



BNN DESIGN AND CONSULTANT CO.,LTD.

Soil Boring and Testing , Surveying , Geotechnical Structure and Slope Protection Design

SUMMARY OF TEST RESULT

Project : ก่อสร้างถนน กาญจนภิเษก-พุทธมณฑล สาย2

Date of Boring : 16 พฤศจิกายน 2561

Location : พุทธมณฑล สาย2 เขตทวีวัฒนา กรุงเทพมหานคร

Boring : BH - 6 Page : 1

SAMPLE NUMBER	DEPTH (m.)		PHYSICAL PROPERTIES							ATTERBERG LIMITS			SOIL CLASSIFICATION	ENGINEERING PROPERTIES				
			Wn (%)	γ (t/m ³)	% Passing					LL (%)	PL (%)	PI (%)		UCS (tsm.)	Qur (tsm.)	Qp (tsm.)	N (blows/ft)	Vs (tsm.)
	#4	#10			#40	#100	#200											
ST-1	1.50	2.00	35.59	1.79	100.00	100.00	99.62	97.15	93.80	29.31	18.22	11.09	CL	6.04				
ST-2	3.00	3.50	49.00	1.75	100.00	100.00	99.12	98.29	97.79	42.31	28.18	14.13	CL	4.63				
ST-3	4.50	5.00	87.54	1.54	100.00	100.00	99.76	99.68	99.32	80.54	33.48	47.06	CH	2.05				
ST-4	6.00	6.50	85.92	1.57	100.00	100.00	99.89	99.81	99.72	82.57	32.50	50.07	CH	2.07				
ST-5	7.50	8.00	58.63	1.64	100.00	100.00	99.82	99.65	99.42	74.81	28.70	46.11	CH	2.95				
ST-6	9.00	9.50	64.93	1.72	100.00	100.00	99.78	99.63	99.48	75.34	30.57	44.77	CH	4.38				
ST-7	10.50	11.00	64.40	1.76	100.00	100.00	99.83	99.72	99.63	74.66	30.65	44.01	CH	4.48				
ST-8	12.00	12.50	61.97	1.78	100.00	100.00	99.70	99.36	98.74	73.67	29.91	43.76	CH	7.37				
ST-9	13.50	14.00				NO RECOVERY												
ST-10	15.00	15.45	45.27	1.79	100.00	100.00	83.10	54.21	39.19	42.11	25.96	16.15	SC	7.50				
SS-1	16.50	16.95	15.92		100.00	98.29	78.10	45.30	20.44		NP		SM				57	
SS-2	18.00	18.45	20.60		100.00	98.11	76.29	30.78	19.50	24.14	19.20	4.94	SC-SM				22	
SS-3	19.50	19.95	20.44		100.00	98.53	74.18	31.59	17.67	24.27	18.94	5.32	SC-SM				26	
SS-4	21.00	21.45				NO RECOVERY											28	
SS-5	22.50	22.95				NO RECOVERY											30	
SS-6	24.00	24.45	24.88		100.00	99.45	89.28	61.75	36.58	35.62	22.19	13.43	SC				25	
SS-7	25.50	25.95	22.46		100.00	99.29	96.73	9.32	1.72		NP		SP				37	
SS-8	27.00	27.45	22.04		100.00	95.99	88.12	13.91	3.25		NP		SP				63	
SS-9	28.50	28.95	22.03		100.00	99.81	96.24	13.51	1.88		NP		SP				51	
SS-10	30.00	30.45	24.46		100.00	98.93	93.51	13.98	2.81		NP		SP				62	

PHYSICAL PROPERTIES

Wn = Natural Water Content

γ = Bulk Unit Weight

ATTERBERG LIMITS

LL = Liquid Limit

PL = Plastic Limit

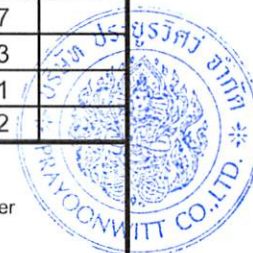
PI = Plasticity Index

ENGINEERING PROPERTIES

UCS = Unconfined Compressive Strength N = Standard Penetration Number

Qur = Remolded Shear Strength Vs = Vane Shear Strength

Qp = Pocket Penetrometer





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Project : ก่อสร้างถนน กาญจนภิเษก-พุทธมณฑล สาย2

