

AGENDA FOR THE SPECIAL COMMITTEE OF THE WHOLE MEETING  
OF THE CORPORATE AUTHORITIES OF THE  
VILLAGE OF CAMPTON HILLS

February 20, 2018

6:30 P.M.  
CAMPTON TOWNSHIP COMMUNITY CENTER  
5N082 OLD LAFOX ROAD  
Campton Hills, IL

- 1. Call to Order**
- 2. Roll Call**
- 3. Pledge of Allegiance**
- 4. Dark Skies Ordinance Presentation - Trustee George**
- 5. Adjournment**

# Chapter 7

## OUTDOOR LIGHTING FOR NEW CONSTRUCTION

### 9-7-1: DEFINITIONS:

### 9-7-2: APPLICATION OF PROVISIONS:

### 9-7-3: PROHIBITED LIGHTING FOR NEW CONSTRUCTION:

### 9-7-4: ILLUMINATION STANDARDS:

### 9-7-5: LUMINAIRE STANDARDS:

### 9-7-6: PROCEDURAL REQUIREMENTS:

### **9-7-1: DEFINITIONS:**

When used in this chapter, the following words and terms shall have the meanings ascribed to them in this section:

**AMBIENT LIGHTING:** The general overall level of lighting in an area.

**ARCHITECTURAL LIGHTING:** Outdoor lighting directed at buildings, facades, structures, monuments, and other architectural features.

**AUTOMOBILE SERVICE STATION:** As defined in the village of Campton Hills zoning ordinance.

**CANOPY:** A roofed structure with at least one side open for pedestrian and/or vehicle access that typically provides protection from the sun or weather and is associated with providing goods or services.

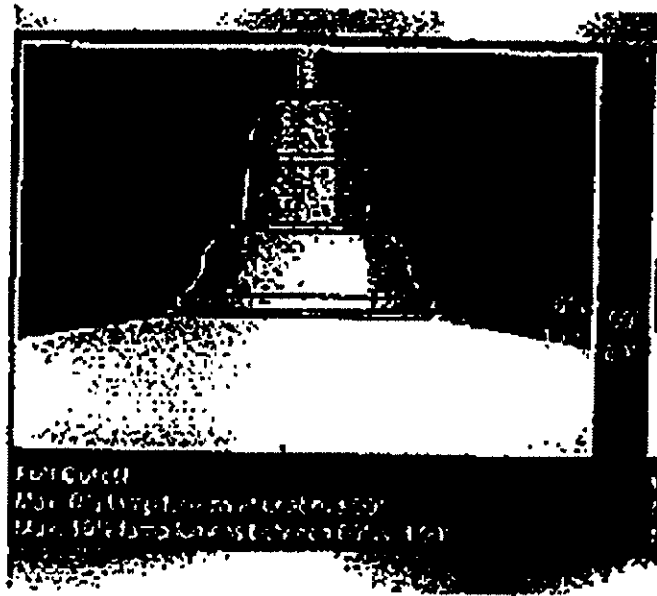
**COMMERCIAL:** Any lot, however zoned, in any zoning district that does not have as its primary use a single-family residential dwelling, a two-family residential dwelling, or land used for "agriculture", as defined in the village of Campton Hills zoning ordinance.

**CORRELATED COLOR TEMPERATURE (CCT):** Measured in degrees Kelvin (K), the absolute temperature of a blackbody whose chromaticity most nearly resembles that of the light source. For the purpose of this chapter, "CCT" is used as a simplified way to characterize the spectral properties of a light source and estimate the overall appearance of the light to the human eye.

**FLOODLIGHT:** A light designed for lighting a scene or object to a luminance greater than its surroundings.

**FOOT-CANDLE:** A unit of measure of illuminance equal to one lumen of light spread over an area of one square foot.

**FULL CUTOFF LUMINAIRE:** A luminaire having zero intensity at or above horizontal (90°) and limited to a value not exceeding ten percent (10%) of lamp lumens at or above eighty degrees (80°). Such luminaire is determined by a photometric test and certified by the manufacturer. See diagram below:



**GLARE:** Lighting entering the eye directly from luminaires or indirectly from reflective surfaces that causes visual discomfort or reduced visibility.

