



COUNTY OF BEXAR       §  
STATE OF TEXAS       §

**AMENDED ORDER FOR REGULATION OF OUTDOOR LIGHTING IN THE  
UNINCORPORATED AREAS OF BEXAR COUNTY, TEXAS  
WITHIN 5 MILES OF A MILITARY INSTALLATION**

*WHEREAS*, Camp Bullis and Lackland Training Annex are critical training facilities for the United States military, where all branches of the service train their medical personnel to function at night, under fire; and

*WHEREAS*, Martindale Army Airfield conducts night training flights of UH-60 Blackhawk helicopters to train for real world emergencies and supports the Camp Bullis mission ; and

*WHEREAS*, the continued viability of Camp Bullis, Lackland Training Annex, and Martindale Army Airfield for such training purposes is essential to the readiness of the United States military, the utility of Ft. Sam Houston, and the vitality of Bexar County's economy; and

*WHEREAS*, downward-directed, fully-shielded, low-glare lighting, using efficient modern lighting sources and amounts appropriate to the needs for utility, safety, security and commerce, improves visibility and decreases energy waste and carbon dioxide emissions, thereby reducing the operating cost for outdoor lighting systems; and

*WHEREAS*, the Texas Legislature passed and Governor Rick Perry signed into law on May 25, 2007, House Bill 1852 (Corte/Van de Putte)(now Subchapter B of the Texas Local Government Code Chapter 240), providing that on the request of a United States military installation, base, or camp commanding officer, the commissioners court of a county, any part of which is located immediately adjacent to the installation, base, or camp, may adopt orders regulating the installation and use of outdoor lighting; and

*WHEREAS*, on April 9, 2008, Bexar County received a letter from Major General Russell Czerw, Commanding General, U.S. Army Medical Department Center and School and Fort Sam Houston, requesting that Bexar County issue an order regulating outdoor night-time lighting for new construction within three miles of the boundaries of Camp Bullis in order to protect military night training activities, amended by a July 29, 2009 request from Major General Russell Czerw to extend the lighting order out five miles; and

WHEREAS, on December 3, 2010 Bexar County received an additional letter from Brigadier General Leonard A Patrick, Commander, 502d Air Base Wing, requesting that Bexar County issue an order regulating outdoor night-time lighting for new construction within five miles of the boundaries of Camp Bullis and Lackland Air Force Training Annex in order to protect military night training activities; and

WHEREAS, the 2009 Camp Bullis Joint Land Use Study and the 2015 Ambient Lighting Assessment for the Lackland Air Force Training Annex recommended by the 2011 Lackland Air Force Base Joint Land Use Study concluded that military influence area for lighting needed to extend to five miles; and

WHEREAS, the City of San Antonio coordinated with multiple parties including representatives from the development community, Joint Base San Antonio, and International Dark Sky Association; and

WHEREAS, Bexar County coordinated with the City of San Antonio to reformat the Lighting Court Order to be similar to the City of San Antonio Ordinance establishing regulations for outdoor lighting impacting military operations five (5) miles or less from the perimeter of Camp Bullis/Camp Stanley, Randolph Air Force Base, and Lackland Air Force Base, and

WHEREAS, on May 30, 2018 Bexar County received a letter from Troy Meuth, Lieutenant Colonel, Texas Army National Guard Facility Commander, Martindale Army Airfield, requesting Bexar County to issue an order regulating outdoor nighttime lighting for new construction within five (5) miles of the boundaries of Martindale Army Airfield; and

WHEREAS, the 85<sup>th</sup> Texas Legislature passed and Governor Greg Abbott signed into law on August 15, 2017 Senate Bill 6 (Campbell/Huberty) to allow voters to choose how a city will regulate land use within (5) five miles from a United States military installation with a Joint Land Use Study; and

WHEREAS, on November 6, 2018, voters within areas designated by the City of San Antonio around Camp Bullis and Lackland Training Annex voted for land use controls without annexation by the City of San Antonio; and

WHEREAS, after giving at least two weeks public notice, the Bexar County Commissioners Court conducted a hearing on the proposed adoption of this Order on May 21, 2019;

**NOW, THEREFORE, BE IT ORDERED BY THE COMMISSIONERS COURT OF BEXAR COUNTY, TEXAS:**

COMMISSIONERS COURT REGULATION No. 12.501.072208, Approved July 22, 2008 and Effective July 22, 2008, was revoked and replaced by an updated Order effective August 18, 2009.

COMMISSIONERS COURT REGULATION No. 12.501.072208, Approved August 18, 2009 and Effective August 18, 2009, is hereby revoked and replaced by this Order.

**(a) Military Lighting Regions (MLRs).**

The areas where this Lighting Order will apply can be found in Exhibit 1. The overall geographic areas shall be known as Military Lighting Regions as described below.

