


Directorate of Erbil Construction Laboratory	BOREHOLE LOG AND RECORD OF TESTS RESULTS			
Test Form No.	S 13	Revision	Approve date	04.04.2019

Project Name									Construction of Six Story Commercial Building -Bakhtiary District																									
Sample Location									Erbil						BH No.		1		Sheet No.							1								
Sample			Depth (m)		Index Properties			Particle Size Distribution				% Passing # 4	% Passing # 200	S.P.T N	Soil Layer	Desecription , Identification & Classification of Soil (ASTM D 2487-06, D 2488-09a)	Specific Gravity	Unit weight(*) (kN/m <sup>3</sup> )		q <sub>u</sub>	Consolidation							Chemical Tests						
Field No.	Lab. No.	Type	From	To	M.C %	L.L %	p.I %	C	M	S	G							PH	Org. %		GYPSUM													
																				Wet		Dry	kN/m <sup>2</sup>	eo	Cs	Cc	Swelling Pressure kN/m2	Po kN/m2	Pc kN/m2	SO <sub>3</sub>	T.S.S	CaCo <sub>3</sub>	Cl <sup>-</sup>	
1	1-1	D	0.0	1.0										Light brown mixture of fine and coarse grained(Fill Material)																				
2	1-2	SS	1.0	1.5										30	do																			
3	1-3	D	1.5	3.0											Light brown clayey silt with few sand and trace of gravel, CL																			
4	1-4	U	3.0	3.5	21.3	46	22	25	63	9	3	96	88		Light brown clayey silt with few sand and trace of gravel, CL	2.762																		
5	1-5	SS	3.5	4.0										61	do										0.0525	0.21	38.0	0.022	9.40	0.874	0.11			
6	1-6	D	4.0	5.5											do																			
7	1-7	SS	5.5	6.0										55	do																			
8	1-8	D	6.0	7.5											do																			
9	1-9	SS	7.5	8.0										59	do																			
10	1-10	D	8.0	9.0											do																			
11	1-11	U	9.0	9.5	37.0	51	25	48	47	5	0	100	95		Brown clay/silt with few sand, CL/CH	2.874																		
12	1-12	SS	9.5	10.0										67	do										0.0575	0.23	33.0	0.072	9.40	0.740	0.115			
13	1-13	D	10.0	12.5											do																			
14	1-14	SS	12.5	13.0										76	do																			
15	1-15	D	13.0	14.5											do																			
16	1-16	SS	14.5	15.0										83 <sup>10.5°</sup>	do																			
17	1-17	D	15.0	16.5											do																			
18	1-18	SS	16.5	17.0										85 <sup>8°</sup>	do																			

The sion(\*) means that test is accrdited by IOAS according to the reurement of the standard ISO/IEC.17025:2005.

Gravel	Sand	Silt	Clay
○ ○ ○ ○ ○ ○ ○ ○	● ● ● ● ● ● ● ●	/// ///	///

Prepared By:  
Zamawand F.Abdullah

D: Disturbed sample
U: Undisturbed sample
SS: S.P.T

Approved By:  
Ala J. Rasool