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Town of Aurora
Committee of the Whole Report
No. FIN24-034

Subject: Updated Corporate Asset Management Plan

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Department: Finance

Date: July 2, 2024

Recommendation

1. That Report No. FIN24-034 be received; and
2. That the updated Corporate Asset Management plan for the Town of Aurora be approved; and
3. That the proposed capital asset levels of service measures and targets be approved.

Executive Summary

The proposed Corporate Asset Management Plan (AMP) represents a significant step forward for the Town, putting it on a path toward a financially sustainable asset renewal program, while ensuring a consistent level of service to its users. The proposed AMP ensures the Town's compliance with the final remaining major milestone of Ontario Regulation 588/17 (O. Reg 588/17).

- The Town has consistently met all requirements of O. Reg 588/17
- The state of the Town's infrastructure has declined slightly since the last AMP update
- This AMP is built upon defined levels of service for each capital asset category
- The Town's present funding strategy will not achieve the recommended capital asset levels of service

- While this AMP meets all requirements under O. Reg 588/17 through July 1, 2025, the AMP is considered a dynamic document that will be updated continuously as new data becomes available

This AMP's complimentary Natural Capital Asset Management Plan (NCAMP) will be presented to Council this evening under a separate report to the Committee of Whole (PDS24-079).

Background

The Town has consistently met all requirements of O. Reg 588/17

As part of the *Infrastructure for Jobs and Prosperity Act, 2015*, S.O. 2015, c. 15, the Ontario government filed Ontario Regulation 588/17 - Asset Management Planning for Municipal Infrastructure (O. Reg 588/17). O. Reg 588/17 facilitates asset management best practices by providing a degree of consistency to asset management plans and leveraging asset management planning to optimize infrastructure investment decisions.

O. Reg 588/17 outlines several key milestones and requirements for municipal asset management plans in Ontario between July 1, 2022 and July 1, 2025. The Town has met all key milestones and requirements under this regulation to date. The proposed AMP within this report ensures the Town's compliance with the final remaining key milestone requirement under this regulation being the achievement of an approved AMP which includes the following components for all of its asset categories:

- Proposed levels of service for the next 10 years
- Updated inventory analysis
- Lifecycle management strategy
- Financial strategy, including a plan to address all identified shortfalls
- Discussion of how growth assumptions impacted lifecycle and financial strategies

Every AMP must present the outcomes of a municipality's asset management program and identify the resource requirements needed to achieve a defined level of service. An AMP typically includes the following content:

- State of Infrastructure
- Asset Management Strategies
- Levels of Service
- Financial Strategies
- Continuous Improvement

This AMP is aligned with the Town's Strategic Asset Management Policy and is guided by the key principles of the Town's corporate strategic goals and priorities.

Also, this AMP represents a snapshot in time and is based on the best available processes, data, and information at that time. Strategic asset management planning is an ongoing and dynamic process that requires continuous improvement and dedicated resources. As a result, an AMP is a living document that should be updated regularly as additional asset and financial data becomes available. These regular reviews also allow the Town to re-evaluate the state of infrastructure and identify how the organization's asset management and financial strategies are progressing. The regulation requires each municipality to undertake a review and update of the AMP a minimum of every 5 years.

Analysis

The state of the Town's infrastructure has declined slightly since the last AMP update

Since the Town's last AMP update, its assets and their replacement costs have grown significantly. The overall average condition of the Town's assets remains good, but have declined slightly over this same period, falling from an average condition of 79 percent in 2020-21 to 74 percent as of the end of 2023. The total estimated replacement cost for all assets has grown from \$1.5 to \$2.35 billion over the past few years. Table 1 presents a summary of the state of the Town's infrastructure as of today.

Table 1
Current State of Infrastructure for the Town of Aurora

Asset Category	Average Asset Category Condition (%)	Current Estimated Replacement Cost (\$'s)
Road Network	65	845,639,000
Bridges & Culverts	63	38,412,000
Buildings	54	187,055,000
Fleet	42	10,770,000
Machinery & Equipment	38	4,862,000
Park Facilities	65	60,803,000
Water Network	61	330,688,000
Sanitary Sewer Network	63	299,590,000
Stormwater Network	64	569,195,000
	74	2,347,014,000

Table 2 presents a summary of the Town's condition rating criteria to assist in the interpretation of the presented average asset category condition assessments in Table 1.

Table 2
Condition Rating Criteria

Condition	Average Asset Condition Rating (%)
Very Good	80-100
Good	60-80
Fair	40-60
Poor	20-40
Very Poor	0-20

This AMP is built upon defined levels of service for each capital asset category

A level of service (LOS) is a measure of what the Town is providing to the community and the nature and quality of that service. The LOS is the driver for the identification of asset needs and is the basis for investment decisions.

