balance at the beginning of the year	**$ 58,466**	$ 52,963
Current operations		
Investment income	**1,215**	1,213
Repayment of Waste Management Projects	**7,923**	8,440
Other	**(208)**	-
	8,930	9,653
Tangible capital assets		
Waste Management Projects	**452**	-
Parkland	**-**	(150)
Other	**(4,000)**	(4,000)
	(3,548)	(4,150)
Balance at the end of the year	**$ 63,848**	$ 58,466

15. Taxation

	Budget 2021	**Actual 2021**	Actual 2020
Taxation from real property	$ 1,161,072	**$ 1,164,870**	$ 1,146,798
Taxation from other governments payments in lieu of taxes	16,900	**17,508**	16,900
	1,177,972	**1,182,378**	1,163,698
Less: Taxation collected on behalf of school boards	(193,426)	**(196,406)**	(205,959)
Net taxes available for municipal purposes	$ 984,546	**$ 985,972**	$ 957,739

The City is required to levy and collect taxes on behalf of the school boards. The taxes levied over (under) the amounts requisitioned are recorded as accounts payable (receivable).

16. Government transfers

		2021		2020
Government transfers received:				
Policing	**$**	**5,825**	$	4,936
Court security		**5,188**		5,055
Transit		**8,468**		14,922
Waste diversion		**6,570**		5,731
Public Health		**65,201**		46,171
Ambulance services		**34,755**		32,885
Social assistance		**158,409**		171,360
Long term care homes		**31,724**		27,228
Child care		**79,276**		66,348
Housing		**41,134**		24,151
Federal and provincial gas tax		**34,670**		40,757
Other		**25,898**		21,202
Infrastructure		**39,146**		60,559
	$	**536,264**	$	521,305

		2021		2020
Government transfers paid:				
Social assistance	**$**	**99,917**	$	121,608
Social housing		**58,026**		59,166
Grants		**39,902**		19,401
	$	**197,845**	$	200,175

17. Contractual obligations

(a) The City has outstanding contractual obligations of approximately $431,428,000 at December 31, 2021 for capital works (2020 - $441,657,000). City Council has authorized the financing of these obligations.

(b) The City has agreements with the Ontario Realty Corporation, an agency of the Provincial Government of Ontario, for various capital projects. The outstanding future obligations at December 31, 2021 amounting to $2,496,000 (2020 - $2,670,000) are not reflected in the Consolidated Financial Statements. Payments made to the Ontario Realty Corporation amounting to $174,000 in 2021 (2020 - $140,000) are reported in the Consolidated Statement of Operations.

(c) The City is legislated under the Development Charges Act to fund Government of Ontario ("GO") Transit's Growth and Capital Expansion Plan. The obligation at December 31, 2021 of $3,460,000 (2020 - $3,460,000) is reported in the Consolidated Statement of Financial Position. Payments are collected through development charges and remitted to Metrolinx, an agency of the Government of the Province of Ontario. Payments made to Metrolinx in the amount of $522,000 in 2021 (2020 - $440,000) are reported in the Consolidated Statement of Operations.

(d) The City has a contract with Waste Connections (formerly known as Progressive Waste Services) for the transfer, hauling and disposal of the City's solid waste, including the operations of the City's Transfer Stations and Community Recycling Centre. The term of the agreement is ten years for the period of March 1, 2020 to February 28, 2030. The contract fees amounting to $5,767,000 for 2021 (2020 - $6,783,000) are reported in the Consolidated Statement of Operations.

17. Contractual obligations (continued)

(e) The City has a contract with GFL Environmental Inc. for the provision of curbside/roadside collection of organics, garbage, leaf and yard, bulk waste for one-half of the City, including curbside/roadside recycling, automated recycling and bin waste collection for the entire City. The agreement ended on March 28, 2020 and the City exercised a one-year option. The new contract came into effect on March 29, 2021 and will end on April 2, 2028 (with a one-year extension option). Contract fees amounting to $23,061,000 for 2021 (2020 - $18,608,000) are reported in the Consolidated Statement of Operations.

(f) The City has lease agreements with Disabled and Aged Regional Transit System (D.A.R.T.S.) for the delivery of specialized transportation services. The agreement is on a month-to-month basis until a new contract is signed or until cancelled on 120 calendar days' notice by either party. The annual contract fees amounting to $12,999,000 for 2021 (2020 - $14,368,000) are reported in the Consolidated Statement of Operations.

(g) The City has executed lease agreements for administrative office space, parking lots and other land leases requiring annual payments in future years as they become due and payable in the amount of $61,493,000 (2020 - $67,559,000). The minimum lease payments for these leases over the next five years and thereafter are:

		2021
2022	**$**	**6,804**
2023		**6,829**
2024		**6,342**
2025		**4,999**
2026		**4,692**
2027 and thereafter		**31,827**
Total	**$**	**61,493**

(h) The City has a Credit Facility Agreement dated March 14, 2012 with a Canadian chartered bank to borrow up to $117,740,000, consisting of $65,000,000 in a revolving demand facility, and two non-revolving term facilities in the amounts of $38,000,000 and $14,740,000.

On May 8, 2012, the City took a drawdown of $38,000,000 and $14,740,000 from the two non-revolving term facilities, by undertaking two term loans. No other amounts have been drawn from the Credit Facility Agreement and therefore, as at December 31, 2021, the City has $65,000,000 in a revolving demand facility.

The first term loan of $14,740,000 was paid in full on May 8, 2017. The second term loan has an original principal of $38,000,000, a term of 15 years, and an annual principal repayment of $2,533,000. As at December 31, 2021, the remaining principal balance for the second term loan is $15,203,000 (2020 - $17,736,000). The interest cost for the City is based on the 30-day Banker's Acceptance rate. These loans are included in Long term liabilities – "Municipal Operations on the Statement of Financial Position."

18. Contractual Rights

Contractual rights are rights to economic resources arising from contracts or agreements that will result in revenues and assets in the future. The City has entered into an agreement with the Ontario Lottery and Gaming Corporation (OLG) whereby quarterly contributions are received based on a percentage of gaming revenues estimated at $5,200,000 per year.

19. Public liability insurance

The City has undertaken a portion of the risk for public liability, as a means of achieving cost effective risk management. As a result, the City is self-insured for public liability claims up to $250,000 for any individual claim or for any number of claims arising out of a single occurrence. Outside insurance coverage is in place for claims in excess of $250,000 to a maximum of $50,000,000 per claim or occurrence.

The City has reported liabilities for insurance claims on the Consolidated Statement of Financial Position in the amount of $20,117,000 (2020 - $19,149,000). Claim expenses for the year in the amount of $9,780,000 (2020 - $8,708,000) are reported as expenses in the Consolidated Statement of Operations.

20. Contingent liabilities

The City has outstanding contractual obligations with its unionized employee groups as of December 31, 2021. An estimated liability has been recorded on the Consolidated Statement of Financial Position to fund the three outstanding settlements.

21. Tangible Capital Assets

Details of the tangible capital assets are included in the Schedule of Tangible Capital Assets (pages 2-40 and 2-41). The City has tangible capital assets valued at cost in the amount of $10,220,429,000 (2020 - $9,806,138,000) and a net book value of $6,448,616,000 (2020 - $6,202,964,000). The net book value of the tangible capital assets valued as at December 31, 2021 is as follows:

	2021	2020
General		
Land	**$ 442,267**	$ 403,879
Land improvements	**202,950**	181,506
Buildings	**821,383**	829,290
Vehicles	**140,537**	138,937
Computer hardware and software	**17,694**	18,698
Other	**104,261**	92,062
Infrastructure		
Roads	**1,307,472**	1,315,237
Bridges and structures	**177,730**	181,098
Water and wastewater facilities	**448,041**	416,470
Underground and other networks	**2,066,026**	2,021,641
Net Book Value	**5,728,361**	5,598,818
Assets under construction	**720,255**	604,146
Balance at the end of the year	**$ 6,448,616**	$ 6,202,964

Included are leased tangible capital assets with a net book value of $4,198,000 (2020 - $2,123,000). In addition, the City has works of arts and historical treasures including sculptures, fine art, murals, cemetery crosses, cenotaphs, cannons and artillery that are preserved by the City but are not recorded as tangible capital assets.

22. Reporting by Business Segment

The Consolidated Financial Statements provide a summary of the revenues and expenses for all of the services provided to the residents and businesses in the City of Hamilton as defined in the reporting entity (Note 1).

Certain allocation methodologies are employed in the preparation of segmented financial information. Services are funded primarily by taxation and user fees. Taxation revenue is allocated to the general government segment. Certain government grants, user charges and other revenues have been allocated based upon the same allocation as the related expenses. User fees are allocated based upon the segment that generated the fee.

Revenues and expenses are reported by the following functions and services:

- General government: Office of the Mayor and council, corporate administration including fleet and facilities
- Protection services: police, fire, conservation authorities
- Transportation services: roads, winter maintenance, traffic, parking, transit
- Environmental services: water, wastewater, storm water, waste management collection, diversion & disposal
- Health services: public health, cemeteries and emergency medical services/ambulance
- Social and family services: general assistance, hostels, homes for the aged, services to aged persons, child care services
- Social housing: public housing, non-profit housing, rent supplement programs
- Recreation and cultural services: parks, recreation programs, recreation facilities, golf courses, marinas, museums, libraries, and tourism.
- Planning and development: planning, zoning, commercial and industrial development and residential development

Financial information about the City's business segments is included in the Schedule of Operations for Business Segments (pages 2-42 and 2-43).

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23. Liability for Contaminated Sites

The City of Hamilton estimates liabilities of $33,288,000 as at December 31, 2021 for remediation of various lands using a risk-based approach (2020 - $28,882,000). Total future undiscounted expenditures are estimated at $39,260,000. The liabilities result from past industrial uses. Future expenditures are based on agreements with third parties, where available, as well as estimates. Future expenditures have been discounted using a 3.5% discount rate. The amount of estimated recoveries is nil (2020 – nil).

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24. Budget figures

The 2021 operating budget and capital financing for the housing corporation was approved by the CityHousing Hamilton Board at a meeting on December 15, 2020. The 2021 operating budget and capital financing for municipal operations was approved by City Council at a meeting on March 31, 2021.

The budget figures conform to the accounting standards adopted in CPA Canada Public Sector Accounting Handbook section *PS1200 Financial Statement Presentation.* As such, the budget figures presented in the consolidated financial statements differ from the presentation approved by City Council. A summary reconciliation follows:

24. Budget figures (continued)

		2021
Revenue		
Council Approved Gross Revenue Operating Budget - Municipal	**$**	**1,859,636**
Council Approved Gross Revenue - Public Health & HSD fully funded programs		**35,289**
Council Approved Gross Revenue Capital Budget - Municipal		**784,303**
		2,679,228
Board Approved Gross Revenue Operating Budget - Housing Corporation		**58,090**
Board Approved Gross Revenue Capital Budget - Housing Corporation		**8,856**
		66,946
Adjustments to Revenues		
Less: Transfers from reserves and reserve funds Operating Budget Municipal Operations		**(71,426)**
Less: Transfers from reserves and reserve funds Capital Budget Municipal Operations		**(201,967)**
Less: Transfers from capital fund to current fund - Municipal Operations		**(222,757)**
Less: Transfers from capital fund to current fund - Housing Corporation		**(8,856)**
Less: Long term debt financing Capital Budget		**(77,075)**
Add: Donated tangible capital assets		**28,811**
Add: Reserve & reserve funds		**25,924**
Add: Confederation Park Consolidation		**588**
Less: Elimination for consolidation of Housing Corporation		**(17,776)**
		(544,534)
Consolidated	**$**	**2,201,640**
Expenses		
Council Approved Gross Expenditure Operating Budget - Municipal	**$**	**1,859,636**
Council Approved Gross Expenditure - Public Health & HSD fully funded program		**35,289**
Council Approved Gross Expenditure Capital Budget - Municipal		**784,303**
		2,679,228
Board Approved Gross Expenditure Operating Budget - Housing Corporation		**58,090**
Board Approved Gross Expenditure Capital Budget - Housing Corporation		**8,856**
		66,946
Adjustments to Expenditures		
Less: Debt principal repayment - Municipal Operations		**(45,112)**
Less: Debt principal repayment - Housing Corporation		**(6,027)**
Less: Transfers to reserves and reserve funds - Municipal Operations		**(89,172)**
Less: Transfers to capital from current funds - Municipal Operations		**(222,757)**
Less: Tangible capital assets - Municipal Operations		**(692,241)**
Less: Tangible capital assets - Housing Corporation		**(8,856)**
Add: Change in employee future benefits and other obligations		**8,711**
Add: Change in solid waste landfill liabiliy		**13,125**
Add: Change in Contaminated Sites and Environmental Liability		**4,406**
Add: Amortization expense for tangible capital assets		**216,262**
Add: Confederation Park Consolidation		**238**
Less: Elimination for consolidation of Housing Corporation		**(23,990)**
Less: Loss on disposition of tangible capital assets		**14,012**
		(831,401)
Consolidated	**$**	**1,914,773**

25. COVID-19

On March 11, 2020, the COVID-19 outbreak was declared a pandemic by the World Health Organization. This has resulted in governments worldwide, including the Canadian, Ontario and municipal governments, enacting emergency measures to combat the spread of the virus. These measures, which include the implementation of travel bans, self-imposed quarantine periods and physical distancing, have caused material disruption to businesses globally and in Ontario resulting in an economic slowdown. Governments and central banks have reacted with significant monetary and fiscal interventions designed to stabilize economic conditions however the success of these interventions is not currently determinable.

The City of Hamilton continued to take extraordinary measures throughout 2021 to support its residents, including the most vulnerable, in response to the COVID-19 pandemic. The actions taken by the City of Hamilton, with the support of senior levels of government, resulted in significant financial pressures in 2021 estimated at $98M in additional expenses and $51M in lost revenues, as well as operational savings of $56M. The Public Health vaccination and rapid response programs, adaptation and transformation of services for people experiencing homelessness, and lost revenues for public transit and water were the largest contributors to the overall financial pressures faced by the City, but the pandemic has significantly impacted many other programs and services including:

- Public Health Services
- Ontario Works
- Housing Services
- Hamilton Water
- Long-Term Care
- Paramedic Services
- Provincial Offences Act and Red Light Camera Revenues
- Parking Services
- Licensing and By-Law Services
- Transit
- Information Technology
- Ontario Lottery and Gaming Slots
- Shared Airport Revenues
- Police Services
- Fire Services

In response to the pandemic, the City put in place several measures to mitigate the financial impact of the pandemic response including:

- Closure of facilities
- Temporary suspension of scheduling for part-time and casual labour
- Not hiring full complement of student and seasonal positions
- Redeployment of staff to affected program areas
- Restrictions on hiring for non-essential positions
- Strict controls on discretionary spending including training, travel and conferences

Together with the application of various COVID-19 related funding from senior levels of government, including the Safe Restart Agreement – Municipal and Transit streams, Social Services Relief Fund, Reaching Home Initiative, Ministry of Public Health funding, Prevention and Containment funding, the COVID-19 Recovery Funding for Municipalities Program and many others, the City was able to successfully manage the financial pressures related to the COVID-19 pandemic response.

25. COVID-19 (continued)

The current challenging economic climate may lead to adverse changes in cash flows, reduction of service levels and budgetary constraints, which may also have a direct impact on the Corporation's revenues, annual surplus or deficit and reserve and reserve funds in the future. The situation is dynamic and the ultimate duration and magnitude of the impact on the Corporation, surrounding economy and services are not known at this time.

2021 Schedule of Tangible Capital Assets

	General						Infrastructure					
	Land	**Land Improvements**	**Buildings**	**Vehicles**	**Computer**	**Other**	**Roads**	**Bridges & Other Structures**	**W/WW Facilities**	**W/WW/SW Linear Network**	**Assets Under Construction**	**TOTAL**
Cost												
Balance, Jan 1, 2021	$ 403,879	$ 381,381	$ 1,514,736	$ 343,559	$ 35,021	$ 160,797	$ 2,568,703	$ 252,459	$ 849,535	$ 2,691,922	$ 604,146	$ 9,806,138
Additions, betterments & transfers in 2021	38,451	36,997	40,484	25,402	6,152	27,322	37,530	6	52,065	66,230	116,675	447,314
Disposals & writedowns in 2021	(4,037)	(1,345)	(10,005)	(21,194)	(6,685)	(8,974)	(2,258)	-	(240)	(6,531)	(566)	(61,835)
Donations & contributions in 2021	3,974	-	-	-	-	-	8,552	-	-	16,286	-	28,812
Balance, Dec 31, 2021	$ 442,267	$ 417,033	$ 1,545,215	$ 347,767	$ 34,488	$ 179,145	$ 2,612,527	$ 252,465	$ 901,360	$ 2,767,907	$ 720,255	$10,220,429
Accumulated amortization												
Balance, Jan 1, 2021	$ -	$ 199,875	$ 685,446	$ 204,622	$ 16,323	$ 68,735	$ 1,253,466	$ 71,361	$ 433,065	$ 670,281	$ -	$ 3,603,174
Amortization in 2021	-	14,743	40,204	23,585	7,156	15,123	53,604	3,374	20,494	37,979	-	216,262
Disposals in 2021	-	(535)	(1,818)	(20,977)	(6,685)	(8,974)	(2,015)	-	(240)	(6,379)	-	(47,623)
Balance, Dec 31, 2021	$ -	$ 214,083	$ 723,832	$ 207,230	$ 16,794	$ 74,884	$ 1,305,055	$ 74,735	$ 453,319	$ 701,881	$ -	$ 3,771,813
Net book value Dec 31, 2021	$ 442,267	$ 202,950	$ 821,383	$ 140,537	$ 17,694	$ 104,261	$ 1,307,472	$ 177,730	$ 448,041	$ 2,066,026	$ 720,255	$ 6,448,616
Assets under construction	$ -	$ 43,776	$ 153,820	$ 844	$ 4,643	$ -	$ 35,744	$ 9,699	$ 430,873	$ 40,856	$ (720,255)	
Total	$ 442,267	$ 246,726	$ 975,203	$ 141,381	$ 22,337	$ 104,261	$ 1,343,216	$ 187,429	$ 878,914	$ 2,106,882	$ -	$ 6,448,616

2020 Schedule of Tangible Capital Assets

	General						Infrastructure					
	Land	**Land Improvements**	**Buildings**	**Vehicles**	**Computer**	**Other**	**Roads**	**Bridges & Other Structures**	**W/WW Facilities**	**W/WW/SW Linear Network**	**Assets Under Construction**	**TOTAL**
Cost												
Balance, Jan 1, 2020	$ 387,321	$ 354,095	$ 1,467,214	$ 334,807	$ 35,692	$ 170,778	$ 2,512,779	$ 249,959	$ 808,438	$ 2,626,572	$ 425,067	$ 9,372,722
Additions, betterments & transfers in 2020	23,708	27,409	52,339	15,144	5,988	11,775	60,501	2,581	41,097	67,137	180,197	487,876
Disposals & writedowns in 2020	(7,380)	(123)	(4,817)	(6,392)	(6,659)	(21,756)	(7,755)	(81)	-	(6,873)	(1,118)	(62,954)
Donations & contributions in 2020	230	-	-	-	-	-	3,178	-	-	5,086	-	8,494
Balance, Dec 31, 2020	$ 403,879	$ 381,381	$ 1,514,736	$ 343,559	$ 35,021	$ 160,797	$ 2,568,703	$ 252,459	$ 849,535	$ 2,691,922	$ 604,146	$ 9,806,138
Accumulated amortization												
Balance, Jan 1, 2020	$ -	$ 186,858	$ 651,742	$ 186,548	$ 16,193	$ 77,443	$ 1,202,437	$ 68,063	$ 412,943	$ 639,707	$ -	$ 3,441,934
Amortization in 2020	-	13,054	37,746	24,331	6,789	13,014	58,735	3,357	20,122	36,919	-	214,067
Disposals in 2020	-	(37)	(4,042)	(6,257)	(6,659)	(21,722)	(7,706)	(59)	-	(6,345)	-	(52,827)
Balance, Dec 31, 2020	$ -	$ 199,875	$ 685,446	$ 204,622	$ 16,323	$ 68,735	$ 1,253,466	$ 71,361	$ 433,065	$ 670,281	$ -	$ 3,603,174
Net book value Dec 31, 2020	$ 403,879	$ 181,506	$ 829,290	$ 138,937	$ 18,698	$ 92,062	$ 1,315,237	$ 181,098	$ 416,470	$ 2,021,641	$ 604,146	$ 6,202,964
Assets under construction	$ -	$ 47,048	$ 110,078	$ 1,737	$ 7,525	$ 3,816	$ 25,239	$ 3,452	$ 377,914	$ 27,337	$ (604,146)	
Total	$ 403,879	$ 228,554	$ 939,368	$ 140,674	$ 26,223	$ 95,878	$ 1,340,476	$ 184,550	$ 794,384	$ 2,048,978	$ -	$ 6,202,964

2021 Schedule of Operations for Business Segments

	General government	Protection services	Transportation services	Environmental services	Health services	Social and family services	Social housing	Recreation and cultural services	Planning and development	TOTAL 2021
Revenue										
Taxation	$ 985,972	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	**$ 985,972**
Government grants and contributions	7,575	18,288	45,422	34,294	100,305	269,919	50,016	8,901	1,544	**536,264**
User charges	4,696	5,983	39,973	249,492	4,334	14,777	1,062	10,915	12,854	**344,086**
Development charges and subdivider contributions	291	1,268	24,830	32,352	263	21	-	510	9,006	**68,541**
Donations of tangible capital assets	-	-	8,552	16,286	-	-	-	3,974	-	**28,812**
Investment income	18,000	1,163	4,565	9,902	32	235	627	2,055	1,060	**37,639**
Income from Government Business Entreprises	13,097	-	-	-	-	-	-	-	-	**13,097**
Other	23,814	30,523	12,845	909	108	198	44,577	8,153	10,547	**131,674**
Total	$ 1,053,445	$ 57,225	$ 136,187	$ 343,235	$ 105,042	$ 285,150	$ 96,282	$ 34,508	$ 35,011	**$ 2,146,085**
Expenses										
Salaries and benefits	$ 80,670	$ 295,927	$ 116,145	$ 49,067	$ 121,598	$ 86,063	$ 16,498	$ 65,384	$ 31,017	**$ 862,369**
Interest on long term debt	220	1,548	2,570	4,337	391	140	1,048	1,169	63	**11,486**
Materials supplies services	78,467	23,106	39,961	40,533	9,142	10,166	15,529	24,696	4,347	**245,947**
Contracted services	12,130	4,744	64,512	101,794	5,557	108,644	46,062	16,767	14,985	**375,195**
Rents and financial expenses	3,688	2,158	6,836	5,872	3,389	2,134	1,356	6,733	3,802	**35,968**
External transfers	27	7,832	7	1,108	1,176	124,389	35,508	5,260	708	**176,015**
Amortization	10,150	10,235	80,834	67,834	3,384	2,512	7,891	30,364	3,057	**216,261**
Interfunctional transfers	(90,075)	11,967	27,753	13,011	8,759	8,445	938	13,865	5,337	**-**
Total	$ 95,277	$ 357,517	$ 338,618	$ 283,556	$ 153,396	$ 342,493	$ 124,830	$ 164,238	$ 63,316	**$ 1,923,241**
Annual surplus (deficit)	$ 958,168	$ (300,292)	$ (202,431)	$ 59,679	$ (48,354)	$ (57,343)	$ (28,548)	$ (129,730)	$ (28,305)	**$ 222,844**

2020 Schedule of Operations for Business Segments

	General government	Protection services	Transportation services	Environmental services	Health services	Social and family services	Social housing	Recreation and cultural services	Planning and development	TOTAL 2020
Revenue										
Taxation	$ 957,739	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	**$ 957,739**
Government grants and contributions	10,147	15,049	52,090	52,198	79,544	264,936	35,672	9,854	1,815	**521,305**
User charges	5,326	5,274	37,266	240,856	3,262	14,337	290	11,279	11,426	**329,316**
Development charges and subdivider contributions	116	1,117	11,384	10,421	-	-	-	9,769	886	**33,693**
Donations of tangible capital assets	-	-	3,178	5,086	-	-	-	230	-	**8,494**
Investment income	16,789	1,116	3,309	9,349	39	141	571	1,726	505	**33,545**
Income from Government Business Entreprises	10,726	-	-	-	-	-	-	-	-	**10,726**
Other	18,870	25,926	11,366	629	578	245	51,858	8,593	2,461	**120,526**
Total	$ 1,019,713	$ 48,482	$ 118,593	$ 318,539	$ 83,423	$ 279,659	$ 88,391	$ 41,451	$ 17,093	**$ 2,015,344**
Expenses										
Salaries and benefits	$ 70,150	$ 287,039	$ 114,554	$ 47,076	$ 100,088	$ 85,748	$ 17,139	$ 66,052	$ 31,342	**$ 819,188**
Interest on long term debt	608	1,310	2,937	4,478	386	230	1,194	1,198	75	**12,416**
Materials supplies services	47,739	19,196	37,920	41,955	7,737	7,903	15,738	21,005	3,852	**203,045**
Contracted services	21,549	3,896	48,469	75,270	5,116	84,290	27,823	4,403	11,352	**282,168**
Rents and financial expenses	2,952	2,163	6,039	5,072	2,256	3,015	4,251	9,995	337	**36,080**
External transfers	121	9,723	-	1,073	40	141,292	35,661	5,196	561	**193,667**
Amortization	9,880	9,188	86,598	63,148	3,319	2,406	7,384	29,230	2,914	**214,067**
Interfunctional transfers	(84,920)	8,728	26,134	13,756	7,988	8,639	873	12,853	5,949	**-**
Total	$ 68,079	$ 341,243	$ 322,651	$ 251,828	$ 126,930	$ 333,523	$ 110,063	$ 149,932	$ 56,382	**$ 1,760,631**
Annual surplus (deficit)	$ 951,634	$ (292,761)	$ (204,058)	$ 66,711	$ (43,507)	$ (53,864)	$ (21,672)	$ (108,481)	$ (39,289)	**$ 254,713**

Section 3

City of Hamilton
Consolidated Financial Statements for the Trust Funds
Cemetery and General Trusts

December 31, 2021

Contents

KPMG LLP
Commerce Place
21 King Street West, Suite 700
Hamilton ON L8P 4W7
Canada
Tel 905-523-8200
Fax 905-523-2222

INDEPENDENT AUDITORS' REPORT

To the Members of Council, Inhabitants and Ratepayers of the
City of Hamilton

Opinion

We have audited the consolidated financial statements of The City of Hamilton Trust Funds – Cemetery and General Trust (the Entity), which comprise:

- the consolidated statement of financial position as at December 31, 2021
- the consolidated statement of operations and accumulated surplus for the year then ended
- and notes to the consolidated financial statements, including a summary of significant accounting policies

(Hereinafter referred to as the "financial statements")

In our opinion, the accompanying financial statements present fairly, in all material respects, the financial position of The City of Hamilton Trust Funds – Cemetery and General Trust as at December 31, 2021, and its results of operations for the year then ended in accordance with Canadian public sector accounting standards.

Basis for Opinion

We conducted our audit in accordance with Canadian generally accepted auditing standards. Our responsibilities under those standards are further described in the ***"Auditors' Responsibilities for the Audit of the Financial Statements"*** section of our report.

We are independent of the Entity in accordance with the ethical requirements that are relevant to our audit of the financial statements in Canada and we have fulfilled our other responsibilities in accordance with these requirements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Responsibilities of Management and Those Charged with Governance for the Financial Statements

Management is responsible for the preparation and fair presentation of the financial statements in accordance with Canadian public sector accounting standards, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is responsible for assessing the Entity's ability to continue as a going concern, disclosing as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Entity or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Entity's financial reporting process.

Auditors' Responsibility for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinion.

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Canadian generally accepted auditing standards will always detect a material misstatement when it exists.

Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of the financial statements.

As part of an audit in accordance with Canadian generally accepted auditing standards, we exercise professional judgment and maintain professional skepticism throughout the audit.

We also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion.

  The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Entity's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Entity's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditors' report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditors' report. However, future events or conditions may cause the Entity to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represents the underlying transactions and events in a manner that achieves fair presentation.
- Communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

KPMG LLP

Chartered Professional Accountants, Licensed Public Accountants

Hamilton, Canada
May 18, 2022

Statement of Financial Position

As at December 31, 2021

	2021	2020
Financial assets		
Cash	**$ 1,290,657**	$ 4,268,815
Investments (Note 2)	**20,469,229**	16,420,085
Due from City of Hamilton - Cemetery (Note 3)	**1,211,167**	1,227,777
Due from City of Hamilton - Other Trust Funds (Note 3)	**36,600**	35,571
Total financial assets	**$ 23,007,653**	$ 21,952,248
Liabilities		
Deposits	**$ 339,647**	$ 578,570
Accumulated surplus and net financial assets	**$ 22,668,006**	$ 21,373,678

Statement of Operations

Year ended December 31, 2021

	2021	2020
Revenues		
Cemetery lots and interments	**$ 1,067,972**	$ 915,158
Investment income	**424,652**	590,205
Total revenue	**$ 1,492,624**	$ 1,505,363
Expenses		
Transfer to other trust funds	**$ 186,119**	$ 176,423
Other	**12,177**	15,276
Total expenses	**$ 198,296**	$ 191,699
Annual surplus	**$ 1,294,328**	$ 1,313,664
Accumulated surplus at the beginning of the year	**21,373,678**	20,060,014
Accumulated surplus at the end of the year (Note 4)	**$ 22,668,006**	$ 21,373,678

See accompanying notes to the financial statements

1. Significant accounting policies

The consolidated financial statements of the City of Hamilton Trust Funds (the “Trust Funds”), including the financial statements of the Cemetery and financial statements of the Other Trusts, are the representation of management prepared in accordance Canadian public sector accounting standards. Since precise determination of many assets and liabilities is dependent upon future events, the preparation of periodic financial statements necessarily involves the use of estimates and approximations.

(a) Basis of consolidation

These consolidated statements reflect the revenues, expenditures, assets and liabilities of the following trust funds:

Fieldcote Farmer (Ancaster)
Dundas Knowles Bequest
Hamilton F. Waldon Dundurn Castle
Dundas Ellen Grafton
Ancaster Fieldcote Livingstone-Clarke
Ancaster Fieldcote Shaver
Hamilton Balfour Estate Chedoke
Cemetery Trust Funds
Municipal Election Surplus

(b) Basis of accounting

(i) Sources of financing and expenditures are reported on the accrual basis of accounting.

(ii) The accrual basis of accounting recognizes revenues as they become available and measurable; expenditures are recognized as they are incurred and measurable.

(iii) Revenues on the cemetery lots are recognized upon transfer of title of the deed.

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2. Investments

The total investments recorded at the lower of cost or market value in the Statement of Financial Position are $20,469,229 (2020 - $16,420,085). These investments have a market value of $21,820,723 (2020 - $18,555,153) at the end of the year.

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3. Due from City of Hamilton

The amount due from the City of Hamilton is non-interest bearing with no fixed repayment terms.

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4. Deposits

Deposits are comprised of cash receipts related to prepayment plan arrangements associated with funeral and other final expenses.

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5. Accumulated surplus

	2021	2020
The accumulated surplus consists of:		
Cemeteries	**$ 22,010,072**	$20,722,605
Other		
Fieldcote Farmer (Ancaster)	**338,111**	332,966
Knowles Bequest (Dundas)	**249,443**	248,669
F. Walden Dundurn Castle (Hamilton)	**6,859**	6,742
Ellen Grafton (Dundas)	**8,161**	8,103
Fieldcote Livingstone-Clarke (Ancaster)	**5,155**	5,155
Fieldcote Shaver (Ancaster)	**5,155**	5,155
Municipal Election (Hamilton)	**37,506**	36,868
Balfour Estate Chedoke (Hamilton)	**7,544**	7,415
	$ 657,934	$ 651,073
	$ 22,668,006	$21,373,678

6. COVID-19

During fiscal 2020, the COVID-19 outbreak was declared a pandemic by the World Health Organization. This has resulted in governments worldwide, including the Canadian and Ontario governments, enacting emergency measures to combat the spread of the virus. These measures, which include the implementation of travel bans, self-imposed quarantine periods and social distancing, have caused material disruption to businesses globally and in Ontario resulting in an economic slowdown. Governments and central banks have reacted with significant monetary and fiscal interventions designed to stabilize economic conditions however the success of these interventions is not currently determinable. The current challenging economic climate may lead to adverse changes in cash flows, working capital levels and/or debt balances, which may also have a direct impact on the Trust's operating results and financial position in the future. As it relates to fiscal 2021, there have not been adverse changes to the Trust's operating results and financial position due to COVID-19. The situation is dynamic and the ultimate duration and magnitude of the impact on the economy and the financial effect on business in the future is not known at this time.

Statement of Financial Position

As at December 31, 2021

	2021	2020
Financial assets		
Cash	**$ 870,569**	$ 3,904,559
Investments	**20,267,983**	16,168,839
Due from City of Hamilton	**1,211,167**	1,227,777
Total financial assets	**$ 22,349,719**	$ 21,301,175
Liabilities		
Deposits	**$ 339,647**	$ 578,570
Accumulated surplus	**$ 22,010,072**	$ 20,722,605

Statement of Operations

Year ended December 31, 2021

	2021	2020
Revenues		
Cemetery lots and interments	**$ 1,067,972**	$ 915,158
Investment income	**415,676**	578,117
Total revenue	**$ 1,483,648**	$ 1,493,275
Expenses		
Transfer to other trust funds	**$ 186,119**	$ 168,594
Other	**10,062**	10,171
Total expenses	**$ 196,181**	$ 178,765
Annual surplus	**$ 1,287,467**	$ 1,314,510
Accumulated surplus at the beginning of the year	**20,722,605**	19,408,095
Accumulated surplus at the end of the year	**$ 22,010,072**	$ 20,722,605

See accompanying notes to the financial statements

Statement of Financial Position

As at December 31, 2021

		2021		2020
Financial assets				
Cash	**$**	**420,088**	$	364,256
Investments		**201,246**		251,246
Due from City of Hamilton		**36,600**		35,571
Total financial assets	**$**	**657,934**	$	651,073
Accumulated surplus	**$**	**657,934**	$	651,073

Statement of Operations

Year ended December 31, 2021

		2021		2020
Revenues				
Investment income	**$**	**8,976**	$	12,088
Total revenue	**$**	**8,976**	$	12,088
Expenses				
Transfer to other trust funds	**$**	**-**	$	7,829
Other		**2,115**		5,105
Total expenses	**$**	**2,115**	$	12,934
Annual deficit	**$**	**6,861**	$	(846)
Accumulated surplus at the beginning of the year		**651,073**		651,919
Accumulated surplus at the end of the year	**$**	**657,934**	$	651,073

See accompanying notes to the financial statements

Section 4

City of Hamilton
Financial Statements for the
Trust Funds – Homes for the Aged

December 31, 2021

Contents

KPMG LLP
Commerce Place
21 King Street West, Suite 700
Hamilton ON L8P 4W7
Canada
Tel 905-523-8200
Fax 905-523-2222

INDEPENDENT AUDITORS' REPORT

To the Members of Council, Inhabitants and Ratepayers of the
City of Hamilton

Opinion

We have audited the financial statements of The City of Hamilton Trust Funds – Homes for the Aged (the 'Trust Fund'), which comprise:

- the statement of financial position as at December 31, 2021
- the statement of operations and accumulated surplus for the year then ended
- and notes to the financial statements, including a summary of significant accounting policies

(Hereinafter referred to as the "financial statements")

In our opinion, the accompanying financial statements present fairly, in all material respects, the financial position of the Trust Fund as at December 31, 2021, and its results of operations for the year then ended in accordance with Canadian public sector accounting standards.

Basis for Opinion

We conducted our audit in accordance with Canadian generally accepted auditing standards. Our responsibilities under those standards are further described in the ***"Auditors' Responsibilities for the Audit of the Financial Statements"*** section of our report.

We are independent of the Trust Fund in accordance with the ethical requirements that are relevant to our audit of the financial statements in Canada and we have fulfilled our other responsibilities in accordance with these requirements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

KPMG

Responsibilities of Management and Those Charged with Governance for the Financial Statements

Management is responsible for the preparation and fair presentation of the financial statements in accordance with Canadian public sector accounting standards, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is responsible for assessing the Trust Fund's ability to continue as a going concern, disclosing as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Trust Fund or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Trust Fund's financial reporting process.

Auditors' Responsibility for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinion.

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Canadian generally accepted auditing standards will always detect a material misstatement when it exists.

Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of the financial statements.

As part of an audit in accordance with Canadian generally accepted auditing standards, we exercise professional judgment and maintain professional skepticism throughout the audit.

We also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion.

  The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Trust Fund's internal control.

- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Trust Fund's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditors' report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditors' report. However, future events or conditions may cause the Trust Fund to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represents the underlying transactions and events in a manner that achieves fair presentation.
- Communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

KPMG LLP

Chartered Professional Accountants, Licensed Public Accountants

Hamilton, Canada
May 13, 2022

Statement of Financial Position
As at December 31, 2021

	Macassa Lodge Resident Trusts	Wentworth Lodge Resident Trusts	Macassa Lodge Other Trusts	Wentworth Lodge Other Trusts	**Total 2021**	Total 2020
Financial assets						
Cash	$ 21,036	$ 23,756	$ 34,539	$ 327,740	**$ 407,071**	$ 412,821
Investments	-	-	-	-	**-**	-
Total financial assets	21,036	23,756	34,539	327,740	**407,071**	412,821
Liabilities						
Accounts payable	$ -	$ -	$ -	$ -	**$ -**	$ -
Accumulated surplus	$ 21,036	$ 23,756	$ 34,539	$ 327,740	**$ 407,071**	$ 412,821

Statement of Operations
Year ended December 31, 2021

	Macassa Lodge Resident Trusts	Wentworth Lodge Resident Trusts	Macassa Lodge Other Trusts	Wentworth Lodge Other Trusts	**Total 2021**	Total 2020
Revenue						
Residents' deposits	$ 79,368	$ 35,767	$ -	$ 17,995	**$ 133,130**	$ 132,250
Investment income	-	-	232	351	**583**	8,224
Donations	-	-	7,429	-	**7,429**	2,457
	79,368	35,767	7,661	18,346	**141,142**	142,931
Expenses						
Maintenance payments	$ 4,655	$ -	$ -	$ -	**$ 4,655**	$ 13,671
Residents' charges	65,858	40,717	-	20,847	**127,422**	105,720
Payments to estates	10,175	4,307	-	-	**14,482**	15,065
Renovation expense	-	-	-	333	**333**	-
	80,688	45,024	-	21,180	**146,892**	134,456
Annual surplus (deficit)	(1,320)	(9,257)	7,661	(2,834)	**(5,750)**	8,475
Accumulated surplus at the beginning of the year	22,356	33,013	26,878	330,574	**412,821**	404,346
Accumulated surplus at the end of the year	$ 21,036	$ 23,756	$ 34,539	$ 327,740	**$ 407,071**	$ 412,821

See accompanying notes to the financial statements.

1. Purpose of Trust Funds

The various Trust Funds administered by the City of Hamilton are established for the following purposes:

Macassa and Wentworth Lodge Resident Trusts

These Trust Funds are established for residents to receive their funds and to pay for their various charges including monthly maintenance payments.

Macassa and Wentworth Lodge Other Trusts

These Trust Funds are established for the receipts of funds from donations and fund-raising activities. The funds are to be used for the benefit of lodge residents over and above normal capital and operating expenses of the lodges.