- (1) MLR1- 3 miles or less from the installation (most restricted lighting) = LZ-2 for BUG rating limitations referenced in Table 1. Lighting Zone 2 allows only 50 lumens in the Uplight High (UH) and Uplight Low (UL) zones, 100 lumens total (less than a 25W incandescent lamp).
- (2) MLR2- greater than 3 miles and up to and including 5 miles from the installation (less restricted lighting) = LZ-3 for BUG rating limitations referenced in Table 1. Lighting Zone 3 allows only 500 lumens in the Uplight High (UH) and Uplight Low (UL) zones, 1000 lumens total (about the output of a 75W incandescent bulb).
- (3) MLR3 – areas established by the City of San Antonio as Military Protection Areas where voters rejected proposed annexation by the City of San Antonio. Permitting and enforcement shall be conducted in accordance with the City of San Antonio Unified Development Code Section 35-339.
- (4) This shall ensure the following:
  - A. Consistent color temperature of the lights
  - B. Color temperatures do not exceed 4100K (white light or warm light) depending on MLR
  - C. Fully shielded lights
  - D. No light emitted above 90 degrees
  - E. Appropriate amount of light where needed
  - F. Glare restrictions are in place

**Table 1 Maximum Allowable BUG Ratings for Non-Residential**

*Note: BUG ratings are defined by IDA*

<b>Maximum allowable Backlight ratings</b>		
	<b>MLR-1/ LZ-2</b>	<b>MLR-2/ LZ-3</b>
Greater than 2 mounting heights from property line	B4	B5
1 to less than 2 mounting heights from property line and ideally oriented**	B3	B4
0.5 to 1 mounting heights from property line and ideally oriented**	B2	B3
Less than 0.5 mounting height to property line and ideally oriented**	B0	B1
<i>** To be considered “ideally oriented” the luminaire shall be mounted with the backlight portion of the light output oriented perpendicular and towards the property line of concern</i>		
<b>Maximum allowable Uplight ratings</b>		
Allowed Uplight Rating	U2	U3
Allowed % light emission above 90 degrees for street or area lighting	0%	0%

<b>Maximum allowable Glare ratings</b>		
Allowed Glare Rating	G2	G3
Any luminaire not ideally oriented* with 1 to less than 2 mounting heights to any property line of concern	G1	G1
Any luminaire not ideally oriented* with 0.5 to 1 mounting heights to any property line of concern	G0	G1
Any luminaire not ideally oriented* with 0.5 mounting heights to any property line of concern	G0	G0
*Any luminaire that cannot be mounted with its backlight perpendicular to any property line within 2x the mounting heights of the luminaire location shall meet the Allowed Glare Rating.		

(b) **Limits to Off Site Impacts.** All luminaires shall be rated and installed using either Option A (the maximum Allowable BUG ratings as shown in Table 1) or Option B (through computer lighting calculations/photometric calculations). Only one option may be used per plan submission.

(1) Option A: All luminaires shall be rated and installed according to Table 1.

(2) Option B: Shall be required for all non-residential luminaires that:

(A) Do not have BUG ratings, or exceed acceptable BUG ratings

(B) Are not fully shielded, or have adjustable mountings

The entire outdoor lighting design shall be analyzed using industry standard lighting software including inter-reflections in the following manner:

1. Input data shall describe the lighting system including luminaire locations, mounting heights, aiming directions, and employing photometric data tested in accordance with IES guidelines. Buildings or other physical objects on the site within three object heights of the property line shall be included in the calculations.
2. Analysis shall utilize an enclosure comprised of calculation planes with zero reflectance values around the perimeter of the site. The top of the enclosure shall be no less than 33 feet above the tallest luminaire. Calculations shall include total lumens upon the inside surfaces of the box top and vertical sides and maximum vertical illuminance (footcandles and/or lux) on the sides of the enclosure.
3. Photometric plan and data sheets, such as or similar to that furnished by manufacturers, showing the angle of cut off or light emissions.
4. A lighting plan and photometric plan shall be prepared by a certified engineer, lighting engineer, architect, landscape architect or designer.

The design complies if:

- (i) The total lumens on the inside surfaces of the virtual enclosure are less than 15% of the total site lumen limit per Table 2; and
- (ii) The maximum vertical illuminance on any vertical surface is less than the allowed maximum illuminance per Table 3.

“Total initial luminaire lumens” is a measurement in addition to footcandles or lux. The footcandle (fc) is equal to one lumen per square foot. Lux is the metric unit and is equal to one lumen per square meter.

**Table 2 Allowed Total Initial Site Lumens**

	<b>MLR-1/ LZ-2</b>	<b>MLR-2/ LZ-3</b>
<b>Allowed Lumens per SF</b>	2.5	5.0
<b>Allowed Base Lumens per Site</b>	7,000	14,000

*Note: Lighting Zones (LZ) are defined in IDA model ordinance*

**Table 3 Maximum Vertical Illuminance at any point in the plane of the property line**

<b>Maximum Allowable Vertical Illuminance</b>	
<b>MLR-1/ LZ-2</b>	<b>MLR-2/ LZ-3</b>
0.3 FC or 3.0 LUX	0.8 FC or 8.0 LUX

*Note: Lighting Zones (LZ) are defined in IDA model ordinance*

**Table 4 Additional Allowances for Certain Non-Residential Uses**

	<b>MLR-1/ LZ-2</b>	<b>MLR-2/ LZ-3</b>
<b>Additional Lumens Allowances for All Buildings except service stations and outdoor sales facilities. A MAXIMUM OF THREE (3) ALLOWANCES ARE PERMITTED***</b>		
<b>Building Entrances or Exits.</b> This allowance is per door. In order to use this allowance, luminaires shall be within 20 feet of the door.	2,000 lumens per door	4,000 lumens per door
<b>Building Facades.</b> This allowance is lumens per unit area of building façade that are illuminated. To use this allowance, luminaires shall be aimed at the façade and capable of illuminating it without obstruction.	8 lumens per square foot area	16 lumens per square foot area
<b>Sales or Non-sales Canopies.</b> This allowance is lumens per unit area for the total area within the drip line of the canopy. In order to qualify for this allowance, luminaires shall be located under the canopy.	6 lumens per square foot area	12 lumens per square foot area
<b>Guard Stations.</b> This allowance is lumens per unit area of guardhouse plus 2000 sf per vehicle lane. In order to use this allowance, luminaires shall be within 2 mounting heights of a vehicle lane or the guardhouse.	12 lumens per square foot area	24 lumens per square foot area

