

ARTICLE VII. - OUTDOOR LIGHTING

Footnotes:

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Editor's note— Ord. No. 2010-06-01, adopted Sept. 7, 2010, deleted the former Art. VII, §§ 18-231—18-237, and enacted a new Art. VII as set out herein. The former Art. VII pertained to outdoor lighting and derived from Ord. No. 2000-4-2, §§ 1—7, adopted 5-23-00.

Sec. 18-231. - Title, purpose and scope.

- (a) This article shall be known and cited as the "Outdoor Lighting Ordinance."
- (b) The purpose of this article is:
 - (1) To provide safer, more efficient and attractive outdoor lighting;
 - (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.
- (c) This article shall apply within the city, hereinafter referred to as city, and within the surrounding areas where the city asserts powers of extraterritorial jurisdiction.

(Ord. No. 2010-06-01, (exh. A), 9-7-10)

Sec. 18-232. - Definitions.

- (a) The following definitions are hereby adopted for the purposes of this article:

Area lighting means light fixtures located on public or private property that are designed 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 those outdoor light fixtures already installed at the time this article is adopted.

Foot candle (fc) means the illuminance measured one foot from a one candela source.

Floodlight means a light fixture having a wide beam.

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 and vertical foot candles 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 source of light.

Light fixture means the assembly that holds 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 unit of luminous flux, the total amount of light falling uniformly on or passing through an area of one square foot, each point of which is one foot from a one candela source, yielding an illuminance of one foot candle at that distance (the output of lamps and bulbs is customarily measured in lumens, a common 100 watt incandescent light bulb, for example, having an output less than 1,800 lumens).

Private lighting means outdoor light fixtures 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 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.

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

(Ord. No. 2010-06-01, (exh. A), 9-7-10)

Sec. 18-233. - Existing outdoor light fixtures.

- (a) To reduce glare, safety hazards for drivers and pedestrians, light trespass, and light pollution, all existing spotlights, floodlights, and wallpacks will 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 will be adjusted to an angle not more than 20 degrees from the vertical line between the fixture and the ground (see Exhibits 1 and 2 of [section 18-240](#)).
 - (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 will be adjusted to minimize the amount of light escaping above, below, and to the sides of the illuminated object.
 - (3) Wallpacks will be shielded or replaced with full cut off wallpacks.

(b) It will be the responsibility of the city to publish this article in the newspaper of record and to disseminate the ordinance [this article] by other appropriate means; to make its best efforts, when possible, to identify those spotlights, floodlights, and wallpacks requiring adjustment; and, as time permits, to inform their owners of the provisions, including owners' right to apply for Dark Sky Fund assistance.

(1) Any required adjustments should be completed within six months from the date of the adoption of the lighting ordinance or as soon as possible. Any owner who fails to comply with these provisions may be issued a warning notice. Any owner who further fails to comply after 30 days from the issuance of such warning notice may be subject to a fine of \$25.00 for each day of noncompliance, unless the city council grants a waiver or variance.

It is not the intent of this article to require an additional investment in order to comply with these provisions. Persons needing assistance to purchase light fixtures to comply with this article may apply for assistance from the Dark Sky Fund.

(c) All existing exterior lighting shall comply, if possible, with this lighting ordinance [this article] on or before January 1, 2015. All new construction shall comply after the adoption of this article.

(d) 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. 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. 2010-06-01, (exh. A), 9-7-10)

Sec. 18-234. - New light fixtures installed after the adoption of this article, 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, will be shielded as well as is practicable to reduce glare, safety hazards, light trespass, and light pollution; will provide levels of illuminance consistent with nationally recognized Illuminating Engineering Society of North America (IESNA) standards; and will be operated on a schedule that coincides with scheduled events. This article does not prohibit existing public facility use.

(b) No lighting of towers and associated facilities is allowed, except by permit, except for flagpoles and except as required by the Federal Aviation Administration or other federal or state agency. In coordination 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.

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) All outdoor lighting fixtures shall be full cutoff fixtures (see Exhibit 3 of [section 18-240](#)).
 - (1) New streetlights shall be full cutoff fixtures of approved historical design, utilizing a minimum output consistent with the safety of drivers and pedestrians.
 - (2) Sag-lens or drop lens fixtures are prohibited.
 - (3) 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.
 - (4) Light trespass is defined as 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 will evaluate the complaint. Where light trespass is found to occur, the city will 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.
- (d) In the interest of conserving energy and protecting the environment, mercury vapor fixtures are prohibited.
- (e) Each flag shall be lighted by one spotlight emitting no more than 1,800 lumens.

