

Article

# Three-Dimensional Stratigraphic Structure and Property Collaborative Modeling in Urban Engineering Construction

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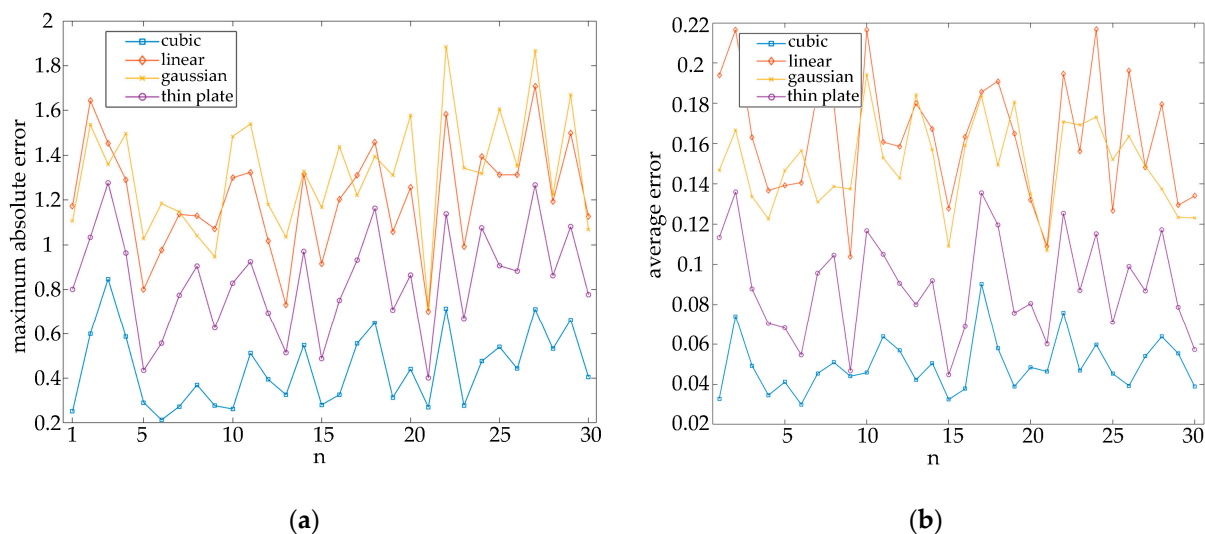
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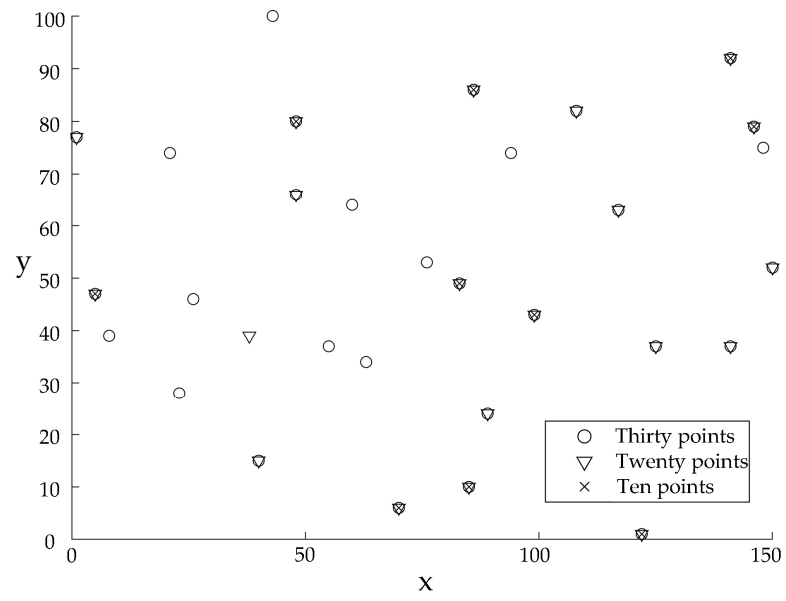
## Supplementary Materials

**Table S1.** Commonly used RBFs.

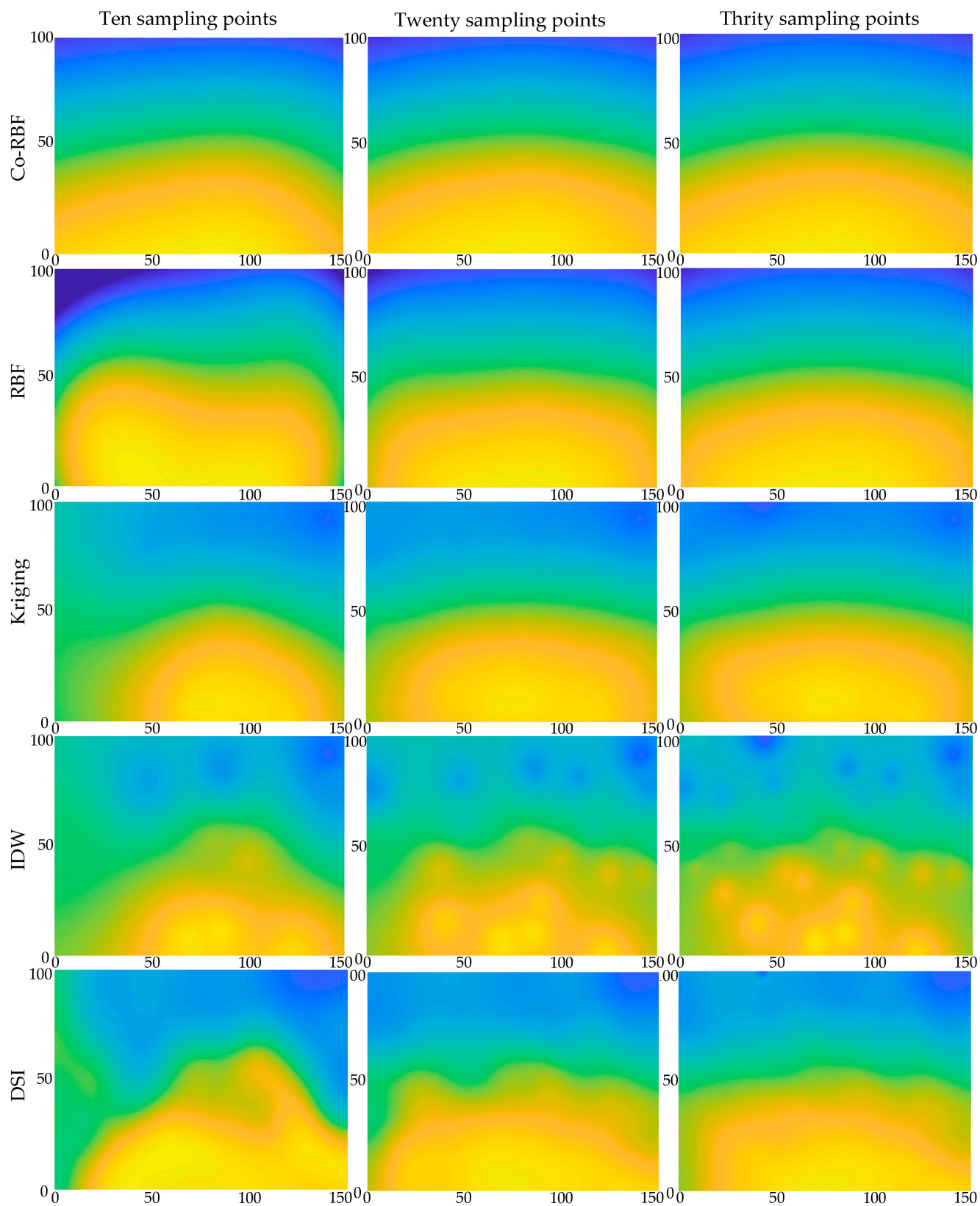
Basis function	Definition
Gaussian distribution function	$\varphi(r) = \exp(-r^2/\beta^2)$
Multi-quadric function (MQ)	$\varphi(r) = (r^2 + \beta^2)^{1/2}$
Inverse multi-quadric function (IMQ)	$\varphi(r) = (r^2 + \beta^2)^{-1/2}$
Thin plate spline (TPS)	$\varphi(r) = r^{2k-d} \log r$ or $\varphi(r) = r^{2k-d}$
Cubic function	$\varphi(r) = r^3$
Linear function	$\varphi(r) = r$



**Figure S1.** Basis function comparison of MRBF interpolation performance of (a) maximum absolute error and (b) average error.



