Origination Form

Proposed Revisions to a Standard Plans Index

Originator:	Turley, Joshua	**Index Number:**	455-101
Date:	8/21/2024	**Sheet Number(s):**	1
E-mail:	Joshua.Turley@dot.state.fl.us	**Index Title:**	SQUARE CFRP & SS PRESTRESSED CONCRETE PILES - TYPICAL DETAILS & NOTES

Summary of the changes:

Sheet 1: Added a note to General Note 4 indicating that all the strand diameters are nominal

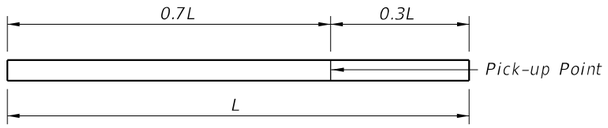
Commentary/Background:

This adds clarification to distinguish between nominal and actual diameters driven by the fact that the strands are fabricated in millimeters not inches.

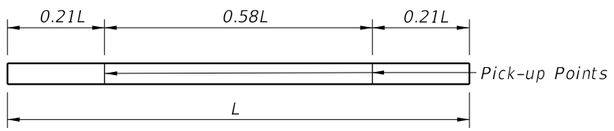
Other Affected Documents/Offices	Person Contacted	Affected (Yes/No)
Other Standard Plans	Joshua Turley	Yes
FDOT Design Manual		No
Standard Specifications		No
Basis of Estimates Manual		No
Approved Product List		No
Construction Office		No
Maintenance Office		No

Implementation

["FY-Standard Plans (Next Release)"]



1-POINT PICK-UP



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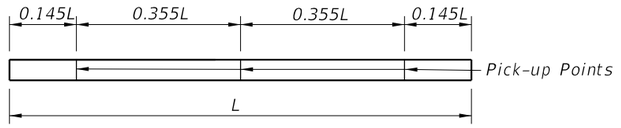
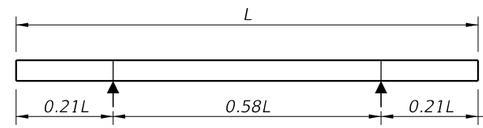
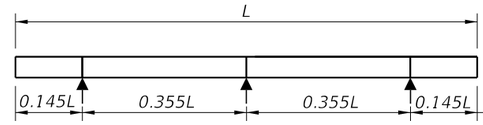


3-POINT PICK-UP

PILE PICK-UP DETAILS



2-POINT SUPPORT



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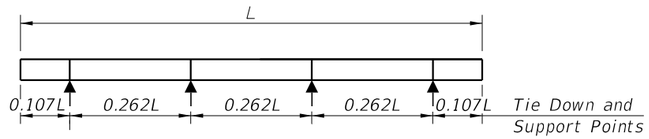


4-POINT SUPPORT

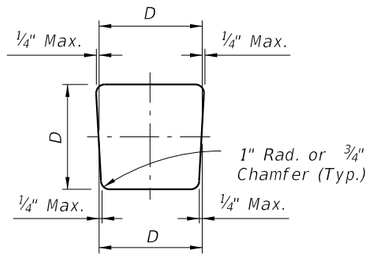
STORAGE AND TRANSPORTATION SUPPORT DETAILS

PRESTRESSED CONCRETE PILE NOTES:

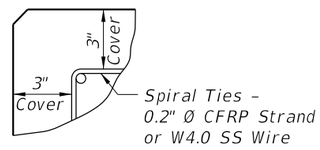
1. Work this Index with the Square Prestressed Concrete Pile Splices (Index 455-102), the Prestressed Concrete Pile Standards (Index 455-112, 455-114, 455-118, 455-124, 455-130, and the Pile Data Table in the Structures Plans.
2. Concrete:
   - A. Piles: Class V
   - B. See "GENERAL NOTES" in the Structures Plans for locations where the use of Highly Reactive Pozzolans is required for options using stainless steel strand and reinforcing.
3. Concrete strength at time of prestress transfer:
   - A. Piles: 4,000 psi minimum.
4. Reinforcing:
   - A. Bars:
     - a. Stainless Steel: Meet the requirements of Specification Section 931 for Type 304, Grade 75.
     - b. Carbon FRP: Meet the requirements of Specification Section 932.
   - B. Prestressing Strands:
     - a. Stainless Steel: Seven-wire HSSS, Grade 240 strand, meeting the requirements of Specification Section 933.
     - b. Carbon FRP: Meet the requirements of Specification Section 933.
5. Spiral Ties:
   - A. Tie each wrap of the spiral strand to a minimum of two corner strands.
   - B. One full turn required for spiral splices.
6. Pile Splices: Fill dowel holes and form the joint between pile sections with a Type AB Epoxy Compound in accordance with Specification Section 926. Use an Epoxy Bonding Compound or an Epoxy Mortar as recommended by the Manufacturer.

