

Chapter 16.25 OUTDOOR LIGHTING ON PUBLIC AND PRIVATE PROPERTY

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16.25.010 Purpose.

The purpose of this chapter is to provide regulations that preserve and enhance the view of the dark sky; promote health, safety, security, and productivity; and help protect natural resources. The provisions of this chapter are intended to control glare and light trespass. It is the intent of this chapter to provide standards for appropriate lighting practices and systems that will enable people to see essential detail in order that they may undertake their activities at night, facilitate safety and security of persons and property, and curtail the degradation of the nighttime visual environment. This chapter is intent on reducing lighting conflicts between property owners, and preserving the naturally dark sky for the benefit of residents, visitors, wildlife, and the environment.

Commented [KG1]: Sourced from Dark Sky International model ordinance.

16.25.020 Definitions.

The following terms have the following definitions for purposes of this chapter:

- A. *Accent lighting* means any luminaire that emphasizes a particular object or draws attention to a particular area for aesthetic purposes.
- B. *Candela* means the unit of measure for luminous intensity.
- C. *Cut-off angle* (of a luminaire) means the angle, measured from the lowest point between a vertical line from the center of the lamp extended to the ground and the first line of sight at which the bare source is not visible.
- D. *Director* means the director of development services for the City of Medina.
- E. *Fixture* (also called a "luminaire") means a complete lighting unit including the lamps, together with the parts required to distribute the light, to position and protect the lamps, and to connect the lamps to the power supply.
- F. *Foot-candle* means a measure of illuminance or a measure of how bright a light appears to the eye. One foot-candle is equal to one lumen per square foot. As

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an example, a typical 60-watt incandescent lamp (840 lumens) produces an illuminance of 0.1 foot-candles at a distance of about 25 feet.

FG. *IES (Illuminating Engineering Society) means an American National Standards Institute (ANSI)-recognized Standards Development Organization. ANSI/IES Recommended Practices are universally recognized as authoritative references for lighting applications.*

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H. *Lamp* means the light-producing source installed in the socket portion of a luminaire.

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GI. *Light level means the maintained luminance or illuminance value.*

Commented [KG4]: Sourced from Dark Sky International model ordinance.

J. *Light pollution* means general sky glow caused by the scattering of artificial light in the atmosphere and resulting in decreased ability to see the natural night sky.

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HJ. *Light trespass* means any light emitted by an outdoor luminaire that shines directly beyond the property on which the luminaire is installed or indirectly shines beyond the property on which the luminaire is installed at a brightness (illuminance) that exceeds 0.1 foot-candles at the property line. This term includes light extending above a commercial building from a sky light.

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K. *Luminaire.* See definition for "*fixture*" (subsection D of this section).

KL. *Outdoor lighting fixture* means a luminaire outside of an enclosed building or structure or any luminaire directed such that it primarily illuminates outdoor areas.

KM. *Seasonal lighting means outdoor or site lighting that is portable, temporary, decorative, and used in connection with holidays and traditions. This includes, but is not limited to, string lighting, icicle lighting, and lighted inflatables.*

N. *Security lighting means illumination used specifically to protect people, property, and infrastructure from criminal threat or malicious intent.*

Commented [KG5]: Sourced from Dark Sky International model ordinance.

O. *Shielding* means that no light rays are emitted by a fixture above the horizontal plane running through the lowest point of the fixture.

LP. *Spotlight* means any lamp that incorporates a reflector or a refractor to concentrate the light output into a directed beam in a particular direction.

Q. *Temporary or periodic event means an occasion or activity that occurs for no more than 12 hours and relates to special events, festivals, community benefits, or personal celebrations.*

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Commented [KG6]: 12 hours seems an appropriate minimum allowance given the exemption's applicability to nighttime construction.

16.25.030 Applicability.

A. All outdoor lighting fixtures installed on private and public property shall comply with this chapter. This chapter does not apply to interior lighting; provided, however, that if it is determined by the director that any interior lighting emitting light outside of the building or structure in which it is located creates a light trespass, the interior lighting shall be subject to the requirements of this chapter. Types of outdoor lighting to which this chapter applies include, but are not limited to, lighting for:

1. Buildings and structures including, but not limited to, overhangs and canopies;

- 2. Parking lot lighting;
- 3. Security lighting;
- 4. Landscape lighting;
- 5. Driveway lighting;
- 6. Patio or deck lighting;
- 7. Lighting on docks and piers;
- 8. Street lighting.

