

BIRMINGHAM TOWNSHIP  
CHESTER COUNTY, PENNSYLVANIA  
Subdivision and Land Development Ordinance No. 0302  
Dated 02/18/03

Section 103-40. OUTDOOR LIGHTING

- A. Purpose. The standards in this section shall require and 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 disabling glare of non-vehicular light sources.
  - (3) Protect neighbors and the night sky from nuisance glare and light trespass from poorly shielded, aimed, placed, applied or maintained light sources.
  - (4) Promote energy efficient lighting design and operation.
  - (5) Protect and retain the intended character of Birmingham Township.
- B. Applicability
- (1) Outdoor lighting shall be required for safety and personal security for uses that operate during hours of darkness where there is public assembly and/or traverse, including but not limited to the following: commercial, industrial, public-recreational, institutional and multi-family residential developments.
  - (2) The Board of Supervisors may, in its sole discretion, require lighting be incorporated for other uses or locations or may restrict lighting in any of the above uses, as deemed necessary.
  - (3) The glare-control requirements herein contained apply to lighting in all above-mentioned uses as well as, but not limited to, sign, architectural, landscape, recreational, and residential lighting.
  - (4) Temporary decorative lighting is exempt from all but the glare control requirements of this Ordinance.
- C. Definitions
- (1) Footcandle - a unit of incident light quantity measurable with an illuminance meter, a.k.a. footcandle meter or light meter.
  - (2) Full Cutoff - a term used by the lighting industry to describe 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 light intensity is emitted at an angle 10 degrees below that horizontal plane, at all lateral angles around the fixture.
  - (3) Glare - the sensation produced by excessive direct or reflected light that causes annoyance, discomfort or loss in visual performance to the eye. Glare is subjective and cannot be measured with a meter.
  - (4) Illuminance - the quantity of incident light per unit area, measured with a light meter in footcandles (or lux).
  - (5) Light Trespass - the light created by a lighting installation, which extends beyond the boundaries of the property on which the 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 or permitted by this Ordinance, shall have intensities and uniformity ratios in accordance with the recommended practices of the Illuminating Engineering Society of North America (IESNA) as contained in the IESNA Lighting Handbook, 9th Edition or subsequent editions, or as contained in current publications of the IESNA Recommended Practices or Design Guides.
- (b) The intensity of illumination projected onto a residential property from another property shall not exceed 0.1 vertical footcandle measured line-of-sight from any point on the adjacent residential property.

(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, areas of vehicular and pedestrian passage, 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, 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 Board of Supervisors or its designee, 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. 1000 lumens).
- (d) "Barn lights," aka "dusk-to-dawn lights," shall not be permitted where they are visible from other uses or properties, unless fitted with a reflector or shield to render them full cutoff.

E. Installation

- (1) Electrical feeds for fixtures mounted on poles shall be run underground, not overhead.
- (2) Lighting standards to the rear of parking spaces shall be placed a minimum of five (5) feet outside paved area, curbing or tire stops, or on

concrete pedestals at least thirty (30) inches high above the pavement, or suitably protected by other approved means.

- (3) Fixtures meeting IESNA full-cutoff criteria shall not be mounted in excess of twenty (20) feet above finished grade of the area being illuminated.
- (4) Fixtures not meeting IESNA "full-cutoff" criteria shall not be mounted in excess of sixteen (16) feet above grade of the area being illuminated.

F. Maintenance Lighting fixtures and ancillary equipment shall be maintained so as always to meet the requirements of this Ordinance.

G. Recreational Lighting

- (1) When facilities for outdoor recreational activities (such as, but not limited to, baseball, tennis, football and miniature golf), are specifically permitted by the Township for operation during hours of darkness, excluding recreational accessory uses which are permitted on properties in the RA, A-RT, R-1 and R-2 zoning districts, the following lighting requirements shall apply:

- (a) 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.
- (b) For new recreational facilities and recreational facilities wishing to change their hours of operation during hours of darkness, sporting events shall be timed so that all lighting in the sports facility, other than lighting for safe exit of patrons, shall be extinguished by 10:00 p.m., regardless of such occurrences as extra innings or overtimes.
- (c) Golf driving ranges and trap shooting facilities shall not be artificially illuminated.
- (d) The foregoing outdoor recreational activities shall not be illuminated if located within any residential district or sited on a nonresidential property located within 1200 feet of a residential use.
- (e) Maximum mounting heights for recreational lighting shall be in accordance with the following:

[1]	Basketball	20'
[2]	Football	70'
[3]	Soccer	70'
[4]	Little League Baseball	
	(a)	200' Radius 60'
	(b)	300' Radius 70'
[5]	Miniature Golf	20'
[6]	Tennis	20'
[7]	Track	20'

H. Plan Submission

- (1) For subdivision and land-development applications where site lighting is required or proposed, lighting plans shall be submitted to the Township for review and approval with any preliminary or final subdivision/land-development plan application and with any conditional use, special exception, variance application or any building permit where requested, and shall include:
  - (a) A site plan, 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, and a layout of all proposed fixtures by location, mounting height and type. The submittal shall include in addition to area lighting, exterior architectural lighting, building-entrance lighting, landscape lighting, etc.
  - (b) 10'x10' illuminance-grid (point-by-point) plot of maintained footcandles, 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 Township. The lamp lumen rating and type, maintenance (light-loss) factors and IES file names used in calculating the illuminance levels shall be documented on the plan.
  - (c) 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.
  - (d) Plan Notes – The following notes shall appear on the lighting plans:
    - [1] Post-approval alterations to lighting plans or intended substitutions for approved lighting equipment shall be submitted to the Township for review and approval.
    - [2] The Township reserves the right to conduct post-installation nighttime inspections to verify compliance with the requirements of this Chapter, and if appropriate, to require remedial action at no expense to the Township.
    - [3] Applicant shall identify the following items in a Not: (1) the date and edition of the IESNA Manual which was in effect when the land development application was approved; (ii) the specific lighting criteria (intensity, illumination levels and uniformity ratio) that applied to the development as contained in the IESNA Handbook or Recommended Practices or Design Guides that were in effect when the application was approved.
- (2) When requested by the Township, applicant shall also submit a visual-impact plan that demonstrates appropriate steps have been taken to

mitigate on-site and off-site glare and light trespass and taken to retain the Township's intended character.