**Figure S2.** Sampling points' numbers of 10, 20 and 30.



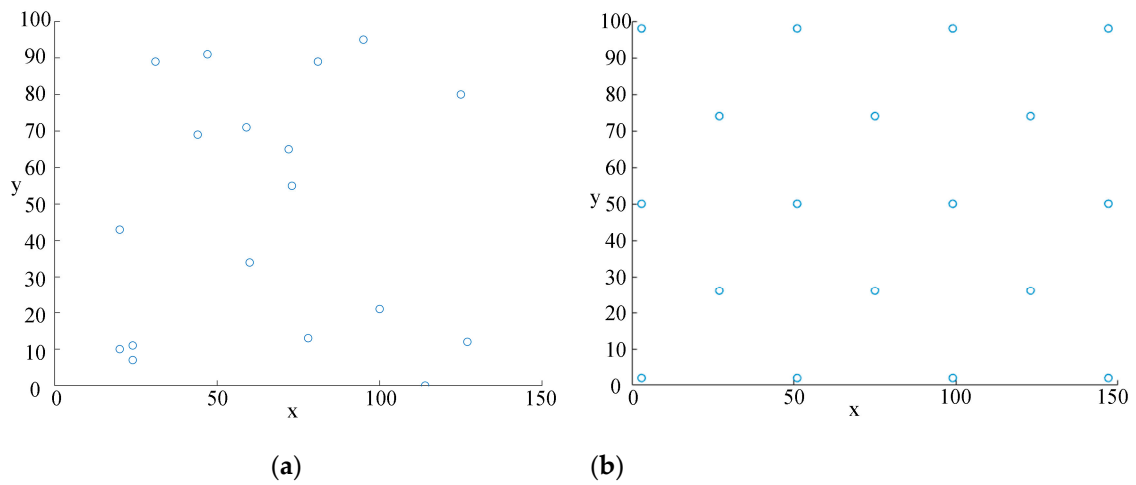
**Figure S3.** Interpolation results of different methods with different numbers of sampling points.

**Table S2.** Performance of different interpolation methods with different number of sampling points.

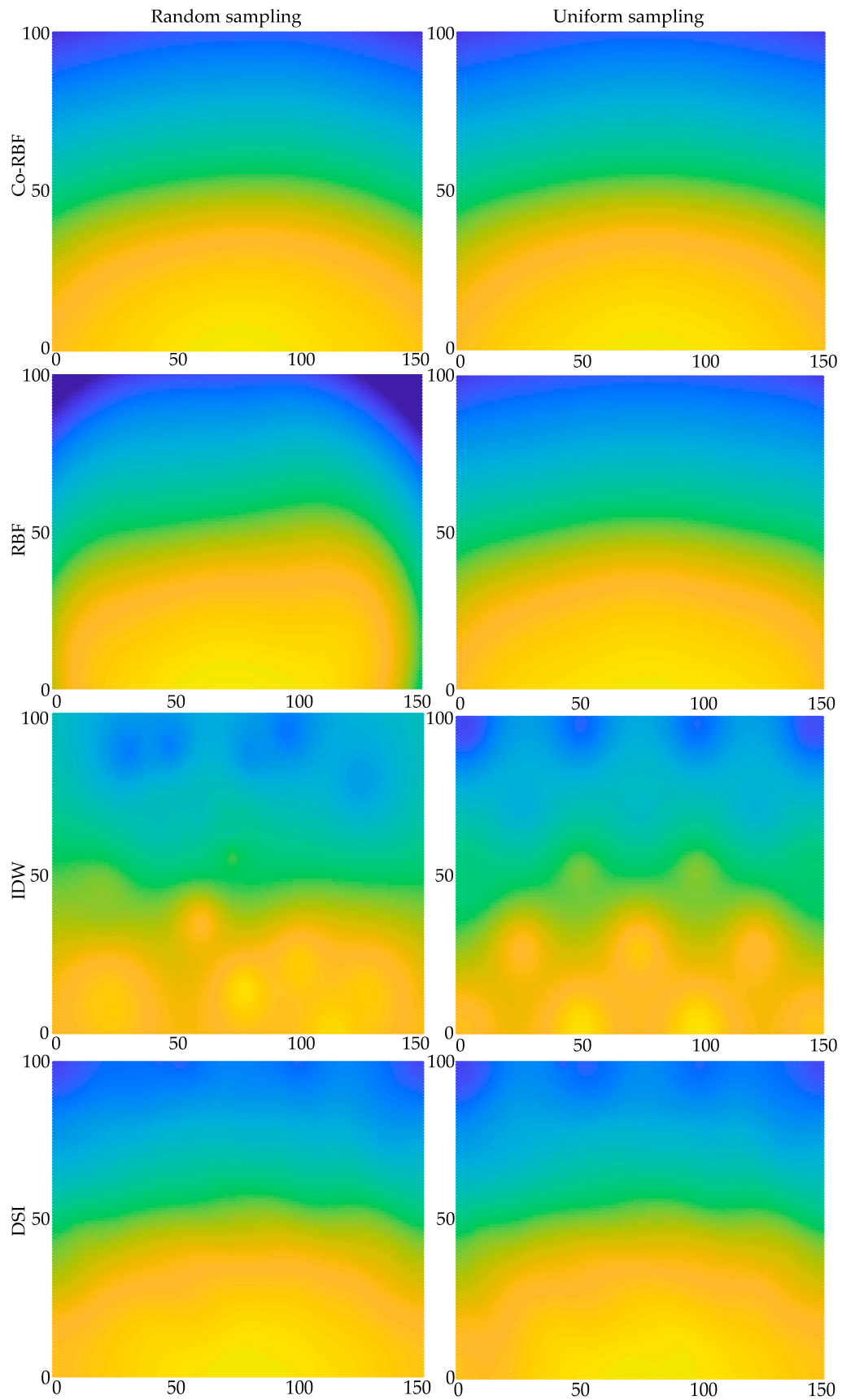
Number of sampling points	Method	MABS	MAE	MSE
10	Co-RBF	<b>0.667</b>	<b>0.117</b>	<b>0.025</b>
	RBF	6.529	0.500	0.649
	Kriging	4.149	0.638	0.800
	IDW	4.429	0.829	1.167
	DSI	4.819	0.732	1.042
20	Co-RBF	<b>0.390</b>	<b>0.041</b>	<b>0.004</b>
	RBF	1.250	0.093	0.023
	Kriging	2.501	0.254	0.195
	IDW	3.653	0.179	0.945
	DSI	2.214	0.294	0.227
30	Co-RBF	<b>0.437</b>	<b>0.007</b>	<b>0.003</b>
	RBF	0.606	0.010	0.005
	Kriging	2.049	0.042	0.091
	IDW	3.666	0.178	0.875
	DSI	2.445	0.268	0.238

**Table S3.** Fitting parameters for OK spherical variogram function.

Number of sampling points	Function	Parameters		
		$c_0$	$c$	$a$
10	$y = \begin{cases} c_0 + c \left( \frac{3x}{2a} - \frac{x^3}{2a^3} \right) & 0 < x \leq a \\ c_0 + c & x > a \end{cases}$	-3.8881	13.7040	105.0105
20		-0.9241	9.7158	104.5785
30		-1.5618	8.4799	103.2386



**Figure S4.** (a) Random vs. (b) uniform spatial distributions of 18 sampling points.



**Figure S5.** Interpolation results for each method with randomly and uniformly spatial distributed sampling points.

**Table S4.** Performances of different interpolation methods with different spatially distributed sampling points.

Type of sampling	Methods	MABS	MAE	RMSE
Uniform sampling	Co-RBF	0.158	0.024	0.001
	RBF	0.182	0.039	0.003
	IDW	1.992	0.139	0.438
	DSI	1.364	0.122	0.042
Random sampling	Co-RBF	0.351	0.035	0.003
	RBF	5.044	0.297	0.347
	Kriging	0.286	0.071	0.007
	IDW	3.734	0.145	0.671
	DSI	1.134	0.085	0.023

