

<p>6. COMPREHENSIVE ASSET MANAGEMENT - POLICY AND FRAMEWORK UPDATE GESTION INTÉGRALE DES ACTIFS – MISE À JOUR DE LA POLITIQUE ET DU CADRE</p>

COMMITTEE RECOMMENDATIONS

That Council:

- 1. Approve the updated Comprehensive Asset Management Policy, as described in this report and attached as Document 1;**
- 2. Receive the Asset Management Plan Framework, as described in this report and attached as Document 2; and**
- 3. Receive the update on initiatives under the Comprehensive Asset Management Program, as described in this report.**

RECOMMANDATIONS DU COMITÉ

Que le Conseil :

- 1. Approuve la politique de gestion intégrale des actifs, décrite dans le présent rapport et jointe en tant que document 1;**
- 2. Prenne connaissance du cadre du plan de gestion intégrale des actifs, décrit dans le présent rapport et joint en tant que document 2; et**
- 3. Prenne connaissance de la mise à jour des initiatives menées en vertu du Programme de gestion intégrale des actifs, tel que décrit dans le présent rapport.**

DOCUMENTATION/DOCUMENTATION

- 1. Acting Director's report, Infrastructure Services, Infrastructure and Economic Development Department, dated April 21, 2021 (ACS2021-PIE-IS-0003)**

Rapport de la Directrice par intérim, Service d'infrastructure, Direction générale de la planification, de l'infrastructure et du développement économique, daté le 21 avril 2021, (ACS2021-PIE-CRO-0007)

2. Extract of draft Minutes, Finance and Economic Development Committee, 18 May 2021.

Extrait de l'ébauche du procès-verbal, Comité des finances et du développement économique, le 18 mai 2021.

**Report to
Rapport au:**

**Finance and Economic Development Committee
Comité des finances et du développement économique
18 May 2021 / 18 mai 2021**

**and Council
et au Conseil
26 May 2021 / 26 mai 2021**

**Submitted on April 21, 2021
Soumis le 21 avril 2021**

**Submitted by
Soumis par:
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Ward: CITY WIDE / À L'ÉCHELLE DE LA VILLE File Number: ACS2021-PIE-IS-0003

SUBJECT: Comprehensive Asset Management - Policy and Framework Update

OBJET: Gestion intégrale des actifs – mise à jour de la politique et du cadre

REPORT RECOMMENDATIONS

That Finance and Economic Development Committee recommend Council:

- 1. Approve the updated Comprehensive Asset Management Policy, as described in this report and attached as Document 1;**
- 2. Receive the Asset Management Plan Framework, as described in this report and attached as Document 2; and**

- 3. Receive the update on initiatives under the Comprehensive Asset Management Program, as described in this report.**

RECOMMANDATIONS DU RAPPORT

Que le Comité des finances et du développement économique recommande ce qui suit au Conseil :

- 1. Approuver la politique de gestion intégrale des actifs, décrite dans le présent rapport et jointe en tant que document 1;**
- 2. Prendre connaissance du cadre du plan de gestion intégrale des actifs, décrit dans le présent rapport et joint en tant que document 2; et**
- 3. Prendre connaissance de la mise à jour des initiatives menées en vertu du Programme de gestion intégrale des actifs, tel que décrit dans le présent rapport.**

Executive Summary

The City's Comprehensive Asset Management (CAM) Program and Policy have defined Council's expectations around the management of the City's infrastructure assets since 2012. The practice of asset management and its associated regulations are evolving – as are their contexts. This report presents an updated Policy that reflects new provincial regulations as well as updated City documents and policies.

In 2017, Council received a detailed update on the accomplishment of many of the CAM Program's defined goals, as well as broader achievements. It was underscored, however, that the challenges of asset management required a balance of funding and non-financial strategies to help sustain the City's assets in good state of repair. This report shares the City's progress on key CAM initiatives, including those non-financial strategies.

