

**CHAPTER 8****LAND AND BUILDING REGULATIONS****829. OUTDOOR LIGHTING ORDINANCE****Section 829.01. Purpose and Intent.**

**Subd. 1.** Sections 829.01 et seq. shall be known as the outdoor lighting ordinance. It is the intent of this ordinance to define practical and effective measures by which the obtrusive aspects of excessive and/or careless light usage that affects the nighttime environment can be minimized, while preserving safety, security and the nighttime use and enjoyment of property. These measures are intended to curtail the degradation of the nighttime visual environment by encouraging lighting practices that direct appropriate amounts of light where and when it is needed, increasing the use of energy efficient sources, and decreasing the wastage of light and glare resulting from overlighting and poorly shielded or inappropriately directed lighting fixtures.

**Subd. 2.** All outdoor illuminating devices shall be installed in conformance with the provisions of this ordinance and the Minnesota State Building Code as applicable and under appropriate permit and inspection.

**Section 829.02. Definitions.** As used in this ordinance, unless the context clearly indicates otherwise, the following words and phrases shall have the meanings given to them:

**Subd. 1. Certified Lighting Professional.** Any person holding certification by the National Council of Qualifications for the Lighting Professions, International Association of Lighting Management Companies or the Association of Energy Engineers.

**Subd. 2. Class 1 Lighting.** All outdoor lighting used for, but not limited to, outdoor sales or eating areas, assembly or repair areas, advertising and other signs, recreational facilities and other similar applications where color rendition is important to preserve the effectiveness of the activity. Designation of lighting as Class 1 requires a finding by the zoning administrator of the essential nature of color rendition for the application. Class 1 uses include outdoor eating and retail food or beverage service areas; outdoor maintenance areas; display lots; and assembly areas, such as concert or theater amphitheaters.

**Subd. 3. Class 2 Lighting.** All outdoor lighting used for, but not limited to, illumination for walkways, roadways, equipment yards, parking lots and outdoor security where general illumination for safety or security of the grounds is the primary concern.

**Subd. 4. Class 3 Lighting.** Any outdoor lighting used for decorative effects including, but not limited to, architectural illumination, flag and monument lighting, and illumination of landscaping.

**Subd. 5. Direct Illumination.** Illumination resulting from light emitted directly from a lamp or luminaire, not light diffused through translucent signs or reflected from other surfaces such as the ground or building faces.

**Subd. 6. Directly Visible.** Allowing a direct line-of-sight to the light source or lamp.

**Subd. 7. Flood Light or Lamp.** A specific form of lamp designed by the manufacturer to direct its output in a specific direction (a beam) but with a diffusing glass envelope.

**Subd. 8. Footcandle (fc).** A unit of illuminance equal to one lumen per square foot. It is the luminous flux per unit area in the Imperial system. One footcandle equals approximately 10 (10.76) lux.

**Subd. 9. Full Cutoff Light Fixture.** A luminaire light distribution where no light is emitted above the horizontal, and where the intensity at 80 degrees from nadir (straight down) is no greater than 100 candela per 1000 lamp lumens.

**Subd. 10. Fully Shielded Light Fixture.** A lighting fixture constructed in such a manner that 95% of all light emitted by the fixture, either directly from the lamp or a diffusing element, or indirectly by reflection or refraction from any part of the luminaire, is projected below the horizontal as determined by photometric test or certified by the manufacturer. Up to 5% of the light emitted may shine above the horizontal. Any structural part of the light fixture providing this shielding must be permanently affixed.

**Subd. 11. Glare.** The sensation produced by a bright source within the visual field that is sufficiently brighter than the level to which the eyes are adapted to cause annoyance, discomfort, or loss in visual performance and visibility. The magnitude of glare depends on such factors as the size, position, or brightness of the source, and the brightness level to which the eyes are adapted.

**Subd. 12. Glass Enclosed Area.** Interior building spaces with extensive use of glass or other transparent or translucent material, including atria, sky lighted areas, conservatories or greenhouses, in which interior lighting of the area will provide illumination onto adjacent exterior spaces.

**Subd. 13. IESNA.** Illuminating Engineering Society of North America

**Subd. 14. Installed.** The attachment or assembly fixed in place of any outdoor light fixture, whether or not connected to a power source.

