



City of
Peterborough

To: **Members of the General Committee**

From: **Cynthia Fletcher**
Commissioner of Infrastructure and Planning Services

Meeting Date: **November 2, 2020**

Subject **Report IPSIM20-027**
Asset Management Planning Update

Purpose

A report to provide an update on the progress of asset management planning at the City of Peterborough in relation to Ontario Regulation 588/17 Asset Management Planning for Municipal Infrastructure reporting requirements.

Recommendation

That Council approve the recommendation outlined in Report IPSIM20-027, dated November 2, 2020, of the Commissioner of Infrastructure and Planning Services, as follows:

That the report on the City's asset management planning progress be received for information.

Budget Implications

There are no budget or financial implications in Council receiving this report.

Background

The City completed its first Asset Management Plan in 2014 (Report USDIR14-008 – Adoption of Capital Asset Management Plan) to meet the new funding requirements for the Government of Ontario's Building Together program. The service areas in the 2014 Plan included:

- Wastewater
- Stormwater
- Roads
- Bridges
- Social Housing

In 2016, an updated Plan was presented to Council (Report USDIR16-015 – Capital Asset Management Plan 2016) and covered service areas reported in the 2014 Plan with the addition of:

- Roads & Related Assets such as: sidewalks, trails, parking structures, fleet, streetlights, signals, traffic control systems, guiderails, road furniture etc.
- Transit – fleet, facilities, miscellaneous
- Arenas – arena facilities, non-arena facilities and fleet

A link to the approved 2016 Asset Management Plan can be found here: [2016 Asset Management Plan](#)

In 2016, the Asset Management Policy was approved by Council (Report USEC16-021) to fulfill one of the requirements of the Asset Management Road Map (Report USEC16-007 approved by Council in March 2016), which recommended that the City develop this Policy.

In December 2017, the Ministry of Infrastructure (MOI) mandated that all municipalities have an Asset Management Policy with prescriptive criteria to be included within the policy. In response to these mandates, the City updated the Policy and developed an Asset Management Procedure (Policy 0038 and Procedure 0038-001) which were approved in March of 2018 (Report USEC18-004).

A link to the approved Asset Management Policy and Procedure can be found here: [City of Peterborough Asset Management Policy and Procedure](#)

What is Asset Management?

Asset management is defined as the “coordinated activity of an organization to realize value from assets”.¹ It is an ongoing process of making the best possible decisions regarding the construction, operation, maintenance, renewal, replacement and disposal of assets. Asset management helps put some rigor and structure around the information the City uses to make strategic decisions.

What is an Asset Management Plan?

The International Infrastructure Management Manual² defines an asset management plan as; a plan developed for the management of one or more infrastructure assets that combines multi-disciplinary management techniques (including technical and financial) over the life cycle of the asset in the most cost effective manner to provide a specific level of service.

The Plan should provide the current state of the infrastructure assets, the levels of service expected, planned actions to ensure the assets are providing the determined level of service, and financing strategies to implement the planned actions. The goal of a well-developed plan is to ensure the City can provide services that are financially, environmentally and socially sustainable.

The purpose of the City’s Asset Management Plan is:

1. To provide a comprehensive reference for Council, Managers and staff to make informed decisions by using asset data as evidence.
2. To serve as a strategic work plan for City assets and to provide a means of guiding infrastructure investment decisions in order to meet key strategic goals.
3. To fulfill provincial requirements, enabling the City to apply for funding grants such as the provincial Gas Tax allocation.

Staff is in the process of completing the City’s 2020 Asset Management Plan and anticipate presenting this document to Council as a separate report by the first quarter of 2021.

¹ International Organization for Standardization. (2014). *Standard for Asset Management*, ISO 55000

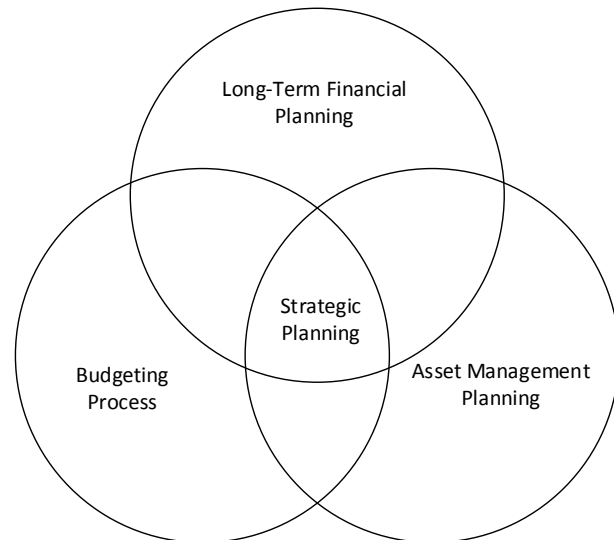
² Institute of Public Works Engineering Australasia, *International Infrastructure Management Manual (IIMM)*, October 14, 2008

What is Asset Management Planning?

