



**TOQUERVILLE CITY**  
**ORDINANCE 2017.XX LED LIGHTING ORDINANCE**

**AN ORDINANCE TO AMEND TITLE 10, CHAPTER 24,  
LED LIGHTING ORDINANCE.**

**Recitals**

WHEREAS, Toquerville City, as municipal corporation and political subdivision of the State of Utah (“City”), has authority pursuant to its constitutionally granted police powers, to protect the health, safety and general welfare of the residents of the City; and

WHEREAS, Lighting Administrator is designated as the representative to enforce this ordinance; and

WHEREAS, the term luminaries will be replaced with luminaires for proper clarification of lighting units; and

WHEREAS, in 10-24-4-B2 Use of Floodlight Luminaire, requires clarification; and

WHEREAS, in 10-24-4-Cb Exception No. 2 as called out is not applicable and other items in the section should be renumbered; and

WHEREAS, in 10-24-4-D5 requires an engineered Photometric Plan which meets IESNA recommended practices to be done prior to LED luminaire installation; and

WHEREAS, 10-24-4-E will be removed in its entirety.

**ORDINANCE**

NOW THEREFORE, BE IT HEREBY ORDAINED by the City Council of Toquerville City, State of Utah, as follows:

10-24-1: TITLE AND PURPOSE: This chapter shall be known as the *TOQUERVILLE EXTERIOR LIGHTING ORDINANCE*. The purpose of these regulations is to protect and promote the public health, safety and welfare, the quality of life, and the ability to view the night sky, by establishing regulations and a process for review of exterior lighting. This chapter establishes standards for exterior lighting in order to accomplish the following:

- A. Provide safe roadways for motorists, cyclists and pedestrians, and ensure that sufficient lighting can be provided where needed to promote safety and security;
- B. Minimize the effects of direct glare and excessive lighting;

- C. Protect the nighttime use and enjoyment of property and curtail the degradation of the nighttime visual environment, and thereby help preserve the quality of life in the city;
- D. Prevent light trespass in all areas of the city;
- E. Promote energy efficient and cost effective lighting in all areas of the city;
- F. Allow for flexibility in the style of lighting fixtures;
- G. Define practical and effective measures by which the obtrusive aspects of outdoor light usage can be minimized, and provide lighting practices that direct appropriate amounts of light where and when it is needed;
- H. Provide nonfinancial assistance to property owners and occupants in bringing nonconforming lighting into conformance with this chapter; and
- I. Work with other jurisdictions within Washington County to meet the purposes of this chapter.

10-24-2: APPLICABILITY:

- A. All exterior lighting, installed after the effective date hereof, shall conform to the standards established by this chapter.
- B. All existing exterior lighting, installed before the effective date hereof, shall be brought into conformance with this chapter, except subsection B1 of this section, within the following time periods:
  1. All existing exterior lighting located on a subject property that is part of an application for design review approval, a conditional use permit, subdivision approval, building permit or any other kind of land use approval is required to be brought into conformance with this chapter before issuance of a certificate of occupancy, final inspection or final plat recordation, when applicable. For other permits, the applicant shall have a maximum of thirty (30) days from date of permit issuance to bring the lighting into conformance.
  2. All other existing exterior lighting on property used for residential, commercial, institutional, or any other public and semipublic use that is not in conformance with this chapter shall be brought into conformance with this chapter within eighteen (18) months from the date of adoption of this chapter.
  3. The city shall perform an audit of all public outdoor lighting in the city, as recommended. These audits will identify all lighting that does not conform to the standards of this chapter. The results of these audits will be made available to the public.

**10-24-3: DEFINITIONS:**

Unless specifically defined below, words or phrases used in this chapter shall be interpreted so as to give them the meaning they have in common usage and to give this section its most reasonable application:

**AREA LIGHT:** A luminaire equipped with a lamp that produces over one thousand eight hundred (1,800) lumens. Area lights include, but are not limited to, streetlights, parking lot lights and yard lights. (See section [10-24-4](#), table 1 of this chapter for light output of various lamps.)

**AVERAGE HORIZONTAL FOOT-CANDLE:** The average level of luminance for a given situation (with snow cover if that is to be expected in the given situation) measured at ground level with the light meter placed parallel to the ground.

**BUILDING OFFICIAL:** The planning and zoning administrator for Toquerville City, or any other person appointed by the Toquerville City mayor, with the concurrence of the Toquerville City council.

**DIRECTIONAL FLOODLIGHT:** A fully shielded fixture that is angled no higher than thirty degrees (30°) from vertical and which targets a specific area to be lit.

