

Sisters Development Code Amendments

Chapter 2.15-Special Provisions

Section 2.15.2400 Dark Skies Standards (This completely restates SDC 2.15.2400 and all text below is new text)

A. Purpose: The purpose of the Dark Skies Standards is to utilize responsible lighting practices to:

1. Protect the valuable resource of dark night skies.
2. Preserve opportunities for viewing stars, planets, and other astronomical features.
3. Promote human health and limit negative impacts from light at night.
4. Provide safely and responsibly lit areas for citizens and visitors.
5. Protect ecological wellness and support wildlife needs for darkness.
6. Reduce energy consumption, emissions, and costs.
7. Increase opportunities for tourism, such as astrotourism.

B. Guiding Principles. The Dark Skies Standards are based on the following guiding principles and are not intended to be mandatory approval criteria:

1. Useful. Light should only be used if needed. All light should have a clear purpose, with consideration about how light will impact neighbors, wildlife, and their habitats.
2. Targeted. Light fixtures should be directed so light falls only where it is needed. Shielding and careful aiming of the light beam to target its direction downward should be employed to prevent spill beyond where lighting is needed.
3. Low Level. Lights should be no brighter than necessary, using the lowest light level possible. Attention should be given to reflective surfaces that will amplify lights and direct light into the sky or neighboring properties.
4. Controlled. Lighting should only occur when it is needed. Controls such as timers or motion detectors should be employed to ensure that light is available when it is needed, dimmed when possible and turned off when not needed.
5. Color. Warmer color lights should be used where possible.

C. Definitions.

1. ANSI: American National Standards Institute
2. Correlated Color Temperature (CCT): A specification of the color appearance of the light emitted by a lamp, relating its color to the color of light from a reference source when heated to a particular temperature, measured in kelvins (K).
3. Dark Skies Standards: The provisions of this Section 2.15.2400.
4. Downcast: Lighting that is installed such that its light is directed only down toward the ground and in which the fixture shield is parallel with the level ground (see Figure 1).
5. Effective Date: February 10, 2024.
6. Foot-candle: A measurement of light intensity. One foot-candle is defined as enough light to saturate a surface having an area of one square foot with one lumen of light.
7. Fully shielded: A light fixture that allows no direct emission of light above a horizontal plane passing through the lowest light-emitting part of the light fixture (see Figure 1).

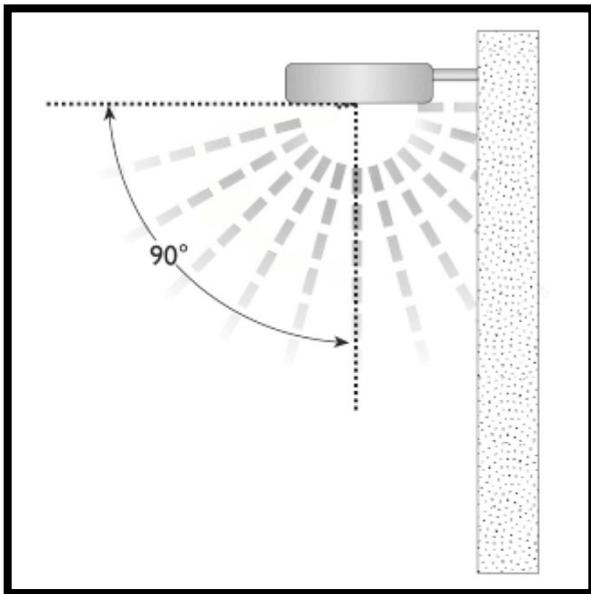


Figure 1.

8. Glare: The sensation produced by luminances within the visual field that are sufficiently greater than the luminance to which the eyes are adapted to cause annoyance, discomfort, or loss in visual performance or visibility.
9. IES: Illuminating Engineering Society.
10. Illuminance: Describes the amount of light falling onto or illuminating a given surface.
11. Kelvin: A measurement unit (abbreviated "K") used to describe the correlated color temperature of a light source. This is the specification that gives a description of the "warmth" or "coolness" of a light source.
12. Lamp: The specific component of a light fixture that emits light.
13. Laser Source: Any lamp employing light amplification by stimulated emission of radiation to produce highly monochromatic and coherent light.
14. Light Trespass: A condition in which light emitted directly by a light fixture shines beyond the property lines of the property where the fixture is installed. This means that a person standing on any other property sees the light-emitting source directly. Light trespass does not include indirect reflection or scattering of light from mounting hardware or any other surfaces.
15. Light Fixture: A device that includes the lamp, the ballast or driver, internal wiring, reflectors, lens and any additional components required to deliver light. It does not include the pole or other mounting surface.
16. Low Lumen: Describes a light fixture whose total light output does not exceed 300 lumens.
17. Lumen: The International System of Units (SI) measure of luminous flux equal to the amount of light emitted per second into a unit solid angle of one steradian from a uniform source of one candela.
18. Luminance: The amount of light that passes through, is emitted, or reflected, from a particular area, and that falls within a given solid angle.

