

ARTICLE XV

WATER AND WASTEWATER, OUTDOOR LIGHTING, AND MISCELLANEOUS UTILITIES (REWRITTEN 4/20/10)

PART 1. WATER AND WASTEWATER

Section 15-236 Utility Ownership and Easement Rights.

In any case in which a developer installs or causes the installation of water, sewer, electric power, telephone, fiber optic cable or conduit, or cable television facilities and intends that such facilities shall be owned, operated or maintained by a public utility or any entity other than the developer, the developer shall transfer to such utility or entity the necessary ownership or easement rights to enable the utility or entity to operate and maintain such facilities.

Section 15-237 Lots Served by OWASA-Owned Water and Sewer Lines.

(a) Subject to subsection (d), whenever it is legally possible and practicable in terms of topography to connect a lot with a water or sewer line owned by the Orange Water and Sewer Authority (OWASA) by running a connecting line not more than the distance specified in subdivision (1) below from the lot to the point of connection, then no use requiring water or sewage disposal service may be made of such lot unless connection is made to the OWASA line. (AMENDED 2/24/87)

- (1) If the tract in question is proposed to be developed for residential purposes, then the distance within which connection must be made shall be 200 feet plus 10 feet for each unit in excess of 4 units on the development tract. If the tract in question is proposed to be developed for nonresidential purposes, then the distance within which connection must be made shall be determined by transposing the projected demand of the proposed non-residential use into the demand created by an equivalent number of average residential units and using the foregoing formula.
- (2) In determining units in a development, tracts proposed to be subdivided and not using architecturally integrated subdivisions shall have their total unit potential determined by calculating the maximum number of units allowable for each proposed lot. The total number of units proposed on other developments shall be shown on the proposed site plan.

(b) Connection to the OWASA line is not legally possible if, in order to make connection with the OWASA line by a connecting line that does not exceed a distance

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determined in accordance with subsection (a), it is necessary to run the connecting line over property not owned by the owner of the property to be served by the connection, and after diligent effort, the easement necessary to run the connecting line cannot reasonably be obtained.

(c) For purposes of this article, a lot is “served” by the OWASA system if the lot is connected to that system or if connection is required by this section.

(d) This section shall not operate either to require or prevent the extension of water or sewer lines to lots within the WR, C, B-5, or WM-3 zoning districts. **(AMENDED 05/15/90)**

Section 15-238 Sewage Disposal Facilities Required.

(a) Every principal use and every lot within a subdivision shall be served by a sewage disposal system that is adequate to accommodate the reasonable needs of such use or subdivision lot, and that complies with all applicable health regulations.

(b) Notwithstanding any other provisions of this article, no sewage treatment system other than individual on-site septic systems or individual on site alternative disposal systems approved by the Orange County Health Department or the appropriate state or federal agency and serving a single unit shall be allowed within the WR, C, B-5, and WM-3 zoning districts, except that any lots in the Rangewood Subdivision that were benefited by OWASA’s previous water and sewer extension project and which appear on OWASA’s final assessment role for that project may be connected to OWASA’s water and/or sewer lines as long as all assessments, fees, and charges have been paid or are up-to-date. **(AMENDED 09/01/92)**

(c) Notwithstanding any other provisions of this article, no sewage collection system shall be allowed within the WR, C, B-5, and WM-3 zoning districts except to remedy a public health emergency not otherwise correctable such as (but not limited to) a failing septic system or failing package treatment plant as determined by the Orange County Health Department or appropriate state or federal agency. **(AMENDED 5/3/88; 6/23/88; 5/15/90)**

Section 15-239 Determining Compliance With Section 15-238.

(a) Primary responsibility for determining whether a proposed development will comply with the standard set forth in Section 15-238 often lies with an agency other than the town, and the developer must comply with the detailed standards and specifications of such other agency. The relevant agencies are listed in subsection (b). Whenever any such agency requires detailed construction or design drawings before giving its official approval to the proposed sewage disposal system, the authority issuing a permit under this chapter may rely upon a preliminary review by such agency of the basic design elements of the proposed sewage disposal system to determine compliance with Section 15-238. However, construction of such system may not be commenced until the detailed plans and specifications have been reviewed and any appropriate permits issued by such agency.