<p><b>Outdoor Dining.</b> This allowance is lumens per unit area for the total illuminated hardscape of outdoor dining. In order to use this allowance, luminaires shall be within 2 mounting heights of the hardscape area of outdoor dining.</p>	<p>5 lumens per square foot area</p>	<p>10 lumens per square foot area</p>
<p><b>Drive Up Windows.</b> This allowance is lumens per window. In order to use this allowance, luminaires shall be within 20 feet of the center of the window.</p>	<p>4,000 lumens per drive-up window</p>	<p>8,000 lumens per drive-up window</p>
<p style="text-align: center;"><b>Additional Lumens Allowances for Service Stations only.</b> Service stations may not use any other additional allowances</p>		
<p><b>Vehicle Service Station Hardscape.</b> This allowance is lumens per unit area for the total illuminated hardscape area less area of buildings, area under canopies, area off property, or areas obstructed by signs or structures. In order to use this allowance, luminaires shall be illuminating the hardscape area and shall not be within a building, below a canopy, beyond property lines, or obstructed by a sign or other structure.</p>	<p>8 lumens per square foot area</p>	<p>16 lumens per square foot area</p>
<p><b>Vehicle Service Station Canopies.</b> This allowance is lumens per unit area for the total area within the drip line of the canopy. In order to use this allowance, luminaires shall be located under the canopy.</p>	<p>16 lumens per square foot area</p>	<p>32 lumens per square foot area</p>
<p style="text-align: center;"><b>Additional Lumens Allowances for Outdoor Sales facilities only.</b> Outdoor Sales facilities may not use any other additional allowances</p>		
<p><b>Outdoor sales lots.</b> This allowance is lumens per square foot of uncovered sales lots used exclusively for the display of vehicles or other merchandise for sale, and may not include driveways, parking or other non-sales areas and shall not exceed 25% of the total hardscape area. To use this allowance, Luminaires shall be within 2 mounting heights of the sales lot area.</p>	<p>8 lumens per square foot area</p>	<p>12 lumens per square foot area</p>

<p><b>Outdoor sales frontage.</b> This allowance is for lineal feet of sales frontage immediately adjacent to the principal viewing location(s) and unobstructed for its viewing length. A corner sales lot may include two adjacent sides provided that a different principal viewing location exists for each side. In order to use this allowance, luminaires shall be located between the principal viewing location and the frontage outdoor sales area.</p>	<p>1,000 lumens per linear foot</p>	<p>1,500 lumens per linear foot</p>
<p>*** It should be noted that the lighting allowance defined in Table 4 is only applicable for the area defined for that use and cannot be transferred to another area of the site.</p>		

*Note: Lighting Zones (LZ) are defined in IDA model ordinance*

**(c) Lighting Plans**

For areas outside of the City of San Antonio Military Protection Area (MLR-3), the lighting plan noted in subsection (b) above shall be submitted with a building permit authorization that includes relevant source, luminaire and pole information including:

- (1) For commercial permitted projects
  - Luminaire manufacturer and catalog number
  - Lamp manufacturer and catalog number if applicable
  - Mounting height
  - BUG rating for each luminaire type, including for any variations in lamping and shielding or photometric plan in lieu of BUG rating
  - Color information (CCT and CRI)
- (2) For residential permitted projects
  - Lighting information may be submitted in the form of manufacturer specs and/or cut sheets to include:
    - Light source information
    - Location
    - Shielding, if applicable
    - Controls

**(d) Certification Statement**

The lighting plan/ photometric plan shall also contain a certification by the preparer of the lighting plan/photometric plan that the exterior lighting represented on the lighting plan complies with the requirements of this Lighting Order.

**(e) Region Standards.**

(1) As used in this article, the following terms are defined as follows:

BUG: A luminaire classification system that rates: backlight (B), uplight (U), and glare (G).

Business: A person, partnership, corporation, or organization engaged in commerce, manufacturing, or a service; profit and non-profit seeking enterprise or concern. The definition is intended to be broadly construed and shall include, but not be limited to, charitable organizations.

Candela: The unit of measure indicating the luminous intensity (candlepower) of a light source in a specific direction.

Color Rendering Index (CRI): A measure of the accuracy with which a light source of a particular CCT renders different colors in comparison to a reference light source with the same CCT. A high CRI provides better illumination with the same or lower lighting levels. It is important not to mix lamps with different CCTs and CRIs. Specify both the CCT and CRI when purchasing lamps.

Commercial Property – A building, site or structure whose use shall be for other than residential use.

Correlated Color Temperature (CCT): A measure in degrees Kelvin (°K) of light's warmth or coolness. Lamps with a CCT of less than 3,200 °K are pinkish and considered warm. Lamps with a CCT greater than 4,000 °K are bluish-white and considered cool.

Digital Sign: Catho-ray tube (CRT), flat panel liquid-crystal display (LCD), plasma, aerial imaging, projector or other electronic devices that are at the end-point of a digital signage system, presenting the content to include: Dynamic signs, electronic signs, digital media advertising, as well as signs within a Digital Signage Network, In-store TV Network, Captive Audience Network, Narrowcasting Network, Out-of-home Media Network, Digital Media Network, and Advertising Network.

