

# ROBESON TOWNSHIP

## AN ORDINANCE OF THE TOWNSHIP OF ROBESON, BERKS COUNTY, PENNSYLVANIA, AMENDING THE ROBESON SUBDIVISION AND LAND DEVELOPMENT ORDINANCE OF 1993

### Lighting

11/18/03

#### Section 519 – Lighting Requirements and Design Standards

- A. The purpose of this Section is to set minimum standards for outdoor lighting in order to:
1. Provide for and control lighting in outdoor public places where public health, safety and welfare are potential concerns.
  2. Protect drivers and pedestrians from the glare of non-vehicular light sources.
  3. Protect neighbors and the night sky from nuisance glare and light trespass from improperly selected, placed, aimed, applied, maintained or shielded light sources.
  4. Promote energy efficient lighting design and operation
  5. Protect and retain the intended visual character of the Township
- B. Applicability
1. Uses that are proposed to operate during hours of darkness where there is public assembly and traverse, including but not limited to the following: multi-family residential, other residential developments with lot sizes of 20,000 square feet or smaller, as well as commercial, industrial, recreational and institutional uses, as well as billboards, architectural and landscape lighting.
  2. The Board of Supervisors may require that lighting be incorporated for other uses, applications and locations, as it deems necessary.
  3. The glare-control requirements herein contained apply to lighting in all uses, applications and locations.
  4. Temporary decorative lighting is exempt from all but the glare-control requirements of this Section.
- C. Definitions
1. Footcandle – Unit of light intensity stated in lumens per square foot and measurable with an illuminance meter, a.k.a. light meter
  2. Full Cutoff – Attribute of a lighting fixture from which no light is emitted at or above a horizontal plane drawn through the bottom of the fixture and no more than 10% of the lamp's intensity is emitted at or above an angle 10° below that horizontal plane, at all lateral angles around the fixture
  3. Glare – Excessive brightness in the field of view that causes loss in visual performance or annoyance, to jeopardize health, safety or welfare
  4. Illuminance – Quantity of light, measured in footcandles
  5. Light Trespass – Light emitted by a lighting fixture or installation, which is cast beyond the boundaries of the property on which the lighting installation is sited.
  6. Lumen – The light-output rating of a lamp (light bulb), as used in the context of this Ordinance.
- D. Criteria
1. Illumination Levels
    - a. Lighting, where required by this Ordinance or otherwise required by the Township, shall have intensities and uniformity ratios in accordance with the current recommended practices of the Illuminating Engineering Society of North America (IESNA) as contained

in the IESNA Lighting Handbook and applicable Recommended Practices, except as otherwise required by the Board of Supervisors.

2. Lighting Fixture Design

- a. Fixtures shall be of a type and design appropriate to the lighting application and aesthetically acceptable to the Township.
- b. For the lighting of predominantly horizontal surfaces such as, but not limited to, roadways, vehicular and pedestrian passage areas, merchandising and storage areas, automotive-fuel dispensing facilities, automotive sales areas, loading docks, cul-de-sacs, active and passive recreational areas, building entrances, sidewalks, paths, site entrances and parking areas, fixtures shall be aimed straight down and shall meet IESNA full-cutoff criteria, unless the aggregate wattage per-fixture does not exceed the output of a standard 60-watt incandescent lamp, i.e. 1,000 lumens, in which case non-cutoff fixtures shall be permitted.
- c. For the lighting of non-horizontal surfaces such as, but not limited to, facades, landscaping, signs, fountains, displays, flags and statuary, the use of lighting not meeting IESNA full-cutoff criteria shall be permitted only with the approval of the Township, based upon acceptable glare control (approval shall not be required if the aggregate wattage per fixture does not exceed the output of a standard 60-watt incandescent lamp, i.e. 1,000 lumens).
- d. "Barn lights," aka "dusk-to-dawn lights," shall not be permitted where they are visible from other uses unless fitted with a reflector to render them full cutoff.

3. Control of Nuisance and Disabling Glare

- a. All 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. Floodlights and spotlights, where their use is specifically approved by the Township, shall be so installed and aimed that they do not project their output into the windows of neighboring residences, adjacent uses, past the object being illuminated, skyward or onto a public roadway.
- c. Parking facility and vehicular and pedestrian way lighting (except for safety and security applications), for commercial, industrial and institutional uses shall be automatically extinguished no later than one hour after the close of business or facility operation.
  - (1) When safety or security lighting is proposed by Applicant for after-hours illumination, lighting intensities shall not be in excess of thirty-five (35) percent of the illumination levels normally required or permitted for the lighting application.
- d. Illumination for signs, billboards, building facades 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 for a commercial establishment may remain illuminated while the establishment is actually open for business, and until one hour after closing.
- e. 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.
- f. The intensity of illumination projected from any use onto a residential use shall not exceed 0.1 initial vertical footcandle, measured line of sight from any point on the residential property.

