

**OR-2002-03-01**

**VILLAGE OF MARVIN  
OUTDOOR LIGHTING ORDINANCE**

The purpose of this ordinance is to improve public safety, utility, and security by restricting the nighttime emission of light rays. New lighting technologies have produced lights that are extremely powerful. Incorrect installation may result in problems such as excessive glare, light trespass, and higher energy use. Excessive glare can be annoying and may cause safety problems. Light trespass reduces privacy, may be detrimental to the aesthetic values of the Village, and can restrict persons from the peaceful enjoyment of their property. Higher energy use results in increased costs for everyone. This ordinance is intended to reduce the problems caused by excessive, poorly designed or incorrectly installed, outdoor lighting.

**ARTICLE 1**

**1-1. DEFINITIONS:** For the purpose of this ordinance, terms used shall be defined as follows:

**Average to Min:** The ratio of average footcandles to the minimum foot-candle point calculation or reading for a given area. This ratio normally uses maintained foot-candles but may use initial foot-candles. This ratio is an indicator of lighting uniformity. The lower the ratio the better the uniformity.

**Candlepower:** A measure of luminous intensity. Candlepower is normally associated with a directional type fixture such as a floodlight.

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

**Fixture:** The assembly that houses the lamp or lamps and can include all or some of the following parts: a housing, a mounting bracket or pole socket, a lamp holder, a ballast, a reflector or mirror, and/or a refractor or lens.

**Flood or Spotlight:** A light fixture or lamp that incorporates a reflector or a refractor to concentrate the light output into a directed beam.

**Foot-candle(s):** The amount of light falling on a surface (measured or calculated). A foot-candle is defined as one lumen per square foot.

**Foot-candles (Initial):** Footcandles that are calculated from the manufacturers catalog data or measured when lighting system is new.

**Foot-candles (Maintained):** Footcandles that are calculated with an adjustment for a maintenance factor, to include dirt build-up in the luminaire (fixture) and

reduced lumen output due to aging of the lamp, or measured after 100 hours of operation.

**Foot-candles (Average):** The average of a number of points of footcandle calculations or foot-candle readings in a given area. Either initial or maintained foot-candles may be specified.

**Full Cutoff (Fully Shielded Lights):** Outdoor light fixtures shielded or constructed so that no light rays are emitted by the installed fixture at angles above the horizontal plane as certified by a photometric test report.

**Glare:** Light emitting from a luminaire with an intensity great enough to reduce a viewer's ability to see or, in extreme cases, cause momentary blindness.

**Pre Existing Luminaires:** Luminaires not conforming to this Ordinance that were in place at the time this Ordinance was adopted.

**Mounting Height of Luminaire:** The mounting height of a luminaire shall be the vertical distance from the ground directly below the centerline of the luminaire to the center of the light source (lamp) in the luminaire.

**Indirect Light:** Direct light that has been reflected or scattered from other surfaces.

**Lamp:** The component of a luminaire that produces the light.

**Light Trespass:** The shining of light, produced by a luminaire, beyond the boundaries of the property on which it is located.

**Lumen:** A unit of luminous flux. One foot-candle is one lumen per square foot. For the purpose of this ordinance, the lumen-output values shall be the INITIAL lumen output ratings of a lamp as listed in a lamp catalog.

**Luminaire:** This is a complete lighting system, and includes a lamp or lamps and a fixture housing, reflector(s), refractor, etc.

**Maximum:** The maximum footcandle point calculation or reading in a given area. This is usually expressed in maintained foot-candles, but may use initial foot-candles.

**Minimum:** The minimum footcandle point calculation or reading in a given area. This is usually expressed in maintained foot-candles, but may use initial foot-candles.

**Max to Min:** The ratio of the maximum foot-candle point calculation or reading to the minimum foot-candle point calculation or reading for a given area. This ratio is an indicator of lighting uniformity. A lower ratio indicates more uniform illumination.

**Outdoor Lighting:** The night-time illumination of an outside area or object by means of a lamp or luminaire.

**Temporary Outdoor Lighting:** Outdoor lighting in use for a period of less than 7 days, with at least 180 days passing before being used again.

**ARTICLE 2**

**2-1. REGULATIONS:** All public and private outdoor lighting installed in the Village of Marvin shall be in conformance with the requirements established by this ordinance. The provisions of this ordinance are intended to supplement other applicable codes and requirements. Compliance with all applicable provisions of building, electrical, and other codes must be observed. In the event of a conflict between the requirements of this code and other requirements, the more stringent requirement shall apply.