(b) In the following table, the column on the left describes the type of development and the column on the right indicates the agency that must certify to the town whether the proposed sewage disposal system complies with the standards set forth in Section 15-238.

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IF	THEN
<p>1. The use is located on a lot that is served by the OWASA sewer system or a previously approved, privately owned packaged treatment plant, and the use can be served by a simple connection to the system (as in the case of the single-family residence) rather than the construction of an internal collection system (as in the case of a shopping center or apartment complex)</p>	<p>No further certification is necessary</p>
<p>2. The use (other than a subdivision) is located on a lot that is served by the OWASA sewer system but service to the use necessitates construction of an internal collection system (as in the case of a shopping center or apartment complex); and</p>	
<p>a. The internal collection system is to be transferred to and maintained by OWASA;</p>	<p>OWASA must certify to the Town that the proposed internal collection system meets OWASA’s specifications and will be accepted by OWASA. (A “Permit to Construct” must be obtained from the Division of Environmental Management of the NC Department of <u>Environmental Quality (DEQ)</u> Natural Resources and Community Development.)</p>
<p>b. The internal collection system is to be privately maintained.</p>	<p>The public works director must certify that the proposed collection system is adequate.</p>
<p>3. The use (other than a subdivision) is not served by the OWASA system but is to be served by a privately operated sewage treatment system (that has not previously been approved) with 3000 gallons per day or less design capacity, the effluent</p>	<p>The Orange County Health Department (OCHD) must certify to the Town that the proposed system complies with all applicable State and local health regulations. If the proposed use is a single dwelling other than a mobile home, the developer must obtain an improvements permit from the OCHD. If the proposed use is a single family mobile home, the developer must present to the Town a certificate of completion from the OCHD.</p>

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<p>from which does not discharge to surface waters.</p>	
<p>4. The use (other than a subdivision) is to be served by a privately operated sewage treatment system (not previously approved) that has a design capacity of more than 3000 gallons per day or that discharges effluent into surface waters.</p>	<p>The Division of Environmental Management of the NC Department of Natural Resources and Community Development must certify to the Town that the proposed system complies with all applicable State regulations, (A “Permit to Construct” and a “Permit to Discharge” must be obtained from DEM.)</p>
<p>5. The proposed use is a subdivision; and</p>	
<p>a. Lots within the subdivision are to be served by simple connection into existing OWASA lines or lines of a previously approved private system;</p>	<p>No further certification is necessary</p>
<p>b. Lots within the subdivision are to be served by the OWASA system but the developer will be responsible for installing the necessary additions to the OWASA system;</p>	<p>OWASA must certify to the Town that the proposed system meets OWASA’s specifications and will be accepted by OWASA. (A “Permit to Construct” must be obtained from the Division of Environmental Management of the NC Department of Environmental Quality (DEQ) <u>Department of Natural Resources and Community Development</u>.)</p>
<p>c. Lots within the subdivision are to be served by a sewage treatment system that has not been approved, that has a design capacity of 3000 gallons per day or less, and that does not discharge into surface waters;</p>	<p>The OCHD must certify that the proposed system complies with all applicable State and local health regulations. If each lot within the subdivision is to be served by separate on-site disposal system, the OCHD must certify that each lot shown on a major subdivision preliminary plat can probably be served, and each lot on a major or minor subdivision final</p>

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	plat can be served by an on-site disposal system.
d. Lots within the subdivision are to be served by a privately operated sewage treatment system (not previously approved) that has a design capacity in excess of 3000 gallons per day or that discharges effluent into surface waters.	The Division of Environmental Management of the NC Department of <u>Environmental Quality (DEQ)</u> Natural Resources and Community Development must certify that the proposed system complies with all applicable State regulations. (A “Permit to Construct” and a “Permit to Discharge” must be obtained from DE <u>QM</u> .)

(c) Any certification by OWASA pursuant to (b)2.a. or (b)5.b. of this section shall identify on appropriate project plans, the locations of all easements which OWASA will require from the developer. (AMENDED 5/3/88)

Section 15-240 Water Supply System Required.

Every principal use and every lot within a subdivision shall be served by a water supply system that is adequate to accommodate the reasonable needs of such use or subdivision lot and that complies with all applicable health regulations.

