

Chapter 170. Zoning

Article XIII. Performance Standards

§ 170-119. Outdoor lighting.

[Amended 9-8-2004]

A. Purpose and intent.

- (1) The purposes of this section are:
 - (a) To promote the public health, safety, convenience and welfare;
 - (b) To preserve healthy surroundings for family life in residential areas;
 - (c) To protect and enhance the use and enjoyment of properties in the Resource Preservation Zoning Districts which are adjacent to commercial and industrial uses;
 - (d) To restrict light to the property and use for which it was intended;
 - (e) To provide sufficient light in Commercial and Industrial Zoning Districts for safety and security;
 - (f) To prevent glare on public roadways and adjoining properties;
 - (g) To conserve resources by employing lighting in an efficient and non-redundant manner.
- (2) It is the intent hereof to accomplish these purposes by regulating the proper placement, orientation, distribution, intensity, type, and configuration of outdoor light fixtures, and the levels of illuminance produced thereby, in Commercial and Industrial Zoning Districts.

B. Applicability.

- (1) This section only applies to outdoor light fixtures if they are installed in conjunction with:
 - (a) A use permitted by right in either a Commercial Zoning District, General Commercial Overlay District or Industrial Zoning District, and for which a site plan is required by § 170-36; or
 - (b) A permanent parking area in any zoning district which provides more than fifty vehicle spaces.
- (2) No provision of this section shall apply to any:
 - (a) Single-family dwelling, or any structure, landscaping or use permitted by right on the same lot with the single-family dwelling;
 - (b) Place of religious worship (except parking areas as specified above);
 - (c) Property owned by the County of Rappahannock or the Rappahannock County School Board;
 - (d) Outdoor light fixtures activated by a sensing device which remains on for no more that 15 minutes per cycle;

- (e) Interior lighting, including light emanating from inside any machine or device to enable its use, such as ATM machines, vending machines, telephone pedestals/booths and gasoline pumps;
 - (f) Circus, fair, carnival, or civic uses of a duration of less than 11 days per year;
 - (g) Agricultural, horticultural or forestry uses specified by § 170-36G which are allowed by right;
 - (h) Outdoor light fixtures not exceeding 60 watts per light fixture used for decorative purposes on a structure or to illuminate walkways, doorways or landscaping;
 - (i) Agency of the State or Federal Government or lighting required by state or federal law;
 - (j) Lighting used to facilitate construction activities for which a valid building permit has been issued and is in effect;
 - (k) Lights on vehicles, including police, rescue and fire vehicles;
 - (l) Lighting required by any building code;
 - (m) Hand-held lights or lighting devices worn or carried for personal safety;
 - (n) Decorative seasonal lighting used for less than 30 days per year.
- (3) Nothing herein shall prevent the Board of Supervisors or Board of Zoning Appeals from imposing all or some of the requirements of this section as conditions or restrictions upon the granting of a special exception or a special use permit if necessary to insure the permitted use will be compatible with existing or planned development in the general area, as provided by § 170-47.

C. Definitions. As used in this section, the following terms shall have the meanings indicated:

DIRECTIONALLY SHIELDED LIGHT FIXTURE

A light fixture constructed and installed such that the light emitted, either directly from the lamp or diffusing element, or indirectly by reflection or refraction from any part of the light fixture, is substantially confined to a target area. Light may be projected above the horizontal if necessary to illuminate the target area.

FULLY SHIELDED LIGHT FIXTURE

A light fixture constructed and installed such that all light emitted, either directly from the lamp or diffusing element, or indirectly by reflection or refraction from any part of the light fixture, is projected below the horizontal.

HORIZONTAL ILLUMINANCE

The intensity of luminance flux falling on a horizontal surface. Unless otherwise indicated herein, horizontal illuminance is measured in a horizontal plane at grade.

ILLUMINANCE

The concentration of luminous flux falling on a surface, that is, the incident luminous flux per unit area, measured in footcandles (fc).

LAMP

The component of a light fixture that produces light. A lamp is commonly referred to as a "bulb."

LIGHT FIXTURE

A complete lighting unit consisting of one or more lamps and ballasts (when applicable) together with the components designed to distribute the light, to position and protect the lamp, and to connect the lamp to an electrical power supply.

OUTDOOR LIGHT FIXTURE

A light fixture, permanent or portable, installed outdoors.

UNIFORMITY RATIO

A measure of the uniformity of illuminance on a surface. Uniformity ratios may be specified as maximum to average, average to minimum, or maximum to minimum.

D. Nonconforming light fixtures.

- (1) Outdoor light fixtures legally installed prior to the effective date of this section which do not meet the terms of this section are exempt from the provisions of this section, and are referred to as "nonconforming outdoor light fixtures." Nonconforming outdoor light fixtures may be maintained by replacing lamps or other components. If the entire nonconforming outdoor light fixture is replaced, any new outdoor light fixture shall conform to this section; provided that if the nonconforming outdoor light fixture to be replaced is part of a group of similar light fixtures, the replacement outdoor light fixture need not conform to this section if it is substantially the same as the outdoor light fixture it replaces so to maintain a matching set.
- (2) If the use of any nonconforming outdoor light fixture is discontinued for more than two years, the nonconforming outdoor light fixture must be brought into compliance with this section upon its use being recontinued.
- (3) If any use includes nonconforming outdoor light fixtures and the use is to be enlarged, extended or expanded, any newly installed outdoor light fixtures may match the existing nonconforming outdoor light fixtures and shall themselves become nonconforming outdoor light fixtures; provided, the resulting total number of nonconforming outdoor light fixtures shall not be more than two times the number of existing nonconforming outdoor light fixtures. Example: a structure has two nonconforming outdoor light fixtures; an addition to the structure may contain no more than two new outdoor light fixtures which match the nonconforming outdoor light fixtures, for a total of four. All four of such outdoor light fixtures shall be deemed to be nonconforming outdoor light fixtures.

