

Quadro de Cubação

Alinhamento: Perfil Longitudinal - Trecho 01



<u>Estaca</u>	<u>Área de Corte (m²)</u>	<u>Volume de Corte (m³)</u>	<u>Área de Aterro (m²)</u>	<u>Volume Aterro (m³)</u>	<u>Vol. Acum. Corte (m³)</u>	<u>Vol. Acum. Aterro (m³)</u>
0+0.000	0.00	0.00	1.83	0.00	0.00	0.00
0+10.000	0.00	0.00	2.02	19.22	0.00	19.22
1+0.000	0.00	0.00	1.49	17.44	0.00	36.66
1+10.000	0.00	0.00	1.87	16.76	0.00	53.41
2+0.000	0.00	0.00	1.94	19.09	0.00	72.51
2+10.000	0.00	0.00	2.28	21.07	0.00	93.57
3+0.000	0.00	0.00	4.20	32.32	0.00	125.89
3+10.000	0.00	0.00	1.64	29.15	0.00	155.04
4+0.000	0.00	0.00	1.53	15.81	0.00	170.85
4+10.000	0.00	0.00	1.53	15.29	0.00	186.15
5+0.000	0.00	0.00	1.88	17.06	0.00	203.21
5+10.000	0.00	0.00	1.48	16.86	0.00	220.06
6+0.000	0.00	0.00	1.16	13.21	0.00	233.28
6+10.000	0.11	0.55	0.45	8.05	0.55	241.32
7+0.000	0.00	0.60	1.28	8.65	1.15	249.97
7+10.000	0.27	1.33	1.38	13.43	2.48	263.40
8+0.000	0.00	1.33	1.55	14.66	3.81	278.06
8+10.000	0.00	0.00	1.55	15.51	3.81	293.57
9+0.000	0.00	0.00	1.44	14.94	3.81	308.51
9+10.000	0.00	0.00	1.68	15.60	3.81	324.11
9+15.180	0.00	0.00	1.92	9.33	3.81	333.45
11+13.220	0.00	0.00	1.61	0.00	0.00	0.00
12+0.000	0.00	0.00	1.81	11.59	0.00	11.59
12+10.000	0.00	0.00	1.36	16.04	0.00	27.63
13+0.000	0.00	0.00	1.55	14.57	0.00	42.20
13+10.000	0.00	0.00	1.65	15.98	0.00	58.18
14+0.000	0.00	0.00	1.82	17.36	0.00	75.54
14+10.000	0.00	0.00	1.22	15.21	0.00	90.75
15+0.000	0.29	1.43	0.98	11.01	1.43	101.76
15+10.000	0.03	1.61	1.03	10.03	3.04	111.79
16+0.000	0.00	0.15	1.40	12.18	3.19	123.97
16+10.000	0.00	0.00	1.86	16.32	3.19	140.29
17+0.000	0.00	0.00	2.06	19.42	3.19	159.71
17+10.000	0.00	0.00	1.89	19.73	3.19	179.45
18+0.000	0.00	0.00	1.58	17.35	3.19	196.79
18+10.000	0.00	0.00	1.68	16.30	3.19	213.10
19+0.000	0.00	0.00	1.75	17.08	3.19	230.17
19+10.000	0.00	0.00	1.69	17.23	3.19	247.40
20+0.000	0.00	0.00	1.55	16.21	3.19	263.61



Quadro de Cubação

Alinhamento: Perfil Longitudinal - Trecho 01



<u>Estaca</u>	<u>Área de Corte (m²)</u>	<u>Volume de Corte (m³)</u>	<u>Área de Aterro (m²)</u>	<u>Volume Aterro (m³)</u>	<u>Vol. Acum. Corte (m³)</u>	<u>Vol. Acum. Aterro (m³)</u>
20+10.000	0.00	0.00	1.30	14.24	3.19	277.85
21+0.000	0.00	0.00	1.10	11.98	3.19	289.84
21+10.000	0.00	0.00	1.02	10.61	3.19	300.45
22+0.000	0.00	0.00	1.17	10.96	3.19	311.41
22+10.000	0.00	0.00	1.58	13.76	3.19	325.17
23+0.000	0.00	0.00	1.56	15.72	3.19	340.89
23+10.000	0.00	0.00	1.69	16.26	3.19	357.15
24+0.000	0.00	0.00	1.56	16.25	3.19	373.40
24+10.000	0.00	0.00	1.53	15.45	3.19	388.85
25+0.000	0.00	0.00	1.69	16.13	3.19	404.98
25+10.000	0.00	0.00	1.72	17.07	3.19	422.04
26+0.000	0.00	0.00	1.55	16.36	3.19	438.40
26+10.000	0.00	0.00	1.36	14.56	3.19	452.96
27+0.000	0.00	0.00	1.18	12.74	3.19	465.70
27+10.000	0.00	0.00	1.35	12.69	3.19	478.39
28+0.000	0.00	0.00	1.65	15.02	3.19	493.41
28+10.000	0.00	0.00	1.52	15.86	3.19	509.27
29+0.000	0.00	0.00	1.36	14.43	3.19	523.70
29+10.000	0.00	0.00	1.22	12.94	3.19	536.64
30+0.000	0.00	0.00	0.84	10.37	3.19	547.01
30+10.000	0.07	0.37	0.78	8.11	3.57	555.12
31+0.000	0.00	0.37	1.32	10.50	3.94	565.62
31+10.000	0.02	0.12	1.12	12.21	4.06	577.83
32+0.000	0.00	0.12	1.55	13.37	4.18	591.20
32+10.000	0.00	0.00	1.76	16.55	4.18	607.75
33+0.000	0.00	0.00	1.36	15.61	4.18	623.36
33+10.000	0.00	0.00	1.23	12.97	4.18	636.33
34+0.000	0.00	0.00	1.96	15.95	4.18	652.29
34+10.000	0.00	0.00	2.40	21.65	4.18	673.94
35+0.000	0.00	0.00	2.40	23.99	4.18	697.93
35+10.000	0.00	0.00	2.22	23.14	4.18	721.07
36+0.000	0.00	0.00	2.16	21.88	4.18	742.94
36+10.000	0.00	0.00	1.59	18.84	4.18	761.79
37+0.000	0.00	0.00	1.23	14.13	4.18	775.92
37+10.000	0.00	0.00	1.24	12.46	4.18	788.37
38+0.000	0.00	0.00	1.20	12.22	4.18	800.59
38+10.000	0.00	0.00	1.34	12.69	4.18	813.28
39+0.000	0.00	0.00	1.43	13.83	4.18	827.11
39+10.000	0.00	0.04	0.98	12.02	4.22	839.13



