



REPORT

To: Mayor and Council
From: Chief Administrative Officer
Subject: For Your Decision: Service Delivery Review - Winter Control
Date: September 25, 2023

Issue

- Council has directed staff to do a service delivery review on all service levels.
- "Winter Control" was scheduled in the Q3 2023 round of services to be reviewed.
- The Winter Control Delivery Review is intended to provide guidance to Council of the Municipality of Greenstone and the Public on a sustainable management approach for the desired levels of service over the next 5-10 years.

Facts

Please refer to the attached Winter Control Service Delivery Review Report.

Recommendation

That Council of the Municipality of Greenstone approve the following:

1. **THAT** all non-critical Road and Fleet related capital projects for 2024 be postponed allowing sufficient staff time and human resources to update all departmental policies, procedures and practices relating to winter control activities and level of service standards to align with Minimum Maintenance Standards in accordance with Ontario Regulation 366/18 amending O.REG. 239/02 (Minimum Maintenance Standards for Municipal Highways).
2. **THAT** an updated road classification program be completed by August 2024 based on data from a traffic count analysis. The traffic count analysis shall be completed by an outside contractor funded through the 2024 one-time special projects budget.

3. **THAT** plow routes be developed and formalized to optimize response times based on road classification by October 2024, which shall involve a communication plan for the public on the established routes, service expectations and road classifications.

4. **THAT** the Snow Windrow Removal Program be redeveloped to define program eligibility criteria for seniors and persons with disabilities based on financial need, similar to the Municipality's policy on water and sewer rate relief for eligible low-income persons and that a full communication plan be developed to inform residents. Program changes are to come into effect for the 2024/2025 Winter Season.

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Report No.	SDR-06

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Service Summary

Service	SERVICE AREA NAME HERE
Department	
Summary	<p>Winter Control refers to the operational activities involved in addressing snow and ice on municipal roads and sidewalks. Activities include snowplowing, salting and sanding, salt/sand mixing and stockpiling, snow removal, scraping, road patrolling and inspections, weather monitoring and snow windrow removal program delivery.</p>
Mandatory	<p>Road maintenance standards are regulated by the Province. This includes winter maintenance activities for roads and sidewalks.</p> <p>There is no legislated requirement for municipalities to provide a windrow clearing service. This is a discretionary service that few municipalities have implemented through customized programs.</p>
Legislation	<p>O. Reg. 366/18 made under the Municipal Act, 2001, amending O. Reg. 239/02 (Minimum Maintenance Standards for Municipal Highways)</p> <p>Canada Environmental Protection Act, 1999 - Code of Practice for the Environmental Management of Road Salts (Salt Management Plan)</p> <p>Highway Traffic Act - Ontario</p> <ul style="list-style-type: none"> ▪ Hours of Service (Drive Time DZ and up) - 555/06 ▪ Commercial Vehicle Operator's Registration (CVOR) - 424/97
By-laws	<ul style="list-style-type: none"> ▪ Winter Maintenance of Municipal Roads and Travel Ways Policy ▪ Rural Road Maintenance Policy ▪ Financial Assistance for Rural Road Maintenance Policy
Fees/Charges	None

2023 Budget Summary

The true cost of Winter Control as a financial figure is not accurately captured by the current accounting structure and cost tracking mechanisms available. This report presents cost components as can best be measured.

The Winter Control Budget as it is designed in the Operations Budget is \$197,000 and includes sand and salt material costs, contract service charges to assist with snow management in rural

areas, and snow removal within communities as needed. The figures below reflect the actual budgeted cost along with an allocation of \$176,000 in fleet charges and \$188,000 in staffing costs for a total cost of \$561,000.

Figure 1. Winter Control Budget

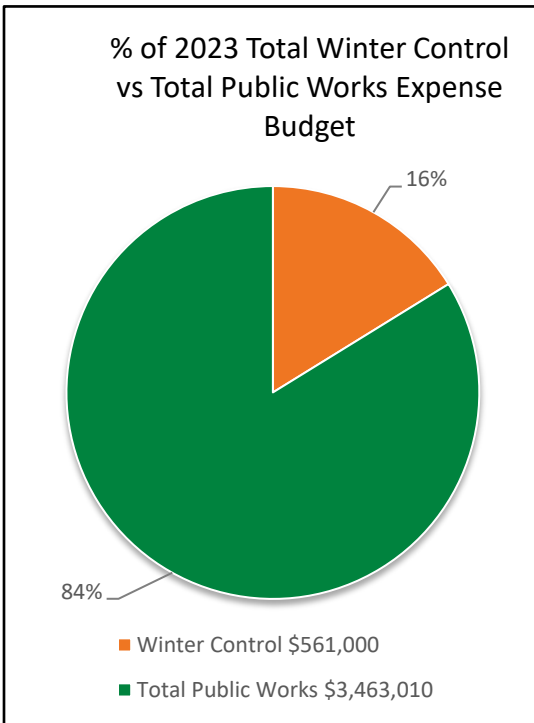
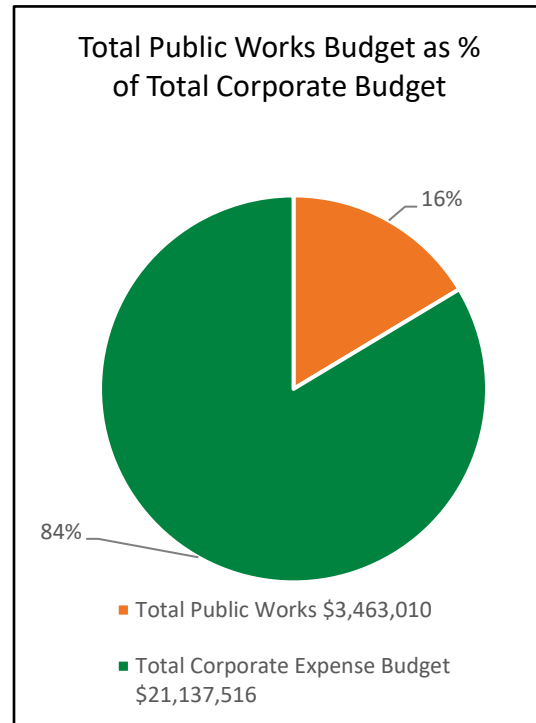


Figure 2. Total Public Works Budget



Winter Control Materials and Contractors

A cost summary of winter control materials (road salt and winter control sand) and contractors for 2021 and 2022 is provided in Table 1. Contract work refers to the multi-year contract for the provision of rural snowplowing services, rural windrow removal services, and contract support as required by Public Works which is usually attributed to night-time snow removal operations in Geraldton (loading and hauling snow from downtown areas and main intersections). Contract costs are primarily recorded in the budget lines for the Geraldton and Longlac Wards.

Table 1. Winter Control Expense Summary 2022

Ward	2021 Actual Winter Control Materials and Contract Work	2022 Actual Winter Control Materials and Contract Work	2023 Budget
Beardmore	\$2,070	\$3,118	\$10,000
Geraldton	\$88,497	\$132,288	\$125,000
Longlac	\$55,031	\$91,692	\$55,000
Nakina	\$2,638	\$18,116	\$7,000
TOTALS	\$148,236	\$245,214*	\$197,000
*cost increase resulting from contracted snow removal costs for downtown Geraldton in late Winter/early Spring			

Fleet and Equipment Costs

To describe costs associated with vehicles and equipment utilized in winter control activities, a percentage of use for winter control was assigned to each unit. Costs as calculated by use for all winter control fleet and equipment units are summarized in Table 2. The percent breakdown is an indication of winter use vs summer use. The fleet units identified by the expense summary are either 100% used for winter control, such as the sander unit and sidewalk plow, or may be a 50% estimated split between summer and winter use, as in the case of grader units.

Table 2. Public Works Winter Control Fleet and Equipment Expenses

2019 ACTUAL	2020 ACTUAL	2021 ACTUAL	2022 ACTUAL	2023 BUDGET
\$131,843.98	\$163,025.44	\$191,540.81	\$229,342.37	\$176,000.00

Staffing Costs

The calculations used for fleet and equipment costs are general but rationalized. The same principle cannot be applied to Public Works wages, due to the varied duties of staff from day to day. A breakdown of actual costs for in-house manpower is not provided however, these costs will be available in 2024 when administrative functions will track delivery of specific core

services.

An estimate of staff time required to respond to a single snowfall is outlined in the Staffing section of this report. The following estimated costs are projected using the 2023 wages, benefits and overhead costs for staff.

Table 3. Estimated Staffing Costs for a Single Snowfall (12-hour period)

Ward	Total Hours Estimate	Estimated Cost per Event	Estimated Annual Cost based on 40 events
Beardmore	16	\$700	\$28,000
Geraldton	40	\$1,750	\$70,000
Longlac	36	\$1,550	\$62,000
Nakina	16	\$700	\$28,000
Total Estimated Staffing Cost		\$4,700	\$188,000

Winter Control Revenue

A 50% MTO subsidy applies to snow removal on Main Street/Hwy 11 in Beardmore, as per Ministry Directive C-22 of the Provincial Roads Program that states:

“The Ministry is responsible for plowing, sanding and salting of all Assumed Highways and Secondary Roads through Municipalities. However, this does not include the picking up and hauling away of snow from the roadside... When such removal on an Assumed Highway is requested by a Municipality... the Ministry will assume 50% of the cost.”

Revenue received for providing services under this agreement from 2020 to 2022 is presented in Table 4.

Table 4. Winter Control Revenue from MTO Subsidy (billed by calendar year)

Billing Year	2020	2021	2022
Revenue Received	\$24,800.42	\$12,585.66	\$18,564.08

Staffing

The maintenance of municipal roads is one of three of the costliest core service provisions, being among water and sewer infrastructure maintenance and waste management services. Four Public Works yards with assigned work crews facilitate operational coverage across the Municipality’s geography. For the most part, Public Works staff reside in the communities of the respective Public Works yards. Staff complements by workplace are provided in Table 5.

A variety of employment strategies have been deployed over the years to manage the workload associated with timely winter maintenance activities and response. Seasonal, Casual and Contract positions have been created in attempts to support full-time staff and balance costs with service demands. The current staffing situation in Public Works is strained with a number of vacancies from both short-term & long-term disability claims and unfilled positions. Daily work plans are impacted by priority response needs and regular scheduled duties, as well as staff vacation entitlements etc. Limited staff resources are not easily shared between Public Works yards. In the case of Winter Control, there is limited opportunity to gain efficiencies through centralizing either staff or equipment resources. The skill levels of Operators are also a factor in delivering services, as not all Operators are proficient on all heavy equipment types.

Table 5. Public Works Staff Positions Assigned by Location

Ward	Supervisor/Foreman	Operators	Labourers	Total Staff
Beardmore	1	1	0	2
Geraldton	1	6	1	8
Longlac	1	6	1	8
Nakina	1	1	1	3
*Does not indicate current staff vacancies				

The challenge of course with responding to winter snow events is that simultaneous response needs to happen across Greenstone for roads with the same classifications. Since municipal amalgamation (2001), the Public Works staff complement has not been robust enough to manage winter control responsibilities, and a number of contract arrangements have been deployed over the years to address this shortfall. Tables 6 and 7 provide an average work scenario for a response to a single snowfall in a 12-hour period.

Table 6. Employee time per snow event for a normal overnight snow fall (12-hour period)

Ward	Total Hours Estimate	Explanation
Beardmore	16	<ul style="list-style-type: none"> ▪ 2 Operators @ 8 hrs
Geraldton	40	<ul style="list-style-type: none"> ▪ 1 Operator @ 8 hrs to plow roads and parking lots with plow truck ▪ 1 Operator @ 8 hrs to plow roads and parking lots with grader ▪ 1 Employee @ 8 hrs to plow/sand sidewalks ▪ 1 Operator @ 8 hrs on loader and 1 Operator @ 8 hrs on wheeled backhoe for snow removal for hydrants, parking lots and windrows.

Longlac	36	<ul style="list-style-type: none"> ▪ 5 Employees @ 4 hrs to hand shovel/plow downtown core = 20 hrs ▪ 1 Operator @ 8 hrs to plow roads ▪ 2 Operators from downtown core @ 4 hrs to plow parking lots, windrows hydrants etc. = 8 hrs
Nakina	16	<ul style="list-style-type: none"> ▪ 2 Operators @ 8 hrs

Table 7. Contractor time per snow event for a normal overnight snowfall (12-hour period)

Location	Total Hours Estimate	Explanation
Rural	25	Contracted snowplowing/sanding services for rural municipal roads along Hwy 11 corridor (2 plow trucks with Operator); rural windrow removal (1 pick-up truck with plow). Contractor headquarters in Longlac. Winter control sand supplied by Geraldton PW Yard.
MacDiarmid	2	Contracted Plow Truck & Operator as per agreement with Red Rock First Nation for Rocky Bay First Nation/municipal roads in MacDiarmid

Service Background

Winter Control, in other words, winter maintenance activities associated with the management of snow and ice, is a legislated provision for municipal roads, sidewalks and designated bike paths. For clarification, the Municipality does not have jurisdictional responsibility for Highway 11, Highway 584 (Nakina), Highway 643 (Aroland), or Highway 625 (Caramat), any Crown or forest access roads, nor any roads on federal reserve lands except where an inter-jurisdictional agreement may apply, as is the case in MacDiarmid. There are however exceptions for specific roads across the Municipality where winter maintenance services are provided. The Municipality also provides a tax subsidy program to a maximum of 15% of municipal property taxes paid to Road Associations that maintain their own access roads.

Details of Legislated Responsibilities

The Municipality of Greenstone is expected to meet the requirements of O. Reg. 366/18 made under the Municipal Act, 2001, amending O. Reg. 239/02 (Minimum Maintenance Standards for Municipal Highways). The Municipality must strive to ensure that all winter control operations meet the maintenance standards, specifically in the areas of Classification of Highways, Patrolling, Weather Monitoring, Snow Accumulation, and Ice Formation Prevention and Icy Roadways as per the information below. Where Council opts to increase the level of service,

the Municipality must then ensure consistent compliance with this maintenance standard to demonstrate due diligence. Litigation concerning municipal road and sidewalk maintenance is a priority concern in risk management due to the potential cost of a lawsuit; Council must be prepared to position the Municipality with service levels that it can meet under normal circumstances and therefore uphold in court.

The legislated maintenance standards provide municipalities with a statutory defense. It is important to understand the Regulation, which sets out the following terms:

“For the purposes of this Regulation, unless otherwise indicated in a provision of this Regulation, a municipality is deemed to be aware of a fact if, in the absence of actual knowledge of the fact, circumstances are such that the municipality ought reasonably to be aware of the fact.”

To illustrate this, a municipality cannot claim the defense that it didn't know a road or sidewalk was in sub-standard condition if the probability of such conditions are reasonable. For example, a broken water main in the winter can reasonably be expected to cause ice formation and slippery conditions at the site and thus the Municipality must take action to respond to these conditions. The Municipality can't claim that it didn't know that slippery conditions existed at the site because it had not yet performed a visual inspection and documented the condition. As soon as the water break is reported to staff, the Municipality is deemed to be aware of the condition and staff need to then take steps to respond.

