

Sec. 34-625. Outdoor lighting standards.

(a) *Purpose.* The purpose of this provision is to curtail and reverse the degradation of the night time visual environment by minimizing light pollution, glare, and light trespass through regulation of the form and use of outdoor lighting; and to conserve energy and resources while maintaining night-time safety, utility, security and productivity.

(b) *Applicability.* All new luminaires, regardless of whether a development order is required, must comply with the provisions and standards of this section.

(c) *General exemptions.* The following are generally exempt from the provisions of this section:

(1) Emergency lighting required for public safety and hazard warning luminaires required by federal or state regulatory agencies;

(2) Outdoor light fixtures producing light directly by the combustion of fossil fuels, such as kerosene and gasoline;

(3) Low wattage holiday decorative lighting fixtures (comprised by incandescent bulbs of less than 8 watts each or other lamps of output less than 100 lumens each) used for holiday decoration; and

(4) Lighting for public roads except as provided in section 14-77.

(d) *Standards and Criteria.* In addition to the standards and criteria for outdoor lighting established in this subsection, there are standards for sea turtle lighting in chapter 14, Article I, division 2 of this code and further technical standards are specified in a related county administrative code. When specific standards are not addressed in these sources, the standards of the Illuminating Engineering Society of North America (IESNA) will apply.

(1) *Illuminance*. Table 1 is provided as a general synopsis of the illumination level requirements. These levels are based upon general use or task categories and are measured in footcandles on the task surface (for example the parking lot or area surface) with a light meter held parallel to the ground or other surface, facing up, unless otherwise specifically stated.

Table 1. Illumination Level Requirements (1)

TABLE INSET:

Use/Task	Initial Actual Footcandles (2),(4)	Initial Uniformity Avg. (3)
Parking, multi-family		
Low vehicular/pedestrian activity	0.3 min.	4:1
Medium vehicular/pedestrian activity	0.8 min.	4:1
Parking, industrial/commercial/ institutional, municipal		
High activity, e.g., shopping centers, fast food facilities, major athletic/civic, cultural events.	1.2 min.	4:1
Medium activity, e.g., office parks, hospitals, commuter lots, cultural/civic/recreational events	0.8 min.	4:1
Low activity, e.g., neighborhood shopping, industrial employee parking, school, church parking	0.3 min.	4:1
Non-residential walkways and bikeways	0.3 min.	5:1
Canopy, drive-thru, fuel pumps, overhang	6.0 min	5:1

Notes:

(1) These specified illumination level criteria are the initial actual levels to be measured at the time of final inspection for a certificate of compliance. The outdoor lighting must be maintained so the average illumination levels do not increase above the specified values. The minimum illumination levels may decrease over time consistent with the Light Loss Factor (LLF) associated with the installed fixtures.

(2) In no case may the illumination exceed 0.5 footcandle measured at the property line. The amount of illumination projected onto a residentially zoned property or use from another property, may not exceed 0.2 footcandle measured at 10 feet from the property line onto the adjacent residential property.

(3) Uniformity ratios dictate that the average illumination values may not exceed initial values by more than the product of the initial value and the specific ratio. For example, in the case of commercial parking and high activity, the initial average illuminance may not be in excess of 4.8 footcandles (1.2 x 4).

(4) Where all night safety or security lighting is to be provided, the lighting intensity levels should provide the lowest possible illumination to discourage crime and undesirable activity and to effectively allow surveillance but may not exceed 50 percent of the levels normally permitted for the use as specified in this code.

(2) *Lamp standards.* Lamp types and colors must be in harmony with the adjacent community, any special circumstances existing on the site, and with surrounding installations. Lamp types must be consistent with the task and setting and should not create a mix of colors unless otherwise specifically approved by the director for a cause shown. Specifically, mercury vapor lamps are prohibited. The installation, sale, offering for sale, lease or purchase of any mercury vapor light fixture or lamp for use as outdoor lighting in the county is specifically prohibited.

Lighting of outdoor recreational facilities (public or private) such as, but not limited to, football fields, soccer fields, baseball fields, softball fields, tennis courts, etc. are exempt from the lamp type standards provided that all other applicable provisions are met.

(3) *Luminaire standards.* Fully shielded, full cutoff luminaires with recessed bulbs and flat lenses are the only permitted fixtures for outdoor lighting, with the following exceptions.

a. Luminaires that have a maximum output of 260 lumens per fixture (the approximate output of one 20 watt incandescent bulb), regardless of number of bulbs, may be left unshielded provided the fixture has an opaque top to keep light from shining directly up.

b. Luminaires that have a maximum output of 1,000 lumens per fixture (the approximate output of one 60 watt incandescent bulb), regardless of number of bulbs, may be partially shielded, provided the bulb is not visible, and the fixture has an opaque top to keep light from shining directly up.

c. Sensor activated lighting may be unshielded provided it is located in such a manner as to prevent direct glare and lighting into properties of others or into a public right-of-way, and provided the light is set to only go on when activated and to go off within five minutes after activation has ceased, and the light must not be triggered by activity off the property.

d. Flood or spot luminaires with a lamp or lamps rated at 900 lumens or less may be used except that no spot or flood luminaire may be 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, or directed skyward, or directed towards the shoreline areas. The luminaire must be redirected or aimed so that illumination is directed to the designated areas and its light output controlled as necessary to eliminate such conditions. Illumination resulting from such lighting must be considered as contributing to the illumination levels specified herein.

e. All externally illuminated billboards and signs must be lighted by shielded fixtures mounted at the top of the sign and aimed downward. Outdoor advertising signs of the type constructed of translucent materials and wholly illuminated from within do not require shielding. Dark backgrounds with light lettering or symbols is preferred to minimize detrimental effects. Illumination resulting from sign lighting must be considered as contributing to the illumination levels specified herein.

f. Fixtures used to accent architectural features, materials, colors, style of buildings, landscaping, or art must be located, aimed and shielded so that light is directed only on those features. Such fixtures must be aimed or shielded to minimize light spill onto adjacent properties or into the night sky in conformance with illumination and luminaire standards.

g. All non-essential exterior commercial lighting must be turned off after business hours.

