AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF ORLANDO, FLORIDA, RELATING TO LIGHTING REGULATIONS; AMENDING CHAPTER 63, ENVIRONMENTAL PROTECTION, BY CREATING NEW PART 2M, ENTITLED "OUTDOOR LIGHTING;" CONSOLIDATING EXISTING OUTDOOR LIGHTING REGULATIONS IN THE NEW PART 2M, PROVIDING PURPOSE AND INTENT OF LIGHTING REGULATIONS AND DEFINITIONS; REQUIRING AN OUTDOOR LIGHTING PLAN FOR CERTAIN DEVELOPMENT; PROVIDING SUBMITTAL REQUIREMENTS FOR APPLICATIONS FOR OUTDOOR LIGHTING PLAN APPROVAL; PROVIDING LIGHTING PLAN REGULATIONS, VARIANCE APPROVAL PROCESS AND ALTERNATIVE STANDARDS FOR OUTDOOR LIGHTING PLANS; PROVIDING FOR SEVERABILITY, CODIFICATION, CORRECTION OF SCRIVENER'S ERRORS, AND AN EFFECTIVE DATE.

WHEREAS, section 163.3202(1), Florida Statutes, requires that the City of Orlando, Florida (the "City"), adopt or amend and enforce land development regulations that are consistent with and implement the City's adopted comprehensive plan; and

WHEREAS, section 163.3203(3), Florida Statutes, encourages the use of innovative land development regulations and requires that all land development regulations be combined into a single land development code for the City; and

WHEREAS, from time to time, amendments and revisions to the City's adopted comprehensive plan (the "Growth Management Plan") and progress in the field of planning and zoning make it necessary or desirable to amend the land development regulations of the City; and

WHEREAS, at its regularly scheduled meeting of March 19, 2013, the Municipal Planning Board recommended to the City Council of the City of Orlando, Florida (the "Orlando City Council"), that the provisions of this ordinance are consistent with the applicable provisions of the City's adopted Growth Management Plan, are in the best interest of the public health, safety, and welfare, are in harmony with the purpose and intent of the City's Land Development Code, will not result in disorderly and illogical development patterns, and will not result in incompatible land uses; and

WHEREAS, the Orlando City Council hereby finds and determines that this ordinance is consistent with the applicable provisions of the City's adopted Growth Management Plan, is in the best interest of the public health, safety, and welfare, is in harmony with the purpose and intent of the City's Land Development Code, will not result in disorderly and illogical development patterns, and will not result in incompatible land uses; and

WHEREAS, outdoor lighting is provided for a variety of purposes to the benefit of modern society, including safety and security, recreation, emphasizing features of architectural or historic significance, and to light parks and gardens; and

WHEREAS, recent developments to the rapidly changing lighting industry, including the use of light-emitting diode (LED) technology, have greatly improved the effectiveness and energy efficiency of outdoor lighting; and

WHEREAS, the existing Code of the City of Orlando, Florida (the "Orlando City Code") does not recognize LED and other relatively new lighting technologies; and

WHEREAS, the Orlando City Council hereby finds and declares that this ordinance is in the best interest of the public health, safety, and welfare, and that it preserves, protects, and enhances the use of property within the City through the use of appropriate and efficient lighting practices and systems; and

NOW, THEREFORE, BE IT ENACTED BY THE CITY COUNCIL OF THE CITY OF ORLANDO, FLORIDA, AS FOLLOWS:

SECTION 1. SECTION 9.23, DELETED. Section 9.23, Orlando City Code, is hereby deleted and reserved for future use.

SECTION 2. SECTION 9.32, DELETED. Section 9.32, Orlando City Code, is hereby deleted and reserved for future use.

SECTION 3. SECTION 9.36, DELETED. Section 9.36, Orlando City Code, is hereby deleted and reserved for future use.

SECTION 4. SECTION 61.306, DELETED. Section 61.306, Orlando City Code, is hereby deleted and reserved for future use.

SECTION 5. CHAPTER 63, PART 2M, CREATED. Chapter 63, Part 2M, Orlando City Code, is hereby created to read as follows:

Part 2M. Outdoor Lighting

Sec. 63.400. Purpose and Intent.