- g. Externally illuminated billboards and signs shall be lighted by fixtures mounted at the top of the billboard or sign and aimed downward. The fixtures shall be designed, placed, fitted and aimed to limit the light output on and not beyond the sign or billboard.
  - h. Except as provided for in Section 519.F., Recreational Uses, fixtures meeting IESNA full-cutoff criteria shall not be mounted in excess of twenty (20) feet above finished grade. Fixtures not meeting IESNA full-cutoff criteria, when specifically permitted by the Township, shall not be mounted in excess of sixteen (16) feet above finished grade.
  - i. Directional fixtures, when their use is specifically permitted by the Board of Supervisors, for such applications as façade, fountain, feature and landscape illumination, shall be aimed so as not to project their output beyond the objects intended to be illuminated, shall be extinguished between the hours of 11 p.m. and dawn and shall not be in conflict with the Township's aim to maintain its rural character.
  - j. Only the United States and the state flag shall be permitted to be illuminated from dusk till dawn and each flag shall be illuminated by a single source with a beam spread no greater than necessary to illuminate the flag. Flag lighting sources shall not exceed 10,000 lumens per flagpole.
  - k. Under-canopy lighting, for such applications as a gas/service station, hotel/theater marquee, fast-food/bank/drugstore drive thru, shall be accomplished using flat-lens full-cutoff fixtures aimed straight down and shielded in such a manner that the lowest opaque edge of the fixture shall be below the light source. The average illumination intensity in the area directly below the canopy shall not exceed 20 maintained footcandles and the maximum intensity shall not exceed 30 maintained footcandles.
4. Installation
- a. Electrical feeds for lighting standards shall be run underground, not overhead.
  - b. Poles supporting lighting fixtures for the illumination of parking areas and located directly behind parking spaces, or where they could be hit by snow plows, shall be placed a minimum of five (5) feet outside paved area or placed on concrete pedestals at least thirty (30) inches high above the pavement, or suitably protected by other approved means.
  - c. Pole mounted fixtures shall be aimed straight down.
5. Maintenance
- Lighting fixtures and ancillary equipment shall be maintained so as always to meet the requirements of this Section.
6. Illumination Intensities
- a. Unless otherwise specified by the Board of Supervisors, illumination intensities shall be as published in the latest edition of the Lighting Handbook and Recommended practices of the IESNA.
- E. Residential Development Lighting – When specifically required or allowed by the Board of Supervisors, shall be provided as follows:
- 1. For residential developments where lot sizes are or average less than 20,000 square feet lighting shall be provided at the following locations:
    - a. At the intersection of public roads with entrance roads to the proposed development.
    - b. Intersections involving proposed public or non-public major-thoroughfare roads within the proposed development.
    - c. At the apex of the curve of any major-thoroughfare road, public or non-public, within the proposed development, having a minimum 300-foot horizontal curve.
    - d. Cul-de-Sac bulb radii.

- e. Terminal ends of center median islands having concrete structure curbing, trees and/or other fixed objects not having breakaway design for speeds of 25 m.p.h. or greater.
  - f. At defined pedestrian crossings located within the development
  - g. At other locations along the street as deemed necessary by the Township
  - h. At common parking areas where six (6) or more common contiguous parking spaces are proposed
2. Common parking areas in apartment house developments
- F. Recreational Uses – When facilities for such outdoor recreational activities as baseball, tennis, football and miniature golf are specifically permitted by the Township for operation during hours of darkness, the following requirements shall apply:
- 1. Lighting shall be accomplished only through the use of fixtures conforming to IESNA full-cutoff criteria, or as otherwise approved by the Township based on suitable control of glare and light trespass.
  - 2. Sporting events shall be timed so that all lighting in the sports facility, other than lighting required for safe exit of patrons, is extinguished by 10:00 p.m., regardless of such occurrences as extra innings or overtimes.
  - 3. Golf driving ranges, racetracks, trap-shooting ranges and other facilities requiring that lighting to be projected at horizontal or near horizontal angles shall not be artificially illuminated.
  - 4. The outdoor recreational activities contained in e. below, with the exception of tennis, shall not be illuminated if located within any residential district or sited on a nonresidential property located within 1200 feet of a residential use.
  - 5. Maximum mounting heights for recreational lighting shall be in accordance with the following:
 