Classification of Highways

Table 8 below summarizes the classification of highways as per amending Ontario Regulation 366/18 based on traffic counts and posted speed limits.

Table 8. Ontario Standard (Municipal Highway Classification)

Average Annual Daily Traffic (number of motor vehicles)	Posted or Statutory Speed Limit (kilometers per hour)						
	91-100	81-90	71-80	61-70	51-60	41-50	1-40
53,000 or more	1	1	1	1	1	1	1
23,000 - 52,999	1	1	1	2	2	2	2
15,000 - 22,999	1	1	2	2	2	3	3
12,000 - 14,999	1	1	2	2	2	3	3
10,000 - 11,999	1	1	2	2	3	3	3
8,000 - 9,999	1	1	2	3	3	3	3
6,000 - 7,999	1	2	2	3	3	4	4
5,000 - 5,999	1	2	2	3	3	4	4
4,000 - 4,999	1	2	3	3	3	4	4
3,000 - 3,999	1	2	3	3	3	4	4
2,000 - 2,999	1	2	3	3	4	5	5
1,000 - 1,999	1	3	3	3	4	5	5
500 - 999	1	3	4	4	4	5	5
200 - 499	1	3	4	4	5	5	6
50 - 199	1	3	4	5	5	6	6
0 - 49	1	3	6	6	6	6	6

Traffic count studies are prescribed by the Regulation as follows:

“...the average annual daily traffic on a highway or part of a highway under municipal jurisdiction shall be determined,

- (a) by counting and averaging the daily two-way traffic on the highway or part of the highway for the previous calendar year; or
 - (b) by estimating the average daily two-way traffic on the highway or part of the highway in accordance with accepted traffic engineering methods.
- O. Reg. 239/02, s. 1 (3).

The Municipality has not conducted a traffic count study for municipal roads within the last five years. The need for reliable and updated data regarding traffic counts and traffic patterns will allow new road networking mapping to be developed. Based on the chart above, using the existing (outdated) traffic count information, the Municipality has the following road network inventory (Table 8).

Table 9. Municipality of Greenstone Road Inventory Classification

Class of Highway	Length (km)	% Of Total Network
1	-	-
2	-	-
3	-	-
4	16	12%
5	115	83%
6	7	5%
TOTAL	138	100%

It should be noted that the Regulation recognizes Class 6 roads but provides no maintenance standard for this classification. It is each municipality's responsibility to set the standard. In Greenstone's case, all Class 6 roads (identified as laneways) are maintained using the Class 5 guidelines. Council authorization is required to update the policy to establish a different (lesser) level.

Additionally, there are almost 35km of roads not included in the inventory that the Municipality provides some maintenance services for but does not own. Municipal policy for Rural Road Maintenance currently permits the service level as an establishment of past practice.

Geraldton

- 16 km - Pipeline Road
- 0.59 km - Summerset Road
- 0.1 km - Cyr Way
- 0.24 km - Rosedale Road

Rural

- 4.8 km - Hwy 801 (occasional circumstances in coordination with forest industry)
- 2.3 km - Keung's Road

Nakina

- 0.5 km - West end of Cordingley Lake Road

Longlac

- 2.5 km - East portion of Crib Road (from Blueberry Road to Longlac Landfill)
- 7.8 km - Railway Avenue (from municipal boundary to Old Forestry Road)

Municipal parking lots do not fall under the maintenance standard for municipal roads, though they do belong in the discussion on winter control, particularly concerning the order of service.

Patrolling

The Regulation prescribes the frequency of inspecting roads.

Table 10. Patrolling Requirement for Highway Classifications

Class of Highway	Patrolling Frequency
1	3 times every 7 days
2	2 times every 7 days
3	Once every 7 days
4	Once every 14 days
5	Once every 30 days

Weather Monitoring

The Regulation prescribes the monitoring (and documentation) of weather conditions.

Table 11. Minimum Standards for Weather Monitoring

Season	Minimum Standard
October 1 to April 30	To monitor the weather, both current and forecast to occur in the next twenty-four (24) hours, once every shift or three times per calendar day.
May 1 to September 30	To monitor the weather, both current and forecast to occur in the next twenty-four (24) hours, once per calendar day.

Ice Formation Prevention and Icy Roadways

The Regulation prescribes a timeline for ice prevention. The objective is to apply treatment by class of road, within the times as per the following table.

Table 12. Required Response Timeline for Ice Prevention on Municipal Highways

Class of Highway	Response Time
1	3 hours
2	4 hours
3	8 hours
4	12 hours
5	16 hours

Snow Accumulation

The Regulation prescribes a timeline for snow removal. The objective is to provide winter control response as per the snow accumulation depth prescribed by road classification, with response commencing as per the prescribed timeframes. (During the response, removal of accumulated snow may exceed the depths noted.)

Table 13. Required Response Timeline for Snow Removal on Municipal Highways

Class of Highway	Depth (cm)	Response Time
1	2.5	4 hours
2	5	6 hours
3	8	12 hours
4	8	16 hours
5	10	24 hours

Overall Maintenance Standards vs. Existing Service Levels

As discussed above, the Municipality does not have updated traffic count data for its' roads. The information is in excess of 5 years old, if available at all and, in many cases, the traffic data for one section of road was generalized to all sections of that road even though traffic flow does not typically work in this manner. Given the lack of data, the Municipality's network is generally serviced as a Class 5 Highway. This has resulted in staff maintaining all roads using the Class 5 standards, unless traffic counts dictated a Class 3/4 Highway (Michael Power Boulevard in Geraldton).

With the implementation of a traffic count study as prescribed by the Regulation, the Municipality would have data that would methodically assign the appropriate road classification. It is very possible that the new dataset may indicate that the Municipality either:

- 1) does not meet the standards for higher traffic roads; or
- 2) has been providing an overall level of service for winter control that exceeds the maintenance standards, especially for Class 6 Highways.

The current deployment by Ward during qualifying weather events are outlined as follows:

Geraldton

Except for Michael Power Boulevard/Main Street in Geraldton (Class 3/4) all municipal roads are currently treated as Class 5. The Priority 1 service area is the main road through town (Michael Power Blvd from Highway 11 north to town limit just north of airport). A dedicated plow truck unit maintains this single route regularly to keep within the maintenance standard. When time allows, this unit will also cover Priority 2 areas which include the road to the hospital (Hogarth Avenue) and to the high school (Beamish Avenue) and other school bus routes.

All other roads and all sidewalks in Geraldton are considered Priority 3 and are plowed with a variety of equipment units (grader, loader and other plow truck as directed by the Working Supervisor). Generally, the plowing is done from North to South for the west half of the community and subsequently South to North for the east half of the community.

Contractors are dispatched by the Working Supervisor to the rural areas, usually directed the night before to be out in the early morning depending on weather. Parking lots and laneways are then completed as the final priority.

Longlac

All roads in Longlac are currently treated as Class 5. Staff usually deploy at 5 am on a heavy snow day. Directed by the Working Supervisor, five (5) employees descend on the downtown area, two with hand shovels, one operating the toolcat sidewalk machine, one operating a loader and one operating the wheeled backhoe. It takes approximately four (4) hours to hand shovel and plow the snow off the sidewalk area and remove the snow from around the decorative light poles down the center of Forestry Road (the main downtown road). One other operator is also then dispatched on a plow truck to systematically plow the residential streets.

Nakina

All roads in Nakina are currently treated as Class 5. One Working Foreman and one Operator self dispatch to clean the roads with grader and loader with plow blade.

Beardmore

All roads in Beardmore are currently treated as Class 5. One Working Foreman and one Operator self dispatch to clean the roads with a grader and a loader with plow blade.

The Highway through Beardmore is the MTO Contractors' responsibility (EMCON). When Hwy 11 through Main Street in Beardmore is plowed by EMCON, snow build up on municipal sidewalks occurs. For this reason, the MTO re-imburses the Municipality 50% of the cost of maintaining sidewalks on Main Street. (Refer to Table 3. Winter Control Revenue from MTO Subsidy.)

Jellicoe, Caramat, MacDiarmid & Rural Areas

The Contractor assigned to municipal roads in the Rural East and Rural West Wards is dispatched from its headquarters in Longlac by the Longlac and/or the Geraldton Public Works Supervisor. Notification is usually the night before to begin plowing in the early morning, depending on weather. Rural school bus stops are priority roads to service.

It should be recognized that Kings Highway closures may impact municipal service ability. When weather conditions create dangerous driving conditions, service delays can be expected.

In MacDiarmid, Rocky Bay First Nation conducts all winter road maintenance for the community and bills the Municipality for maintenance of municipal roads. Winter control materials are obtained from the Municipality and billed accordingly.

Key performance indicators

Conducting winter operations to provide safe roads and sidewalks during and after snow and ice storms requires a complex set of activities and resources. Staff providing winter maintenance services must monitor operational effectiveness and efficiencies to make sure standards, as well as community expectations, are met and, identify and evaluate opportunities for improvement. The Public Services Department is often pressured to improve service levels without increases in budget resources. In addition, there also exists a growing pressure to reduce the negative environmental impacts for the use of salt and other chemicals used in road maintenance activities.

The following performance indicators would provide useful information for service level decision-making once updated data is available.

1. Cost Per Lane Kilometer - road winter maintenance, sidewalk winter maintenance. This measure represents the total cost for winter maintenance of a single km. It includes all functions included in clearing and maintaining the roadway or of sidewalk snow clearing. Costs will vary from year to year due to winter weather conditions.

2. Equipment for Winter Operations - % of fleet serviced and prepared for start of winter control season, % of fleet available for deployment when required. This measure represents the readiness of the winter control fleet and the downtime experienced that results in reduced service levels.
3. Materials used - Tonnes of salt used, tonnes of sand used. Amount will vary from year to year due to winter weather conditions.
4. Timeliness of reaction to winter events - % of responses (by type) that met the service standard. This measure represents the ability for winter control forces to meet the maintenance standards as set out in the legislation and Council policies.
5. Snow Windrow Removal Program - annual cost analysis. Program evaluation is necessary to determine program affordability and whether demand for service and availability of alternatives warrants the program.

Asset use

Fleet and Equipment

The following equipment assets are utilized in each Ward. Some units have been recently replaced in recognition that the overall condition of fleet and equipment is poor and many units are end of life. The upcoming Service Delivery Review for Fleet - Public Works will provide further detail on fleet replacement needs.

Table 14 presents a tentative replacement schedule and the total cost for units scheduled for replacement within the next 1-5 years.

Table 14. Condition of Fleet and Equipment Assets used in Winter Control

WARD	UNIT #	DESCRIPTION	REPLACEMENT YEAR	REPLACEMENT VALUE
Beardmore				
	19	1 Ton Pick-Up with Plow (2023)	2033	TBD
	115	Sander Trailer	2027	\$15,000
	110	Grader (1991)	2026	\$375,000
	111	Loader	2024	\$347,000
Nakina				
	402	Sand Truck Out of Service - Failed Safety	2024	\$153,000
	G-1	Grader (2018)	2034	TBD
	333	Loader	2033	TBD
	411	Rubber Tire Backhoe	2024	\$210,000
Longlac				
	304	Combination plow/sander	2026	\$370,000

	318	1 Ton Pick-Up with Plow	2024	\$93,000
	TBD	Toolcat sidewalk machine (2023)	2038	TBD
	L2	Loader	2035	TBD
	312	Tandem Dump Truck	2024	\$195,000
	8	Pick-Up Truck	2026	\$55,000
	9	Pick-Up Truck	2027	\$55,000
Geraldton				
	235	Combination plow/sander (2020)	2035	TBD
	241	Combination plow/sander	2029	TBD
	123	Trackless sidewalk blower/sander machine	2024	\$225,000
	223	Trackless sidewalk plow/sander machine	2025	\$150,000
	4	Pick-Up Truck with Plow	2025	\$93,000
	415	Grader (2012)	2026	\$700,000
	L-1	Loader (2018)	2026	\$350,000
	RT-1	Rubber Tire Backhoe Loader (2020)	2028	\$230,000
	215	Triaxle Dump Truck	2027	\$200,000
	3	Pick-Up Truck	2029	TBD
Total Short-Term Estimated Equipment Replacement Cost				\$3,816,000

The total estimated investment cost of \$3,816,000 over 5 years translates to an annual investment of \$763,200 for fleet units utilized in Winter Control. The 2023 Budget included a tax levy of \$721,000 for capital fleet replacement specific to winter control. An average annual increase of \$42,000 to the existing level of funding needs to be included to maintain the overall fleet.

This cost does not reflect price increases due to inflationary pressures. Additional Capital investment is also required annually for other fleet replacement needs (not winter-control related).

Analysis

Options

- 1. Status quo operations.**
Not compliant with legislation, poses a high liability risk.
- 2. Conduct an in-depth review of Winter Control policies and procedures and prepare updated policies and procedures.**
Recommended to align with regulations and service standards on which insurance risk and litigation is based.

3. **Conduct a traffic count study.**

This research provides factual statistics on road usage necessary to determine road classification on which maintenance standards are based.

4. **Update the Snow Windrow Removal Policy.**

Being a discretionary service, the program should be reviewed to evaluate its continuation either as a fee-for-use service or redeveloped introducing eligibility criteria based on financial need.

Improving In-House Process and Performance

Through the review of services, it is noted that current practices for deployment, routing, road classification, documentation, etc. are not consistent throughout all of the operations yards. This inconsistency could cause future issues when defending liability claims relating to meeting or exceeding prescribed Maintenance Standards.

The current Winter Maintenance of Municipal Roads and Travel Ways policy (attached) was last reviewed in 2017 and is out of date. The policy refers heavily to the 2003 MTO Maintenance Manual which is not relevant to municipal operations or meeting the Minimum Maintenance Standards (MMS) legislation. The correct legislation to apply is the Minimum Maintenance Standards for Municipal Highways, as amended.

As a starting point, a new policy needs to be developed from scratch reflecting the current municipal operations and in compliance with the MMS.

Furthermore, internal procedures, practices and daily log templates need to be developed to ensure a consistent level of service is provided across the entire municipality. More importantly, this framework is expected from the insurance company in an effort to provide a standard approach to winter maintenance when defending against litigation for non-compliance with MMS and municipally established service levels.

Lastly, an updated road use policy including illegally dumping snow on roadways, overnight parking during the winter season, etc. need to be developed for Council approval.

Given the time and effort that is required to complete an effective overhaul of the operational practices for winter control, staff are recommending postponing all non-critical Roads and Fleet related capital projects for 2024 to allow sufficient time and human resources to complete this work.

Adjusting Service Levels

As was highlighted previously the Municipality must meet MMS legislation. In the context of the roads network, all but 16km being Michael Power Boulevard/Main Street/Airport Road is

currently treated as Class 5. For MPB, the road needs to be serviced within 12 hours but for most roads, the Municipality must service the road within 24 hours **after** 8cm of snow accumulation. In all cases and in all areas of the Municipality, the service level is far exceeded unless there is a very significant weather event. Units are deployed in many cases before 8cm accumulates and roads are generally serviced more than once a day during any type of substantial snow fall. The Municipality has the ability to considerably reduce the service level and still be in compliance with the MMS.

