METHODS OF SAMPLING AND TESTING
MT 228-13
METHOD OF ESTABLISHING FIELD TARGET DENSITY FOR CEMENT TREATED BASE DENSITY CONTROL

1 Scope

1.1 This method is the procedure for establishing the field target density and moisture for compaction control of cement treated base (CTB).

2 Referenced Documents

AASHTO
T 134 Moisture-Density Relations of Soil-Cement Mixtures

MT Materials Manual
MT 216 Method of Sampling and Testing Cement Treated Base

3 Procedure

3.1 At the start of CTB production, use the maximum density and optimum moisture determined by AASHTO T 134 and provided in the mix design as the target for compaction control.

3.2 When samples for MT 216 have been taken, use the specimens molded for compressive strength to determine density. Use the average density of the three specimens to represent each sample. Use additional material taken for MT 216 to determine moisture content. Once the field density and moisture have been determined for two samples, average the results. If the average results in an increase of 1.0 pounds per cubic foot (16.0 kg per cubic meter) or greater or a decrease of 1.5 pounds per cubic foot (24.0 kg per cubic meter) or greater, calculate a new maximum density and optimum moisture in accordance with AASHTO T 134 for the material produced. Apply the new maximum density retroactive to the start of CTB production on the project. Do not change the target moisture unless a new optimum moisture is determined by AASHTO T 134.

3.3 When field densities on four samples have been completed, average the four test values. If the average results in an increase of 0.5 pound per cubic foot (8.0 kg per cubic meter) or greater or a decrease of 1.0 pound per cubic foot (16.0 kg per cubic meter) or greater, calculate a new maximum density and optimum moisture in accordance with AASHTO T 134 for the material produced. Apply the new maximum density to all subsequent CTB produced. Do not change the target moisture unless a new optimum moisture is determined by AASHTO T 134.

3.4 As each additional field density and moisture is completed, add the results to the results of the previous three densities and moistures, and average. If the average results in an increase of 0.5 pound per cubic foot (8.0 kg per cubic meter) or greater or a decrease of 1.0 pound per cubic foot (16.0 kg per cubic meter) or greater, calculate a new maximum density and optimum moisture in accordance with AASHTO T 134 for the material produced. Apply the new maximum density to all subsequent CTB produced. Do not change the target moisture unless a new optimum moisture is determined by AASHTO T 134.

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