

THE CORPORATION OF THE MUNICIPALITY OF MISSISSIPPI MILLS

BY-LAW NO. 25-049

BEING a By-law to repeal and replace Bylaw 03-62 Regulate Outdoor Illumination and Control Light Pollution to ensure responsible lighting, light pollution abatement and the conservation of the night sky environment.

WHEREAS Section 129 of the Municipal Act 2001, S.O. 2001 c.25 as amended, provides municipalities with the authority to prohibit and regulate with respect to noise, vibration, odour, dust, and outdoor illumination, including indoor lighting that can be seen outdoors.

AND WHEREAS the Council of the Corporation of the Municipality of Mississippi Mills deems it desirable to enact a by-law respecting the regulation and control of outdoor illumination, and control light trespass, as well as to ensure the continued astronomical importance of the Fred Lossing Observatory, located at 365 Bennies Corners Road, Almonte, On, in the former Township of Ramsay;

AND WHEREAS properly designed light fixtures do not emit undesirable illuminating light rays into the night sky and thus protect the night-time environment;

NOW THEREFORE the Council of the Corporation of the Municipality of Mississippi Mills enacts as follows:

SECTION 1: DEFINITIONS

For the purposes of this By-Law, terms used shall be defined as follows:

Direct Light means light emitted directly from the lamp, off the reflector or luminaire.

Director or Director of Roads and Public Works shall mean the Director of Roads and Public Works for Mississippi Mills or their designee.

Fixture means the assembly that houses the lamp or lamps and can include all or some of the following parts: a housing, a mounting bracket or pole socket.

Flood or Spotlight means any light fixture or lamp that incorporates a reflector or a refractor to concentrate the light output into a directed beam in a particular direction.

Footcandle means a measure of luminance per unit area used in IESNA standard measurements i.e. one footcandle (fc) equates to one lumen per square foot.

Full-Cut-Off Fixture means a fixture where the luminous intensity (in candelas) at or above an angle of 90° above nadir is zero, and the luminous intensity (in candelas) at or above a vertical angle of 80° above nadir does not numerically exceed 10% of the luminous flux (in lumens) of the lamp or lamps in the luminaire.

Glare means light emitting from a luminaire with an intensity great enough to reduce a viewer's ability to see, and in extreme cases causing momentary blindness.

Grandfathered Luminaires means non-conforming luminaires that were lawfully installed prior to September 9, 2003.

Height of Luminaire means the height of a luminaire as calculated by the vertical distance from the ground directly below the centerline of the luminaire to the lowest direct-light-emitting part of the luminaire.

IESNA means the Illumination Engineers Society of North America, which is the standards committee for responsible outdoor lighting. This is an organization that recommends lighting levels and lighting fixtures.

Indirect Light means direct light that has been reflected or has scattered off other surfaces.

Lamp means the component of a luminaire that produces the actual light.

Light Trespass means the shining of light produced by a luminaire beyond the boundaries of the property on which it is located.

Lumen means a unit of luminous flux equal to the light emitted in a unit solid angle by a uniform point source.

Luminaire means a complete lighting system, including a lamp or lamps and a fixture.

Lux means the SI unit of illuminance equal to one Lumen per square meter.

Outdoor Light Fixtures means outdoor artificial illuminating devices, installed or portable, used for flood lighting, general illumination or advertisement.

Pole Spacing Ratio means the ratio of the inter-pole distance per effective height of lamp on the pole.

Sharp-Cut-Off Fixture means the same as Full-Cut-Off Fixture.

Municipality means the Corporation of the Municipality of Mississippi Mills.

Uniformity Ratio of Lighting means the average level of illumination in relation to the lowest level of illumination for a given area.

WallPack Light Fixture means flood light fixtures on exterior walls of buildings

SECTION 2: REGULATIONS

2.1 General Regulation

Any person who installs outdoor lighting within the boundaries of the Municipality shall do so in conformity with the requirements of this By-Law. If conflicts arise regarding control and maintenance of outdoor lighting, this By-Law shall be the governing document.

