

**EXCERPTS FROM  
THE CHAPEL HILL LAND USE MANAGEMENT ORDINANCE**

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Focus: Lighting Regulations  
Compiled: 11/04/04

**3.5.2 Office/Institutional – 4 District (OI-4)**

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**(c) Development Plan**

A Development Plan shall address issues such as general location and size of new facilities, parking, utilities, stormwater management, impervious surface, and access/circulation. A Development Plan shall identify the general location, size, and proposed uses of buildings. A Development Plan shall project anticipated impacts on streets, water and sewer facilities, stormwater runoff, air quality, noise, and lighting.

(1) Submittal Requirements. Application submittal requirements shall include the following:

- A. Specific descriptions of proposed development with building locations, building sizes, parking arrangements, and description of building heights with consideration of impact on adjacent areas.
- B. Analysis of impacts resulting from proposed development, along with options to mitigate impacts relating to:
  - Transportation Management (traffic, transit, parking, bikes, pedestrians, air quality);
  - Stormwater Management Analysis (quantity and quality); and
  - Noise and **Lighting Analysis**.

Individual effects must be evaluated in the context of the whole Development Plan and not in isolation. Impacts shall be evaluated in accordance with guidelines endorsed for use by the Town Council.

- C. Preliminary timetable and sequencing schedule for building construction and for related mitigation measures.



# ARTICLE 5. DESIGN AND DEVELOPMENT STANDARDS

*This Section establishes the criteria for designing a lot, a development, or a site. Section 5.2 describes how to establish lots and lot lines. . . . .*

*Lighting and signage provide visibility for development, but can also create unsafe conditions and clutter. Controlling light spillage onto adjoining properties is important to Chapel Hill’s neighborhoods. This issue is addressed in Section 5.11. Section 5.14 controls the type, size and location of signs.*



## 5.6 Landscaping, Screening and Buffering

### 5.6.1 Purpose of Buffers

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Buffers shall be required to separate a proposed development from adjacent major streets and different adjacent land uses or zoning designations in order to minimize potential nuisances such as the transmission of noise, dust, odor, litter, and glare of lights; to reduce the visual impact of unsightly aspects of adjacent development; to provide for the separation of spaces; and to establish a sense of privacy.



### 5.9.5 Parking Design Standards

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All parking areas shall meet the following minimum design requirement:

- (j) All lighting of and within parking facilities shall conform to the lighting design standards contained in Section 5.11.

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- (n) Parking facilities shall be designed with walkways and lighting to facilitate safe walking movements to and from parked vehicles.



## **5.11 Lighting Standards**

Purpose statement: *This Section provides standards for lighting that shall be designed to minimize spillover of light onto adjacent property, glare that could impair vision, and/or other conditions that deteriorate normally accepted qualities and uses of adjacent property.*

### **5.11.1 Applicability**

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The provisions of this Section apply to any outside lighting used around buildings, recreation areas, parking areas, walkways, drives, or signs.

Lighting sources shall be shielded or arranged so as not to produce within any public right-of-way glare that interferes with the safe use of such right-of-way and so as not to constitute a nuisance to the occupants of adjacent properties.

### **5.11.2 Mounting Heights**

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Outdoor lighting, except sports and athletic field lighting, shall be mounted at heights no greater than fifteen (15) feet for non-cutoff lights; and no greater than thirty-five (35) feet for full cutoff lights.

### **5.11.3 Sports Fields**

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Lighting for sports and athletic fields must include glare control features and must be designed so that primary illumination is directed onto the play area and ancillary areas such as bleachers, stands, and similar areas. All lighting fixtures for sports fields shall be equipped with a glare control package including louvers, shields, or similar devices). The fixtures must be aimed so that their beams are directed and fall within the primary playing or performance area.

### **5.11.4 Offsite Illumination**

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Increases in illumination on off-site property shall not result in lighting levels in excess of 0.3 foot-candles, measured at ground level. Where existing ambient off-site lighting levels are in excess of 0.3 foot-candles, no increase in measurable off-site lighting levels will be allowed as a result of outdoor lighting in the development.

### **5.11.5 Buildings, Streets, Driveways and other Passageways**

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Except for single- and two-family dwellings, all streets, driveways, bikeways, sidewalks, pedestrian paths, parking areas, and other common areas and facilities shall be lighted where necessary to ensure the security of property and the safety of persons using such streets, driveways, bikeways, sidewalks, pedestrian paths, parking areas, and other common areas and facilities. Specific standards for and restrictions on lighting are included in the Town's Design Manual.

All principal entrances and exits to principal buildings used for nonresidential purposes or containing more than five (5) dwelling or lodging units shall be sufficiently lighted to ensure the safety of residents and the security of the building.

