

**STATE OF NEW JERSEY  
DEPARTMENT OF TRANSPORTATION  
TRENTON, NEW JERSEY 08625**

**METRIC SPECIFICATIONS FOR CABLE LOCATOR**

N.J. Specification No. EBM-CBLR

Effective Date: July 1, 2001

New Jersey Department of Transportation Specifications for a Cable Locator.

The purpose of these specifications is to describe minimum acceptable design and operating requirements for a cable locator.

**GENERAL - I**

- 1-1 The cable locator shall consist of a transmitter and receiver with a transmitter cable and a stainless steel ground rod.
- 1-2 The transmitter shall have nominal dimensions of 172 by 286 by 197 millimeters and a maximum weight of 2.5 kilograms.
- 1-3 The receiver shall have nominal dimensions of 648 by 95 by 273 millimeters and a maximum weight of 1.7 kilograms.
- 1-4 The transmitter and receiver shall be operational when exposed to the following temperature extremes:
  - A. While in operation: -20 °C to +50 °C
  - B. Storage: - 40 °C to +70 °C
- 1-5 The material for the cable locator shall be suitable in all weather conditions.

**ELECTRICAL CHARACTERISTICS - II**

- 2-1 The transmitter trace frequencies shall be 577 hertz and 33 kilohertz.
- 2-2 The transmitter shall have a power output of 100 milliwatts for a normal setting and 1 watt for a high setting.
- 2-3 The transmitter shall be powered by a maximum of six alkaline "C" batteries.

- 2-4 The receiver shall have the following operating frequencies:
  - A. Active: 577 hertz, 33 kilohertz
  - B. Passive: 540 hertz (power) - 60 hertz
- 2-5 The receiver shall be capable of locating and measuring a cable from a depth of 4.5 meters with an accuracy of 10%  $\pm$ 1 digit at 0 to 1.5 meters and 15% at 1.5 to 4.5 meters.
- 2-6 The receiver shall have an easy to read bar graph to indicate received signal and proximity to the cable. The readings shall be measured in metric units.
- 2-7 The receiver shall be powered by a maximum of six alkaline "AA" batteries.

### **INSTRUCTIONS AND GUARANTEE - III**

- 3-1 One operational manual for the cable locator shall be supplied with each cable locator furnished.
- 3-2 No changes or substitutions in these requirements will be accepted unless authorized in writing. Inquires regarding this specification shall be addressed to the Manager, Office of ITS Engineering, New Jersey Department of Transportation, 1035 Parkway Avenue, P.O. Box 613, Trenton, New Jersey 08625.
- 3-3 The cable locator shall carry a one year guarantee from the date of delivery against any imperfections in workmanship and material.
- 3-4 The company agrees upon the request of the Manager, Office of ITS Engineering to deliver to the Office, a sample cable locator to be supplied in compliance with these specifications for inspection and test before acceptance. After completion of the test the sample shall be returned.
- 3-5 The company shall furnish any and all other equipment which it deems necessary for safe and reliable field operation of the cable locator.