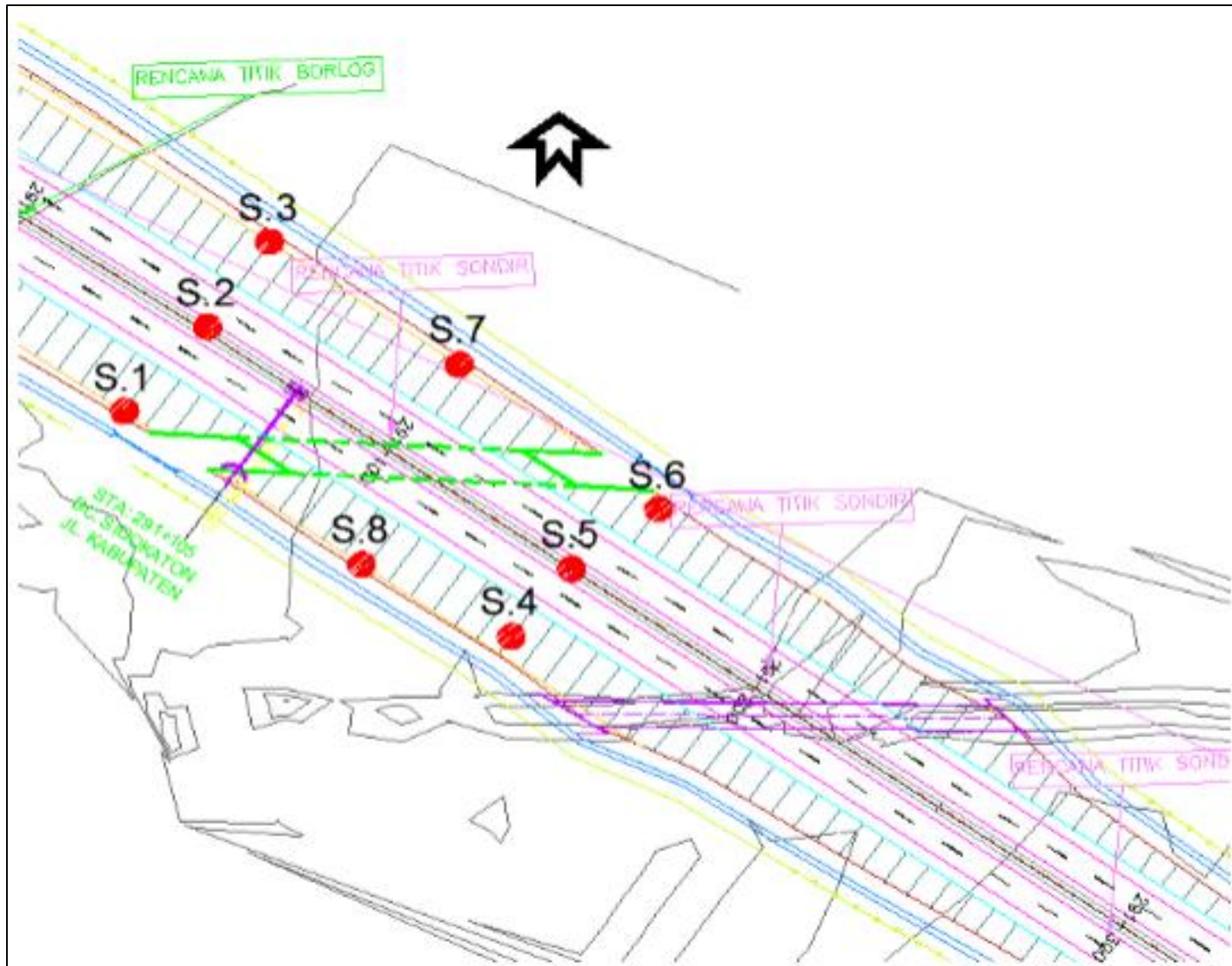


LAYOUT TITIK SOIL INVESTIGATION SIDOKATON



A2a

67500

500 7500 7500 7500 7500 7500 7500 7500

7710

STA. 291+105

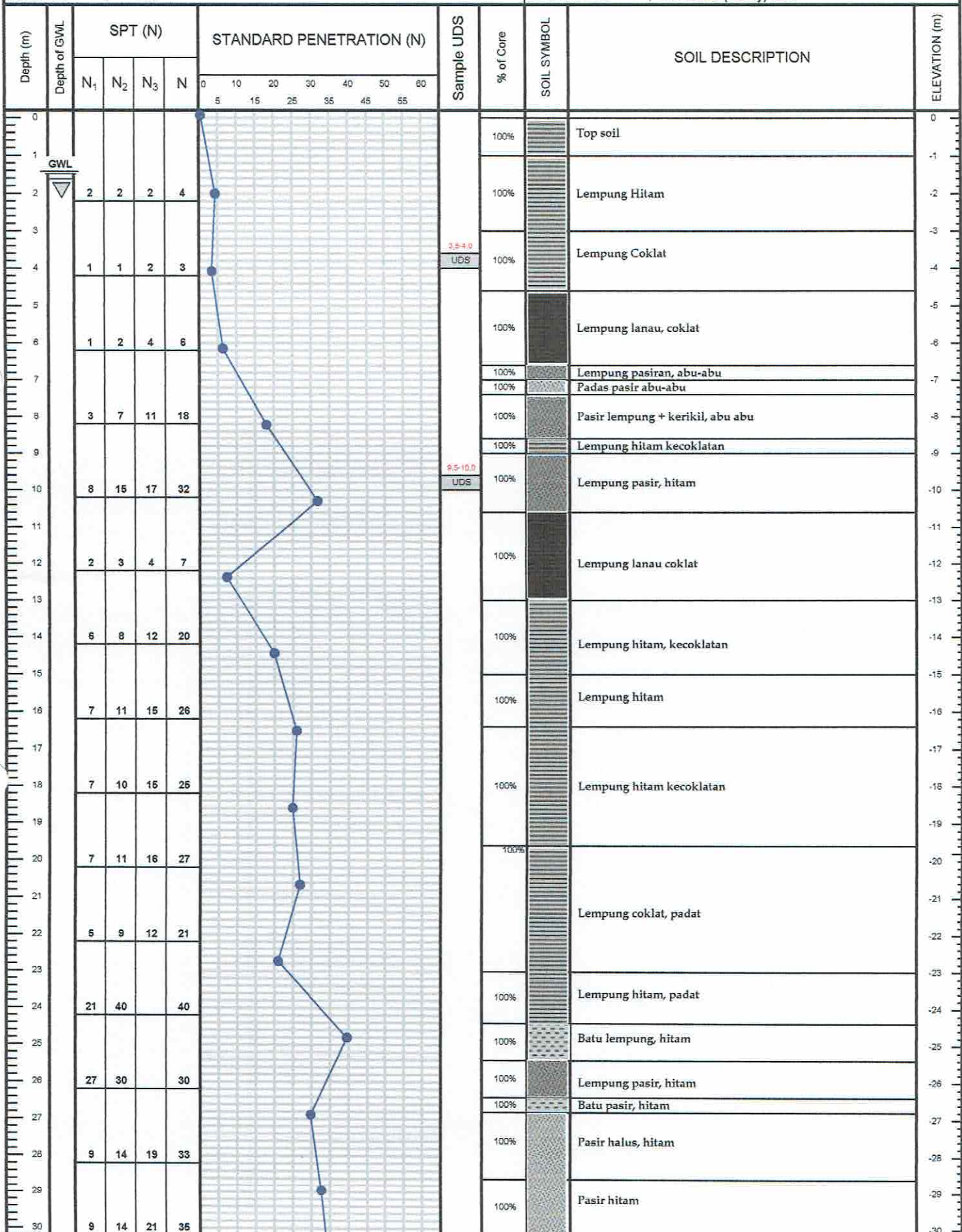
BT. SIDOKATON

JALAN KABUPATEN

3  
4

6  
4

PROJECT	JALAN TOL PEJAGAN - PEMALANG SEKSI 3-4		
LOCATION	Main Road	DISKRIPSI BY	Suparman
BOR NO.	STA. 291+000	DATE FINISH	04-Sep-16
DATE START	01-Sep-16	BORING METHOD	Coring, Sampling
MASTER BOR	Maruf	TYPE OF HAMMER	Automatic Hammer
SAMPLE TYPE	UDS	SAMPLING METHOD	Thin walled (shelby) tube





PROJECT	JALAN TOL PEJAGAN - PEMALANG SEKSI 3-4		
LOCATION	Main Road	DISKRIPSI BY	Superman
BOR NO.	STA. 291+000	DATE FINISH	04-Sep-16
DATE START	01-Sep-16	BORING METHOD	Coring, Sampling
MASTER BOR	Makruf	TYPE OF HAMMER	Automatic Hammer
SAMPLE TYPE	UDS	SAMPLING METHOD	Thin walled (shelby) tube

Depth (m)	Depth of GWL	SPT (N)				STANDARD PENETRATION (N)	Sample UDS	% of Core	SOIL SYMBOL	SOIL DESCRIPTION	ELEVATION (m)
		N <sub>1</sub>	N <sub>2</sub>	N <sub>3</sub>	N						
30		19	14	21	35					-30	
31										-31	
32		9	14	22	36		100%		Pasir hitam	-32	
33										-33	
34		9	15	22	37					-34	
35										-35	
										-36	
										-37	
										-38	
										-39	
										-40	
										-41	
										-42	
										-43	
										-44	
										-45	
										-46	
										-47	
										-48	
										-49	
										-50	
										-51	
										-52	
										-53	
										-54	
										-55	
										-56	
										-57	
										-58	
										-59	
										-60	

DATA SONDIR

NO. TITIK : 8-19

NAMA PROYEK : DOL PEJAJARAN - PEMALANG

STA : 291+100 R

LOCATION : MAIN ROAD

