

[Jackson, Michigan Code of Ordinances Sec. 28-109](#)

CODE OF ORDINANCES City of JACKSON, MICHIGAN Codified through Ordinance No. 2020-15, adopted September 8, 2020. (Supp. No. 79)

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§ Sec. 28-109 Lighting standards.

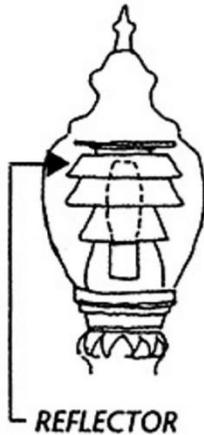
- (a) *Intent and purpose.* The purpose of this section is to protect the health, safety and welfare of the public by recognizing the need for buildings and sites to be illuminated for safety, **security** and visibility for pedestrians and motorists balanced against the often detrimental effects associated with the use of outdoor **lighting**. This section provides **standards** for various forms of **lighting** that will minimize **light** pollution; reduce the potential for off-site impacts; preserve the restful quality of nighttime by eliminating intrusive artificial **light** and **lighting** that unnecessarily contributes to sky glow; reduce **light** pollution and **light** trespass from **light** sources onto adjacent properties; enhance customer and employee safety; contribute to improving visibility by requiring illuminated areas to have uniform **light**; and curtail the degradation of the nighttime visual environment.
- (b) *Applicability.* The **standards** in this chapter apply to any **light** source visible beyond the property from which it is emanating. The zoning administrator (or designee) may review any building or site to determine compliance with the requirements under this section. Whenever a person is required to obtain a building permit, electrical permit for outdoor **lighting** or illuminated signs, a conditional use permit, subdivision approval or site plan approval from the city, the applicant must submit sufficient information to enable the zoning administrator (or designee) or planning commission to determine whether the proposed **lighting** will comply with this section.
- (c) *Exemptions.*
- (1) Street **lights** located in a public right-of-way or another public easement are exempt from the **lighting** requirements of this chapter without any conditions.
 - (2) The following are exempt from the **lighting** requirements of this chapter, provided that they do not shine beyond the property line and have no glare or other detrimental effects on adjoining streets or property owners:
 - a. Residential **lighting** associated with one- and two-family dwellings.
 - b. Private swimming pools;
 - c. Holiday decorations; and
 - d. Window displays.
- (d) *Submittal requirements.* The following information must be included for all site plan submissions which include any existing or new exterior **lighting** and where site plan approval is not required, some or all of the items may be required by the zoning administrator (or designee) prior to zoning approval or **lighting** installation:
- (1) The location of all outdoor **lighting** fixtures, including but not limited to pole-mounted, building-mounted (including outline **lighting**), architectural accent, landscape (including walkway bollards), and canopy **light** fixtures on the site plan and building elevations;

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- (2) A photometric grid overlaid on the proposed site plan indicating the ***light*** intensity throughout the site (in footcandles (fc)). Measurements must be at ground level and shown at ten-foot spacing;
- (3) The manufacturer's specification sheets and details for the type of fixture being proposed including but not limited to ***light*** intensity levels (in footcandles (fc)) at ground level based on fixture mounting height, the total lumen output, type of lamp, distribution type and method of shielding;
- (4) The maximum and minimum footcandle (fc) calculations, minimum-to-maximum and minimum-to-average uniformity ratios, and the ***light*** loss factor (LLF) used. These statistics must be provided for areas where vehicular and pedestrian movement is provided for and for other areas as necessary to show compliance with ***standards*** of subsection ***28-109(f)*** of this chapter.
- (5) Use of fixture(s) proposed; and
- (6) Any other information deemed necessary by the zoning administrator in accordance with the intent and purpose of this section.

(e) ***General standards.***

- (1) Unless otherwise permitted within subsection ***28-109(c)*** or subsection ***28-109(f)***, only shielded fixtures as defined in Section 28-5 may be used. Any interior ***light*** fixtures that are deemed to be causing glare and therefore not meeting the purpose or intent of this Chapter must be shielded to prevent glare outside the building and do not shine beyond the property line.
- (2) Decorative fixtures using lamps with low wattages do not have to be shielded; these include incandescent lamps of sixty (60) watts or less; glass tubes filled with neon, argon and krypton; and any other ***light*** source of fifty (50) watts or less. Decorative luminaries above fifty (50) watts must have internal and/or external reflectors that shield the ***light*** source.



