

Table of Contents

List of Figures	ii
List of Tables	iii
Acknowledgment	iv
Introduction	1
Development of p-y Curves	1
Shapes of p-y Curves	1
Values of p_{ult} for Soils with Cohesion and Friction	2
Spreadsheet for Calculating p-y Curves	3
Determination of Parameter A	3
Comparison of Measured and Calculated Deflections of Test Shafts	6
Deflections at Working Loads	15
Effect of Parameters on the Groundline Deflection	15
Maximum Bending Moments	19
Conclusion	22
Appendix A: Equations for the Factors K_q and K_c in Brinch-Hansen's (1961) Theory ..	23
Appendix B: References	25

List of Figures

Figure 1: Example of p-y Calculations using Spreadsheet "PYSHEET"	4 & 5
Figure 2: Measured and Calculated Load-Deflection Curves for the Prices Fork Site ..	9
Figure 3: Measured and Calculated Load-Deflection Curves for the Salem Site.....	10
Figure 4: Measured and Calculated Load-Deflection Curves for the Suffolk Site	11
Figure 5: Measured and Calculated Load-Deflection Curves for the Fairfax County Parkway Site	12
Figure 6: Measured and Calculated Load-Deflection Curves for the Roberts Road Site	13
Figure 7: Base Case Conditions for Deflection and Moment Study	16
Figure 8: LCAP101 Analysis of the Base Case	17

List of Tables

Table 1: Soil Properties and Drilled Shaft Diameters used in p-y Calculations.....	7
Table 2: p-y Curve Parameters Obtained from Back Analysis of Field Data	8
Table 3: Effect of Soil Properties on Groundline Deflection	18
Table 4: Approximate Ground Line Deflections of 30-inch Diameter Drilled Shaft Sound Wall Foundations when Subjected to Full Wind Load (inches)	20