TANGGAL : 28/9/2016

INSTITUSI PELAKSANA :

Kedalaman (m)	Penetrasi Konus (kg/cm <sup>2</sup> )	Jumlah Perlawanan (kg/cm <sup>2</sup> )	Kedalaman (m)	Penetrasi Konus (kg/cm <sup>2</sup> )	Jumlah Perlawanan (kg/cm <sup>2</sup> )	Kedalaman (m)	Penetrasi Konus (kg/cm <sup>2</sup> )	Jumlah Perlawanan (kg/cm <sup>2</sup> )
0.00	1	1						
0.20	3	6	10.20			20.20		
0.40	3	6	10.40			20.40		
0.60	3	6	10.60			20.60		
0.80	3	6	10.80			20.80		
1.00	3	6	11.00			21.00		
1.20	4	7	11.20			21.20		
1.40	4	7	11.40			21.40		
1.60	4	7	11.60			21.60		
1.80	4	8	11.80			21.80		
2.00	4	8	12.00			22.00		
2.20	4	8	12.20			22.20		
2.40	4	9	12.40			22.40		
2.60	6	9	12.60			22.60		
2.80	6	10	12.80			22.80		
3.00	6	10	13.00			23.00		
3.20	7	7	13.20			23.20		
3.40	7	7	13.40			23.40		
3.60	7	7	13.60			23.60		
3.80	7	7	13.80			23.80		
4.00	7	7	14.00			24.00		
4.20	7	6	14.20			24.20		
4.40	7	6	14.40			24.40		
4.60	7	6	14.60			24.60		
4.80	2	5	14.80			24.80		
5.00	2	5	15.00			25.00		
5.20	3	6	15.20			25.20		
5.40	5	9	15.40			25.40		
5.60	5	9	15.60			25.60		
5.80	5	10	15.80			25.80		
6.00	6	11	16.00			26.00		
6.20	4	7	16.20			26.20		
6.40	4	7	16.40			26.40		
6.60	4	7	16.60			26.60		
6.80	7	11	16.80			26.80		
7.00	7	11	17.00			27.00		
7.20	12	18	17.20			27.20		
7.40	21	29	17.40			27.40		
7.60	21	30	17.60			27.60		
7.80	30	55	17.80			27.80		
8.00	85	107	18.00			28.00		
8.20	30	96	18.20			28.20		
8.40	50	167	18.40			28.40		
8.60	30	13	18.60			28.60		
8.80	35	55	18.80			28.80		
9.00	100	120	19.00			29.00		
9.20	110	155	19.20			29.20		
9.40	175	215	19.40			29.40		
9.60	7	250	19.60			29.60		
9.80			19.80			29.80		
10.00			20.00			30.00		



