



# MEMORANDUM

<b>GENERAL SUBJECT:</b> Revisions to Manual of Instructions, Geotextile Sections	<b>NUMBER:</b> MD 363-13
<b>SPECIFIC SUBJECT:</b> Revisions to Manual of Instructions, Geotextile Sections 204.20, 205, and 207.02	<b>DATE:</b> October 28, 2013
<b>DIRECTED TO:</b> District Materials Engineers	<b>SIGNATURE:</b>  <b>Charles A. Babish, PE</b> <i>Signature on original copy of memorandum</i>

*This Memorandum notifies the users of the Materials Division Manual of Instructions that Sections 204.20, 205, and 207.02 regarding geotextile sampling and testing have been revised in order to update language and update current sampling and testing procedures.*

*The revised section is included below.*

*The Manual of Instructions may be accessed chapter by chapter by using the link below:*

<http://www.virginiadot.org/business/materials-download-docs.asp>

## Sec 204.20 Landscape Materials (Roadside Development) and Geotextiles

### (f) ~~Filter Cloth Fabric~~– Geotextiles

*This section covers geotextiles used for silt fence, riprap bedding, drainage fabric, and subgrade and embankment stabilization, as specified in VDOT Road and Bridge Specification 245.03, (a) through (d). Each lot of ~~filter cloth fabric~~ geotextile shall be sampled at the ~~source~~ Supplier by a VDOT Materials Division Quality Assurance (QA) Section Industrial Inspector or a VDOT Materials Representative (Industrial Inspector) and the sample submitted to the VDOT Central Office Laboratory for testing. If there is no evidence of test when the material arrives at the project, it shall be sampled at the project.*

*In addition, the Manufacturer or Supplier shall certify ~~only that the material contains ultraviolet ray inhibitors and stabilizers, since this test would take too long to determine. Also the Manufacturer shall certify the burst strength of the material being furnished, where applicable. the following material test results as VDOT does not perform these tests:~~*

*Silt Fence – ultraviolet stability*

*Riprap Bedding – apparent opening size, ultraviolet stability, puncture strength*

*Drainage Fabric – apparent opening size*

*Subgrade Stabilization Fabric – apparent opening size, tear strength, puncture strength*

*Embankment Stabilization Fabric – apparent opening size, tear strength, puncture strength*

*In addition, for silt fence geotextile, the Supplier shall be responsible for having each lot of material it stocks, tested for filtering efficiency, flow rate, and grab strength. These results shall be from a Geosynthetic Accreditation Institute (GAI)-accredited laboratory, which in addition is specifically certified by GAI on tests ASTM D5141 (Flow Rate and Filtering Efficiency) and D4632 (Grab Strength). Manufacturer test results on its own lots shall not be used; Supplier lots shall be a maximum of 250,000 square feet as described below.*

*~~This~~ These certifications ~~should~~ shall be presented to the VDOT Industrial Inspector before sampling and testing of the material for approval. The VDOT Materials QA Section ~~industrial inspector~~ will maintain the documentation and will not place state seals, stamps, or decals on materials that do not have the appropriate documentation.*

*A visual inspection ~~should~~ shall be made of the ~~stockpile~~ Supplier's lot of geotextile to see that the ~~fabric~~ geotextile is uniform in composition, packaging and free of obvious defects resulting from shipment or storage. All rolls ~~should~~ shall have roll and style numbers as identifiers. Rolls not meeting visual inspection requirements shall be removed from the lot.*

*The ~~fabric producer or provider (consignee)~~ Supplier ~~should~~ shall have a shipping document containing all roll numbers for the materials being evaluated. A copy of this shipping document and the manufacturer's certifications ~~regarding ultraviolet ray inhibitors, stabilizers, and or burst strength~~ ~~should~~ of material test results described above shall be given to the Industrial Inspector and a lot number assigned to this grouping of rolls. The Industrial Inspector ~~should~~ shall label these shipping document sheets with the assigned lot numbers and retain them as part of the material's ~~his~~ permanent documentation. A sample of the ~~fabric~~ geotextile, at least 10 linear feet (~~5 meters~~) and full width of the roll is then taken at random by the Industrial Inspector. Pertinent information on the ~~fabric~~ geotextile is then recorded on a TL-10 and is submitted with the sample to the VDOT Central Office Materials Division for testing. Lot size shall be no greater than 250,000 square feet (~~25,000~~*

~~square meters) per sample. Two or more samples should be taken if quantity of material exceeds this criteria as outlined and a separate TL-10 written for each sample. The number of samples collected shall be in accordance with Table 3 of ASTM D4354, Standard Practice for Sampling of Geosynthetics for Testing. (This is one (1) sample for up to 200 rolls, two (2) samples for 201 to 500 rolls, three (3) samples for 501 to 1,000 rolls, and four (4) samples for 1001 or more rolls.) A separate sample shall be taken for each lot and a separate TL-10 written for each sample.~~

Acceptable lots of material, *those that meet the VDOT specification requirements*, shall be sealed, stamped, or decal labeled by the Industrial Inspector.