(4) *Luminaire mount standards.* the following standards apply to luminaire mountings.

a. *Free standing luminaires.* Light poles must be placed on the interior of the site. When light poles are proposed to be placed on the perimeter of the site, specific consideration should be addressed to compliance with the illumination standards at the property line and off the property onto adjacent residential property. The maximum height of light poles for parking lots and vehicular use areas may not exceed 25 feet measured from the ground level directly below the luminaire to the bottom of the lamp itself. Light poles located within 50 feet of a residentially zoned property or use may not exceed 15 feet. Poles used to illuminate pedestrian walkways may not exceed 15 feet. Lighting for outdoor recreational facilities (public or private) such as, but not limited to, football fields, soccer fields, baseball fields, softball fields, tennis courts, etc., are exempt from the mounting height standards provided that all other applicable provisions are met.

b. *Building mounted luminaires.* These luminaires may only be attached to the building walls and the top of the fixture may not exceed the height of the parapet, or the roof, or 25 feet, whichever is the lowest.

c. *Canopy lighting.* Light fixtures mounted on the underside of a canopy must be recessed or shielded full cutoff type so that the light is restrained to 85 degrees or less from the vertical. As an alternative (or supplement) to the canopy ceiling lights, indirect lighting may be used where the light is beamed upward and then reflected down from the underside of the canopy. When this method is used, light fixtures must be shielded so that direct illumination is focused exclusively on the underside of the canopy. No part of the canopy may be back-lighted. Lights may not be mounted on the top or sides (fascias) of the canopy. The sides (fascias) of the canopy may not be illuminated in any manner.

d. *Trees and landscaping.* To avoid conflicts, locations of all light poles and fixtures must be coordinated with the locations of all trees and landscaping whether existing or shown on the landscaping plan. Vegetation screens may not be employed to serve as the means for controlling glare. Glare control must be achieved through the use of such means as cutoff fixtures, shields and baffles, and appropriate application of fixture mounting height, wattage, aiming angle and fixture placement.

(e) *Development order and permit criteria.* The applicant for any development order or building permit, as applicable under the provisions of this code involving outdoor lighting fixtures, must submit as part of the application evidence that the proposed work will comply with the outdoor lighting standards of this code. Specifically the submission must include the following:

1. Plans indicating the location on the premises and the type of illuminating devices, fixtures, lamps, supports, reflectors and other devices.
2. A detailed description of the illuminating devices, fixtures, lamps, supports, reflectors, and other devices. The description must include manufacturer's catalogue cuts and drawings, including pictures, sections, and proposed wattages for each fixture.
3. All applications for development orders or building permits, except for single family and duplex building permits, must provide photometric data, such as that furnished by the manufacturer of the proposed illuminating devices, showing the angle of cut-off and other characteristics of the light emissions including references to the standards contained herein.
4. All applications for development orders or building permits, except for single family and duplex building permits, must provide photometrics in initial footcandles output for all proposed and existing fixtures on-site shown on a 20 foot by 20 foot grid on an appropriately scaled plan. On-site lighting to be included in the calculations must include, but is not limited to, lighting for parking lot, canopies, and building mounted and recessed lighting along the building facades and overhangs. The photometric plan must include a table showing the average, minimum, and maximum footcandles of illumination on the site and within 50 feet of the site and the calculations deriving the averages. Evidence must be provided demonstrating that the proposed lighting plan will comply with the requirements of this code. The use of a light loss factor (LLF) is not permitted in these photometrics. This photometric plan must be coordinated with the landscape plan to identify the location of trees and other landscaping features with respect to the lighting devices. Rejection or acceptance of the photometric plan will be based on this code.

(f) *Compliance.*

1. Prior to the final inspection for a certificate of compliance pursuant to section 10-183, site verified footcandle readings must be provided demonstrating that the outdoor lighting, as installed, conforms with the proposed photometrics and the letter of substantial compliance provided by a registered professional engineer must include a certification that the outdoor lighting is in compliance with this code.

2. If any outdoor light fixture or the type of light source therein, is changed after the permit or development order has been issued, a change request or development order amendment must be submitted for approval together with adequate information to assure compliance with this code. This request or amendment must be approved prior to the installation of the proposed change.

3. Outdoor lighting must be maintained in compliance with this code.

(g) *Existing outdoor lighting.* Light pole height requirements do not apply to existing light poles. Existing light fixtures must be brought into compliance with this code within ten years of the adoption of this code (June 24, 2003). Any fixtures replaced after the date of the adoption of this code (June 24, 2003) must be replaced with fixtures that comply with the standards established herein. Illuminance levels specified in this code apply to all outdoor lighting.

(Ord. No. 03-16, § 6, 6-24-03)

Secs. 34-626--34-650. Reserved.