




**CITY OF HAMILTON  
PUBLIC WORKS DEPARTMENT  
Transportation Operations and Maintenance Division**

<b>TO:</b>	Chair and Members Public Works Committee
<b>COMMITTEE DATE:</b>	February 1, 2021
<b>SUBJECT/REPORT NO:</b>	Maintenance Standards for Municipal Highways Policy (PW18096(a)) (City Wide) <b>(Outstanding Business List Item)</b>
<b>WARD(S) AFFECTED:</b>	City Wide
<b>PREPARED BY:</b>	Mike Field (905) 546-2424 Ext. 4576 Bob Paul (905) 546-2424 Ext. 7641 Greg Witt (905) 546-2424 Ext. 4818
<b>SUBMITTED BY:</b>	Edward Soldo Director, Transportation Operations & Maintenance Public Works Department
<b>SIGNATURE:</b>	

## RECOMMENDATIONS

- (a) That Appendix "A" to Report PW18096(a) respecting Maintenance Standards for Municipal Highways Policy be approved; and
- (b) That the Outstanding Business List Item, Minimum Maintenance Standards Changes, be identified as completed and removed from the list.

## EXECUTIVE SUMMARY

The Minimum Maintenance Standards for Municipal Highways (MMS), established by the Province under the Municipal Act, provide for a consistent level of service and maintenance of roads, sidewalks, lighting and related infrastructure in the right-of-way across Ontario.

The standards assist in minimizing the risk of accidents and injury and providing a level of safety for the public and citizens, while allowing municipalities an ability to manage costs and liability. The standards were developed to provide municipalities with a defence against liability from actions arising with regard to levels of care on roads and

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bridges. Meeting or exceeding this level of service will reduce the overall cost of defence of claims arising from issues of road maintenance.

Through Report PW18096(a), it is recommended that Council affirm the City's approach to transportation infrastructure maintenance as it relates to the different classifications of municipal highways.

The principles and desired objectives for the level of maintenance are defined in the Maintenance Standards for Municipal Highway Policy, attached to Report PW18096(a) as Appendix "A". To ensure appropriate maintenance levels are achieved, staff will reference its Maintenance Guidelines for Levels of Service for Highways, which is attached to Report PW18096(a) as Appendix "B".

While the common law test of reasonableness continues to apply to the City's duty to provide a reasonably safe transportation system, the Road Authority uses the MMS as a framework and benchmark for providing service and the continual and ongoing development of the Transportation Quality Management System (TQMS) Operational Plan.

The TQMS is a framework that documents processes, procedures, and responsibilities to safely, effectively and efficiently maintain and operate the transportation system while meeting applicable legislative and regulatory requirements.

**Alternatives for Consideration – N/A**

**FINANCIAL – STAFFING – LEGAL IMPLICATIONS**

Financial: N/A

Staffing: N/A

Legal: Meeting the standard(s) prescribed by the MMS is intended to provide municipalities with a complete defence to a claim alleging failure to maintain the roadway or sidewalks. Therefore, where the City is able to meet or exceed the MMS within this policy, a complete defence based upon the MMS will be available to the City. Meeting or exceeding this level of service will reduce the overall cost of defence of claims arising from issues of road maintenance.

The purpose of this policy is to establish an approach which is reflective of an operational plan established pursuant to available staffing, equipment, and budget resources.

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**HISTORICAL BACKGROUND**

The second 5-year review of the MMS was completed in 2018 by the Province and the current version of the MMS came into force on May 3, 2018.

In December 2018, Council approved "Minimum Maintenance Standards Changes" (PW18096) and recommendations including:

- (a) That staff be directed to develop, and report back to Council, an updated policy setting out maintenance standards of repair for highways under the jurisdiction of the City of Hamilton, with consideration of the standards contained in the *Municipal Act, 2001*, Ontario Regulation (O.Reg.) 239/02 – Minimum Maintenance Standards for Municipal Highways, and the existing Winter Control Level of Service (attached as Appendix "D" to Report PW18096(a)).

Since that time, staff have reviewed the amended MMS and current programs from an operational and resourcing perspective to ensure that all regulated activities within the Road Authority generally align with the MMS while addressing the City's needs and expectations of divisions to operate within approved budget.

Through the development of the Transportation Quality Management System (TQMS) Operational Plan, documentation and data management practices are continually being improved to ensure that evidence is readily accessible to support that service standard levels are being met.

Establishing a Policy for maintenance standards reflective of provincial regulation and best practices will enable the City to capture the benefits of improved public safety, and a greater ability to defend claims against the municipality.