2. Significant accounting policies

The financial statements of the Trust Funds of The City of Hamilton are the representation of management prepared in accordance with Canadian public sector accounting standards.

Basis of accounting

The Trust Funds follow the accrual method of accounting for revenues and expenses. Revenues are normally recognized in the year in which they are earned and measurable. Expenses are recognized as they are incurred and measurable as result of receipt of goods and services and/or the creation of a legal obligation to pay.

3. Investments

During 2020, Wentworth Lodge's investments were sold. The fair market value at the time of sale was $287,978. This was included as part of the Cash balance as at December 31, 2020.

4. COVID-19

On March 11, 2020, the COVID-19 outbreak was declared a pandemic by the World Health Organization. This has resulted in governments worldwide, including the Canadian and Ontario governments, enacting emergency measures to combat the spread of the virus. These measures, which include the implementation of travel bans, self-imposed quarantine periods and social distancing, have caused material disruption to businesses globally and in Ontario resulting in an economic slowdown.

With respect to the Trust Funds, the safety restrictions were maintained in 2021 which caused many social programs to be cancelled for various periods of time. There were, however, some restrictions lifted resulting in an increase of withdrawals by the residents when there were no outbreaks. The outbreak restrictions also paused the admission of new residents consistent with 2020, resulting in fluctuations in deposits to resident trusts. The current challenging economic climate may lead to adverse changes in cash flows, working capital levels and/or debt balances, which may also have a direct impact on the Trust Fund's operating results and financial position in the future. The situation is dynamic and the ultimate duration and magnitude of the impact on the economy and the financial effect on business is not fully known at this time.

Community Benefits Charge Strategy

City of Hamilton

This report provides for minor updates to the April 6, 2022 Draft Community Benefits Charge Strategy. Areas of the report which are been refined are as follows:

- Section 4.2 C.B.C. - Eligible Cost Analysis – includes within the discussion, acknowledgement that Table 4-1 has deducted the Development Charge Reserve Fund Balances for Municipal Parking and Airport

- Section 6.2.3 - Exemptions – provides for discretionary exmptions to align with the City's present Development Charge exemptions for Downtown CIPA and for a Residential Facility/Lodging House

- Section 6.2.5 - In-Kind Contributions – provides for clarification as to how potential In-Kind contributions will be considered by the City

- Section 6.2.2 - Maximum Amount of the Community Benefit Charge – provides for clariication of the calcuation should multiple buildings be constructed on the land at different times.

The proposed by-law for Council's consideration is also provided in Appendix C to this report.

Table of Contents

List of Acronyms and Abbreviations

Acronym	Full Description of Acronym
C.B.C.	Community Benefits Charge
C-I-L	Cash-in-lieu
D.C.	Development Charge
D.C.A.	Development Charges Act, 1997, as amended
G.R.I.D.S.	Growth Related Integrated Development Strategy
N.F.P.O.W.	No fixed place of work
O.L.T.	Ontairo Land Tribunal
O. Reg.	Ontario Regulation
P.P.U.	Persons per unit
sq.ft.	square foot
sq.m.	square metre

Report

Chapter 1
Introduction

1. Introduction

1.1 Purpose of this Document

This strategy report has been prepared pursuant to the requirements of the Planning Act, 1990, (section 37) and, accordingly, recommends the imposition of a Community Benefits Charge (C.B.C.) and associated policies for the City of Hamilton (the "City").

The City retained Watson & Associates Economists Ltd. (Watson), to undertake the C.B.C. strategy process in December, 2021. Watson worked with City staff preparing the C.B.C. analysis and policy recommendations contained within this strategy.

The C.B.C. strategy report, containing the proposed C.B.C. by-law, will be distributed to members of the public in order to provide interested parties the background information on the legislation, the recommendations contained herein, and an outline of the basis for these recommendations.

This report has been prepared, in the first instance, to meet the statutory requirements applicable to the City's C.B.C. strategy, as summarized in Chapter 3. It also addresses the requirement for "rules" (contained in Chapter 6) and the proposed by-law to be made available as part of the approval process (included as Appendix C).

In addition, the report is designed to set out sufficient background on the legislation (Chapter 3) and the policies underlying the proposed by-law, to make the exercise understandable to those who are involved.

Finally, the report addresses post-adoption implementation requirements (Chapter 7) which are critical to the successful application of the new policy.

The chapters in the strategy report are supported by Appendices containing the data required to explain and substantiate the calculation of the charge. A full discussion of the statutory requirements for the preparation of a strategy and calculation to support the C.B.C. rate is provided herein.

1.2 Legislative Context

1.2.1 Bill 197 - COVID-19 Economic Recovery Act, 2020

The COVID-19 Economic Recovery Act received Royal Assent on July 21, 2020. Schedule 3 of the Act amends the Development Charges Act (D.C.A.) and Schedule 17 amends the Planning Act (including amendments to community benefits and the alternative rate of parkland dedication). These amendments replace those not proclaimed under the More Homes, More Choice Act (Bill 108).

The COVID-19 Economic Recovery Act amendments in Schedules 3 and 17 were proclaimed and came into effect on September 18, 2020. In regard to the C.B.C., eligible municipalities have two years after the date of proclamation (i.e., September 18, 2022) to transition to the new rules and pass a C.B.C. by-law if they wish to continue imposing these charges.

D.C.A. Amendments:

Changes to Eligible Services – the amendments reframe the context of the D.C.A. from a tool to fund services that are not defined as "ineligible," to only include "eligible" services for which development charges (D.C.s) may be imposed. Eligible services applicable to the City include:

- Water supply services, including distribution and treatment services;
- Wastewater services, including sewers and treatment services;
- Storm water drainage and control services;
- Services related to a highway;
- Transit services;
- Waste diversion services;
- Policing services;
- Fire protection services;
- Ambulance services;
- Public library services;
- Long-term care services;
- Parks and recreation services;
- Public health services;

- Child-care services;
- Housing services;
- Services related to proceedings under the Provincial Offences Act; and
- Emergency preparedness services.

C.B.C. Amendments:

As per section 37 (5) of the Planning Act, a C.B.C. may be imposed for services that do not conflict with services or projects provided under a municipality's D.C. by-law or Parkland dedication by-law. Hence, the service provided under the C.B.C. would be defined as follows:

(a) land for park or other public recreational purposes in excess of lands dedicated or provided cash-in-lieu payments under section 42 or 51 of the Planning Act;

(b) services not provided under section 2 (4) of the D.C.A. (as noted above);

(c) capital costs for eligible D.C. services that are not intended to be funded under the City's D.C. by-law.

Single-tier and lower-tier municipalities may impose a C.B.C. against land to pay for the capital costs of facilities, services and matters required because of development or redevelopment in the area to which the by-law applies. As noted above, there are no restrictions on the services that may be included in the charge, with the exception of capital costs included under a D.C.A. by-law or Cash-in-Lieu (C-I-L) of Parkland by-law. There are, however, restrictions on the application of the charges, i.e., a C.B.C. may not be imposed with respect to:

- development or redevelopment of fewer than 10 residential units, and in respect of buildings or structures with fewer than five storeys;
- a building or structure intended for use as a long-term care home;
- a building or structure intended for use as a retirement home;
- a building or structure intended for use by a university, college, or an Indigenous Institute;
- a building or structure intended for use as a memorial home, clubhouse or athletic grounds by an Ontario branch of the Royal Canadian Legion;
- a building or structure intended for use as a hospice to provide end-of-life care; or

- not-for-profit housing.

O. Reg. 509/20 specifies that a maximum charge of 4% of the value of land at the time of building permit issuance may be imposed. Prior to adopting a C.B.C. by-law the municipality must undertake a C.B.C. strategy report and follow the required public procedure. The C.B.C. by-law is appealable to the Ontario land Tribunal (O.L.T.).

1.3 Current Policies

Historically, the City has not imposed charges related to community benefits under the prior Planning Act section 37 provisions.

1.4 Summary of the Process

Prior to passing a C.B.C. by-law, the Planning Act, section 37 (10) requires the City to consult with the public and such persons and public bodies as the City considers appropriate. As such, meetings to be undertaken for the City include two with the Development Industry Liaison Group (DILG), two with the Development Charges Stakeholder Sub-Committee, and one with the City's Audit, Finance and Administration (AF&A) Committee. These meetings are being held to present the strategy's purpose, approach, and proposed C.B.C. by-law. The feedback received during the public consultation will be reported back to Council during a meeting scheduled for June 8, 2022 prior to Council's consideration of the by-law on June 22, 2022. In addition, the City has posted an awareness engagement page related to the C.B.C. through the "Engage Hamilton" website (https://engage.hamilton.ca/community-benefits-charges-strategy) which provides education materials, a few action items, presentation and videos of sub-committee meetings, so that the public community can follow the progress of the strategy.

Figure 1-1 provides an outline of the schedule to be followed with respect to the C.B.C. strategy and by-law adoption and implementation process.

Figure 1-1
City of Hamilton
Schedule of Key Dates in the C.B.C. Strategy Process

Item	Date
1. Data collection, land valuation analysis, growth forecast development, capital needs assessment, staff review, C.B.C. calculations and policy work.	December 2021 to March 2022
2. D.C. Stakeholder Sub-Committee Meeting/Presentation	February 28, 2022
3. Meeting with Development Industry Liaison Group (DILG)	March 14, 2022
4. Release of C.B.C. Strategy Report and proposed by-law	June 2, 2022
5. D.C. Stakeholder Sub-Committee Meeting/Presentation	April 12, 2022
6. Meeting with Development Industry Liaison Group (DILG)	May 9, 2022
7. Audit, Finance and Administration (AF&A) Committee Public Meeting	May 19, 2022
8. Meeting of Council advertisement placed in newspaper(s)	Last week of May, 2022
9. Meeting of Council to present the C.B.C. Strategy and proposed by-law	June 8, 2022
10. Council considers adoption of C.B.C. strategy and passage of by-law	June 22, 2022
11. Notice given of by-law passage	No later than 20 days after passage
12. Last day for by-law appeal	40 days after passage

Chapter 2
Anticipated Development in the City of Hamilton

2. Anticipated Development

2.1 Requirement of the Act

Chapter 3 provides the methodology for calculating a C.B.C. as per the Planning Act. Figure 3-1 presents this methodology schematically. It is noted in the first box of the schematic that in order to determine the C.B.C. that may be imposed, it is a requirement of section 37 (9) of the Planning Act and O. Reg. 509/20 that "the anticipated amount, type and location of development and redevelopment, for which a C.B.C. can be imposed, must be estimated."

The growth forecast contained in this chapter (with supplemental tables in Appendix A) provides for the anticipated development for which the City will be required to provide services over a 10-year (mid-2022 to mid-2032) time horizon.

2.2 Basis of Population, Household and Employment Forecast

The C.B.C. growth forecast has been derived by Watson. In preparing the growth forecast, the following information sources were consulted to assess the residential and non-residential development potential for the City over the forecast period, including:

- Growth Related Integrated Development Strategy (G.R.I.D.S.) 2 and Municipal Comprehensive Review – Final Land Needs Assessment and Addendum and Peer Review Results (PED17010(n)) (City Wide), November 9, 2021;
- 2006, 2011, 2016 and 2021 population and household Census data;
- 2006, 2011 and 2016 employment Census data;
- Historical residential building permit data over the 2012 to 2021 period;
- Residential supply opportunities as identified by City staff; and
- Discussions with City staff regarding anticipated residential development in the City.

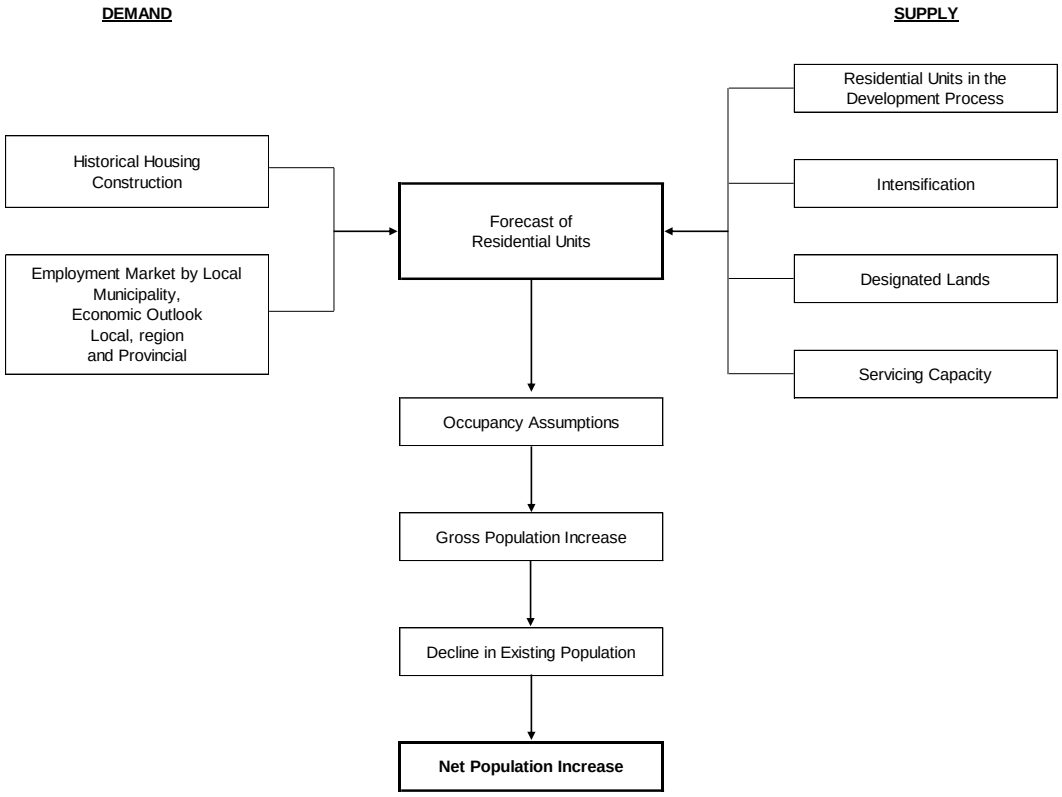
2.3 Summary of Growth Forecast

A detailed analysis of the residential and non-residential growth forecasts is provided in Appendix A and the methodology employed is illustrated in Figure 2-1. The discussion

provided herein summarizes the anticipated growth for the City and describes the basis for the forecast. The results of the residential growth forecast analysis are summarized in Table 2-1 below, and Schedule 1 in Appendix A.

As identified in Table 2-1 and Schedule 1, the City's population is anticipated to reach approximately 641,880 by mid-2032, resulting in an increase of 65,100 persons, over the 10-year forecast period.[1]

Figure 2-1
Household Formation-based Population and Household Projection Model



[1] The population figures used in the calculation of the 2022 C.B.C. exclude the net Census undercount, which is estimated at approximately 2.9%.

Table 2-1
City of Hamilton
Residential Growth Forecast Summary

	Year	Population (Including Census Undercount)[1]	Excluding Census Undercount			Housing Units					Persons Per Unit (P.P.U.): Total Population/ Total Households
			Population	Institutional Population	Population Excluding Institutional Population	Singles & Semi-Detached	Multiple Dwellings[2]	Apartments[3]	Other	Total Households	
Historical	*Mid 2006*	518,990	504,559	8,969	495,590	118,020	25,450	50,265	730	194,465	2.595
	Mid 2011	534,820	519,949	10,309	509,640	124,433	27,760	50,800	813	203,806	2.551
	Mid 2016	552,270	536,917	8,982	527,935	127,705	31,405	51,680	810	211,600	2.537
Forecast	*Mid 2022*	593,270	576,774	10,032	566,742	131,610	37,496	58,063	810	227,979	2.530
	Mid 2032	660,230	641,875	11,197	630,678	137,583	44,308	78,998	810	261,699	2.453
Incremental	**Mid 2006 - Mid 2011**	**15,830**	**15,390**	**1,340**	**14,050**	**6,413**	**2,310**	**535**	**83**	**9,341**	
	Mid 2011 - Mid 2016	**17,450**	**16,968**	**-1,327**	**18,295**	**3,272**	**3,645**	**880**	**-3**	**7,794**	
	Mid 2016 - Mid 2022	**41,000**	**39,857**	**1,050**	**38,807**	**3,905**	**6,091**	**6,383**	**0**	**16,379**	
	Mid 2022 - Mid 2032	**66,960**	**65,101**	**1,165**	**63,936**	**5,973**	**6,812**	**20,935**	**0**	**33,720**	

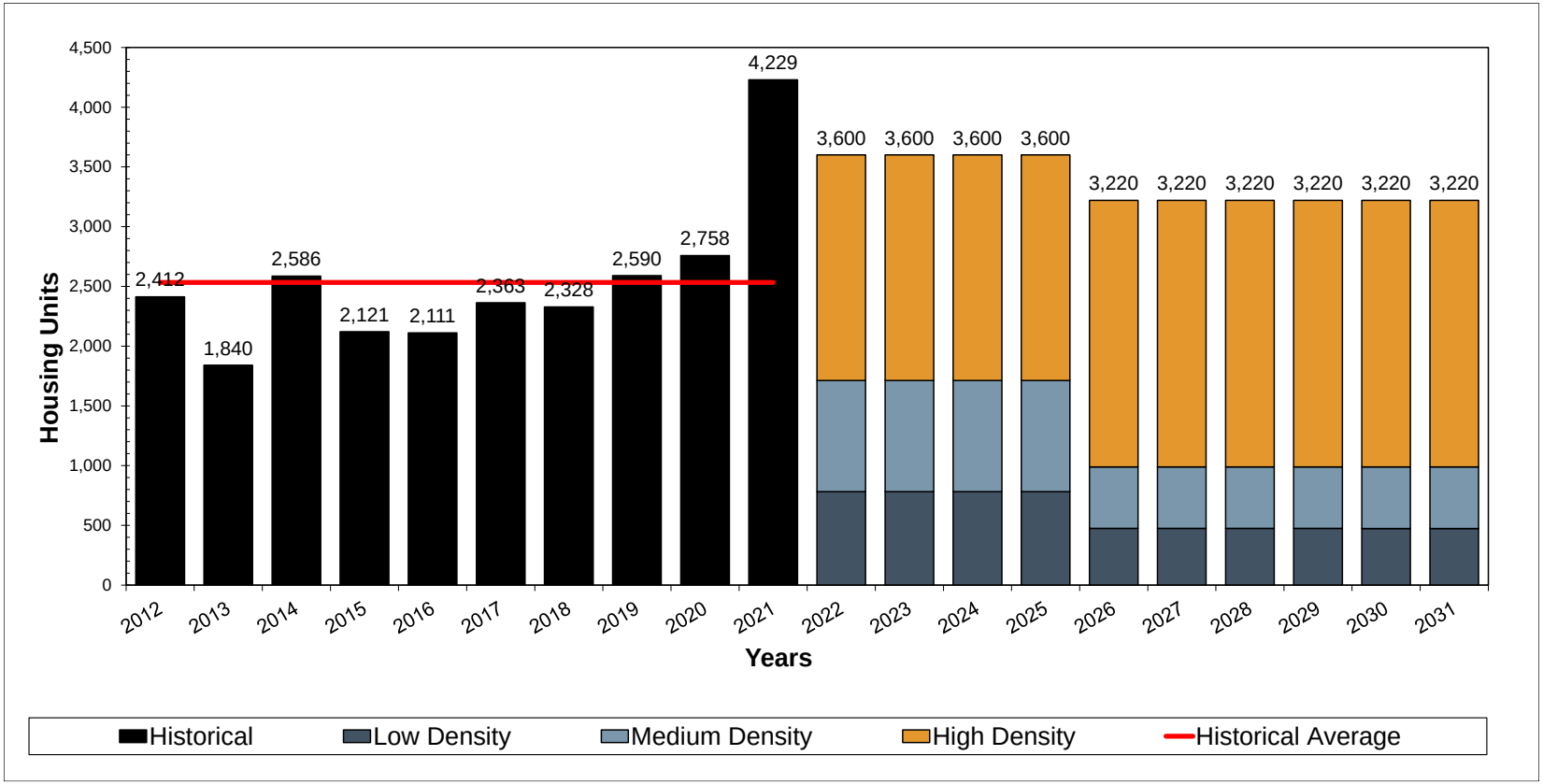
Source: Derived from City of Hamilton No Urban Boundary Expansion Scenario (Septemeber, 2021) forecast for the City of Hamilton and discussions with municipal staff regarding servicing and land supply by Watson & Associates Economists Ltd., 2022.

[1] Census undercount estimated at approximately 2.9%. Note: Population including the undercount has been rounded.

[2] Includes townhouses and apartments in duplexes.

[3] Includes bachelor, 1-bedroom and 2-bedroom+ apartments.

Figure 2-2
City of Hamilton
Annual Housing Forecast[1]



Source: Historical housing activity derived from City of Hamilton building permit data, 2012 to 2021.

[1] Growth forecast represents calendar year.

Provided below is a summary of the key assumptions and findings regarding the City C.B.C. growth forecast:

1. Unit Mix (Appendix A – Schedules 1, 5 and 6)

    - The housing unit mix for the City was derived from a detailed review of historical development activity (as per Schedule 6), as well as active residential development applications (as per Schedule 5) and discussions with City staff regarding anticipated development trends for Hamilton.
    - Based on the above indicators, the 2022 to 2032 household growth forecast for the City is comprised of a unit mix of 18% low density units (single detached and semi-detached), 20% medium density (multiples except apartments) and 62% high density (accessory units, bachelor, 1-bedroom and 2-bedroom apartments) units.

2. C.B.C.-Eligible Units

    - Subsection 37 (4) of the Planning Act establishes the criteria for a development to be C.B.C. eligible. A C.B.C. may be imposed if:
        - Development of a proposed building or structure has five or more storeys at or above ground and has 10 or more residential units;
        - Redevelopment of an existing building or structure that will have 5 or more storeys at or above ground after redevelopment and proposes to add 10 or more residential units to an existing building or structure; or
        - Such types of development or redevelopment as prescribed. 2020, c. 18, Sched. 17, section 1.
    - The C.B.C.-eligible unit forecast is derived based on the established criteria above and a detailed review of historical Census housing trends, historical development activity (as per Schedule 6), active residential development applications (as per Schedule 5) and discussions with City staff regarding anticipated C.B.C.-eligible developments.
    - Based on the above indicators, the City is forecast to accommodate 11,531 C.B.C.-eligible household units over the 10-year forecast period. This translates to 55% of all high-density units, including accessory units, being C.B.C. eligible from 2022 to 2032. Table 2-2 and Schedule 2

summarizes the anticipated amount, type, and location of development for the City by development location.

3. Geographic Location of C.B.C.-Eligible Residential Development (Appendix A – Schedule 2)

    - Schedule 2 summarizes the anticipated amount, type, and location of C.B.C.-eligible development by area for the City.
    - In accordance with forecast demand and available land supply, the amount and percentage of forecast C.B.C.-eligible housing growth between 2022 and 2032 by development location is summarized in Table 2-2.
    - The Lower Hamilton Area has been broken down into the following additional sub-areas: Inside the Downtown Secondary Plan Area and Outside the Downtown Secondary Plan Area (see maps in Appendix B).

Table 2-2
City of Hamilton
Residential High-Density Growth by Development Area

Development Location	Total High-Density Housing Growth, 2022 to 2032 [1]	C.B.C.-Eligible Share	C.B.C.-Eligible Housing Growth, 2022 to 2032	C.B.C.-Housing Growth Shares by Location, 2022 to 2032
Ancaster	471	0%	0	0%
Dundas	253	100%	253	2%
Flamborough	2,953	10%	307	3%
Sub-total Ancaster, Dundas, Flamborough	**3,677**	**15%**	**560**	**5%**
Glanbrook	197	0%	0	0%
Upper Hamilton	5,779	67%	3,889	34%
Stoney Creek	4,371	65%	2,837	25%
Sub-total Glanbrook, Dundas, Flamborough	**10,347**	**65%**	**6,726**	**58%**
Lower Hamilton (inside Downtown Secondary Plan)	3,249	100%	3,235	28%
Lower Hamilton (outside Downtown Secondary Plan)	3,662	28%	1,010	9%
Sub-Total Lower Hamilton	**6,911**	**61%**	**4,245**	**37%**
Total City of Hamilton	**20,935**	**55%**	**11,531**	**100%**

[1] High density includes accessory apartments, bachelor, 1-bedroom and 2-bedroom+ apartments.
Source: Watson & Associates Economists Ltd.

4. Planning Period

    - A 10-year planning horizon has been used based on the City's budgeting forecast period, recognizing that there are a number of planning initiatives underway that will identify growth outside the planning horizon which has not yet been endorsed within an Official Plan.

5. Population in New Units (Appendix A – Schedules 3 and 4)

    - The number of housing units to be constructed by 2032 in the City over the forecast period is presented in Figure 2-2. Over the 2022 to 2032 forecast period, the City is anticipated to average 3,372 new housing units per year.
    - Institutional population[1] is anticipated to increase by approximately 1,165 people between 2022 to 2032.
    - Population in new units is derived from Schedules 3 and 4 which incorporate historical development activity, anticipated units (see unit mix discussion) and average persons per unit (P.P.U.) by dwelling type for new units.
    - Schedule 7 summarizes the average P.P.U. assumed for new housing units by age and type of dwelling based on Statistics Canada 2016 custom Census data for the City. The total calculated 15-year adjusted average P.P.U.s by dwelling type are as follows:
        - Low density: 3.381
        - Medium density: 2.334
        - High density:[2] 1.634

6. Existing Units and Population Change (Appendix A – Schedules 3 and 4)

    - Existing households for mid-2022 are based on the 2016 Census households, plus estimated residential units constructed between mid-2016 and end of year 2021, assuming a six-month lag between construction and occupancy (see Schedule 3).

[1] Institutional population largely includes special care facilities such as nursing home or residences for senior citizens. A P.P.U. of 1.100 depicts 1-bedroom and 2-or-more-bedroom units in collective households.
[2] Includes accessory units, bachelor, 1-bedroom and 2-or-more-bedroom apartments.

- The decline in average occupancy levels for existing housing units is calculated in Schedules 3 and 4, by aging the existing population over the forecast period. The forecast population decline in existing households over the 2022 to 2032 forecast period is approximately 6,370.

7. Employment (Appendix A – Schedule 8)

- The employment projections provided herein are largely based on the activity rate method, which is defined as the number of jobs in the City divided by the number of residents. Key employment sectors include primary, industrial, commercial/population-related, institutional, and work at home, which are considered individually below.
- 2016 employment data[1] (place of work) for the City is outlined in Schedule 8. The 2016 employment base is comprised of the following sectors:
  - 1,845 primary (1%);
  - 15,805 work at home employment (8%);
  - 47,760 industrial (23%);
  - 74,260 commercial/population related (37%); and
  - 63,665 institutional (31%).
- In accordance with the 2016 Statistics Canada Census, the City's 2016 employment base by usual place of work, including work at home, is 203,335. An additional 29,160 employees have been identified for the City in 2016 that have no fixed place of work (N.F.P.O.W.).[2]
- Total employment, including work at home and N.F.P.O.W. for the City is anticipated to reach approximately 274,420 by mid-2032. This represents an employment increase of approximately 32,620 for the 10-year forecast period.
- Schedule 8, Appendix A, summarizes the employment forecast, excluding work at home employment and N.F.P.O.W. employment, which is the basis for the C.B.C. employment forecast. The impact on municipal

[1] 2016 employment is based on Statistics Canada 2016 Place of Work Employment dataset by Watson & Associates Economists Ltd.
[2] No fixed place of work is defined by Statistics Canada as "persons who do not go from home to the same workplace location at the beginning of each shift. Such persons include building and landscape contractors, travelling salespersons, independent truck drivers, etc."

services from work at home employees has already been included in the population forecast. The need for municipal services related to N.F.P.O.W. employees has largely been included in the employment forecast by usual place of work (i.e., employment and gross floor area generated from N.F.P.O.W. construction employment).

- Total employment for the City (excluding work at home and N.F.P.O.W. employment) is anticipated to reach approximately 219,340 by mid-2032. This represents an employment increase of approximately 27,500 for the 10-year forecast period.

Based upon the above information, the following summaries are provided for use in the calculations presented in chapter 4, as follows:

- Of the services to be provided, most service costs will be allocated a 70% residential share (Table 2-3).
- Of the residential portion of the costs, 49% of the population is forecast to reside in high-density residential units (Table 2-4).
- Of those whose reside in high density residential units, 55% are forecast to reside in units to which the C.B.C. may be imposed (Table 2-5).

Table 2-3
Residential and Non-Residential Growth Share based on Incremental Growth in Population and Employment over the 10-Year Forecast Period

Residential Population and Non-Residential Employment Growth	Population/ Employment Growth	Residential/ Non-Residential Growth %
Residential Net Population Growth	65,101	70%
Employment Growth (net of Work at Home & N.F.P.O.W.)	27,504	30%
Total Population & Employment Growth	**92,605**	**100%**

Table 2-4
Low/Medium Density Growth and High-Density Growth Share

Residential Density	Residential Population Growth	% of Gross Population in New Units
Low/Medium Density	36,094	51%
High Density	34,208	49%
Total Residential Growth Forecast	**70,302**	**100%**

Table 2-5
Eligible and Ineligible High-Density Growth Share

Residential High Density	Residential Population Growth	% of Gross Population in High Density Units
Eligible High Density Growth	18,842	55%
Ineligible High Density Growth	15,366	45%
Total Residential High Density Growth Forecast	**34,208**	**100%**

2.4 Land Valuation

As the C.B.C. rate is applied against the value of land the day before a building permit is issued, average land values are required to be assessed in various locations throughout the City where development and redevelopment is anticipated. These land values assist in calculating the eligible C.B.C. rate (up to a maximum of 4%). As such, the City's Corporate Real Estate Office provided input into the analysis.

Staff from the City's Corporate Real Estate Office undertook land value estimates to assist with the implementation of this C.B.C. strategy. The land valuations were based on high density residential lands in three locations within the City. The high-density

lands were based on lands permitted to be developed into buildings with five storeys or more and a minimum of 10 residential units.

The areas assessed are provided below along with mapping provided in Appendix B:

1. Ancaster/Dundas/Flamborough Area;
2. Glanbrook, Stoney Creek, Upper Hamilton Area; and
3. Lower Hamilton Area which was further broken down into two (2) sub-areas:
    a. Inside the Downtown Secondary Plan Area; and
    b. Outside the Downtown Secondary Plan Area.

For the development that is located inside the Downtown Secondary Plan Area, a further breakdown for the high-density was made to account for buildings that are considered “Mid-Rise” (i.e. between 5 and 15 storeys) and “High-Rise” (i.e. over 15 storeys).

Table 2-6 provides the findings of the land valuation assessment for eligible high-density development, by area.

Table 2-6
Summary of Land Valuations by Area

Area	Estimated Median ($/acre)
Upper Hamilton, Stoney Creek, Glanbrook (Map 1 – Area 2)	$3,000,000
Ancaster, Dundas, Flamborough, Westdale (Map 1 - Area 1)	$5,000,000
Lower Hamilton Outside of Downtown Secondary Plan Area (Map 1 – Area 3)	$8,000,000
Downtown Secondary Plan Area - Low-Rise & Mid-Rise (Map 2)	$8,000,000
Downtown Secondary Plan Area - High-Rise (Map 2)	$13,500,000

2.5 Land Analysis

For purposes of calculating the total land value potential for high-density development in the City, the eligible high-density growth forecast was aligned with the average land

valuations based on applications in the planning process and the anticipated growth over the 10-year forecast. Table 2-7 provides for the assumptions on growth by area and the corresponding land valuations.

Table 2-7
Summary of Eligible High-Density Growth in the Planning Process by Area

Area	C.B. C. Eligible Units				Average Land Value Per Acre
	Registered	Draft Approved	Pending	Total	
Ancaster	-	-	-	-	$5,000,000
Dundas	-	132	121	253	$5,000,000
Flamborough	-	233	74	307	$5,000,000
Glanbrook	-	-	-	-	$3,000,000
Upper Hamilton	-	1,462	2,427	3,889	$3,000,000
Stoney Creek	1,023	367	1,447	2,837	$3,000,000
Lower Hamilton (Inside the Downtown Secondary Plan Area):					
Mid-Rise (5-15 Storeys)	-	40	-	40	$8,000,000
High-Rise (Over 15 Storeys)	-	764	2,431	3,195	$13,500,000
Lower Hamilton (Outside the Downtown Secondary Plan Area)	-	885	125	1,010	$8,000,000
Total	**1,023**	**3,883**	**6,625**	**11,531**	

Based on the average land valuations identified in Table 2-7 and the eligible high-density units anticipated to develop over the forecast period, the total land value is calculated for each area by converting the units to estimated total acres.

To undertake this conversion, the average eligible high-density units per acre have been estimated by area. The high-density growth identified in Dundas provided for an average of 130 units per acre. Currently there are no active applications in the planning process for Ancaster and Glanbrook, therefore, it has been assumed that the high-density growth in the Ancaster area would be similar to that anticipated in Dundas, while the high-density growth in Glanbrook provided for an average of 150 units per acre. Based on current applications in the development process, an average of 130 units per acre are anticipated within the Flamborough Area, 150 units per acre in the Upper Hamilton and Stoney Creek areas. Within the Lower Hamilton (Inside the Downtown Secondary Plan Area) the assumption for high-density growth is 510 units per acre in the mid-rise (5-15 storeys) and 570 units per acre in the high-rise (over 15 storeys) areas. The remaining area of Lower Hamilton (Outside the Downtown Secondary Plan) is generating an average 280 units per acre based on current applications.

Once the eligible units have been converted to acres of land (by area), the acres are multiplied by the land values to determine a total land value which will be used as the denominator in the C.B.C. calculations. Table 2-8 provides for these calculations. An estimated 58.4 acres of eligible high-density growth is anticipated over the 10-year forecast period; with the total land value estimated at approximately $261 million.

Table 2-8
Summary of Eligible High-Density Growth and Total Land Value by Area

Area	Total C.B.C. Eligible Units	Average Land Value Per Acre	Average Units Per Acre	Estimated Total Acres	Total Land Value
Ancaster	-	$5,000,000	130	-	$0
Dundas	253	$5,000,000	130	2.0	$9,753,000
Flamborough	307	$5,000,000	130	2.4	$11,834,000
Glanbrook	-	$3,000,000	150	-	$0
Upper Hamilton	3,889	$3,000,000	150	25.9	$77,780,000
Stoney Creek	2,837	$3,000,000	150	18.9	$56,740,000
Lower Hamilton (Inside the Downtown Secondary Plan Area):					
Mid-Rise (5-15 Storeys)	40	$8,000,000	510	0.1	$628,000
High-Rise (Over 15 Storeys)	3,195	$13,500,000	570	5.6	$75,671,000
Lower Hamilton (Outside the Downtown Secondary Plan Area)	1,010	$8,000,000	280	3.6	$28,857,000
Total	**11,531**			**58.4**	**$261,263,000**

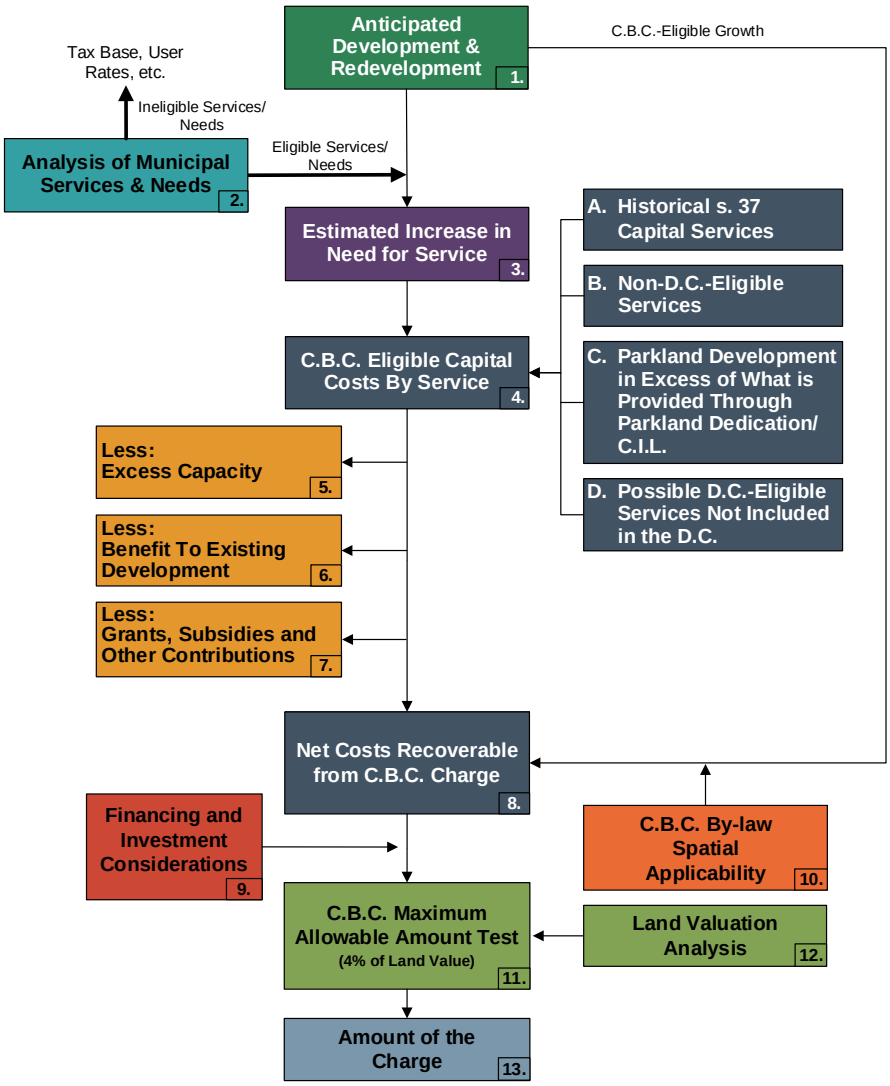
Chapter 3
Approach to the Calculation

3. The Approach to the Calculation of the Charge

3.1 Introduction

This chapter addresses the requirements of subsection 37(9) of the Planning Act and sections 2 and 3 of O. Reg. 509/20 with respect to the establishment of the need for service which underpins the C.B.C. calculation. These requirements are illustrated schematically in Figure 3-1.

Figure 3-1
The Process of Calculating a Community Benefits Charge under the Planning Act



3.2 Anticipated Development and Redevelopment

The anticipated development and redevelopment forecast is provided in chapter 2 (with supplemental tables in Appendix A). This chapter provides for the anticipated over all growth within the City over a 10-year (mid-2022 to mid-2032) time horizon and then estimates the residential units eligible to be considered as per section 37 (4) of the Planning Act.

3.3 Services Potentially Involved

As per section 37 (5) of the Planning Act, a C.B.C. may be imposed for services that do not conflict with services or projects provided under a municipality's D.C. by-law or Parkland dedication by-law. Hence, the service provided under the C.B.C. would be defined as follows:

(a) land for park or other public recreational purposes in excess of lands dedicated or provided cash-in-lieu payments under section 42 or 51 of the Planning Act.

(b) services not provided under section 2 (4) of the D.C.A.

(c) capital costs for eligible D.C. services that are not intended to be funded under the City's D.C. by-law.

Examples of services not provided by a D.C. or Parkland by-law include (but are not limited to) capital facilities and equipment for municipal parking, airports, municipal administration building expansions, museums, arts centres, public art, heritage preservation, landfill, public realm improvements, community gardens, space for non-profits, etc.

