

**CITY OF MARFA ORDINANCE NO. 2021-09
PROVIDING FOR THE REGULATION OF OUTDOOR LIGHTING
IN THE CITY OF MARFA, TEXAS.**

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF MARFA, TEXAS THAT THIS ORDINANCE REFLECTS THE CITY OF MARFA'S DESIRE TO PRESERVE AND OPTIMIZE THE DARK SKIES OF WEST TEXAS AND TO PROTECT THE MCDONALD OBSERVATORY'S ABILITY TO FULFILL ITS PURPOSE OF ASTRONOMICAL OBSERVATIONS. THIS ORDINANCE IS INTENDED TO ELIMINATE PROBLEMS OF GLARE, MINIMIZE LIGHT TRESPASS AND HELP REDUCE THE ENERGY AND FINANCIAL COSTS OF OUTDOOR LIGHTING BY ESTABLISHING REGULATIONS WHICH LIMIT THE AREA THAT CERTAIN KINDS OF OUTDOOR-LIGHTING FIXTURES CAN ILLUMINATE AND BY LIMITING THE TOTAL ALLOWABLE ILLUMINATION OF TRACTS OR PARCELS LOCATED IN THE CITY OF MARFA AND WITHIN ITS EXTRATERRITORIAL JURISDICTION. ALL PUBLIC AND PRIVATE OUTDOOR LIGHTING INSTALLED IN THE CITY OF MARFA AND WITHIN ITS EXTRA TERRITORIAL JURISDICTION SHALL BE IN CONFORMANCE WITH THE REQUIREMENTS ESTABLISHED BY THIS ORDINANCE.

SECTION 1: Title, Purpose, and Scope

A. This ordinance shall be known and cited as the Marfa Outdoor Lighting Ordinance.

B. The Purpose of this ordinance is:

- 1) To reduce glare and improve nighttime visibility which contributes to safer, more secure, and attractive outdoor living spaces;
- 2) To conserve energy;
- 3) To make our community a better place to live and work and a more inviting place to visit; and
- 4) To preserve the darkness and clarity of the night sky, mindful of the needs of McDonald Observatory.

See Exhibit 1 for an illustration of steps to best outdoor lighting practices.

C. This Ordinance shall apply within the City of Marfa hereinafter referred to as "City", and within the surrounding areas where the City asserts powers of extraterritoriality.

SECTION 2: Definitions

The following definitions are hereby adopted for the purposes of this Ordinance:

Adaptive controls mean mechanical or electronic devices, when used in the context of outdoor lighting systems, intended to actively regulate the switching, duration, and/or intensity of light emitted by the outdoor lighting system. Examples of adaptive controls include timers, dimmers and motion-sensing switches.

Beam of a light fixture means the spatial distribution of the emitted light.

Correlated Color Temperature (CCT) means a measure of the color properties of light emitted by lamps, being equal to the temperature, expressed in Kelvins (K). CCT values are typically provided on lighting manufacturer packaging or data sheets (see Exhibit 5).

Decorative/holiday lighting means low-intensity string lights, whose luminous output does not exceed fifty (50) lumens per linear foot, and fully-shielded floodlights, whose luminous output does not exceed one thousand (1,000) lumens and which are aimed and oriented in such a way as to not create light trespass onto another property nor into the night sky, operated only during prescribed periods of time during the calendar year.

Electronic Message Display means any illuminated sign of an informative or advertising nature, whether on-or off-premise, and operable at night, whose content is made visible to the viewer by means of luminous elements under active electronic control and therefore subject to alteration in order to vary the content of the message. Electronic displays may be either static or dynamic in terms of light color and intensity.

Existing light fixtures means those outdoor light fixtures already installed at the time this ordinance is adopted.

Floodlight means a light fixture having a wide beam.

Fully Shielded means an outdoor luminaire constructed so that in its installed position, all of the light emitted from the light fixture is projected below the horizontal plane passing through the lowest light-emitting part of the fixture (see Exhibit 4 for an illustration of a fully shielded fixture and Exhibit 2 for examples of acceptable and unacceptable light fixtures).

Glare means visual discomfort or impairment caused by a bright source of light in a direction near one's line of sight.