**Table S5.** Buildings' workloads.

No.	Building	Floor	Height(m)	Basement	Elevation (m)	Structure Type	Maximum axial force of single column (kN)
1	1#	24F	72	2F	87.3	shear wall	2000
2	2#	24F	72	2F	87.3	shear wall	2000
3	3#	19F	57	2F	87.3	shear wall	2000

**Table S6.** Standard values of ultimate lateral resistance and ultimate end resistance.

Stratum	$q_{sik}$	$q_{pk}$
Plain fill soil( $Q_4^{ml}$ )	/	/
Silty clay( $Q_4^{al}$ )	100	/
Gravelly sand( $Q_4^{al}$ )	110	/
Clay( $Q_4^{el}$ )	60	/
Fully weathered mudstone(E)	80	/
Strongly weathered mudstone(E)	180	6000

**Table S7.** Characteristic values of pile bearing capacity of building 1#.

Pile No.	Position			Thickness(m)				Pile bearing capacity(kN)	
	X	Y	Z	gravelly sand (Q <sub>4<sup>al</sup></sub> )	clay (Q <sub>4<sup>el</sup></sub> )	Fully weathered mudstone	Strongly weathered mudstone	Standard value	Characteristic value
1	72804.43	49346.13	57.35	6.47	4.41	9.77	4.35	5051.33	2525.67
2	72802.45	49346.35	57.79	6.32	4.15	9.73	4.79	5122.32	2561.16
3	72813.05	49343.2	55.58	5.73	6.46	10.23	2.58	4673.80	2336.90
4	72806.41	49345.92	56.96	6.58	4.73	9.74	3.96	4984.90	2492.45
5	72813.27	49345.18	55.84	6.65	5.79	9.72	2.84	4779.67	2389.84
6	72810.84	49345.45	56.18	6.65	5.47	9.70	3.18	4843.54	2421.77
7	72808.4	49345.71	56.55	6.64	5.08	9.73	3.55	4913.66	2456.83
8	72810.62	49343.46	55.95	5.70	6.10	10.25	2.95	4742.74	2371.37
9	72812.84	49341.21	55.36	4.79	7.16	10.69	2.36	4573.11	2286.56
10	72810.41	49341.47	55.73	4.77	6.76	10.74	2.73	4643.00	2321.50
11	72807.98	49341.73	56.26	4.71	6.33	10.70	3.26	4737.20	2368.60
12	72802.23	49344.36	57.90	5.48	4.66	9.97	4.90	5083.13	2541.57
13	72808.19	49343.72	56.39	5.65	5.71	10.24	3.39	4821.14	2410.57
14	72806.2	49343.93	56.87	5.58	5.35	10.21	3.87	4904.72	2452.36
15	72804.22	49344.15	57.43	5.51	4.97	10.09	4.43	5001.37	2500.68
16	72811.26	49349.41	56.64	8.43	4.30	8.63	3.64	5035.97	2517.98
17	72808.83	49349.68	56.87	8.44	3.93	8.76	3.87	5084.07	2542.03
18	72806.84	49349.89	57.09	8.39	3.61	8.90	4.09	5126.62	2563.31
19	72813.7	49349.16	56.53	8.42	4.52	8.53	3.53	5011.13	2505.56
20	72807.05	49351.88	57.18	9.16	3.11	8.54	4.18	5193.15	2596.57
21	72805.07	49352.09	57.31	9.12	2.82	8.74	4.31	5220.98	2610.49
22	72803.09	49352.3	57.47	8.87	2.66	9.00	4.47	5238.38	2619.19
23	72804.86	49350.11	57.32	8.22	3.36	9.09	4.32	5162.90	2581.45
24	72806.63	49347.91	57.01	7.51	4.16	9.32	4.01	5055.22	2527.61
25	72804.64	49348.12	57.33	7.33	3.91	9.43	4.33	5105.25	2552.62
26	72802.66	49348.33	57.69	7.21	3.58	9.51	4.69	5166.32	2583.16
27	72808.62	49347.69	56.74	7.54	4.48	9.23	3.74	5004.42	2502.21
28	72802.88	49350.32	57.59	8.10	3.08	9.23	4.59	5207.30	2603.65
29	72813.48	49347.17	56.19	7.56	5.12	9.13	3.19	4898.93	2449.47
30	72811.05	49347.43	56.41	7.56	4.87	9.16	3.41	4941.52	2470.76
31	72805.98	49341.95	56.80	4.63	5.96	10.61	3.80	4829.60	2414.80
32	72801.38	49336.42	58.16	2.38	6.87	10.58	5.16	4909.01	2454.51
33	72811.98	49333.27	55.48	1.54	9.90	11.08	2.48	4352.44	2176.22
34	72809.55	49333.53	55.84	1.55	9.51	11.11	2.84	4421.46	2210.73
35	72803.36	49336.21	57.59	2.22	7.32	10.87	4.59	4798.01	2399.00
36	72809.77	49335.52	55.68	2.27	8.77	11.28	2.68	4454.78	2227.39
37	72807.34	49335.78	56.32	2.26	8.18	11.24	3.32	4572.79	2286.39
38	72805.34	49335.99	56.96	2.22	7.75	11.08	3.96	4684.35	2342.17
39	72807.12	49333.79	56.49	1.51	8.90	11.10	3.49	4541.13	2270.57
40	72809.34	49331.55	56.08	0.85	10.22	10.85	3.08	4404.64	2202.32
41	72806.91	49331.81	56.70	0.79	9.59	10.91	3.70	4519.74	2259.87
42	72804.92	49332.02	57.21	0.84	9.02	10.92	4.21	4619.37	2309.68
43	72811.77	49331.29	55.73	0.92	10.51	10.85	2.73	4343.53	2171.77



44	72805.13	49334.01	57.13	1.48	8.39	11.01	4.13	4656.34	2328.17
45	72803.15	49334.22	57.67	1.58	7.87	10.87	4.67	4762.67	2381.34
46	72801.16	49334.43	58.19	1.77	7.41	10.63	5.19	4868.06	2434.03
47	72807.76	49339.75	56.21	3.86	6.89	11.04	3.21	4671.31	2335.66
48	72805.77	49339.96	56.81	3.84	6.47	10.88	3.81	4778.32	2389.16
49	72803.79	49340.18	57.47	3.77	6.12	10.64	4.47	4889.02	2444.51
50	72810.2	49339.49	55.60	3.87	7.39	11.14	2.60	4560.79	2280.39
51	72804	49342.16	57.44	4.50	5.63	10.43	4.44	4934.82	2467.41
52	72802.02	49342.38	57.98	4.59	5.24	10.19	4.98	5035.46	2517.73
53	72812.63	49339.23	55.22	3.88	7.83	11.07	2.22	4488.06	2244.03
54	72801.8	49340.39	58.03	3.81	5.79	10.36	5.03	4990.28	2495.14
55	72803.58	49338.19	57.51	2.97	6.72	10.80	4.51	4839.00	2419.50
56	72801.59	49338.41	58.11	3.08	6.32	10.49	5.11	4950.83	2475.41
57	72812.2	49335.25	55.29	2.28	9.18	11.25	2.29	4380.24	2190.12
58	72805.56	49337.98	56.84	2.99	7.10	11.06	3.84	4723.60	2361.80
59	72812.41	49337.24	55.19	3.05	8.52	11.24	2.19	4422.65	2211.33
60	72809.98	49337.5	55.58	3.01	8.08	11.33	2.58	4495.76	2247.88
61	72807.55	49337.77	56.22	3.03	7.52	11.23	3.22	4614.60	2307.30
62	72812.41	49323.18	57.32		11.26	9.42	4.32	4526.26	2263.13
63	72812.2	49321.2	57.80		11.18	9.02	4.80	4604.92	2302.46
64	72811.98	49319.21	58.26		11.07	8.67	5.26	4680.14	2340.07
65	72812.84	49327.15	56.40		11.37	10.23	3.40	4378.75	2189.38
66	72813.48	49333.11	55.35	1.54	9.98	11.13	2.35	4329.64	2164.82
67	72813.26	49331.13	55.62	0.93	10.56	10.89	2.62	4324.96	2162.48
68	72813.05	49329.14	55.98	0.30	11.12	10.60	2.98	4335.71	2167.86
69	72811.77	49317.23	58.68		10.91	8.41	5.68	4751.14	2375.57
70	72809.84	49299.35	60.24		7.82	9.94	7.24	5092.54	2546.27
71	72809.63	49297.37	60.22		7.48	10.29	7.22	5101.42	2550.71
72	72809.41	49295.38	60.20		7.21	10.59	7.20	5106.46	2553.23
73	72810.27	49303.32	60.20		8.60	9.20	7.20	5062.97	2531.48
74	72810.91	49309.28	59.87		9.79	8.34	6.87	4972.59	2486.29
75	72810.7	49307.3	60.06		9.38	8.56	7.06	5015.59	2507.80
76	72810.48	49305.31	60.13		9.00	8.86	7.13	5039.30	2519.65
85	72814.97	49347.01	56.05	7.49	5.25	9.21	3.05	4869.98	2434.99
86	72814.76	49345.02	55.70	6.57	5.92	9.80	2.70	4750.37	2375.18
87	72814.54	49343.04	55.42	5.69	6.59	10.30	2.42	4642.59	2321.29
88	72815.61	49352.96	57.23	9.90	3.53	7.34	4.23	5221.42	2610.71
90	72816.04	49356.94	57.95	11.12	2.71	6.22	4.95	5417.71	2708.86
91	72815.82	49354.95	57.61	10.58	3.06	6.75	4.61	5328.19	2664.10
92	72809.2	49293.4	60.16		7.00	10.84	7.16	5106.95	2553.47
93	72805.5	49356.06	57.21	10.50	2.06	8.23	4.21	5292.60	2646.30
94	72803.52	49356.27	57.29	10.33	1.86	8.52	4.29	5304.10	2652.05
95	72814.12	49353.13	57.23	9.97	3.46	7.35	4.23	5226.91	2613.45
96	72807.48	49355.85	57.17	10.53	2.33	7.97	4.17	5280.36	2640.18
97	72814.34	49355.11	57.56	10.62	3.01	6.81	4.56	5323.67	2661.84
98	72811.9	49355.38	57.40	10.60	2.84	7.16	4.40	5303.90	2651.95
99	72809.47	49355.63	57.26	10.55	2.61	7.58	4.26	5286.47	2643.24
100	72811.69	49353.39	57.19	10.04	3.22	7.55	4.19	5231.89	2615.94
101	72813.91	49351.14	56.87	9.24	3.96	7.93	3.87	5120.80	2560.40