O. Reg 588/17 requires that all proposed LOS are demonstrated to be appropriate based upon an assessment of:

- Proposed LOS options (i.e., increase, decrease, or maintain current LOS) and the risks associated with these options (i.e., asset reliability, safety, affordability) when considering the long-term sustainability of the municipality
- How the proposed LOS may differ from current LOS
- Whether the proposed LOS is achievable
- The municipality's ability to afford proposed LOS

The proposed LOS measures include a combination of prescribed measures under O. Reg. 588/17 in addition to performance measures identified by the Town as worth measuring and evaluating. The Town's measures are defined at two levels: Community Levels of Service, and Technical Levels of Service.

Community levels of service are a simple, plain language description or measure of the service that the community receives. For the most part these measures are qualitative in nature. Technical levels of service are a measure of the key technical attributes of the service being provided to the community. These include mostly quantitative measures and tend to reflect the impact of the Town's asset management strategies on the

physical condition of assets or the quality/capacity of the services they provide. Technical metrics and qualitative descriptions that measure both technical and community levels of service have been established and measured for each asset category within the attached AMP as data is available.

In addition, O Reg. 588/17 requires that a lifecycle management and financial strategy be developed in support of proposed LOS' for a period of at least 10 years with specific reporting on:

- The identification of lifecycle activities needed to provide the proposed LOS
- An estimate of the annual cost of meeting the proposed LOS for a period of 10 years, separated by capital and operating expense

The following three scenarios were considered in the determination of the recommended LOS:

- Scenario 1: Maintain existing asset condition and level of service/estimated service life (status quo)
- Scenario 2: Allow asset category average condition/estimated service life to decrease by 5 percent
- Scenario 3: Increase asset category average condition/estimated service life by 5 percent

Table 3 and 4 present a summary of the LOS scenario analysis that was undertaken in support of the recommended asset LOS' for both the Town's tax levy and rate funded assets, respectively.

Table 3
Summary of LOS Scenario Analysis Impacts
by Asset Category Tax Levy Funded

Category	Maintain Current Condition		Current Condition +5%		Current Condition -5%	
	KPI Value (%)	Est. Annual Capital Cost (\$)	KPI Value (%)	Est. Annual Capital Cost (\$)	KPI Value (%)	Est. Annual Capital Cost (\$)
Bridges & Culverts	63	750,000	68	752,000	58	560,000
Buildings	54	5,764,000	59	5,767,000	49	5,728,000
Fleet	42	736,000	47	821,000	37	658,000
Machinery & Equipment	38	705,000	38	705,000	38	705,000
Parks Facilities	65	1,605,000	65	1,605,000	65	1,605,000

Road Network	46	14,322,000	51	15,023,000	41	12,756,000
Tax Funded Average/Total	49	23,882,000	54	24,673,000	44	22,012,000

**Table 4
Summary of LOS Scenario Analysis Impacts
by Asset Segment Rate Funded**

Category	Maintain Current Condition		Current Condition +5%		Current Condition -5%	
	KPI Value (%)	Est. Annual Capital Cost (\$)	KPI Value (%)	Est. Annual Capital Cost (\$)	KPI Value (%)	Est. Annual Capital Cost (\$)
Sanitary Network	63	4,227,500	68	4,745,500	58	3,815,000
Stormwater Network	64	8,405,000	69	9,082,900	59	7,382,000
Water Network	61	5,720,200	66	6,526,300	56	4,836,000
Rate Funded Average/Total	63	18,352,700	68	20,354,700	58	16,033,000

Informed by this LOS scenario sensitivity analysis and other considerations, recommended LOS' have been defined for all of the Town's asset categories. A complete list of all the recommended LOS' by asset category, along with any supporting details can be found within Section 7 of the AMP under Attachment #2. A summary of the recommended LOS impacts compared to existing LOS' by asset category for both tax levy and rate funded assets can be found under Tables 5 and 6, respectively.

Table 5
Summary of Recommended LOS Impacts by Asset Category
Tax Levy Funded

Category	Maintain Existing Condition Est. Annual Capital Cost (\$)	Recommended Target Condition Est. Annual Capital Cost (\$)
Road Network	14,322,000	15,454,000
Bridges & Culverts	750,000	739,000
Buildings	5,764,000	5,767,000
Fleet	736,000	869,000
Machinery & Equip.	705,000	705,000
Park Facilities	1,605,000	1,892,000
	23,882,000	25,426,000

For the most part the recommended LOS' align with present values. Under the Road Network asset category, it is recommended that the roads asset segment's present pavement condition target of 70 be maintained with proposed increases to barriers & railings, sidewalks, streetlights and parking lots. Minor LOS increases are proposed under the Bridges & Culverts, Buildings and Fleet asset categories.

