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## ORIGINATION FORM

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### 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: 455-154

Sheet Number (s): 1

Index Title: 54" Precast/Post-Tensioned CFRP & SS 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                                  |                             |
|--------------------------|-------------------------------------|-----------------------------|
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Other Standard Plans –      |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | FDOT Design Manual –        |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Basis of Estimates Manual – |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Standard Specifications –   |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Approved Product List –     |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Construction –              |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Maintenance –               |

**Origination Package Includes:**

(Email or hand deliver package to Rick Jenkins)

- | Yes                                 | N/A                                 |  |
|-------------------------------------|-------------------------------------|--|
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | Redline Mark-ups                         |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Proposed Standard Plan Instruction (SPI) |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Revised SPI                              |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Other Support Documents                  |

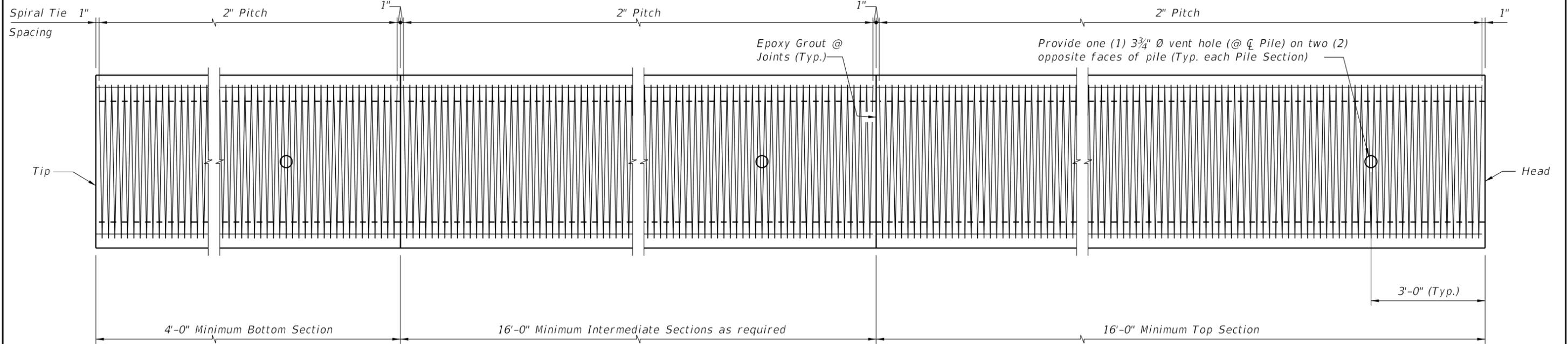
**Implementation:**

- |                                     |                                  |
|-------------------------------------|----------------------------------|
| <input type="checkbox"/>            | Design Bulletin (Interim)        |
| <input type="checkbox"/>            | DCE Memo                         |
| <input type="checkbox"/>            | Program Mgmt. Bulletin           |
| <input checked="" type="checkbox"/> | FY-Standard Plans (Next Release) |