Résumé

Le programme et la politique de gestion intégrale des actifs de la Ville ont défini les attentes du Conseil en matière de la gestion des actifs matériels municipaux depuis 2012. La gestion des actifs et la réglementation qui l'encadre évoluent, tout comme leur contexte. Le présent rapport présente une politique mise à jour qui tient compte des nouveaux règlements provinciaux ainsi qu'autres documents et politiques mises à jour de la Ville.

En 2017, le Conseil recevait une mise à jour détaillée sur l'atteinte de bon nombre des objectifs définis du programme de gestion intégrale des actifs, ainsi que sur les réalisations plus générales. Il avait été souligné, toutefois, que les défis associés à la gestion des actifs nécessitaient un équilibre entre le financement et les stratégies non financières pour aider à assurer le maintien en bon état des actifs de la Ville. Le présent rapport fait état des progrès réalisés par la Ville dans les principales initiatives de gestion intégrale des actifs, notamment en ce qui concerne les stratégies non financières.

BACKGROUND

The City of Ottawa is a municipal leader in asset management and the associated long-range financial planning. Over nearly two decades, successive Councils have proactively taken steps toward establishing a clearer picture of the City's infrastructure assets and their renewal, rehabilitation and replacement investments necessary to balance service levels, risk and affordability for Ottawa residents, businesses and visitors.

The City's [Comprehensive Asset Management \(CAM\) Program](#) and its CAM Policy have defined Council's expectations around the management of the City's infrastructure assets since 2012. ([Council Agenda](#))

The City's CAM Program involves applying planning, finance, engineering, maintenance and operations principles to support decision-making related to the creation of new assets and the rehabilitation or disposal of existing ones. This approach results in decisions that maximize benefits, reduce risk, and reduce costs while continuing to provide safe and reliable levels of service to all community users in a socially, culturally, environmentally and economically conscious manner.

The City of Ottawa delivers services essential to the quality of life and economic growth of our community, and it is critical that the infrastructure needed to deliver these services remains reliable, safe and in a state of good repair.

The City maintains nearly \$50 billion (2020 dollars) in infrastructure assets and acquires new infrastructure annually. These assets require thoughtful, targeted investments in renewal, repair, rehabilitation and replacement that balances service levels, risk and affordability. In other words, they require the right intervention, on the right asset, at the right time.

Like most large cities, Ottawa is challenged by a lack of long-term, predictable funding to complement municipal resources, and by expectations of service levels as they relate to asset needs.

Capital spending varies year-to-year depending on the timing of projects and the size of projects in any given year. It is based on a four-year average amount over a four-year spending period and aligns with the Long-Range Financial Plan (LRFP).

In 2017, Council received a detailed update on the accomplishment of many of the CAM Program's defined goals, as well as broader achievements. It was underscored, however, that the challenges of asset management required a balance of funding and non-financial strategies to help sustain the City's assets in a good state of repair. This report shares the City's progress on key CAM initiatives, including those non-financial strategies. ([Council, Agenda of June, 14, 2017](#))

Council was presented with accomplishments under the CAM Program, the City's 2017 [State of the Assets Report](#) (SOAR), and the [Strategic Asset Management Plan](#) (SAMP) – a living document that connects tactical actions at the asset level to service outcomes, based on organizational goals and objectives.

The 2017 report also referenced the beginnings of a framework which exceeded the guidelines of the day in its aim to support the future development of service-based Asset Management Plans (AMPs). An AMP is a strategic document with a 10-year view of the strategies/activities that will be applied to achieve service-delivery expectations within the City's recognized financial and delivery constraints.

In 2017, following the CAM Update report to Council, the Province introduced [Ontario Regulation 588/17 \("O. Reg. 588/17"\): Asset Management Planning for Municipal Infrastructure Regulation](#), effective January 2018, which set out new requirements for undertaking asset management planning, including that municipalities must have a Council-approved strategic asset management policy by July 1, 2019, and Council-approved asset management plans for core municipal infrastructure assets by July 1, 2022 (and for all other municipal infrastructure assets by July 1, 2024).

