

*****ADOPTED MAY 16, 2011*****

TOWNSHIP OF DELANCO

ORDINANCE 2011-18

AN ORDINANCE AMENDING AND SUPPLEMENTING CHAPTER 91 GOVERNING SITE PLAN IN SECTION 91-8 ENTITLED LANDSCAPING, SCREENING, AND LIGHTING

AN ORDINANCE AMENDING AND SUPPLEMENTING CHAPTER 100 GOVERNING SUBDIVISION IN SECTION 100-41 ENTITLED LIGHTING AND UNDERGROUND WIRING

OF THE ORDINANCES ENTITLED PART II LAND USE PROCEDURES OF THE TOWNSHIP OF DELANCO FOR THE ESTABLISHMENT OF DEFINITIONS AND AMENDING STANDARDS FOR STREET LIGHTING AND SITE LIGHTING.

WHEREAS, the Governing Body of the Township of Delanco ("Township") is dedicated to improving and preserving the appearance of the Township for the betterment of the community;

WHEREAS, the Planning Board has been assigned to amend "Lighting Standards" for the community as part of the Master Plan review process; and Lighting shall comport to the standards of the Illuminating Engineering Society of North America while considering energy conservation, dark skies initiatives to reduce negative outdoor lighting impact to the natural environment for stargazing, wildlife, birds, and bird migration. The ordinance is intended to encourage reasonable outdoor lighting providing nighttime safety, security, and enjoyment while preserving the setting of the night. The purpose is to enhance the nighttime environment and:

- 1) Provide 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 that shine into their eyes and thereby impair safe traverse.
- 3) Protect neighbors and the night sky from nuisance glare and stray light from poorly aimed, placed, applied, or shielded light sources.
- 4) Promote energy conservation through efficient lighting design.
- 5) Promote efficiencies by limiting the amount of lighting equipment and subsequent maintenance costs.

WHEREAS, the Township has reviewed existing Code provisions for the Township of Delanco, with regard to existing conditions.

NOW, WHEREFORE, IT IS HEREBY ORDAINED by the Governing Body of the Township of Delanco as follows:

SECTION I.

91-4 Definitions

The following definitions shall be added:

FOOTCANDLE – A measure of illuminance equal to one (1) lumen per square foot.

FULL CUT-OFF – A light fixture which cuts off all upward transmission of light.

GLARE – The sensation produced by luminances within the visual field that are sufficiently greater than the luminance to which the eyes are adapted, which causes annoyance, discomfort, or loss in visual performance and visibility.

HORIZONTAL ILLUMINANCE – The amount of light striking a horizontal plane.

IESNA – Illuminating Engineering Society of North America.

ILLUMINANCE – The areal density of the luminous flux incident at a point on a surface.

ILLUMINANCE (footcandle or lux) METER – An instrument for measuring illuminance on a plane.

ISOLUX or ISOFOOTCANDLE LINE – A line plotted on any appropriate set of coordinates to show all the points on a surface where the illuminance is the same.

LENS – A glass or plastic element used in luminaries to change the direction and control the distribution of light rays.

LIGHT – Radiant energy that is capable of exciting the retina and producing a visual sensation.

LIGHT FIXTURE or LUMINAIRE – A complete lighting unit consisting of a lamp or lamps and/or ballast(s) together with the parts designed to distribute the light, to position and protect the lamps, and to connect the lamps to the power supply.

LIGHT SOURCE – A bulb and lens, diffuser, or reflective enclosure.

LIGHT TRESPASS – Any light projected onto a property from a fixture not located on that property.

LUMENS – The measure of brightness of the illumination exiting a bulb.

LUX – A measurement of illuminance where one lux is one lumen per square meter.

POINT METHOD – A lighting design procedure for predetermining the illuminance at various locations in lighting installations by use of luminaire photometric data.

VERTICAL ILLUMINANCE – The amount of light striking a vertical plane.

VISIBILITY – The quality or state of being perceivable by the eye.

SECTION II.

§91-8 entitled Landscaping, screening, and lighting shall be amended as follows:

C. Lighting; purpose and intent, shall remain.

(1) shall remain

(2) “multi-family, other residential developments with lot sizes of 15,000 square feet or smaller” shall be stricken and “residential” added.

