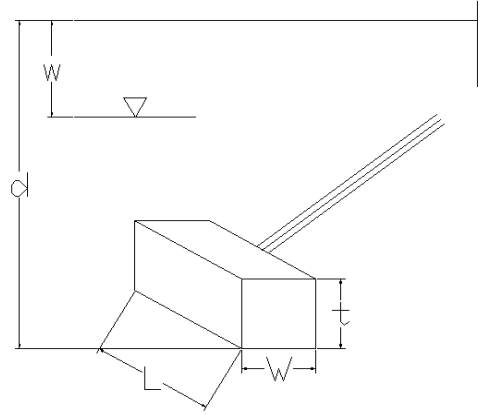


Site Name: **Portland ME, ME**
 Site Number: **10047**
 Engineering Number: **OAA702064_C3_07**
 Engineer: **Brendan M Smith**
 Date: **06/21/17**

Program Last Updated: **5/13/2014**
 American Tower Corporation

Design Standard per TIA-222-G

Anchor Radius:	115.0 ft
Uplift (Factored - P_u):	100.3 k
Shear (Factored - V_u):	65.8 k
Berm Present:	N
Design Anchor Rod:	N
Mapped Foundation:	N
Anchor Base Depth (d):	12.5 ft
Width of Anchor (W):	12.0 ft
Length of Anchor (L):	12.0 ft
Thickness of Anchor (t):	3.0 ft
Depth Below Ground Surface to Water Table (w):	99.0 ft
Soil Uplift at Base / Top of Anchor (B/T):	T
Unit Weight of Concrete:	150.0 pcf
Unit Weight of Soil Above Water Table:	110.0 pcf
Unit Weight of Water:	62.4 pcf
Submerged Soil Unit Weight:	55.0 pcf
Internal Angle of Friction:	10 Degrees
Cohesion:	0 psf
Ultimate Skin Friction of Pad Sides to Soil:	220 psf
Ultimate Coefficient of Shear Friction:	0.30
Maximum Top Conical Failure Angle:	20 Degrees
Maximum Base Conical Failure Angle:	20 Degrees
Allowable Capacity Increase:	1.00 (Due to Transient Loads)
Uplift Strength Reduction Factor (ϕ_u):	0.75
Shear Strength Reduction Factor (ϕ_v):	0.75
Concrete Uplift Strength Reduction Factor (ϕ_{uc}):	0.90



Uplift

Weight of Concrete (Buoyancy Effect Considered):	64.8 k
Weight of Soil (Buoyancy Effect Considered):	250.3 k
Ultimate Uplift Resistance from Skin Friction:	23.8 k
Nominal Factored Uplift Resistance ($\phi_u P_n$):	246.0 k
$P_u / \phi_u P_n$:	0.40 Result: OK

Shear

Ultimate Shear Friction Resistance Due to Normal Force - Uplift:	42.7 k
Passive Pressure:	1719 psf
Ultimate Passive Pressure Resistance:	61.9 k
Nominal Shear Resistance ($\phi_v V_n$):	78.4 k
$V_u / \phi_v V_n$:	0.82 Result: OK