CHAPTER 19 OUTDOOR LIGHTING

Article 19-1 ADMINISTRATION

19-1-1 Purpose
19-1-2 Conformance with Applicable Codes
19-1-3 Approved Material and Methods of Installation

Section 19-1-1 Purpose

This ordinance is intended to restrict the permitted use of outdoor artificial illuminating devices emitting undesirable rays into the night sky which have a detrimental effect on astronomical observations.

Section 19-1-2 Conformance with Applicable Codes

All outdoor artificial illuminating devices shall be installed in conformance with the provisions of this chapter and any building ordinances which may hereafter be enacted, as applicable.

Where any provisions of any of the Arizona State Statutes, any of the Federal laws, or any other law of this code conflicts with the requirements of this chapter of the code, the most restrictive provision shall govern.

Section 19-1-3 Approved Material and Methods of Installation

The provisions of this chapter are not intended to prevent the use of any material or method of installation not specifically prescribed by this chapter provided any such alternate has been approved. The building inspector may approve any such alternate provided that he finds that the proposed design, material, or methods:

A. Provides approximate equivalence to those specific requirements of this chapter; or

B. Is otherwise satisfactory and complies with the intent of the chapter.
Section 19-2-1  Outdoor Lighting Fixtures

Outdoor artificial illuminating devices, outdoor fixtures, lamps and other devices, permanent or portable, used for illumination or advertisement. Such devices shall include, but are not limited to search, spot, or flood lights for:

A. Buildings and structures.
B. Recreational areas.
C. Parking lot lighting.
D. Landscape lighting.
E. Billboards and other signs (advertising or other).
F. Street lighting.

Section 19-2-2  Individual

Shall mean any private individual, tenant, lessee, owner, or any commercial entity including but not limited to companies, partnerships, joint ventures, or corporations.

Section 19-2-3  Installed

Shall mean the initial installation of outdoor light fixtures defined herein, following the effective date of this chapter, but shall not apply to those outdoor light fixtures installed prior to such date.
19-3-1 OUTDOOR LIGHTING 19-3-3

Article 19-3 GENERAL REQUIREMENTS

19-3-1 Shielding
19-3-2 Filtration
19-3-3 Requirements for Shielding and Filtering

Section 19-3-1 Shielding

All exterior illuminating devices, except those exempt from this chapter and those regulated by Section 19-4-3 shall be fully or partially shielded as required in Section 19-3-3.

A. "Fully Shielded" shall mean that those fixtures shall be shielded in such a manner that light rays emitted by the fixture, either directly from the lamp or indirectly from the fixture, are projected below a horizontal plane running through the lowest point on the fixture where light is emitted.

B. "Partially Shielded" shall mean that hose fixtures shall be shielded in such a manner that the bottom edge of the shield is below the plane center line of the light source (lamp), minimizing light above the horizontal.

Section 19-3-2 Filtration

A. Those outdoor light fixtures requiring a filter in Section 19-3-3 shall be equipped with a filter whose transmission is less than five percent (5%) total emergent flux at wavelengths less than thirty-nine hundred (3900) angstroms. Total emergent flux is defined as that between 3000 and 7000 angstrom units.

B. It is recommended that existing mercury vapor fixtures shall be equipped with a filter whose transmission is less that 10 percent total emergent flux at wavelengths less than forty-four hundred (4400) angstroms. Total emergent flux is defined as that between 3000 and 7000 angstrom units, or replaced.

C. Low Pressure Sodium lamps are the preferred lamp for minimizing adverse effects on astronomical observations.

Section 19-3-3 Requirements for Shielding and Filtering

The requirements for shielding and filtering light emission from outdoor light fixtures shall be as set forth in the following table:
## REQUIREMENTS FOR SHIELDING AND FILTERING

<table>
<thead>
<tr>
<th>FIXTURE LAMP TYPE</th>
<th>SHIELDED</th>
<th>FILTERED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Pressure Sodium</td>
<td>Partially</td>
<td>None</td>
</tr>
<tr>
<td>High Pressure Sodium</td>
<td>Fully</td>
<td>None</td>
</tr>
<tr>
<td>Metal Halide (6)</td>
<td>Fully</td>
<td>Yes</td>
</tr>
<tr>
<td>Fluorescent</td>
<td>Fully</td>
<td>Yes</td>
</tr>
<tr>
<td>Quartz (3)</td>
<td>Fully</td>
<td>None</td>
</tr>
<tr>
<td>Incandescent</td>
<td>Fully</td>
<td>None</td>
</tr>
<tr>
<td>Greater than 150W</td>
<td>Fully</td>
<td>None</td>
</tr>
<tr>
<td>Mercury Vapor</td>
<td>Fully (7)</td>
<td>Yes</td>
</tr>
<tr>
<td>Fossil Fuel</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Glass Tubes</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>filled with Neon, Argon, Krypton</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Sources</td>
<td>AS APPROVED BY THE BUILDING INSPECTOR</td>
<td></td>
</tr>
</tbody>
</table>

Footnotes:

1. This is the preferred light source to minimize undesirable light into the night sky affecting astronomical observations.

2. Warm White and Natural Lamps are preferred to minimize detrimental effects.

3. For the purposes of this chapter, quartz lamps shall not be considered an incandescent light source.

4. Most glass, acrylic, or translucent enclosures satisfy these filter requirements.

5. Outdoor advertising signs of the type constructed of translucent materials and wholly illuminated from within do not require shielding.