2.2 Luminaire Design Factors For Outdoor Areas

Any person installing an outdoor lighting fixture shall be required to use Full-Cut-Off fixtures. Outdoor lighting fixtures shall include, but are not limited to, lights for: buildings and structures, including canopies and overhangs; recreational areas; parking lot lighting; landscape lighting; billboards and signs; public and private street lighting; display and service area lighting; public and private walkway lighting; rural barn lights; residential yard lights; and outdoor lighting for all residential, commercial, industrial, institutional and provincial and federal government uses not otherwise specified.

2.2.1 Municipal Streetlights and Lighting in Residential Areas

The Municipality shall strive to maintain outdoor streetlights that have the following:

1. Uniform light levels within the urban area that do not exceed uniformity ratios recommended by the IESNA
2. Minimum light used for safety does not exceed IESNA recommendations.
3. Full-Cut-Off fixtures
4. The recommended values for average surface illumination and uniformity ratios for illuminated areas as identified in Table I of Appendix I.
5. LED fixtures shall have a colour temperature of 3000 k or less.

2.3 Streetlighting Design

All new municipal outdoor streetlighting must be Full-Cut-Off **LED** Fixtures installed in accordance with IESNA standards. Any existing grandfathered partially cut-off streetlighting shall be replaced by Sharp-Cut-Off fixtures when lamp replacement is required. The lamp wattage design requirements for both new and grandfathered streetlighting shall be as follows:

1. 25 to 40 W for Residential
2. 60 - 75 W for Intersections
3. 80 - 100 W for major thoroughfares
4. 120 W for pole spacing with a ratio greater than 5:1
5. Pole spacing ratio in urban areas shall not exceed IESNA luminance and uniformity factors

All pole spacing ratio assumes values of 3:1 to 10:1 based on usage, at the discretion of the Director of Roads and Public Works

2.4 Structural Illumination

1. All new wall-mounted commercial lighting shall be Full-Cut-Off LED fixtures.
2. All existing grandfathered wall-mounted lights are encouraged to adhere to the requirements of Section 2.2. Property owners whose structures are furnished with unshielded wall-packs shall be encouraged to shield such fixtures.
3. All architectural lighting and building accent lighting shall be mounted such that the accent light is aimed down and shall be no glare emanating from the fixture, in accordance with fully shielded design.
4. The use of low wattage lights for decoration purposes such as holiday lighting and property ornamentation shall be exempt from Section 2.4.3, at the discretion of the Director of Roads and Public Works.

2.5 Property Illumination

All artificial lighting for yards and parking areas shall be arranged to ensure there is no light trespass.

2.6 Provisions for Shielding Exterior Lighting to Reduce Light Trespass

1. Any light trespass resulting from municipally owned fixtures will be reviewed and adjusted through shielding or other means as determined reasonable, at the discretion of the Director of Roads and Public Works.
2. Residential properties with fixtures that create light trespass shall be required to complete corrective actions, including shielding or other adjustments as necessary, to eliminate light trespass, to the satisfaction of the Director of Roads and Public Works.

2.7 Lighting of Outdoor Signs

Except for the requirements of 2.12 of this By-law, the Municipalities Sign By-law No. 16-22, as amended from time to time, shall regulate the illumination of outdoor signs.

2.8 Recreational Facilities

Any light source permitted by this By-law may be used for lighting of outdoor public or private recreational facilities, including but not limited to, sports fields and courts or show areas, provided all of the following conditions are met:

1. All fixtures used for event lighting shall be Full-Cut-Off LED Fixtures, or have sharp cut-off capability by a shielding retrofit, to minimize up-light, light trespass and glare.
2. Lighting shall be off when the recreation facility is not in use.
3. Owners of grandfathered lighting fixtures at recreational facilities shall install

shielding fixtures when replacement occurs.