**POLICY IMPLICATIONS AND LEGISLATED REQUIREMENTS**

The provincial Minimum Maintenance Standards (MMS) O. Reg. 239/02 amended by 366/18 clarify the scope of the statutory defence available to the City under clause 44(3)(c) of the *Municipal Act, 2001*, as it relates to its roadway and sidewalk maintenance obligations. The Policy recommended in Report PW18096(a) aligns with the minimum standards outlined in the MMS. In some areas, the City has established higher levels of service, such as in the City's Winter Control Level of Service where certain priority roads exist during inclement weather conditions.

Council has approved Winter Control Level of Service at the Public Works Committee on March 18, 2013 Report PW13022 – attached to Report PW18096(a) as Appendix "B". The level of service exceeds the MMS and will continue.

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Council approved Streetlighting Maintenance Program Service Levels at the Public Works Committee on February 5, 2007 and updated on October 15, 2020, Report PW07024 – attached to Report PW18096(a) as Appendix “B”. The level of service exceeds the MMS and will continue.

**RELEVANT CONSULTATION**

Corporate Services Department – Legal & Risk Management Services Division were consulted in the preparation of this report and have provided their feedback.

Public Works Department – Engineering Services Division provided feedback on the Policy and report.

Planning and Economic Development Department – Transportation Planning and Parking Division have provided their feedback on the Policy and report.

**ANALYSIS AND RATIONALE FOR RECOMMENDATION(S)**

The MMS identifies six basic categories of roads all of which are defined only by traffic volume and speed limit. In 2001, when levels of service standards were harmonized, the application of provincial standards in Hamilton’s large urban setting would have resulted in a fragmented operating plan that may not have met the broader socio-economic needs of the community for transit and emergency response groups such as police, fire and ambulance.

Therefore, the City of Hamilton decided to instead incorporate three priorities for the roadway network designed to meet the needs of the community from the perspective of driver safety and emergency service provisions. Over the years, Council has modified service levels and some remain higher than the standards in provincial regulations.

Recognizing that roads are a necessary part of municipal infrastructure relied upon by the public, the City has established service levels to inspect, maintain and repair that infrastructure to reduce the risk to users. In cases of serious collisions or personal injury, municipalities are often faced with liability claims. A significant number of claims are related to road and sidewalk maintenance (both summer and winter), road design, and signage. The MMS is designed to provide municipalities with a “due diligence” defense in the event of vehicular collisions, slips, trips and falls, or other incidents.

**Operational Assessment**

After completing a comprehensive review and gap analysis of the MMS, it has identified the City is consistent with the minimum level of service for all substantive maintenance activities except for the following areas:

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Parking Signs – These signs are a sub-segment of regulatory and warning signs. On street parking is managed through the Transportation Planning and Parking Division (TPP) in the Planning & Economic Development Department. The signs are implemented in the field by the Transportation Operations & Maintenance Division (TOM) in Public Works.

There is currently no comprehensive inventory of on-street parking signs and a comprehensive plan for state of repair inspections is required. All other regulatory and warning signs are inventoried, inspected, serviced and repaired as per the guidelines out by the TOM division. Through analysis, this gap has been identified and the two divisions are working to clarify roles and responsibilities in order to determine how the levels of service will be met.

Winter Sidewalk Snow Removal - In November of 2020, Report PW19022(b) Sidewalk Snow Removal provided an overview of the existing practice and enhancement options to the level of service for winter sidewalk maintenance to be considered as part of the 2021 Operating Budget deliberations.

The Minimum Maintenance Standards (Ontario Regulation 239/02) was changed in May 2018 to contain specific sections dealing with sidewalk winter maintenance. Refer to Minimum Maintenance Standards Changes (Report PW18096).

Section 16.3 of the MMS provides a standard for snow removal on sidewalks. It states that snow accumulation on sidewalks shall be reduced to less than or equal to eight centimetres within 48 hours of the end of a snow event. The section further provides a standard of a minimum maintained width of one metre. The section does not require clearing to bare pavement; rather, simply reducing the depth to less than or equal to eight centimetres.

Sidewalks are deemed to be in a state of repair with respect to snow accumulation (a) where snow depth is less than or equal to eight centimetres; and (b) during ongoing snow accumulation, even where it exceeds eight cm, until 48 hours after the snow accumulation ends.

The current level of service is defined in By-law No. 03-296 which requires that every occupant or owner shall, within 24 hours of the cessation of a winter storm event, or within 24 hours of the cessation of a series of consecutive winter storm events, remove and clear all snow and ice from sidewalks abutting the highways in front of, or alongside, or at the rear of any occupied or unoccupied lot or vacant lot.

By-law No. 03-296 provides a higher level of service than is required through Section 16.3 of the MMS when complied with by the property owners.