DATA SONDIR

NO.TITIK : 8.19

NAMA PROYEK : TOL PEJAGAN - DEMALANG

STA : 291+200 L

LOCATION : MAIN ROAD

TANGGAL : 20/9/2016

INSTITUSI PELAKSANA :

Kedalaman (m)	Penetrasi Konus (kg/cm <sup>2</sup> )	Jumlah Perlawanan (kg/cm <sup>2</sup> )	Kedalaman (m)	Penetrasi Konus (kg/cm <sup>2</sup> )	Jumlah Perlawanan (kg/cm <sup>2</sup> )	Kedalaman (m)	Penetrasi Konus (kg/cm <sup>2</sup> )	Jumlah Perlawanan (kg/cm <sup>2</sup> )
0.00	1	1						
0.20	3	6	10.20			20.20		
0.40	3	6	10.40			20.40		
0.60	3	7	10.60			20.60		
0.80	3	7	10.80			20.80		
1.00	3	7	11.00			21.00		
1.20	3	6	11.20			21.20		
1.40	3	6	11.40			21.40		
1.60	3	6	11.60			21.60		
1.80	1	8	11.80			21.80		
2.00	1	8	12.00			22.00		
2.20	5	6	12.20			22.20		
2.40	5	6	12.40			22.40		
2.60	5	6	12.60			22.60		
2.80	4	8	12.80			22.80		
3.00	4	8	13.00			23.00		
3.20	3	7	13.20			23.20		
3.40	3	7	13.40			23.40		
3.60	3	7	13.60			23.60		
3.80	3	7	13.80			23.80		
4.00	3	7	14.00			24.00		
4.20	3	7	14.20			24.20		
4.40	3	7	14.40			24.40		
4.60	3	7	14.60			24.60		
4.80	7	11	14.80			24.80		
5.00	7	11	15.00			25.00		
5.20	7	11	15.20			25.20		
5.40	7	11	15.40			25.40		
5.60	7	11	15.60			25.60		
5.80	6	17	15.80			25.80		
6.00	6	17	16.00			26.00		
6.20	19	20	16.20			26.20		
6.40	17	22	16.40			26.40		
6.60	17	22	16.60			26.60		
6.80	29	33	16.80			26.80		
7.00	29	37	17.00			27.00		
7.20	50	67	17.20			27.20		
7.40	60	80	17.40			27.40		
7.60	60	80	17.60			27.60		
7.80	76	100	17.80			27.80		
8.00	130	150	18.00			28.00		
8.20	150	195	18.20			28.20		
8.40	150	250	18.40			28.40		
8.60		250	18.60			28.60		
8.80			18.80			28.80		
9.00			19.00			29.00		
9.20			19.20			29.20		
9.40			19.40			29.40		
9.60			19.60			29.60		
9.80			19.80			29.80		
10.00			20.00			30.00		



DATA SONDIR

NO.TITIK :

8-20

NAMA PROYEK : TOL PEJABAN - PEMALANG

STA : 291 + 300 AS

LOCATION : MAIN ROAD

TANGGAL : 30/9/2016

INSTITUSI PELAKSANA :

Kedalaman (m)	Penetrasi Konus (kg/cm <sup>2</sup> )	Jumlah Perlawanan (kg/cm <sup>2</sup> )	Kedalaman (m)	Penetrasi Konus (kg/cm <sup>2</sup> )	Jumlah Perlawanan (kg/cm <sup>2</sup> )	Kedalaman (m)	Penetrasi Konus (kg/cm <sup>2</sup> )	Jumlah Perlawanan (kg/cm <sup>2</sup> )
0.00	1	1						
0.20	2	1	10.20			20.20		
0.40	2	1	10.40			20.40		
0.60	2	1	10.60			20.60		
0.80	3	6	10.80			20.80		
1.00	3	6	11.00			21.00		
1.20	4	7	11.20			21.20		
1.40	4	7	11.40			21.40		
1.60	4	7	11.60			21.60		
1.80	5	10	11.80			21.80		
2.00	5	10	12.00			22.00		
2.20	5	10	12.20			22.20		
2.40	6	11	12.40			22.40		
2.60	6	11	12.60			22.60		
2.80	6	11	12.80			22.80		
3.00	6	11	13.00			23.00		
3.20	6	11	13.20			23.20		
3.40	6	11	13.40			23.40		
3.60	6	11	13.60			23.60		
3.80	4	9	13.80			23.80		
4.00	4	9	14.00			24.00		
4.20	4	9	14.20			24.20		
4.40	4	9	14.40			24.40		
4.60	4	9	14.60			24.60		
4.80	4	9	14.80			24.80		
5.00	4	9	15.00			25.00		
5.20	6	11	15.20			25.20		
5.40	7	11	15.40			25.40		
5.60	7	11	15.60			25.60		
5.80	7	11	15.80			25.80		
6.00	7	11	16.00			26.00		
6.20	15	23	16.20			26.20		
6.40	21	28	16.40			26.40		
6.60	29	30	16.60			26.60		
6.80	30	52	16.80			26.80		
7.00	50	70	17.00			27.00		
7.20	160	200	17.20			27.20		
7.40	175	240	17.40			27.40		
7.60	250		17.60			27.60		
7.80			17.80			27.80		
8.00			18.00			28.00		
8.20			18.20			28.20		
8.40			18.40			28.40		
8.60			18.60			28.60		
8.80			18.80			28.80		
9.00			19.00			29.00		
9.20			19.20			29.20		
9.40			19.40			29.40		
9.60			19.60			29.60		
9.80			19.80			29.80		
10.00			20.00			30.00		