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102	72811.48	49351.4	56.92	9.28	3.72	8.07	3.92	5138.56	2569.28
103	72809.04	49351.66	56.98	9.21	3.45	8.35	3.98	5153.38	2576.69
104	72803.3	49354.29	57.39	9.62	2.24	8.75	4.39	5274.36	2637.18
105	72809.26	49353.65	57.11	9.98	2.96	7.95	4.11	5224.76	2612.38
106	72807.27	49353.86	57.22	9.93	2.67	8.17	4.22	5248.66	2624.33
107	72805.28	49354.08	57.27	9.86	2.39	8.48	4.27	5262.57	2631.29
108	72812.33	49359.34	57.62	11.52	2.25	6.61	4.62	5400.35	2700.18
109	72809.9	49359.61	57.33	11.46	2.01	7.20	4.33	5359.37	2679.69
110	72807.91	49359.82	57.20	11.45	1.76	7.59	4.20	5345.36	2672.68
111	72804.16	49362.23	57.11	11.58	1.23	8.08	4.11	5354.35	2677.17
112	72810.11	49361.59	57.35	11.70	1.80	7.15	4.35	5380.44	2690.22
113	72808.13	49361.8	57.19	11.65	1.59	7.56	4.19	5359.60	2679.80
114	72806.14	49362.02	57.14	11.67	1.38	7.81	4.14	5358.82	2679.41
115	72805.92	49360.03	57.15	11.44	1.51	7.90	4.15	5345.24	2672.62
116	72807.7	49357.84	57.17	11.03	2.00	7.80	4.17	5313.82	2656.91
117	72805.71	49358.05	57.18	10.99	1.77	8.06	4.18	5320.79	2660.39
118	72803.73	49358.26	57.23	10.83	1.60	8.34	4.23	5326.42	2663.21
119	72809.68	49357.62	57.30	11.02	2.31	7.37	4.30	5323.00	2661.50
120	72803.94	49360.25	57.16	11.30	1.34	8.19	4.16	5346.60	2673.30
121	72814.55	49357.1	57.75	11.08	2.71	6.46	4.75	5385.26	2692.63
122	72812.12	49357.36	57.53	11.08	2.55	6.84	4.53	5356.11	2678.06
123	72802.94	49332.23	57.75	0.96	8.48	10.82	4.75	4726.19	2363.09
124	72806.35	49303.75	59.81		8.76	9.43	6.81	4996.53	2498.26
125	72803.91	49304.01	59.48		8.77	9.75	6.48	4944.31	2472.15
126	72801.93	49304.22	59.22		8.90	9.87	6.22	4899.75	2449.88
127	72808.78	49303.48	60.11		8.67	9.21	7.11	5046.56	2523.28
128	72802.14	49306.21	59.13		9.02	9.85	6.13	4881.11	2440.56
129	72800.16	49306.42	58.87		9.16	9.98	5.87	4835.47	2417.74
130	72798.17	49306.63	58.66		9.40	9.94	5.66	4795.52	2397.76
131	72799.95	49304.44	58.97		9.08	9.95	5.97	4854.65	2427.33
132	72801.72	49302.23	59.28		8.74	9.98	6.28	4914.43	2457.21
133	72799.73	49302.45	59.04		8.94	10.02	6.04	4869.60	2434.80
134	72797.74	49302.66	58.86		9.22	9.92	5.86	4831.83	2415.91
135	72803.7	49302.02	59.56		8.49	9.95	6.56	4965.69	2482.85
136	72797.96	49304.65	58.76		9.31	9.93	5.76	4813.32	2406.66
137	72808.57	49301.5	60.19		8.26	9.55	7.19	5071.42	2535.71
138	72806.13	49301.76	59.90		8.38	9.72	6.90	5021.95	2510.98
139	72800.59	49310.39	58.67		9.43	9.91	5.67	4796.02	2398.01
140	72798.6	49310.61	58.49		9.51	10.01	5.49	4764.92	2382.46
141	72809.21	49307.46	59.94		9.49	8.58	6.94	4993.35	2496.68
142	72802.57	49310.18	58.88		9.60	9.52	5.88	4824.37	2412.19
143	72809.42	49309.44	59.79		9.92	8.29	6.79	4956.54	2478.27
144	72806.99	49309.7	59.43		9.97	8.60	6.43	4898.57	2449.29
145	72804.55	49309.96	59.12		9.75	9.13	6.12	4857.20	2428.60
146	72806.77	49307.72	59.61		9.56	8.83	6.61	4940.12	2470.06
147	72808.99	49305.47	60.02		9.11	8.87	7.02	5018.32	2509.16
148	72806.56	49305.73	59.70		9.17	9.13	6.70	4966.15	2483.07
149	72804.13	49305.99	59.38		9.18	9.44	6.38	4915.33	2457.66
150	72798.38	49308.62	58.56		9.47	9.97	5.56	4778.21	2389.10