**2-2. CONTROL OF GLARE, LIGHT TRESPASS AND LIGHT LEVELS:**

- A. Glare Control: All fixtures other than floodlights shall be fully shielded and shall be classified as full cutoff as classified by the IESNA. This shall mean that no light is to be emitted out of the fixture above the horizontal plane. Floodlights are to be equipped with shields and aimed so as to direct the light onto the area to be lighted.
- B. Light Trespass: The horizontal illumination on the ground shall not exceed 0.4 maintained footcandles five feet beyond any adjacent property line.
- C. Light Levels: The following table summarizes the recommended light levels for general parking and pedestrian areas.

**Light Levels for General Outdoor:**

Use/Task	Maintained Footcandles	Uniformity Avg./Min.
(a) Streets, local residential	0.4 Avg.	6:1
(b) Streets, local commercial	0.9 Avg.	6:1
(c) Parking, residential, multi-family <ul style="list-style-type: none"> <li>• Low vehicular/pedestrian activity</li> <li>• Medium vehicular/pedestrian activity</li> </ul>	0.2 Min. 0.6 Min.	4:1 4:1
(d) Parking, industrial/commercial/institutional/municipal <ul style="list-style-type: none"> <li>• High activity, i.e. regional shopping centers/fast food facilities, major athletic/civic cultural events</li> <li>• Medium activity, i.e. community shopping, office parks, hospitals, commuter lots, cultural/civic/recreational events</li> <li>• Low activity, i.e. neighborhood shopping, industrial employee parking, schools, church parking</li> </ul>	0.9 Min.  0.6 Min.  0.2 Min.	4:1  4:1  4:1
(e) Walkways and Bikeways	0.5 Avg.	5:1
(f) Building entrances	5.0 Avg.	

- Notes:
1. Illumination levels are horizontal on the task, e.g. pavement or area surface.
  2. Uniformity ratios dictate that average illuminance values shall not exceed minimum values by more than the product of the minimum value and the specified ratio. For example, for commercial parking high activity, the average footcandles shall not be in excess of 3.6 (0.9 x 4).
  3. Any low or medium activity can be reclassified upward when appropriate with town approval.
  4. Source: IESNA Lighting Handbook 8<sup>th</sup> edition
  5. Lighting levels may be less than the maximum maintained footcandles.
- D. Sales/Display Areas: In some instances higher values are required for retail sales/display areas such as car lots. Please see the follow table for these values:

**Light Levels for Sales/Display:**

Use/Task	Maximum Footcandles	Uniformity Ratio Max./Min
(a) Main Business District (highly competitive)		
<ul style="list-style-type: none"> <li>• Adjacent to roadway</li> <li>• Other rows</li> <li>• Entrances</li> <li>• Driveways</li> </ul>	<p>10-20</p> <p>5-10</p> <p>5-10</p> <p>2-3</p>	<p>5:1</p> <p>10:1</p> <p>5:1</p> <p>10:1</p>
(b) Secondary Business Districts (or small towns)		
<ul style="list-style-type: none"> <li>• Adjacent to roadway</li> <li>• Other rows</li> <li>• Entrances</li> <li>• Driveways</li> </ul>	<p>5-10</p> <p>2.5-5</p> <p>2.5-5</p> <p>1-2</p>	<p>5:1</p> <p>10:1</p> <p>5:1</p> <p>10:1</p>

Source: IESNA RP-33-99

- E. Gas Station/Convenience Store Lighting: Lighting levels for convenience stores, gas stations, etc shall be adequate to facilitate the activities taking place in such locations. Lighting of such areas shall not be used to attract attention to such businesses. Signs allowed under the appropriate section of the Village of Marvin's regulations shall be used for that purpose. Facilities having canopies shall be restricted to no more than 320 watt recessed fixtures (including lenses) mounted flush with the bottom of the canopy. The light level shall not exceed 20 footcandles average maintained, measured at ground level at the gas pump island area. Lights shall not be mounted on the top or sides (fascias) of the canopy, and the sides (fascias) of the canopy shall not be illuminated.
- F. Sportsfield Lighting: Lighting for sportsfields is generally in excess of general outdoor lighting levels. Recreation lighting levels established by the IESNA are to be used as the standard. Higher lighting levels for tournament or high league play are sometimes required and must be approved by the Town prior to construction. All sportsfields must meet the following minimum standards:
1. Fixtures must not exceed 80 feet in mounting height (this includes bases and/or other mounting structures).

