AVERAGE VALUE OF PHYSICO - MECHANICAL PROPERTIES

Layer 2: Very soft, high plasticity blackish grey ORGANIC CLAY (OH).

Table : 1d

No	Property		Sign	Average value.	Maximum value	Minimum value	Number of test
1	Sieve Analisis, % Passing						
	3/4" (19 mm)						
	1/2" (12.5 mm)						
	3/8" (9.5 mm)						
	#4 (4.75 mm)						
	#8 (2.36 mm)			100.0	100.0	100.0	40
	#16 (1.18 mm)			99.5	100.0	94.5	40
	#30 (0.6 mm)			99.1	100.0	91.3	40
	#50 (0.3 mm)			98.3	100.0	83.1	40
	#100 (0.15 mm)			96.6	100.0	74.9	40
	#200 (0.075 mm)			93.2	99.0	73.3	40
	< 0.005 mm			57.8	73.1	29.2	40
2	Natural moisture content	(%)	w	81.77	99.69	51.13	40
3	Natural unit weight	(g/cm^3)	γ	1.543	1.579	1.326	40
4	Dry unit weight	(g/cm^3)	γ_d	0.804	1.045	0.664	40
5	Specific gravity		Gs	2.579	2.698	2.567	40
6	Porosity		n	0.69	0.74	0.60	40
7	Void ratio		e_o	2.261	2.893	1.489	40
8	Degree saturation	(%)	S	93.9	99.5	88.4	40
9	Liquid limit	(%)	LL	78.6	97.8	52.2	21
10	Plastic limit	(%)	LP	41.8	49.6	30.3	21
11	Plastic index	(%)	PI	36.8	53.6	21.2	21
12	Water plasticity ratio	(%)	B	1.15	1.72	0.69	21
13	Unconfined compression	(Kg/cm^2)	qu	0.148	0.222	0.076	15
14	Compression index		Cc	1.129	1.278	0.957	12
15	Coefficient of consolidation	(cm^2/Kg)	Cv	2.12E-04	3.37E-04	1.68E-04	12
16	Preconsolidation pressure	(kg/cm^2)	Pc	0.754	1.333	0.213	12
17	Coefficient of volunm compressibility		Mv	1.41E-04	1.68E-04	1.02E-04	12
18	Permeability	(cm/sec)	k20	3.17E-08	4.58E-08	2.03E-08	12

AVERAGE VALUE OF PHYSICO - MECHANICAL PROPERTIES

Layer 3: Soft, high plasticity blackish grey ORGANIC CLAY (OH).

Table : 2d

No	Property		Sign	Average value.	Maximum value	Minimum value	Number of test
1	Sieve Analisis, % Passing						
	3/4" (19 mm)						
	1/2" (12.5 mm)						
	3/8" (9.5 mm)						
	#4 (4.75 mm)						
	#8 (2.36 mm)						
	#16 (1.18 mm)						
	#30 (0.6 mm)						
	#50 (0.3 mm)						
	#100 (0.15 mm)			100.0	100.0	100.0	3
	#200 (0.075 mm)			97.4	98.3	96.7	3
	< 0.005 mm			72.2	73.2	71.4	3
2	Natural moisture content	(%)	w	64.88	65.77	63.97	3
3	Natural unit weight	(g/cm^3)	γ	1.485	1.501	1.466	3
4	Dry unit weight	(g/cm^3)	γ_d	0.901	0.915	0.884	3
5	Specific gravity		Gs	2.600	2.603	2.595	3
6	Porosity		n	0.65	0.66	0.65	3
7	Void ratio		e_o	1.888	1.934	1.844	3
8	Degree saturation	(%)	S	89.4	90.3	88.2	3
9	Liquid limit	(%)	LL	90.3			1
10	Plastic limit	(%)	LP	46.4			1
11	Plastic index	(%)	PI	43.9			1
12	Water plasticity ratio	(%)	B	0.44			1
13	Unconfined compression	(Kg/cm^2)	qu				
14	Compression index		Cc				
15	Coefficient of consolidation	(cm^2/Kg)	Cv				
16	Preconsolidation pressure	(kg/cm^2)	Pc				
17	Coefficient of volunm compressibility		Mv				
18	Permeability	(cm/sec)	k20				

AVERAGE VALUE OF PHYSICO - MECHANICAL PROPERTIES

Layer 4: Stiff, low plasticity whitish grey CLAY (CL).

