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Town of Aurora
Committee of the Whole Report
No. OPS24-018

Subject: Sidewalk Winter Maintenance – Service Delivery Review

Prepared by: Luigi Colangelo, Manager, Public Works

Department: Operational Services

Date: July 2, 2024

Recommendation

1. That Report No. OPS24-018 be received; and
2. That staff increase the number of sidewalk routes from of eight to ten for the 2024/2025 winter season; and
3. That the length of individual sidewalk routes be reduced and maintained at approximately 25 kilometres to maintain current approved service level standards.

Executive Summary

The purpose of this report is to provide Council with an update on the winter maintenance of sidewalks which involves the plowing and salting of all sidewalks, walkways and multi-use paths to reduce slip hazards, to provide safe passage for pedestrians during the winter months in support the Town of Aurora’s Active Transportation Master Plan (ATMP):

- The Town of Aurora currently maintains over 252 kilometres of sidewalks, walkways and multi-use pathways on Town-owned and Regional road networks and strives to meet service levels set by Council.
- Despite a 25 per cent growth in the road and sidewalk network, the current resource complement of sidewalk machines or routes has not been updated in recent years.
- A review of municipal best practices indicates that Aurora’s kilometres per sidewalk route exceeds those of other regional municipalities. Operational

Services added one additional sidewalk route in-house during the 2023/2024 winter season to determine if efficiencies could be created by shortening routes.

- Contracted winter sidewalk maintenance service provision supplemented by Town-owned equipment and staff affords the most flexibility in meeting the challenges inherent in the work.

Background

The Town of Aurora currently maintains over 252 kilometres of sidewalks, walkways and multi-use pathways on Town-owned and Regional road networks and strives to meet service levels set by Council.

The Town's 252 kilometre sidewalk network is divided into eight routes, seven of which are maintained by the Town's contractor and one route, introduced in 2023/2024, maintained by town staff and equipment. Aurora's sidewalk maintenance routes are divided into primary and secondary routes. The division of classification as identified in the Ontario Regulation 239/02: Minimum Maintenance Standards for Municipal Highways (MMS) filed under the *Municipal Act, 2001*, is that primary routes consist of sidewalks along arterial and collector roadways as well as school zones, including sidewalks along regional roads and secondary routes consist of lower volume local roads.

Aurora's approved service levels for sidewalks and multi-use pathways for winter maintenance is to plow all sidewalks within 24 hours of the end of a snowfall when accumulations reach five centimetres or more. This currently exceeds the requirements in the MMS standard which states that snow depths on sidewalks must be reduced to less than eight centimetres within 48 hours. The level of service targets approved by Council in 2014 are key defense tools in protecting the Town from claims related to winter sidewalk operations. Road and sidewalk winter management are high risk areas of operation for the Town. These risks are primarily related to personal injury claims. The purpose of establishing service levels and policies for these areas of risk is to mitigate the risks and reduce liability to the Town. To manage the Town's risk, it's important to "say what you will do and do what you will say". When responding to a personal injury claim, one key defence is that the Town has clear and supportable policies and stated service levels in place and that those policies are being delivered to the service level targets.

Analysis

Despite a 25 per cent growth in the road and sidewalk network, the current resource complement of sidewalk machines or routes has not been updated in recent years.

The Town has experienced a 25 per cent increase in the length of sidewalks maintained over the past ten winter seasons (see Table 1). On average, the Town experiences, 45 to 50 winter maintenance events each season which require sidewalk plowing and salting. During an event, contracted staff are dispatched and often must return the next day for additional clean-up. Despite the substantial growth in the road and sidewalk network, the current resource complement of sidewalk machines or the number of sidewalk routes has not been updated in recent years. The Town's contractor has encountered numerous challenges in adhering to Council-approved service levels of plowing all sidewalks within 24 hours. The expanded and lengthy sidewalk routes have proven difficult to cover and excessively time-consuming within the designated timeframe. Ensuring sidewalks remain clear of snow and ice, especially along regional roads often require multiple passes, adding complexity and time to the sidewalk plowing process. In addition, there is little surplus flexibility. Despite these obstacles, efforts are ongoing to optimize operations to meet Council-approved service levels but continuing to operate in this manner, without additional sidewalk machines going forward, will prove problematic.

