

DIVISION 310 LIGHTING REGULATIONS

Sec. 310-010 Purpose and Intent

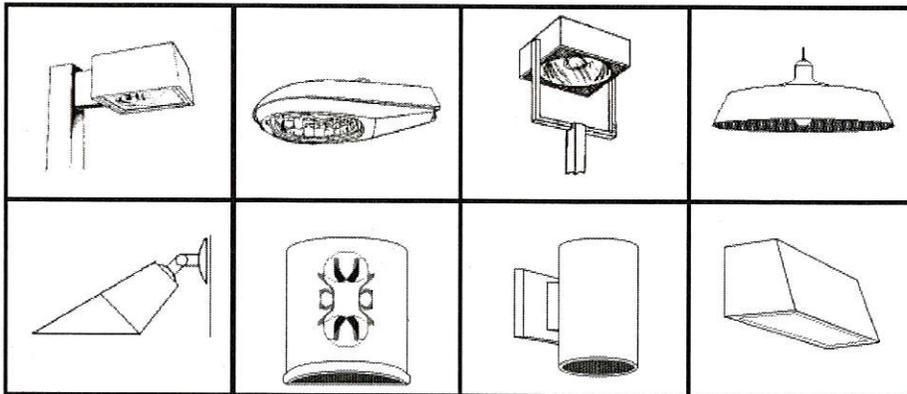
The purpose and intent of this Division is to appropriately regulate outdoor lighting in Oldham County to minimize the effects of light pollution, glare, and light trespass, to save energy, and to provide a safe nighttime environment for pedestrians, motorists, and properties while protecting the public's ability to view the night sky.

Sec. 310-020 Applicability

The lighting regulations contained herein shall apply to all exterior lighting and to interior lighting to the extent that it impacts the outdoor environment including lighted signs. In the event of conflict between the regulations set forth in this Division and any other applicable regulations, the more stringent limitation and requirement shall govern.

Sec. 310-030 Definitions

1. **Foot-Candle:** A quantitative unit of measurement equal to one lumen per square foot measured at ground level.
2. **Fully-Shielded Light Fixture (also known as Full Cutoff):** A light fixture constructed in such a manner that all light emitted by the fixture, either directly from the lamp or a diffusing element, or indirectly by reflection or refraction from any part of the fixture, is projected below the horizontal plane. The following are examples of fully-shielded light fixtures:



3. **Glare:** The effect produced by a light source within the visual field that is sufficiently brighter than the level to which the eyes are adapted, to cause annoyance, discomfort or loss of visual performance and ability.
4. **IESNA:** The Illuminating Engineering Society of North America, a non-profit professional organization of lighting specialists that has established recommended design standards for various lighting applications.
5. **Illuminance:** The area density of the luminous flux incident at a point on the surface. It is a measure of light incident on a surface, expressed in lux or foot-candles.

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6. Light Fixture (Luminaire): A complete lighting unit consisting of a lamp or lamps and ballasting (when applicable) together with the parts designed to distribute the light, to position and protect the lamps, and to connect the lamps to the power supply.
7. Light Pollution: Any adverse effect of manmade lighting; light where it is not needed or wanted; and wasted light.
8. Light Trespass: Light from an artificial light source that is intruding into an area where it is not wanted or does not belong.
9. Lumen: A quantitative unit measuring the amount of light emitted by a light source.

Sec. 310-040 General Requirements:

All public and private outdoor lighting shall meet the following standards:

1. Light fixtures, except as otherwise permitted herein, are required to be fully shielded (full cutoff). Fully-shielded light fixtures result in a light distribution pattern where no light is permitted at or above a horizontal plane at the bottom of the fixture.
2. Light fixtures shall be installed and maintained in a manner consistent with the intended application and as approved in the lighting plan. Fully-shielded light fixtures may not be tilted or aimed in a manner that results in light distribution above the horizontal plane.
3. Lighting associated with canopies, including but not limited to fuel islands, seasonal outdoor sales areas, shopping malls, theaters, drive-through bays of any kind, hotels and pavilions shall meet the following additional standards:
 - a. All light fixtures mounted on or recessed into the lower surface of canopies shall be fully shielded and utilize flat lenses;
 - b. All light emitted from the canopy shall be substantially confined to the ground directly beneath the perimeter of the canopy.
 - c. The level of lighting shall not exceed fifty (50) foot-candles at any point beneath a canopy.
 - d. No lighting of any kind, except as permitted by sign regulations, shall be allowed on the top or sides of a canopy.
4. Exterior sports or recreational facilities (public or private) may use any light fixtures permitted by this Division provided all of the following conditions are met:
 - a. Light fixtures shall be fully shielded.
 - b. The height of the post shall not exceed 50 feet.
 - c. All lights used for the purpose of illuminance of the playing area shall be turned off following the conclusion of the final event of the night. The remainder of the facility lighting, except for reasons of security, shall be turned off within one hour after the event and remain extinguished until one hour prior to the commencement of the next event.
 - d. Illumination of any playing area within five-hundred (500) feet of any residential use shall not be permitted between 11:00 p.m. and 7:00 a.m. unless an event normally expected to end before 11:00 p.m. is prevented from concluding at such time due to specific circumstance.
 - e. Exterior sports or recreational facilities shall submit a lighting plan for review and approval by the Planning and Zoning Commission. The plan shall document the effect of lighting on adjacent residential areas. The Planning and Zoning

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Commission may require modification of the lighting plan or impose conditions on its approval as necessary to mitigate the impacts of the lighting.

5. Illuminance of a parking lot shall meet the following additional conditions:
 - a. Light fixtures shall be fully shielded.
 - b. The use of horizontal lamps is recommended for pole mounted light fixtures in parking lots.
 - c. The maximum parking lot pole height (includes base and fixture) shall be:
 - i. 24 feet when fixture is located within 75 feet of the site's boundary; and
 - ii. 40 feet when the fixture is located beyond 75 feet from the site's boundary provided that for mounting heights in excess of 24 feet, the distance of the fixture to the site's boundary is not less than three times the mounting height.
 - iii. 14 feet when a non-residential property is adjacent to a residential or agricultural zoning district or use.
 - d. A maximum of two light fixtures per pole is recommended for parking lots not exceeding two hundred (200) stalls except for perimeter lighting, which should be limited to one fixture per pole.
 - e. When a parking lot adjoins a residential zoning district or residential use, all light fixtures shall be fitted with shielding on the residential side to reduce the impact of light trespass and glare.
 - f. Illumination Levels: Open parking lots should be lit to meet current standards issued by the Illuminating Engineering Society of North America (IESNA). The following guidelines should be used:

	Highest Activity Levels	Medium Activity Levels	Low Activity Levels
Typical Activities	<i>fast food restaurants gas stations convenience stores cultural/institutional facilities</i>	community shopping centers hospital parking areas educational facilities banks, other services	local merchants industrial employee parking multi-family parking lots
Average maintained illumination levels	2.0-3.0 footcandles	1.0-2.0 footcandles	.05-1.0 footcandles
Uniformity Ratios	3:1 average/minimum (.66 f.c minimum) 12:1 maximum/minimum (8.0 f.c. maximum)	3:1 average/minimum (.33 f.c minimum) 12:1 maximum/minimum (4.0 f.c. maximum)	4:1 average/minimum (.125 f.c minimum) 15:1 maximum/minimum (2.5 f.c. maximum)
Maximum light at property boundary adjoining a residential zoning district or lot containing a residential use	0.5 (one-half) footcandle	0.5 (one-half) footcandle	0.5 (one-half) footcandle
Maximum light at property boundary adjoining a nonresidential zoning district or lot containing a nonresidential use or at the right-of-way line	1 .0 footcandle	1 .0 footcandle	1 .0 footcandle

6. Illumination of a building façade to enhance architectural features may be permitted. Downlighting is preferred, provided wall-mounted fixtures are used and illuminance is contained completely within the vertical face of the building and does not spill off the building edge. Uplighting may be permitted provided no illuminance escapes the façade. Building facades may be illuminated to a maximum of 20 foot-candles as measured on the