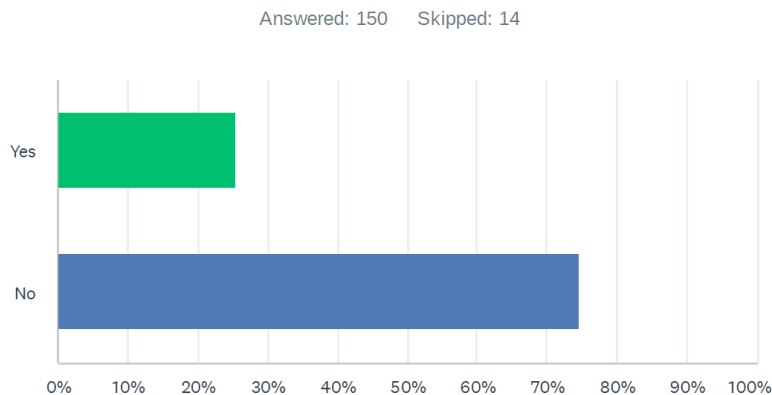
Public Survey Results

Of the questions posed, survey results indicated accessibility issues in downtown areas for some residents, support for increased by-law enforcement, and willingness to contribute tax dollars to the snow windrow removal program.

Survey data is provided for reference.

Figure 3. 2023 Winter Control SDR - Public Survey Results

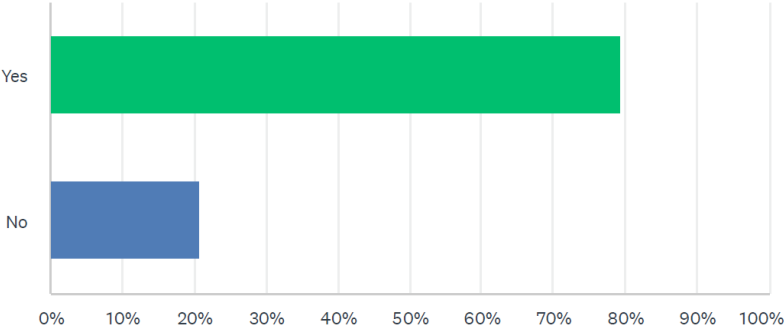
Q12 Boulevards and the municipal road allowance (between the road and private property boundary) are in part intended to provide space for the deposit of snow resulting from municipal road and sidewalk maintenance activities. In downtown areas, the Municipality periodically removes snow banks from the boulevards. Does the frequency of this service present any problems for your ability to access businesses?



ANSWER CHOICES	RESPONSES	
Yes	25.33%	38
No	74.67%	112
TOTAL		150

Q13 The deposit of snow on municipal roadways, sidewalks, road allowances, and areas around fire hydrants presents a safety hazard. Overnight parking on roads interferes with snow plowing activities. Would you agree the Municipality needs to improve its enforcement efforts through fines?

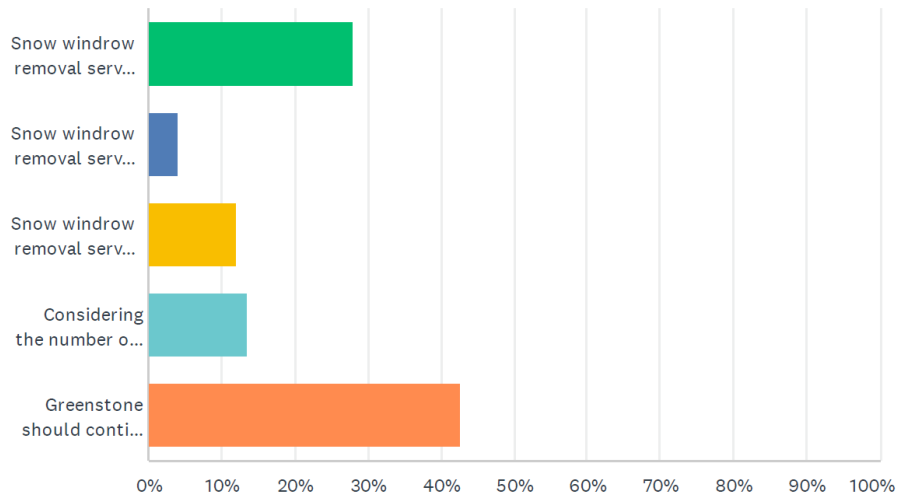
Answered: 150 Skipped: 14



ANSWER CHOICES	RESPONSES	
Yes	79.33%	119
No	20.67%	31
TOTAL		150

Q14 The Snow Windrow Removal Program offered to Seniors and Disabled residents is a fully tax funded service. Which of the following service approaches would you agree should be adopted by Greenstone:

Answered: 150 Skipped: 14



ANSWER CHOICES	RESPONSES	
Snow windrow removal service is offered to Low-Income Seniors and Low-Income Persons with Disabilities.	28.00%	42
Snow windrow removal service is not offered, however a Property Tax Rebate is available to Low-Income Seniors and Low-Income Persons with Disabilities.	4.00%	6
Snow windrow removal service is not offered, however Seniors and Persons with Disabilities that hire a Contractor to plow their driveway can apply for a grant.	12.00%	18
Considering the number of roads and geographic area the Municipality must keep to standard within time limits, snow windrow removal service should not be funded by the municipal tax base.	13.33%	20
Greenstone should continue to manage the current tax supported program without change.	42.67%	64
TOTAL		150

Second to maintaining the status quo for the windrow program, survey results favoured that the Municipality provide physical services and restrict eligibility to low-income seniors and low-income persons with disabilities. This eligibility criteria is similar to the Township of Terrace Bay’s Snow Removal Assistance Program.

Cost Avoidance: Operating Costs and Capital Investments

1. Preparation of a Salt Management Plan

Overall salt management techniques should be developed to reduce the amount of salt used during winter control operations. For the most part, staff realize when salt should

be used on roads based on traffic levels and best practices. Over the past decade, the Municipality has been increasingly relying on salt applications, especially on Michael Power Boulevard.

2. Formalize Plow Routes

After a traffic analysis is accomplished and any required updates to road classification made, staff will need to review plow routes, including average length, drive time etc. During the winter control season, various staffing schedules should be developed to ensure operational optimizations that can occur by altering plow routes and reducing overall routes to ensure a more consistent level of service from early morning to late evening.

Enhancing and Expanding Service Levels

1. Declaration of Significant Weather Events

The declaration of significant weather events (SWE) is addressed by the MMS Regulation and is intended to provide for public communication of road hazards due to weather conditions that may cause road maintenance delays.

The Municipality needs to develop a policy in compliance with the MMS and further should communicate expectations on “significant weather events” to all residents before each winter control season.

If a policy is not developed, the municipality cannot declare a SWE and must continue to maintain roads based on the MMS classification. If the roads are not maintained to the minimum standard, the municipality may be found liable should accidents occur.

2. Greenstone Gold Mine Service Needs

Additional services are required to accommodate development needs associated with Greenstone Gold Mines.

It is necessary to increase the level of service for Sunset Drive in Geraldton providing access to the Greenstone OPP Detachment to align with the service level for Michael Power Boulevard, until such time that the OPP detachment is relocated. This will include reprioritizing the road to “Priority 2” ensuring it is serviced shortly after MPB and within the same route as the school and hospital.

It will also be necessary to extend service on Old Arena Road for an additional 1.2 km to provide access to the new site for the hydro sub-station under construction. This section of road will be considered a Priority 3 and serviced with most other roads in the Geraldton ward.

The additional servicing needs will not impact overall operations or costs by any

significant amount.

New Revenues

None proposed.

Alternative Service Delivery Including Shared Services or Contracting Out

1. Renewal of Rural Winter Maintenance Contract

The current term of the winter maintenance contract will expire in April 2026 and includes two additional one-year renewal terms.

2. Contract out winter maintenance of Michael Power Boulevard, Main Street and "Airport Road" (northern extent of municipal road)

In Greenstone, the Ministry of Transportation (via contractor) maintains the Hwy 11 corridor as well as Hwy 584 north of MacOdrum Drive (Greenstone Regional Airport access road) northwards to Nakina and Hwy 625 to Caramat.

Hwy 584 from MacOdrum Drive southwards through the community of Geraldton up to the Hwy 11 intersection was transferred to the Municipality; the geographical sections (north to south) are referred to as Main Street and/or Michael Power Boulevard (MPB).

Significant operational resources are dedicated to winter maintenance of MPB. The primary task of the night work shift is winter maintenance; two plow trucks equipped with salt/sanding apparatus, an adequate supply of salt and sand, and road patrol coverage (outside of regular work shifts) as predicated by weather conditions.

By engaging the MTO contractor, the Municipality will meet its due diligence requirements for the applicable sections of road:

O. Reg. 366/18 Minimum Maintenance Standards for Municipal Highways (under Municipal Act, 2001) clarifies "*the scope of the statutory defense available to a municipality under clause 44 (3) (c) of the Act by establishing maintenance standards which are non-prescriptive as to the methods or materials to be used in complying with the standards but instead describe a desired outcome.*"

It is difficult to demonstrate a definitive cost benefit analysis without first engaging the contractor to determine pricing. Staff would then develop an internal costing formula detailing operator, equipment, material, supplies, fuel, insurance and other overhead costs. Despite these circumstances, it is recognized that the maintenance of the Class 4 road is expensive. Up front savings would include the elimination of Class 4 road patrols, a drastic reduction in vehicle maintenance and fuel costs and a reduction in salt and sand supply expenditures (materials are included in the MTO service price).

Adjusting municipal operations to incorporate the MTO service agreement would not result in a reduction of staff. Rather, it is important to understand that continuous improvement in other areas of responsibility, risk management and service demand is an ongoing effort.

Service Structure and Staffing Realignment

Discuss any changes to current staffing that may provide a better standard of service, more effective service, enhanced service, reduced overtime, or reduced overhead costs if a realignment was to occur.

Since municipal amalgamation, rural areas of Greenstone have continuously been serviced by one or more contractors due to the limited capacity of staff to meet required timeframes across the entire municipality. The Municipality currently has a 3-5 year contract with a local contractor to service its rural roads. The contractor utilizes two plow trucks to meet the requirements of the contract. The current contractor was the sole bidder for the most recent tender for services.

The risk exists that the current contract could be terminated by the contractor, or that no contractors will bid on the upcoming tender. If this were to happen, the Municipality would be in a very difficult situation to meet its mandatory requirements for winter maintenance of roads.

Discontinuing the Service (if applicable)

Winter maintenance of roads and sidewalks is legislated and must be provided to the minimum service level standard as prescribed. The regulation also prescribes the use of winter control materials.

Where a road is not owned by the Municipality but maintained by the Municipality to some degree, the service standard should be set by municipal policy or service agreements.

1. Introduce New Eligibility Criteria for the Snow Windrow Removal Program

The Municipality of Greenstone provides a service to seniors and other residents who are physically unable to perform the tasks of keeping their roadways and driveways clear of snow and ice following a major winter weather event. The service is available to any municipal resident by filling out an application form and subject to approval by the municipality. This service is known locally as the "Windrow" program.

The program has been reviewed multiple times since amalgamation due to the cost of the service. Documentation from 2002, 2013 and 2020 (Seniors' review) show that in all three occasions the recommendation was to either cease the program or implement a fee to (at least partially) cover the costs.

One of the risks of the Windrow program is the fact that the costs are variable and estimated

each year based on the number of significant snow events. The potential for escalating costs without a way to generate revenues makes this a risky service for the municipality to offer.

The windrow removal program is a discretionary service and can be reviewed by Council at will. Introducing eligibility criteria based on financial need like the recent Water and Sewer relief program is proposed which will result in the discontinuation of service to a significant fraction of current registrants. As a reminder, the snow windrow removal program does not provide service for private driveways and walkways. No data is confirmed on the availability of Contractors in each Ward that cater to snow removal.

Program registration statistics for 2022 are provided below in Table 15.

Table 15. Snow Windrow Removal Program Registrants in 2022

Ward	Number of Registrants in 2022
Beardmore	17
Geraldton	124
Longlac	66
Nakina	36
Rural	25
Total Registrants	268

Administration staff, Public Services Dept management staff, and Public Works Supervisors/Foremen all field calls associated with windrow service, mostly during snowfall events and mostly concerning when service will be provided. Despite policy terms and conditions being listed on the annual registration form, there is a continuous expectation for more expedient service. During back-to-back snowfall events (multi-day snowfall) the targeted service timeline of 48 hours after snowfall for the program is not met, which results in numerous complaints to the department, year after year. The Department does not hire a Contractor at additional expense to support this program unless there are exceptional circumstances.

Financial Impact

Contracting Out

The current organizational structure does not have the capacity to address all winter control needs of the Municipality and is therefore reliant on the private sector to provide core municipal services. There is little room to negotiate pricing given the lack of a competitive market.

Alteration of the Windrow Program

Changing the current structure of the program to implement a user fee (as per the Seniors' Service Review) or revamping the program to include an income threshold will save significant money. The current program requires approximately 0.57% of the tax levy as detailed below.

The estimated costs for human resources relating to the operational delivery of the Snow Windrow Removal Program, for a single response period are calculated using a 3-minute timeframe to plow one windrow and travel to the next service location. (The calculation below does not include rural registrants, as these are not serviced by Public Works staff.)

$$243 \text{ registrants} \times 3 \text{ minutes} = 729 \text{ min or } 12.15 \text{ hrs per snow event}$$

To estimate costs, the 2023 MTO equipment rate for a Wheeled Loader with Operator of similar size to Public Works equipment is \$142.10/hour.

$$12.15 \text{ hrs} \times \$142.10/\text{hr Service Rate} = \$1,726.52 \text{ per snow event}$$

$$\$1,726.52 \text{ response cost} / 243 \text{ registrants} = \$7.11 \text{ per property}$$

Annual program costs are calculated assuming 40 snow events.

$$\$1,726.52 \text{ per event} \times 40 \text{ snow events} = \$69,060.80 \text{ annual cost}$$

For 2022, the annual cost per property as calculated is:

$$\$69,060.80 \text{ program cost} / 243 \text{ registrants} = \$284.20 \text{ per property}$$

The Snow Windrow Removal Program is also offered to rural residents. In 2022, service was provided to 25 residents. Due to a lack of internal capacity, a contracted service provider is relied upon. The most recent contract rate for this service was \$125/hr.) It takes approximately 6 hours to service rural registrants in response to a snow event due to the distances involved between properties and the contractor headquarters.

$$\$125/\text{hr service cost} \times 6 \text{ hrs} = \$750.00 \text{ cost per trip}$$

$$\$750 \text{ cost per trip} / 25 \text{ registrants} = \$30 \text{ per property}$$

Annual program costs are calculated assuming 40 snow events.

$$\$750 \text{ per event} \times 40 \text{ snow events} = \$30,000 \text{ annual cost}$$

For 2022, the annual cost per property as calculated is:

$$\$30,000 \text{ program cost} / 25 \text{ registrants} = \$1,200 \text{ per property}$$

Table 16 summarizes overall program costs. As identified in the Seniors Services Delivery Review Report (2020), the Snow Windrow Removal Program is the costliest program offered for seniors.

