Division II
MATERIALS

SECTION 200—GENERAL

200.01—Description.

These specifications cover general sampling and testing procedures, certifications for aggregate acceptance, and technicians and batchers for asphalt and hydraulic cement concrete.

200.02—Conformance with Specifications.

Materials shall conform to these specifications in accordance with the requirements of Section 106.06. Whenever a reference to a material is followed by a reference to a specification, the material shall conform to the referenced specification.

Material that is required to conform to these specifications shall not be used until it has been approved by the Engineer.

Where maximum and minimum limits are given for a characteristic of a material, material whose specified characteristic approximates the mean value shall be furnished. The specified limits shall not be exceeded.

When a material is fabricated of or treated with another material or when any combination of materials is assembled to form a product, the failure of any component to comply with the applicable specification shall be sufficient cause for rejection of the whole unless the combination of components will produce a product satisfactory to the Engineer.

If the Contractor desires to substitute another material for that specified, he shall submit proof that the substitute material is equal in all respects to the material specified. Proof shall be in the form of specifications for the proposed substitution that may be readily compared with the specifications for the original material.

200.03—General Sampling and Testing Procedures.

Materials shall be tested in accordance with the requirements of standard AASHTO, ASTM, or federal methods or methods devised by the Department as specified in the applicable specifications or as approved by the Engineer. At the discretion of the Engineer, the Contractor may furnish a certification of conformity from the manufacturer in lieu of testing.

The Engineer reserves the right to retest any material that has previously been tested or accepted on certification and reject that material if it is found to be defective.

The Department has developed test methods for the evaluation of certain materials or their properties. These test methods are identified by the prefix *VTM* (Virginia

Test Method) followed by a number that will identify the specific VTM to be used. Copies of the Department's test methods may be obtained from the Department's Materials Division.

Sampling of materials shall be performed in accordance with the standard methods of the Department. When required, samples submitted to the Department's laboratory shall be accompanied by an MSDS. Failure by the Contractor to submit an MSDS will be cause for rejection of the material.

When a material is to be tested prior to delivery to the project, the Contractor shall furnish complete identification of the material and its specific intended use in the proposed construction, including references to the plans or specifications calling for the material.

Material will be inspected at the original or intermediate source of supply whenever it is economically advantageous to the Department. This inspection does not relieve the Contractor of the responsibility to furnish materials that conform to the specifications. The Department's representative shall have ready access to all parts of any processing plant furnishing material for a project. Access for sampling and inspecting materials or plant equipment shall include secure, sturdy platforms conforming to local, state, and federal safety regulations.

The Department may discontinue the use of a plant laboratory for acceptance testing in the event of a mechanical malfunction of the laboratory equipment and in cases of emergency involving plant inspection personnel. In such event, acceptance testing will be performed at the district or central office laboratory until the malfunction or emergency has been satisfactorily corrected or resolved.

200.04—Acceptance Procedures for Aggregates.

Aggregates conforming to the requirements of Section 207 (for Type I) and Section 208 will be accepted under a quality assurance program that uses statistical concepts. Aggregate materials shall conform to such requirements prior to the addition of admixtures.

Acceptance procedures for other aggregates shall be in accordance with the requirements of an approved production control plan conforming to the policies of the Department with regard to sampling and testing. Shipments of aggregates accepted under such a production control plan shall be accompanied by the following certification:

Aggregate Certification

Aggregate shipped under this certification has been tested and conforms to the requirements of VDOT.

_____

Signature and Title

The certification may be printed or stamped on the delivery ticket or affixed by a gummed label thereto. The certification shall be signed by an authorized representative of the aggregate supplier and given to the Engineer upon delivery of the aggregate.

The No. 10 sieve shall be the dividing sieve for soils, select material, aggregate subbase material, and aggregate base material. The No. 8 sieve shall be the dividing sieve for asphalt concrete aggregates. That portion of the total aggregate retained on the sieves is defined as coarse aggregate, and that portion passing the sieves is defined as fine aggregate. Soundness tests will be performed in accordance with the requirements of AASHTO T104 without regard to these definitions of fine and coarse aggregate. Fine and coarse aggregates for hydraulic cement concrete are distinguishable by their conformity to the series of grading requirements in Section 202 and Section 203, respectively.

The term *nonpolishing aggregate* shall mean aggregate that the Department has determined will result in a surface of acceptable skid resistance when it is used and exposed as part of a wearing surface. The Department reserves the right to evaluate and determine the acceptability of polishing characteristics of aggregate proposed for use in pavement surfaces.

200.05—Handling and Storing Aggregates.

Stockpiles of aggregate shall be constructed on areas that are hard, well drained, and denuded of vegetation. The different sizes and kinds of aggregates shall be kept separate during handling and storage and until batched. Care shall be taken to prevent segregation of coarse and fine particles during handling and storing.

Aggregates placed directly on the ground shall not be removed from the stockpiles within 1 foot of the ground until final cleanup, and then only clean aggregate shall be used.

200.06—Technician and Batcher Certification.

Certification for technicians and batchers will be awarded by the Department upon a candidate's satisfactory completion of an examination.

(a) **Central Mix Aggregate Technician:** A Central Mix Aggregate Technician designs and makes necessary adjustments in job mixtures at the plant based on analysis of the specified material. The technician also samples materials and conducts any tests necessary to put the plant into operation and produce a mixture in accordance with the applicable specifications.

(b) **Asphalt Concrete Plant Technician:** An Asphalt Concrete Plant Technician designs and makes necessary adjustments in asphalt concrete mixtures at the mixing plant. The technician also samples material and con-

ducts any tests necessary to put the plant into operation and ensure production of a mixture conforming to these specifications.

(c) **Hydraulic Cement Concrete Plant Technician:** A Hydraulic Cement Concrete Plant Technician performs necessary adjustments in the proportioning of material used to produce the specified concrete mixtures.

(d) **Hydraulic Cement Concrete Batcher:** A Hydraulic Cement Concrete Batcher performs the batching operation. The batcher implements adjustments only at the direction of a certified Concrete Plant Technician unless the batcher's certification authorizes otherwise.

(e) **Asphalt Paving Technician:** An Asphalt Paving Technician inspects asphalt concrete placement and surface treatment in accordance with applicable requirements.

(f) **Concrete Field Technician:** A Concrete Field Technician provides quality control of placement operations for hydraulic cement concrete in accordance with the requirements of Sections 316, 404, 405, 410, 412, 415, 502, 504, 505, 506, and 509.

SECTION 201—MINERAL FILLER

201.01—Description.

These specifications cover inorganic material such as lime or fly ash, usually of very fine grading, added to soil or asphalt to produce a desired effect.

201.02—Detail Requirements.

Mineral filler shall conform to the requirements of AASHTO M17. Tests will be performed in accordance with the requirements of AASHTO T37.

SECTION 202—FINE AGGREGATE

202.01—Description.

These specifications cover material for use as fine aggregate in hydraulic cement concrete, mortar, asphalt concrete, and asphalt surface treatments.

202.02—Materials.

Fine aggregate is classified herein in accordance with its occurrence or method of manufacture as natural sand or stone sand. Natural sand shall consist of grains of