Table 1: Sidewalks Maintained and Number of Routes

Winter Season	Sidewalk Length (km)	Avg. Sidewalk Route Length (km) ¹	# of Plow Routes
2014-2015	201.74	33.62	6
2015-2016	206.53	34.42	6
2016-2017	213.14	35.52	6
2017-2018	226.38	37.73	6
2018-2019	235.67	39.27	6
2019-2020	238.68	34	7
2020-2021	249.22	35.6	7
2021-2022	249.89	35.6	7
2022-2023	250.91	35.8	7
2023-2024	252.69	31.6	*8

*Includes in-house route added this past winter

Aurora currently has 252 kilometres of sidewalk which does not include any new subdivisions that are to be assumed within the next five years. The Town's sidewalk network is anticipated to increase nine kilometres by 2029, as outlined in the Town's ATMP. This expansion addresses existing gaps and areas where sidewalks are currently absent, rather than being driven by new developments or regional sidewalk construction. When you consider both growth and the ATMP implementation, it is expected that Aurora's total network of sidewalks will reach approximately 290 kilometres by 2029. This significant increase will directly impact sidewalk winter maintenance operations. To address the growing maintenance needs required to meet the current service levels, staff project the need to increase the number of sidewalk routes from the current eight routes to a total of ten routes to address the additional kilometres of sidewalks.

A review of municipal best practices indicates that Aurora's kilometres per sidewalk route exceeds those of other regional municipalities. Operational Services added one additional sidewalk route in-house during the 2023/2024 winter season to determine if efficiencies could be created by shortening routes.

In comparing Aurora's sidewalk winter maintenance efforts to those of neighbouring municipalities, it becomes clear that a consistent standard prevails across the Region. Each municipality is committed to clearing sidewalks within 24 hours following the end of a winter storm, ensuring safe pedestrian passage. This uniformity in service level highlights a collective dedication to public safety and efficient operational coordination.

Despite each municipality sharing the 24-hour service level, neighbouring municipalities maintain an average route length of 25 kilometres per route while the Town's average route length is 31.6 kilometres. Despite each municipality sharing the same 24-hour service level, neighbouring municipalities maintain an average route length of 25 kilometres per route while the Town's average route length is 31.6 kilometres.

By maintaining an average route length of 25 kilometres per route, these municipalities demonstrate a strategic and efficient approach to resource allocation. This balance of workload distribution and maximized coverage reflects a shared understanding of the importance of accessible, hazard-free sidewalks for community mobility and well-being. Increasing the number of routes to ten will change the average route length in Aurora to 25.3 kilometres/route.

Table 2: Neighbouring Municipalities Sidewalk Maintenance Operations

Municipality	Km Maintained	Number of Routes	Average Length
Newmarket	392 km	17	23 km/route
Bradford West Gwillimbury	150 km	6	25 km/route
East Gwillimbury	120 km	5	24 km/route
Township of King	118 km	6	20 km/route
City of Richmond Hill	750 km	25	30 km/route

During the 2023/2024 winter season, one winter sidewalk route was added utilizing existing Town staff and equipment to improve our sidewalk clearing operations. This initiative yielded significant benefits: decreased total route lengths from 36 kilometers to 31 kilometres on average/route, operator seat time reduced therefore less physical strain, reducing the risk of workplace injuries; response times improved, allowing staff to adapt more quickly to changing weather conditions; and equipment endured less wear and tear, potentially lowering maintenance costs over time.

This trial was also designed as a commitment to continuous improvement and proactive measures to address the challenges posed by winter weather conditions and the ability to enhance sidewalk service delivery utilizing existing Town resources.

Contracted winter sidewalk maintenance service provision, supplemented by Town-owned equipment and staff affords the most flexibility in meeting the challenges inherent in the work.