Table 16. Annual Cost Summary for Snow Windrow Removal Program

Service Provider	Cost in 2022
In-house program services	\$69,068.80
Contracted program services	\$30,000.00
Total Estimated Annual Cost	\$99,068.80

Program administration also needs to be recognized as this is not included in the cost analysis provided. The requirement for an annual registration process was implemented in recent years to resolve the issue of a growing number of property addresses with residents that did not qualify for services. Advertising of the windrow program is typically conducted in the Fall, however the program does not have a registration period or registration deadline. With this being the case, administration staff are tasked with regular updates to the windrow list whenever new submissions are received which are then forwarded to the appropriate Public Works Yard or Contractor.

**ONTARIO REGULATION 366/18**

made under the

MUNICIPAL ACT, 2001

Made: May 2, 2018

Filed: May 3, 2018

Published on e-Laws: May 3, 2018

Printed in The Ontario Gazette: May 19, 2018

AMENDING O. REG. 239/02**(MINIMUM MAINTENANCE STANDARDS FOR MUNICIPAL HIGHWAYS)**

1. (1) The definition of “surface” in subsection 1 (1) of Ontario Regulation 239/02 is amended by striking out “roadway or shoulder” and substituting “sidewalk, roadway or shoulder”.

(2) Subsection 1 (1) of the Regulation is amended by adding the following definitions:

“bicycle facility” means the on-road and in-boulevard cycling facilities listed in Book 18 of the Ontario Traffic Manual;

“bicycle lane” means,

(a) a portion of a roadway that has been designated by pavement markings or signage for the preferential or exclusive use of cyclists, or

(b) a portion of a roadway that has been designated for the exclusive use of cyclists by signage and a physical or marked buffer;

“encroachment” means anything that is placed, installed, constructed or planted within the highway that was not placed, installed, constructed or planted by the municipality;

“pothole” means a hole in the surface of a roadway caused by any means, including wear or subsidence of the road surface or subsurface;

“sidewalk” means the part of the highway specifically set aside or commonly understood to be for pedestrian use, typically consisting of a paved surface but does not include crosswalks, medians, boulevards, shoulders or any part of the sidewalk where cleared snow has been deposited;

“significant weather event” means an approaching or occurring weather hazard with the potential to pose a significant danger to users of the highways within a municipality;_

“utility” includes any air, gas, water, electricity, cable, fiber-optic, telecommunication or traffic control system or subsystem, fire hydrants, sanitary sewers, storm sewers, property bars and survey monuments;

“utility appurtenance” includes maintenance holes and hole covers, water shut-off covers and boxes, valves, fittings, vaults, braces, pipes, pedestals, and any other structures or items that form part of or are an accessory part of any utility;

“weather hazard” means the weather hazards determined by Environment Canada as meeting the criteria for the issuance of an alert under its Public Weather Alerting Program.

(3) Subsections 1 (2) and (3) of the Regulation are amended by striking out “annual” wherever it appears.

(4) Subsection 1 (4) of the Regulation is revoked and the following substituted:

(4) For the purposes of this Regulation, unless otherwise indicated in a provision of this Regulation, a municipality is deemed to be aware of a fact if, in the absence of actual knowledge of the fact, circumstances are such that the municipality ought reasonably to be aware of the fact.

(5) The Table to section 1 of the Regulation is revoked and the following substituted:

TABLE
CLASSIFICATION OF HIGHWAYS

Column 1 Average Daily Traffic (number of motor vehicles)	Column 2 91 - 100 km/h speed limit	Column 3 81 - 90 km/h speed limit	Column 4 71 - 80 km/h speed limit	Column 5 61 - 70 km/h speed limit	Column 6 51 - 60 km/h speed limit	Column 7 41 - 50 km/h speed limit	Column 8 1 - 40 km/h speed limit
53,000 or more	1	1	1	1	1	1	1
23,000 - 52,999	1	1	1	2	2	2	2
15,000 - 22,999	1	1	2	2	2	3	3
12,000 - 14,999	1	1	2	2	2	3	3
10,000 - 11,999	1	1	2	2	3	3	3
8,000 - 9,999	1	1	2	3	3	3	3
6,000 - 7,999	1	2	2	3	3	4	4
5,000 - 5,999	1	2	2	3	3	4	4
4,000 - 4,999	1	2	3	3	3	4	4
3,000 - 3,999	1	2	3	3	3	4	4
2,000 - 2,999	1	2	3	3	4	5	5
1,000 - 1,999	1	3	3	3	4	5	5
500 - 999	1	3	4	4	4	5	5
200 - 499	1	3	4	4	5	5	6
50 - 199	1	3	4	5	5	6	6
0 - 49	1	3	6	6	6	6	6

2. The Regulation is amended by adding the following section:

Purpose

2.1 The purpose of this Regulation is to clarify the scope of the statutory defence available to a municipality under clause 44 (3) (c) of the Act by establishing maintenance standards which are non-prescriptive as to the methods or materials to be used in complying with the standards but instead describe a desired outcome.

3. (1) The heading before section 3 of the Regulation is amended by striking out “MINIMUM” and substituting “MAINTENANCE”

(2) Subsections 3 (1) and (2) of the Regulation are amended by striking out “minimum” wherever it appears.

(3) Subsection 3 (4) of the Regulation is amended by striking out “section 16.1” and substituting “section 16.1, 16.2, 16.3 or 16.4”.

4. Subsections 3.1 (1) and (2) of the Regulation are amended by striking out “minimum” wherever it appears.

5. (1) Subsection 4 (1) of the Regulation is amended by striking out the portion before clause (a) and substituting the following:

Snow accumulation, roadways

(1) Subject to section 4.1, the standard for addressing snow accumulation on roadways is,

.....

(2) Subsection 4 (3) of the Regulation is amended by adding “and, if applicable, lane width under clause (1) (b),” after “roadway” in the portion before paragraph 1.

(3) Subsection 4 (4) of the Regulation is amended by adding “and lane width” after “roadway” in the portion before clause (a).

(4) Subsections 4 (5) and (6) of the Regulation are revoked and the following substituted:

(5) For the purposes of this section, addressing snow accumulation on a roadway includes,

- (a) plowing the roadway;
- (b) salting the roadway;
- (c) applying abrasive materials to the roadway;
- (d) applying other chemical or organic agents to the roadway;
- (e) any combination of the methods described in clauses (a) to (d);

(6) This section does not apply to that portion of the roadway,

- (a) designated for parking;
- (b) consisting of a bicycle lane or other bicycle facility; or
- (d) used by a municipality for snow storage;

(5) The heading of the Table to section 4 of the Regulation is revoked and the following substituted:

SNOW ACCUMULATION - ROADWAYS

7. The Regulation is amended by adding the following sections:

Snow accumulation on roadways, significant weather event

4.1 (1) If a municipality declares a significant weather event relating to snow accumulation, the standard for addressing snow accumulation on roadways until the declaration of the end of the significant weather event is,

- (a) to monitor the weather in accordance with section 3.1; and

- (b) if deemed practicable by the municipality, to deploy resources to address snow accumulation on roadways, starting from the time that the municipality deems appropriate to do so.
- (2) If the municipality complies with subsection (1), all roadways within the municipality are deemed to be in a state of repair with respect to snow accumulation until the applicable time in the Table to section 4 expires following the declaration of the end of the significant weather event by the municipality.
- (3) Following the end of the weather hazard in respect of which a significant weather event was declared by a municipality under subsection (1), the municipality shall,
- (a) declare the end of the significant weather event when the municipality determines it is appropriate to do so; and
- (b) address snow accumulation on roadways in accordance with section 4.

Snow accumulation, bicycle lanes

4.2 (1) Subject to section 4.3, the standard for addressing snow accumulation on bicycle lanes is,

- (a) after becoming aware of the fact that the snow accumulation on a bicycle lane is greater than the depth set out in the Table to this section, to deploy resources as soon as practicable to address the snow accumulation; and
- (b) after the snow accumulation has ended, to address the snow accumulation so as to reduce the snow to a depth less than or equal to the depth set out in the Table to this section to provide a minimum bicycle lane width of the lesser of 1 metre or the actual bicycle lane width.
- (2) If the depth of snow accumulation on a bicycle lane is less than or equal to the depth set out in the Table to this section, the bicycle lane is deemed to be in a state of repair in respect of snow accumulation.
- (3) For the purposes of this section, the depth of snow accumulation on a bicycle lane and, if applicable, lane width under clause (1) (b), may be determined in the same manner as set out in subsection 4 (4) and by the persons mentioned in subsection 4 (3), with necessary modifications.
- (4) For the purposes of this section, addressing snow accumulation on a bicycle lane includes,
- (a) plowing the bicycle lane;
- (b) salting the bicycle lane;
- (c) applying abrasive materials to the bicycle lane;
- (d) applying other chemical or organic agents to the bicycle lane;
- (e) sweeping the bicycle lane; or
- (f) any combination of the methods described in clauses (a) to (e).

TABLE

SNOW ACCUMULATION – BICYCLE LANES

Column 1 Class of Highway or Adjacent Highway	Column 2 Depth	Column 3 Time
1	2.5 cm	8 hours
2	5 cm	12 hours
3	8 cm	24 hours

4	8 cm	24 hours
5	10 cm	24 hours

Snow accumulation on bicycle lanes, significant weather event

4.3 (1) If a municipality declares a significant weather event relating to snow accumulation, the standard for addressing snow accumulation on bicycle lanes until the declaration of the end of the significant weather event is,

(a) to monitor the weather in accordance with section 3.1; and

(b) if deemed practicable by the municipality, to deploy resources to address snow accumulation on bicycle lanes, starting from the time that the municipality deems appropriate to do so.

(2) If the municipality complies with subsection (1), all bicycle lanes within the municipality are deemed to be in a state of repair with respect to snow accumulation until the applicable time in the Table to section 4.2 expires following the declaration of the end of the significant weather event by the municipality.

(3) Following the end of the weather hazard in respect of which a significant weather event was declared by a municipality under subsection (1), the municipality shall,

(a) declare the end of the significant weather event when the municipality determines it is appropriate to do so; and

(b) address snow accumulation on bicycle lanes in accordance with section 4.2.

8. Section 5 of the Regulation is revoked and the following substituted:

Ice formation on roadways and icy roadways

5. (1) The standard for the prevention of ice formation on roadways is doing the following in the 24-hour period preceding an alleged formation of ice on a roadway:

1. Monitor the weather in accordance with section 3.1.

2. Patrol in accordance with section 3.

3. If the municipality determines, as a result of its activities under paragraph 1 or 2, that there is a substantial probability of ice forming on a roadway, treat the roadway, if practicable, to prevent ice formation within the time set out in Table 1 to this section, starting from the time that the municipality determines is the appropriate time to deploy resources for that purpose.

(2) If the municipality meets the standard set out in subsection (1) and, despite such compliance, ice forms on a roadway, the roadway is deemed to be in a state of repair until the applicable time set out in Table 2 to this section expires after the municipality becomes aware of the fact that the roadway is icy.

(3) Subject to section 5.1, the standard for treating icy roadways is to treat the icy roadway within the time set out in Table 2 to this section, and an icy roadway is deemed to be in a state of repair until the applicable time set out in Table 2 to this section expires after the municipality becomes aware of the fact that a roadway is icy.

(4) For the purposes of this section, treating a roadway means applying material to the roadway, including but not limited to, salt, sand or any combination of salt and sand.

(5) For greater certainty, this section applies in respect of ice formation on bicycle lanes on a roadway, but does not apply to other types of bicycle facilities.

TABLE 1
ICE FORMATION PREVENTION

Class of Highway	Time
1	6 hours
2	8 hours
3	16 hours
4	24 hours
5	24 hours

TABLE 2
TREATMENT OF ICY ROADWAYS

Class of Highway	Time
1	3 hours
2	4 hours
3	8 hours
4	12 hours
5	16 hours

Icy roadways, significant weather event

5.1 (1) If a municipality declares a significant weather event relating to ice, the standard for treating icy roadways until the declaration of the end of the significant weather event is,

- (a) to monitor the weather in accordance with section 3.1; and
- (b) if deemed practicable by the municipality, to deploy resources to treat icy roadways, starting from the time that the municipality deems appropriate to do so.

(2) If the municipality complies with subsection (1), all roadways within the municipality are deemed to be in a state of repair with respect to any ice which forms or may be present until the applicable time in Table 2 to section 5 expires after the declaration of the end of the significant weather event by the municipality.

(3) Following the end of the weather hazard in respect of which a significant weather event was declared by a municipality under subsection (1), the municipality shall,

- (a) declare the end of the significant weather event when the municipality determines it is appropriate to do so; and
- (b) treat icy roadways in accordance with section 5.

8. (1) Subsection 6 (1) of the Regulation is amended by striking out “minimum”.

(2) Section 6 of the Regulation is amended by adding the following subsections:

(1.1) For the purposes of this section, the surface area and depth of a pothole may be determined in accordance with subsections (1.2) and (1.3), as applicable, by a municipal employee, agent or contractor whose duties or responsibilities include one or more of the following:

1. Patrolling highways.
2. Performing highway maintenance activities.
3. Supervising staff who perform activities described in paragraph 1 or 2.

(1.2) The depth and surface area of a pothole may be determined by,

- (a) performing an actual measurement; or
- (b) performing a visual estimate.

(1.3) For the purposes of this section, the surface area of a pothole does not include any area that is merely depressed and not yet broken fully through the surface of the roadway.

9. (1) Subsections 7 (1) and (2) of the Regulation are revoked and the following substituted:

Shoulder drop-offs

(1) If a shoulder drop-off is deeper than 8 cm, for a continuous distance of 20 metres or more, the standard is to repair the shoulder drop-off within the time set out in the Table to this section after becoming aware of the fact.

(2) A shoulder drop-off is deemed to be in a state of repair if its depth is less than 8 cm.

(2) The Table to section 7 of the Regulation is revoked and the following substituted:

TABLE
SHOULDER DROP-OFFS

Class of Highway	Time
1	4 days
2	4 days
3	7 days
4	14 days
5	30 days

10. (1) Subsections 8 (1) and (2) of the Regulation are revoked and the following substituted:

Cracks

(1) If a crack on the paved surface of a roadway is greater than 5 cm wide and 5 cm deep for a continuous distance of three metres or more, the standard is to repair the crack within the time set out in the Table to this section after becoming aware of the fact.

(2) A crack is deemed to be in a state of repair if its width or depth is less than or equal to 5 cm.

(2) The Table to section 8 of the Regulation is revoked and the following substituted:

TABLE
CRACKS

Column 1 Class of Highway	Column 2 Time

1	30 days
2	30 days
3	60 days
4	180 days
5	180 days

11. Subsection 9 (1) of the Regulation is amended by striking out “minimum”.

12. Subsections 10 (0.1), (1), (2), (3), (4), (5) and (6) of the Regulation are revoked and the following substituted:

Luminaires

(1) The standard for the frequency of inspecting all luminaires to check to see that they are functioning is once per calendar year, with each inspection taking place not more than 16 months from the previous inspection.

(2) For conventional illumination, if three or more consecutive luminaires on the same side of a highway are not functioning, the standard is to repair the luminaires within the time set out in the Table to this section after becoming aware of the fact.