Table 6
Summary of Recommended LOS Impacts by Asset Category
Rate Funded

Category	Maintain Existing Condition Est. Annual Capital Cost (\$)	Recommended Target Condition Est. Annual Capital Cost (\$)
Sanitary Network	4,227,500	4,227,500
Stormwater Network	8,405,000	8,414,500
Water Network	5,720,200	5,746,300
	18,352,700	18,388,300

Similar to tax levy funded assets, most recommended rate funded LOS' align with existing asset segment performance. An increased LOS is proposed for sanitary equalization tanks under the sanitary network asset category. Increased LOS' are also proposed to headwalls and oil grit separators under the stormwater network category. Minor LOS increases are proposed under the water network category to hydrants and other water system supporting components as well.

The Town's present funding strategy will not achieve the recommended capital asset levels of service

Based upon the recommended capital asset LOS, the average annual capital costs are estimated to be \$25,426,000 and \$18,388,300 for tax levy and rate funded assets, respectively. Currently, the Town has approximately \$10,536,600 and \$5,674,600 available from sustainable revenue sources for tax and rate funded asset renewal. The resultant annual funding gaps are \$14,889,400 and \$12,713,700 for tax and rate funded assets.

The Town's present funding strategy includes an annual tax rate increase of 1 percent in support of its fiscal strategy. Of this increase, approximately 0.2 percent is contributed toward the growth & new and studies & other reserve. The remaining 0.8 percent annual increase is allocated in support of asset management reserves.

As per the AMP's recommended LOS, an estimated total tax rate increase of 27.5 percent would be required to address the Town's current identified infrastructure deficit of \$14,889,400. This tax rate increase may be mitigated through phasing it in over an extended period. Table 7 presents a summary of possible phase-in periods for the tax levy increase.

Table 7
Possible Tax Levy Increase Phase-in Period Options

Phase-in Period Duration (Years)	Required Tax Rate Increase (%)	Present Funding Strategy (%)	Additional Tax Rate Increase (%)
5	4.97	0.80	4.17
10	2.45	0.80	1.65
15	1.63	0.80	0.83
20	1.22	0.80	0.42

It is recommended that the Town consider a 15-year phase-in period for its required tax increase, meaning that an increase of the existing dedicated annual tax increase of 0.8

to 1.63 percent be adopted, which will sufficiently mitigate the tax burden while addressing the Town's associated infrastructure deficit as promptly as possible.

As per the 2021 AMP's recommendations, the Town adopted dedicated annual user rate increases of 2.2, 0.4 and 11.0 percent for water, sanitary sewer and stormwater services, respectively. This strategy has continued to present.

As per this AMP's recommended levels of service, it is estimated that a total user rate increase of 32.9, 18.0 and 161.4 percent would be required to address the current identified infrastructure funding deficit for the water, sanitary and stormwater networks. Similarly, these user rate increases may be mitigated through a multi-year phase-in period. Table 8 presents a summary of possible phase-in periods for each of these services.

Table 8
Possible User Rate Increases Phase-in Period Options
by Service Type

Service	Required Annual User Rate Increase (%)			
	5 Years	10 Years	15 Years	20 Years
Water Network	5.86	2.89	1.92	1.45
Sanitary Network	3.37	1.67	1.11	0.83
Stormwater Network	21.19	10.09	6.62	4.92

It is recommended that the Town adopt phase-in periods of 15 for water, 10 for sanitary and 20 years for stormwater networks resulting in dedicated annual rate increases of 1.92, 1.67 and 4.92 percent for water, sanitary and stormwater, respectively. These recommended increases try to find a balance between the annual burden placed on each service's user rate(s), while minimizing the time needed to reach a state of infrastructure affordability.

An infrastructure deficit will continue to exist over the phase-in period in all instances. Therefore, the need to prioritize planned capital project work and seek out alternative funding sources will continue to exist.

New asset growth and further unplanned inflationary pressures are not considered in the presented model, this model's focus is on ensuring the Town's affordability for current capital asset holdings. As growth-related assets are constructed or acquired, they will be integrated into the Town's AMP as part of subsequent scheduled reviews and updates.

Debt may be strategically used as an interim funding source in the management of the Town's infrastructure deficit. At this time the use of debt for this purpose is not recommended.