**EIGHTY FIVE DEGREE CUTOFF TYPE OF LUMINAIRES:** Luminaires that do not allow light to escape above an eighty five degree (85°) angle measured from a vertical line from the center of the lamp extended to the ground.

**EXTERIOR LIGHTING:** Temporary or permanent outdoor lighting that is installed, located or used in such a manner to cause light rays to shine outdoors. Luminaires that are indoors that are intended to light something outside are considered exterior lighting for the purpose of this chapter.

**FLOODLIGHT:** A light fixture that produces up to one thousand eight hundred (1,800) lumens and is designed to flood a well-defined area with light. (See section [10-24-4](#), table 1 of this chapter for light output of various lamps.)

**FOOT-CANDLE (fc):** The American unit used to measure the total amount of light cast on a surface (luminance). One foot-candle is equivalent to the luminance produced by a source of one candle at a distance of one foot (1'). For example, the full moon produces 0.01 fc (fc is measured with a light meter). One foot-candle is approximately equal to ten (10) lux, the metric unit also used to measure luminance.

**FULL CUTOFF LUMINAIRES:** Luminaires designed and installed where no light is emitted at or above a horizontal plane running through the lowest point on the luminaires.

**FULLY SHIELDED:** The luminaire incorporates a solid barrier (the shield), which permits no light to escape through the barrier on the top and sides of the fixture.

**GLARE:** Stray light striking the eye that may result in: a) nuisance or annoyance glare, such as light shining into a window; b) discomfort glare, such as bright light causing squinting of the eyes; c) disabling glare, such as bright light reducing the ability of the eyes to see into shadows; or d) reduction of visual performance.

**HOLIDAY LIGHTING:** Exterior lighting consisting of strings of individual lamps, where the output per lamp is not greater than fifteen (15) lumens.

**IESNA:** Illuminating Engineering Society of North America (IES or IESNA). The Professional Society of Lighting Engineers.

**IESNA RECOMMENDED PRACTICES:** The current publications of the IESNA setting forth luminance levels.

**ILLUMINANCE:** The amount of light falling on any point of a surface measured in foot-candles or lux. Foot-candles are measured as lumens per square foot, and lux is measured as lumens per square meter.

**LAMP:** The generic term for an artificial light source, to be distinguished from the whole assembly (see definition of Luminaire). Commonly referred to as "bulb".

**LED:** Light emitting diode solid state lighting source.

**LIGHT:** The form of radiant energy acting on the retina of the eye to make sight possible.

**LIGHT POLLUTION:** Any adverse effect of artificial night light, including, but not limited to, discomfort to the eye or diminished vision due to glare, light trespass, or any manmade light that diminishes the ability to view the night sky.

**LIGHT TRESPASS:** Light falling on the property of another or the public right of way when it is not required to do so.

**LIGHTING:** Any or all parts of a luminaires that function to produce light.

**LIGHTING ADMINISTRATOR:** A city official designated by the city council to administer, interpret and enforce this chapter, and make recommendations thereunder.

**LUMEN:** The unit used to quantify the amount of light energy produced by a lamp at the lamp. Lumen output of most lamps is listed on the packaging.

**LUMINAIRE:** A complete lighting unit, consisting of a lamp or lamps, together with the parts designed to distribute the light, to position and protect the lamps and to connect the lamps to the power. When used, includes ballasts and photocells. Commonly referred to as "fixture".

**LUMINANCE:** At a point and in a given direction, the luminous intensity in the given direction produced by and element of the surface surrounding the point divided by the area of the projection of the element on a plane perpendicular to the given direction.  
Units: Candelas per unit area. The luminance is the perceived brightness that we see the visual effect of the luminance, reflected, emitted or transmitted from a surface.

**MAINTAINED ILLUMINANCE:** The condition that occurs after two hundred (200) hours of lamp use prior to a point where luminaire cleaning is necessary. Measurements are taken at ground level with sensor parallel to the ground for horizontal luminance and measured at five feet (5') above ground with sensor perpendicular to the ground for vertical luminance.

**NONESSENTIAL LIGHTING:** Lighting that is not necessary for an intended purpose after the purpose has been served. Does not include any lighting used for safety and/or public circulation purposes.

**OPAQUE:** The effect of a part or parts of a luminaire that provides a barrier above and in some cases around the lamp, that does not allow any light to pass through.

**PARTIALLY SHIELDED:** The luminaire incorporate a translucent barrier, the "partial shield" around the lamp that allows some light to pass through the barrier of the fixture's walls while concealing the lamp from the viewer.