(3) For conventional illumination and high mast illumination, if 30 per cent or more of the luminaires on any kilometre of highway are not functioning, the standard is to repair the luminaires within the time set out in the Table to this section after becoming aware of the fact.

(4) Despite subsection (2), for high mast illumination, if all of the luminaires on consecutive poles on the same side of a highway are not functioning, the standard is to deploy resources as soon as practicable after becoming aware of the fact to repair the luminaires.

(5) Despite subsections (1), (2) and (3), for conventional illumination and high mast illumination, if more than 50 per cent of the luminaires on any kilometre of a Class 1 highway with a speed limit of 90 kilometres per hour or more are not functioning, the standard is to deploy resources as soon as practicable after becoming aware of the fact to repair the luminaires.

(6) Luminaires are deemed to be in a state of repair,

(a) for the purpose of subsection (2), if the number of non-functioning consecutive luminaires on the same side of a highway does not exceed two;

(b) for the purpose of subsection (3), if more than 70 per cent of luminaires on any kilometre of highway are functioning;

(c) for the purpose of subsection (4), if one or more of the luminaires on consecutive poles on the same side of a highway are functioning;

(d) for the purpose of subsection (5), if more than 50 per cent of luminaires on any kilometre of highway are functioning.

13. The Regulation is amended by striking out “minimum” wherever it appears in the following provisions:

1. Sections 11 to 16.

2. Subsection 16.1 (1).

14. Subsections 16.1 (2), (2.1), (3) and (4) of the Regulation are revoked and the following substituted:

(2) If a surface discontinuity on or within a sidewalk exceeds two centimetres, the standard is to treat the surface discontinuity within 14 days after acquiring actual knowledge of the fact.

(3) A surface discontinuity on or within a sidewalk is deemed to be in a state of repair if it is less than or equal to two centimetres.

(4) For the purpose of subsection (2), treating a surface discontinuity on or within a sidewalk means taking reasonable measures to protect users of the sidewalk from the discontinuity, including making permanent or temporary repairs, alerting users' attention to the discontinuity or preventing access to the area of discontinuity.

(5) In this section,

“surface discontinuity” means a vertical discontinuity creating a step formation at any joint or crack in the surface of the sidewalk or any vertical height difference between a utility appurtenance found on or within the sidewalk and the surface of the sidewalk.

15. The Regulation is amended by adding the following sections.

Encroachments, area adjacent to sidewalk

16.2 (1) The standard for the frequency of inspecting an area adjacent to a sidewalk to check for encroachments is once per calendar year, with each inspection taking place not more than 16 months from the previous inspection.

(2) The area adjacent to a sidewalk that has been inspected in accordance with subsection (1) is deemed to be in a state of repair in respect of any encroachment present.

(3) For greater certainty, the area adjacent to a sidewalk begins at the outer edges of a sidewalk and ends at the lesser of the limit of the highway, the back edge of a curb if there is a curb and a maximum of 45 cm.

(4) The area adjacent to a sidewalk is deemed to be in a state of repair in respect of any encroachment present unless the encroachment is determined by a municipality to be highly unusual given its character and location or to constitute a significant hazard to pedestrians.

(5) If a municipality determines that an encroachment is highly unusual given its character and location or constitutes a significant hazard to pedestrians, the standard is to treat the encroachment within 28 days after making such a determination, and the encroachment is deemed in a state of repair for 28 days from the time of the determination by the municipality.

(6) For the purpose of subsection (4), treating an encroachment means taking reasonable measures to protect users, including making permanent or temporary repairs, alerting users' attention to the encroachment or preventing access to the area of the encroachment.

Snow accumulation on sidewalks

16.3 (1) Subject to section 16.4, the standard for addressing snow accumulation on a sidewalk after the snow accumulation has ended is,

a) to reduce the snow to a depth less than or equal to 8 centimetres within 48 hours; and

b) to provide a minimum sidewalk width of 1 metre.

(2) If the depth of snow accumulation on a sidewalk is less than or equal to 8 centimetres, the sidewalk is deemed to be in a state of repair in respect of snow accumulation.

(3) If the depth of snow accumulation on a sidewalk exceeds 8 centimetres while the snow continues to accumulate, the sidewalk is deemed to be in a state of repair with respect to snow accumulation, until 48 hours after the snow accumulation ends.

(4) For the purposes of this section, the depth of snow accumulation on a sidewalk may be determined in the same manner as set out in subsection 4 (4) and by the persons mentioned in subsection 4 (3) with necessary modifications.

(5) For the purposes of this section, addressing snow accumulation on a sidewalk includes,

(a) plowing the sidewalk;

- (b) salting the sidewalk;
- (c) applying abrasive materials to the sidewalk;
- (d) applying other chemical or organic agents to the sidewalk; or
- (e) any combination of the methods described in clauses (a) to (d).

Snow accumulation on sidewalks, significant weather event

16.4 (1) If a municipality declares a significant weather event relating to snow accumulation, the standard for addressing snow accumulation on sidewalks until the declaration of the end of the significant weather event is,

- (a) to monitor the weather in accordance with section 3.1; and
 - (b) if deemed practicable by the municipality, to deploy resources to address snow accumulation on sidewalks starting from the time that the municipality deems appropriate to do so.
- (2) If the municipality complies with subsection (1), all sidewalks within the municipality are deemed to be in a state of repair with respect to any snow present until 48 hours following the declaration of the end of the significant weather event by the municipality.
- (3) Following the end of the weather hazard in respect of which a significant weather event was declared by a municipality under subsection (1), the municipality shall,
- (a) declare the end of the significant weather event when the municipality determines it is appropriate to do so; and
 - (b) address snow accumulation on sidewalks in accordance with section 16.3.

Ice formation on sidewalks and icy sidewalks

16.5 (1) Subject to section 16.6, the standard for the prevention of ice formation on sidewalks is to,

- (a) monitor the weather in accordance with section 3.1 in the 24-hour period preceding an alleged formation of ice on a sidewalk; and
 - (b) treat the sidewalk if practicable to prevent ice formation or improve traction within 48 hours if the municipality determines that there is a substantial probability of ice forming on a sidewalk, starting from the time that the municipality determines is the appropriate time to deploy resources for that purpose.
- (2) If ice forms on a sidewalk even though the municipality meets the standard set out in subsection (1), the sidewalk is deemed to be in a state of repair in respect of ice until 48 hours after the municipality first becomes aware of the fact that the sidewalk is icy.
- (3) The standard for treating icy sidewalks after the municipality becomes aware of the fact that a sidewalk is icy is to treat the icy sidewalk within 48 hours, and an icy sidewalk is deemed to be in a state of repair for 48 hours after it has been treated.
- (4) For the purposes of this section, treating a sidewalk means applying materials including salt, sand or any combination of salt and sand to the sidewalk.

Icy sidewalks, significant weather event

16.6 (1) If a municipality declares a significant weather event relating to ice, the standard for addressing ice formation or ice on sidewalks until the declaration of the end of the significant weather event is,

- (a) to monitor the weather in accordance with section 3.1; and
 - (b) if deemed practicable by the municipality, to deploy resources to treat the sidewalks to prevent ice formation or improve traction, or treat the icy sidewalks, starting from the time that the municipality deems appropriate to do so.
- (2) If the municipality complies with subsection (1), all sidewalks within the municipality are deemed to be in a state of repair with respect to any ice which forms or is present until 48 hours after the declaration of the end of the significant weather event by the municipality.

(3) Following the end of the weather hazard in respect of which a significant weather event was declared by a municipality under subsection (1), the municipality shall,

- (a) declare the end of the significant weather event when the municipality determines it is appropriate to do so; and
- (b) address the prevention of ice formation on sidewalks or treat icy sidewalks in accordance with section 16.5.

Winter sidewalk patrol

16.7 (1) If it is determined by the municipality that the weather monitoring referred to in section 3.1 indicates that there is a substantial probability of snow accumulation on sidewalks in excess of 8 cm, ice formation on sidewalks or icy sidewalks, the standard for patrolling sidewalks is to patrol sidewalks that the municipality selects as representative of its sidewalks at intervals deemed necessary by the municipality.

(2) Patrolling a sidewalk consists of visually observing the sidewalk, either by driving by the sidewalk on the adjacent roadway or by driving or walking on the sidewalk or by electronically monitoring the sidewalk, and may be performed by persons responsible for patrolling roadways or sidewalks or by persons responsible for or performing roadway or sidewalk maintenance activities.

Closure of a highway

16.8 (1) When a municipality closes a highway or part of a highway pursuant to its powers under the Act, the highway is deemed to be in a state of repair in respect of all conditions described in this Regulation from the time of the closure until the highway is re-opened by the municipality.

(2) For the purposes of subsection (1), a highway or part of a highway is closed on the earlier of,

- (a) when a municipality passes a by-law to close the highway or part of the highway; and
- (b) when a municipality has taken such steps as it determines necessary to temporarily close the highway or part of a highway.

Declaration of significant weather event

16.9. A municipality declaring the beginning of a significant weather event or declaring the end of a significant weather event under this Regulation shall do so in one or more of the following ways:

1. By posting a notice on the municipality's website.
2. By making an announcement on a social media platform, such as Facebook or Twitter.
3. By sending a press release or similar communication to internet, newspaper, radio or television media.
4. By notification through the municipality's police service.
5. By any other notification method required in a by-law of the municipality.

Commencement

16. This Regulation comes into force on the day it is filed.

Made by:

KATHRYN MCGARRY

Minister of Transportation

Date made: May 2, 2018



Municipal Act, 2001
Loi de 2001 sur les municipalités

ONTARIO REGULATION 239/02

MINIMUM MAINTENANCE STANDARDS FOR MUNICIPAL HIGHWAYS

Consolidation Period: From May 3, 2018 to the [e-Laws currency date](#).

Last amendment: [366/18](#).

Legislative History: [+]

This Regulation is made in English only.

Definitions

1. (1) In this Regulation,

“bicycle facility” means the on-road and in-boulevard cycling facilities listed in Book 18 of the Ontario Traffic Manual;

“bicycle lane” means,

(a) a portion of a roadway that has been designated by pavement markings or signage for the preferential or exclusive use of cyclists, or

(b) a portion of a roadway that has been designated for the exclusive use of cyclists by signage and a physical or marked buffer;

“cm” means centimetres;

“day” means a 24-hour period;

“encroachment” means anything that is placed, installed, constructed or planted within the highway that was not placed, installed, constructed or planted by the municipality;

“ice” means all kinds of ice, however formed;

“motor vehicle” has the same meaning as in subsection 1 (1) of the *Highway Traffic Act*, except that it does not include a motor assisted bicycle;

“non-paved surface” means a surface that is not a paved surface;

“Ontario Traffic Manual” means the Ontario Traffic Manual published by the Ministry of Transportation, as amended from time to time;

“paved surface” means a surface with a wearing layer or layers of asphalt, concrete or asphalt emulsion;

“pothole” means a hole in the surface of a roadway caused by any means, including wear or subsidence of the road surface or subsurface;

“roadway” has the same meaning as in subsection 1 (1) of the *Highway Traffic Act*;

“shoulder” means the portion of a highway that provides lateral support to the roadway and that may accommodate stopped motor vehicles and emergency use;

“sidewalk” means the part of the highway specifically set aside or commonly understood to be for pedestrian use, typically consisting of a paved surface but does not include crosswalks, medians, boulevards, shoulders or any part of the sidewalk where cleared snow has been deposited;

“significant weather event” means an approaching or occurring weather hazard with the potential to pose a significant danger to users of the highways within a municipality;_

“snow accumulation” means the natural accumulation of any of the following that, alone or together, covers more than half a lane width of a roadway:

1. Newly-fallen snow.
2. Wind-blown snow.
3. Slush;

“substantial probability” means a significant likelihood considerably in excess of 51 per cent;

“surface” means the top of a sidewalk, roadway or shoulder;

“utility” includes any air, gas, water, electricity, cable, fiber-optic, telecommunication or traffic control system or subsystem, fire hydrants, sanitary sewers, storm sewers, property bars and survey monuments;

“utility appurtenance” includes maintenance holes and hole covers, water shut-off covers and boxes, valves, fittings, vaults, braces, pipes, pedestals, and any other structures or items that form part of or are an accessory part of any utility;

“weather” means air temperature, wind and precipitation.

“weather hazard” means the weather hazards determined by Environment Canada as meeting the criteria for the issuance of an alert under its Public Weather Alerting Program. O. Reg. 239/02, s. 1 (1); O. Reg. 23/10, s. 1 (1); O. Reg. 47/13, s. 1; O. Reg. 366/18, s. 1 (1, 2).

(2) For the purposes of this Regulation, every highway or part of a highway under the jurisdiction of a municipality in Ontario is classified in the Table to this section as a Class 1, Class 2, Class 3, Class 4, Class 5 or Class 6 highway, based on the speed limit applicable to it and the average daily traffic on it. O. Reg. 239/02, s. 1 (2); O. Reg. 366/18, s. 1 (3).

(3) For the purposes of subsection (2) and the Table to this section, the average daily traffic on a highway or part of a highway under municipal jurisdiction shall be determined,

(a) by counting and averaging the daily two-way traffic on the highway or part of the highway; or

(b) by estimating the average daily two-way traffic on the highway or part of the highway. O. Reg. 239/02, s. 1 (3); O. Reg. 23/10, s. 1 (2); O. Reg. 366/18, s. 1 (3).

(4) For the purposes of this Regulation, unless otherwise indicated in a provision of this Regulation, a municipality is deemed to be aware of a fact if, in the absence of actual knowledge of the fact, circumstances are such that the municipality ought reasonably to be aware of the fact. O. Reg. 366/18, s. 1 (4).

TABLE
CLASSIFICATION OF HIGHWAYS

Column 1 Average Daily Traffic (number of motor vehicles)	Column 2 91 - 100 km/h speed limit	Column 3 81 - 90 km/h speed limit	Column 4 71 - 80 km/h speed limit	Column 5 61 - 70 km/h speed limit	Column 6 51 - 60 km/h speed limit	Column 7 41 - 50 km/h speed limit	Column 8 1 - 40 km/h speed limit
53,000 or more	1	1	1	1	1	1	1
23,000 - 52,999	1	1	1	2	2	2	2

15,000 - 22,999	1	1	2	2	2	3	3
12,000 - 14,999	1	1	2	2	2	3	3
10,000 - 11,999	1	1	2	2	3	3	3
8,000 - 9,999	1	1	2	3	3	3	3
6,000 - 7,999	1	2	2	3	3	4	4
5,000 - 5,999	1	2	2	3	3	4	4
4,000 - 4,999	1	2	3	3	3	4	4
3,000 - 3,999	1	2	3	3	3	4	4
2,000 - 2,999	1	2	3	3	4	5	5
1,000 - 1,999	1	3	3	3	4	5	5
500 - 999	1	3	4	4	4	5	5
200 - 499	1	3	4	4	5	5	6
50 - 199	1	3	4	5	5	6	6
0 - 49	1	3	6	6	6	6	6

O. Reg. 366/18, s. 1 (5).

Application

2. (1) This Regulation sets out the minimum standards of repair for highways under municipal jurisdiction for the purpose of clause 44 (3) (c) of the Act. O. Reg. 288/03, s. 1.