### **5.11.6 Submittals**

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Each application for a Zoning Compliance Permit for development other than a single-family or two-family dwelling shall include a lighting plan that shows existing and proposed lighting fixture types and locations. The plan shall indicate, by isolux contour diagram and grid points, the measured and calculated pre-development and post-development foot-candles at grade both on the development site and on adjacent property where lighting impacts are expected. The lighting plan must be sealed by a Professional Engineer with demonstrable expertise in lighting design and mitigation strategies, or a lighting specialist who is Lighting Certified (LC) by NCQLP (National Town Council on Qualifications for the Lighting Professions).

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## **5.14 Signs**

### **5.14.3 Signs Exempt from Regulation**

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The following signs are exempt from regulation and permit requirements under this Section provided such signs comply with the provision of Section [5.14.4](#) and provided that neon tube and like illumination shall be prohibited except as permitted in Section [5.14.8](#).

- (a) Signs bearing only property identification numbers and names, post office box numbers, names of occupants of the premises on which the signs are located, or other identification of premises not of a commercial nature, provided such signs are **not illuminated** and do not exceed two (2) signs per zoning lot nor two (2) square feet in area per display surface.

- (b) Flags and insignia of a government, when not displayed in connection with a commercial promotion.
  - (c) Legal notices, identification and informational signs, and traffic directional or regulatory signs erected by or on behalf of a governmental body.
  - (d) Memorial signs or tablets, and names and construction dates of buildings when cut into any masonry surface.
  - (e) Signs directing and guiding traffic and parking on private property on which the signs are located, provided such signs are **not illuminated**, bear no advertising matter, and do not exceed four (4) square feet in area per display surface.
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- (l) Signs in the Town Center-1 and -2 districts that are no more than six (6) square feet in area per display surface. This provision applies only to changeable or moveable signs that are limited to one (1) sign per business, located in front of the business identified on the sign. Changeable or moveable signs are those **non-illuminated** signs that change or are moved on a daily basis.
  - (m) Information kiosks or bulletin boards erected by or on behalf of a governmental body on public property or rights-of-way in the Town Center districts for the display of handbills or posters of community interest, provided such kiosks or bulletin boards contain no more than six (6) square feet in area per sign display surface, and a maximum of seventy-two (72) square feet per kiosk or bulletin board.
  - (n) Signs stating that a business other than a home occupation is open, provided that there is no more than one such sign per business establishment, and provided that such sign does not exceed two (2) square feet in display area.
  - (o) Non-commercial signs not covered by other exemptions listed in this Section, provided such signs are located on private property and are **non-illuminated**.

#### **5.14.4 Traffic Safety Precautions**

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Notwithstanding any other provision in this Chapter, the following restrictions shall apply to signs in order to preserve the safety of pedestrian, bicycle, and vehicular movement:

- (a) No sign, or part thereof, shall be located within a clear-vision area established by the Design Manual.
- (b) No sign shall make use of the words "STOP", "SLOW", "CAUTION", "DANGER", or any other word, phrase, symbol, or character in such manner as is reasonably likely to be confused with traffic directional and regulatory signs.

(c) No sign shall be erected so that by its location, color, nature, or message is likely to be confused with or obstruct the view of traffic signals or signs, or is likely to be confused with the **warning lights** of an emergency or public safety vehicle.

(a) Except as used to display time and temperature, no sign shall contain **flashing lights**.

**5.14.5 General Limitations**

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(c) Except where specifically exempted by this Chapter, all signs, including the supports, frames, and embellishments thereto, shall not be located within any public right-of-way, nor shall any sign be attached, affixed, or painted on any utility pole, light standard, telephone or telegraph pole, any tree, rock, or other natural object.

(d) No display surface shall contain more than ten (10) items of information except where the name of the occupant of the premises contains more than ten (10) items of information and the display surface contains only the name of the occupant. An item of information means any of the following: a word; an abbreviation; a number; a symbol; a geometric shape. In computing items of information, letters less than three (3) inches in height, if contained in a wall sign, shall not be counted. When there is more than one occupant on the premises, ground signs shall be limited to either the name of the development and a maximum of two anchor tenants, or a maximum of three (3) designated anchor tenants (and no name of the development).

(e) **No source of illumination of a sign, such as floodlights or spotlights, shall be directly visible from any public right-of-way, from any Residential district, or from adjacent properties.**

(f) **Internally illuminated signs, other than window signs, shall consist of a dark background and light letters or message. The letters or message of internally illuminated signs shall consist of non-reflective material.**

(g) Animated, rotating, or other moving or apparently moving signs shall be prohibited.

(h) Devices consisting of banners, streamers, pennants, wind-blown propellers, **strung light bulbs**, and similar installations shall be prohibited unless approved by the Town Manager for non-commercial enterprises.

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**5.14.7 Signs in Residential, Materials Handling, and Rural Transition Districts and in PD-H Developments**

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No sign shall be erected or displayed in any Residential, Materials Handling, or rural Transition district or in any Planned Development-Housing except as allowed under Section [5.14.3](#) or as provided below:

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- (d) External lighting of signs in Residential, Materials Handling, and Rural Transition Districts and in PD-H Developments is permitted if illumination levels are low, all fixtures are concealed, and spill-over of light is minimal. Internal illumination of signs in Residential, Materials Handling, and Rural Transition Districts is prohibited.

