18" OCTAGONAL PILES

Low prestress level
- 8 strands - $f_{pc} = 801$
- $f_c = 6$ ksi
- 237 ton axial load
- $f_c = 7$ ksi
- 281 ton axial load
- $f_c = 8$ ksi
- 325 ton axial load

High prestress level
- 13 strands - $f_{pc} = 1251$
- $f_c = 6$ ksi
- 220 ton axial load
- $f_c = 7$ ksi
- 265 ton axial load
- $f_c = 8$ ksi
- 309 ton axial load
18" OCTAGONAL PILE
8 strands, $f_c = 6$ ksi

SECTION PROPERTIES
\[ I = 5746 \text{ in}^4 \]
\[ r = 4.6 \text{ in} \]
\[ A = 268 \text{ in}^2 \]
\[ w = 295 \text{ lbf} \]
Perimeter = 59.6 in

\[ \frac{1}{r} = \text{effective unsupported length of the pile} / \text{radius of gyration} \]

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**Graph: 18" Octagonal Pile**

- 8 strands
- $f_c = 6$ ksi

**Axes:**
- **AXIAL LOAD** $\phi P_n$ (kips)
- **BENDING MOMENT** $\phi M_n$ (ft.k.)

**Contour Lines:**
- Labeled from 0 to 200 in increments of 25 kips and 50 ft.k.
18" OCTAGONAL PILE
8 strands, $f_c = 7$ ksi

SECTION PROPERTIES
\[ I = 5746 \text{ in}^4 \]
\[ r = 4.6 \text{ in} \]
\[ A = 268 \text{ in}^2 \]
\[ w = 295 \text{ ptf} \]
Perimeter = 59.6 in

\[ I/r = \text{effective unsupported length of the pile} / \text{radius of gyration} \]

18" Octagonal Pile
8 strands
$fc = 7$ ksi
18" OCTAGONAL PILE
8 strands, $f'_c = 8$ ksi

SECTION PROPERTIES
$I = 5746$ in$^4$
$r = 4.6$ in
$A = 268$ in$^2$
$w = 295$ p IDF
Perimeter = 59.6 in

$l/r = \text{effective unsupported length of the pile} / \text{radius of gyration}$

18" Oct Pile
8 strands
$fc = 8$ ksi
18" OCTAGONAL PILE
13 strands, $f'_c = 6$ ksi

SECTION PROPERTIES
- $I = 5746$ in$^4$
- $r = 4.6$ in
- $A = 268$ in$^2$
- $w = 295$ plf
- Perimeter = 59.6 in

$\frac{l}{r}$ = effective unsupported length of the pile / radius of gyration

18" Oct Pile
13 strands
$fc = 6$ ksi
18" OCTAGONAL PILE
13 strands, $f'_c = 7$ ksi

SECTION PROPERTIES
- $I = 5746$ in$^4$
- $r = 4.6$ in
- $A = 268$ in$^2$
- $w = 295$ plf
- Perimeter = 59.6 in

$I/r =$ effective unsupported length of the pile / radius of gyration

AXIAL LOAD $\phi P_n$ (kips)

BENDING MOMENT $\phi M_n$ (ft.k.)
18" OCTAGONAL PILE
13 strands, \( f'_c = 8 \text{ ksi} \)

SECTION PROPERTIES
\[ I = 5746 \text{ in}^4 \]
\[ r = 4.6 \text{ in} \]
\[ A = 268 \text{ in}^2 \]
\[ w = 295 \text{ lbf} \]
Perimeter = 59.6 in

\( I/r \) = effective unsupported length of the pile / radius of gyration