The purpose and intent of this part is to ensure that outdoor lighting (or "exterior lighting") has a positive visual impact on surrounding properties. To that end, exterior lighting should be designed, installed, and maintained in a consistent and coordinated fashion to provide safe, convenient, and efficient lighting for customers, pedestrians, and vehicles. Outdoor lighting must also avoid the creation of hot spots, glare, obtrusive light, unreasonable light pollution, light trespass, and visual nuisance. This part is also

intended to promote energy conservation. Also, exterior lighting should accentuate key architectural elements of buildings, and highlight or otherwise emphasize landscape features.

Sec. 63.401. Scope.

This part applies to all development with exterior lighting except agricultural uses, single family residential, and duplexes.

Sec. 63.402. Definitions.

Color Rendering Index (CRI) means the scale used to compare the effect of a light source on the color appearance of its surroundings. The higher the score, the more accurately the light source reflects true color.

Cutoff fixture means an outdoor light fixture that provides a cutoff (shielding) of the emitted light. The light distribution may not be greater than 2.5% of the luminaire's lumen output at or above 90 degrees vertical from the nadir and not more than 10% of a luminaire's lumen output at or above 80 degrees vertical from nadir.

Fixture means the assembly that houses a lamp or lamps, and may also include reflectors, mirrors, refractors, lenses, ballasts, housings, and other attachment parts. A fixture is the same as a "luminaire."

*Footcandle (*sometimes denoted as "*f.c.")* means the measure of light noted as a unit of illuminance amounting to one lumen per square foot.

Glare means intense and somewhat blinding light, or the sensation produced by brightness within the visual field that is sufficiently greater than the intensity of light to which the human eyes are accustomed or adapted, thereby causing annoyance, discomfort, visual impairment, or loss or reduction of visibility.

Height of fixture means the vertical distance from the normal finished grade directly below the centerline of the luminaire to the top of the light fixture.

Height of the pole means the vertical distance from the finished grade to the highest point inclusive of the pole, finial, fixture, and mounting arm.

Hot spot means an area of very high illumination above normal footcandle levels – typically found in an area underneath a luminaire, making normal footcandle levels appear relatively dark.

Illuminance means the quantity of light arriving at a surface divided by the area of the lighted surface, measured in footcandles.

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Illuminating Engineering Society of North America (IES or IESNA) means the nonprofit professional society of lighting engineers and specialists that has established recommended design standards for various exterior lighting applications.

Internal louvered optical system means a series of high-speculer (mirror type) stacked louvers that cover the lamp, creating a cutoff, low-glare light pattern.

Lamp means a light bulb.

LED means light-emitting diode.

Light loss factor means the product of all factors that contribute to the lowering of an illumination level, including factors such as reflector degradation, dirt, lamp depreciation, and voltage fluctuations.

Light pollution means any adverse effect of manmade light, often used to denote a brightness of the night sky, commonly known as urban sky glow.

Light trespass means light falling where it is not desired, wanted, or needed.

Lumen means a quantitative unit measuring the amount of light emitted by a lamp or luminaire.

Luminaire means a complete lighting unit consisting of the lamp or light source, fixture, and other parts designed to distribute the light.

Luminance means the quantitative measure of brightness of a light source or an illuminated surface, equal to luminous intensity per unit area of the source or surface viewed from a given angle.

Metal halide (lamp) means a high intensity discharge lamp where the light is produced by radiation from metal-halide vapors, and which renders colors close to their daytime appearance.

Obtrusive light means light which causes annoyance, discomfort, visual impairment, or loss or reduction of visibility.

Photometric plan means a diagram drawn to scale depicting the location of all light poles and building-mounted light fixtures in a specific area and a numerical grid of the maintained lighting levels that the fixtures will produce. All values must be at grade unless otherwise stipulated.

Sag lens, convex lens, or drop-lens means a clear or prismatic refracting lens that extends below the lowest opaque portion of the light fixture.

Shielded means a fixture constructed to have internal or external shields, top and side visors, hoods, or internal louvers to limit glare and light trespass caused by light emission from the luminaire.