**Subd. 15. Light pollution.** Any adverse effect of manmade light.

**Subd. 16. Light Trespass.** Light falling where it is not wanted or needed, including across property boundaries.

**Subd. 17. Lighting Zones.** An overlay zoning area in which maximum levels of light are established. The four lighting zones are defined on the lighting zone map and by this reference made a part of this ordinance. A parcel located in more than one of the lighting zones described herein shall be considered to be regulated by the lighting zone it is in. Guidelines used to guide the delineation of the lighting zones are:

- (a) Lighting Zone E4. Areas of high ambient lighting levels. This zone generally includes urban areas with primary land uses for commercial, business and industrial activity, including highway commercial and downtown districts.
- b) Lighting Zone E3. Areas of medium ambient lighting levels. This zone generally includes suburban residential areas, but neighborhood commercial or industrial parcels largely surrounded by suburban residential uses may also be included.
- (c) Lighting Zone E2. Areas of low ambient lighting levels. This zone generally includes rural residential and agricultural areas, but may also include small outlying neighborhood commercial and industrial areas surrounded by rural residential areas.
- (d) Lighting Zone E1. Areas with intrinsically dark landscapes. This zone includes rural areas, including rural residential areas, where preservation of natural darkness has been identified as a high priority or other areas where the preservation of a naturally dark landscape is of utmost priority.

**Subd. 18. Lumen.** Unit of luminous flux, used to measure the amount of light emitted by lamps.

**Subd. 19. Luminaire.** The complete lighting assembly except the support assembly. Lighting assemblies that include multiple unshielded or partially shielded lamps on a single pole shall be considered as a single unit, for purposes of determining total light output from a luminaire.

**Subd. 20. Lux.** One lumen per square meter. It is the luminous flux per unit area in the metric system. One lux equals approximately .1 (.093) footcandles.

**Subd. 21. Multi-class Lighting.** Any outdoor lighting used for more than one purpose, such as security and decoration, such that its use falls under the definition of two or more lighting classes.

**Subd. 22. Non-Residential Property.** A property of which the primary use is not-residential regardless of planning zone location.

**Subd. 23. Opaque.** A material which does not transmit light from an internal illumination source. Applied to sign backgrounds, opaque means that the area surrounding any letters or symbols on the sign either is not lighted from within, or allows no light from an internal source to shine through it.

**Subd. 24. Outdoor Display Lot.** An outdoor area where active nighttime sales activity occurs and where accurate color perception of merchandise by customers is required.

**Subd. 25. Outdoor Light Fixture.** An outdoor illuminating device, outdoor lighting or reflective surface, lamp or similar device, permanently installed or portable, used for illumination or advertisement. Such devices include, but are not limited to, lights used for parking lots; roadways; buildings and structures; landscaping; signs; and building overhangs and open canopies.

**Subd. 26. Person.** Any individual, firm, business, partnership, joint venture, corporation or any other such entity, whether the owner, lessee or tenant of the property.

**Subd. 27. Residential Property.** A property of which the primary use is residential regardless of planning zone location.

**Subd. 28. Sign, Externally Illuminated.** A sign illuminated by light sources from the outside.

**Subd. 29. Sign, Internally Illuminated.** A sign illuminated by light sources enclosed entirely within the sign cabinet and not directly visible from outside the sign.

**Subd. 30. Sign, Neon.** A sign including luminous gas-filled tubes formed into text, symbols or decorative elements and directly visible from outside the sign cabinet.

**Subd. 31. Sky Glow.** The brightening of the night sky that results from the scattering of artificial visible radiation from the constituents of the atmosphere.

**Subd. 32. Spot Light or Lamp.** A specific form of lamp designed by the manufacturer to direct its output in a specific direction (a beam) and with a clear or nearly clear glass envelope.

**Subd. 33. Use, Abandonment of.** The cessation of a use or activity on a property by the owner or tenant for a period of 12 months or more, excluding temporary or short term interruptions for the purpose of remodeling, maintaining, or otherwise improving or rearranging a facility. A use shall be deemed abandoned when such use is suspended as evidenced by the cessation of activities or conditions that constitute the principle use of the property.