Direct light: Light emitted directly from the lamp, off of the reflector diffuser, or through the refractor or diffuser lens of a luminaire.

Exempted nonconforming luminaires: Any existing luminaires which were lawfully in place according to all applicable county orders at the time, but which do not now comply with all applicable regulations as of the effective date of the region designation.

Flood lamp: means a specific form of lamp designed to direct its output in a specific direction (a beam) with a reflector formed from the glass envelope of the lamp itself, and with a diffusing glass envelope.

Foot-candle (fc): A unit of light measurement equal to one (1) lumen per square foot.

Full cutoff: Describes a luminaire light distribution where one hundred (100) candela per one thousand (1,000) lamp lumens (ten (10) percent) may emit at all vertical angles beginning at eighty (80) degrees up from nadir to less than ninety (90) degrees, and 0 (zero) candela per one thousand (1,000) lamp lumens (zero percent) is allowed at ninety (90) degrees (horizontal plane) and all angles above. This applies to all horizontal angles around the luminaire. A full cutoff luminaire is also fully shielded. (See Figure 1).

Fully shielded: A lighting fixture constructed in such a manner that all light emitted by the fixture, either directly from the lamp or a diffusing element, or indirectly by reflection or refraction from any part of the luminaire, is projected below the horizontal plane as determined by photometric test or certified by the manufacturer. A fully shielded fixture is not necessarily full cutoff.

Gasoline filling station: See definition as provided in Appendix A of the City of San Antonio Unified Development Code.

Glare: A luminance produced by bright sources in the field-of-view superimposed on the image in the eye reducing contrast and hence visibility.

International Dark-Sky Association (IDA): A non-profit organization whose goals are to build awareness of the value of dark skies, and of the need for quality outdoor lighting.

“IESNA” (or “IES”): An acronym for the Illuminating Engineering Society of North America. The IESNA makes recommendations for outdoor lighting but does not set outdoor lighting community standards which are set through local regulations.

Illuminance: The quantity of light arriving at a surface measured in lux or foot-candles.

Intermittent lighting: Luminaires that do not remain on for more than five (5) minutes.

Lighting: Man-made illumination (e.g., street lights, airfield lighting, building lights) to provide safety and security in desired locations. Glare (direct or reflected light) is produced when the intensity, direction and/or duration of the lighting is directed or spills over to unintended areas or objects in a manner that is harsh and disrupts normal vision.

Low Ambient Landscape Lighting: Landscape lighting powered at less than 15 volts and limited to luminaires having a rated luminaire lumen output of 525 lumens or less.

Lumen: A unit of luminous flux. For purposes of this section, the lumen-output values will be the initial lumen output ratings of a lamp. The lumen rating associated with a given lamp is generally indicated on its packaging or may be obtained from the manufacturer.

Luminaire: A complete lighting fixture consisting of a lamp or lamps together with the parts designed to distribute the light, to position and protect the lamps and to connect the lamps to the power supply.

Luminous flux: A quantitative expression of the brilliance of a source of visible light which is electromagnetic energy within the wavelength range of approximately three hundred ninety (390) nanometers (nm) to seven hundred seventy (770) nm. This quantity is measured in terms of the power emitted per unit solid angle from an isotropic radiator, a theoretical point source that radiates equally in all directions in three-dimensional space.

Mounting Height: The height of the photometric center of a luminaire above grade level.

Nadir: The direction pointing vertically down from the lowest light emitting part of the luminaire (see Figure 1 for an example).

Nit: A unit of illuminative brightness equal to one (1) candle per square meter, measured perpendicular to the rays of the source.

Non-Residential: See Commercial.

Outdoor lighting: Illumination of an outside area or object by any man-made device that is located outdoors and produces light.

Photometric Plan: A point-by-point plan illustrating the intensity and location of lighting on the property.

Residential: a single-family, duplex, or three-family dwelling.

Sign, externally illuminated: means a sign illuminated by light sources from the outside.

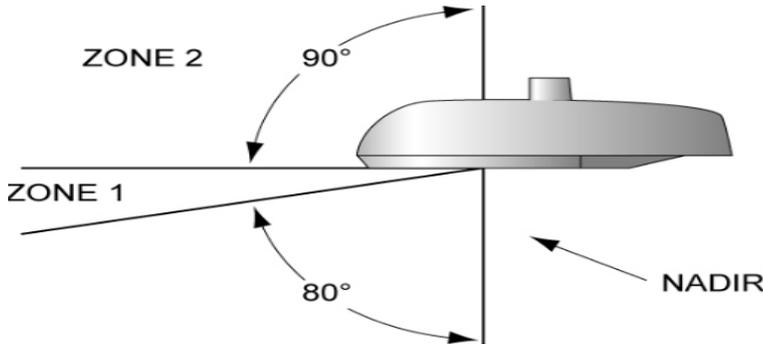
Spot lamp: means a specific form of lamp designed to direct its output in a specific direction (a beam) with a reflector formed from the glass envelope of the lamp itself, and with a clear or nearly clear glass envelope. Spot lamps are those lamps so designated by the manufacturers.

Street lighting: is defined as lighting provided for major, collector, and local roads where pedestrians and cyclists are generally present. The primary purpose of street lighting is to help the motorist identify obstacles, provide adequate visibility of pedestrians and cyclists, and assist in visual search tasks, both on and adjacent to the roadway.

Temporary outdoor lighting: Lighting allowed as specified in subsection 20.K below.

Trespass lighting: Light emitted by a luminaire that falls outside the boundaries of the property on which the luminaire is sited.