Asset management planning is part of a strategic planning process that is integrated with budget processes and long-term financial planning.³

The basic asset management questions are:

- Asset Inventory: What do we own? How old is it? Where is it? What condition is it in?
- Levels of Service (LOS): What is the level of service (current and expected) that each asset provides?
- Asset Management Strategy: How are assets managed throughout their lifecycle? Which assets are the most critical, and what is the level of risk to their function and sustainability?
- Financial Strategy: What is the City's approach to funding the asset management strategy? What does the City need to invest to sustain the services provided by each asset? What is the timeline? What will it cost?



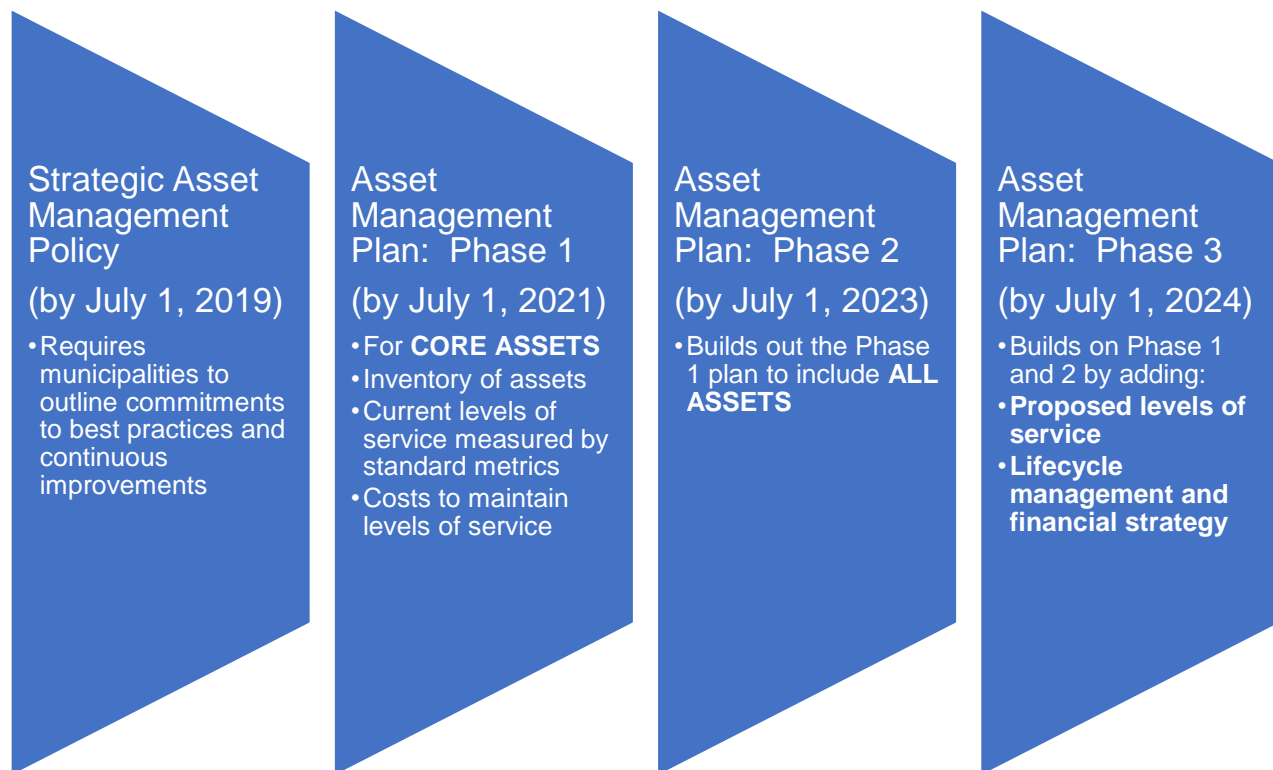
Having the information to answer these questions will not only enable staff and Council to make strategic, evidence-based decisions related to assets but also allow for delivery of services in a fiscally responsible manner without service interruptions.

Regulatory Asset Management Requirements

Important regulatory changes have occurred in Ontario that have increased the need for the City to put an emphasis on asset management and capital planning. One of the primary goals of the regulation change is to gain a better understanding of the infrastructure requirements to deliver services that stakeholders depend on.