6. Metal halide display lighting shall not be used for security lighting after 11 p.m. (or after closing hours if before 11 p.m.) unless fully shielded. Metal halide lamps shall be in enclosed luminaries.
7. Recommended for existing fixtures. The installation of mercury vapor fixtures is prohibited effective 90 days after the date of adoption of this chapter.
Article 19-4  PROHIBITIONS

19-4-1  Searchlights
19-4-2  Recreational Facility
19-4-3  Outdoor Building Illumination
19-4-4  Mercury Vapor

Section 19-4-1  Searchlights

The operation of searchlights for advertising purposes is prohibited.

Section 19-4-2  Recreational Facility

No outdoor recreational facility, public or private, shall be illuminated by nonconforming means after 11 p.m. except to conclude a specific recreational or sporting event or any other activity conducted at a ball park, outdoor amphitheater, arena, or similar facility in progress prior to 11 p.m.

Section 19-4-3  Outdoor Building or Landscaping Illumination

The unshielded outdoor illumination of any building, landscaping, signing or other purpose, is prohibited except with incandescent fixtures less than 500 watts.

Section 19-4-4  Mercury Vapor

The installation of mercury vapor fixtures is prohibited effective ninety days after the date of adoption of this chapter by ordinance.
Article 19-5 PERMANENT EXEMPTIONS

19-5-1 Nonconforming Exemptions
19-5-2 Fossil Fuel Light
19-5-3 Federal and State Facilities
19-5-4 Special Exemptions

Section 19-5-1 Nonconforming Fixtures

All outdoor light fixtures existing and fully installed prior to the effective date of the adoption of this chapter by ordinance may remain "nonconforming" indefinitely; provided, however, that no change in use, replacement, structural alteration, or restoration after abandonment of outdoor light fixtures shall be made unless it thereafter conforms to the provisions of these regulations.

Section 19-5-2 Fossil Fuel Light

Produced directly or indirectly by the combustion of natural gas or other utility-type fossil fuels.

Section 19-5-3 Federal and State Facilities

Those facilities and lands owned, operated, or protected by the U.S. Federal Government or the State of Arizona are exempted by law from all requirements of this ordinance. Voluntary compliance with the intent of this ordinance at those facilities is encouraged.

Section 19-5-4 Special Exemptions

The building inspector may grant a special exemption to the requirements of Section 19-3-3 only upon a written finding that there are extreme geographic or geometric conditions warranting the exemption and that there are no conforming fixtures that would suffice.
Article 19-6

PROCEDURES FOR COMPLIANCE

19-6-1 Applications
19-6-2 Contents of Applications
19-6-3 Issuance of Permit
19-6-4 Amendment to Permit

Section 19-6-1 Applications

A. Any individual applying for a building or use permit intending to install outdoor lighting shall as a part of said application submit evidence that the proposed work will comply with this chapter.

B. All other individuals intending to install outdoor lighting fixtures shall submit an application to the building inspector providing evidence that the proposed work will comply with this chapter.

C. Utility companies entering into a duly approved contract with the City of Coolidge in which they agree to comply with the provisions of these regulations, shall be exempt from applying for and obtaining a permit for the installation of outdoor light fixtures, including residential security lighting.

Section 19-6-2 Contents of Application or Submission

The submission shall contain but shall not necessarily be limited to the following, all or part of which may be part of or in addition to the information required elsewhere in the building codes of the city upon application for the required permit:

A. Plans indicating the location on the premises, and the type of illuminating devices, fixtures, lamps, supports, other devices, etc.

B. Description of the illuminating devices, fixtures, lamps, supports, and other devices, etc. This description may include but is not limited to, manufactures catalog cuts, and drawings (including sections where required).

The above required plans and descriptions shall be sufficiently complete to enable the building inspector to readily determine whether compliance with the requirements of this chapter will be secured. If such plans and descriptions cannot enable this ready determination, by reason of the nature or configuration of the devices, fixtures or lamps proposed, the applicant shall submit evidence of compliance by certified test reports as performed by a recognized testing lab.
Section 19-6-3 Issuance of Permit

Upon compliance with the requirements of this chapter, the building inspector shall issue a permit for installation of the outdoor lighting fixtures, to be installed as in the approved application. In the event the application is part of the building permit application under the building code regulations, the issuance of the building permit will be made if the applicant is in compliance with this chapter as well as the other requirements for issuance pursuant to the building codes of the city. Appeal procedures of the building codes shall apply.

Section 19-6-4 Amendment to Permit

Should the applicant desire to substitute outdoor light fixtures or lamps after a permit has been issued, the applicant must submit all changes to the building inspector for approval, with adequate information to assure compliance with this chapter.
Article 19-7  TEMPORARY EXEMPTIONS

19-7-1 Request
19-7-2 Appeal for Temporary Exemption

Section 19-7-1  Request for Temporary Exemptions

Any individual as defined herein may submit a written request on a form prepared by the city to the building inspector for a 'temporary exemption' to the requirements of this chapter, such exemption to be valid for 30 days, renewable at the discretion of the city manager.

The Request for Temporary Exemption shall contain minimally the following listed information:

A.  Specific exemptions requested.
B.  Type and use of exterior light involved.
C.  Duration of time for requested exemption.
D.  Type of lamp and calculated lumens.
E.  Total wattage of lamp or lamps.
F.  Proposed location of exterior light.
G.  Previous temporary exemptions, if any.
H.  Physical size of exterior light and type of shielding provided.

In addition to the above data the building inspector may request any additional information which would enable him to make a reasonable evaluation of the Request for Temporary Exemption.

Section 19-7-2  Appeal for Temporary Exemption

The building inspector, within five days from the date of the properly completed Request for Temporary Exemption, shall approve or reject in writing the request.

If rejected, the individual making the request shall have the right of appeal to the city manager or the board of appeals for review pursuant to the procedures applicable to any other appeal of a decision of the building inspector.

Article 19-8  PENALTY

It is unlawful for any person to violate any of the provisions of this chapter.