

The Corporation of the Township of Tudor & Cashel

Minimum Maintenance Standards & Roadway Level of Service for
Municipal Roads

Roads Committee

11/1/2012

The Corporation of the Township of Tudor and Cashel
Minimum Maintenance Standards & Roadway Level of Service
For
Municipal Roadways

By-Law 2012 – 15

Being a By-law to establish the Minimum Maintenance Standards and Roadway levels of service for Municipal Roadways within the jurisdiction of the Corporation of the Township of Tudor and Cashel.

And Whereas the Council of the Corporation of the Township of Tudor and Cashel wishes to provide Standards as outlined by Ontario Regulation 239/02.

And Whereas the Ministry of Transportation, in accordance with section 24 to 68 of the Municipal Act S.O. 2010, which may make regulations establishing minimum standards of repair for highways and bridges or any class of them.

And Whereas the *Section 26 of the Municipal Act S.O. 2010* requires a municipality that has jurisdiction over a highway or bridge shall keep it in a state of repair that is reasonable in the circumstances, including the character and location of the highway or bridge.

And whereas it is found expedient and necessary to have the minimum maintenance levels of service for roadway services on roads within the jurisdiction of this municipality described as follows and attached as Schedule A hereto:

- 1.0 Patrolling
- 2.0 Snow accumulation
- 3.0 Icy roadways
- 4.0 Bridge deck spalls
- 5.0 Surface discontinuities
- 6.0 Flooding

- 7.0 Dust
- 8.0 Potholes
- 9.0 Shoulder drop off
- 10.0 Cracks
- 11.0 Clearance

APPENDICES

- 1.0 Clearance Measurements
- 2.0 Classification of Tudor and Cashel Township Highways
- 3.0 Township of Tudor and Cashel Road Classifications – Fully & Seasonally Maintained Roads
- 4.0 Non Assumed/Non Maintained Roads
- 5.0 Map of Roads in Tudor Township
- 6.0 Map of Roads in Cashel Township
- 7.0 Roadway Service Standards Diagrams
- 8.0 Definitions

NOW THEREFORE THIS CORPORATION OF THE TOWNSHIP OF TUDOR AND CASHEL ENACTS AS FOLLOWS:

1. That the level of service herein, as amended from time to time, and reviewed on a biennial basis (every 2 years) by the Roads Committee and presented to Council, be hereby adopted and come into effect on the passing thereof.
2. That all operational activities of the municipal road department be directed to provide the minimum levels of service for municipal highways as herein described where care is taken first to ensure that the minimum maintenance levels of service are maintained and second that such levels are efficiently and effectively rendered.
3. That neither the Corporation nor its Officials make any promise or assurance that municipal highway maintenance will be in excess of the minimum herein defined.
4. That these standards, and definitions of terminology, are made available to ratepayers and users of the Corporations' municipal highways and that where exception is taken to the levels of service stated herein, or interpretation of the same, such concerns may be reviewed at a meeting of this Council, or it's Committee if one exists for that purpose for consideration.
5. That where situations arise or applications be made which may fall outside the scope of these minimum maintenance levels of service, the senior Road Manager in conjunction with Council approval, shall respond as may be deemed to be appropriate, with respect to budgetary constraint and reasonable practice.
6. That budgets and Council priorities shall be set on the basis of provision of municipal highways to the minimum levels of service set out in Schedule A.
7. And that the liability of the Corporation related to the state of repair of a highway or bridge, and the Corporation's defense to such claims of liability are set out in Sections 24 to 68 of the Municipal Act S.O 2010 and in Ontario Regulation 239/02.
8. This by-law repeals By-law 2011-04 and shall take effect on the day of passing.

Passed this 1st day of November 2012.

REEVE

CLERK/TREASURER

Schedule A

Minimum Maintenance Standards

1.0 Patrolling

Objective

To determine the condition of the road system and to keep records of the conditions found during the patrolling.

Minimum Maintenance Standard

- Patrolling shall be carried out by driving on the highway to check for conditions described in the regulations
- Patrolling may be carried out by the Supervisor or an employee reporting to the Supervisor. Records shall be kept of the time of the inspections and of highway conditions observed. A monthly report is required for the Roads Committee and Council.
- Patrolling is not required between sunset and sunrise.
- The frequency of patrolling is set out in Table Patrolling Frequency.
- Patrolling will not be carried out during the winter maintenance season on those roads not designated for winter maintenance.