Greenhouse means any building that is constructed of glass, plastic, or other transparent material in which plants are grown under climate-controlled conditions and includes hoop houses and other similar structures.

Illuminance means the intensity of light in a specified direction measured at a specific point.

Light source means a light emitting portion of the luminaire and any diffusing elements and surfaces intended to reflect or refract light emitted from the lamp individually or collectively, for example, a lamp, bulb, lens, highly reflective surface, or frosted glass.

Light pollution means the unintended, adverse and /or obtrusive effect of the use of outdoor light at night.

Light trespass means light emitted from fixtures designed or installed in a manner that unreasonably causes light to fall on a property other than the one where the light is installed, in a motor vehicle drivers' eyes, or upwards toward the sky. If the light source is visible from another property or the public roadway, the light is creating light trespass. It is expected that the illumination produced by a light source may be viewed from other properties but the light source itself should not be visible from other properties. (See Exhibit 6 for educational illustration about light trespass.)

Lumen means the unit of measurement used to quantify the amount of light produced by a bulb or emitted from a light source. Lumen values are typically provided on lighting manufacturer packaging or data sheets. For the purposes of this article, unless otherwise stated, the lumen output values shall be the initial lumen output ratings as defined by the manufacturer.

Lumens per Net Acre means the total outdoor light output, as defined in this article, divided by the number of acres, or part of an acre with outdoor illumination. Undeveloped, non-illuminated portions of the property may not be included in the net acreage calculation.

Luminaire means a complete lighting assembly or lighting fixture, consisting of a lamp, housing, optic(s), and other structural elements, but not including any mounting pole or surface.

Luminance means the measure of light emitted by or from a surface.

Nit means the standard unit of measure of luminance used for internally illuminated signs, digital signs, or electronic message displays.

Outdoor Lighting means temporary or permanent lighting that is installed, located, or used in such a manner to cause light rays to shine outdoors.

Nonresidential fixtures that are installed indoors that cause light rays to shine outside are considered outdoor lighting for the intent of this article (see Exhibit 3 for an illustration of this type of situation).

Residential fixtures installed indoors generating more than 3,800 lumens (approximately equal to a 300-watt incandescent bulb) that cause light to shine outside are also considered outdoor lighting for the intent of this article.

All of the lighting that illuminates the translucent portion of a greenhouse or solarium, including roofing material, is considered outdoor lighting for the intent of this article.

Private lighting means outdoor light fixtures that are owned or leased or operated or maintained or controlled by individual persons, including but not limited to families, partnerships, corporations, and other entities engaged in the conduct of business or other non-governmental activities.

Public lighting means outdoor light fixtures located on property owned, leased, or controlled by the City or other governmental entity or entities, including but not limited to streets, highways, alleys, easements, parking lots, and parks.

Sag-lens or drop-lens means a clear or prismatic refracting lens that extends below the lowest opaque portion of a light fixture.

Searchlight means a light fixture having a narrow beam intended to be seen in the sky.

Spotlight means a light fixture having a narrow beam

Temporary lighting means non-permanent lighting installations installed and operated for a duration not to exceed thirty (30) days.

Total outdoor light output means the total amount of light, measured in lumens, from all outdoor light fixtures within the illuminated area of a property. The lumen value to be used in the calculation is the lumen value as defined in this article. To compute the total, add the lumen outputs attributed to each light fixture together.

Wallpack means a floodlight mounted on the wall of a building or other structure;

SECTION 3: Nonconforming existing outdoor light fixtures.

A. It shall be the responsibility of the City to publish this ordinance in the newspaper of record and to disseminate the ordinance by other appropriate means; to identify those spotlights, floodlights, and wallpacks requiring shielding or adjustment; and to inform their owners of these provisions.

B. Any required shielding or adjustments shall be completed within six (6) months from the date of this ordinance.

B. Existing light fixtures, other than spotlights, floodlights and wallpacks, already installed at the time this ordinance is enacted must be brought into compliance with five (5) years from the date of this ordinance.

SECTION 4: New Fixtures Installed after the Effective Date of the Ordinance, Including Replacements for Existing Fixtures

A. Fully Shielded:

All Outdoor Lighting fixtures installed, replaced, or repaired after the effective date of this Order shall be fully shielded except as otherwise specified in this Order.

