

State of Illinois  
Department of Transportation  
Bureau of Materials  
Springfield

POLICY MEMORANDUM

Issued: September 8, 2020

32-12.0

TO: REGIONAL ENGINEERS AND BUREAU CHIEFS IN THE OFFICE OF HIGHWAYS PROJECT IMPLEMENTATION AND APPROVED/QUALIFIED AGGREGATE SOURCES

SUBJECT: FINE AND COARSE AGGREGATES USED AS SELECT FILL IN MSE WALLS ACCEPTANCE PROCEDURES FOR APPROVED/QUALIFIED AGGREGATE SOURCES

**1.0 PURPOSE**

1.1 To establish procedures whereby fine and coarse aggregates used as **Select Fill** in MSE walls and furnished by an **Approved/Qualified Aggregate Source** will be accepted for use on **Department** projects.

**2.0 SCOPE**

2.1 This procedure is available to all **Approved/Qualified Aggregate Sources**.

**3.0 AUTHORITY AND REFERENCES**

1. IDOT Standard Specifications for Road and Bridge Construction
2. IDOT Manual of Test Procedures for Materials
3. AASHTO, ASTM, and IDOT Test Procedures
4. Code of Federal Regulations (23 CFR Part 637)
5. Department Policy MAT-15, "Quality Assurance Procedures for Construction"
6. IDOT CBM Policy Memorandum 30-12.2 for "Minimum Private Laboratory Requirements for Resistivity and Chemical Testing of Fine and Coarse Aggregates Used in MSE Walls"

**4.0 DEFINITIONS**

**AASHTO** - American Association of State Highway and Transportation Officials.

**APPROVED/QUALIFIED AGGREGATE SOURCE** – A quarry that is approved to supply coarse and/or fine aggregates for **Select Fill** on **Department** projects.

**ASTM** - American Society for Testing Materials.

**BUREAU** - Central Bureau of Materials (CBM), Illinois **Department** of Transportation.

**DEPARTMENT** - Illinois Department of Transportation (IDOT), including its Districts and Central Bureau offices.

**DISTRICT**- District office, Illinois **Department** of Transportation.

**INDEPENDENT ASSURANCE (IND) SAMPLE** - A sample used to provide an independent check on the reliability of a **Producer's** and/or a **Qualified Private Laboratory's** quality control program.

**AGGREGATE INSPECTOR** - District materials inspector who has successfully completed the Department's Aggregate Technician Course and is responsible for inspection at an aggregate Source. A Consultant, hired by the Department to perform the duties of an **Aggregate Inspector**, shall not be allowed to take any quality or Freeze-Thaw samples at an aggregate source.

**INVESTIGATION (INV) SAMPLE** - A destination sample used to verify the acceptability of **Select Fill** from a **Producer**.

**PRELIMINARY (PRE) SAMPLE** - A sample used to determine, in advance, if the **Select Fill** will be qualified prior to use on future **Department** projects.

**PRODUCER** - An individual or business entity providing materials and/or products for performance of prescribed work.

**QUALIFIED PRIVATE LABORATORY** - A resistivity and/or chemical construction materials testing laboratory not operated by the **Department** or a **Local Agency** that is inspected and approved by the **Department**.

**SELECT FILL** – Coarse or fine aggregate intended for use in constructing reinforced soil masses in mechanically stabilized earth (MSE) walls.

**SPECIFICATIONS** - Specifications for materials; manufactured, fabricated or constructed items; processes; products; designs; conducted test procedures, etc. which includes the **Standard Specifications**, supplemental specifications and recurring special provisions, highway standards, shop drawings, contract plans, project special provisions, **AASHTO Specifications**, **ASTM Specifications**, etc., as applicable.

**SPLIT SAMPLE** - A sample in which half the material is tested by a **Qualified Private Laboratory**, and the other half is sent to the **Bureau** and may be tested for Quality Assurance.

**STANDARD SPECIFICATIONS** - The **Department's** Standard Specifications for Road and Bridge Construction.

**VERIFICATION (VER) SAMPLE** - A sample used for the purpose of verifying that the stock of **Select Fill** continues to be within specification limits.

## 5.0 FINE AND COARSE AGGREGATE FOR USE AS SELECT FILL IN MSE WALLS ACCEPTANCE PROCEDURES

5.1 In order to supply **Select Fill** on **Departmental** projects, the **Producer** shall be listed on the **Department's** "[Approved/Qualified Producer List of Aggregate Sources](#)".

5.2 In order for a private laboratory to conduct acceptance testing on **Select Fill**, it shall be approved as a **Qualified Private Laboratory** according to **Department** Policy Memorandum 30-12 "[Minimum Private Laboratory Requirements for Resistivity and Chemical Testing of Fine and Coarse Aggregates Used in MSE Walls](#)."

### 5.3 Preliminary Stockpile Qualification Procedure.

#### 5.3.1 Preliminary Sampling.

5.3.1.1 No more than 12 months prior to use, an **Aggregate Inspector** from the **Bureau** or **District** will request **Preliminary (PRE) Samples** of the **Select Fill** intended for incorporation into **Departmental** MSE wall projects.

5.3.1.2 **PRE Samples** shall be **Split Samples** according to Illinois Test Procedures (ITP) 2 and 248. The blending and splitting process shall be witnessed by the **Aggregate Inspector**. One portion of the **Split Sample** shall be shipped to the **Bureau**, and the other shall be secured by the **Aggregate Inspector** using security zip ties and be shipped by the **Producer** to a **Qualified Private Laboratory**. Costs associated with shipping **Split Samples** to the **Bureau** and a **Qualified Private Laboratory** shall be borne by the **Producer**.

