

Article XII

116-96 Purpose and Intent

The purpose of this article is to provide regulations which will protect the health, safety and welfare of the general public, conserve valuable energy resources, prevent light trespass from interfering with quality of life, protect ecological and natural resources, and preserve the ability to view the celestial features of the night sky for present and future generations. By this legislation, the Town Board establishes provisions and a process for review so that outdoor lighting that is protective of the environment is installed on all new construction and is used when current outdoor lighting fixtures that are not in compliance with this article need replacement. These standards provide for the following:

- A. Comprehensive regulations and guidelines in order for residents, business owners, and the municipality to comply with the standards set by the community for outdoor lighting.
- B. Preservation of rural character, aesthetic value, and the unique quality of life enjoyed by Town residents by preserving and enhancing the ability to view the night sky.
- C. Advancement of sound environmental policies which will benefit residents and serve as a positive example.
- D. Proper direction and use of light in order to minimize light trespass, and energy wasted on unnecessary and indiscriminate illumination.
- E. Elimination of the need for commercial establishments to compete for visual attention by escalating outdoor lighting levels
- F. Reduction in excessive illumination which can have a detrimental effect on flora and fauna that depend on the natural cycle of day and night for survival.
- G. Reduction in excessive illumination which can impact human circadian rhythm and health.
- H. Prevention of nuisances caused by unnecessary light intensity, and light trespass.
- I. Reasonable implementation of lighting changes to minimize impact on existing properties.

116-97 Definitions

As used in this article, the following terms shall have the meanings indicated;

Average Footcandles

The average level of illuminance for a given area measured at ground level with a light meter placed parallel to the ground.

Commercial Lighting

Any outdoor lighting intended for use on a lot with a business (except home occupation), industrial, or institutional use (or if undeveloped, is zoned for such use). Municipal buildings and facilities shall follow commercial standards.

Essential Lighting

Light used for a specified period of time that is necessary for a specific purpose, as defined herein, while said purpose is actively being served. This includes fully shielded lighting that is necessary to promote location identification, identify entrances and exits for public circulation, to illuminate walkways in order to promote public safety, and fully shielded security lighting activated by motion sensors and/or timers providing for illumination for a maximum period of 10 minutes per triggering event.

Excessive Lighting

Light that exceeds the amount that is needed to perform a visual task at night or is required for safety, per suggested minimum illuminance levels published by IES in its Recommended Practices.

Light Fixture

The complete lighting assembly that houses the lamp or lamps and can include all or some of the following parts: a housing, a mounting bracket or pole socket, a lamp holder, a ballast, a reflector or mirror, and/or a refractor or lens; also referred to as a "luminaire."

Flood- or Spotlight

Any light fixture or lamp that incorporates a reflector, a refractor, or a prismatic lens to concentrate the light output into a directed beam in a particular direction.

Fluorescent

A type of discharge lamp that employs mercury vapor and phosphors. Unlike incandescent lamps, fluorescent lamps require a ballast to regulate the flow of electricity.

Footcandle

The unit of measurement used to quantify the amount of light falling on a surface. One footcandle is the illuminance produced by a candle on a surface one-foot square from a distance of one foot.