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151	72804.34	49307.98	59.28		9.53	9.19	6.28	4889.07	2444.53
152	72802.36	49308.2	59.03		9.38	9.59	6.03	4854.86	2427.43
153	72800.38	49308.41	58.78		9.30	9.92	5.78	4817.64	2408.82
154	72808.35	49299.52	60.22		7.88	9.90	7.22	5087.86	2543.93
155	72802.85	49294.08	59.73		7.79	10.47	6.73	5014.84	2507.42
156	72800.86	49294.29	59.51		8.16	10.32	6.51	4968.48	2484.24
157	72798.88	49294.51	59.30		8.55	10.15	6.30	4923.14	2461.57
158	72805.28	49293.82	59.99		7.37	10.63	6.99	5068.90	2534.45
159	72799.09	49296.49	59.25		8.56	10.19	6.25	4914.47	2457.23
160	72797.1	49296.71	59.07		8.98	9.95	6.07	4873.21	2436.61
161	72807.71	49293.56	60.16		7.09	10.74	7.16	5104.41	2552.20
162	72796.89	49294.72	59.13		8.94	9.93	6.13	4883.22	2441.61
163	72798.66	49292.52	59.33		8.49	10.17	6.33	4930.12	2465.06
164	72796.68	49292.73	59.15		8.93	9.92	6.15	4888.02	2444.01
165	72803.52	49356.27	57.29	10.33	1.86	8.52	4.29	5304.10	2652.05
166	72800.65	49292.31	59.55		8.08	10.37	6.55	4977.53	2488.77
167	72807.5	49291.57	60.16		6.97	10.87	7.16	5106.91	2553.45
168	72805.07	49291.83	59.95		7.28	10.77	6.95	5065.43	2532.72
169	72802.63	49292.09	59.76		7.68	10.56	6.76	5023.13	2511.57
170	72797.53	49300.68	58.92		9.14	9.94	5.92	4845.48	2422.74
171	72808.14	49297.53	60.21		7.55	10.24	7.21	5097.32	2548.66
172	72805.71	49297.79	60.00		7.79	10.20	7.00	5057.28	2528.64
173	72799.52	49300.46	59.10		8.81	10.09	6.10	4883.31	2441.66
174	72805.92	49299.77	59.96		8.07	9.97	6.96	5041.34	2520.67
175	72803.49	49300.04	59.64		8.26	10.10	6.64	4984.78	2492.39
176	72801.5	49300.25	59.35		8.53	10.12	6.35	4931.24	2465.62
177	72803.27	49298.05	59.68		8.07	10.25	6.68	4998.28	2499.14
178	72805.49	49295.8	60.01		7.56	10.43	7.01	5066.22	2533.11
179	72803.06	49296.07	59.71		7.90	10.38	6.71	5008.28	2504.14
180	72801.08	49296.28	59.47		8.21	10.32	6.47	4959.81	2479.90
181	72807.93	49295.54	60.20		7.28	10.52	7.20	5104.08	2552.04
182	72801.29	49298.27	59.42		8.35	10.23	6.42	4947.27	2473.63
183	72799.3	49298.48	59.17		8.67	10.15	6.17	4898.87	2449.43
184	72797.32	49298.69	59.01		9.06	9.93	6.01	4860.62	2430.31
185	72810.91	49323.34	57.30		11.30	9.40	4.30	4521.61	2260.81
186	72808.48	49323.6	57.40		10.96	9.64	4.40	4549.51	2274.76
187	72806.05	49323.86	57.58		10.38	10.04	4.58	4594.59	2297.30
188	72800.3	49326.49	58.22		9.24	10.54	5.22	4730.85	2365.42
189	72806.27	49325.85	57.39		10.41	10.20	4.39	4563.87	2281.94
190	72804.28	49326.06	57.71		9.83	10.46	4.71	4633.47	2316.74
191	72802.3	49326.28	58.00		9.41	10.59	5.00	4691.39	2345.70
192	72804.06	49324.08	57.90		9.82	10.28	4.90	4662.86	2331.43
193	72805.84	49321.88	57.82		10.31	9.86	4.82	4635.77	2317.88
194	72803.85	49322.09	57.98		9.91	10.11	4.98	4673.29	2336.64
195	72801.87	49322.3	58.12		9.56	10.32	5.12	4705.22	2352.61
196	72808.27	49321.62	57.75		10.85	9.40	4.75	4606.95	2303.48
197	72802.08	49324.29	58.09		9.48	10.43	5.09	4702.96	2351.48
198	72800.09	49324.51	58.21		9.31	10.48	5.21	4728.14	2364.07
199	72810.7	49321.36	57.73		11.25	9.02	4.73	4591.66	2295.83

200	72804.7	49330.04	57.39	0.24	9.61	10.76	4.39	4600.19	2300.09
201	72802.72	49330.25	57.81	0.43	9.01	10.75	4.81	4693.88	2346.94
202	72800.73	49330.46	58.22	0.76	8.38	10.64	5.22	4794.23	2397.12
203	72806.7	49329.82	56.95	0.17	10.19	10.68	3.95	4510.93	2255.47
204	72800.95	49332.45	58.20	1.26	7.90	10.65	5.20	4829.20	2414.60
205	72811.55	49329.3	56.07	0.31	11.09	10.53	3.07	4350.78	2175.39
206	72809.13	49329.56	56.44	0.22	10.82	10.53	3.44	4411.98	2205.99
207	72811.34	49327.31	56.45		11.41	10.14	3.45	4386.06	2193.03
208	72800.52	49328.48	58.21	0.31	8.88	10.59	5.21	4756.57	2378.29
209	72811.13	49325.33	56.84		11.41	9.76	3.84	4445.94	2222.97
210	72808.7	49325.59	57.08		11.01	9.91	4.08	4497.25	2248.62
211	72802.51	49328.26	57.88		9.44	10.68	4.88	4672.34	2336.17
212	72808.91	49327.57	56.73		11.02	10.25	3.73	4441.91	2220.95
213	72806.48	49327.84	57.16		10.38	10.46	4.16	4529.80	2264.90
214	72804.49	49328.05	57.55		9.87	10.58	4.55	4606.28	2303.14
215	72799.88	49322.52	58.24		9.38	10.38	5.24	4730.09	2365.05
216	72807.41	49313.68	59.03		10.39	8.58	6.03	4822.99	2411.50
217	72804.98	49313.94	58.78		10.09	9.13	5.78	4792.59	2396.30
218	72803	49314.15	58.62		9.88	9.50	5.62	4774.48	2387.24
219	72809.85	49313.41	59.30		10.50	8.20	6.30	4861.09	2430.55
220	72803.21	49316.14	58.48		9.90	9.62	5.48	4752.26	2376.13
221	72801.23	49316.35	58.38		9.65	9.98	5.38	4743.11	2371.56
222	72799.24	49316.56	58.31		9.57	10.12	5.31	4735.16	2367.58
223	72801.02	49314.36	58.47		9.66	9.86	5.47	4758.29	2379.14
224	72802.78	49312.16	58.74		9.75	9.50	5.74	4797.81	2398.91
225	72800.8	49312.38	58.55		9.57	9.89	5.55	4772.58	2386.29
226	72798.81	49312.59	58.42		9.55	10.03	5.42	4753.35	2376.68
227	72804.77	49311.95	58.94		9.94	9.12	5.94	4823.32	2411.66
228	72799.03	49314.58	58.35		9.59	10.06	5.35	4741.55	2370.77
229	72809.63	49311.43	59.57		10.24	8.19	6.57	4912.11	2456.05
230	72807.2	49311.69	59.22		10.32	8.47	6.22	4854.40	2427.20
231	72801.66	49320.32	58.16		9.62	10.22	5.16	4710.93	2355.46
232	72799.67	49320.54	58.24		9.45	10.31	5.24	4728.65	2364.32
233	72810.27	49317.38	58.62		10.99	8.39	5.62	4739.30	2369.65
234	72803.64	49320.11	58.12		9.91	9.97	5.12	4694.84	2347.42
235	72810.49	49319.37	58.17		11.16	8.67	5.17	4663.02	2331.51
236	72808.05	49319.63	58.11		10.79	9.10	5.11	4664.92	2332.46
237	72805.63	49319.89	58.13		10.23	9.64	5.13	4687.10	2343.55
238	72807.84	49317.65	58.47		10.64	8.88	5.47	4727.05	2363.53
239	72810.06	49315.4	58.99		10.73	8.28	5.99	4805.42	2402.71
240	72807.63	49315.66	58.74		10.56	8.70	5.74	4771.70	2385.85
241	72805.2	49315.92	58.63		10.17	9.20	5.63	4767.66	2383.83
242	72799.45	49318.55	58.26		9.51	10.23	5.26	4728.93	2364.47
243	72805.41	49317.91	58.39		10.20	9.42	5.39	4727.72	2363.86
244	72803.42	49318.12	58.35		9.89	9.76	5.35	4730.96	2365.48
245	72801.44	49318.34	58.32		9.60	10.08	5.32	4736.67	2368.34