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- façade. Lights mounted on poles for the purpose of illuminating the building façade are not permitted.
7. Pedestrian facilities (sidewalks, paths, etc.) including area leading from a building to parking facilities shall not exceed an average lighting level of two and one-half (2.5) foot-candles. Light fixtures for pedestrian facilities shall not be mounted higher than fifteen (15) feet from the finished grade of the walking surface.
 8. Bollards, or similar light fixtures that do not exceed four feet in height, intended to illuminate landscape features or walkways, may be permitted as part of the overall lighting plan. The total combination of lamps shall not exceed 900 lumens per bollard or light fixture. A maximum of two fixtures per bollard and one lamp per fixture is recommended.
 9. Illumination of a flag on a flagpole is permitted provided a narrow spread light fixture is used and aimed to only illuminate the top of the flagpole. The top of the light fixture must be shielded in a manner so as not to be visible from adjoining properties.
 10. The source of light from any fixture, including interior fixtures visible through windows, shall not create disability glare on adjoining properties.
 11. All lights, except those required for security as provided herein, shall be reduced to security levels within one hour after the end of business until one hour prior to the commencement of business. Security lighting at entrances, stairways and loading docks, as well as limited parking lot lighting, is permitted. The use of motion sensors for security lighting is strongly encouraged. Security lighting shall comply with all applicable provisions contained herein.
 12. The level of lighting resulting from light fixtures installed on a subject site shall not exceed:
 - a. one-half (0.5) foot-candle at any property line adjoining a residential zoning district or a lot containing a residential use; and/or
 - b. one (1.0) foot-candle at any property line adjoining a nonresidential zoning district or lot containing a nonresidential use or at the right-of-way line.
 - c. Maximum of eight (8.0) footcandles anywhere on site.
 13. If the existing light level at any property boundary exceeds the maximum footcandle prior to the development of a site, then the level of lighting resultant from luminaries installed on that site shall not increase the light level at the property boundary by more than one-half footcandle.

Sec. 310-050 Exceptions

1. Airport lighting for air traffic control and warning purposes. All other lighting at airports, including that used for loading areas, hangars, terminal aprons, parking areas, etc., shall conform to all applicable standards of this Division.
2. Traffic lights and other lighting for public safety on streets and ways.
3. Temporary use of low-wattage lighting for public festivals or events, and the observance of holidays.
4. Lighting required temporarily for emergency purposes or repairs in the right-of-way.
5. Lighting of less than 2,400 lumens (2,400 lumens is equal to about 180 watts of an incandescent lamp; and about 28 watts of a high-pressure sodium lamp) per fixture for single-family detached residential areas and agriculture areas, except as prohibited herein.

Sec. 310-060 Sign Lighting

1. All signage must comply with the sign regulations in the Oldham County Comprehensive Zoning Ordinance.
2. All lighted signs shall also comply with the provisions of this Division.

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3. Signs may be internally illuminated, backlit, or illuminated by downlighting or by ground-mounted light fixtures that illuminate the sign face and base only.
4. Illumination of the sign face by ground-mounted light fixtures shall not exceed 50 foot-candles as measured on the sign face.
5. It is suggested that the design of internally illuminated cabinet signs consist of lighter lettering on a darker background in order to maximize visibility.

Sec. 310-070 Prohibited Lighting:

The following is a list of lighting that is prohibited except when used by civil authorities for public safety, health and welfare.

1. Blinking, flashing or changing intensity lights including those proposed for signage.
2. Lighting of a type, style, or intensity determined to interfere with the safe flow of traffic.
3. Strobe lights, searchlights, beacons and laser light, or similar upward- or outworking-oriented lighting.
4. Exposed neon, exposed LED, or similar exposed lighting.
5. Lighting creating a public hazard, including lighting that creates disability glare, particularly where such disability glare has a detrimental effect on motor vehicle traffic.
6. Light fixtures mounted on poles for the purpose of illuminating the building façade.
7. High-intensity floodlighting except as approved for sports facility lighting.
8. Fixtures with drop or sag lens lighting.
9. Any lighting that shines directly on an adjoining property.

Sec. 310-080 Lighting Plan Requirements

The Planning and Zoning Commission may seek assistance from a professional lighting engineer to evaluate lighting plans. The applicant shall pay costs associated with such a review.

Category 1 Development Plan

Prior to the approval of any Category 1 Development Plan, the applicant shall submit a lighting plan that complies with the provisions of this division. Compliance with the approved lighting plan shall be determined following a site inspection that includes field verification of light levels.

