

**STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION**

**SUPPLEMENT 1090  
IN PLACE GRADATION SAMPLING**

**January 15, 2010**

**1090.01 General**

**1090.02 Pugmill or Mixer Sampling Procedure**

**1090.03 In Place Verification Road Sampling**

**1090.01 General.** The Department will use the following procedure to field sample material when specified in Item 304 Aggregate Base and Item 850 Cement Treated Free Draining Base.

The Department will notify the Contractor/Producer 24 hours prior to sampling so that they may witness the sampling procedure. The Department will notify the Contractor/Producer of the test results within three working days of the test completion.

For Item 850, screen the material through a No. 8 (2.37 mm) sieve immediately after sampling. Wash the cement off the aggregate during the screening.

The Department will use this supplement in conjunction with Department Policy 512-005(P) Acceptance of Nonspecification Materials.

**1090.02 Pugmill or Mixer Sampling Procedure.** Sample the material at the discharge point of the pugmill or mixing device according to ASTM D 75 Standard Practice for Sampling Aggregates, Sections 4.3.1, 4.3.2, or 4.3.3.

**1090.03 In Place Verification Road Sampling**

**A. Verification samples for C&MS 304 and SS 850 acceptance.** All samples will be obtained before compaction.

When Item 304 or 850 verification samples are being obtained to determine material gradation the Engineer will obtain one verification road sample for each day's production of 10 to 5500 tons (9 to 5000 metric tons) of material. When the daily production exceeds 5500 tons (5000 metric tons), the Engineer will obtain additional road samples for each 5500 tons (5000 metric tons) or portion thereof.

Provide a sample of 210 pounds (95 kg) of material consisting of three subsamples of 70 pounds (32 kg) each.

Take subsamples at random locations in the day's production. Take the subsamples before the compaction operation. Each subsample consists of three subset samples of 23 pounds (10.5 kg) each. The subset samples will be a full depth sample of the in place material.

Take the three (3) subset samples in a straight line perpendicular to the centerline. Do not take subset samples in the outside two feet (0.6 m) of the spreading operation width. Combine the subset samples to form a 70-pound (32 kg) subsample.

**B. Evaluation samples for C&MS 304 and SS 850 placement segregation testing.** If the Engineer determines the placed materials are visually segregated due to placement operations sample the material as follows:

The Engineer will obtain a 210 lb (95 kg) sample by combining three (3) subset samples of 70 lb (32 kg) obtained from three (3) visually segregated locations. The Engineer may include additional visually segregated locations into the sample when the subset sample size cannot be obtained without leaving the limits of the visually segregated area. The Engineer will define the quantity of in place material represented by the segregation sample.

When sampling visually segregated locations use a sampling shovel with a rectangular blade 9 inches by 11 inches (230 mm by 280 mm) to take each subset sample. Face the shovel toward the spreader and insert into the roadway for the full depth of the layer being spread. Retain as much material on the shovel blade as possible. Continue toward the spreader until approximately 23 pounds (10.5 kg) of material has been obtained. Avoid digging into the surface below the layer being spread.

When sampling for verification samples use the shovel method in the above paragraph or use a pan at each subset sample location large enough to obtain a 23-pound (10.5 kg) sample. Place the pan on the surface prior to spreading the material. Drive pins to hold the pan in place. Retrieve the subset samples after the spreading operation.

**C. Testing of Field Samples.** To check the sieve analysis, use a sample splitter to split each 70-pound (32 kg) subsample into one-third increments weighing approximately 23 pounds (10.5 kg) each. Combine a one-third increment from each subsample together to form a testing sample. The testing sample will be approximately 70 pounds (32 kg) and will consist of approximately equal amounts of each of the three subsamples. Split the testing sample in half prior to performing the sieve analysis.

For failed tests, the Department will determine deductions or removals conforming to Departmental Policy 512-005(P).