

BOROUGH OF MOUNT POCONO
MONROE COUNTY, PENNSYLVANIA

ORDINANCE NO. 5 of 2011

AN ORDINANCE AMENDING THE CODE OF ORDINANCES (CHAPTER 187 - SUBDIVISION AND LAND DEVELOPMENT AND CHAPTER 215 – ZONING) OF THE BOROUGH OF MOUNT POCONO, MONROE COUNTY, PENNSYLVANIA, TO UPDATE LIGHTING REQUIREMENTS AS FOLLOWS:

ITEM 1 - AMEND CERTAIN SECTIONS OF CHAPTER 187.....	1
ITEM 2 - AMEND CERTAIN SECTIONS OF CHAPTER 215.....	1

BE IT HEREBY ORDAINED AND ENACTED by the Borough Council of the Borough of Mount Pocono, Monroe County, Pennsylvania, by the authority of and pursuant to the provisions of Act of July 31, 1968, P.L. 805, No. 247 of the General Assembly of the Commonwealth of Pennsylvania, as reenacted and amended, known and cited as the Pennsylvania Municipalities Planning Code; that the Borough of Mount Pocono Subdivision and land development Ordinance (Code of Ordinances Chapter 187) and the Zoning Ordinance (Code of Ordinances Chapter 215) are hereby amended as follows:

ITEM 1 – AMEND THE FOLLOWING SECTIONS OF CHAPTER 187 TO READ AS NOTED BELOW:

§ 187-66. Design standards.

- J. Illumination. Required illumination of park street systems. All parks shall be furnished with lighting units so spaced and equipped with luminaries placed at such mounting heights as will provide adequate levels, of illumination for the safe movement of pedestrians and vehicles at night. The lighting shall comply with the design standards specified in the Zoning Ordinance.

§ 187-74.Plans.

- (7) Exterior lighting.

ITEM 2 – AMEND THE FOLLOWING SECTIONS OF CHAPTER 215 TO READ AS NOTED BELOW:

§ 215-22. Off-street parking and loading.

- C. Illumination. All driveways, aisles, maneuvering spaces, vehicular service areas, and spaces between or around buildings, designed for use by more than four cars after dusk, other than those accessory to a single dwelling, shall be illuminated according to §215-35.I.

§215-35

- I. Lighting and glare. The standards of this subsection shall apply to all uses including residential and agricultural.

- (1) Purpose. This subsection sets minimum standards for outdoor lighting to:

- (a) Provide lighting in outdoor public places where public health, safety and welfare are potential concerns.
- (b) Protect drivers and pedestrians from the glare of non-vehicular light sources that shine into their eyes and thereby impair safe traverse.
- (c) Protect the privacy of property owners by limiting the potential for glare and light trespass from poorly aimed, placed, applied, maintained or shielded outdoor lighting installations located on adjacent properties and roadways.
- (d) Set forth outdoor lighting requirements which are consistent with lighting industry standards and practices, available technologies, and the lighting sciences.

- (2) Application.

- (a) Outdoor lighting shall be required for safety and personal security in areas of public assembly and traverse, including but not limited to: multifamily dwellings and commercial,

industrial, public recreational, and institutional uses.

- (b) All driveways, aisles, maneuvering spaces, vehicular service areas, and spaces between or around buildings, designed for use by more than four cars after dusk, other than those accessories to a single dwelling, shall be illuminated between sunset and sunrise in accord with the recommendations of the Society of Illuminating Engineers at no cost to the Borough.
- (c) The Council shall require lighting to be incorporated for other uses or locations, as it deems necessary.
- (d) The glare control requirements in this section apply to lighting in all of the above-mentioned uses as well as sign, architectural, landscaping, and residential lighting. Lighting shall be controlled in both height and intensity to maintain community character; and lighting designs shall be an inherent part of the project design. The applicant shall provide the specifications of the proposed lighting and its arrangement on the site, and all required lighting shall be considered improvements for the purpose of regulation by the Borough's Subdivision and Land Development Ordinance.

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

CANDELA — Unit of luminous intensity, describing the intensity of a light source in a specific direction.

CANDELA DISTRIBUTION — A curve, often on polar coordinates, illustrating the variation of luminous intensity of a lamp or luminaire in a plane through the light center.

CANDLEPOWER — Luminous intensity expressed in candelas. A measure of luminous intensity of a light source in a specific direction, measured in candelas.

CUTOFF — A light distribution where a negligible amount of light is permitted at a horizontal plane located at the bottom of a luminaire. Light above the horizontal plane at the bottom of a luminaire is not limited, but cutoff luminaires usually have very little light above the luminaire.

FULL CUTOFF — A light distribution where no light is permitted at or above a horizontal plane located at the bottom of a luminaire. There will be little or no light at the angles that are usually associated with glare.