3.4 Increase in the Need for Service

Similar to a D.C., the C.B.C. calculation commences with an estimate of "the increase in the need for service attributable to the anticipated development," for eligible services to be covered by the by-law. There must be some form of link or attribution between the anticipated development and the estimated increase in the need for service. While the need could potentially be expressed generally in terms of units of capacity, a project-specific expression of need would appear to be most appropriate. This is suggested by

the requirement of section 2 (e) of O. Reg. 509/20 which provides “include estimates of the capital costs necessary to provide the facilities, services and matters referred to in clause 2 (b).” As noted, this is a similar consideration provided when undertaking a D.C. calculation.

3.5 Capital Forecast

Section 37 (2) of the Planning Act provides that, “The council of a local municipality may by by-law impose community benefits charges against land to pay for the capital costs of facilities, services and matters.” The Act does not define what capital costs may be included within the charge. As noted in section 3.3 above, the Act provides that the C.B.C. charge could include capital costs for eligible D.C. services that are not intended to be funded under the City’s D.C. by-law. This provision suggests that capital costs may be defined in an equivalent manner as the D.C.A. Hence, based on this relationship with the D.C.A., capital costs may include:

(a) costs to acquire land or an interest therein (including a leasehold interest);

(b) costs to improve land;

(c) costs to acquire, lease, construct or improve buildings and structures;

(d) costs to acquire, lease or improve facilities, including rolling stock (with a useful life of 7 or more years), furniture and equipment (other than computer equipment), materials acquired for library circulation, reference, or information purposes;

(e) interest on money borrowed to pay for the above-referenced costs;

(f) costs to undertake studies in connection with the above-referenced matters; and

(g) costs of the C.B.C. Strategy study.

3.6 Deductions

The section 2 of O. Reg. 509/20 potentially requires that three deductions be made to the capital costs estimates. These relate to:

- excess capacity;
- benefit to existing development; and
- anticipated grants, subsidies, and other contributions.

The requirements behind each of these reductions are addressed below.

3.6.1 Reduction for Excess Capacity

Section 2 (c) of O. Reg. 509/20 requires the identification of the excess capacity that exists in relation to the facilities, services and matters referred to in clause 2(b) suggesting the need for a potential deduction to the capital.

“Excess capacity” is undefined, but in this case, the excess capacity must be able to meet some or all of the increase in need for service, in order to potentially represent a deduction. The deduction of excess capacity from the future increase in the need for the service would normally occur as part of the conceptual planning and feasibility work associated with justifying and sizing new facilities, e.g., if a new landfill site to accommodate increased solid waste generated by the new growth is not required because sufficient excess capacity is already available, then a landfill site expansion would not be included as an increase in need, in the first instance.

3.6.2 Reduction for Benefit to Existing Development

Section 2 (c) of O. Reg. 509/20 of the D.C.A. provides that the capital estimates identify extent to which an increase in a facility, service or matter referred to in clause 2 (b) of the regulation would benefit existing development. The general guidelines used to consider benefit to existing development included:

- the repair or unexpanded replacement of existing assets that are in need of repair;
- the elimination of a chronic servicing problem not created by growth; and
- providing services where none previously existed (for example, extending garbage pickup to the rural area which previously did not receive the municipal service).

Where existing development has an adequate service level which will not be tangibly increased by an increase in service, no benefit would appear to be involved. For example, where expanding existing garbage collection vehicles simply replicates what

existing residents are receiving, they receive very limited (or no) benefit as a result. On the other hand, where a clear existing service problem is to be remedied, a deduction should be made accordingly.

In the case of services such as cultural facilities, the service is typically provided on a municipal-wide system basis. For example, facilities of the same type may provide different services (i.e., art vs. theatre), different programs (i.e., art classes vs. acting classes), and different time availability for the same service (i.e., art classes available on Wednesdays in one facility and Thursdays in another). As a result, residents will travel to different facilities to access the services they want at the times they wish to use them, and facility location generally does not correlate directly with residence location. Even where it does, displacing users from an existing facility to a new facility frees up capacity for use by others and generally results in only a very limited benefit to existing development. Further, where an increase in demand is not met for a number of years, a negative service impact to existing development is involved for a portion of the planning period.

3.6.3 Reduction for Anticipated Grants, Subsidies and Other Contributions

This step involves reducing the capital costs by capital grants, subsidies, and other contributions made or anticipated by Council and in accordance with various rules such as the attribution between the share related to new vs. existing development. That is, some grants and contributions may not specifically be applicable to growth or where Council targets fundraising as a measure to offset impacts on taxes.

Although specific grants, subsidies and/or other contributions may not be currently identified and reduced in the calculations, due diligence will be undertaken by City staff during the annual budget process to net off any future identified funding from these other sources.

3.7 Municipal-wide vs. Area Rating

This step involves determining whether all of the subject costs are to be recovered on a uniform municipal-wide basis or whether some or all are to be recovered on an area-specific basis. Unlike D.C.s, there is no mandatory requirement to consider area rating of services (providing charges for specific areas and services); however, the legislation

does not prohibit area rating. There may be instances where Council may consider varying rates to align with other policies or possible incentives in the development area.

Through the C.B.C. strategy process, discussions with City staff took place related to structuring the charge on a municipal-wide vs. area specific basis. As the services being provided in the strategy are not restricted to one specific area and are anticipated to be used by all residents with a city-wide benefit, the charges have been provided on a municipal-wide basis. For example, cultural facilities are provided in different parts of the City, and they will be accessed by residents from all areas depending on the programing offered within the facilities and personal interests. Although the charges are to be calculated and imposed on a city-wide basis, consideration of location of the projects will take place through the annual budget process.

3.8 Land Valuation Analysis

To facilitate the rate calculation provided in section 3.9, an estimate of the market value of the land related to the anticipated applicable development/redevelopment presented in section 3.2, needs to be undertaken. It is noted that the land values may vary based on a number of factors including location, zoning density, parcel size, etc., however, these values should estimate the land value the day before building permit issuance. This data may be available from municipal staff, or the municipality may consider engaging the assistance of a land appraiser.

3.9 Calculation of the Community Benefit Charge

Section 37(32) of the Planning Act provides that the amount of the Planning Act provides that the maximum charge which can be imposed is prescribed by the regulations. O. Reg 509/20 section 3 provides that the maximum charge is to be 4%.

To calculate the rate, the net capital cost (provided by netting the deductions set out in section 3.6 from the capital presented in section 3.5) divided by the land values related to the anticipated applicable development/redevelopment produces a percentage of the capital cost to the land value. The product of this calculation provides for the eligible rate. As noted above, the maximum rate to be imposed is 4%; hence, the rate can any rate between 0% and 4%.

Chapter 4
C.B.C.-Eligible Cost Analysis

4. C.B.C.-Eligible Cost Analysis

4.1 Introduction

This chapter outlines the basis for calculating eligible costs to be recovered through C.B.C.s which are to be applied on a uniform basis throughout the City. In each case, the required calculation process set out in O. Reg. 509/20 section 2 (a) through (f) to the Planning Act and described in Chapter 3 was followed in determining C.B.C.-eligible costs.

The nature of the capital projects and timing identified in the Chapter reflects City staff's recommendation based on Council policy directions. However, it is recognized that over time, capital projects and Council priorities change; accordingly, Council's intentions may alter, and different capital projects (and timing) may be necessary to meet the need for services required by new growth.

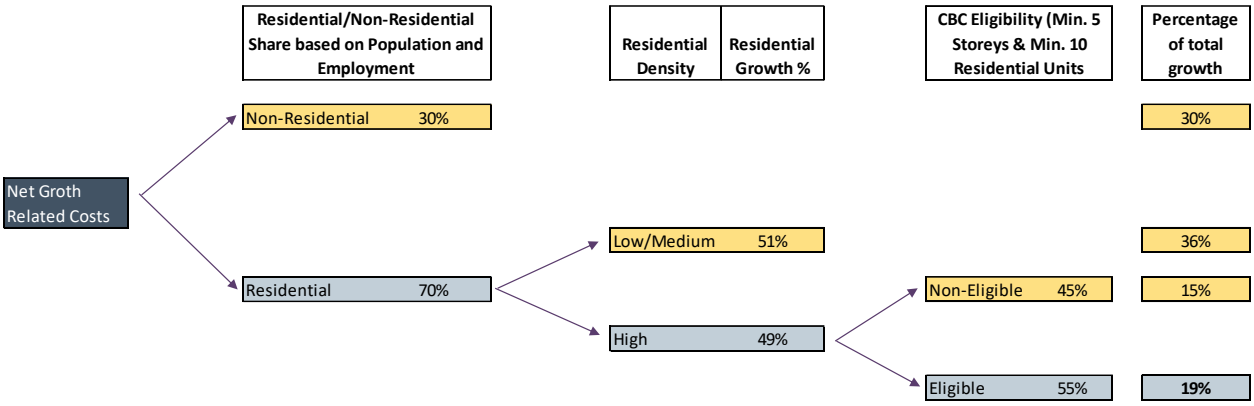
4.2 Allocation of Costs to Eligible High-Density Growth

For capital costs identified for recovery through the C.B.C., a review of the gross costs has been made based on information provided by City staff. Each capital project was assessed to determine if there were deductions required to the gross costs related to excess capacity, benefit to existing development, and grants, subsidies, or other contributions known. The resultant net growth costs were then allocated based on the following:

- Net costs for most services were apportioned between residential and non-residential growth (Table 2-3) based upon the relation between population and employment; however, similar to the City's D.C. background study, parks, recreation, and culture were apportioned 95% residential and 5% non-residential.
- The costs associated with residential growth were then further apportioned between low/medium density growth and total high-density growth anticipated over the forecast (Table 2-4).
- Finally, the costs associated with the total high-density growth were apportioned to eligible growth (i.e., buildings with a minimum of five storeys and a minimum of 10 residential units) and ineligible growth (Table 2-5).

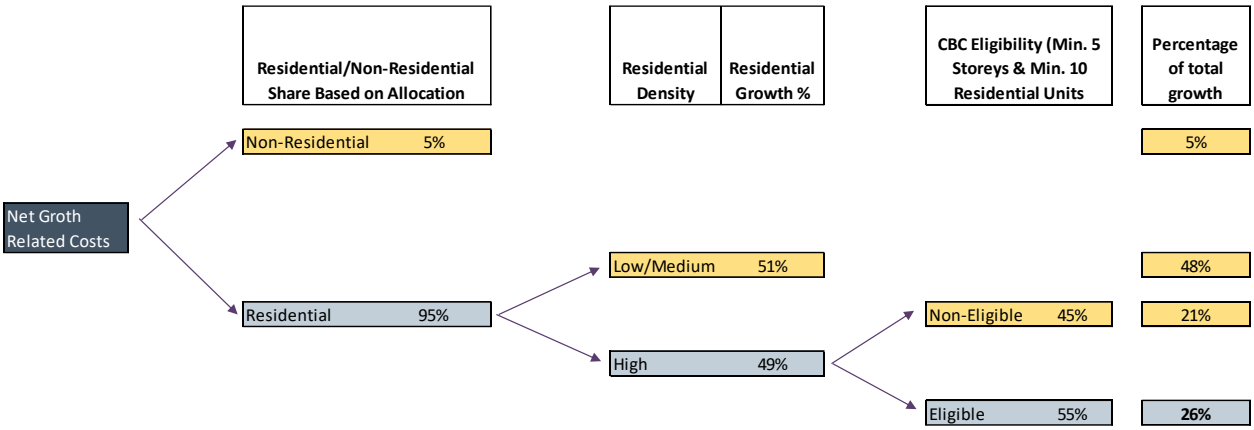
As noted above, similar to the calculations undertaken in the City's D.C. study, some services are shared between residential and non-residential growth based on the incremental population and employment for the forecast period. Based on the C.B.C. 10-year forecast, this would result in an allocation of 70% residential/30% non-residential. Figure 4-1 provides flowchart of the shares that would be assigned to services such as municipal parking, airport services, growth studies, public realm initiatives, corporate initiatives, information technology, and Council initiatives. As noted in Tables 2-3 through 2-5, the allocations between the total growth anticipated over the forecast period would result in 19% of net growth-related costs being eligible for recovery through the C.B.C. (see Table 4-1).

Figure 4-1
Growth Shares for City-Wide Services



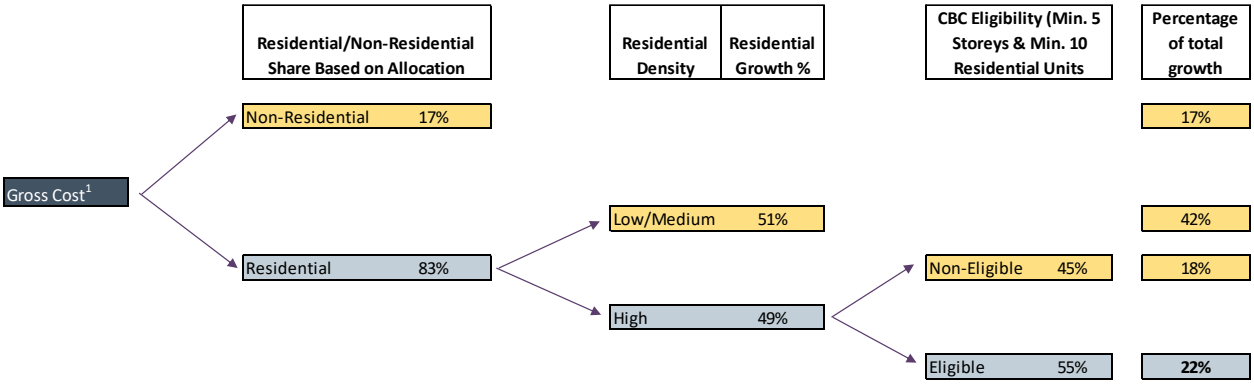
As the predominant users of parks, recreation and culture tend to be residents of the City, the forecast growth-related costs have been allocated 95% to residential and 5% to non-residential, similar to the allocations provided for in the City's D.C. study for these types of services. Figure 4-2 provides flowchart of the shares that would be assigned to cultural services. Therefore, for these services, the total growth anticipated over the forecast period would result in 26% of net growth-related costs being eligible for recovery through the C.B.C. (see Table 4-2).

Figure 4-2
Growth Shares for Cultural Services



For the costs related to landfill services, the forecast growth-related costs have been allocated 83% to residential and 17% to non-residential, similar to the allocations provided for in the City's D.C. study for these types of services. This allocation is based on the average number of residential vs. non-residential properties that waste is collected from. Figure 4-2 provides flowchart of the shares that would be assigned to cultural services. Therefore, for these services, the total growth anticipated over the forecast period would result in 22% of net growth-related costs being eligible for recovery through the C.B.C. (see Table 4-3).

Figure 4-3
Growth Shares for Landfill Services



For the costs related to undertaking the C.B.C. Strategy Study, 100% is attributable to the eligible high-density growth as the C.B.C. is not applicable to other forms of development (see Table 4-4).

4.3 C.B.C. Eligible Cost Analysis

This section provides for the evaluation of development-related capital requirements over a 10-year planning horizon. The projects include growth studies, municipal parking, airport services, C.B.C. strategies, cultural services, landfill services, public realm initiatives, corporate initiatives, information technology, Council initiatives, and collections & program development. As municipal parking and airport services are no longer eligible for recovery through D.C.s, some of the outstanding projects that were included in the City's 2019 D.C. study have been carried forward into the C.B.C. project listing (note also that the Development Charge Reserve balances for both services have been deducted from these projects to provide for a net capital cost to be included within the calculations). In addition, there were a number of growth-related studies that were removed from the D.C. growth studies list during the 2021 D.C. update study, those that have not been undertaken to date, have also been included in the C.B.C. project listing.

The estimated gross cost of each project has been reviewed with staff and where necessary, deductions have been made to recognize the benefit the projects have to the existing community. Further, the projects that have been identified have been reviewed and currently, and where known, anticipated grants, subsidy or other funding anticipated have been deducted. For landfill, a deduction has been made for the portion of projects that related to waste diversion, as that portion is being recovered through D.C.s. Finally, as the projects are associated with future service needs consideration was given to the capacity available for the existing service and projects provided are considered to be incremental costs to service the future growth needs.

Based on the calculations and allocations to eligible high-density growth, the City has identified $15.52 million in eligible net growth-related costs to be included within the C.B.C. calculations (see Table 5-2 Summary of Growth Related Costs).

Table 4-1
Capital Infrastructure Needs to be Recovered through C.B.C.s for Municipal Parking, Airport Services, Growth Studies, Public Realm Initiatives, Corporate Initiatives, Information Technology, Collections & Program Development, and Council Initiatives

Prj.No	Increased Service Needs Attributable to Anticipated Development 2022-2031	Timing (year)	Gross Capital Cost Estimate (2022$)	Less:		Net Growth-Related Cost	Total Non-Residential Share 30%	Total Residential Share 70%	Low/Medium Density Residential	Total High Density Residential	Potential C.B.C. Recoverable Cost	
				Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development						Ineligible High Density Residential	Eligible High Density Residential
	Municipal Parking:											
1	Downtown Parking Structure	2023	29,680,000	4,155,200	-	25,524,800	7,657,440	17,867,360	9,112,354	8,755,006	3,939,753	4,815,254
2	West Harbour Development - Parking Structure	2028-2030	34,590,000	25,013,000	-	9,577,000	2,873,100	6,703,900	3,418,989	3,284,911	1,478,210	1,806,701
2	Parking Payment Equipment	2022-2031	877,500	614,300	156,000	107,200	32,160	75,040	38,270	36,770	16,546	20,223
3	License Plate Reading Tech	2022	300,000	270,000	-	30,000	9,000	21,000	10,710	10,290	4,631	5,660
4	D.C. Reserve Fund Adjustment		-	7,840,000	-	(7,840,000)	(2,352,000)	(5,488,000)	(2,798,880)	(2,689,120)	(1,210,104)	(1,479,016)
	Airport Services											
1	Provision for Additional lands needed for runway expansion and cargo road.	2022-2031	27,380,000	-	-	27,380,000	8,214,000	19,166,000	9,774,660	9,391,340	4,226,103	5,165,237
2	D.C. Reserve Fund Adjustment		-	6,020,000	-	(6,020,000)	(1,806,000)	(4,214,000)	(2,149,140)	(2,064,860)	(929,187)	(1,135,673)
	Growth Studies:											
1	Comprehensive Zoning By-Law 05-200 Update	2022	65,300	32,700	-	32,600	9,780	22,820	11,638	11,182	5,032	6,150
2	Site Plan Guidelines Update/Consolidation	2022	229,000	-	-	229,000	68,700	160,300	81,753	78,547	35,346	43,201
3	Natural Areas Inventory Study	2022-2028	343,800	34,400	-	309,400	92,820	216,580	110,456	106,124	47,756	58,368
4	City-wide Employment Survey	2022-2028	1,031,000	-	-	1,031,000	309,300	721,700	368,067	353,633	159,135	194,498
5	Human Services Study	2022-2025	258,000	129,000	-	129,000	38,700	90,300	46,053	44,247	19,911	24,336
6	Ontario Works Review	2022-2025	129,000	96,800	-	32,200	9,660	22,540	11,495	11,045	4,970	6,075
7	Human Services Market Planning Study	2022-2025	258,000	64,500	-	193,500	58,050	135,450	69,080	66,371	29,867	36,504
8	Neighbourhood Community Needs Study	2022-2025	77,400	38,700	-	38,700	11,610	27,090	13,816	13,274	5,973	7,301
9	Provision for Growth Component of Unidentified Studies	2022-2023	2,600,000	-	-	2,600,000	780,000	1,820,000	928,200	891,800	401,310	490,490
10	Public Art Master Plan Review	2022	18,000	9,000	-	9,000	2,700	6,300	3,213	3,087	1,389	1,698
11	Part IV Designation of Properties under the Ontario Heritage Act	2022-2031	1,485,000	1,336,500	-	148,500	44,550	103,950	53,015	50,936	22,921	28,015
12	City Wide Employment Survey	2025	385,000	-	-	385,000	115,500	269,500	137,445	132,055	59,425	72,630
13	Comprehensive Zoning By-Law	2023	1,535,000	767,500	-	767,500	230,250	537,250	273,998	263,253	118,464	144,789
14	Centennial Neighborhood Streetscape and Public Realm Design Study	2023	500,000	-	-	500,000	150,000	350,000	178,500	171,500	77,175	94,325
15	School Crossing Review	2022	100,000	90,000	-	10,000	3,000	7,000	3,570	3,430	1,544	1,887
16	HAAA Feasibility Study	2022	150,000	135,000	-	15,000	4,500	10,500	5,355	5,145	2,315	2,830

Table 4-1
Capital Infrastructure Needs to be Recovered through C.B.C.s for Municipal Parking, Airport Services, Growth Studies, Public Realm Initiatives, Corporate Initiatives, Information Technology, Collections & Program Development, and Council Initiatives

Prj.No	Increased Service Needs Attributable to Anticipated Development 2022-2031	Timing (year)	Gross Capital Cost Estimate (2022$)	Less:		Net Growth-Related Cost	Total Non-Residential Share 30%	Total Residential Share 70%	Low/Medium Density Residential	Total High Density Residential	Potential C.B.C. Recoverable Cost	
				Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development						Ineligible High Density Residential	Eligible High Density Residential
	Public Realm Initiatives:											
1	King St W Bus Imprv Area Gateway	2022	12,450	11,200	-	1,250	375	875	446	429	193	236
2	Main St W Bus Imprv Area Gateway	2022	150,000	135,000	-	15,000	4,500	10,500	5,355	5,145	2,315	2,830
3	Inter Village BIA Gateway	2022	36,000	32,400	-	3,600	1,080	2,520	1,285	1,235	556	679
	Corporate Initiatives:					-						
1	Digital/Open Data Infrastructure	2022-2024	300,000	270,000	-	30,000	9,000	21,000	10,710	10,290	4,631	5,660
2	Digital Office: Smart City and Digital Transformation Program	2022-2023	200,000	180,000	-	20,000	6,000	14,000	7,140	6,860	3,087	3,773
3	Digital Office: Smart City and Digital Transformation Program	2022-2023	400,000	360,000	-	40,000	12,000	28,000	14,280	13,720	6,174	7,546
	Information Technology:											
1	Business Systems and Services Continuity Plan	2022	150,000	135,000	-	15,000	4,500	10,500	5,355	5,145	2,315	2,830
2	IT Asset Management Program	2022	180,000	162,000	-	18,000	5,400	12,600	6,426	6,174	2,778	3,396
3	IT Strategy Refresh	2022-2024	880,000	792,000	-	88,000	26,400	61,600	31,416	30,184	13,583	16,601
4	Information Security Program	2022-2023	1,300,000	1,170,000	-	130,000	39,000	91,000	46,410	44,590	20,066	24,525
5	EDRMS - Enterprise Data and Records Management System Project	2022-2025	650,000	585,000	-	65,000	19,500	45,500	23,205	22,295	10,033	12,262
	Council Initiatives:											
1	Historical Signs	2022	50,000	45,000	-	5,000	1,500	3,500	1,785	1,715	772	943
2	Chedoke Course Redevelopment	2022	50,000	45,000	-	5,000	1,500	3,500	1,785	1,715	772	943
3	W14 Complete St Enhancement	2022	300,000	270,000	-	30,000	9,000	21,000	10,710	10,290	4,631	5,660
	Total		**106,650,450**	**50,839,200**	**156,000**	**55,655,250**	**16,696,575**	**38,958,675**	**19,868,924**	**19,089,751**	**8,590,388**	**10,499,363**

Table 4-2
Capital Infrastructure Needs to be Recovered through C.B.C.s for Cultural Services

Prj.No	Increased Service Needs Attributable to Anticipated Development 2022-2031	Timing (year)	Gross Capital Cost Estimate (2022$)	Less:		Net Growth-Related Cost	Total Non-Residential Share 5%	Total Residential Share 95%	Low/Medium Density Residential 51%	Total High Density Residential 49%	Potential C.B.C. Recoverable Cost	
				Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development						Ineligible High Density Residential 45%	Eligible High Density Residential 55%
1	St. Mark's Restoration	2022-2023	452,000	226,000	-	226,000	11,300	214,700	109,497	105,203	47,341	57,862
2	St. Mark's Restoration	2022-2023	1,387,000	693,500	-	693,500	34,675	658,825	336,001	322,824	145,271	177,553
3	ICIP CCR Children's Museum Expansion Phase 2	2022-2024	3,344,000	443,900	1,124,640	1,775,460	88,773	1,686,687	860,210	826,477	371,914	454,562
4	Steam Museum Building Expansion	2023-2026	1,040,000	-	-	1,040,000	52,000	988,000	503,880	484,120	217,854	266,266
5	Auchmar Adaptive Reuse - Stone Walls Phase	2023-2031	540,000	486,000	-	54,000	2,700	51,300	26,163	25,137	11,312	13,825
6	Auchmar Adaptive Reuse - Stone Walls Phase	2023-2031	14,280,000	12,852,000	-	1,428,000	71,400	1,356,600	691,866	664,734	299,130	365,604
7	Fieldcote Museum Expansion	2023	35,000	5,300	-	29,700	1,485	28,215	14,390	13,825	6,221	7,604
8	Fieldcote Museum Expansion	2023	465,000	69,800	-	395,200	19,760	375,440	191,474	183,966	82,785	101,181
9	Local History & Archives Renovation	2026	5,000,000	4,500,000	-	500,000	25,000	475,000	242,250	232,750	104,738	128,013
10	Public Art Master Plan Review	2022	18,000	9,000	-	9,000	450	8,550	4,361	4,190	1,885	2,304
11	Public Art - West Hamilton Rail Trail	2022	25,000	-	-	25,000	1,250	23,750	12,113	11,638	5,237	6,401
12	PublicArt-HamTheElectricCity	2022	225,000	-	-	225,000	11,250	213,750	109,013	104,738	47,132	57,606
13	Public Art Locke Street Marker	2022	100,000	-	-	100,000	5,000	95,000	48,450	46,550	20,948	25,603
14	Ancster Memorial Arts Centre PublicArt	2022	250,000	-	-	250,000	12,500	237,500	121,125	116,375	52,369	64,006
15	Public Art-Cenre Memorial Mural	2022	17,500	-	-	17,500	875	16,625	8,479	8,146	3,666	4,480
16	Public Art -Century St Parkett	2022	150,000	-	-	150,000	7,500	142,500	72,675	69,825	31,421	38,404
	Total		**27,328,500**	**19,285,500**	**1,124,640**	**6,918,360**	**345,918**	**6,572,442**	**3,351,945**	**3,220,497**	**1,449,223**	**1,771,273**

Table 4-3
Capital Infrastructure Needs to be Recovered through C.B.C.s for Landfill Services

Prj. No.	Increased Service Needs Attributable to Anticipated Development 2022-2031	Timing (year)	Gross Capital Cost Estimate (2022$)	Less:		Net Growth-Related Cost	Total Non-Residential Share 17%	Total Residential Share 83%	Low/Medium Density Residential 51%	Total High Density Residential 49%	Potential C.B.C. Recoverable Cost	
				Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development						Ineligible High Density Residential 45%	Eligible High Density Residential 55%
1	Solid Waste Management Master Plan - Alternative Disposal Facility (Landfill)	2022	200,000	180,000	-	20,000	3,400	16,600	8,466	8,134	3,660	4,474
2	Glanbrook Landfill Stage 3 Development- Cells C, D, & E	2022	5,500,000	4,950,000		550,000	93,500	456,500	232,815	223,685	100,658	123,027
3	Public Space & Special Event Containers (Landfill Portion)	2022-2031	2,250,000	900,000	450,000	900,000	153,000	747,000	380,970	366,030	164,714	201,317
4	Glanbrook Landfill Capital Improvement Program (Landfill Portion)	2022-2029	2,899,000	260,900	289,900	2,348,200	399,194	1,949,006	993,993	955,013	429,756	525,257
5	Transfer Station/CRC Expansion (Landfill Portion)	2024	14,500,000	-	5,800,000	8,700,000	1,479,000	7,221,000	3,682,710	3,538,290	1,592,231	1,946,060
	Total		**25,349,000**	**6,290,900**	**6,539,900**	**12,518,200**	**2,128,094**	**10,390,106**	**5,298,954**	**5,091,152**	**2,291,018**	**2,800,134**

Table 4-4
Capital Infrastructure Needs to be Recovered through C.B.C.s for the C.B.C. Strategy

Prj. No.	Increased Service Needs Attributable to Anticipated Development 2022-2031	Timing (year)	Gross Capital Cost Estimate (2022$)	Less:		Net Growth-Related Cost	Total Non-Residential Share 0%	Total Residential Share 100%	Low/Medium Density Residential	Total High Density Residential	Potential C.B.C. Recoverable Cost	
				Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development						Ineligible High Density Residential	Eligible High Density Residential
1	Community Benefits Streatgy	2022	225,000	-	-	225,000	-	225,000	-	225,000	-	225,000
2	Community Benefits Streatgy	2027	225,000	-	-	225,000	-	225,000	-	225,000	-	225,000
	Total		**450,000**	**-**	**-**	**450,000**	**-**	**450,000**	**-**	**450,000**	**-**	**450,000**

Chapter 5
C.B.C. Calculation

5. C.B.C. Calculation

5.1 Anticipated Funding Recovery

To summarize the calculation of the charge, the following has been undertaken:

1) Anticipated Development: As presented in Chapter 2, the 10-year growth forecast provides for 11,531 eligible high-density units (i.e., in buildings containing a minimum of five storeys and a minimum of 10 residential units).

2) Land Valuation: the City's Corporate Real Estate Office provided average land valuations for properties anticipated for eligible high-density development. The land valuations were provided for various locations throughout the City, including inside and outside the downtown secondary plan for the lower Hamilton area, the Ancaster/Dundas/Flamborough area, and the Glanbrook/Stoney Creek/Upper Hamilton area (refer to Chapter 2). Further, inside the downtown secondary plan area, land values were provided for "mid-rise" units (i.e. buildings with 5 to 15 storeys) and "high-rise" units (i.e. buildings with greater than 15 storeys).

3) Identification of Services: A number of services were identified including municipal parking, airport services, and growth studies which are no longer eligible for recovery through D.C.s. Other services identified also include culture, landfill, public realm, corporate initiatives, council initiatives, information technology, and the C.B.C. strategy itself.

4) C.B.C. Eligible Costs: Capital needs related to the identified services were provided by City staff. Gross costs of the capital projects were assessed for the portion of the projects that would benefit the existing community vs. the future growth. The growth-costs that were then allocated amongst all types of growth to calculate the amount that is associated with eligible high-density units.

5) Total Land Value: Based on the growth forecast, density assumptions, and land valuation assessment, the total land value for eligible high density was calculated to equal approximately $261.26 million.

6) Maximum C.B.C.: As per the Planning Act, the maximum a municipality can impose for a C.B.C. is equal to 4% of the land value of a property, the day before

building permit issuance. Based on the total land value, the estimated potential C.B.C. recovery for the City equates to just over $10.45 million for the 10-year forecast period (see Table 5-1).

Table 5-1
Anticipated C.B.C. Funding Recovery

Area	Total C.B.C. Eligible Units	Average Land Value Per Acre	Average Units Per Acre	Estimated Total Acres	Total Land Value	C.B.C. %	Potential C.B.C. Revenue
Ancaster	-	$5,000,000	130	-	$0		
Dundas	253	$5,000,000	130	2.0	$9,753,000		
Flamborough	307	$5,000,000	130	2.4	$11,834,000		
Glanbrook	-	$3,000,000	150	-	$0		
Upper Hamilton	3,889	$3,000,000	150	25.9	$77,780,000		
Stoney Creek	2,837	$3,000,000	150	18.9	$56,740,000		
Lower Hamilton (Inside the Downtown Secondary Plan Area):							
Mid-Rise (5-15 Storeys)	40	$8,000,000	510	0.1	$628,000		
High-Rise (Over 15 Storeys)	3,195	$13,500,000	570	5.6	$75,671,000		
Lower Hamilton (Outside the Downtown Secondary Plan Area)	1,010	$8,000,000	280	3.6	$28,857,000		
Total	**11,531**			**58.4**	**$261,263,000**	**4%**	**$10,450,520**

The City has identified capital costs attributable to eligible high-density growth in the amount of $15.52 million (as per Tables 4-1 through 4-4), well in excess of the maximum allowable amount of approximately $10.45 million. Therefore, the City has provided herein that the maximum C.B.C. of 4% may be considered to be imposed on eligible forms of development. It is noted that available C.B.C. funding will not provide funding for all project on the capital projects list, and hence City Council will have to consider the highest capital priorities to be funded through C.B.C. revenue during the annual budget process. Table 5-2 provides a summary of the growth capital costs by service.

Table 5-2
Summary of Growth Capital Costs

Services	Gross Cost	Benefit to Existing Deduction	Grants, Subsidies & Other Contributions	Net Growth-Related Costs	C.B.C. Eligible Costs
D.C. Services Becoming Ineligible:					
Municipal Parking	65,447,500	37,892,500	156,000	27,399,000	5,168,821
Airport Services	27,380,000	6,020,000	-	21,360,000	4,029,564
Growth Studies	9,164,500	2,734,100	-	6,430,400	1,213,095
Total DC Services Becoming Ineligible	**101,992,000**	**46,646,600**	**156,000**	**55,189,400**	**10,411,480**
Other Capital Needs (based on 2022 Capital Plan):					
CBC Strategies	450,000	-	-	450,000	450,000
Landfill Services	25,349,000	6,290,900	6,539,900	12,518,200	2,800,134
Cultural Services	27,328,500	19,285,500	1,124,640	6,918,360	1,771,273
Public Realm Initiatives	198,450	178,600	-	19,850	3,745
Corporate Initiatives	900,000	810,000	-	90,000	16,979
Information Technology	3,160,000	2,844,000	-	316,000	59,613
Council Initiatives	400,000	360,000	-	40,000	7,546
Total Other Potential Capital	**57,785,950**	**29,769,000**	**7,664,540**	**20,352,410**	**5,109,289**
Total Potential Capital Program	**159,777,950**	**76,415,600**	**7,820,540**	**75,541,810**	**15,520,770**

Chapter 6
C.B.C. Policy Recommendations and C.B.C. By-law Rules

6. C.B.C. Policy Recommendations and C.B.C. By-law Rules

6.1 C.B.C. Policies

Planning Act section 37 and O. Reg. 509/20 outline the required policies that must be considered when adopting a C.B.C. by-law. The following subsections set out the recommended policies governing the calculation, payment and collection of C.B.C.s in accordance with the legislation.

6.2 C.B.C. By-law Rules

6.2.1 Payment in any Particular Case

In accordance with the Planning Act, subsection 37 (3), a C.B.C. may be imposed only with respect to development or redevelopment that requires one of the following:

(a) "the passing of a zoning by-law or of an amendment to a zoning by-law under section 34 of the *Planning Act*;

(b) the approval of a minor variance under section 45 of the *Planning Act*;

(c) a conveyance of land to which a by-law passed under subsection 50 (7) of the *Planning Act* applies;

(d) the approval of a plan of subdivision under section 51 of the *Planning Act*;

(e) a consent under section 53 of the *Planning Act*;

(f) the approval of a description under section 9 of the *Condominium Act, 1998*; or

(g) the issuing of a permit under the *Building Code Act, 1992* in relation to a building or structure."

6.2.2 Maximum Amount of the Community Benefit Charge

Subsection 37 (32) of the Planning Act states that the amount of a C.B.C. payable in any particular case shall not exceed an amount equal to the prescribed percentage of the value of the land as of the valuation date.

Based on section 3 of O. Reg. 509/20, the prescribed percentage is 4%.

If a development or redevelopment consist of two or more above grade buildings, that will not be constructed concurrently, and will be built at different times, each phase will be considered separate development or re-development. The CBC charge for the first building will be calculated at 4% of the land value the day before the building permit is issued. For each subsequent building, the CBC will be charged based on 4% at the land value date less the CBC paid for the first building. If the difference is zero or negative, no CBC will be charged. There will be no credit given to a developer by the City should the difference be less than zero.

6.2.3 Exemptions (full or partial)

The following exemptions are provided under subsection 37 (4) of the Planning Act and section 1 of O. Reg. 509/20:

- Development of a proposed building or structure with fewer than five storeys at or above ground;
- Development of a proposed building or structure with fewer than 10 residential units;
- Redevelopment of an existing building or structure that will have fewer than five storeys at or above ground after the redevelopment;
- Redevelopment that proposes to add fewer than 10 residential units to an existing building or structure;
- Such types of development or redevelopment as are prescribed:
    - Development or redevelopment of a building or structure intended for use as a long-term care home within the meaning of subsection 2 (1) of the Long-Term Care Homes Act, 2007.
    - Development or redevelopment of a building or structure intended for use as a retirement home within the meaning of subsection 2 (1) of the Retirement Homes Act, 2010.

- Development or redevelopment of a building or structure intended for use by any of the following post-secondary institutions for the objects of the institution:
    i. a university in Ontario that receives direct, regular and ongoing operating funding from the Government of Ontario,
    ii. a college or university federated or affiliated with a university described in subparagraph i,
    iii. an Indigenous Institute prescribed for the purposes of section 6 of the Indigenous Institutes Act, 2017.
- Development or redevelopment of a building or structure intended for use as a memorial home, clubhouse or athletic grounds by an Ontario branch of the Royal Canadian Legion.
- Development or redevelopment of a building or structure intended for use as a hospice to provide end of life care.
- Development or redevelopment of a building or structure intended for use as residential premises by any of the following entities:
    i. a corporation to which the Not-for-Profit Corporations Act, 2010 applies that is in good standing under that Act and whose primary object is to provide housing,
    ii. a corporation without share capital to which the Canada Not-for-profit Corporations Act applies, that is in good standing under that Act and whose primary object is to provide housing,
    iii. a non-profit housing co-operative that is in good standing under the Co-operative Corporations Act.

In addition to the exemptions noted above, the C.B.C. will not apply to buildings or structures owned by and used for the purposes of any municipality, local board, or Board of Education.

In addition to the above exemptions, it is recommended that any discretionary exemptions included in the CBC policy and By-law be aligned with the current DC By-law while still in effect (expires June 2024). These include:

- A reduction in the amount of 40% of CBC's payable to the City providing the property is within the boundaries of the Downtown CIPA as illustrated on Schedule "A" to the attached By-law (Attachment B to this report); and

- A reduction in the amount of 50% of CBC's payable to the City for the purpose of creating a Residential Facility or Lodging House within the existing Building envelope

6.2.4 Timing of Collection

The C.B.C.s imposed are calculated, payable, and collected upon issuance of a building permit for eligible development or redevelopment.

6.2.5 In-kind contributions

A municipality that has passed a C.B.C. by-law may allow the landowner to provide to the municipality: facilities, services, or matters required because of development or redevelopment in the area to which the by-law applies.

Prior to providing these contributions, In-Kind contributions will be considered at the sole discretion of the General Manager, Corporate Services. The value of the contribution must be evaluated by an external party prior to consideration by the city. The cost of the evaluation will be borne solely by the developer. All in-kind contributions must be endorsed by Council.

6.2.6 The Applicable Areas

The C.B.C. by-law will apply to all lands within the City.

6.2.7 Special Account

All money received by the municipality under a C.B.C. by-law shall be paid into a special account. The money contained within the special account:

- may be invested in securities in which the municipality is permitted to invest under the Municipal Act, 2001, and the earnings derived from the investment of the money shall be paid into a special reserve fund account; and
- must have at least 60 percent of the funds spent or allocated at the beginning of the year.

In addition to the monies collected under a C.B.C. by-law, transitional rules for transferring existing reserve funds are provided in subsection 37 (51) of the Planning Act. These rules apply for any existing reserve funds related to a service that is not

listed in subsection 2 (4) of the D.C.A., as well as reserve funds established under section 37 of the Planning Act prior to Bill 197.

