ORIGINATION FORM

Proposed Revisions to a Standard Plans Index

(Please provide all information — Incomplete forms will be returned)

Contact Information:

Date: February 12, 2020

Originator: Cheryl Hudson

Phone: 414-5332

Email: cheryl.hudson@dot.state.fl.us

Standard Plans:

Index Number: 455-054

Sheet Number (s): 1

Index Title: 54" Square Precast/Post-Tensioned Concrete Cylinder Pile

Summary of the changes:

Change Silica Fume, metakaolin or ultra-fine flyash to Highly Reactive Pozzolans

Commentary / Background:

Specification changed to fit silica fume, metakaolin and ultra-fine flyash under Highly Reactive Pozzolans

Other Affected Offices / Documents: (Provide name of person contacted)

Yes	No	
☐	☑	Other Standard Plans –
☐	☑	FDOT Design Manual –
☐	☑	Basis of Estimates Manual –
☐	☑	Standard Specifications –
☐	☑	Approved Product List –
☐	☑	Construction –
☐	☑	Maintenance –

Origination Package Includes:

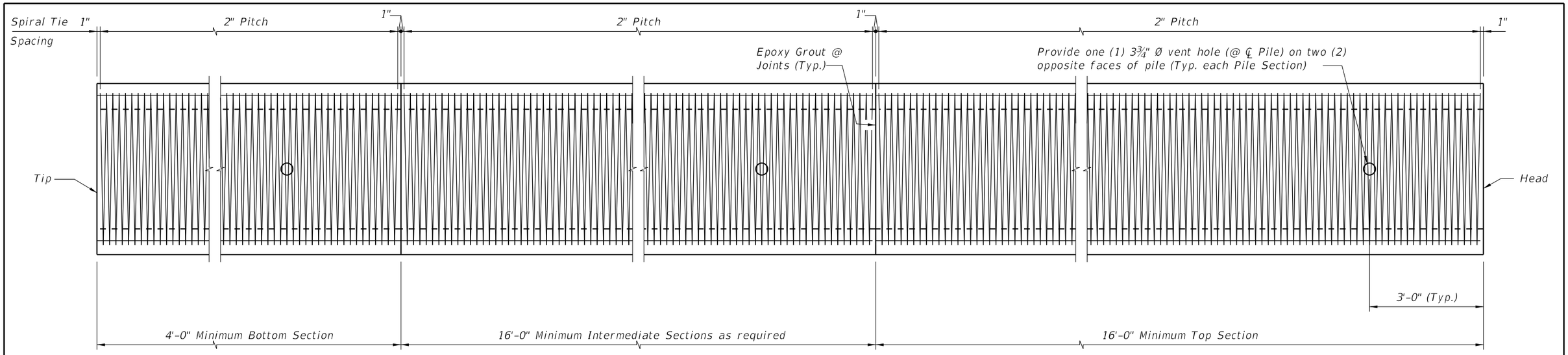
(Email or hand deliver package to Rick Jenkins)

Yes	N/A	
☑	☐	Redline Mark-ups
☐	☑	Proposed Standard Plan Instruction (SPI)
☐	☑	Revised SPI
☐	☑	Other Support Documents

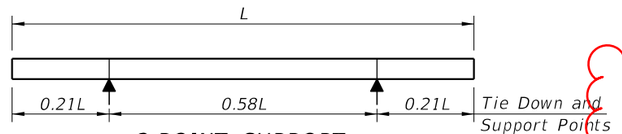
Implementation:

- ☐ Design Bulletin (Interim)
- ☐ DCE Memo
- ☐ Program Mgmt. Bulletin
- ☑ FY-Standard Plans (Next Release)

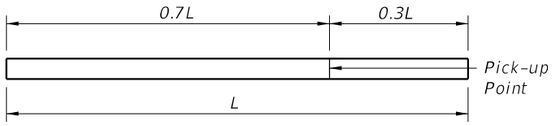
Contact the Roadway Design Office for assistance in completing this form



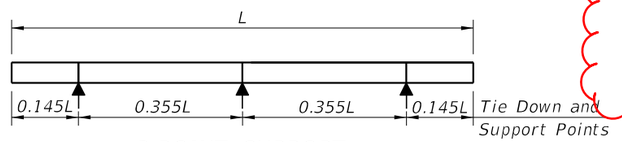
ELEVATION



2-POINT SUPPORT



1-POINT PICK-UP



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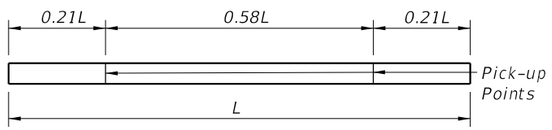
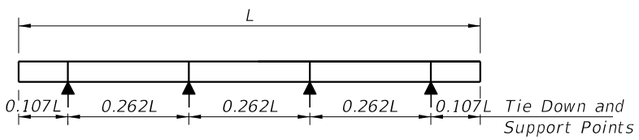


2-POINT PICK-UP



4-POINT SUPPORT

PILE PICK-UP DETAILS

STORAGE AND TRANSPORTATION SUPPORT DETAILS

TABLE OF MAXIMUM PILE PICK-UP AND SUPPORT LENGTHS		
Maximum Pile Length (Feet)	Required Storage and Transportation Detail	Pick-Up Detail
119	2, 3, or 4 point	1 Point
170	2, 3, or 4 point	2 Point