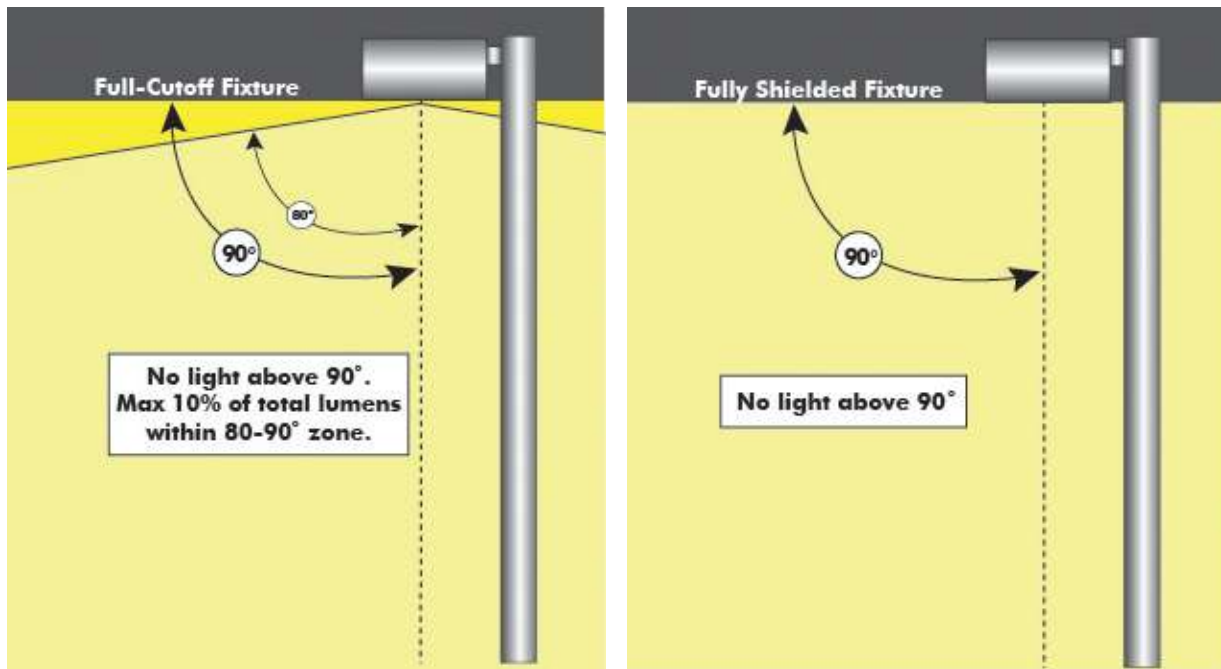
Full-Cutoff

For the purposes of this article, a "full-cutoff fixture" is considered one that delivers 100% of the total lumens within the 0° to 90° zone with a maximum of 10% of total lumens delivered within the 80° to 90° zone. Full-cutoff fixtures are considered fully shielded. See Figure 1.

Fully Shielded

A fixture constructed and installed in a fixed position and in such a manner that all light emitted is projected below the horizontal plane through the fixture's lowest light-emitting part. Unlike a full-cutoff fixture, a fully shielded fixture is not engineered to limit lumen distribution in the 80° to 90° zone. See Figure 1

Figure 1



High-Intensity Discharge (HID) Lighting

An energy-efficient family of lighting that includes high-pressure sodium, mercury vapor, and metal-halide-type bulbs. These types require a warmup time, usually require a ballast exclusive to the light source, and have a higher lumen output per watt than incandescent or halogen lamps.

Holiday Lighting

Temporary lighting of various types and colors installed in connection with holiday or religious observances and removed thereafter. Certain holiday lighting displays may require a Special Event Permit through the Town Board as per Town Code § 95-C.

Illuminance

The amount of light falling on a surface, measure in footcandles (lumens per square foot).

Lamp

A light bulb or other component of a fixture that changes electricity into visible light.

Lamp Type

The category to which a lamp belongs by virtue of the process by which it produces light. The principal categories are incandescent, fluorescent, low-pressure sodium, high-intensity discharge (HID) (which includes high-pressure sodium, metal halide, and mercury vapor), and LED (light-emitting diode). The categories vary in terms of:

- A. The amount of light output (lumens) per watt consumed;
- B. Lamp life;

- C. The color of the light emitted (Correlated Color Temperature); and
- D. The accuracy with which colors of an illuminated object are reproduced (Color Rendering Index).

LED (Light-Emitting Diode)

A semiconductor device that emits visible light when electrical current passes through it.

Lighting

Man-made illumination or equipment used to produce it.

Light Level

The illuminance as measured by a light meter or reported in photometric calculations. Light levels are indicated in footcandle measurements and may also be expressed as uniformity ratios, maximum or average to minimum.

Light Pollution

Any adverse effect of artificial light including, but not limited, glare, light trespass, skyglow, visual clutter, excessive or unnecessary lighting, or any artificial light that unnecessarily diminishes the ability to view the night sky or is disruptive to the natural environment.

