

## REHEAT EVALUATION

The contractor's QMA laboratory technician shall split the sample selected for correlation. The split will provide material for 3 individual maximum specific gravity,  $G_{mm}$ , test samples and material for 3 sets of laboratory density,  $G_{mb}$ , specimens.

The contractor's technician will split and retain sufficient material for 2  $G_{mm}$  test samples and 2 sets of laboratory density specimens. The remainder of the field sample will be submitted to the DOT laboratory. From this portion the DOT laboratory will split and test an additional  $G_{mm}$  sample and an additional set of laboratory density specimens, after reheating.

Immediately after splitting, the contractor's technician will return one set of laboratory density samples to the oven and heat to compaction temperature. Once compaction temperature is reached, this set is removed from the oven, compacted as per [IM 325](#) or [IM 325G](#), cooled to ambient temperature and  $G_{mb}$  determined. The second set of samples is cooled to ambient temperature, reheated to compaction temperature then compacted as per [IM 325](#) or [IM 325G](#), cooled to ambient temperature and  $G_{mb}$  determined. This dual testing is intended to indicate the differences in test results, which can be expected, between samples tested on the original heat of the mixture and those tested at a later time (hot-to-cold testing).

The contractor's technician will cool and separate both  $G_{mm}$  samples. The contractor's technician will test one  $G_{mm}$  sample. The second  $G_{mm}$  sample will be sealed in a plastic bag and submitted to the appropriate DOT laboratory for testing. The DOT laboratory will test the sample without any significant reheating (not more than 5 minutes oven reheating to facilitate breaking up sample).

Interlaboratory correlation, as specified in [IM 208](#), will be determined by comparing  $G_{mm}$  results obtained by the contractor to those obtained by the DOT laboratory on the  $G_{mm}$  samples split by the contractor. The laboratory density obtained by the contractor on the  $G_{mb}$  specimens prepared from the reheated portion will be compared to the  $G_{mb}$  determined by the DOT laboratory on  $G_{mb}$  specimens prepared from the reheated portion of the original split sample. If the test results compared are within the tolerances specified in [IM 208](#), then the reheat procedure shall be performed when required by the District Materials Engineer. If the test results are not within the tolerances specified in [IM 208](#), additional testing on the same or subsequent samples will be required.

The District Materials Engineer may waive the reheat testing if the test results indicate no significant difference caused by reheating of samples. Additional correlation testing may be performed at any time at the request of the contractor or the District Materials Engineer. The information obtained by the dual testing described above may be used when monitoring the daily comparison of contractor's test results to DOT laboratory test results when reheating of samples is involved. All samples shall be retained until permission to discard them is obtained from the DOT laboratory.

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This outline is to serve only as a guide to the steps in the correlation procedure. All tests noted in this outline must be performed in accordance with the applicable IM.

1. Contractor Testing Responsibilities

A. Obtain field sample and split to obtain 2 sets of laboratory density,  $G_{mb}$ , specimens and 2 Maximum specific gravity,  $G_{mm}$ , specimens and submit the remainder of field sample to DOT laboratory for testing.

B. Bulk Density Testing

- 1) Set #1 – Immediately after splitting, return specimens to the oven, reheat to compaction temperature, compact specimens as per [IM 325](#) or [IM 325G](#), cool to ambient temperature and test for density.
- 2) Set #2 – Cool to ambient temperature, return to oven, reheat to compaction temperature, compact as per [IM 325](#) or [IM 325G](#), cool to ambient temperature and test for density.
- 3) Compare values obtained in #1 and #2 to determine possible reheat factor.

C. Maximum Density Testing

- 1) Sample #1 – Cool sample and perform Rice Test.
- 2) Sample #2 – Cool sample, place in plastic bag and submit to the DOT laboratory for testing.

D. Submit remainder of field sample to DOT laboratory for testing.

2. DOT Laboratory Testing Responsibilities

A. Bulk Density Testing

- 1) From the field sample supplied by the contractor, split one set of  $G_{mb}$  specimens, place in oven, heat to compaction temperature, compact as per [IM 325](#) or [IM 325G](#), cool to ambient temperature and test for density.

B. Maximum Density Testing

- 1) From the field sample supplied by the contractor, split one  $G_{mm}$  specimen and perform Rice Test.
- 2) Test the  $G_{mm}$  sample supplied by the contractor.
- 3) Compare values obtained in #1 and #2 to determine possible deviation in  $G_{mm}$  results that might occur between the Contractor's split  $G_{mm}$  sample and the DOT  $G_{mm}$  sample split from a field sample.