2. Fixtures must be fitted with the manufacturer's glare control package. If the manufacturer does not have a glare control package, the fixture specification must be changed to a manufacturer that offers a glare control package.
3. Fixtures must be designed with a sharp cutoff and aimed so that their light beams fall within the primary playing area and the immediate surroundings, so that off-site direct illumination is significantly restricted.
4. Lighting shall be extinguished no later than one hour after the event ends.

G. Signs:

1. Light fixtures illuminating signs shall be located, aimed, and shielded so that light is directed only onto the sign façade and glare is minimized. Lighting fixtures shall not be aimed toward adjacent streets, roads, or properties.
2. Light fixtures illuminating signs shall be of a type such that the light source (bulb) is not directly visible from adjacent streets, roads, or properties.
3. Internally illuminated signs are permitted so long as the sign is not too bright for the surroundings and does not produce excessive glare.
4. Light fixtures shall be directed downward rather than upward or horizontally.
5. This ordinance does not regulate outdoor signs. Such regulations have been adopted and can be found in the Village of Marvin Zoning Ordinance.

H. Building Facades:

1. Minimum illumination on any vertical surface or angular roof shall not exceed 5.0 footcandles average maintained.
2. Light fixtures shall be located, aimed and shielded so that light is directed only onto the building façade. Light fixtures shall not be directed toward adjacent streets or roads.
3. Light fixtures shall be directed downward rather than upward or horizontally.

I. Softscape/Holiday/Festive Lighting:

1. All softscape (landscape) lighting shall be aimed and shielded so as not to present a hazard to the safety of others. All fixtures shall be less than 50 watts. All holiday lighting shall be temporary in nature and shall be used only during the holiday or festive celebration period.

### **2-3. EXCEPTIONS:**

- A. The design for an area may suggest the use of parking lot lighting, area lighting and roadway fixtures of a particular “period” or upscale architectural style such as the “nostalgic lantern”, as either alternatives or supplements to the lighting described above. These decorative post-mounted fixtures are generally classified as “non-cutoff” by the IESNA and are acceptable. The maximum initial lumens generated from each fixture shall not exceed 9,500 lumens per fixture and each fixture must be equipped with a solid top to reduce the amount of light directed above the horizontal plane.
- B. All temporary emergency lighting needed by the Sheriff or Fire Departments or other emergency services, as well as all vehicular luminaries, shall be exempt from the requirements of this article.
- C. All hazard warning luminaries required by Federal regulatory agencies are exempt from the requirements of this article, except that all luminaries must be shown to be as close as possible to the Federally required minimum lumen output requirement for the specific task.
- D. Motion detector security lights which are normally “off” and which are activated for less than 5 minutes occasionally when motion is detected are exempt from this article.
- E. In the case of flags, statues or other top-of-pole mounted objects, including neighborhood entrances, which cannot be illuminated with down-lighting, upward lighting may be used only in the form of not more than two narrow-beam spotlights which confines the illumination to the object of interest.

### **2-4. PROHIBITIONS:**

- A. The operation of searchlights, lasers, or other high-intensity beams is prohibited.
- B. The use of flashing, rotating, or pulsating lighting devices is prohibited.

### **2-5. TEMPORARY OUTDOOR LIGHTING.**

- A. Any temporary outdoor lighting that conforms to the requirements of this Ordinance shall be allowed. Nonconforming temporary outdoor lighting may be permitted by the Village Council after considering: (1) the public and/or private benefits that will result from the temporary lighting; (2) any annoyance or safety problems that may result from the use of the temporary lighting; and (3) the duration of the temporary nonconforming

lighting. The applicant shall submit a detailed description of the proposed temporary nonconforming lighting request to the Village Council in accordance with all applicable submittal procedures, who shall consider the request at the next regularly scheduled meeting. Prior notice of the meeting shall be provided to the applicant. The Village Council shall render its decision on the temporary lighting request and notify the applicant in writing within two weeks from the date of its decision. A failure of the Village Council to act on a request shall constitute a denial of the request.

### **ARTICLE 3**

#### **3-1. EFFECTIVE DATE AND APPLICATION TO PRE-EXISTING LUMINAIRES:**

- A. This ordinance shall take effect immediately upon approval by the Village Council.
- B. All existing lighting installed on or before the adoption of this ordinance is “grandfathered” and therefore is acceptable as is and is not required to be changed.
- C. Luminaries that undergo a change in light source, wattage or fixture housing must be changed to come within compliance of the ordinance.

### **ARTICLE 4**

#### **4-1. AUTHORIZATION FOR INSTALLATION OF PUBLIC AREA AND ROADWAY LIGHTING.**

Installation of any new public area and roadway lighting fixtures other than for traffic control shall be specifically approved by the Marvin Village Council.