Quadro de Cubação

Alinhamento: Perfil Longitudinal - Trecho 01



<u>Estaca</u>	<u>Área de Corte (m²)</u>	<u>Volume de Corte (m³)</u>	<u>Área de Aterro (m²)</u>	<u>Volume Aterro (m³)</u>	<u>Vol. Acum. Corte (m³)</u>	<u>Vol. Acum. Aterro (m³)</u>
40+0.000	0.16	0.86	0.52	7.45	5.08	846.57
40+10.000	0.00	0.80	0.76	6.38	5.88	852.95
41+0.000	0.00	0.00	0.89	8.21	5.88	861.16
41+10.000	0.03	0.15	0.87	8.76	6.03	869.93
42+0.000	0.10	0.63	0.94	9.02	6.67	878.95
42+10.000	0.13	1.12	0.82	8.77	7.79	887.72
43+0.000	0.15	1.33	0.78	8.12	9.12	895.84
43+10.000	0.11	1.30	0.92	8.50	10.42	904.35
44+0.000	0.09	1.03	0.95	9.25	11.44	913.60
44+10.000	0.04	0.63	1.20	10.71	12.07	924.31
45+0.000	0.05	0.43	1.13	11.72	12.51	936.03
45+10.000	0.07	0.63	1.03	10.82	13.14	946.84
46+0.000	0.10	0.85	0.94	9.90	13.99	956.74
46+10.000	0.25	1.75	0.52	7.30	15.74	964.04
47+0.000	0.12	1.86	0.87	6.95	17.60	970.99
47+10.000	0.07	0.94	1.04	9.54	18.54	980.53
48+0.000	0.00	0.36	2.98	20.13	18.90	1000.66
48+10.000	0.00	0.00	5.70	43.40	18.90	1044.06
49+0.000	0.00	0.00	8.01	68.52	18.90	1112.58
49+10.000	0.00	0.00	10.45	92.30	18.90	1204.88
50+0.000	0.00	0.00	12.67	115.61	18.90	1320.49
50+10.000	0.00	0.00	14.44	134.74	18.90	1455.23
51+0.000	0.00	0.00	14.27	143.56	18.90	1598.79
51+10.000	0.00	0.00	13.29	137.90	18.90	1736.69
52+0.000	0.00	0.00	10.74	120.13	18.90	1856.83
52+10.000	0.00	0.00	8.76	96.84	18.90	1953.66
53+0.000	0.00	0.00	7.45	81.05	18.90	2034.71
53+10.000	0.00	0.00	6.37	69.09	18.90	2103.80
54+0.000	0.00	0.00	5.40	58.84	18.90	2162.64
54+10.000	0.00	0.00	3.43	44.15	18.90	2206.79
55+0.000	0.00	0.00	1.85	26.41	18.90	2233.19
55+10.000	0.03	0.13	1.27	15.62	19.03	2248.81
56+0.000	0.07	0.49	1.05	11.54	19.52	2260.35
56+10.000	0.05	0.61	1.14	10.97	20.13	2271.32
57+0.000	0.04	0.43	1.22	11.80	20.56	2283.12
57+10.000	0.03	0.31	1.27	12.43	20.87	2295.55
58+0.000	0.00	0.15	1.44	13.50	21.02	2309.05
58+10.000	0.00	0.02	1.83	16.33	21.02	2325.38
59+0.000	0.00	0.00	1.53	16.99	21.04	2342.37



