



CITY OF HAMILTON
PUBLIC WORKS DEPARTMENT
Corporate Asset Management

TO:	Mayor and Members General Issues Committee
COMMITTEE DATE:	June 19, 2024
SUBJECT/REPORT NO:	Asset Management Plans (PW23073(b)) (City Wide)
WARD(S) AFFECTED:	City Wide
PREPARED BY:	Jasmine MacDonald (905) 546-2424 Ext. 2461
SUBMITTED BY:	Andrea Vargas Acting Director, Corporate Asset Management Public Works Department
SIGNATURE:	

RECOMMENDATION

- (a) That the Corporate Asset Management Plans, attached as appendices “A”, “B”, “C”, “D”, “E”, “F”, “G”, “H”, “I”, “J”, “K”, “L”, “M” and “N” to Report PW23073(b), be approved as required by Ontario Regulation 588/17: Asset Management for Municipal Infrastructure;
- (b) That the Asset Management Plans, attached as appendices “A”, “B”, “C”, “D”, “E”, “F”, “G”, “H”, “I”, “J”, “K”, “L”, “M” and “N” to Report PW23073(b), subject to the approval of recommendation (a), be posted in a designated area on the City’s website, as required under Ontario Regulation 588/17.

EXECUTIVE SUMMARY

This is the first iteration of Asset Management Plans for the following 14 asset categories including:

- Appendix “A” to Report PW23073(b) Animal Services, Licensing and Municipal Law Enforcement
- Appendix “B” to Report PW23073(b) Hamilton Municipal Cemeteries;
- Appendix “C” to Report PW23073(b) Children’s and Community Services;
- Appendix “D” to Report PW23073(b) CityHousing Hamilton;
- Appendix “E” to Report PW23073(b) Corporate Asset Management (Fleet, EAM);

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- Appendix “F” to Report PW23073(b) Corporate Facilities and Energy Management;
- Appendix “G” to Report PW23073(b) Forestry and Horticulture;
- Appendix “H” to Report PW23073(b) Information Technology;
- Appendix “I” to Report PW23073(b) Long-Term Care;
- Appendix “J” to Report PW23073(b) Natural Assets;
- Appendix “K” to Report PW23073(b) Parks and Recreational Trails;
- Appendix “L” to Report PW23073(b) Public Health;
- Appendix “M” to Report PW23073(b) Recreation; and,
- Appendix “N” to Report PW23073(b) Tourism, Museums and Culture.

These were completed by the Corporate Asset Management Division, in partnership with 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* requirements, which include establishing current levels of service and setting a benchmark for the asset groups to identify continuous improvement items for the next iteration of the Plans.

A key output of an Asset Management Plan is the infrastructure funding gap. Over the 10-year planning horizon, Hamilton’s funding gap for these 14 combined asset categories is estimated to be \$120.4 million annually or \$1.2 billion over 10 years with low-medium data confidence.

The overall Citywide funding gap identified from these first plans as presented in Reports PW22048, PW23073, PW23073(a) and PW23073(b) for both Core and Non-core assets is \$383 million annually or \$3.8 billion over 10 years with a low-medium data confidence rating.

Moving forward, the City will continue to improve its asset lifecycle data, which will allow for better-informed choices as to how best to mitigate impacts and address the funding gap itself. This gap in funding will be refined over the next year to improve the confidence and accuracy of the forecasts in alignment with Ontario Regulation 588/17 requirements and present proposed Levels of Service with a funding strategy by 2025.

There are no specific financial commitments required at this time from these Asset Management Plans, however, findings from Report PW23073(b) will be used to inform the 2025 tax-supported budget process.

Alternatives for Consideration – See Page 10

FINANCIAL – STAFFING – LEGAL IMPLICATIONS

Financial: The approval of these Asset Management Plans, attached as Appendices “A”, “B”, “C”, “D”, “E”, “F”, “G”, “H”, “I”, “J”, “K”, “L”, “M” and “N” to Report

PW23073(b), is required for the City of Hamilton to qualify for future infrastructure funding grants.

There are no specific financial commitments required at this time from these Asset Management Plans; However, the findings from Report PW23073(b) will be used to inform the 2025 tax-supported budget process.

