

Greater than thirty-five (35) feet in height at maturity. The minimum size at planting shall be two (2) inches caliper with a twelve (12) to fourteen (14) foot height.

**(2) Small Maturing Deciduous Tree**

Less than thirty-five (35) feet in height maturity. The minimum size at planting shall be one and one half (1 ½) inch in the caliper with an eight (8) to ten (10) foot height.

**(3) Evergreen Tree**

The minimum height at planting shall be six (6) feet.

**(4) Deciduous Shrub**

The minimum size at planting shall be a three (3) gallon container or ten (10) inch root ball with a height of eighteen (18) inches.

**(5) Evergreen Shrub**

The minimum size at planting shall be a three (3) gallon container or ten (10) inch root ball with a height of eighteen (18) inches.

**c. Plant Standards**

All plants must meet the requirements of the most recent edition of the American Standards for Nursery Stock, by AmericanHort. Plants must be healthy, well-branched, and free of disease and insect infestation.

## Section 7.9 Lighting Standards

**A. Purpose**

The purpose of this section is to regulate exterior lighting to enhance the areas being lit; ensure the safety of pedestrians, cyclists, and drivers; minimize light trespass and glare; and reduce skyglow.

**B. Applicability**

All lighting within the Town and ETJ shall be subject to the standards of this section.

**C. Administration**

A lighting plan shall be required as part of any landscape plan submitted through a site plan or design review process required as part of Article 3.

**D. Exemptions**

The following lighting types shall be exempt from the requirements of this section:

1. All temporary emergency lighting needed by the Police or Fire Departments or other emergency services, as well as all vehicular luminaires.
2. All hazard warning luminaires required by Federal regulatory agencies - all luminaires used must be red and must be shown to be as close as possible to the federally required minimum lumen output requirement for the specific task.
3. Individual residential lighting that is not part of a site plan or subdivision plan for street or other common or public areas outdoor lighting.
4. Lighting associated with the holiday, festival, or other temporary uses.
5. Lighting of public art that has been permitted or otherwise approved by the Town.
6. Other municipal or state lighting installed for the benefit of public health, safety, and welfare.
7. All fixtures installed or temporarily used by public agencies, their agents, or contractors for the purpose of illuminating public streets.
8. Lighting of U.S. and North Carolina State Flags provided the flag standard does not exceed the maximum permitted building height for that planning area.

**E. Prohibited Lighting Types**

The following types of lighting are prohibited:

1. **Traffic Control Signals**
  - a. Lighting that imitates an official highway or traffic control light or sign, or,
  - b. Lighting in the direct line of sight with any traffic control light or sign

## 2. High-Intensity Lighting

- a. High-intensity light beams, such as searchlights or laser lights, except when used by federal, State, or local authorities; or
- b. High intensity LED or neon lighting fixtures mounted around the interior or exterior of a window, door, or other architectural feature on a structure.

## 3. Flashing Lights

Flashing, revolving, or intermittent exterior lighting is visible from any lot line or street.

## 4. Upward-Facing Lights

Lights set upon the ground or mounted so as to face upwards toward the sky, except those which are required to light the U.S. Flag and the North Carolina State Flag, when displayed during evening hours.

## F. General

The following standards are required of all exterior lighting except for street lighting (See Section 7-19):

### 1. Design

Exterior lighting shall be consistent with the architectural character of the building as determined by the reviewing body.

### 2. Quantity

The number of fixtures to be provided shall be based upon the desired level of uniform illumination as established in Section 7-13.G. and Section 7-13.H.

### 3. Location

Fixtures shall be placed to provide uniform distribution of light downward and to avoid intense lighting that produces excessive glare and skyglow.

- a. All lighting poles shall be located at least ten (10) feet from property lines defining rear and side setbacks.
- b. Light sources shall not be located within any perimeter-landscaped areas except for pedestrian walkways.

#### 4. Shielding

- a. Building lighting and landscaping lighting shall be located, aimed, and shielded so that direct illumination is focused exclusively on the building facade, plantings, or other site features and shall not extend upward to the night sky. The source of illumination (the bulb) shall not be visible from any roadway or adjacent land use.
- b. Lights shall be shielded to prevent light spillage onto adjoining properties and the street right-of-way.
- c. Lighting used to illuminate pedestrian walkways and signage shall be downcast or cutoff type lighting fixtures. Upward-facing lights shall be prohibited, except when lighting the US or NC State flag at night, as required.

#### 5. Maximum Height

The maximum height as measured from grade for outdoor lighting, except outdoor recreation and performance areas, shall be:

- a. Non-Cut-Off Lights: Twelve (12) feet.
- b. Cut-Off Lights: Twenty-Five (25) feet.

### G. Average Maintained Foot-Candle Requirements

#### 1. Measurement

The maximum permitted illumination shall be measured in average maintained foot candles from ground level. This average shall be arranged to prevent light spillage as specified in Section 7-13.H.