**PLANNING AND ZONING ADMINISTRATOR:** The Toquerville City planning and zoning administrator.

**RECESSED:** When a light is built into a structure or portion of a structure such that the light is fully cut off and no part of the light extends or protrudes beyond the underside of a structure or portion of a structure.

**SHIELDED:** When the light emitted from the fixture is projected below a horizontal plane running through the lowest point of the fixture where light is emitted. The bulb is not visible with a shielded light fixture, and no light is emitted from the sides of the fixture. Also considered a full cutoff fixture.

**SKY GLOW:** The overhead glow from light emitted sideways and upwards. Sky glow is caused by the reflection and scattering of light by dust, water vapor and other particles suspended in the atmosphere.

**TEMPORARY LIGHTING:** Lighting that is intended to be used for a special event for seven (7) days or less, and temporary construction lighting.

**TRANSLUCENT:** The effect of a part or parts of a luminaire that provides a barrier around the lamp that allows some light to pass through the barrier in a diffused manner, such that the lamp cannot be clearly distinguished.

**UNSHIELDED:** The luminaires only incorporate clear glass, which permits all light to escape.

**UPLIGHTING:** Fully shielded lighting that is directed in such a manner as to shine light rays above the horizontal plane.

**WALL WASH:** The reflectivity of artificial lighting from the exterior surface of a building or structure.

#### 10-24-4: STANDARDS AND REQUIREMENTS:

##### A. General Standards:

1. **Exterior Lighting:** All exterior lighting shall be designed, located and lamped in order to prevent or minimize:

- a. Over lighting;
- b. Energy waste;
- c. Glare;
- d. Light trespass;
- e. Sky glow.

2. **Nonessential Lighting:** All nonessential lighting on the exterior of all commercial, recreational and residential structures shall be turned off no later than eleven o'clock (11:00) P.M. Lights on a timer are encouraged. Sensor activated lights are encouraged to replace existing lighting that is desired for security purposes.

3. **Canopy Lights:** Canopy lights, such as service station lighting or covered entries, shall be fully recessed or fully shielded so as to ensure that no light source is visible from or causes glare on public rights of way or adjacent properties.

4. **Area Lights:** All area lights shall be a minimum eighty five degree (85°) full cutoff type luminaire.

5. **Luminaires:** Rocky Mountain Power shall not install any luminaires after the effective date hereof that lights the public right of way without first receiving approval for any such application by the lighting administrator.

6. **Hillsides, Ridgelines, and Special Cases:** In certain cases (such as, but not limited to, properties on or near ridgelines or hillsides), additional shielding may

be required to mitigate glare or light trespass. The need for additional shielding will be considered as part of the building permit review process.

a. All monopole, antenna, tower or support facility lighting not required by the federal aviation administration (FAA) or the federal communication commission (FCC) is prohibited.

b. When lighting is required by the FAA or the FCC, such lighting shall not exceed the minimum requirements of those agencies. Collision markers should have a dual mode for day and night to minimize impact to the night sky and migrating birds.

c. All other lighting used on the property not regulated by the FAA or FCC shall conform to this chapter.

B. Use Of Luminaires: No unshielded or clear glass luminaires shall be allowed; all exterior lighting shall use full cutoff luminaires with the light source downcast and fully shielded, with the following exceptions:

1. Luminaires: Luminaires that have a maximum output of one thousand (1,000) lumens per fixture (equal to one 60-watt incandescent lamp) regardless of number of lamps, may be partially shielded, provided the luminaire has an opaque top or is under a solid overhang.

2. Floodlights: Floodlights with external shielding shall be angled; provided, that no light is directed above a thirty degree (30°) angle measured from the vertical line from the center of the light extended to the ground, and only if the luminaires do not cause glare or light to shine on adjacent property or public rights of way. Residential floodlights must be turned off by eleven o'clock (11:00) P.M.

3. Residential Holiday Lighting: Flashing holiday lights on residential properties are discouraged. Holiday lights shall be turned off by eleven o'clock (11:00) P.M.

4. Commercial Holiday Lighting: Flashing holiday lights are prohibited. Commercial holiday lights shall be turned off by eleven o'clock (11:00) P.M. or the close of business, whichever is later.

5. Sensor Activated Luminaires: Sensor activated luminaires, provided:

a. It is located in such a manner as to prevent glare and light trespass onto properties of others or into a public right of way;

b. The luminaire is set to only go on when activated and to go off within five (5) minutes after activation has ceased;

c. The luminaire shall not be triggered by activity off the subject property.

6. Emergency Lighting: All temporary emergency lighting needed by the fire and police departments, or other emergency services.