a. Basketball	20'
b. Football	70'
c. Soccer	70'
d. Little League Baseball	
(1) 200' Radius	60'
(2) 300' Radius	70'
e. Miniature Golf	20'
f. Tennis	20'
g. Track	20'
- G. Plan Submission
- 1. For subdivision and land-development applications where site lighting is required by this Ordinance, is otherwise required the Township or is proposed by Applicant, lighting plans containing the following information shall be submitted to the Township for review and approval with preliminary and final subdivision/land development plan applications. The Board of Supervisors also may require that some or all of the following information be submitted with conditional use applications:
    - a. Lighting plans, complete with all structures, parking spaces, building entrances, traffic areas (both vehicular and pedestrian), vegetation that might interfere with lighting, and adjacent uses that might be adversely impacted by the lighting. The lighting plan shall contain a layout of all proposed fixtures by location, mounting height and type. The submission shall include, in addition to area lighting, all other exterior lighting, e.g., architectural, building-entrance, landscape, flag, sign, billboard, etc.
    - b. A 10'x10' illuminance-grid (point-by-point) plot of maintained horizontal footcandles overlaid on the site plan, plotted out to 0.0 footcandles, which demonstrates compliance with the light trespass, intensity and uniformity requirements as set forth in this Ordinance or as otherwise required by the Board of Supervisors.

- c. The lamp lumen ratings and types, maintenance (light-loss) factors and IES file nomenclature used in calculating the illuminance levels.
  - d. Description of the proposed equipment, including fixture catalog cuts, photometrics, glare reduction devices, lamps, on/off control devices, mounting heights, pole foundation details and mounting methods.
  - e. Landscaping plans shall contain lighting fixture locations and shall demonstrate that the site lighting and landscaping have been coordinated to minimize conflict between vegetation and intended light distribution, both initially and at vegetation maturity.
2. When requested by the Township, Applicant shall also submit a visual-impact plan that demonstrates appropriate steps have been taken to mitigate the potential consequences of on-site and off-site glare and to retain the rural character of the Township. This plan may require the inclusion of initial vertical footcandle values at specific off-site venues, e.g., bedroom windows of adjacent residential uses.
3. Plan Notes – The following notes shall appear on the Lighting Plan:
- a. Post-approval alterations to lighting plans or intended substitutions for approved lighting equipment shall be submitted to the Township for review and approval.
  - b. The Township reserves the right to conduct post-installation nighttime inspections to verify compliance with the Ordinance requirements and approved Lighting Plan commitments, and if deemed appropriate by the Board of Supervisors, to require remedial action at no expense to the Township.
  - c. All exterior lighting shall meet IESNA full-cutoff criteria unless otherwise approved by the Board of Supervisors.

H. Compliance Monitoring

1. Safety Hazards
- a. If the Board of Supervisors judges a lighting installation creates a safety or personal-security hazard, the person(s) responsible for the lighting shall be notified and required to take remedial action.
  - b. If appropriate corrective action has not been effected within fifteen (15) days of notification, the Board of Supervisors may initiate appropriate legal action.
2. Nuisance Glare and Inadequate Illumination Levels
- a. When the Board of Supervisors judges an installation produces unacceptable levels of nuisance glare, skyward light, excessive or insufficient illumination levels or otherwise varies from this Ordinance, the Board of Supervisors may cause notification of the person(s) responsible for the lighting and require appropriate remedial action.
  - b. If the infraction so warrants, the Township may initiate appropriate legal action.

I. Nonconforming Lighting

Any lighting fixture or lighting installation existing on the effective date of this Ordinance that does not conform with the requirements of this Ordinance, shall be considered as a lawful nonconformance subject to the following:

1. A nonconforming lighting fixture or lighting installation shall be made to conform with the requirements of this Ordinance when:
- a. Minor corrective action, such as reaiming or shielding, can produce conformity with the requirements of this Ordinance
  - b. It is deemed by the Township to create a safety hazard
  - c. It is replaced with another fixture or fixtures, abandoned or relocated

- d. There is a change in use
- 2. When requested to do so by the Township, nonconforming lighting fixtures and lighting installations shall be made to conform with the requirements of this Ordinance or removed after five (5) years from the effective date of this Ordinance.

J. Street Lighting Dedication

- 1. When the Board of Supervisors agrees to accept dedication of street lighting, applicant shall be responsible for all costs involved in the lighting of streets and street intersections until the street is accepted for dedication.
- 2. Prior to dedication and in the event of the formation of a homeowner's association and/or property management declaration, Township shall require said agency to enter into an agreement guaranteeing the Township payment of all costs associated with dedicated street lighting.
- 3. Assumption of Costs of Dedicated Street Lighting
  - a. Upon dedication of public streets, the Township shall assess the homeowners' association, individual property owners, or corporations, as may be necessary to collect all revenues required that are directly or indirectly associated with all costs of each specific street lighting fixture. These costs shall include:
    - (1) Administration
    - (2) Collection
    - (3) Pro-ration of non payables
    - (4) Actual utility electrical charges
    - (5) Maintenance and maintenance contracts for maintenance of fixtures and associated equipment.