

Cone Technologies and Their Applications

		CONES				OTHER		
		CPT	CPTU	SEISMIC CONE	CONE PRESSURE METER (FDP)	RESISTIVITY PROBE	PUSH IN VANE	PLATE LOAD
Soil Parameters	Soil Type	High	High/Moderate	High/Moderate	Moderate	Moderate/Low	Low	None
	Profile	High	High/Moderate	High/Moderate	Moderate	Moderate/Low	Low	None
	u_2	None	High/Moderate	High/Moderate	None	None	None	None
	ϕ'	Low	High/Moderate	High/Moderate	Low	Moderate/Low	None	None
	s_u	High	High/Moderate	High/Moderate	High	Low	High	High
	m_v	Low	High/Moderate	High/Moderate	Low	Low	None	High
	c_v	None	High/Moderate	High/Moderate	Low	None	None	High
	k	None	High/Moderate	High/Moderate	None	None	None	High
	G	High	High/Moderate	High/Moderate	High	None	None	High
	σ_h	Moderate/Low	Moderate/Low	High/Moderate	Low	None	None	High
	OCR	High	High/Moderate	High/Moderate	Low	None	Moderate/Low	High
Ground Type	Hard Rock	None	None	None	None	None	None	High
	Soft Rock	Low	High/Moderate	High/Moderate	Low	Low	None	High
	Gravel	Low	None	None	None	None	None	High
	Sand	High	High/Moderate	High/Moderate	High	High	None	High
	Silt	High	High/Moderate	High/Moderate	High	High	None	High
	Clay	High	High/Moderate	High/Moderate	High	High	High	High
	Peat	High	High/Moderate	High/Moderate	High	High	High	High

Applicability:	High	High/Moderate	Moderate	Moderate/Low	Low	None
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ϕ' = Will depend on soil type

Soil parameter definitions:

u = in situ static pore pressure

k = coefficient of permeability

ϕ' = effective internal friction angle s_u = undrained shear strength

G = shear modulus at small strains

σ_h = horizontal stress

m_v = constrained modulus

OCR = overconsolidation ratio

c_v = coefficient of consolidation

