

**ORDINANCE # 2005-1**

**AN ORDINANCE FOR THE TOWN OF LIBERTY, VERNON COUNTY, WISCONSIN, TO BE KNOWN AS THE “DARK SKY ORDINANCE”.**

WHEREAS, unnecessary and improperly designed light fixtures cause glare, light pollution and light trespass,

WHEREAS, glare and light pollution can result in: hazardous circulation conditions for all modes of transportation, the diminishing ability to view the night sky, light trespass, and unattractive townscape; and

WHEREAS, the Town of Liberty desires to protect the health, safety and welfare of the residents and general public, and to protect the night sky that adds to the quality of life and economic well being of the Town; and,

WHEREAS, these regulations for exterior lighting will not sacrifice the safety of our citizens or visitors, or the security of property, but instead will result in safer, efficient and more cost effective lighting.

NOW THEREFORE, BE IT ORDAINED BY THE TOWN BOARD OF THE TOWN OF LIBERTY, VERNON COUNTY, WISCONSIN:

- (A) Lighting Fixtures must be a Fully shielded design that is installed so that all light travels downward, and no light is allowed to escape the fixture horizontally, or any angle above horizontal; (See attached schedule – International Dark-Sky Association Information Sheet 143); and
- (B) Use of motion sensing devices are encouraged; and
- (C) No industrial or commercial use shall cause a level of illumination exceeding 0.5 foot candles horizontal, in a contiguous or adjacent residential district. Light intensity shall be measured using a light meter calibrated within the last 12 months and accurate to 0.05 foot candles; and procedures established in the Security Lighting Guide, publication GA-03
- (D) No source of intense light or glare, such as High Intensity Discharge lamps, shall be visible from off the site where said light is generated. Construction welding is exempt from this standard; and
- (E) No lighting shall blink, flash or be of unusual high intensity or brightness; and
- (F) All lighting fixtures shall be appropriate in scale, intensity, and height to the use they are serving, but not to exceed 30 feet; and
- (G) Mercury vapor lights and all other HID ‘Security’ or ‘Yard Lights’ shall be fitted with a shade to make them fully shielded.

EXEMPTIONS:

- ~~(1)~~ Lighting fixtures used temporarily for emergency purposes;
- ~~(2)~~ Approved temporary special events lighting; Lighting fixtures 1,000 lumens or less;

~~(3)~~ Existing signs and lighting:

- (a) All existing signage not complying with the provisions of this ordinance shall come into compliance when:
- i. The sign is relocated; or
  - ii. If more than 60% of the sign is damaged, replaced or repaired; or
  - iii. If the plastic panel of a box sign is no longer utilized any replacement panel facing shall utilize a dark colored background with light colored lettering; or
  - iv. If the existing property is sold or transferred, the new owners or lessors shall comply with the provisions of this ordinance.

~~(b)~~ Existing lighting fixtures installed prior to the effective date of this ordinance are exempt for a period of two years from the date of enactment of this ordinance, unless:

- i. ~~—~~ The fixtures become inoperable except for bulb replacement, or
- ii. ~~—~~ The fixture can be retrofitted at the time of bulb replacement to come into compliance with this ordinance
- iii. ~~—~~ The property is sold or transferred.
- iv. ~~—~~ A building permit is taken out for improvements, renovation, or additions to the property.

#### PENALTIES FOR VIOLATION OF DARK SKY ORDINANCE

Any person violating any provision of this ordinance, shall, upon conviction, forfeit not less than \$10.00 nor more than \$100.00 and the costs of prosecution, and in default of payment of such forfeiture and costs of prosecution, shall be imprisoned in the County Jail until payment of such forfeiture and costs of prosecution, but not exceeding thirty days for each violation. Each day of violation shall constitute a separate offense.

Dated this 14<sup>th</sup> day of March, 2005 at the Liberty Town Hall.

/s/ Danny Deaver, Chairman /s/William Oliver, Supervisor

/s/ R. Craig Starr, Supervisor

Passed: March 14, 2005  
Posted in 3 places: 3/20/05  
Published: 3/23/05

ATTESTED TO BY:

/s/ Lori Polhamus, Town Clerk

## **FOR INFORMATION ONLY:**

### Recommended Criteria for Exterior Lighting Ordinances:

**Direct Glare:** Direct glare is defined as the visual discomfort resulting from insufficiently shielded light sources in the field of view. One should “see the effect, not the light source.” The direct glare definition means if you can see an unshielded lamp, or the luminaire maximum candlepower zone, you may well have glare. However, usually when you are near a luminaire, you will see these parameters, of course. So a reasonable definition limiting the field of view is required.

**Limitation of Observation of Direct Glare:** Direct glare shall not be observable (outside the originating property limits) at an angle greater than 85 degrees from the nadir of the vertical axis of the light source. The definition is a reasonable one. In practice, it will result in limiting the distance from the light source that you see direct glare to less than ten times the mounting height of the light source. In many cases, it would be approximately six times the mounting height. There are many cutoff luminaire types that can meet this requirement easily. Also many floodlight luminaires and other area luminaire types with proper installation and shielding can also meet this requirement.

**Light Trespass:** Limit the exterior lighting originating on a property to a maximum of 0.5 horizontal foot candles (HFC) at a distance of 25 feet beyond the property lines. This specification will allow the controlled placement of lighting poles and luminaries adjacent to the property lines. With many outdoor luminaries, it is difficult to comply with low level foot candle requirements at the property line. For example: a typical 250 watt high pressure sodium (HPS) luminaire at the property line would have about a 5 HFC below the light fixture, but it could be shielded so that there is no more than 0.5 HFC at 25 feet from the property line.

**Luminaire Mounting Height:** A mounting height of 30 feet allows the use of a variety of luminaries in an energy efficient manner. There should be provisions in any code for needed exceptions, such as sport lighting installations or other high mast designs.

**Illumination Levels:** Use the term foot candle (HFC) or vertical foot candle (VFC) to define the type of illumination levels and measurements. Recommended illumination levels are published in various IES publications and by many luminaire manufacturers.

(Insert copy of International Dark-Sky Association – Information Sheet 143)