

ARTICLE XI. - OUTDOOR LIGHTING

Sec. 14-384. - Title, purpose and scope.

- (a) This article shall be known and cited as the "Outdoor Lighting Ordinance."
- (b) The purpose of this article is to:
 - (1) Provide safer, more efficient and attractive outdoor lighting;
 - (2) Conserve energy;
 - (3) Make our community a better place to live and work and a more inviting place to visit; and
 - (4) Preserve the darkness and clarity of the night sky, mindful of the needs of McDonald's Observatory.
- (c) This article shall apply within the city and within the surrounding areas where the city asserts powers of extraterritorial jurisdiction.

(Ord. No. 12-02-01, § I)

Sec. 14-385. - Definitions.

The following words, terms and phrases, when used in this article, shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning:

Area lighting means light fixtures located on public or private property that are designated to light spaces, including, but not limited to, parks, parking lots and sales lots.

Axis of illumination means the midline of the beam emitted by a light fixture.

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

Candela (cd) means the unit of measurement of the intensity of a point source of light (approximately equal to one candlepower).

Existing light fixtures means outdoor light fixtures already installed at the time the ordinance from which this article is derived is adopted.

Floodlight means a light fixture having a wide beam.

Footcandle (fc) means the illuminance measured one foot from one candela source.

Full cutoff means a shielded light fixture that emits no light above a horizontal plane touching the lowest part of the fixture.

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

Horizontal/vertical footcandles means the illuminance measured by a light meter in those positions (illuminance may also be measured in other specified positions or directions).

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

Lamp or bulb means a device for producing light; a rounded, spheroidal or pear-shaped object or part for producing light.

Light fixture means the assembly that hold or contains a lamp or bulb.

Light pollution means the sky glow caused by scattered light emitted upward from unshielded or poorly aimed light fixtures.

Light trespass means unwanted light falling on public or private property from an external location.

Lumen means the SI unit of luminous flux, equal to the amount of light emitted per second in a unit solid angle of one steradian from a uniform source of one candela.

Private lighting means an outdoor light fixture located on property owned 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, parks, playing fields, schools, institutions of higher learning and meeting places and all entities completely or partly funded by grants obtained by the city or its agents from federal, state or private sources.

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

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

(Ord. No. 12-02-01, § II)

Sec. 14-386. - Existing outdoor light fixtures.

To reduce glare, safety hazards for drivers and pedestrians, light trespass, and light pollution, all existing spotlights, floodlights and wallpacks shall be adjusted in accordance with the following provisions, excepting the lights at existing sports facilities used temporarily during scheduled sporting or related events:

- (1) For spotlights and floodlights mounted overhead on poles and used for area lighting, the axis of illumination shall be adjusted to an angle of not more than 20 degrees from the vertical line between the fixture and the ground. See Exhibits 1 and 2 (section 14-393).
- (2) For spotlights and floodlights mounted at or near ground level and used to light a building, billboard or other structure, the axis of illumination shall be adjusted to minimize the amount of light escaping above, below and to the sides of the illuminated object.
- (3) Wallpacks shall be shielded or replaced with full cut off wallpacks.
- (4) It shall be the responsibility of the city to publish this article in the newspaper of record and to disseminate the article by other appropriate means; to identify those spotlights, floodlights and wallpacks requiring adjustment; and to inform their owners of these provisions.
- (5) Any required adjustments shall be completed within six months from the date of the adoption of the ordinance from which this article is derived. Any owner who fails to comply with these provisions shall be issued a warning notice. Any owner who further fails to comply after 30 days from the issuance of such warning notice shall be subject to a fine of \$25.00 for each day of noncompliance.
- (6) It is not the intent of this article to require an additional investment in order to comply with these provisions.
- (7) All exterior lighting shall comply with this article on or before January 1, 2015.
- (8) An owner of a grandfathered luminaire may replace or modify the luminaire so that it conforms to this article if requested by a designated city official or a member of the McDonald's Observatory staff. However, the replacement or modification of the luminaire must be provided at no cost to the owner, including materials and labor. For example, a grandfathered mercury-vapor outdoor light may be retrofitted with a light shield to make it fully shielded.

(Ord. No. 12-02-01, § III)

Sec. 14-387. - New light fixtures installed after the adoption of the ordinance from which this article is derived, including replacements for existing fixtures.

