



MEMORANDUM

To: Mayor and City Council

From: Eryn Kim, Planning Technician

Date: April 12, 2022

Subject: Text Amendment
 Chapter 27 – Outdoor Lighting

ITEM DESCRIPTION

This item is a proposed text amendment to add color temperature regulations and requirements for outdoor lighting. Limiting outdoor LED lighting to 3000 Kelvin, thereby preventing harsh glares and vision impairment, would protect the health and safety of pedestrians, bikers, and motorists at night. It would also conserve energy and lower costs, conserve the nocturnal wildlife, and protect the natural nightscape in alignment with the City's Dark-Sky Compliant Lighting Efficiency Ordinance.

DISCUSSION

In September 2010, the City adopted a Dark-Sky Compliant Lighting Efficiency Ordinance for efficient operation of outdoor lighting by limiting misdirected, excessive, or unnecessary light. After a recent citizen inquiry regarding disturbance from bleeding lights at several drive-through ATMs, Councilman Joe Secorder requested the staff to identify any gaps in the current code. While the current code addresses floodlight spillovers which were enforced on the ATMs, this research process prompted the staff to consider a city-wide standard for limiting outdoor LED lighting to 3000 Kelvin, as further recommended by the International Dark-Sky Association, and demonstrated by many municipalities nationwide. In other words, this text amendment would be in alignment with the City's existing Dark-Sky Compliant Lighting Efficiency Ordinance.

The proposed amendments would limit the color temperature of outdoor lighting fixtures to 3000 Kelvin at the light source, except at outdoor sports, recreation fields, and performance areas for safety purposes. Color temperature specifications of all proposed fixtures would also be required for submission as part of the photometric plan.

STAFF RECOMMENDATION

Staff recommends **APPROVAL**.

Lynn Deutsch Mayor

Eric Linton ICMA-CM City Manager

Sharon Lowery CMC City Clerk

Catherine Lautenbacher City Council Post 1

Rob Price City Council Post 2

Tom Lambert City Council Post 3

Stacey Harris City Council Post 4

Joe Secorder City Council Post 5

John Heneghan City Council Post 6



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Dunwoody, Georgia 30338
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ATTACHMENTS

- Chapter 26, Article IV, Division 3. Outdoor Lighting – current.
- Chapter 26, Article IV, Division 3. Outdoor Lighting – proposed.
- Chapter 26, Article IV, Division 3. Outdoor Lighting – Ordinance.

Lynn Deutsch Mayor
Eric Linton ICMA-CM City Manager
Sharon Lowery CMC City Clerk

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Rob Price City Council Post 2
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Stacey Harris City Council Post 4
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**AN ORDINANCE TO AMEND CHAPTER 27 (ZONING ORDINANCE) OF THE
CITY OF DUNWOODY CODE OF ORDINANCES; TO ADD COLOR
TEMPERATURE REGULATIONS AND REQUIREMENTS FOR OUTDOOR
LIGHTING;**

WHEREAS, the City of Dunwoody adopted a Dark-Sky Compliant Lighting Efficiency Ordinance in September 2010 to require efficient operation of outdoor lighting by limiting misdirected, excessive, or unnecessary light; and

WHEREAS, the International Dark-Sky Association also recommends outdoor LED lighting to stay below 3000 Kelvin to save energy and lower costs, protect health and human safety, conserve nocturnal wildlife, and protect natural nightscapes; and

WHEREAS, outdoor LED lighting higher than 3000K ("cold color") creates a harsh glare, impairing the vision of residents, pedestrians, bikers, and motorists at night; and

WHEREAS, today, 3000K ("warm color") is the standard choice for outdoor LED lighting in many municipalities and organizations, including Georgia Power; and

WHEREAS, the amendment is necessary to ensure the health, safety, and welfare of Dunwoody residents.

NOW, THEREFORE, the Mayor and City Council of the City of Dunwoody HEREBY ORDAIN that Chapter 27 is amended as follows:

Section I: That Chapter 27 of the City Code is further amended by amending Code Section 27-250, to be entitled "Regulations", to read as follows:

Sec. 27-250. - Regulations.