19. Net acre: The portion of any property that is developed, consisting of structures and/or hardscape. The net acreage of a property is the gross acreage of that parcel less any acres that are considered undeveloped.
 20. Searchlight: A light fixture generating a very intense beam of light consisting of parallel rays that can be oriented in any particular direction often used to draw the attention of the public to a place or event.
 21. String Lights: Electric lights on a wire, string, or cable used as decoration or for outdoor lighting.
 22. Warm Color: A white light source with a correlated color temperature less than or equal to 3000 Kelvins.
 23. Uplighting: Any lighting that is directed in such a manner as to shine light above the horizontal plane.
- D. Applicability: Except as otherwise exempted by the SDC, the Dark Skies Standards are generally applicable to all new lighting installed on or after the Effective Date and therefore apply even if proposed lighting does not require the filing of an application or the issuance of a permit of approval (or even if no development occurs, see e.g. 2.15.2400(E)(4)). The Dark Skies Standards are in addition to applicable provisions of the Building Code and Electrical Code, and other provisions of the SDC including, without limitation, Chapter 3.4 (Signs).
- E. Requirements: All non-exempt outdoor lighting fixtures shall meet the following requirements:
1. Downcast. Lighting shall be downcast. Uplighting is prohibited.
 2. Fully Shielded. Unless subject to an exception, all light fixtures shall be fully shielded and otherwise designed and installed to prevent light trespass and glare.
 3. Maximum Brightness: To prevent over-lighting, lighting shall not exceed the following maximum lamp brightness:
 - a. Single Family Residential: No individual light fixture may exceed 850 lumens and the entire property may not exceed 4,000 lumens in total or 6,000 lumens in total if the property contains an accessory dwelling.
 - b. Duplex and Triplex: No individual lighting fixture may exceed 850 lumens and the entire property shall not exceed 6,000 lumens in total for a duplex or 8,000 lumens for a triplex.
 - c. Multi-Family Residential: No individual light fixture may exceed 850 lumens and the entire property may not exceed 20,000 lumens per net acre.
 - d. Mixed Use and Non-Residential: No individual light fixture may exceed 1,500 lumens and the entire property may not exceed 25,000 lumens for the initial net acre plus 2,000 lumens for each additional net acre.
 - e. Publicly Owned Lighting: Public street lighting shall adhere to the standards contained in the current edition of IES Recommended Practice 8 ("Design of Roadway Facility Lighting").
 4. Parking Lot Lighting: Parking lot lighting shall be downcast, fully shielded and meet the maximum brightness in accordance with recommended minimum value of the IES Standard RP-20-1 "Lighting for Parking Facilities" and shall not exceed a threshold of allowable light trespass of 0.1 foot-candle at the property line.
 5. Curfew. In all non-residential zones, all exterior lighting shall be extinguished either by 11 P.M.; or within one (1) hour of the close of normal business hours; or at the conclusion of usual operations, whichever occurs later. The use of such lighting may resume one (1) hour before

sunrise (or opening of business for the property, whichever is earlier) of the following day. Businesses whose normal operating hours are twenty-four (24) hours per day are exempt from this provision. Security lighting in accordance with the current edition of IES Guide 1 ("Guide for Security Lighting for People, Property and Critical Infrastructure") is permitted during curfew.

6. Color. The Correlated Color Temperature (CCT) shall not exceed 3000 Kelvins.
7. Publicly Owned Lighting. Publicly owned lighting (including streetlights located in the public right-of-way) shall be fully shielded, comply with the color limits in Section 2.15.2400.E.6. and meet the brightness limits in Section 2.15.2400.3.e. They are encouraged, but not required, to comply with the light trespass requirement. Notwithstanding the foregoing, all outdoor light fixtures on property (other than public right-of-way) or buildings that are owned and operated by the City of Sisters must be fully shielded unless exempt under Section 2.15.2400(H) and adaptive controls and curfews must be employed.

F. Signage. Notwithstanding anything in Chapter 3.4 to the contrary, lighting of signage must meet the following requirements:

1. Except for businesses whose normal operating hours are twenty-four (24) hours per day, sign illumination must be extinguished completely one (1) hour after sunset (or at close of business for the property, whichever is later), and remain off until one (1) hour before sunrise (or opening of business for the property, whichever is earlier);
2. The illuminated surface area of an individual sign cannot exceed 200 square feet; and
3. Lighting must be downcast and fully shielded.