Quadro de Cubação

Alinhamento: Perfil Longitudinal - Trecho 01



<u>Estaca</u>	<u>Área de Corte (m²)</u>	<u>Volume de Corte (m³)</u>	<u>Área de Aterro (m²)</u>	<u>Volume Aterro (m³)</u>	<u>Vol. Acum. Corte (m³)</u>	<u>Vol. Acum. Aterro (m³)</u>
59+10.000	0.00	0.00	1.37	14.71	21.05	2357.08
60+0.000	0.04	0.20	1.05	12.37	21.24	2369.45
60+10.000	0.11	0.74	0.91	9.77	21.99	2379.23
61+0.000	0.11	1.09	0.93	9.20	23.08	2388.43
61+10.000	0.00	0.57	1.47	12.07	23.65	2400.50
62+0.000	0.36	1.80	0.31	8.88	25.45	2409.38
62+10.000	0.00	1.78	2.30	13.02	27.24	2422.40
63+0.000	0.00	0.00	1.47	18.44	27.24	2440.84
63+10.000	0.08	0.39	1.06	12.63	27.63	2453.47
64+0.000	0.00	0.41	1.48	12.53	28.04	2466.00
64+10.000	0.00	0.00	2.89	21.86	28.04	2487.86
65+0.000	0.00	0.00	2.07	24.60	28.04	2512.46
65+10.000	0.00	0.00	1.49	17.83	28.04	2530.29
66+0.000	0.01	0.06	1.35	14.17	28.10	2544.46
66+10.000	0.00	0.06	1.75	15.49	28.16	2559.95
67+0.000	0.00	0.00	1.71	17.31	28.16	2577.27
67+10.000	0.00	0.00	1.62	16.65	28.16	2593.92
68+0.000	0.00	0.00	1.42	15.19	28.16	2609.11
68+10.000	0.01	0.06	1.38	14.05	28.21	2623.17
69+0.000	0.00	0.09	1.40	13.86	28.31	2637.03
69+10.000	0.00	0.04	1.59	15.00	28.34	2652.02
70+0.000	0.00	0.00	1.93	17.60	28.34	2669.62
70+10.000	0.00	0.00	2.04	20.08	28.34	2689.70
71+0.000	0.00	0.00	1.91	19.78	28.34	2709.48
71+10.000	0.00	0.00	1.81	18.83	28.34	2728.31
72+0.000	0.00	0.00	1.71	17.61	28.34	2745.92
72+10.000	0.00	0.00	1.55	16.30	28.34	2762.21
73+0.000	0.00	0.03	1.41	14.78	28.37	2777.00
73+10.000	0.05	0.26	1.17	12.80	28.64	2789.79
74+0.000	0.13	0.87	0.84	10.04	29.50	2799.83
74+10.000	0.13	1.29	0.82	8.36	30.80	2808.20
75+0.000	0.09	1.10	0.98	9.03	31.90	2817.22
75+10.000	0.09	0.92	0.95	9.62	32.82	2826.85
76+0.000	0.12	1.09	0.86	9.05	33.91	2835.90
76+10.000	0.07	0.94	1.07	9.63	34.85	2845.53
77+0.000	0.02	0.47	1.29	11.66	35.32	2857.19
77+10.000	0.04	0.33	1.19	12.39	35.65	2869.58
78+0.000	0.04	0.41	1.19	11.87	36.06	2881.45
78+10.000	0.02	0.30	1.32	12.43	36.36	2893.88



Quadro de Cubação

Alinhamento: Perfil Longitudinal - Trecho 01



<u>Estaca</u>	<u>Área de Corte (m²)</u>	<u>Volume de Corte (m³)</u>	<u>Área de Aterro (m²)</u>	<u>Volume Aterro (m³)</u>	<u>Vol. Acum. Corte (m³)</u>	<u>Vol. Acum. Aterro (m³)</u>
79+0.000	0.00	0.09	1.64	14.82	36.45	2908.70
79+10.000	0.00	0.00	1.88	17.66	36.45	2926.36
80+0.000	0.00	0.00	1.69	17.82	36.45	2944.18
80+10.000	0.00	0.04	1.42	15.52	36.49	2959.70
81+0.000	0.18	0.94	0.68	10.49	37.43	2970.20
81+10.000	0.28	2.29	0.45	5.63	39.72	2975.83
82+0.000	0.06	1.71	1.08	7.64	41.42	2983.47
82+10.000	0.04	0.51	1.23	11.57	41.93	2995.03
83+0.000	0.00	0.19	1.77	15.03	42.12	3010.06
83+10.000	0.06	0.32	1.09	14.33	42.44	3024.39
84+0.000	0.16	1.11	0.76	9.24	43.55	3033.63
84+10.000	0.00	0.79	2.00	13.76	44.35	3047.39
85+0.000	0.00	0.00	2.25	21.25	44.35	3068.64
85+10.000	0.00	0.00	2.03	21.44	44.35	3090.09
86+0.000	0.00	0.00	1.94	19.87	44.35	3109.96
86+10.000	0.00	0.00	1.90	19.32	44.35	3129.28
87+0.000	0.00	0.00	1.74	18.22	44.35	3147.50
87+10.000	0.00	0.00	1.98	18.63	44.35	3166.12
88+0.000	0.00	0.00	1.67	18.28	44.35	3184.40
88+10.000	0.00	0.01	1.43	15.51	44.36	3199.91
89+0.000	0.02	0.11	1.30	13.65	44.47	3213.56
89+10.000	0.01	0.16	1.34	13.13	44.64	3226.69
90+0.000	0.00	0.06	1.91	16.25	44.70	3242.94
90+10.000	0.00	0.00	1.92	19.14	44.70	3262.08
91+0.000	0.00	0.00	1.67	17.97	44.70	3280.05
91+10.000	0.00	0.00	2.18	19.37	44.70	3299.42
92+0.000	0.00	0.00	3.17	27.15	44.70	3326.56
92+10.000	0.00	0.00	6.91	50.67	44.70	3377.23
93+0.000	0.00	0.00	11.50	91.85	44.70	3469.08
93+10.000	0.00	0.00	15.40	134.51	44.70	3603.60
94+0.000	0.00	0.00	15.64	155.20	44.70	3758.79
94+10.000	0.00	0.00	15.30	154.49	44.70	3913.28
95+0.000	0.00	0.00	14.54	149.17	44.70	4062.45
95+10.000	0.00	0.00	13.29	138.95	44.70	4201.40
96+0.000	0.00	0.00	9.90	115.18	44.70	4316.57
96+10.000	0.00	0.00	6.60	82.50	44.70	4399.07
97+0.000	0.00	0.00	4.10	53.10	44.70	4452.17
97+10.000	0.00	0.00	2.97	35.14	44.70	4487.31
98+0.000	0.00	0.00	2.96	29.79	44.70	4517.10