NOTES

1. Work this Index with the Pile Data Table in the Structures Plans.
2. Concrete:
   - A. Piles: Class V (Special).
   - B. Splice: Class IV.
   - C. ~~Silica Fume:~~ See "GENERAL NOTES" in Structures Plans for locations where the use of ~~silica fume, metakaolin or ultra-fine flyash~~ is required.
3. Concrete Strength at time of prestress transfer:
   - A. Piles: 6,000 psi minimum.
4. Carbon-Steel Reinforcing:
   - A. Bars: Meet the requirements of Specification Section 415.
   - B. Prestressing Strands: Meet the requirements of Specification Section 933.
   - C. Tendons: Two seven-wire ½" dia. (Special) Grade 270, low-relaxation strands tensioned to 33.8 kips.
   - D. Protect all carbon-steel strands permanently exposed to the environment and not embedded under final conditions in accordance with Specification Section 450.
   - E. Spiral Ties:
     - a. One half turn is required for carbon-steel spiral splice.
     - b. One full turn is required at the pile head and tip.
5. Pile Splices:
   - A. Epoxy: Type AB Epoxy Compound or Mortar must meet the requirements of Specification Section 926.
     - a. Use a Type AB Epoxy Bonding Compound or Epoxy Mortar, as recommended by the Manufacturer, to form the joint between pile sections
     - b. Use a Type AB Epoxy Bonding Compound as a bonding agent on internal pile surfaces.
   - B. Driving: Resume pile driving after splice concrete reaches a minimum strength of 5,500 psi.
6. Mark piles at the pick-up points to indicate the proper points for attaching handling lines.

Highly Reactive Pozzolans

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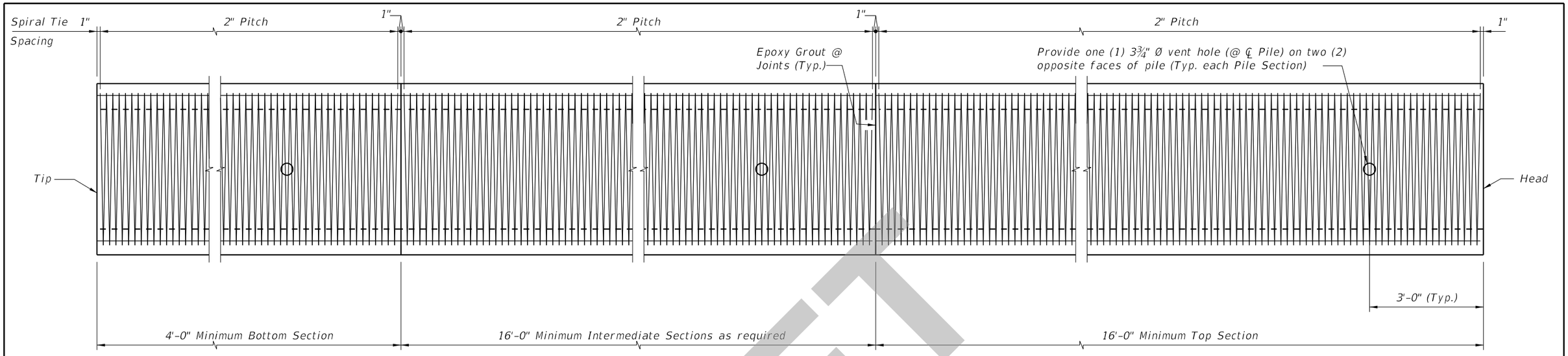

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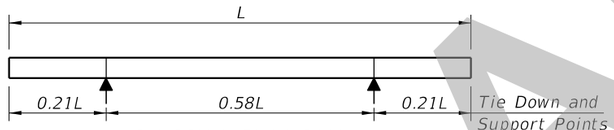

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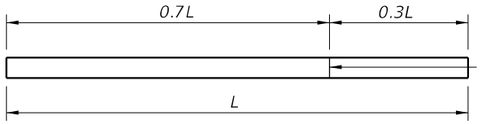

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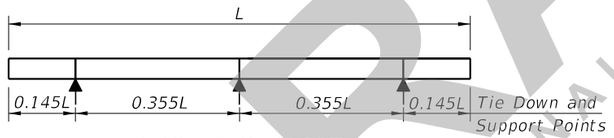

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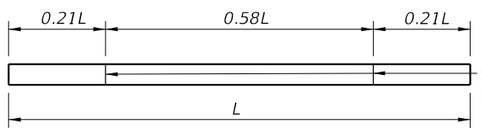

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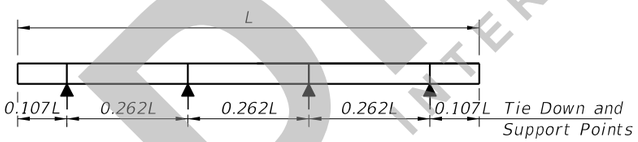
PILE PICK-UP DETAILS



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7/27/2020 3:21:39 PM

LAST REVISION	REVISION	DESCRIPTION:	FDOT	FY 2020-21 STANDARD PLANS	54" PRECAST/POST-TENSIONED CONCRETE CYLINDER PILE	INDEX	SHEET
11/01/16						455-054	1 of 2