2.9 Prohibitions

2.9.1 Laser Source Light

The use of laser source light or any similar high intensity light for outdoor advertising or entertainment purposes is prohibited.

2.9.2 Searchlights

With the exception of events that previously used searchlight prior to the passing of this By-law, the operation of searchlights for advertising or entertainment purposes is prohibited.

2.9.3 Off-Site Advertising Off-Site Signs

Illumination of off-site advertising signs along municipal or private roadways is prohibited after business hours.

2.10 Request For Exemption for Temporary Events

Any person may submit a written request to the Director of Roads and Public Works for a temporary exemption to the requirements imposed by this By-law and shall include the following information:

- a. Specific exemption requested
- b. Type and use of the proposed lighting
- c. Date and duration of the event and the duration of the requested exemption
- d. Proposed location of lighting
- e. Details of the lighting including but not limited to physical size, luminaires, wattage, manufacturers information

2.11 Grandfathering of Non-conforming Luminaires

All luminaires and luminous advertising signs lawfully in place prior to the date of the passing of this By-law shall be considered non-conforming luminaires. Any replacement, modification or relocation of a non-conforming luminaire shall be required to meet the provisions of this By-law.

2.12 Conservation Of Night Sky Environment Near The Fred Lossing Observatory (FLO)

Due to the light sensitive nature of the astronomical operation of the Fred Lossing Observatory, zoned protection shall be implemented appropriate to the existing and planned land use within four (4) kilometers of this site. Any new development within four (4) kilometres of FLO must comply with the provisions as outlined in Table 2 of Appendix 1, attached hereto and forming part of this By-law and provide documentation indicating the types and number of fixtures to be installed. Existing Luminaires in this area shall be made compliant upon replacement.

SECTION 3: NEW DEVELOPMENT INVOLVING OUTDOOR LIGHTING

3.1 Submission Contents

Planning Act applications, including but not limited to, Draft Plan of Subdivision, Site Plan or Minor Variance, involving lighting fixtures shall include, evidence that the proposed lighting will comply with this By-law. The submission shall include, but not limited to the following:

- a. Site Plan indicating the location of lighting on the premises, and the type of illuminating devices, fixtures, lamps, supports, reflectors, and other devices
- b. Description of the illuminating devices, fixtures, lamps, supports, reflectors, and other devices and the description may include, but is not limited to, catalogue cuts by manufacturers and drawings (including sections where required);
- c. Site Lighting Plan prepared by a qualified professional with photometric data such as manufacture details, shop drawings or similar documentation illustrating the angle of cut off or light emissions.

The submission shall be sufficiently enable the Municipality to determine compliance with the provisions of this By-law and the Design Guidelines for Illumination and Street Lighting .

3.2 Lamp or Fixture Substitution

In the event that any light fixture, or the light source therein is proposed to be changed after the design has been approved by the Municipality, the proposed modified lighting design shall be submitted to the the Municipality prior to installation. In the event that the lighting design was part of a development application which has a registered agreement on title, the modified lighting design may require an amendment to the agreement, to the satisfaction of the Municipality. . All other approvals shall be in writing from the Director of Roads and Public Works.

SECTION 4: OFFENCES AND PENALTIES

4.1 Whenever the By-law Enforcement Officer, after inspecting lighting including temporary or portable lighting, finds such lighting to be in violation of the provisions of this By-law, they shall notify the Owner(s) in writing by registered mail, or by causing a notice to be delivered personally to such Owner(s) requiring a repair, alteration, modification, or removal of the lighting within ten (10) days from the receipt of such notice.

4.2 At the discretion of the Director of Roads and Public Works where the repair, alteration, modification or removal of lighting is a matter of extreme urgency because it is deemed to be a danger to the public, or motorists or any other situation deemed to be dangerous, verbal notice may be given, and the period of time to implement corrective actions may be reduced under the direction of the Director of Roads and Public Works.

4.3 Where removal of lighting is required, the notice as provided for in Section 4.1 or 4.2. shall terminate any pre-existing approvals granted by the Municipality.

