REFERENCES

Abdul Rahman, H. C. (2021). ANALISIS DAYA DUKUNG PONDASI BORE PILE MENGGUNAKAN DATA SONDIR DAN SPT PADA PROYEK PEMBANGUNAN RESERVOIR SUNGAI LOBAN.

Ary Pardomuan Silitonga, R. I. (n.d.). PERBANDINGAN DAYA DUKUNG PONDASI TIANG PANCANG METODE ANALITIS DAN LOADING TEST TERHADAP METODE ELEMEN HINGGA MENGGUNAKAN MODEL MOHR-COULOMB DAN SOFT SOIL PADA BORE-HOLE I (STUDI KASUS PEMBANGUNAN RUSUNAWA JATINEGARA BARAT JAKARTA TIMUR).

Badan Standarisasi Nasional. (2008). *Cara Uji Penetrasi Lapangan dengan Alat Sondir.* Badan Standarisasi Nasional.

Badan Standarisasi Nasional. (2008). *Cara Uji Penetrasi Lapangan dengan SPT.* Badan Standarisasi Nasional.

Donald P. Coduto, W. A.-C. (2015). *Foundation Design Principles and Practices Third Edition.* Pearson Education.

Hakim, F. A. (n.d.). ANALISIS DAYA DUKUNG PONDASI BORE PILE BERDASARKAN DATA SONDIR PADA PROYEK PADA PROYEK PEMBANGUNAN INSTALASI IBUKOTA KECAMATAN (IKK) PERUSAHAAN DAERAH AIR MINUM (PDAM) KABUPATEN TANAH LAUT.

Hidayah, S. E. (2020). *EVALUASI DAYA DUKUNG PONDASI BORED PILE DENGAN STATIC LOADING TEST DAN CROSSHOLE SONIC LOGGING (CSL) PADA PROYEK TRANS ICON SURABAYA.*

Jusi, U. (2015). ANALISA KUAT DUKUNG PONDASI BORED PILE BERDASARKAN DATA PENGUJIAN LAPANGAN (CONE DAN N-STANDARD PENETRATION TEST). *JURNAL TEKNIK SIPIL SIKLUS, Vol 1, No 2*.

Kedar C. Birid, M. (2017). Evaluation of Ultimate Pile Compression Capacity from Static Pile Load Test Results. *1st GeoMEast International Congress and Exhibition .* Egypt.

Mochammad Nouval Diva Ramadhan, D. P. (2022). ANALISIS PENGARUH VARIASI BENTUK DAN VARIASI DIMENSI TERHADAP DAYA DUKUNG PONDASI TIANG PANCANG PADA GEDUNG KULIAH BERSAMA DAN LABORATORIUM FEB UPN "VETERAN" JAWA TIMUR. *Jurnal Teknik Sipil Universitas Warmadewa Vol 11, No 2*.

Nelson Aoki, D. A. (1975). *An Approximate Method to Estimate The Bearing Capacity of Piles.* Sao Paulo.

Pratama, Y. A. (2019). *ANALISA PERBANDINGAN KAPASITAS DAYA DUKUNG PONDASI BORE PILE DENGAN MENGGUNAKAN METODE EMPIRIS DAN DINAMIK PADA PROYEK JALAN TOL PANDAAN - MALANG.*

Prativi, A., Dewi, P., Sutra, N., Adi, W. T., & Weijia, C. (2022). A Comparison of Individual Bore Pile Bearing Capacity Using the Results of Standard Penetration Test (SPT) and Pile Driving Analysis (PDA) Test of the Railway Bridge Foundation. *Journal of Railway Transportation and Technology Vol 1, No 2*, 14-23.

Romadhoni, A. (2022). *ANALISA DAYA DUKUNG PONDASI BORE PILE PADA PROYEK PEMBANGUNAN PASAR BARU MANDAILING NATAL.*

Selidiki Nduru, S. P. (2021). ANALISA DAYA DUKUNG PONDASI BORED PILE BERDASARKAN DATA BORING/SPT PADA PROYEK PEMBANGUNAN PASAR BARU PENYABUNGAN KABUPATEN MADINA. *JURNAL BIDANG APLIKASI TEKNIK SIPIL DAN SAINS*.

Shella Christiani, A. K. (2019). ANALISIS DAYA DUKUNG FONDASI DALAM DENGAN METODE INNER BORING DI JAKARTA. *Jurnal Mitra Teknik Sipil*.

Shiananta, D. (2015). PEMROGRAMAN METODE INTERPRETASI DAYA DUKUNG ULTIMATE PADA HASIL UJI BEBAN TIANG DAN USULAN NILAI KOREKSI DAYA DUKUNG TIANG EMPIRIS KE METODE INTERPRETASI KUADRATIC HYPERBOLIC. 16-19.

Sopian. (2017). ANALISI DAYA DUKUNG TIANG BOR BERDASARKAN STANDARD PENETRATION TEST (SPT) DAN HASIL REACTION PILE. *SANTIKA-ISSN2088-5047*.

Sudjatmiko, E. T. (2022). SPT and CPT Correlation of Expensive Clay in Cikarang, Indonesia. *Journal of Civil Engineering Forum*.

Ully Nurul Fadilah, H. T. (2018). ANALISA DAYA DUKUNG PONDASI BORED PILE BERDASARKAN DATA N-SPT MENURUT RUMUS REESE & WRIGHT DAN PENURUNAN. *JURNAL IKRA-ITH TEKNOLOGI, Vol 2, No 3*.

Wanda Aska Alawiah, Y. A. (2016). Analisis Daya Dukung Tiang Tunggal Statik pada Tanah Lunak di Gedebage. *Jurnal Online Institut Teknologi Nasional Vol 2, No 3*.

Winda Widia, H. L. (2017). EVALUASI DAYA DUKUNG PONDASI BORED PILE TERHADAP UJI PEMBEBANAN LANGSUNG PADA PROYEK PEMBANGUNAN AEON MALL MIXED USE SENTUL CITY BOGOR.

