

# Amendment to Chapter 94 Zoning Article VII Supplementary Regulations.

## Add Sec 94.149 Outdoor Lighting

### 1. GENERAL PROVISIONS

#### a. Purpose and Intent

This article is intended to reduce the problems created by improperly designed and installed outdoor lighting. They are intended to eliminate problems of glare and minimize light trespass, with regulations that avoid unnecessary direct light from shining onto abutting properties or streets.

#### b. Definitions

For purposes of this article, the following terms are defined:

Direct light: Light emitted directly from the lamp, off of the reflector or reflector diffuser, or through the refractor or diffuser lens, of a luminaire.

Fixture: 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, a lamp holder, a ballast, a reflector or mirror, and/or a refractor or lens.

Footcandle: A unit of illuminance on a surface that is everywhere one (1) foot from a uniform point source of light of one (1) candle and equal to one (1) lumen per square foot. One (1) footcandle (FC) is the equivalent of 10.76 Lux (1 Lux = 0.0929 FC).

Full cutoff luminaire: Outdoor light fixtures shielded or constructed so that no direct light rays are emitted by the installed fixture at angles above the horizontal plane.

Glare: 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, or that causes annoyance or discomfort.

Illuminance: The area density of the luminous flux incident at a point on the surface. It is a measure of light incident on a surface, expressed in lux or footcandles.

Isofootcandle plan: A site plan of a proposed development showing proposed outdoor illuminance with a series of isofootcandle lines that join points on a surface where the illuminance is the same.

Light trespass: The shining of light produced by a luminaire beyond the boundaries of the property on which it is located.

Luminaire: A complete lighting system, including a lamp or lamps and a fixture. This term shall be interpreted broadly as applying to all outdoor electrically powered illuminating devices, outdoor lighting or reflective surfaces, lamps and similar devices, permanently installed or portable, used for illumination or advertisement.

Outdoor lighting: The night-time illumination of an outside area or object by any man-made device located outdoors that produces light by any means.

Safety lighting: Exterior lighting that involves ensuring proper levels of illumination to provide safe working conditions, safe passage, and the identification of outdoor hazards.

Security lighting: Exterior lighting installed solely to enhance the security of people and property.

#### c. Applicability

All public and private outdoor lighting installed in the City of Jasper shall be in conformance with the requirements established by this article.

## **2. Exemptions**

The following shall be exempt from the provisions of this article:

- (a) All temporary emergency lighting needed by police or fire departments or other emergency services.
- (b) All hazard warning luminaires required by federal regulatory agencies.
- (c) All vehicular luminaires.
- (d) Safety lighting, as defined in this article.
- (e) Security lighting, as defined in this article, including lighting activated by motion sensor devices.
- (f) All outdoor light fixtures producing light directly by the combustion of natural gas or other fossil fuels.
- (g) Aesthetic lighting limited to interior roadway lighting with a maximum height of two (2) feet within a development, not intended to take the place of required street lighting, or lighting to be utilized within open space used to feature decorative plantings, sidewalks, walkways, or ornamental objects, such as fountains or similar features. Aesthetic lighting, although exempt from an isofootcandle plan, shall be identified on all design plans as to type of light and location to ensure appropriate use of aesthetic lighting in accordance with this section.

## **3. OUTDOOR LIGHTING REGULATIONS**

### **a. Cut-Off Fixtures**

All luminaires not exempted from this article hereafter installed for outdoor lighting shall be full cutoff luminaires, as defined by this article, or another luminaire which does not emit any direct light above a horizontal plane through the lowest direct-light-emitting part of the luminaire.

### **b. Glare**

Any luminaire that is aimed, directed, or focused such as to cause direct light from the luminaire to be directed toward residential buildings on adjacent or nearby land, or to create glare perceptible to persons operating motor vehicles on public ways, shall be redirected or its light output controlled as necessary to eliminate such conditions. Lighting shall be established in such a way that adjacent properties and roadways are not adversely affected, and that no direct light is cast upon adjacent properties and roadways.

### **c. Intensity Specifications**

Illuminance levels for outdoor lighting fixtures shall comply with the standards in table 1-1, measured at three (3) feet above the ground or finished grade.

TABLE 1-1

OUTDOOR LIGHTING REGULATIONS  
TABLE INSET:

At Property Lines Including Rights-of-Way	Minimum Footcandles	Maximum Footcandles
At property line abutting a residential use	0	0.5
At property line abutting an office or institutional use	0	1.0
At property line abutting a commercial or light industrial use	0	1.5

TABLE INSET:

Off-Street Parking Lots	Minimum Footcandles	Average Footcandles	Maximum Footcandles
Residential areas	0.5	2	4
Office-professional areas	1.0	3	6
Commercial areas	2.0	6	12
Light industrial areas	1.0	4	8

#### 4. Lighting Plan Required

A lighting plan, approved by the design review board or historic preservation commission, whichever has jurisdiction, shall be required for all non-single-family residential developments of three (3) acres or more in size, and for community recreation, as defined, when lighting is proposed. It is the intent of this section that small sites with a limited number of fixtures should be exempted from preparing and submitting a professional lighting plan, and that the zoning director will exercise discretion to provide such relief where appropriate. When required, lighting plans shall illustrate proposed lighting. The plan shall show areas of night illumination and the amount of light at various places measured in footcandles. When required, the lighting plan shall consist of either isofootcandles (connecting points of equal light illumination levels, similar to a topographic contour) or a photometric grid with individual spot readings. No lighting plan shall be approved which will result in direct light that exceeds the requirements or is otherwise inconsistent with this article. Unless otherwise exempted by the zoning director, the outdoor lighting plan shall require approval by the design review board as a design plan application, or by the historic preservation as a certificate of appropriateness, whichever has jurisdiction.

## **5. Type of Lighting**

Unless otherwise approved by the zoning director, outdoor lighting shall be incandescent or high pressure sodium.

## **6. Recommended Practice**

The zoning director, should consider and apply the following design standard in their review of outdoor lighting plans:

The illuminated distance of any given luminaire should not exceed three (3) times the height of the given luminaire.