




CITY OF HAMILTON
PUBLIC WORKS DEPARTMENT
Corporate Asset Management

| | |
|---------------------------|--|
| TO: | Mayor and Members General Issues Committee |
| COMMITTEE DATE: | December 6, 2023 |
| SUBJECT/REPORT NO: | Asset Management Plans (PW23073) (City Wide) |
| WARD(S) AFFECTED: | City Wide |
| PREPARED BY: | Jasmine MacDonald (905) 546-2424 Ext. 2461 |
| SUBMITTED BY: | Patricia Leishman Director, Corporate Asset Management Public Works Department |
| SIGNATURE: |  |

RECOMMENDATIONS

- (a) That the Corporate Asset Management Plans, attached as Appendices “A”, “B” and “C” to Report PW23073, 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” and “C” attached to Report PW23073, 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 Hamilton Police Service, Waste Management and Hamilton Municipal Parking System 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 in order 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 combined asset groups is estimated to be \$248 million or \$24.8 million annually with a low-medium data

confidence. 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 future plans will be refined over the next two years 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 have been used to inform the 2024 tax-supported budget process.

The total replacement cost for these assets is approximately \$1.04B. Overall, these assets are on average in Fair condition and are an average of 34 years of age with 34% 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 may change substantially.

Alternatives for Consideration – See Page 8

FINANCIAL – STAFFING – LEGAL IMPLICATIONS

Financial: The approval of these Asset Management Plans, attached as Appendices “A”, “B” and “C” to Report PW23073, 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 have been used to inform the 2024 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*, came into force 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:

- 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.
- 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" and "C" 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 the three 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:

- Public Works Asset Management Plan - Provincial Requirement PW14035- April 7, 2014
- Strategic Asset Management Policy PW19053- June 17, 2019
- Corporate Asset Management Information Report PW22037- May 18, 2022
- Core Asset Management Plan Recommendation Report PW22048- June 15, 2022
- Strategic Asset Management Policy and Corporate Asset Management Program Update Recommendation Report PW23044- June 14, 2023

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. The 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:

- Corporate Services Financial Planning and Policy Division
- Hamilton Police Service
- Waste Management Division
- Hamilton Municipal Parking System

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.

By the July 1, 2024 deadline, Corporate Asset Management will have brought forward all required Asset Management Plans in order to meet the regulatory deadline.

Like many municipalities, the City of Hamilton is modifying its approach to asset management and is progressively adapting 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 three asset management groups is estimated to be \$24.8M 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 to how best to mitigate any impacts and address the funding gap itself. This gap in funding future plans will be refined over the next two years to improve the confidence and accuracy of the forecasts in alignment with Ontario 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 Hamilton Police Service, Waste Management and Hamilton Municipal Parking 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.

Table 1: Summary of Findings

| ASSET CATEGORY | REPLACEMENT VALUE (M) | 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) |
|-----------------------------------|-----------------------|--|-------------------|-----------------------|-------------------------------------|--------------------------|-------------------------------|
| Hamilton Police Service | \$351.9 | 25 | Fair | 25.9% | 93% | \$18.1 | \$181 |
| Data Confidence | Medium | High | Medium | Medium | Low | Low | Low |
| Waste Management | \$560 | 39 | Fair | 63.7% | 93.8% | \$4.6 | \$46 |
| Data Confidence | Low | Low | Low | Low | Low | Low | Low |
| Hamilton Municipal Parking | \$131 | 39 | Fair | 37.5% | 87% | \$2.1 | \$21 |
| Data Confidence | Low | Low | Low | Low | Low | Low | Low |
| TOTAL | \$1.04B | Funding Gap \$24.8 annually (data confidence low-med) | | | | \$24.8 | \$248 |

The total replacement cost for all assets is approximately \$1.04B. Overall, assets are an average of Fair condition and are an average of 34 years of age or 34% of the average remaining service life. 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 may change substantially. 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, the 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.

OUR Vision: To be the best place to raise a child and age successfully.

OUR Mission: To provide high quality cost conscious public services that contribute to a healthy, safe and prosperous community, in a sustainable manner.

OUR Culture: Collective Ownership, Steadfast Integrity, Courageous Change, Sensational Service, Engaged Empowered Employees.

Over the next two years, Hamilton will be updating the Long-Term Financial Plan to connect the current funding allocation within the budget process directly 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 and the continuation of services.

The Asset Management Plans detail 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 include acquisition, operations, maintenance, renewal, and disposal. 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 is mandatory due to legislative requirements and cannot simply be avoided or deferred. Additionally, Hamilton is expecting to invest in renewals for the three asset groups discussed in this report. This is important as continually deferring renewals can create risks of higher financial costs, decreased availability, and decreased satisfaction with asset performance and levels of service.

Data Confidence is referenced throughout the report based on asset management best practices 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. See Table 2 for the Data Confidence Grading Scale.

| Table 2: Data Confidence Grading Scale | | |
|--|--|--|
| Confidence Grade | Reliability | Accuracy |
| A - Very High | Data based on sound records, procedures, investigations, and analysis, were documented properly and agreed as the best method of assessment. | A dataset is complete and estimated to be accurate +/- 2% |
| B - High | Data based on sound records, procedures, investigations and analysis, are documented properly but have 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. | A 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. | A 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. | A dataset may not be fully complete, and most data is estimated or extrapolated. Accuracy +/- 40% |
| E - Very Low | None or very little data is held. | The dataset does not exist or has very little accuracy. |

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. There will be a more robust incorporation of climate initiatives in future 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 good progress in both the finalization of Asset Management 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 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 – Hamilton Police Service Asset Management Plan

Appendix "B" to Report PW23073 – Waste Management Asset Management Plan

Appendix "C" to Report PW23073 – Hamilton Municipal Parking System Asset Management Plan