DATA SONDIR

NO.TITIK : S.21

NAMA PROYEK : TOL PEJAJARAN — PEMALANG

STA : 291 + 400 R

LOCATION : MAIN ROAD

TANGGAL : 30/9/2016

INSTITUSI PELAKSANA :

Kedalaman (m)	Penetrasi Konus (kg/cm <sup>2</sup> )	Jumlah Perlawanan (kg/cm <sup>2</sup> )
0.00		
0.20	2	4
0.40	2	4
0.60	3	5
0.80	3	5
1.00	3	5
1.20	3	6
1.40	3	7
1.60	3	7
1.80	3	7
2.00	3	7
2.20	5	9
2.40	5	9
2.60	5	9
2.80	6	10
3.00	7	11
3.20	5	8
3.40	5	8
3.60	5	8
3.80	4	6
4.00	4	6
4.20	3	6
4.40	3	6
4.60	3	6
4.80	3	6
5.00	3	6
5.20	4	8
5.40	8	12
5.60	8	12
5.80	13	17
6.00	15	21
6.20	16	23
6.40	20	28
6.60	20	28
6.80	26	36
7.00	35	47
7.20	30	42
7.40	25	31
7.60	25	31
7.80	60	86
8.00	100	135
8.20	90	115
8.40	75	95
8.60	75	95
8.80	150	195
9.00	175	210
9.20	175	210
9.40	175	210
9.60	175	250
9.80		
10.00		

Kedalaman (m)	Penetrasi Konus (kg/cm <sup>2</sup> )	Jumlah Perlawanan (kg/cm <sup>2</sup> )
10.20		
10.40		
10.60		
10.80		
11.00		
11.20		
11.40		
11.60		
11.80		
12.00		
12.20		
12.40		
12.60		
12.80		
13.00		
13.20		
13.40		
13.60		
13.80		
14.00		
14.20		
14.40		
14.60		
14.80		
15.00		
15.20		
15.40		
15.60		
15.80		
16.00		
16.20		
16.40		
16.60		
16.80		
17.00		
17.20		
17.40		
17.60		
17.80		
18.00		
18.20		
18.40		
18.60		
18.80		
19.00		
19.20		
19.40		
19.60		
19.80		
20.00		

Kedalaman (m)	Penetrasi Konus (kg/cm <sup>2</sup> )	Jumlah Perlawanan (kg/cm <sup>2</sup> )
20.20		
20.40		
20.60		
20.80		
21.00		
21.20		
21.40		
21.60		
21.80		
22.00		
22.20		
22.40		
22.60		
22.80		
23.00		
23.20		
23.40		
23.60		
23.80		
24.00		
24.20		
24.40		
24.60		
24.80		
25.00		
25.20		
25.40		
25.60		
25.80		
26.00		
26.20		
26.40		
26.60		
26.80		
27.00		
27.20		
27.40		
27.60		
27.80		
28.00		
28.20		
28.40		
28.60		
28.80		
29.00		
29.20		
29.40		
29.60		
29.80		
30.00		



DATA SONDIR

NO.TITIK : S.22

NAMA PROYEK : TOL PEJAJARAN — PEMALANG

STA : 291+500 L LOCATION : MAIN ROAD

TANGGAL : 30/9/2016 INSTITUSI PELAKSANA :

Kedalaman (m)	Penetrasi Konus (kg/cm <sup>2</sup> )	Jumlah Perlawanan (kg/cm <sup>2</sup> )	Kedalaman (m)	Penetrasi Konus (kg/cm <sup>2</sup> )	Jumlah Perlawanan (kg/cm <sup>2</sup> )	Kedalaman (m)	Penetrasi Konus (kg/cm <sup>2</sup> )	Jumlah Perlawanan (kg/cm <sup>2</sup> )
0.00								
0.20			10.20	15	21	20.20		
0.40	2	9	10.40	15	21	20.40		
0.60	2	9	10.60	15	21	20.60		
0.80	2	6	10.80	15	22	20.80		
1.00	3	6	11.00	15	22	21.00		
1.20	4	8	11.20	15	22	21.20		
1.40	6	10	11.40	15	22	21.40		
1.60	6	10	11.60	15	22	21.60		
1.80	6	10	11.80	15	22	21.80		
2.00	6	10	12.00	15	22	22.00		
2.20	6	10	12.20	17	25	22.20		
2.40	6	10	12.40	20	26	22.40		
2.60	6	10	12.60	20	26	22.60		
2.80	6	10	12.80	30	41	22.80		
3.00	8	13	13.00	30	41	23.00		
3.20	8	13	13.20	30	45	23.20		
3.40	9	14	13.40	30	45	23.40		
3.60	9	14	13.60	30	45	23.60		
3.80	8	13	13.80	35	50	23.80		
4.00	6	10	14.00	35	51	24.00		
4.20	3	6	14.20	35	51	24.20		
4.40	3	6	14.40	45	60	24.40		
4.60	3	6	14.60	45	60	24.60		
4.80	3	6	14.80	45	60	24.80		
5.00	3	6	15.00	45	60	25.00		
5.20	3	6	15.20	45	60	25.20		
5.40	3	6	15.40	45	60	25.40		
5.60	3	6	15.60	45	60	25.60		
5.80	4	8	15.80	45	60	25.80		
6.00	4	8	16.00	45	60	26.00		
6.20	4	8	16.20	45	60	26.20		
6.40	4	8	16.40	45	63	26.40		
6.60	4	8	16.60	45	63	26.60		
6.80	4	6	16.80	45	63	26.80		
7.00	4	6	17.00	45	63	27.00		
7.20	4	6	17.20	45	63	27.20		
7.40	4	6	17.40	45	63	27.40		
7.60	4	6	17.60	47	65	27.60		
7.80	4	6	17.80	47	65	27.80		
8.00	4	6	18.00	47	65	28.00		
8.20	5	9	18.20	47	65	28.20		
8.40	5	9	18.40	47	65	28.40		
8.60	5	9	18.60	47	65	28.60		
8.80	5	10	18.80	47	65	28.80		
9.00	10	16	19.00	47	65	29.00		
9.20	13	18	19.20	47	65	29.20		
9.40	15	21	19.40	47	65	29.40		
9.60	15	21	19.60	47	65	29.60		
9.80	15	21	19.80	47	65	29.80		
10.00	15	21	20.00	47	65	30.00		