B. Light Trespass:

1) Light trespass is prohibited. No luminaire, except governmental streetlights, shall create conditions of light trespass. Governmental street lights may only create light trespass below it within one hundred (100) feet of its installed location.

2) All outdoor lighting, except governmental streetlights, shall be shielded so that the light source shall not be visible from any other property.

C. Color Temperature:

The correlated color temperature (CCT) of luminaries shall not exceed 2700 Kelvins.

D. Lumen Caps:

The lumen per net acre values are an upper limit and not a design goal; design goals should be the lowest levels that meet the requirement of the task. Lumen per net acre values exclude governmental owned street lights used for illumination of public rights-of-way and outdoor recreation facilities.

1) Nonresidential Property: Total outdoor light output installed on any nonresidential property shall not exceed 50,000 lumens per net acre in any contiguous illuminated area;

2) Residential Property: Total outdoor light output installed on any residential property shall not exceed 25,000 lumens per net acre in any contiguous illuminated area.

E. Adaptive Controls:

All outdoor lighting is encouraged to be turned off when no one is present to use the light. Adaptive controls such as timers, motion sensors, and half night photocells can assist in this effort.

F. Service Station Canopy Lighting:

1) All luminaires mounted on or recessed into the lower surface of service station canopies shall be fully shielded and utilize only flat lenses or windows.

2) Service station canopy lighting shall be subject to the Color Temperature provision of these Orders.

G. Sign Lighting:

All illuminated signs shall be extinguished at 11:00 p.m. or within one (1) hour of the end of normal business hours, whichever occurs later. All sign illumination shall be subject to the Correlated Color Temperature (CCT) provision of these Orders.

1) Externally Illuminated Signs

a) Externally illuminated signs shall be lit only from the top of the sign, with fully shielded luminaires designed and installed to prevent light from spilling beyond the physical edges of the sign.

2) Internally Illuminated Signs:

Outdoor internally illuminated signs (whether free standing or building mounted) shall be subject to all the following provisions:

a) The sign must be constructed with an opaque background and translucent letters and symbols or with a colored background and lighter letters and symbols (see Exhibit 7 for examples).

b) The internally illuminated portion of the sign cannot be white, cream, off-white, light tan, yellow or any light color unless it is part of a registered logo that does not have an alternate version with dark tones. Light tone colors such as white, cream, off-white, light tan, yellow or any light color are permitted in the logo only, provided that such colors in the logo shall represent not more than 33% of the total sign area permitted.

c) The internal illumination, between sunset and sunrise, is to be the lowest intensity needed to allow the sign to be visible for up to 1/2 mile from its installation and shall not exceed 50 nits.

d) Size limit. The luminous surface area of an individual sign shall not exceed 50 square feet.

e) Electronic message displays are discouraged and shall comply with outdoor lighting curfews stipulated in this ordinance. Messages appearing on electronic displays shall not be displayed for less than (30) seconds and shall require no longer than 0.25 seconds to transition from one message to another. Moving and/or flashing text or images are prohibited.

H. Sports Lighting:

1) Lighting at public and private outdoor sports facilities, including but not limited to playing fields, arenas, tracks, and swimming pools, will be shielded to the greatest practical extent to reduce glare, safety hazards, light trespass, and light pollution;

2) Will provide levels of illuminance that are adjustable according to task, allowing for illuminating levels not to exceed nationally recognized Illuminating Engineering Society of North America (IESNA) standards according to the appropriate class of play, as well as for lower output during other times, such as when field maintenance is being actively performed; and

3) Shall be provided exclusively for illumination of the surface of play and adjacent viewing stands, and not for any other application, such as lighting a parking lot; and

4) Must be extinguished by 11:00 p.m. or within one (1) hour of the end of active play. The outdoor sports facility lighting shall be fitted with mechanical or electronic timers to prevent lights from being left on accidentally overnight.

5) Outdoor sports facility lighting will be exempted from the other regulations of this article if its design and installation, as certified by a professional engineer (PE) licensed in the state of Texas, adheres to the version of the International Dark-Sky Association's Criteria for Community-Friendly Outdoor Sports Lighting operative at the time when the construction permit is submitted to the City for review.

