

## Winter Sidewalk Maintenance Service Standards Options for Implementation During the 2023-2024 Winter Season

Presented To:	Operations Committee
Meeting Date:	September 18, 2023
Type:	Managers' Reports
Prepared by:	Tony De Silva Linear Infrastructure Services
Recommended by:	General Manager of Growth and Infrastructure

### Report Summary

This report provides a recommendation regarding winter sidewalk maintenance service standard options for implementation during the 2023-2024 winter season.

### Resolution

THAT the City of Greater Sudbury implement a winter sidewalk maintenance pilot project in the 2023-2024 winter season which will see the addition of three (3) seasonal sidewalk plow operators who will be dedicated to performing winter sidewalk maintenance continually throughout the week at a total cost of \$277,000;

AND THAT the cost to fund the pilot project in the amount of \$97,000 for 2023 and \$180,000 for 2024 be funded from the Winter Control Reserve Fund, as outlined in the report entitled "Winter Sidewalk Maintenance Service Standards Options for Implementation During the 2023-2024 Winter Season", from the General Manager of Growth and Infrastructure, presented at the Operations Committee meeting of September 18, 2023.

### Relationship to the Strategic Plan, Health Impact Assessment and Community Energy & Emissions Plan (CEEP)

A pillar of the Strategic Plan 2019–2027 is the Asset Management and Service Excellence strategic initiative. One of the key principles of this initiative is to continually look for innovative and cost-effective approaches for the operational services staff deliver each day. Utilizing this continuous improvement approach ensures Linear Infrastructure Services provides efficient, high quality operational activities that meet the needs of residents and supports how they work, live and play in Greater Sudbury. As well, accessible winter sidewalks will encourage more residents to utilize active transportation rather than use motorized vehicles to get to their destination, which is consistent with the objectives of Greater Sudbury's Community Energy and Emissions Plan (CEEP).

This report is also consistent with Council's Strategic Plan with respect to the goal of conducting research, benchmarking and experimentation to ensure road maintenance practices reflect appropriate best practices.

## **Financial Implications**

If approved, the cost of the pilot project in the amount of \$97,000 for 2023 and \$180,000 for 2024 will be funded from the Winter Control Reserve Fund.

## **Background**

Linear Infrastructure Services maintains 350 kilometers of sidewalks across Greater Sudbury each winter. Winter sidewalk maintenance involves plowing and sanding sidewalks to reduce slip hazards and provide a smooth surface for sidewalk users. As the City strives toward their on-going commitment to becoming a more pedestrian friendly community in line with the City of Greater Sudbury Strategic Plan pillar to “Create a Healthier Community” and CEEP Goal #8 to encourage active transportation and reduce vehicle use, the importance of clearing sidewalks in the winter to help residents maintain healthy, active lifestyles and to provide access to work, school, shopping, and GOVA Transit services is recognized.

On February 16, 2021, the Finance and Administration Committee passed resolution FA2021-06 requesting that staff prepare a study of service standards and service delivery models for winter sidewalk maintenance with recommended service level options for potential consideration as a possible business case for the 2022 budget deliberations including but not limited to reviewing: snow accumulation to initiate operations; continuous plowing practices; priorities for the sidewalk network; service models and best practices in other cities; and alignment with the active transportation policies and goals of the Community Energy and Emissions Plan (CEEP).

Commencing in September of 2021 and concluding in June of 2023, Staff prepared a series of three separate detailed information reports to Operations Committee outlining the most suitable options for sidewalk winter maintenance in the CGS. In consideration of the information provided by staff and a presentation made to Committee by the Greater Sudbury Safer Sidewalks (GSSS), a resolution was passed during the June 19, 2023, Operations Committee meeting. The resolution (OP2023-12) directed staff to prepare a subsequent report detailing winter sidewalk maintenance options such as, to explore a pilot project, expand downtown service model to other parts of the City and to ensure winter sidewalk maintenance routes are completed in a timely manner after the end of a winter event.

## **Analysis**

### **Current Winter Sidewalk Maintenance Standards**

Sidewalk winter maintenance within the City has evolved over a number of years. The City’s current winter sidewalk maintenance standards have been derived from the City’s Active Transportation Winter Maintenance Policy and the Province of Ontario’s Minimum Maintenance Standards (O.Reg 239/02). In general terms, the Active Transportation Winter Maintenance Policy identifies which sidewalks should receive winter maintenance and the Minimum Maintenance Standards (often referred to as the MMS) identify the minimum frequency required for patrolling, weather monitoring and plowing and sanding municipal roads and sidewalks. To note, the sidewalks which receive winter maintenance are reviewed annually at the Operations Committee. Table 1 summarizes the City’s current overall winter sidewalk maintenance standard.