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The City does not deflect or transfer liability to property owners through the sidewalk clearing by-law. As the owner of the sidewalk the City carries a full liability exposure for sidewalk slip and falls. If it can be established that the City has not satisfied the MMS in relation to a particular slip and fall incident, the City will most likely be found liable in a court of law.

#### Policy

The standards outlined in the MMS are not mandatory; as such, the City does not have to explicitly follow them. If the City cannot meet the MMS as established, it may continue to rely upon the defences that were available before the MMS were introduced (i.e. the City met its duty of keeping highways in a reasonable state of repair, by establishing a reasonable program of inspection and maintenance of highways within its jurisdiction, based upon available municipal resources). In short, the City can set its own Maintenance Standards based on its needs and resources.

To meet its duty as described above, the City's program reflects the MMS and are supported by the guidelines outlined in Appendix "B" to Report PW18096(a). These levels of service are based upon highway and sidewalk classification, and priorities based upon expected levels of pedestrian and vehicular traffic.

Meeting the MMS is a complete defence, as prescribed by section 44 of the *Municipal Act*. However, in some cases, the City is not able to meet the MMS due to available municipal resources. For this reason, it is not recommended that the MMS be adopted in its entirety. Instead, it is recommended that the program outlined in Appendix "B" to Report PW18096(a) be accepted as "guidelines".

It is recommended that the Maintenance Standards for Municipal Highways Policy in Appendix "A" to Report PW18096(a) be approved. The purpose of the policy is to clarify that the City of Hamilton will reference the MMS as a guideline for delivering a level of service for maintenance operations. The policy will provide the Road Authority with clear direction from Council on the level of maintenance effort as it relates to the different classification of municipal highways.

Under circumstances where situations fall outside of the scope of guidelines, the Road Authority will respond as deemed appropriate with respect to budgetary constraint and reasonable best practice.

#### **ALTERNATIVES FOR CONSIDERATION**

N/A

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**ALIGNMENT TO THE 2016 – 2025 STRATEGIC PLAN**

**Built Environment and Infrastructure**

Hamilton is supported by state of the art infrastructure, transportation options, buildings and public spaces that create a dynamic City.

**Our People and Performance**

Hamiltonians have a high level of trust and confidence in their City government.

**APPENDICES AND SCHEDULES ATTACHED**

Appendix "A" to Report PW18096(a) - Maintenance Standards for Municipal Highways Policy


Appendix "B" to Report PW18096(a) - Maintenance Guidelines for Levels of Service for Highways

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<b>Public Works Department Policy</b>		Content Updated: Feb 2021
Maintenance Standards for Municipal Highways		
Policy No: PW-TOM-Y-026		Version No: 1
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### ***Maintenance Standards for Municipal Highways Policy***

<b>POLICY STATEMENT</b>	<p>Part III of the <i>Municipal Act, 2001 S.O. 2001, Chapter 25</i>, gives municipalities jurisdiction over highways and provides for the municipality to keep the highway or bridge in a state of repair that is reasonable in the circumstances, including the character and location of the highway or bridge, 2001, c. 25, s. 44(1).</p> <p>In addition, the Minister of Transportation may make regulations establishing minimum standards of repair for highways and bridges or any class of them, 2001, c. 25, s. 44(4).</p> <p>The Minister made Ontario Regulation 239/02, amended by Ontario Regulation 366/18, filed on May 3, 2018 which provides for Minimum Maintenance Standards for Municipal Highways and is the foundation for the highway maintenance program.</p> <p>The City of Hamilton is committed to providing a safe, accessible and efficient transportation system for the movement of people, goods and services across the City in keeping with applicable provincial legislation, accepted standards, and Council approved service levels. This Policy outlines the City's approach to maintenance of its municipal highways.</p>
<b>PURPOSE</b>	<p>The purpose of this policy is to clarify that the City of Hamilton will reference the Minimum Maintenance Standards for Municipal Highways (O. Reg. 239/02 as amended) as a guideline for delivering a level of service for maintenance operations.</p> <p>This policy will provide the Road Authority with clear direction from Council on the level of maintenance effort as it relates to the different classification of municipal highways.</p> <p>The provisions and standards in this policy should be followed to manage the City's liability and risk to keep its highway infrastructure, including sidewalks in a good state of repair.</p>
<b>SCOPE</b>	<p>This policy shall apply to all highways assumed and maintained as public highways by the City of Hamilton. Notwithstanding the foregoing, neither the City of Hamilton nor its officials or employees make any promise, assurance or guarantee that the services provided by the Road Authority will be in excess of the minimum standard, as required by regulation and detailed herein. Inherent within the standard is the expectation that drivers will act responsibly and will operate their vehicles, at all times, reasonably</p>




