

# THE CORPORATION OF THE TOWNSHIP OF MUSKOKA LAKES BY-LAW 2014-029

Being a By-law to Regulate Outdoor Illumination to ensure responsible lighting, light pollution mitigation and conservation of the dark sky environment.

**WHEREAS** Section 129 of the Municipal Act 2001, S.O 2001:

“A local municipality may,

- a) prohibit and regulate with respect to noise, vibration, odour, dust and outdoor illumination, including indoor lighting that can be seen outdoors; and
- b) prohibit the matters described in clause (a) unless a permit is obtained from the municipality for those matters and may impose conditions for obtaining, continuing to hold and renewing the permit, including requiring the submission of plans.”

**AND WHEREAS** the Township of Muskoka Lakes Official Plan encourages, sensitive lighting which is oriented downward, is low wattage, energy efficient, and minimizes glare, particularly in waterfront and rural areas, to:

- a) prevent conflicts with abutting uses and preserve privacy;
- b) prevent impacts on wildlife and hazards to navigation; and
- c) preserve the night sky.

**AND WHEREAS** the Township of Muskoka Lakes recognizes its responsibility to protect and enhance the Torrance Barrens Dark Sky Reserve, which exists within the boundaries of the Township:

**AND WHEREAS** the Official Plan contains a provision that requires the use of sensitive lighting practices that do not interfere with the view of the night sky or spill into surrounding properties will be required for all land uses;

**AND WHEREAS** the Township of Muskoka Lakes values its dark sky on a broader scale throughout the municipality as it contributes to our tourist economy and traditional Muskoka character;

**AND WHEREAS** the Council of the Corporation of the Township of Muskoka Lakes deems it desirable to enact a by-law with respect to dark sky preservation and improvement by regulating lighting fixtures;

**AND WHEREAS** properly designed light fixtures do not emit undesirable or unsafe light rays into the dark sky and thus protect the dark sky environment and human health both on our streets and on the water;

**AND WHEREAS** the by-law will be referred to as the “Dark Sky By-law”;

**NOW THEREFORE** the Council of the Corporation of the Township of Muskoka Lakes enacts as follows:

## **SECTION 1: DEFINITIONS**

For the purposes of this By-Law, terms used shall be defined as follows:

**Direct Light** means light emitted directly from the lamp or off of the reflector or luminaire.

**Director** means the Director of Planning or designate as deemed appropriate based on the circumstance.

**Fixture** means the 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.

**Flood or Spotlight** means any light fixture or lamp that incorporates a reflector or a refractor to concentrate the light output into a directed beam in a particular direction.

**Footcandle** means a measure of luminance per unit area used in IESNA standard measurements i.e. one footcandle (fc) equates to one lumen per square foot.

**Full-Cut-Off Fixture** means a luminaire or light fixture that; by design of the housing, does not allow any light dispersion or direct glare to shine above a horizontal plane from the base of the fixture where light is emitted and must be installed in a horizontal position as designed. These fixtures produce no glare or stray light due to the exposure of the bulb light source because the source is recessed or shielded.

**Glare** means light emitting from a luminaire, or reflection with an intensity great enough to reduce a viewer's ability to see, and in extreme cases causing momentary blindness.

**Grandfathered Luminaires** means luminaires not conforming to this code that were in effect prior to the passage of this by-law.

**IESNA** means the Illumination Engineers Society of North America, which is the standards committee for responsible outdoor lighting. This is an organization that recommends lighting levels and lighting fixtures.

**Indirect Light** means direct light that has been reflected or has scattered off other surfaces.

**Lamp** means the component of a luminaire that produces the actual light.

**Light Trespass** means the shining of light produced by a luminaire, or reflection beyond the boundaries of the property on which it is located.

**Light Pollution** means the shining of light upwards into the sky above the horizontal plane of the light fixture, or lighting that interferes with the ability to see the night sky caused by any of: light trespass; excess of glare; excess of direct light; excess of reflected light; light from fixtures that are not 'full cut-off'.

**Lumen** means a unit of luminous flux equal to the light emitted in a unit solid angle by a uniform point source.

**Luminaire** means a complete lighting system, including a lamp or lamps and a fixture.

**Outdoor Light Fixtures** means outdoor artificial illuminating devices, installed or portable, used for flood lighting, general illumination or advertisement.