Light Source

The light-emitting part or parts of a light fixture, consisting of the lamp or lamps and any transparent or translucent covering over the lamp, as well as any refractors, reflectors prismatic lenses, mirrors, or diffusers which emit or transmit light.

Light Trespass

Light projected onto a property or into the public right-of-way from a light source on a different property.

Low-Pressure Sodium

A type of discharge lamp that primarily employs sodium. These lamps have a higher lumen output per watt than HID lamps but low Color Rendering Index.

Lumen

The unit of measurement used to quantify the amount of light produced by a lamp or emitted from a fixture (as distinct from “watt,” which is a unit of measurement of electrical power). For the purposes of this article, measurements in lumens shall refer to “initial lamp lumens” (as opposed to “maintained lamp lumens”) as rated by the manufacturer when the lamp is new as listed on the packaging.

Luminaire

See “fixture.”

Mercury Vapor

A type of high-intensity discharge lamp that uses mercury as the primary light-producing element. Mercury vapor lamps produce light with a cool Correlated Color Temperature (CCT) from 3000 to 7000 K.

Metal Halide

A type of high-intensity discharge lamp that uses mercury and several halide additives as light-producing elements. Metal halide lamps are typically available with cool Correlated Color Temperatures (CCT) from 2300 to 5400 K and with CRT values from 60 to 93.

Mounting Height

The vertical distance measured from the average elevation of the existing natural grade or average elevation of the approved grade (if cut/fill activities are proposed) to the lowest light-emitting part of an installed fixture.

Non-conforming

Lighting which does not meet the requirements and specifications contained in this article.

Nonessential Lighting

Lighting which is unnecessary for pedestrian passage or other tasks and therefore not generally useful (i.e. decorative and landscape lighting). This includes lighting intended for a specific task or purpose when said task or purpose is not being actively performed (i.e. parking lot illumination and wall mounted perimeter lights after business hours).

Nuisance Lighting

Any outdoor lighting that creates a potential hazard to the public, illuminates the interior of a neighboring residential structure from an external point, or creates a light trespass or glare to neighboring properties, thereby causing loss of enjoyment, comfort, or repose.

Outdoor Lighting

Lighting that provides illumination to a surface, building, structure, device, or other outdoor feature. Any fixture located indoors that is intended to illuminate something outdoors is considered outdoor lighting for the purposes of this article.

Photometric(s) or Photometry

A test to determine light distribution and performance of a fixture. A photometric report, which may include candlepower distribution data, cutoff or other light distribution classification, foot candle chart, etc., is generally available from the manufacturer.

Repair

Any service normally provided by an electrician to a light fixture or lighting installation, including replacement, modification, or relocation of any of the following: Poles, mounting arms, wiring, housings, or any component within or attached to a light fixture. Replacement of a user-serviceable lamp (i.e. light bulb) shall not by itself be considered a repair.

Residential Lighting

Any outdoor lighting on a lot having a structure or structures whose primary use is residential (or if undeveloped, is zoned for such use). Although reviewed as a commercial site plan, lighting plans for multifamily or condominium developments shall follow residential standards.

Searchlight

Lighting designed to project a high-intensity beam of light that is typically used to sweep the sky for promotional purposes.

Sensor (Motion)

A device that causes a light fixture to turn on or off in response to motion or light or infrared radiation or a combination thereof.

Shield or Shielded

An opaque device that is attached to a light fixture to prevent light from being emitted in certain directions. Auxiliary “back” or “house-side” shielding added to an already fully shielded fixture can help limit trespass where a fixture is located near the property line.

Streetlighting

Permanent outdoor lighting that is owned and maintained by a municipality or other public agency and that is specifically intended to illuminate streets for automotive vehicles and may also incidentally light sidewalks and private property.

Temporary lighting

Lighting which is intended to be used for a specified purpose and for a limited time and is removed thereafter.

Town

The Town of Aurora and its employees, officers, or agents, including any board committee, council, or department of the Town created by law or by the Town Board or by the Town Supervisor, the expenses of which are paid in whole or in part from Town Funds.

UL Rating

A reference to “Underwriters Laboratory,” a commercial agency that certifies the maximum safe wattage for fixtures and other electrical devices. A UL label indicating the maximum safe wattage is affixed or imprinted on all light fixtures which are offered for sale.