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**5.14.8 Signs in TC-2, TC-1, CC, NC, OI-4, OI-3, OI-2, OI-1 and I Districts**

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- (c) A Unified Sign Plan is an overall plan for placement and design of multiple signs for a building or group of buildings on a zoning lot. The Unified Sign Plan shall display harmony and consistency with regard to theme, number and size of signs, placement of signs, materials and colors, size and style of lettering, and type of lighting.

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**5.14.9 Sign Area Limitations**

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Type of Sign	Zoning District	
	TC-1, TC-2	CC, NC, OI-1, OI-2, OI-3, OI-4, Ind
Ground Sign - <i>Maximum Area per Display Surface</i>	8.0 sq. feet	15.0 sq. feet
Projecting Sign - <i>Maximum Area per Display Surface</i>	8.0	8.0
Wall Sign - <i>Maximum Percent of Façade Coverage</i>	5.0%	5.0%

\* The maximum area per display surface of any internally illuminated sign shall be one-half (1/2) the maximum area per display surface listed above.

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**6.6 Extraction of Earth Products**

- (b) All operations associated with the extraction shall conform to the following performance standards:
  - (1) Direct illumination resulting from the operation shall not fall upon any land not covered by the application;

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**6.7 Landfill**

- (b) All operations associated with the landfill shall conform to the following performance standards:
  - (1) Direct illumination resulting from the operation shall not fall upon any land not covered by the application;

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**6.15 Car Wash**

- (a) That no outdoor lighting, other than ground level lighting otherwise permitted by the Land Use Management Ordinance, be allowed to be used after 10:00 p.m. Sunday through Thursday, and after 11:00 p.m. Friday and Saturday. A lighting plan shall be approved by the Community Design Commission.

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**APPENDIX A. DEFINITIONS**

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**Cutoff:**

The point at which all light emitted from a source or fixture is eliminated at a specific angle above ground level.

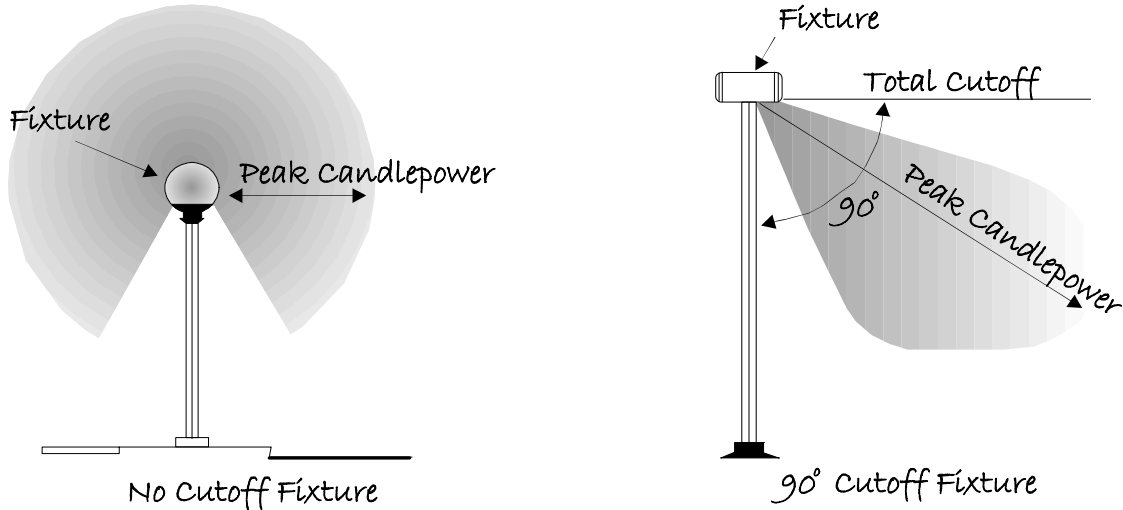
**Cutoff Angle:**

The angle formed by a line drawn from the direction of light rays at the light source and a line perpendicular to the ground from the light source, above which no light is emitted.



### Cutoff Light:

A fixture with elements such as shields, reflectors, or reflector panels which direct and cutoff the light at a cutoff angle that is not more than 90 degrees. Typically this type of fixture conceals the light source, thus reducing glare and spillover of light.



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### Foot-candle (FC):

A quantitative unit measuring the amount of light cast onto a given point, measured as one lumen per square foot.

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### 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.

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### Light Source:

The element of a lighting fixture that is the point of origin of the lumens emitted by the fixture.

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### Lumen:

A quantitative unit measuring the amount of light emitted by a light source.

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**Non-cutoff Light:**

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A fixture with elements such as shields, reflectors, or reflector panels which direct and cutoff the light at a cutoff angle that exceeds 90 degrees (see definition of "Cutoff Light," above).

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