1. If the municipality passes a C.B.C. by-law under this section before the specified date, the municipality shall, on the day it passes the by-law, allocate the money in the special account or reserve fund to the special account referred to in subsection (45) of the Planning Act.

2. If the municipality has not passed a C.B.C. by-law under this section before the specified date, the special account or reserve fund is deemed to be a general capital reserve fund for the same purposes for which the money in the special account or reserve fund was collected.

3. Despite paragraph 2, subsection 417 (4) of the Municipal Act, 2001 (a provision which requires the funds raised for a reserve fund must only be used for the intended purpose) and any equivalent provision of do not apply with respect to the general capital reserve fund referred to in paragraph 2.

4. If paragraph 2 applies and the municipality passes a C.B.C. by-law under this section on or after the specified date, the municipality shall, on the day it passes the by-law, allocate any money remaining in the general capital reserve fund referred to in paragraph 2 to the special account referred to in subsection (45) of the Planning Act.

Based on the above, it is recommended that the D.C. reserve funds for Municipal Parking and Airport services be transferred to the C.B.C. special account.

6.2.8 Credits

Subsection 37 (52) of the Planning Act indicates that any credits that were established under section 38 of the D.C.A. and that are not related to a service that is listed in subsection 2 (4) of the D.C.A., may be used by the holder of the credit with respect to a charge that the holder is required to pay under a C.B.C. by-law.

6.2.9 By-law In-Force Date

A C.B.C. by-law comes into force on the day it is passed, or the day specified in the by-law, whichever is later.

6.3 Recommendations

It is recommended that Council:

"Adopt the C.B.C. approach to calculate the charges on a uniform City-wide basis;"

"Approve the capital project listing set out in Chapter 4 of the C.B.C. Strategy dated June 2, 2022, subject to further annual review during the capital budget process;"

"Create a special reserve fund account which will contain all C.B.C. monies collected;"

"Approve the C.B.C. Strategy dated June 2, 2022, as amended (if applicable);"

"Determine that no further public consultation is required;" and

"Approve the C.B.C. By-law as set out in Appendix C."

Chapter 7
By-law Implementation

7. By-law Implementation

7.1 Introduction

This chapter addresses the public consultation process and by-law implementation requirements for the imposition of a C.B.C. by-law. Figure 7-1 provides an overview of the process.

7.2 Public Consultation Process

7.2.1 Required Consultation

In establishing the policy for which a C.B.C. strategy and by-law will be based; section 37 (10) of the Planning Act requires that:

> "In preparing the community benefits strategy, the municipality shall consult with such persons and public bodies as the municipality considers appropriate."

As there is no specific guidance as to which parties the municipality shall consult with, municipalities may establish their own policy for public consultation. The policy for public consultation should be designed to seek the co-operation and participation of those involved, in order to produce the most suitable policy. Municipalities may consider a public meeting, similar to that undertaken for D.C. study processes (however, this is not a mandated requirement). At a minimum, this would include a presentation to Council and the public on the findings of the C.B.C. strategy, advanced notice of the meeting, and consideration for delegations from the public.

7.2.2 Interested Parties to Consult

There are three broad groupings of the public who are generally the most concerned with municipal C.B.C. policy.

1. The first grouping is the residential development community, consisting of land developers and builders, who will typically be responsible for generating the majority of the C.B.C. revenues. Others, such as realtors, are directly impacted by C.B.C. policy. They are, therefore, potentially interested in all aspects of the charge, particularly the percentage applicable to their properties, projects to be funded by

the C.B.C. and the timing thereof, and municipal policy with respect to development agreements and in-kind contributions.

2. The second public grouping embraces the public at large and includes taxpayer coalition groups and others interested in public policy.

3. The third grouping is the non-residential mixed-use development sector, consisting of land developers and major owners or organizations with significant construction plans for mixed use developments. Also involved are organizations such as Industry Associations, the Chamber of Commerce, the Board of Trade, and the Economic Development Agencies, who are all potentially interested in municipal C.B.C. policy. Their primary concern is frequently with the percentage charge applicable to their lands, exemptions, and phase-in or capping provisions in order to moderate the impact.

As noted in Section 1.4, through the C.B.C. strategy process, the City's consultation process includes meetings with the Development Industry Liaison Group (DILG), the Development Charges Stakeholder Sub-Committee, the City's Audit, Finance and Administration (AF&A) Committee, and Council. Further, the City has provided a website through "Engage Hamilton" to provide the community with information related to the C.B.C. process.

7.3 Anticipated Impact of the Charge on Development

The establishment of sound C.B.C. policy often requires the achievement of an acceptable balance between two competing realities. The first is that increased residential development fees (such as a C.B.C.) can ultimately be expected to be recovered via higher housing prices and can impact project feasibility in some cases (e.g., rental apartments). Secondly, C.B.C.s or other municipal capital funding sources need to be obtained in order to help ensure that the necessary infrastructure and amenities are installed. The timely installation of such works is a key initiative in providing adequate service levels and in facilitating strong economic growth, investment, and wealth generation.

7.4 Implementation Requirements

7.4.1 Introduction

Once the City has calculated the charge, prepared the complete strategy, carried out the public process, and passed a new by-law, the emphasis shifts to implementation matters.

These include notices, potential appeals and complaints, in-kind contributions, and finally the collection of revenues and funding of projects.

The sections that follow provide an overview of the requirements in each case.

7.4.2 Notice of Passage

In accordance with subsection 37 (13) of the Planning Act, when a C.B.C. by-law is passed, the clerk of the municipality shall give written notice of the passing and of the last day for appealing the by-law (the day that is 40 days after the day it was passed). Such notice must be given no later than 20 days after the day the by-law is passed (i.e., as of the day of newspaper publication or the mailing of the notice).

Section 4 of O. Reg. 509/20 further defines the notice requirements which are summarized as follows:

- notice shall be given by publication in a newspaper which is (in the clerk's opinion) of sufficient circulation to give the public reasonable notice, or by personal service, fax or mail to every owner of land in the area to which the by-law relates;
- subsection 4 (2) lists the persons/organizations who must be given notice; and
- subsection 4 (5) lists the seven items that the notice must cover.

7.4.3 Appeals

Subsections 37 (13) to 37 (31) of the Planning Act set out the requirements relative to making and processing a C.B.C. by-law appeal as well as an OLT hearing in response to an appeal. Any person or organization may appeal a C.B.C. by-law to the OLT by filing a notice of appeal with the clerk of the municipality, setting out the objection to the

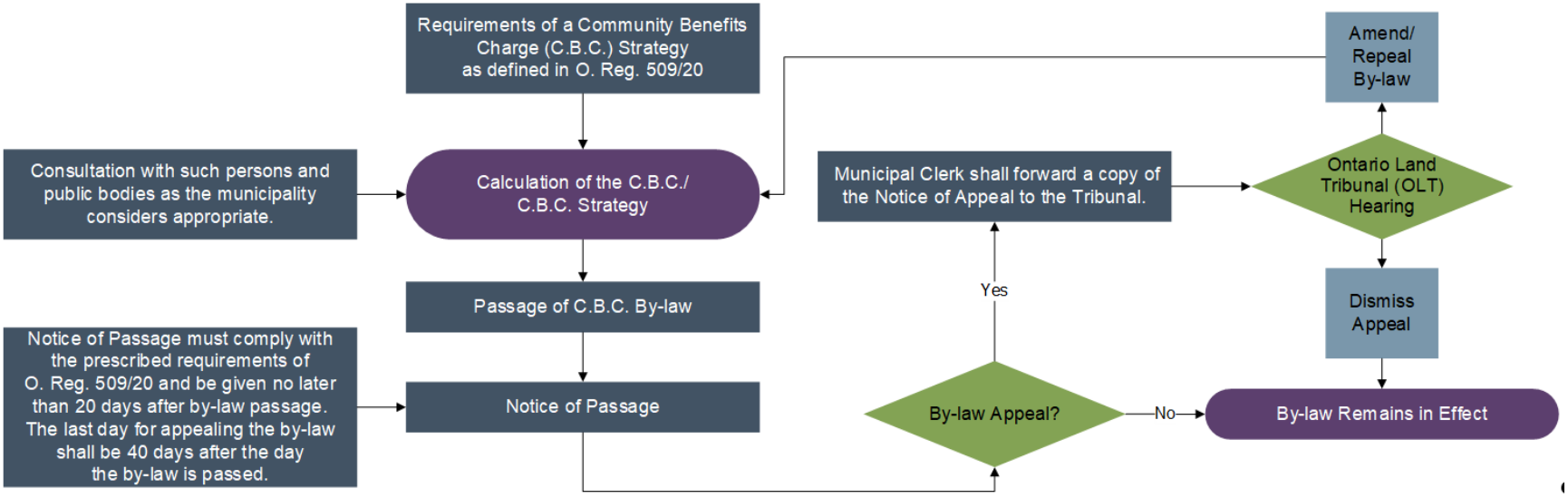
by-law and the reasons supporting the objection. This must be done by the last day for appealing the by-law, which is 40 days after the by-law is passed.

The municipality is carrying out a public consultation process, in order to address the issues that come forward as part of that process, thereby avoiding or reducing the need for an appeal to be made.

7.4.4 In-Kind Contributions

Subsections 37 (6) to 37 (8) provide the rules for in-kind contributions. An owner of land may provide the municipality facilities, services, or matters required because of development or redevelopment in the area to which the by-law applies. Prior to providing these contributions, the municipality shall advise the owner of the land of the value that will be attributed to the contributions. The value of the contributions shall be deducted from the amount the owner of the land would otherwise have to pay under the C.B.C. by-law.

Figure 7-1
The Process of Required for Passing a Community Benefits Charge By-law under the Planning Act



7.5 Ongoing Application and Collection of C.B.C. funds

7.5.1 Introductions

Once the municipality passes a C.B.C. by-law, development or redevelopment that meets the requirements of the C.B.C. by-law will pay a C.B.C. based on the value of their land. The following sections describe the overall process and discusses the approach to appraisals and use of the special account as set out in the Planning Act.

7.5.2 Overview of Process and Appraisals

Figure 7-2 provides an overview of the process for application of the C.B.C. by-law and collection of C.B.C. funds.

Once the C.B.C. by-law is in place, as development or redevelopment that meets the eligibility criteria proceeds (i.e., prior to issuance of a building permit), the municipality collects C.B.C.s based on the calculated percentage (as set out in the by-law and C.B.C. strategy) and the value of the land. The City's Corporate Real Estate Office will review the application based on the location, size of property, and density of the development, and assign an apprised value for use in calculating the C.B.C. charge on each development or redevelopment.

If the owner agrees with the appraised value, they may pay their C.B.C.s to the City which will then be deposited into the special account. If the owner does not agree, they shall pay the charge under protest and provide the City with an appraisal value within 30 days. Note, if no appraisal is received within 30 days, the payment will be deemed to have not been made under protest.

Once the protested appraisal is received by the municipality, the municipality has 45 days to provide the owner of the land with their own appraisal value. Then:

- If no appraisal is provided to the owner within 45 days, the owner's appraisal is deemed accurate and the difference in the amounts shall be refunded to the owner.
- If the City's appraisal is within 5% of the landowner's appraisal, the landowner's appraisal is deemed accurate, and the City shall refund the difference in the amounts to the owner.

- If the appraisal is more than 5% higher than the landowner's appraisal, the City shall request an appraisal be undertaken by an appraiser, selected by the landowner, from the list of approved appraisers provided by the City. This must be undertaken within 60 days. This final appraisal is deemed accurate for the purposes of calculating the applicable C.B.C.
- In regard to the last bullet, subsection 37 (42) and 37 (43) require the municipality to maintain a list of at least three persons who are not employees of the municipality or members of Council and have an agreement with the municipality to perform appraisals for the above. This list is to be maintained until the C.B.C. by-law is repealed or the day on which there is no longer any refund that could be required (whichever is later).

7.5.3 Special Reserve Fund Account

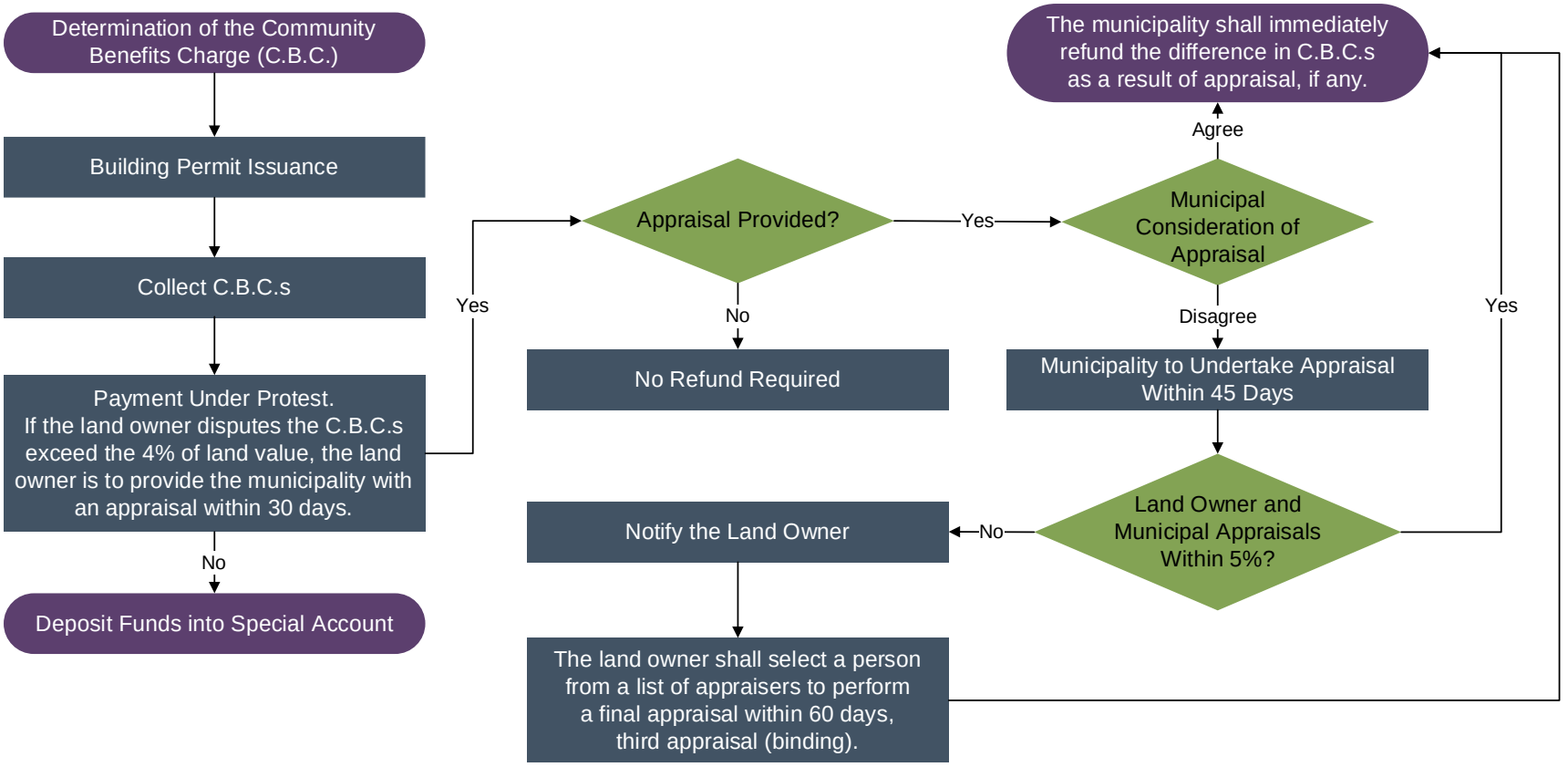
All funds collected under the C.B.C. by-law are to be deposited into a special account. Subsections 37 (45) to 37 (48) of the Planning Act outline the rules with respect to the special reserve fund account. As noted in section 6.2.7, these rules are as follows:

- All money received under a C.B.C. by-law shall be paid into a special account;
- The money in the special account may be invested in securities (as permitted under the Municipal Act) and the interest earnings shall be paid into the special account;
- In each year, a municipality shall spend or allocate at least 60 percent of the monies that are in the special account at the beginning of the year; and
- The municipality shall provide reports and information as set out in section 7 of O. Reg. 509/20
- In regard to the third bullet, it is suggested that the annual capital budget for the City directly list the works which are being undertaken and/or to which monies from this fund are being allocated toward.

As per this C.B.C. strategy, the growth-related services (as outlined in Chapter 4), form the anticipated capital needs required to service growth over the 10-year forecast period. However, other services may be considered by Council in the future and are subject to approval by resolution and inclusion in the annual budget process. Further, any additional services approved and funded from C.B.C. revenue in the future will be reported on through an annual C.B.C. reserve fund statement, which will form part of the City's overall year-end statements.

During the annual budget process, the use of C.B.C. funding will be reviewed, and the capital costs associated with each eligible service and capital project will be confirmed and identified for approval of Council.

Figure 7-2
City of Hamilton
Community Benefits Charge Application and Calculation Process



7.6 Transitional Matters

7.6.1 Existing Reserves and Reserve Funds

The Planning Act, section 37 (49) to section 37 (51) provides transitional provisions for:

1. A special account established under the previous section 37 rules; and
2. D.C. reserve funds for which services are no longer eligible (e.g., municipal parking, airport services, etc.).

If the municipality passes a C.B.C. by-law with an in-force date before September 18, 2022, the municipality shall allocate the money in the D.C. parking and airport reserve funds to the C.B.C. special account.

If the municipality does not pass a C.B.C. by-law before September 18, 2022, the parking and airport D.C. reserve funds are deemed to be general capital reserve funds for the same purpose in which the money was collected (e.g., a parking D.C. reserve fund would become a general capital reserve fund for parking services).

If a C.B.C. by-law is passed after September 18, 2022, the municipality shall allocate the money from the newly created general capital reserve funds described above, to the C.B.C. special account.

7.6.2 Credits under Section 38 of the Development Charges Act

The Planning Act (s.37 (52)) provides that, if a municipality passes a C.B.C. by-law before September 18, 2022, any credits held for services that are no longer D.C. eligible (e.g., parking services), may be used against payment of a C.B.C. by the landowner. The City does not currently hold credits related to the services which are no longer D.C. eligible, therefore, there are no adjustment against future payments of a C.B.C. to apply.

7.6.3 Continued Application of Previous Section 37 Rules

Section 37.1 of the Planning Act provides for transitional matters regarding previous section 37 rules. Any charges that are currently in place under the previous rules, may remain in place until the municipality passes a C.B.C. by-law or September 18, 2022, whichever comes first. As noted previously, the City did not impose charges under the previous rules, therefore, this section does not apply.

Appendices

Appendix A
Background Information on Residential and Non-Residential Growth Forecast

Schedule 1
City of Hamilton
Residential Growth Forecast Summary

	Year	Population (Including Census Undercount)[1]	Excluding Census Undercount			Housing Units					Persons Per Unit (P.P.U.): Total Population/ Total Households
			Population	Institutional Population	Population Excluding Institutional Population	Singles & Semi-Detached	Multiple Dwellings[2]	Apartments[3]	Other	Total Households	
Historical	*Mid 2006*	518,990	504,559	8,969	495,590	118,020	25,450	50,265	730	194,465	2.595
	Mid 2011	534,820	519,949	10,309	509,640	124,433	27,760	50,800	813	203,806	2.551
	Mid 2016	552,270	536,917	8,982	527,935	127,705	31,405	51,680	810	211,600	2.537
Forecast	*Mid 2022*	593,270	576,774	10,032	566,742	131,610	37,496	58,063	810	227,979	2.530
	Mid 2032	660,230	641,875	11,197	630,678	137,583	44,308	78,998	810	261,699	2.453
Incremental	**Mid 2006 - Mid 2011**	**15,830**	**15,390**	**1,340**	**14,050**	**6,413**	**2,310**	**535**	**83**	**9,341**	
	Mid 2011 - Mid 2016	**17,450**	**16,968**	**-1,327**	**18,295**	**3,272**	**3,645**	**880**	**-3**	**7,794**	
	Mid 2016 - Mid 2022	**41,000**	**39,857**	**1,050**	**38,807**	**3,905**	**6,091**	**6,383**	**0**	**16,379**	
	Mid 2022 - Mid 2032	**66,960**	**65,101**	**1,165**	**63,936**	**5,973**	**6,812**	**20,935**	**0**	**33,720**	

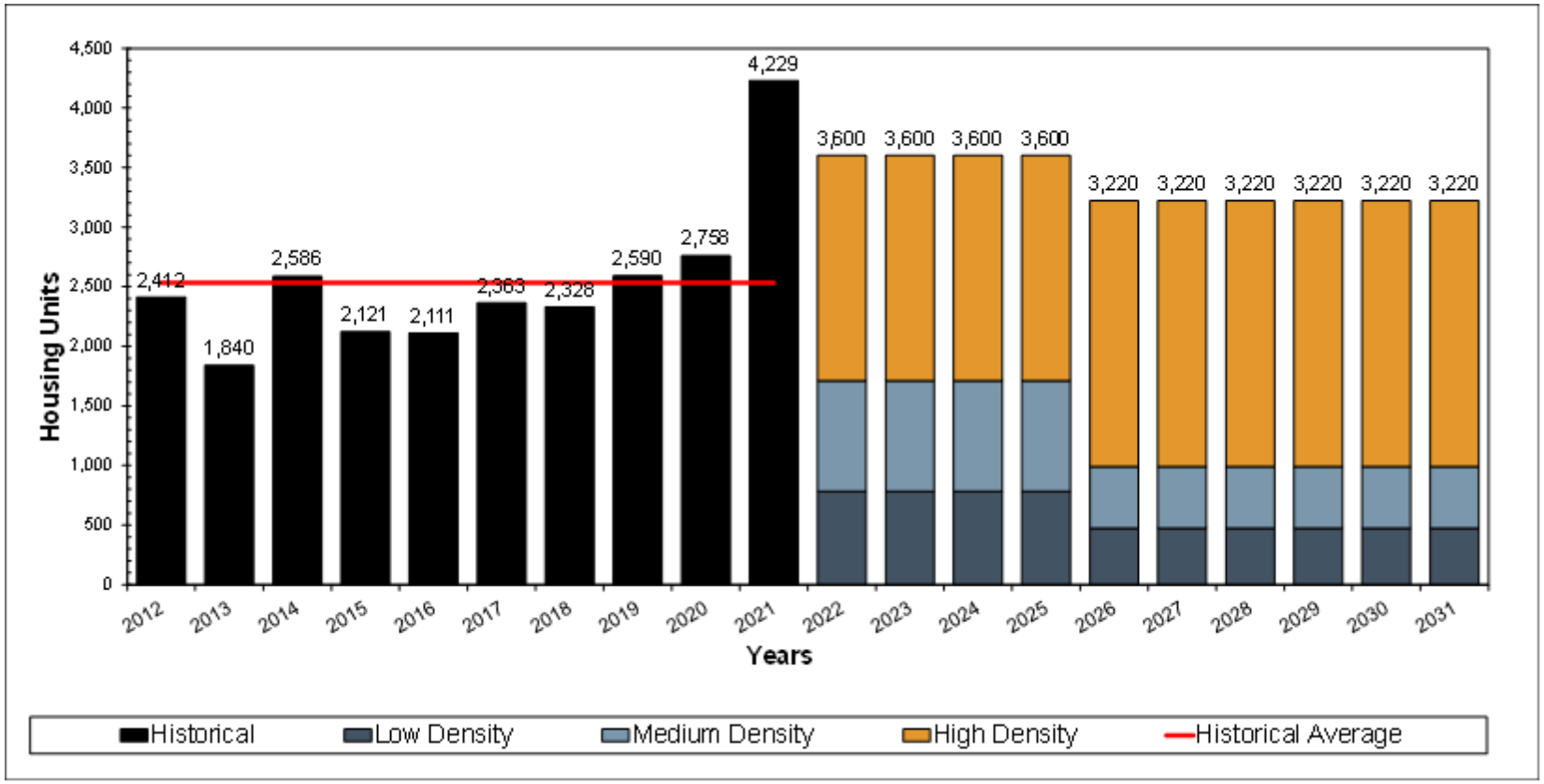
Source: Derived from City of Hamilton No Urban Boundary Expansion Scenario (Septemeber, 2021) forecast for the City of Hamilton and discussions with municipal staff regarding servicing and land supply by Watson & Associates Economists Ltd., 2022.

[1] Census undercount estimated at approximately 2.9%. Note: Population including the undercount has been rounded.

[2] Includes townhouses and apartments in duplexes.

[3] Includes bachelor, 1-bedroom and 2-bedroom+ apartments.

Figure A-1
City of Hamilton
Annual Housing Forecast [1]



Source: Historical housing activity derived from City of Hamilton building permit data, 2012 to 2021.

[1] Growth forecast represents calendar year.

Schedule 2
City of Hamilton
Estimate of the Anticipated Amount, Type and Location of Residential Development for Which Community Benefits Charges Can Be Imposed

Development Location	Timing	Single & Semi-Detached	Multiples[1]	Apartments[2]			Total Residential Units	Gross Population In New Units	Existing Unit Population Change	Net Population Increase, Excluding Institutional	Institutional Population	Net Population Including Institutional
				Units in C.B.C. Ineligible	Units in C.B.C. Eligible	Total Apartment Units						
Ancaster	2022 - 2032	656	566	471	0	471	1,693	4,309	(481)	3,828	88	3,916
Dundas	2022 - 2032	46	61	0	253	253	360	711	(288)	423	53	476
Flamborough	2022 - 2032	854	975	2,646	307	2,953	4,782	9,988	(506)	9,482	93	9,575
Sub-Total Ancaster, Dundas & Flamborough	**2022 - 2037**	**1,556**	**1,602**	**3,117**	**560**	**3,677**	**6,835**	**15,008**	**(1,275)**	**13,733**	**234**	**13,967**
Glanbrook	2022 - 2032	2,030	1,749	197	0	197	3,976	11,267	(354)	10,913	65	10,978
Stoney Creek	2022 - 2032	843	1,658	1,534	2,837	4,371	6,872	13,862	(824)	13,038	151	13,189
Upper Hamilton	2022 - 2032	1,230	1,188	1,890	3,889	5,779	8,197	16,375	(1,817)	14,558	332	14,890
Sub-Total Glanbrook, Stoney Creek, & Upper Hamilton	**2022 - 2032**	**4,103**	**4,595**	**3,621**	**6,726**	**10,347**	**19,045**	**41,504**	**(2,995)**	**38,509**	**548**	**39,057**
Lower Hamilton (inside Downtown Secondary Plan)	2022 - 2032	2	3	14	3,235	3,249	3,254	5,323	(577)	4,746	23	4,769
Lower Hamilton (Outside Downtown Secondary Plan)	2022 - 2032	312	612	2,652	1,010	3,662	4,586	8,467	(1,519)	6,948	360	7,308
Sub-Total Lower Hamilton	**2022 - 2032**	**314**	**615**	**2,666**	**4,245**	**6,911**	**7,840**	**13,790**	**(2,096)**	**11,694**	**383**	**12,077**
City of Hamilton	**2022 - 2032**	**5,973**	**6,812**	**9,404**	**11,531**	**20,935**	**33,720**	**70,302**	**-6,366**	**63,936**	**1,165**	**65,101**

Source: Derived from City of Hamilton No Urban Boundary Expansion Scenario (Septemeber, 2021) forecast for the City of Hamilton and discussions with municipal staff regarding servicing and land supply by Watson & Associates Economists Ltd., 2022.

[1] Includes townhouses and apartments in duplexes.

[2] Includes accessory apartments, bachelor, 1-bedroom and 2-bedroom+ apartments.

Note: Numbers may not add to totals due to rounding.

Schedule 3
City of Hamilton
Current Year Growth Forecast
Mid 2016 to Mid 2022

			Population
Mid 2016 Population			536,917
Occupants of New Housing Units, Mid 2016 to Mid 2022	*Units (2)*	16,379	
	multiplied by P.P.U. (3)	2.385	
	gross population increase	39,061	39,061
Occupants of New Equivalent Institutional Units, Mid 2016 to Mid 2022	*Units*	955	
	multiplied by P.P.U. (3)	1.100	
	gross population increase	1,050	1,050
Decline in Housing Unit Occupancy, Mid 2016 to Mid 2022	*Units (4)*	211,600	
	multiplied by P.P.U. decline rate (5)	-0.001	
	total decline in population	-254	-254
Population Estimate to Mid 2022			576,774
Net Population Increase, Mid 2016 to Mid 2022			*39,857*

(1) 2016 population based on Statistics Canada Census unadjusted for Census undercount.

(2) Estimated residential units constructed, Mid-2016 to the beginning of the growth period assuming a six-month lag between construction and occupancy.

(3) Average number of persons per unit (P.P.U.) is assumed to be:

Structural Type	Persons Per Unit[1] (P.P.U.)	% Distribution of Estimated Units[2]	Weighted Persons Per Unit Average
Singles & Semi Detached	3.455	24%	0.824
Multiples (6)	2.518	37%	0.936
Apartments (7)	1.604	39%	0.625
Total		100%	2.385

[1] Based on 2016 Census custom database

[2] Based on Building permit/completion activity

(4) 2016 households taken from Statistics Canada Census.

(5) Decline occurs due to aging of the population and family life cycle changes, lower fertility rates and changing economic conditions.

(6) Includes townhouses and apartments in duplexes.

(7) Includes bachelor, 1-bedroom and 2-bedroom+ apartments.

Note: Numbers may not add to totals due to rounding.

Schedule 4
City of Hamilton
Ten Year Growth Forecast
Mid 2022 to Mid 2032

			Population
Mid 2022 Population			576,774
Occupants of New Housing Units, Mid 2022 to Mid 2032	*Units (2)*	33,720	
	multiplied by P.P.U. (3)	2.085	
	gross population increase	70,302	70,302
Occupants of New Equivalent Institutional Units, Mid 2022 to Mid 2032	*Units*	1,059	
	multiplied by P.P.U. (3)	1.100	
	gross population increase	1,165	1,165
Decline in Housing Unit Occupancy, Mid 2022 to Mid 2032	*Units (4)*	227,979	
	multiplied by P.P.U. decline rate (5)	-0.028	
	total decline in population	-6,366	-6,366
Population Estimate to Mid 2032			641,875
Net Population Increase, Mid 2022 to Mid 2032			*65,101*

(1) Mid 2022 Population based on:

2016 Population (536,917) + Mid 2016 to Mid 2022 estimated housing units to beginning of forecast period (16,379 x 2.385 = 39,061) + (955 x 1.1 = 1,050) + (211,600 x -0.001 = -254) = 576,774

(2) Based upon forecast building permits/completions assuming a lag between construction and occupancy.

(3) Average number of persons per unit (P.P.U.) is assumed to be:

Structural Type	Persons Per Unit[1] (P.P.U.)	% Distribution of Estimated Units[2]	Weighted Persons Per Unit Average
Singles & Semi Detached	3.381	18%	0.599
Multiples (6)	2.334	20%	0.472
Apartments (7)	1.634	62%	1.014
one bedroom or less	1.294		
two bedrooms or more	1.914		
Total		100%	2.085

[1] Persons per unit based on adjusted Statistics Canada Custom 2016 Census database.

[2] Forecast unit mix based upon historical trends and housing units in the development process.

(4) Mid 2022 households based upon 2016 Census (211,600 units) + Mid 2016 to Mid 2022 unit estimate (16,379 units) = 227,979 units.

(5) Decline occurs due to aging of the population and family life cycle changes, lower fertility rates and changing economic conditions.

(6) Includes townhouses and apartments in duplexes.

(7) Includes bachelor, 1-bedroom and 2-bedroom+ apartments.

Note: Numbers may not add to totals due to rounding.

Schedule 5
City of Hamilton
Summary of C.B.C Eligible Units in the Development Approvals Process

Development Location	Stage of Development Approvals Process			
	Registered	Draft Approved	Pending	Total
Ancaster	0	0	0	0
Dundas	0	132	121	253
Flamborough	0	233	74	307
Sub-Total Ancaster, Dundas & Flamborough	**0**	**365**	**195**	**560**
% Breakdown	**0%**	**65%**	**35%**	**100%**
Glanbrook	0	0	0	0
Stoney Creek	1,023	367	2,240	3,630
Upper Hamilton	0	1,462	2,427	3,889
Sub-Total Glanbrook, Stoney Creek, & Upper Ha	**1,023**	**1,829**	**4,667**	**7,519**
% Breakdown	**14%**	**24%**	**62%**	**100%**
Lower Hamilton	**0**	**1,689**	**2,556**	**4,245**
% Breakdown	**0%**	**40%**	**60%**	**100%**
City of Hamilton Total	**1,023**	**3,883**	**7,418**	**12,324**
% Breakdown	**8%**	**32%**	**60%**	**100%**

Source: Derived from data provided by the City of Hamilton by Watson & Associates Economists Ltd.

Schedule 6
City of Hamilton
Historical Residential Building Permits
Years 2012 to 2021

Year	Residential Building Permits			
	Singles & Semi Detached	Multiples[1]	Apartments[2]	Total
2012	1,329	704	379	2,412
2013	1,102	532	206	1,840
2014	933	767	886	2,586
2015	1,037	548	536	2,121
2016	895	930	286	2,111
Sub-total	5,296	3,481	2,293	11,070
Average (2012 - 2016)	***1,059***	***696***	***459***	***2,214***
% Breakdown	47.8%	31.4%	20.7%	100.0%
2017	621	990	752	2,363
2018	515	880	933	2,328
2019	723	960	907	2,590
2020	618	928	1,212	2,758
2021	533	1,403	2,293	4,229
Sub-total	3,010	5,161	6,097	14,268
Average (2017 - 2021)	***602***	***1,032***	***1,219***	***2,854***
% Breakdown	21.1%	36.2%	42.7%	100.0%
2012 - 2021 Total	8,306	8,642	8,390	25,338
Average	***831***	***864***	***839***	***2,534***
% Breakdown	32.8%	34.1%	33.1%	100.0%

Source: Historical housing activity derived from City of Hamilton building permit data, 2012 to 2021.

[1] Includes townhouses and apartments in duplexes.

[2] Includes bachelor, 1 bedroom and 2 bedroom+ apartments.

Schedule 7
City of Hamilton
Person Per Unit by Age and Type of Dwelling
(2016 Census)

Dwelling	< 1 BR	1 BR	2 BR	3/4 BR	5+ BR	Total	15 Year Average	15 Year Average Adjusted[3]
1-5	-	-	1.980	3.439	5.103	**3.455**		
6-10	-	-	1.973	3.424	4.983	**3.474**		
11-15	-	-	1.800	3.345	4.601	**3.403**	3.444	3.381
16-20	-	-	1.833	3.247	4.695	**3.288**		
20-25	-	-	2.017	3.275	4.426	**3.328**		
25-35	-	1.571	1.907	2.939	4.087	**3.009**		
35+	-	1.508	1.874	2.663	3.724	**2.572**		
Total	**2.000**	**1.549**	**1.878**	**2.876**	**4.082**	**2.821**		

Age of	Multiples[1]							
Dwelling	< 1 BR	1 BR	2 BR	3/4 BR	5+ BR	Total	15 Year Average	15 Year Average Adjusted[3]
1-5	-	1.459	1.954	2.682	-	**2.518**		
6-10	-	1.364	1.818	2.682	-	**2.497**		
11-15	-	1.870	1.841	2.615	-	**2.366**	2.460	2.334
16-20	-	1.500	1.808	2.723	-	**2.370**		
20-25	-	1.647	1.779	2.908	-	**2.648**		
25-35	-	1.314	1.874	2.916	4.053	**2.686**		
35+	-	1.288	2.020	2.847	4.045	**2.527**		
Total	**1.143**	**1.361**	**1.921**	**2.795**	**4.059**	**2.526**		

Age of	Apartments[2]							
Dwelling	< 1 BR	1 BR	2 BR	3/4 BR	5+ BR	Total	15 Year Average	15 Year Average Adjusted[3]
1-5	-	1.244	1.725	-	-	**1.604**		
6-10	-	1.210	1.710	-	-	**1.512**		
11-15	-	1.406	1.837	-	-	**1.744**	1.620	1.634
16-20	-	1.350	1.964	3.037	-	**1.790**		
20-25	-	1.401	2.052	3.960	-	**1.838**		
25-35	1.056	1.268	1.962	2.793	-	**1.688**		
35+	1.068	1.234	1.982	2.927	3.000	**1.672**		
Total	**1.143**	**1.249**	**1.969**	**2.952**	**2.816**	**1.681**		

Age of	All Density Types					
Dwelling	< 1 BR	1 BR	2 BR	3/4 BR	5+ BR	Total
1-5	-	1.288	1.907	3.177	4.951	**2.951**
6-10	-	1.274	1.824	3.187	4.857	**3.017**
11-15	-	1.535	1.837	3.171	4.619	**2.988**
16-20	-	1.403	1.880	3.127	4.678	**2.844**
20-25	-	1.438	1.970	3.179	4.370	**2.881**
25-35	1.333	1.280	1.932	2.931	4.082	**2.680**
35+	1.113	1.259	1.939	2.696	3.733	**2.297**
Total	**1.254**	**1.278**	**1.929**	**2.864**	**4.056**	**2.495**

[1] Includes townhouses and apartments in duplexes.

[2] Includes bachelor, 1 bedroom and 2 bedroom+ apartments.

[3] Adjusted based on 2001-2016 historical trends.

Note: Does not include Statistics Canada data classified as 'Other'

P.P.U. Not calculated for samples less than or equal to 50 dwelling units, and does not include institutional population.

Schedule 8
City of Hamilton
Employment Forecast, Mid-2022 to Mid-2032

Period	Population	Activity Rate								Employment								
		Primary	Work at Home	Industrial	Commercial/ Population Related	Institutional	Total	N.F.P.O.W.[1]	Total Including N.F.P.O.W.	Primary	Work at Home	Industrial	Commercial/ Population Related	Institutional	Total	N.F.P.O.W.[1]	Total Employment (Including N.F.P.O.W.)	Total (Excluding Work at Home and N.F.P.O.W.)
Mid 2016	536,917	0.3%	2.9%	8.9%	13.8%	11.9%	37.9%	5.4%	43.3%	1,845	15,805	47,760	74,260	63,665	203,335	29,160	232,495	187,530
Mid 2022	576,774	0.3%	3.0%	8.7%	13.1%	11.1%	36.2%	5.7%	41.9%	1,845	17,058	50,319	75,600	64,070	208,892	32,913	241,805	191,834
Mid 2032	641,875	0.3%	2.9%	8.9%	14.0%	11.0%	37.1%	5.7%	42.8%	1,868	18,585	57,189	89,888	70,393	237,923	36,499	274,422	219,338
Incremental Change																		
Mid 2016 - Mid 2022	39,857	0.0%	0.0%	-0.2%	-0.7%	-0.7%	-1.7%	0.3%	-1.4%	0	1,253	2,559	1,340	405	5,557	3,753	9,310	4,304
Mid 2022 - Mid 2032	65,101	0.0%	-0.1%	0.2%	0.9%	-0.1%	0.8%	0.0%	0.8%	23	1,527	6,870	14,288	6,323	29,031	3,586	32,617	27,504
Annual Average																		
Mid 2016 - Mid 2022	6,643	0.0%	0.0%	0.0%	-0.1%	-0.1%	-0.3%	0.0%	-0.2%	0	209	427	223	68	926	626	1,552	717
Mid 2022 - Mid 2032	6,510	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	0.0%	0.1%	2	153	687	1,429	632	2,903	359	3,262	2,750

Source: Derived from City of Hamilton No Urban Boundary Expansion Scenario (Septemeber, 2021) forecast for the City of Hamilton and discussions with municipal staff regarding servicing and land supply by Watson & Associates Economists Ltd., 2022.