**IES:** Illuminating Engineering Society Of North America.

**ILLUMINANCE:** The total luminous flux incident on a surface, per unit area.

**ILLUMINANCE GRID PLOT:** A photometric report indicating the average horizontal illumination delivered to each of the squares of a gridded area illuminated by one or more luminaires.

**INITIAL LUMEN:** The measurement of a lamp's lumen output at the time the lamp is burned for the first time. As a light ages, the amount of light produced is reduced.

**INSTALLED HEIGHT:** The height above grade of the lowest light emitting point of an installed luminaire.

**ISO-FOOT-CANDLE PLOTS:** A plot that graphically represents a particular luminaire's lighting pattern, in illuminance, as the light strikes a horizontal surface. It includes foot-candle calculations shown with the luminaire at various mounting heights. Contour lines are drawn through illuminance values.

**KELVIN:** A unit increment of temperature used as a color temperature scale of a light bulb (see definition of "correlated color temperature (CCT)" in this section).

**LED (LIGHT EMITTING DIODE):** An electronic semiconductor device that emits light when an electrical current is passed through it.

**LAMP:** The source of light being emitted from a luminaire, such as a bulb, LED, and/or a refractive pane.

**LIGHT:** Electromagnetic radiation within a range of wavelengths sufficient for visual perception by

the normal unaided human eye.

**LIGHT LEVEL:** See definition of Illuminance.

**LIGHT OUTPUT:** Luminous flux (see definition of "luminous flux" in this section). The amount of light which is emitted by a lamp or luminaire.

**LIGHT POLE:** Pole on which a luminaire is mounted.

**LIGHT TRESPASS:** Light that falls on property other than that of the owner of the light source.

**LIGHTING INSTALLATION:** An arrangement of one or more luminaires including any mounting hardware, brackets, and supporting structures.

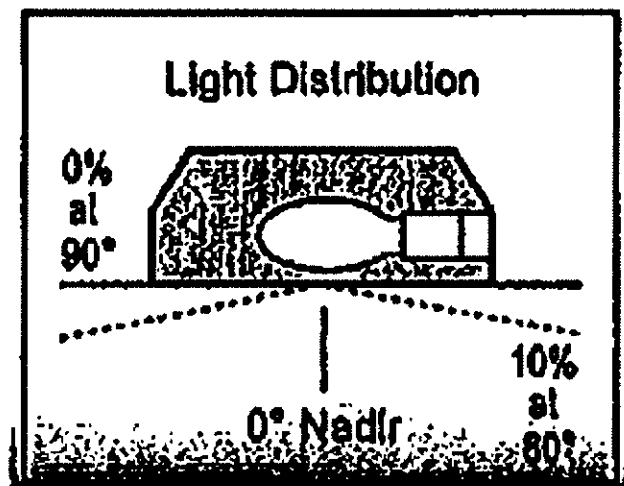
**LIGHTING PLAN:** An overall plan that describes the outdoor lighting.

**LUMEN:** A unit of measure of luminous flux.

**LUMINAIRE, LIGHT LUMINAIRE:** The complete lighting assembly (including the lamp(s), housing, ballasts, photocells, globes, reflectors or refractors, lenses, sensors and shield(s) and excluding the support assembly or pole, mounting bracket and base) consisting of one or more lamps, together with the attachment parts designed to distribute light, position and connect the lamp to the power supply.

**LUMINOUS FLUX:** The power emitted from a source of electromagnetic radiation, such as a light bulb, in the form of visible light. Luminous flux is measured in lumens and is typically specified by the manufacturer for a given lamp or luminaire.

**NADIR:** The direction pointing directly downward from the light source of the luminaire that originates from a horizontal plane at the lowest point on the luminaire. See diagram below:



**NEON LIGHT:** Colored fluorescent or gas discharge tubular which can be bent into various forms for use decoratively or as signs.

**NEW CONSTRUCTION:** A. Subject to the exemption described in subsection B of this definition, means:

1. Site preparation for, and construction of, entirely new structures (including new poles) and subsequent replacement of such new structures or any part thereof.
  2. Enlargement of any existing structure by the more restrictive of fifty percent (50%) of the area of the footprint of the building or fifty percent (50%) of the gross square footage of such existing structure (regardless of the number of other structures on the same site).
  3. Adding new lighting fixture(s), pole(s) or other amenity(ies) to existing structure(s) or pole(s) to which such fixture(s) were or are to be attached.
- B. New construction does not apply to the replacement of lighting fixtures, poles, or other amenities that existed prior to July 1, 2014.

