

Origination Form

Specifications

Name:	Melissa Hollis	Specification Number:	145-3, 145-4
Email:	Melissa.Hollis@dot.state.fl.us	Associated Specs:	None
Date:	2024-06-17T15:31:53Z	Verified:	VERIFIED

Summary:

145-3: APL/BABA formatting updates 145-4: Updated submittal requirements, to be consistent with other geosynthetic materials.

Justification:

APL/BABA changes are to help ensure compliance with Federal rules. Updated submittal requirements are to be consistent for all geosynthetic materials, to ensure correct materials for the intended application.

Do the changes affect other types of specifications?

Neither

List Specifications Affected:

Other Affected Documents/Offices	Contacted	Yes/No
Other Standard Plans		No
Florida Design Manual		No
Structures Manual		No
Basis of Estimates Manual		No
Approved Product List	Karen Byram	Yes
Construction Office		No
Maintenance Office		No
Materials Manual		No
Traffic Engineering Manual		No

Are changes in line with promoting and making progress on improving safety, enhancing mobility, inspiring innovation, and fostering talent; explain how?

APL/BABA changes are to help ensure compliance with Federal rules. Submittal requirement update is to be consistent across all geosynthetic materials, to ensure the correct materials for the intended application.

What financial impact does the change have; project costs, pay item structure, or consultant fees?

None

What impact does the change have on production or construction schedules?

None

How does this change improve efficiency or quality?

The submittal requirement will help to ensure that the correct geotextiles are installed for the intended application.

Which FDOT offices does the change impact?

Product Evaluation

What is the impact to districts with this change?

None

Does the change shift risk and to who?

None

Provide summary and resolution of any outstanding comments from the districts or industry.

Comments and Responses are available on the Track the Status of Revisions hyperlink located on the Specifications landing page: <https://www.fdot.gov/programmanagement/Specs.shtm>

What is the communication plan?

Through the established specification revision process (e.g., Internal and Industry Review)

What is the schedule for implementation?

The Standard Specifications eBook and Workbook are effective July 1st every year.

**GEOSYNTHETIC REINFORCEMENT
(REV 6-17-24)**

ARTICLE 145-3 is deleted and the following substituted:

145-3 Materials.

Meet the following requirements:

Geosynthetic Material*Section 985

*Use products listed on the Department’s APL.

145-3.1 Geosynthetic Materials: ~~Use geosynthetic materials meeting the requirements of Section 985 and listed on the Approved Product List (APL).~~ Ensure the geosynthetic materials received at the job site are in unopened shipping packages and the packages are clearly labeled with the manufacturer’s name, product name, style number, roll dimension and LOT number, otherwise, the Engineer will reject the material. Store geosynthetic materials in accordance with the manufacturer’s instructions ensuring to protect the geosynthetic material from physical damage, debris, and temperatures greater than 140° F. Prevent mud, fluid concrete, asphalt, or other deleterious materials from coming in contact with the geosynthetic materials that could impact the performance of the geosynthetic material. Replace geosynthetic materials with defects, tears, punctures, flaws, deterioration, or other damage at no additional cost to the Department.

145-3.2 Geosynthetic Reinforced Soil Slopes:

145-3.2.1 Backfill Materials: Use only free draining backfill material in the reinforced fill volume as shown in the Plans meeting the following gradation limits as determined in accordance with AASHTO T 27 and FM 1-T011:

Table 145-1	
Sieve Size	Percent Passing
3-1/2 inches	100
3/4 inch	70 to 100
No. 4	30 to 100
No. 40	15 to 100
No. 100	5 to 65
No. 200	0 to 15

Do not use backfill material containing more than an average of 2.0% by weight of organic material, as determined by FM 1-T267 and by averaging the test results for three randomly selected, representative samples from each stratum or stockpile of a particular material. Consider the stratum or stockpile unsuitable for construction of the reinforced fill volume if an individual test value exceeds 3.0%.

Use backfill material with a maximum plasticity index of 6 as determined by AASHTO T 90, and a maximum liquid limit of 15 as determined by AASHTO T 89. Use backfill material with a pH between 5.0 and 10.0 as determined by FM 5-550. For polyester geosynthetic reinforcement, use backfill material with a pH between 5.0 and 9.0. Do not use soil cement or lime stabilized backfill unless approved by the Engineer.

145-3.2.2 Slope Face Treatment: For reinforced soil slopes, provide slope face material, if applicable, as shown in the Plans and listed on the APL.

145-3.3 Geosynthetic Reinforced Foundations Over Soft Soils: Use backfill material meeting the requirements of Section 120, all Contract Documents, and any other applicable specification requirements. Meet the pH criteria specified in 145-3.2.1 as determined by FM 5-550.

145-3.4 Geosynthetic Reinforced Embankment: Use backfill material meeting the requirements of Section 120 for Embankment, Section 160 for Stabilization, Section 200 for Rock Base, and Section 204 for Graded Aggregate Base, all Contract Documents, and any other applicable specification requirements. Meet the pH criteria specified in 145-3.2.1 as determined by FM 5-550.

SUBARTICLE 145-4.1 is deleted and the following substituted:

145-4 Construction Requirements.

145-4.1 General: At least fourteen days prior to installation of geosynthetic materials, submit the product sample and certification in accordance with 145-5. ~~Obtain from the geosynthetic supplier, technical instructions, guidance in preconstruction activities, and on-site technical assistance during construction. Submit a copy of any instructions provided by the supplier to the Engineer prior to beginning installation.~~ Install in accordance with Manufacturer's Instructions.

ARTICLE 145-5 is deleted and the following substituted:

145-5 Certification.

For geosynthetic materials, submit to the Engineer ~~the product label with the manufacturer's name, product name, style number, roll dimension and LOT number at least fourteen days prior to placement~~ a certification from the manufacturer confirming that the material is appropriate for the intended use. The manufacturer's certification shall be attested to within the past one year by a person having legal authority to bind the manufacturing company, and must include the project number, APL product number, LOT number, and product name.

_____ In addition, provide two 8-inch by 10-inch samples of geosynthetic materials for product identification to the Engineer. The acceptance of the geosynthetic material is subject to the approval of the State Materials Office (SMO).

For backfill materials, submit to the Engineer a signed and sealed certification by a Professional Engineer registered in the State of Florida, that the pH meets the requirements of 145-3.