(a) *Applicability.*

- (1) The regulations of this section apply:
 - a. To all new land uses, new developments and new buildings that require a permit;
 - b. Whenever existing land uses, developments or buildings are expanded by 25 percent or more in terms of additional dwelling units, parking spaces or gross floor area, in which case the entire property must be brought into conformance with these regulations; and
 - c. whenever existing outdoor lighting constituting 60 percent or more of the permitted lumens for the parcel is modified or replaced, no matter the actual amount of lighting already on the site.
- (2) When existing developments or buildings are expanded by less than 25 percent in terms of additional dwelling units, parking spaces or gross floor area and the expansion requires a

permit, the applicant must submit a complete inventory and site plan detailing all existing and any proposed new outdoor lighting. Any new lighting on the site must comply with the shielding and lamp type regulations of this division.

(b) *General regulations.*

- (1) Outdoor lighting fixtures must be full cutoff and placed so as to allow no light above the horizontal as measured at the luminaire, except as herein noted in this section (as in the case of period fixtures, cutoff fixtures may be used) and except as allowed in chapter 20 of the Municipal Code (signs).
- (2) Outdoor lighting fixtures must be located, aimed or shielded to minimize glare and stray light trespassing across lot lines and into the public right-of-way.
- (3) Flood or spot lamps must be positioned no higher than 45 degrees above straight down (half-way between the vertical and the horizontal) when the source is visible from any off-site residential property or public roadway.

At Property Lines Including Rights-of-Way	Maximum Footcandles
At property line abutting a residential or an agricultural use	0.5
At property line abutting an office or institutional use	1.0
At property line abutting a commercial or industrial use	1.5

Off-Street Parking Lots	Minimum Footcandles	Average Footcandles	Maximum Footcandles
Residential areas	0.5	2.5	4.0
Office-professional areas	1.0	3.5	6.0
Commercial areas	2.0	7.0	12.0
Light industrial areas	1.0	5.0	8.0

- (4) All light fixtures that are required to be shielded shall be installed and maintained in such a manner that the shielding is effective as described herein for fully shielded fixtures.
- (5) Lighting on sites consisting of multiple uses must conform to the standards of the respective uses.
- (6) Illumination levels are measured from any height and orientation of the measuring device at any location along the property line except the lighting of parking lots must be measured at grade with the meter sensor held horizontally at the surface.
- (7) Color temperature of outdoor lighting fixtures must not exceed 3000K at the light source except at outdoor sports, recreation fields and performance areas.

(c) *Specific uses and activities.* This subsection establishes supplemental lighting regulations for specific types of uses and activities. All lighting not directly associated with the special use areas designated below must comply with all other applicable regulations of this division.

(1) *Outdoor sports, recreation fields and performance areas.* Lighting of outdoor recreational facilities (public or private), such as, but not limited to, outdoor athletic fields, courts, tracks, special event or show areas must comply with the following regulations:

- a. Facilities designed for municipal leagues, elementary to high school levels of play and training fields for recreational or social levels of play, college play, semi-professional, professional or national levels of play must utilize luminaries with minimal uplight consistent with the illumination constraints of the design. Where fully shielded fixtures are not utilized, acceptable luminaries include only those that:
 - 1. Are provided with internal and/or external glare control louvers or lenses, and are installed so as to minimize uplight and offsite light trespass and glare, and
 - 2. All lighting installations must be designed to achieve the illuminance levels for the activity as recommended by the Illuminating Engineering Society of North America (IESNA RP-6).

Light Trespass Limitations for Sports Lighting			
Environmental Zone	Pre-Curfew Limit	Post-Curfew Limit	Degrees Above Nadir (not to exceed 12,000 candela from a single fixture)
E1	Not allowed	0.0 max vertical	Not allowed
E2	0.25 max horizontal 1.0 max vertical	0.10 max vertical	82 degrees
E3	0.5 max horizontal 2.0 max vertical	0.30 max vertical	85 degrees
E4	0.75 max horizontal 3.0 max vertical	0.60 max vertical	88 degrees

E1 = Areas with intrinsically dark landscapes, such as national parks, areas of outstanding natural beauty, etc.
 E2 = Areas of low ambient brightness, including sensitive residential areas.
 E3 = Areas of medium ambient brightness, generally being urban residential areas.
 E4 = Areas of high ambient brightness, which would include dense urban areas with mixed residential and commercial use with high levels of nighttime activity.

- b. All events must be scheduled so as to complete all activity no later than 10:30 p.m. Illumination of the playing field, court or track is permitted after the curfew only to conclude a scheduled event that was unable to conclude before the curfew due to

unusual circumstances. Field lighting for these facilities must be turned off within 30 minutes of completion of the last event of the night.