**Figure 1**



- (2) All public and private outdoor lighting installed after the effective date(s) of an MLR designation shall conform to the requirements established by this section.
- (3) Any luminaire in a new development that is aimed, directed, or focused so as to cause direct light from the luminaire to be directed toward an adjacent military base, camp or installation is prohibited. Such luminaire shall be redirected or its light output controlled to eliminate such conditions.
- (4) For new development properties situated at or above one thousand two hundred (1,200) feet in elevation (above sea level), and which are situated within one (1) mile from the perimeter of the affected military installation, all lighting shall be fully screened from the affected military installation(s). Methods of screening can include, but are not limited to, fencing and landscaping.
- (5) Maximum CCT of 3000K for all outdoor light sources within MLR1.
- (6) Maximum CCT of 4100K for all outdoor light sources within MLR2.
- (7) **Residential Lighting.**
  - (A) No trespass lighting within residential areas may exceed one and one-half (1½) foot-candles at the property line, with the exception of intermittent lighting which can be up to two (2) foot-candles.
  - (B) All lighting within residential areas shall comply with commercial lighting subsections (9)A—E below.
- (8) **Residential Lighting Exceptions**
  - (A) Low Ambient Landscape lighting.
- (9) **Commercial Lighting.**
  - (A) All lighting fixtures installed on any commercial property and which include or exceed two (2) foot-candles shall be fitted to render them full cutoff (no light output emitted above ninety (90) degrees at any lateral angle around the fixture.) See “acceptable fixture” designation as shown in Figure 2. The manufacturer or firm handling the installation of outdoor lighting shall provide documentation to prove full cutoff status of outdoor lighting to the planning and development services department during the plan review stage.

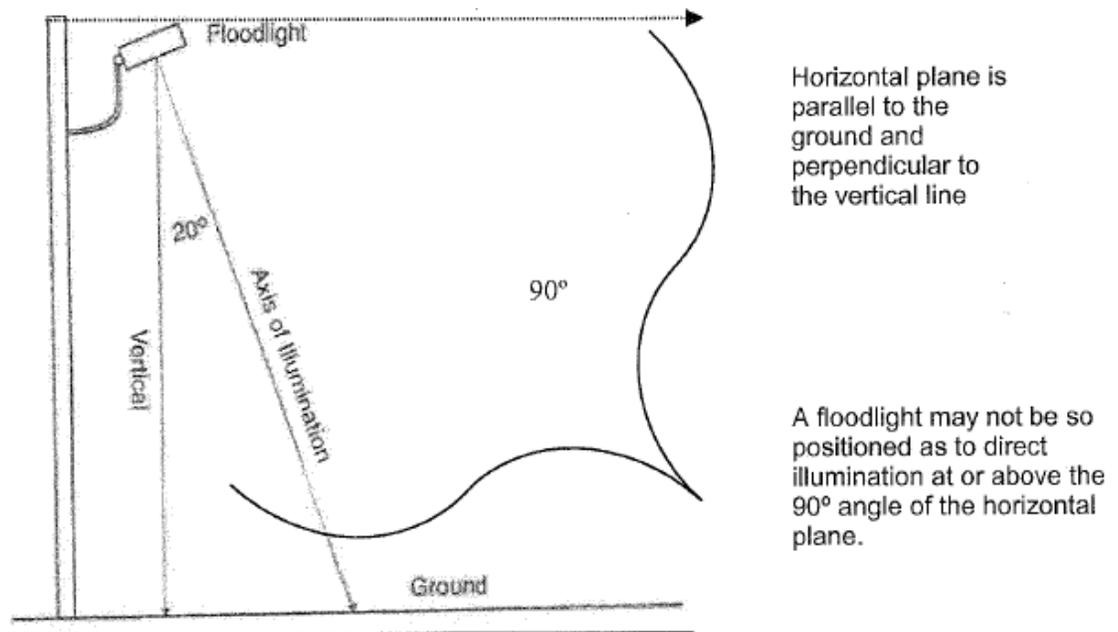
**Figure 2**  
**Acceptable vs. Unacceptable Fixture Examples**



(B) For lighting horizontal tasks such as roadways, sidewalks, entrances and parking areas, fixtures shall meet “full cutoff” criteria (no light output emitted above ninety (90) degrees at any lateral angle around the fixture).

- (C) Intermittent lighting shall be of the “motion sensor” type that stays on for a period of time not to exceed five (5) minutes and has a sensitivity setting that allows the luminaire to be activated only when motion is detected on the site.
- (D) All trespass lighting shall not exceed two and one-half (2½) foot-candles measured at the property line, except that residential trespass lighting is regulated in subsection e(7)A above.
- (E) Floodlight fixtures shall be aimed so as to prevent direct radiation of light into the open sky at any angle above the horizontal plane as shown in Figure 3 and verified using a tool such as shown in Exhibit 8.

**Figure 3**



**Figure 4**

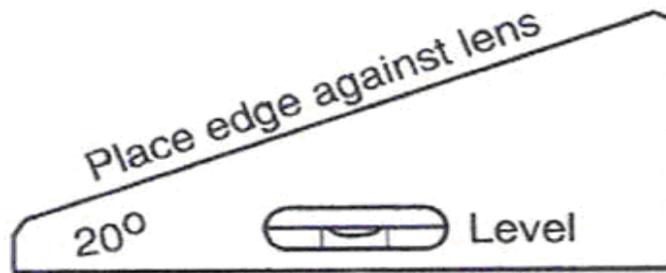


Figure 4: This is a tool for aiming lights such as the floodlight represented in Figure 3. This tool would verify the angle of 20° by placing the upper edge of the tool against the floodlight lens and adjusting the floodlight so that a level parallel to the bottom edge shows level.