**Section 829.03. Applicability.**

**Subd. 1. New Uses, Buildings and Major Additions or Modifications on Non-Residential Property.** For all proposed new land uses, developments, buildings, and structures on non-residential property that require a permit, all outdoor lighting fixtures shall meet the requirements of this ordinance. All building additions of 25 percent or more in terms of additional dwelling units, gross floor area, or parking spaces, either with a single addition or with cumulative additions subsequent to the effective date of this ordinance, shall invoke the requirements of this ordinance for the entire property, including previously installed and any new outdoor lighting. Cumulative modification or replacement of outdoor lighting constituting 25 percent or more of the lighted area for the parcel, no matter the actual amount of lighting already on a non-conforming site, shall constitute a major addition for purposes of this section.

**Subd. 2. Minor Additions on Non-Residential Property.** Additions or modifications to existing land uses, developments, buildings and structures on non-residential property of less than 25 percent that require a permit shall require the submission of a complete inventory and site plan detailing all existing and proposed new outdoor lighting. New lighting on the site shall meet the requirements of this ordinance with regard to shielding and lamp type.

**Subd. 3. Time For Compliance.** Notwithstanding anything herein to the contrary, all land uses, developments, buildings and structures on non-residential properties must be brought into compliance with this ordinance within two years of its effective date if adjacent to residential property or within five years in all other cases.

**Subd. 4. Resumption After Abandonment of Use.** If a property or use with non-conforming lighting is abandoned as defined in Section 829.02, subd.31, all outdoor lighting shall be reviewed and brought into compliance with this ordinance before the use is resumed.

**Subd. 5. Roadways.** Lighting for public or private roadways shall meet the requirements of this ordinance with regard to shielding and lamp type.

**Subd. 6. Sign Lighting.** Notwithstanding anything herein to the contrary, the regulations of Section 829.05 related to Sign Lighting shall apply to all residential and Non-Residential Property in the City.

**Section 829.04. Shielding and Outdoor Light Level Standards for All non-Residential Properties.**

**Subd. 1.** All nonexempt outdoor lighting fixtures shall have shielding as shown in Table 1. For exempt light fixtures refer to Section 829.10.

**Subd. 2.** Any lamp greater than 2000 lumens installed must be shielded such that the lamp is not directly visible from any residential property.

**TABLE 1 - LAMP TYPE AND SHIELDING STANDARDS FOR ALL NON-RESIDENTIAL PROPERTIES**

USE CLASS & LAMP TYPE	LIGHTING ZONES			
	E4	E3	E2	E1
<b>CLASS 1 LIGHTING (TASK ILLUMINATION):</b>				
Initial Light Output Greater than or equal to 2000 Lumens	F	F	F	F
Initial Light Output below 2000 Lumens (2)	A(1)	A(1)	A(1)	F
<b>CLASS 2 LIGHTING (GENERAL ILLUMINATION):</b>				
Initial Light Output Greater than or equal to 2000 Lumens	F	F	F	F
Initial Light output below 2000 Lumens (2)	A(1)	A(1)	A(1)	F
<b>CLASS 3 LIGHTING (DECORATIVE) (3):</b>				
Initial Light Output Greater than or equal to 2000 Lumens	F	F	X	X
Initial Light Output below 2000 Lumens (2)	A(1)	A(1)	F	F

Use Codes:

- A - All types of fixtures allowed; shielding not required but highly recommended, except that any spot or flood light must be aimed no higher than 45 degrees above straight down.
- F - Only fully shielded fixtures allowed.
- X - Not allowed.

Notes to Table 1.

1. Flood or spotlights must be aimed no higher than 45 degrees above straight down (halfway between straight down and straight to the side) when the source is visible from any off-site residential property or public roadway.
2. Seasonal decorations using typical unshielded low-wattage (less than 15 watts per bulb) incandescent lamps shall be permitted in all lighting zones.
3. All Class 3 lighting shall be extinguished between 11:00 p.m., or when the business closes, whichever is later, and sunrise.
4. Any lamp greater than 2000 lumens installed must be shielded such that the lamp is not directly visible from any residential property.