Uniformity Ratio

A ratio that describes uniformity of illuminance across an area. The uniformity ratio may be a ratio of the maximum to minimum illuminance or the average to minimum illuminance.

Unshielded

A fixture designed or installed so that it is not fully shielded, i.e. emits light above the lowest light-emitting part of the fixture.

Watt

The standard unit of measurement of electrical power. One watt is one ampere of current flowing at one volt.

116-98 Applicability

- A. New lighting. All outdoor lighting newly installed after the effective date of this article shall comply with its provisions.
- B. Preexisting lighting. All properties with legally existing and operative outdoor lighting, at the effective date of this article shall be exempt from compliance, subject to the provisions below.

1. Any outdoor lighting fixture that is replaced, changed, repaired, or relocated, in whole or in part, after the effective date of this article shall comply with its provisions.
 - a. Commercial and Residential lighting. Subsequent to the effective date of this article, any addition or expansion that is made to a property, shall subject said addition or expansion to the provisions of this article. Existing lighting may remain in place unless specified by New York State Uniform Code requirements.
 2. Nuisance lighting. The exemption shall not apply if the Town determines that certain outdoor lighting creates nuisance lighting as defined in §116-97. If the Town determines that nuisance lighting exists on a property, that lighting shall comply with Subsection B(3) below, in accordance with the procedures outlined in §116-104B.
 - a. Light trespass shall be considered nuisance lighting when:
 - i. Illuminance at or beyond a property line abutting a residential or open space parcel exceeds 2 footcandles as measurable from any orientation of the measuring device; or
 - ii. Illuminance at or beyond a property line abutting a commercial property or public right-of-way exceeds 5 footcandles as measurable from any orientation of the measuring device; or
 - b. Light shall be considered a nuisance when such light illuminates the interior of a neighboring residential structure from an external point.
 3. Abatement of nuisance lighting. If the Town determines nuisance lighting ~~to existing~~ exists on a property, that lighting shall comply with either section below in accordance with the procedures outlined in §116-104B.
 - a. To the extent that the abatement of nuisance lighting will require re-aiming a fixture or re-lamping to reduce lumen output, such lighting shall be re-aimed and/or re-lamped so that the light source is not visible across property lines.
 - b. To the extent that the abatement of nuisance lighting will require removing, replacing, shielding, retrofitting, or relocating a fixture, such lighting shall be removed, replaced, shielded, retrofitted, or relocated so that the light source is not visible across property lines.
 4. Hours of operation. Preexisting lighting on both residential and commercial properties shall comply with the limits on hours of operation set forth in §§116-101D and 116-102D of this article.
 5. Streetlighting. No new light fixture (other than municipal streetlighting) shall be installed on a public utility pole after the effective date of this article.
- C. Use. Lighting plans and installations shall continue to be reviewed by the Town based on the use of a property and with due regard to the underlying zoning district as well as potential impacts to existing adjacent uses.
- D. Other laws.
1. In the case where this article is found to be in conflict with another provision of local law, the provision that is the more restrictive, or that which establishes the higher standard, shall prevail.
 2. Sign lighting. Illumination of signs shall be governed by §116-34 of this Chapter and any amendments thereto.

3. Special events. Outdoor lighting for special events shall be governed by Chapter 95-C (Special Events) of this Code and any amendments thereto.
- E. Other jurisdictions. Federal, state, county agencies, and school districts with facilities located within the Town are urged to comply with the provisions of this article except where doing so would conflict with established regulations.

116-99 Exempt and prohibited outdoor lighting.