(F) With the exception of lighting which is required for security and safety such as parking lot illumination, businesses shall turn off outdoor lights emitting illumination levels exceeding two (2) foot-candles (fc) after 11:00 p.m or 1 hour after closing, the later of the two.

(G) Lighting installed to illuminate construction sites in order to secure or protect equipment at night shall meet the requirements of subsection c(9) A above.

**(10) Non-Residential**

(A) Non-residential limits to off-site impacts are determined using Backlight, Uplight, and Glare (BUG) ratings.

**(11) Gasoline Filling Stations:**

(A) Outdoor sales and service station canopies shall utilize canopy lights that are fully recessed into the canopy or are fully shielded by the canopy.

(B) The following average maintained illuminance levels for service stations shall not be exceeded:

Service Station Component	Lighting Level
Approach	2.0 fc
Driveway	2.0 fc
Pump Island	10.0 fc
Building Facade	3.0 fc
Service Areas	3.0 fc
Landscape Highlights	2.0 fc

Note: fc = foot-candle

**(12) Parking Lot and Parking Structure Lighting:**

(A) Total pole and fixture height shall comply with section 35-392.b of the City of San Antonio's Unified Development Code.

(B) All lighting luminaires in surface parking lots and on the top decks of parking structures shall be fitted to render them full cutoff.

(C) Reflectivity. In order to allow for a variety of surface material options:

- 1 Surface parking lots shall be designed, coated or constructed so that illumination levels are no more than what is reflected from asphalt at an average of twenty (20) foot-candles.
- 2 Top decks of parking structures shall be designed, coated or constructed so that illumination levels are no more than what is reflected from asphalt at an average of fifteen (15) foot-candles.

(D) One (1) hour after closing, businesses shall reduce light output at least fifty (50) percent in surface parking lots and on top decks of parking structures; however, those luminaires turned off may be set to function utilizing a motion detector system or dimmer.

**(13) Outdoor Sign Lighting.**

(A) All signs, except conventional non-digital off-premise signs, located within three-quarters ( $\frac{3}{4}$ ) of a mile of a military installation with an associated MLR designation shall be positioned in such a manner and contain “dark sky” approved shielding devices as to significantly reduce spillover light affecting the military installation and operations. In no instance shall signs be positioned facing parallel to the adjacent boundaries of the military installation.

(B) On-premises signs may remain illuminated during regular business hours, but may not be illuminated later than one-half ( $\frac{1}{2}$ ) hour after the business is no longer open to the public, nor prior to the daily opening of the business to the public.

(C) On-premises signs utilizing neon tube lighting shall be exempt from the requirements of subsection B above.

(D) Single-tenant on-premises signs shall be illuminated at a level no greater than seven (7) foot-candles measured at five (5) feet from the light source. Multi-tenant on-premises signs shall be illuminated at a level no greater than twelve (12) foot-candles measured at five (5) feet from the light sources.

(E) Exterior means of illumination utilized for on-premises signs shall be positioned in a “top down” manner as depicted in Figure 2. Bottom-mounted fixtures shall not be used for on-premises signs.

(F) Conventional non-digital off-premises signs shall employ an upward illumination system utilizing no more than three (3) luminaires to illuminate each sign message area (face). Each luminaire shall employ a refractor and hood that focuses the light on to the sign face and each luminaire may not exceed two hundred (200) watts.

(G) All on-premises and off-premises digital signs shall be illuminated at a level no greater than 0.3 footcandles over ambient light levels for the location and time and shall employ light cutoff devices, such as louvers, to minimize light escaping above the horizontal plane. This subsection (13)G. is not exempt from the requirements of subsection (13)B. above.

(H) Other than the requirements contained in subsection c(1) and subsection (13), the installation, operation, alteration, repair or improvement of an illumination device used for an off-premises sign are not subject to the other provisions of sections 35-339.04 or 35-498 of the City of San Antonio Unified Development Code, but are subject to provisions of Chapter 28 and Chapter 35 of the City of San Antonio Development Code as appropriate.

(I) Nothing in this section shall be interpreted to authorize signs in areas of the city prohibiting signs.

**(14) Externally Illuminated sign standards.**

- (A) External illumination for signs shall conform to the following lamp source, shielding restrictions and lumen caps as shown in Table 5.
- (B) Upward-directed sign lighting is prohibited.

**Table 5 Lamp Type and Shielding Standards**

	Lighting Zone	
Color Rendition:	MLR-1/LZ-2	MLR-2/LZ-3
Initial output greater than or equal to 1800 lumens	F	F
Initial output below 1800 lumens	A(1)	A(1)

*Note: Lighting Zones (LZ) are defined in IDA model ordinance*

**Notes to Table 5.**

A = all types of light fixtures are allowed except that any spot or floodlight shall be aimed not higher than twenty-five degrees from the vertical line between the light fixture and the ground when light emitted from a light fixture is visible from any off-site residential property or public roadway.