Quadro de Cubação

Alinhamento: Perfil Longitudinal - Trecho 01



<u>Estaca</u>	<u>Área de Corte (m²)</u>	<u>Volume de Corte (m³)</u>	<u>Área de Aterro (m²)</u>	<u>Volume Aterro (m³)</u>	<u>Vol. Acum. Corte (m³)</u>	<u>Vol. Acum. Aterro (m³)</u>
98+10.000	0.00	0.00	2.08	25.23	44.70	4542.33
99+0.000	0.00	0.00	1.67	18.87	44.70	4561.19
99+10.000	0.00	0.00	1.68	16.72	44.70	4577.92
100+0.000	0.00	0.00	1.57	16.14	44.70	4594.06
100+10.000	0.00	0.02	1.54	15.52	44.72	4609.58
101+0.000	0.06	0.30	1.00	12.83	45.02	4622.41
101+10.000	0.19	1.29	0.70	8.45	46.30	4630.86
102+0.000	0.28	2.36	0.45	5.77	48.67	4636.63
102+10.000	0.37	3.30	0.36	4.01	51.97	4640.64
103+0.000	0.08	2.26	1.10	7.29	54.23	4647.93
103+10.000	0.04	0.56	1.12	11.44	54.79	4659.37
104+0.000	0.07	0.54	1.04	10.78	55.33	4670.15
104+4.374	0.08	0.33	1.00	4.45	55.66	4674.60



Quadro de Cubação

Alinhamento: Perfil Longitudinal - Trecho 02



<u>Estaca</u>	<u>Área de Corte (m²)</u>	<u>Volume de Corte (m³)</u>	<u>Área de Aterro (m²)</u>	<u>Volume Aterro (m³)</u>	<u>Vol. Acum. Corte (m³)</u>	<u>Vol. Acum. Aterro (m³)</u>
0+0.000	0.00	0.00	1.83	0.00	0.00	0.00
0+10.000	0.00	0.04	1.58	17.06	0.04	17.06
1+0.000	0.00	0.04	3.32	24.49	0.07	41.55
1+10.000	0.00	0.00	3.10	32.08	0.07	73.63
2+0.000	0.00	0.00	1.65	23.74	0.07	97.37
2+10.000	0.33	1.64	1.54	15.94	1.71	113.31
3+0.000	0.51	4.24	1.68	16.00	5.95	129.30
3+10.000	0.52	5.17	1.08	13.78	11.12	143.09
4+0.000	0.02	2.72	1.46	12.70	13.84	155.78
4+10.000	0.00	0.11	1.56	15.12	13.96	170.91
5+0.000	0.18	0.91	0.25	9.07	14.87	179.98
5+10.000	0.00	0.91	1.66	9.56	15.78	189.54
6+0.000	0.00	0.00	1.80	17.32	15.78	206.86
6+10.000	0.22	1.09	1.11	14.60	16.87	221.46
7+0.000	0.00	1.09	1.28	11.98	17.96	233.44
7+10.000	0.09	0.45	0.86	10.73	18.41	244.18
8+0.000	0.00	0.44	1.45	11.59	18.85	255.77
8+10.000	0.00	0.00	1.32	13.83	18.85	269.60
9+0.000	0.00	0.00	1.81	15.64	18.85	285.24
9+10.000	0.00	0.00	1.50	16.54	18.85	301.78
10+0.000	0.00	0.00	1.31	14.04	18.86	315.82
10+10.000	0.05	0.27	1.03	11.72	19.13	327.54
11+0.000	0.14	0.96	0.87	9.50	20.10	337.04
11+10.000	0.02	0.79	1.30	10.77	20.88	347.81
12+0.000	0.00	0.08	2.04	16.67	20.96	364.48
12+10.000	0.00	0.00	2.54	22.88	20.96	387.36
13+0.000	0.00	0.00	2.29	24.16	20.96	411.52
13+10.000	0.00	0.00	2.33	23.09	20.96	434.61
14+0.000	0.00	0.00	1.64	19.83	20.96	454.44
14+10.000	0.00	0.00	1.56	16.02	20.96	470.47
15+0.000	0.00	0.00	1.46	15.10	20.96	485.57
15+10.000	0.00	0.00	1.66	15.59	20.96	501.16
16+0.000	0.00	0.00	1.78	17.20	20.96	518.36
16+10.000	0.00	0.00	1.59	16.84	20.96	535.20
17+0.000	0.00	0.00	2.20	18.95	20.96	554.14
17+2.690	0.04	0.05	0.70	3.90	21.01	558.05
22+11.020	0.00	0.00	1.55	0.00	0.00	0.00
23+10.000	0.00	0.00	2.49	38.34	0.00	38.34
24+0.000	0.00	0.00	1.99	22.40	0.00	60.73