9. Outdoor lighting employed during construction or development activities, which shall comply with Section 16.44.040 of this code.

- B. The city's departments of development services and public works shall administer and enforce this chapter.
- C. In the event of a conflict between the requirements of this chapter and any other requirement of the City of Medina Municipal Code, the more restrictive requirement shall apply.

16.25.040 Exemptions.

The following are exempt from the provisions of this chapter:

- A. Traffic control signals and devices;
- B. Street lights installed prior to the effective date of the ordinance codified in this chapter; provided, that when a street light fixture becomes inoperable, any replacement street light fixture shall be subject to the provisions of this chapter;
- C. Temporary emergency lighting (i.e., fire, police, repair workers) or warning lights;
- D. Moving vehicle lights;
- E. Navigation lights (i.e., radio/television towers, docks, piers, buoys) or any other lights where state or federal statute or other provision of the City of Medina Municipal Code requires lighting that cannot comply with this chapter. In such situations, lighting shall be shielded to the maximum extent possible, and lumens shall be minimized to the maximum extent possible, while still complying with state or federal statute;
- F. Public recreational facilities;
- G. Seasonal ~~decorations-lighting~~ does not have to be shielded; provided, that they it does not have a brightness of more than 0.1 foot-candles at the property line on which they are installed;
- H. Outdoor lighting approved by the director for temporary or periodic events (e.g., fairs, nighttime construction, events on private property), provided the lighting does not cause light trespass and has a rated correlated color temperature of 2,700K or less;

Commented [KG7]: This refers to code that has been recently changed by IOC written by the City Attorney to control lighting at homes under construction or listed for sale.

Commented [KG8]: For Planning Commission discussion: At our January meeting, the topic of whether upward-oriented lighting built in stairs should be OK to allow safe navigation of the stairs was discussed. Lights can be installed into the side (face) of the stair, instead, which is more in keeping with the intent of this chapter. Are there strong thoughts on this?

Commented [KG9]: There was a comment from the public that the City should regulate lux/lumens rather than foot candles. That does not seem needed, for two reasons:
 1. Foot-candles are defined as another way to measure lumens (see definition of foot-candle in this code). The two can be converted between each other.
 2. The City has indicated that the amount of light at a private property does not need to be regulated, as long as the light does not trespass and is of warm tones. While some cities govern particular measurements of lumens allowed per parcel, Medina seems to be interested instead in allowing for lighting at private property to afford security, as long as it is not disruptive to neighboring parcels or the environment.

For these reasons, I recommend maintaining the existing system of measurement captured in the IC, which was built on examples of successful neighboring cities' code.

Commented [KG10]: This has been added to allow for things like lighting at backyard weddings and gatherings.

I. Downward cast security lighting, provided the lighting does not cause light trespass and has a rated correlated color temperature of 2,700K or less, unless the luminaire emits light only upon detected motion, in which case color temperature is not limited to 2,700K;

J. Lighting installed within the vessel of a pool, spa, or hot tub, provided the lighting does not cause light trespass;

K. Lighting installed to illuminate a flagpole...~~MORE~~

16.25.050 **General standards.**

A. The following general standards shall apply to all nonexempt outdoor lighting fixtures and accent lighting:

1. All light trespass is prohibited.

2. Outdoor lighting fixtures, other than ~~and~~ accent lighting, must be shielded and aimed downward, and shall be installed at the minimum height necessary. Examples of acceptable and unacceptable light pollution control shielding are shown in Figures 1 through 4 in section 16.25.090080. The shield must mask the direct horizontal surface of the light source. The light must be aimed to ensure that the illumination is only pointing downward onto the ground surface, with no escaping direct light permitted to contribute to light pollution by shining upward into the sky.

2-3. Outdoor lighting shall have a rated correlated color temperature of 2,700K or less, except that public sport courts and school fields may install lighting with a correlated color temperature that is appropriate for the sport, class of play, and viewing audience as defined by relevant ANSI/IES lighting standard, or any Washington state alternative, but never exceeding 5,700K.