**OPEN SPACE AND OPEN SPACE LOT:** A parcel of land in a predominately undeveloped condition that is protected from development.

**ORGANIZED SPORTING EVENT:** A prearranged sports or recreational event involving at least one group or team with a roster and schedule.

**OUTDOOR LIGHTING:** Light generated from an indoor or outdoor source that provides illumination to any exterior surface, building, sign, structure, device, or other outdoor feature (including land) which is visible to an observer located outdoors. For the purposes of this chapter, the light source inside an internally illuminated sign is not considered outdoor lighting.

**PHOTOMETRIC PLAN:** A technical plan that will indicate light distribution and the performance of lighting fixtures. It will explain the distribution of the proposed lighting and its effects on the area surrounding the site.

**PLAYING FIELD:** An open outdoor field or court used for, but not limited to, playing sports such as baseball, soccer, football, tennis, volleyball, and basketball.

**RESIDENTIAL:** Any zoning lot in a residential or agricultural zoning district that has as its primary use a residential dwelling, as defined in the village of Campton Hills zoning ordinance.

**STREET LIGHTING:** One or more luminaires or light installations designed to illuminate a public roadway or intersection.

**UPLIGHTING:** Lighting applications which direct light above a horizontal plane.

**VARIANCE:** As defined in the village of Campton Hills zoning ordinance.

**ZONING LOT:** As defined in the village of Campton Hills zoning ordinance. (Ord. O-14-12, 6-17-2014)

## **9-7-2: APPLICATION OF PROVISIONS:**

This chapter shall be applicable to the following lighting applications for new construction only and the subsequent maintenance of all new construction:

A. Residential: Street, pedestrian, sign, flood, and parking lot luminaires only.

B. Commercial: Any outdoor lighting luminaire. (Ord. O-14-12, 6-17-2014)

**9-7-3: PROHIBITED LIGHTING FOR NEW CONSTRUCTION:**  

The following lighting shall not be permitted for new construction in any zoning district as of the effective date hereof:

A. Strobe lights and laser lights, including laser light shows and aerial laser lights.

B. Neon style colored light tubes.

C. Flashing lights unless temporarily triggered by a security system and extinguished within thirty (30) minutes or at a time of security response.

D. Lighting which is used to outline a building, including neon, fiber optic, light emitting diode (LED), or fluorescent tube lighting which is used for this purpose (unless considered holiday lighting).

E. Any lighting luminaire that is construed as or confused with a traffic signal or traffic control device.

F. As determined by the police chief, lighting that contributes to or causes disabling or distracting glare onto a public roadway.

G. The use of uplighting, except when lighting the American flag or other government flag or government endorsed flag. (Ord. O-14-12, 6-17-2014)

**9-7-4: ILLUMINATION STANDARDS:**  

A. Gross Emission Of Light: The total light output from all luminaires used for outdoor lighting on any zoning lot, except for street lighting, outdoor display lots, automobile service station and outdoor

lighting of playing fields on public property, shall not exceed fifty thousand (50,000) initial lumens per acre of illuminated area. Automobile service stations shall not exceed eighty thousand (80,000) initial lumens per acre of illuminated area. Lighting installations located under skirted canopies shall not contribute more than fifty percent (50%) of this limit.

B. Light Intensity And Uniformity: The maximum illuminated surface light level for automobile service stations and drive-in/drive-through canopies is ten (10) foot-candles, measured horizontally at ground level.

C. Light Direction And Control: Lighting applications shall meet the following requirements:

<b>Lighting Application</b>	<b>Maximum Inclination Above Nadir</b>	<b>Maximum Light Output</b>
Architectural lighting	90 degrees	1,100 initial lumens
Floodlighting	90 degrees	2,200 initial lumens
Sidewalk lighting	45 degrees	800 initial lumens

D. Correlated Color Temperature (CCT): All lighting sources, except for public playing fields, must have a correlated color temperature (CCT) at or below three thousand two hundred degrees Kelvin (3200°K).