- c. All light poles must be set back a minimum 60 feet from any residential property line or right-of-way.
- (2) *Service station canopies and parking garages.*
- a. All luminaries mounted on or recessed into the lower surface or service station canopies and parking structures must be fully shielded and utilize flat lenses.
 - b. The total light output of luminaries mounted on the lower surface, or recessed into the lower surface of the canopy, and any lighting within signage or illuminated panels over the pumps, may not exceed 50 footcandles. The total light output of other illuminated areas of a service station may not exceed 15 footcandles.
 - c. Illuminance levels for the interior of parking structures, where interior lighting is visible from outside the structure, must conform to IESNA recommendation RP-20.
 - d. Lights may not be mounted on the top or sides of a canopy, and the sides of the canopy may not be illuminated.
- (3) *Security lighting.*
- a. Security lighting must be directed towards the targeted area.
 - b. Sensor activated lighting must be located in such a manner as to prevent direct glare and lighting into properties of others or into a public right-of-way, and the system must be designed and maintained so that lights are not activated by activity off of the subject property.
- (4) *Pedestrian path lighting.* Lighting posts for pedestrian path lighting may not exceed 16 feet in height from finished grade.
- (5) *Architectural accent lighting.*
- a. Fixtures used to accent architectural features, materials, colors, style of buildings, landscaping, or art must be located, aimed and shielded so that light is directed only on those features. Such fixtures must be aimed or shielded to minimize light spill into the dark night sky in conformance with the luminaire standards.
 - b. Lighting fixtures may not generate glare, or direct light beyond the façade onto a neighboring property, streets or into the night sky.
- (6) *Temporary lighting permits.* Permits for temporary lighting may be granted by the community development department if the total output from the luminaries does not exceed 50 footcandles, subject to the following regulations:
- a. The lighting may not remain for more than 30 days, except that permits for a major construction project may extend to completion.
 - b. The lighting must be designed in such a manner as to minimize light trespass and glare.
 - c. Temporary recreational lighting allowed by permit must be extinguished by 10:30 p.m.
- (7) *Parking areas.*
- a. All lighting fixtures servicing parking lots must be directed downward and not towards buildings or other areas.
 - b. Parking lots must be illuminated to a minimum illumination level of 0.4 footcandles at grade level, and the ratio of the average illumination to the minimum illumination may not exceed 4:1.

- c. Light poles used in parking lots with 100 parking spaces or less may not exceed 20 feet in height. Light poles used in parking lots with more than 100 parking spaces may not exceed 35 feet in height.
- (8) *Street lights.* Unless street light fixtures are of a period or architecture style as approved by the public works department, all new, repaired or replaced fixtures must be full cutoff fixtures.

(Ord. No. 2013-10-15, § 1(Exh. A § 27-14.50), 10-14-2013; Ord. No. 2015-01-05, § 1, 1-26-2015)

Section II: That Chapter 27 of the City Code is further amended by amending Code Section 27-252, to be entitled "Plans", to read as follows:

Sec. 27-252. - Plans.

- (a) Applicants for any permit for any residential use required by any provision of the ordinances of the city involving outdoor lighting fixtures must submit evidence that the proposed work will comply with the outdoor lighting regulations of this division.
 - (1) The submission must include the following information with the application for the required permit:
 - a. Description of all proposed outdoor illuminating devices, fixtures, lamps, supports, reflectors. The description may include, but is not limited to catalog cuts and illustrations by manufacturers.
- (b) Applicants for any permit for any commercial use required by any provision of the ordinances of the city involving outdoor lighting fixtures must submit evidence that the proposed work will comply with the outdoor lighting regulations of this division.
 - (1) The submission must include the following information with the application for the required permit:
 - a. Plans indicating the location on the premises of each outdoor illuminating device, both proposed and any already existing on the site.
 - b. Description of all proposed illuminating devices, fixtures, lamps, supports, reflectors. The description may include, but is not limited to catalog cuts and illustrations by manufacturers.
 - c. Photometric data, such as that furnished by manufacturers or similar, showing the angle of cut-off of light emissions and the color temperature of all proposed illuminating devices, fixtures, lamps, supports, and reflectors.
 - d. Photometric plans must include the maximum and average light layout.
 - (2) The above required plans, descriptions, and data must be complete and accurate so that the community development department is able to readily determine whether the proposal will comply with the requirements of this division.

(Ord. No. 2013-10-15, § 1(Exh. A § 27-14.70), 10-14-2013; Ord. No. 2015-01-05, § 1, 1-26-2015)

STATE OF GEORGIA
CITY OF DUNWOODY

ORDINANCE 2022-XX-XX

SO ORDAINED, this ____ day of _____, 2022.