- A. Exempt outdoor lighting. The following are exempt from the provisions of this article:
 1. All temporary emergency lighting determined to be necessary by the Chief of Police, Chief of Fire Department, Superintendent of Highways, or other firefighting or emergency service providers.
 2. Lighting used in municipal road construction or emergency repair or maintenance of utility lines, sewer, water mains or similar public infrastructure.
 3. Holiday lighting, as defined in §116-97.
 4. Flag uplighting, provided any such flag is not used for advertising purposes and the light source is not visible across property lines or from roadways.
 5. Lighting for radio and communication towers, provided that the owner or occupant demonstrates to the satisfaction of the Town Board that the Federal Aviation Administration (FAA) regulations can only be met through the use of lighting that does not comply with this article, and that the provisions of this article are otherwise met to the fullest extent possible. Lighting for any wireless communications facility shall not be permitted unless required by the FAA: in which case, required lighting shall be of the lowest allowed intensity, unless specifically forbidden by the FAA.
- B. Prohibited outdoor lighting. The following outdoor lighting shall not be permitted within the Town as of the effective date of this article, except as exempt above:
 1. Lighting used to illuminate a property other than that on which the fixture is located.
 2. Searchlights, except those used for governmental or emergency purposes.
 3. Strobe lights and laser lights, including laser light shows and aerial laser lights.
 4. Neon lights
 5. Fixtures that revolve or create blinking, flickering, scrolling, rotating, pulsating or tracing light, including on signs, exclusive of exempt holiday lighting.
 6. Flashing lights.
 7. Any type of lighting used to outline all or part of a building (i.e., a window, roof, or gable), except for fully recessed soffit lighting that otherwise complies with this article.
 8. Any light fixture that may be construed as or confused with a traffic signal or traffic control device.
 9. Lighting that is determined by municipal law enforcement to contribute to a condition of disabling or distracting glare into a public roadway.
 10. Mercury vapor (MV) lamps.

116-100 General standards for all outdoor lighting installations.

- A. All new or replacement outdoor lighting shall be designed, located, amped, directed, and maintained in order to prevent the following:
 1. Nuisance lighting.
 2. Excessive lighting and energy consumption.

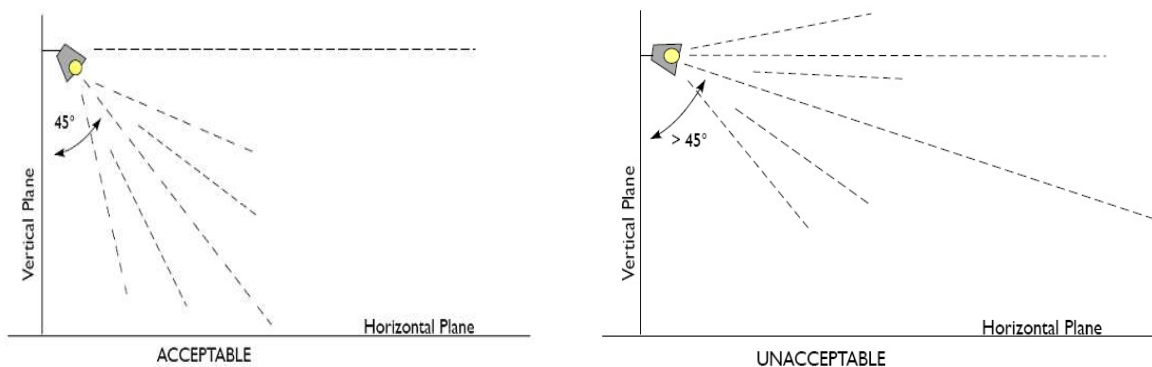
3. Light trespass.
4. Interference with pedestrian or vehicular travel on streets, roadways, and highways.

116-101 Residential lighting standards.

All residential and multi-family residential properties shall comply with the requirements of the New York State Uniform Code and the following standards:

- A. Nuisance prevention. Outdoor lighting on residential properties shall be designed and installed so that all light which is emitted by any outdoor light fixture shall not shine on or illuminate any neighboring property. No outdoor lighting shall be maintained or operated in such a manner so as to be nuisance lighting, as defined in §116-97.
- B. Shielding. All outdoor lighting fixtures shall be fully shielded and aimed straight downward, with the following exceptions:
 1. Outdoor lighting fixtures with total light output of 600 lumens (40 watts incandescent equivalent or less) are exempt from the shielding and aiming requirement above.
 2. Unshielded outdoor lighting fixtures operated by motion sensors are permitted, provided that:
 - i. The fixture is set to go on only when activated and to go off within ten minutes after activation has ceased; and
 - ii. The sensor shall not be triggered by activity off the property; and
 - iii. The output per fixture does not exceed 1,800 lumens (100 watts incandescent).
 3. Unshielded floodlights not exceeding 1,800 lumens (100 watts incandescent) are permitted, provided they are aimed no higher than 45°, as shown in Figure 2, and do not cause nuisance lighting, as defined in §116-97.