Patrolling Frequency

Class	Summer Frequency	Winter Frequency
4	Once every 7 days	Once every 7 days
5	Once every 14 days	Once every 30 days
6	Once every 14 days	Once every 30 days

2.0 Snow Accumulation

Objective

To remove snow accumulations in excess of the depths noted in the table shown below within the timeframes set out in the table.

Class 4 & 6-A roads

The Roads Department shall have all winter control equipment, schedules, manpower and procedures in place to commence winter control operations on the 15th day of November each year. Winter control equipment and manpower will be available until the 15th day of April the following year.

Minimum Maintenance Standard

- While snow continues to accumulate, to deploy resources to clear snow as soon as practicable after becoming aware of the fact that the snow accumulation on a roadway is greater than the depth set out in the table below.
- After the snow accumulation has ended and after becoming aware that the snow accumulation is greater than the depth set out in the table below, to clear the snow accumulation and return the roadway to the desired surface condition within the timeframes set out in the table below and;
 - Clear the snow accumulation from the roadway to within a distance of 0.6 meters inside the outer edges of the roadway
 - On Class 4 & 5 highways with two lanes, the snow accumulation on the roadway must be cleared to a width of at least 5 meters.
- If a winter event becomes so severe that winter event response cannot safely continue all operations involved in the clearing of the snow accumulation will be suspended until conditions improve.
 - In the event that operations are suspended the department head or his/her designate will notify police, fire, ambulance, other emergency services, school boards and the local radio station.
- Winging back of windrowed snow to provide storage for subsequent snowfalls will be completed during normal daylight hours.
- Clearing of windrowed snow at all residential driveways, commercial and industrial entrances will be the responsibility of the property owner.
- This level of service does not apply to that portion of the roadway designated for parking.
- This level of service does not apply to roads that are not designated for winter maintenance.

Snow Accumulation

Class	Depth	Time	Surface Condition
4	8 cm	14 hours	Snow packed
5	10 cm	24 hours	Snow packed
6	10 cm	24 hours	Snow packed
6	10 cm	24 hours	Snow drifts

NOTE: In circumstances where “full time employees” are at their limit of hours (12 hours), an on-call employee is required to complete the removal of snow.

3.0 Icy Roadways

Objective

To deploy resources to treat an icy roadway as soon as practicable after becoming aware that the roadway is icy and to treat icy roadway within the timeframe set out in the table shown below.

Season

This level of service will apply during the winter maintenance season from November 15th each year until April 15th of the following year.

Minimum Maintenance Standard

- Resources will be deployed to treat the icy roadway within the times set out in the Icy Roadways table below, after becoming aware of the fact.
- This level of service does not apply to roads that are not designated for winter maintenance.

Icy Roadways

Class	Time
4	6 hours
5	12 hours
6	12 hours

Note: Township uses sand/salt combination

4.0 Bridge Deck Spalls

Objective

To enhance motorists' safety and reduce impact loading on bridges.

Minimum Maintenance Standard

- If a bridge deck spall exceeds both the surface area and depth set out in the Bridge Deck Spalls table below, the level of service is to repair the bridge deck spall within the time set out in the table below, after becoming aware of the fact.
- A bridge deck spall is deemed to be repaired if its surface area or depth is less than that set out in the table.

Bridge Deck Spalls

Class	Surface Area	Depth	Time
4	1000 cm squared	8 cm	7 days
5	1000 cm squared	8 cm	7 days
6	1000 cm squared	8 cm	7 days

Note: There are no bridges on Weslemkoon Lake Road (the only class 4 road in the municipality)

Note: Bridges in Township of Tudor and Cashel:

- **Sutton Road Bridge**
- **Wolfe Lake Bridge**
- **South Millbridge**
- **Glanmire Bridge**

5.0 Surface Discontinuities

Objective

To enhance motorists' safety, prevent vehicle damage and reduce impact loadings on roads and bridges.

Minimum Maintenance Standard

- If a surface discontinuity, other than a surface discontinuity on a bridge deck, exceeds the height set out in the Surface Discontinuities table below, the level of service will be to repair the discontinuity within the time set out in the table, after becoming aware of this fact.
- If a surface discontinuity on a bridge deck exceeds 5 cm, the level of service is to deploy resources, as soon as practicable after becoming aware of the fact and to repair the surface discontinuity on the bridge deck.

Surface Discontinuities

Class	Height	Time-Summer Frequency
4	5 cm	14 days
5	5 cm	21 days
6	5 cm	21 days

6.0 Flooding

Objective

To enhance motorists safety by posting warning signs at flooded areas.