Approved:

Lynn Deutsch, Mayor

ATTEST:

Approved as to Form and Content:

Sharon Lowery, City Clerk (Seal)

City Attorney

DIVISION 3. - OUTDOOR LIGHTING

Sec. 27-246. - Purpose.

The regulations of this division are intended to:

- (1) Permit reasonable uses of outdoor lighting for nighttime safety, utility, security, productivity, enjoyment and commerce;
- (2) Curtail and reverse the degradation of the nighttime visual environment and the night sky;
- (3) Preserve the dark night sky for astronomy;
- (4) Minimize glare, obtrusive light and artificial sky glow by limiting outdoor lighting that is misdirected, excessive or unnecessary;
- (5) Conserve energy and resources to the greatest extent possible; and
- (6) Help protect the natural environment from the damaging effects of night lighting from human-made sources.

(Ord. No. 2013-10-15, § 1(Exh. A § 27-14.10), 10-14-2013)

Sec. 27-247. - Conformance with applicable regulations.

All outdoor lighting devices must comply with the provisions of this division, the building code and the electrical code, required permits and inspections, as applicable.

(Ord. No. 2013-10-15, § 1(Exh. A § 27-14.20), 10-14-2013)

Sec. 27-248. - Prohibited lighting.

The following are expressly prohibited:

- (1) Aerial lasers;
- (2) Searchlight style lights;
- (3) Light sources that exceed 200,000 lumens or intensity in any direction of 2,000,000 candelas or more;
- (4) Mercury vapor lamps;
- (5) Low-sodium vapor lamps; and
- (6) Exposed neon lighting.

(Ord. No. 2013-10-15, § 1(Exh. A § 27-14.30), 10-14-2013)

Sec. 27-249. - Exempt lighting.

The following luminaries and lighting systems are expressly exempt from the regulations of this division:

- (1) Underwater lighting used for the illumination of swimming pools and fountains;
- (2) Temporary holiday lighting;
- (3) Lighting required and regulated by the Federal Aviation Administration, or other authorized federal, state or local government agency;
- (4) Emergency lighting used by police, fire, or medical personnel, or at their direction;
- (5) All outdoor light fixtures producing light directly from the combustion of fossil fuels, such as kerosene and gasoline;
- (6) Security lighting controlled and activated by a motion sensor device for a duration of ten minutes or less.

(Ord. No. 2013-10-15, § 1(Exh. A § 27-14.40), 10-14-2013)

Sec. 27-250. - Regulations.

(a) *Applicability.*

- (1) The regulations of this section apply:
 - a. To all new land uses, new developments and new buildings that require a permit;
 - b. Whenever existing land uses, developments or buildings are expanded by 25 percent or more in terms of additional dwelling units, parking spaces or gross floor area, in which case the entire property must be brought into conformance with these regulations; and
 - c. whenever existing outdoor lighting constituting 60 percent or more of the permitted lumens for the parcel is modified or replaced, no matter the actual amount of lighting already on the site.
- (2) When existing developments or buildings are expanded by less than 25 percent in terms of additional dwelling units, parking spaces or gross floor area and the expansion requires a permit, the applicant must submit a complete inventory and site plan detailing all existing and any proposed new outdoor lighting. Any new lighting on the site must comply with the shielding and lamp type regulations of this division.

(b) *General regulations.*

- (1) Outdoor lighting fixtures must be full cutoff and placed so as to allow no light above the horizontal as measured at the luminaire, except as herein noted in this section (as in the case of period fixtures, cutoff fixtures may be used) and except as allowed in chapter 20 of the Municipal Code (signs).
- (2) Outdoor lighting fixtures must be located, aimed or shielded to minimize glare and stray light trespassing across lot lines and into the public right-of-way.
- (3) Flood or spot lamps must be positioned no higher than 45 degrees above straight down (half-way between the vertical and the horizontal) when the source is visible from any off-site residential property or public roadway.