3-4. All outdoor lighting fixtures and accent lighting shall be designed, installed, located and maintained such that light trespass is essentially nonexistent (see Figure 3 in section 16.25.080).

4-5. Outdoor lighting fixtures and accent lighting shall not directly illuminate public waterways, unless it is a navigational light subject to state or federal regulations.

5-6. Accent lighting shall be directed downward onto the illuminated object or area and not toward the sky or onto adjacent properties (see Figure 4 in section 16.25.080), except that lighting used to accent landscaping or driveways may be directed at an upward angle that does not exceed 45 degrees from a horizontal plane parallel to the ground, provided that the lighting does not cause light trespass and has a rated correlated color temperature of 2,700K or less. Direct light emissions of such accent lighting shall not be visible above the roof line or beyond the building, structure, or object edge.

7. Spotlighting on landscaping and foliage shall be limited to 150 watts incandescent (2,020 lumens output).

Commented [KG11]: For Planning Commission discussion: should lighting at flag poles be allowed at the base of the pole, or should we require lighting be installed at the top of the flag pole and cast down onto the pole?

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Commented [KG12]: I want to explore height limitations for outdoor lighting with the Planning Commission in more depth at our March meeting. The streetlight poles are owned by PSE, so we might not have a direct ability to require poles of different heights.

As written now, all lighting shall be installed at the minimum height necessary.

Commented [KG13]: If the CM/Council direct the City to retrofit all City buildings and streetlights, this would be the standard they're subject to. Currently, Council has adopted a streetlight standard of 3K color temperature and 25W. Some streetlights burned out and were replaced by PSE with 5k bulbs. Ryan is working with PSE to have the correct bulbs installed. Notably, the current lighting standard adopted for streetlights is not in keeping with American Association of State Highway and Transportation Officials (AASHTO) standards.

Commented [KG14]: Sourced from Dark Sky International model ordinance.

Commented [KG15]: This provision has been added to reflect feedback from the Planning Commission in January. It also seems to be in keeping with the general standard in (7) of this section; if spotlighting of landscaping is allowed, it reasons that the lighting could be directed upward to some nominal extent.

8. Outdoor lighting at school fields and public sport courts shall be extinguished at 10:00PM and shall remain extinguished until sunrise. The maximum luminous intensity from any luminaire lighting a school field shall not exceed 10,000 candelas as measured along a perimeter that is 150-feet from the edge of the field, at 5-feet above grade. When ANSI/EIS lighting standards would recommend a school field light level that is higher than 100 lux (approximately 9.3 foot-candles), installed lighting at the sports field shall not exceed 10% more than the light level recommended by the applicable ANSI/IES lighting standard, or an approved alternative by the state of Washington.

Commented [KG16]: Sourced from Dark Sky International model ordinance. The intent of this provision is to control spanning brightness from the field. The detail on candelas would be provided by the applicant with their building permit application.

~~6.~~

16.25.060 Prohibited.

A. The following fixtures (luminaires) are prohibited:

1. Searchlights for any purpose other than temporary emergency lighting or as allowed by a special event license;
2. Laser lights or any similar high-intensity light for outdoor use or entertainment, when projected above the horizontal plane;
3. Quartz lamps;
4. Mercury vapor lamps.

4-5. Lighting at vacant residences, whether under construction or complete, except as authorized in Section 16.44.040 of this code.

B. No lighting shall be allowed on private sports courts or private accessory recreational facilities in the City. Lighting consistent with the provisions of this chapter may be allowed on public sports courts.

C. The city reserves the right to further restrict outdoor lighting including, but not limited to, pole height, and level of illumination, when it is deemed to be in the best public interest consistent with the purpose of this chapter.

16.25.070 Submittals.

All building permit applications which include the installation of outdoor lighting fixtures shall demonstrate compliance with the requirements of this chapter by indicating the location and type of lighting used on the site plan submitted with the building permit application. Building permit applications shall include an outdoor lighting plan with a lighting schedule that includes:

- A. Luminaire identifications (i.e., manufacturer, model number, correlated color temperature, type);
- B. Luminaire quantities;
- C. Correlated color temperature (Kelvin) for each fixture, and;
- D. Installation locations.