G. Prohibitions.

1. Laser Source Light. The use of laser source light or any similar high intensity light is prohibited if it projects beyond the property lines of the property on which it is located.
2. Searchlights. The operation of searchlights for purposes other than public safety or emergencies is prohibited.
3. Upward-pointing light fixtures. All light fixtures must be downcast including illumination of signs, landscaping, flags (except the US and state flag, if flown on the same flagpole), and other items.

H. Exemptions. Notwithstanding anything hereinto the contrary, the following forms of lighting are exempt from the Dark Skies Standards.

1. Non-conforming lighting subject to Section 2.15.2400(I).
2. Airport operations lighting and aircraft navigational beacons required by the Federal or State Law are exempt from these provisions. All other airport outdoor lighting must conform with this ordinance.
3. String Lights, subject to the following standards:
 - a. String lights may be installed in either residential or non-residential zones.
 - b. String lights shall not be used to solely illuminate or decorate landscaping features.
 - c. All installations of string lighting shall employ lamps that do not flash or flicker and whose individual output does not exceed fifty (50) lumens.
 - d. String lights shall consist only of white light sources with a CCT not to exceed three thousand (3000) Kelvin.
 - e. String lights are exempt from the downcast and full shielding requirements of Section 2.15.400.E; it should be noted, however, the installation and operation of string lights in accordance with these provisions may still result in civil nuisance claims.

- f. In non-residential zones, string lights may be installed in outdoor dining and entertainment areas only and shall not be used to delineate or outline the edges of a building or for any other purpose. String lighting must be completely extinguished by the end of normal business hours. Permanent string lighting installations shall be subject to inclusion in the total lumen allowance calculation.
 - g. In residential zones, string lighting may be used to delineate or outline the edges of patios, porches, decks and similar structures. String lighting must be completely extinguished by 11 P.M.
 - h. The aforementioned limitations do not apply to holiday lighting.
4. Decorative Lighting
 - a. Holiday lighting shall be allowed for no more than the period between November 1 and February 15.
 - b. Decorative low lumen lights are permitted only in residential districts.
 - c. Low lumen landscape lighting is permitted, but such lighting shall be shielded in such a way as to prevent glare and light trespass. Light fixtures shall be mounted no more than three (3) feet above grade and used solely for landscape delineation rather than area lighting.
 5. Special events that require the use of temporary outdoor light fixtures are exempt if the exemption does not exceed five (5) days for a particular property in any calendar year; however, permanent installations special event venues must conform to the Dark Skies Standards.
 6. Lighting for U.S. flags properly displayed (consistent with the U.S. Flag Code).
 7. Temporary construction lighting necessary for an allowed use.
 8. Lighting under the jurisdiction of the Oregon Department of Transportation.
 9. Athletic field lighting meeting the following conditions:
 - a. Current Illuminating Engineering Society (IES) lighting guidelines are followed according to the appropriate class of play.
 - b. Field lighting is provided exclusively for illumination of the surface of play and viewing stands and not for any other applications.
 - c. Illuminance levels must be adjustable based on the task (e.g., active play vs. field maintenance).
 - d. Off-site impacts of the lighting will be limited to the greatest practical extent possible.
 - e. Lights must be extinguished by 10:00 pm local time or one hour after the end of play, whichever is later.
 - f. Timers must be installed to prevent lights being left on accidentally overnight.
- I. Non-Conforming Lighting. Outdoor light fixtures lawfully installed and operable prior to the Effective Date are exempt from all such requirements, except as follows:
 1. All publicly owned lighting must be brought into conformance within five (5) years after the Effective Date.
 2. All privately owned lighting must be brought into conformance within five (5) years after the Effective Date.
 3. Notwithstanding anything herein to the contrary, any replacement or modification to nonconforming outdoor lighting must comply with the Dark Skies Standards.
 4. Notwithstanding anything herein to the contrary, all non-conforming outdoor lighting must be brought into compliance as a condition of land use approval involving a Conditional Use or a Site Plan Review.

J. Lighting Plan Required. All applications for Site Plan Review and/or building permits must include lighting plans showing location, type, height, color temperature, lumen output and amount of all proposed and existing light fixtures, along with light fixture cut sheets from the manufacturer. The applicant must provide enough information to demonstrate compliance with the Dark Skies Standards. The Community Development Director may request any additional information necessary or appropriate to evaluate compliance with the Dark Skies Standards.