[1] Statistics Canada defines no fixed place of work (N.F.P.O.W.) employees as "persons who do not go from home to the same work place location at the beginning of each shift". Such persons include building and landscape contractors, travelling salespersons, independent truck drivers, etc.

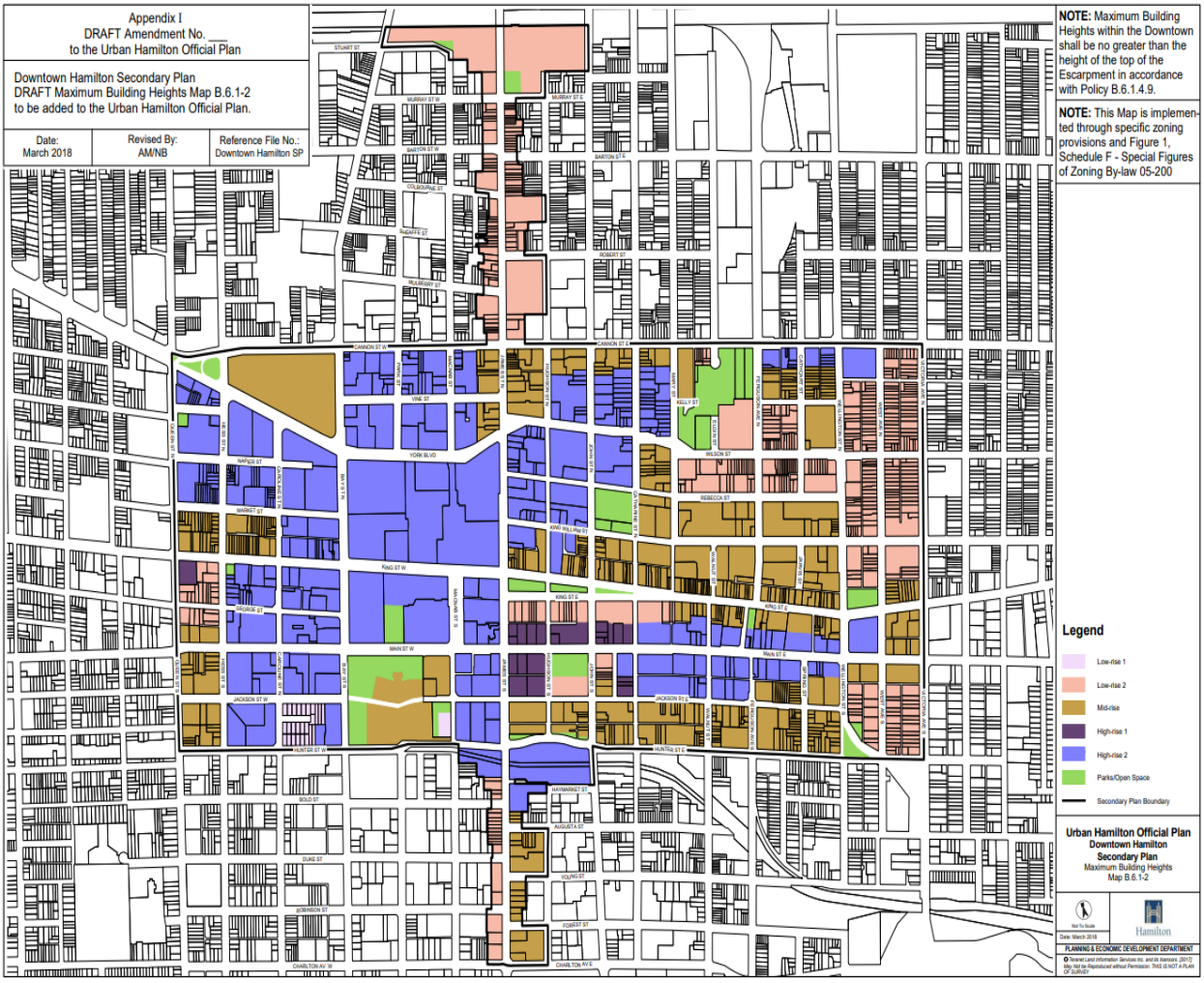
Appendix B
Land Valuation Mapping

Appendix B: Land Valuation Mapping

The land valuation analysis undertaken by the City's Corporate Real Estate Office, has established areas and sub-areas which provide similar land values. This information was detailed in Chapter 2. The following maps provide a visual representation of the areas defined by the land appraiser.

Map B-1
Land Valuation Areas

Map B-2
Downtown Secondary Plan Area



Appendix C
Proposed C.B.C. By-law

To be Provided Under Separate Cover

CITY OF HAMILTON
RESERVE POLICIES

DEPARTMENT/DIV. RESPONSIBLE: CORPORATE SERVICES – FPAP		POLICY NO: RESCAP-XXXX
DATE APPROVED:	LAST REVISION DATE:	REVIEW DATE:
SUBJECT: CONSOLIDATED RESERVE POLICY BY RESERVE		RESERVE: Community Benefits Charge Reserve Fund

Purpose:

The Community Benefits Charge Reserve Fund (CBC Reserve Fund) - All funds collected under the CBC By-law are to be deposited into a special Reserve Fund and used solely for growth capital projects eligible under the CBC Strategy. Reports and information as set out in section 7 of O. Reg. 509/20 outlining balances and use of funds must be adhered to.

Authorization:

That all transfers from the CBC Reserve Fund be approved by City Council either by a budget submission by a separate Council report or by a Council motion.

Source of Funding:

CBCs are collected from developers undertaking eligible development and redevelopment in the city of Hamilton based on a percentage of land value the day before a building permit is issued in accordance with the CBC Bylaw and Strategy.

Application of Funds:

Funds and interest collected in the CBC Reserve Fund are to be used solely for growth capital projects eligible under the CBC Strategy. A municipality must spend or allocate at least 60% of the monies that are in the special account at the beginning of the year.

Target Reserve Level and Ceiling: N/A

Borrowing from Reserve: N/A

Duration: Ongoing

Interest Bearing: Yes

Separate Bank Account: No

CITY OF HAMILTON
RESERVE POLICIES

DEPARTMENT/DIV. RESPONSIBLE: CORPORATE SERVICES – FPAP		POLICY NO: RESCAP-XXXX
DATE APPROVED:	LAST REVISION DATE:	REVIEW DATE:
SUBJECT: CONSOLIDATED RESERVE POLICY BY RESERVE		RESERVE: Development Charges – Community Benefits Charge Transition Reserve Fund

Purpose:

As of September 18, 2022, changes to the *Development Charges Act* have disallowed a municipality from collecting Development Charges for Airport or Parking Services. Funds currently in these respective DC Reserve Funds will be transferred to the Development Charges-Community Benefits Charge Transition Reserve Fund to be used for these services in future capital projects.

Authorization:

That all transfers from the CBC Reserve Fund be approved by City Council either by a budget submission by a separate Council report or by a Council motion.

Source of Funding:

Funds transferred from the Airport and Parking DC Reserve Funds will be transferred to this new Reserve Fund.

Application of Funds:

Funds and interest collected in the CBC Reserve Fund are to be used solely for eligible Airport and Parking growth projects no longer eligible for DC's.

Target Reserve Level and Ceiling: N/A

Borrowing from Reserve: N/A

Duration: Once the Reserve Funds reach a zero balance, it must be closed.

Interest Bearing: Yes

Separate Bank Account: No

EMERGENCY & COMMUNITY SERVICES COMMITTEE REPORT 22-010

1:30 p.m.
Thursday, June 16, 2022
Room 264
Hamilton City Hall
71 Main Street West

Present: Councillors B. Clark (Chair), N. Nann and E. Pauls

Regrets: Councillors T. Jackson, S. Merulla and T. Whitehead – Personal

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THE EMERGENCY & COMMUNITY SERVICES COMMITTEE PRESENTS REPORT 22-010 AND RESPECTFULLY RECOMMENDS:

1. Hamilton Public Library and City of Hamilton Operating Agreement at Valley Park Community Centre Site (HSC22036) (Ward 9) (Item 7.1)

(a) That the City enter into an Operating Agreement with the Hamilton Public Library for the operation of a library branch at the Valley Park Community Centre; and,

(b) That the General Manager of the Healthy and Safe Communities Department or their designate be authorized and directed to execute the Operating Agreement between the City of Hamilton and the Hamilton Public Library for dedicated space at Valley Park Community Centre, and any further agreements or documents, as may be required for this project, in a form satisfactory to the City Solicitor.

2. Hamilton's Plan for an Age-Friendly Community, 2021 Community Progress Report and Hamilton Council on Aging Contract Renewal (HSC22031) (City Wide) (Item 8.1)

(a) That the 2021 Age-Friendly Community Progress Report, attached as Appendix “A” to Emergency and Community Services Committee Report 22-010, be received;

(b) That the Hamilton Council on Aging’s annual contract be increased by $10,000 to a total of $40,000 on an annual basis for a term of five years to cover backbone supports associated with implementing the Age Friendly Plan and funded first from divisional surplus, then departmental surplus in 2022 and referred to the 2023 operating budget process; and,

(c) That the single source procurement to the Hamilton Council on Aging, pursuant to Procurement Policy 11 – Non-competitive Procurements, for the work to implement and provide backbone supports for the Age Friendly Plan be approved for a term of five years.

3. Authority to Allocate Unutilized Poverty Reduction Investment Plan Funds on New Affordable Housing Builds (HSC22027) (City Wide) (Item 10.1)

(a) That all the remaining and uncommitted funds in the New Affordable Rental Housing Construction Projects, Project ID 6731741609, in the amount of approximately $680,000 be utilized for the creation of new affordable housing units including but not limited to payments for pre-development costs, payment of City development charge exemptions and construction (capital) costs for non-profit organisations; and,

(b) That the General Manager of the Healthy and Safe Communities Department, or their designate, be directed and authorized to enter into, execute and administer all agreements, documents and ancillary agreements for eligible projects costs for the purpose of creating new affordable housing opportunities on such terms and conditions satisfactory to the General Manager of the Healthy and Safe Communities Department or their designate and in a form satisfactory to the City Solicitor.

4. Reaching Home and Social Services Relief Fund Phase 5 Funding Update (HSC22032) (City Wide) (Item 10.2)

That Report HSC22032, respecting Reaching Home and Social Services Relief Fund Phase 5 Funding Update (City Wide), be received.

5. Emergency Shelter Overflow for Families Update (HSC22039) (City Wide) (Added Item 10.3)

That Report HSC22039, respecting Emergency Shelter Overflow for Families Update (City Wide), be received.

6. Wentworth Lodge Heritage Trust Fund Sub-Committee Report 22-001 (Added Item 10.4)

(a) Wentworth Lodge Heritage Trust Fund - Financial Status -2022 (HSC22023) (Ward 13)

(i) That $259,170 of the total funds payable from the settlement of the Wentworth Lodge Guaranteed Investment Certificates (GIC) portfolio in the amount of $287,977, be reinvested in a GIC portfolio under similar terms as previously at one, two, three, four and five years; and,

(ii) That $28,807 of the total funds payable from the settlement of the Wentworth Lodge Guaranteed Investment Certificates (GIC) portfolio in the amount of $287,977, be left in the Wentworth Lodge

Heritage Trust bank account to be used at the discretion of the Wentworth Lodge Heritage Trust Fund Sub-Committee to support resident activities and Wentworth Lodge enhancements which support resident quality of life.

(b) Wentworth Lodge Enhancements to the Courtyard -2022 (HSC22024) (Ward 13) (Item 10.2)

(i) That the Wentworth Lodge Heritage Trust Fund Sub-Committee authorize the use of a maximum of $10,000 from the Wentworth Lodge Heritage Trust Fund bank account in 2022, to purchase equipment, materials and supplies to enhance the Courtyards and the resident activities that are hosted there, with oversight and approval of the Senior Administrator, Long Term Care.

FOR INFORMATION:

(a) APPROVAL OF AGENDA (Item 2)

The Committee Clerk advised the following changes to the agenda:

7. CONSENT ITEMS

7.2. Seniors Advisory Committee Minutes – May 6, 2022

10. DISCUSSION ITEMS

10.3. Emergency Shelter Overflow for Families Update (HSC22039) (City Wide)

10.4 Wentworth Lodge Heritage Trust Fund Sub-Committee Report 22-001

The agenda for the June 16, 2022 Emergency and Community Services Committee meeting was approved, as amended.

(b) DECLARATIONS OF INTEREST (Item 3)

There were no declarations of interest.

(c) APPROVAL OF MINUTES OF PREVIOUS MEETING (Item 4)

The Minutes of the June 2, 2022 meeting of the Emergency and Community Services Committee, were approved, as presented.

(d) CONSENT ITEMS (Item 7)

(i) Seniors Advisory Committee Minutes – May 6, 2022 (Added Item 7.2)

The May 6, 2022 Seniors Advisory Committee Minutes, were received:

(e) STAFF PRESENTATIONS (Item 8)

(i) Hamilton's Plan for an Age-Friendly Community, 2021 Community Progress Report and Hamilton Council on Aging Contract Renewal (HSC22031) (City Wide) (Item 8.1)

Lisa Maychak, Project Manager, Age-Friendly City, Penelope Petrie, Chair, Seniors Advisory Committee, and Julie Richardson, Chair, Age Friendly Hamilton, Collaborative Governance Committee, Hamilton Council on Aging, addressed the Committee, respecting Hamilton's Plan for an Age-Friendly Community, 2021 Community Progress Report and Hamilton Council on Aging Contract Renewal, with the aid of a presentation.

The presentation from Lisa Maychak, Project Manager, Age-Friendly City, Penelope Petrie, Chair, Seniors Advisory Committee, and Julie Richardson, Chair, Age Friendly Hamilton, Collaborative Governance Committee, Hamilton Council on Aging, respecting Hamilton's Plan for an Age-Friendly Community, 2021 Community Progress Report and Hamilton Council on Aging Contract Renewal, was received.

For further disposition of this matter, refer to Item 2.

(f) ADJOURNMENT (Item 15)

There being no further business, the Emergency and Community Services Committee was adjourned at 2:27 p.m.

Respectfully submitted,

Councillor B. Clark
Chair, Emergency and Community Services Committee

Tamara Bates
Legislative Coordinator
Office of the City Clerk

2021 -2026

HAMILTON'S PLAN FOR AN AGE FRIENDLY COMMUNITY

2021 COMMUNITY PROGRESS REPORT

"An authentic age-friendly vision can only be generated and sustained by the widest possible ownership of it."

- Dr. Alex Kalache, President, ILC-Brazil

Hamilton

HCoA
Hamilton Council On Aging

Ontario

2021-2026 HAMILTON'S PLAN FOR AN AGE FRIENDLY COMMUNITY

2021 COMMUNITY PROGRESS REPORT

CONTENTS

A MESSAGE FROM THE CO-CHAIRS, AGE-FRIENDLY COLLABORATIVE COMMITTEE

Hamilton's 2021-2026 Plan for an Age-Friendly Community was completed and launched early in 2021, in the midst of the Covid-19 global pandemic. At that time, we were aware of the economic and social disruptions resulting from the pandemic and we experienced the impact on our community. What we couldn't have foreseen is that, one year later, the pandemic would continue to affect our lives in many different ways.

Despite disruptions resulting from the pandemic, we heard countless stories about resilience, innovative shifts in the way services and programs are offered, and a continued commitment to ensure that Hamilton remains 'the best place to raise a child and to age successfully'.

By leveraging the power of technology and, through creatively adapting our processes, the Age-Friendly Collaborative Committee (AFCC) has successfully navigated year one of implementing Hamilton's Plan for an Age-Friendly Community. We are excited to present our 2021 Community Progress Report to you!

In this report, you will read about age-friendly practices introduced in 2021 both by organizations whose primary role is serving older adults, as well as organizations who serve a broader audience. In keeping with our commitment to integrate a dementia-friendly approach into the age-friendly plan, we are encouraged that many of the age-friendly practices shared with us include opportunities for older adults living with dementia.

While we pause to celebrate our successes, we acknowledge that there is still much work to be done in the Hamilton community. We continue to expand our inclusion lens as we seek more opportunities for celebrating diversity, whether that be age, race, ethnicity, gender and/or sexual orientation.

We want to thank everyone who contributed stories about their age-friendly practices for the progress report. Our strength as a community is contingent on sharing resources, ideas and collaborating with partners and community stakeholders. This is how we will continue to build a community in which every person is included and has opportunities to both give and receive support.

We would also like to thank the members of the AFCC, and our partners at the City of Hamilton, the Hamilton Council on Aging and the Seniors Advisory Committee, an advisory committee of Hamilton City Council, for their continued support.

With our best wishes,

Lori Letts
Co-Chair, Age-Friendly Hamilton
Collaborative Governance Committee

Julie Richardson
Co-Chair, Age-Friendly Hamilton
Collaborative Governance Committee

BACKGROUND

During the spring of 2021, Hamilton's 2021-2026 Plan for an Age-Friendly Community[1] was launched. The plan includes 7 strategic goals, 21 objectives, 61 recommendations and provides a valuable roadmap to guide our ongoing age-friendly initiatives.

The following 8 principles[2] established a solid base for developing the plan and offer a lens through which to evaluate Hamilton's age-friendly practices[3].

Principles

1. **Creating supportive and enabling environments** where hospitality is practiced,and accessibility is the norm.
2. **Optimizing opportunities for health, participation, security and life-long learning** across the life cycle. Health refers to physical, mental, social and spiritual well-being.
3. **Equity, inclusion and respect;** recognizing the diversity of older adults including their wide range of interests, cultural practices, capacities and resources while reducing barriers to social connectivity that result from differences.
4. **Building a dementia-friendly community** in which dementia-friendly environments, opportunities and supports for individuals living with dementia and their care partners are understood and fully integrated into the overall age-friendly plan.
5. An informed community that practices **accountability and transparency** while facilitating personal, social and system **connectivity.**
6. **Community and neighbourhood** capacity building.
7. **Effective public service,** delivered with integrity, that is adaptive, dynamic and uses an equity and inclusion lens and that is responsive to individual and collective needs as well as emerging opportunities while delivering value for money spent.
8. **Community engagement**, where people have meaningful opportunities to have a say in designing services and influencing decisions that affect them.

[1] You can access the plan at hamiltoncoa.com

[2] The 8 principles and 7 strategic goals are included in the 2021 progress report to provide context for readers who may not have seen the 2021-2026 plan.

[3] Age-Friendly practices are ones that 'recognize the wide range of capacities and resources among older people; anticipate and respond flexibly to age-related needs and preferences; respect older people's decisions and lifestyle choices; reduce inequities; protect those who are most vulnerable and promote older people's inclusion in and contributions to all areas of community life'. Source: World Health Organization

In addition to the foundational principles, 7 strategic goals guided the development of the plan and the resulting objectives and recommendations. The goals included the following:

Seven strategic goals

With the overall age-friendly plan launched and the 8 principles and 7 goals as a guide, the Age-Friendly Collaborative Committee (AFCC) shifted their focus to implementation.

In preparing the 2021-2026 plan, the AFCC recognized that many organizations and stakeholders in the not-for-profit, private and public sectors, as well as individual citizens, would have much to contribute to the implementation of the recommendations. Cross sector outreach was a key consideration in the committee's outreach efforts to learn about Hamilton's age-friendly practices.

The results of year one, 2021, are the focus of the current community progress report.

IMPLEMENTATION STRATEGY

The City of Hamilton, Hamilton Council on Aging and the City of Hamilton's Seniors Advisory Committee are core partners for Hamilton's Age-Friendly Plan. In 2021, the Hamilton Council on Aging secured a one-year Ontario Inclusive Communities Grant to develop an implementation strategy. Following a governance review, the committee transitioned to a new organizational structure that enables and supports the implementation of the plan. This included the organizing of the Age-Friendly Collaborative Committee (AFCC) with 14 goal champions, two for each strategic goal. Eleven new AFCC members were recruited and oriented to the committee from various City of Hamilton departments and community organizations. We participated in the Ontario Age-Friendly Communities Outreach Program's

Pilot Workshop Series on Evaluation for Age-Friendly Community Initiatives. Additionally, an age-friendly action planning toolkit was designed in partnership with the Hamilton Social Planning and Research Council. By the end of 2021, six action and evaluation plans that aim to address key recommendations in the plan were created, with implementation activities commencing in 2022.

Ongoing engagement and shared learning opportunities are central to the implementation of Hamilton's Age-Friendly Plan. This is achieved through broader participation in committees such as the Ontario Association of Councils on Aging, the Southern Ontario Age-Friendly Network, and the Ontario Age-Friendly Communities Network Exchange.

Locally, the AFCC strives to engage non-profit/voluntary, public and private sector organizations that are contributing to making Hamilton the best place to age well and to develop an annual report that reflects progress. In December 2021, an online ***Age-Friendly Community Progress Questionnaire*** was launched to link local age-friendly practices to the 7 strategic goals within the plan and to highlight them within this report.

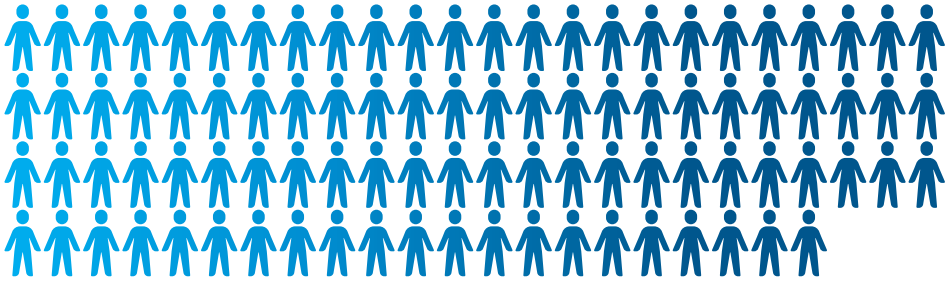
RESULTS

The results for 2021 represent promising progress in Hamilton with a number of age-friendly practices in progress and some completed and evaluated. This progress demonstrates that, despite the pandemic, organizations, groups and individuals are committed to advancing age-friendly practices in Hamilton and are prepared to make the adaptations necessary to ensure that we continue to make progress.

We begin this section by presenting quantitative information from the questionnaire responses in an infographic. It is encouraging to note the process of involving older adults in various ways in age-friendly practices.

This is followed by brief descriptions of age-friendly practices that organizations shared when completing the questionnaire as well as goal-specific activities that are being led by the AFCC goal champions. We encourage you to use the contact information provided to follow up on additional information about their age-friendly practices. Age-friendly practice descriptions are organized by the plan's 7 strategic goals.

AGE-FRIENDLY ENGAGEMENT



9360 PEOPLE POSITIVELY IMPACTED

**Each person represents 100 people.*

AGE-FRIENDLY PRACTICES

20 IN PROGRESS

15 EVALUATED

2 COMPLETED

OLDER PERSONS' INVOLVEMENT IN AGE-FRIENDLY PRACTICE[1]

50%
OLDER PEOPLE WERE INVOLVED IN THE AF PRACTICE AT ALL OR MULTIPLE STAGES

14%
Older people were not involved

18%
Older people were consulted during the planning process

18%
Older people helped to implement the AF practice

FINANCIAL CONTRIBUTIONS

TOTAL VALUE INVESTED: $2,988,122

$207,500	$2,651,122	$129,500
External Funding Contributions	Internal Funding Contributions	In-Kind Contributions

[1] 'Older persons' was self-defined by questionnaire respondents
Infographic data was collected from completed 2021 Hamilton Age-Friendly Community Progress Questionnaire submissions.

GOAL 1: Housing

INCREASE KNOWLEDGE AND AWARENESS OF HOUSING

☑ **IN PROGRESS**

To create awareness and educate Housing Services Staff and Indwell about Hamilton's Age Friendly Plan.

AFCC Goal Champions:
Marcée Lane, mgroen@indwell.ca
Kamba Ankunda, Kamba.Ankunda@hamilton.ca

HOME MANAGEMENT SUPPORT FOR SENIORS

☑ **IN PROGRESS**

City of Hamilton Home Management Workers provide 1:1 support for clients in an age-friendly manner, including providing advocacy, service navigation, and remote supports around home management needs like cleaning, budgeting, organization.

City of Hamilton Website:
www.hamilton.ca/social-services/support-programs/home-management-program

Email: homemanagement@hamilton.ca

Phone: 905-546-4804

GOAL 2
Transportation

LET'S GET DRIVING WORKSHOPS

☑ **IN PROGRESS**

To give information on a variety of topics related to driving and to allow participants to assess their driving skills.

AFCC Goal Champions:
Jeanne Mayo, agefriendly@hamiltoncoa.com
Jay Adams, jay.adams@hamilton.ca

Hamilton Council on Aging Website: www.coahamilton.ca

LET'S GET WALKING WORKSHOPS

☑ **IN PROGRESS**

To increase older adult's knowledge about how to walk safely.

AFCC Goal Champions:
Jeanne Mayo, agefriendly@hamiltoncoa.com
Jay Adams, jay.adams@hamilton.ca

Hamilton Council on Aging Website: www.coahamilton.ca

LET'S TAKE THE BUS WORKSHOPS

☑ **IN PROGRESS**

Design and testing of a workshop to introduce older adults to Hamilton's transit system including transit safety, route finding, fares, fees and payments, trip planning, boarding and riding the bus, using trans-cab and HSR myRide and accessible transportation.

Hamilton Council on Aging Website: www.coahamilton.ca

GOAL 3
Information and Communication

DEMENTIA-FRIENDLY EDUCATION - PUBLIC SERVICE SECTOR

☑ IN PROGRESS

Increase awareness of dementia in public facing staff of the City of Hamilton and provide relevant tools and resources.

AFCC Goal Champions:
Karen Robins, educationhamilton@alzhh.ca
Chris D'Agostino, cdagosti@hpl.ca

WEBSITE/BLOGS/EVENTS

☑ IN PROGRESS ☑ EVALUATED

The goal is to provide website, regular blogs and virtual events on Resilient Aging in Community of interest to older adults living in the Hamilton area.

A sample of activities includes regular blogs by various authors, an intergenerational memoir project, technology teaching for older adults and an expansion of website information related to seniors' services in Hamilton and housing alternatives for older adults.

Hamilton Aging in Community Website: www.hamiltonagingtogether.ca

An attendee at the 'A Place to Thrive' panel commented: "I was completely engaged in all aspects of the material...delivered so thoroughly. [The] insights are inspiring and [the] presentation style was motivating".

DEMENTIA-FRIENDLY EDUCATION WORKSHOPS

☑ **IN PROGRESS**

The Empowering Dementia-Friendly Communities project is a collaborative initiative, led by the Hamilton Council on Aging (HCoA) and funded by the Public Health Agency of Canada. The Dementia-Friendly Education Workshop was designed in partnership with people living with dementia. It is available to all sectors and community groups seeking more information about how to create dementia inclusive social and physical environments.

Hamilton Council on Aging Website:
www.coahamilton.ca/our-priorities/dementia-friendly-communities/

GOAL 4
Health and Community Services

INCREASE AWARENESS & ACCESS OF HAMILTON'S AGE-FRIENDLY PLAN

☑ **IN PROGRESS**

To increase system partner awareness of Hamilton's Age-Friendly Plan.

AFCC Goal Champions:
Holly Odoardi, Holly.Odoardi@hamilton.ca
Renee Guder, rguder@thrivegroup.ca

ENGAGING THE VOICE OF PERSONS LIVING WITH DEMENTIA

☑ **IN PROGRESS**

One of our organization's strategic directions is to raise awareness about dementia. We teach community providers (e.g. banks, lawyers, paramedics) how to recognize and support persons who are living with dementia. We have strengthened the inclusion of older adults living with dementia to ensure their voices help share new initiatives (e.g. new website, co-design).

Alzheimer Society of Brant, Haldimand Norfolk Hamilton Halton Website:
www.alzda.ca

DESIGNING NEW PROGRAMS USING CO-DESIGN

☑ **IN PROGRESS**

We have developed many new programs and services over the years after receiving feedback from those we serve. This time, we decided to engage persons with lived experience in the design of new initiatives. Two projects have been developed as a result: a tool for persons who are newly diagnosed with dementia (basically, a "what I wish I had known" type of guide) as well as a peer-led support group for those in the early stages of dementia. The guide will be shared with geriatricians across Hamilton and the Niagara Peninsula as a tool for both their own knowledge and to share with their clients. The peer-led support group has trained its facilitators and started in early January 2022.

Alzheimer Society of Brant, Haldimand Norfolk Hamilton Halton Website:
www.alzda.ca

GOAL 5
Social Participation: Recreation, Learning, Arts and Culture

INTRODUCTION OF VIDEO PROGRAMS

☑ **IN PROGRESS**

This City of Hamilton recreation piloted art and fitness video programs during pandemic closures. Video programs offered a good alternative for older adults who felt uncomfortable participating in person. The project included an evaluation to assess need and long-term sustainability.

City of Hamilton's Recreation Division Website: www.hamilton.ca/recreation

Feedback has been positive with accessible technology. Patrons also enjoyed being able to purchase a program with supplies they could pick up (such as art supplies) or pick the option of having their own supplies already.

FACES OF DEMENTIA AWARENESS CAMPAIGN

☑ **IN PROGRESS**

A campaign is being developed to raise awareness and promote dementia inclusive social and physical environments. The campaign was informed by persons living with dementia and features stories of people living with dementia, what they want people living with dementia and others to know, as well as information about what people can do to promote dementia-friendly communities. The campaign will target private and public sectors as well as the broader community.

Hamilton Council on Aging Website:
www.coahamilton.ca/our-priorities/dementia-friendly-communities

SENIORS CONNECT

☑ IN PROGRESS

Seniors Connect is an umbrella term that describes all forms of wellness programming offered by CityHousing. One example of Seniors Connect is Channel 399, a CCTV program that brings the outside world in for older residents. Given that most residents grew up with TV, it serves as an accessible mode of communication. CityHousing partnered with TV Tours — a company that specializes in adapting content to CCTV in older adult contexts.

City Housing implemented Seniors Connect as a pilot project in First Place, CityHousing's largest building. CityHousing installed TV screens in public spaces where Channel 399 serves as a site where both crucial information and wellness programming.

CityHousing Hamilton Website: www.hamilton.ca/cityhousing-hamilton

Residents express the immense sense of connection and engagement brought about by the videos and programming: some suggest, for example, that the travel programming brought back nice memories from when they traveled when they were younger.

SENIORS ISOLATION PROGRAM THROUGH WORKSHOPS AND CASE MANAGEMENT FOR ADULTS 55+

☑ IN PROGRESS

Goals include an increased sense of community as well as stronger relationships with family, friends and engagement with community members. Clients are able to access services and supports within their community with greater confidence and ease. Increased feelings of social inclusion and health and wellness through access to cultural and physical activities that support a high quality of life.

Wesley Urban Ministries - Seniors Isolation Program Website:
www.wesley.ca/services/newcomer-community/supports-for-seniors-and-older-adults

CYCLING WITHOUT AGE (CWA)

☑ **IN PROGRESS**

Cycling Without Age is a global initiative that provides older adults and others who cannot cycle an opportunity to enjoy a complimentary, safe ride through their neighbourhood on a trishaw (three wheeled electric bike) piloted by a trained volunteer. 2001 was the first year of operation for this Ontario CWA chapter. From August to October 2021, 19 Welcome Inn seniors enjoyed many rides along the Waterfront Trail. The CWA Hamilton program received great reviews from both older adults and the community. During the late fall, an outdoor information session was held with approximately 45 potential volunteer pilots and several suggested ideas for next season.

Website: www.cyclingwithoutage.ca/hamilton-burlington
Facebook: www.facebook.com/HBCyclingWithoutAge
Twitter: www.twitter.com/CwaHamilton

"I've lived in Hamilton for more than 50 years and I've never gone to those places," says 93-year-old Angus Martin, a retired high school teacher who's travelled the world.

INCREASED PICKLEBALL OUTDOOR COURTS

☑ **COMPLETED**

New pickleball assets/amenities were developed at the Ancaster Senior Achievement Centre with an alternative program model to support outdoor pickleball programming and access. Older adults were able to play pickleball to stay healthy and active while indoor amenities were closed due to COVID restrictions.

City of Hamilton's Recreation Division Website: www.hamilton.ca/recreation

The asset was well utilized and offered many more program opportunities for pickleball.

DUNDAS 55+ GROUP

☑ IN PROGRESS

Programs are offered for older adults to participate in exercise and to socialize with others with the objective of reducing social isolation. Adults 55+ in the Dundas community are encouraged to participate in, and contribute to, programs that promote healthy lifestyles.

Dundas 55+ Group Website: www.hamilton.ca/recreation

"I love to dance and I no longer have a partner so line dancing is ideal for me: fun and exercise!"

SENIORS CENTRE WITHOUT WALLS (SCWW)

☑ IN PROGRESS

The goal of the program was to engage the community in programs which would have been offered pre-Covid and in house. It is an over the phone program and includes newsletters for seniors who are 50+ and Indigenous. Food security and wellness supports are offered through this program.

Hamilton Regional Indian Centre Website: www.hric.ca

SENIORS CENTRE WITHOUT WALLS - PATH TO INDEPENDENT PARTICIPATION

☑ IN PROGRESS ☑ EVALUATED

The City of Hamilton's Senior Centre Without Walls (SCWW) program model is supported by the Older Adult Centres' Association of Ontario (OACAO) and is a free interactive telephone-based group activity program that connects seniors and older adults 50+ and adults with physical disabilities who find it difficult to leave their home. SCWW programs offer an inclusive, safe, inviting space to listen, learn and be heard which increases social connectedness and well-being for participants.

City of Hamilton's Recreation Division Website: www.hamilton.ca/recreation

ARTFUL MOMENTS: ARTS-EXPERIENCES FOR SPECIALIZED AUDIENCES

☑ IN PROGRESS ☑ EVALUATED

The Art Gallery of Hamilton's (AGH) Artful Moments program is specially designed to support persons with dementia and their care partners in a gallery-based and virtual program of conversations about art and hands on art-making. In the past two years this program has also expanded to present customized programs for persons on the autism spectrum, those living with mental illness and other chronic conditions. The main goals are to provide meaningful engagement, validation of personhood and social connections, especially in a time of isolation. Before covid, these programs were presented in-person at the AGH, but have been offered virtually via zoom or phone-based experiences. Evaluations gathered from all programs indicate success in fostering social connections among participants, and in bringing new experiences into their daily lives at a time where in-person experiences were not possible.

Art Gallery of Hamilton Website: www.artgalleryofhamilton.com

LIFE LONG CARE

☑ IN PROGRESS

Provides community support services to urban Indigenous clients, regardless of age, who are disabled, chronically ill, frail, elderly or require acute/chronic continuum of care. Supports range from culture/inclusion to support with medical appointments. We reach out to our clients two times a week to provide conference calls to seniors who don't have Internet. We also connect elders and youth to carry on and share story telling and teachings. Among other services, we provide home visits, crisis support and hospital visits to all clients. We assist and advocate for clients that need medical assistive devices and support clients with food security and medical transportation.

Hamilton Regional Indian Centre Website: www.hric.ca

"I feel supported and I know you're there when I need someone."

HEALTH AND WELLNESS PROGRAMMING

☑ IN PROGRESS ☑ EVALUATED

YWCA Hamilton pivoted to provide online and telephone-based health and wellness programming for older adults that includes physical movement, social interaction, friendly calls, meditation and education programs. We strive to keep community members engaged and involved in programming to ensure their physical and cognitive health remain optimal. The impacts of first connecting with individuals on the phone, then by Internet live-stream programs resulted with individuals feeling less stressed, increased feelings of happiness and confidence, and improved/ maintained physical fitness levels. Many individuals had opportunities to access new programming due to the convenience of reduced program costs, reduced transportation costs/considerations and feeling safe in their homes.

YWCA Hamilton, Seniors Active Living Centres 55+ Website: www.ywcahamilton.org

OFFERED 55+ OPPORTUNITIES IN THE ABSENCE OF BOARD-RUN PROGRAMS

☑ IN PROGRESS

In the absence of the Dundas Senior Citizen club due to the pandemic, the Dundas Recreation Centre offered targeted programs to adults 55+. This practice increased social participation and access to recreation. The target initiative was a drop-in fitness program offered at a small cost where patrons could drop in on a week-to- week basis. The goal was to fill a gap in service in a way that offered little commitment should patrons begin to again feel uncomfortable with the pandemic restrictions.

City of Hamilton, Dundas Website: www.hamilton.ca/recreation

UPDATE TO RECREATION REGISTRATION

☑ **COMPLETED**

The City of Hamilton's website for the Recreation Division was redesigned along with the registration process. Previously done in person on paper sheets, COVID restrictions resulted in registration being moved online.

Recreation offered workshops and facilitated opportunities for older adults to learn how to access programs, set up an account and to register. These technical skills will help older adults in future online registration apart from recreation.

City of Hamilton's Recreation Division Website: www.hamilton.ca/recreation

Email: scww@hamilton.ca

Phone: 905-526-4084

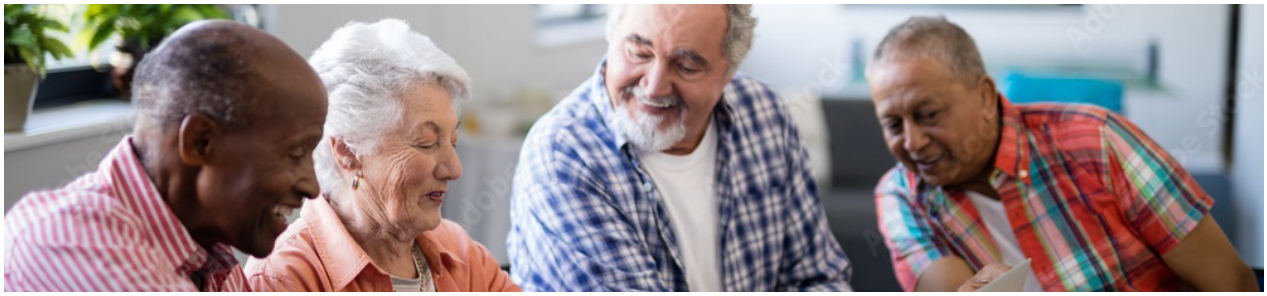
INTRODUCTION TO TECHNOLOGY PROGRAM

☑ **IN PROGRESS**

The City of Hamilton in partnership with Warden Seniors Club who received a New Horizons grant in 2020 for "Promoting Computer Literacy and Staying Connected during the COVID-19 Pandemic".

In addition to the lending program, the Club also worked with the City of Hamilton's Recreation Division to develop iPad workshops. The beginner iPad series took place over nine weeks and included topics such as navigating the home screen, turning on/off, using a touch screen, settings, and applications. The intermediate iPad series took place over four weeks and included using video conferencing programs (e.g. Zoom), navigation apps, translation apps, and movie making. Plan to finalize in 2022 with roll out as a workshop option.

City of Hamilton's Recreation Division Website: www.hamilton.ca/recreation



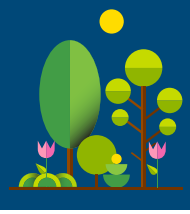
GOAL 6
Civic Engagement, Volunteerism and Employment

THE FLAMBOROUGH SENIOR EMPLOYMENT PROJECT

☑ **IN PROGRESS**

In partnership, Flamborough Connects and PATH Employment Services initiated a project that will educate seniors on job search strategies and techniques to find meaningful employment post pandemic. The project will also educate local employers on the advantages of hiring older workers. This project will both bring awareness to businesses on the benefits, experience and skills older workers bring to the workforce, and also support older workers in finding opportunities that meet their individual and financial goals.