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- (4) All light fixtures that are required to be shielded shall be installed and maintained in such a manner that the shielding is effective as described herein for fully shielded fixtures.
- (5) Lighting on sites consisting of multiple uses must conform to the standards of the respective uses.
- (6) Illumination levels are measured from any height and orientation of the measuring device at any location along the property line except the lighting of parking lots must be measured at grade with the meter sensor held horizontally at the surface.
- (c) *Specific uses and activities.* This subsection establishes supplemental lighting regulations for specific types of uses and activities. All lighting not directly associated with the special use areas designated below must comply with all other applicable regulations of this division.
- (1) *Outdoor sports, recreation fields and performance areas.* Lighting of outdoor recreational facilities (public or private), such as, but not limited to, outdoor athletic fields, courts, tracks, special event or show areas must comply with the following regulations:
- a. Facilities designed for municipal leagues, elementary to high school levels of play and training fields for recreational or social levels of play, college play, semi-professional, professional or national levels of play must utilize luminaries with minimal upright consistent with the illumination constraints of the design. Where fully shielded fixtures are not utilized, acceptable luminaries include only those that:

1. Are provided with internal and/or external glare control louvers or lenses, and are installed so as to minimize uplight and offsite light trespass and glare, and
2. All lighting installations must be designed to achieve the illuminance levels for the activity as recommended by the Illuminating Engineering Society of North America (IESNA RP-6).

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E2 = Areas of low ambient brightness, including sensitive residential areas.

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E4 = Areas of high ambient brightness, which would include dense urban areas with mixed residential and commercial use with high levels of nighttime activity.

- b. All events must be scheduled so as to complete all activity no later than 10:30 p.m. Illumination of the playing field, court or track is permitted after the curfew only to conclude a scheduled event that was unable to conclude before the curfew due to unusual circumstances. Field lighting for these facilities must be turned off within 30 minutes of completion of the last event of the night.

- c. All light poles must be set back a minimum 60 feet from any residential property line or right-of-way.
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- a. All luminaries mounted on or recessed into the lower surface or service station canopies and parking structures must be fully shielded and utilize flat lenses.
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 - c. Illuminance levels for the interior of parking structures, where interior lighting is visible from outside the structure, must conform to IESNA recommendation RP-20.
 - d. Lights may not be mounted on the top or sides of a canopy, and the sides of the canopy may not be illuminated.
- (3) *Security lighting.*
- a. Security lighting must be directed towards the targeted area.
 - b. Sensor activated lighting must be located in such a manner as to prevent direct glare and lighting into properties of others or into a public right-of-way, and the system must be designed and maintained so that lights are not activated by activity off of the subject property.
- (4) *Pedestrian path lighting.* Lighting posts for pedestrian path lighting may not exceed 16 feet in height from finished grade.
- (5) *Architectural accent lighting.*
- a. Fixtures used to accent architectural features, materials, colors, style of buildings, landscaping, or art must be located, aimed and shielded so that light is directed only on those features. Such fixtures must be aimed or shielded to minimize light spill into the dark night sky in conformance with the luminaire standards.
 - b. Lighting fixtures may not generate glare, or direct light beyond the façade onto a neighboring property, streets or into the night sky.
- (6) *Temporary lighting permits.* Permits for temporary lighting may be granted by the community development department if the total output from the luminaries does not exceed 50 footcandles, subject to the following regulations:
- a. The lighting may not remain for more than 30 days, except that permits for a major construction project may extend to completion.
 - b. The lighting must be designed in such a manner as to minimize light trespass and glare.
 - c. Temporary recreational lighting allowed by permit must be extinguished by 10:30 p.m.
- (7) *Parking areas.*
- a. All lighting fixtures servicing parking lots must be directed downward and not towards buildings or other areas.

- b. Parking lots must be illuminated to a minimum illumination level of 0.4 footcandles at grade level, and the ratio of the average illumination to the minimum illumination may not exceed 4:1.
 - c. Light poles used in parking lots with 100 parking spaces or less may not exceed 20 feet in height. Light poles used in parking lots with more than 100 parking spaces may not exceed 35 feet in height.
- (8) *Street lights.* Unless street light fixtures are of a period or architecture style as approved by the public works department, all new, repaired or replaced fixtures must be full cutoff fixtures.

(Ord. No. 2013-10-15, § 1(Exh. A § 27-14.50), 10-14-2013; Ord. No. 2015-01-05, § 1, 1-26-2015)

Sec. 27-251. - Variances.

Applications for variances from the outdoor lighting regulations of this division must include the recommended practices of the Illuminating Engineering Society of North America, a professional engineer or other commonly recognized authority on outdoor lighting. Applications must also include information concerning the proposed design and appearance of the luminaire and how light trespass and glare will be limited.

(Ord. No. 2013-10-15, § 1(Exh. A § 27-14.60), 10-14-2013)

Sec. 27-252. - Plans.