- On January 1, 2018, under the authority of the **Infrastructure for Jobs and Prosperity Act 2015**, Ontario Regulation 588/17: Asset Management Planning for Municipal Infrastructure was enacted. The regulation sets out requirements for municipal asset management planning to help municipalities better understand infrastructure needs and inform infrastructure planning and investment decisions. The requirements for municipalities under the new regulation are shown in the figure below:

³ Anthony Boland, (2018). The Ministry of Infrastructure Municipal Asset Management Planning Regulation (O.Reg. 588/17) [slideshow presentation].



- In 2018, the City met the legislated requirements for having an approved Strategic Asset Management Policy (0038) and Procedure (0038-P01) in place.

- **Asset Management Plan: Phase 1 – Current Levels of Service: Focus on Core Assets**

Core assets include roads and related assets, bridges, stormwater conveyance and treatment infrastructure, and wastewater conveyance and treatment infrastructure.

The development of the Plan to comply with Phase 1 of the regulatory reporting requirements is currently underway. Municipalities must first understand what services it provides and what assets are involved in delivering those services. The City is required to carry out a level of service analysis and measure performance against the determined levels of service. Stakeholder expectations, regulatory requirements, costs and benefits associated with the services offered are to be considered as part of the analysis.

Although the current approved Asset Management Plan discusses levels of service and current performance for all service areas included in the Plan, it

reflects mandatory level of service metrics and performance required by the regulation for core service areas only. The costs to maintain those levels of service has also not been previously identified.

The City's 2020 Asset Management Plan, which is underway, will be in compliance with Phase 1 of O.Reg. 588/17 for core service areas and will also report levels of service and current performance for all other (non-core) service areas included in that Plan. Costs for maintaining current levels of service for non-core service areas is planned to be reported in the next Plan release prior to the Regulation's Phase 2 milestone.

Phase 1 will be completed by the first quarter of 2021, ahead of the July 1, 2021 milestone.

- **Asset Management Plan: Phase 2 – Current Levels of Service: All Assets**

The development of the Plan to comply with Phase 2 of the regulatory reporting requirements is also underway. The Phase 2 requirements are the same as Phase 1 applied to assets in all City service areas including the core assets above in addition to:

- | | |
|-----------------------------------|-------------------|
| • Administration | • Airport |
| • Arts, Culture & Heritage | • Fire Services |
| • Information Technology Services | • Police Services |
| • Public Works | • Real Estate |
| • Recreation/Arenas | • Housing |
| • Social Services | • Solid Waste |
| • Transit | • Urban Forest |

The planned completion date for Phase 2 is June 2022, one year ahead of the regulatory milestone of July 1, 2023.

- **Asset Management Plan: Phase 3 – Proposed Levels of Service**

The development of the Plan to comply with Phase 3 will require the City to fully understand the current levels of service and costs for providing them. Analyzing differences between current and any proposed levels of service will allow for identification of areas for improvement, priority setting, and quantify financial impacts, including the City's ability to achieve any additional proposed levels of service.

The planned completion date for Phase 3 is June 2024 to meet the regulatory milestone of July 1, 2024.

O. Reg. 588/17 Reporting Requirements for Asset Management Planning Progress

One future requirement of the regulation is for council to conduct an annual review of the asset management planning process. This requirement comes into effect after the last phase of the regulation is delivered for asset management plans and proposed levels of service (by July 1, 2024).

The City of Peterborough's Asset Management Maturity Assessment and Roadmap

An asset management maturity assessment is an analysis of the asset management process currently implemented, related to establishing and measuring against levels of service, assessing what the City does and how it is done. Areas assessed include, but are not limited to, decision making, investment planning, performance management, capital and operational delivery. Information gained from the assessment will enable the City to identify areas of priority.

In 2016, Associated Engineering Ltd. was retained to conduct a maturity assessment of the City's asset management business practices. The findings from the assessment provided the basis for an action plan and roadmap for asset management improvement initiatives over the subsequent five years. The action plan is intended to support the City in managing challenges of growth and changing service expectations, and in support of the goal of providing services that are financially, environmentally and socially sustainable.

The maturity assessment conducted used the ISO 55001 international standard in asset management as a guiding framework. The need for an approved Asset Management Policy and Procedure was identified in the action plan as an opportunity for improvement.

In 2016, council approved the City's Asset Management Policy 0038 and Procedure 0038-P01 (USEC18-004) which recognizes that internal and external audits are required at regular intervals to map progress, identify opportunities for improvement to the City Asset Management planning process and to provide for evidence based recommendations and decisions.