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	<p>with due regard for the prevailing weather and roadway conditions.</p> <p>The Minimum Maintenance Standards in O. Reg. 239/02 (MMS) identifies road classifications, levels of maintenance and service frequencies for various highway components. The standards apply to a range of infrastructure elements including but not limited to:</p> <ul style="list-style-type: none"> <li>• Pavement surface</li> <li>• Street Light Luminaires</li> <li>• Signs</li> <li>• Traffic Control</li> <li>• Winter maintenance</li> <li>• Monitoring</li> </ul> <p>In the MMS, municipally owned highways are classified based on their average daily traffic and posted speed limits. Based on the classification, the MMS defines minimum levels of inspection and repair.</p> <p>Associated maintenance activities will be established to protect the quality, integrity and safety of the transportation infrastructure.</p>
<b>PRINCIPLES (if applicable)</b>	<p>The following principles apply to this Policy:</p> <ol style="list-style-type: none"> <li>1. Operational activities of the Road Authority shall be directed to maintain the City of Hamilton's public highways to the prescribed standards herein. Care shall be taken first to assure that the minimum standards are maintained and secondly that such services are efficiently and effectively rendered.</li> <li>2. Neither the City nor its officials make any promises or assurance that public highways or any public highway in particular will be maintained in excess of the minimum standards herein defined now or in the future. The fact that the City may exceed those standards, when the resources available permit it to do so, does not change the minimum standards prescribed herein.</li> <li>3. The Maintenance Standards Policy is based on the assumption that not all infrastructure need be maintained at the same level of service but depends on its role in the total transportation network and on other various services the City provides, be they emergency or non-emergency.</li> <li>4. This policy uses the MMS as a guide to set out the level of</li> </ol>

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	<p>service for maintenance of highways, with the exception of winter maintenance and streetlighting, which is a higher Council approved level of service.</p> <p>5. That where situations arise or applications be made which fall outside of the scope of standards, the Road Authority shall respond in a manner that is appropriate with respect to budgetary constraint and reasonable best practice.</p> <p>6. This policy will promote environmental stewardship by managing lifecycle costs of asset ownership and making use of acceptable recycled materials.</p> <p>7. The standards will assist in inform preparing budgets and decisions prioritizing resources.</p>
<b>TERMS &amp; CONDITIONS</b>	<p>The following terms and conditions apply to this Policy:</p> <p>(From the <i>Highway Traffic Act</i>, R.S.O. 1990, c. H.8)  <b>Highway</b> – includes a common and public highway, street, avenue, parkway, driveway, square, place, bridge, viaduct or trestle, any part of which is intended for or used by the general public for the passage of vehicles and includes the area between the lateral property lines thereof</p> <p><b>Roadway</b> – means the part of the highway that is improved, designed or ordinarily used for vehicular traffic, but does not include the shoulder, and, where a highway includes two or more separate roadways, the term “roadway” refers to any one roadway separately and not to all of the roadways collectively</p> <p>(From the Minimum Maintenance Standards for Municipal Highways, O. Reg. 239/02 as amended)</p> <p><b>Classification of Highways</b> – every highway or part of a highway under the jurisdiction of a municipality in Ontario is classified 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).</p> <p>(From the <i>Public Transportation and Highway Improvement Act</i>, R.S.O. 1990, c. P.50)</p> <p><b>Road Authority</b> – means a body having jurisdiction and control of a highway.</p>

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	<p><b>Maintenance</b> – includes repair.</p>
<b>COMPLIANCE</b>	<p>The City is required to maintain all highways and sidewalks within its jurisdiction in a reasonable state of repair.</p> <p>The City must keep records to prove that at the time an action arose the alleged default was covered by the standard and that the service provided by the municipality met or exceeded the standard.</p> <p>The policy recognizes that operational decisions during the winter season will need to be made based on local conditions in the field depending upon the extent and severity of a winter storm event, and as a result, there may need to be some reasonable deviations from this policy. Under such circumstances, the City will endeavour to recover winter maintenance operations in accordance with the level of service as soon as practicable.</p> <p>This policy is based on normal circumstances (e.g. winter weather conditions), reliability and availability of resources both human and physical. The City does not guarantee a level of service under abnormal, emergency, or extreme winter conditions nor in the event of a work stoppage.</p> <p>It is acknowledged that conditions may occur which temporarily prevent achieving levels assigned. In such cases, efforts will be made to keep roads open and in a reasonable state, consistent with available resources.</p>
<b>RELATED</b>	<p>The following documents are related to the Maintenance Standards for Municipal Highways Policy and employees must be aware and abide by these as well:</p> <ul style="list-style-type: none"> <li>• City of Hamilton Maintenance Guidelines for Levels of Service for Highways</li> <li>• By-Law 03-296, the Snow Removal By-Law</li> <li>• Strategic Asset Management Policy</li> <li>• <i>Municipal Act 2001, S. O. 2001, c. 25</i></li> <li>• Minimum Maintenance Standards for Municipal Highways (O. Reg. 239/02 as amended)</li> <li>• <i>Highway Traffic Act, R.S.O. 1990, c. H.8</i></li> <li>• Standards for Bridges (O. Reg. 104/97)</li> <li>• Ontario Traffic Manual, Book 11</li> </ul>
<b>HISTORY</b>	<p>The following stakeholders were consulted in the creation or revisions made to this Policy:</p>