Section 15-241 Determining Compliance with Section 15-240.

(a) Primary responsibility for determining whether a proposed development will comply with standards set forth in Section 15-240 often lies with an agency other than the town and the developer must comply with the detailed standards and specifications of such other agency. The relevant agencies are listed in subsection (b). Whenever any such agency requires detailed construction or design drawings before giving its official approval to the proposed water supply system, the authority issuing a permit under this chapter may rely upon a preliminary review by such agency of the basic design elements of the proposed water supply system to determine compliance with Section 15-240. However, construction of such system may not be commenced until the detailed plans and specifications have been reviewed and any appropriate permits issued by such agency.

(b) In the following table, the column on the left describes the type of development and the column on the right indicates the agency that must certify to the town whether the proposed water supply system complies with the standards set forth in section 15-240.

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IF	THEN
<p>1. The use is located on a lot that is served by the OWASA water system or a previously approved, privately owned public water supply system and the use can be served by a simple connection to the system (as in the case of a single family residence) rather than the construction of an internal distribution system (as in the case of shopping center of apartment complex).</p>	<p>No further certification is necessary</p>
<p>2. The use (other than a subdivision) is located on a lot that is served by the OWASA water system but service to the use necessitates construction of an internal distribution system (as in the case of a shopping center or apartment complex); and</p>	
<p>a. The internal distribution system is to be transferred to and maintained by OWASA;</p>	<p>OWASA must certify to the Town that the proposed internal distribution system meets OWASA's specifications and will be accepted by OWASA. (A "Permit to Construct" must be obtained from the Division of <u>Public Health Services</u> of the NC Department of <u>Health and Human ServicesResources</u>.)</p>
<p>b. The internal distribution system is to be privately maintained.</p>	<p>The public works director must certify that the proposed distribution system is adequate.</p>
<p>3. The use (other than a subdivision) is located on a lot not served by the OWASA system or a previously approved, privately owned public water supply system; and</p>	
<p>a. The use is to be served by a privately owned public water supply that has not previously been approved.</p>	<p>The Division of <u>Public Health Services</u> of the NC Department of <u>Health and Human ServicesResources</u> must certify that the proposed system complies with all applicable State and federal regulations. (A "Permit to Construct" must be obtained from <u>DHHS</u>.) The Division of Environmental Management of the NC Department of <u>Environmental</u></p>

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	Quality (DEQ) Natural Resources and Community Development must also approve the plans if the water source is a well and the system has a design capacity of 100,000 gallons per day or is located in certain areas designated by DEQM . OWASA must also approve the distribution lines for possible future addition to the OWASA system.
b. The use is to be served by some other source (such as an individual well).	The OCHD must certify that the proposed system meets all applicable State and local regulations.
4. The proposed use is a subdivision; and	
a. Lots within the subdivision are to be served by simple connection to existing OWASA lines or lines of a previously approved public water supply system;	No further certification is necessary.
b. Lots within the subdivision are to be served by the OWASA system, developer will be responsible for installing the necessary additions to the OWASA system;	OWASA must certify to the Town that the proposed system meets OWASA's specifications and will be accepted by OWASA. (A "Permit to Construct" must be obtained from the Division of Health Services of the NC Department of Human Resources.
c. Lots within the subdivision are served by a privately owned public water supply system that has not previously been approved.	The Division of Health Services of the NC Department Human Resources must certify that the proposed system complies with all applicable State and federal regulations. (A "Permit to Construct" must be obtained from DHS.) The Division of Environmental Management of the NC Department of Natural Resources and Community Development must also approve the plans if the water source is a well and the system has a design capacity of 100,000 gallons per day or is located within certain areas designated by DEM. OWASA must also approve the distribution lines for possible future addition to the OWASA system.
d. Lots within the subdivision are to be served by individual wells.	The OCHD must certify to the Town that each lot intended to be served by a well can be served in accordance with applicable health regulations.