**Table 1 – Current Sidewalk Winter Maintenance Standards**

Sidewalk Winter Maintenance - Snow Events			Service Timelines		Service Timelines when SWE is Declared
Sidewalk Classification	Protocol / Action	Snow Accumulation	Complete Round #1 / Initial Deployment	Clear / Material Application	
Downtown	Plow & Sand Sidewalks	N/A	Midnight to 8 am, Weekdays	-	None
Class 1 <sup>2</sup>	Plow & Sand Sidewalks	8 cm	Within 4 - 24 Hours of reaching 8 cm Threshold	12 - 24 Hours after Storm Ends <sup>if Required</sup>	None
Class 2 <sup>3</sup>	Plow & Sand Sidewalks	8 cm	Within 8 - 24 Hours of reaching 8 cm Threshold	12 - 24 Hours after Storm Ends <sup>if Required</sup>	None

Sidewalk Winter Maintenance - Ice Events			Service Timelines		Service Timelines when SWE is Declared
Sidewalk Classification	Protocol / Action	Ice Detection	Complete Round #1 / Initial Deployment	Clear / Material Application	
Downtown	Plow & Sand Sidewalks	N/A	Midnight to 8 am, Weekdays	-	None
All Sidewalks	Sand Sidewalks	Detected	Within 24 Hours of Ice Detection	24 Hours after Storm Ends <sup>if Required</sup>	None

<sup>2</sup> Class 1 Sidewalks - Sidewalks adjacent to Class 1 - 3 Roads

<sup>3</sup> Class 2 Sidewalks - Sidewalks adjacent to Class 4 - 6 Roads

SWE – Significant Weather Event

## Delivering Sidewalk Winter Maintenance Services

There are twenty-two (22) sidewalk plow routes throughout the City of Greater Sudbury. Generally, these routes were designed to be completed by one sidewalk plow during the course of one shift (8 to 13 hours) however some may take longer based on the route and weather conditions. During a major winter event, sidewalk plowing begins on all routes once 8 centimeters (cm) of snow accumulation occurs or icy conditions are detected. The City has four (4) to twenty-four (24) hours after such an event has ended to complete this service standard. Snow accumulation on sidewalks is generally cleared with a single pass. The Collective Bargaining Agreement (CBA) allows for sidewalk plow operators to work on a “first eight (8) in twenty-four (24)” schedule which means that staff may start at any time of day within a twenty-four (24) hour period based on operational need. A typical shift is eight (8) hours but may be extended up to thirteen (13) hours on overtime with staff concurrence. This service is staffed for only one shift, which means that when the previously mentioned shift has ended, all staff are entitled to a mandatory rest period of at least 11 hours prior to returning to work. During this period of time, there is no staff available to continue clearing sidewalks. If the storm ends in the middle of a shift and staff cannot complete the required work before the end of same shift, any sidewalks that are not completed will be left until the following shift commences.

The downtown area of Sudbury is unique as it has been listed as a priority area. As such, the routes associated with downtown Sudbury are serviced to the minimum standards above and in addition they are serviced every weekday from midnight to 8 a.m. regardless of snow accumulation.

During periods of non-snow/ice events, sidewalk plow operators are utilized to complete all required winter maintenance tasks such as pot-hole patching, snow removal and winter ditching as needed. Sidewalks in Greater Sudbury are patrolled at regular intervals as set out in the Minimum Maintenance Standards (MMS) and are spot plowed and / or sanded as necessary to ensure they are passable for pedestrians.

## **Service Enhancement Considerations**

In order to meet the needs of the community and align with Council's direction as set out in the above noted motion, staff considered a number of different options for changing the way sidewalk winter maintenance may be delivered in the 2023/2024 winter season. Some of these considerations are set out below.

### *Expanding the Downtown Service Model*

A pilot project which would include expanding the downtown service model of daily winter sidewalk maintenance to one specific winter sidewalk maintenance section of the City was considered. However, because citizens tend to use the same sidewalks for their day-to-day commute / leisure activity, an objective review of whether such a pilot project has increased citizen satisfaction would be difficult to gauge. Given the CGS's large geography and existing microclimates, the effectiveness of sidewalk winter maintenance from section to section may be variable and therefore further obscure the effectiveness of such a pilot project.

### *Additional Coverage to Service Winter Sidewalk Routes*

In order to improve the timeliness of completion of winter sidewalk maintenance after a winter event, many factors are required to be considered such as cost, resource allocation, and limitations within the existing Collective Bargaining Agreement (CBA).