APPENDICES

Depth	qc	Qb 1	Qb 2	Qs 1	Qs 2	Qs 1 cumm	Qs 2 cumm	Qult 1	Qult 2
0	0	161.57	252.45	0.00	0.00	0.00	0.00	161.57	252.45
2	31	161.57	252.45	0.31	0.39	0.31	0.39	161.88	252.84
4	31	161.57	252.45	0.31	0.39	0.62	0.78	162.19	253.23
6	41	161.57	252.45	0.41	0.52	1.04	1.29	162.60	253.74
8	41	161.57	252.45	0.88	1.10	1.92	2.40	163.49	254.85
10	122	161.57	252.45	2.63	3.29	4.55	5.68	166.11	258.13
12	122	161.57	252.45	2.63	3.29	7.18	8.97	168.74	261.42
14	71	161.57	252.45	1.53	1.91	8.70	10.88	170.27	263.33
16	357	161.57	252.45	7.69	9.61	16.40	20.49	177.96	272.94
18	469	161.57	252.45	4.71	5.89	21.11	26.39	182.68	278.84
20	133	161.57	252.45	2.87	3.58	23.98	29.97	185.54	282.42
22	102	161.57	252.45	2.20	2.75	26.17	32.72	187.74	285.17
24	92	161.57	252.45	1.98	2.48	28.15	35.19	189.72	287.64
26	71	161.57	252.45	1.53	1.91	29.68	37.10	191.25	289.55
28	61	161.57	252.45	1.31	1.64	31.00	38.75	192.57	291.20
30	61	161.57	252.45	1.31	1.64	32.31	40.39	193.88	292.84
32	71	161.57	252.45	1.53	1.91	33.84	42.30	195.41	294.75
34	82	161.57	252.45	1.77	2.21	35.61	44.51	197.18	296.96
36	92	161.57	252.45	1.98	2.48	37.59	46.99	199.16	299.44
38	92	161.57	252.45	1.98	2.48	39.57	49.46	201.14	301.91
40	71	161.57	252.45	1.53	1.91	41.10	51.38	202.67	303.83
42	122	161.57	252.45	1.23	1.53	42.33	52.91	203.90	305.36
44	112	161.57	252.45	1.13	1.41	43.45	54.32	205.02	306.77
46	143	161.57	252.45	1.44	1.80	44.89	56.11	206.46	308.56
48	133	161.57	252.45	1.34	1.67	46.23	57.79	207.80	310.23
50	133	161.57	252.45	1.34	1.67	47.57	59.46	209.13	311.91

Figure A: Aoki & De Alencar Method Calculation

Depth	qc	Qb 1	Qb 2	Qs 1	Qs 2	Qs 1 cumm	Qs 2 cumm	Qult 1	Qult 2
0	0	313.08	489.19	0.00	0.00	0.00	0.00	313.08	489.19
2	0	313.08	489.19	0.00	0.00	0.00	0.00	313.08	489.19
4	45	313.08	489.19	0.45	0.57	0.45	0.57	313.53	489.76
6	39	313.08	489.19	0.39	0.49	0.84	1.06	313.93	490.25
8	55	313.08	489.19	1.18	1.48	2.03	2.54	315.11	491.73
10	112	313.08	489.19	2.41	3.02	4.44	5.55	317.52	494.74
12	428	313.08	489.19	9.22	11.53	13.66	17.08	326.74	506.27
14	120	313.08	489.19	2.59	3.23	16.25	20.31	329.33	509.50
16	122	313.08	489.19	2.63	3.29	18.88	23.59	331.96	512.79
18	122	313.08	489.19	2.63	3.29	21.50	26.88	334.59	516.07
20	122	313.08	489.19	2.63	3.29	24.13	30.16	337.21	519.36
22	118	313.08	489.19	2.54	3.18	26.67	33.34	339.76	522.53
24	314	313.08	489.19	6.76	8.46	33.44	41.80	346.52	530.99
26	464	313.08	489.19	10.00	12.49	43.43	54.29	356.52	543.48
28	428	313.08	489.19	9.22	11.53	52.65	65.82	365.74	555.01
30	428	313.08	489.19	9.22	11.53	61.87	77.34	374.96	566.53
32	53	313.08	489.19	1.14	1.43	63.02	78.77	376.10	567.96
34	82	313.08	489.19	1.77	2.21	64.78	80.98	377.86	570.17
36	86	313.08	489.19	1.85	2.32	66.63	83.29	379.72	572.48
38	122	313.08	489.19	2.63	3.29	69.26	86.58	382.35	575.77
40	89	313.08	489.19	1.92	2.40	71.18	88.98	384.26	578.17
42	110	313.08	489.19	2.37	2.96	73.55	91.94	386.63	581.13
44	128	313.08	489.19	2.76	3.45	76.31	95.38	389.39	584.57
46	113	313.08	489.19	2.43	3.04	78.74	98.43	391.82	587.62
48	147	313.08	489.19	3.17	3.96	81.91	102.39	394.99	591.58
50	144	313.08	489.19	3.10	3.88	85.01	106.26	398.09	595.45

Figure B: Aoki & De Alencar Method Calculation

Depth (m)	qc	Qb 1	Qb 2	fs	Qs 1	Qs 2	Qs 1 Cumm	Qs 2 Cumm	Qult 1	Qult 2
0	0	986.96	1542.13	0.0	0.00	0.00	0.00	0.00	986.96	1542.13
2	31	986.96	1542.13	0.1	0.55	0.68	0.55	0.68	987.51	1542.81
4	31	986.96	1542.13	0.1	0.55	0.68	1.09	1.36	988.05	1543.49
6	41	986.96	1542.13	0.1	0.72	0.90	1.81	2.27	988.77	1544.39
8	41	986.96	1542.13	0.1	0.72	0.90	2.53	3.17	989.50	1545.30
10	122	986.96	1542.13	0.4	2.15	2.68	4.68	5.85	991.64	1547.98
12	122	986.96	1542.13	0.4	2.15	2.68	6.83	8.53	993.79	1550.66
14	71	986.96	1542.13	0.2	1.25	1.56	8.08	10.09	995.04	1552.22
16	357	986.96	1542.13	1.2	6.28	7.85	14.36	17.94	1001.32	1560.07
18	469	986.96	1542.13	1.6	8.25	10.31	22.61	28.26	1009.57	1570.39
20	133	986.96	1542.13	0.5	2.34	2.92	24.95	31.18	1011.91	1573.31
22	102	986.96	1542.13	0.4	1.79	2.24	26.74	33.43	**1013.70**	**1575.56**
24	92	986.96	1542.13	0.3	1.62	2.02	28.36	35.45	1015.32	1577.58
26	71	986.96	1542.13	0.2	1.25	1.56	29.61	37.01	1016.57	1579.14
28	61	986.96	1542.13	0.2	1.07	1.34	30.68	38.35	1017.64	1580.48
30	61	986.96	1542.13	0.2	1.07	1.34	31.76	39.69	1018.72	1581.82
32	71	986.96	1542.13	0.2	1.25	1.56	33.00	41.26	1019.97	1583.38
34	82	986.96	1542.13	0.3	1.44	1.80	34.45	43.06	1021.41	1585.19
36	92	986.96	1542.13	0.3	1.62	2.02	36.07	45.08	1023.03	1587.21
38	92	986.96	1542.13	0.3	1.62	2.02	37.68	47.11	1024.65	1589.23
40	71	986.96	1542.13	0.2	1.25	1.56	38.93	48.67	1025.90	1590.80
42	122	986.96	1542.13	0.4	2.15	2.68	41.08	51.35	1028.04	1593.48
44	112	986.96	1542.13	0.4	1.97	2.46	43.05	53.81	1030.01	1595.94
46	143	986.96	1542.13	0.5	2.52	3.14	45.57	56.96	1032.53	1599.09
48	133	986.96	1542.13	0.5	2.34	2.92	47.91	59.88	1034.87	1602.01
50	133	986.96	1542.13	0.5	2.34	2.92	50.25	62.81	1037.21	1604.94