- (a) Lighting at public and private outdoor sports facilities, including, but not limited to, playing fields, arenas, tracks and swimming pools, shall be shielded as well as is practicable, to reduce glare, safety hazards, light trespass and light pollution; shall provide levels of illuminance consistent with nationally recognized Illuminating Engineering Society of North America (IESNA) standards; and shall be operated on a schedule that coincides with scheduled events.
- (b) If a tower height that requires lighting is justified, the applicant shall demonstrate how the lighting will be shielded from the ground. Shielding of tower lighting onto nearby properties shall be installed as part of construction of the tower. If lighting is justified, slowly blinking red lights must be used at night. White strobe lights at night are prohibited.
- (c) No lighting of towers and associated facilities is allowed, except as required by the Federal Aviation Administration or other federal or state agency. In coordinating with the applicable federal or state agency, the applicant shall determine the maximum height of the tower that would not require lighting. If a proposed tower would require lighting, the applicant shall demonstrate that a tower height that requires lighting is necessary. Such justification shall include documentation showing:
 - (1) Coverage limitations;
 - (2) Type of system (e.g., cellular, radio, television);
 - (3) Technical and engineering details of the lighting to be installed; and
 - (4) Requirements of federal, state and local agencies.
- (d) All outdoor lighting fixtures shall be full cutoff fixtures.
- (e) New streetlights shall be full cutoff fixtures of approved historical design, utilizing a minimum output consistent with the safety of drivers and pedestrians.
- (f) Sag lens and drop lens fixtures are prohibited.
- (g) Streetlights and private lighting shall be allowed to shine on adjacent property in the absence of a complaint of light trespass by an owner or occupant.
- (h) Light trespass is defined at 0.2 fc measured five feet above the ground, five feet inside the property line, with the detector aimed at the source. 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. If a violation is found to occur, the offender may switch to a lower wattage bulb or convert to FCO fixtures to become compliant.
- (i) In the interest of conserving energy and protecting the environment, mercury vapor fixtures are prohibited.
- (j) Each flag shall be lighted by one spotlight emitting no more than 1,000 lumens.

(Ord. No. 12-02-01, § IV)

Sec. 14-388. - Maximum maintained levels of illuminance required or permitted at specific facilities.

Maximum, maximum average and minimum levels of illuminance (maintained) for different facilities are listed below in horizontal footcandles. Unless otherwise specified, minimum levels shall be the lowest consistent with safety and security.

- (1) Parking lots and parking areas: Average 2.0 fc; minimum 0.2 fc;

- (2) Entry areas near buildings: Maximum 5.0 fc;
- (3) Service stations and other fueling facilities: Maximum 10.0 fc in the area surrounding pump islands; parking areas and entry areas shall be lighted as required in subsection (1) of this section;
- (4) Sales lots where merchandise, including automobiles, is displayed at night: maximum 15 fc;
- (5) For locations and facilities not specified herein, the board shall set acceptable levels of illuminance upon request based on guidelines established by the IESNA;
- (6) The use of searchlights is prohibited for advertising, attracting attention to any event and for any other use except for emergency purposes.

(Ord. No. 12-02-01, § V)

Sec. 14-389. - Large outdoor lighting projects.

- (a) Any outdoor lighting project that will produce a luminous power of 100,000 lumens or more in the aggregate shall file a lighting plan with the planning and zoning board. A lighting plan shall be filed at the same time as any other plans required by the city and shall specify the following:
 - (1) Number and types of light fixtures to be used;
 - (2) Their output in lumens; and
 - (3) Photometric data from the manufacturer(s) showing the spatial distribution of the light output from the proposed fixtures, both on the ground and as a function of angle from the vertical (nadir).
- (b) The outdoor lighting advisory group (comprised of two members of the planning and zoning board, two members of the environmental advisory board and two citizen appointees knowledgeable about outdoor lighting) shall review the lighting plan, taking into account factors including, but not limited to, levels of illuminance, luminance, glare, safety hazards, light trespass and light pollution. The outdoor lighting advisory group will make recommendations to the planning and zoning board. The planning and zoning board shall approve or reject the plan within 30 days of submission, returning it to the applicant with an explanation. The applicant shall not move forward with the outdoor lighting project until the lighting plan is approved.

