

WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
MATERIALS CONTROL, SOILS AND TESTING DIVISION

MATERIALS PROCEDURE

METHOD FOR ACCEPTANCE OF COMPACTION TESTING

1. PURPOSE

- 1.1 To provide a procedure for the acceptance of compaction testing.
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2. SCOPE

- 2.1 This procedure is applicable to all materials that require evaluation of compaction tests.
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3. TESTING

- 3.1 Acceptance Testing Lots are performed by the Division and are often referred to as Quality Assurance (QA) lots.
- 3.2 Quality Control (QC) lots are performed by the Contractor.
- 3.3 The minimum frequency for acceptance testing shall be 10% of the contractor's individual tests. Five tests shall be performed in a lot for acceptance testing.
- 3.4 Acceptance testing shall be distributed throughout the placement of material.
- 3.5 The material should be categorized according to the base, subgrade, pipe backfill, embankment, etc.
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4. EVALUATION

- 4.1 Calculations shall be rounded to the following significant digits according to ASTM Method E29.

Average (X)	0.1%
Standard Deviation	0.01
Range	1%

- 4.2 Determine the number of lots tested by the contractor for a particular material since the last monitoring, including the lot just tested. After completion of the QA lot, the test data shall be entered into AWP, or the current System. Enter the test data for the QC lots into AWP, or the current System. Each QC lot shall be linked to the appropriate QA lot.
- 4.3 Generate the appropriate Compaction Similarity Report in AWP, or the current System.
- 4.3.1 If all the acceptance tests in the report are within the range of plus or minus 1.65 standard deviations, the testing is similar. When the testing is similar, the degree of compaction for the lots of material represented by the acceptance evaluation may be accepted.

- 4.3.2 If any of the 5 acceptance tests are outside the range, compare the acceptance tests to the range in the report calculated using 3 standard deviations.
- 4.3.3 If all acceptance tests are within the range, the testing is considered similar, however, the quality control practices by the contractor should be reviewed for possible problems.
- 4.3.4 Any test outside the 3 standard deviation range indicates that there may be problems within the quality control system and no additional material shall be placed until the problem is investigated and resolved. The investigation, to be performed by the District Materials Supervisor, shall include checking such areas as equipment, test procedures, location of tests, variability of materials, compaction techniques, etc. The results of the investigation shall be documented in the project files and a copy forwarded to Materials Control, Soils & Testing Division via email at DOHCompaction@wv.gov.

**Michael
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