

## LED Slimline Illuminated Street Name Sign (One Sided) Specification

### 1.0 Scope & Background

1.1 This document shall provide an overview of the technical requirements needed to manufacture safe and reliable signage for use in Street Name Identification.

1.2 LED signs designed and manufactured by Traffic Signs, Inc. are far more reliable than traditionally illuminated signs and require little or no maintenance. LED signs generally use only a small fraction of the power required by earlier generation signs and are more economical to operate.

LED technology has made it possible, to utilize these solid-state light sources in place of traditional illumination to display Street Name Identification in housings that are thinner, lighter and more easily accessible for routine cleaning and maintenance of the illuminated sign face and internal components.

1.3 An LED Slimline Illuminated Street Name sign can display the designated street name clearly and legibly in the daylight hours without being energized and at night when energized.

1.4 The sign assembly shall consist of an aluminum housing that is available in standard lengths of four, six or eight-foot and 18" in height (custom length and height may be available).

1.5 The street name shall be displayed on a sign face located on the front of the sign. The character size and front shall be per the provided project specification or plan sheet and may include a city, village or county name displayed underneath. A logo may also be incorporated on the sign face and is generally located to the left of the street name. A green background is most common, however other colors are available. The sign face shall be installed in a track in the front of the sign when the hinged door on the end of the sign is in the open position.

1.6 Illumination shall be an LED panel installed in a track inside the housing located in the back of the sign and parallel to the sign face. LED module specifications can be provided if desired.

### 2.0 Mechanical

2.1 The weatherproof sign housing shall be fabricated using a single .100" thick aluminum sheet to form the top, back and bottom as well as the top and bottom retaining tracks on the front of the sign.

2.2 The power entrance end shall have a continuous TIG (Tungsten Inert Gas) weld to provide a weatherproof seal. A wire junction box shall be attached to the top of that end where field wire connections will be made. When a photocell is required in the sign, it will be installed in the cover plate of the wire junction box.

2.3 A hinged access door is at the left end of the sign and allows for the insertion or removal of the sign face and the LED panel. The door is constructed of .100" thick

aluminum. The door is fastened to the end of the housing by a full length, .040" x 1" open aluminum hinge. The door shall be gasketed and held secure onto the internal door support by one stainless steel quarter-turn lock. When the door is open, the face can be moved to gain access to the interior of the sign including the power supply mounted inside the opposite end of the sign. The LED panel can also be removed for service after removing the two DC power supply wires from the terminal block.

2.4 The outside dimension for a Slimline sign shall be 3/16" longer than the designated length as listed in section 1.4. A standard sign housing height is 18-3/16", the depth is 5-1/2". The approximate base weight of a finished 6' sign is 50 pounds and an 8' sign is 73 pounds.

2.5 Drain holes in the bottom of the sign shall be 1/4" in diameter and screened to prevent intrusion of insects or debris.

2.6 The exterior finish of the sign shall be provided as a wet coat, paint or powder coat in the desired color. A mill, or natural aluminum finish will be provided if desired.

2.7 All fasteners and hardware shall be corrosion resistant stainless steel.

2.8 Sign faces are provided in either a reflective or non-reflective format depending upon the requirements of the project. The substrate material shall be a nominal .125" thick.

A non-reflective sign face consists of a white polycarbonate substrate and shall have the street name applied directly on it using electronically cuttable (EC) film of the desired color for the background.

A reflective sign face consists of a white sign grade, Impact Modified Acrylic substrate covered with 3M, white prismatic DG3 (4090T) reflective sheet. EC film with the street name shall then be applied over the reflective sheet.

### **3.0 LED Light Engine**

3.1 The LED Light Engine is located in the rear of the sign and supported by an upper and lower channel. High output LEDs are mounted on a .063" thick aluminum panel. Two horizontal rows of high output LEDs are properly spaced to provide and even illumination across the entire face of sign.

3.2 The LED Light Engine is powered by a 12 volt class 2 power supply and shall convert the incoming 120VAC to 12VDC.