

# Business Case for Service Level Change

**Request/Project Name:** Request for Enhanced Winter Maintenance on MacLennan Drive in Skead

**Department:** Growth & Infrastructure

**Division:** Linear Infrastructure Services

**Council Resolution (if applicable):**

**CC2018-306**

## I. Executive Summary

### Overview of Proposal

A motion was brought forth at the April 10th, 2018 council meeting that directed staff to prepare and analyze options which would enhance winter plowing/sanding/salting services on MacLennan Drive in Skead from the Fire Hall to its terminus. Council has since directed staff to prepare a business case to have MacLennan Drive reclassified in December, 2018 (CC2018-306). This business case represents the analysis of converting MacLennan Drive from a Class 5 roadway to a Class 3 roadway for winter maintenance. Staff is recommending against the conversion of MacLennan Drive due to environmental concerns, inconsistency in service delivery concerns which may create a precedence for all other Class 4-6 roadways.

## II. Background

### Current Service Level

For maintenance purposes, the City's road network is classified according to the Ontario Municipal Act, 2001 (Minimum Maintenance Standards for Municipal Highways, O. Reg. 239/02) (revised May 2nd, 2018). Road classification under this system is determined by a combination of Average Annual Daily Traffic (AADT) and posted speed limit. Hence, MacLennan Drive, north and east of the Fire Hall, to its terminus, is considered to be a class 5 road.

#### Class 1 to 3 Roads (Major Roads):

Plows are typically dispatched to salt and/or sand the Class 1 to 3 road network when the snow fall begins. Once a snow accumulation of 5 cm has been reached on the road surface, the City commences the plowing operation and continues this until the snow fall concludes and the roadways are cleared. The City has up to 8 hours after the snow fall ends to clear the Class 1 to 3 roadways of snow. However, in very cold weather conditions, snow packed conditions can be expected to remain on these roads. Snow accumulation is the measure of snow depth, on snow pack or bare surface, measured on a traveled lane with more than 50% of that lane covered in snow of similar depth. Commence salting or sanding operations as soon as icy conditions are detected on Class 1 to 3 roads. The City treats its Class 1 to 3 roads within 4 hours of ice detection.

#### Class 4 to 6 Roads (Local Roads):

Plows are dispatched to plow and sand the Class 4 to 6 road network once a snow accumulation of 8 cm has been reached. The City continues to plow and spot sand until the snow fall concludes and the roadways are cleared. The City has up to 24 hours after the snow fall ends to complete its clearing effort of Class 4 to 6 roadways. Class 4 to 6 roads are maintained to a snow packed state. Commence sanding operations as soon as icy conditions are detected on Class 4 to 6 roads. The City treats its Class 4 to 6 roads within 24 hours of ice detection.

### Drivers for Proposed Course of Action

The driver for this proposed course of action is the request to enhance plowing, sanding, and salting services for MacLennan Drive.

## III. Recommendation

### Categorize your specific request (mark an 'X' for all that apply):

<input checked="" type="checkbox"/>	Change to base operating budget	<input type="checkbox"/>	Change to base FTE allocation
<input type="checkbox"/>	Change to fees (unit price)	<input type="checkbox"/>	Change to revenues (volume change)
<input type="checkbox"/>	Investment in project (Operating)	<input type="checkbox"/>	Investment in project (Capital)

### Recommendation

In 2007, staff presented Council with options for providing winter control services consistently across all areas of the City. Therefore, staff is recommending that MacLennan drive remains unchanged as it relates to winter control road plowing (Class 4 to 6 standard) as it does not meet the warrants of a Class 1-3 road for winter maintenance. This approach would ensure MacLennan Drive is treated in conformance with City service levels and in compliance with the minimum maintenance standards and thereby reducing risk. There are numerous class 4-6 roads throughout the City that are similar to MacLennan Drive. All of these roads would have to be considered for a similar upgrade to level of service in order to maintain uniformity throughout the City.