Figure 2



4. Driveway lighting. Unshielded lighting fixtures installed in or on a pillar or post at the foot of a driveway may not exceed 250 lumens (25 watts incandescent) per pillar/post.
- C. Mounting height.
 1. The mounting height of a light fixture attached to any structure shall not exceed 12 feet from the lowest light-emitting point on the fixture to the area to be lit directly below the fixture, except for fully recessed soffit lighting that otherwise complies with this article.

2. The mounting height of any freestanding light fixture shall not exceed 10 feet, and when located in the side and/or rear yards, shall have a minimum 10' setback from lot lines.
- D. Hours of operation. Automated shutoff controls for outdoor lighting are encouraged to conserve energy, to extinguish lighting that is not needed for safety, and to alleviate nuisance lighting.
 1. Nonessential outdoor lighting shall not remain on continuously from 10:00pm until dawn.
 2. Essential outdoor lighting sufficient for security purposes may be in operation continuously from 10:00pm until dawn, provided that illumination on the ground or on any vertical surface is not greater than 1 footcandle.
- E. No light fixture on a residential property shall have a total light output exceeding 2,600 lumens (150 watts incandescent).

116-102 Commercial lighting standards.

Properties with commercial lighting, as defined in §116-97, shall comply with the New York State Uniform Code and the following standards.

- A. Nuisance prevention. Outdoor lighting on commercial properties shall be designed and installed so that all light that is emitted by any outdoor light fixture shall not shine on or illuminate any neighboring property. No outdoor lighting shall be maintained or operated in such a manner so as to be nuisance lighting as defined in §116-97.
- B. Shielding. Unless otherwise specified, all outdoor lighting fixtures shall be fully shielded and aimed straight downward.
- C. Mounting height.
 1. Building or structure. Outdoor lighting fixtures shall not be installed at a height greater than 12 feet from grade to the lowest light-emitting part of the fixture, except for fully recessed soffit lighting that otherwise complies with this article.
 2. Free-standing pole. Outdoor lighting fixtures shall not be installed at a height greater than 10 feet from the natural grade to the lowest light-emitting part and shall be setback a minimum of 10 feet from lot lines.
 3. Parking lot lighting.
 - i. Lighting fixtures shall not be installed at a height greater than 20'.
 - ii. Shall have full cutoff fixtures.
 - iii. Shall be setback a minimum of 20' from lot lines.
- D. Hours of operation.
 1. Nonessential outdoor lighting shall not remain on continuously from 10:00pm until dawn.
 2. Essential outdoor lighting in operation after the close of business shall be controlled by timers or motion sensors.
 3. The Town Board, upon the recommendation of the Planning Board, may establish hours of operation in connection with a lighting plan and may authorize specific lighting to remain on after the close of business.

116-103 Procedures.

- A. Adding new or relocating outdoor lighting on commercial properties requires a site plan approval through the Town Board.

