

211-R-608 TYPE 3 STRUCTURE BACKFILL REQUIREMENTS

(Revised 12-20-12)

The Standard Specifications are revised as follows:

SECTION 211, BEGIN LINE 120, DELETE AND INSERT AS FOLLOWS:

Structure backfill for all retaining walls shall be in accordance with the following criteria:

Property	Criteria	Test Method
pH	$5 < \text{pH} < 10$	AASHTO T 289
Organic Content	1 % max.	AASHTO T 267
Resistivity, min.	3000 Ω cm	AASHTO T 288
Permeability, min.	30 ft/day (9 m/day)	AASHTO T 215

The gradation shall be run on the material used in the permeability test. Testing for permeability shall be performed on the sample of the material compacted to 95% in accordance with AASHTO T 99, Method C or D. All of the tests listed above shall be run a minimum of once ~~per calendar year~~ *every 12 months* per source. The ~~Engineer~~ *Office of Materials Management* will evaluate the material from each source and determine the appropriate tests to be performed.

In addition to the criteria above, structure backfill for ~~use in MSE, steel bin type, cut wall, and temporary wire-faced~~ retaining wall systems *containing metal components in contact with structure backfill* shall also be in accordance with the following criteria:

Property	Criteria	Test Method
Chlorides	< 100 ppm	AASHTO T 291
Sulfates	< 200 ppm	AASHTO T 290
Resistivity, min.	3,000 Ω cm	AASHTO T 288
Internal friction angle, ϕ	34° minimum	AASHTO T 236* or T 297*

*under consolidated drained conditions

If the minimum resistivity exceeds 5,000 Ω cm, the requirement for the testing of chlorides and sulfates ~~may~~ *will* be waived. The resistivity shall be tested at 100% saturation. All of the tests listed above shall be run a minimum of once ~~per calendar year~~ *every 12 months* per source. The ~~Engineer~~ *Office of Materials Management* will evaluate the material from each source and determine the appropriate tests to be performed.

~~For MSE, concrete block, or wire faced retaining walls, t~~Testing for ϕ shall be performed ~~on the portion that passes the No. 8 (2.36 mm) sieve~~, using a sample of the material compacted to 95% in accordance with AASHTO T 99, Method C or D. Testing for ~~internal friction angle ϕ is~~ *will not be required if 80% of the materials do not pass the No. 4 (4.75 mm) sieve when using coarse aggregate No. 5, No. 8, or No. 9.*