- (3) It is recognized that metal halide LED, inductive, and fluorescent lamps are superior ***lights*** for color and object recognition when compared to other lamp types such as low and high pressure sodium or mercury vapor. Therefore, use of metal halide, LED, inductive, and fluorescent lamps is required unless the zoning administrator (or designee) or planning commission determines that unique circumstances exist that prevent installation of the required lamp types. It is also recognized that as the ***lighting*** industry develops, new lamp types are occasionally introduced that may have similar characteristics as the currently required types that may also be desirable for use in outdoor ***lighting***.
- (4) The intensity of ***light*** on a site must not exceed three-tenths (0.3) of a footcandle (fc) at any property line that abuts a residentially zoned property or half (0.5) of a footcandle (fc) for any other zoned property.
- (5) All exterior ***lighting*** must be designed in a consistent and coordinated manner for the entire site.
- (6) Indirect internal illumination of signs and canopies is permitted provided a maximum one hundred twenty-five (125) watt bulb is utilized and the transmittal surface is of a color and material that effectively shields lamps. This does not take into consideration fluorescent, LED, or neon ***light*** sources typically used in these applications.

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(f) **Lighting** intensity and uniformity **standards**.

- (1) Table of **standards**. The following **lighting** intensity and uniformity **standards** must be used in designing an outdoor **lighting** plan as required within subsection **28-109(d)** of this chapter.

Table of **Lighting**
Intensity and
Uniformity
Standards

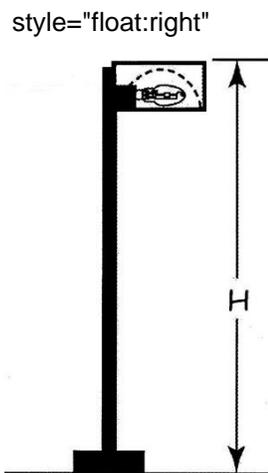
<u>Light</u> Use	Required Average to Minimum Uniformity Ratio (b)	Required Minimum Footcandle (fc) Reading (b)	Maximum Allowable Average Illumination (b)	Maximum Allowable Footcandle (fc) Reading (b)
The C-4 district along West Avenue and Wisner Street (north of North Street)	4:1	n/a	5.0 fc	No more than 20 fc in addressed front yards or 10 fc in non- addressed front yards.
All other districts				No more than 10 fc in addressed front yards or 5 fc in non-addressed front yards.
Pump islands of gasoline stations	4:1	Between 1.0 fc and 5.0 fc		22.0 fc
Building facades and externally illuminated signs (c)			n/a	
Building entrances	4:1	n/a	5.0 fc, active, and 1.0 fc, inactive	n/a
Parking lots ^{2d}	4:1	Between 0.2 fc and 0.7 fc	n/a	n/a
<u>Security lighting</u>	n/a	n/a	1.5 fc	n/a
Exterior recreational facilities	See subsection (e)(3)			

(2) *Footnotes to the table.*

- a. The above statistics should only be applied to the area of each site devoted to the particular use. For example, a gas station/restaurant combination may have an area dedicated as a parking lot for the restaurant patrons and in addition have a pump island canopy. In this scenario two sets of statistics would need to be generated; one set for the parking lot and the other set for the canopy area.

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- b. Measurements for average to minimum uniformity ratio, required minimum footcandle (fc) reading, maximum allowable average illumination and maximum allowable footcandle (fc) reading must be generated at the surface intended to be illuminated (e.g., pavement or area surface). These statistics must be provided for areas where vehicular and pedestrian movement is provided for and other areas as necessary to show compliance with **standards**.
- c. Building facades and signs cannot be illuminated if they are of glass, polished metal or other glossy surface including painted surfaces. Building facades cannot be entirely illuminated. Rather, illumination can be for architectural ornament and/or the illumination of small areas for visibility and **security**. For spotlight fixtures, no less than ninety (90) percent of the **light** beam must be concentrated on the surface intended to be illuminated. For fixtures mounted directly to a wall surface or sign, external shields or dark colored non-reflective surface materials or other appropriate methods must be used to direct the **light** perpendicular to the ground and minimize reflectance glare.
- d. The maximum height of parking lot **light** fixtures, from grade, shall be as follows:



Fixture Height

1. Up to fifteen (15) feet in a residential district;
 2. Up to eighteen (18) feet in a commercial or industrial district when within one hundred fifty (150) feet of a residential district;
 3. Up to twenty (20) feet in a commercial district when no less than one hundred fifty (150) feet of a residential district; or
 4. Up to twenty-five (25) feet in an industrial district when no less than one hundred fifty (150) feet of a residential district.
- (3) *Exterior recreational facilities.* For exterior recreational facilities, sufficient information must be submitted in addition to that required in Subsection **28-109**(c) that demonstrates that the location, selection and aiming of all **lighting** fixtures will focus **light** on the playing areas, minimize glare and visibility from adjacent and nearby properties and roadways and minimize sky glow. A written explanation and statements must be supplied explaining why locations, fixtures types, intensities, orientation of fixtures and other decisions were made. **Lighting** of sports facilities cannot be operated except during an event and must be turned off no later than forty-five (45) minutes after the event is over.
- (4) *Uses not specifically listed.* For uses not specifically listed within this Subsection, but determined to be of a type, use and or intensity that may be detrimental to achieving the purpose of this chapter, the zoning administrator, depending on the purpose of the **lighting**, must classify **lighting** into one of the categories contained in subsection **28-109**(f) of this chapter. An applicant may appeal an initial classification to the zoning administrator, in writing, detailing why more intense **lighting** or less **lighting** is necessary. The zoning administrator must either approve or deny the appeal based on whether or not sufficient justification

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has been submitted and whether the proposal meets the intent of this Code. Final determinations of the zoning administrator may be appealed to the zoning board of appeals.

(g) *Prohibited outdoor **lighting**.*

- (1) The use of a laser **light** source, searchlights or any similar high intensity **light** for outdoor advertisement or entertainment is prohibited except in conjunction with a special event as defined in article VI of chapter 16 of this Code.
- (2) **Lighting** cannot be of a flashing, moving or intermittent type except in conjunction with a special event as defined in article VI of chapter 16 of this Code.

(h) *Lamp or fixture substitution.* Should any **light** fixture regulated under this Chapter, or the type of **light** source therein, be changed after the permit has been issued, a change request must be submitted to the zoning administrator for approval, together with adequate information to assure compliance with this code, which must be received prior to substitution.(i) *Administration.*

- (1) An outdoor **lighting** permit must be issued on a form from the zoning administrator (or designee) if it is determined by the zoning administrator (or designee) or planning commission that a proposal fulfills the requirements and intent and purpose of this chapter. The permit must list what is being approved and contain copies of relevant documents.
- (2) The zoning administrator has the discretion to require the re-direction of existing **light** fixtures when it is determined that the fixture is not in compliance with the requirements of this code.

HISTORY NOTE:

(Ord. No. 2013.10, 3, 4-23-13; Ord. No. 2016-29, 3, 11-15-16)

Annotations

Notes Applicable To Upper Hierarchy

CHARTER REFERENCE:

Commission's powers of zoning, serial section 65.

CROSS REFERENCE:

Administration, Ch. 2; buildings and building regulations, Ch. 5; community development, Ch. 8; fire prevention and protection, Ch. 10; housing, Ch. 14; planning, Ch. 20; water and sewers, Ch. 27.

STATE LAW REFERENCE:

Authority to regulate land use, MCL 125.581 et seq.

Notes Applicable To Entire Article

EDITORS NOTE:

Ord. No. 2012.16, 5, adopted July 17, 2012, repealed the former Art. IV, 28-106, 28-159, and enacted a new Art. IV as set out herein. The former Art. IV pertained to supplemental provisions. For a complete derivation see the Code Comparative Table at the end of this volume.

Editors Note

Ord. No. 2013.10, 3, adopted April 23, 2013, enacted provisions intended for codification as 28-125. At the direction of the city, and to avoid duplicate section numbers, said provisions have been redesignated as **28-109**.

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