While this AMP meets all requirements under O. Reg 588/17 through July 1, 2025, the AMP is considered a dynamic document that will be updated continuously as new data becomes available

Under Reg 588/17, municipalities are required to formally update AMP documents every five years. In addition, staff will conduct an annual review of its progress in implementing the AMP and will report back to Council with its findings.

The AMP provides recommendations and next steps that will allow the Town to continue enhancing their asset management maturity level. Key recommendations include:

- Continuing to review and validate capital asset inventory data, assessed condition data and replacement costs for all assets upon the completion of assessments, studies, or inspections as data becomes available.
- Enhancing organizational efficiency and optimizing resource utilization through automating the merging and reconciling of all existing active capital asset registries as much as possible across the organization.
- Implementing a formal condition assessment program and strategy for all municipal infrastructure.
- Continuing to operationalize risk-based decision-making frameworks by configuring the Town's asset management system to intuitively calculate risk as part of asset management planning and budgeting processes.
- Reviewing assets that have surpassed their estimated useful life to determine if immediate replacement is required.
- Evaluating the efficacy of the Town's lifecycle management strategies at regular intervals to determine the impact cost, condition, and risk.
- Continuing the review of asset replacement costs to ensure they are up to date.
- Continuing to review and update risk and service level models to ensure they remain relevant.

A comprehensive list of all recommended next steps can be found under Section 9 of AMP under Attachment 2.

Advisory Committee Review

Not applicable.

Legal Considerations

O. Reg. 588/17 requires all municipalities in Ontario to have a comprehensive AMP that identifies current LOS in place for all municipal infrastructure assets by July 1, 2024, and a plan that includes proposed LOS by July 1, 2025.

Financial Implications

A key requirement under the O. Reg 588/17 is that the Town must adopt levels of service for all core and non-core capital assets that are affordable. The recommended capital asset levels of service which mostly reflect what is currently being provided to users, are unaffordable in the long term based upon the Town's current funding strategy.

As a result, the following phased in rate increases are recommended as presented in Table 9.

Table 9
Asset Renewal Financial Sustainability Strategy
by Funding Source Type

Funding Source	Required Tax Rate Increase (%)	Required Phase-in Period (Years)
Tax Levy	1.63	15
Water Network	1.92	15
Sanitary Network	1.67	10
Storm Network	4.92	20

These recommended increases do not consider the Town's on-going funding of the Growth & New and Studies & Other reserves. As of the 2024 budget review, the annual tax rate increase requirement for these two reserves combined was 0.2 percent per year.

Finance will present to Council in the fall, a comprehensive funding strategy which will consider both this AMP and the NCAMP's identified funding requirements as well as all other known tax levy, water, sanitary and stormwater network pressures.

Communications Considerations

In accordance with the requirements of O. Reg. 588/17, the AMP will be posted on the Town's website, along with related background documents for the public to access.

Climate Change Considerations

To achieve the sustainable delivery of services, climate change considerations have been incorporated into asset management practices. The integration of asset management and climate change adaptation observes industry best practices and enables the development of a holistic approach to risk management. Climate vulnerability risks from the Climate Change Adaptation Plan by WSP (2022) have been integrated into various categories within the AMP.

Link to Strategic Plan

This updated AMP represents the foundation upon which all future multi-year capital plans will be based, this plan supports all aspects of the Strategic Plan. In particular, the AMP contributes to achieving the Strategic Plan's guiding principle of "Leadership in Corporate Management" and improves transparency and accountability to the community.

Alternative(s) to the Recommendation

1. Council may choose to accept, amend, or reject any or all recommendations of this report.
2. Council may provide alternative directions with respect to the presented draft AMP.

Conclusions

With the assistance of Public Sector Digest, an extensive review and update of the Town's asset management was undertaken to enable to comply with the final July 1, 2025 key milestone requirement of O. Reg 588/17. This AMP includes several enhancements such as the introduction of defined LOS' for all Town capital asset categories. This AMP also includes a necessary financial strategy which ensures its recommended LOS' are affordable and can be achieved.

Attachments

Attachment 1 – Presentation: Public Sector Digest

Attachment 2 – Proposed Asset Management Plan Final v5

Previous Reports

FIN22-015, Continued Advancement of the Second-Generation Asset Management Plan,
May 3, 2022

FIN21-037, Second Generation Asset Management Plan, September 21, 2021

Pre-submission Review

Agenda Management Team review on June 12, 2024

Approvals

Approved by Rachel Wainwright-van Kessel, CPA, CMA, Director, Finance

Approved by Doug Nadorozny, Chief Administrative Officer