



## REPORT

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**TO:** Mayor Bonnette and Members of Council

**FROM:** Dharmen Dhaliah, Senior Manager Climate Change & Asset Management

**DATE:** April 11, 2022

**REPORT NO.:** ADMIN-2022-0014

**SUBJECT:** Corporate Asset Management Program Update and Core Infrastructure Asset Management Plan

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### RECOMMENDATION:

THAT Report No. ADMIN-2022-0014, dated April 11, 2022, regarding Corporate Asset Management Program Update and Core Infrastructure Asset Management Plan be received.

AND FURTHER THAT Council approves the Core Infrastructure Asset Management Plan in compliance with Ont. Regulation 588/17 Municipal Asset Management Planning.

AND FURTHER THAT a resolution be prepared for Council's consideration which directs staff to apply to the Federation of Canadian Municipalities' Municipal Asset Management Program (MAMP) grant funding opportunity to improve data quality and close gaps as part of its continuous improvement "Asset Management Improvement" project.

AND FURTHER THAT Council directs the Climate Change and Asset Management Division to proceed with the implementation and operationalization of the Core Infrastructure Asset Management Plan.

AND FURTHER THAT staff report back to Council with another update on the progress made of the Town's Corporate Asset Management Program in the first quarter of 2023.

### KEY POINTS:

- The Town is progressing well with its Corporate Asset Management (CAM) Program and remains in compliance with the requirements of Ont. Reg. 588/17 for Municipal Asset Management Planning. Key accomplishments are outlined in this report.

- As prescribed in Ont. Reg. 588/17 Municipal Asset Management Planning all municipalities in Ontario need to submit an updated asset management plan for core infrastructure assets by July 1, 2022. The Town has completed the preparation of its Core Infrastructure Asset Management Plan for its road network, bridges, culverts, and stormwater assets as outlined in this report.
- Staff continue to identify opportunities to improve the asset management planning process to elevate the confidence level in the information gathered. Staff is looking into applying for funding from the FCM Municipal Asset Management Program to support the “Asset Management Improvement” project to address some of the data gaps and quality.

## **BACKGROUND AND DISCUSSION:**

The Town is progressing well with its Corporate Asset Management (CAM) Program and remains in compliance with the requirements of Ont. Reg. 588/17 for Municipal Asset Management Planning. In 2018 the Town developed its first Corporate Asset Management Policy, which Council endorsed on June 25, 2018, Report No. RP-2018-0018 to commit to guiding principles for better asset management planning. In February 2019, Town of Halton Hills issued its State of Infrastructure Report, approved by Council through Report No. RP-2019-0001. This report provided insight into the Town’s inventory of essential infrastructure assets for the delivery of public services, their current condition and the cost to maintain them in a state of good repair.

The Town also has a Governance Structure in place to support the Town’s CAM Program consisting of a Steering Committee and a Network Team. These two groups have been meeting regularly since 2017 with a mandate to ensure the Town meets the requirements of both Ont. Reg. 588/17 and the deployment of the best asset management practices across the organization.

A Corporate Asset Management Framework which includes a roadmap are in place to maintain consistency and alignment for the development and implementation of asset management practices across different services areas.

*See Appendix 1 – Corporate Asset Management Framework*

## **CORPORATE ASSET MANAGEMENT PROGRAM UPDATE:**

Since 2019 the Corporate Asset Management Program has evolved and many projects have been completed.

Appendix 2 outlines the Town of Halton Hills Corporate Asset Management Program journey, the progress made so far as well as upcoming projects.

*See Appendix 2 – Corporate Asset Management Program Journey*

## **Key Accomplishments:**

- Strategic Asset Management Plan (SAMP)

The SAMP provides an overall framework which describes the long-term approach to the management of the Town's infrastructure and assets. It specifies how organizational objectives are to be converted into asset management objectives, the approach for developing asset management plans for different asset classes and the roles of the asset management system and its strategies in supporting the achievement of the asset management objectives.

- Asset Management Information System (AMIS) Project

Staff is currently in the process of implementing Esri-Cityworks, Assetic's Predictor and Spatial DNA as part of the asset management information system (AMIS) for the Town. An AMIS is a key component of the CAM Program to collect, store and analyze data and provide accurate information which is then in turn used for optimum decision-making when managing physical assets. This project is due for completion in 2023.