Maturity Status Scale

Maturity status is measured based on ISO Audit Clauses shown in Appendix A, as depicted on the outer edge of the wheel (4.1, 4.2, 4.3...). Each Clause, or component for strong asset management, is ranked out of four. The following outlines the Maturity Status Scale:

- A score of zero - the City is considered 'Innocent',
- Scores of 1 - the City is considered 'Aware'

- Scores of 2 - the City is considered 'Developing'
- Scores of 3 - the City is considered 'Competent'
- Scores of 4 - the City is considered at an advanced level of asset management practices and is beyond the scope of the ISO standards.

During the initial assessment completed by the consultant Associated Engineering LTD., the City set a goal to strive for an overall score of 3 being 'Competent'. When the City has achieved this level of competence, this target can be reconsidered.

Discussion

In 2016, the City's asset management maturity was 1.1 asset management 'Aware'. Since 2016 the City has been implementing the asset management road map and by year-end 2019 the City's maturity has improved to 1.9 or transitioning to 'Developing'. A figure showing the City's progress, between 2016-2019, can be found in Appendix A.

Maturity Assessment Findings:

1. Areas where the City achieved Maturity Improvements

Clauses shown below are where the City has made progress in implementing asset management strategies. 'Improvements' are defined as areas where the average scores of the clause and sub-clauses have improved by 1 or more points.

- Clause 4.3 Determining the scope of the asset management system
- Clause 4.4 Asset management system
- Clause 5.2 Leadership and commitment
- Clause 7.4 Awareness
- Clause 7.5 Information requirements
- Clause 7.6.1 Documented information general
- Clause 7.6.2 Creating and updating documented information
- Clause 7.6.3 Control of documented information
- Clause 8.3 Outsourcing
- Clause 9.1 Monitoring, measurement, analysis and evaluation
- Clause 9.2 Internal Audit
- Clause 9.3 Management review

2. Key Areas for Improvement

a) Levels of Service Expectations

Under Clause 4.2 – Understanding the needs and expectations of stakeholders, the average score is 1.3 and rated at Maturity Level – 'Aware'. This area focuses on

defining the Levels of Service expected and understanding how these requirements translate into financial and non-financial requirements. By progressing on the maturity scale in this criterion Council, staff and community stakeholders will have a better understanding in the following areas:

- How a desired service level can be delivered
- The relevant assets that help provide the service to meet that need
- The level of investment required to maintain or renew those assets.

An increased understanding of the needs and expectations of stakeholders will facilitate the conversation related to appropriate and achievable levels of service. By establishing the costs to deliver different levels of service, informed decisions on how to spend limited financial resources can be made.

b) Organizational Roles and Responsibilities

Under Clause 5.3 – Organizational roles, responsibilities and authorities, the average score for this area is 1.0 and rated at Maturity Level 1 – ‘Aware’. This area plays a key role in the successful implementation of the asset management program across the organization.

Organizational roles and responsibilities within the asset management workflow are defined in the Asset Management Policy (0038) and Procedure (0038-P01); however, there is a need to implement a strategy to communicate these roles and responsibilities as they relate to assets and the asset management program.

Currently, job descriptions are not linked to an overall asset management program or workflow. The review recommended aligning job descriptions with the Asset Management Policy and Procedure as it relates to the delivery of the asset management workflow. Staff have identified a list of asset management actions and responsibilities and will prioritize the incorporation of these in existing and new job descriptions where required.

Summary

The City has made many improvements in its asset management planning journey. The overall maturity has improved between 2016 and 2019 from being Asset Management ‘Aware’ and moving towards Asset Management ‘Developing’ status. The goal is to achieve an Asset Management maturity level of ‘Competent’. Work will continue over the next few years to improve the City’s Management program and meet the regulatory reporting requirements.

Strategies to address the areas of improvement include developing greater consistency and awareness around the implementation of asset management plans which include

managing the risks associated with implementation. An increased understanding of the needs and expectations of stakeholders will facilitate the conversation related to feasible levels of service. By establishing the costs to deliver different levels of service, informed decisions on how to spend limited financial resources can be made.

The action plan and roadmap developed for the City outlines the overall strategy to address the challenges to effective asset management and service delivery. The City will prioritize the various findings, tasks and initiatives in the action plan, and supplement with input from staff, to enable successful asset management practices and level of service provision.

The 2020 Asset Management Plan that will detail the current state of the infrastructure assets, the levels of service expected, planned actions to ensure the assets are providing the determined level of service, and financing strategies to implement the planned actions will be presented to Council as a separate report by the end of the first quarter of 2021.