Similar to the winter roads contract service providers, the contracted sidewalk maintenance service provider must be available 24/7 on short notice, managing both equipment and personnel while complying with Ministry of Labour and Ministry of Transportation regulations. While the majority of winter sidewalk maintenance is conducted by a contract service, the Town supplements this service with its own equipment and staff, particularly during equipment breakdowns, severe storms, or specific maintenance needs.

Furthermore, this equipment serves other important needs in the operation associated with snow windrow removal including Yonge Street (and other streets in the downtown

core) as well as spring sidewalk sweeping throughout the entire municipality. Based on these needs, having this equipment in the Roads and Fleet Divisions continues to benefit overall operations.

Advisory Committee Review

None.

Legal Considerations

The Town has published service level standards and is legislatively mandated to maintain its sidewalks in a reasonable state of repair as set out in the MMS. The Town cannot abrogate this responsibility and may be liable for damages that any person may sustain, if the Town were to default on the prescribed obligations.

The MMS is a statutory defence to claims and deems roads and sidewalks to be a state of repair when the MMS is adhered to. To use this statutory defence, a municipality must be able to show through documentation that it met the standards prescribed in the MMS. It would be difficult to avoid liability in a case where the failure to meet the MMS had contributed to an incident. Consequently, should the Town conduct maintenance that falls below the MMS standard, it is expected that it would lead to an increase in claims, financial liabilities and insurance premiums. The recommendations brought forward by this report aim to maintain the service standards at a level that would continue to meet or exceed the MMS.

Financial Implications

The Town's current sidewalk winter maintenance contract costs total approximately \$493,900 per year including unrecoverable taxes for its present seven routes. The eighth route is provided 'in house' by Town staff at an estimated cost of approximately \$55,000 not including fuel/maintenance/sod repairs.

If staff's recommendation for two additional contracted routes is approved, this would result in a budget pressure of \$120,000 to increase the contract.

If the Town proceeds with the two additional routes, it is recommended that the \$120,000 budget pressure be funded from the Tax Rate Stabilization reserve for the 2024/2025 winter season. The 2025/2026 winter season's incremental costs would

then become a tax levy pressure that would be phased in over the 2025 and 2026 Operating budgets.

Communications Considerations

There are no communications considerations as a result of this report.

Climate Change Considerations

The key opportunity in developing the Green Fleet Plan (GFP) in 2021 was to achieve long-term GHG emissions targets, in conjunction with fundamental goals developed and the associated action items.

The following actions from GFP play a role in climate change mitigation:

- Replace vehicles with best in-class fuel efficient vehicles. New models are more fuel efficient, produce lower emissions and are good options while the manufacturers develop viable hybrid/electric vehicles required to provide service. Overall, GHG reduction, by upgrading alone, through capital renewal can produce 4-5 percent decrease.
- Utilize telematic information provided through GPS system to reduce idling, driver behaviour.

Link to Strategic Plan

Sidewalk winter maintenance service delivery review supports the Strategic Plan goal of Strengthening the Fabric of our Community through its accomplishment in developing a plan to review and realign service levels to reflect current and future demographic trends.

Alternative(s) to the Recommendation

1. Council could consider recommending alternative service levels or service provision methods and have staff report back on these alternatives.
2. Other options as directed by Council.

Conclusions

The sidewalk winter maintenance service delivery review highlights areas for improvement to enhance the quality and reliability of sidewalk winter maintenance services. By implementing the recommendations outlined in the report, the Town can optimize resource allocation, improve levels of service and deliver more effective and efficient snow removal services, ultimately reducing the Town's liability and ensuring safer pedestrian mobility during the winter months.

Attachments

None.

Previous Reports

IES14, 047, Service Level Review for Winter Maintenance and Revised Policies, September 2, 2014

Pre-submission Review

Agenda Management Team review on June 12, 2024.

Approvals

Approved by Sara Tienkamp, Director, Operational Services

Approved by Doug Nadorozny, Chief Administrative Officer