

## Procedure for Checking Contractor's 25 Foot California Style Profilograph

---

### 1. Scope:

This test covers the procedure for checking the Contractor's 25' California style profilograph machine to the Department's 25' California style profilograph to assure that the Contractor's machine is producing pavement smoothness results similar to the Department's machine.

### 2. Apparatus:

2.1 25 Foot California style profilograph – SDDOT.

### 3. Procedure:

3.1 Assemble the profilograph machine as per manufacturer's recommendations.

3.2 Perform the vertical calibration a minimum of once per day or after each re-assembly.

3.3 Tire pressure shall be as per manufacturer's recommendations, (Cox or McCracken - 25 psi, Ames - 30 psi). Check the tire pressure at least once per 3 hours of use.

3.4 Perform the horizontal calibration annually, unless a discrepancy is noted. This shall be accomplished on a pre-measured test distance of 500 to 1000'. The tolerance should be at  $\pm 0.2\%$  of the measured distance.

3.5 Observe the Contractor's profilograph vertical calibration.

3.6 Operate the profilographs at a walk approximately 3 mph in one or more wheel paths for approximately one mile with the Contractor. Compare the machine horizontal measurements with the Contractor's. The horizontal measurements should compare with  $\pm 0.2\%$ .

3.7 The average results of the contractor's machine should be within 1 inch/mile for a 0.2" blanking band and within 2 inches/mile for a 0 blanking band of the average results of the SDDOT machine.

3.8 Repeat the above steps until an acceptable comparison is obtained. The Contractor shall make whatever adjustments necessary to his machine to achieve an acceptable comparison.

### 4. Report:

4.1 The Central Office Materials Lab shall report the results of the comparison in a letter to the Area Engineer, Region Engineer, Concrete Engineer and the Project File.

**5. References:**

SDDOT Training Manual for concrete paving