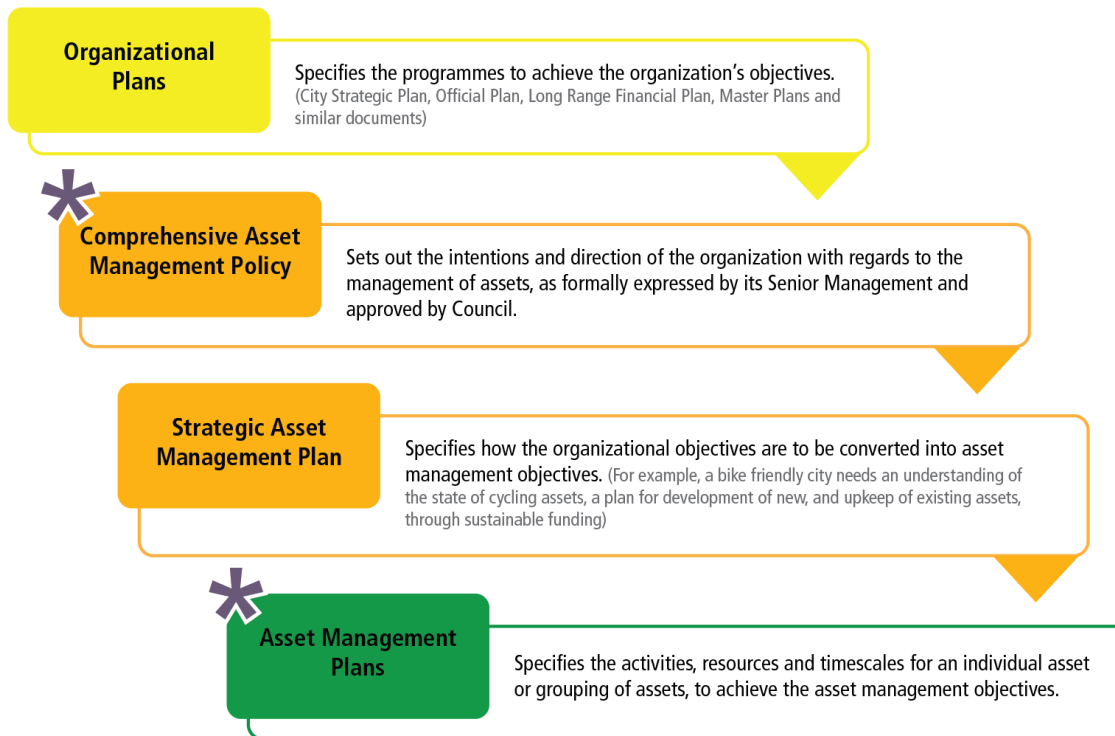
The City met the requirements for the CAM Policy with its existing 2012 Policy and the 2017 SAMP. Further, the City is on track to achieve the deadline for the AMPs.

Most recently, [on December 9, 2020, an audit of the City's facilities management](#) made several recommendations that will be addressed through ongoing or upcoming planned

asset management initiatives, including the development of asset management plans and an update to the existing SAMP.

This report provides an update on the CAM Policy, in keeping with O. Reg. 588/17. It also shares the Framework that will support the development of provincially regulated AMPs. Finally, it outlines progress on key CAM initiatives, including non-financial strategies. The following figure provides context for how the Policy and AMP Framework fit into the City's Asset Management System.

Figure 1: Key Components of an Asset Management System



* What the CAM Update will be addressing

Adapted from ISO 55000:2014

DISCUSSION

Comprehensive Asset Management Policy Update

An important element in managing the City's infrastructure assets is the ability to link the City's service goals and objectives with how assets are managed on a day-to-day basis.

The City's first [Comprehensive Asset Management \(CAM\) Policy \(2012\)](#) communicated Council's expectations around the management of the City's physical assets.

