

**UDO-286**  
**AN ORDINANCE AMENDMENT PROPOSED BY**  
**PLANNING AND DEVELOPMENT SERVICES STAFF REVISING**  
**CHAPTERS A AND B OF THE *UNIFIED DEVELOPMENT ORDINANCES***  
**TO CHANGE THE STANDARDS FOR OUTDOOR LIGHTING**

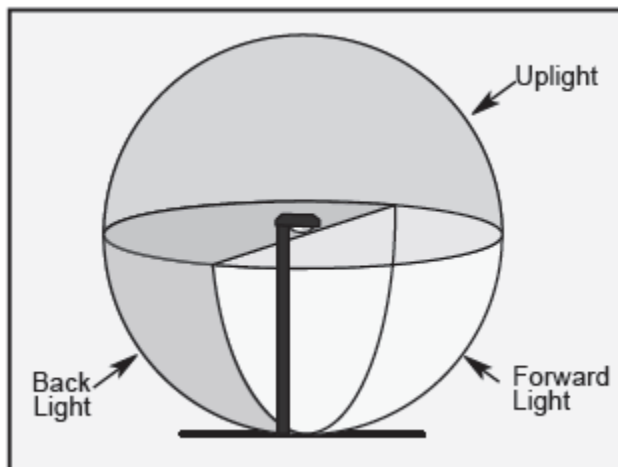
Be it ordained by the \_\_\_\_\_ that the *Unified Development Ordinances (UDO)* is hereby amended as follows:

**Section 1.** Chapter A – Definitions Ordinance, Article II – Definitions, is amended as follows:

## **Chapter A**

### **Article II – Definitions**

**Backlight.** For an exterior light fixture, lumens emitted in the quarter sphere below horizontal and in the opposite direction of the intended orientation of the fixture. For fixtures with symmetric distribution, backlight will be the same as front or forward light.



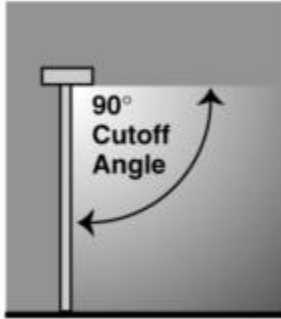
*a diagram showing backlight, uplight, and forward light [to be included in UDO]*

**BUG.** A light fixture classification system used by the lighting industry that rates a fixture's backlight (B), uplight (U) and glare (G).

**Candela.** A measure of light intensity which is useful in determining how much light is shining out of a fixture and in what direction.

**Footcandle.** The unit of measure of light received on a surface. One footcandle is the illuminance produced by a candle on a surface one foot square from a distance of one foot.

**Full Cutoff.** A light fixture classification where no light intensity is emitted at or above a horizontal plane drawn through the bottom of the fixture and no more than 10% of the lamp's light intensity is emitted at or above an angle 10 degrees below that horizontal plane.



*a diagram showing a full cutoff light fixture [to be included in UDO]*

**Glare.** Light entering the eye directly from lighting fixtures or indirectly from reflective surfaces that causes visual discomfort or reduced visibility.

**Temporary Lighting.** Lighting installed and operated for periods not to exceed 60 days, completely removed and not operated again for at least 30 days.

**Uplight.** For an exterior light fixture, lumens emitted at or above the horizontal plane.

**Section 2.** Chapter B - Zoning Ordinance, Article III – Other Development Standards, is amended as follows:

## **Chapter B**

### **Article III - Other Development Standards**

#### **3-11 - OTHER STANDARDS**

##### **3-11.1 - LIGHTING**

Where a bufferyard is required pursuant to Section B.3.5, outdoor lighting shall be so shielded and oriented as to cast no direct light onto adjacent property.

(A) Applicability:

- (1) The standards of this section shall apply to lighting for principal buildings submitted for permitting after [the adoption date of this ordinance] on zoning lots that are adjacent to a public street or to residential zoning, or lighting for outdoor recreation uses and stadiums as described in Section C, below.
- (2) This Section shall not apply to:
  - (a) The uses Residential Building, Single Family; Residential Building, Duplex; Residential Building, Twin Home; and Residential Building, Townhouse;
  - (b) Street lights in the public right-of-way;
  - (c) Airport runway and aviation safety lights required by the FAA; or

NOTE: Items to be deleted are indicated with a ~~strikeout~~; items to be added are indicated with an underscore.  
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(d) Temporary Lighting.

- (3) Where these standards conflict with the standards of the H (Historic) or HO (Historic Overlay) zoning districts, the standards for those districts shall take precedence.

(B) General Requirements

(1) Lighting Plan.

- (a) A lighting plan prepared by a Lighting Certified (LC) lighting professional or a professional engineer licensed in the state of North Carolina shall demonstrate that all exterior lighting is designed, located, and installed in such a manner that light levels measured at the residential property line and the public right-of-way do not exceed one-half (1/2) footcandle.
- i. Light Level Measurement... Light levels are specified, calculated, and measured in footcandles. All values are initial footcandles. Measurements shall be made at ground level with the light-registering portion of the meter held horizontally pointing up.
- (b) Prior to the issuance of a certificate of occupancy, the Lighting Certified (LC) lighting professional or professional engineer shall certify in writing that the lighting was installed per the approved plans.
- (2) Parking lot lighting shall utilize fixtures certified as a Full Cutoff or LED BUG-rated fixtures with an Uplight Rating of U0 and a maximum Glare Rating of G3.
- (3) Lights mounted on poles shall have a maximum pole height of thirty (30) feet.
- (4) Non-shielded wall packs and high-intensity light beams, such as outdoor searchlights, lasers, or strobe lights, are prohibited.
- (5) Routine maintenance of existing lighting, including changing the lamp, ballast, starter, photo control, fixture housing, lens, and other required components, is allowed for all existing fixtures. A lighting plan is not required for such changes.

(C) Lighting for Outdoor Recreation Uses and Stadiums....

- (1) In addition to the standards above, the following shall apply to:
- (a) The uses: Entertainment Facility, Large; Fishing, Fee Charged; Golf Driving Range; Recreation Services, Outdoor; Recreation Facility, Public; and Stadium, Coliseum, or Exhibition Building, as well as new accessory athletic fields and courts submitted for permitting after [the adoption date of this ordinance];
- (b) Lighting added to existing outdoor recreation uses, stadiums, and accessory athletic fields and courts that did not have lighting before [the adoption date of this ordinance].
- (2) Fixtures shall be fitted with the manufacturer's glare control package. If the manufacturer does not have a glare control package, the fixture specification shall be changed to a manufacturer that offers a glare control package.
- (3) Fixtures shall be designed with a sharp cutoff and aimed so that their beams fall within the primary playing area and immediate surroundings, so that off-site direct illumination and glare are significantly restricted.
- (4) The maximum pole height of an outdoor recreation lighting source shall be eighty (80) feet unless approved by the Assistant City Manager for Public Works or Designee after being determined that the lighting will have no significant adverse effect on surrounding property.
- (5) The lighting plan shall demonstrate that the max candela per fixture does not exceed 7,500 candela at a distance of 150 feet from the edge of the playing field.
- (6) New lighting fixtures for existing outdoor recreation uses, stadiums, and accessory athletic fields and courts installed after [the adoption date of this ordinance] shall follow

the standards above only if they change from conventional lighting fixtures to LED fixtures.

**Section 3.** This ordinance shall be effective upon adoption.