

WALLACE TOWNSHIP  
LIGHTING  
SUBDIVISION & LAND DEVELOPMENT ORDINANCE

SECTION 623 LIGHTING STANDARDS

- A. Purpose – To require and set minimum standards for outdoor lighting 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 caused by improperly selected or poorly placed, aimed, applied, maintained or shielded light sources.
  4. Promote energy-efficient lighting design and operation
  5. Protect and retain the existing rural character of Wallace 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, residential developments, commercial, industrial, recreational and institutional uses, and sign, billboard, architectural and landscape lighting applications.
  2. The Board of Supervisors may require lighting be incorporated for other uses, applications and locations or may restrict lighting in any of the above uses, as they deem necessary to promote health, safety and welfare.
  3. The glare-control requirements herein contained apply to lighting in all uses, applications and locations.
- C. Definitions
1. Footcandle – Unit of light density incident on a plane (assumed to be horizontal unless otherwise specified), measured 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. Fully Shielded – Attribute of a lighting fixture provided with internal and/or external shields and louvers to prevent brightness from lamps, reflectors, refractors and lenses from causing glare at normal viewing angles
  4. Glare – The sensation produced by brightness in the field of view that is sufficiently greater than the brightness to which the eyes are adapted, to cause annoyance, discomfort or loss in visual performance and visibility, so as to jeopardize health, safety or welfare.
  5. Illuminance – Quantity of light, measured in footcandles
  6. 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.
  7. Lumen – As used in the context of this Ordinance, the light-output rating of a lamp (light bulb).
- D. Criteria
1. Illumination Levels – Lighting, where required by this Ordinance or otherwise required or allowed by the municipality, shall have illuminances and uniformities and glare control 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 may otherwise be required by this Ordinance.

2. Lighting Fixture Design

- a. Fixtures shall be of a type and design appropriate to the lighting application and shall be aesthetically acceptable to the Township.
- b. For the lighting of predominantly horizontal surfaces such as, but not limited to parking areas, 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, bicycle and pedestrian paths, and site entrances, fixtures shall be aimed straight down and shall meet IESNA full-cutoff criteria. Non-directional fixtures with an aggregate rated lamp lumen output per fixture that does not exceed 1,000 lumens, e.g., the rated output of a standard non-directional 60-watt incandescent lamp, are exempt from the requirements of this paragraph.
- c. For the lighting of predominantly non-horizontal surfaces such as, but not limited to, facades, landscaping, signs, billboards, fountains, displays and statuary, which require the use of fixtures that are not aimed straight down, the fixtures shall be fully shielded and shall be installed and aimed so as to not project their output into the windows of neighboring residences, adjacent uses, past the object being illuminated, skyward or onto a public roadway.

3. Control of 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. Directional fixtures, e.g., floodlights and spotlights shall be so shielded, 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 or pedestrian way.
- c. Parking facility and vehicular and pedestrian way lighting (except for safety and security applications and all-night business operations), for commercial, industrial and institutional uses shall be automatically extinguished no later than one hour after the close of business or facility operation. When safety or security lighting is proposed for after-hours illumination, it shall not be in excess of twenty-five (25) percent of the number of fixtures or illuminance required or permitted for illumination during regular business hours.
- 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 cutoff fixtures, shields and baffles, and appropriate application of fixture mounting height, wattage, aiming angle and fixture placement.
- f. The illumination projected from any property to a residential use shall at no time exceed 0.1 footcandle, measured line-of-sight from any point on the receiving property.
- g. The illumination projected from any property to a non-residential use at no time shall exceed 1.0 footcandle, measured line-of-sight from any point on the receiving property.
- h. 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, shielded and aimed to limit the light output onto and not beyond the sign or billboard.