**Owner** includes, with respect to land or Property, the registered owner, occupant, tenant, or the person for the time being managing or receiving the rent of the property whether on his own account or on an account of an agent or trustee of any other person, or any of the aforesaid;

**Person** includes an individual, an owner, corporation, partnership, company, firm, association, or party and includes the successors, assigns, heirs, executors, administrators, or other legal representatives of a person to whom the context can apply according to law and the singular shall include the plural;

**Pole Spacing Ratio** means the ratio of the inter-pole distance per effective height of lamp on the pole.

**Staff** means, Municipal By-law Enforcement Officer or designate for the Township of Muskoka Lakes

**Strobe Light or Stroboscopic Lamp**, commonly called a strobe, is a device used to produce regular flashes of light.

**Township** means the Corporation of the Township of Muskoka Lakes.

**Uniformity Ratio of Lighting** means the average level of illumination in relation to the lowest level of illumination for a given area.

**Wall Pack Light Fixture** means flood light fixtures on exterior walls of buildings

## **SECTION 2: REGULATIONS**

### **2.1 General Regulation**

Any person who installs outdoor lighting within the boundaries of the Township shall do so in conformity with the requirements of this By-Law and shall not cause light pollution. If conflicts arise regarding control and maintenance of outdoor lighting, this By-Law shall be the governing document.

### **2.2 Luminaire Design Factors For Outdoor Areas**

Any person installing an outdoor lighting fixture shall be required to use completely shielded Full-Cut-Off fixtures, as identified in Appendix I attached hereto and forming part of this by-law.

Outdoor lighting fixtures shall include, but are not limited to, lights for: buildings and structures, including canopies, overhangs, docks and boathouses; recreational areas; parking lot lighting; landscape lighting; billboards and signs; public and private street lighting; display and service area lighting; public and private walkway lighting; residential yard lights; and outdoor lighting for all residential, waterfront residential, commercial, industrial, institutional and provincial and federal government uses not otherwise specified.

### **2.3 Municipal Street Lights**

The Township will install and maintain outdoor street lights that have the following:

- a) Uniform light levels within the urban area that do not exceed uniformity ratios recommended by the IESNA and supported by the International Dark Sky Association;
- b) Minimum light used for safety that does not exceed the standards contained in a) above; and
- c) Full-Cut-Off fixtures, examples of which are identified in Appendix I and 2.

### **2.4 Street Lighting Design**

All new municipal outdoor street lighting must be Full-Cut-Off Fixtures installed in accordance with IESNA standards supported by the International Dark Sky Association. Any existing street lighting shall be replaced by Full-Cut-Off fixtures when fixture replacement is required.

### **2.5 Structural Illumination**

- 2.5.1 All new wall-mounted commercial lighting shall consist of Full-Cut-Off fixtures.
- 2.5.2 All existing wall-mounted lights shall be required to adhere to the requirements of Section 2.2. Property owners whose structures are furnished with unshielded wall-packs shall be required to shield such fixtures by January 1, 2024.
- 2.5.3 All architectural lighting and building lighting shall be mounted such that the light is aimed down. There shall be no light pollution emanating from the fixture in accordance with fully shielded design.
- 2.5.4 The use of low wattage lights for decoration purposes such as Christmas lighting and property ornamentation shall be exempt from Section 2.5.3.
- 2.5.5 Lighting used to warn people about the location of open water in the winter months (mainly used when bubbling boathouses and docks) shall be any solid colour but red.

### **2.6 Property Illumination**

All artificial lighting for yards and parking areas shall be arranged so as to minimize unnecessary light trespass.

### **2.7 Provisions For Shielding Exterior Lighting to Reduce Light Trespass**

Inquiries may be made to either the Planning, Building or By-law Services Department to obtain advice for proper shielding in the form of visors, rotational adjustments, etc. to lighting that cause light trespass. Examples are provided in Appendix 2.

## **2.8 Lighting Of Outdoor Advertising Signs**

Outdoor advertising signs, and light fixtures used to illuminate signs or billboards shall minimize light pollution by being mounted on top of the sign facing down, must utilize full cut-off fixtures and must be in compliance with other sections of this by-law. Examples are provided in Appendix 2.