#### 2. Level of Illumination

The level of illumination shall be based on the primary activity in each area to be lighted as shown in the table below. Foot-candle designations represent measurements for the average maintained intensity at grade.

**TABLE 7-7 FOOT-CANDLE REQUIREMENTS**

<b>Average Maintained Foot-candle Requirements</b>			
<b>Lighting Type</b>	<b>Maintained Foot-candles</b>		<b>Additional Notes/Requirements</b>
	<b>Max</b>	<b>Min</b>	
a. Utility Lighting			
(1) Street Lighting	2.0	0.5	Also, see Sec. 7.10. for additional street lighting standards.
(2) Pedestrian Paths/Sidewalks	1.0	0.5	<ul style="list-style-type: none"> <li>As measured at the property line</li> <li>Outdoor lighting sources shall be shielded so as not be visible from a residential use.</li> </ul>
b. Area Lighting			
(1) Commercial/Mixed-Use	2.0	1.0	As measured at the property line.
(2) Residential	0.3	n/a	Lighting shall be focused exclusively on the plantings and away from adjoining properties and the street right-of-way.
(3) Landscaped Areas	2.0	n/a	<ul style="list-style-type: none"> <li>Lighting shall be coordinated with trees and landscaping so as not to be obscured by such plantings.</li> <li>Lighting fixtures of more than two thousand (2,000) lumens shall be cut-off fixtures.</li> <li>Decorative lighting fixtures no more than eighteen (18) feet in height shall be installed along pedestrian walkways, as approved by the Zoning Administrator. Such lighting shall provide uniform distribution of lighting to produce minimal shadows.</li> </ul>
(4) Parking Lots	4.0	1.0	<ul style="list-style-type: none"> <li>Fixtures shall be directed to light the parking area and not to shine onto adjacent properties.</li> <li>All fixtures shall be fully shielded or installed with a manufacturer's glare control package to minimize up-light, spill-light, and glare.</li> </ul>

Average Maintained Foot-candle Requirements			
Lighting Type	Maintained Foot-candles		Additional Notes/Requirements
	Max	Min	
			<ul style="list-style-type: none"> <li>Fixtures must not exceed sixty(60) feet in height as measured from grade.</li> </ul>
(5) Outdoor Recreation and Performance Facilities	n/a	n/a	<ul style="list-style-type: none"> <li>Fixtures shall be directed to the primary playing or performance area and the immediate surroundings only so as not to shine onto adjacent properties.</li> <li>All fixtures shall be fully shielded or installed with a manufacturer's glare control package to minimize up-light, spill-light and glare.</li> <li>Fixtures must not exceed eighty (80) feet in height as measured from grade.</li> </ul>
c. Building Exteriors			
(1) Patron Entrances	6.0	2.0	-
(2) Employee/Service Entrances	1.0	0.5	-
(3) Building Facade	5.0	2.0	Lighting shall be focused exclusively on the building features and away from adjoining properties and right-of-way.

*This table is derived from recommendations of the Illuminating Engineering Society.*

**H. Light Spillage Requirements**

Lighting intensities shall be controlled to assure that light spillage and glare are not directed at adjacent properties, neighboring areas, drivers, or the sky. The table below shows the maximum light permitted, as measured in foot candles, at the property line in order to prevent light spillage.

**TABLE 7-8 MAXIMUM LIGHT SPILLAGE**

<b>Light Spillage Requirements</b>	
<b>Lighting Type</b>	<b>Maximum Foot-candles at Property Line</b>
1. Commercial/Mixed-Use Areas	2.0
2. Residential Areas	0.3
3. Parking Lots	2.0
4. Outdoor Recreation and Performance Areas	2.0
5. All Other Areas	0.3 (non-cut-off lights); 1.5 (cut-off lights)

**I. Lighting Color**

The LED correlated color temperature (CCT) shall not be higher than 4,300 K (Kelvin degrees).

**Section 7.10 Street Lighting****A. Require Improvements**

The owner, developer, or subdivider of property shall install street lighting along all proposed streets and along all adjoining existing streets in conformance with Duke Energy and Town of Sylva standards at the developer's expense.

**B. Design and Maintenance****1. Type**

Pedestrian-scale street lighting shall be less than eighteen (18) feet in height and shall be provided using decorative lighting fixtures, as approved by the Zoning Administrator. Pedestrian lighting is encouraged in parking areas, along sidewalks, and other right-of-way used by pedestrians in the evening hours.

**2. Location**

The placement of street lighting fixtures in residential areas shall be at one hundred sixty (160) to two hundred (200) foot intervals (three hundred (300) to five hundred (500) foot intervals in the LDR), and at each intersection unless:

- a. The roadway length is less than two hundred (200) feet, a streetlight is placed at the intersection, and no natural features obstruct the light source, in which case a streetlight will not be required at the end of the street; or

- b.** The vertical and horizontal street alignment or natural features necessitate shorter spacing intervals.