(Ord. No. 2010-06-01, (exh. A), 9-7-10)

Sec. 18-235. - Maximum maintained levels of illuminance required or permitted at specific facilities.

- (a) Maximum, average, and minimum levels of illuminance (maintained) for different facilities are listed below in horizontal foot candles. 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 0.2fc.
 - (2) Entry areas near buildings: maximum 5.0 fc.
 - (3) Service stations and other fueling facilities: maximum 10 fc in the area surrounding pump islands; parking areas and entry areas shall be lighted as required in subsections (a)(1) and (a)(2) of this section; drop-lens fixtures are prohibited, whether mounted under canopies or on poles.
 - (4) Sales lots where merchandise, including automobiles, is displayed at night: maximum 15 fc.
- (b) For locations and facilities not specified herein, the city council may set acceptable levels of illuminance upon request based on guideline established by the IESNA.
- (c) The use of searchlights is prohibited for advertising, attracting attention to any event, and for any other use except for emergency purposes.

(Ord. No. 2010-06-01, (exh. A), 9-7-10)

Sec. 18-236. - 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 city. 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 lighting plan shall be reviewed by the city building official, taking into account factors, including but not limited to, levels of illuminance, luminance, glare, safety hazards, light trespass, and light pollution. The building official may seek input from community members knowledgeable about outdoor lighting during the review process. The building official 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. 2010-06-01, (exh. A), 9-7-10)

Sec. 18-237. - 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 the 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, or government sports facilities.
- (b) This article 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-Sky Association, if the council wishes to do so.
- (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 city council may grant variances in the application of the provisions of this article.

(Ord. No. 2010-06-01, (exh. A), 9-7-10)

Cross reference— Streets, sidewalks, and other public places, ch. 86.

Sec. 18-238. - Notification.

All building permit applicants will be notified of the city lighting ordinance [this article].

(Ord. No. 2010-06-01, (exh. A), 9-7-10)

Sec. 18-239. - 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 p.m. or when the use or activity closes, whichever is later.

- (b) *Internal illumination.* 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 provision, are defined with reference to the color wheel below. Existing signs may be grandfathered in, or not subject to change as determined by the city council. If existing signs are damaged more than 50 percent, they will need to comply with the standards in this article.



Color Wheel "A" Sign Background - Color Wheel "B" Logo Color

(Ord. No. 2010-06-01, (exh. A), 9-7-10)

Sec. 18-240. - Exhibits.

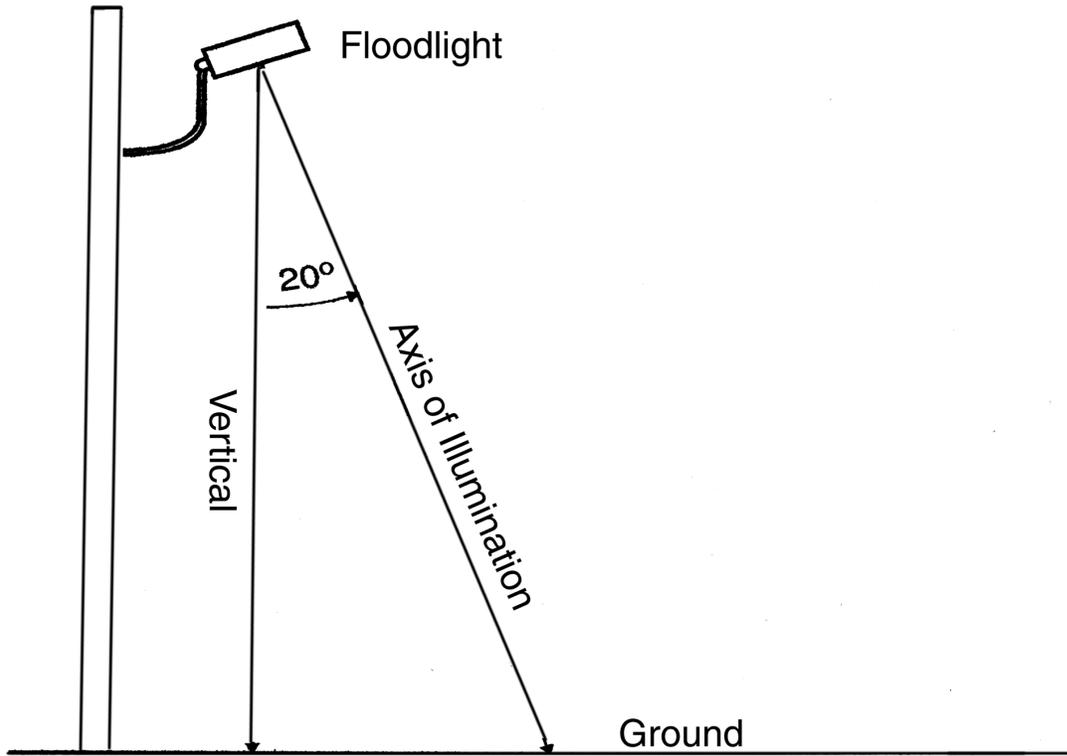


Exhibit 1. See [subsection 18-233(a)(1) of this article]: For spotlights and floodlights mounted overhead on poles and used for area lighting the axis of illumination shall be adjusted to an angle not more than 20 degrees from the vertical line between the fixture and the ground.