Figure C: Meyerhoff Method Calculation at Bor-Log BH-1

Depth (m)	qc	Qb 1	Qb 2	fs	Qs 1	Qs 2	Qs 1 Cumm	Qs 2 Cumm	Qult 1	Qult 2
0	0	767.05	1198.52	0.0	0.00	0.00	0.00	0.00	767.05	1198.52
2	0	767.05	1198.52	0.0	0.00	0.00	0.00	0.00	767.05	1198.52
4	45	767.05	1198.52	0.2	0.79	0.99	0.79	0.99	767.84	1199.51
6	39	767.05	1198.52	0.1	0.69	0.86	1.48	1.85	768.53	1200.36
8	55	767.05	1198.52	0.2	0.97	1.21	2.45	3.06	769.50	1201.57
10	112	767.05	1198.52	0.4	1.97	2.46	4.42	5.52	771.47	1204.04
12	428	767.05	1198.52	1.5	7.53	9.41	11.95	14.93	779.00	1213.45
14	120	767.05	1198.52	0.4	2.11	2.64	14.06	17.57	781.11	1216.09
16	122	767.05	1198.52	0.4	2.15	2.68	16.20	20.25	783.25	1218.77
18	122	767.05	1198.52	0.4	2.15	2.68	18.35	22.94	785.40	1221.45
20	122	767.05	1198.52	0.4	2.15	2.68	20.50	25.62	787.55	1224.14
22	118	767.05	1198.52	0.4	2.08	2.59	22.57	28.21	789.62	1226.73
24	314	767.05	1198.52	1.1	5.52	6.91	28.10	35.12	795.15	1233.64
26	464	767.05	1198.52	1.6	8.16	10.20	36.26	45.32	803.31	1243.84
28	428	767.05	1198.52	1.5	7.53	9.41	43.79	54.74	810.84	1253.25
30	428	767.05	1198.52	1.5	7.53	9.41	51.32	64.15	818.37	1262.67
32	53	767.05	1198.52	0.2	0.93	1.17	52.25	65.31	819.30	1263.83
34	82	767.05	1198.52	0.3	1.44	1.80	53.69	67.12	820.74	1265.63
36	86	767.05	1198.52	0.3	1.51	1.89	55.21	69.01	822.26	1267.53
38	122	767.05	1198.52	0.4	2.15	2.68	57.35	71.69	824.40	1270.21
40	89	767.05	1198.52	0.3	1.57	1.96	58.92	73.65	825.97	1272.17
42	110	767.05	1198.52	0.4	1.94	2.42	60.85	76.07	827.91	1274.58
44	128	767.05	1198.52	0.4	2.25	2.81	63.11	78.88	830.16	1277.40
46	113	767.05	1198.52	0.4	1.99	2.48	65.09	81.37	832.15	1279.88
48	147	767.05	1198.52	0.5	2.59	3.23	67.68	84.60	834.73	1283.12
50	144	767.05	1198.52	0.5	2.53	3.17	70.21	87.77	837.26	1286.28

Figure D: Meyerhoff Method Calculation at Bor-Log BH-2

Depth (m)	N' OB	Cu	Qp 1	Qp 2	Qs 1	Qs 2	Qs 1 Cumm	Qs 2 Cumm	Qult 1	Qult 2
0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	19	128.46	58.11	90.80	35.51	44.39	35.51	44.39	93.63	135.20
4	20	132.39	59.89	93.58	36.60	45.75	72.11	90.14	132.01	183.72
6	25	164.24	74.30	116.09	45.41	56.76	117.52	146.90	191.82	263.00
8	27	180.56	81.68	127.63	49.92	62.40	167.44	209.30	249.12	336.93
10	73	489.19	221.30	345.79	135.24	169.05	302.68	378.35	523.99	724.14
12	70	465.12	210.41	328.77	128.59	160.73	431.27	539.08	641.68	867.86
14	41	273.37	123.67	193.23	75.58	94.47	506.84	633.55	630.51	826.79
16	53	352.87	159.63	249.43	97.55	121.94	604.40	755.49	764.03	1004.92
18	61	405.28	13.19	13.19	37.70	47.12	642.09	802.62	655.29	815.81
20	63	421.00	190.46	297.59	116.39	145.49	758.48	948.11	948.94	1245.69
22	49	323.50	146.35	228.67	89.43	111.79	847.92	1059.90	**994.27**	**1288.57**
24	39	263.33	119.13	186.14	72.80	91.00	920.72	1150.90	1039.85	1337.04
26	30	201.80	91.29	142.64	55.79	69.74	976.51	1220.64	1067.80	1363.28
28	26	172.43	78.00	121.88	47.67	59.59	1024.18	1280.22	1102.18	1402.10
30	26	171.92	77.77	121.52	47.53	59.41	1071.71	1339.63	1149.48	1461.15
32	29	192.22	86.96	135.87	53.14	66.43	1124.85	1406.06	1211.81	1541.93
34	29	191.11	86.46	135.09	52.84	66.04	1177.68	1472.10	1264.14	1607.20
36	32	214.44	97.01	151.58	59.29	74.11	1236.97	1546.21	1333.98	1697.79
38	33	217.46	98.38	153.72	60.12	75.15	1297.09	1621.36	1395.47	1775.08
40	25	165.23	74.75	116.79	45.68	57.10	1342.77	1678.46	1417.52	1795.25
42	26	173.93	78.68	122.94	48.08	60.11	1390.85	1738.57	1469.54	1861.51
44	24	160.47	72.59	113.43	44.36	55.45	1435.22	1794.02	1507.81	1907.45
46	29	194.15	87.83	137.24	53.68	67.10	1488.89	1861.12	1576.73	1998.36
48	26	172.65	78.10	122.04	47.73	59.66	1536.62	1920.78	1614.72	2042.81
50	26	176.27	79.74	124.60	48.73	60.91	1585.35	1981.69	1665.09	2106.29