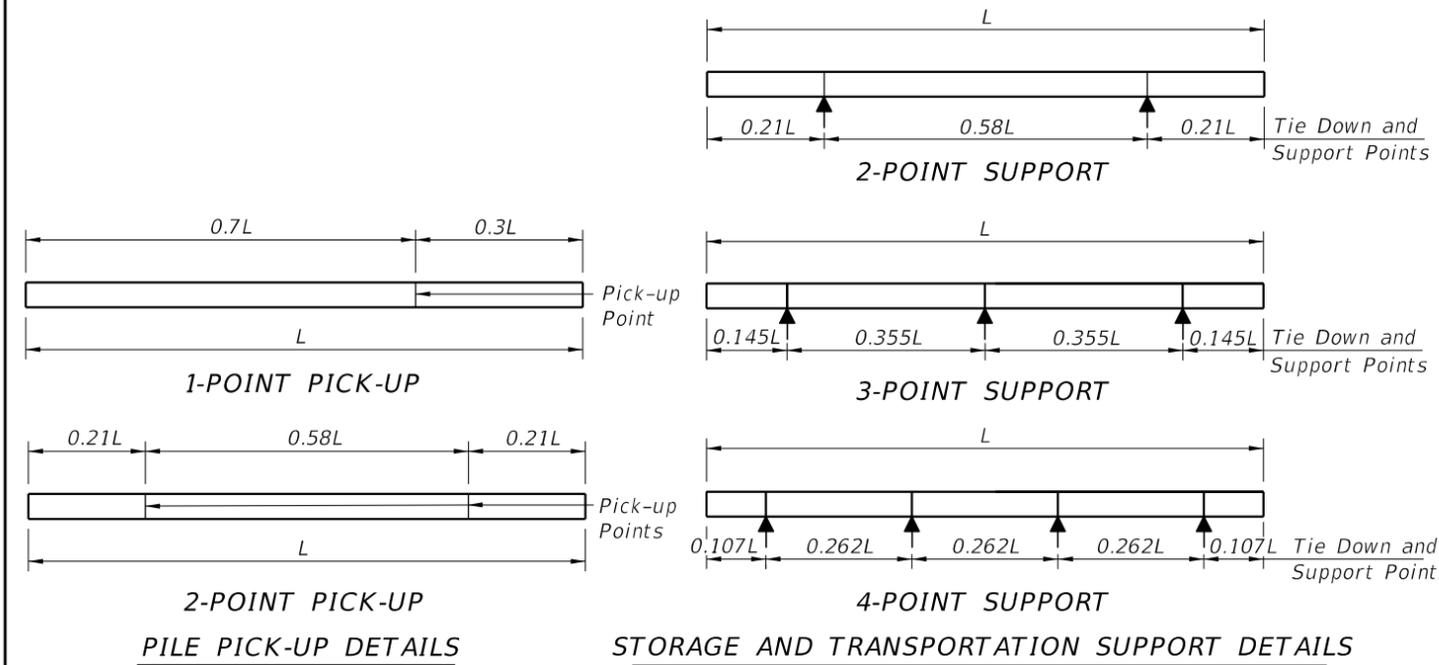
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Contact the Roadway Design Office for assistance in completing this form

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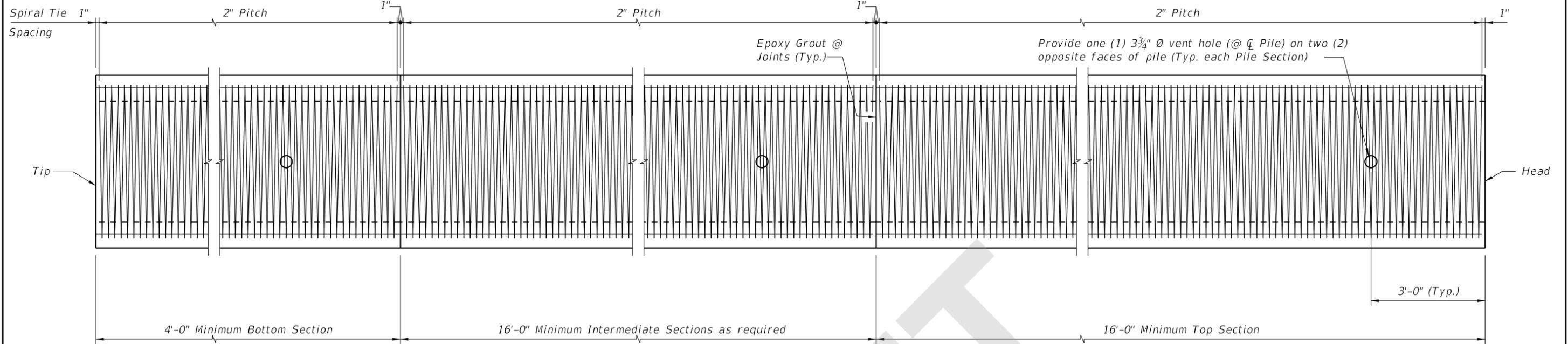
| Maximum Pile Length (Feet) | Required Storage and Transportation Detail | Pick-Up Detail |
|----------------------------|--|----------------|
| 119                        | 2, 3, or 4 point                           | 1 Point        |
| 170                        | 2, 3, or 4 point                           | 2 Point        |