I. Tower Lighting:

No lighting of towers and associated facilities is allowed, except as required by the Federal Aviation Administration or other federal or state agency. Towers requiring white strobe lights during the day will transition to the lowest allowed intensity pulsating red lights at night.

J. Landscape Lighting:

1) The unshielded outdoor illumination of any building or landscaping, or sign is prohibited. Spotlights less than or equal to 500 lumens may be used, provided such fixtures are shielded and aimed to prevent light from being emitted away from the target of illumination.
String or Rope Lighting:

2) String, rope, festoon, bistro, and similar lighting, provided that the emission of no individual lamp exceeds fifty (50) lumens, and no installation of such lighting exceeds, in the aggregate, six thousand (6,000) lumens. These lights must have a CCT at or below 2700 Kelvin.

K. Flagpole Lighting:

Property owners are encouraged to not illuminate flagpoles at night, but rather to hoist flags after dawn and lower flags before sunset.

1) Flagpoles with a height greater than 20 feet above ground level shall be illuminated only from above.

2) Flagpoles with a height equal to or less than twenty (20) feet above ground level may be illuminated from below. If ground-level illumination is used, flagpoles may be illuminated with spotlight type luminaires, utilizing shields to reduce glare, whose maximum combined lumen output is 75 lumens per linear foot of pole height, measured from the level of the luminaire above grade to the top of the flagpole. Luminaires are to be mounted so that their lenses are perpendicular to the flagpole and the light output points directly toward the flag(s).

L. Greenhouse Lighting:

All interior lighting in a greenhouse or solarium must be shielded so that no direct light shines outside of the structure.

M. Prohibitions:

The use of the following types of outdoor lighting are prohibited, except as specifically exempted here or elsewhere in this article.

1) Sag-lens or drop lens fixtures.

2) Any luminaire that uses mercury vapor lamps.

3) Searchlights, skybeams, and similar lighting, except as required by response personnel during emergency conditions and for compelling public safety purposes (flood warning systems, search and rescue, fire suppression, and other emergencies).

4) Any light that dynamically varies its output by intermittently fading, flashing, blinking, or rotating. This type of lighting includes strobe lighting.

SECTION 7: Exemptions, Amendments, and Variances

A. This Ordinance shall not apply to the following:

1) Decorative holiday lighting from November 15 through the next January 15;

2) Lighting required by law to be installed on surface vehicles and aircraft;

3) Airport lighting required by law;

4) Temporary lighting at construction projects.

B. Exemptions:

Any person or entity may apply for a temporary exemption from the requirements of this Order by presenting the request, in writing, to the Planning and Zoning Commission. Exemptions will only be granted where extenuating circumstances make compliance with this Order impractical or impossible.

Any application for exemption shall contain, as a minimum, the following information:

- 1) Name of the person or entity requesting the exemption;
- 2) Proposed location of outdoor lighting;
- 3) Beginning and ending date of proposed exemption;
- 4) Reasons why it is impossible or impractical to comply with this Order.

C. This ordinance may be amended from time to time as local conditions change, and as changes occur in the recommendations of nationally recognized organizations such as the Illuminating Engineering Society of North America and the International Dark-Association.

D. Nothing in this ordinance shall be construed as limiting the right of any person or entity to pursue legal action against any other person or entity under any applicable law, including the doctrine of light trespass.

E. The Marfa Board of Adjustments shall have the power to grant variances in the application of the provisions of this ordinance.

This ordinance shall become effective thirty (30) days after the date of its adoption.

The City of Marfa shall pass on the findings of the Zoning board of this city after review by Council and its legal counsel. Approval of this ordinance shall occur only after proper procedures have been duly published and found to have been approved by council action.

SECTION 8: Conflict with Other Laws

Nothing in this Ordinance shall be construed to violate any provision of the United States of State Constitution, and all acts done under this act shall be in such manner as will conform hereto whether expressly provided or not. In case of conflict between these orders and any other applicable law. Statute or order, the most restrictive shall govern.

SECTION 9: Enforcement

Enforcement of this Ordinance shall be made by the City of Marfa.