- i. Except for certain recreational lighting covered elsewhere in this Ordinance, 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 permitted by the Board of Supervisors, shall not be mounted in excess of sixteen (16) feet above finished grade.
  - j. The United States and the state flag shall be permitted to be illuminated from dusk till dawn. All other flags shall not be illuminated past 11:00 p.m. Flag lighting sources shall not exceed 10,000 lumens per flagpole. The light source shall have a beam spread no greater than necessary to illuminate the flag.
  - k. Under-canopy lighting, for such applications as gas/service stations, hotel/theater marquees, fast-food/bank/drugstore drive-ups, 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 at all lateral angles. 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 initial footcandles.
  - l. Soffit lighting around building exteriors shall not exceed 15 initial footcandles.
  - m. The use of white strobe lighting for tall structures such as smokestacks, chimneys and radio/communications/television towers is prohibited during hours of darkness, except as specifically required by FAA.
4. Installation
- a. Electrical feeds for lighting poles 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 tire stops, or placed on concrete pedestals at least thirty (30) inches high above the pavement, or suitably protected by other municipality-approved means.
  - c. Pole mounted fixtures for the illumination of predominantly horizontal tasks, as defined in Section D.2.b. of this Ordinance, shall be aimed straight down.
- E. Recreational Facilities – The nighttime illumination of outdoor recreational facilities for such sports as baseball, basketball, soccer, tennis, track, 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. Permission to illuminate such facilities shall be granted only when the Township is satisfied that the health, safety and welfare rights of nearby property owners and the Township as a whole have been properly protected.
- 1. To assist in determining whether lighting will be permitted, land development applications shall be accompanied by not only the information required under Section 623.F. below, but also by a visual impact plan that contains the following:
    - a. Plan views containing a layout of the recreational facility and showing pole locations and the location of residences on adjoining properties
    - b. Elevations containing pole and fixture mounting heights, horizontal and vertical aiming angles and fixture arrays for each pole location
    - c. Elevations containing initial vertical illuminance plots at the boundary of the site, taken at 5° line-of-sight.
    - d. Elevations containing initial vertical illuminance plots on the windowed facades of all residences facing and adjacent to the recreational facility, which demonstrate compliance with the light trespass requirements of Sections 623.D.2.f. & g.
    - e. A full description of the proposed lighting equipment, including shielding devices

- f. Proposed frequency of use of the facility during hours of darkness and proposed time when the sports lighting will be extinguished.
  - g. A narrative describing the measures proposed to achieve minimum off-site disturbance.
2. 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, can be extinguished by ten (10:00) p.m., regardless of such occurrences as extra innings or overtimes.
  3. Racetracks and such recreational venues as golf driving ranges and trap-shooting facilities, which require the projection of light at a horizontal or near horizontal angle, shall not be artificially illuminated.
  4. The following outdoor recreational facilities shall not be illuminated if located within a residential district or sited on a nonresidential property located within 1,000 feet of a residential use: basketball, baseball, football, soccer, miniature golf, tennis, track.
  5. Maximum mounting heights for recreational lighting, when such lighting is permitted by the Township, 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. Swimming Pool Aprons	20'
g. Tennis	20'
h. Track	20'

F. Plan Submission – Where site lighting is required by this Ordinance, is otherwise required by the Municipality or is proposed by Applicant, lighting plans shall be submitted to the Township for review and approval with preliminary and final subdivision/land development plan applications and conditional use applications and shall, as a minimum, contain the following:

1. A plan or plans of the site, 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, orientation, aiming direction, mounting height and type. The submission shall include, in addition to proposed area lighting, all other exterior lighting, e.g., architectural, building-entrance, landscape, flag, sign, canopy, soffit, etc.
2. 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, illuminance and uniformity requirements as set forth in Section 623.D.1. of this Ordinance or as otherwise required by the Municipality. When the scale of the plan, as judged by the Township, makes a 10'x10' grid plot illegible, a larger grid spacing may be used.
3. The complete lamp ordering nomenclature and lumen ratings, maintenance (light-loss) factors and IES photometric file nomenclature used in calculating the illuminance levels.
4. 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.
5. 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.
6. When requested by the Wallace 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.

7. 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 Municipality for review and approval.
  - b. The Municipality reserves the right to conduct post-installation inspections to verify compliance with the Ordinance requirements and approved Lighting Plan commitments, and if deemed appropriate by the Municipality, to require remedial action at no expense to the Municipality.
  - c. All exterior lighting shall meet IESNA full-cutoff criteria unless otherwise approved by the municipality.