E. Permitted Hours Of Outdoor Lighting:

1. Commercial: No more than fifty percent (50%) of exterior lighting shall be permitted to be illuminated, except for one hour before start of business, during regular business hours as determined by said business, and one hour following close of business unless exempt for safety or security concerns, as determined by the police chief. All outdoor lighting shall be turned off during daylight hours.
2. Property Used For Governmental And Public Purposes: Any zoning lot in any zoning district used for governmental or public purposes, except for street lighting, shall comply with the permitted hours and security lighting limitations for commercial lighting zones. Outdoor lighting of the playing field of an organized sporting event on public property may remain illuminated until thirty (30) minutes after the conclusion of an event.

F. Light Trespass: Violations of this chapter shall be punishable as provided by section 5-1-6 of this code. (Ord. O-14-12, 6-17-2014)

**9-7-5: LUMINAIRE STANDARDS:**  

**A. Full Cutoff Requirement:**

1. All lighting regulated by this chapter shall be full cutoff.
2. Where applicable and appropriate, for areas outside of the village jurisdiction including, but not limited to, forest preserve and open space areas, the village shall recommend to the appropriate jurisdiction that lighting be full cutoff.

**B. Streetlight Restrictions:** Streetlights are permitted only at intersections unless exempt through a variance or PUD ordinance.

**C. Photocell/Timer Requirement For Street And Parking Lot Lights:** Both street lighting and parking lot lighting shall include photocells or timers as needed to regulate the hours of operation as required by this chapter and to prevent operation during daylight hours.

**D. Installed Height:** The installed height of any full cutoff luminaire used for the outdoor lighting of any roadway shall not exceed the following limits:

<b>Roadway</b>	<b>Maximum Installed Height</b>
Residential lighting	20 feet
Commercial lighting, municipal lighting, open space/forest preserve lighting	25 feet
Public playing field lighting	50 feet

**E. Light Pole Color Restriction:** Street and parking lot luminaire poles shall have a dark, matte finish, excluding spun aluminum and concrete poles.

**F. Canopy Requirement:** All canopies must be skirted with a skirt depth of eight inches (8") or greater. (Ord. O-14-12, 6-17-2014)

**9-7-6: PROCEDURAL REQUIREMENTS:**  



A. Plan Submission: For land development, redevelopment and new zoning applications where outdoor lighting is proposed, lighting plans shall be submitted to the village building and zoning officer for review by a village appointed engineer at the expense of the applicant and approval prior to final plat and shall include:

1. A site plan complete with all structures, parking spaces, building entrances, traffic areas (both vehicular and pedestrian), vegetation that might interfere with lighting, and all adjacent uses. The site plan shall show and identify the location of each existing and proposed luminaire and shall specify its installed height, detailed pole foundations, and method of mounting.
2. Iso-foot-candle plots for individual lighting installations, or ten feet by ten feet (10' x 10') illuminance grid plots for multiluminaire lighting installations which shall demonstrate compliance with all applicable requirements set forth in this chapter. The plots shall indicate the location of each existing and proposed luminaire, the installed height of said luminaires, and the overall light levels in foot-candles and initial lumens on the entire zoning lot and at the property lines.
3. A summary table identifying the maximum and minimum light levels in foot-candles and initial lumens for all, but not limited to, parking areas, street or building entryways, signs, street lighting, canopies, architectural lighting and walkways.
4. A description of each luminaire identified in the site plan including, but not limited to:
  - a. Manufacturer with website.
  - b. Lamp type.
  - c. Bulb type including CCT (Kelvin).
  - d. Model number.
  - e. Photograph or catalog cut.
  - f. Photometric plan.
  - g. Pole color.
  - h. Light output in initial lumens.
  - i. Shielding or glare reduction devices.
  - j. Energy reduction and on/off control devices.

B. Postapproval Alterations: Postapproval alterations to lighting plans or intended substitutions for approved lighting equipment shall be submitted to the village building and zoning officer for review by a village appointed engineer at the expense of the applicant and approval prior to final plat, with all plan submission requirements set forth in this chapter, prior to installation.

C. Inspections: The village shall have the right to conduct a postinstallation inspection to verify compliance with the requirements of this chapter and, if appropriate, to require remedial action within thirty (30) days at the expense of the applicant.

D. Variances: Variances shall be processed as defined in the village zoning ordinance, except a public notice sign and publication in a local newspaper shall not be required. (Ord. O-14-12, 6-17-2014)