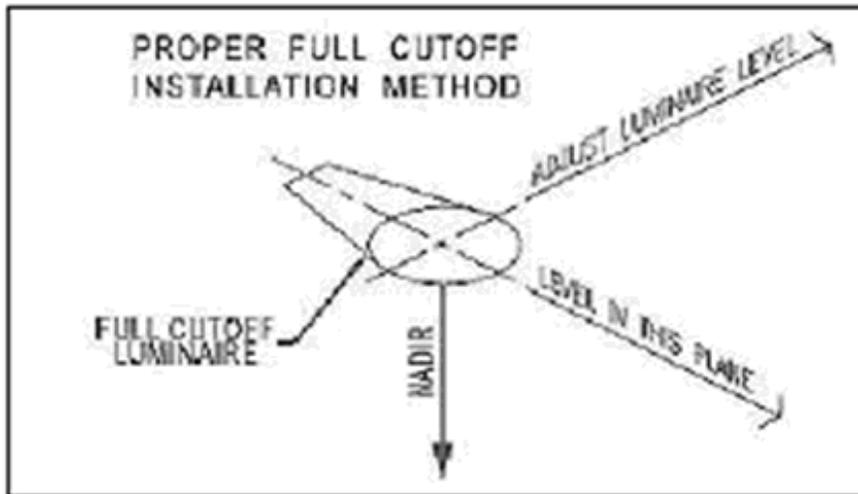
F = only fully shielded light fixtures allowed.

(1) = Flood or spot lamps shall be aimed no higher than twenty-five degrees from the vertical line between the light fixture and the ground when the source is visible from any off-site residential property or public roadway.

**(15) Street Lighting.**

- (A) This subsection regulates the illumination levels and CCT for the MLR’s street lights that are installed on any street and shall follow the American National Standard Practice for Roadway Lighting under the IESNA.
- (B) Street light illumination shall follow the guidelines in paragraph (C), (D), and (E) of this subsection unless a licensed professional engineer, trained and experienced in the science of illumination engineering, deems other illumination levels based on IESNA standards more appropriate for existing conditions and staff concurs with this assessment.
- (C) Street lights installed in residential areas on IESNA classified local roads shall have a max CCT of 3000K. Street lights installed on IESNA classified collector and major roads shall have a max CCT of 4000K.
- (D) All standard streetlights shall utilize full cutoff type luminaires that are installed level to the ground in two intersecting perpendicular planes (see Figure 5), and should be horizontally level in all directions.

Figure 5



- (E) New ornamental street lights shall be classified as either IES "Full Cutoff" or IES "Cutoff" as determined by a valid photometric report. This report shall be generated for the specified model by a qualified testing lab (testing to IES standards) and shall include a full vertical evaluation through one hundred eighty (180) degrees, otherwise that fixture shall be unacceptable.
- (16) **LEED Standards.** It is encouraged that, where possible, LEED (The Leadership in Energy and Environmental Design) certified lighting standards be substituted for the requirements of subsections (e)(5) through (10) above, so long as the minimum standards of this section are met. If a project utilizes LEED certified lighting standards, the remainder of a project's design does not have to meet LEED standards.
- (17) **Tower and Structure Lighting.** See FCC or FAA regulations.
- (18) **Other Prohibited Lighting.** Unless authorized by Commissioners Court by specific Court Order for a special event:
- (A) The use of laser source light or any similar high intensity light, such as used for outdoor advertising or entertainment, when projected above the horizontal plane is prohibited; and
- (B) The operation of searchlights for any purposes is prohibited.
- (19) **Unmanned Automated Teller Machine Lighting.** Unmanned automated teller machines (ATMs) shall comply with the requirements as listed in section 59.307, Texas Finance Code and this article by utilizing fully shielded or full cutoff luminaires as appropriate.
- (20) **Exemptions.** The following outdoor lighting instances are exempt from the lighting requirements of this section:
- (A) All legal outdoor lighting in place prior to the effective date of a MLR designation. (See section (21) below).
- (B) Outdoor lighting for which light is produced directly by the combustion of fossil fuels.

- (C) Outdoor lighting used during law enforcement, fire, and medical activities and for meteorological data gathering purposes.
- (D) Outdoor lighting employed during emergency or night-time repairs of roads and utilities.
- (E) Lighting required by law to be installed on motor vehicles.
- (F) Lighting required for the safe operation of aircraft.
- (G) Outdoor lighting installed on Federal and State facilities; however, voluntary compliance is encouraged.
- (H) Decorative holiday lighting from November 15 through the next January 15.
- (I) Applicable Building Code required lighting for steps, stairs, walkways, and building entrances.
- (J) Outdoor lighting that is owned or maintained for the purpose of illuminating:
  - 1 a tract of land that is maintained as a single-family residence and that is located outside the boundaries of a platted subdivision;
  - 2 a tract of land maintained for agricultural use;
  - 3 an activity that takes place on a tract of land maintained for agricultural use;
  - 4 structures or related improvements located on a tract of land maintained for agricultural use; or
  - 5 a correctional facility operated by or under a contract with the Texas Department of Criminal Justice.
- (K) Temporary exemptions: Any individual may submit a written request to the Public Works Department for temporary outdoor lighting. Temporary outdoor lighting shall be allowed for a period not to exceed thirty (30) days, with at least thirty (30) days passing before another request is submitted provided no conflict with a military training exercise has been confirmed. The request for temporary exemption shall contain the following information:
  - 1 Proposed use and location of the outdoor light requested.
  - 2 Type of lamp(s) to be used, including manufacturer's part number and initial lumens.
  - 3 Type of light fixture used, including manufacturer's model number and specification (cut) sheets indicating photometric distribution data stated in iso foot-candle diagrams.
  - 4 Starting and ending dates for temporary exemption use.
  - 5 Contact information including name of requester, affiliation (if applicable), address and telephone number.
  - 6 And such other information Public Works may require.