E. General requirements.

- (1) All outdoor light fixtures shall be either fully shielded light fixtures or directionally shielded light fixtures.
- (2) The mounting height of any outdoor light fixture shall not exceed 25 feet measured from grade.
- (3) The target area for directionally shielded light fixtures shall be on the property on which the light fixture is located, except the target area may be on adjoining property if either under the same ownership or with the written permission of the adjoining property owner.
- (4) Outdoor light fixtures for canopies, drive-through areas, building overhangs, porches, porticos and any similar outdoor covered area shall either be one, or a combination of, the following:
 - (a) Recessed into the ceiling so that the bottom of the light fixture is flush with the ceiling; or
 - (b) Indirect lighting where the light is directed upward and then reflected down from the underside of the canopy or the ceiling. Light fixtures used for indirect lighting shall either be directionally shielded light fixtures or a light fixture which, when used with architectural or structural elements, is the functional equivalent of a directionally shielded light fixture. All light shall be projected onto the underside of the canopy or the ceiling.
- (5) No overhead wires shall be used to provide electrical power to any outdoor light fixture.
- (6) No outdoor light fixture shall flash or intermittently turn itself on and off or change its brightness or color at a rate faster than one cycle per hour. No outdoor lighting fixture shall be installed so that it is subject to repetitive motion.
- (7) Illuminated signs.
 - (a) All signs which are illuminated shall use one, or a combination of, the following methods provided that each separate lot in the Commercial or Industrial Zoning Districts shall be allowed by right one internally illuminated sign which shall in size, location and otherwise be subject to the provisions of Article XII of Chapter 170 (§ 170-92 et seq.):

- [1] Directionally shielded light fixtures; or,
 - [2] A light fixture which when used with architectural or structural elements is, in the opinion of the Zoning Administrator, the functional equivalent of a directionally shielded light fixture; or,
 - [3] Backlighting, where light is projected on a surface behind the sign.
- (b) Any sign which communicates information through the use of lights, such as time, temperature or news, shall only be allowed by special exception. In considering such special exception, the Board of Supervisors shall consider, in addition to the factors set forth in Article VI (§ 170-47 et seq.) of this chapter, whether such sign would be a distraction to motorists.

F. Performance standards.

- (1) Average horizontal illuminance and uniformity ratios for outdoor lighting shall be as follows:

Service station pump islands	30 fc	4:1 average to minimum
Service station service areas	12 fc	
Parking lots	5 fc	15:1 maximum to minimum
Loading and unloading areas	10 fc	
Auto/truck dealership	20 fc	5:1 maximum to minimum
Exterior restaurants	10 fc	
Drive-through ATM machines and/or night deposit facilities	40fc	
Other drive-through canopied areas	30fc	
Stand-alone ATM machines and/or night deposit facilities	40fc	
All other areas	6 fc	

- (2) The illuminance emanating from a property subject to this section in a Commercial or Industrial Zoning District, as measured at the property line of any adjacent property in a Residential or Resource Preservation Zoning District, at any orientation of the illuminance meter, shall not exceed the following unless the owner of the adjacent property consents in writing: 3.0 fc.
- (3) These performance standards shall survive approval of a site plan and must continue to be met as long as the property is one to which this section is applicable under Subsection B, above.

G. Approval required.

- (1) No use or structure subject to the terms of this section shall be established, commenced or occupied unless and until a site plan is approved and/or, where applicable, a special exception is obtained. For all such properties the site plan shall include a lighting plan showing:
- (a) The location of all proposed outdoor light fixtures and any structure(s) which will support the fixture(s);
 - (b) A photograph or scale drawing of each such outdoor lighting fixture;
 - (c) A numerical grid of lighting levels, in footcandles, that the fixtures will produce on the ground (photometric report). The grid shall include not less than 20 uniformly spaced points for any area being considered, and in no case shall the spacing exceed 25 feet. The photometric report will indicate the average, minimum and maximum footcandle levels within the areas of interest.
- (2) The lighting plan shall be sufficiently complete to enable the Zoning Administrator to determine compliance with the requirements of this section. If such plan does not enable this determination, the applicant shall submit evidence of compliance by a registered professional engineer.

- (3) In the event all or some of the provisions of this section are imposed as conditions for the issuance of a special use permit or a special exception for a use or structure for which a site plan is not required, the Board of Supervisors or Board of Zoning Appeals may require a lighting plan as specified above, or so much thereof, or such other information, as it deems necessary to ensure compliance with any imposed conditions.
- (4) The applicant shall file with the site plan any written consents from adjoining property owners which the applicant intends to rely upon to meet the terms of this section.