Because the City had both a Council-approved CAM Policy and a Council-approved [Strategic Asset Management Plan \(SAMP\) \(2017\)](#), it fulfilled O. Reg. 588/17's requirement to have, by July 1, 2019, a finalized strategic asset management policy that promotes best practices and links asset management planning with budgeting, operations, maintenance and other municipal planning activities.

The 2012 CAM Policy and its accompanying CAM Framework have been updated, reflecting the latest corporate policy template and referencing up to date documents, such as the City's Accessibility Design Standards/Accessibility Plans, Climate Change Master Plan, and Equity and Diversity Policy. The Policy update is in compliance with the provincial regulation and also:

- the municipal goals, plans and policies the Policy will support;
- the identification of the executive lead and how Council will be involved;
- the process by which the Policy will be considered in the development of the City's budget;
- the principles that guide the Policy;
- the process for alignment with the City's land-use planning framework;
- a commitment to consider climate change mitigation and adaptation;
- a commitment to provide opportunities to engage with the public; and
- the approach to continuous improvement.

Staff recommend that Committee and Council approve the updated CAM Policy attached as **Document 1**.

Asset Management Plan Framework

Producing AMPs is recognized as industry best practice in asset management and is a requirement of ISO 55000, an international standard covering the management of assets.

An Asset Management Plan (AMP) is a strategic document with a 10-year view of the strategies/activities that will be applied to assets to achieve service-delivery expectations within the City's recognized financial and delivery constraints.

In addition to effecting policy-based change, O. Reg. 588/17 also set out to bring consistency and standardization to asset management plans (AMPs) in stating: "Every municipality shall prepare an asset management plan in respect of its core municipal infrastructure assets by July 1, 2022, and in respect of all of its other municipal infrastructure assets by July 1, 2024."

Within O. Reg. 588/17, "core municipal infrastructure asset" is defined as any municipal infrastructure asset that is a,

- (a) water asset that relates to the collection, production, treatment, storage, supply or distribution of water,
- (b) wastewater asset that relates to the collection, transmission, treatment or disposal of wastewater, including any wastewater asset that from time to time manages stormwater,
- (c) stormwater management asset that relates to the collection, transmission, treatment, retention, infiltration, control or disposal of stormwater,
- (d) road, or
- (e) bridge or culvert

The City's planned development of AMPs will advance the clear definitions of roles, responsibilities and key processes as they pertain to asset; detail levels-of-service expectations; support enhanced strategies to manage and mitigate the underfunding of assets as well as those to assist with identifying potential savings; develop short- and long-term integrated management plans; and be informed by enhanced prioritization tools and risk framework. This is consistent with management's responses to the 2020 Facilities Management Audit.

Staff have developed a guiding framework for preparing AMPs across the City's various service areas. The AMP Framework not only ensures compliance with O. Reg. 588/17, but also:

- facilitates collaboration and a common understanding among City staff with varying backgrounds, functional groups and levels of asset management

- ensures consistent language to support clear communication between all stakeholders
- explains the recommended content and elaborates through Ottawa-specific examples
- provides a common look-and-feel for AMPs across Service Areas through updates
- provides greater collaboration between different groups departments from operations, maintenance programming and renewal
- promotes understanding among City staff of the intent, typical content and expected outcomes from an AMP

Figure 2 provides an overview of the key sections that are contained within the AMPs, and is consistent with the Province of Ontario's [Building Together Guide for Municipal Asset Management Plans](#).

Figure 2: The AMP Framework



All AMPs, in accordance with O. Reg. 588/17, must be approved by Council. As such, the following “core municipal infrastructure” AMPs will be brought to **Council for approval prior to the 2022 deadline:**

- Drinking Water AMP (relates to the production, treatment, storage, supply and distribution of water)
- Wastewater AMP (relates to the collection, conveyance, treatment and/or disposal, including any wastewater asset that, from time to time, manages stormwater)
- Stormwater AMP (relates to the collection, conveyance, treatment, retention, infiltration, control and/or disposal of stormwater)
- Transportation AMP (relates to the mobility of vehicles and people via roads, bridges/culverts, pathways, sidewalks and other network assets)

By July 1, 2024, AMPs for the remainder of the City’s infrastructure assets will be brought to Council for approval. Finally, under O. Reg. 588/17, all AMPs will be updated to reflect target levels of service by July 1, 2025. The remaining AMPs include Solid Waste, Transit, Recreation, Social Services, Fire, Paramedics, Bylaw, Libraries, and Corporate Services.