DATA BONDIR

NO.TITIK : S-23

NAMA PROYEK : TOL BEJAGAN - PEMALANG

STA : 291+600 AS

LOCATION : MAIN ROAD

TANGGAL : 31/10/2016

INSTITUSI PELAKSANA :

Kedalaman (m)	Penetrasi Konus (kg/cm <sup>2</sup> )	Jumlah Perlawanan (kg/cm <sup>2</sup> )
0.00	-	-
0.20	9	7
0.40	9	7
0.60	9	7
0.80	9	7
1.00	9	7
1.20	9	7
1.40	9	12
1.60	9	12
1.80	9	12
2.00	9	12
2.20	9	14
2.40	9	14
2.60	9	14
2.80	9	14
3.00	9	14
3.20	9	14
3.40	9	8
3.60	9	8
3.80	9	9
4.00	9	9
4.20	9	7
4.40	9	7
4.60	9	7
4.80	9	7
5.00	9	15
5.20	20	17
5.40	19	20
5.60	14	20
5.80	20	27
6.00	26	37
6.20	35	51
6.40	50	67
6.60	50	67
6.80	50	75
7.00	85	105
7.20	70	95
7.40	45	56
7.60	45	56
7.80	45	56
8.00	45	56
8.20	100	145
8.40	160	205
8.60	180	220
8.80	180	250
9.00		
9.20		
9.40		
9.60		
9.80		
10.00		

Kedalaman (m)	Penetrasi Konus (kg/cm <sup>2</sup> )	Jumlah Perlawanan (kg/cm <sup>2</sup> )
10.20		
10.40		
10.60		
10.80		
11.00		
11.20		
11.40		
11.60		
11.80		
12.00		
12.20		
12.40		
12.60		
12.80		
13.00		
13.20		
13.40		
13.60		
13.80		
14.00		
14.20		
14.40		
14.60		
14.80		
15.00		
15.20		
15.40		
15.60		
15.80		
16.00		
16.20		
16.40		
16.60		
16.80		
17.00		
17.20		
17.40		
17.60		
17.80		
18.00		
18.20		
18.40		
18.60		
18.80		
19.00		
19.20		
19.40		
19.60		
19.80		
20.00		

Kedalaman (m)	Penetrasi Konus (kg/cm <sup>2</sup> )	Jumlah Perlawanan (kg/cm <sup>2</sup> )
20.20		
20.40		
20.60		
20.80		
21.00		
21.20		
21.40		
21.60		
21.80		
22.00		
22.20		
22.40		
22.60		
22.80		
23.00		
23.20		
23.40		
23.60		
23.80		
24.00		
24.20		
24.40		
24.60		
24.80		
25.00		
25.20		
25.40		
25.60		
25.80		
26.00		
26.20		
26.40		
26.60		
26.80		
27.00		
27.20		
27.40		
27.60		
27.80		
28.00		
28.20		
28.40		
28.60		
28.80		
29.00		
29.20		
29.40		
29.60		
29.80		
30.00		



DATA SONDIR

NO.TITIK : 3-24

NAMA PROYEK : TOL PEJABAN - PEMALANG

STA : 291+700 R

LOCATION : MAIN ROAD

TANGGAL : 01/9/2016

INSTITUSI PELAKSANA :

Kedalaman (m)	Penetrasi Konus (kg/cm <sup>2</sup> )	Jumlah Perlawanan (kg/cm <sup>2</sup> )	Kedalaman (m)	Penetrasi Konus (kg/cm <sup>2</sup> )	Jumlah Perlawanan (kg/cm <sup>2</sup> )	Kedalaman (m)	Penetrasi Konus (kg/cm <sup>2</sup> )	Jumlah Perlawanan (kg/cm <sup>2</sup> )
0.00	1	1						
0.20	3	6	10.20			20.20		
0.40	3	6	10.40			20.40		
0.60	3	6	10.60			20.60		
0.80	3	6	10.80			20.80		
1.00	3	6	11.00			21.00		
1.20	3	6	11.20			21.20		
1.40	3	6	11.40			21.40		
1.60	3	6	11.60			21.60		
1.80	4	7	11.80			21.80		
2.00	4	7	12.00			22.00		
2.20	4	7	12.20			22.20		
2.40	6	11	12.40			22.40		
2.60	8	12	12.60			22.60		
2.80	8	12	12.80			22.80		
3.00	8	16	13.00			23.00		
3.20	8	13	13.20			23.20		
3.40	8	13	13.40			23.40		
3.60	8	13	13.60			23.60		
3.80	7	13	13.80			23.80		
4.00	7	13	14.00			24.00		
4.20	7	7	14.20			24.20		
4.40	9	7	14.40			24.40		
4.60	9	7	14.60			24.60		
4.80	9	7	14.80			24.80		
5.00	9	7	15.00			25.00		
5.20	10	15	15.20			25.20		
5.40	12	20	15.40			25.40		
5.60	12	20	15.60			25.60		
5.80	13	21	15.80			25.80		
6.00	15	22	16.00			26.00		
6.20	13	21	16.20			26.20		
6.40	13	21	16.40			26.40		
6.60	13	21	16.60			26.60		
6.80	13	21	16.80			26.80		
7.00	13	21	17.00			27.00		
7.20	45	60	17.20			27.20		
7.40	70	95	17.40			27.40		
7.60	77	100	17.60			27.60		
7.80	100	145	17.80			27.80		
8.00	100	145	18.00			28.00		
8.20	125	155	18.20			28.20		
8.40	150	195	18.40			28.40		
8.60	165	200	18.60			28.60		
8.80	77	250	18.80			28.80		
9.00			19.00			29.00		
9.20			19.20			29.20		
9.40			19.40			29.40		
9.60			19.60			29.60		
9.80			19.80			29.80		
10.00			20.00			30.00		