(Ord. No. 12-02-01, § VI)

Sec. 14-390. - Exemptions, amendments and variances.

- (a) This article 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 emergency lighting;
 - (5) Temporary lighting other than security lighting at construction projects; and
 - (6) Governmental facilities where compelling needs for safety and security are demonstrated.
- (b) This article may be amended from time to time as local conditions change, and as changes occur in the recommendations of nationally recognize organizations such as the Illuminating Engineering Society of North America and the International Dark-Sky Association.

- (c) Nothing in this article 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.
- (d) The planning and zoning board of the city shall have the power to grant variances in the application of the provisions of this article after review and recommendation by the outdoor lighting advisory group.

(Ord. No. 12-02-01, § VII)

Sec. 14-391. - Notification.

All building permit applicants shall be notified of the Town of Pecos City Lighting Ordinance.

(Ord. No. 12-02-01, § VIII)

Sec. 14-392. - Sign illumination.

- (a) All permanent signs may be non-illuminated, illuminated by internal, internal indirect (halo) or lit by external indirect illumination, unless otherwise specified. All illuminated signs shall be extinguished at 11:00 or when the use or activity closes, whichever is later.
- (b) Outdoor, internally illuminated signs, including, but not limited to, awning/canopy signs, cabinet signs (whether freestanding or building mounted), changeable copy panels or service island signs, shall be constructed with an opaque background and translucent letters and symbols, or with a colored background and lighter letters and symbols. Where white or other night bright colors are part of a logo, such colors are permitted in the logo only, provided that such logo shall represent not more than 50 percent of the total sign area permitted. Colors considered to be "night bright," as used in this subsection, are defined with reference to the color wheel attached to Ordinance No. 12-02-01 and on file in the city secretary's office.

(Ord. No. 12-02-01, § IX)

Sec. 14-393. - Exhibits.

