Florida Department of Transportation

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605 Suwannee Street
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JIM BOXOLD
SECRETARY

August 24, 2015

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

Re: State Specifications Office
Section **443**
Proposed Specification: **4430100 French Drains.**

Dear Mr. Nguyen:

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

The changes are proposed by Chase Knight of the State Materials Office (SMO) to include recently approved pipe materials.

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

FRENCH DRAINS.
(REV 68-24-15)

ARTICLE 443-1is deleted and the following substituted:

443-1 Description.

Construct Ffrench Ddrains, utilizing one of the authorized types of pipe, with coarse aggregate, or ballast rock when specified, and filter fabric.

ARTICLE 443-2 is deleted and the following substituted:

443-2 Materials.

443-2.1 Pipe: Unless a particular type is specified in the Plans, pipe furnished may be any of the following types:

(1.) Concrete Pipe (Bell & Spigot): Slotted or perforated concrete pipe may be used. Meet the requirements of Section 449 for concrete pipe. Do not use gaskets. Fully insert the spigot in the bell, and bring home. Conform to Design Standards, Index No. 285 for slotted pipe. Use perforated pipe having perforations equally located 360 degrees around the pipe. Use pipe having not less than 30 round perforations, 3/8 inch each, per square foot of inside pipe surface. Extend perforations to within 6 inches of the bell or spigot area. The Engineer will permit other perforations not less than 5/16 inch nor more than 3/8 inch in the least dimension if they provide an opening area not less than 3.31 in^2/ft^2 of pipe surface.

(2.) Corrugated Aluminum Alloy Culvert Perforated Pipe: Meet the requirements of Section 945. Use perforated pipe having perforations equally located 360 degrees around the pipe. Locate perforations either on the inside crests or on the neutral axis of all corrugations except that perforations are not required within 4 inches of each end of each length of pipe or in a corrugation where seams are located.

Provide pipe having not less than 30 round perforations, 3/8 inch each, per square foot of pipe surface. The Engineer will permit other perforations not less than 5/16 inch nor more than 3/8 inch in the least dimension if they provide an opening area not less than 3.31 in^2/ft^2 of pipe surface.

(3.) Corrugated Steel Perforated Pipe: Meet the requirements of Section 943. Space the perforations and meet the requirements as specified in (2) above.

(4.) Bituminous Coated Corrugated Steel Perforated Pipe: Meet the requirements of Section 943. Space the perforations and meet the requirements as specified in (2) above. Place the perforations prior to the bituminous coating. The Engineer will accept the minimum opening of not less than 3.31 in^2/ft^2 of pipe if 50% of the opening area is maintained after coating.

(5.) Corrugated High-Density Polyethylene (HDPE) Pipe: Meet the requirements of 948-2.3. Space the perforations and meet the requirements as specified in (2) above.

(6.) Polyvinyl Chloride (PVC) Pipe: Meet the requirements of 948-1.7. Space the perforations and meet the requirements as specified in (2) above.

7. Corrugated Polypropylene Pipe: Meet the requirements of Section 948. Space the perforations and meet the requirements as specified in (2) above.

443-2.2 Coarse Aggregate: Meet the requirements of 901-1.4 for No. 4 stone.

443-2.3 Select Fill: Use select fill meeting the requirements of ~~either~~ Section 911~~, 913, 913A or 915~~.

FRENCH DRAINS.
(REV 8-24-15)

ARTICLE 443-1is deleted and the following substituted:

443-1 Description.

Construct french drains, utilizing one of the authorized types of pipe, with coarse aggregate, or ballast rock when specified, and filter fabric.

ARTICLE 443-2 is deleted and the following substituted:

443-2 Materials.

443-2.1 Pipe: Unless a particular type is specified in the Plans, pipe furnished may be any of the following types:

1. Concrete Pipe (Bell & Spigot): Slotted or perforated concrete pipe may be used. Meet the requirements of Section 449 for concrete pipe. Do not use gaskets. Fully insert the spigot in the bell, and bring home. Conform to Design Standards, Index No. 285 for slotted pipe. Use perforated pipe having perforations equally located 360 degrees around the pipe. Use pipe having not less than 30 round perforations, 3/8 inch each, per square foot of inside pipe surface. Extend perforations to within 6 inches of the bell or spigot area. The Engineer will permit other perforations not less than 5/16 inch nor more than 3/8 inch in the least dimension if they provide an opening area not less than 3.31 in^2/ft^2 of pipe surface.

2. Corrugated Aluminum Alloy Culvert Perforated Pipe: Meet the requirements of Section 945. Use perforated pipe having perforations equally located 360 degrees around the pipe. Locate perforations either on the inside crests or on the neutral axis of all corrugations except that perforations are not required within 4 inches of each end of each length of pipe or in a corrugation where seams are located.

Provide pipe having not less than 30 round perforations, 3/8 inch each, per square foot of pipe surface. The Engineer will permit other perforations not less than 5/16 inch nor more than 3/8 inch in the least dimension if they provide an opening area not less than 3.31 in^2/ft^2 of pipe surface.

3. Corrugated Steel Perforated Pipe: Meet the requirements of Section 943. Space the perforations and meet the requirements as specified in (2) above.

4. Bituminous Coated Corrugated Steel Perforated Pipe: Meet the requirements of Section 943. Space the perforations and meet the requirements as specified in (2) above. Place the perforations prior to the bituminous coating. The Engineer will accept the minimum opening of not less than 3.31 in^2/ft^2 of pipe if 50% of the opening area is maintained after coating.

5. Corrugated High-Density Polyethylene (HDPE) Pipe: Meet the requirements of 948. Space the perforations and meet the requirements as specified in (2) above.

6. Polyvinyl Chloride (PVC) Pipe: Meet the requirements of 948. Space the perforations and meet the requirements as specified in (2) above.

7. Corrugated Polypropylene Pipe: Meet the requirements of Section 948. Space the perforations and meet the requirements as specified in (2) above.

443-2.2 Coarse Aggregate: Meet the requirements of 901-1.4 for No. 4 stone.

443-2.3 Select Fill: Use select fill meeting the requirements of Section 911.