7. Lighting For Flags: Lighting for flags, provided the flag is a United States Of America or state of Utah official flag and the maximum lumen output is one thousand three hundred (1,300) lumens. Flags may be taken down at sunset to avoid the need for lighting. The external beam shall minimize light trespass and/or glare.

8. Uplighting: Uplighting for landscaping and/or structures shall be fully captured for approval. All uplighting shall be turned off by eleven o'clock (11:00) P.M.

9. Lighting Of Towers: Lighting of radio, communication and navigation towers, provided the owner or occupant demonstrates that the federal aviation administration (FAA) regulations can only be met through the use of lighting that does not comply with this chapter.

10. Neon Lights: See subsection [10-22-5C3](#) of this title.

11. Playing Field Luminaires: Luminaires used for playing fields and courts shall be exempt from the height restriction, provided all other provisions of this chapter are met and the light is used only while the field or court is in use. In no case shall the lights be used later than eleven o'clock (11:00) P.M. without prior approval.

12. Nonresidential Luminaires: Nonresidential luminaires may deviate from the requirements of these exterior lighting regulations only upon submitting for planning commission approval a design review application, detailing the specific reasons for the proposed deviation. Such application may be granted only if the applicant demonstrates each of the following:

- a. The proposed deviation is appropriate to the location of the lighting and the surrounding neighborhood;
- b. The proposed deviation will not unreasonably diminish either the health, safety or welfare of the surrounding neighborhood uses; and
- c. The proposed deviation will not unreasonably conflict with the general intent of these exterior lighting regulations.
- d. The planning commission may approve, deny or approve with conditions any such application submitted under this subsection.

C. Placement And Height Of Luminaires



1. Parking area luminaires shall be no taller than seventeen feet (17') as measured from the ground to their tallest point. Parking area lights are encouraged to be greater in number, lower in height and lower in lumens, as opposed to fewer in number, higher in height and higher in lumens.

2. Freestanding luminaires on private property in residential zones shall be mounted at a height no greater than twelve feet (12') from ground level to the top of the luminaires.

3. Streetlights used on arterial roads may exceed twenty feet (20') in height, with the recommendation by the city council, and only with a finding that exceeding twenty feet (20') is necessary to protect the safety of the residents of the city.

4. Illumination of Right-of-Ways: Lighting of public and private right-of-ways shall be fully shielded. In addition, lighting shall comply with source color temperature of this section.

a. Traffic signal indications are excepted.

b. Definitions: Right-of-Way types:

i. Expressway – A divided major roadway for through traffic, with partial control of access and generally with interchanges at major crossroads.

ii. Major Roads – The part of the roadway system that serves as the principal network for the through traffic flow. The routes connect areas of principal traffic generation and important rural roadways leaving the city.

iii. Collector Roads – Roadways serving traffic between major and local streets. These are streets used mainly for traffic movement within residential, commercial and industrial areas.

iv. Local Roads – Local streets are used primarily for direct access to residential, commercial, industrial, or other abutting property.

c. Illumination levels of Right-of-Ways. The maximum average illumination level along the entire right-of way being illuminated and over the right-of-way area only, shall be:

i. Expressway 1.4 footcandles

- ii. Major Roads 1.5 footcandles
- iii. Collector Roads 1.0 footcandles
- iv. Local Roads 0.4 footcandles.
- v. Existing luminaires on local roads may be retrofitted with full cutoff luminaires with the design not to exceed 0.4 footcandles average. The maximum maintained average illumination in the intersection area shall be 2 times the average of the maintained footcandles of the two types of roads at the intersections.
- vi. Intersections of Collector & Local Roads shall be 1.6 footcandles maximum and at Local & Local Roads shall be 1.4 footcandles maximum.

5. Luminaires used for playing fields shall be exempt from the height restriction, provided all other provisions of this chapter are met and the light is used only while the field is in use.

D. Luminance And Type Of Lamp:

1. Luminance levels for parking lots, sidewalks and other walkways affected by side mounted building lights, and freestanding sidewalk lights (not streetlights) shall not exceed luminance levels listed in the most current "IESNA Recommended Practices", as amended from time to time. The city recognizes that not every such area will require lighting.
2. Aboveground parking lot lighting shall not exceed an overall average illumination of 1.5 foot-candles. Interior parking structure lighting shall not exceed the minimum security illumination levels listed in the most current "IESNA Recommended Practices", as amended from time to time.
3. The use of lighting for exterior wall washing is limited for residences, condominiums and apartments; the use of recessed eave lighting to achieve wall washing is preferred, and wall washing should strive for uniform illumination distribution. The maximum average illumination limits for wall washing are:
  - a. Dark colored exterior surfaces: 1.0 foot-candle.
  - b. Light colored exterior surfaces: 0.5 foot-candle.