- Integrate Climate Change & Level of Service

As outlined in Section 3 (5) of Ont. Reg. 588/17, municipalities are required to consider, the vulnerabilities of infrastructure assets to climate change, in respect of operations, levels of service, and lifecycle management activities during the asset management planning process.

- Data Management Strategy

A key component of asset management program is the importance of data, and this is identified in the Town's CAM Framework. Data quality can be the Achilles heel of asset management plans and a solid data management strategy can mitigate this by ensuring there is a uniform approach to collection, storage, maintenance and sharing of data for better interoperability.

- Risk Management Strategy

A Risk Management Strategy specifically focused on infrastructure and assets supports the Town by strengthening its resilience to external risks and provides guidance around the control and mitigation of risks that can arise from the management and operation of assets. The risk strategy provides staff with a better understanding of the probability of various threat events that could impact the Town's ability to deliver ongoing levels of services to residents. Risk management helps Town staff to undertake risk-based planning and service delivery to smooth out Capital and Operating expenditure curves and reduce the overall whole life cost of asset ownership

- Lifecycle Management Strategy

Asset lifecycle management aims to maximize the performance of an asset while minimizing its costs throughout the course of its lifecycle. This approach considers all lifecycle phases including the planning, acquisition, installation and commissioning, operation, maintenance, renewal, replacement and disposal of infrastructure and assets. The Lifecycle management strategy and activities will be a direct input into the Town's AMIS and asset management plans, which in turn will identify and forecast the future capital and operational needs to deliver required levels of service with minimum risk.

### **CORE INFRASTRUCTURE ASSET MANAGEMENT PLAN :**

As prescribed in Ont. Reg. 588/17 Municipal Asset Management Planning all municipalities in Ontario need to submit an updated asset management plan for core infrastructure assets by July 1, 2022. Core infrastructure assets consist of the road network, bridges, culverts, and stormwater assets.

*See Appendix 3 – Ont. Reg. 588/17 Deadlines*

### **What is Asset Management?**

Asset Management is an integrated approach, involving all organization departments to effectively manage existing and new assets to deliver services to customers. The intent is to maximize benefits, reduce risks and provide satisfactory levels of service to the community in a sustainable manner – providing an optimum balance. Good asset management practices are fundamental to achieving sustainable communities. Asset management provides communities with the opportunity to do more with less, by providing a structured way of tracking performance, costs and risks to meet service objectives in the most efficient and effective manner.

The provincial governments throughout Canada have adopted differing approaches to encourage asset management at the community level. Several provinces are making it mandatory for municipalities to have an “Asset Management Plan” in place to access provincial infrastructure funding such as the Canada Community Building Fund (Formerly Federal Gas Tax). Municipalities need to have a clear understanding of their short, medium, and long-term infrastructure and asset needs to improve their asset management practices.

In Ontario, Asset Management planning has been regulated since the end of 2017 – through Ontario Regulation 588/17.

### **Key sections of an asset management plan**

An Asset Management Plan (AM Plan) provides a prioritized investment plan to meet the level of service requirements of the community, at an acceptable level of risk. In alignment

with the requirements of O.Reg. 588/17, the Town of Halton Hills has completed the development of its Core Infrastructure AM Plan to meet the deadline of July 1, 2022, to be in compliance with the regulation.

*See Appendix 4 - Executive Summary of the Core Infrastructure Asset Management Plan*

*See Appendix 5 - Final Draft of the Core Infrastructure Asset Management Plan.*

*These documents should be read in conjunction with this council report.*

The Core Infrastructure AM Plan has been organized into the following eight (8) sections:

1. Introduction
2. State of the Infrastructure
3. Levels of Service
4. Risk Management
5. Future Demand
6. Whole Lifecycle Management
7. Financial Strategy
8. Continuous Improvement

### **Introduction**

This section of the Core Infrastructure AM Plan outlines both the context and organization of the asset management plan document. It describes the purpose of the plan, how it meets regulatory requirements, and how it aligns with and supports the Town's vision, mission and key strategic objectives including growth and climate change response.

The introduction identifies the following core asset categories which support the provision of municipal services to the Town's 61,000 residents and its, commercial, industrial, and institutional customers.