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Public Works Department, Transportation Operations & Maintenance Division – Roadway Maintenance Section, Transportation Operations Section

Public Works Department, Engineering Services Division – Asset Management Section

Planning and Economic Development Department - Transportation Planning and Parking Division

Corporate Services Department, Legal & Risk Management Services Division – Legal Services Section, Risk Management Section

City of Hamilton Maintenance Guidelines for Levels of Service for Highways				
Maintenance Category	Maintenance Activities	Description	Level of Service / Minimum Maintenance Standard	Related Reports
Monitoring	Roadway Patrol	Consists of observing the highway, either by driving on or by electronically monitoring and may be performed by persons responsible for patrolling highways or performing highway maintenance activities.	<p>Patrolling frequency:</p> <p>Class 1 - 3 times every 7 days            Class 2 - 2 times every 7 days            Class 3 - once every 7 days            Class 4 - once every 14 days            Class 5 - once every 30 days</p>	
	Weather Monitoring	To monitor the current weather and forecast for next 24 hours	<p>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 3 times per calendar day, whichever is more frequent.</p> <p>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.</p>	
	Sidewalk Winter Patrol	Patrol sidewalks that the municipality selects as representative of its sidewalks at intervals deemed necessary by the municipality	If weather monitoring indicates there is a substantial probability of snow accumulation on sidewalks in excess of 8 cm, ice formation on sidewalks or icy sidewalks, the standard is to patrol representative sidewalks at intervals deemed necessary by the municipality.	

City of Hamilton Maintenance Guidelines for Levels of Service for Highways				
Maintenance Category	Maintenance Activities	Description	Level of Service / Minimum Maintenance Standard	Related Reports
	Sidewalk Surface Discontinuities and Encroachments, area adjacent to sidewalk	(a) Surface discontinuity means a vertical discontinuity creating a step formation at joints or cracks in the surface of the sidewalk. (b) Check for encroachments to determine if they are highly unusual or constitute a significant hazard to users.	The standard for the frequency of inspecting sidewalks to check for surface discontinuity and the area adjacent to sidewalks for encroachments is once per calendar year, with each inspection taking place not more than 16 months from the previous inspection. Treat encroachment within 28 days, if required.	

City of Hamilton Maintenance Guidelines for Levels of Service for Highways				
Maintenance Category	Maintenance Activities	Description	Level of Service / Minimum Maintenance Standard	Related Reports
Winter Maintenance	Snow Accumulation - Roadways	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: Newly-fallen snow Wind-blown snow Slush	<p>The standard* for addressing snow accumulation on roadways:</p> <p>Class 1/Priority 1 (Parkways/Arterials) - 2.5 cm depth - 4-hour response</p> <p>Class 1-5/Priority 1 (Escarpment Crossings) - 5 cm depth - 4-hour response</p> <p>Class 2/Priority 2A (Collectors Primary) - 8 cm depth - 8 hour response</p> <p>Class 2-3/Priority 2B (Collectors Secondary) - 8 cm depth - 8-hour response</p> <p>Class 4-6/Priority 3 (Rural Hard top) - 10 cm - 24-hour response</p> <p>Class 5/Priority 3 (Residential) - 8 cm - 24-hour response</p> <p>Class 6/Priority 3 (Rural Loose top) - 10 cm - 24-hour response.</p>	<p>PW13022 Winter Control Program Service Level Review</p> <p><a href="http://www2.hamilton.ca/NR/rdonlyres/6F5643A3-C6D0-4AE9-942D-05DF5FE9F3DE/0/Mar18Item83_PW13022.pdf">http://www2.hamilton.ca/NR/rdonlyres/6F5643A3-C6D0-4AE9-942D-05DF5FE9F3DE/0/Mar18Item83_PW13022.pdf</a></p> <p>PW18096</p> <p><a href="https://pub-hamilton.escribemeetings.com/filestream.ashx?DocumentId=173914">https://pub-hamilton.escribemeetings.com/filestream.ashx?DocumentId=173914</a></p>