~~Failing~~ Lots of material may be retested once, if requested by the Supplier. Sampling for retests ~~should~~ shall be done in accordance with ASTM ~~D4354~~ D4759, *Standard Practice for Determining the Specification Conformance of Geosynthetics*. ~~(The number of rolls to be sampled and tested shall be the cube root of the total number of rolls in the lot.)~~ This shall be interpreted to mean the same number of samples as initially collected per lot shall be again collected, and that the average of the original and resampled results must meet the VDOT specification requirements. Otherwise the lot shall be considered failing. For silt fence, in the event the Supplier results pass and the VDOT results fail for filtering efficiency, flow rate, or grab strength, the cause of the difference shall be investigated and a determination made by the VDOT Central Office Soils Lab Program Manager as to the adequacy of the material.

The Industrial Inspector shall notify Suppliers of failing lots. The Suppliers shall then be required to remove that material from consideration for use on VDOT state projects ~~or state purchases~~.

The Industrial Inspector shall issue a TL-109 when geotextiles are being shipped to VDOT state projects, *or for material from Suppliers participating in the VDOT Materials Quality Assurance Program, the material paperwork shall be stamped with the certification stamp*. The Industrial Inspector shall issue a Physical Release when geotextiles are sold or transferred to subconsignees or other providers contracting to ~~the state~~ VDOT. To facilitate this documentation, the ~~distributor~~ ~~should~~ Supplier shall notify the Industrial Inspector of shipment of material to other ~~distributors~~ Suppliers in regions of the state where the material may ultimately be purchased by the Department VDOT.

No material shall be used on a ~~state~~ VDOT project if the material does not carry the state seal, stamp, or a decal of approval. The Industrial Inspector shall be contacted in the event that there is no evidence of testing and approval *on geotextiles at the project*.

No special packaging is required. Samples shall be marked, in accordance with Sec. 203 of *this MOI*, using Form TL-10, as outlined in Sec. 800 of *this MOI*. Length and width measurements as well as lot number, manufacturer, brand name and style shall be shown on the TL-10. Laboratory tests of ~~filter cloth fabric geotextiles will~~ shall be reported on Form TL-47, as outlined in Sec. 800.

**SECTION 205 SUMMARY OF MINIMUM ACCEPTANCE SAMPLING REQUIREMENTS**

Under **Section 205**, the table of Minimum Acceptance Sampling Requirements, Item 20

(f) <del>Filter Cloth-Fabric</del> <i>Geotextiles...</i>		One piece 10 ft. (3 m) x full width submitted to VDOT Central Office Laboratory, together with <del>Manufacturer's certification ultraviolet ray inhibitors and stabilizers, and burst strength, where applicable</del> <i>required</i> <del>Manufacturer's and Supplier's certifications</del>	At <del>source or job site</del> <i>Supplier.</i>	No packaging necessary.	(f) <del>Filter Cloth-Fabric</del> <i>Geotextiles</i>
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**Sec. 207.02 Materials for General or Routine Consideration**

(21) ~~Filter Cloth, Fabric, Silt Fence and Other~~ Geotextiles. (Up to 3 rolls of material may be accepted on Contractor's certification that materials were tested for a previous project.)

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| <p>cy: Commissioner<br/>         Chief Engineer<br/>         Chief of Operations<br/>         Division Administrators<br/>         Residency Administrators<br/>         District Materials Engineers<br/>         District Construction Engineers<br/>         District Maintenance Engineers<br/>         Areas Construction Engineers<br/>         Virginia Asphalt Association</p> | <p>Virginia Transportation Research Council<br/>         Virginia Ready-Mixed Concrete Association<br/>         Precast Concrete Association of Virginia<br/>         Virginia Transportation Construction Alliance<br/>         Virginia Dept. of Minority Business Enterprise<br/>         Federal Highway Administration<br/>         American Concrete Paving Association<br/>             NE Chapter, Southern Region<br/>         Old Dominion Highway Contractors Association</p> |
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