

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.	Patrolling frequency: 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	
	Weather Monitoring	To monitor the current weather and forecast for next 24 hours	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. 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.	
	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.	

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	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.	

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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	The standard* for addressing snow accumulation on roadways: Class 1/Priority 1 (Parkways/Arterials) - 2.5 cm depth - 4-hour response Class 1-5/Priority 1 (Escarpment Crossings) - 5 cm depth - 4-hour response Class 2/Priority 2A (Collectors Primary) - 8 cm depth - 8 hour response Class 2-3/Priority 2B (Collectors Secondary) - 8 cm depth - 8-hour response Class 4-6/Priority 3 (Rural Hard top) - 10 cm - 24-hour response Class 5/Priority 3 (Residential) - 8 cm - 24-hour response Class 6/Priority 3 (Rural Loose top) - 10 cm - 24-hour response.	PW13022 Winter Control Program Service Level Review http://www2.hamilton.ca/NR/rdonlyres/6F5643A3-C6D0-4AE9-942D-05DF5FE9F3DE/0/Mar18Item83_PW13022.pdf PW18096 https://pub-hamilton.escribemeetings.com/filestream.ashx?DocumentId=173914

	Snow Accumulation - Bicycle Lanes	Refers to: 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 Does not apply to other types of bicycle facilities.	Note - snow on bicycle lanes are generally cleared while the roadways are being cleared The standard for addressing snow accumulation on bicycle lanes: Class 1 - 2.5 cm depth – 8-hour response Class 2 - 5 cm - 12-hour response Class 3 - 8 cm - 24-hour response Class 4 - 8 cm - 24-hour response Class 5 - 10 cm - 24-hour response.	PW10096a Winter Control Program Maintenance Service Levels for Cycling Infrastructure - Pilot Program http://www2.hamilton.ca/NR/rdonlyres/1FB374FF-010F-496B-833B-0B21B7C927EE/0/Jun20EDRMS_n180033_v1_8_1PW10096a.pdf
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	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	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. 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 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	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 http://www2.hamilton.ca/NR/rdonlyres/2BB4752B-D56A-4C2E-8DCC-5FD5093F9D2A/0/03296.pdf

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	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.	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: Class 1 - 6-hour response Class 2 - 8-hour response Class 3 - 16-hour response Class 4 and 5 - 24-hour response If ice forms on a roadway, the roadway must be treated once the City becomes aware of that within the following times: Class 1 - 3 hours Class 2 - 4 hours Class 3 - 8 hours Class 4 - 12 hours Class 5 - 16 hours.	PW13022 Winter Control Program Service Level Review http://www2.hamilton.ca/NR/rdonlyres/6F5643A3-C6D0-4AE9-942D-05DF5FE9F3DE/0/Mar18Item83_PW13022.pdf PW18096 https://pub-hamilton.escribemeetings.com/filestream.ashx?DocumentId=173914

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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.	Potholes on Paved Surface of Roadway (minimum depth of 8 cm): Class 1 - 600 cm² (surface area) 4 days Class 2 - 800 cm² - 4 days Class 3 - 1000 cm² - 7 days Class 4 - 1000 cm² - 14 days Class 5 - 1000 cm² - 30 days Potholes on Non-paved Surface of Roadway (minimum surface area of 1500 cm²): Class 3 - 8 cm (depth)- 7 days Class 4 - 10 cm- 14 days Class 5 - 12 cm - 30 days Potholes on Paved or Non-Paved Surface of Shoulder (minimum surface area of 1500 cm²): Class 1 - 8 cm - 7 days Class 2 - 8 cm - 7 days Class 3 - 8 cm - 14 days Class 4 - 10 cm - 30 days Class 5 - 12 cm - 60 days.	

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	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	

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	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 ² (surface area) - 8 cm (depth) - 4 days Class 2 - 800 cm ² - 8 cm - 4 days Class 3 - 1,000 cm ² - 8 cm - 7 days Class 4 - 1,000 cm ² - 8 cm - 7 days Class 5 - 1,000 cm ² - 8 cm - 7 days	

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	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	

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Street Light Luminaires	Luminaires	The primary objective for streetlighting maintenance is to have all equipment in proper working order at all times.	The standard* for maintaining streetlighting: A. Light-outs or cycling lights, public or staff complaint - Standard repairs to be completed within 7 calendar days 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). 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.	Streetlighting Maintenance Program Service Levels, Asset Management and Service Provider Transition (PW07024) http://www2.hamilton.ca/NR/rdonlyres/308F11A2-30BA-4EB4-9C46-6A57AA208B0C/0/Feb19PW07024.pdf http://www2.hamilton.ca/Hamilton.Portal/Inc/PortalPDFs/ClerkPDFs/Public-Works/2005/Jan04/PW05008.pdf

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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.	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: 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 as soon as practicable after becoming aware of the fact.	

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	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.	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. 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: Class 1 - 7 days Class 2 - 14 days Class 3 - 21 days Class 4 - 30 days Class 5 - 30 days	
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.	

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	Traffic Control Signal System Sub-Systems	To inspect, test and maintain the following: 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.	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