AFCC Goal Champions:
Amelia Steinbring, Flamborough Connects, amelia@flamboroughconnects.ca
Catherine Johnston, PATH Employment, Catherine.johnston@pathemployment.com



GOAL 7
Outdoor Spaces and Buildings

WINTER WASHROOM PILOT PROJECT

☑ **IN PROGRESS**

This two-year pilot project was initiated by City Council, the feedback they received from their constituents, as well as an increase in the number of residents who were homeless.

This pilot project started in November 2021 with 16 locations (4 have portable toilets) where washrooms are kept open for the public until April. In 2022, 11 more locations will be available to the public once updates take place. Locations were determined based on high traffic areas and are available throughout Hamilton. A community survey to assess impact has been targeted for spring 2022.

City of Hamilton Website:
www.hamilton.ca/parks-recreation/parks-trails-and-beaches/park-washrooms

LESSONS LEARNED: MOVING FORWARD

The impact of the pandemic has been pervasive and far-reaching. In Hamilton, as in other communities, city staff, healthcare workers and others have been redeployed to assist with the pandemic response. Recreational facilities, schools, gyms and many small businesses have experienced unsettling periods of closing and opening, only to have to close again. Everyone, to varying degrees and in different ways, has been confronted with the uncertainty of these times. It can be argued that those individuals with access to technology may have fared better than those without. Providing affordable technology, reliable and affordable Internet access and ongoing technological support for older adults has become a rallying cry as digital inequities are exposed.

In spite of the challenges resulting from the pandemic, it has been encouraging to witness the resilience of many older adults and the resolve of groups and organizations to shift to new ways of offering services and programs, often through online platforms such as Zoom.

The following are some of the lessons we learned during 2021 and plans for addressing them to move forward.

1. More intentionally **reaching out to and including the private sector** (e.g., business) was an important aspiration of Hamilton's Plan for an Age-Friendly Community. While there were no responses to the community questionnaire from the private sector this time around, it remains a goal as implementation plans evolve. The lack of response may have been influenced by the pandemic. However, the AFCC will evaluate outreach strategies to determine the most effective ways to engage the private sector.

2. The pandemic presented a **challenge to offering in person programs**. Many organizations responded by shifting to online programs for older adults. Moving forward, in order to swiftly respond to external limitations, it may be wise to design both in-person and virtual versions of programs. Not all older adults will be comfortable attending programs in-person when restrictions ease. Having the option of online participation may continue to be a preferred choice for some individuals and may also address barriers that many older adults face going out in inclement weather.

'NOTHING ABOUT US WITHOUT US!'

Include older adults when planning programs and services.

3. The importance of **involving older adults in planning programs and services** was reinforced in comments submitted by respondents to the 2021 community questionnaire. As seen in Chart #1, older adults were quite involved in the age-friendly practices that were reported in the questionnaire. Moving forward, we will continue to encourage the inclusion of older adults in planning programs and services that impact them. They know their wants, needs and what works for them. 'Nothing about us without us!'

4. Really listening to the population you serve and finding a way to meet their needs will allow for higher quality service delivery. **Listening to your clients** was a recurring theme among questionnaire respondents.

5. Not all older adults are familiar with or have access to technology. While it may be tempting to convert everything to online, we learned that **it is still important to offer print copies of registration guides, brochures**, etc. to be sure that we leave no one behind.

6. **Give programs time to gain traction and grow.** One of our respondents worded this so well, *'If patrons don't attend (your program) yet, give the program some time and consistency to gain a following and take feedback from patrons'*. We are often in a hurry for immediate results so this is something important to keep in mind as we move forward and try new things. Relatedly, another respondent wrote about *'patience and flexibility to deal with hiccups'*.

For additional information about Hamilton's Plan for an Age-Friendly Community, please contact

agefriendly@hamiltoncoa.com
or visit www.coahamilton.ca
or www.hamilton.ca/agefriendly

APPENDICES

Appendix A: 2021 Age-Friendly Collaborative Committee (AFCC) Members

Lori Letts, Co-Chair, Hamilton Council on Aging
Julie Richardson, Co-Chair, Hamilton Council on Aging
Penelope Petrie, Seniors' Advisory Committee
Ann Elliott, Seniors' Advisory Committee
Holly Odoardi, City of Hamilton
Eleanor Morton, City of Hamilton
Kristy Tadeson, City of Hamilton
Margaret Denton, Hamilton Council on Aging
Cheryll Sullivan, Hamilton Council on Aging
Lisa Maychak, City of Hamilton
Tracy Gibbs, Hamilton Council on Aging
Kim Martin, Social Planning and Research Council
Deirdre Pike, Social Planning and Research Council
Megan Blair, Social Planning and Research Council (Student)
Madeline Chow, Social Planning and Research Council (Student)

2021 Age Friendly Goal Champions

GOAL 1 – HOUSING
Kamba Ankunda, City of Hamilton
Marcée Groen, Indwell

GOAL 2 – TRANSPORTATION
Jeanne Mayo, Community Member
Jay Adams, City of Hamilton

GOAL 3 – INFORMATION & COMMUNICATION
Chris D'Agostino, Hamilton Public Library
Karen Robins,
Alzheimer Society ASBHNHH

GOAL 4 – HEALTH & COMMUNITY SERVICES
Renee Guder, Thrive Group
Holly Odoardi, City of Hamilton

GOAL 5 – SOCIAL PARTICIPATION
Eleanor Morton/Laura Kerr,
City of Hamilton
Genevieve Hladysh, The YMCA of
Hamilton/Burlington/Brantford

GOAL 6 – CIVIC ENGAGEMENT/ VOLUNTEERISM/EMPLOYMENT
Amelia Steinbring,
Flamborough Connects
Catherine Johnston,
PATH Employment Services

GOAL 7 – OUTDOOR SPACES AND PUBLIC BUILDINGS
Kasey Livingston, City of Hamilton
Melissa McGinnis, City of Hamilton

Appendix B: List of collaborating organizations and funders involved in 2021 Age-Friendly Practices[5]

Aboriginal Health Unit
Alzheimer Society of Brant, Haldimand Norfolk, Hamilton Halton
Ancaster Computer Products
Art Gallery of Hamilton
Ancaster Seniors Achievement Centre Board
Autism Ontario
Bruce Park Neighbourhood Association
Buchannan Park Softball Organization
Cancer Screening Bus
Children's Aid Society
City Enrichment Fund - City of Hamilton
City of Hamilton, Dundas
City Housing Hamilton
City of Hamilton Home Management
City of Hamilton Recreation Department
City of Hamilton Seniors Advisory Committee
City of Hamilton Transit Division
City of Hamilton Technology
Cycling Without Age – Hamilton & Burlington
Dundas 55+ Group
Dundas Community Centre
Family Health Team
First Unitarian Church
Flamborough Chamber of Commerce
Flamborough Connects
GERAS Centre for Aging Research
Government of Canada
Greater Hamilton Health Network
Hamilton Aging in Community
Hamilton Oshawa Port Authority (HOPA)
Hamilton Council on Aging
Hamilton Health Sciences
Hamilton Jewish Family Services
Hamilton Public Library
Hamilton Regional Indian Centre
Hamilton Strategic Road Safety Committee
Home and Community Care – Local Integrated Health Network
Indigenous Diabetes Health Circle
Indwell
Local Health Integrated Network
Long Term Care-CARES
Long Term Care Collaborative
McMaster Children's Hospital
McMaster Gilbrea Centre
McMaster Institute for Research on Aging
McMaster University
Ministry of Transportation
New Horizons
Ontario Arts Council
Ontario Community Services for Seniors
Ontario Trillium Foundation
PATH Employment
Province of Ontario
Public Health Agency of Canada
Public Works (Environmental Services, Parks & Cemeteries)
Public Works (Energy Fleet & Facilities Management)
Regional Geriatric Program central
Seniors without Walls
Social Planning and Research Council
St. Mathews House
Thrive Group
Toronto Dominion Bank
Trinity Lutheran Church
Warden Seniors Club
Waterdown YMCA Employment Services
Waterdown Business Improvement Area (BIA)
Welcome Inn (Seniors Program)
Wesley Urban Ministries
YMCA of Hamilton/Burlington/Brantford
YWCA Hamilton

[1] Collaborating organizations and funders were identified by 2021 Hamilton Age-Friendly Progress questionnaire respondents and Age-Friendly Collaborative Committee Goal Champions.

HAMILTON ENTERPRISES HOLDING CORPORATION SHAREHOLDER ANNUAL GENERAL MEETING REPORT 22-001

9:30 a.m.
June 17, 2022
Council Chambers, 2nd Floor
Hamilton City Hall
71 Main Street West, Hamilton, Ontario

Present: Mayor F. Eisenberger (Chair)
Councillors M. Wilson, J. Farr, N. Nann, R. Powers, E. Pauls, B. Clark, Ferguson, A. VanderBeek, J. Partridge

Absent: Councillors J.P. Danko, B. Johnson – Other City Business
Councillor T. Jackson, S. Merulla, M. Pearson, T. Whitehead – Personal

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THE HAMILTON ENTERPRISES HOLDING CORPORATION SHAREHOLDER PRESENTS REPORT 22-001, AND RESPECTFULLY RECOMMENDS:

1. Consolidated Financial Statements – Year Ended December 31, 2021; and, Appointment and Remuneration of Auditor (Item 6.1)

(a) Audited Financial Statements – Year Ended December 31, 2021

(i) That the Audited Consolidated Financial Statements of the Hamilton Enterprises Holding Corporation for the year ended December 31, 2021, as approved by the Board of Directors of the Corporation, be received; and,

(b) Appointment and Remuneration of Auditor

(i) That the present auditor of the Hamilton Enterprises Holding Corporation (Corporation), KPMG LLP, be appointed as the auditor of the Corporation for the 2022 fiscal year of the Corporation at a remuneration to be fixed by the Directors of the Corporation, the

Directors of the Corporation being hereby authorized to fix such remuneration.

2. Appointment of the Directors of the Hamilton Enterprises Holding Corporation (Item 7.1)

(a) That the direction provided to staff in Closed Session respecting the Appointment of the Directors of the Hamilton Enterprises Holding Corporation, be approved; and,

(b) That the direction provided to staff in Closed Session respecting Appointment of the Directors of the Hamilton Enterprises Holding Corporation, remain confidential until approved by Council.

FOR INFORMATION:

(a) CHANGES TO THE AGENDA (Item 1)

The Committee Clerk advised that there were no changes to the agenda:

The agenda for the June 17, 2022 Hamilton Enterprises Holding Corporation Annual General Meeting was approved, as presented.

(b) DECLARATIONS OF INTEREST (Item 2)

There were no declarations of interest.

(c) APPROVAL OF MINUTES OF PREVIOUS MEETING (Item 3)

(i) December 10, 2021 (Items 3.1)

The Minutes of the December 10, 2021 Hamilton Enterprises Holding Corporation Shareholder meeting were approved, as presented.

(d) COMMUNICATIONS (Item 4)

(i) Hamilton Enterprises Holding Corporation Board Member Profiles (Item 4.1)

The correspondence, respecting Hamilton Enterprises Holding Corporation Board Member Profiles, was received.

(e) PRESENTATIONS (Item 6)

(i) Hamilton Enterprises Holding Corporation (Item 6.1)

Laurie Tugman, Chairman of the Board, Hamilton Enterprises Holding Corporation; and, Jeff Cowan, President and CEO of Hamilton Enterprises Holding Corporation, addressed Committee and provided a PowerPoint presentation respecting the Hamilton Enterprises Holding Corporation.

The presentation respecting, Hamilton Enterprises Holding Corporation, was received.

(f) ADJOURNMENT (Item 8)

There being no further business, the Hamilton Enterprises Holding Corporation Shareholder meeting adjourned at 10:35 a.m.

Respectfully submitted,

Mayor Fred Eisenberger, Chair
Hamilton Enterprises Holding
Corporation Shareholder

Stephanie Paparella
Legislative Coordinator
Office of the City Clerk

HAMILTON UTILITIES CORPORATION SHAREHOLDER ANNUAL GENERAL MEETING REPORT 22-002

11:00 a.m.
June 17, 2022
Council Chambers
Hamilton City Hall

Present: Mayor F. Eisenberger (Chair)
Councillors M. Wilson, J. Farr, N. Nann, R. Powers, E. Pauls, B. Clark, A. VanderBeek, J. Partridge

Absent: Councillors J.P. Danko, B. Johnson, L. Ferguson – Other City Business
Councillor T. Jackson, S. Merulla, M. Pearson, T. Whitehead – Personal

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THE HAMILTON UTILITIES CORPORATION SHAREHOLDER PRESENTS REPORT 22-002, AND RESPECTFULLY RECOMMENDS:

1. Audited Consolidated Financial Statements for the year ended December 31, 2021; and, Appointment and Remuneration of the Auditor of Hamilton Enterprises Holding Corporation (Item 6.1)

(a) Audited Consolidated Financial Statements - Year Ended December 31, 2021

(i) That the Audited Consolidated Financial Statements of the Hamilton Utilities Corporation for the year ended December 31, 2021 (attached hereto as Appendix “A”), as approved by the Board of Directors of the Corporation, be received.

(b) Alectra Inc. Audited Consolidated Financial Statements and Shareholder Report – Year Ended December 31, 2021

(i) That the Audited Consolidated Financial Statements of Alectra Inc. and Shareholder Report for the year ended December 31, 2021, as approved by the Board of Directors of Alectra Inc. (attached hereto as Appendix “B”), be received.

(c) Appointment and Remuneration of Auditor

(i) That the present auditor of the Hamilton Utilities Corporation (Corporation), KPMG LLP, be appointed as the auditor of the Corporation for the 2022 fiscal year of the Corporation at a remuneration to be fixed by the Directors of the Corporation, the Directors of the Corporation being hereby authorized to fix such remuneration.

2. Number of and Appointment of Board of Directors of Hamilton Utilities Corporation (Item 7.2)

(a) That the direction provided to staff in Closed Session respecting the Number of and Appointment of Board of Directors of Hamilton Utilities Corporation, be approved; and,

(b) That the direction provided to staff in Closed Session respecting the Number of and Appointment of Board of Directors of Hamilton Utilities Corporation, remain confidential until approved by Council.

3. Confirmation of Directors of Alectra Inc. Corporation (Item 7.3)

(a) That the direction provided to staff in Closed Session respecting the Confirmation of Directors of Alectra Inc. Corporation, be approved; and,

(b) That the direction provided to staff in Closed Session respecting the Confirmation of Directors of Alectra Inc. Corporation, remain confidential until approved by Council.

FOR INFORMATION:

(a) CHANGES TO THE AGENDA (Item 1)

The Committee Clerk advised of the following changes to the agenda:

7. PRIVATE AND CONFIDENTIAL

7.1. Closed Session Minutes - March 2, 2022

Pursuant to Section 9.1, Sub-sections (f), (i) and (k) of the City's Procedural By-law 21-021, as amended, and Section 239(2), Sub-sections (f), (i) and (k) of the Ontario Municipal Act, 2001, as amended, as the subject matter pertains to advice that is subject to

solicitor-client privilege, including communications necessary for that purpose; a trade secret or scientific, technical, commercial, financial or labour relations information, supplied in confidence to the municipality or local board, which, if disclosed, could reasonably be expected to prejudice significantly the competitive position or interfere significantly with the contractual or other negotiations of a person, group of persons, or organization; and, a position, plan, procedure, criteria or instruction to be applied to any negotiations carried on or to be carried on by or on behalf of the municipality or local board.

7.2. Number of and Appointment of Board of Directors of Hamilton Utilities Corporation

Pursuant to Section 9.1, Sub-section (b) of the City's Procedural By-law 21-021, as amended, and Section 239(2), Sub-section (b) of the Ontario Municipal Act, 2001, as amended, as the subject matter pertains to personal matters about an identifiable individual, including municipal or local board employees.

7.3. Confirmation of Directors of Alectra Inc. Corporation

Pursuant to Section 9.1, Sub-section (b) of the City's Procedural By-law 21-021, as amended, and Section 239(2), Sub-section (b) of the Ontario Municipal Act, 2001, as amended, as the subject matter pertains to personal matters about an identifiable individual, including municipal or local board employees.

The agenda for the June 17, 2022 Utilities Corporation Shareholder was approved, as amended.

(b) DECLARATIONS OF INTEREST (Item 2)

There were no declarations of interest.

(c) APPROVAL OF MINUTES OF PREVIOUS MEETING (Item 3)

(i) March 2, 2022 (Items 3.1)

The Minutes of the March 2, 2022 Hamilton Utilities Corporation Shareholder meeting were approved, as presented.

(d) COMMUNICATIONS (Item 4)

(i) Hamilton Utilities Corporation Board Member Profiles (Item 4.1)

The correspondence, respecting the Hamilton Utilities Corporation Board Member Profiles, was received.

(e) PRESENTATIONS (Item 5)

(i) 2022 Alectra Inc. Corporation Update (Item 5.1)

Brian Bentz, President & CEO, Alectra Inc. and John Basilio, Chief Financial Officer, Alectra Inc., addressed Committee to provide the 2022 Alectra Inc. Corporation Update, with the aid of a PowerPoint presentation.

The presentation respecting the 2022 Alectra Inc. Corporation Update, was received.

(ii) 2022 Hamilton Utilities Corporation Update (Item 5.2)

Jeffrey Cowan, President & CEO, Hamilton Utilities Corporation, and Laurie Tugman, Chairman of the Board, Hamilton Utilities Corporation, addressed Committee to provide the 2022 Hamilton Utilities Corporation Update, with the aid of a PowerPoint presentation.

The presentation respecting, 2022 Hamilton Utilities Corporation Update, was received.

(f) PRIVATE & CONFIDENTIAL (Item 7)

(i) Closed Session Minutes – March 2, 2022 (Item 7.1)

(a) The Closed Session Minutes of the March 2, 2022 Hamilton Utilities Corporation Shareholder meeting were approved; and,

(b) The Closed Session Minutes of the March 2, 2022 Hamilton Utilities Corporation Shareholder meeting shall remain confidential.

(g) ADJOURNMENT (Item 8)

There being no further business, the Hamilton Utilities Corporation Shareholder meeting adjourned at 11:36 a.m.

Respectfully submitted,

Mayor Fred Eisenberger, Chair
Hamilton Enterprises Holding
Corporation Shareholder

Stephanie Paparella
Legislative Coordinator
Office of the City Clerk

CITY OF HAMILTON
HEALTHY AND SAFE COMMUNITIES DEPARTMENT
General Manager's Office

TO:	Mayor and Members City Council
COMMITTEE DATE:	June 8, 2022
SUBJECT/REPORT NO:	Ukrainian Response Update and Request for Assistance (HSC22029(a)) (City Wide)
WARD(S) AFFECTED:	City Wide
PREPARED BY:	Dave Cunliffe (905) 546-2424 Ext. 3343 Connie Verhaeghe (905) 546-2424 Ext. 6038
SUBMITTED BY: **SIGNATURE:**	Grace Mater General Manager City Manager's Office

RECOMMENDATION

The following resolutions were approved by Council at its meeting of June 8, 2022:

~~(b) That staff be directed to pursue full recovery from senior levels of government for the costs associated with the City's response to the Ukraine Crisis, and that staff report back on the outcome of this undertaking; and,~~

~~(d) That Council endorse Mayor Eisenberger, in concert with area Mayors, send correspondence to the Prime Minister, Deputy Prime Minister, Provincial Premier and Local MPPs, and MPs to assist Hamilton with the housing and support for Ukrainian refugees.~~

The following resolutions were DEFERRED to the June 22, 2022 Council meeting:

(a) That staff be authorized to respond to supporting the Ukraine Crisis, including but not limited to short-term and temporary accommodations and wrap around supports with an estimated cost of $670,000 per month, to be charged to the Corporate Financials – Expenditures/Non-Program Dept Id;

(c) That the Mayor and City Clerk be authorized and directed to execute all documentation necessary to support the City's response to the Ukraine Crisis, with content acceptable to the General Manager, City Managers Office, and in a form satisfactory to the City Solicitor.

EXECUTIVE SUMMARY

In a recent meeting with the Greater Toronto Hamilton and Area (GTHA) Committee, the Canadian Red Cross situated at Pearson Airport reported that the number of Ukrainian arrivals is increasing at Pearson International Airport. Commercial flights arriving at Pearson Airport have increased from one flight per day to two flights per day. It is estimated that approximately 300 Ukrainians will arrive daily in Toronto. Many Ukrainians are arriving without connections to family, friends or host families. The Public Health Agency of Canada (PHAC) has reported there are over 75 Ukrainians currently at the Designated Quarantine Facility in the Peel Region, with 95% having no accommodation plan. PHAC has reported that every day, 2-3 families with no housing options are ready to leave the quarantine facility which is resulting in a large strain on the over burden sheltered system in Peel Region and neighbouring municipalities such as Toronto, Durham, Halton Region, York Region, and Hamilton.

The GTHA Committee has developed a Regional Plan for the Provision of Temporary Accommodation to Canadian Ukrainian Authorization for Emergency Travel (CUAET) Visa Holders. This Temporary Accommodation Plan is being activated across the GTHA and supports a surge in response needed to respond to the increase arrivals of Ukrainians in the GTHA. All municipalities and regions are developing plans to accommodate Ukrainians. This involves a complex response to meet their housing, clothing, nutritional and other social service needs.

Without a committed Federal/Provincial funding source, this will result in an unfunded pressure within Corporate Financials – Expenditures/Non-Program. Staff will continue their joint advocacy efforts with the Greater Toronto Hamilton Area Mayors and Chairs to pursue full recovery from senior levels of government for the costs associated with the City's response

Alternatives for Consideration – Not applicable

FINANCIAL – STAFFING – LEGAL IMPLICATIONS

Financial: An unfunded pressure of approximately $670,000/month for 50 households is forecasted and will be charged to the Corporate Financials – Expenditures/Non-Program Dept Id. A household is defined as 1 adult, 1 youth >12, 2 children< 12).

Staff will continue to work with the Federal and Provincial governments to secure reimbursement for any expenses incurred in the preparation and delivery of the humanitarian response.

Staffing: N/A

Legal: N/A

HISTORICAL BACKGROUND

Since January 1, 2022, 22,253 Ukrainians have arrived in Canada (Source IRCC April 24, 2022), with an estimated 200 Ukrainians having arrived in the City of Hamilton and are living with family, friends and host families.

The Hamilton Ukrainian Humanitarian Crisis Response Team (HUHCR) is a team comprised of City staff and key leaders from community organizations who specialize in resettlement and settlement of refugees. This team is working closely with the Hamilton chapter of the Canadian Ukrainian Congress. The mission of this team is to coordinate local efforts to proactively plan and coordinate support for Ukrainians who have already arrived in Hamilton and to anticipate a surge of arrivals and/or a secondary migration to Hamilton. This team has and will continue to coordinate access to critical services such as health care, education, child-minding, social assistance and interpretation services.

The City of Toronto, together with five Regions and Cities in the surrounding region (Durham, York, Peel and Halton Regions, and the City of Hamilton) developed a Regional Plan for the Provision of Temporary Accommodation to Canadian Ukrainian Authorization for Emergency Travel (CUAET) Visa Holders.

POLICY IMPLICATIONS AND LEGISLATED REQUIREMENTS

N/A

RELEVANT CONSULTATION

The Senior Leadership Team was consulted, and their comments were incorporated into this report.

ANALYSIS AND RATIONALE FOR RECOMMENDATION

All levels of government are working hard to make sure that people affected by the conflict in Ukraine have access to the services and support they need to settle in their destination.

The City of Toronto, together with five Regions and Cities in the surrounding region (Durham, York, Peel and Halton Regions, and the City of Hamilton) developed a Regional Plan for the Provision of Temporary Accommodation to Canadian Ukrainian Authorization for Emergency Travel (CUAET) Visa Holders. The plan provides for a coordinated and managed approach, with consistent services across the region. It is scalable and adaptable, based on the need. It facilitates a seamless experience for arrivals, while providing protection from a range of risks. Through contracted services and in-kind municipal oversight and coordination, the plan is to build capacity to accommodate up to 1,200 Ukrainian arrivals at any one time across the region. Depending on the rate of transition to more permanent housing this means potentially thousands of Ukrainian travelers could be accommodated through this approach. This plan has been endorsed and supported by the regional Mayors and Chairs. As the numbers of those arriving at Pearson Airport without housing has increased significantly, the Toronto Mayor has brought this plan to the Prime Minister and Minister of Immigration on behalf of the regional Mayors and Chairs. It is the expectation of each municipality listed in the plan to provide housing supports to ensure an early start to integration into the community.

Currently, the Region of Peel will be securing a 90-room hotel as a Reception Centre where approximately 300 Ukrainians will be accommodated effective June 6, 2022. The City of Toronto expects to open a Reception Centre with accommodations starting on June 13, 2022. Halton Region plans to initiate immediate housing at a community college and Durham is working on a plan to provide accommodation at a local hotel. Hamilton has reached out to local universities and college to secure housing options. Utilizing existing structures and supports in a coordinated way will build capacity without overburdening the exhausted shelter system. Housing solutions have been secured with Mohawk College, McMaster University and Redeemer University.

Since many Ukrainians have arrived with connections to families, friends and host families the number of Ukrainians that have arrived in the Greater Toronto Area is hard to determine. As of May 25, 2022, 1168 Ukrainians in the GTHA have applied for emergency income assistance. In the City of Hamilton, as of June 3, 2022, 33 Ukrainians have applied for Emergency Income Assistance. We do expect these numbers to grow and will report on the status of arrivals and applications for assistance as they become known.

ALTERNATIVES FOR CONSIDERATION

None

ALIGNMENT TO THE 2016 – 2025 STRATEGIC PLAN

Community Engagement and Participation
Hamilton has an open, transparent and accessible approach to City government that engages with and empowers all citizens to be involved in their community

Healthy and Safe Communities
Hamilton is a safe and supportive City where people are active, healthy, and have a high quality of life.

Culture and Diversity
Hamilton is a thriving, vibrant place for arts, culture, and heritage where diversity and inclusivity are embraced and celebrated.

APPENDICES AND SCHEDULES ATTACHED

None

CITY OF HAMILTON
MOTION

Council: June 22, 2022

MOVED BY COUNCILLOR S. MERULLA……..……..……..……...….

SECONDED BY MAYOR F. EISENBERGER……

Amendment to Item 7 of General Issues Committee Report 21-009, respecting Motion - Disposition of the Biindigen Well Being Centre (Former St. Helen Catholic Elementary School Property at 785 Britannia) (Ward 4) (Item 14.2)

WHEREAS, Council on April 28, 2021 approved Item 7 of the General Issues Committee Report 21-009, being a motion respecting the Disposition of the Biindigen Well Being Centre (Former St. Helen Catholic Elementary School Property at 785 Britannia) (Ward 4); and

WHEREAS, staff have been pursuing the disposition of the Biindigen Well Being Centre (Former St. Helen Catholic Elementary School Property at 785 Britannia) (Ward 4).

THEREFORE BE IT RESOLVED:

(i) That Sub-section (a) to Item 7 to the General Issues Committee Report 21-021, respecting the Motion - Disposition of the Biindigen Well Being Centre (Former St. Helen Catholic Elementary School Property at 785 Britannia) (Ward 4), be ***amended*** by the amendment in the Confidential Appendix 'A' (attached), to read as follows:

(a) That the direction provided to staff in Closed Session, ***as amended*** in Confidential Appendix 'A' to this motion, respecting the Motion regarding the amendment to the Motion on Disposition of the Biindigen Well Being Center (Former St. Helen Catholic Elementary School Property at 785 Britannia) in Ward 4, be approved; and,

(ii) That pending the approval of the amendment to sub-section (a) to Item 7 to the General Issues Committee Report 21-021, respecting the Motion - Disposition of the Biindigen Well Being Centre (Former St. Helen Catholic Elementary School Property at 785 Britannia) (Ward 4), Item 7 (b), be ***amended*** by deleting (b) in its entirety and replacing (b) with the following:

(b) ~~That the Motion respecting the Disposition of the Biindigen Well Being Centre (Former St. Helen Catholic Elementary School Property at 785 Britannia, Hamilton in Ward 4 remain confidential until completion of the real estate transaction, with the following exception:~~

~~(i) That staff be authorized to share any information that may be necessary to give effect to the sale of the property, located at 785 Britannia Avenue, Hamilton.~~

(b) That the amended Closed Session Motion in Confidential Appendix 'B' (attached), respecting the Disposition of the Biindigen Well Being Centre (Former St. Helen Catholic Elementary School Property at 785 Britannia, Hamilton in Ward 4, be released publicly following Council approval.

Attachments:

Confidential Appendix 'A' – Proposed ***Amendment*** to the Closed Session direction approved by Council on April 28, 2021.
Confidential Appendix 'B' – Amended Closed Session Motion (for public release following Council approval)

COUNCIL COMMUNICATION UPDATES

June 3, 2022 to June 16, 2022

Council received the following Communication Updates during the time period listed above, the updates are also available to the public at the following link: https://www.hamilton.ca/government-information/information-updates/information-updates-listing, as per Section 5.18 of By-law 21-021 (A By-Law To Govern the Proceedings of Council and Committees of Council) a member of Council may refer any of the items listed below, to a Standing Committee by contacting the Clerk and it will be placed on the next available agenda of the respective Standing Committee.

Date	Department	Subject	Link
June 3, 2022	Healthy and Safe Communities	Encampment Coordination Team Update - May 2022 (City Wide)	https://www.hamilton.ca/sites/default/files/media/browser/2022-06-03/comm-update-encampment-coordination-team-update-may2022.pdf
June 6, 2022	Public Works	Chedoke Creek Remediation - HW.22.03 (City Wide)	https://www.hamilton.ca/sites/default/files/media/browser/2022-06-06/comms-update-pw-chedoke-creek-remediation-website-jun2022.pdf
June 6, 2022	Planning and Economic Development	Placemaking Grant Pilot Program 2022 Update (City Wide)	https://www.hamilton.ca/sites/default/files/media/browser/2022-06-07/commupdate-ped-placemakinggrantpilot-jun2022.pdf
June 8, 2022	Public Works	Kenilworth Soil Removal – HW 22.04 (City Wide)	https://www.hamilton.ca/sites/default/files/media/browser/2022-06-09/comms-update-pw-kenilworth-soil-removal-june2022.pdf
June 9, 2022	Corporate Services	City of Hamilton Credit Rating Raised to AAA/Stable (City Wide)	https://www.hamilton.ca/sites/default/files/media/browser/2022-06-17/comms-update-coh-credit-rating-raised-to-aaa-stable.pdf
June 9, 2022	Public Works	Forestry sending help to Ottawa and Peterborough (City Wide) (ES22007)	https://www.hamilton.ca/sites/default/files/media/browser/2022-06-10/comms-update-pw-forestry-sending-help-ottawa-peterborough-june2022.pdf
June 9, 2022	Planning and Economic Development	2022 Summer Concert Series (City Wide)	https://www.hamilton.ca/sites/default/files/media/browser/2022-06-10/comms-update-ped-summer-concert-series-jun2022.pdf
June 13, 2022	Planning and Economic Development	2030 Commonwealth Games Update (City Wide)	https://www.hamilton.ca/sites/default/files/media/browser/2022-06-14/comms-update-ped-2030-commonwealth-games-update-jun2022.pdf
June 13, 2022	Planning and Economic Development	Launch of Free-Floating Carshare in Hamilton (Wards 1, 2 and 3)	https://www.hamilton.ca/sites/default/files/media/browser/2022-06-14/comms-update-ped-free-floating-carshare-launch-jun2022.pdf

June 13, 2022	Planning and Economic Development	Open Street Temporary Urban Linear Park – Public Engagement (Wards 2 and 3)	https://www.hamilton.ca/sites/default/files/media/browser/2022-06-14/comms-update-ped-open-street-temporary-urban-linear-park-jun2022.pdf
June 13, 2022	Public Works	Wild Waterworks 2022 Operation Season - Update (ES22006) (City Wide)	https://www.hamilton.ca/sites/default/files/media/browser/2022-06-14/comms-update-pw-wild-waterworks-operating-season-jun2022.pdf

Authority: Item 14, Committee of the Whole
Report 01-003 (FCS01007)
CM: February 6, 2001
Ward: 2,3,11,13,14

Bill No. 150

CITY OF HAMILTON
BY-LAW NO. 22-

To Amend By-law No. 01-218, as amended, Being a By-law To Regulate On-Street Parking

WHEREAS *Section 11(1)1 of the Municipal Act, S.O. 2001, Chapter 25*, as amended, confers upon the councils of all municipalities the power to enact by-laws for regulating parking and traffic on highways subject to the *Highway Traffic Act*;

AND WHEREAS on the 18th day of September, 2001, the Council of the City of Hamilton enacted By-law No. 01-218 to regulate on-street parking;

AND WHEREAS it is necessary to amend By-law No. 01-218, as amended.

NOW THEREFORE the Council of the City of Hamilton enacts as follows:

1. By-law No. 01-218, as amended, is hereby further amended by adding/deleting from the identified Schedules and Sections noted in the table below as follows:

Schedule	Section	Highway	Side	Location	Times	Adding/ Deleting
8 - No Parking	*G*	**Hatt Street**	South	from 64 metres east of McMurray Street to 7.5 metres easterly	Anytime	Deleting
8 - No Parking	*E*	**Upper Kenilworth**	East	Mohawk to Southerly End	Anytime	Deleting
8 - No Parking	*E*	**Upper Kenilworth**	West	from 114.6m south of Carson to Southerly End	Anytime	Deleting
8 - No Parking	*E*	**Fairleigh Avenue South**	West	Cumberland Avenue to southerly end	8:00 a.m. to 12:00 Noon Wednesdays	Adding
8 - No Parking	*E*	**Lynnette Drive**	South	60 metres east of Claudia Gate to 24.5 metres east thereof	Anytime	Adding
8 - No Parking	*G*	**MacNab Street South**	East	10 metres south of Jackson Street to 11 metres south thereof	Anytime	Adding
8 - No Parking	*D*	**Tanglewood Drive**	East	DeGrow Crescent (northern intersection) to 37 metres south of DeGrow Crescent (southern intersection)	December 1st to March 31st	Adding

8 - No Parking	*D*	**Tanglewood Drive**	West	37 metres south of Maggie Johnson Drive to Binbrook Road	December 1st to March 31st	Adding
8 - No Parking	*E*	**Upper Kenilworth Avenue**	Both	Landron Avenue to Limeridge Road East	Anytime	Adding

Schedule	Section	Highway	Side	Location	Times	Adding/ Deleting
12 - Permit	*E*	**Niagara Street**	West	77 metres south of Burlington Street to 12m south thereof	Anytime	Deleting
12 - Permit	*E*	**Bay**	East	from 16.8m south of Ferrie to 6m southerly	Anytime	Deleting
12 - Permit	*E*	**Grosvenor Ave**	East	commencing 87.3m south of Roxborough Ave and extending 6m southerly	Anytime	Deleting

Schedule	Section	Highway	Side	Location	Times	Adding/ Deleting
13 - No Stopping	*B*	**Hatt Street**	South	from 86 metres east of McMurray Street to 18 metres east thereof	Anytime	Deleting
13 - No Stopping	*E*	**MacNab Street South**	East	Jackson Street to 28 metres south thereof	Anytime	Deleting
13 - No Stopping	*B*	**Hatt Street**	South	from 12 metres east of Foundry Street to 42 metres east thereof	Anytime	Adding
13 - No Stopping	*E*	**Upper Kenilworth Avenue**	West	138 metres south of Carson Drive to 32 metres south thereof	Anytime	Adding
13 - No Stopping	*E*	**Upper Kenilworth Avenue**	West	Landron Avenue to 58 metres metres north thereof	Anytime	Adding
13 - No Stopping	*E*	**Upper Kenilworth Avenue**	West	Townmansion Drive to 58 metres north thereof	Anytime	Adding
13 - No Stopping	*E*	**Upper Kenilworth Avenue**	West	Townmansion Drive to Limeridge Road East	Anytime	Adding
13 - No Stopping	*E*	**Upper Kenilworth Avenue**	East	Limeridge Road East to 115 metres north thereof	Anytime	Adding
13 - No Stopping	*E*	**Upper Kenilworth Avenue**	East	240 metres north of Limeridge Road East 40 metres north thereof	Anytime	Adding
13 - No Stopping	*E*	**Upper Kenilworth**	East	441 metres south of Mohawk Road East to 55 metres south thereof	Anytime	Adding

		Avenue				
13 - No Stopping	*E*	**Upper Kenilworth Avenue**	East	338 metres south of Mohawk Road East to 25 metres north thereof	Anytime	Adding
13 - No Stopping	*E*	**Upper Kenilworth Avenue**	East	138 metres south of Mohawk Road East to 42 metres south thereof	Anytime	Adding

2. Subject to the amendments made in this By-law, in all other respects, By-law No. 01-218, including all Schedules thereto, as amended, is hereby confirmed unchanged.

3. This By-law shall come into force and take effect on the date of its passing and enactment.

PASSED this 22nd day of June 2022.

F. Eisenberger
Mayor

A. Holland
City Clerk

Authority: Item 3, Public Works Committee
Report 22-004 (PW22013)
CM: March 30, 2022
Ward: 8

Bill No. 151

CITY OF HAMILTON
BY-LAW NO. 22-

**To Establish City of Hamilton Land
Described as Part of Lot 14, Concession 8 in the Geographic Township of Barton, designated as Part 4 on Plan 62R-12821, and Part 12 on Plan 62R-9741 Save and Except Part 18 on Plan 62R-15778,
as Part of Dicenzo Drive**

WHEREAS sections 8, 9 and 10 of the *Municipal Act, 2001* authorize the City of Hamilton to pass by-laws necessary or desirable for municipal purposes, and in particular by-laws with respect to highways; and

WHEREAS section 31(2) of the *Municipal Act, 2001* provides that land may only become a highway by virtue of a by-law establishing the highway.

NOW THEREFORE the Council of the City of Hamilton enacts as follows:

1. The land, owned by and located in the City of Hamilton, described as Part of Lot 14, Concession 8 in the Geographic Township of Barton, in the City of Hamilton, designated as Part 4 on Plan 62R-12821, and Part 12 on Plan 62R-9741 Save and Except Part 18 on Plan 62R-15778, is established as a public highway, forming part of Dicenzo Drive.

2. The General Manager of Public Works or their authorized agent is authorized to establish the said land as a public highway.

3. This By-law comes into force on the date of its registration in the Land Registry Office (No. 62).

PASSED this 22nd day of June, 2022.