SEMI-CUTOFF — A light distribution where slightly more light is permitted at a horizontal plane located at the bottom of a luminaire than the cutoff distribution. Like cutoff, light above the horizontal plane at the bottom of a luminaire is not limited, but the amount of light above the luminaire is relatively small.

NON-CUTOFF — A light distribution that can produce considerable light above the horizontal plane located at the bottom of a luminaire.

CUTOFF ANGLE OF A LUMINAIRE — The angle, measured up from the nadir (i.e., straight down), between the vertical axis and the first line of sight at which the bare source (the bulb or lamp) is not visible.

FLOODLIGHT — A fixture designed to "flood" a well-defined area with light.

FOOTCANDLE — A unit of illuminance. The English measurement unit of illuminance (or light level) on a surface. One lumen is equal to one footcandle per square foot. A unit of light intensity stated in lumens per square foot and measurable with an illuminance meter, a/k/a footcandle or light meter. One footcandle is equal to 10.76 lux, and one lux is equal to 0.093 footcandles.

FULLY SHIELDED LIGHT FIXTURE — A light 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 horizon.

GLARE — Light that hinders or bothers the human eye. The sensation produced by luminances within the visual field that is sufficiently greater than the luminance to which the eyes are adapted to cause annoyance, discomfort, or loss in visual performance or visibility. The degree of glare is described as follows:

- (a) BLINDING GLARE—Glare that is so intense that for an appreciable length of time after it has been removed, no object can be seen.
- (b) DIRECT GLARE—Glare resulting from high luminances or insufficiently shielded light sources in the field of view.
- (c) DISABILITY GLARE—The effects of stray light in the eye whereby visibility and visual

performance is significant enough to keep a person from seeing adequately.

- (d) DISCOMFORT GLARE—Glare that produces discomfort. It does not necessarily interfere with visual performance or visibility.
- (e) REFLECTED GLARE—Glare resulting from reflections of high luminances in polished or glossy surfaces in the field of view.

ILLUMINANCE — The quantity of light measured in footcandles or lux. A term that quantifies light striking a surface or a plane point. It is expressed either in lumens per square foot (footcandles/the English unit) or lumens per square meter (lux/the metric unit). The areal density of the luminous flux incident at a point on a surface. One footcandle is equal to 10.76 lux, and one lux is equal to 0.093 footcandle.

ILLUMINATION — An alternative term for illuminance. Commonly used in a qualitative or general sense to designate the act of illuminating or the state of being illuminated.

LAMP — A generic term for a man-made source of light.

LIGHT — Radiant energy that is capable of exciting the retina and producing a visual sensation. The visible portion of the electromagnetic spectrum extends from about 380 to 770 nanometers.

LIGHT TRESPASS — Light emitted by a lighting installation which extends beyond the boundaries of the property on which the installation is sited; spill light; obtrusive light; undesirable illumination, including the following examples:

- (a) The classic light shining in a window.
- (b) Unwanted light on an adjacent property.
- (c) Excessive brightness in the normal field of vision (discomfort glare).

LUMEN — Units of measurement of luminous flux representing the quantity of light being produced by a lamp or emitted from a luminaire.

LUMINAIRE — A complete lighting unit consisting of one or more lamps (light sources) together with the parts designed to control the light distribution and other mechanical and electrical components.

LUMINANCE — A term that quantifies directional brightness of a light source (e.g., a lamp, luminaire, reflecting material) or of a surface that is illuminated and reflects light. The emitted or reflected light from a surface; relates directly to perceived "brightness." The unit of luminance is the candela per square meter (cd/M²). Measurable with a luminance meter.

LUX — A unit of light intensity stated in lumens per square meter. There are approximately 10.76 lux per footcandle.

NADIR — The point directly below the luminaire when the luminaire is pointed down (0-degree angle).

NIGHTTIME — The hours between the end of evening civil twilight and the beginning of morning civil twilight. Civil twilight ends in the evening when the center of the sun's disk is six degrees below the horizon and begins in the morning when the center of the sun's disk is six degrees below the horizon.

SPOTLIGHT — A fixture designed to light only a small, well-defined area.

- (4) Criteria.
 - (a) Illumination levels for nonresidential uses. Illumination of nonresidential uses, where required by this chapter, shall have intensities and uniformity ratios in accordance with the most current recommended practices of the Illuminating Engineering Society of North America (IES NA) Lighting Handbook.
 - (b) Average lighting levels should not exceed the values provided in Exhibit 1.