PART II. OUTDOOR LIGHTING

Section 15-242 Purpose and Intent (AMENDED 4/20/10)

(a) The ~~Town Council~~Board finds that outdoor lighting serves a number of beneficial purposes. For work or recreation, it enables people to see essential detail in order that they may undertake their activities at night. It facilitates the safety and security of persons and property, for example through lighting on roads and pathways and the entrances to buildings. It may be used to emphasize features of architectural or historical significance, and to light parks and gardens. It is used for advertising or display to promote products or services, or to call attention to commercial premises by means of area lighting or signs. However, excessive or inappropriately directed lighting may create unwanted glare, interfere with observation of the nighttime sky, waste valuable energy supply, and otherwise interfere with the use or enjoyment of adjoining or nearby public or private property.

(b) It is the intent of this part to preserve, protect, and enhance the lawful nighttime use and enjoyment of any and all property through the use of appropriate lighting practices and systems by providing for the installation of individual fixtures and lighting systems that are designed and installed to maintain safety, security and productivity, and to curtail the degradation of the nighttime visual environment.

Section 15-242.1 Definitions

Unless otherwise specifically provided, or unless clearly required by the context, the words and phrases defined in this section shall have the meaning indicated when used in this part.

- (1) Direct Light: Light emitted directly from the lamp, off of the reflector diffuser, or through the refractor or diffuser lens, of a luminaire.
- (2) Fixture: The assembly that houses the lamp or lamps and can include all or some of the following parts: a housing, a mounting bracket or pole socket, a lamp holder, a ballast, a reflector or mirror, and/or a refractor or lens.
- (3) Floodlight: A form of lighting designated to direct its output more or less in a specific direction.
- (4) Footcandle: (fc) The total amount of light or illuminance cast on a surface and equivalent to the light produced by a source of one (1) candle measured at a distance of one (1) foot
- (5) Full cut-off luminaires: A luminaire designed and installed where no light is emitted at or above a horizontal plane running through the lowest point on the luminaire.
- (6) Fully Shielded: Outdoor light fixtures with opaque top and sides, capable of only emitting light in the lower photometric hemisphere as installed.

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- (7) Glare: Light emitting from a luminaire with an intensity great enough to reduce a viewer's ability to see, or cause annoyance and discomfort, and, in extreme cases, causing momentary blindness.
- (8) IESNA: Illuminating Engineering Society of North America, a non-profit society of professional lighting specialists that has developed a series of recommended standards for a variety of lighting applications.
- (9) Lamp: The component of the luminaire that produces the light and commonly referred to as the "bulb."
- (10) Light Trespass: The shining of light produced by a luminaire beyond the boundaries of the property on which it is located.
- (11) Lumen: The unit used to quantify the amount of light energy produced by a lamp at the lamp. Lumen output of most lamps is listed on the packaging. For example, a 60-watt incandescent lamp produces 950 lumens while a 55-watt low-pressure sodium lamp produces 8000 lumens.
- (12) Luminaire: A complete lighting system that includes light source and all necessary mechanical, electrical, and decorative parts.
- (13) Maintained Foot Candle: Illuminance of lighting fixtures adjusted for dirt buildup and lamp output depreciation.
- (14) Wall Pack: A type of light fixture typically flush-mounted on a vertical wall surface.

Section 15-242.2 Applicability

(a) The provisions of this part apply to developments for which permits are issued after the effective date of this part; therefore developments that exist on the effective date of this part that do not comply with its provisions shall not be regarded as nonconforming. However, when new luminaries are installed or existing luminaries are replaced, they shall comply with this part.

(b) Notwithstanding the provisions of subsection (a) of this section, luminaires installed prior to the effective date of this part that violate the following provisions shall be brought into compliance or removed within three months after the date of notification of the violation: Section 15-242.5 (d).

(c) Regulations applicable to the lighting of signs are found in Article XVII of this chapter, particularly Section 15-281.

(d) The provisions of this part do not apply to:

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- (1) Streetlights installed on public streets.
- (2) Traffic control signals and devices.
- (3) Temporary emergency lighting (i.e. fire, police, repair workers, etc.).
- (4) Moving vehicle lights.
- (5) Navigation lights (i.e. airports, heliports, radio/television towers, etc.).
- (6) Seasonal decorations with individual lights in place no longer than 60 consecutive days.
- (7) Security lights that are controlled by a motion-sensor switch that does not allow the lights to remain on longer than 12 minutes after activation, so long as the lamps do not exceed 150 watts and 2,200 lumens.