(2) REVOKED: O. Reg. 23/10, s. 2.

(3) This Regulation does not apply to Class 6 highways. O. Reg. 239/02, s. 2 (3).

Purpose

2.1 The purpose of this Regulation is to clarify the scope of the statutory defence available to a municipality under clause 44 (3) (c) of the Act by establishing maintenance standards which are non-prescriptive as to the methods or materials to be used in complying with the standards but instead describe a desired outcome. O. Reg. 366/18, s. 2.

MAINTENANCE STANDARDS**Patrolling**

3. (1) The standard for the frequency of patrolling of highways to check for conditions described in this Regulation is set out in the Table to this section. O. Reg. 23/10, s. 3 (1); O. Reg. 366/18, s. 3 (2).

(2) If it is determined by the municipality that the weather monitoring referred to in section 3.1 indicates that there is a substantial probability of snow accumulation on roadways, ice formation on roadways or icy roadways, the standard for patrolling highways is, in addition to that set out in subsection (1), to patrol highways that the municipality selects as representative of its highways, at intervals deemed necessary by the municipality, to check for such conditions. O. Reg. 47/13, s. 2; O. Reg. 366/18, s. 3 (2).

(3) Patrolling a highway consists of observing the highway, either by driving on or by electronically monitoring the highway, and may be performed by persons responsible for patrolling highways or by persons responsible for or performing highway maintenance activities. O. Reg. 23/10, s. 3 (1).

(4) This section does not apply in respect of the conditions described in section 10, subsections 11 (0.1) and 12 (1) and section 16.1, 16.2, 16.3 or 16.4. O. Reg. 23/10, s. 3 (1); O. Reg. 366/18, s. 3 (3).

TABLE
PATROLLING FREQUENCY

Class of Highway	Patrolling Frequency
1	3 times every 7 days
2	2 times every 7 days
3	once every 7 days
4	once every 14 days
5	once every 30 days

O. Reg. 239/02, s. 3, Table; O. Reg. 23/10, s. 3 (2).

Weather monitoring

3.1 (1) From October 1 to April 30, the standard is to monitor the weather, both current and forecast to occur in the next 24 hours, once every shift or three times per calendar day, whichever is more frequent, at intervals determined by the municipality. O. Reg. 47/13, s. 3; O. Reg. 366/18, s. 4.

(2) From May 1 to September 30, the standard is to monitor the weather, both current and forecast to occur in the next 24 hours, once per calendar day. O. Reg. 47/13, s. 3; O. Reg. 366/18, s. 4.

Snow accumulation, roadways

4. (1) Subject to section 4.1, the standard for addressing snow accumulation on roadways is,

- (a) after becoming aware of the fact that the snow accumulation on a roadway is greater than the depth set out in the Table to this section, to deploy resources as soon as practicable to address the snow accumulation; and
- (b) after the snow accumulation has ended, to address the snow accumulation so as to reduce the snow to a depth less than or equal to the depth set out in the Table within the time set out in the Table,
 - (i) to provide a minimum lane width of the lesser of three metres for each lane or the actual lane width, or
 - (ii) on a Class 4 or Class 5 highway with two lanes, to provide a total width of at least five metres. O. Reg. 47/13, s. 4; O. Reg. 366/18, s. 5 (1).

(2) If the depth of snow accumulation on a roadway is less than or equal to the depth set out in the Table to this section, the roadway is deemed to be in a state of repair with respect to snow accumulation. O. Reg. 47/13, s. 4.

(3) For the purposes of this section, the depth of snow accumulation on a roadway and, if applicable, lane width under clause (1) (b), may be determined in accordance with subsection (4) by a municipal employee, agent or contractor, whose duties or responsibilities include one or more of the following:

1. Patrolling highways.
2. Performing highway maintenance activities.
3. Supervising staff who perform activities described in paragraph 1 or 2. O. Reg. 47/13, s. 4; O. Reg. 366/18, s. 5 (2).

(4) The depth of snow accumulation on a roadway and lane width may be determined by,

- (a) performing an actual measurement;
- (b) monitoring the weather; or
- (c) performing a visual estimate. O. Reg. 47/13, s. 4; O. Reg. 366/18, s. 5 (3).

- (5) For the purposes of this section, addressing snow accumulation on a roadway includes,
- (a) plowing the roadway;
 - (b) salting the roadway;
 - (c) applying abrasive materials to the roadway;
 - (d) applying other chemical or organic agents to the roadway;
 - (e) any combination of the methods described in clauses (a) to (d). O. Reg. 366/18, s. 5 (4).
- (6) This section does not apply to that portion of the roadway,
- (a) designated for parking;
 - (b) consisting of a bicycle lane or other bicycle facility; or
 - (d) used by a municipality for snow storage. O. Reg. 366/18, s. 5 (4).

TABLE
SNOW ACCUMULATION - ROADWAYS

Class of Highway	Depth	Time
1	2.5 cm	4 hours
2	5 cm	6 hours
3	8 cm	12 hours
4	8 cm	16 hours
5	10 cm	24 hours

O. Reg. 47/13, s. 4; O. Reg. 366/18, s. 5 (5).

Snow accumulation on roadways, significant weather event

4.1 (1) If a municipality declares a significant weather event relating to snow accumulation, the standard for addressing snow accumulation on roadways until the declaration of the end of the significant weather event is,

- (a) to monitor the weather in accordance with section 3.1; and
- (b) if deemed practicable by the municipality, to deploy resources to address snow accumulation on roadways, starting from the time that the municipality deems appropriate to do so. O. Reg. 366/18, s. 7.

(2) If the municipality complies with subsection (1), all roadways within the municipality are deemed to be in a state of repair with respect to snow accumulation until the applicable time in the Table to section 4 expires following the declaration of the end of the significant weather event by the municipality. O. Reg. 366/18, s. 7.

(3) Following the end of the weather hazard in respect of which a significant weather event was declared by a municipality under subsection (1), the municipality shall,

- (a) declare the end of the significant weather event when the municipality determines it is appropriate to do so; and
- (b) address snow accumulation on roadways in accordance with section 4. O. Reg. 366/18, s. 7.

Snow accumulation, bicycle lanes

4.2 (1) Subject to section 4.3, the standard for addressing snow accumulation on bicycle lanes is,

- (a) after becoming aware of the fact that the snow accumulation on a bicycle lane is greater than the depth set out in the Table to this section, to deploy resources as soon as practicable to address the snow accumulation; and
- (b) after the snow accumulation has ended, to address the snow accumulation so as to reduce the snow to a depth less than or equal to the depth set out in the Table to this section to provide a minimum bicycle lane width of the lesser of 1 metre or the actual bicycle lane width. O. Reg. 366/18, s. 7.
- (2) If the depth of snow accumulation on a bicycle lane is less than or equal to the depth set out in the Table to this section, the bicycle lane is deemed to be in a state of repair in respect of snow accumulation. O. Reg. 366/18, s. 7.
- (3) For the purposes of this section, the depth of snow accumulation on a bicycle lane and, if applicable, lane width under clause (1) (b), may be determined in the same manner as set out in subsection 4 (4) and by the persons mentioned in subsection 4 (3), with necessary modifications. O. Reg. 366/18, s. 7.
- (4) For the purposes of this section, addressing snow accumulation on a bicycle lane includes,
- (a) plowing the bicycle lane;
- (b) salting the bicycle lane;
- (c) applying abrasive materials to the bicycle lane;
- (d) applying other chemical or organic agents to the bicycle lane;
- (e) sweeping the bicycle lane; or
- (f) any combination of the methods described in clauses (a) to (e). O. Reg. 366/18, s. 7.

TABLE
SNOW ACCUMULATION – BICYCLE LANES

Column 1 Class of Highway or Adjacent Highway	Column 2 Depth	Column 3 Time
1	2.5 cm	8 hours
2	5 cm	12 hours
3	8 cm	24 hours
4	8 cm	24 hours
5	10 cm	24 hours

O. Reg. 366/18, s. 7.

Snow accumulation on bicycle lanes, significant weather event

4.3 (1) If a municipality declares a significant weather event relating to snow accumulation, the standard for addressing snow accumulation on bicycle lanes until the declaration of the end of the significant weather event is,

- (a) to monitor the weather in accordance with section 3.1; and
- (b) if deemed practicable by the municipality, to deploy resources to address snow accumulation on bicycle lanes, starting from the time that the municipality deems appropriate to do so. O. Reg. 366/18, s. 7.
- (2) If the municipality complies with subsection (1), all bicycle lanes within the municipality are deemed to be in a state of repair with respect to snow accumulation until the applicable time in the Table to section 4.2 expires following the declaration of the end of the significant weather event by the municipality. O. Reg. 366/18, s. 7.

(3) Following the end of the weather hazard in respect of which a significant weather event was declared by a municipality under subsection (1), the municipality shall,

- (a) declare the end of the significant weather event when the municipality determines it is appropriate to do so; and
- (b) address snow accumulation on bicycle lanes in accordance with section 4.2. O. Reg. 366/18, s. 7.

Ice formation on roadways and icy roadways

5. (1) The standard for the prevention of ice formation on roadways is doing the following in the 24-hour period preceding an alleged formation of ice on a roadway:

1. Monitor the weather in accordance with section 3.1.
2. Patrol in accordance with section 3.
3. If the municipality determines, as a result of its activities under paragraph 1 or 2, that there is a substantial probability of ice forming on a roadway, treat the roadway, if practicable, to prevent ice formation within the time set out in Table 1 to this section, starting from the time that the municipality determines is the appropriate time to deploy resources for that purpose. O. Reg. 366/18, s. 8.

(2) If the municipality meets the standard set out in subsection (1) and, despite such compliance, ice forms on a roadway, the roadway is deemed to be in a state of repair until the applicable time set out in Table 2 to this section expires after the municipality becomes aware of the fact that the roadway is icy. O. Reg. 366/18, s. 8.

(3) Subject to section 5.1, the standard for treating icy roadways is to treat the icy roadway within the time set out in Table 2 to this section, and an icy roadway is deemed to be in a state of repair until the applicable time set out in Table 2 to this section expires after the municipality becomes aware of the fact that a roadway is icy. O. Reg. 366/18, s. 8.

(4) For the purposes of this section, treating a roadway means applying material to the roadway, including but not limited to, salt, sand or any combination of salt and sand. O. Reg. 366/18, s. 8.

(5) For greater certainty, this section applies in respect of ice formation on bicycle lanes on a roadway, but does not apply to other types of bicycle facilities. O. Reg. 366/18, s. 8.

TABLE 1
ICE FORMATION PREVENTION

Class of Highway	Time
1	6 hours
2	8 hours
3	16 hours
4	24 hours
5	24 hours

O. Reg. 366/18, s. 8.

TABLE 2
TREATMENT OF ICY ROADWAYS

Class of Highway	Time
1	3 hours
2	4 hours
3	8 hours

4	12 hours
5	16 hours

O. Reg. 366/18, s. 8.

Icy roadways, significant weather event

5.1 (1) If a municipality declares a significant weather event relating to ice, the standard for treating icy roadways until the declaration of the end of the significant weather event is,

(a) to monitor the weather in accordance with section 3.1; and

(b) if deemed practicable by the municipality, to deploy resources to treat icy roadways, starting from the time that the municipality deems appropriate to do so. O. Reg. 366/18, s. 8.

(2) If the municipality complies with subsection (1), all roadways within the municipality are deemed to be in a state of repair with respect to any ice which forms or may be present until the applicable time in Table 2 to section 5 expires after the declaration of the end of the significant weather event by the municipality. O. Reg. 366/18, s. 8.

(3) Following the end of the weather hazard in respect of which a significant weather event was declared by a municipality under subsection (1), the municipality shall,

(a) declare the end of the significant weather event when the municipality determines it is appropriate to do so; and

(b) treat icy roadways in accordance with section 5. O. Reg. 366/18, s. 8.

Potholes

6. (1) If a pothole exceeds both the surface area and depth set out in Table 1, 2 or 3 to this section, as the case may be, the standard is to repair the pothole within the time set out in Table 1, 2 or 3, as appropriate, after becoming aware of the fact. O. Reg. 239/02, s. 6 (1); O. Reg. 366/18, s. 8 (1).

(1.1) For the purposes of this section, the surface area and depth of a pothole may be determined in accordance with subsections (1.2) and (1.3), as applicable, by a municipal employee, agent or contractor whose duties or responsibilities include one or more of the following:

1. Patrolling highways.

2. Performing highway maintenance activities.

3. Supervising staff who perform activities described in paragraph 1 or 2. O. Reg. 366/18, s. 8 (2).

(1.2) The depth and surface area of a pothole may be determined by,

(a) performing an actual measurement; or

(b) performing a visual estimate. O. Reg. 366/18, s. 8 (2).

(1.3) For the purposes of this section, the surface area of a pothole does not include any area that is merely depressed and not yet broken fully through the surface of the roadway. O. Reg. 366/18, s. 8 (2).

(2) A pothole is deemed to be in a state of repair if its surface area or depth is less than or equal to that set out in Table 1, 2 or 3, as appropriate. O. Reg. 239/02, s. 6 (2); O. Reg. 47/13, s. 6.

TABLE 1
POTHOLES ON PAVED SURFACE OF ROADWAY

Class of Highway	Surface Area	Depth	Time
1	600 cm ²	8 cm	4 days
2	800 cm ²	8 cm	4 days
3	1000 cm ²	8 cm	7 days
4	1000 cm ²	8 cm	14 days
5	1000 cm ²	8 cm	30 days

O. Reg. 239/02, s. 6, Table 1.

TABLE 2
POTHOLES ON NON-PAVED SURFACE OF ROADWAY

Class of Highway	Surface Area	Depth	Time
3	1500 cm ²	8 cm	7 days
4	1500 cm ²	10 cm	14 days
5	1500 cm ²	12 cm	30 days

O. Reg. 239/02, s. 6, Table 2.

TABLE 3
POTHOLES ON PAVED OR NON-PAVED SURFACE OF SHOULDER

Class of Highway	Surface Area	Depth	Time
1	1500 cm ²	8 cm	7 days
2	1500 cm ²	8 cm	7 days
3	1500 cm ²	8 cm	14 days
4	1500 cm ²	10 cm	30 days
5	1500 cm ²	12 cm	60 days

O. Reg. 239/02, s. 6, Table 3.

Shoulder drop-offs

7. (1) If a shoulder drop-off is deeper than 8 cm, for a continuous distance of 20 metres or more, the standard is to repair the shoulder drop-off within the time set out in the Table to this section after becoming aware of the fact. O. Reg. 366/18, s. 9 (1).

(2) A shoulder drop-off is deemed to be in a state of repair if its depth is less than 8 cm. O. Reg. 366/18, s. 9 (1).

(3) In this section,

“shoulder drop-off” means the vertical differential, where the paved surface of the roadway is higher than the surface of the shoulder, between the paved surface of the roadway and the paved or non-paved surface of the shoulder. O. Reg. 239/02, s. 7 (3).