Quadro de Cubação

Alinhamento: Perfil Longitudinal - Trecho 02



<u>Estaca</u>	<u>Área de Corte (m²)</u>	<u>Volume de Corte (m³)</u>	<u>Área de Aterro (m²)</u>	<u>Volume Aterro (m³)</u>	<u>Vol. Acum. Corte (m³)</u>	<u>Vol. Acum. Aterro (m³)</u>
24+10.000	0.00	0.00	1.42	17.03	0.00	77.76
25+0.000	0.00	0.00	1.90	15.81	0.00	93.57
25+10.000	0.00	0.00	5.23	35.28	0.00	128.85
26+0.000	0.00	0.00	6.85	60.18	0.00	189.03
26+10.000	0.00	0.00	8.63	77.41	0.00	266.44
27+0.000	0.00	0.00	9.58	91.03	0.00	357.47
27+10.000	0.00	0.00	11.57	106.76	0.00	464.23
28+0.000	0.00	0.00	11.75	116.60	0.00	580.82
28+10.000	0.00	0.00	9.17	104.59	0.00	685.42
29+0.000	0.00	0.00	8.68	89.26	0.00	774.67
29+10.000	0.00	0.00	7.38	80.72	0.00	855.39
30+0.000	0.00	0.00	6.12	67.51	0.00	922.91
30+10.000	0.00	0.00	4.83	54.78	0.00	977.69
31+0.000	0.00	0.00	2.89	38.64	0.00	1016.32
31+10.000	0.13	0.65	1.54	22.17	0.65	1038.49
32+0.000	0.82	4.76	0.83	11.86	5.40	1050.35
32+10.000	1.29	10.55	0.43	6.31	15.96	1056.65
33+0.000	1.17	12.28	0.38	4.07	28.24	1060.72
33+10.000	0.00	5.86	1.71	10.46	34.10	1071.19
34+0.000	0.00	0.00	0.93	13.24	34.10	1084.43
34+10.000	0.07	0.36	0.06	4.96	34.47	1089.38
35+0.000	0.00	0.36	0.91	4.84	34.83	1094.23
35+10.000	0.00	0.04	1.17	10.40	34.87	1104.62
36+0.000	0.00	0.04	1.68	14.27	34.92	1118.90
36+10.000	0.21	1.04	1.20	14.40	35.96	1133.30
37+0.000	0.73	4.69	0.32	7.57	40.65	1140.86
37+10.000	0.00	3.70	2.48	14.00	44.35	1154.86
38+0.000	0.00	0.00	3.20	28.43	44.35	1183.29
38+10.000	0.00	0.00	3.75	34.74	44.35	1218.03
39+0.000	0.00	0.00	4.98	43.65	44.35	1261.67
39+10.000	0.00	0.00	7.28	61.34	44.35	1323.01
40+0.000	0.00	0.00	9.99	86.37	44.35	1409.39
40+10.000	0.00	0.00	12.82	114.32	44.35	1523.70
41+0.000	0.00	0.00	10.73	117.92	44.35	1641.62
41+10.000	0.00	0.00	7.84	92.80	44.35	1734.42
42+0.000	0.00	0.00	6.91	73.77	44.35	1808.19
42+10.000	0.04	0.19	2.42	47.18	44.54	1855.37
43+0.000	0.00	0.20	0.47	14.56	44.74	1869.93
43+10.000	0.00	0.00	1.96	12.15	44.74	1882.08



Quadro de Cubação

Alinhamento: Perfil Longitudinal - Trecho 02



Estaca	Área de Corte (m ²)	Volume de Corte (m ³)	Área de Aterro (m ²)	Volume Aterro (m ³)	Vol. Acum. Corte (m ³)	Vol. Acum. Aterro (m ³)
44+0.000	0.02	0.11	1.27	16.17	44.86	1898.25
44+10.000	0.00	0.11	2.04	16.58	44.97	1914.83
45+0.000	0.00	0.00	2.98	25.17	44.97	1940.00
45+10.000	0.00	0.00	1.60	22.90	44.97	1962.90
46+0.000	0.00	0.00	0.99	13.00	44.97	1975.90
46+10.000	0.24	1.19	1.43	12.15	46.16	1988.05
47+0.000	0.49	3.82	1.20	13.36	49.98	2001.41
47+10.000	0.44	5.02	1.32	12.43	55.00	2013.84
48+0.000	0.03	2.29	1.34	13.47	57.29	2027.31
48+10.000	0.00	0.17	1.71	15.23	57.46	2042.55
49+0.000	0.00	0.00	1.70	17.69	57.46	2060.24
49+10.000	0.16	0.74	0.97	13.61	58.21	2073.85
50+0.000	0.43	2.76	0.90	9.60	60.97	2083.45
50+10.000	0.09	2.60	1.58	12.39	63.57	2095.84
51+0.000	0.11	0.94	1.42	15.32	64.51	2111.16
51+10.000	0.12	1.03	1.03	12.80	65.53	2123.96
52+0.000	0.02	0.70	1.21	11.23	66.23	2135.19
52+10.000	0.30	1.58	1.69	14.50	67.81	2149.69
53+0.000	0.32	3.07	1.74	17.16	70.88	2166.86
53+10.000	0.00	1.61	2.23	19.82	72.49	2186.68
54+0.000	0.00	0.00	4.72	34.47	72.49	2221.14
54+10.000	0.00	0.00	7.21	59.63	72.49	2280.77
55+0.000	0.00	0.00	10.20	86.25	72.49	2367.02
55+10.000	0.00	0.00	13.46	118.33	72.49	2485.35
56+0.000	0.00	0.00	12.12	126.18	72.49	2611.53
56+10.000	0.00	0.00	11.24	116.82	72.49	2728.34
57+0.000	0.00	0.00	13.96	126.01	72.49	2854.36
57+10.000	0.00	0.00	16.93	154.47	72.49	3008.83
58+0.000	0.00	0.00	17.08	169.57	72.49	3178.39
58+10.000	0.00	0.00	17.18	168.88	72.49	3347.27
59+0.000	0.00	0.00	9.48	133.28	72.49	3480.55
59+10.000	0.00	0.00	3.60	65.29	72.49	3545.83
60+0.000	0.00	0.00	2.13	28.75	72.49	3574.58
60+10.000	0.00	0.00	1.74	19.39	72.49	3593.97
61+0.000	0.00	0.00	1.15	14.43	72.49	3608.40
61+10.000	0.04	0.20	2.00	15.87	72.69	3624.27
62+0.000	0.04	0.39	0.63	13.13	73.08	3637.40
62+10.000	0.65	3.32	0.68	6.53	78.40	3643.94
63+0.000	0.53	6.01	0.84	7.60	82.40	3651.54