Luminance measurements of indirect light creating wall wash shall be measured with a luminance meter four feet (4') from ground level with the meter held horizontally and touching the wall surface.

4. Streetlights shall be LED, unless otherwise determined that another type is more efficient and approved by the city council. LED street lighting shall be fully shielded, and emit no light upward. Light housing shall be constructed to expel excess heat from the fixture. The correlated color temperature on all fixtures shall be 3000K or warmer (lower number). LED lighting fixtures shall be installed with an adaptive control system capable of dimming and/or motion sensor control that is compatible with the current city control system. LED is permitted, then the replacement fixture shall have the equivalent output as the other light type. (See table 1 of this section.)

5. LED streetlights shall be implemented in accordance with an engineering study, specifically a Photometric Plan, that shall have been conducted and approved prior to installation of LED luminaires. Said Photometric Plan shall recommend appropriate perceived levels of illumination based upon the correlated color temperature of the proposed luminaires and the specific location and purpose of the luminaire, e.g. residential cul-de-sac, highway intersection, etc. as referenced in IESNA Recommended Practices.

#### 10-24-5: PROCEDURE FOR APPROVAL:

A. All applications for design review, conditional use permits, planned unit developments, subdivision approvals, applicable sign permits or building permits shall include lighting plans showing location, type, height, lumen output and luminance levels in order to verify that lighting conforms to the provisions of this chapter. The lighting administrator may waive the requirement for luminance level information only, if the lighting administrator finds that the luminance levels conform to this chapter. For all other exterior lights which must conform to the requirements of this chapter, an application shall be made to the lighting administrator, showing location, type, height, lumen output and luminance levels.

B. The lighting administrator shall review any new exterior lighting or any existing exterior lighting on subject property that is part of an application for design review, conditional use permit, planned unit development, subdivision approval, applicable sign permits or building permits, or any other land use approval, to determine whether the exterior lighting complies with the standards of this chapter.

C. The lighting administrator shall convey in writing a recommendation whether the exterior lighting complies with the standards of this chapter to the

building official, the planning commission, or to the appropriate approving body as the case may be, before any review or hearing on a building permit, design review, conditional use permit, planned unit development, subdivision application or applicable sign permit.

D. For all other exterior lighting which must conform to the requirements of this chapter, the lighting administrator shall issue a decision whether the exterior lighting complies with the standards of this chapter. All such decisions may be appealed to the board of adjustment within thirty (30) days of the decision.

10-24-6: VIOLATIONS; ENFORCEMENT:

If the lighting administrator finds that any provision of this chapter is being violated, the lighting administrator shall give notice by hand delivery or by certified mail, return receipt requested, of such violation to the owner and/or to the occupant of such premises, demanding that the violation be abated within thirty (30) days of the date of hand delivery or of the date of mailing of the notice. The planning department staff shall be available to assist in working with the violator to correct said violation. If the violation is not abated within the thirty (30) day period, the lighting administrator may institute actions and proceedings, either legal or equitable, to enjoin, restrain or abate any violations of this chapter. Such actions or proceedings shall be in addition to the enforcement and penalties provisions of [chapter 5](#) of this title.

REPEALER. This Ordinance shall repeal and supersede all prior ordinances and resolutions governing the same.

SAVINGS CLAUSE: If any provision or clause in this Ordinance or the application thereof to any person or entity or circumstance is held to be unconstitutional or otherwise invalid by any court of competent jurisdiction, such invalidity shall not affect other sections, provisions, clauses, or applications hereof which can be implemented without the invalid provision, clause, or application hereof, and to this end the provisions and clauses of this Ordinance are declared to be severable.

EFFECTIVE DATE. This Ordinance shall take effect immediately upon approved by the City Council.

Keen Ellsworth	Aye <u>X</u>	Nay _____
Brad Langston	Aye <u>X</u>	Nay _____
Ty Bringhurst	Aye <u>X</u>	Nay _____
Paul Heideman	Aye <u>X</u>	Nay _____
Mark Fahrenkamp	Aye _____	Nay _____ Absent <u>X</u>

PASSED AND APPROVED THIS 13<sup>th</sup> DAY OF April, 2017.

CITY OF TOQUERVILLE a Utah Municipal Corporation

  
M. Darrin LeFevre, Mayor

April 13, 2017

Attest:  
  
Dana M. Mckim, City Recorder