Minimum Maintenance Standard

- Where water, either standing or flowing, covers more than one-half a lane width, resources shall be deployed to post warning signs within the time set out in the Flooding table below, after becoming aware of the fact.

Flooding

Class	Time
4	4 hours
5	6 hours
6	12 hours

7.0 Dust

Objective

To enhance highway safety by controlling dust that reduces with motorists' visibility.

This level of service does not apply to controlling dust for other purposes, such as field crops or air quality.

Minimum Maintenance Standard

- If dust caused by traffic reduces visibility, over a distance of at least 100 meters, to the extent that it affects traffic safety, resources will be deployed and the dust will be controlled within the time set out in table below, after becoming aware of the fact.

Dust

Class	Time
4	4 days
5	4 days
6	7 days

Note: Township uses 35% calcium chloride

8.0 Potholes

Objective

To deploy resources and repair potholes in the roadway or shoulder.

Minimum Maintenance Standard

- If a pothole exceeds both the surface area and the depth set out in tables 1, 2 or 3 below, the pothole shall be repaired within the time set out in Table 1, 2 or 3 as appropriate, after becoming aware of the fact.
- The pothole shall be deemed to be repaired if its surface area or depth is less than that set out in Table 1, 2 or 3 as appropriate.

Table 1 - Potholes on Paved surface

Class	Surface Area	Depth	Time
4	1000 cm squared	8 cm	10 days
5	1000 cm squared	8 cm	30 days
6	1000 cm squared	8 cm	30 days

Table 2 – Potholes on Non-Paved Surface

Class	Surface Area	Depth	Time
4	1500 cm squared	10 cm	10 days
5	1500 cm squared	10 cm	30 days
6	1500 cm squared	10 cm	30 days

Table 3 – Potholes on Paved or Non-Paved Surface of Shoulders

Class	Surface Area	Depth	Time
4	1500 cm squared	10 cm	20 days
5	1500 cm squared	12 cm	30 days
6	1500 cm squared	12 cm	30 days

9.0 Shoulder Drop-offs

Objective

To improve safety by deploying resources and repairing shoulder drop-offs and wash outs.

Minimum Maintenance Standard

- If a shoulder drop-off is deeper, for a continuous distance of 20 meters or more, than the depth set out in the table below, the drop-off shall be repaired within the time set out in the table after becoming aware of the fact.
 - A shoulder drop-off shall be deemed to be repaired if its depth is less or equal to that set out in the table.

Shoulder Drop-offs

Class	Depth	Time
4	8 cm	10 days
5	8 cm	30 days
6	8 cm	30 days

10.0 Cracks

Objective

To improve safety by deploying resources and repairing cracks in paved roadway surfaces.

Minimum Maintenance Standard

- If a crack on the paved surface of a roadway is greater, for a continuous distance of 3 meters or more, than both the width and depth as set out in the table below, resources shall be deployed and the cracks repaired within the time set out in the table after becoming aware of the fact.
- A crack shall be deemed repaired if its width or depth is less than or equal to that set out in the table.

Cracks

Class	Width	Depth	Time
4	5 cm	5 cm	60 days
5	5 cm	5 cm	120 days
6	5 cm	5 cm	120 days

11.0 Clearance

Objective

To create roadside service standards to improve the clearance of roadways for visibility and the safety of ratepayers and workers.

Minimum Maintenance Standard

- Where vertical and/or horizontal clearance recognizes the setback of obstacles that may cause damage when struck, or may impair visibility (e.g. trees, brush, grass, rocks etc.) then said obstacles must be removed.

Roadway/Vegetation Clearance

- Desirable vertical clearance for all municipal roads is 4.5 meters.
- Non-woody vegetation may encroach the clearance zone to the maximum conditions as shown in the chart below.

Clearances

Class	Minimum Vertical Clearance	Encroachment	Minimum Horizontal
4	4 meters	0.5 meters	n/a
5	4.5 meters	1 meter	3.5 meters
6	4.5 meters	1 meter	3.5 meters

Appendix 1

Sent separately

Appendix 2

1.0 Classification of the Township of Tudor & Cashel Highways (Roads)

For the purpose of this by-law, the Highway Classifications as contained in Ontario Regulation 239/02 will apply.

In addition, **Class 6 Highways** shall be further defined and subdivided as follows:

Class 6-A: hereby defined as highways designated for summer and winter maintenance. They are classed as “fully maintained” in Appendix 3 of this by-law. These highways are **assumed** by the township.

