

**BOSTON TRANSPORTATION DEPARTMENT**  
**Specification for LED Pedestrian Activated Flashing Beacon**  
**For 120 VAC Power Source**

January 9, 2018

**General:**

**The Pedestrian Activated Flashing Beacon (PAFB) system shall be compliant with the MUTCD. Refer to BTB drawing A42.1 latest revision.**

A back-to-back PAFB system shall include four 12-inch yellow light emitting diode (LED) indications and corresponding BTB W-6 (Pedestrian W11-2) crossing warning sign with a diagonal downward arrow (W16-7P) plaque mounted on BTB standard signal post/pedestal bases to be installed to either side of a crosswalk. At each post, four yellow LED indications and two of each mentioned signs above mounted back-to-back shall be provided for each direction of travel.

A single-sided PAFB system shall include two 12-inch yellow light emitting diode (LED) indications and corresponding BTB W-6 (Pedestrian W11-2) crossing warning sign with a diagonal downward arrow (W16-7P) plaque mounted on BTB standard signal post/pedestal bases to be installed to either side of a crosswalk.

The system shall be designed to operate from a 120VAC power source over a temperature range from -30F to + 165F and shall include a small N.E.M.A. cabinet/enclosure with a circuit breaker of appropriate rating and electric meter socket. Proposed N.E.M.A. cabinet shall be submitted to the Boston Transportation Department Engineer for approval.

Wiring diagrams and manuals shall be supplied for all equipment installed as part of the system. Documentation shall involve instructions for set up and troubleshooting of all components in the system.

Training sessions shall be conducted by the supplier in the setup and troubleshooting of the system. Four (4) hours of training shall be provided at a location and during periods to be approved by the Boston Transportation Department Engineer.

The PAFB system shall include a warrantee by its supplier for two years from the date of installation.

The system shall utilize an audible information pushbutton device to activate the PAFBs and a pedestrian instruction sign at a size of 5" x 7 3/4" with the legend "PUSH BUTTON TO TURN ON WARNING LIGHTS" shall be mounted adjacent to or integral with each audible information pushbutton device.

The audible information pushbutton device shall be yellow in color and feature a pushbutton locator tone, a speech pushbutton information message, a small LED light integral to the pushbutton to provide confirmation the flashers are in operation, and an

audible message when the PAFB is flashing. The audible message, “*Yellow lights are flashing*” shall be programmed to repeat twice at the beginning of the flashing period.

**Beacon Dimensions and Materials:**

- a. Each PAFB shall consist of two and/or four circular-shaped yellow 12-inch LED indications per “*BTD LED 12-Inch Vehicle Traffic Signals*” specification dated September 30, 2005.
- b. Each 12-inch yellow LED indication shall be contained in a housing. The housing shall be provided with a cut-away visor and shall be of die-cast aluminum alloy or polycarbonate, rigidly constructed, and with a smooth outer surface as outlined per “*BTD specification for 12-Inch Traffic Signals*” dated November 8, 1993.

**Beacon Flashing Requirements:**

- a. When activated, the yellow LED indications on each post shall flash in an alternating flashing sequence (top light on, then bottom light on).
- b. Each of the yellow LED indications shall be flashed at a rate of not less than 50 or more than 60 times per minute, and be wired to alternately flash between the two yellow LED indications. The illuminated period, shall be a minimum of 1/2 and a maximum of 2/3 of the total cycle.
- c. An automatic dimming device shall be provided to reduce the brilliance of the flashing yellow signal indications during night operation.

**Beacon Operation:**

- a. The PAFB shall be normally dark, shall initiate operation only upon pedestrian activation, and shall cease operation at a predetermined time after the pedestrian activation.
- b. All PAFBs associated with a given crosswalk shall, when activated, simultaneously commence operation of their alternating flashing indications and shall cease operation simultaneously.
- c. The duration of the predetermined flashing period after activation shall be based on the MUTCD procedures for timing of pedestrian clearance times for pedestrian signals unless otherwise directed by the BTD engineer. This time setting shall be adjustable by the user.