The Township's Sign By-law may also apply for the lighting of outdoor advertising signs.

## **2.9 Recreational Facilities**

2.9.1 Any light source permitted by this By-law may be used for lighting of outdoor public or private recreational facilities, such as, but not limited to, football fields, soccer fields, baseball fields, softball fields, tennis courts, ice rinks or show areas, provided all of the following conditions are met:

- a) All Outdoor Light Fixtures used for event lighting shall be Full-Cut-Off Fixtures, or be designed or provided with full cut-off capability by a shielding retrofit, so as to minimize up-light, spill-light, and glare;
- b) All facility's lighting shall be turned off when not in use;
- c) Owners of grandfathered lighting fixtures at outdoor recreational facilities are required to install shielding fixtures when maintenance and replacement occurs, or by January 1, 2024, whichever comes first.

## **2.10 Prohibitions**

### **2.10.1 Laser Source Light**

The use of laser source light or any similar high intensity light for outdoor advertising or entertainment purposes is prohibited.

### **2.10.2 Searchlights**

The operation of searchlights for advertising or entertainment purposes is prohibited.

### **2.10.3 Outdoor Advertising Off-Site Signs**

Electrical illumination of outdoor advertising off-site signs along roadways is prohibited.

### **2.10.3 Strobe Lights**

The use of strobe lights is prohibited, except for construction projects or emergency purposes.

## **2.11 Exemptions**

### **2.11.1 Other Authorities Having Jurisdiction**

This policy does not apply to any related provincial or federal policies or regulations related to lighting buildings, structures or waterways, including, but not limited to, authorities under NAV Canada, Canada Coast Guard, Transport Canada and Industry Canada.

### **2.11.2 Bubblers**

Lighting used to warn people about the location of open water in the winter months (mainly used when bubbling boathouses and docks) shall be exempt from criteria requiring shielding.

### **2.12 Request For Exemption For Temporary Events/Advertising**

A temporary exemption to the requirements imposed by this By-law is permitted for temporary events and/or advertising provided such lighting does not continue for greater than 96 contiguous hours (4 days).

For exemptions requiring greater than 96 contiguous hours (4 days), any person may submit a written request to the Director of Planning, or designate, for a temporary exemption to the requirements imposed by this By-law. The request for lighting exemption for temporary

events shall require approval by the Director, or designate, and contain the following information:

- a) Specific exemption requested (e.g. searchlights);
- b) Type and use of exterior light involved;
- c) Date of the event;
- d) Duration of time for requested exemption;
- e) Proposed location of exterior light; and
- f) Physical size of exterior light.

### **2.13 Grandfathering of Nonconforming Luminaires**

2.13.1 Having regard to Section 2.13.3, all luminaires and luminous advertising signs lawfully in place prior to the date of passing of the By-law shall be grandfathered.

2.13.2 Any luminaire that replaces, modifies, or moves a grandfathered luminaire shall be required to meet the provisions of this By-law.

2.13.3 Luminaires which are determined to direct light toward streets, parking lots or navigable waterways and cause glare to motorists, cyclists or boaters, and therefore deemed to be a public safety concern, should be either shielded or re-directed within a reasonable timeframe as specified by the Officer.

2.13.4 All non-conforming luminaires shall be made compliant to the regulations of this by-law by January 1, 2024.

### **2.14 Enhanced Preservation Area**

The following regulations will apply within the identified Enhanced Preservation Area shown around the Torrence Barrens Dark Sky Reserve shown in Appendix 3.

#### **Curfews**

ALL existing sources of exterior illumination, including but not limited to residential, commercial, industrial, recreational, institutional, and signage for the purposes of advertising/entertainment that do NOT comply with pertinent sections of this bylaw shall be turned off by:

- i. 11 pm from April 1<sup>st</sup> to September 30<sup>th</sup>
- ii. 9 pm from October 1<sup>st</sup> to March 30<sup>th</sup>

#### **Signage**

No new illumination for the purpose of advertising/entertainment shall be permitted within the specified Preservation Area. See Appendix 3.

#### **Miscellaneous**

ALL persons residing within the specified radius are required to use the least powerful lamps possible for their outdoor lighting needs and take the steps necessary to make existing lighting compliant with this bylaw.