Staffing: N/A

Legal: N/A

HISTORICAL BACKGROUND

Ontario Regulation 588/17: Asset Management Planning for Municipal Infrastructure, filed under the *Infrastructure for Jobs and Prosperity Act, 2015*, was enacted on January 1, 2018. Expanding upon the Province's 10-year infrastructure plan, "*Building Together: Guide for Municipal Asset Management Plans (2012)*", Ontario Regulation 588/17 outlines the requirements and deadlines for municipal asset management plans and policies.

Key requirements of Ontario Regulation 588/17 include the preparation of a strategic asset management policy and phased implementation of asset management plans:

(1) Strategic Asset Management Policy

The deadline for Strategic Asset Management Policy implementation was July 1, 2019. The policy requires municipal Council endorsement, to be reviewed and updated every five years. City Council approved the Corporate Asset Management Policy (PW19053) in June 2019, fulfilling this requirement. Council approved an updated Policy in June 2023 through report PW23044, now recognizing all assets owned by the City.

(2) Corporate Asset Management Plan

The Corporate Asset Management Plan has three implementation deadlines, as set out by Ontario Regulation 588/17:

- (i) July 1, 2022 – Preparation of an Asset Management Plan, including current Levels of Service, with respect to a municipality's core municipal infrastructure, defined as water, wastewater, stormwater, roads, bridges, and culverts. City Council approved these plans in June 2022 (Appendices "B" and "C" to report PW22048), fulfilling this requirement.
- (ii) July 1, 2024 – Preparation of an Asset Management Plan with respect to its other municipal infrastructure assets. City Council approved some of these

plans in December 2023 (Appendices “A”, “B” and “C” to report PW23073) and in April 2024 (Appendices “A”, “B”, “C”, “D” and “E” to report PW23073(a)) with the remaining asset management plans to be presented in June 2024 via report PW23073(b).

- (iii) July 1, 2025 –Preparation of an Asset Management Plan, to include proposed Levels of Service and associated financial strategy, with respect to its municipal infrastructure assets.

Ontario Regulation 588/17 also outlines that a municipality shall review and update asset management plans at least every five years.

The Asset Management Plans attached as Appendices “A”, “B”, “C”, “D”, “E”, “F”, “G”, “H”, “I”, “J”, “K”, “L”, “M” and “N” to Report PW23073(b), are the outcome of efforts from staff across the City who are involved with managing municipal infrastructure assets, which include finance, technical service areas and operations staff.

The process of developing comprehensive Asset Management Plans was a structured approach which included multiple meetings and workshops with each of these service areas included in the scope of the Asset Management Plans.

The plans contain an analysis of the services provided, history, voice of the customer, lifecycle activities, changing demand, climate impacts, risk, levels of service (both current and proposed where possible), financial impacts and opportunities for continuous improvement.

Previous reports pertinent to this recommendation:

- Asset Management Plans Recommendation Report PW23073(a) – April 3, 2024
 - Hamilton Street Railway (HSR)
 - Hamilton Fire Department
 - Hamilton Paramedic Service
 - Corporate Real Estate Office
 - Hamilton Public Library
- Asset Management Plans Recommendation Report PW23073 – December 6, 2023.
 - Waste Management
 - Hamilton Police Service
 - Hamilton Municipal Parking System
- Strategic Asset Management Policy and Corporate Asset Management Program Update Recommendation Report PW23044 – June 14, 2023;
- Core Asset Management Plan Recommendation Report PW22048 – June 15, 2022;

- Water
 - Wastewater
 - Storm Water
 - Roads
 - Engineered Structures
- Corporate Asset Management Information Report PW22037 – May 18, 2022;
 - Strategic Asset Management Policy PW19053 – June 17, 2019; and
 - Public Works Asset Management Plan – Provincial Requirement PW14035 – April 7, 2014.