**Table S8.** Characteristic values of pile bearing capacity of building 2#.

Pile No.	Position			Thickness(m)			Pile bearing capacity(kN)		
	X	Y	Z	gravelly sand (Q4al)	clay (Q4el)	Fully weathered mudstone	Strongly weathered mudstone	Standard value	Characteristic value
77	72759.08	49300.91	56.27		8.87	12.86	3.27	4436.82	2218.41
78	72756.64	49301.17	56.13		9.16	12.71	3.13	4405.49	2202.75
79	72754.66	49301.38	56.09		9.38	12.53	3.09	4392.22	2196.11
80	72761.51	49300.65	56.47		8.65	12.88	3.47	4474.87	2237.43
81	72754.87	49303.37	56.37		9.09	12.54	3.37	4445.81	2222.91
82	72752.88	49303.58	56.41		9.09	12.49	3.41	4452.12	2226.06
83	72750.9	49303.8	56.48		9.10	12.42	3.48	4462.03	2231.01
84	72752.67	49301.6	56.06		9.56	12.38	3.06	4382.16	2191.08
89	72750.69	49301.81	56.09		9.58	12.33	3.09	4385.73	2192.87
246	72756.86	49303.16	56.40		8.92	12.68	3.40	4456.35	2228.17
256	72767.7	49344.17	58.76		12.38	6.86	5.76	4717.93	2358.97
257	72766.63	49334.24	60.01		10.63	7.36	7.01	4968.77	2484.38
277	72766.41	49332.26	60.14		10.15	7.70	7.14	5005.12	2502.56
278	72761.34	49344.85	58.81		10.70	8.48	5.81	4778.75	2389.37
279	72759.35	49345.07	58.94		9.93	9.13	5.94	4823.40	2411.70
280	72757.37	49345.28	59.04		9.19	9.77	6.04	4862.52	2431.26
281	72763.77	49344.59	58.69		11.51	7.79	5.69	4734.52	2367.26
282	72757.59	49347.27	58.40		9.45	10.15	5.40	4753.79	2376.90
283	72755.59	49347.48	58.50		8.72	10.77	5.50	4792.21	2396.11
284	72766.2	49344.33	58.74		12.12	7.14	5.74	4723.57	2361.78
285	72755.38	49345.49	59.05		8.60	10.36	6.05	4881.43	2440.72
286	72757.16	49343.3	59.65		9.11	9.24	6.65	4960.83	2480.41
287	72755.17	49343.51	59.64		8.56	9.80	6.64	4975.23	2487.62
288	72765.78	49340.36	59.59		11.62	6.79	6.59	4872.66	2436.33
289	72759.14	49343.08	59.54		9.80	8.66	6.54	4921.83	2460.92
290	72765.99	49342.34	59.08		11.95	6.97	6.08	4781.21	2390.61
291	72763.56	49342.61	59.21		11.31	7.48	6.21	4822.31	2411.16
292	72761.13	49342.87	59.41		10.53	8.06	6.41	4878.14	2439.07
293	72761.77	49348.82	57.79		10.69	9.52	4.79	4618.76	2309.38
294	72759.78	49349.04	57.81		10.10	10.10	4.81	4640.09	2320.05
295	72757.8	49349.25	57.90		9.39	10.71	4.90	4677.24	2338.62
296	72764.2	49348.56	57.84		11.39	8.77	4.84	4604.49	2302.24
297	72765.13	49320.34	59.47		7.97	10.55	6.47	4968.42	2484.21
298	72764.06	49310.41	57.78		8.07	12.15	4.78	4699.36	2349.68
299	72766.63	49348.3	57.91		11.94	8.16	4.91	4597.70	2298.85
300	72755.81	49349.46	57.94		8.93	11.13	4.94	4696.83	2348.41
301	72763.98	49346.58	58.27		11.60	8.13	5.27	4664.68	2332.34
302	72761.55	49346.84	58.26		10.81	8.93	5.26	4689.30	2344.65
303	72759.57	49347.05	58.32		10.17	9.51	5.32	4718.09	2359.05
304	72766.42	49346.32	58.35		12.13	7.52	5.35	4661.29	2330.64
305	72767.48	49342.18	59.10		12.21	6.69	6.10	4775.85	2387.92
306	72767.27	49340.2	59.41		11.94	6.66	6.41	4833.08	2416.54
307	72767.05	49338.21	59.68		11.59	6.73	6.68	4886.96	2443.48
369	72763.34	49340.62	59.76		11.06	7.18	6.76	4915.69	2457.85

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370	72758.35	49317.05	60.17	7.70	10.13	7.17	5085.65	2542.83
371	72756.37	49317.27	60.80	7.80	9.40	7.80	5181.24	2590.62
372	72754.38	49317.48	61.08	8.00	8.92	8.08	5219.86	2609.93
373	72760.78	49316.79	59.64	7.63	10.73	6.64	5005.44	2502.72
374	72754.59	49319.47	61.64	7.95	8.41	8.64	5308.52	2654.26
375	72752.61	49319.68	61.86	8.24	7.90	8.86	5334.15	2667.07
376	72763.22	49316.53	59.08	7.72	11.20	6.08	4914.92	2457.46
377	72752.39	49317.7	61.14	8.34	8.51	8.14	5218.55	2609.28
378	72754.16	49315.5	60.38	8.11	9.51	7.38	5106.44	2553.22
379	72752.18	49315.71	60.39	8.42	9.18	7.39	5098.71	2549.36
380	72762.79	49312.56	58.25	7.81	11.94	5.25	4781.65	2390.82
381	72756.16	49315.28	60.07	7.88	10.06	7.07	5064.74	2532.37
382	72763	49314.55	58.67	7.72	11.62	5.67	4849.49	2424.75
383	72760.57	49314.81	59.14	7.66	11.20	6.14	4926.16	2463.08
384	72758.14	49315.07	59.63	7.75	10.63	6.63	4999.20	2499.60
385	72753.03	49323.65	62.69	8.34	6.97	9.69	5461.80	2730.90
386	72763.64	49320.5	59.82	7.81	10.37	6.82	5028.29	2514.14
387	72761.21	49320.77	60.40	7.74	9.86	7.40	5121.96	2560.98
388	72755.02	49323.44	62.50	8.09	7.42	9.50	5439.56	2719.78
389	72761.42	49322.75	60.71	7.91	9.38	7.71	5164.68	2582.34
390	72758.99	49323.01	61.36	7.95	8.68	8.36	5265.87	2632.93
391	72757.01	49323.23	61.91	8.07	8.01	8.91	5348.42	2674.21
392	72758.78	49321.03	61.06	7.80	9.14	8.06	5223.67	2611.84
393	72761	49318.78	60.09	7.64	10.27	7.09	5075.46	2537.73
394	72758.56	49319.04	60.72	7.68	9.60	7.72	5173.25	2586.62
395	72756.58	49319.25	61.24	7.77	8.99	8.24	5252.53	2626.27
396	72763.43	49318.52	59.52	7.76	10.73	6.52	4981.78	2490.89
397	72756.79	49321.24	61.68	7.84	8.48	8.68	5318.98	2659.49
398	72754.8	49321.45	62.14	7.95	7.91	9.14	5388.01	2694.01
399	72752.82	49321.67	62.38	8.24	7.39	9.38	5415.88	2707.94
400	72760.36	49312.82	58.60	7.76	11.64	5.60	4837.80	2418.90
401	72755.3	49307.34	57.37	8.46	12.17	4.37	4623.03	2311.52
402	72753.31	49307.55	57.47	8.53	12.00	4.47	4635.46	2317.73
403	72751.33	49307.77	57.49	8.78	11.73	4.49	4630.77	2315.39
404	72757.28	49307.13	57.35	8.36	12.29	4.35	4622.72	2311.36
405	72751.54	49309.75	58.14	8.71	11.14	5.14	4735.75	2367.87
406	72762.15	49306.6	57.17	8.23	12.60	4.17	4598.86	2299.43
407	72759.72	49306.87	57.24	8.24	12.52	4.24	4608.38	2304.19
408	72761.94	49304.62	56.86	8.40	12.74	3.86	4545.07	2272.54
409	72751.11	49305.78	56.92	8.88	12.20	3.92	4539.34	2269.67
410	72761.72	49302.63	56.62	8.56	12.82	3.62	4501.47	2250.73
411	72759.29	49302.89	56.48	8.70	12.83	3.48	4474.77	2237.38
412	72753.1	49305.57	56.88	8.75	12.36	3.88	4536.75	2268.38
413	72759.5	49304.88	56.85	8.45	12.70	3.85	4540.95	2270.48
414	72757.07	49305.14	56.83	8.61	12.56	3.83	4532.86	2266.43
415	72755.09	49305.36	56.79	8.74	12.47	3.79	4522.33	2261.16
416	72762.58	49310.57	57.87	7.94	12.18	4.87	4718.05	2359.02
417	72760.14	49310.84	58.11	7.91	11.98	5.11	4755.82	2377.91
418	72757.71	49311.1	58.42	7.98	11.60	5.42	4802.78	2401.39
419	72751.97	49313.72	59.66	8.50	9.84	6.66	4980.51	2490.25
420	72757.92	49313.08	59.02	7.86	11.12	6.02	4901.07	2450.54