Figure E: Reese & Wright Method Calculation at Bor-Log BH-1

Depth (m)	N' OB	Cu	Qp 1	Qp 2	Qs 1	Qs 2	Qs 1 Cumm	Qs 2 Cumm	Qult 1	Qult 2
0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	28	189.61	85.78	134.02	52.42	65.52	52.42	65.52	138.19	199.55
6	22	148.28	67.08	104.81	40.99	51.24	93.41	116.76	160.49	221.58
8	30	200.77	90.82	141.91	55.50	69.38	148.92	186.14	239.74	328.06
10	57	378.32	171.15	267.42	104.59	130.74	253.51	316.88	424.66	584.30
12	58	383.94	173.69	271.39	106.15	132.68	359.65	449.56	533.34	720.96
14	53	352.94	159.67	249.48	97.57	121.97	457.23	571.53	616.89	821.01
16	51	336.96	152.44	238.19	93.16	116.45	550.38	687.98	702.82	926.16
18	48	317.54	143.65	224.45	87.79	109.73	638.17	797.71	781.82	1022.17
20	45	300.23	135.82	212.22	83.00	103.75	721.17	901.46	856.99	1113.68
22	41	275.22	124.51	194.54	76.09	95.11	797.26	996.57	**921.76**	**1191.11**
24	30	198.52	89.81	140.33	54.88	68.60	852.14	1065.18	941.95	1205.50
26	42	279.53	126.46	197.59	77.28	96.60	929.42	1161.78	1055.88	1359.37
28	37	246.48	111.51	174.23	68.14	85.18	997.56	1246.95	1109.07	1421.18
30	35	235.92	106.73	166.77	65.22	81.53	1062.79	1328.48	1169.52	1495.25
32	15	98.03	44.35	69.30	27.10	33.88	1089.89	1362.36	1134.24	1431.66
34	22	144.87	65.54	102.40	40.05	50.06	1129.94	1412.43	1195.48	1514.83
36	26	176.54	79.86	124.79	48.81	61.01	1178.75	1473.43	1258.61	1598.22
38	24	162.55	73.54	114.90	44.94	56.17	1223.69	1529.61	1297.22	1644.51
40	17	114.06	51.60	80.63	31.53	39.42	1255.22	1569.03	1306.82	1649.65
42	21	137.19	62.06	96.97	37.93	47.41	1293.15	1616.43	1355.21	1713.41
44	23	155.22	70.22	109.72	42.91	53.64	1336.06	1670.08	1406.28	1779.80
46	20	132.74	60.05	93.83	36.70	45.87	1372.76	1715.95	1432.81	1809.78
48	25	167.30	75.68	118.26	46.25	57.81	1419.01	1773.76	1494.70	1892.02
50	24	159.28	72.06	112.59	44.03	55.04	1463.05	1828.81	1535.10	1941.40

Figure F: Reese & Wright Method Calculation at Bor-Log BH-1

Depth (m)	N' OB	Qp 1	Qp 2	Qs 1	Qs 2	Qs 1 Cumm	Qs 2 Cumm	Qult 1	Qult 2
0	0	295.56	442.86	5.03	6.28	5.03	6.28	300.59	449.15
2	19	277.68	442.86	37.31	46.64	42.34	52.92	320.02	495.79
4	20	277.68	442.86	38.30	47.87	80.64	100.80	358.32	543.66
6	25	277.68	442.86	46.30	57.88	126.94	158.68	404.62	601.54
8	27	462.80	738.10	50.41	63.01	177.35	221.69	640.15	959.79
10	73	462.80	738.10	127.97	159.97	305.32	381.65	768.12	1119.76
12	70	462.80	738.10	121.92	152.40	427.25	534.06	890.05	1272.16
14	41	462.80	738.10	73.73	92.16	500.98	626.22	963.78	1364.33
16	53	578.50	922.63	93.71	117.14	594.69	743.36	1173.19	1665.99
18	61	925.60	1476.21	106.88	133.61	701.57	876.97	1627.17	2353.18
20	63	462.80	738.10	110.84	138.54	812.41	1015.51	1275.21	1753.62
22	49	462.80	738.10	86.33	107.91	898.74	1123.43	**1361.54**	**1861.53**
24	39	462.80	738.10	71.21	89.01	969.95	1212.44	1432.75	1950.54
26	30	462.80	738.10	55.74	69.68	1025.69	1282.12	1488.49	2020.22
28	26	462.80	738.10	48.36	60.45	1074.06	1342.57	1536.86	2080.67
30	26	462.80	738.10	48.23	60.29	1122.29	1402.86	1585.09	2140.97
32	29	462.80	738.10	53.34	66.67	1175.63	1469.53	1638.43	2207.64
34	29	462.80	738.10	53.06	66.32	1228.69	1535.86	1691.49	2273.96
36	32	462.80	738.10	58.92	73.65	1287.61	1609.51	1750.41	2347.61
38	33	462.80	738.10	59.68	74.60	1347.29	1684.11	1810.09	2422.22
40	25	462.80	738.10	46.55	58.19	1393.84	1742.30	1856.64	2480.41
42	26	462.80	738.10	48.74	60.93	1442.58	1803.23	1905.38	2541.33
44	24	462.80	738.10	45.36	56.70	1487.94	1859.92	1950.74	2598.03
46	29	462.80	738.10	53.82	67.28	1541.76	1927.20	2004.56	2665.31
48	26	462.80	738.10	48.42	60.52	1590.18	1987.72	2052.98	2725.83
50	26	462.80	738.10	49.33	61.66	1639.51	2049.38	2102.31	2787.49