	<p>Snow Accumulation - Bicycle Lanes</p>	<p>Refers to:</p> <p>a) a portion of a roadway that has been designated by pavement markings or signage for the preferential or exclusive use of cyclists, or</p> <p>b) a portion of a roadway that has been designated for the exclusive use of cyclists by signage and a physical or marked buffer</p> <p>Does not apply to other types of bicycle facilities.</p>	<p>Note - snow on bicycle lanes are generally cleared while the roadways are being cleared</p> <p>The standard for addressing snow accumulation on bicycle lanes:</p> <p>Class 1 - 2.5 cm depth – 8-hour response</p> <p>Class 2 - 5 cm - 12-hour response</p> <p>Class 3 - 8 cm - 24-hour response</p> <p>Class 4 - 8 cm - 24-hour response</p> <p>Class 5 - 10 cm - 24-hour response.</p>	<p>PW10096a Winter Control Program Maintenance Service Levels for Cycling Infrastructure - Pilot Program</p> <p><a href="http://www2.hamilton.ca/NR/rdonlyres/1FB374FF-010F-496B-833B-0B21B7C927EE/0/Jun20EDRMS_n180033_v1_8_1PW10096a.pdf">http://www2.hamilton.ca/NR/rdonlyres/1FB374FF-010F-496B-833B-0B21B7C927EE/0/Jun20EDRMS_n180033_v1_8_1PW10096a.pdf</a></p>
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## City of Hamilton Maintenance Guidelines for Levels of Service for Highways

Maintenance Category	Maintenance Activities	Description	Level of Service / Minimum Maintenance Standard	Related Reports
	Snow Accumulation - Segregated Bicycle Lanes	A portion of a roadway that has been designated for the exclusive use of cyclists by signage and a physical or marked buffer.	Within 24 hours of the cessation of any precipitation and/or accumulation of snow or ice (event), or within 24 hours of the cessation of a series of Consecutive events, remove and clear all snow and ice from sidewalks abutting the highways in front of, or alongside, or at the rear of any occupied or unoccupied lot, or vacant lot*	
	Snow Accumulation on Sidewalks	Snow removal from sidewalks	<p>To reduce the snow to a depth less than or equal to 8 cm within 48 hours; and to provide a minimum sidewalk width of 1 m.</p> <p>If the depth of snow accumulation on a sidewalk is less than or equal to 8 cm, the sidewalk is deemed to be in a state of repair</p> <p>If the depth of snow accumulation on a sidewalk exceeds 8 cm while the snow continues to accumulate, the sidewalk is deemed to be in a state of repair</p>	<p>The City of Hamilton's Snow and Ice By-law No. 03-296 requires property owners and/or occupants to clear snow and ice within 24 hours after the end of a snow event from: sidewalks adjacent to their property, roofs that overhang the City sidewalk</p> <p><a href="http://www2.hamilton.ca/NR/rdonlyres/2BB4752B-D56A-4C2E-8DCC-5FD5093F9D2A/0/03296.pdf">http://www2.hamilton.ca/NR/rdonlyres/2BB4752B-D56A-4C2E-8DCC-5FD5093F9D2A/0/03296.pdf</a></p>

City of Hamilton Maintenance Guidelines for Levels of Service for Highways				
Maintenance Category	Maintenance Activities	Description	Level of Service / Minimum Maintenance Standard	Related Reports
	Ice formation on roadways and icy roadways	Treating a roadway means applying material to the roadway, including but not limited to, salt, sand or any combination of salt and sand.	<p>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:</p> <p>Class 1 - 6-hour response  Class 2 - 8-hour response  Class 3 - 16-hour response  Class 4 and 5 - 24-hour response</p> <p>If ice forms on a roadway, the roadway must be treated once the City becomes aware of that within the following times:</p> <p>Class 1 - 3 hours  Class 2 - 4 hours  Class 3 - 8 hours  Class 4 - 12 hours  Class 5 - 16 hours.</p>	<p>PW13022 Winter Control Program Service Level Review</p> <p><a href="http://www2.hamilton.ca/NR/rdonlyres/6F5643A3-C6D0-4AE9-942D-05DF5FE9F3DE/0/Mar18Item83_PW13022.pdf">http://www2.hamilton.ca/NR/rdonlyres/6F5643A3-C6D0-4AE9-942D-05DF5FE9F3DE/0/Mar18Item83_PW13022.pdf</a></p> <p>PW18096  <a href="https://pub-hamilton.escribemeetings.com/filestream.ashx?DocumentId=173914">https://pub-hamilton.escribemeetings.com/filestream.ashx?DocumentId=173914</a></p>