Quadro de Cubação

Alinhamento: Perfil Longitudinal - Trecho 02



<u>Estaca</u>	<u>Área de Corte (m²)</u>	<u>Volume de Corte (m³)</u>	<u>Área de Aterro (m²)</u>	<u>Volume Aterro (m³)</u>	<u>Vol. Acum. Corte (m³)</u>	<u>Vol. Acum. Aterro (m³)</u>
63+10.000	0.13	3.21	0.96	9.05	85.61	3660.59
64+0.000	0.03	0.83	1.02	9.90	86.44	3670.49
64+10.000	0.10	0.69	0.77	8.97	87.13	3679.46
65+0.000	0.00	0.53	0.90	8.35	87.65	3687.81
65+10.000	0.12	0.59	0.80	8.51	88.25	3696.32
66+0.000	0.27	1.96	0.70	7.53	90.21	3703.85
66+2.684	0.00	0.37	1.09	2.41	90.58	3706.26



Quadro de Cubação

Alinhamento: Perfil Longitudinal - Trecho 03



<u>Estaca</u>	<u>Área de Corte (m²)</u>	<u>Volume de Corte (m³)</u>	<u>Área de Aterro (m²)</u>	<u>Volume Aterro (m³)</u>	<u>Vol. Acum. Corte (m³)</u>	<u>Vol. Acum. Aterro (m³)</u>
0+0.000	0.33	0.00	0.00	0.00	0.00	0.00
1+0.000	0.00	3.33	0.50	5.05	3.33	5.05
2+0.000	0.00	0.00	0.94	14.41	3.33	19.46
3+0.000	0.00	0.00	0.85	17.87	3.33	37.33
4+0.000	0.00	0.00	2.69	35.42	3.33	72.75
5+0.000	0.00	0.00	2.42	51.05	3.33	123.80
6+0.000	0.00	0.00	6.63	90.45	3.33	214.26
7+0.000	0.00	0.00	10.46	170.35	3.33	384.60
8+0.000	0.00	0.00	14.19	246.45	3.33	631.05
9+0.000	0.00	0.00	13.35	275.48	3.33	906.53
10+0.000	0.00	0.00	14.32	276.75	3.33	1183.27
11+0.000	0.00	0.00	14.51	288.31	3.33	1471.58
12+0.000	0.00	0.00	16.06	305.71	3.33	1777.29
13+0.000	0.00	0.00	14.90	309.59	3.33	2086.88
14+0.000	0.00	0.00	14.48	293.45	3.33	2380.33
15+0.000	0.00	0.00	12.86	273.50	3.33	2653.83
16+0.000	0.00	0.00	10.09	229.58	3.33	2883.41
17+0.000	0.00	0.00	4.55	146.30	3.33	3029.71
18+0.000	0.00	0.00	2.50	70.45	3.33	3100.16
19+0.000	0.00	0.00	2.16	46.57	3.33	3146.73
20+0.000	0.04	0.35	1.68	38.77	3.68	3185.49
21+0.000	0.00	0.36	7.46	91.39	4.04	3276.89
22+0.000	0.00	0.00	6.96	144.17	4.04	3421.06
23+0.000	0.00	0.00	5.03	119.86	4.04	3540.91
24+0.000	0.00	0.00	1.58	66.12	4.04	3607.03
25+0.000	0.00	0.00	6.24	78.18	4.04	3685.21
26+0.000	0.00	0.00	15.24	214.76	4.04	3899.97
27+0.000	0.00	0.00	17.93	331.72	4.04	4231.70
28+0.000	0.00	0.00	21.31	392.17	4.04	4623.87
29+0.000	0.00	0.00	16.01	373.23	4.04	4997.10
30+0.000	0.00	0.00	12.47	284.81	4.04	5281.91
31+0.000	0.00	0.00	5.37	178.36	4.04	5460.27
32+0.000	0.00	0.00	1.53	69.03	4.04	5529.30
33+0.000	0.09	0.90	1.08	26.01	4.95	5555.31
34+0.000	0.00	0.89	8.01	90.87	5.83	5646.18
35+0.000	0.00	0.00	4.28	122.92	5.83	5769.11
36+0.000	0.00	0.00	2.27	65.51	5.83	5834.62
37+0.000	0.00	0.00	2.01	42.79	5.83	5877.41
38+0.000	0.00	0.00	2.19	41.93	5.83	5919.33