- (a) Applicants for any permit for any residential use required by any provision of the ordinances of the city involving outdoor lighting fixtures must submit evidence that the proposed work will comply with the outdoor lighting regulations of this division.
 - (1) The submission must include the following information with the application for the required permit:
 - a. Description of all proposed outdoor illuminating devices, fixtures, lamps, supports, reflectors. The description may include, but is not limited to catalog cuts and illustrations by manufacturers.
- (b) Applicants for any permit for any commercial use required by any provision of the ordinances of the city involving outdoor lighting fixtures must submit evidence that the proposed work will comply with the outdoor lighting regulations of this division.
 - (1) The submission must include the following information with the application for the required permit:
 - a. Plans indicating the location on the premises of each outdoor illuminating device, both proposed and any already existing on the site.
 - b. Description of all proposed illuminating devices, fixtures, lamps, supports, reflectors. The description may include, but is not limited to catalog cuts and illustrations by manufacturers.
 - c. Photometric data, such as that furnished by manufacturers or similar, showing the angle of cut-off of light emissions.

- d. Photometric plans must include the maximum and average light layout.
- (2) The above required plans, descriptions, and data must be complete and accurate so that the community development department is able to readily determine whether the proposal will comply with the requirements of this division.

(Ord. No. 2013-10-15, § 1(Exh. A § 27-14.70), 10-14-2013; Ord. No. 2015-01-05, § 1, 1-26-2015)

Sec. 27-253. - Certification.

For all projects, certification that the lighting as installed, conforms to the approved plans must be provided by a licensed professional before the certificate of occupancy is issued. Until this certification is submitted, approval for use by the issuance of the certificate of occupancy may not be issued.

(Ord. No. 2013-10-15, § 1(Exh. A § 27-14.80), 10-14-2013)

Secs. 27-254—27-265. - Reserved.

DIVISION 3. - OUTDOOR LIGHTING

Sec. 27-246. - Purpose.

The regulations of this division are intended to:

- (1) Permit reasonable uses of outdoor lighting for nighttime safety, utility, security, productivity, enjoyment and commerce;
- (2) Curtail and reverse the degradation of the nighttime visual environment and the night sky;
- (3) Preserve the dark night sky for astronomy;
- (4) Minimize glare, obtrusive light and artificial sky glow by limiting outdoor lighting that is misdirected, excessive or unnecessary;
- (5) Conserve energy and resources to the greatest extent possible; and
- (6) Help protect the natural environment from the damaging effects of night lighting from human-made sources.

(Ord. No. 2013-10-15, § 1(Exh. A § 27-14.10), 10-14-2013)

Sec. 27-247. - Conformance with applicable regulations.

All outdoor lighting devices must comply with the provisions of this division, the building code and the electrical code, required permits and inspections, as applicable.

(Ord. No. 2013-10-15, § 1(Exh. A § 27-14.20), 10-14-2013)

Sec. 27-248. - Prohibited lighting.

The following are expressly prohibited:

- (1) Aerial lasers;
- (2) Searchlight style lights;
- (3) Light sources that exceed 200,000 lumens or intensity in any direction of 2,000,000 candelas or more;
- (4) Mercury vapor lamps;
- (5) Low-sodium vapor lamps; and
- (6) Exposed neon lighting.

(Ord. No. 2013-10-15, § 1(Exh. A § 27-14.30), 10-14-2013)

Sec. 27-249. - Exempt lighting.

The following luminaries and lighting systems are expressly exempt from the regulations of this division:

- (1) Underwater lighting used for the illumination of swimming pools and fountains;
- (2) Temporary holiday lighting;
- (3) Lighting required and regulated by the Federal Aviation Administration, or other authorized federal, state or local government agency;
- (4) Emergency lighting used by police, fire, or medical personnel, or at their direction;
- (5) All outdoor light fixtures producing light directly from the combustion of fossil fuels, such as kerosene and gasoline;
- (6) Security lighting controlled and activated by a motion sensor device for a duration of ten minutes or less.

(Ord. No. 2013-10-15, § 1(Exh. A § 27-14.40), 10-14-2013)

Sec. 27-250. - Regulations.

(a) *Applicability.*

- (1) The regulations of this section apply:
 - a. To all new land uses, new developments and new buildings that require a permit;
 - b. Whenever existing land uses, developments or buildings are expanded by 25 percent or more in terms of additional dwelling units, parking spaces or gross floor area, in which case the entire property must be brought into conformance with these regulations; and
 - c. whenever existing outdoor lighting constituting 60 percent or more of the permitted lumens for the parcel is modified or replaced, no matter the actual amount of lighting already on the site.
- (2) When existing developments or buildings are expanded by less than 25 percent in terms of additional dwelling units, parking spaces or gross floor area and the expansion requires a permit, the applicant must submit a complete inventory and site plan detailing all existing and any proposed new outdoor lighting. Any new lighting on the site must comply with the shielding and lamp type regulations of this division.