Staff recommend that Committee and Council receive the Asset Management Plan Framework attached as **Document 2**.

Update on Related CAM Program Initiatives

Staff have been working diligently and pursuing several non-financial CAM approaches, while adapting our path to align with provincial regulations, which came into effect just after the last CAM Update to Council.

The following offers an update on the 2017 report to Council:

2017 Statement - Continue to enhance the CAM program governance and implementations

Update: The CAM Steering Committee, comprised of directors from across the organization, continues to meet on a regular basis to provide governance, guidance and champion asset management.

In 2019, a joint initiative between Infrastructure Services, Water Services, and Technology Innovation and Engineering Support Services was launched to build an

Asset Management framework and processes for the City's critical Water Facilities. Directors for the three service areas and a working group of managers developed the direction for the Asset Management Branch (AMB) to take on the strategic oversight for asset management accountability of Water Facilities. This aligns with what is already successfully in place for the management of other asset types under the City's ownership. A new "Infrastructure Assessment - Water Facilities" unit was created in the AMB. Progress in 2020 included staffing and information gathering on asset management inventories, compilation of existing condition data, and a preliminary software build in the asset management system. In 2021, the asset management program for Water Facilities will continue with a focus on building risk frameworks, needs assessment and prioritization processes, and a condition assessment program.

Staff have started implementing funding apportionment practices into the capital budget process to ensure funds are being apportioned to the assets that need it most. This enables a service-level perspective to funding allocation, with a view on the overall impact to risk and level of service, which embodies a One City, One Team philosophy.

Over the last number of years, Infrastructure Services has focused on successfully delivering capital projects by enhancing project delivery practices that are executed in a consistent and measurable manner. Infrastructure Services is continually improving its data, systems and processes, including the recent implementation of a formal project close-out process to ensure that critical asset information is available and provided to the Asset Management Branch, as well as operations and maintenance branches, as soon as possible, so that the asset can be properly lifecycle managed.

The improved tracking of project progress and spending is helping to identify unused capital funds tied to a specific project and free up the funds to offset cost overruns on other projects or to support other identified needs.

2017 Statement – Documenting 'as-is' levels of service for core service areas, and quantifying asset needs against the documented and communicated level-of-service expectations

Update: Through the preparation of the AMPs for the "core municipal infrastructure", staff from across multiple departments have worked together to develop existing levels of service, which will be brought forward for Council approval prior to the 2022 deadline. By July 1, 2024, AMPs for the remainder of the City's infrastructure assets will be brought to Council for approval. Finally, all AMPs will be updated to reflect target levels of service by July 1, 2025.

2017 Statement – Assessing outcomes of Phase 2 federal funding programs and the provincial asset management regulation

Update: In recent years, the City has been successful in receiving funding from other levels of government. A key criterion for these applications is having asset management programs, policies and/or plans in place. The City is and will continue to be well-positioned to leverage all available funding opportunities.

Major infrastructure projects have benefited from funding partnerships, including:

- the [Combined Sewage Storage Tunnel](#) (CSST), delivered with funding from the City of Ottawa, the Government of Canada and the Government of Ontario.
- the new [Ottawa Public Library and Library and Archives Canada Joint Facility](#) is a funding partnership between the City of Ottawa, Ottawa Public Library, and Library and Archives Canada.

In 2019, the City of Ottawa submitted 36 applications for funding as part of the Investing in Canada Infrastructure Program – Community, Culture and Recreation program. The application is pending.