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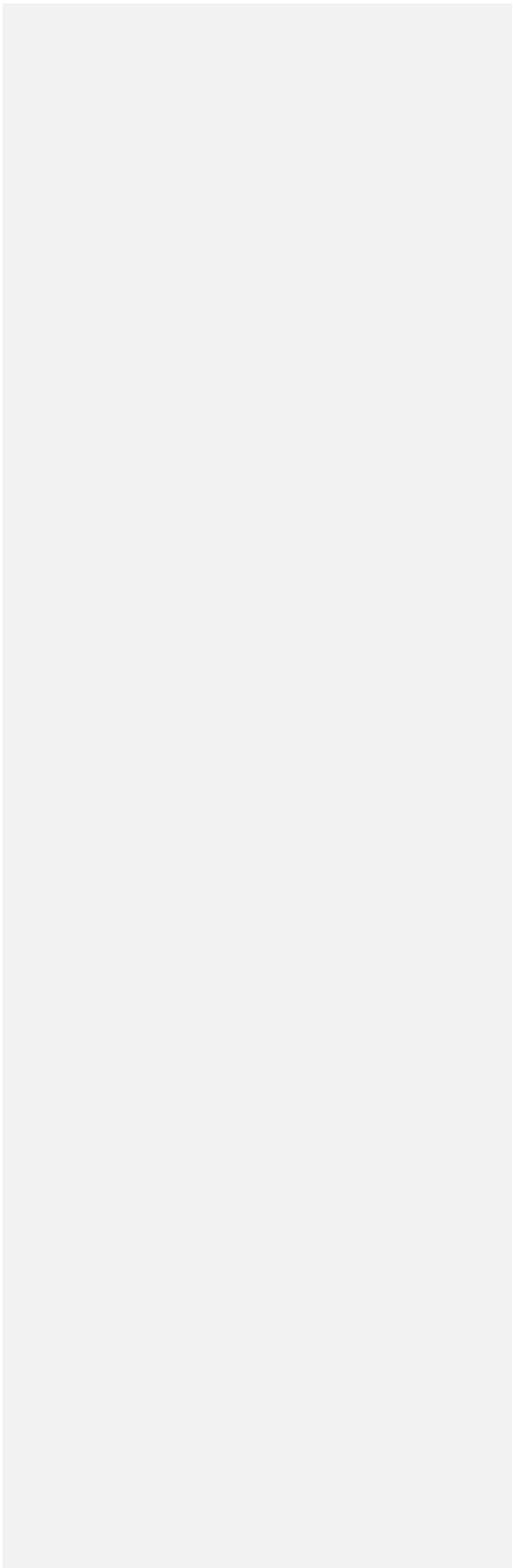
Commented [KG17]: For discussion with the Planning Commission and Council: confirming these details via inspection would require the City to hire professional services. Alternatively, we can accept represented consistency as presented in applications.

The lighting schedule shall include both permanent luminaires and temporary luminaires used during construction.

16.25.080 Figures of acceptable shielding and direction of outdoor light fixtures.

The following four figures illustrate acceptable and unacceptable outdoor lighting fixtures in the city:

Figure 1: Wall-Mounted Lighting Fixtures





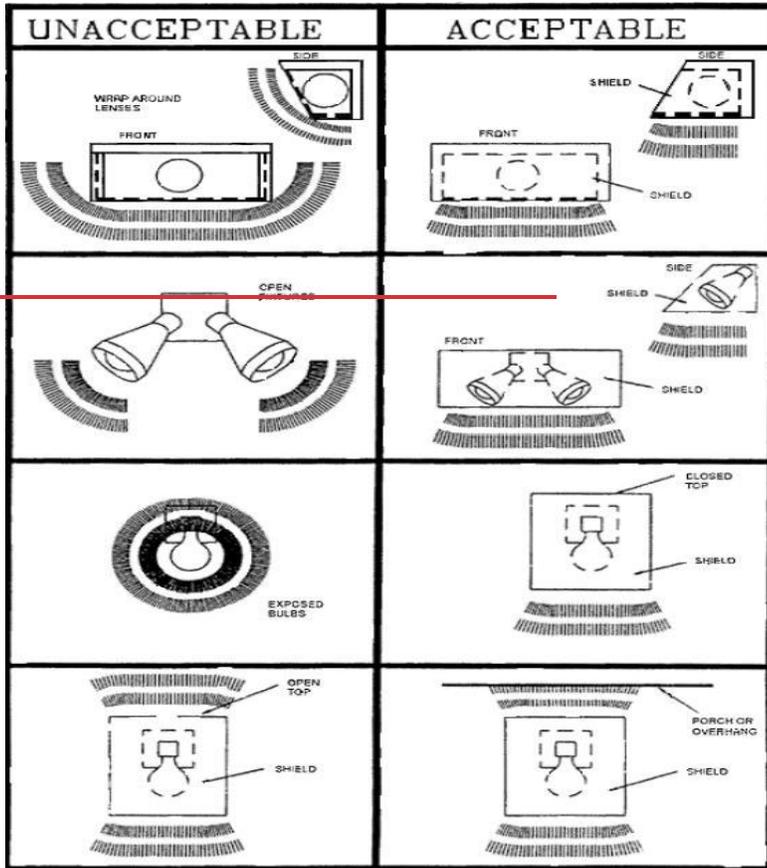
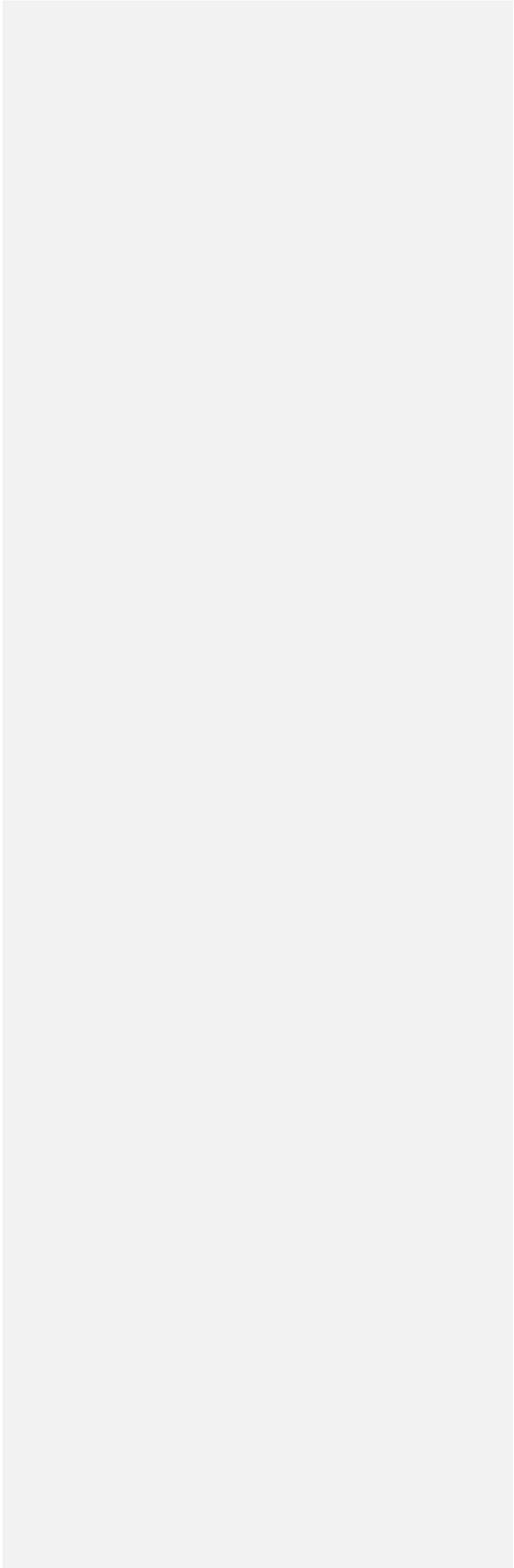