**How does this align with Council's Strategic Plan?**

Growth and Economic Development		Responsive, Fiscally Prudent, Open Governance
Quality of Life and Place	x	Sustainable Infrastructure

The project supports Council's Strategic Plan in the area of Sustainable Infrastructure. Converting MacLennan Drive would enhance the quality of the City's roads, specifically during the winter months.

**IV. Impact Analysis****Qualitative Implications**

Converting from a Class 1-3 road would provide the following:

- Expedited plowing to 5cm of accumulation compared to 8cm for Class 4-6
- The City would clean snow within 8 hours compared to the 24 hours for Class 4-6
- Salting and/or sanding services would be within 4 hours of ice detection, rather than 24 hours

Converting the road would also have an impact on the use of chemical road deicers. According to the Salt Management Plan (SMP), the main objective of the SMP is to take all actions necessary to provide effective winter maintenance to ensure the safety of road users in keeping with applicable legislation and accepted standards while striving to minimize adverse impacts to the environment. Approval of this business case would result in a negative environmental impact with the increased requirement for chemical road deicers.

Conversion of the road would also set precedent for conversion of all Class 4-6 roads to Class 1-3. This would have much larger financial impacts as well as the environment due to the increased need for chemical road deicers.

**Quantifiable Implications**

Staff are not recommending the conversion of the road, however, conversion would cost approximately \$7,500 per annum to enhance plowing, sanding and salting services on MacLennan Drive.

**Operating Revenue - Incremental****Detail**

Description	Duration	Revenue Source	2019 \$	2020 \$	2021 \$	2022 \$	2023 \$
	On-Going		\$ -	\$ -	\$ -	\$ -	\$ -
	One-Time		\$ -	\$ -	\$ -	\$ -	\$ -
Total			\$ -	\$ -	\$ -	\$ -	\$ -

**Operating Expenditures - Incremental****Detail**

Description	Duration	Funding Source	2019 \$	2020 \$	2021 \$	2022 \$	2023 \$
	On-Going		\$ -	\$ -	\$ -	\$ -	\$ -
	One-Time		\$ -	\$ -	\$ -	\$ -	\$ -
Total			\$ -	\$ -	\$ -	\$ -	\$ -

**FTE Table**

Position	Bargaining Unit	Duration	Permanent / Part Time	2019	2020	2021	2022	2023
		Permanent		-	-	-	-	-
		PT Hours		-	-	-	-	-

Net Impact	2019 \$	2020 \$	2021 \$	2022 \$	2023 \$
On-Going	\$ -	\$ -	\$ -	\$ -	\$ -
One-Time	\$ -	\$ -	\$ -	\$ -	\$ -
Total	\$ -	\$ -	\$ -	\$ -	\$ -

**Implementation**

Assuming the business case were approved, MacLennan road would require additional plowing, sanding and salting services. The plow that currently services Skead Road would be used for this additional work. This proposed service level change will result in a slight increase in the total time required to complete a single pass on this snow plow route (approximately 15-30 minutes, depending on severity of the winter event).

**Advantages/Disadvantages**

Advantages	Disadvantages
<ul style="list-style-type: none"> <li>Converting the roadway would provide increased customer satisfaction</li> </ul>	<ul style="list-style-type: none"> <li>Converting the roadway would result in increased use of chemical deicers</li> <li>Converting the roadway would create precedent for all other Class 4-6 roadways</li> </ul>

**V. Alternatives****Alternatives Considered**

Solution Options	Advantages/Disadvantages	Financial Impact
Status Quo	Advantages - Remains in line with Minimum Maintenance Standards as well as Salt Management Plan - Does not create precedent for Class 4-6 roadways	None
Convert MacLennan Drive to Class 1-3 Roadway	Advantages - Increased customer satisfaction  Disadvantages - Increased use of chemical deicers - Creates precedent for Class 4-6 roadways	\$ 7,500
Convert All Class 4 and 5 Roadways to Class 3 for Winter Maintenance	Advantages - Consistent service levels throughout the City  Disadvantages - Affects 2,856 km of road, therefore would result in a large financial impact	TBD