Spill light means light that falls outside the property where the luminaire is located.

Sec. 63.403. Outdoor Lighting Plan Approval Required.

Unless otherwise exempt, it is hereby made unlawful and a violation of this part to install or operate outdoor lighting without first obtaining lighting plan approval from the City permitting official. All outdoor lighting must be built and maintained in conformity with the applicable lighting plan approval. The following is exempt from this section:

(a) Work on property within an historic preservation overlay district or property designated as an Orlando historic landmark.

(b) Work associated with single and two family residential uses.

(c) Work not constituting a substantial improvement to the outdoor lighting system of a building or site.

(d) Structures and improvements approved as a temporary use for less than 61 days.

(e) Work in the public right-of-way.

Sec. 63.404. Application for Outdoor Lighting Plan Approval.

An application for outdoor lighting plan approval must be submitted to the City permitting official on a form provided for such purpose. The application form must include a description of all the information, documents, and other submissions that City officials will need in order to review the proposal for compliance with this Code. At a minimum, the outdoor lighting plan must include or conform to the following:

(a) A photometric plan covering the entire site, including any new street right-of-way. The photometric plan must provide enough information to determine the potential for direct illumination of the site's outdoor areas, spill illumination, and compliance with this part. The photometric plan must show the illumination levels (in footcandles) for all exterior fixtures.

(b) The plan must be prepared by a licensed design professional, who shall sign and seal the plans and certify that the plan complies with this part.

(c) The plan must be prepared in a scale that is easily legible.

(d) The plan must show all proposed and existing buildings on the site, pedestrian and vehicular areas, other above-ground improvements, the horizontal location of all proposed and existing outdoor lighting fixtures including pole and wall-mounted fixtures, mounting heights of each fixture, overall height of each pole above grade, location of externally illuminated signs and associated fixtures, and the location of all architectural and landscape lighting fixtures.

(e) The plan must show initial horizontal illuminance values in footcandles for the area to be illuminated. These values must be calculated at grade and include contributions from all onsite fixtures. The light loss factor may not be less than 0.8.

(f) The manufacturer's cut sheets (specifications) for each proposed fixture must be submitted. Each cut sheet must be legible and must identify the manufacturer's catalog number. A fixture schedule must be provided with this information and the plan cross-reference identification. Drawings of all typical fixtures must show the directional controls such as shields, reflectors, refractors, and lenses that will aim and limit the angle of illumination. Details must show the vertical angle of illumination that will determine shielding angle.

(g) A lighting fixture schedule that presents the following information:

1. Lighting fixture plan identification symbol or abbreviation.

2. Fixture type, including the manufacturer's product identification catalog number.

3. Lamp type and wattage or LED luminaire wattge.

4. Fixture mounting height.

5. Light loss factors used in the plans.

(h) The plan must plot footcandles of illumination at ground level to the nearest tenth of a footcandle, and at horizontal grid intervals of no more than ten feet. Light intensity values must be maintained values calculated using a maintenance factor of less than 0.8.

Sec. 63.405. General Regulations for Outdoor Lighting Plans.

All outdoor lighting plans must conform to the following regulations:

(a) *Illumination levels*. Illumination levels may not exceed 0.5 footcandles at the property line where the neighboring property is a residential use or is zoned for a residential use. For all other uses, illumination levels may not exceed 1.0 footcandles at the property line. To avoid glare and light spilling onto neighboring properties, fixtures must be installed with shields and reflectors.

(b) *Light fixtures*. All light fixtures must conform to the following regulations:

1. All fixtures, including security lighting, must be cutoff fixtures.

2. All fixtures must be incorporated into the building or site as an integrated design element through the use of common or complementary style, material, and color.

3. Fixtures may not be tilted towards adjacent properties.

4. Sag lenses, convex lenses, and drop lenses are prohibited.

5. Floodlighting is prohibited except for non-retail industrial uses where the floodlight is internal to the site and cannot be seen from adjacent public rights-of-way and neighboring residential uses or zoning districts.