A lighting plan shall be depicted on a site plan, indicating the location of each current and proposed outdoor lighting fixture and include the following:

1. Identification of all light fixture locations including notations on whether they are pole-, ground- or building-mounted.
2. Mounting height with distance noted to the nearest property line for each luminaire.
3. Elevation of the poles and fixtures, and position of the lamp within the fixture.
4. Type and number of luminaire fixtures. A copy of the manufacturers catalog sheet, which includes photographs of the fixtures, including the certified cut-off characteristics, product number, and IESNA-type description.
5. Lamp source type (bulb type, i.e. high pressure sodium), lumen output, and wattage for each fixture.
6. Description of light-level-reduction controls for each fixture or grouping of fixtures and resulting after-hours light levels.
7. A note stating that no substitutions, additions, or changes may be made without prior approval of Oldham County Planning & Development Services.

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8. Such additional information as the Planning and Zoning Administrator may determine is necessary to ensure compliance with this Division.

Category 2 & 3 Development Plan

Prior to the approval of any Category 2 and 3 Development Plan, Non-residential use abutting a residential or agricultural use, or Multi-family Preliminary Plan, the applicant shall submit a photometric plan that complies with the provisions of this division. Submittal and drawings shall be signed by a licensed professional engineer or architect taking responsibility for the design. The name and company information for the plan preparer shall be clearly stated on the submittal drawings. Compliance with the approved photometric plan shall be determined following a site inspection that includes field verification of light levels.

A photometric plan shall be depicted on a site plan, indicating the location of each current and proposed outdoor lighting fixture, and include the following:

1. Footcandle distribution, plotting the light levels in footcandles on the ground for the entire lot and at least ten feet beyond the project property lines, at the designated mounting heights for the proposed fixtures. Maximum illuminance levels should be expressed in the footcandle measurements on a grid of the site showing footcandle readings in every five or ten-foot square. The grid shall include light contributions from all sources (i.e. pole mounted, wall mounted, sign, and street lights).
2. Identification of all light fixture locations including notations on whether they are pole-, ground- or building-mounted.
3. Mounting height with distance noted to the nearest property line for each luminaire.
4. Total square feet of areas to be illuminated.
5. The plan must include a key to the proposed lighting that provides the following information:
 - a. Type and number of luminaire fixtures. A copy of the manufacturers catalog sheet, which includes photographs of the fixtures, including the certified cut-off characteristics, product number, and IESNA-type description.
 - b. Lamp source type (bulb type, i.e. high pressure sodium), lumen output, and wattage for each fixture.
 - c. Elevation of the poles and fixtures, and position of the lamp within the fixture.
 - d. Description of light-level-reduction controls for each fixture or grouping of fixtures, proposed hours when each fixture will be operated, and resulting after-hours light levels.
6. Photometric calculations providing the following statistics:
 - a. Average to minimum;
 - b. Uniformity ratio of maximum to minimum;
 - c. Average foot-candles;
 - d. Minimum footcandles;
 - e. Maximum footcandles.
7. A note stating that no substitutions, additions, or changes may be made without prior approval of Oldham County Planning & Development Services.
8. Such additional information as the Planning and Zoning Administrator may determine is necessary to ensure compliance with this Division.

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Sec. 310-090 Inspections of Site, Building or Sign Lighting Installation

1. When inspecting light fixtures the inspector shall do a visual evaluation to determine whether the fixture meets the requirements established in the provisions of this Division.
2. When inspecting light trespass complaints, the inspector shall use an IESNA approved instrument to take a foot-candle reading to determine whether the light brightness exceeds the standards. The inspector shall stand at the property line and hold the detector approximately three (3) feet off the ground. The average of the vertical and horizontal measurements shall be used to determine compliance with applicable standards.

Sec. 310-100 Nonconforming Uses

No light fixture which was lawfully installed prior to the enactment of this Division shall be required to be removed or modified except as expressly provided herein. However no modification or replacement shall be made to a nonconforming fixture unless the fixture thereafter conforms to the provisions of this Division. In the event that an outdoor lighting fixture is abandoned (discontinuation of use for a period of six months) or is damaged to the point of requiring repairs for safe operation, the repaired or replacement fixture shall comply with the provisions of this Division.

Sec. 310-110 Permits and Waivers

Upon application, the Planning and Zoning Commission may grant a waiver of requirements of this Division.