F. Eisenberger
Mayor

A. Holland
City Clerk

Authority: Item 2, Planning Committee
Report 22-010 (PED22112(a))
CM: June 22, 2022
Ward: City Wide
Bill No. 152

CITY OF HAMILTON

BY-LAW NO. 22-152

To Consolidate and Update Delegated Site Plan Control By-laws in the City of Hamilton

WHEREAS under the provisions of Subsection 41(4.0.1) of the *Planning Act*, as amended by Bill 109, *More Homes for Everyone Act, 2022*, a council that passes a by-law under subsection (2) shall appoint an officer, employee or agent of the municipality as an authorized person for the purposes of subsection (4);

WHEREAS the City of Hamilton previously passed Delegated Site Plan Approval Authority By-law No. 07-325 and By-law No. 03-295;

WHEREAS the purpose of this by-law is to repeal and replace By-law Nos. 07-325 and 03-295 with a new by-law responding to Bill 109 changes and using appropriate staff titles for housekeeping purposes;

WHEREAS the changes are administrative and do not change the intent or effect of previous delegated approval authority under Section 41 of the *Planning Act.*

NOW THEREFORE the Council of the City of Hamilton enacts as follows:

1. The municipal Council of the City of Hamilton under Section 41 of the *Planning Act* shall appoint the approval of site plans and drawings of development, including the authority to impose conditions of approval, to the Director of Planning and Chief Planner. Such authority delegated to the said Director of Planning and Chief Planner, shall be carried out and implemented as provided for in Section 41 of the *Planning Act.*

2. In the event the Director of Planning and Chief Planner or any successor is absent for any reason, the said authority of Council is delegated to the Manager, Heritage and Urban Design or any successor and, in this event, all references to the Manager, Heritage and Urban Design or any successor in this By-law shall be deemed to be references to the said Manager, Heritage and Urban Design or any successor. Where both the said Director of Planning and Chief Planner and the said Manager, Heritage and Urban Design are absent, the authority delegated pursuant to this By-law is hereby delegated to the person or persons designated in writing by the Director of Planning and Chief Planner, or any successor to act as the said Director during their absence.

3. The Mayor and City Clerk, or delegate are hereby authorized and directed to execute any agreement or undertaking required of an Owner as a condition of site plan approval, in a form satisfactory to the City Solicitor. Where required for

purposes of electronic registration of such agreement, or electronic registration of notice of such agreement on title to the property under development, staff are also authorized and directed to signify in an electronic format, that such agreement or notice of such agreement was approved by the City as provided for in this by-law.

4. City of Hamilton By-law No. 03-295 is hereby repealed in its entirety.

5. City of Hamilton By-law No. 07-325 is hereby repealed in its entirety.

PASSED this 22nd day of June, 2022.

F. Eisenberger
Mayor

A. Holland
City Clerk

Authority: Item 5, Planning Committee
Report 22-010 (PED22126)
CM: June 22, 2022
Ward: 10

Bill No. 153

CITY OF HAMILTON

BY-LAW NO. 22-153

**To Amend Zoning By-law No. 3692-92,
Respecting Lands Located at 541 and 545 Fifty Road (Stoney Creek)**

WHEREAS the City of Hamilton Act, 1999, Statutes of Ontario, 1999 Chap. 14, Sch. C. did incorporate, as of January 1, 2001, the municipality "City of Hamilton";

AND WHEREAS the City of Hamilton is the successor to certain area municipalities, including the former area municipality known as "The Corporation of the City of Stoney Creek" and is the successor to the former Regional Municipality, namely, "The Regional Municipality of Hamilton-Wentworth";

AND WHEREAS the City of Hamilton Act, 1999, provides that the Zoning By-laws of the former area municipalities continue in force in the City of Hamilton until subsequently amended or repealed by the Council of the City of Hamilton;

AND WHEREAS Zoning By-law No. 3692-92 (Stoney Creek) was enacted on the 8th day of December, 1992, and approved by the Ontario Municipal Board on the 31st day of May, 1994;

AND WHEREAS the Council of the City of Hamilton, in adopting Item 5 of Report 22-010 of the Planning Committee, at its meeting held on the day of June 22, 2022, recommended that Zoning By-law No. 3692-92 (Stoney Creek), be amended as hereinafter provided; and,

AND WHEREAS this by-law is in conformity with the Urban Hamilton Official Plan of the City of Hamilton in accordance with the provisions of the Planning Act;

NOW THEREFORE the Council of the City of Hamilton enacts as follows:

1. That Map No. 4 to Schedule 'A' of Zoning By-law No. 3692-92 (Stoney Creek), is hereby further amended by changing from Neighbourhood Development "ND" Zone and Rural Residential "RR" Zone to Single Residential "R3-45" Zone, Modified, the extent and boundaries of which are shown on plan hereto annexed as Schedule "A".

2. That Section 6.4.7 "Special Exceptions" of Zoning By-law No. 3692-92 (Stoney Creek), as amended, be amended by adding Special Exception "R3-45" as follows:

"R3-45" 541 and 545 Fifty Road, Schedule "A" Map No. 4

For the purpose of this By-law, a private common element condominium road shall be deemed to be a street, and parking, landscaping and amenity areas shall be permitted within the common element condominium road.

In addition to the definition of a Lot in Part 2 of Zoning By-law No. 3692-92 (Stoney Creek), as amended, that for the purposes of this Zone, a vacant land condominium unit within a draft approved or registered plan of condominium shall be considered a Lot.

Notwithstanding the provisions of paragraphs (b), (c), (d), (f) and (g) of Section 6.4.3, Single Residential "R3" Zone, the following shall apply:

(b) Minimum Interior Lot Frontage	9.0 metres
(c) Minimum Front Yard	6.0 metres to a garage
	4.5 metres to a dwelling
(d) Minimum Side Yard	1.25 metres on a corner lot abutting a private road.
(f) Maximum Building Height	12.0 metres
(g) Maximum Lot Coverage	56 percent

Notwithstanding the provisions of paragraphs (c) and (d) of Section 6.1.8, Parking Restrictions in Residential Zones, the following shall apply:

(c) Where the required minimum number of parking spaces is four or more, no parking space shall be provided closer than 1.5 metres to any lot line or closer than 2.7 metres to any dwelling unit located on a lot other than the said lot.

(d) Parking spaces for physically challenged persons shall have a width of not less than 2.8 metres and a length of not less than 5.8 metres, and to have an additional painted aisle adjacent to the said space of not less than 1.5 metres in width.

Notwithstanding the provisions of paragraph (b) of Section 4.10.3, Dimensions of Parking Spaces, the following provision shall apply:

(b) For parking spaces within private residential garages, two steps may project not more than 0.6 metres into the required length or width of a parking space.

Notwithstanding the provisions of paragraph (a) of Section 4.10.4, Requirement for Parking for Vehicles of Physically Challenged, the following provision shall apply:

(a) Minimum rectangular dimensions of 2.8 metres in width and 5.8 metres in length, and to have an additional painted aisle adjacent to the said space of not less than 1.5 metres in width.

Notwithstanding the provisions of paragraph (d) of Section 4.19, Yard Encroachments, the following provision shall apply:

(d) Balconies, canopies, unenclosed porches, including a cold cellar underneath same, may project into any required side yard abutting a flankage lot line 1.5 metres.

3. That the amending by-law be added to Map No. 4 of Schedule "A" of Stoney Creek Zoning By-law No. 3692-92.

4. That no building or structure shall be erected, altered, extended or enlarged, nor shall any building or structure or part thereof be used, nor shall any land be used, except in accordance with the Single Residential "R3-45" Zone provisions subject to the special requirements as referred to in Section 2 of this By-law.

5. That the Clerk is hereby authorized and directed to proceed with the giving of notice of the passing of this by-law, in accordance with the Planning Act.

PASSED and ENACTED this 22nd day of June, 2022.

F. Eisenberger
Mayor

A. Holland
City Clerk

ZAC-21-045/25CDM-202120

This is Schedule "A" to By-law No. 22-153

Passed the 22 day of June, 2022

Mayor

Clerk

Schedule "A"

Map forming Part of By-law No. 22-153

to Amend By-law No. 3692-92

Scale: N.T.S	File Name/Number: ZAC-21-045 & 25CDM-202120
Date: May 3, 2022	Planner/Technician: RD/VS

PLANNING AND ECONOMIC DEVELOPMENT DEPARTMENT

Hamilton

Subject Property

541-545 Fifty Road

Change in zoning from the Rural Residential "RR" Zone and Neighbourhood Development "ND" Zone to the Single Residential "R3-45" Zone, Modified

Authority: Item 6, Planning Committee
Report 22-010 (PED22125)
CM: June 22, 2022
Ward: 3

Bill No. 154

CITY OF HAMILTON

BY-LAW NO. 22-154

**To Amend Zoning By-law No. 6593
Respecting Lands Located at 16 Steven Street and Part of 436 King William Street, Hamilton**

WHEREAS Council approved Item 6 of Report 22-010 of the Planning Committee, at its meeting held on June 22, 2022; and,

AND WHEREAS the City of Hamilton is the successor to certain area municipalities, including the former municipality known as the "The Corporation of the City of Hamilton" and is the successor to the former regional municipality, namely, "The Regional Municipality of Hamilton-Wentworth";

AND WHEREAS the City of Hamilton Act, 1999 provides that the Zoning By-laws and Official Plans of the former area municipalities and the Official Plan of the former regional municipality continue in full force in the City of Hamilton until subsequently amended or repealed by the Council of the City of Hamilton;

AND WHEREAS the Council of The Corporation of the City of Hamilton passed Zoning By-law No. 6593 (Hamilton) on the 25th day of July 1950, which by-law was approved by the Ontario Municipal Board by Order dated the 7th day of December 1951 (File No. P.F.C. 3821);

AND WHEREAS the Council of the City of Hamilton, in adopting Item of Report 22 - of the Planning Committee, at its meeting held on the day of June 14, 2022, recommended that Zoning By-law No. 6593 (Hamilton), be amended as hereinafter provided;

NOW THEREFORE the Council of the City of Hamilton enacts as follows:

1. That Sheet No. E12 of the District Maps as amended to and forming part of By-law No. 6593 (Hamilton), is amended by changing the zoning from the "D" (Urban Protected Residential – One and Two Family Dwellings, Etc.) District to the "DE-3/S-1820" (Multiple Dwellings) District, Modified; the extent and boundaries of which are more particularly shown on Schedule "A" annexed hereto and forming part of this By-law.

2. That the "DE" (Multiple Dwellings) District provisions as contained in Section 10C of Zoning By-law No. 6593 applicable to the subject lands, be modified to include the following special requirements:

a) That notwithstanding Sections 10C(3)(i)(b), 10C(3)(ii)(b), 10C3(iii)(b), 10C(5), 18(3)(vi)(b), 18(3)(vi)(e) and 18(4)(v) a 15 unit multiple dwelling shall be permitted within the building existing on the date of passing of this By-law only. Any additions to the existing building shall otherwise conform to the By-law.

b) That notwithstanding Section 10C (4) (iv), an area of at least 473.0 square metres shall be required for a 15 unit multiple dwelling within the building existing on the date of passing of this By-law only.

c) That notwithstanding Section 10C (6), a minimum of 10% of the area of the lot shall be landscaped area, unused for access or manoeuvring space or parking space or for any other purpose other than landscaped area.

d) That notwithstanding Section 18A (1) (a) and (b) and Section 1 (g) of Table 1 and Table 2, the Minimum Parking Requirement for a Multiple Dwelling shall be 0.13 spaces per Class A Dwelling Unit.

e) That notwithstanding Section 18A(1)(c), and 18A Table 3, no loading space shall be required.

f) Section 18A (1) (f) and Column 1 and Column 2 of Table 6, shall not apply.

g) Section 18A (25) and (26), shall not apply.

h) Section 18A (28), shall not apply.

3. That no building or structure shall be erected, altered, extended or enlarged, nor shall any building or structure or part thereof be used, nor shall any land be used, except in accordance with the "DE-3/S-1820" (Multiple Dwellings) District, Modified, provisions.

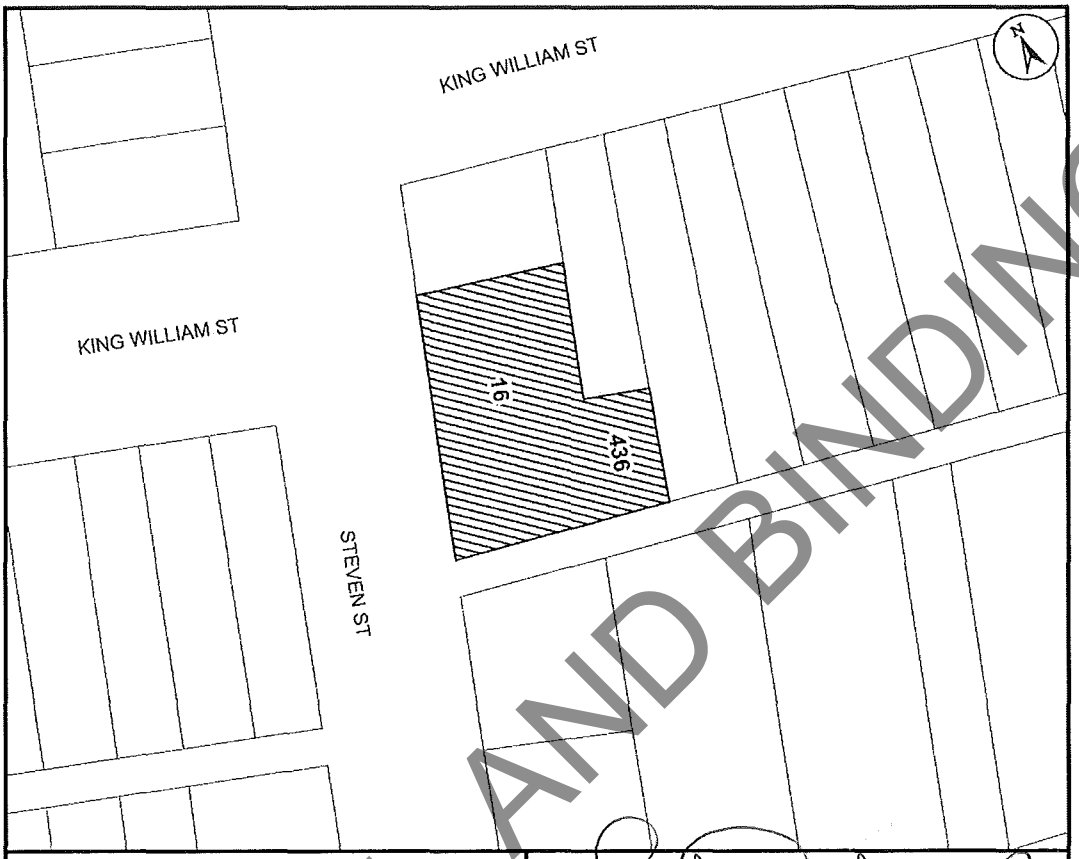
4. That the Clerk is hereby authorized and directed to proceed with the giving of notice of the passing of this By-law, in accordance with the *Planning Act*.

PASSED this 22nd day of June, 2022.

F. Eisenberger
Mayor

A. Holland
City Clerk

ZAC-22-019



This is Schedule "A" to By-law No. 22-154

Passed the 22 day of June, 2022

Mayor

Clerk

Schedule "A"

Map forming Part of By-law No. 22-_____

to Amend By-law No. 6593

Scale: N.T.S	File Name/Number: ZAC-22-019
Date: April 29, 2022	Planner/Technician: JA/VS

PLANNING AND ECONOMIC DEVELOPMENT DEPARTMENT

Hamilton

Subject Property

16 Steven Street and Part of 436 King William Street

Change is zoning from "D" (Urban Protected Residential – One and Two Family Dwellings, Etc.) District to "DE-3/S-1820" (Multiple Dwellings) District

Authority: Item 7, Planning Committee
Report 22-010 (PED22131)
CM: June 22, 2022
Ward: City Wide

Bill No. 155

CITY OF HAMILTON

BY-LAW NO. 22-155

To Amend Zoning By-law No. 6593 (former City of Hamilton), Respecting Housekeeping Amendments to Various Definitions and Certain Day Nursery Regulations

WHEREAS the *City of Hamilton Act, 1999*, Statutes of Ontario 1999 Chap. 14, Schedule C did incorporate, as of January 1, 2001, the municipality "City of Hamilton";

AND WHEREAS the City of Hamilton is the successor to certain area municipalities, including the former area municipality known as "The Corporation of the City of Hamilton", and is the successor of the former Regional Municipality, namely, "the Regional Municipality of Hamilton-Wentworth";

AND WHEREAS the *City of Hamilton Act, 1999*, provides that the Zoning By-laws and Official Plans of the former area municipalities and the Official Plan of the former regional municipality continue in force in the City of Hamilton until subsequently amended or repealed by the Council or the City of Hamilton;

AND WHEREAS the Council of The Corporation of the City of Hamilton passed Zoning By-law No. 6593 (Hamilton) on the 25th day of July 1950, which by-law was approved by the Ontario Municipal Board by Order dated the 7th day of December 1951 (File No. P.F.C. 3821);

AND WHEREAS Council, in approving Item 7 of Report 22-010 of the Planning Committee, at its meeting held on the 22nd day of June, 2022, recommended that Zoning By-law No. 6593 (Hamilton) be amended as hereinafter provided;

AND WHEREAS this By-law is in conformity with the Urban Hamilton Official Plan, Hamilton-Wentworth Regional Official Plan and City of Hamilton Official Plan;

NOW THEREFORE the Council of the City of Hamilton enacts as follows:

1. That SECTION TWO: INTERPRETATION AND DEFINITIONS be amended by deleting Section 2. (2) B. (i) in its entirety and replacing it with the following definition:

   (i) **"Children's Residence"** shall mean all or any part of a building or buildings in which three or more children not of common parentage residing away from the home of their parents or guardians primarily for the purpose of receiving residential care, and includes any other home or institution in which three or more children not of common parentage reside and that is supervised or operated by a children's aid society under the Child, Youth, and Family

Services Act, whether or not the children are Crown wards or wards of the society, but does not include,

(a) A Residential Care Facility;
(b) A house that is licensed under the *Private Hospitals Act*;
(c) A day nursery or camp provided for under the *Child Care and Early Years Act*;
(d) A home for special care under the *Homes for Special Care Act*;
(e) Part of a school provided for under the *Education Act*;
(f) A hostel intended for short-term accommodation; or,
(g) A hospital that is in receipt of financial aid from the Province of Ontario.

2. That SECTION TWO: INTERPRETATION AND DEFINITIONS be amended by deleting Section 2. (2) B. (ii) in its entirety and replacing it with the following definition:

(ii) **"Day Nursery"** shall mean a facility licensed under the *Child Care and Early Years Act* which receives more than five children who are not of common parentage, primarily for the purpose of providing temporary care and/or guidance for a continuous period not exceeding 24 hours, where children are,

(a) Under eighteen years of age in the case of a day nursery for children with a development disability; and,
(b) Under ten years of age in all other cases but shall not include part of a school provided for under the *Education Act*."

3. That SECTION THREE: APPLICATION OF BY-LAW be amended by deleting the wording "Day Nurseries Act, R.S.O. 1980, c. 111" within Section 3 (10) and replacing it with "*Child Care and Early Years Act*".

4. That SECTION EIGHT: "B" DISTRICTS (SUBURBAN AGRICULTURE AND RESIDENTIAL, ETC.) be amended by deleting Section 8. (1) (iiia) in its entirety and replacing it with the following:

(iiia) A day nursery;

5. That SECTION NINE: "C" DISTRICTS (URBAN PROTECTED RESIDENTIAL, ETC.) be amended by deleting Section 9. (1) (iii) in its entirety and replacing it with the following:

(iii) A day nursery;

6. That SECTION NINE A: "R-4" DISTRICTS (SMALL LOT SINGLE FAMILY DWELLING) be amended by deleting Section 9A. (1) (aa) 1. in its entirety and replacing it with the following:

1. A day nursery;

7. That SECTION TEN: "D" DISTRICTS (URBAN PROTECTED RESIDENTIAL – ONE AND TWO FAMILY DWELLINGS, ETC.) be amended by deleting Section 10. (1) (xa) in its entirety and replacing it with the following:

   (xa) A day nursery;

8. That SECTION TEN A: "DE" DISTRICTS (LOW DENSITY MULTIPLE DWELLINGS) be amended by deleting Section 10A. (1) (ix) in its entirety and replacing it with the following:

   (ix) A day nursery;

9. That SECTION TEN B: "DE-2" DISTRICTS (MULTIPLE DWELLINGS) be amended by deleting Section 10B. (1) (viii) in its entirety and replacing it with the following:

   (viii) A day nursery;

10. That SECTION TEN C: "DE-3" DISTRICTS (MULTIPLE DWELLINGS) be amended by deleting Section 10C. (1) (viii) in its entirety and replacing it with the following:

    (viii) A day nursery;

11. That SECTION TEN D: "RT-10" DISTRICTS (TOWNHOUSE) be amended by deleting Section 10D. (2) (b) 1. in its entirety and replacing it with the following:

    1. A day nursery;

12. That SECTION TEN E: "RT-20" DISTRICTS (TOWNHOUSE – MAISONETTE) be amended by deleting Section 10E. (2) (b) 1. in its entirety and replacing it with the following:

    1. A day nursery;

13. That SECTION TEN F: "RT-30" DISTRICTS (STREET – TOWNHOUSE) be amended by deleting Section 10F. (2) (b) 1. in its entirety and replacing it with the following:

    1. A day nursery;

14. That the Clerk is hereby authorized and directed to proceed with the giving of notice of passing of this By-law, in accordance with the *Planning Act*.

15. That this By-law comes into force in accordance with Section 34 of the *Planning Act*.

PASSED this 22nd day of June, 2022.

F. Eisenberger
Mayor

A. Holland
City Clerk

CI 22-F

Authority: Item 7, Planning Committee
Report 22-010 (PED22131)
CM: June 22, 2022
Ward: 11

Bill No. 156

CITY OF HAMILTON

BY-LAW NO. 22-156

To Amend Zoning By-law No. 464 (Glanbrook), Respecting Lands Located at 3140 – 3150 Binbrook Road

WHEREAS the *City of Hamilton Act, 1999*, Statutes of Ontario 1999 Chap. 14, Schedule C did incorporate, as of January 1, 2001, the municipality "City of Hamilton";

AND WHEREAS the City of Hamilton is the successor to certain area municipalities, including the former area municipality known as "The Corporation of the Township of Glanbrook", and is the successor of the former Regional Municipality, namely, "the Regional Municipality of Hamilton-Wentworth";

AND WHEREAS the *City of Hamilton Act, 1999*, provides that the Zoning By-laws and Official Plans of the former area municipalities and the Official Plan of the former regional municipality continue in force in the City of Hamilton until subsequently amended or repealed by the Council or the City of Hamilton;

AND WHEREAS Zoning By-law No. 464 (Glanbrook) was enacted on the 16th of November 1992 and approved by the Ontario Municipal Board on the 31st of May 1993;

AND WHEREAS Council, in approving Item 7 of Report 22-010 of the Planning Committee, at its meeting held on the 22nd day of June, 2022, recommended that Zoning By-law No. 464 (Glanbrook) be amended as hereinafter provided;

AND WHEREAS this By-law is in conformity with the Urban Hamilton Official Plan;

NOW THEREFORE the Council of the City of Hamilton enacts as follows:

1. That the Residential Multiple "RM3-321" Zone, Modified within SECTION 44: EXCEPTIONS TO THE PROVISIONS OF THIS BY-LAW, be amended as follows:

   (i) By adding the following paragraph after the words "3140 and 3150 Binbroook Road (By-law No. 21-120)":
   In addition to the uses permitted in **SECTION 19: RESIDENTIAL MULTIPLE "RM3" ZONE**, Subsection 19.1 **PERMITTED USES**, the following additional uses shall also be permitted:

   Street Townhouse Dwelling

   (ii) By deleting the first paragraph "Notwithstanding the regulations of **SECTION 19.2 – REGULATIONS FOR USES PERMITTED IN PARAGRAPH (a) OF**

SUBSECTION 19.1 (BLOCK TOWNHOUSE DWELLINGS), provisions (a), (b), (e), (f), (j), and (m), the following provisions shall apply:" and replacing it with the following wording:

"The following regulations shall apply to a Street Townhouse Dwelling:"

(iii) By adding the following wording after subsection (m):

"All other regulations of Subsection 19.2 shall also apply to a Street Townhouse Dwelling."

2. That the Clerk is hereby authorized and directed to proceed with the giving of notice of passing of this By-law, in accordance with the *Planning Act*.

3. That this By-law comes into force in accordance with Section 34 of the *Planning Act*.

PASSED this 22nd day of June, 2022.

F. Eisenberger
Mayor

A. Holland
City Clerk

CI 22-F

Authority: Item 8, General Issues Committee
Report 22-012 (CM22009)
CM: June 22, 2022
Ward: City Wide
Bill No. 157

CITY OF HAMILTON

BY-LAW NO. 22-157

A By-law to Delegate Authority During any Restricted Period following Nomination Day

WHEREAS section 275(3) of the Municipal Act restricts certain actions of the Council of a local municipality once it can be determined that any of the circumstances set forth in paragraphs 1, 2 or 3 of section 275(1) of the Municipal Act will apply to the new Council of the City;

AND WHEREAS subsection 275(6) of the Municipal Act provides that nothing in section 275 prevents any person or body exercising any authority of a municipality that is delegated to the person or body prior to Nomination Day for the election of the new Council;

AND WHEREAS, pursuant to section 23.1 of the Municipal Act, a municipality is authorized to delegate its powers and duties under the Municipal Act or any other Act to a person or body, subject to the restrictions set out in Part II of the Municipal Act;

AND WHEREAS to ensure the efficient and effective management of the City of Hamilton during any Restricted Period it is prudent that Council delegate certain authorities to the City Manager;

NOW THEREFORE the Council of the City of Hamilton enacts as follows:

1. The delegations of authority outlined in this By-law are in addition to any other delegations of authority established by other City by-laws, resolutions, policies and otherwise at law. In the event of any inconsistency between this By-law and any other City by-law, the provision that delegates the broader authority shall prevail to the extent of the inconsistency.

2. In this By-law:

"By-law" means this By-law to Delegate Authority during any Restricted Period following Nomination Day;

"City" means the City of Hamilton or the geographic area of the City of Hamilton as the context requires;

"City Clerk" means the Clerk for the City of Hamilton as appointed by Council;

"City Manager" means the Chief Administrative Officer for the City of Hamilton as appointed by Council;

"Council" means the Council for the City of Hamilton;

"Municipal Act" means the *Municipal Act, 2001*, S.O. 2001, c. 25, as amended;

"Nomination Day" means the third Friday in August in the year of the election for a regular election; and

"Restricted Period" means the period commencing when any of the circumstances set forth in paragraphs 1, 2 or 3 of section 275(1) of the Municipal Act apply and ending at the conclusion of the inaugural meeting of the newly elected Council.

3. During the Restricted Period the City Manager shall have the authority with respect to the following matters:

    (a) the appointment of any employee on an acting basis;

    (b) the disposition of any real or personal property of the City that has a value exceeding $250,000 at the time of disposal;

    (c) making any expenditures or incurring any other liability of $250,000 or greater; and

    (d) approve the award of contract for any capital projects where the competitively procured cost exceeds the approved capital budget for that project by $250,000.

4. During the Restricted Period, the General Manager, Finance and Corporate Services shall be authorized to fund estimates in excess of the budget for individual capital projects through budget appropriation transfers between capital projects and /or through reserves funding and/ or through debenture issue(s).

5. During the Restricted Period the General Manager, Finance and Corporate Services shall be authorized to amend the debt forecast and calculate an updated Annual Repayment Limit (ARL) related to incurring long term debt for any capital projects.

6. Prior to exercising the delegated authorities set forth in this By-law, the City Manager or the General Manager shall:

    (a) consult with the General Manager, Finance and Corporate Services and with the General Manager, Planning and Economic Development, with respect to any acquisition or disposition of real or personal property that exceeds $250,000;

    (b) consult with the General Manager, Finance and Corporate Services and with the appropriate General Manager with respect to the making of any expenditure, or the incurring of any liability of $250,000 or greater; and

(c) consult with the General Manager, Finance and Corporate Services and with the appropriate General Manager with respect to approving the award of contract for capital projects where the cost exceeds the amount of the capital budget for that project by $250,000.

7. The City Manager shall provide a report to the first General Issues Standing Committee meeting following the inaugural meeting of the newly elected Council identifying any exercise of the authorities delegated pursuant to this By-law.

8. The authorities delegated to the City Manager pursuant to this By-law include the authority to negotiate, enter into and execute all necessary contracts and agreements and any ancillary documents required to give effect thereto in a form satisfactory to the City Solicitor and to take all necessary steps and actions to exercise the delegated authorities.

9. The City Clerk shall advise Council in writing when the Restricted Period has commenced.

10. This By-law shall come into force on the day it is passed and expire on the date of the inaugural meeting of the new term of Council.

PASSED this 22nd day of June, 2022.

F. Eisenberger
Mayor

A. Holland
City Clerk

Authority: Item 6, Audit, Finance and Administration Committee Report 22-012 (FCS22015(b)) CM: June 22, 2022 Ward: City Wide

Bill No. 158

CITY OF HAMILTON
BY-LAW NO. 22-158

Being a By-law Respecting Community Benefits Charges on Lands within the City of Hamilton

WHEREAS the City of Hamilton (hereinafter referred to as the "City") will experience growth through Development and Redevelopment;

AND WHEREAS Council for the City desires to impose Community Benefits Charges against land to pay for the Capital Costs of facilities, services and matters required because of Development or Redevelopment in the area to which the by-law applies;

AND WHEREAS the *Planning Act, 1990* (the "Act") provides that the council of a municipality may by by-law impose Community Benefits Charges against Development or Redevelopment;

AND WHEREAS a Community Benefits Charge strategy report has been completed which identifies the Facilities, Services and Matters that will be funded with Community Benefits Charges and complies with the requirements of the *Planning Act*, R.S.O. 1990 c.P.13, as amended;

AND WHEREAS Council, at its meeting of June 22, 2022, has adopted and approved the said Community Benefits Charge Strategy and the Community Benefits Charges and policies recommended by the General Manager of the Finance and Corporate Services Department to be included in this By-law; and

AND WHEREAS the Corporation of the City of Hamilton has consulted with such persons and public bodies as the municipality considers appropriate;

NOW THEREFORE the council of the City of Hamilton enacts as follows:

1. That in this by-law and the Recitals, thereto:

INTERPRETATION

(a) **"Adaptive Reuse"** means the alteration of an existing Building on a Protected Heritage Property for compliance of its continuing or resumed use(s) with current Building Code requirements; or, for compliance of its proposed new use(s) with current Building Code requirements; or, for ensuring its structural integrity; or for optimizing its continued, resumed or new use(s); while maintaining the cultural heritage value or interests of the subject Building; and in compliance with the conditions of any Heritage Permit required for the subject alterations;

(b) **"Affordable Housing Project"** means a development or redevelopment that provides housing and incidental facilities for persons of low and moderate income;

(c) **"Board of Education"** means a board as defined in clause 1(1) of the Education Act 1997, S.O. 1997, c.E.2

(d) **"Building"** means any structure or building as defined in the Building Code, as amended from time to time or any successor thereof but does not include a vehicle;

(e) **"Building Code"** means Ontario Regulations 332/12; Building Code;

(f) **"Building Code Act"** means the *Building Code Act, 1992*, SO 1992, c 23, as amended, or any successor thereof;

(g) **"Building Permit"** means a building permit issued pursuant to the Building Code Act;

(h) **"Capital Costs"** means costs incurred or proposed to be incurred by the City or a Local Board thereof directly or by others on behalf of, and as authorized by, the City or Local Board,

(i) to acquire land or an interest in land, including a leasehold interest,

(ii) to improve land,

(iii) to acquire, lease, construct or improve buildings and structures,

(iv) to acquire, construct or improve facilities including,

(A) furniture and equipment, and

(B) rolling stock, and

(v) to undertake studies in connection with any of the matters referred to in clauses (i) to (iv) above, including the Community Benefits Charge Strategy,

required for the provision of Services designated in this By-law within or outside the City, including interest on borrowing for those expenditures under clauses (i) to (v) above that are growth-related;

(i) **"City"** means the City of Hamilton or the geographic area of the municipality, as the context requires;

(j) **"Community Benefits Charge"** or **"Community Benefits Charges"** means the charges permitted by the *Planning Act* and imposed by this By-law against land to pay for the Capital Costs of Facilities, Services and Matters required because of Development or Redevelopment in the area to which the by-law applies;

(k) **"Community Benefits Charge Strategy"** means the community benefits strategy prepared by the City in accordance with the *Planning Act* and approved by Council on June 22, 2022;

(l) **"Council"** means the Council of the City;

(m) **"Development"** means the construction, erection, or placing of one or more Buildings on land or the making of an addition or alteration to a Building that has the effect of increasing the size or usability thereof or any development requiring any of the actions described in subsection 12(a), and includes Redevelopment;

(n) **"Downtown CIPA"** means the area shown on Schedule "A";

(o) **"Facilities, Services and Matters"** are the facilities, services and matters described in the Community Benefits Charge Strategy;

(p) **"Full Kitchen"** means a kitchen which contains a fridge, stove and sink;

(q) **"General Manager"** means the General Manager of Corporate Services and Finance for the City;

(r) **"Local Board"** means a municipal service board, transportation commission, public library board, board of health, police services board, planning board, or any other board, commission, committee, body or local authority established or exercising any power under any Act with respect to the affairs or purposes of the City, excluding a school board and a conservation authority;

(s) **"Lodging House"** means a Building that is used or designed to provide four or more lodging units, which may share common areas of the Building other than the lodging unit and do not appear to function as a single housekeeping unit and does not include a Residential Facility;

(t) **"Lodging Unit"** means a room or set of rooms located in a Lodging House designed or intended to be used for sleeping and living accommodation, which:

(i) is designed for the exclusive use of the resident or residents of the unit;

(ii) is not normally accessible to persons other than the resident or residents of the unit; and,

(iii) may contain either a bathroom or Full Kitchen but does not contain both for the exclusive use of the resident or residents of the unit;

(u) "**Mixed-use Development**" means a Building used, designed or intended for use for both Residential and Non-residential Uses;

(v) **"Non-residential Use"** means the use of land or Buildings other than for a Residential Use;

(w) **"Ontario Heritage Act"** means the *Ontario Heritage Act*, R.S.O. 1990, c. O.18;

(x) **"Owner"** means the owner of land who has made application for an approval for the Development of land for which a Community Benefits Charge may be imposed;

(y) **"Parcel"** means a lot or parcel of land which can be legally conveyed pursuant to the *Planning Act*;

(z) **"Planning Act"** means the *Planning Act*, R.S.O. 1990 c.P.13, as amended;

(aa) **"Protected Heritage Property"** means a property that is designated under Part IV of the Ontario Heritage Act, subject to a Heritage Easement under Part II of the Ontario Heritage Act, subject to a Heritage Easement under Part IV of the Ontario Heritage Act, or subject to a covenant or agreement on title held between the property owner and a conservation authority or level of government in the interest of conserving built heritage;

(bb) **"Redevelopment"** means the construction, erection or placing of one or more Buildings on land where all or part of a Building has previously been demolished on such land, or changing the use of a Building or part of a Building from a Non-Residential Use to a Residential Use, or changing a Building or part of Building from one form of Residential Use to another form of Residential Use;

(cc) **"Residential Unit"** means a room or group of rooms occupied or designed to be occupied exclusively as an independent and separate self-contained housekeeping unit including a house;

(dd) **"Residential Facility"** means a Building or part thereof containing four or more rooms or suites of rooms designed or intended to be used for sleeping and living accommodation that have a common entrance from street level and:

(i) where the occupants have the right to use, in common, halls, stairs, yards, common rooms and accessory Buildings;

(ii) which may or may not have exclusive sanitary facilities for each occupant;

(iii) which does not have exclusive Full Kitchen facilities for each occupant;

(iv) where support services such as meal preparation, grocery shopping, laundry; and

(v) housekeeping, nursing, respite care and attendant services may be provided at various levels;

(ee) **"Residential Use"** means land, or Buildings of any kind whatsoever used or designed or intended for use as:

(i) one or more Residential Units, including the portion of a Mixed-use Development comprised of any Residential Units and any areas

intended to be used exclusively by the occupants of the Residential Units;

(ii) a Lodging House; or

(iii) a Residential Facility;

(ff) **"Short Term Accommodation"** means a Building or a portion of a Building designed or used or designed or intended for use as a temporary rental sleeping accommodation for travellers and shall include but not be limited to a motel, motor hotel, hotel or an apartment hotel; and

(gg) **"Valuation date"** means, with respect to land that is the subject of Development or Redevelopment,

(i) the day before the day the Building Permit is issued in respect of the Development or Redevelopment, or

(ii) if more than one Building Permit is required for the Development or Redevelopment, the day before the day the first permit is issued.

2. Any reference in this By-law to any statute or regulation or any section of any statute or regulation shall, unless otherwise expressly stated, be deemed to be a reference to such statute, regulation or section as amended, restated or re-enacted from time to time and to any successor legislation or regulation. Any defined term in the Planning Act that has not been defined in section 1 of this By-law, shall have the meaning given to it in the *Planning Act.*

3. Unless otherwise indicated, references in this By-law to sections and schedules are to sections and schedules of this By-law.

4. In this By-law "herein", "hereof", "hereto" and "hereunder" and similar expressions refer to this By-law.

5. If the context of this By-law requires changes of gender and number, this By-law shall be read such that words importing the singular number only shall include the plural and vice versa, words importing the masculine gender shall include the feminine and neuter genders and vice versa.

Schedules

6. The following schedules to this By-law form an integral part of this By-law:

Schedule "A": Downtown CIPA

Lands Affected

7. This By-law applies to all land within the City except lands that are owned by and used for the purposes of:

(a) the City or a Local Board;

(b) a Board of Education.

Facilities, Services and Matters Funded by the Community Benefits Charges

8. The Facilities, Services and Matters will be funded with the Community Benefits Charges.

9. All Development and Redevelopment of land within the area to which this By-law applies will increase the need for the Facilities, Services and Matters.

10. The Community Benefits Charges applicable to a Development or Redevelopment as determined pursuant to this By-law shall apply without regard to the Facilities, Services and Matters required or used by an individual Development or Redevelopment.

Amount of Community Benefits Charge

11. (a) Where there is Development or Redevelopment other than that described in subsection 12(b) and which requires one or more of the approvals set out in subsection 12(a), on land to which this By-law applies, the Community Benefits Charges payable pursuant to this By-law shall be four (4) percent of the value of the land being developed as of the Valuation Date.

(b) Land referred to in subsections 11(a) and 11(c) means the entire Parcel or Parcels on which the Development or Redevelopment is occurring regardless of whether the Development or Redevelopment is only on a part of the Parcel or Parcels or is a phase of a Development or Redevelopment.

(c) If a Development or Redevelopment consists of two or more above grade Buildings that will not be constructed concurrently, will be subject to separate building permits and are anticipated to be completed at different times, each phase of the Development or Redevelopment is deemed to be a separate Development or Redevelopment for the purposes of this By-law. The Community Benefits Charges for the first of the above grade Buildings will be calculated in accordance with subsection 11(a). For each subsequent above grade Building the Community Benefits Payable shall be calculated as follows:

4% of the value of the land being developed as of the Valuation Date
Community Benefits Charges Payable for the first above grade Building

If the difference in the aforesaid calculation is zero or a negative value no CBC is payable, and no credit or refund will be payable.

For the purposes of this subsection an above grade shared podium structure will not be considered part of a Building.

Approvals to Which Community Benefits Charge Applies

12. (a) A Community Benefits Charge shall be imposed with respect to Development or Redevelopment of land that requires:

(i) the passing of a zoning By-Law or of an amendment to a zoning By-Law under section 34 of the *Planning Act*;

(ii) the approval of a minor variance under section 45 of the *Planning Act*;

(iii) a conveyance of land to which a by-law passed under subsection 50(7) of the *Planning Act* applies;

(iv) the approval of a plan of subdivision under section 51 of the *Planning Act*;

(v) a consent under section 53 of the *Planning Act*;

(vi) the approval of a description under section 9 of the *Condominium Act, 1998,* SO 1998, c 19, as amended, or any successor thereof; or

(vii) the issuing of a permit under the *Building Code Act* in relation to a Building.