POLICY IMPLICATIONS AND LEGISLATED REQUIREMENTS

Ontario Regulation. 588/17 came into effect on January 1, 2018. It requires the City to develop a comprehensive Corporate Asset Management Plan based on a phased approach with three deadlines of July 1, 2022, July 1, 2024, and July 1, 2025. July 1, 2022, and July 1, 2024, deadlines are where 'Core' assets (water, wastewater, stormwater, road, bridges, and culverts) and all other City infrastructure assets, respectively, are required to have an asset management plan, documenting current levels of service. The final deadline requires the documentation of proposed levels of service and financial strategies to fund these expenditures.

RELEVANT CONSULTATION

As part of the Asset Management Plan preparation and development, various workshops and meetings were held with relevant asset owner groups and stakeholders to ensure that all pertinent information had been captured accurately.

The following departments and divisions were consulted:

Table 1: Departments and Divisions Consulted

DIVISION	ASSOCIATED ASSET MANAGEMENT PLAN(S)
Licensing and Bylaw Enforcement	Animal Services, Licensing and Municipal Law Enforcement
Children's and Community Services	Children's and Community Services
CityHousing Hamilton	CityHousing Hamilton
Corporate Asset Management	Corporate Asset Management (Fleet and EAM)
Corporate Facilities and Energy Management	Corporate Facilities and Energy Management
Corporate Services Financial Planning and Policy	Information Technology
Division	Associated Asset Management Plan(s)

Environmental Services	Parks and Recreational Trails Forestry and Horticulture Hamilton Municipal Cemeteries
Long-Term Care	Long-Term Care
Public Health Services	Public Health
Recreation	Recreation
Tourism, Museums and Culture	Tourism, Museums and Culture
Multiple Divisions	Natural Assets

ANALYSIS AND RATIONALE FOR RECOMMENDATION

Ontario Regulation 588/17 – Asset Management Planning for Municipal Infrastructure, under the Infrastructure for Jobs and Prosperity Act, 2015, requires each municipality to have asset management plans written and approved by Council for all City assets. As such, the Corporate Asset Management Division has worked with asset groups across the organization to develop Asset Management Plans as attached to Report PW23073(b).

PW23073(b), if approved by Council, fulfils the City’s requirement under Ontario Regulation 588/17 to complete Asset Management Plans to current levels of service for all assets by July 1, 2024.

Like many municipalities, the City of Hamilton is modifying its approach to asset management and is progressively adopting a service-focused view of City infrastructure and investments. By integrating customer-centric levels of service framework, metrics, and targets, and weighing investments based on service impact and risk, the City will establish a clear relationship between infrastructure investment and service outcomes.

A key output of an Asset Management 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 funding gap over the long term to ensure that the City can continue to deliver its services sustainably today and across future generations.

Over the next 10-year period Hamilton’s funding gap for these 14 asset management plans is estimated to be \$120.4M annually (see Table 2) 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 to how best to mitigate any impacts and address the funding gap itself. This gap in funding will be refined over the next year to improve the confidence and accuracy of the forecasts in alignment with Ontario

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Regulation 588/17 requirements and to present proposed levels of service and a funding strategy by 2025.

It should be noted that this funding gap relates to Animal Services, Licensing and Municipal Law Enforcement, Cemeteries, Children’s and Community Services, CityHousing Hamilton, Corporate Asset Management (Fleet, EAM), Corporate Facilities and Energy Management, Forestry and Horticulture, Information Technology, Long-Term Care, Natural Assets, Parks and Recreational Trails, Public Health, Recreation and Tourism, Museums and Culture asset groups only and as the City applies asset management practices more robustly, it is expected that this gap may increase.