Section 15-242.3 Minimum Lighting Requirements for Security

(a) All streets, sidewalks, and other common areas or facilities in subdivisions shall be sufficiently illuminated to ensure the security of property and the safety of persons using such streets, sidewalks, and other common areas or facilities.

(b) All roads, driveways, sidewalks, parking lots, and other common areas or facilities in unsubdivided developments shall be sufficiently illuminated to ensure the security of property and the safety of persons using such roads, driveways, sidewalks, and other common areas or facilities.

(c) All entrances and exits in buildings used for non-residential purposes and in multi-family residential dwellings containing more than four dwelling units shall be adequately lighted to ensure the safety of persons and the security of such buildings.

Section 15-242.4 Subdivisions

(a) With respect to street lighting for subdivision streets that (i) are located on property within the town at or about the time of final plat approval, and (ii) are intended to be dedicated to the town, the developer shall coordinate with the electric utility company to ensure that all facilities necessary for the installation of street lights in accordance with the town's street lighting policy are put in place. "As a condition of construction plan approval, all public street lighting is to be installed by the developer prior to street acceptance by the town. The developer shall be responsible for all installation cost and monthly billing until the public streets are accepted onto the town's street maintenance system."

(b) With respect to street lighting for subdivision streets that (i) are located on property that is not within the town at or about the time of final plat approval, and (ii) are intended to be dedicated to the public (i.e. to the N.C. Department of Transportation initially and eventually to the town when the subdivision is annexed), the developer shall coordinate with the electric utility

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company to see that all facilities necessary for the installation of street lights in accordance with the town's street lighting policy are put in place. The installation of street lights that are consistent with town policies may then be provided for either by an arrangement between the developer or a property owners association and the electric utility company until such time as the subdivision is annexed.

(c) With respect to street lighting for subdivision streets that are not intended to be dedicated to the town, the developer shall provide for the installation and maintenance (either by the developer or a successor property owners association) of a street lighting system that will provide sufficient lighting for safety and security purposes.

Section 15-242.5 General Standards (AMENDED 10/23/2018)

(a) Unless otherwise specified, under no circumstances may the light level at a lot line exceed .2 foot candles. A limitation of 2.0 footcandles shall generally apply to lot lines in the B-1(c) and B-1(g) zoning districts. However, a limitation of .2 footcandles shall apply to lot lines of properties zoned B-1(c) or B-1(g) under any of the following circumstances:

- (1) Where such lot lines separate properties zoned B-1(c) or B-1(g) from properties zoned residential;
- (2) If and to the extent that properties zoned residential lie directly across a street from the lot lines of properties zoned B-1(c) or B-1(g);
- (3) Where such lot lines separate properties zoned B-1(c) or B-1(g) from properties that are not zoned residential but that are used for residential purposes and were so used on the effective date of this subsection;
- (4) If and to the extent that properties that are not zoned residential but are used for residential purposes and were so used on the effective date of this subsection lie directly across a street from the lot lines of properties zoned B-1(c) or B-1(g).

(b) Notwithstanding the foregoing, the permit-issuing authority may allow or require deviations from the lot line foot candle limitations described in Subsection 15-242.5(a), along public rights-of-way, where such rights-of-way are located within a unified commercial or mixed-use development operating under a single ~~class A special conditional~~ use permit. The right-of-way must extend through the development, not along the perimeter, and it must be dedicated to the Town.

(c) Vegetative buffers shall not be used to satisfy the standards set forth in subsection (a) of this section.

(d) Any luminaire with a lamp or lamps rated at a total of more than 1,800 lumens shall be fully shielded and shall be located to prevent glare and light trespass beyond the property boundary (including onto adjacent streets).

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(e) The recommended maximum light output is 70,000 lumens per acre for lots developed for commercial or multi-family purposes and 6,500 lumens per acre for lots developed for all other purposes. This recommended maximum does not apply to those uses regulated by Sections 15-242.6, 15-242.7, and 15-242.8.