(b) Despite 3.4(a) above, a Community Benefits Charge shall not be imposed with respect to:

(i) Development of a proposed Building with fewer than five storeys at or above ground;

(ii) Development of a proposed Building with fewer than 10 Residential Units;

(iii) Redevelopment of an existing Building that will have fewer than five storeys at or above ground after the redevelopment; or

(iv) Redevelopment that proposes to add fewer than 10 Residential Units to an existing Building.

(c) If a Development or Redevelopment is partially comprised of a use described in subsections 13(a) or (b) the portion of the Development or Redevelopment comprised of such use will not be considered part of the Development or Redevelopment and only the portion of the Development or Redevelopment that does not contain a use described in subsections 13(a) or (b) will be considered for the determination of whether a Community Benefits Charge is payable pursuant to this By-law.

Exemptions

13. Notwithstanding the provisions of this By-law, Community Benefits Charges shall not be imposed with respect to:

(a) Development or Redevelopment as prescribed in Ontario Regulation 509/20 for the purposes of subsection 37(4)(e) of the *Planning Act*;

(b) until such time as the City develops and implements a Community Benefits Charge Incentive Program, Development or Redevelopment of an Affordable Housing Project that:

(i) is not included within the exemption in subsection 6 of section 1 of Ontario Regulation 509/20;

(ii) has been approved to receive construction funding from the Government of Canada or the Province of Ontario (including their Crown corporations) under an affordable housing program or has been approved by the City through an affordable housing program;

(ii) such affordable housing Development or Redevelopment is not eligible for funding for Community Benefits Charges liabilities from the Government of Canada or the Province of Ontario (including their Crown corporations); and

(c) Redevelopment or Development on a Protected Heritage Property involving the Adaptive Reuse of all of a Building but without any addition thereto or the construction of any additional Buildings on the Protected Heritage Property provided the Protected Heritage Property contains:

(i) heritage attributes that are the subject of designation under Part IV of the Ontario Heritage Act;

(ii) features subject to a Heritage Easement under Part II of the Ontario Heritage Act;

(iii) features subject to a Heritage Easement under Part IV of the Ontario Heritage Act; or

(iv) features subject to a covenant or agreement on title held between the property owner and a conservation authority or level of government in the interest of conserving,

Downtown CIPA and Other Partial Exemptions

14. Notwithstanding any other provision of this By-law, the Community Benefits Charges payable under this By-law respecting all Development and Redevelopment for which the date of Building Permit issuance is on or before June 12, 2024 and which is within the boundaries of the Downtown CIPA as shown on Schedule "A", shall be reduced by 40%.

15. Redevelopment of an existing Residential Development for the purpose of creating a Residential Facility or Lodging House within the existing Building envelope is exempt from 50% of the Community Benefit Charge otherwise payable pursuant to this By-law.

In-Kind Contributions

16. In accordance with subsection 37(6) of the *Planning Act*, the City may in its sole discretion permit an Owner to provide the City Facilities, Services or Matters required because of Development or Redevelopment on lands to which the By-law applies, in return for a deduction from the Community Benefits Charges payable by the Owner subject to the Owner and the City entering into an agreement.

17. The General Manager is delegated the authority to make the decision in section 16 herein and may authorize and execute any agreement required pursuant to section 16 herein on such terms and conditions satisfactory to the General Manager.

18. Before the Owner enters into an agreement in accordance with section 16 to provide the City Facilities, Services or Matters required because of Development or Redevelopment on lands to which the By-law applies the City shall advise the Owner of the value that will be attributed to them.

19. The value attributed under section 18 shall be deducted from the amount the Owner would otherwise be required to pay under this By-law. If the value attributed under section 18 exceeds the Community Charges Benefits payable the excess value shall not be paid to Owner providing the Facilities, Services or Matters and no credit shall be provided to the Owner. If the value attributed under section 18 is less than the Community Benefits Charges that are payable the Owner shall pay the difference to the City in accordance with section 20.

Time of Payment of Community Benefits Charges

20. Community Benefits Charges imposed under this By-law are calculated, payable, and collected upon issuance of a Building Permit for the Development or Redevelopment.

Multiple building permits

21. If a Development or Redevelopment requires more than one Building Permit but only contains one above grade Building, the Community Benefits Charges for the Development or Redevelopment are payable upon the first Building Permit being issued.

22. For Development or Redevelopment that requires more than one Building Permit and is comprised of more than one above grade Building, Community Benefits Charges are payable upon the issuance of the first Building Permit being issued and for each Building Permit issued for the construction of every above grade Building after the first above grade Building and shall be calculated in accordance with subsection 11(c). If the first Building Permit for the Development or Redevelopment permits the construction of more than one above grade Building, the Community Benefits Charges payable for any additional above grade Building will payable upon the issuance each Building Permit for any additional above grade Building and the Community Benefits Charges shall be calculated in accordance with subsection 11(c).

Interest on Refunds

22. If it is determined that a refund is required to be paid pursuant to subsections 37(27) and 37(27) of the *Planning Act*, the City shall pay interest on a refund required to be paid pursuant to 37(28) and 37(29) of the *Planning Act* at a rate not less than that required pursuant to subsection 37(29) of the *Planning Act* from the day the amount was paid to the municipality to the day it is refunded.

Severability

23. If, for any reason, any provision of this By-law is held to be invalid, it is hereby declared to be the intention of Council that all the remainder of this By-law shall continue in full force and effect until repealed, re-enacted, amended or modified.

Administration of By-law

24. This By-law shall be administered by the Corporate Services and Finance Department of the City.

Headings for Reference Only

25. The headings inserted in this By-law are for convenience of reference only and shall not affect the construction or interpretation of this By-law.

Non-Binding Nature

26. Nothing in this By-law shall be construed so as to commit or require the City or its Council to authorize or proceed with any specific capital project at any specific time.

General

27. This By-law may be referred to as the "City of Hamilton Community Benefits Charges By-law".

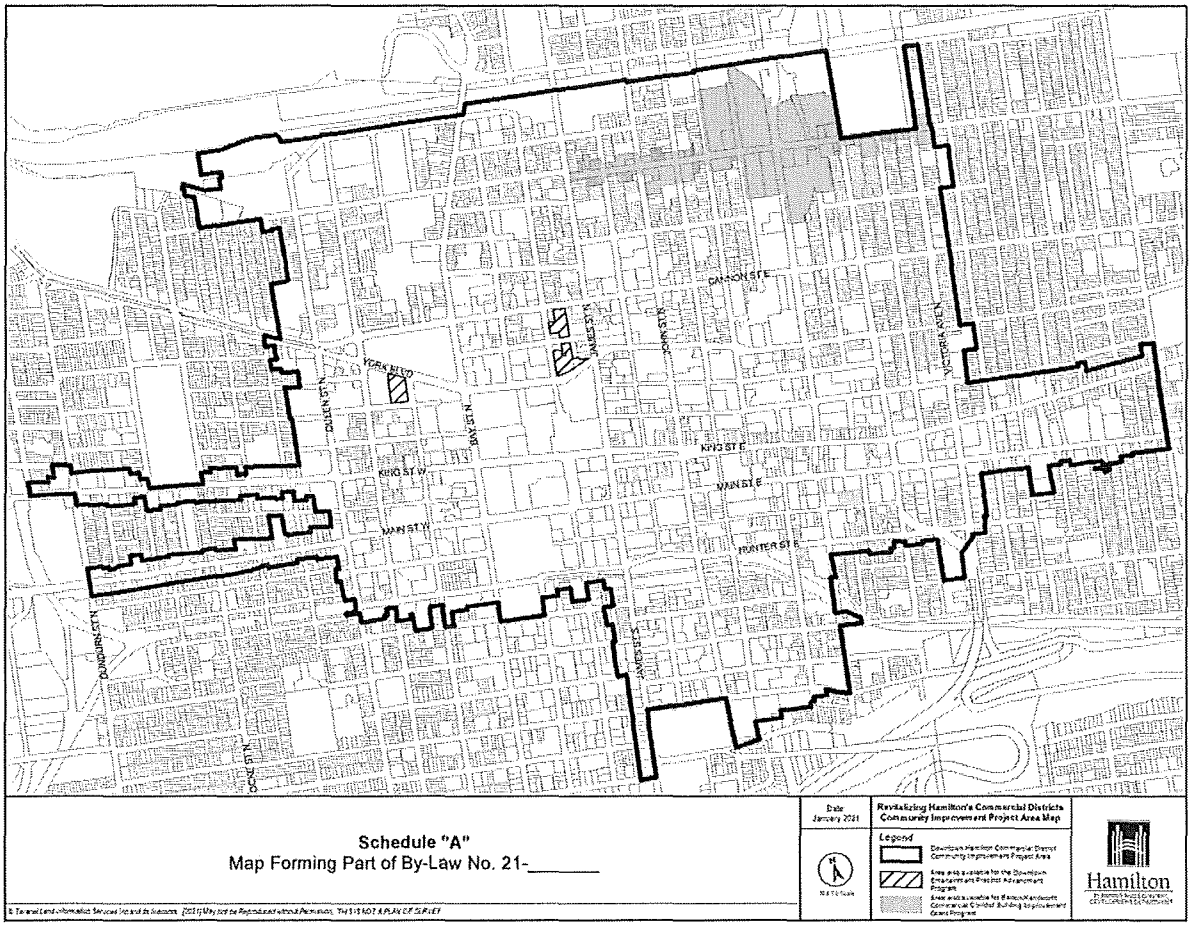
Date By-law In Force

28. This By-law shall come into effect at 12:01 A.M. on September 18, 2022.

PASSED this 22 day of June, 2022.

F. Eisenberger
Mayor

A. Holland
City Clerk



Schedule "A"
Map Forming Part of By-Law No. 21-_____

Authority: Item 17, Public Works Committee
Report 07-011
(TOE02005(b)/PED07248)
CM: September 26, 2007
Ward: 12

Bill No. 159

CITY OF HAMILTON

BY-LAW NO. 22-159

To Repeal and Replace By-Law No. 22-065
To impose a Sanitary Sewer Charge Upon Owners of Land Abutting Springbrook Ave from Approximately 24.5 metres South of Lockman Drive to Approximately 17 metres South of Regan Drive, in the City of Hamilton

WHEREAS the Council of the City of Hamilton authorized recovering a portion of costs associated with the construction of a sanitary sewer on Springbrook Avenue from approximately 24.5 metres south of Lockman Drive to approximately 17 metres south of Regan Drive, in the City of Hamilton, by approving, on September 26, 2007, Item 17 of Public Works Committee Report 07-011 (Report TOE02005b/FCS02026b/PED07248); and approving, on June 11, 2007, Item 5 of Committee of the Whole Report 07-020, and the 0MB approved the said cost recoveries by issuance of Decision No. 2034 on July 18, 2007;

AND WHEREAS, Item 11.2, approved February 5, 2008 through the Economic Development & Planning Committee, directed that the amount per address be set at $5,000 to be indexed from 2009;

AND WHEREAS Landmart Realty Corp, in satisfaction of terms and conditions of a Subdivision Agreement dated the 10th day of September 2007 and registered the 11th day of October 2007, as well as the conditions imposed in accordance with the approval of Draft Plan of Subdivision "Meadowlands Phase 10" constructed certain Sewer Works, in the City of Hamilton, as more particularly described in Schedule "A" attached to this By-law (the Sewer Works");

AND WHEREAS Liv Developments Ltd. as successor to Landmart Realty Corp entered into an Amending Subdivision Agreement dated November 15, 2021 which extended the cost recovery obligations of the City set out in schedule "D" of the Amending Subdivision Agreement for a period of ten years from the date of the Amending Subdivision Agreement;

AND WHEREAS to the extent that the construction of the said Sewer Works benefits the property owners described in Schedule "A", such works were services or activities that were provided or done on behalf of the City of Hamilton with the express intention that section 391 (1)(a) of the Municipal Act, S.O. 2001, c.25 as amended would apply thereto;

AND WHEREAS the cost of the said Sewer Works, that relate to the benefitting property owners described in Schedule "A" is $40,000.00, and this amount is to be

recovered from all benefitting property owners as set forth in the By-law, (the "Sewer Charges"); and

AND WHEREAS the said Sewer Charges are imposed pursuant to Part XII of the Municipal Act, S.O., 2001, c. 25 as amended and pursuant to section 14 of the City of Hamilton Act, 1999, S.O., 1999, c. 14, Schedule C as amended.

NOW THEREFORE the Council of the City of Hamilton enacts as follows:

1. Sewer Charges are imposed upon the owners or occupants of land who benefit from the construction of the Sewer Works (the "Assessed Owners").

2. The Assessed Owners' lands and the respective Sewer Charges are more particularly described in Schedule "A", which Schedule is attached to and forms part of this By-law.

3. The Sewer Charges have been established using the approved method for cost apportionment per City of Hamilton Report TOE02005b/FCS02026b/PED07248 (Funding Methodologies for Municipal Infrastructure Extensions Review and Update), and OMB Decision No. 2034 which established a flat fee Sanitary Sewer Charge of $5,000.00, which includes one sanitary drain connection, attributable to each Assessed Owner of an existing residential lot. The Sewer Charges shall be indexed in accordance with the percentage change in the composite Canadata Construction Index (Ontario Series) commencing from July 2009 until October 2020, then the charges will be adjusted yearly by the City of Hamilton's 15 year serial all-in interest rate for each year, (2022 rate 2.44%) to the date of permit issuance.

4. Subject to section 7 of this By-law, the amount resulting from the application of the Sewer Charges (the "Indebtedness"), shall be collected by the City from each Assessed Owner at the time of permit issuance for any connection to the said Sewer Works, in addition to any applicable permit fee.

5. The Assessed Owners have the option of paying the Indebtedness by way of annual payments over a period of 15 years from the date of permit issuance for connection by entry on the tax roll, to be collected in like manner as municipal taxes. The interest rate utilized for the 15 year payment shall be the City of Hamilton's then-current 15 year borrowing rate (2022 rate 2.75%).

6. Notwithstanding Section 5, an Assessed Owner of a parcel described in Schedule "A" may pay the commuted value of the Indebtedness without penalty, but including interest, at any time.

7. Should an Assessed Owner sever or subdivide their parcel of land, the Indebtedness owed to the City of Hamilton, whether the parcel of land is connected or not, and whether or not the Assessed Owner has previously exercised the repayment option

set out in Section 5 above, shall be paid forthwith to the City of Hamilton in a lump sum as a condition of severance or subdivision approval at full cost recovery.

8. The developer, LIV Developments Ltd., or their successors or assigns, upon satisfying the City of Hamilton that it has completed its obligations with respect to the construction of the said Sewer Works, shall receive repayment of that portion of the associated cost of the construction collected hereunder, pursuant to the terms and conditions of the Subdivision Agreement as amended by the Amending Subdivision Agreement. In accordance with the terms of the Amending Subdivision Agreement, the City's cost recovery obligation under this by-law shall expire on a date that is ten (10) years after the date of the Amending Subdivision Agreement, being November 15, 2031.

9. Unpaid Sewer Charges constitute a debt to the City and may be added to the tax roll and collected in the same manner as municipal taxes.

10. If any provision or requirement of this By-law, or the application of it to any person, shall to any extent be held to be invalid or unenforceable by any court of competent jurisdiction, the remainder of the By-law, or the application of it to all persons other than those in respect of whom it is held to be invalid or unenforceable, shall not be affected, and each provision and requirement of this By-law shall be separately valid and enforceable.

11. City of Hamilton By-law No. 22-065 is hereby repealed and replaced in its entirety.

12. This By-law comes into force on the day following the date of its passing.

PASSED this 22nd day of June, 2022

F. Eisenberger
Mayor

A. Holland
City Clerk

Schedule "A" to By-law No. 22-159

Springbrook Avenue
Sanitary Sewer on Springbrook Avenue from approximately 24.5m South of Lockman Drive to approximately 17m South of Regan Drive

Sewer Charges 0MB DECISION 2034

Property Address	Sanitary Sewer & 1 Drain Connection
343 Springbrook Avenue	$5,000.00
365 Springbrook Avenue	$5,000.00
366 Springbrook Avenue	$5,000.00
372 Springbrook Avenue	$5,000.00
379 Springbrook Avenue	$5,000.00
380 Springbrook Avenue	$5,000.00
407 Springbrook Avenue	$5,000.00
446 Springbrook Avenue	$5,000.00
TOTAL	$40,000.00

Authority: Item 12, Committee of the Whole
Report 01-033 (PD01184)
CM: October 16, 2001
Ward: 9

Bill No. 160

CITY OF HAMILTON

BY-LAW NO. 22-160

Respecting Removal of Part Lot Control
Part of Lots 1 to 6, 9 to 51, 55, 56, 59 to 63, 65 to 84, and Part of Blocks 86 and 95 Registered Plan No. 62M-1280, for lands municipally known as 103, 104, 107, 108, 111, 112, 115, 119, 123, 127, 131, 135, 139, 143, 147, 150, 151, 154, 155, 159, 163, 167, 171, 175, 179, 183, 187, 191, 195, 199, 203, 207, 211, 215, 219, 223, 227, 231, 235, 239, 243, 247, 251, 255, 259, 271, 275, 279, 282, 283, 286, 287, 290, 291 Rockledge Drive and 128, 132, 133, 136, 137, 140, 141, 144, 148, 152, 156, 160, 164, 168, 172, 176, 180, 184, 188, 192, 196, 200, 204, Cittadella Boulevard, Glanbrook

WHEREAS the Sub-Section 50(5) of the *Planning Act*, (R.S.O. 1990, Chapter P.13, as amended, establishes part-lot control on land within registered plans of subdivision;

AND WHEREAS Sub-Section 50(7) of the *Planning Act*, provides as follows:

"(7) **Designation of lands not subject to part lot control. --** Despite Sub-Section (5), the council of a local municipality may by by-law provide that Sub-Section (5) does not apply to land that is within such registered plan or plans of subdivision or parts of them as are designated in the by-law."

AND WHEREAS the Council of the City of Hamilton is desirous of enacting such a by-law with respect to the lands hereinafter described;

NOW THEREFORE the Council of the City of Hamilton enacts as follows:

1. Sub-Section 5 of Section 50 of the *Planning Act*, for the purpose of creating 78 maintenance and encroachment easements, shown as Parts 1-78, inclusive, on deposited Reference Plan 62R-21835, shall not apply to the portion of the registered plan of subdivision that is designated as follows, namely:

   Part of Lots 1-6, 9 to 51, 55, 56, 59 to 63 and 65 to 84 and Part of Blocks 86 and 95, on Registered Plan No. 62M-1280, in the City of Hamilton

2. This by-law shall be registered on title to the said designated land and shall come into force and effect on the date of such registration.

3. This by-law shall expire and cease to be of any force or effect on the 22nd day of June 2024.

PASSED this 22nd day of June 2022.

F. Eisenberger
Mayor

A. Holland
City Clerk

PLC-22-002

Authority: Item 12, Committee of the Whole
Report 01-033 (PD01184)
CM: October 16, 2001
Ward: 15

Bill No. 161

CITY OF HAMILTON

BY-LAW NO. 22-161

Respecting Removal of Part Lot Control, Part of Lots 385 - 389, 408 – 475, 515 – 529 and Blocks 627 - 630, Registered Plan No. 62M-1266

WHEREAS the sub-section 50(5) of the *Planning Act,* (R.S.O. 1990, Chapter P.13, as amended, establishes part-lot control on land within registered plans of subdivision;

AND WHEREAS sub-section 50(7) of the *Planning Act*, provides as follows:

"(7) **Designation of lands not subject to part lot control. --** Despite subsection (5), the council of a local municipality may by by-law provide that subsection (5) does not apply to land that is within such registered plan or plans of subdivision or parts of them as are designated in the by-law."

AND WHEREAS the Council of the City of Hamilton is desirous of enacting such a by-law with respect to the lands hereinafter described;

NOW THEREFORE the Council of the City of Hamilton enacts as follows:

1. Sub-section 5 of Section 50 of the *Planning Act*, for the purpose of creating 176 semi-detached dwellings, 16 townhouse dwelling units, 23 maintenance and encroachment easements and entry easements, shown as Parts 1-56, inclusive, on deposited Reference Plan 62R-21860, Parts 1-8, inclusive, on deposited Reference Plan 62R-21855, Parts 1-76, inclusive, on deposited Reference Plan 62R-21859, Parts 1-32, inclusive, on deposited Reference Plan 62R-21856, Parts 1-31, inclusive, on deposited Reference Plan 62R-21853, and Parts 1-10, inclusive, on deposited Reference Plan 62R-21854, shall not apply to the portion of the registered plan of subdivision that is designated as follows, namely:

   Part of Lots 385 - 389, 408 – 475, 515 – 529 and Blocks 627 - 630, Registered Plan No. 62M-1266

2. This by-law shall be registered on title to the said designated land and shall come into force and effect on the date of such registration.

3. This by-law shall expire and cease to be of any force or effect on the 22nd day of June 2024.

PASSED this 22nd day of June, 2022.

F. Eisenberger
Mayor

A. Holland
City Clerk

PLC-22-010

Authority: Item 7, Planning Committee
Report: 22-009 (PED22098)
CM: June 8, 2022
Ward: 1

Bill No. 162

CITY OF HAMILTON

BY-LAW NO. 22-162

To Adopt:

Official Plan Amendment No. 168 to the

Urban Hamilton Official Plan

Respecting:

1107 Main Street West

(Hamilton)

NOW THEREFORE the Council of the City of Hamilton enacts as follows:

1. Amendment No. 168 to the Urban Hamilton Official Plan consisting of Schedule "1", hereto annexed and forming part of this by-law, is hereby adopted.

PASSED this 22nd day of June, 2022.

F. Eisenberger
Mayor

A. Holland
City Clerk

Schedule "1"

Urban Hamilton Official Plan
Amendment No. 168

The following text, attached hereto, constitutes Official Plan Amendment No. 168 to the Urban Hamilton Official Plan.

1.0 Purpose and Effect:

The purpose and effect of this Amendment is to establish a new Area Specific Policy within Area Specific Policy – Area E of the Ainslie Wood Westdale Secondary Plan to permit a maximum building height of 15 storeys and a maximum residential density of 345 units per gross hectare.

2.0 Location:

The lands affected by this Amendment are known municipally as 1107 Main Street, in the former City of Hamilton.

3.0 Basis:

The basis for permitting this Amendment is:

- The proposed development is consistent with, and complementary to, the existing development in the immediate area and efficiently utilizes existing infrastructure and supports transit;
- The proposed development implements the Residential Intensification policies of the Urban Hamilton Official Plan; and,
- The Amendment is consistent with the Provincial Policy Statement, 2020 and conforms to the Growth Plan for the Greater Golden Horseshoe, 2019, as amended.

4.0 Actual Changes:

4.1 Volume 2 – Secondary Plans

Text

4.1.1 Chapter B.6.0 – Hamilton Secondary Plans – Section B.6.2 - Ainslie Wood Westdale Secondary Plan

a. That Policy B.6.2.17.6 of Volume 2, be amended by adding a new paragraph b), as follows:

"b) Notwithstanding Policy E.4.6.7 of Volume 1, for the lands known municipally as 1107 Main Street West, designated Mixed Use – Medium Density, shown as Area Specific Policy - Area E-1 on Map – B.6.2-1 Ainslie Wood Westdale Secondary Plan Land Use Plan, a maximum building height of 15 storeys shall be permitted."

Maps

4.2.1 Map

a. That Volume 2: Map B.6.2-1 – Ainslie Wood Westdale Secondary Plan – Land Use Plan be amended by adding Area Specific Policy – Area E-1 identification to the subject lands, as shown on Appendix "A", attached to this Amendment.

5.0 Implementation:

An implementing Zoning By-Law Amendment and Site Plan will give effect to the intended uses on the subject lands.

This Official Plan Amendment is Schedule "1" to By-law No. 22-162 passed on the 22nd day of June, 2022.

The
City of Hamilton

F. Eisenberger
Mayor

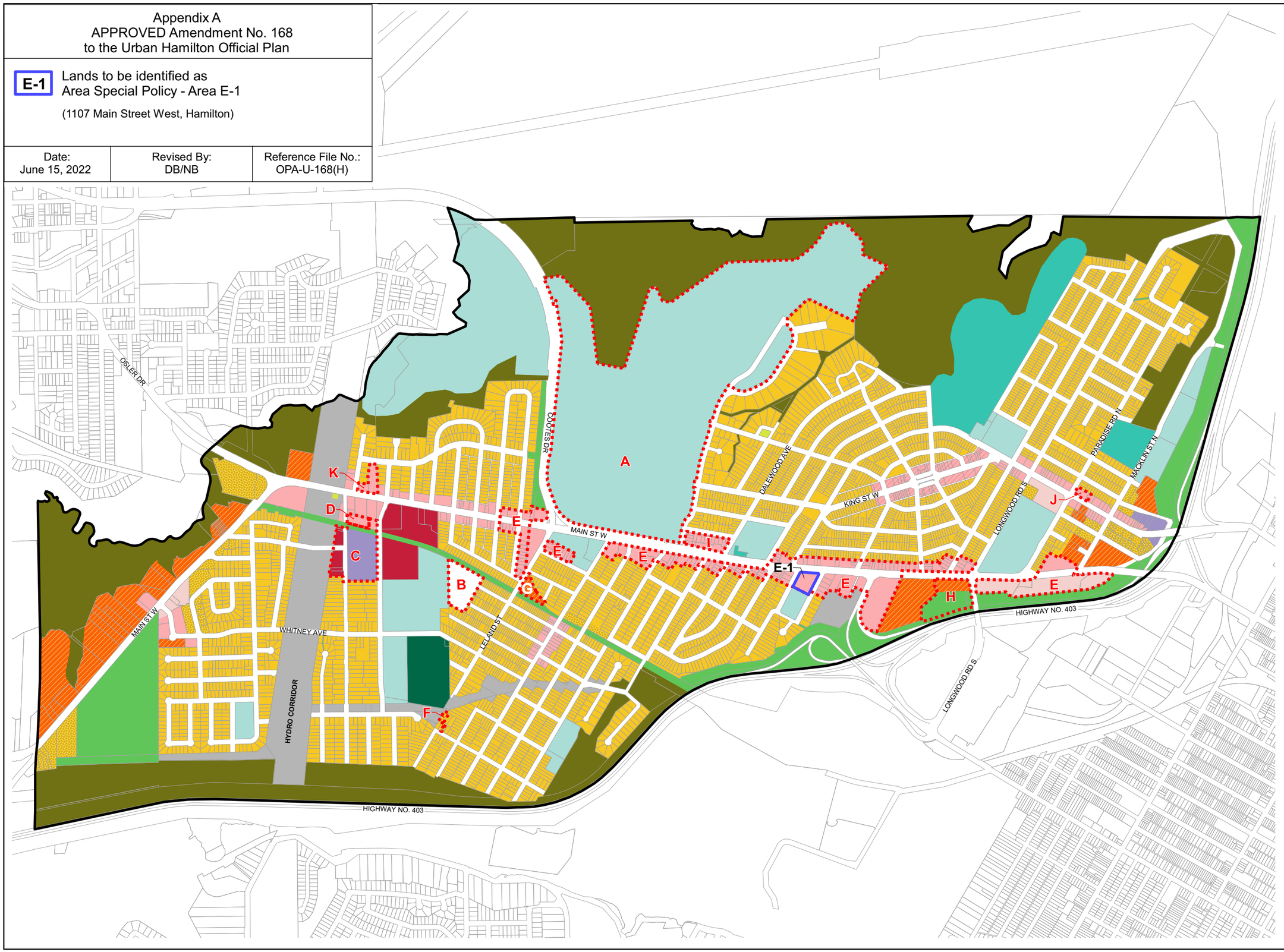
A. Holland
City Clerk

Appendix A
APPROVED Amendment No. 168
to the Urban Hamilton Official Plan

E-1 Lands to be identified as Area Special Policy - Area E-1

(1107 Main Street West, Hamilton)

Date:	Revised By:	Reference File No.:
June 15, 2022	DB/NB	OPA-U-168(H)



Legend

Residential Designations

- Low Density Residential 2
- Low Density Residential 3c
- High Density Residential 1

Commercial and Mixed Use Designations

- Cocal Commercial
- Mixed Use - Medium Density
- Mixed Use - Medium Density - Pedestrian Focus
- District Commercial

Parks and Open Space Designations

- Parkette
- Neighbourhood Park
- Community Park
- General Open Space
- Natural Open Space

Other Designations

- Institutional
- Employment Area - Industrial Lands
- Utility

Other Features

- Area or Site Specific Policy
- Secondary Plan Boundary

Council Adopted: July 9, 2009
Ministerial Approval: March 16, 2011
Effective Date: August 16, 2013

Urban Hamilton Official Plan
Ainslie Wood Westdale Secondary Plan
Land Use Plan
Map B.6.2-1

Not To Scale

Date: January 2022

Hamilton

PLANNING & ECONOMIC DEVELOPMENT DEPARTMENT

Authority: Item 7, Planning Committee
Report 22-009 (PED22098)
CM: June 8, 2022
Ward: 1
Bill No. 163

CITY OF HAMILTON

BY-LAW NO. 22-163

To Amend Zoning By-law No. 05-200 Respecting Lands Located at 1107 Main Street West

WHEREAS Council approved Item 7 of Report 22-009 of the Planning Committee, at the meeting held on June 8, 2022;

AND WHEREAS this By-law is in conformity with the Urban Hamilton Official Plan upon adoption of Official Plan Amendment No. 168;

NOW THEREFORE the Council of the City of Hamilton enacts as follows:

1. That Map 949 of Schedule "A" – Zoning Maps, appended to and forming part of By-law No. 05-200, is amended by changing the zoning from the Transit Oriented Corridor Mixed Use Medium Density (TOC1) Zone to the Transit Oriented Corridor Mixed Use Medium Density (TOC1, 772, H75) Zone for the extent and boundaries more particularly described in Schedule "A" annexed hereto forming part of this By-law.

2. That Schedule "C" - Special Exceptions of Zoning By-law No. 05-200, is hereby amended by adding the following new Special Exception:

"772. Within the lands zoned Transit Oriented Corridor Mixed Use Medium Density (TOC1) Zone, identified on Map 949 of Schedule "A" - Zoning Maps and described as 1107 Main Street West, the following special provisions shall apply:

a) Notwithstanding Section 4.8 (b) and (g) and Section 4.27 the following special provisions shall apply:

i)	An accessory building (landscape feature) shall be permitted to be located within a front or flankage yard;
ii)	An accessory building (landscape feature) shall have a maximum height of 9.7 metres; and,
iii)	A community garden shall be permitted to be located within a front or flankage yard.

b) In addition to Section 11.1.1 and 11.1.3 b) and notwithstanding Sections 11.1.1.1 i) 1., 11.1.3 a) ii), d) ii) and iii), g) v) and i) i) and 11.1.8 a) the following special provisions shall apply:

i)	A Community Garden shall also be permitted.	
ii)	That an accessory building (landscape features) shall include a portion of the existing building façade and shall be required to be provided within the front yard.	
iii)	Minimum Finished Floor Elevation of any dwelling unit	0.5 metres above grade;
iv)	Building Setback from a Street Line	1. Maximum 13.3 metres from Main Street West; 2. Notwithstanding 1. above, a minimum 9.3 metres from Main Street West for any portion of the building exceeding 36.0 metres in height; 3. Maximum 4.5 metres from Cline Avenue South and Dow Avenue; 4. Notwithstanding 3. above, the following minimum setbacks shall apply from Cline Avenue South and Dow Avenue: A. 5.0 metres for any portion of the building exceeding a height of 7.8 metres; B. 6.5 metres for any portion of the building exceeding a height of 16.5 metres; and, C. 14.3 metres for any portion of the building exceeding a height of 22.0 metres, except for an enclosed stairwell.
v)	Minimum Rear Yard	1. 14.5 metres for any portion of the building exceeding a height of 13.5 metres; 2. 17.5 metres for any portion of the building exceeding a height of 18.0 metres; and,

		3. 33.5 metres for any portion of the building exceeding a height of 22.0 metres, except for an enclosed stairwell.
vi)	Maximum Building Height	47.0 metres
vii)	Built Form for New Development	1. A maximum of two driveways shall be permitted; 2. A driveway on Dow Avenue shall have a maximum width of 7.5 metres and a driveway on Cline Avenue South shall have a maximum width of 6.0 metres; and, 3. A driveway on Main Street West shall not be permitted.
viii)	Visual Barrier	A visual barrier shall be required along any lot line abutting an Institutional Zone and may include a gate.
ix)	Planning Strip	A planting strip with a minimum width of 3.0 metres shall be provided along any lot line abutting an Institutional Zone, except for a walkway to a gate.

4. That Schedule "D" – Holding Provisions, of By-law No. 05-200, be amended by adding the additional Holding Provisions as follows:

H75. Notwithstanding Section 11.1 of this By-law, within lands zoned Transit Oriented Corridor Mixed Use Medium Density (TOC1, 772) Zone on Map No. 949 on Schedule "A" – Zoning Maps, and described as 1107 Main Street West, Hamilton, no development shall be permitted until such time as:

a. A Pedestrian Wind Study has been submitted and implemented to the satisfaction of the Director of Planning and Chief Planner;

b. A Documentation and Salvage Report in accordance with the City's Guidelines for Documentation and Salvage Reports be submitted and implemented all to the satisfaction of the Director of Planning and Chief Planner prior to any demolition and the owner shall

demonstrate that a copy of this report shall be submitted by the owner to the Hamilton Public Library;

c. That a Conservation Management Plan, which address the conservation strategy for the retained front façade, and incorporation of salvage materials into the proposed design be submitted, *approved and implemented through a Site Plan Agreement*, to the satisfaction of the Director of Planning and Chief Planner prior to any demolition; and,

d. That an updated Cultural Heritage Impact Assessment be submitted to the satisfaction of the Director of Planning and Chief Planner.

5. That the Clerk is hereby authorized and directed to proceed with the giving of notice of the passing of the By-law, in accordance with the *Planning Act.*

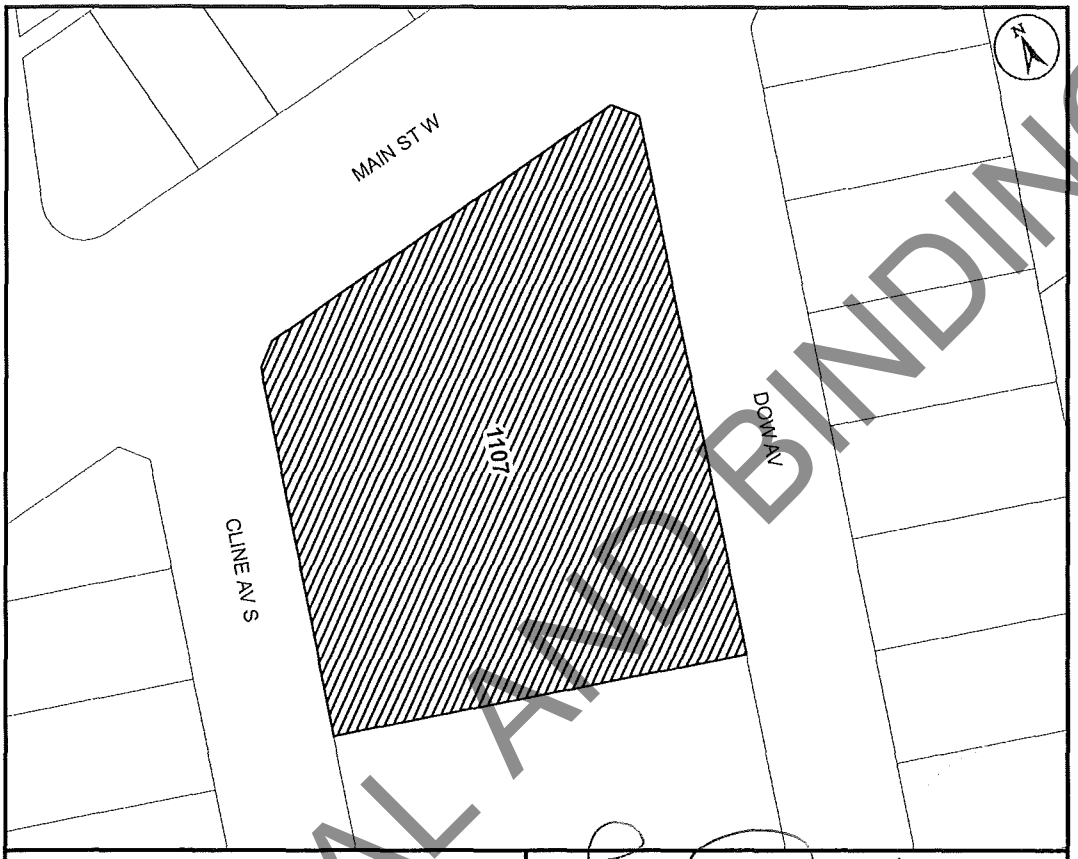
6. That this By-law No. 22-163 shall come into force and be deemed to come into force in accordance with Sub-Section 34(21) of the *Planning Act*, either upon the date of passage of this By-law or as otherwise provided by the said Sub-Section.

PASSED this 22nd day of June, 2022.

F. Eisenberger
Mayor

A. Holland
City Clerk

ZAC-20-016



This is Schedule "A" to By-law No. 22-163

Passed the 22nd day of June, 2022

Mayor

Clerk

Schedule "A"

Map forming Part of
By-law No. 22-_____

to Amend By-law No. 05-200
Map 949

Scale: N.T.S	File Name/Number: ZAC-20-016 & UHOPA-20-012
Date: March 14, 2022	Planner/Technician: DB/VS

PLANNING AND ECONOMIC DEVELOPMENT DEPARTMENT

Hamilton

Subject Property

1107 Main Street West, Hamilton

Change in zoning from the Transit Oriented Corridor Mixed Use Medium Density (TOC1) Zone to Transit Oriented Corridor Mixed Use Medium Density (TOC1, 772, H75) Zone

Bill No. 164

CITY OF HAMILTON

BY-LAW NO. 22-164

To Confirm the Proceedings of City Council at its meeting held on June 22, 2022.

THE COUNCIL OF THE
CITY OF HAMILTON
ENACTS AS FOLLOWS:

1. The Action of City Council at its meeting held on the 22nd day of June 2022, in respect of each recommendation contained in

   City of Hamilton Integrity Commissioner's Report Regarding Complaints Against Councillor Terry Whitehead, June 10, 2022,
   Board of Health Report 22-006 – June 13, 2022,
   Public Works Committee Report 22-010 – June 13, 2022,
   Planning Committee Report 22-010 – June 14, 2022
   General Issues Committee Report 22-012 – June 15, 2022,
   Audit, Finance & Administration Committee Report 22-012 – June 16, 2022,
   Emergency & Community Services Committee Report 22-010 – June 16, 2022,
   Hamilton Enterprises Holding Corporation Shareholder Report 22-001 – June 17, 2022,
   Hamilton Utilities Corporation Shareholder Report 22-002, June 17, 2022,
   and
   Sub-Sections (a) and (c) of Report HSC22029(a) – Ukrainian Response Update and Request for Assistance

   considered by City of Hamilton Council at the said meeting, and in respect of each motion, resolution and other action passed and taken by the City Council at its said meeting is hereby adopted, ratified and confirmed.

2. The Mayor of the City of Hamilton and the proper officials of the City of Hamilton are hereby authorized and directed to do all things necessary to give effect to the said action or to obtain approvals where required, and except where otherwise provided, the Mayor and the City Clerk are hereby directed to execute all documents necessary in that behalf, and the City Clerk is hereby authorized and directed to affix the Corporate Seal of the Corporation to all such documents.

PASSED this 22nd day of June, 2022.

F. Eisenberger
Mayor

A. Holland
City Clerk