Table 2: Summary of Findings

ASSET CATEGORY	REPLACEMENT VALUE	AVERAGE AGE (YEARS)	AVERAGE CONDITION	RENEWAL FUNDING RATIO	10-YEAR O&M AND RENEWAL FUNDING RATIO	FUNDING GAP PER YEAR (M)	FUNDING GAP OVER 10 YEARS
Animal Services, Licensing and Municipal Law Enforcement	\$9.4M	26 Years (43%)	4-POOR	80%	94%	\$1.2M	\$12.0M
Data Confidence	Medium	High	High	Low	Low	Low	Low
Cemeteries	\$29.5M	33 years (31%)	3-FAIR	29%	86%	\$1.0M	\$10.0M
Data Confidence	Low	Low	Low	Low	Low	Low	Low
Children’s and Community Services	\$10.6M	99 years (68%)	3-GOOD	76%	100%	\$0.1M	\$1.3M
Data Confidence	Medium	High	Medium	Medium	Medium	Medium	Medium
CityHousing Hamilton	\$2.95B	40 years (46%)	3-FAIR	7%	56%	\$63.0M	\$630.0M
Data Confidence	Medium	Medium	Medium	Medium	Low	Low	Low
* Corporate Asset Management (Fleet, EAM)	\$87.4M	26 years (39%)	4-POOR	55%	87%	\$2.5M	\$25.4M
Data Confidence	Medium	Medium	Medium	Low	Low	Low	Low
* Corporate Facilities and Energy Management	\$912.7M	39 years (18%)	2-GOOD	42%	84%	\$4.6M	\$46.0M

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ASSET CATEGORY	REPLACEMENT VALUE	AVERAGE AGE (YEARS)	AVERAGE CONDITION	RENEWAL FUNDING RATIO	10-YEAR O&M AND RENEWAL FUNDING RATIO	FUNDING GAP PER YEAR (M)	FUNDING GAP OVER 10 YEARS
Data Confidence	Medium	High	Medium	Medium	Medium	Medium	Medium
Forestry and Horticulture	\$390.0M	26 years (48%)	2-GOOD	95%	91%	\$0.17M	\$1.7M
Data Confidence	Low	High	Low	Low	Medium	Low	Low
* Information Technology	\$25.2M	7 Years (16%)	3-FAIR	59%	92%	\$2.0M	\$19.6M
Data Confidence	Medium	Medium	Low	Low	Medium	Medium	Medium
Long-Term Care	\$319.0M	24 years (51%)	2-GOOD	98%	97%	\$2.5M	\$24.7M
Data Confidence	Medium	High	High	Medium	Medium	Medium	Medium
Parks and Recreational Trails	\$643.2M	28 years (45%)	3-FAIR	35%	71%	\$15.5M	\$155.0M
Data Confidence	Medium	Low	Low	Low	Low	Low	Low
Public Health	\$3.4M	5 years (36%)	3-FAIR	67%	100%	\$0.1M	\$1.3M
Data Confidence	Low	High	Medium	Low	Medium	Medium	Medium
Recreation	\$1.57B	39 years (49%)	3-FAIR	94%	74%	\$22.9M	\$229.0M
Data Confidence	Medium	Medium	Medium	Low	Low	Low	Low
Tourism, Museums and Culture	\$446.3M	147 years	2-GOOD	92%	76%	\$4.8M	\$48.0M
Data Confidence	Low	High	Medium	High	Medium	Medium	Medium
TOTAL	\$7.4B	Funding Gap \$120.4 annually (data confidence low-med)				\$120.4M	\$1.2B

* These service areas are both Asset Owners and internal service providers across the City. The Asset Management Plans for these areas include only the assets needed to deliver their respective services.

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It is important to note that there is a Natural Assets Asset Management Plan that was completed but is not summarized in the table above because natural assets do not always follow traditional asset or financial management practices. Currently, the known natural asset registry information the City can report is the estimated quantity. Replacement value and condition are not yet able to be quantified, and the average age would not be applicable for natural assets. In addition, the City has not yet quantified the lifecycle activities and budget required to manage these assets, so the funding gap and financial ratios were not yet able to be quantified. These values will be incorporated into future iterations of the plan as the City makes progress on the Natural Asset Management Roadmap described in the Natural Assets Asset Management Plan.

Table 3 provides a summary of Asset Management Plans brought forward to Council between 2022 and 2024, their respective Recommendation Report Numbers and the overall City-wide funding gap identified of \$383 million annually with a low-medium data confidence rating.