6. Fixtures that decoratively light a building or wall may not light above the parapet of the building or the top of the wall and may not produce glare or spill light.

Landscape and decorative lights with lamps of 60-watts or less (or the functional equivalent of 60-watts or less) are hereby made exempt from this subsection.

(c) *Time controls and motion detectors*. Lighting on non-residential sites must include time controls. The time controls must dim all outdoor lights by at least 50% of normal illumination levels within one hour of the close of business on the site. The lights must remain dimmed until the business re-opens in the morning or the automatic light sensors switch the light off in the morning. Where a site includes more than one business, the time controls must dim the lights associated with each discrete place of business within the hour of the respective business closing to the public, but common area lighting may remain fully lit until the last onsite business closes. This requirement does not apply to businesses that operate 24-hours a day. Dimmed lights may return to full luminance for no more than 30 seconds if triggered by a motion detector.

(d) *Light sensors*. All outdoor lighting must include light sensors that automatically turn lights off when daylight exceeds 85% of the ground level luminance of the fixture.

(e) *Manual controls*. All electrical circuits for outdoor lighting must include manually controlled switches conveniently located for manual operation.

Sec. 63.406. Special Regulations for Outdoor Lighting Plans.

Outdoor lighting plans must conform to the following regulations where applicable:

(a) *Height of light fixtures*. Excepting the public rights-of-way, light fixtures may not exceed 30-feet in height when located within a parking lot, and may not otherwise exceed 15-feet in height. Height shall be measured from finished grade to the top of the fixture. Industrial uses not within 500-feet of a residential use or residential zoning district (measured between property lines) may include fixtures up to 50-feet if necessary to illuminate roads or berths used by trucks.

(b) *Parking lots*. To avoid conflict in layout, parking lot lighting must be coordinated with the parking lot's landscaping. Parking lot lighting must conform to the following regulations:

1. Lamps must be metal halide, compact fluorescent, LED, or a source that produces a CRI of 65 or greater. Wattage may not exceed 400-watts per bulb unless necessary to illuminate roads or berths used by trucks at industrial uses not within 500-feet of a residential use or residential zoning district (measured between property lines).

2. Illumination levels outside the radius of all light poles must range between 0.6 and 3.6 footcandles. For purposes of this part, the radius of a light pole equals the height of the pole or 20-feet, whichever is greater. Each light pole's radius must be shown on its respective outdoor lighting plan. Areas of a parking lot adjacent to a building canopy, porte-cochere, or other illuminated building overhang may exceed 3.6 footcandles if the luminance otherwise complies with this part.

3. Light poles must be spaced apart from each other at least 2.5 times the height of the pole.

4. Decorative acorn-type fixtures may not exceed 18-feet in height and may not exceed 250-watts per bulb. Acorn-type fixtures must have a textured, clear lens and globe, frosted phosphor-coated bulbs, and an internal louvered optical system, or refractor-type glass globes that meet the cutoff standards of this part.

(c) *Walkways, bikeways, and trails*. Walkway, bikeway, and trail lighting must conform to the following regulations:

1. Fixtures must be decorative in appearance, style, and finish.

2. Lamps must be metal halide, compact fluorescent, LED, or a source that produces a CRI of 65 or greater. Wattage may not exceed 100-watts per bulb.

3. Illumination levels outside the radius of all light poles must range between 0.2 and 2.5 footcandles. Nature trails, walkways, and bikeways may be exempted from this minimum illumination level by the planning official if he or she finds that the natural environmental objectives and purposes of the trail, walkway, or bikeway would be unreasonably compromised by this minimum lighting requirement and that the location and environmental design of the trail, walkway, or bikeway reasonably provides natural surveillance and otherwise protects public safety.

(d) *Canopied areas for vehicles*. Light fixtures in canopied areas for vehicular use such as drive-through facilities at banks and restaurants, at gas stations, porte-cocheres, and in building canopies and awnings within vehicle use areas must be recessed or cutoff fixtures, and must also conform to the following regulations:

1. Lamps must be metal halide, compact fluorescent, LED, or a source that produces a CRI of 65 or greater. Wattage may not exceed 250-watts per bulb.

