

Brattleboro's Streetlight Conversion Plan

Brattleboro divided the town into three zones and recommended spacing of lights in each zone (based on Montpelier's streetlight plan). They had volunteers walk the streets in each zone and measure the distance between the existing streetlights. In most cases, the spacing was within the recommended guidelines, but they found several instances where the spacing was less than recommended and lights could be turned off, as long as it did not affect safety.

See Brattleboro's site map below.

Streetlight Conversion Plan – 2012 – Undertaken by Brattleboro Energy Committee

The Brattleboro Energy Committee presents this plan for guiding the conversion of Town streetlights to high-efficiency Light-Emitting Diode (LED) fixtures, identifying lights that can potentially be turned off, and making sure that critical areas such as crosswalks are well-lit. The goal of the project is to provide more consistent lighting levels Town-wide, while improving safety and reducing electricity costs. The project is part of Efficiency Vermont's Energy Leadership Challenge to help the Town reduce its electric consumption by at least 7.5% by July 1, 2013.

Based on guidelines from the Montpelier (VT) Energy Committee, we have divided the Town into three lighting zones that correspond with different lighting needs within the Town (see attached map):

Lighting Zone #1: Predominately residential areas. Low level of lighting provided. Residential areas with sidewalks, with relatively low pedestrian activity at night. All crosswalks should be well-illuminated. The character of the area would not be adversely affected or disturbed by low light levels. Lighting is deemed necessary for way-finding by motorists and occasional night travel by vehicles and pedestrians. Estimated 280 foot spacing between fixtures. Foot-candle level = 0.1. 20 LED fixtures recommended.

Lighting Zone #2: Multifamily residential and mixed use. Moderate level of lighting provided. This zone covers mixed use and multifamily residential development, home businesses, and some commercial businesses, with low-to-moderate traffic volumes. It is outside the downtown area, but generally within the zone of influence of commercial development and high-density residential, and is characterized by moderate nighttime pedestrian traffic. Sidewalks (or bike lanes) are provided in most of the zone. All crosswalks and intersections are illuminated. Estimated 120-160 foot spacing between fixtures. Foot-candle level = 0.3. 30 LED fixtures recommended.

Lighting Zone #3: Commercial areas and high traffic areas. Highest level of lighting provided. Zone is primarily commercial and high traffic areas, including downtown areas and main thoroughfares. Sidewalks are located along most streets, and traffic levels are moderate-to-high. Visitors, residents, and employees expect moderate lighting levels for way-finding, convenience, and safety. Intersections and crosswalks are well-lit. Lighting should be uniform and continuous. Estimated 60 foot spacing between fixtures. Foot-candle level = 0.8. 40 LED fixtures recommended.

The committee recommends changing light fixtures in three test neighborhoods, one in each lighting zone, using the following guidelines:

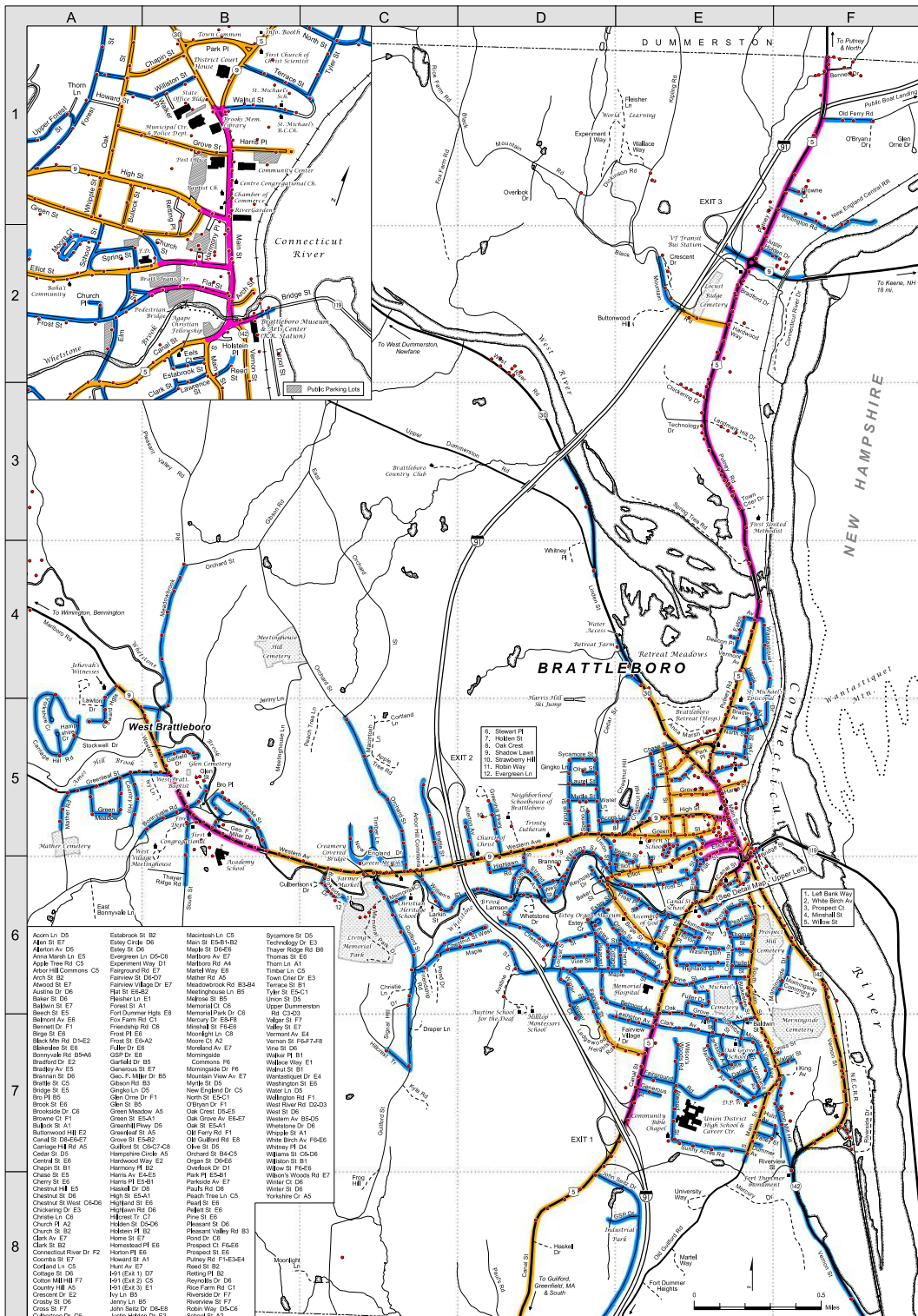
Zone 1 (20 LEDs) – Cedar St./Myrtle St. neighborhood

Zone 2 (30 LEDs) – High St./Western Ave. – downtown to I-91

Zone 3 (40 LEDs) – Putney Rd. – Eaton Ave. to Technology Dr.

Prior to the change to LED fixtures, the committee will inventory lights in the test neighborhoods, and make recommendations about turning off or adding lights. Once these test neighborhoods are complete, we will nominate and inventory other areas throughout town.

As mentioned previously, the project will provide many benefits, including more consistent light levels throughout Town, increased safety for motorists and pedestrians, and reduced energy consumption and costs (at least \$68,494 and 487,419 KWH saved annually).



Streetlight zones

- Zone 1
- Zone 2
- Zone 3

• Streetlights

- Streetlight zones were delineated by the Town of Brattleboro Energy Committee