A. Complaints:

Upon receiving a complaint of light trespass from an owner or occupant, the City shall evaluate the complaint. Where light trespass is found to occur, the City shall take appropriate steps to eliminate or minimize the unwanted light emanating from a light on City property, or from private lighting.

SECTION 10: Notice of Violation

If, after investigation, the City of Marfa finds that any provision of this Ordinance is being violated, the City of Marfa shall give notice by hand delivery or certified mail, return receipt requested, of such violation to the owner and/or to the occupant of the premises having lighting which is not in compliance with this Ordinance. Such notice shall state that such owner's and/or occupant's lighting is not in compliance with this Ordinance, demanding that the violation be abated within thirty (30) days after the date of the hand delivery or the date of mailing of the notice.

SECTION 11: Penalties for Violation

Any lighting structure erected, constructed, enlarged, altered, replaced, moved, improved or converted contrary to the provisions of the Ordinance shall be, and the same is hereby declared to be, unlawful and a public nuisance and, thus, subject to abatement in the manner provided by law. Any failure, refusal or neglect to obtain a permit as required by this Ordinance shall be prima facie evidence of the fact that a public nuisance has been committed. If the violation is not abated within such thirty-(30) day period the City of Marfa may institute and collect a penalty not to exceed \$200.00 for such violation.

SECTION 12: Cost of City Abatement Constitutes Lien

Cumulative of the City's remedy by fine, as set forth in the preceding section hereof, the City may do such work or cause the same to be done to remedy such condition to correct such lighting violation on such owner's premises at the City's expense and may charge the same to the account of the owners of such property and assess the same against the real estate or lot or lots upon which such expense is incurred. The lien statement must state the name of the owner, if known, and the legal description of the property. Upon filing with the County Clerk of Presidio, Texas, of a statement by the City Administrator or Police Chief of such expenses, the city shall have a privileged lien upon said real estate or lot or lots, second only to tax liens and liens for street improvements, to secure the expenditure so made and ten (10) percent interest on the amount from the date of such payment so made by the City. The city may institute suit and recover such expenses and foreclose such lien in any court of competent jurisdiction, and the statement so filed with the County Clerk or a certified copy thereof shall be prima facie proof of the amount expended in any such work or improvements to remedy the condition.

SECTION 13: Compliance with Open Meeting Act

That is hereby officially found and determined that the meeting which this Ordinance was passed was open to the public as required by law and that the public notice of the time, place, and purpose of said meeting was given as required by the Open Meetings Act; Chapter 551, Texas Local Government Code.

ORDAINED, PASSED, AND APPROVED by the Marfa City Council on this the 13th day of July, 2021 by a vote of 5 Ayes and 0 Nay(s).




Hon. Irma Salgado, Mayor Pro Tem

ATTEST:



Amanda Roane, City Manager

APPROVED AS TO FORM:



Teresa L. Todd, City Attorney

SECTION 14: EXHIBITS

Exhibit 1. An illustration of best outdoor lighting practices.



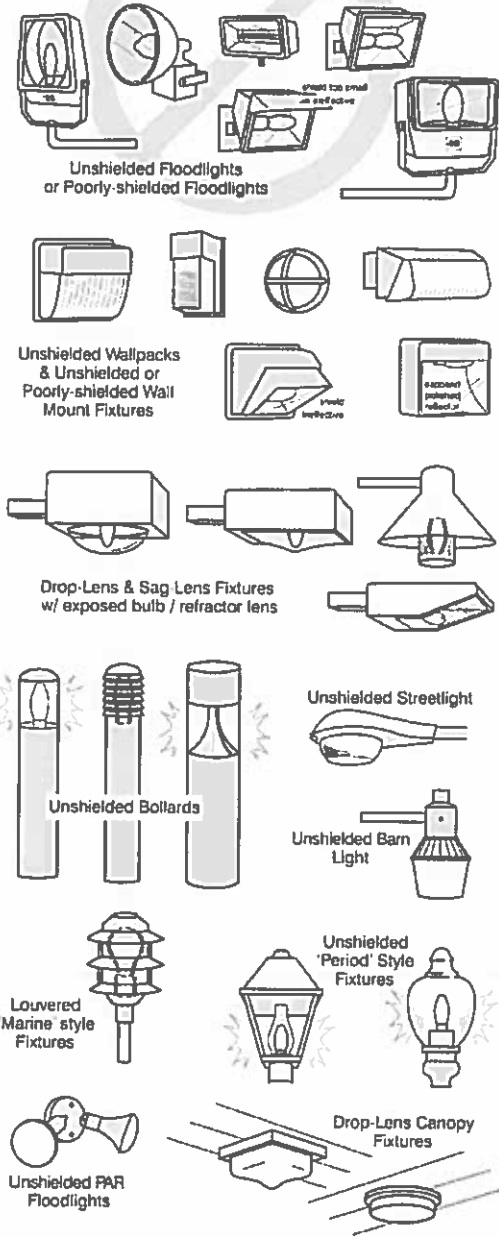
- (1) Use shielding to reclaim wasted light and direct it to the area to be lit.
- (2) Lower the correlated color temperature (CCT) from “cool” white light to “warm” white ($\leq 2700\text{K}$).
- (3) Lower the intensity to provide as much light as needed for the application, but no more.
- (4) Use adaptive controls, e.g., timers, half-night photocells, motion sensors, etc., to limit the hours the light is in use.