City of Hamilton Maintenance Guidelines for Levels of Service for Highways				
Maintenance Category	Maintenance Activities	Description	Level of Service / Minimum Maintenance Standard	Related Reports
Pavement Surface	Potholes	If a pothole exceeds both the surface area and depth set out in Level of Service column the standard is to repair the pothole within the time set out in the Level of Service Column, as appropriate, after becoming aware of the fact.	<p>Potholes on Paved Surface of Roadway (minimum depth of 8 cm):</p> <p>Class 1 - 600 cm<sup>2</sup> (surface area) 4 days</p> <p>Class 2 - 800 cm<sup>2</sup> - 4 days</p> <p>Class 3 - 1000 cm<sup>2</sup> - 7 days</p> <p>Class 4 - 1000 cm<sup>2</sup> - 14 days</p> <p>Class 5 - 1000 cm<sup>2</sup> - 30 days</p> <p>Potholes on Non-paved Surface of Roadway (minimum surface area of 1500 cm<sup>2</sup>):</p> <p>Class 3 - 8 cm (depth)- 7 days</p> <p>Class 4 - 10 cm- 14 days</p> <p>Class 5 - 12 cm - 30 days</p> <p>Potholes on Paved or Non-Paved Surface of Shoulder (minimum surface area of 1500 cm<sup>2</sup>):</p> <p>Class 1 - 8 cm - 7 days</p> <p>Class 2 - 8 cm - 7 days</p> <p>Class 3 - 8 cm - 14 days</p> <p>Class 4 - 10 cm - 30 days</p> <p>Class 5 - 12 cm - 60 days.</p>	

City of Hamilton Maintenance Guidelines for Levels of Service for Highways				
Maintenance Category	Maintenance Activities	Description	Level of Service / Minimum Maintenance Standard	Related Reports
	Shoulder drop-offs	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.	After becoming aware of the fact, address within: Class 1 - 4 days Class 2 - 4 days Class 3 - 7 days Class 4 - 14 days Class 5 - 30 days	

City of Hamilton Maintenance Guidelines for Levels of Service for Highways				
Maintenance Category	Maintenance Activities	Description	Level of Service / Minimum Maintenance Standard	Related Reports
	Cracks	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 3 m or more, the standard is to repair the crack within the time set out in Level of Service column.	After becoming aware of the fact, address within: Class 1 - 30 days Class 2 - 30 days Class 3 - 60 days Class 4 - 180 days Class 5 - 180 days	
	Debris	Debris means any material (except snow, slush or ice) or object on a roadway.	Deploy resources, as soon as practicable after becoming aware of the fact, to remove the debris.	
	Bridge Deck Spalls	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. Repair if a bridge deck spall exceeds both the surface area and depth set out in the Level of Service column.	Class 1 - 600 cm <sup>2</sup> (surface area) - 8 cm (depth) - 4 days Class 2 - 800 cm <sup>2</sup> - 8 cm - 4 days Class 3 - 1,000 cm <sup>2</sup> - 8 cm - 7 days Class 4 - 1,000 cm <sup>2</sup> - 8 cm - 7 days Class 5 - 1,000 cm <sup>2</sup> - 8 cm - 7 days	

City of Hamilton Maintenance Guidelines for Levels of Service for Highways				
Maintenance Category	Maintenance Activities	Description	Level of Service / Minimum Maintenance Standard	Related Reports
	Roadway Surface Discontinuities	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. If a surface discontinuity on a roadway, other than a surface discontinuity on a bridge deck, exceeds the height set out in the Level of Service column, the minimum standard is to repair the surface discontinuity within the time set out in the Level of Service column after becoming aware of the fact.	Class 1 - 5 cm - 2 days Class 2 - 5 cm - 2 days Class 3 - 5 cm - 7 days Class 4 - 5 cm - 21 days Class 5 - 5 cm - 21 days	

