QUICK FACTS: SB 101 **DRAFT**

TEX-101-E, PART 2

Preparing Samples for Compaction, Wet Ball Mill, & Strength Testing

Why

Properly prepare material for moisture and strength testing.

When

Prepare untreated material for compaction, wet ball mill, and compression testing, used to determine the bulk gradation of the sampled base material (Tex-113-E, Tex-116-E, and Tex-117-E).

How

- Prepare embankment (soils), flexible base, or salvaged roadway materials according to Tex-100-E guidelines.
- For testing flexible base, adhere to Article 6 of Tex-100-E.
- When testing soils, spread the material on a clean surface and allow it to air dry or oven dry at a maximum temperature of 140°F.
- Sieve the material using a 1/4 in. sieve, adjusting sieves if coarse aggregates are present. Coarser sieves are applicable and necessary to separate materials.
- Process any lumpy or aggregate-containing material through a 1/4-in. wire-mesh to break it down.
- When testing base materials, oven dry them at 230 ± 9°F until they reach a constant weight.
  - Sieve the material into specified sizes, including 1-3/4 in., 1-1/4 in., 7/8 in., 5/8 in., 3/8 in., No. 4, and No. 40.
  - Avoid overloading the sieves, especially for the material passing through the No. 4 sieve and retained on the No. 40 sieve.
  - Weigh the material retained on each sieve, recording to the nearest 0.1 lb.
- Calculate the bulk gradation for the percent retained on each sieve size using the equation provided in Tex-100-E Section 7.1.

Action

Calculation

- Use the following equation to determine the percent retained for each sieve size.

$$PercentRetained = 100 \times (\frac{W_{Retained}}{W_{Total}})$$

$W_{Retained}$ = Weight of material retained on the sieve

W_{Total} = Total weight of the test sample

- Report to the nearest whole percent.