(b) *General regulations.*

- (1) Outdoor lighting fixtures must be full cutoff and placed so as to allow no light above the horizontal as measured at the luminaire, except as herein noted in this section (as in the case of period fixtures, cutoff fixtures may be used) and except as allowed in chapter 20 of the Municipal Code (signs).
- (2) Outdoor lighting fixtures must be located, aimed or shielded to minimize glare and stray light trespassing across lot lines and into the public right-of-way.
- (3) Flood or spot lamps must be positioned no higher than 45 degrees above straight down (half-way between the vertical and the horizontal) when the source is visible from any off-site residential property or public roadway.

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- (4) All light fixtures that are required to be shielded shall be installed and maintained in such a manner that the shielding is effective as described herein for fully shielded fixtures.
- (5) Lighting on sites consisting of multiple uses must conform to the standards of the respective uses.
- (6) Illumination levels are measured from any height and orientation of the measuring device at any location along the property line except the lighting of parking lots must be measured at grade with the meter sensor held horizontally at the surface.
- (7) Color temperature of outdoor lighting fixtures must not exceed 3000K at the light source except at outdoor sports, recreation fields and performance areas.
- (c) *Specific uses and activities.* This subsection establishes supplemental lighting regulations for specific types of uses and activities. All lighting not directly associated with the special use areas designated below must comply with all other applicable regulations of this division.
- (1) *Outdoor sports, recreation fields and performance areas.* Lighting of outdoor recreational facilities (public or private), such as, but not limited to, outdoor athletic fields, courts, tracks, special event or show areas must comply with the following regulations:
- Facilities designed for municipal leagues, elementary to high school levels of play and training fields for recreational or social levels of play, college play, semi-professional, professional or national levels of play must utilize luminaries with minimal uplight

consistent with the illumination constraints of the design. Where fully shielded fixtures are not utilized, acceptable luminaries include only those that:

1. Are provided with internal and/or external glare control louvers or lenses, and are installed so as to minimize uplight and offsite light trespass and glare, and
2. All lighting installations must be designed to achieve the illuminance levels for the activity as recommended by the Illuminating Engineering Society of North America (IESNA RP-6).

Light Trespass Limitations for Sports Lighting			
Environmental Zone	Pre-Curfew Limit	Post-Curfew Limit	Degrees Above Nadir (not to exceed 12,000 candela from a single fixture)
E1	Not allowed	0.0 max vertical	Not allowed
E2	0.25 max horizontal 1.0 max vertical	0.10 max vertical	82 degrees
E3	0.5 max horizontal 2.0 max vertical	0.30 max vertical	85 degrees
E4	0.75 max horizontal 3.0 max vertical	0.60 max vertical	88 degrees

E1 = Areas with intrinsically dark landscapes, such as national parks, areas of outstanding natural beauty, etc.

E2 = Areas of low ambient brightness, including sensitive residential areas.

E3 = Areas of medium ambient brightness, generally being urban residential areas.

E4 = Areas of high ambient brightness, which would include dense urban areas with mixed residential and commercial use with high levels of nighttime activity.

- b. All events must be scheduled so as to complete all activity no later than 10:30 p.m. Illumination of the playing field, court or track is permitted after the curfew only to conclude a scheduled event that was unable to conclude before the curfew due to unusual

circumstances. Field lighting for these facilities must be turned off within 30 minutes of completion of the last event of the night.