City of Hamilton Maintenance Guidelines for Levels of Service for Highways				
Maintenance Category	Maintenance Activities	Description	Level of Service / Minimum Maintenance Standard	Related Reports
Street Light Luminaires	Luminaires	The primary objective for streetlighting maintenance is to have all equipment in proper working order at all times.	<p>The standard* for maintaining streetlighting:</p> <p>A. Light-outs or cycling lights, public or staff complaint - Standard repairs to be completed within 7 calendar days</p> <p>B. Night inspection frequency - Night inspections to identify light-outs on Class 1 and 2 to be conducted 4 times per year (includes major arterials) - Night inspections to identify light-outs on Class 3-6 to be conducted 2 times per year (generally residential neighbourhoods).</p> <p>C. Light-outs or cycling lights identified via Patrol - Standard repairs identified through night patrol be repaired within 14 days of the end of the night patrol cycle.</p>	<p>Streetlighting Maintenance Program Service Levels, Asset Management and Service Provider Transition (PW07024)</p> <p><a href="http://www2.hamilton.ca/NR/rdonlyres/308F11A2-30BA-4EB4-9C46-6A57AA208B0C/0/Feb19PW07024.pdf">http://www2.hamilton.ca/NR/rdonlyres/308F11A2-30BA-4EB4-9C46-6A57AA208B0C/0/Feb19PW07024.pdf</a></p> <p><a href="http://www2.hamilton.ca/Hamilton.Portal/Inc/PortalPDFs/ClerkPDFs/Public-Works/2005/Jan04/PW05008.pdf">http://www2.hamilton.ca/Hamilton.Portal/Inc/PortalPDFs/ClerkPDFs/Public-Works/2005/Jan04/PW05008.pdf</a></p>

City of Hamilton Maintenance Guidelines for Levels of Service for Highways				
Maintenance Category	Maintenance Activities	Description	Level of Service / Minimum Maintenance Standard	Related Reports
Signs	Signs	To inspect signs of a type listed in MMS to check to see that they meet the retro-reflectivity requirements of the Ontario Traffic Manual.	<p>Inspection is once per calendar year, with each inspection taking place not more than 16 months from the previous inspection. Repair or replace any of the following types of signs that are illegible, improperly oriented, obscured or missing:</p> <ol style="list-style-type: none"> <li>1) Checkerboard</li> <li>2) Curve sign with advisory speed tab</li> <li>3) Do not enter 3.1) Load Restricted Bridge 3.2) Low Bridge 3.3) Low Bridge Ahead</li> <li>4) One Way</li> <li>5) School Zone Speed Limit</li> <li>6) Stop</li> <li>7) Stop Ahead</li> <li>8) Stop Ahead, New</li> <li>9) Traffic Signal Ahead, New</li> <li>10) Two-Way Traffic Ahead</li> <li>11) Wrong Way</li> <li>12) Yield</li> <li>13) Yield Ahead</li> <li>14) Yield Ahead, New as soon as practicable after becoming aware of the fact.</li> </ol>	



City of Hamilton Maintenance Guidelines for Levels of Service for Highways				
Maintenance Category	Maintenance Activities	Description	Level of Service / Minimum Maintenance Standard	Related Reports
	Regulatory & Warning Signs	To repair regulatory signs or warning signs to check to see that they meet the retro-reflectivity requirements of the Ontario Traffic Manual.	<p>The standard frequency of inspecting regulatory signs or warning signs is once per calendar year, with each inspection taking place not more than 16 months from the previous inspection.</p> <p>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 below:</p> <p>Class 1 - 7 days Class 2 - 14 days Class 3 - 21 days Class 4 - 30 days Class 5 - 30 days</p>	
Traffic Control	Traffic Control Signal Systems	If a traffic control signal system is defective in any way described in MMS, s. 13 (2).	Deploy resources as soon as practicable after becoming aware of the defect in a traffic control signal system.	

City of Hamilton Maintenance Guidelines for Levels of Service for Highways				
Maintenance Category	Maintenance Activities	Description	Level of Service / Minimum Maintenance Standard	Related Reports
	Traffic Control Signal System Sub-Systems	<p>To inspect, test and maintain the following:</p> <p>1) The display sub-system, consisting of traffic signal and pedestrian crossing heads, physical support structures and support cables.</p> <p>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.</p> <p>3) The external detection sub-system, consisting of detection sensors for all vehicles, including emergency and railway vehicles and pedestrian push- buttons.</p>	Inspect and maintain (if necessary) once per year, not more than 16 months apart.	
	Conflict monitors	To test and maintain conflict monitors at each signalized intersection.	Inspect and maintain (if necessary) two times per year, not more than 7 month apart, and not less than 5 months apart.	

**Additional Definitions / Notes:**

Declaration of a Significant Weather Event	That the General Manager of Public Works or designate, be authorized and directed to declare the beginning and end of a significant weather event for the purposes of the Municipal Act, 2001, O.Reg. 239/02 – Minimum Maintenance Standards for Municipal Highways, on such terms as the General Manager of Public Works or designate considers appropriate;
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**Notes:**

\*Council approved standard

Municipal Act, 2001, O.Reg. 239/02 – Minimum Maintenance Standards

Levels of Service correspond to O. Reg. 366/18, s. 15, unless otherwise stated