(3) shall remain

Amend “Table – Illumination Levels” to read “Table I – Illumination Guidelines” and add the following Table II after Table I and Notes:

(4) Illumination levels are maintained horizontal footcandles on the task, e.g., pavement or area surface. Maximum illumination levels for the specified tasks and uses shall be provided as follows:

Table II
Maximum Illumination Levels for Specific Tasks and Approaches

	Horizontal Illuminance Maximum	Vertical Illuminance Maximum
Fast Food Restaurants	100 lux or 10 fc	30 lux or 3 fc
Retail uses	30 lux or 3 fc	30 lux or 3 fc
Pedestrian Mall	30 lux or 3 fc	30 lux or 3 fc
<i>Gasoline Service Station</i>		
<i>Dark Surrounding</i>		
Approach	15 lux or 1.5 fc	5 lux or 0.5 fc
Driveway	15 lux or 1.5 fc	5 lux or 0.5 fc
Pump Island Area	30 lux or 3 fc	30 lux or 3 fc
Building faces (exclusive of glass)	20 lux or 2 fc	5 lux or 0.5 fc
Service Areas	20 lux or 2 fc	5 lux or 0.5 fc
Landscape Highlights	10 lux or 1 fc	3 lux or 0.3 fc
<i>Light Surrounding</i>		
Approach	20 lux or 2 fc	5 lux or 0.5 fc
Driveway	20 lux or 2 fc	5 lux or 0.5 fc
Pump Island Area	50 lux or 5 fc	30 lux or 3 fc
Building faces (exclusive of glass)	30 lux or 3 fc	30 lux or 3 fc
Service Areas	30 lux or 3 fc	30 lux or 3 fc
Landscape Highlights	20 lux or 2 fc	5 lux or 0.5 fc

Fixture Design is currently numbered as “(4)” but shall be changed to “D”

(a) shall be changed to (1)

(b) shall be changed to (2)

(c) shall be changed to (3)

(d) shall be changed to (4)

(e) shall be changed to (5)

The following shall be inserted:

(6) In and adjacent to residential areas, light should be shielded so that the lamp is not directly visible outside the property perimeter.

(5) Exceptions to Control Glare shall be amended and moved to the end of the section.

(6) Law Governing Conflicts shall be changed to “E”.

(7) Installation shall be changed to “F”.

F. Installation.

(a) shall be changed to (1)

(b) shall be split into (2) and (3) as follows:

(2) Electrical feeds to lighting standards shall run underground, not overhead.

(3) Lighting standards in parking areas shall be placed a minimum of five (5) feet outside the paved area, outside where vehicles may conflict with the placement of the fixture. Where the poles are five (5) feet outside the paved area, the base of the fixture shall be flush mounted with the ground.

(d) shall be stricken and amended as follows and become (4).

(4) Where, due to restrictions in light locations due to inadequate spacing between vehicle areas and light fixtures, lights may be placed on reinforced concrete pedestals at least thirty (30) inches high above the pavement, or by other acceptable protective means. Above-ground mounting of light pole foundations is not encouraged or desirable. Where due to space limitations, the concrete footing must extend above grade for protection of the poles, they shall be decoratively treated to complement the building materials.

(8) shall be changed to “(G)”.

(9) Fixture location and placement shall be changed to H and the subsequent outline shall be further amended to reflect letters and numbers in appropriate designations.

(a) shall become (1).

[1], [2], and [3] shall become (a), (b), and (c).

(10) Outdoor Advertising signs shall be renumbered and renamed.

H. Outdoor Advertising or Off-Premise Signs.

(a) shall be changed to (1) and (1) will be removed and replaced as below:

Where lighting is provided on existing nonconforming off-premise signs, top mounted fixtures shall be required. Lighting fixtures used to illuminate an outdoor advertising sign shall be mounted on the top of the sign structure. All such fixtures shall be full cut-off fixtures.

(b) shall be changed to (2)

(c) shall be changed to (3)

(11) shall be changed to (4)

(12) shall be changed to (5)

(13) shall be changed to (I)

(I) Recreational Facilities.

(a) shall become (1)

(b) shall become (2)

(14) shall become (J)

(15) shall become (K)

(16) shall become (L)

(17) shall become (M). The long paragraph after the title "Temporary Outdoor Lighting" shall be stricken and divided into sections as follows:

(1) Any temporary outdoor lighting that conforms to the requirements of this ordinance shall be allowed.

(2) Laser Source Light. The use of any type of laser source light or any other similar high intensity light for outdoor purposes is prohibited.

(3) Searchlights. The operation of searchlights for advertising purposes shall be permitted upon receipt of a temporary event zoning permit.

(18) shall become (N)

(a) shall become (1)

(b) shall become (2)

(19) entitled Plan Submission shall become (O)

O. Plan Submission.

(a) shall become (1)

(b) shall become (2)

(b) shall become (3) and be stricken and replaced as below:

(3) All point method lighting plans shall include all canopy, interior and building lights as well as the site lighting proposed.