The City of Ottawa has been successful in securing funding to offset the cost and/or advance the renewal of key infrastructure assets. Through several provincial and federal initiatives, not including Light Rail Transit funding, the City has received infrastructure funding including:

- The City received **\$1.7 million** as part of the Canada 150 Community Infrastructure Program (CIP 150), a \$150-million federal government funding program that invested in renovating, expanding, and improving community infrastructure across the country.
- The City has received access to a maximum amount of **\$155 million** from the Public Transit Infrastructure Fund (PTIF), through both federal and provincial oversight, to upgrade and improve the City's transit and active transportation infrastructure.
- The City has received access to a maximum amount of **\$69 million** in funding as part of the Clean Water and Wastewater fund (CWWF).

- The recently announced Investing in Canada Infrastructure Program (ICIP)- COVID-19 Resilience Infrastructure Stream (Local Government Intake), which provides the City of Ottawa with an allocation of **\$20.1 million** to address critical infrastructure needs.
- The City submitted applications for consideration to the Ministry of Long-Term Care for the recently announced ICIP Long Term Care Funding. This funding stream is providing up to **\$100 million** to Long Term Care homes across Ontario to do retrofits, repairs or upgrades to LTC homes.
- In November 2020, the federal government announced a stimulus plan of up to **\$100 billion** over the next three years, with details expected in the spring of 2021. The City remains well-positioned to respond to this broader opportunity.

2017 Statement – Undertaking non-financial strategy assessments, and documenting benefits and recommendations for consideration

Update: Over the past twenty years, to position the City for success and leadership, the City has established and developed an Asset Management Branch with expertise in the management of infrastructure assets. During this time, in the early 2010s, the City began working on CAM. One of the very important challenges, common among infrastructure owners across North America, is finding a balance between funding and non-financial strategies to help sustain the City's assets in a good state of repair.

Some of the work being undertaken as part of the non-financial strategies include:

- Lifecycle replacement strategies are reviewed to assess effectiveness, and options are considered in greater detail. For example:
 - Undertaking a capacity analysis prior to culvert replacement, as opposed to simply replacing like-for-like. This has resulted in decommissioning and downsizing culverts with significant savings.
 - Expanding preventative maintenance works to better optimize asset performance.
- Infrastructure Services participated in a cross-departmental working group to develop Recreation Facility Infrastructure Standards, approved by Council in 2019. These standards are a blueprint in a new build or major renovation for a recreation facility, to inform design development from concept through tender

drawings and construction. These standards will support accurate estimation of the capital expenditures required to build, renew or replace infrastructure.

- In 2020, RCFS initiated the Parks and Recreation Facilities Master Plan project to determine municipal parkland and recreation facilities required to serve the current and future recreation needs of residents to 2031. This work will help inform key elements of the AMPs, such as levels of service and expected growth.
- In 2020, Public Works and Environmental Services spearheaded a cross-departmental initiative to review how capital projects are delivered for assets within its operational areas, namely: Solid Waste Services, Water Services, Roads and Parking Services, and Parks, Forestry and Stormwater Services. Infrastructure Services is participating in this review of PWES' capital projects and project management needs with a shared objective to improve effectiveness and consistency through more clearly defined and delineated roles and responsibilities.

2017 Statement – A review of the large diameter watermain inspection program will be included in the assessment with proposed alternative to ensure a successful and sustainable program

Update: The large diameter watermain inspection program continues to progress well. In total, 48.4 kilometres of structural condition assessment and 96.2 kilometres of leak detection have been completed on the approximately 235 kilometres of large diameter watermains ($\geq 610\text{mm}$) in the city since 2012. The program focuses on the highest-risk pipes. Specifically, inspections have targeted approximately 55 kilometres of pipe that is of the same vintage as those that failed on Woodroffe Avenue in 2007 and 2011. The City has completed 37.9 kilometers (72 per cent) of structural condition assessment and 36.1 kilometers (69 per cent) of leak detection on this cohort of pipes.