- Roadway Network
- Traffic Services
- Transportation Structures
- Walkways (Sidewalks)
- Storm Sewer Systems
- Stormwater Management Ponds
- Low Impact Development

### **State of the Infrastructure**

Understanding the state of the Town owned assets is critical to the development of a plan to best manage them. This section of the Core Infrastructure AM Plan answers three fundamental questions:

1. What assets do we own?
2. What condition are they in?
3. What are they worth?

Overall, the Town owns core assets with a replacement value of \$819 million, of which, the road network makes up a substantial portion of this amount. The condition of these assets has been assessed as:

- 68.2% in Good or Very Good Condition
- 27.4% in Fair Condition
- 4.4% in Poor or Very Poor Condition

It is important to note that the condition assessments noted above are based on a combination of physical engineering inspections and age-based data. The source of data used to create the condition assessments has a direct correlation to the quality of the reported conditions with lesser reliance on the utilization of age-based assessments.

### **Levels of Service**

Levels of Service (LOS) are statements that describe the outputs the Town intends to deliver to its residents, businesses, and other stakeholders. Developing, monitoring, and reporting on LOS are all integral parts of an overall performance management program aimed at improving service delivery and demonstrating accountability to the Town's stakeholders.

Section 3 of the Core Infrastructure AM Plan provides the Levels of Service statements and indicators required under O.Reg. 588/17 for core assets for 2022, with the associated 2021 performance.

### **Future Demand**

Future demand looks at the Town's ability to meet the changing needs of its residential and business customers over time. Drivers affecting demand include changes in population, demographics, technology, regulatory requirements, environmental awareness, consumer preferences and expectations, economic factors, seasonal factors such as climate change impacts, etc. These external trends and drivers may affect LOS or the Town's ability to meet the proposed LOS in the future.

Section 4 of the Core Infrastructure AM Plan includes a demand management plan that identifies the demand drivers faced by the Town and provides options that can be explored to help manage LOS.

### **Risk Management Strategy**

The Town's key asset management principle is to meet service levels and manage risk, while minimizing lifecycle costs. The Town's risk management framework quantifies the risk exposure related to assets which in turn facilitates the prioritization of investment needs across asset categories and services.

The relative importance of assets to support service delivery, referred to as asset

criticality, is a key driver in the selection of the most appropriate asset management strategy for each asset. Criticality is evaluated as an asset's impact upon service delivery, health and safety, the environment, financial position, and reputation.

Section 5 of the Core Infrastructure AM Plan outlines the Town's risk management approach where consistency is key to the identification, assessment, and management of risk for all assets and infrastructure.

### **Whole Lifecycle Management**

Lifecycle management strategies are the planned lifecycle-based activities that the Town needs to undertake to meet its service levels such as regular maintenance or renewal activities.

- To maintain reliable service levels and provide quality programs, the Town conducts thousands of inspections and maintenance activities and undertakes asset rehabilitation and replacement on its existing assets and infrastructure.
- To meet future demand for services and functional requirements of stakeholders, the Town adds, expands, and upgrades assets and infrastructure through new developments or donations.

The Town prioritizes lifecycle management activities to manage the risk of not meeting service levels and to minimize costs. To achieve its objectives, the Town builds new infrastructure assets to meet capacity needs, upgrades assets to meet new functional needs, and manages existing assets to meet reliability needs – all with limited funds.

Based on the asset lifecycle management strategies necessary to maintain current service levels, the Town's requirements to operate, maintain, renew, upgrade, and grow its \$731 million worth of assets are outlined in Appendix 6

*See Appendix 6 – Whole Lifecycle Management*

As described in Section 6 of the Core Infrastructure AM Plan the total needs (including both renewal and operational activities) to maintain core assets in a state of good repair to deliver required levels of service is forecast to be an average of \$46.4M per year over the next 10 years (dotted line).

### **Estimated Infrastructure Funding Gap**

The Town will need to consider how to fund the lifecycle management activities identified in this Core Infrastructure AM plan to maintain current service levels.

The Town's main sources of revenue for whole life cycle management of existing core infrastructure assets include reserves, which are supported through contributions from property taxes, federal and provincial grants and third-party grant. Debt financing is also used to bridge timing challenges related to the receipt of revenues.