Figure G: Luciano Decourt Method Calculation at Bor-Log BH-1

Depth (m)	N' OB	Qp 1	Qp 2	Qs 1	Qs 2	Qs 1 Cumm	Qs 2 Cumm	Qult 1	Qult 2
0	0	244.73	388.51	5.03	6.28	5.03	6.28	249.76	394.79
2	0	244.73	388.51	5.03	6.28	10.05	12.57	254.78	401.07
4	28	244.73	388.51	52.68	65.85	62.73	78.42	307.46	466.92
6	22	244.73	388.51	42.29	52.87	105.03	131.28	349.76	519.79
8	30	407.88	647.51	55.48	69.36	160.51	200.64	568.39	848.15
10	57	407.88	647.51	100.11	125.14	260.62	325.77	668.50	973.29
12	58	509.85	809.39	101.52	126.90	362.14	452.68	872.00	1262.07
14	53	407.88	647.51	93.73	117.16	455.87	569.84	863.76	1217.35
16	51	407.88	647.51	89.71	112.14	545.59	681.98	953.47	1329.50
18	48	407.88	647.51	84.83	106.04	630.42	788.02	1038.30	1435.54
20	45	407.88	647.51	80.48	100.60	710.90	888.63	1118.78	1536.14
22	41	407.88	647.51	74.20	92.75	785.10	981.37	**1192.98**	**1628.89**
24	30	509.85	809.39	54.92	68.65	840.02	1050.02	1349.87	1859.42
26	42	509.85	809.39	75.28	94.10	915.30	1144.12	1425.15	1953.52
28	37	509.85	809.39	66.97	83.72	982.27	1227.84	1492.13	2037.23
30	35	509.85	809.39	64.32	80.40	1046.60	1308.24	1556.45	2117.64
32	15	407.88	647.51	29.67	37.08	1076.26	1345.33	1484.14	1992.84
34	22	407.88	647.51	41.44	51.80	1117.70	1397.12	1525.58	2044.63
36	26	407.88	647.51	49.40	61.74	1167.09	1458.87	1574.98	2106.38
38	24	407.88	647.51	45.88	57.35	1212.97	1516.22	1620.86	2163.73
40	17	407.88	647.51	33.69	42.12	1246.67	1558.33	1654.55	2205.85
42	21	407.88	647.51	39.51	49.38	1286.17	1607.72	1694.06	2255.23
44	23	407.88	647.51	44.04	55.05	1330.21	1662.76	1738.10	2310.28
46	20	407.88	647.51	38.39	47.98	1368.60	1710.75	1776.48	2358.26
48	25	407.88	647.51	47.07	58.84	1415.67	1769.59	1823.56	2417.10
50	24	407.88	647.51	45.06	56.32	1460.73	1825.91	1868.61	2473.43

Figure H: Luciano Decourt Method Calculation at Bor-Log BH-2

Depth (m)	N' OB	qp	Qb 1	Qb 2	fs	Qs 1	Qs 2	Qs 1 cumm	Qs 2 cumm	Qult 1	Qult 2
0	0	116.05	58.33	91.14	0.00	0.00	0.00	0.00	0.00	58.33	91.14
2	19	116.05	58.33	91.14	4.29	21.56	26.95	21.56	26.95	79.89	118.10
4	20	116.05	58.33	91.14	4.95	24.88	31.10	46.45	58.06	104.78	149.20
6	25	116.05	58.33	91.14	5.78	29.03	36.29	75.47	94.34	133.80	185.48
8	27	116.05	58.33	91.14	5.94	29.86	37.32	105.33	131.66	163.66	222.81
10	73	116.05	58.33	91.14	12.38	62.20	77.75	167.53	209.42	225.87	300.56
12	70	116.05	58.33	91.14	12.38	62.20	77.75	229.74	287.17	288.07	378.32
14	41	116.05	58.33	91.14	8.58	43.13	53.91	272.87	341.08	331.20	432.23
16	53	116.05	58.33	91.14	10.73	53.91	67.39	326.78	408.47	385.11	499.61
18	61	116.05	58.33	91.14	12.38	62.20	77.75	388.98	486.22	447.31	577.37
20	63	116.05	58.33	91.14	13.20	66.35	82.94	455.33	569.16	513.66	660.30
22	49	116.05	58.33	91.14	11.06	55.57	69.46	510.90	638.62	**569.23**	**729.77**
24	39	116.05	58.33	91.14	9.74	48.93	61.17	559.83	699.79	618.16	790.93
26	30	116.05	58.33	91.14	8.25	41.47	51.84	601.30	751.63	659.63	842.77
28	26	116.05	58.33	91.14	7.59	38.15	47.69	639.45	799.32	697.78	890.46
30	26	116.05	58.33	91.14	7.76	38.98	48.73	678.43	848.04	736.76	939.18
32	29	116.05	58.33	91.14	8.58	43.13	53.91	721.56	901.95	779.89	993.09
34	29	116.05	58.33	91.14	8.75	43.96	54.95	765.52	956.90	823.85	1048.04
36	32	116.05	58.33	91.14	9.74	48.93	61.17	814.45	1018.06	872.78	1109.21
38	33	116.05	58.33	91.14	10.07	50.59	63.24	865.04	1081.30	923.37	1172.45
40	25	116.05	58.33	91.14	8.42	42.30	52.87	907.34	1134.18	965.67	1225.32
42	26	116.05	58.33	91.14	8.91	44.79	55.98	952.13	1190.16	1010.46	1281.30
44	24	116.05	58.33	91.14	8.58	43.13	53.91	995.26	1244.07	1053.59	1335.21
46	29	116.05	58.33	91.14	10.07	50.59	63.24	1045.85	1307.31	1104.18	1398.45
48	26	116.05	58.33	91.14	9.41	47.27	59.09	1093.12	1366.40	1151.45	1457.55
50	26	116.05	58.33	91.14	9.74	48.93	61.17	1142.06	1427.57	1200.39	1518.71