(f) Floodlights with external shielding shall be angled provided that no light is directed above a twenty-five (25) degree angle measured from the vertical line from the center of the light extended to the ground, and only if the luminaire does not cause glare or light to shine on adjacent property or public or private rights-of-way. Photocells with timers that allow a floodlight to go on at dusk and off by 11:00 p.m are encouraged.

(g) The presumptive standard for the maximum height of light poles is fifteen (15) feet in height. The ~~Council Board~~ recognizes that due to the particularities of any given development, the inflexible application of a height maximum for lighting fixtures may result in a development with excessive energy consumption or light fixtures that are incompatible with the scale or style of a development. These situations can result in a waste of money that could more desirably be used for valuable development amenities or environmentally useful features. Therefore, the permit-issuing authority may permit deviations from the presumptive requirements and may require shorter light fixtures or allow taller light fixtures whenever it finds that such deviations are more likely to satisfy the standard set forth in subsections 15-242 (a) and (b) and that the lighting complies in all other respects with the requirements of this part.

(1) Without limiting the generality of the foregoing, the permit-issuing authority may allow or require deviations from the light fixture height maximum set forth in Subsection 15-242.5 (f) when it finds that:

- a. An existing multi-family residential development of greater than four (4) units is seeking to improve security and safety for residents by increasing the number of light fixtures and is also seeking to utilize light fixtures that are similar in size and style to existing fixtures; or
- b. Lighting fixtures on neighboring property are substantially lower in height than the maximum that would be allowed and taller light fixtures would result in a discernible negative impact in terms of excessive illumination and glare.

(2) Whenever the permit-issuing authority allows or requires a deviation from the presumptive lighting fixture height requirements set forth in Subsection 15-242.5(e) it shall enter on the face of the permit the lighting fixture height requirement that it imposes and the reasons for allowing or requiring the deviation.

(g) All wall packs shall be fully shielded.

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(h) All luminaires shall be shielded or oriented in such a way as to direct light toward the earth's surface and away from reflective surfaces.

(i) Luminaires designed to illuminate building facades, architectural features, or landscaping shall be oriented and shielded so that direct illumination is focused exclusively on such building façade, architectural feature, or landscaping and away from adjoining properties, public or private way, and the night sky.

(j) Upward flagpole lighting is permitted for governmental flags, either publicly or privately owned, provided that the maximum lumen output is 1,300 lumens. It is encouraged that flags be taken down at sunset to avoid the need for lighting.

(k) Any luminaire must be installed in such a manner that the light emitting source is not visible from any residence not located on the same lot as the luminaire or from any public street.

Section 15-242.6 Vehicular Canopies

(a) The light level beneath vehicular canopies (e.g. for gas stations or convenience stores) shall not exceed 10 foot candles average maintained at the perimeter of the canopy and measured at ground level. Acceptable ways of achieving this objective include, but are not limited to, one or more of the following:

- (1) Recessed fixtures incorporating a lens cover that is either recessed or flush with the bottom surface (ceiling) of the vehicular canopy.
- (2) Surface mounted fixtures incorporating a flat glass that provides a full cut-off or fully shielded light distribution.
- (3) Indirect lighting where light is beamed upward and then reflected down from the underside of the vehicular canopy. Such fixtures shall be shielded such that direct illumination is focused exclusively on the underside of the vehicular canopy.
- (4) Any other method approved by the permit issuing authority that achieves an effect similar to the foregoing illustrations.

(b) During hours when the business is not open, the lighting level shall be reduced to security lighting only.

Section 15-242.7 Outdoor Display Areas

(a) All display area lighting shall utilize fully shielded luminaires that are installed in a fashion that maintains the fully shielded characteristics.

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(b) Display area lighting shall be installed such that glare is not visible from residential properties.

(c) The display area shall not be illuminated in a manner that exceeds the minimal illuminance levels for the activity as recommended by the Illuminating Engineering Society of North America (IESNA Rp-33, or as updated).

(d) For purposes of this section, an “outdoor display area” is an outdoor area where nighttime sales activity regularly occurs and where accurate color perception of merchandise by customers is required. Examples include sales areas for automobiles, boats, building supplies, or plants.

(e) During hours when the business is not open, the lighting level shall be reduced to security lighting only.