Table : 3d

No	Property	Sign	Average value.	Maximum value	Minimum value	Number of test
1	Sieve Analisis, % Passing					
	3/4" (19 mm)					
	1/2" (12.5 mm)					
	3/8" (9.5 mm)					
	#4 (4.75 mm)					
	#8 (2.36 mm)		100.0	100.0	100.0	2
	#16 (1.18 mm)		97.5	99.5	95.5	2
	#30 (0.6 mm)		94.4	97.6	91.1	2
	#50 (0.3 mm)		90.0	91.7	88.3	2
	#100 (0.15 mm)		84.5	86.5	82.4	2
	#200 (0.075 mm)		79.8	85.1	74.5	2
	< 0.005 mm		35.7	35.7	35.6	2
2	Natural moisture content (%)	w	22.28	24.33	20.22	2
3	Natural unit weight (g/cm^3)	γ	1.936	1.943	1.929	2
4	Dry unit weight (g/cm^3)	γ_d	1.584	1.616	1.552	2
5	Specific gravity	Gs	2.676	2.687	2.665	2
6	Porosity	n	0.41	0.42	0.39	2
7	Void ratio	e_o	0.690	0.732	0.649	2
8	Degree saturation (%)	S	86.2	0.9	83.0	2
9	Liquid limit (%)	LL	24.5	26.8	22.2	2
10	Plastic limit (%)	LP	15.5	17.4	13.6	2
11	Plastic index (%)	PI	9.0	9.4	8.6	2
12	Water plasticity ratio (%)	B	0.75	0.77	0.74	2
13	Unconfined compression (Kg/cm^2)	qu				
14	Compression index	Cc				
15	Coefficient of consolidation (cm^2/Kg)	Cv				
16	Preconsolidation pressure (kg/cm^2)	Pc				
17	Coefficient of volunm compressibility	Mv				
18	Permeability (cm/sec)	k20				

AVERAGE VALUE OF PHYSICO - MECHANICAL PROPERTIES

Layer 4a: Medium dense, light brown CLAYEY SAND (SC).

Table: 4d

No	Property	Sign	Average value.	Maximum value	Minimum value	Number of test
1	Sieve Analisis, % Passing					
	3/4" (19 mm)					
	1/2" (12.5 mm)					
	3/8" (9.5 mm)					
	#4 (4.75 mm)					
	#8 (2.36 mm)		100.0	100.0	100.0	3
	#16 (1.18 mm)		97.5	98.8	96.8	3
	#30 (0.6 mm)		92.1	96.1	85.0	3
	#50 (0.3 mm)		55.7	67.9	32.4	3
	#100 (0.15 mm)		27.2	31.2	19.5	3
	#200 (0.075 mm)		22.1	25.3	17.5	3
	< 0.005 mm		14.4	16.8	12.0	3
2	Natural moisture content (%)	w	23.90	40.91	14.87	3
3	Natural unit weight (g/cm^3)	γ	1.906	2.018	1.704	3
4	Dry unit weight (g/cm^3)	γ_d	1.562	1.741	1.209	3
5	Specific gravity	Gs	2.653	2.663	2.645	3
6	Porosity	n	0.41	0.55	0.34	3
7	Void ratio	e_o	0.749	1.202	0.523	3
8	Degree saturation (%)	S	82.2	90.6	75.2	3
9	Liquid limit (%)	LL	26.2	33.5	18.8	2
10	Plastic limit (%)	LP	15.7	20.4	10.9	2
11	Plastic index (%)	PI	10.5	13.1	7.9	2
12	Water plasticity ratio (%)	B	1.69	3.80	-0.42	2
13	Unconfined compression (Kg/cm^2)	qu				
14	Compression index	Cc				
15	Coefficient of consolidation (cm^2/Kg)	Cv				
16	Preconsolidation pressure (kg/cm^2)	Pc				
17	Coefficient of volunm compressibility	Mv				
18	Permeability (cm/sec)	k20				