One of the biggest factors which has caused delays to winter sidewalk maintenance in past seasons is the lack of staff coverage on weekends and statutory holidays. The 2019-2023 CBA had no provision for scheduling of any winter sidewalk maintenance on weekends nor statutory holidays and therefore, staff were forced to rely on calling in on overtime. Not only is that an expensive option, it is also not reliable. An option which has never been explored within the confines of the previous CBA was to recruit a casual pool of municipal tractor operators. Casual employees have no set scheduled shift and therefore can be called in at any time they are deemed required. While this option may provide some additional coverage, the positions are hard to staff as there is no guarantee of full-time work. As well, casual employees still had the ability to say no to two (2) shifts in a row before being removed from the list.

In order to improve coverage, additional language was negotiated into the 2023-2027 CBA which allows for a limited number of staff to be scheduled on weekends if a general call-out is anticipated. Further, language was added to be more restrictive as it relates to casuals declining a call out during a general call-out which now only allows for one (1) decline before requiring acceptance of a shift. This would mean, for example, that if they declined on a Saturday, they would not be able to decline on Sunday. Knowing that this will not fully satisfy the desire for increased winter sidewalk maintenance in the community, a letter of commitment was entered into by the Employer and Union which will allow for further discussions around obtaining expanded staff coverage.

Disregarding the existing CBA constraints, the options for a large increase in coverage such as the 24/7 maintenance model which was discussed in the Operations Committee Report dated June 19, 2023, titled "Winter Sidewalk Maintenance Service Standards 2023" would guarantee timely completion. However, as detailed in that report, this option and options similar require a significant expansion of labour, equipment and material which is deemed cost prohibitive.

Significant enhancements to sidewalk winter maintenance would also require the procurement of additional equipment and material. The timeline for securing additional equipment such as sidewalk plows (MTs) is in excess of a year and deemed cost prohibitive for the purpose of implementing a pilot project.

### Continuous Service Model

Focusing on delivering a maintenance option that can be implemented during the upcoming winter season, with reasonable cost implications, staff identified an option that would result in only a marginal increase in labour that would also meet the objectives of resolution (OP2023-12).

The option which was deemed to be most desirable in order to meet the objectives outlined is the implementation of a pilot project during the upcoming winter season which would require the addition of three (3) additional seasonal employees to supplement the existing twenty-one (21) employees which undertake winter sidewalk maintenance annually. These additional seasonal employees will be deployed from each of the SW/S, SE and NE/NW maintenance sections. Similar to how the downtown sidewalks are maintained each business day regardless of weather conditions, the additional sidewalk plow operators will maintain sidewalks within their respective maintenance sections on a rotational basis during business days. For example, there are six (6) sidewalk plow routes located within the SE Section. Regardless of weather conditions, the additional sidewalk plow operator deployed from the SE Section will maintain Route 1 and 2 on day 1 (Monday), Route 2 and 3 on day 2 (Tuesday), Route 3 and 4 on day 3 (Wednesday), Route 4 and 5 on day 4 (Thursday) and Route 5 and 6 on day 5 (Friday). This service will be delivered on a continuous basis as described, over and above what the existing sidewalk maintenance staff provide. This will improve conditions between storms (i.e. addressing slippery conditions) as previously identified by respondents using the City's "Over to You" survey platform.

During major winter events, existing sidewalk maintenance crews will deliver services in accordance with the current maintenance standards outlined in Table 1. The additional sidewalk plow operators will be deployed on a subsequent shift to assist with plowing and sanding any sidewalk routes left unfinished during the initial deployment of maintenance resources. This will improve conditions previously identified by the Greater Sudbury Safer Sidewalks (GSSS) such as "snow blocking sidewalks" and "slippery and bumpy conditions" sooner after a major winter event has concluded. It will also ensure that routes are completed in a timely fashion.

In accordance with the new CBA, staff will be permitted to schedule the additional temporary employees to work on weekends when weather conditions warrant. Furthermore, a dedicated pool of temporary casual employees will be established to further supplement existing sidewalk crews which will provide more certainty that sidewalks can be maintained on weekends.

In the circumstances where all routes are capable of being maintained by the existing staffing compliment and the additional three (3) operators are deemed to not be required for winter sidewalk maintenance, these additional employees will be utilized to conduct other winter work as necessary.