Section 15-242.8 Outdoor Sports Fields and Performance Areas

(a) The mounting height of outdoor sports fields and outdoor performance area lighting fixtures shall not exceed 60 feet from finished grade unless approved by the permit-issuing authority after receipt of substantial information justifying the need for additional height.

(b) All outdoor sports field and outdoor performance area lighting fixtures shall be equipped with a glare control package (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.

(c) Outdoor sports field and performance area lighting systems shall not be operated between the hours of eleven p.m. and sunrise.

Section 15-242.9 Prohibited Uses of Light

The following are prohibited:

- (1) The use of laser source light or any similar high intensity light for outdoor advertising or entertainment, when projected above the horizon;
- (2) The operation of searchlights for advertising purposes;
- (3) Use of mercury vapor luminaires.

Section 15-242.10 Light Measurement Techniques

a) Light measurements shall be made at finished grade (ground level), with the light-registered portion of the meter held parallel to the ground pointing up. The meter shall have cosine and color correction and have an accuracy tolerance of no greater than plus or minus five (5) percent. Measurements shall be taken with a light meter that has been calibrated within the year.

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Light levels are specified, calculated and measured in footcandles (FC). All FC values are maintained footcandles unless otherwise specified.

b) Compliance with an approved light plan associated with a permit can be verified in the field by confirming that the light fixtures and bulbs do not exceed those shown on the engineered plans. When there is no approved light plan then compliance can be verified by enforcing that the light source is blocked and/or directed in compliance with this Part or by the owner obtaining and providing a professional engineer's certification that verifies that the existing conditions comply with the ordinance.

Section 15-243 RESERVED (AMENDED 4/20/10)

PART III: MISCELLANEOUS UTILITIES (AMENDED 4/20/10)**Section 15-244 Electric Power.**

Every principal use and every lot within a subdivision shall have available to it a source of electric power adequate to accommodate the reasonable needs of such use and every lot within such subdivision. Compliance with this requirement shall be determined as follows:

- (1) If the use is not a subdivision and is located on a lot that is served by an existing power line and the use can be served by a simple connection to such power line (as opposed to a more complex distribution system, such as would be required in an apartment complex or shopping center), then no further certification is needed.
- (2) If the use is a subdivision or is not located on a lot served by an existing power line, or a substantial internal distribution system will be necessary, then the electric utility company must review the proposed plans and certify to the town that it can provide service that is adequate to meet the needs of the proposed use and every lot within the proposed subdivision.

Section 15-245 Telephone Service.

Every principal use and every lot within a subdivision must have available to it a telephone service cable adequate to accommodate the reasonable needs of such use and every lot within such subdivision. Compliance with this requirement shall be determined as follows:

- (1) If the use is not a subdivision and is located on a lot that is served by an existing telephone line and the use can be served by a simple connection to such power line (as opposed to a more complex distribution system, such as would be required in an apartment complex or shopping center), then no further certification is necessary.
- (2) If the use is a subdivision or is not located on a lot served by an existing telephone line or a substantial internal distribution system will be necessary, then the electric utility company must review the proposed plans and certify to the town that it can provide service that is adequate to meet the needs of the proposed use and every lot within the proposed subdivision.

Section 15-246 Underground Utilities.

(a) All electric power lines, (not to include transformers or enclosures containing electrical equipment including, but not limited to, switches, meters or capacitors which may be pad mounted), telephone, gas distribution, fiber optic cable or conduit, and cable television lines in subdivisions developed after the effective date of this chapter shall be placed underground in accordance with the specifications and policies of the respective utility companies and located in accordance with Appendix C, Standard Drawing No. 6 or No. 7.

Art. XV Utilities (cont.)

(b) Whenever an unsubdivided development is hereafter constructed on a lot that is undeveloped on the effective date of this chapter, then all electric power, telephone, gas distribution, and cable television lines installed to serve the development site outside of a previously existing public street right-of-way shall be placed underground in accordance with the specifications and policies of the respective utility companies. **(AMENDED 1/22/85)**

(c) Notwithstanding the foregoing, a developer or builder is not required to bury power lines meeting all of the following criteria:

- (1) The power lines existed above ground at the time of first approval of a plat or development plan, whether or not the power lines are subsequently relocated during construction of the subdivision or development plan.
- (2) The power lines are located outside the boundaries of the parcel of land that contains the subdivision or the property covered by the development plan.

