

# **Loudoun County Virginia Lighting Ordinance**

**Prepared on June 22, 2000**

## **Section 1: Purpose and Intent**

It is the intent of this ordinance to encourage lighting practices and systems which will: provide glare reduction, minimize light trespass, conserve energy and resources, and reduce sky glow while maintaining night-time safety, utility, security and productivity. In order to achieve these objectives, four lighting zones are hereby established, allowing increased flexibility in the uses of quality outdoor lighting throughout the county.

## **Section 2: Conformance with Applicable Codes**

All outdoor illuminating devices shall be installed in conformance with the provisions of this Code, the Building Code, the Electrical Code, and the Sign Code of the jurisdiction as applicable and under appropriate permit and inspection.

## **Section 3: Applicability**

**3.1 New Uses, Buildings and Major Additions or Modifications.** For all proposed new land uses, developments, buildings, and structures that require a permit, all outdoor lighting fixtures shall meet the requirements of this Code. All building additions or modifications of twenty-five (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 provision, shall invoke the requirements of this Code for the entire property, including previously installed and any new outdoor lighting. Cumulative modification or replacement of outdoor lighting constituting twenty-five (25) percent or more of the permitted lumens 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.

**3.2 Minor Additions.** Additions or modifications of less than twenty-five (25) percent to existing uses, as defined in Section 3.1 above, and that require a permit, shall require the submission of a complete inventory and site plan detailing all existing and any proposed new outdoor lighting. Any new lighting on the site shall meet the requirements of this Code with regard to shielding and lamp type; the total outdoor light output after the modifications are complete shall not exceed that on the site before the modification, or that permitted by this Code, whichever is larger.

**3.3 Resumption of Use after Abandonment.** If a property or use with non-conforming lighting is abandoned as defined in Section 16, then all outdoor lighting shall be reviewed and brought into compliance with this Code before the use is resumed.

**3.4 Lighting for access and residential roadways maintained by the county** must make use of properly installed, full cut-off fixtures.

**3.5 Lighting for state maintained roadways** is exempt from the provisions of this Code.

## Section 4: Shielding and Total Outdoor Light Output Standards

4.1 All nonexempt outdoor lighting fixtures shall have shielding as shown in Table 4.1.

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

Table 4.1 LAMP TYPE AND SHIELDING STANDARDS				
USE CLASS AND LAMP TYPE	LIGHTING ZONE			
	E4	E3	E2	E1
<b>Class 1 lighting (Color Rendition):</b>				
Initial output greater than or equal to 2000 lumens	F	F	F	F
Initial output below 2000 lumens (2)	A(1)	A(1)	A(1)	F
<b>Class 2 lighting (General Illumination):</b>				
Initial output greater than or equal to 2000 lumens	F	F	F	F
Initial output below 2000 lumens (2)	A(1)	A(1)	A(1)	F
<b>Class 3 lighting (Decorative)(3):</b>				
Initial output greater than or equal to 2000 lumens	F	F	X	X
Initial output below 2000 lumens (2)	A(1)	A(1)	F	F
<b>Residential lighting (all classes)(4):</b>				
Initial output greater than or equal to 2000 lumens	F	F	F	F
Initial output below 2000 lumens (2)	A(1)	A(1)	A(5)	A(5)

Notes to Table 4.1

1. Flood or spot lamps must be aimed no higher than 45 degrees above straight down (half-way between straight down and straight to the side) when the source is visible from any off-site residential property or public roadway.
2. Exception: seasonal decorations using typical unshielded low-wattage incandescent lamps shall be permitted in all lighting zones from Thanksgiving thru 15 January.
3. All Class 3 lighting shall be extinguished between 11:00pm (or when the business closes, whichever is later) and sunrise.
4. Residential refers to all residential land-use zoning, including all densities and types of housing such as single-family detached and duplexes. Multiple-family residential uses must use standards above for Class 1, 2 and 3 lighting.
5. Any lamp installed on a residential property must be shielded such that the lamp is not directly visible from any other residential property.

**4.2 Total Outdoor Light Output.** Total outdoor light output shall not exceed the limits in Table 4.2. Seasonal decorations, permitted between Thanksgiving and 15 January, are not counted toward these limits. (The values in this table are upper limits and not design goals; design goals should be the lowest levels that meet the requirements of the task.)