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421	72755.94	49313.3	59.45	8.02	10.53	6.45	4963.72	2481.86
422	72753.95	49313.51	59.61	8.23	10.16	6.61	4981.52	2490.76
423	72755.73	49311.31	58.66	8.15	11.18	5.66	4835.08	2417.54
424	72757.5	49309.11	57.89	8.16	11.95	4.89	4714.50	2357.25
425	72755.51	49309.33	57.96	8.25	11.78	4.96	4722.40	2361.20
426	72753.52	49309.54	58.17	8.44	11.39	5.17	4748.31	2374.15
427	72759.93	49308.85	57.71	8.08	12.22	4.71	4687.50	2343.75
428	72753.74	49311.52	58.86	8.34	10.80	5.86	4860.95	2430.48
429	72751.75	49311.74	58.91	8.60	10.49	5.91	4859.52	2429.76
430	72762.36	49308.59	57.51	8.07	12.43	4.51	4656.24	2328.12
431	72762.7	49334.66	60.87	9.78	7.35	7.87	5130.17	2565.09
432	72760.27	49334.93	61.35	9.35	7.29	8.35	5220.03	2610.01
433	72758.29	49335.14	61.63	8.99	7.38	8.63	5275.15	2637.57
434	72765.14	49334.4	60.39	10.38	7.23	7.39	5036.13	2518.06
435	72754.53	49337.55	61.40	8.51	8.09	8.40	5254.52	2627.26
436	72766.2	49330.27	60.18	9.65	8.17	7.18	5026.80	2513.40
437	72765.98	49328.29	60.17	9.15	8.69	7.17	5040.27	2520.13
438	72756.3	49335.35	61.94	8.64	7.42	8.94	5335.26	2667.63
439	72758.07	49333.15	62.00	8.76	7.24	9.00	5340.48	2670.24
440	72756.09	49333.37	62.38	8.49	7.13	9.38	5407.77	2703.89
441	72754.1	49333.58	62.39	8.39	7.22	9.39	5413.18	2706.59
442	72760.06	49332.94	61.55	8.99	7.46	8.55	5262.89	2631.44
443	72754.31	49335.57	61.96	8.48	7.57	8.96	5342.36	2671.18
444	72764.92	49332.42	60.52	9.91	7.56	7.52	5072.21	2536.10
445	72762.49	49332.68	61.06	9.42	7.52	8.06	5172.84	2586.42
446	72765.56	49338.38	59.85	11.27	6.88	6.85	4924.72	2462.36
447	72763.13	49338.63	60.20	10.71	7.09	7.20	4997.04	2498.52
448	72760.7	49338.9	60.52	10.10	7.37	7.52	5066.13	2533.06
449	72754.95	49341.52	60.21	8.58	9.21	7.21	5064.43	2532.22
450	72760.91	49340.88	59.95	10.29	7.76	6.95	4970.96	2485.48
451	72758.93	49341.09	60.16	9.67	8.17	7.16	5023.19	2511.59
452	72756.95	49341.31	60.23	9.04	8.72	7.23	5054.03	2527.02
453	72758.71	49339.11	60.76	9.51	7.73	7.76	5121.63	2560.81
454	72760.48	49336.91	60.92	9.69	7.39	7.92	5142.34	2571.17
455	72758.5	49337.13	61.18	9.30	7.53	8.18	5194.52	2597.26
456	72756.52	49337.34	61.41	8.86	7.72	8.41	5245.11	2622.56
457	72762.92	49336.65	60.59	10.22	7.19	7.59	5072.67	2536.34
458	72756.73	49339.32	60.82	8.99	8.19	7.82	5147.51	2573.76
459	72754.74	49339.54	60.81	8.55	8.64	7.81	5160.19	2580.10
460	72765.35	49336.39	60.15	10.81	7.04	7.15	4985.57	2492.79
461	72764.71	49330.43	60.59	9.43	7.99	7.59	5097.17	2548.58
462	72759.2	49325	61.57	8.20	8.23	8.57	5289.63	2644.81
463	72757.22	49325.21	62.02	8.31	7.67	9.02	5357.20	2678.60
464	72755.23	49325.42	62.49	8.43	7.07	9.49	5428.34	2714.17
465	72761.64	49324.73	61.00	8.19	8.81	8.00	5200.93	2600.47
466	72755.45	49327.41	62.75	8.30	6.95	9.75	5472.95	2736.48
467	72753.46	49327.63	62.92	8.41	6.67	9.92	5496.29	2748.15
468	72764.07	49324.47	60.31	8.28	9.41	7.31	5090.62	2545.31
469	72753.25	49325.64	62.84	8.50	6.66	9.84	5480.07	2740.04
470	72763.64	49306.45	57.19	8.33	12.48	4.19	4598.67	2299.34
471	72763.42	49304.46	56.95	8.43	12.62	3.95	4557.12	2278.56

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472	72763.86	49322.49	60.09	7.99	9.93	7.09	5064.37	2532.18
473	72763.85	49308.43	57.48	8.20	12.32	4.48	4648.01	2324.01
474	72764.92	49318.36	59.16	7.89	10.96	6.16	4920.87	2460.43
475	72764.7	49316.37	58.83	7.87	11.30	5.83	4870.91	2435.46
476	72764.49	49314.39	58.48	7.90	11.62	5.48	4815.08	2407.54
477	72753.89	49331.59	62.76	8.30	6.94	9.76	5475.08	2737.54
478	72764.5	49328.45	60.53	8.99	8.48	7.53	5102.60	2551.30
479	72762.06	49328.71	61.16	8.74	8.10	8.16	5208.70	2604.35
480	72755.88	49331.38	62.71	8.33	6.96	9.71	5465.47	2732.73
481	72762.28	49330.69	61.23	9.12	7.65	8.23	5207.95	2603.98
482	72759.84	49330.95	61.85	8.77	7.38	8.85	5316.93	2658.46
483	72757.86	49331.17	62.33	8.54	7.13	9.33	5399.02	2699.51
484	72759.63	49328.97	61.83	8.58	7.59	8.83	5319.15	2659.57
485	72761.85	49326.72	61.10	8.48	8.42	8.10	5207.46	2603.73
486	72759.42	49326.98	61.72	8.37	7.91	8.72	5308.30	2654.15
487	72757.43	49327.2	62.25	8.33	7.42	9.25	5392.57	2696.28
488	72764.28	49326.46	60.46	8.62	8.92	7.46	5102.84	2551.42
489	72757.65	49329.18	62.36	8.43	7.22	9.36	5406.80	2703.40
490	72755.66	49329.39	62.86	8.24	6.90	9.86	5491.96	2745.98
491	72753.67	49329.61	63.02	8.28	6.70	10.02	5515.42	2757.71

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**Table S9.** Characteristic values of pile bearing capacity of building 3#.