DATA SONDIR

NO.TITIK :

S-25

NAMA PROYEK : TOL PEJOMBAN - PEMALANG

STA : 291+800 L

LOCATION : MAIN ROAD

TANGGAL : 01/10/2016

INSTITUSI PELAKSANA :

Kedalaman (m)	Penetrasi Konus (kg/cm <sup>2</sup> )	Jumlah Perlawanan (kg/cm <sup>2</sup> )	Kedalaman (m)	Penetrasi Konus (kg/cm <sup>2</sup> )	Jumlah Perlawanan (kg/cm <sup>2</sup> )	Kedalaman (m)	Penetrasi Konus (kg/cm <sup>2</sup> )	Jumlah Perlawanan (kg/cm <sup>2</sup> )
0.00	1	1						
0.20	2	4	10.20			20.20		
0.40	2	4	10.40			20.40		
0.60	2	4	10.60			20.60		
0.80	2	4	10.80			20.80		
1.00	2	4	11.00			21.00		
1.20	3	6	11.20			21.20		
1.40	3	6	11.40			21.40		
1.60	3	6	11.60			21.60		
1.80	4	8	11.80			21.80		
2.00	4	8	12.00			22.00		
2.20	4	9	12.20			22.20		
2.40	0	14	12.40			22.40		
2.60	9	14	12.60			22.60		
2.80	5	11	12.80			22.80		
3.00	5	11	13.00			23.00		
3.20	5	11	13.20			23.20		
3.40	5	11	13.40			23.40		
3.60	5	11	13.60			23.60		
3.80	3	7	13.80			23.80		
4.00	3	7	14.00			24.00		
4.20	5	11	14.20			24.20		
4.40	7	13	14.40			24.40		
4.60	7	13	14.60			24.60		
4.80	14	20	14.80			24.80		
5.00	19	27	15.00			25.00		
5.20	23	33	15.20			25.20		
5.40	30	43	15.40			25.40		
5.60	30	43	15.60			25.60		
5.80	40	56	15.80			25.80		
6.00	55	70	16.00			26.00		
6.20	50	68	16.20			26.20		
6.40	46	57	16.40			26.40		
6.60	46	57	16.60			26.60		
6.80	100	145	16.80			26.80		
7.00	100	145	17.00			27.00		
7.20	110	130	17.20			27.20		
7.40	125	165	17.40			27.40		
7.60	175	225	17.60			27.60		
7.80	250	250	17.80			27.80		
8.00			18.00			28.00		
8.20			18.20			28.20		
8.40			18.40			28.40		
8.60			18.60			28.60		
8.80			18.80			28.80		
9.00			19.00			29.00		
9.20			19.20			29.20		
9.40			19.40			29.40		
9.60			19.60			29.60		
9.80			19.80			29.80		
10.00			20.00			30.00		



DATA SONDIR

NO.TITIK : S-26

NAMA PROYEK : TOL PEJABAN PEMALANG

STA : 291+900 L LOCATION : MAIN ROAD

TANGGAL : 01/10/2016 INSTITUSI PELAKSANA :

Kedalaman (m)	Penetrasi Konus (kg/cm <sup>2</sup> )	Jumlah Perlawanan (kg/cm <sup>2</sup> )	Kedalaman (m)	Penetrasi Konus (kg/cm <sup>2</sup> )	Jumlah Perlawanan (kg/cm <sup>2</sup> )	Kedalaman (m)	Penetrasi Konus (kg/cm <sup>2</sup> )	Jumlah Perlawanan (kg/cm <sup>2</sup> )
0.00	1	1						
0.20	3	6	10.20			20.20		
0.40	3	6	10.40			20.40		
0.60	3	6	10.60			20.60		
0.80	4	7	10.80			20.80		
1.00	4	7	11.00			21.00		
1.20	4	7	11.20			21.20		
1.40	4	7	11.40			21.40		
1.60	4	7	11.60			21.60		
1.80	4	8	11.80			21.80		
2.00	4	8	12.00			22.00		
2.20	4	8	12.20			22.20		
2.40	4	8	12.40			22.40		
2.60	4	8	12.60			22.60		
2.80	7	12	12.80			22.80		
3.00	10	16	13.00			23.00		
3.20	10	16	13.20			23.20		
3.40	10	16	13.40			23.40		
3.60	10	16	13.60			23.60		
3.80	5	10	13.80			23.80		
4.00	5	10	14.00			24.00		
4.20	7	13	14.20			24.20		
4.40	7	13	14.40			24.40		
4.60	7	13	14.60			24.60		
4.80	10	17	14.80			24.80		
5.00	17	27	15.00			25.00		
5.20	17	27	15.20			25.20		
5.40	17	27	15.40			25.40		
5.60	17	27	15.60			25.60		
5.80	25	60	15.80			25.80		
6.00	75	90	16.00			26.00		
6.20	150	115	16.20			26.20		
6.40	110	125	16.40			26.40		
6.60	110	125	16.60			26.60		
6.80	150	175	16.80			26.80		
7.00	95	170	17.00			27.00		
7.20	150	200	17.20			27.20		
7.40	175	210	17.40			27.40		
7.60	180	220	17.60			27.60		
7.80	21	250	17.80			27.80		
8.00			18.00			28.00		
8.20			18.20			28.20		
8.40			18.40			28.40		
8.60			18.60			28.60		
8.80			18.80			28.80		
9.00			19.00			29.00		
9.20			19.20			29.20		
9.40			19.40			29.40		
9.60			19.60			29.60		
9.80			19.80			29.80		
10.00			20.00			30.00		

