Class 6-B: hereby defined as highways **NOT** designated for winter maintenance (summer/seasonal maintenance is performed from April 15th to November 15th). These highways are classed as “**seasonally maintained**” in Appendix 3 of this by-law. These highways are assumed by the township for seasonal maintenance only.

Class 6-C: highways are **not assumed** and **not maintained** by the Township. They are also attached in Appendix 4 of this by-law. This classification includes non-assumed township roads, Crown Land, Forestry Roads and privately owned roads.

Class 6-D: This classification includes unopened road allowances and right of ways.

In the event of a disagreement as to the appropriate classification of a particular roadway, the determination of the classification shall be made by the Township Council. The Roads Committee can/will make a “recommendation”, but the final ruling must come from Council and their ruling shall be final.

Appendix 3

Sent separately

The other appendices are the maps and the hand drawings I did for clearance etc.

Appendix 8

Definitions

AADT means the Average Annual Daily Traffic, which is a technical measurement of traffic volume on a road, in both directions. Conversion factors, which vary depending on the time of year and week, extrapolate daily traffic counts into AADT.

Assumption is the process by which a municipality passes a by-law to accept a road into the municipal road system.

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.

Clearance is the zone measured horizontally and vertically from the centre line of the road in which no obstructions should be permitted, except those which improve the safety of the roadway user.

Corporation is the Corporation of the Township of Tudor and Cashel.

Council is the Council of the Corporation of the Township of Tudor and Cashel.

Crown Land – is owned by the “Province of Ontario” and **is not** maintained by the municipality.

Driveway/laneway – is a private access serving a single dwelling constructed and maintained by the Owner of the dwelling and connected directly to a private, Municipal or Provincial Road. **Under no circumstances will this be taken over by the Municipality.**

Encroachment is an obstacle inside the clearance zone which may or may not be permitted by these standards.

Forestry Land – is owned by the Province of Ontario and falls under the umbrella of the Ministry of Natural Resources and **is not** maintained by the municipality.

Horizontal Clearance is an obstruction free zone measured from the centre line of a road or the left edge of the shoulder.

Lane is that portion of the road designated for a single file of vehicles to travel over, in one direction. For roads where two-way traffic is permitted, the lane width is half the road width unless delineated otherwise by pavement marking.

Private Road is an existing road or a road to be constructed that was or will be constructed and maintained by a person or group of persons without any responsibility or obligation to the construct or maintain by the Corporation of the Township of Tudor and Cashel.

Right of Way or R.O.W. describes the corridor of land reserved for roadway improvements and under the jurisdiction of the roadway authority. Certain rights of way infer a rite of passage to the public. However, in the context of these standards only rights of way with assumed public roadways are considered.

Road refers specifically to the travelled road surface on a roadway assumed by a roadway authority, but not including on-street parking or stopping zones.

Roadside refers to all the elements or conditions which make up the roadway within the jurisdiction of the roadway authority, except for the road surface itself.

Roadway is any public assumed road right of way intended for vehicular traffic. It refers not only to the travelled road surface, but to all service relevant to the road, within the right of way.

Roadway Authority is the public agency accountable for the status and condition of the roadway. This refers to the Corporation of the Municipality and its designated officials or agents.

Safety is a general term identifying the concept of mitigating bodily injury or death of persons, or direct damage (beyond wear and tear) to vehicles or contents. The obligation to safety in the context of service standards requires that the user operates in a safe manner giving consideration to the relevant effects and conditions, the vehicle is in good condition, satisfies any load restrictions, and contents are properly secured.

Seasonal refers to the limited time of the year where certain roadway service standards apply to the subject roadway (e.g.: summer roads, ice roads). In the context of these standards, seasonal roads are classified as those not receiving winter services, unless otherwise defined.

Shoulder is that maintained surface immediately adjacent to the travelled surface of the road. The shoulder may be partially or fully hardtop, loose top, grassed, or earth. It is not considered a part of the road for these standards.

Speed refers to the average speed at which an average automobile can safely travel on a road of reasonable length, without the effects of traffic. This does not refer to design speed or legal speed unless specifically qualified. Posted speed is either legal or advisory.

Standards are quantified statements, defining the nature of a product or activity. Usually such standards are minimum or desirable, and in this context refer specifically to the roadway service standards adopted as policy.

Surface is the exposed top of the travelled road and includes adjacent surfaces for turning or stopping, but not parking or shoulders.

Vertical Clearance is an obstruction free zone measured from any point on the surface of the road and above the projection of the horizontal clearance width.