**Subd. 3.** No exterior lighted area may exceed the maximum light levels indicated in Table 2. Measurements are taken by holding the light meter at 5'-0" above the ground, in the vertical position aimed in the direction of the light source.

**TABLE 2. - MAXIMUM LIGHTING LEVELS AT PROPERTY LINE FOR ALL NON-RESIDENTIAL PROPERTIES**

<b>ZONE AND DESCRIPTION</b>	<b>PRE-CURFEW MAXIMUM ILLUMINATION LEVEL</b>	<b>POST-CURFEW MAXIMUM ILLUMINATION LEVEL</b>
Zone E4 (high ambient brightness)	15 Lux (1.5 fc)	6 Lux (0.6 fc)
Zone E 3 (medium ambient brightness)	8 Lux (0.8 fc)	2 Lux (0.2 fc)
Zone E2 (low ambient brightness)	3 Lux (0.3 fc)	1 Lux (0.1 fc)
Zone E1 (intrinsically dark)	1 Lux (0.1 fc)	1 Lux (0.1 fc)

**Subd. 4.** All light fixtures that are required to be shielded shall be installed and maintained in such a manner that they are fully shielded light fixtures.

**Subd. 5.** The maximum pole height for pole mounted luminaires shall be 30 feet plus a pole base not to exceed 30 inches high.

**Subd. 6.** Beyond the shielding requirements of subd. 1 of this section, all light fixtures shall be located, aimed or shielded so as to minimize light trespass.

**Subd. 7.** Multi-class lighting must conform to the shielding and timing restrictions, if any, that apply to the most restrictive included class.

**Section 829.05. Lighting for Signs.**

**Subd. 1.** External illumination for signs shall conform to all provisions of this ordinance. In particular, such lighting shall be treated as Class 1 lighting and shall conform to the lamp source, shielding restrictions and light levels of Section 829.04. All upward-directed sign lighting is prohibited.

**Subd. 2. Internally illuminated signs.**

- (a) Portions of a Sign which do not include a logo or message shall be opaque or, if lighted, shall be constructed with a colored (not white, off-white, light gray, cream or yellow) background.
- (b) Neon signs, Light Emitting Diode (LED) signs, and other similar devices shall be treated as internally illuminated signs for the purposes of this ordinance and shall conform to all provisions of this ordinance. In particular, such lighting shall be treated as Class 3 lighting, shall not exceed 2000 Lumens of Initial Light Output, and shall conform to the light levels of Table 2.

- (c) Other internally-illuminated panels or decorations not considered to be signs according to the sign ordinance, such as illuminated canopy margins or building faces and neon/LED banding, shall be considered Class 3 lighting, and shall be subject to the standards applicable to such lighting, including but not limited to the lamp source, shielding standards and light level requirements of Section 829.04.

**Subd. 3. Curfews.** Illumination for signs and glass enclosed areas, shall be turned off at 10 PM or when the business closes, whichever is later. Illumination for signs and glass enclosed areas shall not be turned on until 6 AM or when the business opens, whichever is later. Signs subject to curfews are required to have functioning and properly adjusted automatic shut-off timers. Light background (white, off-white, light gray, cream or yellow) internally illuminated signs, installed legally before enactment of this ordinance, shall be considered non-conformities but may continue to be used and illuminated so long as their use conforms to the curfews as indicated. Notwithstanding the above, signs with light backgrounds must be brought into compliance with this ordinance within the time periods specified in section 829.03, subd. 3 hereof.

**Subd. 4.** Internally illuminated signs are not permitted in E1 Lighting Zones.

**Section 829.06. Special Uses.** The following regulations apply to specific uses as follows:

**Subd. 1. Temporary Outdoor Display Lots.**

- (a) Recognized display lots include building supply sales, gardening or nursery sales, assembly lots, swap meets, festivals or bazaars. Other uses not on this list must be approved as display lot uses by the zoning administrator.
- (b) Temporary permits are available for no more than 3 consecutive days or 14 days total in a year.
- (c) Outdoor automobile display lots are prohibited.
- (d) Lighting for display lots shall be considered Class 1.
- (e) All display lot lighting shall utilize fully shielded luminaires that are installed in a fashion that maintains their fully shielded characteristics.
- (f) The display lot shall be designed to achieve no greater than the minimal illuminance levels for the activity as recommended by the IESNA.
- (g) The display lot shall limit off-site light trespass (off the parcel containing the display lot) to a maximum of 10 lux (1.0 fc) at any location on any non-residential property, and 5 lux (0.5 fc) at any location on any residential property. Measurements are taken by holding the light meter at 5'-0" above the ground, in the vertical position aimed in the direction of the light sources.