## **SECTION 3: SUBSTANTIAL NEW DEVELOPMENTS INVOLVING OUTDOOR LIGHTING**

### **3.1 Submission Contents**

In support of substantial new developments (e.g. Commercial, Industrial, Institutional, Multiple Residential, etc.), as determined by the Planner, or designate, involving outdoor lighting fixtures, that applicant shall submit evidence that the proposed work will comply with this By-law. The submission shall contain, but shall not necessarily be limited to, the following:

- a) Plans indicating the location of lighting on the premises, and the type of illuminating devices, fixtures, lamps, supports, reflectors, and other devices;
- b) Description of the illuminating devices, fixtures, lamps, supports, reflectors, and other devices and the description may include, but is not limited to, catalogue cuts by manufacturers and drawings (including sections where required);
- c) Photometric data, such as that furnished by manufacturers, or similar documentation showing the angle of cut off or light emissions.

The above required plans, descriptions and data shall be sufficiently complete to enable Council and staff to readily determine compliance with the provisions of this By-law and shall be included in an implementing Site Plan Agreement.

#### **SECTION 4: OFFENCES AND PENALTIES**

- 4.1 Every Person who contravenes any of the provisions of this By-law is guilty of an offence and, upon conviction is liable to a fine or penalty under the *Provincial Offences Act*, R.S.O. 1990, Chapter P.33, as amended.
- 4.2 Each day that such offence is committed, or permitted to continue, shall constitute a separate offence and may be punishable as such. Such fines shall be recoverable under the *Provincial Offences Act*, R.S.O. 1990, Chapter P.33, as amended.
- 4.3 Staff may enter on land at any reasonable time for the purpose of carrying out an inspection to determine whether or not the provisions of this By-law are in compliance and to enforce and carry out the provisions of this By-law or any direction or order issued pursuant to the Municipal Act, 2001, S.O. 2001, c.25 or this By-law.
- 4.4 For the purposes of an inspection under subsection (1) staff may,
  - a) Require the production for inspection of documents or things relevant to the inspection;
  - b) Inspect and remove documents or things relevant to the inspection for the purpose of making copies or extracts;
  - c) Require information from any Person concerning a matter related to the inspection; and
  - d) Alone or in conjunction with a Person possessing special or expert knowledge, make examinations or take tests, samples or photographs necessary for the purposes of the inspection.
- 4.5 A sample taken under clause 4.4 d) shall be divided into two parts, and one part shall be delivered to the Person from whom the sample is taken, if the person so requests at the time the sample is taken and provides the necessary facilities.
- 4.6 If a sample is taken under clause 4.4 d) and the sample has not been divided into two parts, a copy of any report on the sample shall be given to the Person from whom the sample was taken.
- 4.7 A receipt shall be provided for any document or thing removed under clause 4.4 b), and the document or thing shall be promptly returned after the copies or extracts are made.
- 4.8 No Person shall hinder or obstruct, or attempt to hinder or obstruct, staff who is exercising a power or performing a duty under this By-law.
- 4.9 If staff is satisfied that a contravention of this By-law has occurred, staff may make an order requiring the Person who contravened the by-law or who caused or permitted the contravention or the Owner or occupier of the land on which the contravention occurred to;
  - a) Discontinue the contravening activity, or
  - b) Do work to correct the contravention.
- 4.10 Any Person who contravenes an order under subsection 4.9 is guilty of an offence.
- 4.11 An order under subsection 4.9 shall set out,
  - a) Reasonable particulars of the contravention adequate to identify the contravention and the location of the land on which the contravention occurred; and
  - b) The date by which there must be compliance with the order.
- 4.12 An order under subsection 4.9 shall be served to the owner or any person staff determines to be an interested party. Service of shall be deemed served by sending the order registered or first class mail, by posting or by personal service.