Figure 2: Freestanding Outdoor Lighting Fixtures





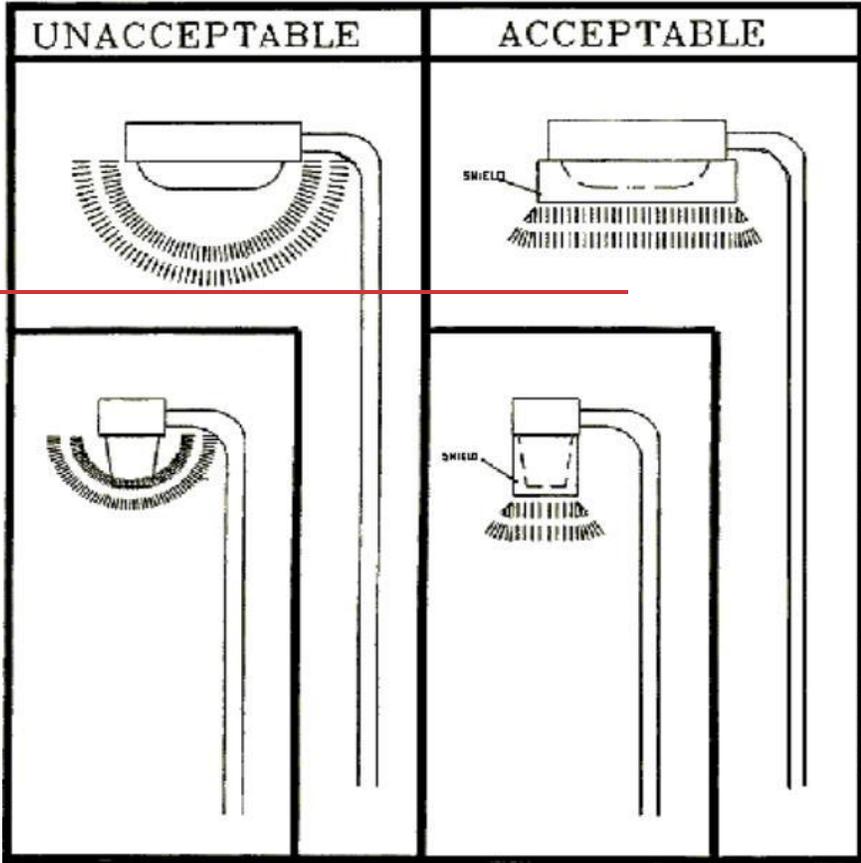
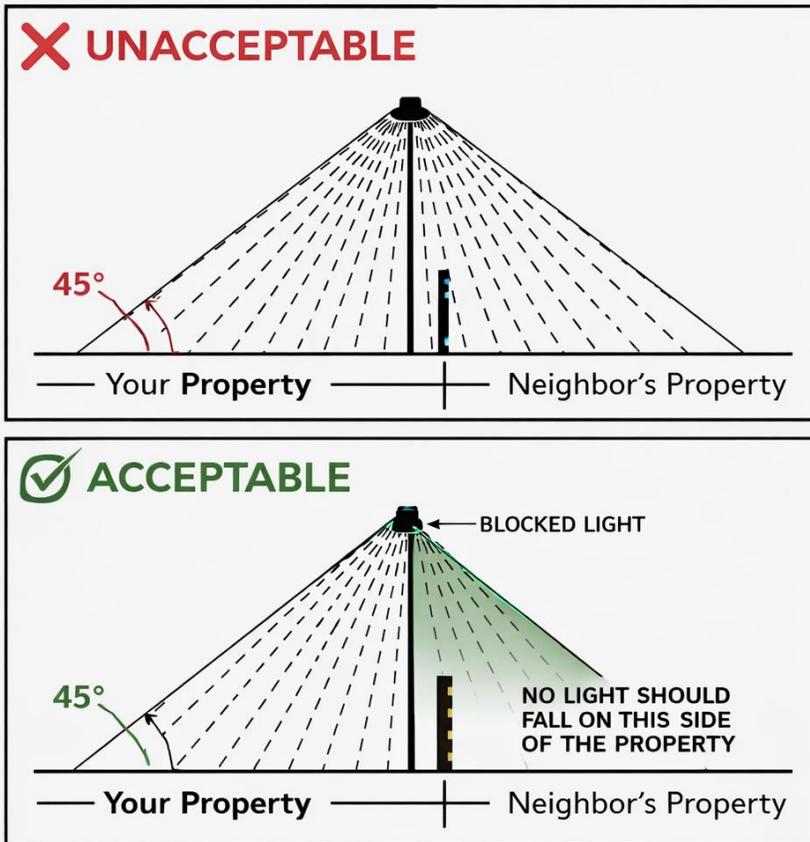
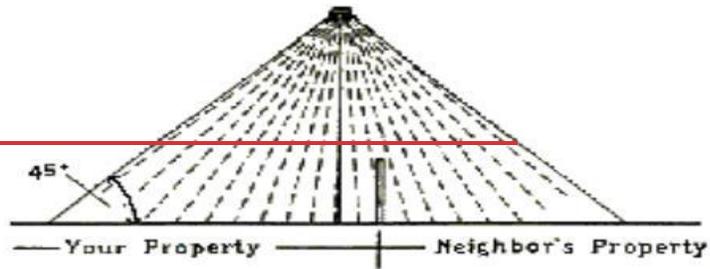