- c. All light poles must be set back a minimum 60 feet from any residential property line or right-of-way.
- (2) *Service station canopies and parking garages.*
- a. All luminaries mounted on or recessed into the lower surface of service station canopies and parking structures must be fully shielded and utilize flat lenses.
 - b. The total light output of luminaries mounted on the lower surface, or recessed into the lower surface of the canopy, and any lighting within signage or illuminated panels over the pumps, may not exceed 50 footcandles. The total light output of other illuminated areas of a service station may not exceed 15 footcandles.
 - c. Illuminance levels for the interior of parking structures, where interior lighting is visible from outside the structure, must conform to IESNA recommendation RP-20.
 - d. Lights may not be mounted on the top or sides of a canopy, and the sides of the canopy may not be illuminated.
- (3) *Security lighting.*
- a. Security lighting must be directed towards the targeted area.
 - b. Sensor activated lighting must be located in such a manner as to prevent direct glare and lighting into properties of others or into a public right-of-way, and the system must be designed and maintained so that lights are not activated by activity off of the subject property.
- (4) *Pedestrian path lighting.* Lighting posts for pedestrian path lighting may not exceed 16 feet in height from finished grade.
- (5) *Architectural accent lighting.*
- a. Fixtures used to accent architectural features, materials, colors, style of buildings, landscaping, or art must be located, aimed and shielded so that light is directed only on those features. Such fixtures must be aimed or shielded to minimize light spill into the dark night sky in conformance with the luminaire standards.
 - b. Lighting fixtures may not generate glare, or direct light beyond the façade onto a neighboring property, streets or into the night sky.
- (6) *Temporary lighting permits.* Permits for temporary lighting may be granted by the community development department if the total output from the luminaries does not exceed 50 footcandles, subject to the following regulations:
- a. The lighting may not remain for more than 30 days, except that permits for a major construction project may extend to completion.
 - b. The lighting must be designed in such a manner as to minimize light trespass and glare.
 - c. Temporary recreational lighting allowed by permit must be extinguished by 10:30 p.m.
- (7) *Parking areas.*

- a. All lighting fixtures servicing parking lots must be directed downward and not towards buildings or other areas.
 - b. Parking lots must be illuminated to a minimum illumination level of 0.4 footcandles at grade level, and the ratio of the average illumination to the minimum illumination may not exceed 4:1.
 - c. Light poles used in parking lots with 100 parking spaces or less may not exceed 20 feet in height. Light poles used in parking lots with more than 100 parking spaces may not exceed 35 feet in height.
- (8) *Street lights*. Unless street light fixtures are of a period or architecture style as approved by the public works department, all new, repaired or replaced fixtures must be full cutoff fixtures.

(Ord. No. 2013-10-15, § 1(Exh. A § 27-14.50), 10-14-2013; Ord. No. 2015-01-05, § 1, 1-26-2015)

Sec. 27-251. - Variances.

Applications for variances from the outdoor lighting regulations of this division must include the recommended practices of the Illuminating Engineering Society of North America, a professional engineer or other commonly recognized authority on outdoor lighting. Applications must also include information concerning the proposed design and appearance of the luminaire and how light trespass and glare will be limited.

(Ord. No. 2013-10-15, § 1(Exh. A § 27-14.60), 10-14-2013)

Sec. 27-252. - Plans.

- (a) Applicants for any permit for any residential use required by any provision of the ordinances of the city involving outdoor lighting fixtures must submit evidence that the proposed work will comply with the outdoor lighting regulations of this division.
 - (1) The submission must include the following information with the application for the required permit:
 - a. Description of all proposed outdoor illuminating devices, fixtures, lamps, supports, reflectors. The description may include, but is not limited to catalog cuts and illustrations by manufacturers.
- (b) Applicants for any permit for any commercial use required by any provision of the ordinances of the city involving outdoor lighting fixtures must submit evidence that the proposed work will comply with the outdoor lighting regulations of this division.
 - (1) The submission must include the following information with the application for the required permit:
 - a. Plans indicating the location on the premises of each outdoor illuminating device, both proposed and any already existing on the site.
 - b. Description of all proposed illuminating devices, fixtures, lamps, supports, reflectors. The description may include, but is not limited to catalog cuts and illustrations by manufacturers.

- c. Photometric data, such as that furnished by manufacturers or similar, showing the angle of cut-off of light emissions and the color temperature of all proposed illuminating devices, fixtures, lamps, supports, and reflectors.
 - d. Photometric plans must include the maximum and average light layout.
- (2) The above required plans, descriptions, and data must be complete and accurate so that the community development department is able to readily determine whether the proposal will comply with the requirements of this division.

(Ord. No. 2013-10-15, § 1(Exh. A § 27-14.70), 10-14-2013; Ord. No. 2015-01-05, § 1, 1-26-2015)

Sec. 27-253. - Certification.

For all projects, certification that the lighting as installed, conforms to the approved plans must be provided by a licensed professional before the certificate of occupancy is issued. Until this certification is submitted, approval for use by the issuance of the certificate of occupancy may not be issued.

(Ord. No. 2013-10-15, § 1(Exh. A § 27-14.80), 10-14-2013)

Secs. 27-254—27-265. - Reserved.