NOTES

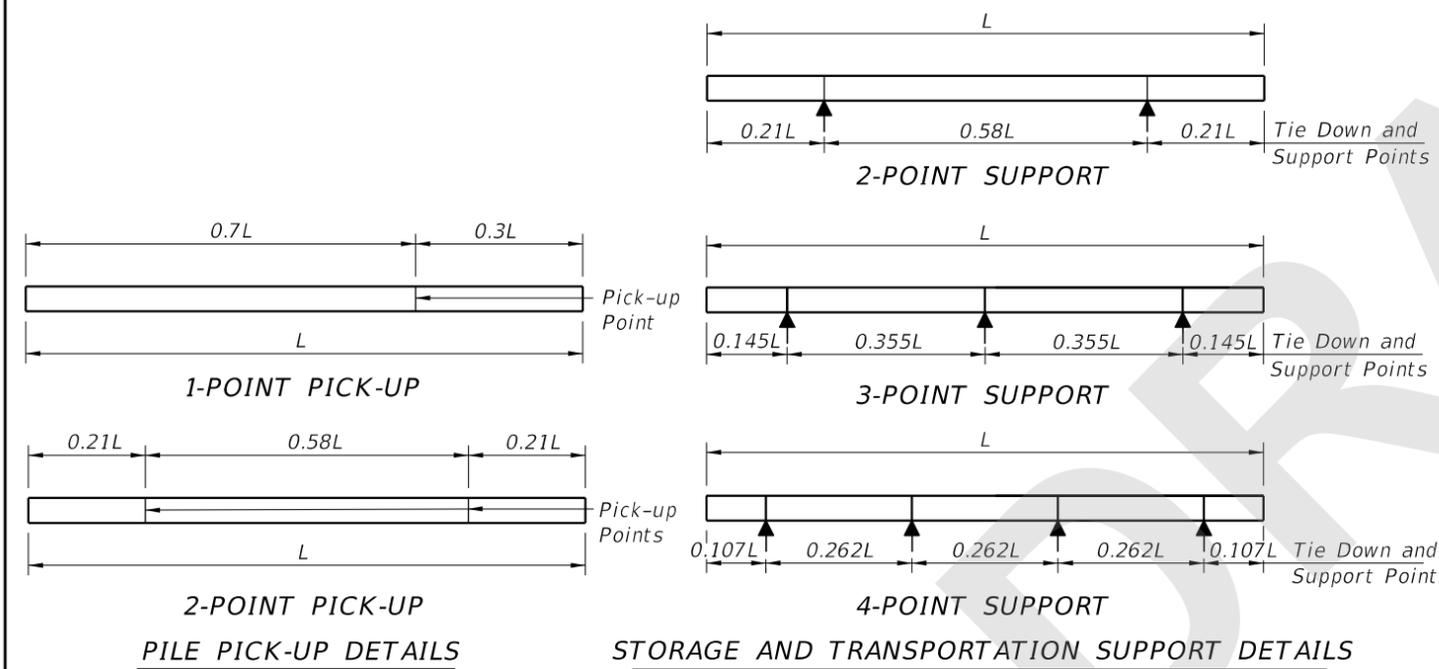
- Work this Index with the Pile Data Table in the Structures Plans.
- Concrete:
  - Piles: Class V (Special)
  - Splice: Class IV
  - ~~Silica Fume: See "GENERAL NOTES" in Structures Plans for locations where the use of silica fume, metakaolin or ultra-fine flyash is required for options using stainless steel strand and reinforcing.~~ **Highly Reactive Pozzolans**
- Concrete Strength at time of prestress transfer:
  - Piles: 6,000 psi minimum.
- Reinforcing:
  - Bars:
    - Stainless Steel: Meet the requirements of Specification Section 931 for Type 304, Grade 75.
    - Carbon FRP: Meet the requirements of Specification Section 932.
  - Prestressing Strands:
    - Stainless Steel: Seven-wire HSSS, UNS S32205 (Type 2205) or UNS S31803 strand, meeting the requirements of Specification Section 933.
    - Carbon FRP: Meet the requirements of Specification Section 933.
  - Spiral Ties:
    - One half turn is required for carbon steel spiral splice.
    - One full turn is required at the pile head and tip.
- Pile Splices:
  - Epoxy: Type AB Epoxy Compound or Mortar must meet the requirements of Specification Section 926.
    - Use a Type AB Epoxy Bonding Compound or Epoxy Mortar, as recommended by the Manufacturer, to form the joint between pile sections.
    - Use a Type AB Epoxy Bonding Compound as a bonding agent on internal pile surfaces.
  - Driving: Resume pile driving after splice concrete reaches a minimum strength of 5,500 psi.
- Mark piles at the pick-up points to indicate the proper points for attaching handling lines.

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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. See "GENERAL NOTES" in 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: 6,000 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, UNS S32205 (Type 2205) or UNS S31803 strand, meeting the requirements of Specification Section 933.
    - b. Carbon FRP: Meet the requirements of Specification Section 933.
  - C. 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.

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        |

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