Submitted by,

Cynthia Fletcher
Commissioner of Infrastructure and Planning Services

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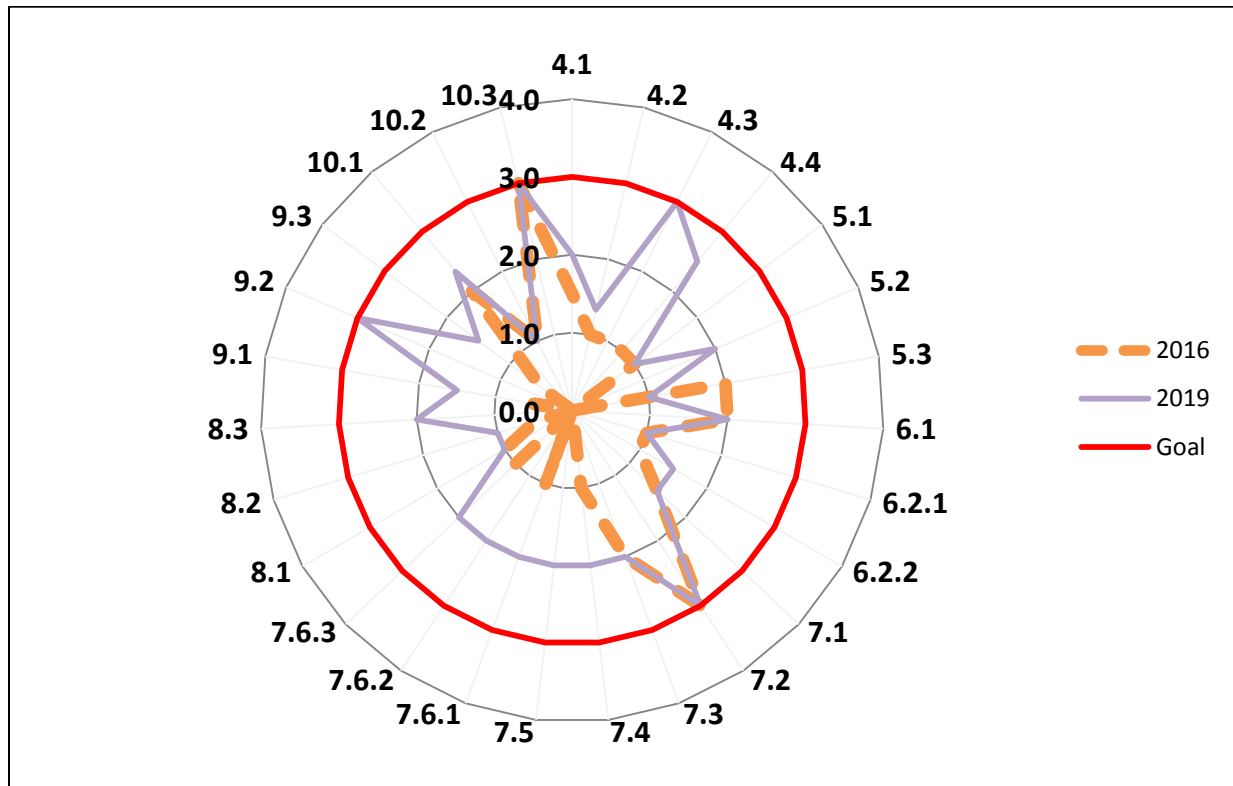
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Attachments:

Appendix A – Asset Management Maturity Scoring Progress
Appendix B – ISO 55000 Audit Clauses: Descriptions

Appendix A – Asset Management Maturity Scoring Progress



Comparison of Maturity between 2016 and 2019

Appendix B – ISO 55000 Audit Clauses

Clause No.	Subsection
4.1	Understanding the organization and its context
4.2	Understanding the needs and expectations of stakeholders
4.3	Determining the scope of the asset management system
4.4	Asset Management system
5.1	Leadership and commitment
5.2	Policy
5.3	Organizational roles, responsibilities and authorities
6.1	Actions to address risks and opportunities for the asset management system
6.2.1	Asset management objectives
6.2.2	Planning to achieve asset management objectives
7.1	Resources
7.2	Competence
7.3	Awareness
7.4	Communication
7.5	Information requirements
7.6.1	Documented information general
7.6.2	Creating and updating documented information
7.6.3	Control of documented information
8.1	Operational planning and control
8.2	Management of change
8.3	Outsourcing
9.1	Monitoring, measurement, analysis and evaluation
9.2	Internal audit
9.3	Management review
10.1	Nonconformity and corrective action
10.2	Preventive action
10.3	Continual improvement