- B. New construction or additions on commercial properties. A comprehensive lighting plan for the site shall be reviewed and approved by the Town Board for outdoor lighting which is associated with new commercial construction, building expansion, and/or additions as specified in §116-98B(2). In any case where total light output will not exceed 4,000 lumens and where all outdoor lighting will be fully shielded, the Town Board may review the general specifications in an expedited fashion; in such case, full site plan renderings with footcandle measurements may not be required.
- C. All applications for proposed or required outdoor lighting submitted to the Town, including but not limited to site plan review, subdivision approvals, or building permits, shall include outdoor lighting plans, fixture and lighting control specifications and any additional documentation required in order for the reviewing entity to verify that the preexisting or proposed outdoor lighting conforms to the provisions of this article.
- D. The following items shall accompany a lighting plan submission for review and approval by the Town Board:
 - 1. A site plan complete with all existing and proposed structures, parking spaces building entrances, traffic areas (both vehicular and pedestrian), vegetation that might interfere with lighting, indicating with shading or highlighting all areas where pedestrians shall be walking or where pedestrians may come into conflict with vehicles.
 - 2. A detailed lighting plan shall be submitted for review and approval for sites that will have a total lumen output of 4,000 or greater.
 - i. Footcandle measurements on a grid of the site showing readings in every five-foot square. The grid shall include the location and installed height of each existing and proposed fixture (i.e. pole -mounted lights, wall-mounted lights, and streetlights), and the overall light levels, in footcandles, on the entire site.
 - ii. The grid shall extend at least 20 feet beyond the site property lines, indicating the zoning of all adjacent properties to assure compliance with light trespass requirements.
 - iii. Photometric plans shall be prepared by the fixture manufacturer or a licensed professional architect, landscape architect, or engineer and shall provide calculation of average maintained footcandles, maximum and minimum footcandle readings, and the average-to-minimum and the maximum-to-minimum uniformity ratios.
 - 3. A description of each light fixture as depicted and identified on the site plan, including the manufacturer, model number, a photograph of the fixture, a manufacturer's catalog cut-sheet, a description of the cutoff characteristics of each fixture, light output in initial lumens, and lamp type verifying any compliance requirements specified within this article.
 - 4. Mounting height indicated with the distance to the nearest property line for each proposed and existing fixture, including pole foundation description.
 - 5. Shielding or glare reduction devices and all mounting details.
 - 6. Types of timing devices or motion sensor devices used to control the fixtures and a schedule of the proposed hours when each fixture will be operated.
 - 7. Total outdoor lamp lumens for all fixtures on the property, calculated at initial lumen output.
 - 8. A summary key table identifying the maximum, minimum, and average light levels in footcandles as well as uniformity ratios for all parking areas and walkways.

- E. When considering a site plan application, the Town Board may require the use of motion sensor devices to control lighting for illumination of a building entrance, recreation areas, parking areas, accessways or other such areas.
- F. A post-installation inspection conducted by a registered professional to verify compliance with the approved plan. The applicant shall submit a certification to the Building Department verifying that such an inspection was performed and that the installed system operates and is in conformance with the approved plan along with a manufacturer's cut-sheet/certification for the installed fixtures prior to the issuance of a certificate of occupancy.
- G. The Town shall have the right to conduct a post-installation inspection on any property with an approved lighting plan to verify compliance with the requirements of this article and, if appropriate, to require remedial action at the expense of the applicant.

116-104 Prohibited acts; penalties for offenses.

- A. It shall be unlawful for any person, firm, owner, tenant, person in possession, partnership, corporation, or other business entity (hereinafter referred to as "person and/or business entity") to install, alter, repair, move, equip, use or maintain or allow such installation of any outdoor lighting in violation of any of the provisions of this article or fail in any manner to comply with a notice, directive or order of the Code Enforcement Officer.
- B. If, after investigation, the Code Enforcement Officer finds that any provision of this article is being violated or nuisance lighting exists, notice shall be given by hand delivery, or by certified mail, return receipt requested and 1st class mail, of such violation to the owner and/or occupant of such premises, instructing that the violation or nuisance lighting must be abated with the time specified in the notice, or in absence thereof, within 30 days of the date of hand delivery or of the date of mailing of the notice. If the violation is not abated within said period, the Code Enforcement Officer may request the Town Board initiate actions and proceedings, either legal or equitable, to enjoin, restrain, or abate any violations of this article. Any costs incurred through abatement by the Town will be paid for by the owner or levied on the tax bill.
- C. Residential. Any person and/or business entity who violates this article, or any provision thereof, shall be guilty of a violation punishable by a civil penalty not to exceed \$250 per day of violation, or imprisonment not exceeding 15 days, or both for residential violations after the expiration of the abatement period provided in Subsection B, and each day shall constitute a separate offense for the purpose of calculating the civil penalty.
- D. Commercial. Any person and/or business entity who violates this article, or any provision thereof, shall be guilty of a violation punishable by a civil penalty not to exceed \$250 per day of violation, or imprisonment not exceeding 15 days, or both for commercial violations after the expiration of the abatement period provided in Subsection B, and each day shall constitute a separate offense for the purpose of calculating the civil penalty.