Figure I: O'Neill & Reese Method Calculation at Bor-Log BH-1

Depth (m)	N' OB	qp	Qb 1	Qb 2	fs	Qs 1	Qs 2	Qs 1 cumm	Qs 2 cumm	Qult 1	Qult 2
0	0	122.76	61.71	96.42	0.00	0	0.00	0	0.00	61.71	96.42
2	0	122.76	61.71	96.42	0.00	0	0.00	0	0.00	61.71	96.42
4	28	122.76	61.71	96.42	6.11	30.69	38.36	30.69	38.36	92.39	134.77
6	22	122.76	61.71	96.42	5.61	28.20	35.25	58.89	73.61	120.59	170.02
8	30	122.76	61.71	96.42	6.93	34.83	43.54	93.72	117.15	155.43	213.57
10	57	122.76	61.71	96.42	11.55	58.06	72.57	151.78	189.72	213.48	286.14
12	58	122.76	61.71	96.42	12.38	62.20	77.75	213.98	267.48	275.69	363.89
14	53	122.76	61.71	96.42	12.21	61.37	76.72	275.35	344.19	337.06	440.61
16	51	122.76	61.71	96.42	12.38	62.20	77.75	337.56	421.95	399.26	518.36
18	48	122.76	61.71	96.42	12.38	62.20	77.75	399.76	499.70	461.47	596.12
20	45	122.76	61.71	96.42	12.38	62.20	77.75	461.96	577.46	523.67	673.87
22	41	122.76	61.71	96.42	12.05	60.54	75.68	522.51	653.14	584.22	749.55
24	30	122.76	61.71	96.42	9.74	48.93	61.17	571.44	714.30	633.15	810.72
26	42	122.76	61.71	96.42	13.20	66.35	82.94	637.79	797.24	699.50	893.66
28	37	122.76	61.71	96.42	12.38	62.20	77.75	700.00	875.00	761.70	971.41
30	35	122.76	61.71	96.42	12.38	62.20	77.75	762.20	952.75	823.91	1049.17
32	15	122.76	61.71	96.42	6.77	34.00	42.51	796.21	995.26	857.91	1091.67
34	22	122.76	61.71	96.42	9.08	45.62	57.02	841.82	1052.28	903.53	1148.69
36	26	122.76	61.71	96.42	9.41	47.27	59.09	889.10	1111.37	950.80	1207.79
38	24	122.76	61.71	96.42	9.08	45.62	57.02	934.71	1168.39	996.42	1264.81
40	17	122.76	61.71	96.42	7.26	36.49	45.62	971.20	1214.01	1032.91	1310.42
42	21	122.76	61.71	96.42	8.42	42.30	52.87	1013.50	1266.88	1075.21	1363.29
44	23	122.76	61.71	96.42	9.41	47.27	59.09	1060.78	1325.97	1122.48	1422.39
46	20	122.76	61.71	96.42	8.58	43.13	53.91	1103.91	1379.88	1165.61	1476.30
48	25	122.76	61.71	96.42	10.40	52.25	65.31	1156.16	1445.20	1217.86	1541.61
50	24	122.76	61.71	96.42	10.23	51.42	64.28	1207.58	1509.47	1269.28	1605.89

Figure J: O'Neill & Reese Method Calculation at Bor-Log BH-2

Depth	Qc	Qc+f	Friction Resistance	HL	JHL
0	0	0	0	0	0
0.2	5	8	3	6	6
0.4	7	14	7	14	20
0.6	4	7	3	6	26
0.8	3	6	3	6	32
1	7	12	5	10	42
1.2	180	200	20	40	82
1.4	50	60	10	20	102
1.6	40	48	8	16	118
1.8	15	20	5	10	128
2	10	15	5	10	138
2.2	15	20	5	10	148
2.4	20	25	5	10	158
2.6	23	28	5	10	168
2.8	30	35	5	10	178
3	40	45	5	10	188
3.2	35	40	5	10	198
3.4	40	50	10	20	218
3.6	48	58	10	20	238
3.8	50	60	10	20	258
4	65	75	10	20	278
4.2	50	60	10	20	298
4.4	45	55	10	20	318
4.6	40	50	10	20	338
4.8	43	53	10	20	358
5	40	48	8	16	374
5.2	35	40	5	10	384
5.4	30	35	5	10	394
5.6	20	25	5	10	404
5.8	18	23	5	10	414
6	15	20	5	10	424
6.2	10	15	5	10	434
6.4	12	17	5	10	444
6.6	13	18	5	10	454
6.8	12	17	5	10	464
7	10	15	5	10	474
7.2	15	20	5	10	484
7.4	20	25	5	10	494
7.6	30	35	5	10	504
7.8	40	47	7	14	518
8	130	140	10	20	538
8.2	250	250	0	0	538
8.4	250	250	0	0	538
8.6	250	250	0	0	538
8.8	250	250	0	0	538
9	250	250	0	0	538
9.2	250	250	0	0	538
9.4	250	250	0	0	538
9.6	250	250	0	0	538
9.8	250	250	0	0	538
10	250	250	0	0	538
10.2	250	250	0	0	538

Figure K: CPT Result at S-1

Depth	Qc	Qc+f	Friction Resistance	HL	JHL
0	5	9	4	8	8
0.2	8	12	4	8	16
0.4	7	12	5	10	26
0.6	5	8	3	6	32
0.8	5	9	4	8	40
1	7	11	4	8	48
1.2	12	20	8	16	64
1.4	20	25	5	10	74
1.6	25	30	5	10	84
1.8	35	40	5	10	94
2	150	160	10	20	114
2.2	15	20	5	10	124
2.4	18	23	5	10	134
2.6	20	25	5	10	144
2.8	22	27	5	10	154
3	28	33	5	10	164
3.2	35	40	5	10	174
3.4	30	35	5	10	184
3.6	28	33	5	10	194
3.8	35	40	5	10	204
4	40	50	10	20	224
4.2	45	55	10	20	244
4.4	47	57	10	20	264
4.6	40	50	10	20	284
4.8	45	55	10	20	304
5	50	60	10	20	324
5.2	50	50	0	0	324
5.4	30	35	5	10	334
5.6	38	43	5	10	344
5.8	35	40	5	10	354
6	27	32	5	10	364
6.2	20	25	5	10	374
6.4	15	20	5	10	384
6.6	18	23	5	10	394
6.8	15	20	5	10	404
7	15	20	5	10	414
7.2	18	23	5	10	424
7.4	15	20	5	10	434
7.6	10	15	5	10	444
7.8	25	30	5	10	454
8	30	37	7	14	468
8.2	35	45	10	20	488
8.4	100	110	10	20	508
8.6	150	160	10	20	528
8.8	180	200	20	40	568
9	250	250	0	0	568
9.2	250	250	0	0	568
9.4	250	250	0	0	568
9.6	250	250	0	0	568
9.8	250	250	0	0	568
10	250	250	0	0	568
10.2	250	250	0	0	568

