

**METHOD OF SAMPLING AND TESTING  
MT 317-04  
PROCEDURE FOR MONITORING IN-PLACE BITUMINOUS  
PAVEMENT DENSITY AND AIR VOIDS**

**1 Scope:**

- 1.1** This test method covers the procedure for establishing a density and air voids database utilizing final record cores and cores taken from designated projects meeting the criteria described in 2.2.

The purpose of this method is to determine how these projects are influenced by traffic compaction, climate and age.

**2 Procedure:**

- 2.1** Initial pavement density and air void data will be obtained from final record cores taken on those bituminous pavements, built using anti-rutting specifications. Reporting of pavement density and air void data will be done on the final record core report.

- 2.1.1** Obtain core bulk specific gravity by using Method B procedure outlined in MT-314.

- 2.1.2** Determine core maximum mixture specific gravity by running the Rice Method (MT-321) of Determining Maximum Specific Gravity of Bituminous Paving Mixtures.

- 2.1.3** Calculate core air void content using:

$$V_V = \frac{G_{CM} - G_{MB}}{G_{CM}} \times 100$$

where:

$V_v$  = volume of air voids as percent of the bulk volume of specimen.

$G_{cm}$  = maximum mixture specific gravity.

$G_{mb}$  = measured bulk specific gravity of compacted mixture.

- 2.2** Monitoring of density and air voids will be accomplished by coring the designated pavements annually for five years. Usually, only three projects will be monitored, but additional ones may be added at the discretion of the District. The District shall select the three projects based upon the following criteria:

- 2.2.1** Projects constructed under the anti-rutting specification.

- 2.2.2** Average daily traffic at 2000 or greater.

- 2.2.3** 25% heavy trucks or greater. (T »25).

- 2.2.4** Projects using different material characteristics, i.e., aggregates, asphalt grades, additives, etc.