



PIN FOUNDATIONS INC.



Calculation Software for Pin Foundation System

PROJECT INFORMATION:

Project Name: Owen's Place Treehouse
 Product: DP-75E
 Location: Beavercreek, OH
 Engineer: Soils - Bowser Mornier / Foundations - PFI
 Date: 8/3/2015

Boring 3 - worst case blow counts

SOIL INFORMATION:

Soil 1
 Description: Med Stiff Sandy Lean Clay
 Phi (degree): 6.00
 Unit Weight (pcf): 110.00
 Cohesion (psf): 375.00
 Ground Water Table: At Grade
 Neglected Depth (ft): 1.00

PILE INFORMATION:

Pile Type: Diamond Pier (4 pins)
 Pin Length (ft): **4.20**
 Angle (degree): 40.00
 Pin Diameter (in): 1.670
 Wall Thickness (in): 0.140
 Pin Type and Grade: Pipe, 36ksi
 Effective Depth (ft), D: 1.74
 Effective Length (ft), B: 4.60
 Effective Pile Width (ft): 0.28

Program automatically corrects Dry Unit Weight for Buoyant Weight when Ground Water Table "At Grade" is indicated.

Program corrects total Pin length indicated for actual active length.

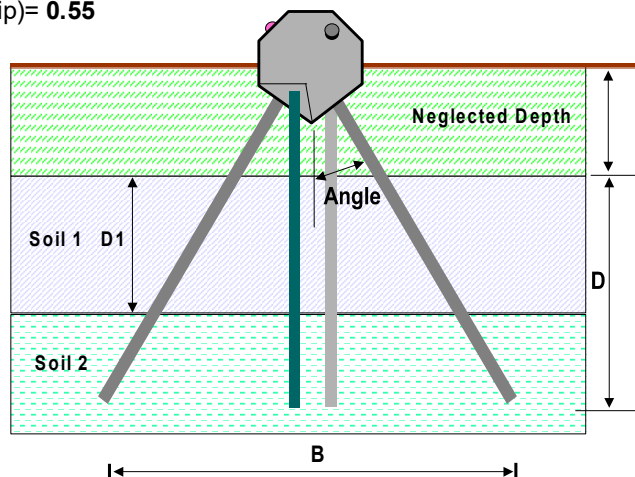
PILE CAPACITY:

Compression: C_ultim (kip)= 7.70
 F.S.=2: C_allow (kip)= **3.85**
 Uplift: U_ultim (kip)= 0.59
 F.S.=1.5: U_allow (kip)= **0.39**
 Lateral:
 Parallel to Pins: L1_allow (kip)= **0.55**
 Perpendicular to Pins: L2_allow (kip)= **0.55**

All capacities are calculated separately.

CALCULATION DATA:

Bearing Capacity Factors:
 Nc=7.70
 Nq=1.80
 Nr=0.50
 Pressure at Base (psf)=82.76
 Arching Factor=2
 Allowable Deflection (in)=1
 Allowable Bending Strength (ksi)=24



* Soil 2 - Not Used



PIN FOUNDATIONS INC.



Calculation Software for Pin Foundation System

PROJECT INFORMATION:

Project Name: Owen's Place Treehouse
 Product: DP-75E
 Location: Beavercreek, OH
 Engineer: Soils - Bowser Mornier / Foundations - PFI
 Date: 8/3/2015

Boring 3 - worst case blow counts

SOIL INFORMATION:

Soil 1
 Description: Med Stiff Sandy Lean Clay
 Phi (degree): 6.00
 Unit Weight (pcf): 110.00
 Cohesion (psf): 375.00
 Ground Water Table: At Grade
 Neglected Depth (ft): 1.00

PILE INFORMATION:

Pile Type: Diamond Pier (4 pins)
 Pin Length (ft): **5.25**
 Angle (degree): 40.00
 Pin Diameter (in): 1.670
 Wall Thickness (in): 0.140
 Pin Type and Grade: Pipe, 36ksi
 Effective Depth (ft), D: 2.54
 Effective Length (ft), B: 5.95
 Effective Pile Width (ft): 0.28

Program automatically corrects Dry Unit Weight for Buoyant Weight when Ground Water Table "At Grade" is indicated.

Program corrects total Pin length indicated for actual active length.

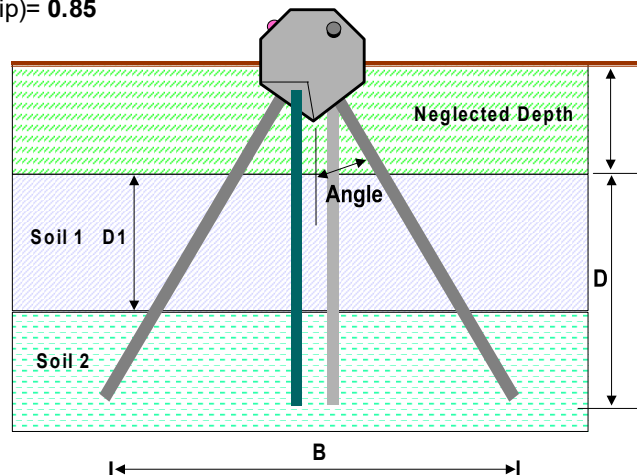
PILE CAPACITY:

Compression: C_ultim (kip)= 10.02
 F.S.=2: C_allow (kip)= **5.01**
 Uplift: U_ultim (kip)= 1.26
 F.S.=1.5: U_allow (kip)= **0.84**
 Lateral:
 Parallel to Pins: L1_allow (kip)= **0.85**
 Perpendicular to Pins: L2_allow (kip)= **0.85**

All capacities are calculated separately.

CALCULATION DATA:

Bearing Capacity Factors:
 Nc=7.70
 Nq=1.80
 Nr=0.50
 Pressure at Base (psf)=121.04
 Arching Factor=2
 Allowable Deflection (in)=1
 Allowable Bending Strength (ksi)=24



* Soil 2 - Not Used