



APPROVAL OF SOURCES OF FINE AND COARSE AGGREGATE

1. SCOPE

- 1.1 Approval of a source is based solely on the quality, physical, and chemical properties of the aggregate.
- 1.2 Aggregate from an approved source must meet all specification requirements for gradation and other applicable properties, and must be inspected and tested at the prescribed sampling and testing rates specified in this manual, dependent upon use.
- 1.3 Approval of an aggregate source merely qualifies it for consideration when submitted by a contractor. No sources of aggregate will be considered for use unless approved through the proper process.

2. REFERENCED DOCUMENTS

2.1 AASHTO Standards

- T11, Materials Finer Than 75 μm (No. 200) Sieve in Mineral Aggregates by Washing
- T19/ T 19M-00, Bulk Density ("Unit Weight") and voids in Aggregate
- T21, Organic Impurities in Fine Aggregates for Concrete
- T27, Sieve analysis of Fine and Coarse Aggregates
- T84, Specific Gravity and Absorption of Fine Aggregate
- T85, Specific Gravity and Absorption of Coarse Aggregate
- T96, Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine

2.2 ASTM Standards

- ASTM D4791, Standard Test Method for Flat Particles, Elongated Particles, or Flat and Elongated Particles in Coarse Aggregate
- ASTM D5821, Standard Test Method for Determining the Percentage of Fractured Particles in Coarse Aggregate

2.3 DOH Standards

- 5, Sampling Stone, Slag, Gravel, Sand, and Stone Block for Use as Highway Materials

3. PROCEDURE FOR NEW SOURCE APPROVAL (THOSE NOT USED PREVIOUSLY BY THE DEPARTMENT)

3.1 Fine Aggregate

- 3.1.1 Upon receipt of a request for approval of fine aggregate from a new source, or one not previously used by the Department, Materials and Research personnel will visit the source and make a thorough evaluation of the site, plant equipment, and operating procedures.
- 3.1.2 Samples of the fine aggregate will be obtained using procedures outlined in DOH 5.
- 3.1.3 Samples representing the material shall be tested to determine acceptability using the following procedures.
 - 3.1.3.1 Gradation – AASHTO T27M
 - 3.1.3.2 Organic Impurities – AASHTO T21M
 - 3.1.3.3 Percent Passing #200 Material – AASHTO T11M
 - 3.1.3.4 Unit Weight – AASHTO T19
 - 3.1.3.5 Specific Gravity and Absorption – AASHTO T84
- 3.1.4 Should the inspection at the plant indicate equipment is adequate and the results of the tests specified are satisfactory, the source is considered “approved” and eligible for use on projects, provided specification compliance is maintained. The source will then be listed on the “Approved Aggregate Chart”, which is issued annually by the Materials and Research Section.

3.2 Coarse Aggregate

- 3.2.1 Upon receipt of a request for use of coarse aggregate from a new source, or one not previously used by the Department, Materials and Research personnel will visit the quarry and make a thorough inspection. The quality will be evaluated based on factors such as site geology, plant equipment, and operational procedures.
- 3.2.2 Samples of the aggregate will be obtained using procedures outlined in DOH5.
- 3.2.3 Samples representing quarry production shall be tested to determine acceptability using the following procedures.
 - 3.2.3.1 Gradation – AASHTO T27M

3.2.3.2 Percentage of Wear – AASHTO T96

3.2.3.3 Unit Weight – AASHTO T19

3.2.3.4 Specific Gravity and Absorption – AASHTO T85

3.2.3.5 Percent Fractured Faces – ASTM D5821

3.2.3.6 Flat or Elongated Particles in Coarse Aggregate – ASTM D4791

3.2.4 Should the inspection at the plant indicate equipment is adequate and the results of the tests specified are satisfactory, the source is considered approved and eligible for use on projects, provided specification compliance is maintained. The source will then be listed on the “Approved Aggregate Chart” which is issued annually by the Materials and Research Section.

4. PROCEDURE FOR PREVIOUSLY USED SOURCE APPROVAL, FINE AND COARSE AGGREGATE

4.1 Sources of fine and coarse aggregate that have previously obtained “approved” status described in Section 2.0 will be inspected, evaluated, and tested annually using the procedures described.

4.2 The inspections and tests may be made more frequently on sources furnishing large quantities of material or on those that are subject to variation in quality.

4.3 The inspections, evaluations, and tests made to qualify a source for approved status are made independently of tests made for project assurance or other purposes.