- 4.13 An order under subsection 4.9 may require work to be done even though the facts which constitute the contravention of the by-law were present before the by-law making them a contravention came into force.
- 4.14 In default of any work directed or required by the Township under this section being done by the Person directed or required to do it, the matter or thing shall be done at the Person's expense.
- 4.15 Where the Township or any authorized agent on behalf of the Township has performed the work required to bring about compliance with the by-law, the Township may recover the costs of doing anything or matter under subsection 4.14 by action or by adding the costs to the tax roll and collected in the same manner as property taxes.
- 4.16 The costs in subsection 4.15 shall include interest calculated at a rate of 15 per cent, calculated for the period commencing on the day the Township incurs the costs and ending on the day the costs, including the interest, are paid in full.
- 4.17 For the purposes of subsection 4.14, the Township or any authorized agent on behalf of the Township may enter upon land at any reasonable time and complete the work set out in the order.
- 4.18 Where the singular is used it shall also mean or stand for the plural.

#### **SECTION 5: SEVERABILITY**

Should any part, section, subsection or portion of this By-law be repealed or declared by a court of competent jurisdiction to be illegal, the same shall not affect the validity of the By-law as a whole or in part thereof, except for that which was declared to be invalid.

#### **SECTION 6: EFFECTIVE DATE**

This By-Law shall take effect upon the date of passing thereof.

Read a first, second and third time and finally passed this 17<sup>th</sup> day of April, 2014.

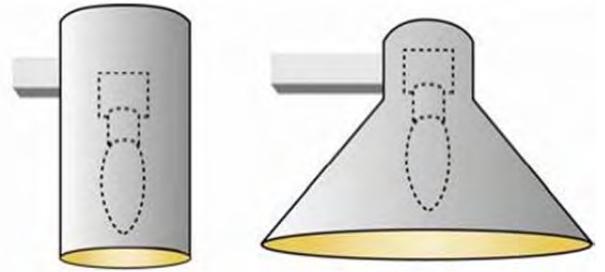
**Original signed by Mayor, Alice Murphy**  
Mayor, Alice Murphy

**Original signed by the Clerk, Cheryl Mortimer**  
Cheryl Mortimer, Clerk

### APPENDIX 1 - Full Cut Off Lighting Examples

#### Shielding

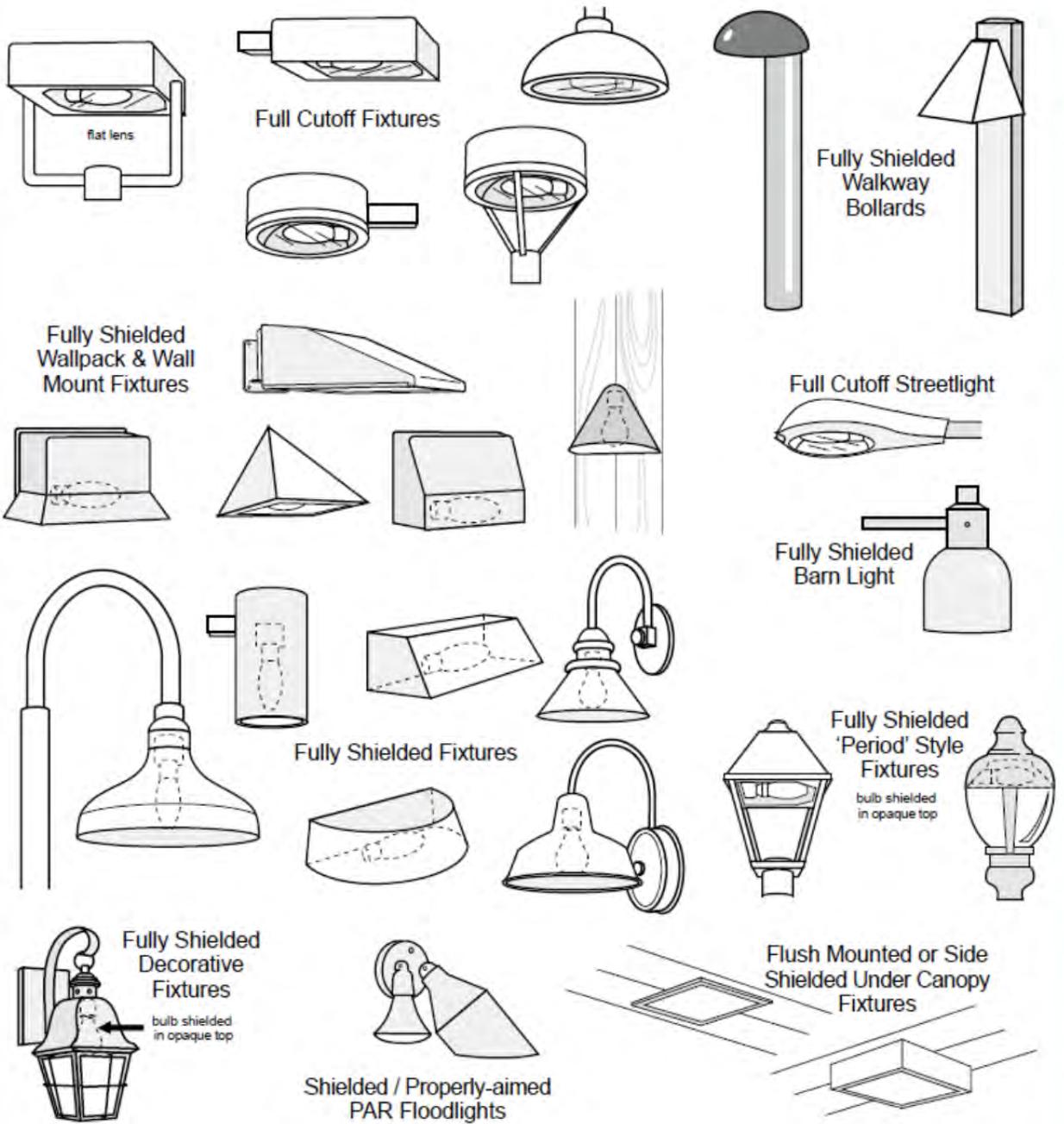
FULL CUT-OFF fixtures shall be installed for all exterior lighting and all fixtures shall be oriented as to direct ALL light below the horizon.



