

Table 2-2 Geotechnical Design Parameters

Soil Description	Cohesion	Friction angle	Undrained Shear Strength	Elastic modulus	Dynamic Young's modulus	Dynamic Shear modulus	Poisson's ratio	Unit weight
	c' (kPa)	ϕ' (deg)	S_u (kPa)	E' (MPa)	E'_{dyn} (MPa)	G'_{dyn} (MPa)	ν	γ (kN/m ³)
Newer Volcanics	Residual Clay (CH)	25	200	50	250	96	0.3	18
	Basalt Rock Mass – Extremely Weathered	35	300	78	390	150	0.3	20
	Basalt Rock Mass – Highly Weathered	35	1500	390	1950	812	0.2	20
	Basalt Rock Mass – Moderately Weathered	39	5000	2400	12000	5200	0.15	22
	Basalt Rock Mass – Moderately to Slightly weathered, or better	42	12000	7000	35000	15000	0.1	25
	Paleosols	25	200	50	250	96	0.3	20
	Scoria Sandy Gravel	40	-	48	240	92	0.3	18
	Clay & Clayey Silt	25	200	50	250	96	0.3	18
	Silty Sand & Sandy Silt	40	-	48	240	92	0.3	20
	Siltstone, Sandstone, Mudstone	35	1500	390	1950	812	0.2	20
Tertiary & Ordovician								

- Parameter Not Applicable