Although the program progresses well, it is not at the pace that was originally identified at the time of the 2012 Report to Council, which was based on the best information available at that time. The progress is impeded by several factors, including maintaining levels of service and adequate redundancy to manage risk, both during inspections and repair work, as required. Program planning and delivery groups are reviewing opportunities for optimization of the program.

Staff recommend that Committee and Council receive the update on initiatives under the Comprehensive Asset Management Program, as described above.

RURAL IMPLICATIONS

The City's Comprehensive Asset Management Program and practices apply to rural, suburban, and urban assets.

CONSULTATION

The CAM Steering Committee includes representation from all departments and is responsible for championing the CAM Program, ensuring the CAM Policy is implemented, improving consistency and strategic alignment of asset management across the City, and providing guidance on and approval/endorsement of asset management initiatives.

The CAM Steering Committee has endorsed the updated CAM Policy and approved the AMP Framework. The Policy and Framework were developed with cross-departmental input and consider not only decision-making transparency but also alignment with key City documents and policies such as the Strategic Plan, various master plans (including the Parks and Recreation Facilities Master Plan, Official Plan, Greenspace Masterplan, Climate Change Master Plan), the Accessibility Design Standards/Accessibility Plans, and the Equity and Diversity Policy.

COMMENTS BY THE WARD COUNCILLORS

Not applicable – This is a City-wide report.

ADVISORY COMMITTEE COMMENTS

There are no Advisory Committee comments on this report.

LEGAL IMPLICATIONS

The recommendations in this report ensure that the City meets its continuing legal obligations contained in Ontario Regulation 588/17 under the Infrastructure for Jobs and Prosperity Act, 2015.

RISK MANAGEMENT IMPLICATIONS

Risk management implications are contained in the report and consistent with those articulated in the 2012 report and the 2017 report.

The City's Comprehensive Asset Management (CAM) Program involves applying planning, finance, engineering, maintenance and operations lenses to support decision-making related to the creation of new assets and the rehabilitation or disposal of

existing ones. This approach results in decisions that maximize benefits, reduce risks, and reduce costs while continuing to provide safe and reliable levels of service to all community users in a socially, culturally, environmentally and economically conscious manner.

ASSET MANAGEMENT IMPLICATIONS

This report provides an update on the City's Comprehensive Asset Management (CAM) Program. The program provides for a customer-focused, forward looking, and systematic approach to managing city assets that support service delivery. The implementation of the CAM program results in timely decisions that minimize lifecycle costs and ensure the long-term affordability of assets. The recommendations of this report will ensure key initiatives supporting these objectives continue to be undertaken and brought to Council for consideration as required.

FINANCIAL IMPLICATIONS

The Long-Range Financial Plans will identify funding strategies for the renewal and maintenance of the City's existing assets. The revised Long-Range Financial Plans will be presented to Council as companion reports to the next updated Transportation Master Plan and Infrastructure Master Plan, to reflect the financial requirements of the most current asset plans.

ACCESSIBILITY IMPACTS

The City's Comprehensive Asset Management Program and practices intend to maximize benefits, reduce risk and provide safe and reliable levels of service to all community users.

ENVIRONMENTAL IMPLICATIONS

The City's Comprehensive Asset Management Program and practices intend to maximize benefits, reduce risk and provide safe and reliable levels of service in an environmentally conscious manner.

TERM OF COUNCIL PRIORITIES

This report supports the 2019-2022 Term of Council Priority of "Sustainable Infrastructure" and aligns with the Planning, Infrastructure and Economic Development Department's actions advance and promote the adoption of the CAM program.

SUPPORTING DOCUMENTATION

Document 1 Comprehensive Asset Management Policy

Document 2 Asset Management Plan Framework

DISPOSITION

Working with departmental partners, Infrastructure Services will implement the CAM policy, in alignment with the responsibilities outlined therein, and post it for public access. Infrastructure Services will continue to build on the initiatives outlined in this report, linking investment decisions to the delivery of service to Ottawa residents, businesses and visitors.