Pile No.	Position			Thickness(m)				Pile bearing capacity(kN)	
	X	Y	Z	gravelly sand (Q4al)	clay (Q4el)	Fully weathered mudstone	Strongly weathered mudstone	Standard value	Characteristic value
247	72769.78	49364.04	55.31		7.92	14.76	2.31	4316.56	2158.28
248	72767.85	49364.56	55.60		7.78	14.63	2.60	4365.54	2182.77
249	72765.92	49365.08	55.84		7.57	14.59	2.84	4410.48	2205.24
250	72771.71	49363.52	55.01	0.58	7.55	14.87	2.01	4307.62	2153.81
251	72768.38	49366.49	55.33		7.86	14.80	2.33	4321.46	2160.73
252	72766.45	49367.01	55.56		7.67	14.77	2.56	4363.13	2181.57
253	72764.52	49367.53	55.75		7.54	14.70	2.75	4397.56	2198.78
254	72764	49365.6	56.05		7.39	14.56	3.05	4449.25	2224.63
255	72763.48	49363.67	56.32		7.52	14.16	3.32	4487.49	2243.74
258	72765.41	49363.15	56.13		7.68	14.19	3.13	4452.42	2226.21
259	72771.19	49361.59	55.23	0.20	8.02	14.55	2.23	4309.61	2154.80
260	72769.27	49362.11	55.55		8.01	14.44	2.55	4350.57	2175.28
261	72767.34	49362.63	55.87		7.83	14.30	2.87	4405.98	2202.99
262	72771.34	49369.83	54.90	2.06	6.60	14.44	1.90	4390.19	2195.10
263	72769.41	49370.34	54.99	1.85	6.63	14.52	1.99	4393.64	2196.82
264	72767.48	49370.86	55.09	1.66	6.65	14.60	2.09	4399.07	2199.54
265	72773.27	49369.3	54.82	2.19	6.50	14.49	1.82	4387.37	2193.68
266	72769.93	49372.27	54.88	2.39	6.59	14.14	1.88	4402.50	2201.25
267	72768	49372.79	54.91	2.43	6.33	14.33	1.91	4417.96	2208.98
268	72766.07	49373.31	54.94	2.32	6.31	14.43	1.94	4417.88	2208.94
269	72765.55	49371.38	55.19	1.46	6.73	14.62	2.19	4402.60	2201.30
270	72765.03	49369.45	55.44	0.31	7.52	14.73	2.44	4364.16	2182.08
271	72772.23	49365.45	54.89	1.49	6.72	14.90	1.89	4357.81	2178.90
272	72770.3	49365.97	55.13	0.80	7.26	14.81	2.13	4346.18	2173.09
273	72766.96	49368.94	55.30	0.54	7.42	14.73	2.30	4355.90	2177.95
274	72772.75	49367.38	54.83	2.06	6.36	14.76	1.83	4386.08	2193.04
275	72770.82	49367.9	54.98	1.68	6.60	14.74	1.98	4384.60	2192.30
276	72768.89	49368.42	55.15	1.02	7.12	14.71	2.15	4363.67	2181.84
308	72770.59	49382.43	55.24	2.88	5.30	14.57	2.24	4522.94	2261.47
309	72768.67	49382.95	55.13	2.86	5.25	14.77	2.13	4506.12	2253.06
310	72779.72	49377.91	56.11	3.27	5.61	13.02	3.11	4668.10	2334.05
311	72772.52	49381.91	55.41	2.89	5.49	14.21	2.41	4544.05	2272.02
312	72778.31	49380.36	56.18	3.19	5.42	13.20	3.18	4681.56	2340.78
313	72776.38	49380.88	55.92	3.00	5.54	13.55	2.92	4627.38	2313.69
314	72774.45	49381.4	55.65	2.91	5.57	13.88	2.65	4579.29	2289.65
315	72777.79	49378.43	55.95	3.06	5.73	13.26	2.95	4628.97	2314.48
316	72768.15	49381.02	54.97	3.12	5.20	14.70	1.97	4495.03	2247.52
317	72779.2	49375.98	55.77	2.95	6.03	13.25	2.77	4586.60	2293.30
318	72777.27	49376.5	55.64	2.92	6.03	13.41	2.64	4565.30	2282.65
319	72770.08	49380.51	55.07	3.14	5.28	14.51	2.07	4509.55	2254.77
320	72775.86	49378.95	55.68	3.00	5.77	13.56	2.68	4582.22	2291.11
321	72773.94	49379.47	55.44	3.05	5.68	13.83	2.44	4550.28	2275.14
322	72772.01	49379.99	55.24	3.11	5.49	14.16	2.24	4527.24	2263.62
323	72773.56	49385.77	55.70	2.54	5.66	14.11	2.70	4567.18	2283.59
324	72771.63	49386.29	55.52	2.41	5.68	14.39	2.52	4532.44	2266.22
325	72769.7	49386.81	55.40	2.33	5.76	14.50	2.40	4508.21	2254.11

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326	72775.49	49385.25	55.94	2.74	5.42	13.91	2.94	4621.61	2310.80
327	72781.28	49383.7	56.87	4.09	4.47	12.57	3.87	4861.98	2430.99
328	72779.35	49384.21	56.54	3.52	4.82	13.13	3.54	4772.53	2386.26
329	72777.42	49384.73	56.23	3.08	5.12	13.57	3.23	4693.66	2346.83
330	72780.76	49381.77	56.65	3.86	4.81	12.68	3.65	4806.38	2403.19
331	72771.12	49384.36	55.40	2.61	5.53	14.46	2.40	4528.17	2264.08
332	72769.19	49384.88	55.27	2.57	5.47	14.69	2.27	4508.11	2254.05
333	72780.24	49379.84	56.43	3.59	5.19	12.80	3.43	4746.86	2373.43
334	72773.05	49383.84	55.58	2.69	5.56	14.17	2.58	4558.53	2279.27
335	72778.83	49382.29	56.39	3.36	5.11	13.14	3.39	4732.69	2366.35
336	72776.9	49382.8	56.11	3.06	5.30	13.53	3.11	4667.50	2333.75
337	72774.98	49383.32	55.81	2.82	5.49	13.87	2.81	4604.54	2302.27
338	72775.34	49377.02	55.44	2.99	5.98	13.59	2.44	4538.23	2269.12
339	72777.13	49368.27	54.78	2.81	5.97	14.44	1.78	4426.14	2213.07
340	72776.61	49366.34	54.70	2.87	5.76	14.67	1.70	4423.38	2211.69
341	72776.09	49364.41	54.70	2.84	5.69	14.77	1.70	4424.28	2212.14
342	72777.64	49370.2	54.91	2.63	6.27	14.20	1.91	4428.50	2214.25
343	72770.45	49374.2	54.89	2.96	6.26	13.90	1.89	4441.02	2220.51
344	72768.52	49374.72	54.81	3.02	6.14	14.03	1.81	4436.04	2218.02
345	72766.59	49375.24	54.79	3.06	5.97	14.19	1.79	4439.33	2219.66
346	72775.57	49362.48	54.77	2.84	5.72	14.67	1.77	4434.17	2217.08
347	72773.64	49363	54.84	1.67	6.66	14.82	1.84	4360.79	2180.39
348	72773.79	49371.23	54.89	2.50	6.46	14.15	1.89	4413.92	2206.96
349	72771.86	49371.75	54.90	2.46	6.50	14.13	1.90	4412.39	2206.20
350	72774.16	49364.93	54.74	2.13	6.24	14.88	1.74	4379.66	2189.83
351	72775.72	49370.71	54.90	2.58	6.34	14.18	1.90	4423.81	2211.91
352	72775.2	49368.79	54.77	2.45	6.26	14.51	1.77	4399.42	2199.71
353	72774.68	49366.86	54.71	2.43	6.08	14.79	1.71	4393.30	2196.65
354	72778.68	49374.05	55.44	2.77	6.27	13.53	2.44	4518.05	2259.03
355	72776.75	49374.57	55.36	2.81	6.25	13.58	2.36	4508.57	2254.29
356	72774.83	49375.09	55.22	2.93	6.18	13.66	2.22	4495.41	2247.71
357	72767.63	49379.1	54.84	3.28	5.16	14.73	1.84	4483.52	2241.76
358	72773.41	49377.54	55.26	3.13	5.85	13.77	2.26	4519.69	2259.84
359	72771.48	49378.06	55.08	3.25	5.65	14.02	2.08	4503.60	2251.80
360	72769.56	49378.58	54.92	3.31	5.38	14.38	1.92	4490.90	2245.45
361	72772.9	49375.61	55.09	3.13	6.06	13.72	2.09	4487.39	2243.69
362	72776.23	49372.64	55.10	2.69	6.37	13.84	2.10	4458.36	2229.18
363	72774.3	49373.16	55.03	2.76	6.34	13.87	2.03	4452.29	2226.15
364	72772.38	49373.68	54.95	2.85	6.35	13.85	1.95	4443.59	2221.79
365	72778.16	49372.13	55.15	2.66	6.35	13.83	2.15	4465.79	2232.89
366	72770.97	49376.13	54.93	3.26	5.95	13.86	1.93	4471.29	2235.65
367	72769.04	49376.65	54.84	3.27	5.77	14.12	1.84	4464.35	2232.17
368	72767.11	49377.17	54.77	3.29	5.53	14.41	1.77	4461.89	2230.94

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