ADDED NOTE: c. All Strand diameters are nominal

TABLE OF MAXIMUM PILE PICK-UP AND SUPPORT LENGTHS							
	D = Square Pile Size (inches)					Required Storage and Transportation Detail	Pick-Up Detail
	12	14	18	24	30		
Maximum Pile Length (Feet)	48	52	59	68	87	2, 3, or 4 point	1 Point
	69	75	85	98	124	2, 3, or 4 point	2 Point
	99	107	121	140	178	3 or 4 point	3 Point



TYPICAL PILE SHAPE FOR MOLD FORMS



DETAIL SHOWING TYPICAL COVER

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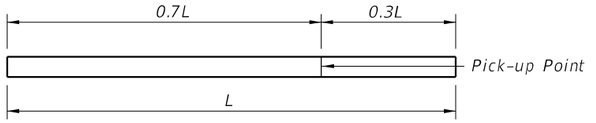
LAST REVISION	REVISION	DESCRIPTION:	FDOT	FY 2024-25 STANDARD PLANS	SQUARE CFRP & SS PRESTRESSED CONCRETE PILES - TYPICAL DETAILS & NOTES	INDEX	SHEET
~~11/01/22~~						455-101	1 of 1



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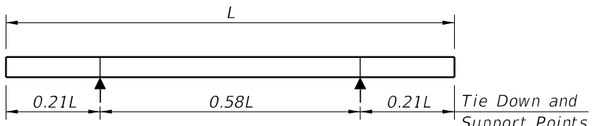
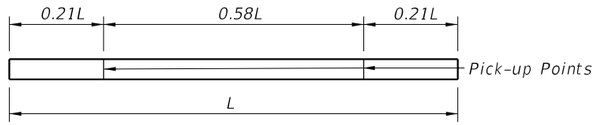


2-POINT SUPPORT



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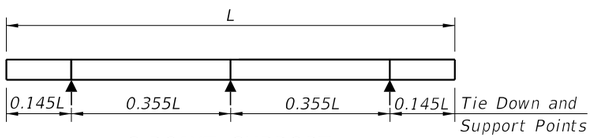

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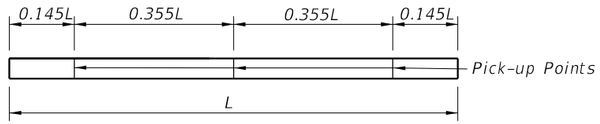

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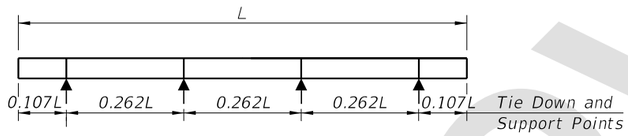
PILE PICK-UP DETAILS



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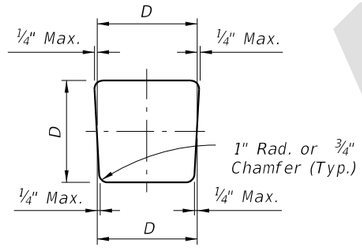

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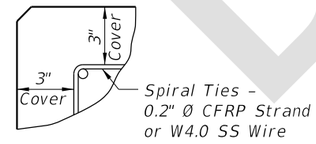

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LAST REVISION	REVISION	DESCRIPTION:				
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