Exhibit 1. Maximum Average Light Levels	
Land Use	Foot Candles
Pedestrian areas/ sidewalks	1.0
Building entries	5.0
Street lighting	1.0
Parking areas w/ high nighttime activity	4.0
Parking areas w/ low nighttime activity	2.0
Playgrounds	5.0
Sports grounds	20.0
Site perimeter	0.5
Local road (residential)	0.4
Collector road (commercial)	1.0
Source: North Carolina Dark Skies Association & Chittenden County Regional Planning Commission	

- (c) Outdoor light standards for all uses.
 - [1] Any lamp over 2,000 initial lumens, installed, shall be fully shielded such that the lamp itself is not directly visible from any other property.
 - [2] The use of more than one luminaire or lamp of 2,000 initial lumens for the purpose of illuminating the same area shall not be permitted.
 - [3] Examples of lamp types of 2,000 lumens and below are: 100-watt standard incandescent; 15-watt cool-white fluorescent; 15-watt compact fluorescent; and 18-watt low-pressure sodium.
- (d) Future amendments to the recommended practices of the IESNA shall become a part of this Section without further action of the Borough.
- (5) Lighting fixture design.
 - (a) Fixtures shall be of a type and design appropriate to the lighting application.
 - (b) For lighting horizontal tasks such as roadways, sidewalks, entrances and parking areas, fixtures shall meet IESNA full cutoff criteria.
 - (c) Fixtures shall be equipped with or be modified to incorporate light directing and/or shielding devices such as shields, visors, skirts or hoods to redirect offending light distribution and/or reduce direct or reflected glare.
 - (d) The use of floodlighting, spotlighting, wall-mounted fixtures, decorative globes and other fixtures shall meet IESNA full cutoff criteria.
- (6) Control of nuisance and disabling glare.
 - (a) All outdoor lighting shall be aimed, located, designed, fitted and maintained so as not to present a hazard to drivers or pedestrians by impairing their ability to safely traverse and so as not to create a nuisance by projecting or reflecting objectionable light onto a neighboring use or property.
 - (b) All outdoor lighting fixtures shall be fully shielded in such a manner that no light is emitted above a horizontal plane passing through the lowest point of the light-emitting element, so that direct light emitted above the horizontal plane is eliminated.

- (c) Floodlights and spotlights shall be so installed or aimed that they do not project their output into the windows of neighboring residences, adjacent properties, skyward or onto a public roadway. Floodlights or spotlights must be aimed no higher than 45° above straight down (i.e., half-way between straight down and straight to the side). The use of searchlights or laser-source lights for advertising or entertainment purposes is prohibited.
- (d) During periods of non-use of a non-residential facility the illumination of the property shall be reduced so that the lighting intensity levels shall not exceed 25% of the levels normally permitted by this Part for the use, but in no case shall they be less than the minimum levels for safety or security as invoked by IESNA. Reductions should not be applied to facilities subject to intermittent night use, such as hospitals and transportation terminals.
- (e) All illumination for advertising signs, buildings and/or surrounding landscapes for decorative, advertising or aesthetic purposes is prohibited between 11:00 p.m. and dawn, except that such lighting situated on the premises of a commercial establishment may remain illuminated while the establishment is actually open for business, and until one hour after closing.
- (f) Unless otherwise permitted by Borough Council such as for safety and security, lighting shall be controlled by automatic switching devices such as time clocks or combination motion detectors and photocells to permit extinguishing offending light sources between 11:00 p.m. and dawn, to mitigate nuisance glare and sky lighting consequences.
- (g) Illumination for flagpole lighting may not exceed 10,000 lumens.
- (h) Vegetation screens shall not be employed to serve as the primary means for controlling glare. Rather, glare control shall be achieved primarily 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.
- (i) Externally illuminated signs and billboards shall use only fixtures mounted at the top of the sign and aimed downward. Such fixtures shall be automatically extinguished between the hours of 11:00 p.m. and dawn, except that such lighting situated on the premises of a commercial establishment may remain illuminated while the establishment is actually open for business, and until one hour after closing, except as specifically approved by appropriate officers or agents of the Borough.
- (j) Directional fixtures for such applications as facade, fountain feature and landscape illumination shall be aimed downward so as not to project their output beyond the objects intended to be illuminated. Additionally, they shall be extinguished between the hours of 11:00 p.m. and dawn except that such lighting situated on the premises of a commercial establishment may remain illuminated while the establishment is actually open for business, and until one hour after closing, except as specifically approved by appropriate officers or agents of the Borough.
- (k) The use of white strobe lighting, flashing, flickering or pulsating lights is prohibited, except as may be required by the Federal Aviation Administration or other governmental agency.
- (l) Fixtures shall not be mounted in excess of 20 feet above finished grade. Fixtures not meeting IESNA cutoff criteria shall not be mounted in excess of 16 feet above finished grade.
- (m) The intensity of illumination projected off the property shall not exceed 0.1 vertical footcandle, measured at 30 inches above the ground at the property line.
- (n) All lighting shall be arranged so to prevent glare into adjoining properties and streets.
- (7) Post installation inspection. The Borough reserves the right to conduct a post-installation nighttime inspection to verify compliance with the requirements of this Part and if, appropriate, to require remedial action at no expense to the Borough.
- (8) Nonconforming lighting. Any lighting fixture or lighting installation existing on the effective date of this chapter that does not conform with the requirements of this chapter shall be considered as a lawful nonconformance, subject to the following:
 - (a) Unless minor corrective action is deemed by the Borough to be an acceptable alternative, a

nonconforming lighting fixture or lighting installation shall be made to conform with the applicable requirements of this chapter, when:

[1] It is deemed by the Borough to create a safety hazard.

[2] Where a SALDO application requires a lighting plan.

- (9) Recreation uses. The nighttime illumination of outdoor recreational facilities for such aerial sports as outdoor riding arenas, baseball, basketball, soccer, tennis, track and field, and football typically necessitate higher than normally allowed fixture mounting heights and aiming angles, utilize very high-wattage lamps and potentially produce unacceptable levels of light trespass and glare when located near residential properties. Permission to illuminate such facilities shall be granted only when the Borough is satisfied that the health, safety and welfare rights of nearby property owners and the Borough as a whole have been properly protected. When recreational uses are specifically permitted by the Borough for operation during hours of darkness, the following requirements shall apply:

- (a) Lighting shall be accomplished through the use of fixtures conforming to IESNA full-cutoff criteria.
- (b) Race tracks and such recreational venues as golf driving ranges, trap-shooting facilities and outdoor riding arenas that necessitate the horizontal, or near horizontal projection of illumination, shall not be permitted to be artificially illuminated.
- (c) Recreational facilities for basketball, baseball, football, soccer, miniature golf, tennis or track shall not be illuminated if located within a residential district or sited on a nonresidential property located within 1,000 feet of a property containing a residential use.
- (d) Sporting events shall be timed to end at such time that all lighting in the sports facility, other than lighting for safe exit of patrons, shall be extinguished by 11:00 p.m., regardless of such occurrences as extra innings or overtimes.

- (e) Maximum mounting heights for recreational lighting shall be in accordance with the following:

[1] Basketball	20 feet
[2] Football	70 feet
[3] Soccer	70 feet
[4] Little League Baseball	
[A] 200 feet Radius	60 feet
[B] 300 feet Radius	70 feet
[5] Miniature Golf	20 feet
[6] Pool Aprons	20 feet
[7] Tennis	20 feet
[8] Track	20 feet

- (f) To assist in determining whether lighting will be permitted, applications for illuminating recreational facilities shall be accompanied not only with the information required in this Section below, but also by a visual impact plan that contains the following:

[1] Plan views containing a layout of the recreational facility and showing pole locations and the location of residences on adjoining properties.

[2] Elevations containing pole and fixture mounting heights, horizontal and vertical aiming angles and fixture arrays for each pole locations.

[3] Elevations containing initial vertical illuminance plots at the boundary of the site, taken at a height of 5-foot line-of-sight.

[4] Elevations containing initial vertical illuminance plots on the windowed facades of all

residences facing and adjacent to the recreational facility. Such plots shall demonstrate compliance with the light trespass and glare control requirements of this Part.

[5] Proposed frequency of use of the facility during hours of darkness on a month-by-month basis and proposed time when the sports lighting will be extinguished.

[6] A narrative describing the measures proposed to achieve minimum off-site disturbance.

(10) Exemptions:

- (a) Emergency lighting, used by police, fire-fighting, or medical personnel, or at their direction, is exempt from all requirements of this chapter for as long as the emergency exists.
- (b) Temporary lighting installations, which include but are not limited to seasonal or holiday displays, carnivals, community fairs, and traveling circuses, may be employed on a temporary basis not to exceed 30 days in duration.

SEVERABILITY

Should any section, subsection, clause, provision or other portion of this Ordinance be declared invalid by any court of competent jurisdiction, such decision shall not affect the validity of the remainder of this Ordinance; the Board of Supervisors having adopted this Ordinance as if such invalid portions had not been included therein.

EFFECTIVE DATE

This Ordinance shall become effective immediately upon adoption.

ADOPTION

THIS ORDINANCE ORDAINED AND ENACTED this 7th day of November, 2011, by the Borough Council of the Borough of Mount Pocono, Monroe County, Pennsylvania, to be effective immediately.

BOROUGH OF MOUNT POCONO

By: /S/
John P. Finnerty, Council President

ATTEST:

/S/
Lori Noonan, Borough Secretary

APPROVED this 7th day of November, 2011

By: /S/
Dan McDavitt, Mayor