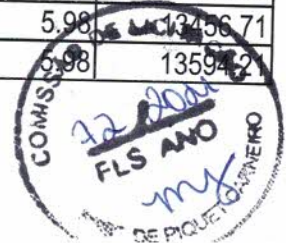


Quadro de Cubação

Alinhamento: Perfil Longitudinal - Trecho 03



<u>Estaca</u>	<u>Área de Corte (m²)</u>	<u>Volume de Corte (m³)</u>	<u>Área de Aterro (m²)</u>	<u>Volume Aterro (m³)</u>	<u>Vol. Acum. Corte (m³)</u>	<u>Vol. Acum. Aterro (m³)</u>
39+0.000	0.00	0.00	2.97	51.55	5.83	5970.88
40+0.000	0.00	0.00	2.21	51.81	5.83	6022.69
41+0.000	0.00	0.00	2.98	51.91	5.83	6074.61
42+0.000	0.00	0.00	3.63	66.10	5.83	6140.71
43+0.000	0.00	0.00	3.20	68.33	5.83	6209.03
44+0.000	0.00	0.00	2.33	55.40	5.83	6264.43
45+0.000	0.00	0.00	2.74	50.90	5.83	6315.33
46+0.000	0.00	0.00	2.22	49.51	5.83	6364.84
47+0.000	0.00	0.07	0.93	31.45	5.91	6396.30
48+0.000	0.00	0.07	4.60	55.20	5.98	6451.50
49+0.000	0.00	0.00	6.99	115.90	5.98	6567.40
50+0.000	0.00	0.00	13.53	205.07	5.98	6772.47
51+0.000	0.00	0.00	15.36	288.27	5.98	7060.74
52+0.000	0.00	0.00	14.98	303.40	5.98	7364.14
53+0.000	0.00	0.00	18.39	333.73	5.98	7697.86
54+0.000	0.00	0.00	16.33	347.29	5.98	8045.15
55+0.000	0.00	0.00	14.22	305.56	5.98	8350.72
56+0.000	0.00	0.00	17.12	313.46	5.98	8664.18
57+0.000	0.00	0.00	15.31	324.36	5.98	8988.54
58+0.000	0.00	0.00	13.28	285.92	5.98	9274.46
59+0.000	0.00	0.00	13.74	270.20	5.98	9544.66
60+0.000	0.00	0.00	13.32	270.61	5.98	9815.27
61+0.000	0.00	0.00	12.65	259.68	5.98	10074.95
62+0.000	0.00	0.00	14.72	273.71	5.98	10348.66
63+0.000	0.00	0.00	14.92	296.46	5.98	10645.13
64+0.000	0.00	0.00	13.63	285.51	5.98	10930.63
65+0.000	0.00	0.00	14.41	280.37	5.98	11211.01
66+0.000	0.00	0.00	14.26	286.70	5.98	11497.70
67+0.000	0.00	0.00	14.99	292.49	5.98	11790.19
68+0.000	0.00	0.00	9.26	242.43	5.98	12032.62
69+0.000	0.00	0.00	9.45	187.09	5.98	12219.71
70+0.000	0.00	0.00	9.89	193.41	5.98	12413.12
71+0.000	0.00	0.00	9.00	188.91	5.98	12602.03
72+0.000	0.00	0.00	9.07	180.70	5.98	12782.73
73+0.000	0.00	0.00	10.02	190.91	5.98	12973.65
74+0.000	0.00	0.00	8.20	182.26	5.98	13155.91
75+0.000	0.00	0.00	7.64	158.44	5.98	13314.35
76+0.000	0.00	0.00	6.60	142.37	5.98	13456.71
77+0.000	0.00	0.00	7.15	137.49	5.98	13594.21