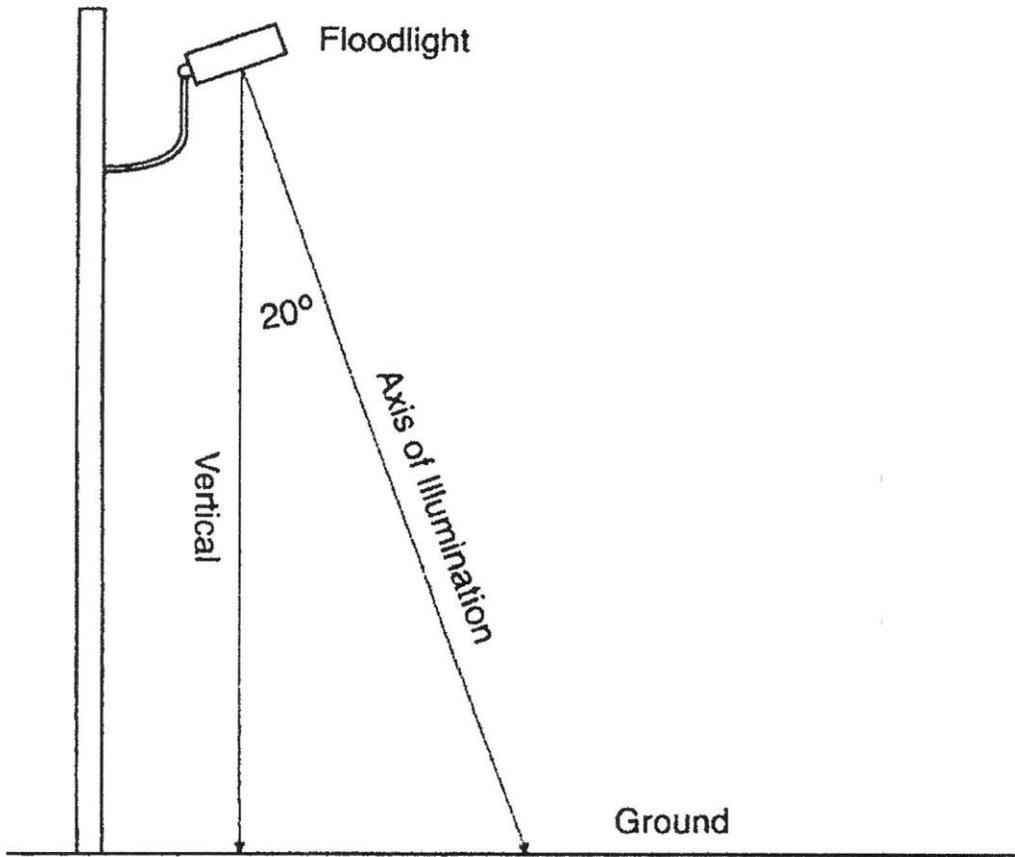


EXHIBIT 1: See Ordinance to Improve Outdoor Lighting in the Town of Pecos City, Section III, Existing Outdoor Light Fixtures: For spotlights and floodlights mounted overhead on poles and used for area lighting, the axis of illumination shall be adjusted to an angle not more than 20 degrees from the vertical line between the fixture and the ground.

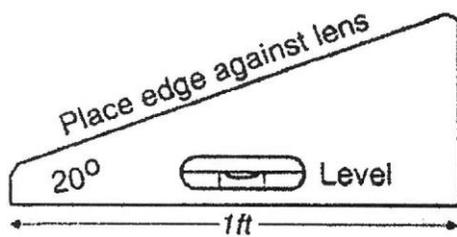
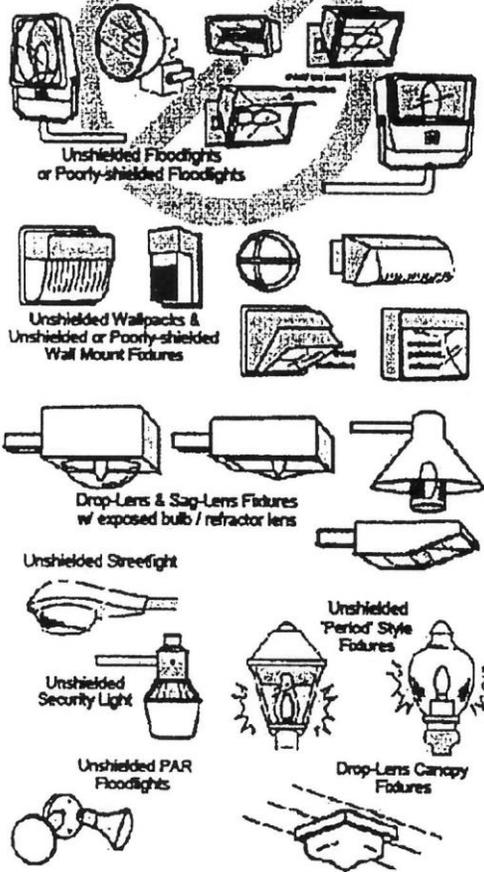


EXHIBIT 2: A tool for aiming lights as in Exhibit 1. Place the upper edge of the tool against the lens and adjust the fixture so the bubble shows level.

Examples of Acceptable / Unacceptable Lighting Fixtures

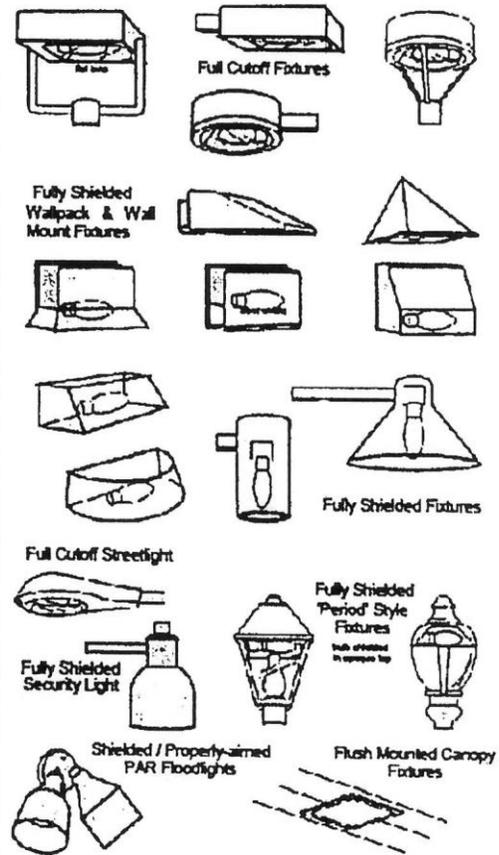
Unacceptable / Discouraged

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



IC 1042

EXHIBIT 3

;adv=9;(Ord. No. 12-02-01)