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 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.
SECTION A-A

ALTERNATE STRAND PATTERNS

48 ~ 0.5" Ø, Single-Strand, at 28 kips
48 ~ 0.6" Ø, 7-Strand, at 29 kips

DETAIL "A"

* For Spun Cast Cylinder Piles, the following requirements for concrete cover apply:
1. Slightly or Moderately Aggressive Environments: The concrete cover may be reduced to 2 inches.
2. Extremely Aggressive Environments: The concrete cover may be reduced to 2 inches as long as the concrete has a documented chloride ion penetration apparent diffusion coefficient with a mean value of 0.005 in² per year or less; otherwise, a 3-inch concrete cover is required.
Outside Pile Wall
Form to retain epoxy compound

Inside Pile Wall
Temporary Blocking
Form to retain epoxy compound

Gasket
Cover (Typ.)
W20 Wire Ties
No. 4 Bars or 1'-0" Min.
Lap Splice
W11 Spiral Wire Ties
4 ~ Longitudinal Spacer Bars (No. 3 Bars or W11 wire) for Spiral Ties @ Equal Spaces
24 ~ No. 10 Bars @ Equal Spaces

Cast in Place Plug
Cover (Typ.)

2 1/2" Ø Formed Holes for Tendons @ Equal Spaces
1 1/2" Ø Formed Holes (1 tendon per hole; 2 or 3 Strands per tendon shown as (•) See Alternate Strand Patterns; Grout per Specification 938)

72 ~ 1/2" Ø, HSSS Strands, at 21 kips (24-3 strand tendons)
58 ~ 1/2" Ø, HSSS Strands, at 24 kips (29-2 strand tendons)
48 ~ 1/4" Ø, HSSS Strands, at 32 kips (24-2 strand tendons)

Alternate Strand Patterns

Concrete Seal

1'-0" Ø Void, open top and bottom to allow through venting of sections

Roughen inside surface of 54" Ø Pile to 1/2" amplitude for Spliced Pile Section

Closed No. 4 Bars or W20 Wire Ties @ 1'-0" ± (Typ.)

Full Epoxy Compound Joint around cylinder pile wall only (See Detail "A")

Drivable Unforeseen Field Splice Detail (Cast-In-Place Plug)

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PRECAST/POST-TENSIONED CFRP & SS CONCRETE CYLINDER PILE

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SS POST-TENSIONED PILE DETAILS