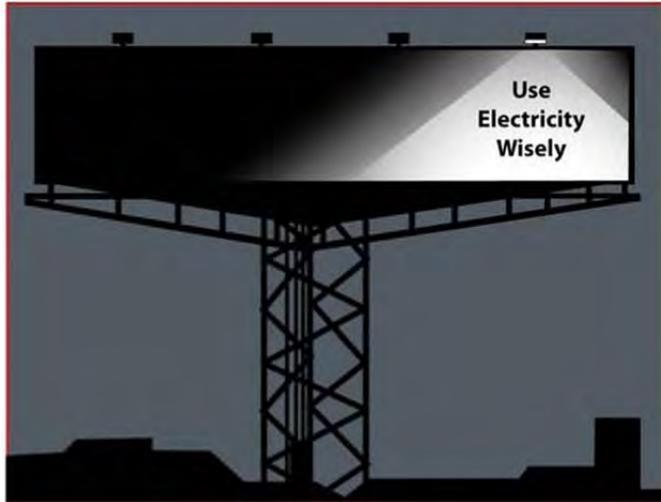
Fully Shielded Fixtures

### ACCEPTABLE

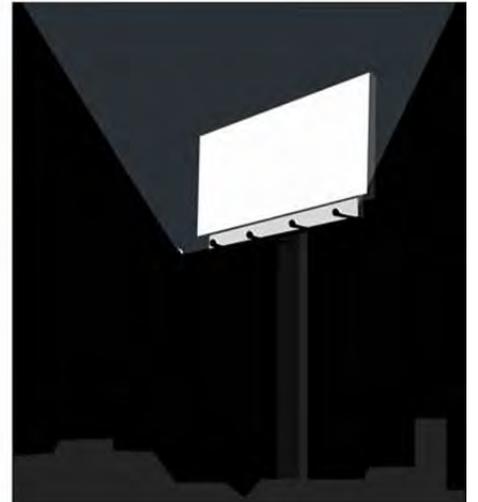
Fixtures that shield the light source to minimize glare and light trespass and to facilitate better vision at night



**APPENDIX 2 – Signage Lighting/Light Standard Fixture/Light Trespass**



Billboard illuminated from the top (permitted)



From the bottom (prohibited)



Flat lens cobra head fixture (permitted)



Drop lens cobra head fixture (prohibited)



No luminaire that produces glare due to its bulb type, power, and/or orientation, shall be permitted.

**APPENDIX 3 – Torrance Barrens Dark Sky Reserve**

Enhanced Preservation Area surrounding Torrance Barrens