TABLE
SHOULDER DROP-OFFS

Class of Highway	Time
1	4 days
2	4 days
3	7 days
4	14 days
5	30 days

O. Reg. 366/18, s. 9 (2).

Cracks

8. (1) If a crack on the paved surface of a roadway is greater than 5 cm wide and 5 cm deep for a continuous distance of three metres or more, the standard is to repair the crack within the time set out in the Table to this section after becoming aware of the fact. O. Reg. 366/18, s. 10 (1).

(2) A crack is deemed to be in a state of repair if its width or depth is less than or equal to 5 cm. O. Reg. 366/18, s. 10 (1).

TABLE
CRACKS

Column 1 Class of Highway	Column 2 Time
1	30 days
2	30 days
3	60 days
4	180 days
5	180 days

O. Reg. 366/18, s. 10 (2).

Debris

9. (1) If there is debris on a roadway, the standard is to deploy resources, as soon as practicable after becoming aware of the fact, to remove the debris. O. Reg. 239/02, s. 9 (1); O. Reg. 366/18, s. 11.

(2) In this section,

“debris” means any material (except snow, slush or ice) or object on a roadway,

(a) that is not an integral part of the roadway or has not been intentionally placed on the roadway by a municipality, and

(b) that is reasonably likely to cause damage to a motor vehicle or to injure a person in a motor vehicle. O. Reg. 239/02, s. 9 (2);

O. Reg. 47/13, s. 9.

Luminaires

10. (0.1) REVOKED: O. Reg. 366/18, s. 12.

(1) The standard for the frequency of inspecting all luminaires to check to see that they are functioning is once per calendar year, with each inspection taking place not more than 16 months from the previous inspection. O. Reg. 366/18, s. 12.

(2) For conventional illumination, if three or more consecutive luminaires on the same side of a highway are not functioning, the standard is to repair the luminaires within the time set out in the Table to this section after becoming aware of the fact. O. Reg. 366/18, s. 12.

(3) For conventional illumination and high mast illumination, if 30 per cent or more of the luminaires on any kilometre of highway are not functioning, the standard is to repair the luminaires within the time set out in the Table to this section after becoming aware of the fact. O. Reg. 366/18, s. 12.

(4) Despite subsection (2), for high mast illumination, if all of the luminaires on consecutive poles on the same side of a highway are not functioning, the standard is to deploy resources as soon as practicable after becoming aware of the fact to repair the luminaires. O. Reg. 366/18, s. 12.

(5) Despite subsections (1), (2) and (3), for conventional illumination and high mast illumination, if more than 50 per cent of the luminaires on any kilometre of a Class 1 highway with a speed limit of 90 kilometres per hour or more are not functioning, the standard is to deploy resources as soon as practicable after becoming aware of the fact to repair the luminaires. O. Reg. 366/18, s. 12.

(6) Luminaires are deemed to be in a state of repair,

- (a) for the purpose of subsection (2), if the number of non-functioning consecutive luminaires on the same side of a highway does not exceed two;
- (b) for the purpose of subsection (3), if more than 70 per cent of luminaires on any kilometre of highway are functioning;
- (c) for the purpose of subsection (4), if one or more of the luminaires on consecutive poles on the same side of a highway are functioning;
- (d) for the purpose of subsection (5), if more than 50 per cent of luminaires on any kilometre of highway are functioning. O. Reg. 366/18, s. 12.

(7) In this section,

“conventional illumination” means lighting, other than high mast illumination, where there are one or more luminaires per pole;

“high mast illumination” means lighting where there are three or more luminaires per pole and the height of the pole exceeds 20 metres;

“luminaire” means a complete lighting unit consisting of,

- (a) a lamp, and
- (b) parts designed to distribute the light, to position or protect the lamp and to connect the lamp to the power supply. O. Reg. 239/02, s. 10 (7).

TABLE
LUMINAIRES

Class of Highway	Time
1	7 days

2	7 days
3	14 days
4	14 days
5	14 days

O. Reg. 239/02, s. 10, Table.

Signs

11. (0.1) The standard for the frequency of inspecting signs of a type listed in subsection (2) to check to see that they meet the retro-reflectivity requirements of the Ontario Traffic Manual is once per calendar year, with each inspection taking place not more than 16 months from the previous inspection. O. Reg. 23/10, s. 7 (1); O. Reg. 47/13, s. 11 (1); O. Reg. 366/18, s. 13.

(0.2) A sign that has been inspected in accordance with subsection (0.1) is deemed to be in a state of repair with respect to the retro-reflectivity requirements of the Ontario Traffic Manual until the next inspection in accordance with that subsection, provided that the municipality does not acquire actual knowledge that the sign has ceased to meet these requirements. O. Reg. 47/13, s. 11 (2).

(1) If any sign of a type listed in subsection (2) is illegible, improperly oriented, obscured or missing, the standard is to deploy resources as soon as practicable after becoming aware of the fact to repair or replace the sign. O. Reg. 239/02, s. 11 (1); O. Reg. 23/10, s. 7 (2); O. Reg. 366/18, s. 13.

(2) This section applies to the following types of signs:

1. Checkerboard.
2. Curve sign with advisory speed tab.
3. Do not enter.
 - 3.1 Load Restricted Bridge.
 - 3.2 Low Bridge.
 - 3.3 Low Bridge Ahead.
4. One Way.
5. School Zone Speed Limit.
6. Stop.
7. Stop Ahead.
8. Stop Ahead, New.
9. Traffic Signal Ahead, New.
10. Two-Way Traffic Ahead.
11. Wrong Way.
12. Yield.
13. Yield Ahead.
14. Yield Ahead, New. O. Reg. 239/02, s. 11 (2); O. Reg. 23/10, s. 7 (3).

Regulatory or warning signs

12. (1) The standard for the frequency of inspecting regulatory signs or warning signs to check to see that they meet the retro-reflectivity requirements of the Ontario Traffic Manual is once per calendar year, with each inspection taking place not more than 16 months from the previous inspection. O. Reg. 23/10, s. 8; O. Reg. 47/13, s. 12 (1); O. Reg. 366/18, s. 13.

(1.1) A regulatory sign or warning sign that has been inspected in accordance with subsection (1) is deemed to be in a state of repair with respect to the retro-reflectivity requirements of the Ontario Traffic Manual until the next inspection in accordance with that subsection, provided that the municipality does not acquire actual knowledge that the sign has ceased to meet these requirements.

O. Reg. 47/13, s. 12 (2).

(2) If a regulatory sign or warning sign is illegible, improperly oriented, obscured or missing, the standard is to repair or replace the sign within the time set out in the Table to this section after becoming aware of the fact. O. Reg. 23/10, s. 8; O. Reg. 366/18, s. 13.

(3) In this section,

“regulatory sign” and “warning sign” have the same meanings as in the Ontario Traffic Manual, except that they do not include a sign listed in subsection 11 (2) of this Regulation. O. Reg. 23/10, s. 8.

TABLE
REGULATORY AND WARNING SIGNS

Class of Highway	Time
1	7 days
2	14 days
3	21 days
4	30 days
5	30 days

O. Reg. 239/02, s. 12, Table.

Traffic control signal systems

13. (1) If a traffic control signal system is defective in any way described in subsection (2), the standard is to deploy resources as soon as practicable after becoming aware of the defect to repair the defect or replace the defective component of the traffic control signal system. O. Reg. 239/02, s. 13 (1); O. Reg. 366/18, s. 13.

(2) This section applies if a traffic control signal system is defective in any of the following ways:

1. One or more displays show conflicting signal indications.
2. The angle of a traffic control signal or pedestrian control indication has been changed in such a way that the traffic or pedestrian facing it does not have clear visibility of the information conveyed or that it conveys confusing information to traffic or pedestrians facing other directions.
3. A phase required to allow a pedestrian or vehicle to safely travel through an intersection fails to occur.
4. There are phase or cycle timing errors interfering with the ability of a pedestrian or vehicle to safely travel through an intersection.
5. There is a power failure in the traffic control signal system.
6. The traffic control signal system cabinet has been displaced from its proper position.
7. There is a failure of any of the traffic control signal support structures.
8. A signal lamp or a pedestrian control indication is not functioning.
9. Signals are flashing when flashing mode is not a part of the normal signal operation. O. Reg. 239/02, s. 13 (2).

(3) Despite subsection (1) and paragraph 8 of subsection (2), if the posted speed of all approaches to the intersection or location of the non-functioning signal lamp or pedestrian control indication is less than 80 kilometres per hour and the signal that is not functioning is a green or a pedestrian “walk” signal, the standard is to repair or replace the defective component by the end of the next business day. O. Reg. 239/02, s. 13 (3); O. Reg. 366/18, s. 13.

(4) In this section and section 14,

“cycle” means a complete sequence of traffic control indications at a location;

“display” means the illuminated and non-illuminated signals facing the traffic;

“indication” has the same meaning as in the *Highway Traffic Act*;

“phase” means a part of a cycle from the time where one or more traffic directions receive a green indication to the time where one or more different traffic directions receive a green indication;

“power failure” means a reduction in power or a loss in power preventing the traffic control signal system from operating as intended;

“traffic control signal” has the same meaning as in the *Highway Traffic Act*;

“traffic control signal system” has the same meaning as in the *Highway Traffic Act*. O. Reg. 239/02, s. 13 (4).

Traffic control signal system sub-systems

14. (1) The standard is to inspect, test and maintain the following traffic control signal system sub-systems once per calendar year, with each inspection taking place not more than 16 months from the previous inspection:

1. The display sub-system, consisting of traffic signal and pedestrian crossing heads, physical support structures and support cables.
2. The traffic control sub-system, including the traffic control signal cabinet and internal devices such as timer, detection devices and associated hardware, but excluding conflict monitors.
3. The external detection sub-system, consisting of detection sensors for all vehicles, including emergency and railway vehicles and pedestrian push- buttons. O. Reg. 239/02, s. 14 (1); O. Reg. 47/13, s. 13 (1); O. Reg. 366/18, s. 13.

(1.1) A traffic control signal system sub-system that has been inspected, tested and maintained in accordance with subsection (1) is deemed to be in a state of repair until the next inspection in accordance with that subsection, provided that the municipality does not acquire actual knowledge that the traffic control signal system sub-system has ceased to be in a state of repair. O. Reg. 47/13, s. 13 (2).

(2) The standard is to inspect, test and maintain conflict monitors every five to seven months and at least twice per calendar year. O. Reg. 239/02, s. 14 (2); O. Reg. 47/13, s. 13 (3); O. Reg. 366/18, s. 13.

(2.1) A conflict monitor that has been inspected, tested and maintained in accordance with subsection (2) is deemed to be in a state of repair until the next inspection in accordance with that subsection, provided that the municipality does not acquire actual knowledge that the conflict monitor has ceased to be in a state of repair. O. Reg. 47/13, s. 13 (4).

(3) In this section,

“conflict monitor” means a device that continually checks for conflicting signal indications and responds to a conflict by emitting a signal. O. Reg. 239/02, s. 14 (3).

Bridge deck spalls

15. (1) If a bridge deck spall exceeds both the surface area and depth set out in the Table to this section, the standard is to repair the bridge deck spall within the time set out in the Table after becoming aware of the fact. O. Reg. 239/02, s. 15 (1); O. Reg. 366/18, s. 13.

(2) A bridge deck spall is deemed to be in a state of repair if its surface area or depth is less than or equal to that set out in the Table. O. Reg. 239/02, s. 15 (2); O. Reg. 47/13, s. 14.

(3) In this section,

“bridge deck spall” means a cavity left by one or more fragments detaching from the paved surface of the roadway or shoulder of a bridge. O. Reg. 239/02, s. 15 (3).

TABLE
BRIDGE DECK SPALLS

Class of Highway	Surface Area	Depth	Time
1	600 cm ²	8 cm	4 days
2	800 cm ²	8 cm	4 days
3	1,000 cm ²	8 cm	7 days
4	1,000 cm ²	8 cm	7 days
5	1,000 cm ²	8 cm	7 days

O. Reg. 239/02, s. 15, Table.

Roadway surface discontinuities

16. (1) If a surface discontinuity on a roadway, other than a surface discontinuity on a bridge deck, exceeds the height set out in the Table to this section, the standard is to repair the surface discontinuity within the time set out in the Table after becoming aware of the fact. O. Reg. 23/10, s. 9; O. Reg. 366/18, s. 13.

(1.1) A surface discontinuity on a roadway, other than a surface discontinuity on a bridge deck, is deemed to be in a state of repair if its height is less than or equal to the height set out in the Table to this section. O. Reg. 47/13, s. 15.

(2) If a surface discontinuity on a bridge deck exceeds five centimetres, the standard is to deploy resources as soon as practicable after becoming aware of the fact to repair the surface discontinuity on the bridge deck. O. Reg. 23/10, s. 9; O. Reg. 366/18, s. 13.

(2.1) A surface discontinuity on a bridge deck is deemed to be in a state of repair if its height is less than or equal to five centimetres. O. Reg. 47/13, s. 15.

(3) In this section,

“surface discontinuity” means a vertical discontinuity creating a step formation at joints or cracks in the paved surface of the roadway, including bridge deck joints, expansion joints and approach slabs to a bridge. O. Reg. 23/10, s. 9.

TABLE
SURFACE DISCONTINUITIES

Class of Highway	Height	Time
1	5 cm	2 days
2	5 cm	2 days

3	5 cm	7 days
4	5 cm	21 days
5	5 cm	21 days

O. Reg. 239/02, s. 16, Table.

Sidewalk surface discontinuities

16.1 (1) The standard for the frequency of inspecting sidewalks to check for surface discontinuity is once per calendar year, with each inspection taking place not more than 16 months from the previous inspection. O. Reg. 23/10, s. 10; O. Reg. 47/13, s. 16 (1); O. Reg. 366/18, s. 13.

(1.1) A sidewalk that has been inspected in accordance with subsection (1) is deemed to be in a state of repair with respect to any surface discontinuity until the next inspection in accordance with that subsection, provided that the municipality does not acquire actual knowledge of the presence of a surface discontinuity in excess of two centimetres. O. Reg. 47/13, s. 16 (2).

(2) If a surface discontinuity on or within a sidewalk exceeds two centimetres, the standard is to treat the surface discontinuity within 14 days after acquiring actual knowledge of the fact. O. Reg. 366/18, s. 14.

(2.1) REVOKED: O. Reg. 366/18, s. 14.

(3) A surface discontinuity on or within a sidewalk is deemed to be in a state of repair if it is less than or equal to two centimetres. O. Reg. 366/18, s. 14.

(4) For the purpose of subsection (2), treating a surface discontinuity on or within a sidewalk means taking reasonable measures to protect users of the sidewalk from the discontinuity, including making permanent or temporary repairs, alerting users' attention to the discontinuity or preventing access to the area of discontinuity. O. Reg. 366/18, s. 14.

(5) In this section,

“surface discontinuity” means a vertical discontinuity creating a step formation at any joint or crack in the surface of the sidewalk or any vertical height difference between a utility appurtenance found on or within the sidewalk and the surface of the sidewalk. O. Reg. 366/18, s. 14.

Encroachments, area adjacent to sidewalk

16.2 (1) The standard for the frequency of inspecting an area adjacent to a sidewalk to check for encroachments is once per calendar year, with each inspection taking place not more than 16 months from the previous inspection. O. Reg. 366/18, s. 15.