Table 4.2 MAXIMUM TOTAL OUTDOOR LIGHT OUTPUT STANDARDS				
LUMEN CAPS - INITIAL LUMENS PER NET ACRE	LIGHTING ZONE			
	E4	E3	E2	E1
<b>Commercial and Industrial zoning (1)</b>				
total (shielded + unshielded)	200000	100000	50000	25000
unshielded only	10000	10000	4000	2000
<b>Residential zoning (2,3)</b>				
total (shielded + unshielded)	20000	10000	10000	10000
unshielded only	5000	5000	1000	1000

Notes to Table 4.2

1. This refers to all land-use zoning classifications for multiple family, commercial and industrial uses.
2. This refers to all residential land-use zoning classifications, including all densities and types of housing such as single-family detached and duplexes.
3. In Lighting Zones E4-E1, each residential single-family detached home or duplex is allowed up to 5,500 total lumens, or the amount indicated in this Table based on the parcel's acreage, whichever is larger. Each is also allowed a maximum of 5,500 lumens of unshielded ("A") lighting, provided Table 4.1 allows the lamp's type with "A" shielding. All residential spot or flood lamps permitted are to be aimed no higher than 45 degrees above straight down (half-way between straight down and straight to the side).

**4.3** All light fixtures that are required to be shielded shall be installed and maintained in such a manner that the shielding is effective as described in the definition in Section 16 for fully-shielded fixtures.

**4.4** Beyond the shielding requirements of Section 4.1, all light fixtures shall be located, aimed or shielded so as to minimize stray light trespassing across property boundaries. Particularly, any lamp installed on a residential property and visible from any other residential property must be shielded such that it is not directly visible from that property.

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

## Section 5: Outdoor Advertising Signs

**5.1** External illumination for signs shall conform to all provisions of this Code. In particular, such lighting shall be treated as Class 1 lighting and shall conform to the lamp source, shielding restrictions and lumen caps of Section 4. All upward-directed sign lighting is prohibited.

**5.2** Internally illuminated and neon signs.

A. Outdoor internally-illuminated advertising signs must either be constructed with an opaque background and translucent text and symbols, or with a colored (not white, off-white, light gray, cream or yellow) background and generally LIGHTER text and symbols. Lamps used for internal illumination of such signs shall not be counted toward the lumen caps in Section 4.2.

B. Neon signs shall be treated as internally illuminated signs for the purposes of this Code, and shall not have their luminous outputs counted toward the lumen caps in Section 4.2. Neon lighting extending beyond the area considered to be the sign area (as defined in the Sign Code of this jurisdiction) shall conform to all provisions of this Code. In particular, such lighting shall be treated as Class 3 (decorative) lighting and shall conform to the lumen caps of Section 4.

C. Other internally-illuminated panels or decorations not considered to be signage according to the sign code of this jurisdiction (such as illuminated canopy margins or building faces), shall be considered decorative (Class 3) lighting, and shall be subject to the standards applicable for such lighting, including but not limited to the lamp source, shielding standards and lumens per acre caps of Section 4.

**5.3 Curfews:** Illumination for all advertising signs, both externally and internally illuminated, shall be turned off at the curfew times listed in Table 5.3 or when the business closes, 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 code [enter date], may continue to be used and illuminated but must conform to the curfews as indicated.

Table 5.3 ILLUMINATED SIGN CURFEWS					
	LIGHTING ZONE				
Sign Type and Land Use Zone(1)	E4	E3	E2	E1	
<b>Commercial and Industrial zoning</b>					
Opaque Background	12am	12am	11pm	11pm	
Colored Background	12am	12am	11pm	N/A	
Light Background	10pm	10pm	9pm	N/A	
<b>All residential zoning</b>					
Opaque Background	11pm	11pm	10pm	9pm	
Colored Background	11pm	11pm	10pm	9pm	
Light Background	8pm	8pm	8pm	8pm	

Note to Table 5.3

1. Land Use Zoning refers to the predominant use of land within 300 meters (or 1000 feet) of the parcel on which the sign is located.
2. N/A means that such signs are not permitted.