PERHITUNGAN DATA SONDIR									
Depth	C	C+F	F	Local	Friction	Friction	Ratio	Total	Jenis Tanah
A	B	C	C-B	(C-B)*0.1	(C-B)*2	(((C-B)*0,1/B)*100	Friction	(C-B)*2	
0									
0.2	3	6	3	0.3	6	10.00	6	Clays	
0.4	3	6	3	0.3	6	10.00	12	Clays	
0.6	3	6	3	0.3	6	10.00	18	Clays	
0.8	3	6	3	0.3	6	10.00	24	Clays	
1	3	6	3	0.3	6	10.00	30	Clays	
1.2	4	7	3	0.3	6	7.50	36	Clays	
1.4	4	7	3	0.3	6	7.50	42	Clays	
1.6	4	7	3	0.3	6	7.50	48	Clays	
1.8	4	8	4	0.4	8	10.00	56	Clays	
2	4	8	4	0.4	8	10.00	64	Clays	
2.2	4	8	4	0.4	8	10.00	72	Clays	
2.4	4	9	5	0.5	10	12.50	82	Clays	
2.6	4	9	5	0.5	10	12.50	92	Clays	
2.8	6	10	4	0.4	8	6.67	100	Clays	
3	6	10	4	0.4	8	6.67	108	Clays	
3.2	4	7	3	0.3	6	7.50	114	Clays	
3.4	4	7	3	0.3	6	7.50	120	Clays	
3.6	4	7	3	0.3	6	7.50	126	Clays	
3.8	4	7	3	0.3	6	7.50	132	Clays	
4	4	7	3	0.3	6	7.50	138	Clays	
4.2	3	6	3	0.3	6	10.00	144	Clays	
4.4	3	6	3	0.3	6	10.00	150	Clays	
4.6	3	6	3	0.3	6	10.00	156	Clays	
4.8	3	5	2	0.2	4	6.67	160	Clays	
5	2	5	3	0.3	6	15.00	166	Clays	
5.2	3	6	3	0.3	6	10.00	172	Clays	
5.4	5	9	4	0.4	8	8.00	180	Clays	
5.6	5	9	4	0.4	8	8.00	188	Clays	
5.8	5	10	5	0.5	10	10.00	198	Clays	
6	6	11	5	0.5	10	8.33	208	Clays	
6.2	4	7	3	0.3	6	7.50	214	Clays	
6.4	4	7	3	0.3	6	7.50	220	Clays	
6.6	4	7	3	0.3	6	7.50	226	Clays	
6.8	7	11	4	0.4	8	5.71	234	Clays	
7	7	11	4	0.4	8	5.71	242	Silts	
7.2	12	18	6	0.6	12	5.00	254	Silts	
7.4	21	29	8	0.8	16	3.81	270	Silts	
7.6	21	30	9	0.9	18	4.29	288	Silts	
7.8	30	55	25	2.5	50	8.33	338	Silts	
8	85	100	15	1.5	30	1.76	368	Sands	
8.2	70	96	26	2.6	52	3.71	420	Sands	
8.4	50	67	17	1.7	34	3.40	454	Sands	
8.6	30	43	13	1.3	26	4.33	480	Sands	
8.8	35	55	20	2	40	5.71	520	Sands	
9	100	120	20	2	40	2.00	560	Sands	
9.2	110	155	45	4.5	90	4.09	650	Sands	
9.4	175	215	40	4	80	2.29	730	Sands	

qc	fr	qc (NM/m; Konsistensi	Korelasi	qc	Nspt	NSPT rata-rata	G.d	Es	G.sat	v	c	k	Angle E (KN/m2)
3	10.00	0.2942	Very Soft Clay	1.5	3	2	2	14	1400	16	0.35	12.5	8.64E-04 4.17 1400000
			Very Soft Clay	1.5	3	2							
			Very Soft Clay	1.5	3	2							
			Very Soft Clay	1.5	3	2							
			Very Soft Clay	1.5	3	2							
4	8.50	0.392266	Very Soft Clay	2	4	2							
			Very Soft Clay	2	4	2							
			Very Soft Clay	2	4	2							
			Very Soft Clay	2	4	2							
4.4	10.33	0.431493	Soft Clay	2	4	2							
			Soft Clay	2	4	2							
			Very Soft Clay	2	4	2							
			Very Soft Clay	2	4	2							
4.4	7.33	0.431493	Soft Clay	3	6	3							
			Soft Clay	3	6	3							
			Very Soft Clay	2	4	2							
			Very Soft Clay	2	4	2							
			Very Soft Clay	2	4	2							
3.2	8.83	0.313813	Soft Clay	2	4	2							
			Very Soft Clay	1.5	3	2							
			Very Soft Clay	1.5	3	2							
			Very Soft Clay	1.5	3	2							
			Very Soft Clay	1.5	3	2							
4	10.20	0.392266	Very Soft Clay	1	2	1							
			Very Soft Clay	1.5	3	2							
			Soft Clay	2.5	5	3	3	14	2100	16	0.35	12.5	8.64E-04 4.17 2100000
			Soft Clay	2.5	5	3							
			Soft Clay	2.5	5	3							
5	7.31	0.490333	Soft Clay	3	6	3							
			Soft Clay	2	4	2							
			Soft Clay	2	4	2							
			Soft Clay	2	4	2							
18.2	5.43	1.78481	Soft Clay	3.5	7	4							
			Soft Clay	2.333333	7	2							
			Medium Clay	4	12	4							
			Medium Clay	7	21	7	7	15	4900	17	0.35	25	8.64E-04 8.33 4900000
			Medium Clay	7	21	7							
			Medium Dense	10	30	10							
54	3.79	5.295591	Medium Dense	21.25	85	21	20	17	14000	19	0.3	11.67	8.64E-02 35 14000000
			Medium Dense	17.5	70	18							
			Medium Dense	12.5	50	13							
			Loose Sands	7.5	30	8							
			Loose Sands	8.75	35	9							
77	2.79	7.551121	Medium Dense	25	100	25							
			Medium Dense	27.5	110	28							
			Dense Sands	43.75	175	44							