4.4 Refusal by the Owner(s) to comply with Section 4.1 or 4.2 will allow the Municipality to remove the non-complying lighting at the expense of the Owner(s) and all expenses will be at the sole cost of the Owner(s).

4.5 Every person who contravenes any provisions of this By-law is guilty of an offence and on conviction is liable to a fine as provided in the Provincial Offences Act, Chapter P.33, R.S.O. 1990 as amended.

SECTION 5: SEVERABILITY

Should any part, section, subsection or portion of this By-law be repealed or declared by a court of competent jurisdiction to be illegal, the same shall not affect the validity of the By-law as a whole or in part thereof, except for that which was declared to be invalid.

SECTION 6: EFFECTIVE DATE

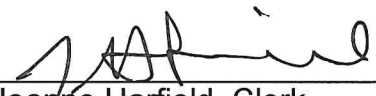
This By-Law shall take effect upon the date of passing thereof.

SECTION 7: REPEAL AND REPLACE

That By-Law 03-62 is hereby repealed.

BY-LAW read, passed, signed and sealed in open Council this 17th day of June, 2025.


Christa Lowry, Mayor


Jeanne Harfield, Clerk

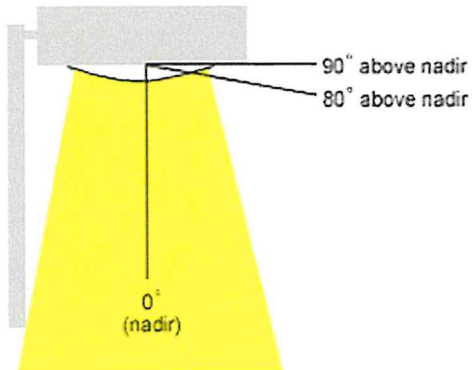
Written approval of this by-law was given by Mayoral Decision MDE-25-003 dated June 17th, 2025.



APPENDIX 1 TO BY-LAW NO. 03-

Full or Sharp Cut Off Definition

Figure 1 – Angles Referenced in the Full Cut-off Definition



Source: Adapted from Bullough 2002
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APPENDIX 1

TABLE 1

The following IESNA standards have been adapted for outdoor lighting and light levels in Mississippi Mills. These values serve as design guidelines when considering the development of new outdoor lighting as well as standard criteria when measuring existing areas of outdoor illumination.

Road Classifications (IESNA R2 & R3)	Illuminance Values		
	Average Maintained Illuminance Values (Lux)	Foot Candles	Illuminance Uniformity Ratio (Average to Minimum)
Local Urban Residential	4	0.4	6:1
Collector	6	0.6	4:1
Arterial	9 - 12	0.9 - 1.2	3:1

*All other Road Classifications not identified above will be considered on an individual basis in accordance with Municipality Requirements.

** Intersections shall have an illumination equal to the sum of the current design levels of the intersecting roadways.

Public Spaces and Usage Levels	Illuminance Values		
	Average Maintained Illuminance Values (Lux)	Foot Candles	Illuminance Uniformity Ratio (Average to Minimum)
Community Shopping Centres, Cultural, Civic or Recreational Events, Office Parking, Airports, Commuter Lots, etc. Residential Complex Parking, Hospital Parking	6 - 24	0.6 – 2.4	4:1
Neighbourhood Shopping, Industrial Employee Parking,	2 - 8	0.2 – 0.8	4:1

Educational Facilities, Places of Worship			
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TABLE 2

Outdoor Illumination Control for Fred Lossing Observatory (FLO)

Table 2 details unshielded or inappropriate outdoor lighting sources which shall not be permitted within four (4) kilometers of the FLO site.

Lighting Requirements	Within 4km radius of FLO	Beyond 4km radius of FLO
Illuminated Signs	Prohibited	Permitted
NON-Full Cutoff Cobra	Prohibited	Permitted
Pole Spacing Ratio < 10	Prohibited	Permitted