Figure L: CPT Result at S-2

Depth	Qc	Qc+f	Friction Resistance	HL	JHL
0	0	0	0	0	0
0.2	12	17	5	10	10
0.4	10	15	5	10	20
0.6	25	30	5	10	30
0.8	15	20	5	10	40
1	13	18	5	10	50
1.2	20	25	5	10	60
1.4	40	50	10	20	80
1.6	150	160	10	20	100
1.8	40	50	10	20	120
2	20	25	5	10	130
2.2	12	17	5	10	140
2.4	15	20	5	10	150
2.6	20	25	5	10	160
2.8	18	23	5	10	170
3	25	30	5	10	180
3.2	30	35	5	10	190
3.4	35	40	5	10	200
3.6	42	52	10	20	220
3.8	40	50	10	20	240
4	40	50	10	20	260
4.2	45	55	10	20	280
4.4	50	60	10	20	300
4.6	40	50	10	20	320
4.8	43	53	10	20	340
5	35	42	7	14	354
5.2	38	43	5	10	364
5.4	35	40	5	10	374
5.6	30	35	5	10	384
5.8	20	25	5	10	394
6	25	30	5	10	404
6.2	18	23	5	10	414
6.4	15	20	5	10	424
6.6	17	22	5	10	434
6.8	15	20	5	10	444
7	10	15	5	10	454
7.2	17	22	5	10	464
7.4	15	20	5	10	474
7.6	10	15	5	10	484
7.8	15	20	5	10	494
8	25	30	5	10	504
8.2	33	38	5	10	514
8.4	80	90	10	20	534
8.6	160	170	10	20	554
8.8	250	250	0	0	554
9	250	250	0	0	554
9.2	250	250	0	0	554
9.4	250	250	0	0	554
9.6	250	250	0	0	554
9.8	250	250	0	0	554
10	250	250	0	0	554
10.2	250	250	0	0	554

Figure M: CPT Result at S-3

Depth	Qc	Qc+f	Friction Resistance	HL	JHL
0	0	0	0	0	0
0.2	10	15	5	10	10
0.4	7	12	5	10	20
0.6	10	15	5	10	30
0.8	13	18	5	10	40
1	11	16	5	10	50
1.2	13	18	5	10	60
1.4	15	20	5	10	70
1.6	30	37	7	14	84
1.8	55	65	10	20	104
2	130	140	10	20	124
2.2	65	75	10	20	144
2.4	35	42	7	14	158
2.6	30	35	5	10	168
2.8	25	30	5	10	178
3	30	35	5	10	188
3.2	32	37	5	10	198
3.4	40	48	8	16	214
3.6	35	42	7	14	228
3.8	37	47	10	20	248
4	40	50	10	20	268
4.2	42	55	13	26	294
4.4	42	52	10	20	314
4.6	40	55	15	30	344
4.8	35	45	10	20	364
5	35	42	7	14	378
5.2	40	50	10	20	398
5.4	45	55	10	20	418
5.6	40	50	10	20	438
5.8	35	42	7	14	452
6	30	35	5	10	462
6.2	25	30	5	10	472
6.4	20	25	5	10	482
6.6	18	23	5	10	492
6.8	15	20	5	10	502
7	20	25	5	10	512
7.2	17	22	5	10	522
7.4	15	20	5	10	532
7.6	10	15	5	10	542
7.8	15	20	5	10	552
8	25	30	5	10	562
8.2	30	35	5	10	572
8.4	40	50	10	20	592
8.6	45	55	10	20	612
8.8	80	90	10	20	632
9	100	110	10	20	652
9.2	120	130	10	20	672
9.4	135	145	10	20	692
9.6	150	160	10	20	712
9.8	180	190	10	20	732
10	200	210	10	20	752
10.2	250	250	0	0	752