**Section 6: Special Uses**

**6.1 Recreational Facilities.**

A. Lighting for outdoor athletic fields, courts or tracks in Lighting Zones E1 -- E4 shall be considered Class 1 (Color Rendition), and shall be exempt from the lumens per acre limits of Section 4.2.

B. Shielding: In Lighting Zones E1 -- E4, fully shielded lighting is required for fields designed for Class III or IV levels of play (typically amateur or municipal league, elementary to high school, training, recreational or social levels). Facilities designed for Class I and II levels of play (typically college, semi-professional, professional or national levels) shall utilize luminaires with minimal uplight consistent with the illumination constraints of the design. Where fully shielded fixtures are not utilized, acceptable luminaires shall include those which:

1. Are provided with internal and/or external glare control louvers and installed so as to minimize uplight and offsite light trespass, and;
2. Are installed and maintained with aiming angles that permit no greater than five percent (5%) of the light emitted by each fixture to project above the horizontal.

C. Illuminance: All lighting installations shall be designed to achieve no greater than the minimal illuminance levels for the activity as recommended by the Illuminating Engineering Society of North America (IESNA).

D. Off-site spill: The installation shall also limit off-site spill (off the parcel containing the sports facility) to the maximum extent possible consistent with the illumination constraints of the design. For Class III and IV levels, a design goal of 5 lux (0.5 fc) at any location on any non-residential property, and 1 lux (0.1 fc) at any location on any residential property, as measurable from any orientation of the measuring device, shall be sought. For Class I and II levels, a design goal of 7.5 lux (0.75 fc) at any location on any non-residential property, and 1.5 lux (0.15 fc) at any location on any residential property, as measurable from any orientation of the measuring device, shall be sought.

E. Certification: Every such lighting system design and installation shall be certified by a registered engineer as conforming to all applicable restrictions of this Code.

F. Curfew: All events shall be scheduled so as to complete all activity before the curfew listed in Table 6.1. Illumination of the playing field, court or track shall be permitted after the curfew only to conclude a scheduled event that was unable to conclude before the curfew due to unusual circumstances.

Table 6.1 SPORTS FACILITY AND DISPLAY LOT LIGHTING CURFEWS				
LIGHTING ZONE				
E4	E3	E2	E1	
12am	11pm	11pm	10pm	

**6.2 Outdoor Display Lots.**

A. Lighting for display lots shall be considered Class 1 (Color Rendition), and shall be exempt from the lumens per acre limits of Section 4.2.

B. Shielding: All display lot lighting shall utilize fully shielded luminaires that are installed in a fashion that maintains the fully shielded characteristics.

C. Illuminance: The display lot shall be designed to achieve no greater than the minimal illuminance levels for the activity as recommended by the Illuminating Engineering Society of North America (IESNA).

D. Off-site spill: The display lot shall limit off-site spill (off the parcel containing the display lot) to a maximum of 5 lux (0.5 fc) at any location on any non-residential property, and 0.5 lux (0.05 fc) at any location on any residential property, as measurable from any orientation of the measuring device.

E. Certification: Every display lot lighting system design and installation shall be certified by a registered engineer as conforming to all applicable restrictions of this Code.

F. Curfew: Display lot lighting exceeding the lumens per acre cap of Section 4.2 shall be turned off at the curfew listed in Section 6.1 or within thirty minutes after closing of the business, whichever is later. Lighting in the display lot after this time shall be considered class 2 lighting, and shall conform to all restrictions of this Code applicable for this class, including the lumens per acre caps in Section 4.2.

### 6.3 Service Station Canopies.

A. Lighting for service station canopies shall be considered class 2 lighting (General Illumination).

B. Shielding: All luminaires mounted on or recessed into the lower surface of service station canopies shall be fully shielded and utilize flat lenses.

C. Total Under-Canopy Output: 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.

C. The lumen output of lamps mounted on or within the lower surface of a canopy is included toward the lumen caps in Section 4.2 according to the method defined in Section 16.24. Other lighting located under a canopy but not mounted on or within the lower surface is included toward the lumen caps in Section 4.2 at full initial output.

**6.4** All lighting not directly associated with the special use areas above shall conform to the lighting standards described in this Code, including but not limited to the lamp type and shielding requirements of Section 4.1 and the lumens per acre limits of Section 4.2. The net acreage for the determination of compliance with Section 4.2 shall not include the area of the athletic field or outdoor display lot, as defined in Section 16.21; the area of any service station canopy **shall** be included in the net acreage.