- (h) A registered engineer or certified lighting professional shall certify every display lot lighting system design and installation as conforming to all applicable restrictions of this ordinance.
- (i) Display lot lighting exceeding the light levels of Section 829.04 shall be turned off at the curfew listed or within thirty minutes after closing of the business, whichever is later. Lighting in the display lot after curfew shall be considered Class 2 lighting, and shall conform to all restrictions of this ordinance applicable to Class 2 lighting, including the light levels in Section 829.04.

**Subd. 2. Service Station Canopies.**

- (a) Lighting for service station canopies shall be considered Class 2 lighting.
- (b) All luminaires mounted on or recessed into the lower surface of service station canopies shall be fully shielded and utilize flat lenses.
- (c) The total light output used for illuminating service station canopies, defined as the sum of all under-canopy initial bare-lamp outputs in lumens, shall not exceed 430 lumens per square meter (forty lumens per square foot) of canopy in Lighting Zones E3 and E4, and shall not exceed 215 lumens per square meter (twenty lumens per square foot) in Lighting Zones E1 and E2. All lighting mounted under the canopy, including but not limited to luminaires mounted on the lower surface or recessed into the lower surface of the canopy and any lighting within signage or illuminated panels over the pumps, is to be included toward the total at full initial lumen output.
- (d) The light levels at the property line must meet the requirements of Section 829.04.

**Subd. 3. Glass Enclosed Areas.** Glass enclosed areas with transparent or translucent areas greater than 2,500 square ft. of continuous area within buildings must meet the curfews in Section 829.05 Subd. 3 or provide shielding to prevent illumination of surrounding areas and sky glow.

**Subd. 4.** All lighting not directly associated with the special use areas above shall conform to the lighting standards described in this ordinance, including but not limited to the lamp type and shielding requirements of Table 1 and the light level limits of Table 2 of section 829.04.

**Section 829.07. Submission of Plans and Evidence of Compliance with Ordinance, Subdivision Plats on Non-Residential Property.**

**Subd. 1. Submission Contents.** The applicant for any permit on non-residential property required by any provision of the code of ordinances in connection with proposed work involving outdoor lighting fixtures shall submit as part of the permit application evidence that the proposed work will comply with this ordinance. Even if no other such permit be required, the installation or modification, except for routine servicing and same-type lamp replacement, of any exterior lighting shall require submission of the information described below. The application shall contain at least the following, all or part of which may be part

or in addition to the information required elsewhere in the code of ordinances upon application for the required permit:

- (a) Plans indicating the location on the site of each illuminating device, both proposed and any already existing.
- (b) Description of all illuminating devices, fixtures, lamps, supports, reflectors and shields, both proposed and existing. The description may include, but is not limited to, catalog cuts and illustrations by manufacturers, including sections where required.
- (c) Photometric data, such as that furnished by manufacturers or similar, showing the angle of cut off of light emissions.
- (d) Plans indicating compliance with light level requirements as indicated in Table 1, vertical illumination at the property line 5'-0" above grade, aimed at the center of the property. Refer to Subd. 6.

**Subd. 2. Additional Submission.** The plans, descriptions and data submitted with the application must be sufficiently complete to enable the zoning administrator to readily determine whether the proposed work will comply with the requirements of this ordinance. If such determination cannot be made pursuant to the plans, descriptions and data, the applicant shall submit such additional evidence of compliance as may be required.

**Subd. 3. Subdivisions.** If any application of any subdivision on non-residential property proposes to install street or other common or public area outdoor lighting, submission of the information as described in Subd. 1 of this section shall be required for all such lighting.

**Subd. 4. Lamp or Fixture Substitution.** If any outdoor light fixture or the type of light source therein is 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 ordinance prior to substitution.