**(21) Maintenance, Repair, and Use of Legal Nonconforming Luminaires.**

- (A) Voluntary compliance with the provisions of this Order is expected of the citizens of Bexar County in an effort to enhance the military operations.
- (B) All luminaires lawfully in place prior to the effective date(s) of a MLR designation shall have legal nonconforming status.
- (C) Minor repair and maintenance of legal nonconforming luminaires up to fifty (50) percent of the replacement value is allowed, however any alteration in excess of fifty (50) percent shall terminate the nonconforming status and at that time all standards of this section shall be met. If a lamp is available that makes the luminaire conform, or progress towards conformance with this Order's required illuminance level, then such lamp should be utilized when the lamp is replaced.
- (D) Outdoor Recreational Facilities: No outdoor recreational facility shall be illuminated by nonconforming means from 11 PM local time to sunrise except to conclude a specific recreational activity already in progress.
- (E) Outdoor Display Lighting: Display lighting using nonconforming outdoor luminaires with metal halide bulbs shall not be used for security lighting after 11 PM local time to sunrise (or after closing hours if before 11 PM local time to sunrise).
- (F) Spotlights and floodlights, with a total luminous flux greater than 1800 lumens, elevated above the ground on poles or buildings and used for area lighting should be adjusted so that their axis of illumination is at an angle not greater than 20 degrees measured from the vertical line between the fixture and the ground. This subsection applies only to spotlights and floodlights with adjustable mounts and does not apply to outdoor recreational facilities.

**(22) Administration.** The Public Works Department (the "Department") shall administer this section.

(A) Enforcement.

- 1 The Department shall give written notice to the owner of the property on which an outdoor lighting violation as defined in this Order exists. The notice shall state:
  - (i) The specific condition that constitutes a violation; and
  - (ii) that the person receiving notice shall correct the violation not later than the 30<sup>th</sup> day after the date on which the notice is served if the person has not previously received a notice regarding a violation on the premises, or the 10<sup>th</sup> business day after the date on which the notice is served, if the person has previously received a notice of violation of this order.
- 2 Written notice shall be served on the owner or his agent:
  - (i) In person or by registered or certified mail, return receipt requested; or
  - (ii) If personal service cannot be obtained or the address of the owner or his agent is unknown, by posting a copy of the notice on the premises on which the

nuisance exists and by publishing the notice in a newspaper with general circulation in the county two times within 10 consecutive days.

(iii) If the occupier of the premises is not the owner or his agent, the occupier shall also be served with notice: (a) in person or by registered or certified mail; or (b) if personal service cannot be obtained, by posting a copy of the notice on the premises.

- 3 Failure to correct the violation after the second notice shall result in a Class C Misdemeanor being filed on the owner
- 4 A separate offense occurs on each day all elements of the offense exist
- 5 The County may withhold the approvals of a permit or lighting plan for any person or permit applicant that installs new outdoor lighting that does not meet the lighting standards of this Order unless a plan of action to bring the lighting into compliance has been accepted by the Public Works Director/County Engineer.

### **(23) Administrative Exceptions.**

(A) **Administrative Exceptions.** The Public Works Director/County Engineer may grant an administrative exception to the requirements of this Order where a literal enforcement of the provisions shall result in unnecessary hardship. A variance request shall be submitted to the Public Works Director/County Engineer in writing that sets out the basis for the request. The request for the exception shall contain the following information:

- 1 Proposed use and location of the outdoor light requested;
- 2 A written explanation on how the alternative methods identified in the lighting plan required in Section (c) above meets the intent of this Order;
- 3 Contact information including name of requester, affiliation (if applicable), address and telephone number; and
- 4 And such other information the Public Works Director/County Engineer may require.

(B) **Administrative Exception Criteria.** No exception shall be granted unless:

- 1 The exception is not contrary to public interest;
- 2 The exception is in harmony with the spirit and purposes of this Order;
- 3 The plight of the owner of the property for which the exception is sought is due to unique circumstances existing on the property, and the unique circumstances were not created by the owner of the property and are not merely financial; and
- 4 The exception will not substantially weaken the general purposes of this Order.

(C) **Appeal.** The applicant may appeal the denial of an administrative exception by the Public Works Director/County Engineer to Commissioners Court.

**(24) Validity and Severability.**

(A) Where any provision of federal or state law conflicts with any provision of this Order, the more restrictive provision will govern.

(B) **Severability.** If a portion of this Order is held to be invalid or unconstitutional by a court of competent jurisdiction, that decree or decision shall be limited to the particular portion of this Order determined to be invalid or unconstitutional and the remainder of the Order shall continue in full force and effect.

**(25) Effective Date.**

This Order shall be in full force and effect from and after its date of approval.

**APPROVED THIS DATE \_\_\_\_\_ OF \_\_\_\_\_, 2019**

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**NELSON W WOLFF**  
County Judge

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**SERGIO “CHICO” RODRIGUEZ**  
Commissioner Precinct 1

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**JUSTIN RODRIGUEZ**  
Commissioner Precinct 2

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**KEVIN A WOLFF**  
Commissioner Precinct 3

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**TOMMY CALVERT**  
Commissioner Precinct 4

# **EXHIBIT 1**

## **MILITARY LIGHTING REGION AREAS**

**1A – CAMP BULLIS/CAMP STANLEY**

**1B – LACKLAND AIR FORCE TRAINING ANNEX**

**1C – MARTINDALE ARMY AIRFIELD**