## **Section 7: Submission of Plans and Evidence of Compliance with Code. Subdivision Plats.**

**7.1** Submission Contents. The applicant for any permit required by any provision of the laws of this jurisdiction in connection with proposed work involving outdoor lighting fixtures shall submit (as part of the application for permit) evidence that the proposed work will comply with this Code. Even should 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 submission shall contain but shall not necessarily be limited to the following, all or part of which may be part or in addition to the information required elsewhere in the laws of this jurisdiction upon application for the required permit:

- A. plans indicating the location on the premises of each illuminating device, both proposed and any already existing on the site;
- B. description of all illuminating devices, fixtures, lamps, supports, reflectors, 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.

**7.2** Additional Submission. The above required plans, descriptions and data shall be sufficiently complete to enable the designated official to readily determine whether compliance with the requirements of this Code will be secured. If such plans, descriptions and data cannot enable this ready determination, the applicant shall additionally submit as evidence of compliance to enable such determination such certified reports of tests as will do so provided that these tests shall have been performed and certified by a recognized testing laboratory.

**7.3** Subdivision Plats. If any subdivision proposes to have installed street or other common or public area outdoor lighting, submission of the information as described in Section 7.1 shall be required for all such lighting.

**7.4** Lamp or Fixture Substitution. Should any outdoor light fixture or the type of light source therein be changed after the permit has been issued, a change request must be submitted to the designated official for approval, together with adequate information to assure compliance with this Code, which must be received prior to substitution.

**7.5** If the designated official determines that the proposed lighting does not comply with this Code, the permit shall not be issued or the plan approved.

**7.6** For all projects where 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 certified engineer before the certificate of occupancy is issued. Until this certification is submitted, approval for use of a Certificate of Occupancy shall not be issued for the project.

## **Section 8: Approved Materials and Methods of Construction or Installation/Operation**

**8.1** The provisions of this Code are not intended to prevent the use of any design, material, or method of installation or operation not specifically prescribed by this Code, provided any such alternate has been approved by the designated official. The designated official may approve any such proposed alternate providing he/she finds that it:

- A. provides at least approximate equivalence to that applicable specific requirements of this Code
- B. is otherwise satisfactory and complies with the intent of this Code.

## **Section 9. Prohibitions**

**9.1** Sale of Non-Conforming Fixtures and Lamps. The installation, sale, offering for sale, lease or purchase of any outdoor lighting fixture or lamp the use of which is not allowed by this Code is prohibited.

**9.2** Laser Source Light. The use of laser source light or any similar high intensity light for outdoor advertising or entertainment, when projected above the horizontal, is prohibited.

**9.3** Searchlights. The operation of searchlights for advertising purposes is prohibited.

**9.4** Outdoor Advertising Off-Site Signs. Illumination of outdoor advertising off-site signs is prohibited in Lighting Zones E2 and E1.

**9.5** Reflective Mountings. Fixtures shall not be installed on reflective surfaces or supports that would compromise the intent of the Ordinance.

## **Section 10. Temporary Exemptions**

**10.1 Request; Renewal; Information Required.** Any person may submit, on a form prepared by the jurisdiction, to the designated official, a temporary exemption request. The request shall contain the following information:

- A. specific Code exemption(s) requested;
- B. purpose of proposed lighting;
- C. duration of requested exemption(s);
- D. information for each luminaire and lamp combination as required in section 7.1;
- E. proposed location on premises of the proposed light fixture(s);
- F. previous temporary exemptions, if any, and addresses of premises thereunder;
- G. such other data and information as may be required by the designated official.

**10.2 Approval; Duration.** The designated official shall have five (5) business days from the date of submission of the request for temporary exemption to act, in writing, on the request. If approved, the exemption shall be valid for not more than thirty (30) days from the date of issuance of the approval. The approval shall be renewable upon further written request, at the discretion of the designated official, for a maximum of one (1) additional thirty (30) day period. The designated official is not authorized to grant more than one (1) temporary permit and one (1) renewal for a thirty (30) day period for the same property within one (1) calendar year.