Figure 3: Outdoor Lighting Fixtures—Street and Lot Light Cut-Off at Property Line



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ACCEPTABLE

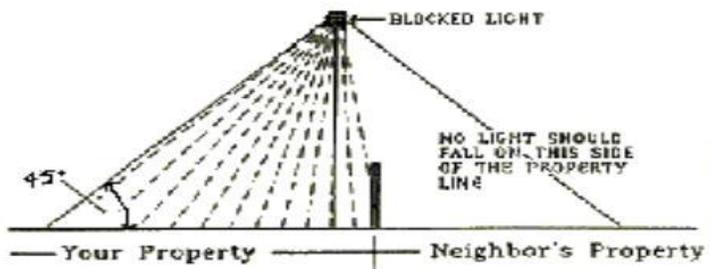
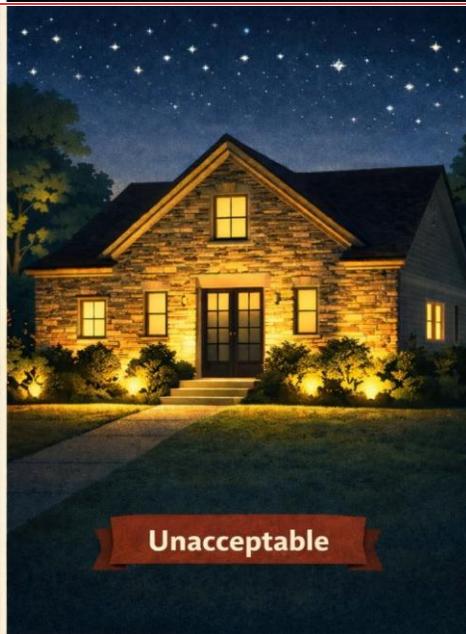
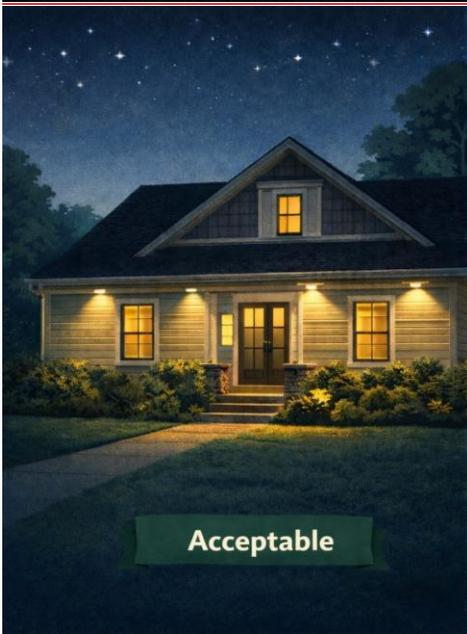
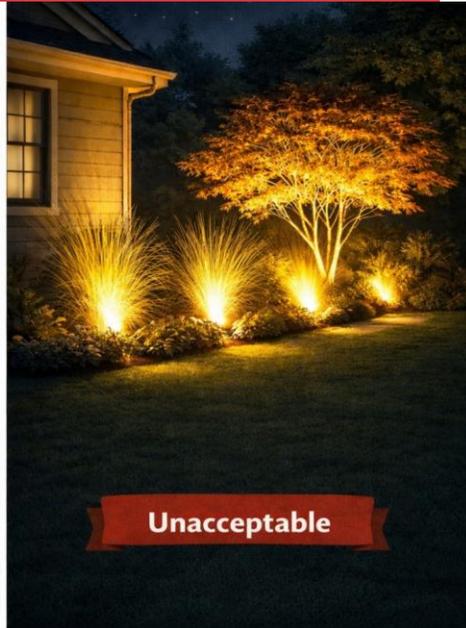
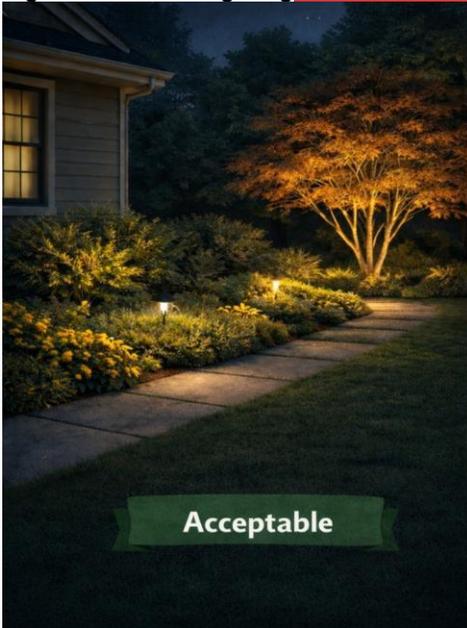


