FLORIDA DEPARTMENT OF TRANSPORTATION
State Materials Office
5007 NE 39th Avenue
Gainesville, Florida 32609

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Florida Test Method
for
PROBING CONCRETE PAVEMENT FOR THICKNESS DETERMINATION

Designation: FM 5-596

1. SCOPE

1.1 This method presents a procedure for probing fresh concrete to determine the thickness of concrete pavements placed on non-erodible bases.

1.2 It is a non-destructive method used to obtain thickness measurements for a newly placed concrete pavement.

2. APPARATUS

2.1 Thickness Probe (Fig. 2.1) – The thickness probe shall be rigid, made of a durable material that is non-reactive with Portland cement concrete.

2.1.1 The probe shall have a top plate that is circular or square with a minimum surface area of 16 square inches. The top plate shall be at least 1/16-inch-thick and sufficiently rigid to maintain a surface planeness of at least 1/8 inch across the widest dimension intended to be in contact with the concrete pavement surface. The hole for the probing rod shall be centrally located and of a diameter as to allow for easy maneuvering along the length of the probing rod.

2.1.2 The Probe shall have a 3/8-inch diameter steel inner probing rod with a minimum length of 16 inches. The rod shall have a T-handle with adequate stiffness and a tapered tip so that the rod can be inserted through the full depth of the plastic concrete pavement without bending.

2.1.3 The probe shall be fitted with a locking device so when the top plate is locked to the probing rod, the angle between the top plate and the probing rod shall be 90 degrees.

2.2 Measuring Tool – An appropriate measuring tool(s) capable of measuring to the nearest 1/16 inch such as, a sliding combination-square, ruler, tape, or calipers.

3. PROCEDURE FOR DETERMINING THICKNESS

3.1 Loosen the locking device, then insert the thickness probe into the plastic concrete pavement until the probe tip contacts the underlying base course.

3.2 Slide the top plate down to contact the surface of the fresh concrete. Tighten the locking device on the top plate securely to the inner probing rod. Then remove the thickness probe from the concrete.

3.3 Using the measuring tool, determine the thickness of the pavement as indicated by the distance from the bottom side of the top plate to the tip of the probing rod. Record the thickness to the nearest 1/16 inch.

3.4 Repeat as required with a minimum of five insertions per thickness determination.

4. REPORT

4.1 Thickness – Report each individual thickness measurement to the nearest 1/16 (0.0625) inch and the average thickness for each LOT to the nearest 0.1 inch.

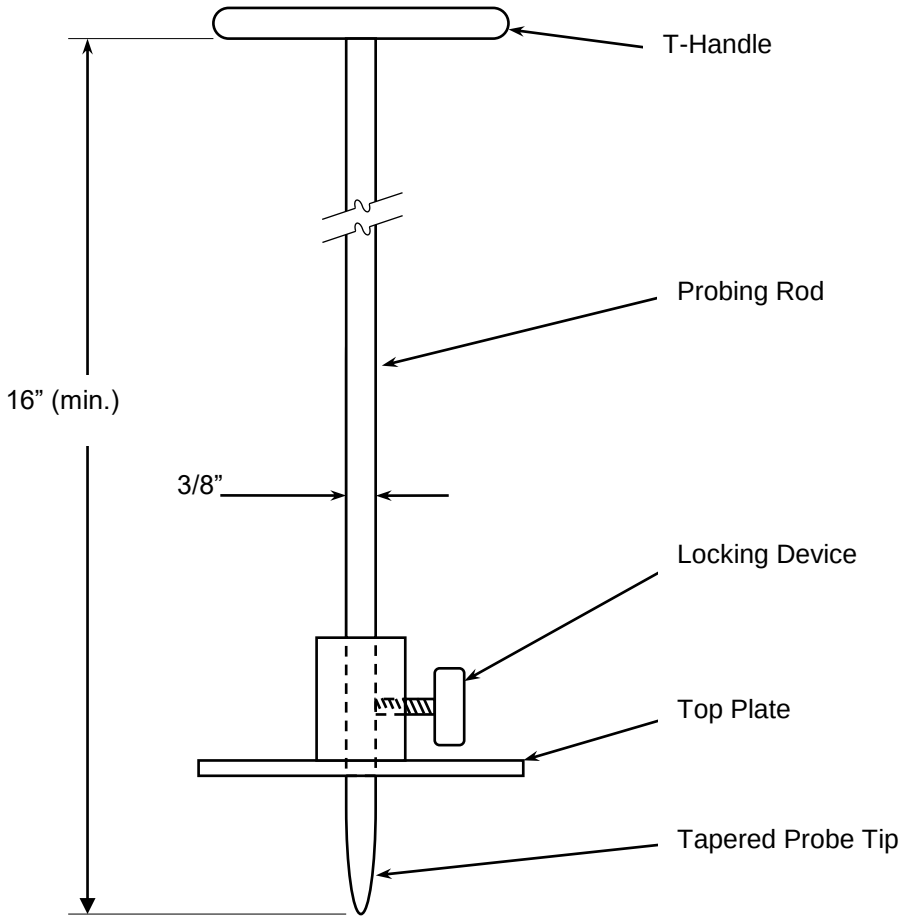

Figure 2.1) Thickness Probe