Figure N: CPT Result at S-4

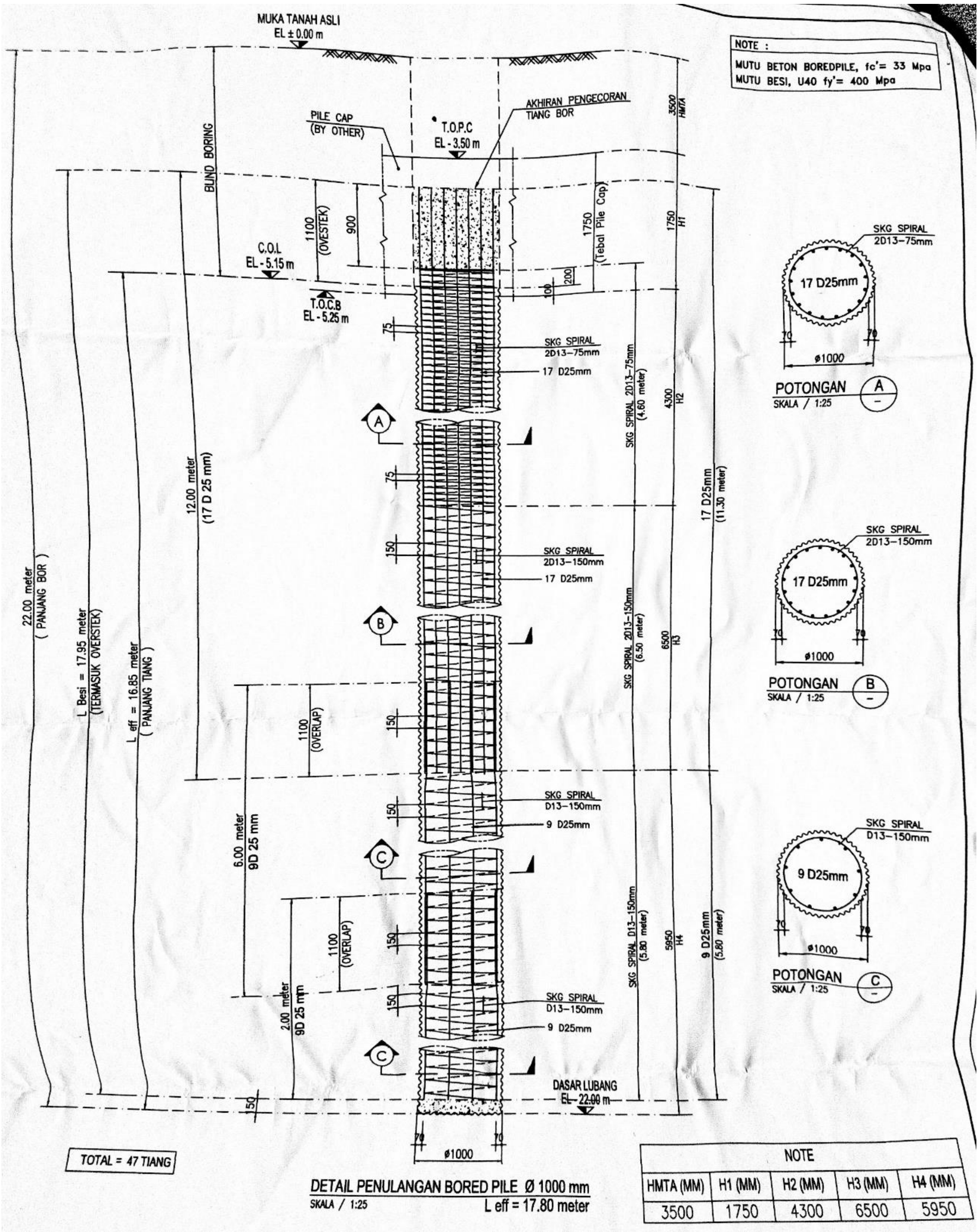

Figure O: Bore Pile Design Ø100 cm

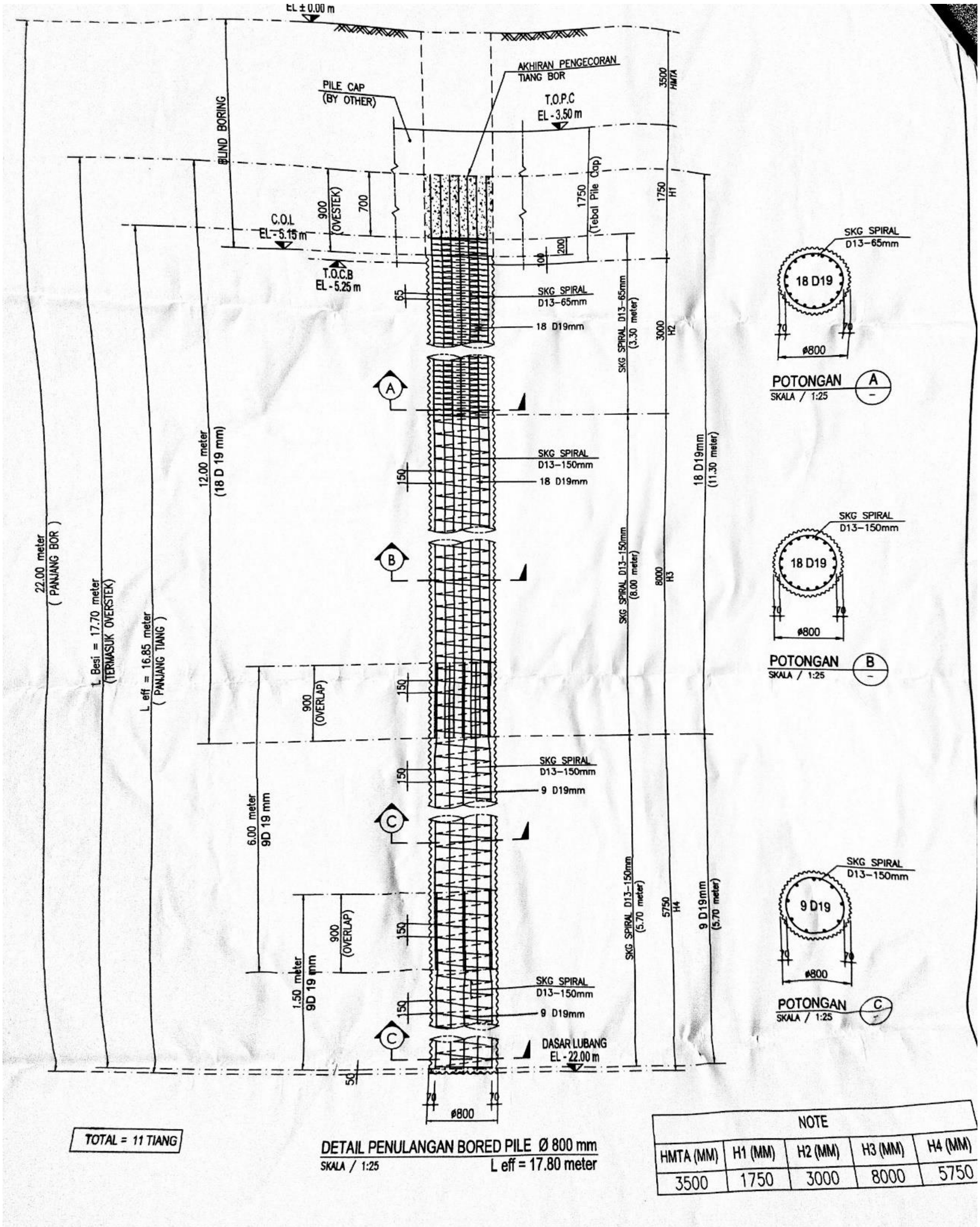

Figure P: Bore pile Design Ø80 cm

Depth (m)	Cu	Nc
0	0	5.00
2	8	5.48
4	9	5.54
6	11	5.66
8	11	5.66
10	23	6.38
12	23	6.38
14	16	5.96
16	20	6.20
18	23	6.38
20	24	6.44
22	20	6.20
24	18	6.08
26	15	5.90
28	14	5.84
30	14	5.84
32	16	5.96
34	16	5.96
36	18	6.08
38	18	6.08
40	15	5.90
42	16	5.96
44	16	5.96
46	18	6.08
48	17	6.02
50	18	6.08

Depth (m)	Cu	Nc
0	0	5.00
2	0	5.00
4	11	5.66
6	10	5.60
8	13	5.78
10	21	6.26
12	23	6.38
14	22	6.32
16	23	6.38
18	23	6.38
20	23	6.38
22	22	6.32
24	18	6.08
26	24	6.44
28	23	6.38
30	23	6.38
32	12	5.72
34	17	6.02
36	17	6.02
38	17	6.02
40	13	5.78
42	15	5.90
44	17	6.02
46	16	5.96
48	19	6.14
50	19	6.14

Figure Q: Value of C_u and N_c at Bor-Log BH-1 and BH-2