Date of Boring : 16 พฤศจิกายน 2561

Location : พุทธมณฑล สาย2 เขตทวีวัฒนา กรุงเทพมหานคร

Boring : BH - 6 Page : 2

SAMPLE NUMBER	DEPTH		PHYSICAL PROPERTIES							ATTERBERG LIMITS			SOIL CLASSIFICATION	ENGINEERING PROPERTIES				
	(m.)		Wn (%)	γ (t/m ³)	% Passing					LL (%)	PL (%)	PI (%)		UCS (tsm.)	Qur (tsm.)	Qp (tsm.)	N (blows/ft)	Vs (tsm.)
	FROM	TO			#4	#10	#40	#100	#200									
SS-11	31.50	31.95	25.10		100.00	99.11	95.09	20.65	4.89		NP		SP				59	
SS-12	33.00	33.45	23.66		100.00	99.38	96.45	19.25	3.53		NP		SP				69	
SS-13	34.50	34.95	27.14		100.00	99.27	95.59	12.70	2.72		NP		SP				67	
SS-14	36.00	36.45				NO RECOVERY											68	
SS-15	37.50	37.95	19.08		100.00	99.17	83.10	64.01	32.19	39.29	20.88	18.41	SC				53	
SS-16	39.00	39.45	16.21		100.00	99.87	70.49	23.81	5.77		NP		SP				50/5"	
SS-17	40.50	40.95	14.57		100.00	97.44	69.43	9.69	1.79		NP		SP				50/5"	
SS-18	42.00	42.45	19.29		100.00	96.32	69.91	22.12	7.27		NP		SP				82	
SS-19	43.50	43.95	16.47		100.00	96.76	51.30	11.60	3.25		NP		SP				86	
SS-20	45.00	45.45	15.68		100.00	89.45	50.16	11.27	2.58		NP		SP				50/6"	
SS-21	46.50	46.95	17.71		100.00	94.65	59.19	11.28	2.78		NP		SP				50/6"	
SS-22	48.00	48.45				NO RECOVERY											50/5"	
SS-23	49.50	49.95	19.44		100.00	98.23	57.16	26.71	3.11		NP		SP				50/5"	
SS-24	51.00	51.45				NO RECOVERY											50/5"	
SS-25	52.50	52.95	18.46		100.00	98.18	58.74	10.73	1.83		NP		SP				50/6"	
SS-26	54.00	54.45	14.94		100.00	98.32	73.95	63.10	25.61	20.28	16.28	4.00	SC-SM				50/6"	
SS-27	55.50	55.95	16.58		100.00	98.32	73.95	63.01	25.61	25.15	15.59	9.56	SC				50/5"	
SS-28	57.00	57.45	16.71		100.00	99.88	74.17	60.19	35.67	36.31	21.19	15.13	SC				50/6"	
SS-29	58.50	58.95	22.18		100.00	99.92	65.55	69.66	39.06	32.62	19.93	12.68	SC				72	
SS-30	60.00	60.45	18.98		100.00	100.00	90.63	68.08	36.37	31.60	19.78	11.82	SC				68	

PHYSICAL PROPERTIES

Wn = Natural Water Content

γ = Bulk Unit Weight

ATTERBERG LIMITS

LL = Liquid Limit

PL = Plastic Limit

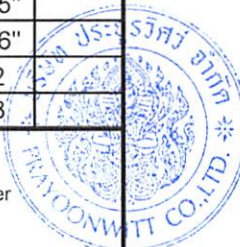
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LOG OF BORING

