Drilled shaft details

**Orientation of Steel H-Piling**

**Vertical Pile**

**Battered Pile**

**Piling Details**

(Concrete or steel H)

**Detail "A"**

(Showing plan view of a 30° skewed abutment)

**Steel H-Pile Tip Reinforcement**

See item 39: "Steel pile tip reinforcement" is required for options to the details shown.

**Steel H-Pile Splice Detail**

Use when required.

**Common Foundation Details**

See Additional and Anchor Head Reinforcement is required for options to the details shown.

**Table of Pile Embedment**

<table>
<thead>
<tr>
<th>Pile Type</th>
<th>Embedment Depth (ft)</th>
</tr>
</thead>
<tbody>
<tr>
<td>18&quot; Sq Concrete</td>
<td>1'-0&quot;</td>
</tr>
<tr>
<td>18&quot; Sq Concrete NPAA Specifications</td>
<td>1'-0&quot;</td>
</tr>
<tr>
<td>20&quot; Sq Concrete</td>
<td>1'-4&quot;</td>
</tr>
</tbody>
</table>

See Prestressed Concrete Piling (PC) standard for additional details on concrete pile embedment.

**Revisions**

April 2019

**Filing**: 1 of 2

**DRAWING**: 1 of 2

**The use of this standard is governed by the "Texas Engineering Practice Act". No warranty of any kind is made by TXDOT for any purpose whatsoever. TXDOT assumes no responsibility for the conversion of this standard to other formats or for incorrect results or damages resulting from its use.**

**DATE**: [Redacted]

**FILE**: [Redacted]
For 42" Dia and smaller columns.

### Table of Footing Quantities for 30° Columns

<table>
<thead>
<tr>
<th>Bar No.</th>
<th>Size</th>
<th>Length</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>F1</td>
<td>11</td>
<td>#4</td>
<td>3'-2&quot;</td>
</tr>
<tr>
<td>F2</td>
<td>16</td>
<td>#8</td>
<td>7'-2&quot;</td>
</tr>
<tr>
<td>F3</td>
<td>16</td>
<td>#4</td>
<td>3'-4&quot;</td>
</tr>
<tr>
<td>F4</td>
<td>10</td>
<td>#9</td>
<td>8'-2&quot;</td>
</tr>
<tr>
<td>F5</td>
<td>8</td>
<td>#9</td>
<td>3'-2&quot;</td>
</tr>
<tr>
<td>F6</td>
<td>8</td>
<td>#9</td>
<td>8'-7&quot;</td>
</tr>
</tbody>
</table>

**Reinforcing Steel:**
- 10 - 3/4"
- 10 - 1/2"
- 10 - 3/8"
- 10 - 5/8"

**Class "C" Concrete:**
- 10 - 4.3
- 10 - 4.1

### General Notes:
- Provide Class "C" Concrete (f'c = 3,600 psi) unless shown otherwise.
- Drive piling under abutment wingwalls to a minimum resistance of 10 Tons/Pile unless shown otherwise.
- Provide Grade 60 reinforcing steel (Galvanize reinforcing if shown elsewhere in the plans).
- See Bridge Layout for type, size and length of piling.

### Designer Notes:
- Do not use the drilled shaft details shown on this standard for retaining wall, wall, wall barrier, or sign foundations without structural evaluation.
- Maximum allowable pile loads for the footings shown are:
  - 72 Tons/Pile with 42" Dia Columns
  - 80 Tons/Pile with 30" Dia Columns
  - 100 Tons/Pile with 24" Dia Columns
  - 120 Tons/Pile with 42" Dia Columns

### Construction Notes:
- See Bridge Layout for foundation type required. Use these foundation details unless shown otherwise.
- Min lap with column reinforcing: #7 Bars = 2'-11"; #9 Bars = 3'-4"; #11 Bars = 4'-8".
- Provide bar laps for drilled shaft reinforcing, where required, as follows:
  - Uncoupled or galvanized (d6) - 3'-0".
  - Coupled or ungalvanized (d6) - 6'-0".
- Min tie bar lap length:
  - #7 Bars = 3'-0".
  - #9 Bars = 3'-6".
  - #11 Bars = 4'-3".

### Notes:
- Cover dimensions are clear dimensions, unless noted otherwise.
- Reinforcing bar dimensions shown are out-to-out of bar.