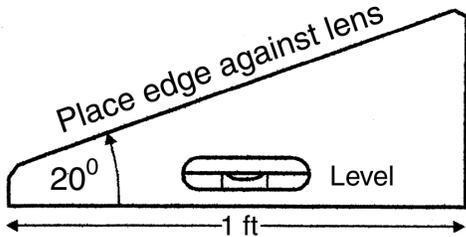


Exhibit 2. A tool for aiming lights as in Exhibit 1, above. Place the upper edge of the tool against the lens, and adjust the fixture so the bubble shows level.

Exhibit 3. Unacceptable Fixtures and Acceptable Fixtures

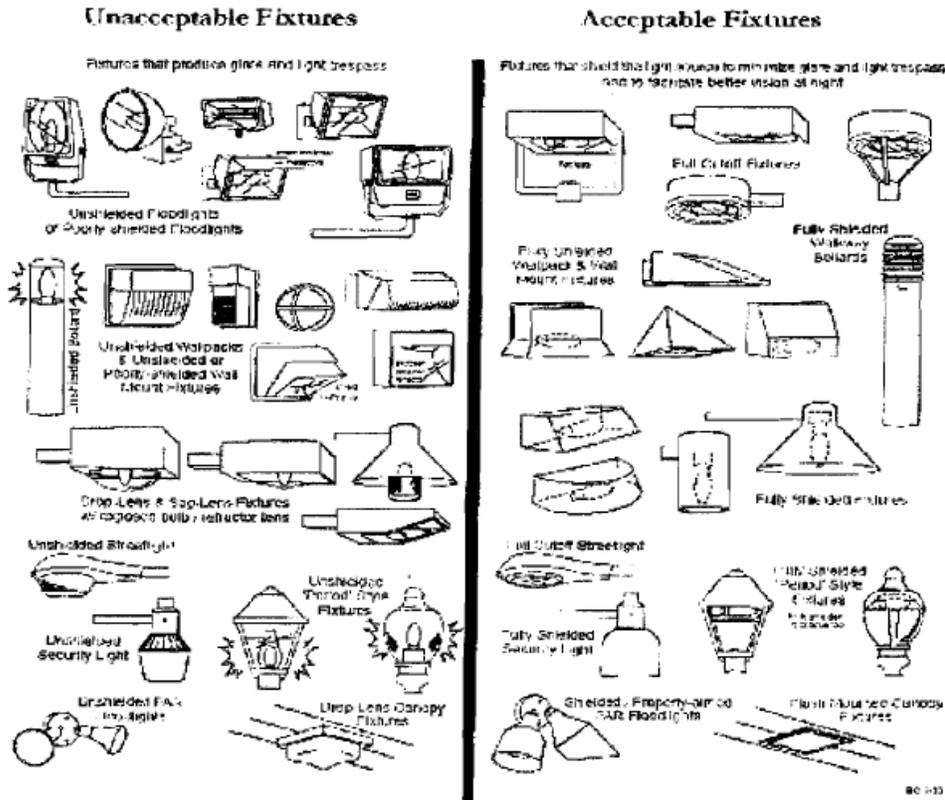
AN ORDINANCE TO IMPROVE OUTDOOR LIGHTING

City of Alpine, Texas

Proposed changes to the City of Alpine lighting ordinance adopted in 2000 are designed to benefit residents and businesses in Alpine by constituting better nighttime visibility, public safety, energy efficiency, and preservation of the natural night environment. Please refer to [this article] for the complete Outdoor Lighting Ordinance. To reduce the economic impact to the community a Dark Sky Fund that is funded by private and public donations has been created.

The goal is not to turn off lights at night but direct it to where it is wanted and prevent it from being wasted into the night sky.

*Note: Recommended illumination levels established by Illuminating Engineering Society of North America shall be observed. When taking out an electrical permit, provide an isofootcandle plot and fixture 'cut sheet' for proposed lighting along with permit application.



(Ord. No. 2010-06-01, (exh. A), 9-7-10)

Secs. 18-241—18-250. - Reserved.