Section 15-247 Utilities To Be Consistent With Internal and External Development.

(a) Whenever it can reasonably be anticipated that utility facilities constructed in one development will be extended to serve other adjacent or nearby development, such utility facilities (e.g., water or sewer lines) shall be located and constructed so that extensions can be made conveniently and without undue burden or expense or unnecessary duplication of service.

(b) All utility facilities shall be constructed in such a manner as to minimize interference with pedestrian or vehicular traffic and to facilitate maintenance without undue damage to improvements or facilities located within the development.

Section 15-248 As-Built Drawings Required.

(a) Whenever a developer installs or causes to be installed any utility line in any public right-of-way, the developer shall, as soon as practicable after installation is complete, furnish the town with a copy of a drawing that shows the exact location of such utility lines. Such drawings must be certified as accurate by the utility company. Compliance with this requirement shall be a condition of the continued validity of the permit authorizing such development.

(b) If any utility in any right-of-way is installed by a utility company, the company shall maintain accurate as-built drawings and shall make these available to the town upon request.

Section 15-249 Fire Hydrants.

(a) Every development, subdivided or unsubdivided, that is served by a public water system shall include a system of fire hydrants sufficient to provide adequate fire protection for the buildings located or intended to be located within such development. **(AMENDED 4/27/82)**

Art. XV Utilities (cont.)

(b) The presumption established by this ordinance is that to satisfy the standard set forth in subsection (a), fire hydrants must be located so that every building within the development is not more than 500 feet from a hydrant. However, the fire chief may authorize or require a deviation from this standard if, in his professional opinion, another arrangement more satisfactorily complies with the standard set forth in subsection (a).

(c) The fire chief shall determine the precise location of all fire hydrants, subject to the other provisions of this section. In general, fire hydrants shall be placed six feet behind the curb line of publicly dedicated streets that have curb and gutter.

(d) All hydrants shall have two 2½ inch hose connections and one 4½ inch hose connection. The 2½ inch hose connection shall be located at least 21½ inches from the ground level. All hydrant threads shall be national standard threads.

(e) Water lines that serve hydrants shall be at least six inch lines, and unless no other practicable alternative is available, no such lines shall be dead-end lines.

(f) When hydrants are required under this section to be located within a public street right-of-way, the installation of such hydrants by the developer shall constitute an offer of dedication of such hydrant to OWASA, and the town and OWASA shall thereafter deal with such hydrant in the same manner as other hydrants located within public rights-of-way within the town. The developer or his successor shall be responsible for ensuring that such hydrant is properly maintained and kept in good working order, and that any costs associated with providing water to such hydrant are paid so that the hydrant can at all times serve its intended function. The developer or his successor may arrange with OWASA or any other entity to have such hydrants properly maintained, but ultimate responsibility for compliance with this section remains on the developer or his successor. **(AMENDED 5/10/83)**

(g) Fire hydrants required under this section shall be installed and in working condition, subject to OWASA approval, prior to framing of any buildings in each phase. **(AMENDED 11/26/85)**

Section 15-250 Screening of Dumpsters (AMENDED 5/26/81)

(a) Every development that, under Chapter 11 of the Town Code, is or will be required to provide one or more dumpsters for solid waste collection shall provide sites for such dumpsters that are:

- (1) Located so as to facilitate collection and minimize any negative impact on persons occupying the development site, neighboring properties, or public rights-of-way; and
- (2) Constructed according to specifications established by the public works director to allow for collection without damage to the development site or the collection vehicle.

Art. XV Utilities (cont.)

(b) All such dumpsters shall be screened if and to the extent that, in the absence of screening, they would be clearly visible to:

- (1) Persons located within any dwelling unit on residential property other than that where the dumpster is located.
- (2) Occupants, customers, or other invitees located within any building on non-residential property other than that where the dumpster is located, unless such other property is used primarily for purposes permitted exclusively in an M-1 or M-2 zoning district.
- (3) Persons traveling on any public street, sidewalk, or bikeway within the Town of Carrboro.

(c) When dumpster screening is required under this section, such screening shall be constructed, installed, and located to prevent or remedy the conditions requiring the screening.