PERHITUNGAN DATA SONDIR								
Depth	C	C+F	F	Local Friction (C-B)*0.1	Friction Ratio (C-B)*2	Friction Ratio (((C-B)*0.1/B)*100	Total Friction (C-B)*2	Jenis Tanah
A	B	C	C-B					
0								
0.2	3	6	3	0.3	6	10.00	6	Clays
0.4	3	6	3	0.3	6	10.00	12	Clays
0.6	3	7	4	0.4	8	13.33	20	Clays
0.8	3	7	4	0.4	8	13.33	28	Clays
1	3	7	4	0.4	8	13.33	36	Clays
1.2	3	6	3	0.3	6	10.00	42	Clays
1.4	3	6	3	0.3	6	10.00	48	Clays
1.6	3	6	3	0.3	6	10.00	54	Clays
1.8	4	8	4	0.4	8	10.00	62	Clays
2	4	8	4	0.4	8	10.00	70	Clays
2.2	5	10	5	0.5	10	10.00	80	Clays
2.4	5	10	5	0.5	10	10.00	90	Clays
2.6	5	10	5	0.5	10	10.00	100	Clays
2.8	4	8	4	0.4	8	10.00	108	Clays
3	4	8	4	0.4	8	10.00	116	Clays
3.2	3	7	4	0.4	8	13.33	124	Clays
3.4	3	7	4	0.4	8	13.33	132	Clays
3.6	3	7	4	0.4	8	13.33	140	Clays
3.8	3	7	4	0.4	8	13.33	148	Clays
4	3	7	4	0.4	8	13.33	156	Clays
4.2	3	7	4	0.4	8	13.33	164	Clays
4.4	3	7	4	0.4	8	13.33	172	Clays
4.6	3	7	4	0.4	8	13.33	180	Clays
4.8	7	11	4	0.4	8	5.71	188	Clays
5	7	11	4	0.4	8	5.71	196	Clays
5.2	7	11	4	0.4	8	5.71	204	Clays
5.4	7	11	4	0.4	8	5.71	212	Clays
5.6	7	11	4	0.4	8	5.71	220	Clays
5.8	10	17	7	0.7	14	7.00	234	Clays
6	10	17	7	0.7	14	7.00	248	Silts
6.2	14	20	6	0.6	12	4.29	260	Silts
6.4	17	22	5	0.5	10	2.94	270	Silts
6.6	17	22	5	0.5	10	2.94	280	Silts
6.8	24	33	9	0.9	18	3.75	298	Silts
7	29	37	8	0.8	16	2.76	314	Sands
7.2	50	67	17	1.7	34	3.40	348	Sands
7.4	60	80	20	2	40	3.33	388	Sands
7.6	60	80	20	2	40	3.33	428	Sands
7.8	76	100	24	2.4	48	3.16	476	Sands
8	130	150	20	2	40	1.54	516	Sands
8.2	150	195	45	4.5	90	3.00	606	Sands
8.4	150	250	100	10	200	6.67	806	Sands
8.6	0	250	250	25	500	#DIV/0!	1306	Silts
8.8	0	0	0	0	0	#DIV/0!	1306	Silts

qc	fr	qc (NM/m; Konsistensi)	Korelasi	qc	NSPT rata-rata	G.d	Es	G.sat	v	c	k	Angle E
3	12.00	0.2942	Very Soft Clay	2	3	2	14	1400	16	0.35	12.5	8.64E-04 4.17 1400000
			Very Soft Clay	2	3							
			Very Soft Clay	2	3							
			Very Soft Clay	2	3							
			Very Soft Clay	2	3							
3.4	10.00	0.333426	Very Soft Clay	2	3							
			Very Soft Clay	2	3							
			Very Soft Clay	2	3							
			Very Soft Clay	2	4							
4.6	10.00	0.451106	Soft Clay	2	4							
			Soft Clay	3	5							
			Soft Clay	3	5							
			Soft Clay	3	5							
			Very Soft Clay	2	4							
3.2	12.67	0.313813	Very Soft Clay	2	4							
			Very Soft Clay	2	3							
			Very Soft Clay	2	3							
			Very Soft Clay	2	3							
			Very Soft Clay	2	3							
3.8	11.81	0.372653	Very Soft Clay	2	3							
			Very Soft Clay	2	3							
			Very Soft Clay	2	3							
			Very Soft Clay	2	3							
			Very Soft Clay	2	3							
7.6	5.97	0.745305	Soft Clay	4	7	4	14	2800	16	0.35	12.5	8.64E-04 4.17 2800000
			Soft Clay	4	7							
			Soft Clay	4	7							
			Soft Clay	4	7							
			Soft Clay	4	7							
16.4	4.18	1.608291	Medium Clay	5	10	5	15	3500	17	0.35	25	8.64E-04 8.33 3500000
			Soft Clay	3	10							
			Medium Clay	5	14							
			Medium Clay	6	17							
			Medium Clay	6	17							
			Stiff Clay	8	24							
55	3.20	5.393658	Medium Dense	7	29	22	17	15400	19	0.3	11.67	8.64E-02 35 15400000
			Medium Dense	13	50							
			Medium Dense	15	60							
			Medium Dense	15	60							
			Medium Dense	19	76							
86	3.74	8.433719	Dense Sands	33	130							
			Dense Sands	38	150							
			Dense Sands	38	150							



## SITE SURVEY SIDOKATON

- Per tanggal 19 Januari 2017  
Oprit Barat



Oprit Timur



- Per tanggal 22 Maret 2017  
Oprit Barat



Oprit Timur





- Per tanggal 11 April 2017  
Oprit Barat



Oprit Timur



➤ Per tanggal 31 Mei 2017





- Per tanggal 28 Juli 2017  
Oprit Barat



### Oprit Timur