**Subd. 5.** If the zoning administrator determines that the proposed lighting does not comply with this ordinance, the permit shall not be issued nor the plan approved.

**Subd. 6.** For all projects on non-residential property in which the total initial output of the proposed lighting equals or exceeds 50,000 lamp lumens, certification that the lighting, as installed, conforms to the approved plans shall be provided by a registered engineer or certified lighting professional before the certificate of occupancy is issued. Until this certification is submitted, no certificate of occupancy shall be issued for the project.

**Section 829.08. Alternate Materials; Prohibitions.**

**Subd. 1. Alternate Materials.** The provisions of this ordinance are not intended to prevent the use of any design, material, or method of installation or operation not specifically prescribed by this ordinance, provided any such alternate has been approved by the zoning administrator. The zoning administrator may approve any such proposed alternate, if it provides at least approximate equivalence to that applicable specific requirement of this ordinance and that it is otherwise satisfactory and complies with the intent of this ordinance.

**Subd. 2.** Notwithstanding anything else herein to the contrary, the use of laser source light or any similar high intensity light for outdoor advertising or entertainment, when projected above the horizontal and the operation of searchlights for advertising purposes are prohibited.

**Section 829.09. Temporary Exemption.**

**Subd. 1. Request; Renewal; Information Required.** Any request to the zoning administrator for a temporary exemption shall contain the following information:

- (a) specific ordinance exemption(s) requested;
- (b) duration of requested exemption(s);
- (c) proposed location on premises of the proposed light fixture(s);
- (d) purpose of proposed lighting;
- (e) information for each luminaire and lamp combination as required in section 829.07;
- (f) previous temporary exemptions, if any, and addresses of premises thereunder; and
- (g) such other data and information as may be required by the zoning administrator.

**Subd. 2. Approval; Duration.** The zoning administrator shall have five business days from the date of submission of the request for temporary exemption to act on the request. All approvals must be in writing. If approved, the exemption shall be valid for not more than 30 days from the date of issuance. The approval is renewable upon further written request, at the discretion of the zoning administrator, for a maximum of one additional 30 day period. The zoning administrator is not authorized to grant more than one temporary permit and one renewal for a 30 day period for the same property within one calendar year.

**Subd. 3.** Any person aggrieved by a decision of the zoning administrator made in the administration of this ordinance may appeal such decision pursuant to section 825.31 of the code of ordinances.

**Section 829.10. Other Exemptions.**

**Subd. 1.** Outdoor light fixtures lawfully installed prior to and operable on the effective date of this ordinance but which are not in compliance with this ordinance shall be Type C non-conformities. No change shall be made in use or lamp type, or any replacement, except for same-type and same-output lamp replacement or structural alteration, without conforming to all applicable requirements of this ordinance. If the use of a property is abandoned or if there is a change in use of the property, the provisions of this ordinance will apply when the abandonment ceases or the new use commences. Notwithstanding the above, lighting

fixtures on non-residential properties must be brought into compliance with this ordinance within the time periods specified in Section 829.03, subd. 3 hereof.

**Subd. 2. Emergency Lighting.** Emergency lighting used by police, firefighting, or medical personnel or at their direction is exempt from all requirements of this ordinance for as long as the emergency exists.

**Subd. 3. Swimming Pool and Fountain Lighting.** Underwater lighting used for the illumination of swimming pools and fountains is exempt from the lamp type and shielding standards of Table 1, but it must conform to all other provisions of this ordinance.

**Section 829.11. Miscellaneous.**

**Subd. 1. Applicable Law; Conflicts.** When any provision of federal or state statute, or other provision ordinance conflicts with any provision of this ordinance, the most restrictive shall govern unless otherwise regulated by law.

**Subd. 2. Severability.** If any of the provisions of this ordinance or the application thereof is held invalid, such invalidity shall not affect other provisions or applications of this ordinance which can be given effect, and to this end, the provisions of this ordinance are declared to be severable.

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**Amendment History of this Section**

*Adopted November 6, 2001 (Ord. 347).*

*Amended September 4, 2012 (Ord. 535). Amending Sections 829.03 and 829.05.*