**10.3 Disapproval; Appeal.** If the request for temporary exemption or its extension is disapproved, the person making the request will have the appeal rights provided in Section 12.

## **Section 11. Other Exemptions**

### **11.1 Nonconformance**

- A. Bottom-mounted or unshielded outdoor advertising sign lighting shall not be used beginning five years after enactment of this Code.
- B. All other outdoor light fixtures lawfully installed prior to and operable on the effective date of this Code are exempt from all requirements of this Code. There shall be no change in use or lamp type, or any replacement (except for same-type and same-output lamp replacement) or structural alteration made, without conforming to all applicable requirements of this Code. Further, if the property is abandoned, or if there is a change in use or ownership of the property, the provisions of this Code will apply when the abandonment ceases or the new use or ownership commences.

**11.2 State and Federal Facilities.** Compliance with the intent of this Code at all State and Federal facilities is encouraged.

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

**11.4 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 Section 4.1, though it must conform to all other provisions of this code.

## **Section 12. Appeals**

Any person substantially aggrieved by any decision of the designated official made in administration of the Code has the right and responsibilities of appeal to the Advisory/Appeals Board of this jurisdiction.

## **Section 13. Law Governing Conflicts**

Where any provision of federal, state, county, township or city statutes, codes, or laws conflicts with any provision of this Code, the most restrictive shall govern unless otherwise regulated by law.

## **Section 14. Violation and Penalty**

It shall be a civil infraction for any person to violate any of the provisions of this Code. Each and every day or night during which the violation continues shall constitute a separate offense. A fine shall be imposed of not less than fifty dollars nor more than seven hundred dollars for any individual or not less than 100 nor more than ten thousand dollars for any corporation, association, or other legal entity for each offense. The imposition of a fine under this Code shall not be suspended.

## **Section 15. Severability**

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

## **Section 16. Definitions**

As used in this Code, unless the context clearly indicates otherwise, certain words and phrases used in this Code shall mean the following:

**16.1 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 Planning Director of the essential nature of color rendition for the application. Recognized Class 1 uses are: outdoor eating and retail food or beverage service areas; outdoor maintenance areas; display lots; assembly areas such as concert or theater amphitheaters.

**16.2 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.

**16.3 Class 3 Lighting.** Any outdoor lighting used for DECORATIVE effects including, but not limited to, architectural illumination, flag and monument lighting, and illumination of trees, bushes, etc.

**16.4** Development Project. Any residential, commercial, industrial or mixed use subdivision plan or development plan which is submitted to the City for approval.

**16.5** 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.

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

**16.7** Display Lot or Area. Outdoor areas where active nighttime sales activity occurs AND where accurate color perception of merchandise by customers is required. To qualify as a display lot, one of the following specific uses must occur: automobile sales, boat sales, tractor sales, building supply sales, gardening or nursery sales, assembly lots, swap meets. Uses not on this list must be approved as display lot uses by the Planning Director.

**16.8** Flood Lamp. A specific form of lamp designed to direct its output in a specific direction (a beam) but with a diffusing glass envelope: Such lamps are so designated by the manufacturers and are typically used in residential outdoor area lighting.

**16.9** Footcandle. One lumen per square foot. Unit of illuminance. It is the luminous flux per unit area in the Imperial system. One footcandle equals approximately 0.1 (0.093) lux.

**16.10** 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 is no greater than 100 candela per 1000 lamp lumens. [This definition is not used in the U.S.A. Pattern Code.]

**16.11** Fully Shielded Light Fixture. A lighting fixture constructed in such a manner that 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. Any structural part of the light fixture providing this shielding must be permanently affixed.

**16.12** 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, brightness of the source, and on the brightness level to which the eyes are adapted.

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

**16.14** Light pollution. Any adverse effect of manmade light.

**16.15** Light Trespass. Light falling where it is not wanted or needed, typically across property boundaries.

**16.16** Lighting Zones. The four lighting zones are defined on the Lighting Zone Map, by this reference made a part of this Code. A parcel located in more than one of the Lighting Zones described under Section 16.16 A-D shall be considered to be only in the more restrictive Lighting Zone. 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, though neighborhood commercial or industrial parcels largely surrounded by suburban residential uses will often 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. In these areas the preservation of a naturally-dark environment, both in the sky and in the visible landscape, is considered of paramount concern. This Zone may also include rural areas, including rural residential areas, that have identified preservation of natural darkness as a high priority or other areas where the preservation of a naturally dark landscape is of utmost priority.