Figure 4: Accent Lighting: Shielded & Downcast vs. Unshielded & Upward Cast



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Section 4. Section 16.34.040 of the Medina Municipal Code is hereby amended to read as follows:

16.34.040. Accessory Recreational Facilities.

C. Development standards.

5. Major recreational facilities that protrude into setback areas shall comply with the following requirements:

- a. Solid landscape screening pursuant to MMC 16.30.070 shall be installed along the perimeter of the lot from which the facility is set back, such that the use is concealed year-round from public streets, private lanes, and nearby properties;
- b. ~~All lighting shall be oriented or shielded such that the lighting does not shine or spill over onto neighboring properties or Lake Washington.~~ No lighting shall be allowed on private sports courts or private accessory recreational facilities in the City;
- c. Fences and barriers shall meet all development and building code requirements; and
- d. Additional mitigation measures may be required such as, but not limited to, restricted hours of use, limitations on lighting, increased screening, altered location, etc., to minimize any negative impacts generated by the use of the accessory recreational facility.

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Commented [KG18]: Recommending this edit to align with MMC 16.25.060(B).

Section 4. Section 16.66.110 of the Medina Municipal Code is hereby amended to read as follows:

16.66.110. Lighting.

~~A. Exterior lighting shall be controlled using limits on height, light levels of fixtures, light shields, and other mechanisms that:~~

- ~~1. Prevent light pollution or other adverse effects that could infringe upon public enjoyment of the shoreline;~~
- ~~2. Protect residential uses from adverse impacts that can be associated with light trespass from adjoining properties; and~~
- ~~3. Prevent adverse effects on fish and wildlife species and their habitats.~~

~~B. Exterior lighting shall be directed downward and away from adjoining residential properties and Lake Washington and shall be consistent with the requirements of Chapter 16.25 of the Medina Municipal Code. Shielding may be required to conceal the light source.~~

Commented [KG19]: The City Attorney and I recommend that this edit be made with the City's Shoreline Master Program update, scheduled for adoption in 2029. Efforts toward this project will likely begin toward the end of 2027.

~~C. — Exterior lighting mounted on piers, docks or other water dependent uses located at the shoreline edge shall be at ground or dock level and be designed to prevent lighting from spilling onto the lake water and shall be consistent with the requirements of Chapter 16.25 of the Medina Municipal Code.~~

~~D. — The following shall be exemptions set forth in Chapter 16.25 of the Medina Municipal Code shall also apply in the Shoreline area, from the lighting requirements in this section:~~

- ~~1. — Emergency lighting required for public safety;~~
- ~~2. — Lighting for public rights of way;~~
- ~~3. — Outdoor lighting for temporary or periodic events (e.g., community events at public parks);~~
- ~~4. — Seasonal decoration lighting; and~~
- ~~5. — Lighting required by a state or federal agency for navigation purposes.~~