



*Florida Department of Transportation*

RON DESANTIS  
GOVERNOR

605 Suwannee Street  
Tallahassee, FL 32399-0450

KEVIN J. THIBAUT, P.E.  
SECRETARY

January 7, 2021

Khoa Nguyen  
Director, Office of Technical Services  
Federal Highway Administration  
3500 Financial Plaza, Suite 400  
Tallahassee, Florida 32312

Re: State Specifications Office  
Section: **145**  
Proposed Specification: **1450600 Geosynthetic Reinforcement.**

Dear Mr. Nguyen:

We are submitting, for your approval, two copies of the above referenced Supplemental Specification.

The changes are proposed by Dino Jameson from the State Materials Office to include updating the density log book on the Department's database.

Please review and transmit your comments, if any, within two weeks. Comments should be sent via email to [daniel.strickland@dot.state.fl.us](mailto:daniel.strickland@dot.state.fl.us).

If you have any questions relating to this specification change, please call me at 414-4130.

Sincerely,

Signature on File

Daniel Strickland, P.E.  
State Specifications Engineer

DS/vc

Attachment

cc: Florida Transportation Builders' Assoc.  
State Construction Engineer

**GEOSYNTHETIC REINFORCEMENT  
(REV 11-06-20)**

ARTICLE 145-6 is deleted and the following substituted:

**145-6 Acceptance Program.**

**145-6.1 General Requirements:** Meet the requirements of 120-10 except delete the requirements of 120-10.1.4.1, 120-10.1.6, ~~and~~ 120-10.2 and 120-10.3.

**145-6.2 Maximum Density Determination:** Determine the maximum QC density in accordance with FM 1-T180, ~~Method D~~. When compacting A-3 or A-2-4 materials to meet the alternate acceptance criteria in 145-6.3.1.1, Ddetermine the maximum density in accordance with ~~AASHTO FM 1-T099, Method C~~. Perform gradation tests on the sample collected in accordance with AASHTO T27 and FM 1-T011.

**145-6.3 Density Testing Requirements:** Ensure compliance with the requirements of nuclear density testing in accordance with FM 1-T238. Determine the in-place moisture content for each density test. Use FM 5-507 (Determination of Moisture Content by Means of a Calcium Carbide Gas Pressure Moisture Tester), or FM 5-535 (Laboratory Determination of Moisture Content by Granular Soils by Use of a Microwave Oven) for moisture determination.

**145-6.3.1 Acceptance Criteria:** For select backfill, obtain a density in each LOT of at least 95% of the maximum density as determined by ~~AASHTO~~ FM 1-T180.

**145-6.3.1.1 Optional Acceptance Criteria for A-3 and A-2-4 Materials:** Obtain a minimum density of 100% of the maximum dry density as determined by ~~AASHTO~~ FM 1-T099. The combined width from both reinforced fill volume and retained fill material may be considered the same LOT if both volumes comprise the same material and both are compacted with the same procedure, lift thickness, equipment and compacting effort.

**145-6.4 Frequency:** Conduct sampling and testing at a minimum frequency listed in the table below. The Engineer will perform verification sampling and tests at a minimum frequency listed in the table below.

| Table 145-2                             |                         |                         |
|---|-------------------------|-------------------------|
| Test Name                               | Quality Control (QC)    | Verification            |
| Maximum Density                         | One per soil type       | One per soil type       |
| Density                                 | One per LOT             | One per four LOTs       |
| Soil Classification, Gradation, LL & PI | One per Maximum Density | One per Maximum Density |
| Organic Content                         | One per soil type       | One per soil type       |

In addition, test for pH at a minimum frequency of one test per soil type at point of placement according to 145-3. The Engineer will collect enough material to split and create two separate samples and retain one for resolution at point of placement until LOTs represented by the samples are accepted.

**145-6.5 Test Selection and Reporting:** Determine test locations including stations and offsets, using the random number generator approved by the Engineer. Do not use note-pads or work-sheets to record data for later transfer into the ~~density log book~~ Earthwork Records System

(ERS) section of the Department's database. Notify the Engineer upon successful completion of QC testing on each LOT.

SUBARTICLE 145-7.1 is deleted and the following substituted:

**145-7.1 Maximum Density Determination:** The Engineer will collect enough material to split and create two separate samples and retain one for resolution until LOTs represented by the samples are accepted. The Engineer will meet the requirements of 120-10.4.1 except replace ~~AASHTO FM 1-T099, Method C~~ with FM 1-T180, ~~Method D~~. If the Contractor selects the optional acceptance criteria, the Engineer will verify the QC results of ~~AASHTO FM 1-T099, Method C~~ in accordance with 120-10.4.1.