## **Financial Analysis**

In addition to the additional cost associated with adding three (3) seasonal employees to the winter staffing compliment, there is also anticipated to be a marginal increase in cost in equipment and material. As three (3) municipal tractors are to be utilized on a more full-time basis, there is an anticipated increase in cost associated with scheduled and unscheduled maintenance as well as an increase in fuel costs. As there will be an increase in sanding, material costs are anticipated to increase as well as an increase in street sweeping costs associated with picking up the additional sand. For the pilot project, no additional equipment will need to be secured. However, should this program become a permanent initiative, capital investments in sidewalk plows may be required.

If approved, the total cost associated with this pilot project is estimated to be \$277,000 as outlined in Table 2 below. In order to implement the pilot project for the full 2023/2024 season, approval for funding was included within this report instead of through the regular budget process. Due to the need for recruitment and

with the winter control period beginning in November, the budget would be approved too late for implementation in the 2023/2024 winter season. Therefore, if approved, the cost of the pilot project in the amount of \$97,000 for 2023 and \$180,000 for 2024 will be funded from the Winter Control Reserve Fund.

**Table 2: Financial Analysis**

<b>Item</b>	<b>2023</b>	<b>2024</b>	<b>Total</b>
Labour	36,000	66,000	102,000
Winter Sand Application	3,000	6,000	9,000
Street Sweeping	4,000	7,000	11,000
Fleet Maintenance & Fuel	54,000	101,000	155,000
<b>Total Incremental Costs</b>	<b>\$ 97,000</b>	<b>\$ 180,000</b>	<b>\$ 277,000</b>

## Conclusion

Ultimately, weather conditions dictate how effectively a winter sidewalk maintenance model performs. During mild winter seasons, sidewalk maintenance may appear to be very effective, whereas the opposite may be true during severe winter seasons. The current winter sidewalk maintenance standard has evolved to optimize existing resources to handle a typical CGS winter season rather than plan for extremes in weather. This approach ensures that the City delivers winter sidewalk maintenance to the public in a cost-effective and responsible manner.

However, the proposed pilot project does provide augmentation of the City's approach to winter sidewalk maintenance by mitigating conditions experienced during extreme weather conditions while supplementing maintenance services during non-winter event periods. It also provides a low-cost, low complexity strategy for creating a more robust manner in which winter sidewalk maintenance is delivered in the City.

## Next Steps

If approved, the pilot project will be implemented in the 2023/2024 winter control season. Staff will review the performance of the pilot project throughout the season as well as analyze citizen feedback in order to provide a final recommendation to the Operations Committee in Q3 of 2024.

In addition, staff will continue making improvements to the City's Road Patrol App to identify and resolve road and sidewalk maintenance needs in accordance with City policies and the MMS. Road supervisors will continue to receive annual training on best practices for winter sidewalk maintenance with emphasis placed on concerns raised through this review of standards. The annual review of maintained sidewalks will continue with an objective of further optimizing maintenance based on the Active Transportation Winter Maintenance Policy.

## Resources Cited

Operations Committee Report dated June 19, 2023, titled "Winter Sidewalk Maintenance Service Standards 2023" <https://pub-greatersudbury.escribemeetings.com/filestream.ashx?DocumentId=49834>

Operations Committee Report dated August 8, 2022, titled "Winter Sidewalk Maintenance Service Standards 2022" <https://pub-greatersudbury.escribemeetings.com/filestream.ashx?DocumentId=47354>

Operations Committee Report dated July 11, 2022, titled “Mechanical Ice Breaker for Sidewalk Winter Maintenance 2021-2022 Pilot Project Update” <https://pub-greatersudbury.escribemeetings.com/filestream.ashx?DocumentId=47022>

Operations Committee Report dated September 20, 2021, titled “Winter Sidewalk Maintenance Service Standards” <https://pub-greatersudbury.escribemeetings.com/FileStream.ashx?DocumentId=41801>

Operations Committee Report dated August 12, 2019, titled “Active Transportation Winter Maintenance Policy” <https://pub-greatersudbury.escribemeetings.com/FileStream.ashx?DocumentId=30113>

Operations Committee Report dated August 21, 2017, titled “Enhanced Sidewalk Winter Maintenance Plan” <https://pub-greatersudbury.escribemeetings.com/FileStream.ashx?DocumentId=31592>

City of Greater Sudbury’s Winter Maintenance Practices and Policies:

<https://www.greatersudbury.ca/live/transportation-parking-and-roads/road-maintenance/>

O.Reg. 239/02 Provincial Minimum Maintenance Standards:

<https://www.canlii.org/en/on/laws/regu/o-reg-239-02/latest/o-reg-239-02.html#document>