**16.17 Lumen.** Unit of luminous flux; used to measure the amount of light emitted by lamps.

**16.18 Luminaire.** The complete lighting assembly, less the support assembly. For purposes of determining total light output from a luminaire, lighting assemblies which include multiple unshielded or partially shielded lamps on a single pole or standard shall be considered as a single unit.

**16.19 Lux.** One lumen per square meter. Unit of illuminance. It is the luminous flux per unit area in the metric system. One lux equals approximately 10 (10.8) footcandles.

**16.20 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 classes as defined for Class 1, 2 and 3 Lighting.

**16.21 Net Acreage.** The remaining area after deleting all portions for proposed and existing streets within a development parcel or subdivision. For parcels including those special uses listed in Section 6 that are exempted from the lumens per acre caps of Section 4.2 (recreational facilities and outdoor display lots), the area devoted to the special use shall also be excluded from the net acreage.

**16.22 Opaque.** Opaque means that a material does not transmit light from an internal illumination source. Applied to sign backgrounds, 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.

**16.23 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 shall include, but are not limited to lights used for:

- A. parking lot lighting;
- B. roadway lighting;
- C. buildings and structures;
- D. recreational areas;
- E. landscape lighting;
- F. billboards and other signs (advertising or other);
- G. product display area lighting;
- H. building overhangs and open canopies.

**16.24 Outdoor Light Output, Total.** The maximum total amount of light, measured in lumens, from all outdoor light fixtures. For lamp types that vary in their output as they age (such as high pressure sodium, fluorescent and metal halide), the initial output, as defined by the manufacturer, is the value to be considered. For determining compliance with Section 4.2 [Total Outdoor Light Output] of this Code, the light emitted from outdoor light fixtures is to be included in the total output as follows:

- A. outdoor light fixtures installed on poles (such as parking lot luminaires) and light fixtures installed on the sides of buildings or other structures, when not shielded from above by the structure itself as defined in parts B, C and D below, are to be included in the total outdoor light output by simply adding the initial lumen outputs of the lamps used;
- B. outdoor light fixtures installed under canopies, buildings (including parking garage decks), overhangs or roof eaves where all parts of the lamp or luminaire are located at least five (5) feet but less than ten (10) feet from the nearest edge of the canopy or overhang are to be included in the total outdoor light output as though they produced only one-quarter (0.25) of the lamp's rated initial lumen output;
- C. outdoor light fixtures installed under canopies, buildings (including parking garage decks), overhangs or roof eaves where all parts of the lamp or luminaire are located at least ten (10) feet but less than thirty (30) feet from the nearest edge of the canopy or overhang are to be included in the total outdoor light output as though they produced only one-tenth (0.10) of the lamp's rated initial lumen output.
- D. outdoor light fixtures installed under canopies, buildings (including parking garage decks), overhangs or roof eaves where all parts of the lamp or luminaire are located thirty (30) or more feet from the nearest edge of the canopy or overhang are not to be included in the total outdoor light output. Such lamps must however conform to the lamp source and shielding requirements of Section 4.

**16.25 Outdoor Recreation Facility.** An area designed for active recreation, whether publicly or privately owned, including, but not limited to, baseball diamonds, soccer and football fields, golf courses, tennis courts and swimming pools.

**16.26 Person.** any individual, tenant, lessee, owner, or any commercial entity including but not limited to firm, business, partnership, joint venture or corporation.

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

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

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

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

**16.31 Spot Lamp.** A specific form of lamp designed to direct its output in a specific direction (a beam) and with a clear or nearly clear glass envelope: Such lamps are so designated by the manufacturers, and typically used in residential outdoor area lighting.

**16.32 Temporary Lighting.** Lighting which does not conform to the provisions of this Code and which will not be used for more than one thirty (30) day period within a calendar year, with one thirty (30) day extension. Temporary lighting is intended for uses which by their nature are of limited duration; for example holiday decorations, civic events, or construction projects.

**16.33 Use, Abandonment of.** The relinquishment of a property, or the cessation of a use or activity by the owner or tenant for a period of six months, 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.