Florida Department of Transportation

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GOVERNOR

605 Suwannee Street
Tallahassee, FL 32399-0450

JIM BOXOLD
SECRETARY

December 23, 2015

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: **1450200 Geosynthetic Reinforcement.**

Dear Mr. Nguyen:

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

The changes are proposed by Amy Tootle of the State Construction Office to require all construction-related documentation to be submitted by electronic means for consistency with the State Construction Office e-Construction initiative.

Please review and transmit your comments, if any, within two weeks. Comments should be sent via email to daniel.scheer@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 Scheer, P.E.
State Specifications Engineer

DS/dt
Attachment
cc: Florida Transportation Builders' Assoc.
State Construction Engineer

GEOSYNTHETIC REINFORCEMENT
(REV 10-14-15)

ARTICLE 145-2 is deleted and the following substituted:

145-2 Responsibility.

Construct the geosynthetic reinforced feature, including materials, method, and installation based on information provided in the Contract Documents and the geosynthetic supplier's recommendations. Submit shop drawings in accordance with Section 5 showing the details and distribution of the selected geosynthetics that meet the design shown in the Plans. Alternate designs optimizing the selected geosynthetic materials may be submitted.

For alternate designs, ~~provide~~ submit complete design calculations and details which include: plan view, elevation view, and details in accordance with the Contract Documents. These shall show the extent, number of layers of geosynthetic reinforcement, minimum properties of each geosynthetic reinforcement layer, vertical spacing of geosynthetic reinforcement, orientation of geosynthetic facing details, details at special structures or obstructions, typical construction sequence, and top and bottom elevations of the geosynthetic reinforcement. Calculations shall be submitted to substantiate the design meets the requirements of Chapter 31 of the PPM and in accordance with the Contract Plans. As a minimum these shall clearly show the derivation of reinforcement requirements (i.e., type, spacing, length, etc.) and determination of all design parameters and factors. All plans and calculations are to be signed and sealed by a Professional Engineer registered in the State of Florida.

SUB-ARTICLE 145-3.2 is deleted and the following substituted:

145-3.2 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 T27 and FM 1-T011:

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 with a maximum plasticity index of six as determined by AASHTO T90, and a maximum liquid limit of 15 as determined by AASHTO T89. Use backfill

materials with a pH between 4.5 and 10.0 as determined by FM 5-550. When metal pipes or other metal items are embedded in the backfill, use backfill with a pH between 6.0 and 10.0. Do not use soil cement or lime stabilized backfill unless approved by the Engineer.

Have the backfill material tested for every soil type for pH by a Department approved independent testing laboratory prior to placement. ~~Provide certification~~ Submit a signed and sealed certification by a Professional ~~to the~~ Engineer registered in the State of Florida, that the results have met the requirements of this Section. ~~and are signed and sealed by a Professional Engineer, registered in the State of Florida~~.

ARTICLE 145-5 is deleted and the following substituted:

145-5 Certification.

~~Furnish~~ Submit certification from the supplier, at least ten days prior to placement, that the products used are the same products listed on the APL, are in accordance with the project design requirements and is recommended by the supplier for use at this location.

Acceptance of furnished material will be based on the supplier's certification and visual inspection by the Engineer.

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