2. Illumination at ground level under canopies may not exceed 20 footcandles.

3. Canopy fascias may not be internally lit.

4. Luminaires in canopies may not rely on surrounding structures, including the canopy edge, for required shielding.

(e) *Outdoor automobile dealerships*. Illumination at ground level of outdoor display areas for products such as automobiles, recreational vehicles, motorcycles, and boats, may not exceed 40 footcandles for display rows adjacent to external rights-of-way and may not exceed 24 footcandles for all other areas. Illumination at ground level of all other outdoor areas of the dealership may not exceed 10 footcandles.

(f) *Firelanes and driveways*. Illumination at ground level of firelanes and driveways may exceed the applicable maximum value provided by this part if the planning official finds that strict compliance with the maximum value would create an unreasonable safety hazard, but in no event may the illumination level exceed 5 footcandles unless the applicable maximum value is greater.

(g) *Awnings*. Back and rear lit awnings are prohibited. Awnings may be lit from above, or from the front by fixtures that meet the cutoff requirements of this part. Shielding on awning light fixtures may be tilted above the horizontal in order to

effectively illuminate awnings and awning signs from the front, or from an angle, but the fixtures must prevent spill light.

(h) *Parking garages*. Interior fixtures must be shielded to prevent light spilling from the garage. Light fixtures on the top deck of a parking garage may not exceed 25-feet in height and must be shielded to prevent light spilling from the boundary of the garage deck.

Sec. 63.407. Variances.

The planning official may approve variances to the quantitative standards of this part. Such variances must be approved as part of the application for the certificate of outdoor lighting plan approval. In considering a request for a variance, the planning official must apply the standards of review provided at section 65.382 of this Code and may condition the approval of the variance on one or more of the conditions provided at section 65.381 of this Code as necessary to minimally mitigate the identified land use impacts of the variance.

Sec. 63.408. Alternative Lighting Standards.

As an alternative to the development standards of this part, the planning official may approve an outdoor lighting plan conforming to the Joint International Dark-Sky Association and Illuminating Engineering Society Model Lighting Ordinance, dated June 15, 2011.

SECTION 6. CODIFICATION. The City Clerk and the City Attorney shall cause the Code of the City of Orlando, Florida, to be amended as provided by this ordinance and may renumber, re-letter, and rearrange the codified parts of this ordinance if necessary to facilitate the finding of the law.

SECTION 7. SCRIVENER'S ERROR. The City Attorney may correct scrivener's errors found in this ordinance by filing a corrected copy of this ordinance with the City Clerk.

SECTION 8. SEVERABILITY. If any provision of this ordinance or its application to any person or circumstance is held invalid, the invalidity does not affect other provisions or applications of this ordinance which can be given effect without the invalid provision or application, and to this end the provisions of this ordinance are severable.

SECTION 9. EFFECTIVE DATE. This ordinance takes effect on April 1, 2014.

DONE, THE FIRST READING, by the City Council of the City of Orlando, Florida, at a regular meeting, this _____ day of _____, 2014.

DONE, THE PUBLIC NOTICE, in a newspaper of general circulation in the City of Orlando, Florida, by the City Clerk of the City of Orlando, Florida, this _____ day of _____, 2014.

DONE, THE SECOND READING, AND PUBLIC HEARING, AND ENACTED ON FINAL PASSAGE, by an affirmative vote of a majority of a quorum present of the City Council of the City of Orlando, Florida, at a regular meeting, this _____ day of _____, 2014.

BY THE MAYOR/MAYOR PRO TEMPORE
OF THE CITY OF ORLANDO, FLORIDA:

_____
Mayor / Mayor Pro Tempore

ATTEST, BY THE CLERK OF THE
CITY COUNCIL OF THE CITY OF
ORLANDO, FLORIDA:

_____
City Clerk

APPROVED AS TO FORM AND LEGALITY
FOR THE USE AND RELIANCE OF THE
CITY OF ORLANDO, FLORIDA:

_____
Assistant City Attorney

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CODING: Words ~~stricken~~ are deletions; words underlined are additions; **** denote omitted text.