# METHODS OF SAMPLING AND TESTING
# MT 108-04
# SAMPLING AND CERTIFICATION OF PORTLAND CEMENT

## 1 Scope

1.1 This method covers the requirements for sampling and certification of Portland cement.

## 2 General

2.1 Cement samples shall weigh a minimum of 6.8 Kg (15 pounds). Such samples shall be placed in air-tight plastic bags which shall in turn be placed in canvas bags to protect against breakage during shipment. The bin or silo number and the grind number shall be shown on the Lab. Form No. 55 to accompany the sample.

## 3 Procedure

3.1 A sample of cement shall be submitted to the Materials Bureau, prior to construction, for all projects which involve bridge construction or projects which involve 114.3 cubic meters (125 cubic yards) of concrete. The sample may be taken from existing stock at the ready mix plant. On many projects this will be the only sample required unless the provisions of Section 4 make additional sampling necessary.

## 4 Sampling Frequency

4.1 *Project Sampling*

4.1.1 *Bridge Projects*

4.1.1.1 Minimum of one sample taken prior to the start of concrete production.

4.1.1.2 One sample for each additional 458.6 cubic meters (600 cubic yards) of concrete used.

4.1.1.3 This procedure shall be used regardless of the number of structures involved in the project.

4.1.2 *Paving Projects*

4.1.2.1 One sample taken prior to the start of concrete production.

4.1.2.2 Additional samples taken for each 4572.0 cubic meters (5,000 cubic yards) of concrete produced.

4.1.3 *Cement Treated Base Projects*

4.1.3.1 One sample taken at the start of the project.

4.1.4 *Miscellaneous Projects (cattle guards, sign bases, etc.)*

4.1.4.1 One sample taken prior to the start of concrete production on jobs involving 114.3 cubic meters (125 cubic yards) of concrete or more.

4.1.4.2 Samples need not be submitted for projects involving less than 114.3 cubic meters (125 cubic yards) of concrete.

4.2 *Random Sampling*

4.2.1 Each district shall, in addition to samples taken in accordance with Section 4.1 above, submit a random sample of each brand of cement used in that district during the year. These samples may be taken at any time during the year.

## 5 Cement Certification

5.1 The cement plants shall furnish the Materials Bureau with certified test results for each new grind or bin of cement produced for use within the state.

5.2 Each shipment of cement from the manufacturing plant to a highway project shall be accompanied by a certificate of compliance. This certificate shall state that the cement complies with all the requirements of AASHTO M 85 or ASTM C150, low alkali cement, and shall be signed by a responsible representative of the cement plant. Two copies of this certification shall accompany the shipment, one for the consignee and one for the Engineering Project Manager.