Exhibit 2. Examples

Examples of Acceptable / Unacceptable Lighting Fixtures

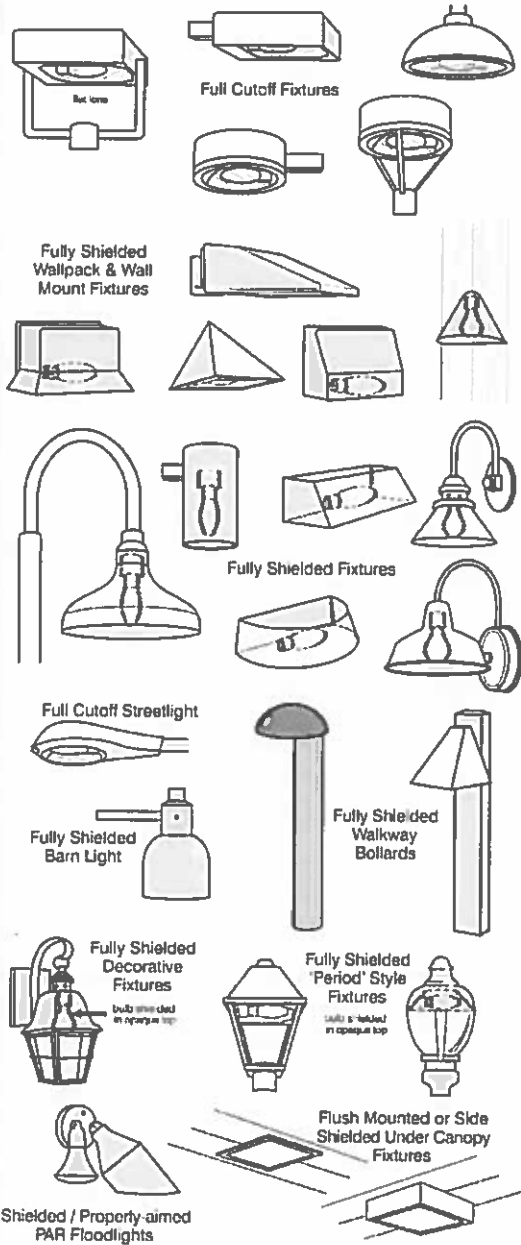
Unacceptable / Discouraged

Fixtures that produce glare and light trespass



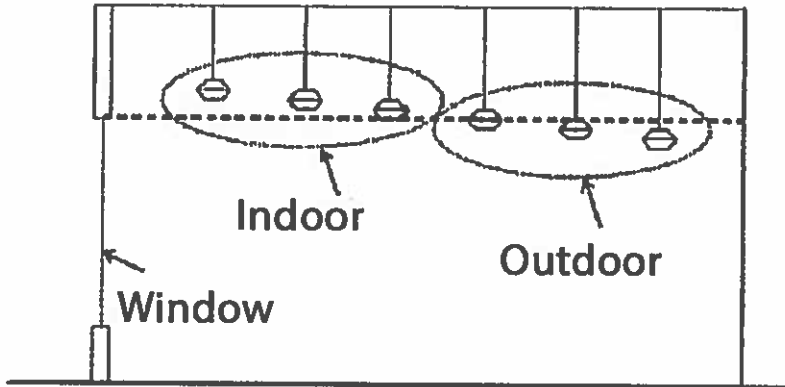
Acceptable

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



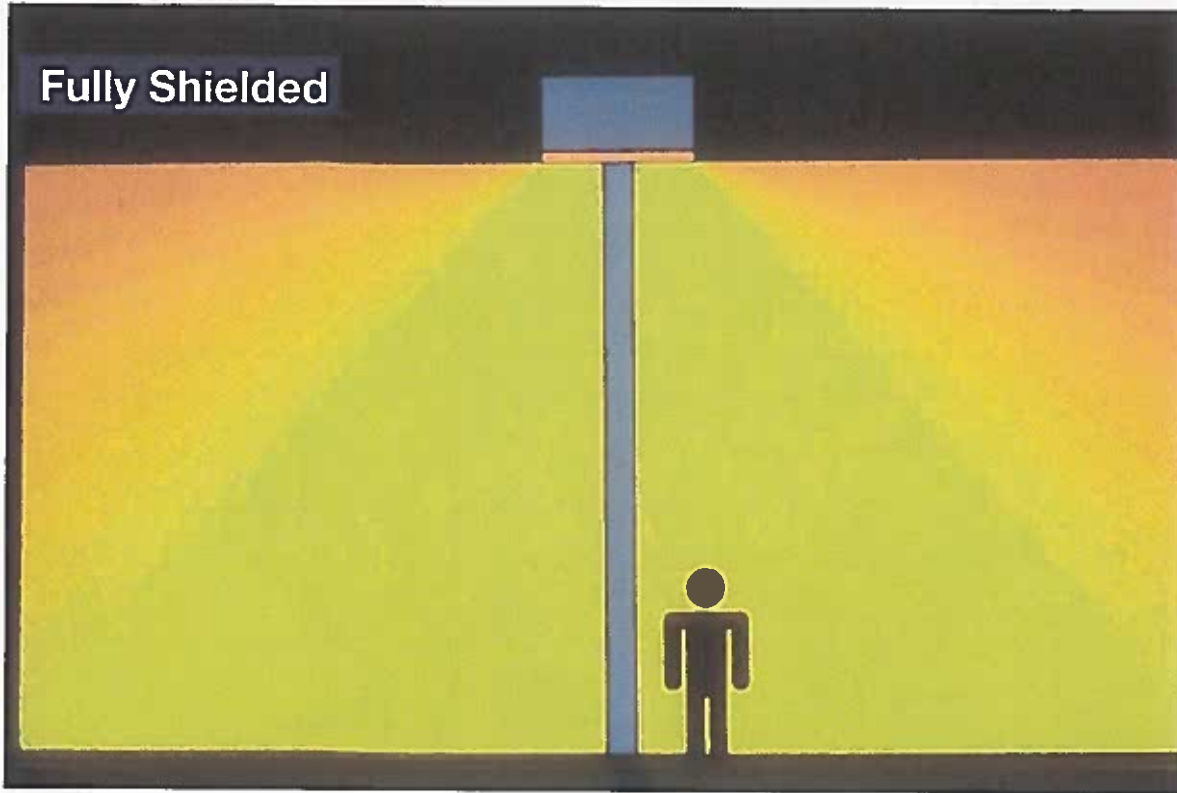
Illustrations by Bob Crelin © 2005. Rendered for the Town of Southampton, NY. Used with permission.

Exhibit 3. Indoor/outdoor lighting.



Elevation view showing an example of a nonresidential application of indoor lighting, labeled "Outdoor", which will be subject to this article. The example presumes the structure in question is not elevated such that any of the luminaires labeled "Indoor" may be seen from any other property. If the structure is elevated such that the luminaires labeled "Indoor" are visible from another property then, they are actually "outdoor lighting" and subject to this article. All luminaires under skylights or other translucent roofing materials are subject to this article just as the fixtures behind the window in this example.

Exhibit 4. Fully Shielded.



