

## ORIGINATION FORM

**THE INFORMATION BELOW IS TO BE PROVIDED BY THE ORIGINATOR**

Modify Specification 455.  
Section/File number

New Section \_\_\_\_\_.  
Section number

**Subject:** Bridge Fender Systems

**Origination date:** 3-31-11

**Originator:** Gevin McDaniel  
**Office/Phone:** Structures Design/ (850) 414-4284  
**Email address/** gevin.mcdaniel@dot.state.fl.us  
**Userid:** st986gm

**Problem statement:** Composite Piles (CP) are being removed from Specification Section 973; therefore, this specification will only cover the wales and dimensional lumber utilized in bridge fender systems. The piling will be handled by performance specification within Section 471, which is currently the construction specification for bridge fender systems. Reference to “Fiberglass Structurally Reinforced Composite Piles” is being changed to “Polymeric Piles” in Section 455.

**Information source:** Jerry Hocking, Robert Robertson, Andre Pavlov, Charles Boyd

**Background data:** Vendors producing various types of polymeric piling have approached the FDOT in hopes of being placed on the QPL for bridge fender system piling. Since there is no industry standard for polymeric piling and so many possible combinations of materials (fiberglass, plastic, vinylester resin, polyester resin, polyurethane resin, various coatings, various UV inhibitors, etc.) there is no efficient way to write a material specification and accommodate a fair playing field for each vendor. Therefore, the fender system piling will be specified based on the minimum performance criteria.

**Recommended Usage Note:** Use for projects with bridge fender systems



## *Florida Department of Transportation*

**RICK SCOTT**  
GOVERNOR

605 Suwannee Street  
Tallahassee, FL 32399-0450

**OFFICE OF THE**  
SECRETARY

### **M E M O R A N D U M**

**DATE:** April 13, 2011  
**TO:** Specification Review Distribution List  
**FROM:** Rudy Powell, Jr., P.E., State Specifications Engineer  
**SUBJECT:** Proposed Specification: 4550400 Structures Foundations - Piling.

In accordance with Specification Development Procedures, we are sending you a copy of a proposed specification change.

This change was proposed by Gevin McDaniel of the Structures Design Office to rename fiberglass structurally reinforced composite piles to the more general term polymeric piles.

Please share this proposal with others within your responsibility. Review comments are due within four weeks and should be sent to Mail Station 75 or to my attention via e-mail at SP965RP or rudy.powell@dot.state.fl.us. Comments received after **April 27, 2011** may not be considered. Your input is encouraged.

RP/cah  
Attachment

**STRUCTURES FOUNDATIONS - PILING.**  
**(REV 4-7-11)**

ARTICLE 455-4 (Pages 526 -527) is deleted and the following substituted:

**455-4 Classification.**

The Department classifies piling as follows:

- (1) Treated timber piling.
- (2) Prestressed concrete piling.
- (3) Steel piling.
- (4) Test piling.
- (5) Sheet piling.

(a) Concrete sheet piling.

(b) Steel sheet piling.

(6) ~~Fiberglass Structurally Reinforced Composite~~ **Polymeric** Piles (see Section ~~973~~ **471** for ~~material~~ **performance** requirements).

SUBARTICLE 455-11.8 (Page 552) is deleted and the following substituted:

**455-11.8 ~~Fiberglass Structurally Reinforced Composite~~ **Polymeric** Piles:** The quantity of ~~fiberglass structurally reinforced composite~~ **polymeric** piles to be paid will be the length in feet furnished and driven to the authorized lengths, as approved by the Engineer.

SUBARTICLE 455-12.8 (Page 555) is deleted and the following substituted:

**455-12.8 ~~Fiberglass Structurally Reinforced Composite~~ **Polymeric** Piles:** Price and payment will be full compensation for all labor, equipment and materials required to furnish and install the piles to the elevation shown in the plans. No separate payment will be made for pile cut-offs.

SUBARTICLE 455-12.14 (of the Supplemental Specification) is deleted and the following substituted:

**455-12.14 Payment Items:** Payment will be made under:

- |                   |   |
|-------------------|---|
| Item No. 455- 2-  | Treated Timber Piling - per foot.   |
| Item No. 455- 14- | Concrete Sheet Piling - per foot.   |
| Item No. 455- 18- | Protection of Existing Structures - lump sum.   |
| Item No. 455- 34- | Prestressed Concrete Piling - per foot.   |
| Item No. 455- 35- | Steel Piling - per foot.  |
| Item No. 455- 36- | Concrete Cylinder Piling - per foot.  |
| Item No. 455- 37- | <del>Fiberglass Structurally Reinforced Composite</del> <b>Polymeric</b><br>Piles-per foot. |
| Item No. 455-119- | Test Loads- each.   |

Item No. 455-120-	Point Protection - each.
Item No. 455-133-	Steel Sheet Piling - per square foot.
Item No. 455-143-	Test Piles (Prestressed Concrete) - per foot.
Item No. 455-144-	Test Piles (Steel) - per foot.
Item No. 455-145-	Test Piles (Concrete Cylinder) - per foot.

**Estimated fiscal  
impact, if  
implemented:**       None

**Implementation of these changes, if and when approved, will begin with the January  
2012 letting.**