The black line in the graph in Appendix 6 shows the average annual budget available

over the next ten years. When the available budget (including capital and operating) is compared to the forecasted lifecycle needs (dotted line) the Core Infrastructure AM Plan has identified an annual infrastructure deficit of \$14.5 million. Changes or enhancements to lifecycle management activities will impact this deficit and will need to be considered from a risk versus affordability factor in the short- and long-term financial planning horizon.

Managing an infrastructure gap as part of municipal asset management planning is not uncommon. What is important however, is that the size of the gap and the strategy that is in place to address it over time ensure that risk to the municipality is minimized.

Section 7 of the Core Infrastructure AM Plan outlines the financial sustainability and projection. Opportunities to close the existing core infrastructure gap include:

- A review of near-term renewal needs by deferring capital renewal projects on lower risk assets. This will extend the capital backlog beyond the current 10-year forecast, however, will likely incur higher maintenance costs in the short term, which will require an increase to base operating budgets.
- A review of current levels of service with a comparison to industry standards and LOS provided by other municipalities.
- Increase available funds through capital reserves, leveraging third part grants, drawing on reserves, issuing debt to mitigate cash flow challenges or establishing a special tax levy. This option is subject to the on-going affordability challenges and competing corporate priorities and cannot be accommodated within the current fiscal planning period.

O.Reg. 588/17 requires that Asset Management Plans for proposed LOS (due by July 1, 2025) provide lifecycle management strategies, a forecast of available annual funding, and any funding gaps for each of the next 10 years.

### **Continuous Improvement**

The Core Infrastructure AM Plan, as presented, is compliant with Ontario Regulation 588/17 for the current levels of service as it relates to the Town's core infrastructure assets.

Data quality can be the Achilles heel of an asset management planning process. Development of asset management plans is an iterative process that includes closing data gaps and improving quality business processes, systems, and staff skills over time to gain more and more confidence in the information presented.

Section 8 of the Core Infrastructure AM Plan recommends a number of action items to enable the Town to continue to improve upon its current asset management planning and programming and to meet future requirements of O.Reg. 588/17. This will require significant resources in the future to continue building on the dataset, filling in the gaps and maintain the information current.

*See Appendix 7 – Improvement Plan*

One of the recommendations in this report is for Council to direct staff to apply for funding from the FCM Municipal Asset Management Program to support the “Asset Management Improvement” project and address some of the data gaps identified.

### **STRATEGIC PLAN ALIGNMENT:**

This report aligns to the Town’s Strategic plan recognizing the value to provide responsive, effective municipal government and strong leadership in the effective and efficient delivery of municipal services.

This report also identifies fiscal and corporate management as one of the Town’s Strategic priorities.

### **RELATIONSHIP TO CLIMATE CHANGE:**

This report is administrative in nature and does not directly impact or address climate change and the Town's Net Zero target.

Integrating climate change and asset management provides the opportunity to assess the impact of climate change on the levels of service provided and adapt to extreme weather events as well as provide the platform for decision making through a climate change lens.

### **PUBLIC ENGAGEMENT:**

Public Engagement was not needed as this report is administrative in nature.

### **INTERNAL CONSULTATION:**

Town staff from Transportation & Public Works, Finance, Asset Management Network Team, and CAM Steering Committee have been consulted in the preparation of this report.

### **FINANCIAL IMPLICATIONS:**

This report is administrative in nature and does not have any financial implications.

There are many components to the Town’s long range financial plan and an established corporate process is in place to ensure ongoing financial affordability and sustainability. As such, the financial impacts of the Core Infrastructure AM Plan follow the steps below:

- Any lifecycle management needs, and infrastructure funding gaps identified through the Core Infrastructure AM Plan will be incorporated into the preparation of the Town’s long term capital plan and the LRFP updates.

- As part of the LRFP a financing strategy will be developed based on affordability, sustainability and corporate priorities.
- There are present and future costs to operationalize the CAM Program by having skilled Town staff resources in all asset classes/service areas to maintain and implement the plan.
- Any resulting operating and capital budget requirements will be incorporated into the annual budget process for council consideration.

Moving forward, the ten-year capital plan will be continuously updated to incorporate the Core Infrastructure AM Plan along with any emerging corporate priorities. This will then guide the LRFP updates and annual budget process.

Reviewed and approved by,

Richard Cockfield, Director of Strategic Planning

Chris Mills, Chief Administrative Officer