(c) shall become (4)

(5) shall be added as below:

(5) The photometric plans shall contain a plan identification symbol or abbreviation, fixture type, lamp type, lamp lumens, lamp degree Kelvin, fixture lens height above lowest adjacent finished grade, and total light loss factor utilized.

G. shall become P

P. Exceptions to Control of Glare.

- 1) Luminaries used for public-roadway illuminations may be installed at a maximum height of twenty-five (25) feet and may be positioned at that height up to the edge of any bordering property.
- 2) All temporary emergency or construction lighting needed by the Police Fire Department or other emergency services; and sewer, utility, water, and/or road construction crews, as well as all vehicular light fixtures shall be exempt from the requirements of this article.
- 3) Downward facing luminaries used primarily for sign illuminations may be mounted at any height to a maximum of twenty (20) feet or to the top of the sign, and no part of the fixture shall exceed 18" above the sign face.

Q. Street and site lighting fixtures shall be provided as follows:

- 1) Street and site lighting along the Burlington Avenue Commercial Zoned corridor shall be as determined by the Governing Body for the Burlington Avenue Streetscape design.
- 2) All light fixtures shall provide the maximum light cut-off as offered by the lighting or utility company. Where possible lighting installations shall be designed and installed to be fully shielded, employing full cut-off fixtures.
- 3) Streetlights shall be controlled by a photo sensor or astronomical time switch that is capable of turning off the exterior lighting when sufficient daylight is available.
- 4) All lighting installation shall use the lowest wattage lamp feasible. Lamp wattage should be adjusted based upon the lamp type such as

for example 250 watts for commercial lighting; 100 watts incandescent, and 26 watts compact fluorescent for residential lighting.

R. Exceptions to Control of Glare.

- 1) Luminaries used for public-roadway illuminations, except as otherwise required herein, may be installed at a maximum height of twenty-five (25) feet and may be positioned at that height up to the edge of any bordering property.
- 2) All temporary emergency lighting needed by the Police or Fire Department or other emergency services, as well as all vehicular light fixtures shall be exempt from the requirements of this article.
- 3) Luminaries used primarily for sign illuminations may be mounted at any height to a maximum of twenty (20) feet or to the top of the sign, whichever is less.

S. All developments shall provide lighting at:

- 1) All entrance roads entering the proposed development and intersecting any public road.
- 2) All intersections involving proposed public roads within the proposed development.
- 3) All proposed public roads within the proposed development with said road having a minimum 300 feet horizontal curve, in the case, the fixture shall be placed on the apex of the horizontal curve or as required by the Township Engineer or Lighting Engineer Consultant thereof.
- 4) Where it is determined by the Board that inadequate or excessive lighting has been provided due to the configuration, layout or scheme of the platted development, light fixtures may be added or removed. However, it should be noted for energy conservation and dark skies initiatives, light fixtures should be only incorporated when absolutely necessary to provide for public safety and safe passage.

T. Where lighting is provided the average to minimum uniformity shall be used as a guideline to ensure adequate uniformity along public rights-of-way, in accordance with the following table:

Table: III
Recommended Illuminance Uniformity Ratios for Streets

Application	Average to Minimum Ratio
Expressways and Major Roadways	3:1
Collector Roadways	4:1
Local Roadways	6:1
Pedestrian Walkways and Bikeways	4:1

U. Average to minimum uniformity shall be used to ensure adequate uniformity at site intersections along public rights of way in accordance with the following table:

Table IV
Recommended Illuminance Uniformity Ratios for Streets and Walkways

Application	Average to Minimum Ratio
Expressways and Major Roadways	3:1
Collector Roadways	4:1
Local Roadways	6:1
Pedestrian Walkways and Bikeways	4:1

(15) shall become (K)

Table V
Recommended Illuminance Uniformity Ratios for On-site Applications

Application	Maximum to Minimum Ratio
Parking Facilities (primarily daytime use)	20:1
Parking Facilities (night use)	15:1

W. Lighting in multi-family residential developments shall be provided in the following locations:

- 1) At all cul-de-sac bulb radii.
- 2) At all terminal ends of center median islands having concrete structure curbing, trees, and/or other fixed objects not having a breakaway design for speeds of twenty-five (25) m.p.h. or greater.
- 3) At any/all defined pedestrian crossings shown on the plans (or required by the Township) located within the development or along an existing road abutting the development with said crossing located in areas other than lighted intersections.
- 4) At any signalized intersection abutting the proposed development.

SECTION III.

§100-41 entitled Lighting and underground wiring shall be amended as follows:

In paragraph A, the following line shall be added to the end of the paragraph:

“Street Lighting shall comply with §91-8C *et seq.* entitled Lighting.”