"Fully Shielded" means an outdoor luminaire constructed so that in its installed position, all of the light emitted from the light fixture is projected below the horizontal plane passing through the lowest light-emitting part of the fixture.

Exhibit 5. Color Temperature.



Exhibit 6. Light Trespass.

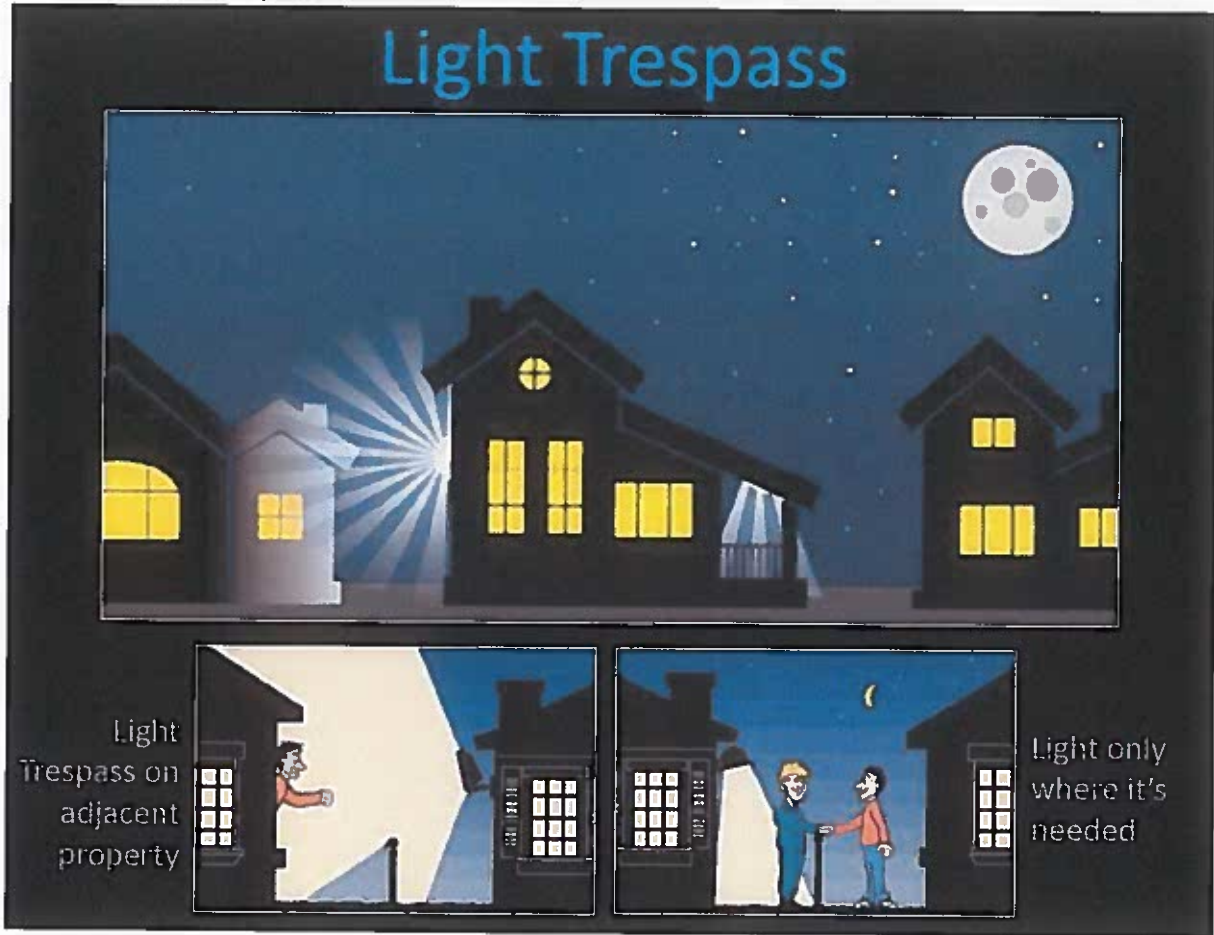


Exhibit 7. Internally Illuminated Signs.

Light Background <input type="checkbox"/>	Colored Background <input checked="" type="checkbox"/>	Opaque Background <input checked="" type="checkbox"/>