Table 3: City-Wide Replacement Value and Funding Gap

REPORT NUMBER	ASSET MANAGEMENT PLANS	REPLACEMENT VALUE (B)	FUNDING GAP PER YEAR (M)	FUNDING GAP OVER 10 YEARS
Core Assets June 2022 - PW22048	Water Wastewater Stormwater Roads Engineered Structures	\$21.3	\$195.9	\$1.96B
Non-Core Assets December 2023 - PW23073	Waste Management Hamilton Police Services Municipal Parking System	\$1.0	\$24.8	\$248M
Non-Core Assets April 2024 - PW23073(a)	Hamilton Street Railway Hamilton Fire Department Hamilton Paramedics Corporate Real Estate Office Hamilton Public Library	\$1.3	\$41.8	\$418M

REPORT NUMBER	ASSET MANAGEMENT PLANS	REPLACEMENT VALUE (B)	FUNDING GAP PER YEAR (M)	FUNDING GAP OVER 10 YEARS (M)
Non-Core Assets June 2024 - PW23073(b)	Animal Services, Licensing and Municipal Law Enforcement Cemeteries Children's and Community Services CityHousing Hamilton Corporate Asset Management (Fleet, EAM) Corporate Facilities and Energy Management Forestry and Horticulture Information Technology Long-Term Care Natural Assets Public Health Services Recreation Tourism, Museums and Culture	\$7.4	\$120.4	\$1.20B
Unallocated Assets	To Be Determined	\$0.2	To Be Determined	To Be Determined
DATA CONFIDENCE		Low-Medium	Low-Medium	Low-Medium
TOTAL		\$31.2	\$383	\$3.83B

As noted in Table 3 above, there are approximately \$200.5M of City-owned assets that are currently unallocated in Asset Management Plans. Examples of unallocated assets include civic properties, buildings owned by the City and leased to others and utility buildings. This has been identified as a Continuous Improvement item for future iterations of the plan.

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 way the conditions could be converted to a standardized scale, the condition was assumed based on estimated remaining service life.

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 sections of the Asset Management Plans.

Hamilton has begun to undergo a shift in how it evaluates risk in accordance with its infrastructure planning. High-level risks and trade-offs have been identified in the Asset Management Plans. This information will be further enhanced in the 2025 Asset Management Plans regarding proposed levels of service.

The Corporate Asset Management Division recognizes the importance of continuous improvement as an essential part of the asset management journey. As the City begins to embrace 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 Asset Management 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) and lifecycle management (not all assets are properly programmed). 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 and can be affected by inflation.

In summary, the Corporate Asset Management Division has made progress in both the finalization of Asset Management Plans and the development of the Corporate Asset Management Program. Asset management is an ongoing process that requires strategic planning and effective execution. Positive progress has been made in successfully fulfilling the necessary requirements under Ontario Regulation 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 Corporate Asset Management Division will continue to lead asset management through governance, expertise, monitoring, research support, reporting and assurance of consistent practices. Enhanced asset management practices will become ingrained in the City's culture at all levels of the corporation.

ALTERNATIVES FOR CONSIDERATION

Due to the requirements under Ontario Regulation 588/17, there are no alternatives for consideration.

APPENDICES AND SCHEDULES ATTACHED

Appendix "A" to Report PW23073(b) – Animal Services, Licensing and Municipal Law Enforcement Asset Management Plan

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- Appendix “B” to Report PW23073(b) – Hamilton Municipal Cemeteries Asset Management Plan
- Appendix “C” to Report PW23073(b) – Children’s and Community Services Asset Management Plan
- Appendix “D” to Report PW23073(b) – CityHousing Hamilton Asset Management Plan
- Appendix “E” to Report PW23073(b) – Corporate Asset Management (Fleet, EAM) Plan
- Appendix “F” to Report PW23073(b) – Corporate Facilities and Energy Management Asset Management Plan
- Appendix “G” to Report PW23073(b) – Forestry and Horticulture Asset Management Plan
- Appendix “H” to Report PW23073(b) – Information Technology Asset Management Plan
- Appendix “I” to Report PW23073(b) – Long Term Care Asset Management Plan
- Appendix “J” to Report PW23073(b) – Natural Asset Management Plan
- Appendix “K” to Report PW23073(b) – Parks and Recreational Trails Asset Management Plan
- Appendix “L” to Report PW23073(b) – Public Health Asset Management Plan
- Appendix “M” to Report PW23073(b) – Recreation Asset Management Plan
- Appendix “N” to Report PW23073(b) – Tourism, Museums and Culture Asset Management Plan