PIN FOUNDATIONS INC.

Calculation Software for Pin Foundation System

PROJECT INFORMATION:

Project Name:	Minuteman NHP Boardwalk
Product:	DP-100E
Location:	Concord, MA
Engineer:	
Date:	9/21/2021

Soil Values Derived from Geotechnical Report submitted by Childs Engineering Corp., Project Number 2551-15.06 dated June 2021

SOIL INFORMATION:

	Soil 1 - Thickness (ft), D1:2.0	**Soil 2**
Description:	Sandy Silt (OL)	Silty Sand (SM)
Phi (degree):	0	40
Unit Weight (pcf):	90	130
Cohesion (psf):	0	0
Ground Water Table:	At Grade	
Neglected Depth (ft):	0.00	

PILE INFORMATION:

Pile Type:	Diamond Pier (4 pins)
Pin Length (ft):	**7.0**
Angle (degree):	40
Pin Diameter (in):	1.90
Wall Thickness (in):	0.145
Pin Type and Grade:	Pipe, 36ksi
Effective Depth (ft), D:	4.88
Effective Length (ft), B:	8.20
Effective Pile Width (ft):	0.40

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:

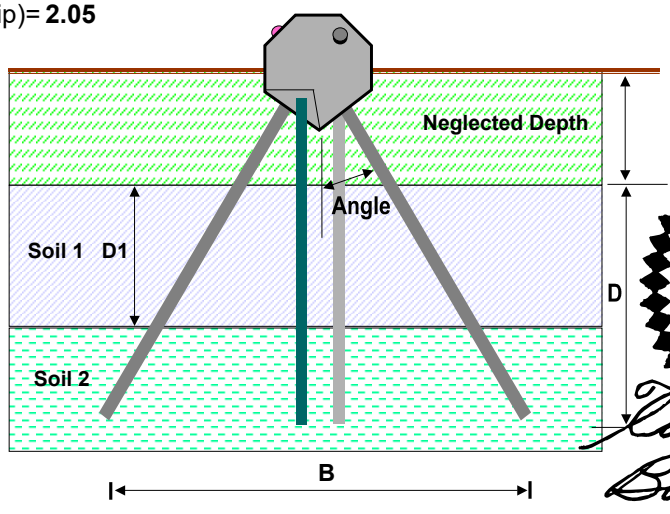
Compression:	C_ultim (kip)= 16.50
F.S.=3:	C_allow (kip)= **5.50**
Uplift:	U_ultim (kip)= 7.11
F.S.=1.5:	U_allow (kip)= **4.74**
Lateral:	
Parallel to Pins:	L1_allow (kip)= **2.05**
Perpendicular to Pins:	L2_allow (kip)= **2.05**

All capacities are calculated separately.

CALCULATION DATA:

Bearing Capacity Factors:
- Nc=22.75
- Nq=10.95
- Nr=6.67

Pressure at Base (psf)=250.13
Arching Factor=2.5
Allowable Deflection (in)=1
Allowable Bending Stength (ksi)=24



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Date Signed: *Apr 14,2023*