5.3.1.3 The size of each portion of a **Split Sample** for fine aggregate shall be three (3) 40 lb (178 N) bags. The size of each portion of a **Split Sample** for coarse aggregate shall be five (5) 40 lb (178 N) bags.

#### 5.3.2 Initial Testing Criteria.

5.3.2.1 A **Qualified Private Laboratory** shall, and the **Bureau** may, conduct initial sample measurements according to Articles 1003.07 or 1004.06 of the **Standard Specifications**, and the applicable Illinois Modified Test Procedures. Costs associated with testing **Split Samples** conducted by a **Qualified Private Laboratory** shall be borne by the **Producer**.

5.3.2.2 Upon completion of testing, a **Qualified Private Laboratory** shall sign and submit a report of the testing results to the **Producer**. The **Producer** shall subsequently forward a copy of the report to the **Bureau** (Chief Geologist).

#### 5.3.3 Initial Assessment Criteria.

5.3.3.1 Conformance requirements detailed in Articles 1003.07 or 1004.06 of the **Standard Specifications**, and the applicable Illinois Modified Test Procedures shall apply to all test results on **Select Fill** conducted by the **Bureau** as well as a **Qualified Private Laboratory**.

5.3.3.2 The **Bureau** will determine the assessment of conformity with the **Specifications** based on all available test data. When the test results of the **Bureau** and a **Qualified Private Laboratory** conflict, the test results on the **Select Fill** obtained by the **Bureau** supersede those of a **Qualified Private Laboratory**.

5.3.3.3 Failure to meet the **Specification** requirements will result in denial of qualification of the **Select Fill** material for potential incorporation into **Departmental** MSE wall projects. However, at the discretion of the **Bureau**, the **Select Fill** may be re-tested and re-assessed according to Section 5.3.4.

5.3.4 Initial Re-Testing, and Re-Assessment Criteria.

5.3.4.1 At the discretion of the **Bureau**, the remaining initially sampled **Select Fill** may be re-tested by the **Bureau**, a **Qualified Private Laboratory** or both according to Section 5.3.2.

5.3.4.2 Re-assessment of test results will be according to Section 5.3.3.

5.3.5 Subsequent Initial Re-Sampling, Re-Testing, and Re-Assessment Criteria. Samples that do not meet the requirements of Section 5.3.4 will result in denial of qualification of the **Select Fill** material for potential incorporation into **Departmental** MSE wall projects, and should not be subsequently re-sampled, re-tested, and re-assessed unless otherwise authorized by the **Bureau**.

5.4 **Stockpile Verification Requirements**

5.4.1 Verification Sampling.

5.4.1.1 A maximum of twelve months after preliminary qualification of **Select Fill** stock, and every subsequent 12 month period thereafter, an **Aggregate Inspector** from the **Bureau** or **District** will request **Verification (VER) Samples**.

5.4.1.2 Sampling criteria outlined in Sections 5.3.1.2 and 5.3.1.3 shall apply.

5.4.2 Verification Testing Criteria.

5.4.2.1 Testing criteria outlined in Section 5.3.2 shall apply.

5.4.3 Verification Assessment Criteria.

5.4.3.1 Assessment criteria outlined in Sections 5.3.3.1 and 5.3.3.2 shall apply.

5.4.3.2 Failure to meet the **Specification** requirements will result in immediate re-testing and re-assessment according to Section 5.4.4.

5.4.4 Verification Re-Testing, and Re-Assessment Criteria.

5.4.4.1 The remaining **Select Fill** material sampled according to Section 5.4.1 will be re-tested by the **Bureau**, a **Qualified Private Laboratory** or both according to Section 5.3.2.

- 5.4.4.2 Re-assessment of test results will be according to Sections 5.3.3.1 and 5.3.3.2.
- 5.4.4.3 Failure to meet the **Specification** requirements upon re-test will result in disqualification of **Select Fill** material for potential incorporation into **Departmental** MSE wall projects. However, at the discretion of the **Bureau**, the **Select Fill** may be subsequently re-sampled, re-tested, re-assessed according to Section 5.4.5.
- 5.4.5 Subsequent Verification Re-Sampling, Re-Testing, and Re-Assessment Criteria.
  - 5.4.5.1 At the discretion of the **Bureau**, the **Select Fill** may be subsequently re-sampled according to Section 5.4.1, re-tested according to Section 5.4.2, and re-assessed according to Sections 5.3.3.1 and 5.3.3.2.
  - 5.4.5.2 Failure to meet the criteria outlined in Section 5.4.5.1 will result in disqualification of **Select Fill** material for potential incorporation into **Departmental** MSE wall projects.
- 5.5 **Independent Assurance (IND) and Investigation (INV) Sampling, Testing and Assessment Criteria.**
  - 5.5.1 **IND or INV Samples** may be taken at any time prior to or during the period of stock qualification.
  - 5.5.2 **IND Sampling** will be according to Sections 5.3.1.2 and 5.3.1.3, or as otherwise determined by the **Bureau**.
  - 5.5.3 **INV Sampling** will be as determined by the **Bureau** or **District**.
  - 5.5.4 **IND or INV Sample** testing and assessment will be according to Sections 5.4.2 and 5.4.3.
  - 5.5.5 **IND or INV re-Sampling**, re-testing, and re-assessment will be according to Section 5.4.4.
- 6.0 **CLOSING NOTICE**

Archived versions of this policy memorandum may be examined by contacting the **Bureau**.

The current **Bureau** Chief of Materials has approved this policy memorandum. Signed documents are on file with the **Bureau**.