### **ARTICLE 5**

#### **5-1. CONSTRUCTION**

- A. Submission Contents. Any applicant seeking lighting approval as required shall submit the information as herein called for. Where applicable, this information shall be submitted as part of a final subdivision plat, as called for in the Village of Marvin Subdivision Ordinance. The submission shall contain, but not be limited to:

1. Plans indicating the location on the premises, a point-by-point footcandle diagram and the type of illuminating devices, fixtures, lamps, supports, reflectors, and other devices.
2. Description of the illuminating devices, fixtures, lamps, supports, reflectors, and other devices. This may include, but is not limited to, manufacturers catalogs and drawings (including sections where required).
3. Photometric data, such as that furnished by manufacturers, showing the angle of cut off of light emissions.

The electric utilities that serve the Village of Marvin, given the on-going high volume of street lights and other outdoor lighting provided by these utilities, are granted a waiver to the procedures described in Section 5-1-A. The Village of Marvin will require each electric utility company to comply as follows:

- (1) A materials specification book for the electric utility fixtures, lamps, supports, reflectors, poles, raised foundations, and other devices will be supplied by the electric utility to the Village of Marvin with a table of contents showing the identification code(s) and page numbers for the electric utility's equipment available to customers. All lighting equipment in this book must be approved by the Village of Marvin as well as all subsequent new lighting equipment that is proposed to be added by the electric utility. Each project will not require individual approval provided the approved equipment in the book is utilized. Note: The use of this book will significantly reduce the paperwork required from the utility lighting supplier.
  - (2) A point-by-point footcandle array in a printout format indicating the location, aiming and type of fixtures shall be provided for each project.
  - (3) If, at some future date, said project is found to be out of compliance, corrections will be made by the electric utility to allow the project to come under compliance at the utility's expense.
- B. Additional Submission: The required plans, as herein called for, shall be sufficiently complete to enable the Zoning Administrator, or other such person assigned to administer this ordinance by the Village Council, to determine compliance with this ordinance. The Zoning Administrator may require the applicant to submit additional information, on a case-by-case basis, to determine ordinance compliance. Such information may include certified reports of tests conducted by a recognized testing laboratory.

- C. Subdivision Plat Certification. If any subdivision proposes to have installed street or other common or public area outdoor lighting, the final plat shall contain a statement certifying that the applicable provisions of the Village of Marvin Outdoor Lighting Ordinance will be adhered to.
- D. Lamp or Fixture Substitution. Should any outdoor light fixture, or the type of light source therein, be changed after the final plat approval, a change request must be submitted to the Zoning Administrator for approval, together with adequate information to assure compliance with this ordinance, which must be received prior to substitution.
- E. Technical Assistance. If the Village of Marvin requires technical assistance in determining whether plans and lighting equipment submitted for approval meet the ordinance requirements, the cost for a lighting consultant's technical services will be paid to the Village of Marvin by the applicant requesting approval of the installation before final plat approval.

## **ARTICLE 6**

### **6-1. NOTIFICATION REQUIREMENTS:**

The Village of Marvin zoning permit shall include a statement asking whether the planned project will include any outdoor lighting.

## **ARTICLE 7**

### **7-1. VIOLATIONS, LEGAL ACTIONS, AND PENALTIES:**

- A. Violation. It shall be a civil infraction for any person to violate any of the provisions of this Ordinance. Each and every day during which the violation continues shall constitute a separate offense.
- B. Violations and Legal Actions: If, after investigation, the Zoning Administrator finds that any provision of the Ordinance is being violated, he shall give notice by hand delivery or by certified mail, return-receipt requested, of such violation to the owner and/or to the occupant of such premises, demanding that violation be abated within thirty (30) days of the date of hand delivery or of the date of mailing of the notice. If the violation is not abated within said thirty-day (30) period, the Zoning Administrator may institute actions and proceedings, to enjoin, restrain, or abate any violations of this Ordinance and to collect any penalties associated with such violations.
- C. Penalties. A violation of this Ordinance shall be punishable in accordance with Section 1.5 Enforcement and Penalties of the Village of Marvin Zoning Ordinance.

This ordinance shall take effect and be enforced as of the 12th day of March 2002.

**THIS ORDINANCE IS HEREBY ADOPTED BY THE VILLAGE COUNCIL OF  
THE VILLAGE OF MARVIN ON THIS THE 12<sup>th</sup> DAY OF MARCH 2002.**

MAYOR \_\_\_\_\_  
Gordon Suhre

ATTEST:

VILLAGE CLERK \_\_\_\_\_  
Maya Coffield

Amended

1. August 28, 2003