Project : ก่อสร้างถนน กาญจนภิเษก-พุทธมณฑล สาย2

Boring No. BH - 6

Tested by N.Winit

Page 1

Location : พุทธมณฑล สาย2 เขตทวีวัฒนา กรุงเทพมหานคร

Started 16 พฤศจิกายน 2561

Checked by W.Jakrabhan

N 1,520,819 E 650,445

Finished 17 พฤศจิกายน 2561

GWL. -1.50 m

Depth (m)	Sample No.	Type Of Sample	Sample Distance	Recovery	Soil Description	Graphic Log	Water Content (%)					SPT - N (Blows/ft)			Soil Shear Strength			Total Density (t/m ³)		
							o	x	+						o	x	PP	FVT	TV	▲
							20	40	60	80	100	25	50	75	3	6	9	1.4	1.8	2.2
1		WO			Soft to Medium Silty CLAY, grey (CL)															
2	1	ST					X	+												
3		WO																		
4	2	ST			Very Soft CLAY, grey (CH)		X	+												
5	3	ST					X			+										
6		WO																		
7	4	ST			Soft to Medium CLAY, grey (CH)		X			+										
8	5	ST					X													
9		WO																		
10	6	ST			Soft to Medium CLAY, grey (CH)		X			+										
11	7	ST					X													
12		WO																		
13	8	ST			Medium Dense Clayey SAND, brown (SC)		X			+										
14	9	ST		No Recovery			X													
15		WO																		
16	10	ST			Medium Dense to Very Dense Clayey Silty SAND, brown (SM), (SC-SM), (SC)		X	+												
17	1	SS												57						
18		WO																		
19	2	SS			Medium Dense to Very Dense Clayey Silty SAND, brown (SM), (SC-SM), (SC)		X	+						22						
20	3	SS					X	+						26						
21		WO																		
22	4	SS		No Recovery	Dense to Very Dense Poorly-graded SAND, brown (SP)									28						
23	5	SS		No Recovery										30						
24		WO																		
25	6	SS			Dense to Very Dense Poorly-graded SAND, brown (SP)		X	+						25						
26	7	SS												37						
27		WO																		
28	8	SS			Dense to Very Dense Poorly-graded SAND, brown (SP)									63						
29	9	SS												51						
30		WO																		
	10	SS												62						





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LOG OF BORING

Project : ก่อสร้างถนน กาญจนภิเษก-พุทธมณฑล สาย2 Boring No. BH - 6 Tested by N.Winit Page 2
 Location : พุทธมณฑล สาย2 เขตทวีวัฒนา กรุงเทพมหานคร Started 16 พฤศจิกายน 2561 Checked by W.Jakrabhan
 N 1,520,819 E 650,445 Finished 17 พฤศจิกายน 2561 GWL. -1.50 m

Depth (m)	Sample No.	Type Of Sample	Sample Distance	Recovery	Soil Description	Graphic Log	o Water Content (%) x Plastic Limit (%) + Liquid Limit (%)					◇ SPT - N (Blows/ft)			Soil Shear Strength o UCS □ FVT x PP △ TV (t/m ²)			Total Density (t/m ³) ▲		
							20	40	60	80	100	25	50	75	3	6	9	1.4	1.8	2.2
31	10	SS			(Same as Above) Dense to Very Dense Poorly-graded SAND, brown (SP)		○						◇	62						
32	11	WO					○						◇	59						
33		SS																		
34	12	WO					○						◇	69						
35	13	SS					○						◇	67						
36		WO																		
37	14	SS		No Recovery									◇	68						
38		WO																		
39	15	SS			Very Dense Clayey SAND, brown (SC)		⊗	+					◇	53						
40		WO																		
41	16	SS			Very Dense Poorly-graded SAND, brown (SP)		○						◇	50/5"						
42		WO																		
43	17	SS					○						◇	50/5"						
44		WO																		
45	18	SS					○						82	◇						
46		WO																		
47	19	SS					○						86	◇						
48		WO																		
49	20	SS					○						◇	50/6"						
50		WO																		
51	21	SS					○						◇	50/6"						
52		WO																		
53	22	SS		No Recovery									◇	50/5"						
54		WO																		
55	23	SS					○						◇	50/5"						
56		WO																		
57	24	SS		No Recovery									◇	50/5"						
58		WO																		
59	25	SS			Very Dense Clayey SAND, brown (SC) and Clayey Silty SAND (SC-SM) @SS-26		○						◇	50/6"						
60		WO					⊗	+					◇	50/5"						
	26	SS					⊗	+					◇	50/5"						
		WO																		
	27	SS					⊗	+					◇	50/6"						
		WO																		
	28	SS					⊗	+					◇	72						
		WO																		
	29	SS					⊗	+					◇	68						
		WO																		
	30	SS					⊗	+					◇	68						

END OF BORING (60.45) m