(2) The area adjacent to a sidewalk that has been inspected in accordance with subsection (1) is deemed to be in a state of repair in respect of any encroachment present. O. Reg. 366/18, s. 15.

(3) For greater certainty, the area adjacent to a sidewalk begins at the outer edges of a sidewalk and ends at the lesser of the limit of the highway, the back edge of a curb if there is a curb and a maximum of 45 cm. O. Reg. 366/18, s. 15.

(4) The area adjacent to a sidewalk is deemed to be in a state of repair in respect of any encroachment present unless the encroachment is determined by a municipality to be highly unusual given its character and location or to constitute a significant hazard to pedestrians. O. Reg. 366/18, s. 15.

(5) If a municipality determines that an encroachment is highly unusual given its character and location or constitutes a significant hazard to pedestrians, the standard is to treat the encroachment within 28 days after making such a determination, and the encroachment is deemed in a state of repair for 28 days from the time of the determination by the municipality. O. Reg. 366/18, s. 15.

(6) For the purpose of subsection (4), treating an encroachment means taking reasonable measures to protect users, including making permanent or temporary repairs, alerting users' attention to the encroachment or preventing access to the area of the encroachment. O. Reg. 366/18, s. 15.

Snow accumulation on sidewalks

16.3 (1) Subject to section 16.4, the standard for addressing snow accumulation on a sidewalk after the snow accumulation has ended is,

- a) to reduce the snow to a depth less than or equal to 8 centimetres within 48 hours; and
- b) to provide a minimum sidewalk width of 1 metre. O. Reg. 366/18, s. 15.

(2) If the depth of snow accumulation on a sidewalk is less than or equal to 8 centimetres, the sidewalk is deemed to be in a state of repair in respect of snow accumulation. O. Reg. 366/18, s. 15.

(3) If the depth of snow accumulation on a sidewalk exceeds 8 centimetres while the snow continues to accumulate, the sidewalk is deemed to be in a state of repair with respect to snow accumulation, until 48 hours after the snow accumulation ends. O. Reg. 366/18, s. 15.

(4) For the purposes of this section, the depth of snow accumulation on a sidewalk may be determined in the same manner as set out in subsection 4 (4) and by the persons mentioned in subsection 4 (3) with necessary modifications. O. Reg. 366/18, s. 15.

(5) For the purposes of this section, addressing snow accumulation on a sidewalk includes,

- (a) plowing the sidewalk;
- (b) salting the sidewalk;
- (c) applying abrasive materials to the sidewalk;
- (d) applying other chemical or organic agents to the sidewalk; or
- (e) any combination of the methods described in clauses (a) to (d). O. Reg. 366/18, s. 15.

Snow accumulation on sidewalks, significant weather event

16.4 (1) If a municipality declares a significant weather event relating to snow accumulation, the standard for addressing snow accumulation on sidewalks until the declaration of the end of the significant weather event is,

- (a) to monitor the weather in accordance with section 3.1; and
- (b) if deemed practicable by the municipality, to deploy resources to address snow accumulation on sidewalks starting from the time that the municipality deems appropriate to do so. O. Reg. 366/18, s. 15.

(2) If the municipality complies with subsection (1), all sidewalks within the municipality are deemed to be in a state of repair with respect to any snow present until 48 hours following the declaration of the end of the significant weather event by the municipality. O. Reg. 366/18, s. 15.

(3) Following the end of the weather hazard in respect of which a significant weather event was declared by a municipality under subsection (1), the municipality shall,

- (a) declare the end of the significant weather event when the municipality determines it is appropriate to do so; and
- (b) address snow accumulation on sidewalks in accordance with section 16.3. O. Reg. 366/18, s. 15.

Ice formation on sidewalks and icy sidewalks

16.5 (1) Subject to section 16.6, the standard for the prevention of ice formation on sidewalks is to,

- (a) monitor the weather in accordance with section 3.1 in the 24-hour period preceding an alleged formation of ice on a sidewalk; and
- (b) treat the sidewalk if practicable to prevent ice formation or improve traction within 48 hours if the municipality determines that there is a substantial probability of ice forming on a sidewalk, starting from the time that the municipality determines is the appropriate time to deploy resources for that purpose. O. Reg. 366/18, s. 15.

(2) If ice forms on a sidewalk even though the municipality meets the standard set out in subsection (1), the sidewalk is deemed to be in a state of repair in respect of ice until 48 hours after the municipality first becomes aware of the fact that the sidewalk is icy. O. Reg. 366/18, s. 15.

(3) The standard for treating icy sidewalks after the municipality becomes aware of the fact that a sidewalk is icy is to treat the icy sidewalk within 48 hours, and an icy sidewalk is deemed to be in a state of repair for 48 hours after it has been treated. O. Reg. 366/18, s. 15.

(4) For the purposes of this section, treating a sidewalk means applying materials including salt, sand or any combination of salt and sand to the sidewalk. O. Reg. 366/18, s. 15.

Icy sidewalks, significant weather event

16.6 (1) If a municipality declares a significant weather event relating to ice, the standard for addressing ice formation or ice on sidewalks until the declaration of the end of the significant weather event is,

- (a) to monitor the weather in accordance with section 3.1; and
- (b) if deemed practicable by the municipality, to deploy resources to treat the sidewalks to prevent ice formation or improve traction, or treat the icy sidewalks, starting from the time that the municipality deems appropriate to do so. O. Reg. 366/18, s. 15.

(2) If the municipality complies with subsection (1), all sidewalks within the municipality are deemed to be in a state of repair with respect to any ice which forms or is present until 48 hours after the declaration of the end of the significant weather event by the municipality. O. Reg. 366/18, s. 15.

(3) Following the end of the weather hazard in respect of which a significant weather event was declared by a municipality under subsection (1), the municipality shall,

- (a) declare the end of the significant weather event when the municipality determines it is appropriate to do so; and
- (b) address the prevention of ice formation on sidewalks or treat icy sidewalks in accordance with section 16.5. O. Reg. 366/18, s. 15.

Winter sidewalk patrol

16.7 (1) If it is determined by the municipality that the weather monitoring referred to in section 3.1 indicates that there is a substantial probability of snow accumulation on sidewalks in excess of 8 cm, ice formation on sidewalks or icy sidewalks, the standard for patrolling sidewalks is to patrol sidewalks that the municipality selects as representative of its sidewalks at intervals deemed necessary by the municipality. O. Reg. 366/18, s. 15.

(2) Patrolling a sidewalk consists of visually observing the sidewalk, either by driving by the sidewalk on the adjacent roadway or by driving or walking on the sidewalk or by electronically monitoring the sidewalk, and may be performed by persons responsible for patrolling roadways or sidewalks or by persons responsible for or performing roadway or sidewalk maintenance activities. O. Reg. 366/18, s. 15.

Closure of a highway

16.8 (1) When a municipality closes a highway or part of a highway pursuant to its powers under the Act, the highway is deemed to be in a state of repair in respect of all conditions described in this Regulation from the time of the closure until the highway is re-opened by the municipality. O. Reg. 366/18, s. 15.

(2) For the purposes of subsection (1), a highway or part of a highway is closed on the earlier of,

(a) when a municipality passes a by-law to close the highway or part of the highway; and

(b) when a municipality has taken such steps as it determines necessary to temporarily close the highway or part of a highway. O.

Reg. 366/18, s. 15.

Declaration of significant weather event

16.9. A municipality declaring the beginning of a significant weather event or declaring the end of a significant weather event under this Regulation shall do so in one or more of the following ways:

1. By posting a notice on the municipality's website.

2. By making an announcement on a social media platform, such as Facebook or Twitter.

3. By sending a press release or similar communication to internet, newspaper, radio or television media.

4. By notification through the municipality's police service.

5. By any other notification method required in a by-law of the municipality. O. Reg. 366/18, s. 15.

REVIEW OF REGULATION

Review

17. (1) The Minister of Transportation shall conduct a review of this Regulation and Ontario Regulation 612/06 (Minimum Maintenance Standards for Highways in the City of Toronto) made under the *City of Toronto Act, 2006* every five years. O. Reg. 613/06, s. 2.

(2) Despite subsection (1), the first review after the completion of the review started before the end of 2007 shall be started five years after the day Ontario Regulation 23/10 is filed. O. Reg. 23/10, s. 11.

18. OMITTED (PROVIDES FOR COMING INTO FORCE OF PROVISIONS OF THIS REGULATION). O. Reg. 239/02, s. 18.

THE CORPORATION OF THE
MUNICIPALITY OF GREENSTONE

POLICY MANUAL

SECTION: PUBLIC SERVICES

**SUBJECT: Winter Maintenance of
Municipal Roads and
Travel Ways**

DATE: March 13, 2017

AUTHORIZATION: 17-43

Purpose

To outline acceptable service standards for winter maintenance, snow removal and ice control for municipal roadways, boulevards, sidewalks, and parking lots.

Policy Statement

The Municipality of Greenstone will coordinate winter road maintenance activity to comply with the Provincial Minimum Maintenance Standard O. Reg. 239/02.

It is the intention of the Municipality to provide practical, safe access to connecting highways, residences, businesses and municipal facilities. Measures of salting, sanding, and/or snow removal will be determined, based on the type and severity of weather event. Operations may deviate from policy standards at the discretion of the Municipality, to address circumstances such as significant weather events.

It is the Municipality's policy to commence snow removal operations on Michael Power Boulevard / Main Street / and the former section of Highway 584 north of Geraldton, classified as a CLASS 4 road, upon notification of the expectation of the accumulation of snow equal to or greater than 2 cm (approximately 1 inch), and to apply salt and/or sand on slippery road surfaces when required. Notification is based upon weather report information and road patrols conducted by municipal staff.

It is the Municipality's policy to commence snow removal operations on CLASS 5 roads, upon notification of the expectation of accumulations of 8 to 10 cm (3 to 4 inches) of snowfall. Notification is based upon weather report information and road patrols conducted by municipal staff. The policy outlined above is intended to serve as the normal operating procedures for winter maintenance, snow removal and/or ice control for the Municipality of Greenstone. Circumstances which may interfere with the implementation of this policy are as follows:

- Emergencies and safety hazards
- Equipment breakdown (eg. mechanical failure, accidents)
- Snow accumulation in excess of 2.5 cm (1 inch) per hour
- Freezing rain or other ice conditions
- Traffic congestion
- Personnel illness

Definitions

In reference to the Ministry of Transportation's (MTO) Maintenance Manual (Maintenance Quality Standard-701, January 2003), "Winter traffic volume is the primary indicator used to determine the winter level of service for each class of Highway. All Highways in Ontario have been divided into five classes: Class 1,2,3,4, and 5 with Class 1 being the highest level of service and Class 5 being the lowest." The roads within the Municipality of Greenstone (that are maintained by the Municipality) are categorized by the MTO as Class 4 and 5 roads.

"The defined level of service for Class 4 is essentially bare pavement. A minimum centre bare condition (the centre 2.5 m), should be reached within 24 hours after the storm has ended or abated and be maintained until conditions permit baring the pavement to full width. This level of service applies to hard-surfaced Highways with Winter Average Daily Traffic volumes between 500 and 1,000 vehicles per day in Southern Ontario and 400 and 800 vehicles per day in Northern Ontario." (MTO, 2003)

"The defined level of service for Class 5 is that a snow pack condition on the Travelled Portion be achieved, within 24 hours after the storm. A snow pack

condition on the Travelled Portion is defined as a smooth, hard, snow covered driving surface with Shoulders that are void of loose snow. This level of service applies to gravel, surface treated or prime surfaced Highways with a Winter Average Daily Traffic volume less than 500 vehicles per day in Southern Ontario and less than 400 vehicles per day in Northern Ontario.” (MTO, 2003)

"MAJOR SNOWFALL & WEATHER EVENTS"

A major snowfall event is defined as one which results in an accumulation of more than 10 cm (4 inches) of dry snow on level open ground, or drifts exceeding 45 cm (18 inches) deep on public thoroughfares. A major weather event includes the conditions described as a major snowfall event in addition to wet snow/freezing rain equivalent to more than 2.5 cm (0.5 inches) of rain.

Guidelines

1. ORDER OF SERVICE

The Public Works Supervisor/Foreman (or designate) is responsible for:

- The timely dispatch of Municipal operators,
- Communication with assigned contractors to confirm dispatch of winter maintenance operators (if applicable), and
- Relaying driving condition advisories for Michael Power Boulevard (Class 4 road in the Geraldton Ward) from the MTO and the Ontario Provincial Police Staff Sergeant or Constable on duty to Municipal operators.

Priority One Roads will be given first priority in a major weather event. Winter maintenance (plowing, salting, sanding as appropriate) will be applied according to conditions. While response to winter maintenance activity is coordinated independently for each Ward, response is often conducted simultaneously.

Priority One Service

1. CLASS 4 HIGHWAYS

Michael Power Boulevard, Main Street, and the former section of Highway 584 north of Geraldton (all of which was formerly recognized as Highway 584 prior to being transferred to the Municipality).

2. CLASS 5 HIGHWAYS as identified and in the following order

- Hogarth Avenue West in the Geraldton Ward to accommodate hospital access from Main Street
- Primary emergency vehicle routes
- Roads that service school bus zones at schools, and school bus routes in rural areas (School days only; order of service may change on weekends)
- Roads that service municipal day care facilities

Priority Two Service

CLASS 5 HIGHWAYS: *Main collector streets*

Winter maintenance operations for Priority Two Roads will be conducted to achieve a traversable condition after Priority One Roads have been addressed as required following a major weather event. Priority Two Roads will be plowed to full road width within 12 hours after of a major snowfall event.

Where necessary, snow will be removed from the site to maintain good visibility. Intersections, railway crossings and hazardous rural locations will receive additional sanding as a safety measure at the discretion of the Municipality.

Priority Three Service

CLASS 5 HIGHWAYS: *All other streets and rural roads, except for seasonal use roads*

Priority Three Roads will be plowed in a major snowfall event after the requirements of Priority One and Priority Two Roads are met. It will be considered acceptable if Priority Three Roads become impassable to ordinary traffic during a major snowfall event. Winter maintenance operations will be arranged to achieve a

traversable condition for Priority 1, 2 & 3 Roads 12 hours after the end of a major snowfall event, and accommodate full two-way traffic within 24 hours of the end of a major snowfall event. Sanding will not be routinely carried out on Priority Three Roads except for those areas known to be of concern.

Priority Four Service

Laneways

Winter maintenance of laneways will be addressed upon meeting the requirements of Priority 1, 2 and 3 Roads. The target will be to plow all urban laneways at least one way within 48 hours of the end of a major snowfall event.

An exception applies to property owners whose sole access to their property is via a laneway, in which case the lane is considered a Priority 3 Road.

2. SIDEWALKS

Sidewalks in downtown commercial areas will be given first priority and will be plowed within 24 hours of a major snowfall event. It will be considered acceptable if all other sidewalks are plowed within 48 hours of a major snowfall event. Sidewalks will be salted/sanded at the discretion of the Public Works Supervisor/Foreman (or designate) to address hazardous conditions.

3. PARKING LOTS

All municipal parking lots will be cleared following the regular winter maintenance operations for Priority 3 roads in urban areas.