EXPECTED IMPLEMENTATION JULY 2016

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471 FIBER REINFORCED POLYMER FENDER SYSTEMS.
(REV 10-14-15) (FA 1-11-16) (7-16)

ARTICLE 471-1 is deleted and the following substituted:

471-1 Description.

Construct fiber reinforced polymer (FRP) fender systems using components in accordance with this Section and the Plans.

Submit a design for the FRP fender system in accordance with 471-4.2.

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ARTICLE 471-3 is deleted and the following substituted:

471-3 Product Acceptance.

Obtain fender system components from a producer that is currently on the list of Producers with Accepted Quality Control (QC) Program for Fiber Reinforced Polymer Composites. Producers seeking inclusion on the list shall meet the requirements of 105-3.

Submit to the Engineer the manufacturer's certification in accordance with Section 6 that the fender system components meet the material requirements of Section 973.

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SUBARTICLE 471-4.2 is deleted and the following substituted:

471-4.2 Design Calculations: Design fender piling, wales and connections in accordance with the latest edition of the FDOT Structures Design Guidelines (SDG) and the FDOT Structures Detailing Manual based on the desired energy capacity rating. Design calculations may be either by hand or by a computer program with hand calculations verifying the program output.

Submit the following design information:

1. Written certification that the fender system meets the requirements of this Section.

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2. A report from an independent lab verifying the flexural properties of the piling as derived from ASTM D6109 using characteristic values in accordance with ASTM D7290 with the following modifications:

   a. Supports shall be located to provide a minimum span to depth ratio of 16:1 and a maximum span to depth ration of 20:1.

   b. Three-point bending tests are acceptable.

   c. Test a minimum of 10 samples.

3. Detailed material specifications showing material type, quality, certifications, acceptance and rejection criteria and placement procedures.

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4. Other information pertinent to the design and performance of the fender system as necessary.