Quadro de Cubação

Alinhamento: Perfil Longitudinal - Trecho 03



<u>Estaca</u>	<u>Área de Corte (m²)</u>	<u>Volume de Corte (m³)</u>	<u>Área de Aterro (m²)</u>	<u>Volume Aterro (m³)</u>	<u>Vol. Acum. Corte (m³)</u>	<u>Vol. Acum. Aterro (m³)</u>
78+0.000	0.00	0.00	7.41	145.66	5.98	13739.87
79+0.000	0.00	0.00	7.73	151.40	5.98	13891.27
80+0.000	0.00	0.00	7.26	149.89	5.98	14041.16
81+0.000	0.00	0.00	9.11	163.72	5.98	14204.88
82+0.000	0.00	0.00	7.77	169.05	5.98	14373.92
83+0.000	0.00	0.00	6.08	138.51	5.98	14512.44
84+0.000	0.00	0.00	5.60	116.76	5.98	14629.20
85+0.000	0.00	0.00	4.89	105.74	5.98	14734.94
86+0.000	0.00	0.00	3.41	84.65	5.98	14819.59
87+0.000	0.00	0.00	1.73	52.13	5.98	14871.73
88+0.000	0.02	0.16	0.76	24.89	6.14	14896.61
89+0.000	0.00	0.17	0.97	17.45	6.31	14914.06
90+0.000	0.00	0.00	2.31	33.00	6.31	14947.06
91+0.000	0.00	0.00	2.33	46.32	6.31	14993.39
92+0.000	0.00	0.00	1.62	39.46	6.31	15032.85
93+0.000	0.00	0.00	3.68	52.99	6.31	15085.84
94+0.000	0.00	0.00	5.77	94.53	6.31	15180.37
95+0.000	0.00	0.00	4.81	105.86	6.31	15286.23
96+0.000	0.00	0.00	2.23	70.30	6.31	15356.53
97+0.000	0.00	0.00	2.22	44.53	6.31	15401.06
98+0.000	0.00	0.00	3.26	54.77	6.31	15455.83
99+0.000	0.00	0.00	3.09	63.94	6.31	15519.77
100+0.000	0.00	0.00	2.19	52.85	6.31	15572.61
101+0.000	0.00	0.00	4.14	63.36	6.31	15635.97
102+0.000	0.00	0.00	4.24	83.78	6.31	15719.75
103+0.000	0.00	0.00	3.62	78.52	6.31	15798.27
104+0.000	0.00	0.00	3.38	69.72	6.31	15868.00
105+0.000	0.00	0.00	2.78	61.52	6.31	15929.52
106+0.000	0.00	0.00	2.73	55.03	6.31	15984.55
107+0.000	0.00	0.00	2.40	51.32	6.31	16035.87
108+0.000	0.00	0.00	2.21	46.15	6.31	16082.02
109+0.000	0.00	0.00	1.69	38.96	6.31	16120.97
110+0.000	0.00	0.00	2.03	37.23	6.31	16158.20
111+0.000	0.00	0.00	3.09	51.20	6.31	16209.40
112+0.000	0.00	0.00	5.99	90.99	6.31	16300.39
113+0.000	0.00	0.00	13.24	192.24	6.31	16492.62
114+0.000	0.00	0.00	16.35	295.81	6.31	16788.44
115+0.000	0.00	0.00	12.14	284.84	6.31	17073.28
116+0.000	0.00	0.00	10.72	228.58	6.31	17301.86



Quadro de Cubação

Alinhamento: Perfil Longitudinal - Trecho 03



<u>Estaca</u>	<u>Área de Corte (m²)</u>	<u>Volume de Corte (m³)</u>	<u>Área de Aterro (m²)</u>	<u>Volume Aterro (m³)</u>	<u>Vol. Acum. Corte (m³)</u>	<u>Vol. Acum. Aterro (m³)</u>
117+0.000	0.00	0.00	8.72	194.42	6.31	17496.29
118+0.000	0.00	0.00	8.22	169.41	6.31	17665.70
119+0.000	0.00	0.00	8.17	163.88	6.31	17829.58
120+0.000	0.00	0.00	5.54	137.14	6.31	17966.72
121+0.000	0.00	0.00	6.34	118.88	6.31	18085.60
122+0.000	0.00	0.00	7.09	134.31	6.31	18219.91
123+0.000	0.00	0.00	3.00	100.90	6.31	18320.82
124+0.000	0.00	0.00	1.84	48.47	6.31	18369.28
125+0.000	0.00	0.00	2.02	38.60	6.31	18407.88
126+0.000	0.00	0.03	0.64	26.59	6.34	18434.47
127+0.000	0.00	0.03	1.84	24.81	6.36	18459.28
128+0.000	0.00	0.00	2.48	43.18	6.36	18502.46
129+0.000	0.00	0.00	2.32	47.95	6.36	18550.42
130+0.000	0.00	0.00	1.48	37.94	6.36	18588.35
131+0.000	0.00	0.00	1.47	29.47	6.36	18617.83
132+0.000	0.00	0.00	2.83	42.98	6.36	18660.81
133+0.000	0.00	0.00	4.47	73.10	6.36	18733.90
134+0.000	0.00	0.00	4.31	87.80	6.36	18821.70
135+0.000	0.00	0.00	6.03	103.42	6.36	18925.12
136+0.000	0.60	6.03	13.18	192.07	12.39	19117.19
137+0.000	0.60	12.05	17.92	310.98	24.45	19428.17
138+0.000	0.28	8.79	18.55	364.69	33.24	19792.86
139+0.000	0.02	2.93	9.99	285.35	36.16	20078.21
140+0.000	0.04	0.50	2.01	120.52	36.66	20198.73
141+0.000	0.00	0.36	3.93	59.46	37.02	20258.19
142+0.000	0.00	0.00	9.44	133.74	37.02	20391.93
143+0.000	0.00	0.00	14.50	239.40	37.02	20631.34
144+0.000	0.00	0.00	16.97	314.71	37.02	20946.04
145+0.000	0.00	0.00	4.14	211.98	37.02	21158.02
146+0.000	0.00	0.00	4.39	84.66	37.02	21242.68
147+0.000	0.00	0.00	7.34	117.30	37.02	21359.98
148+0.000	0.00	0.00	1.56	88.96	37.02	21448.94
149+0.000	0.00	0.00	0.68	22.38	37.02	21471.32
150+0.000	0.00	0.00	1.27	19.44	37.02	21490.77
151+0.000	0.00	0.00	1.13	23.96	37.02	21514.72
152+0.000	0.08	0.83	0.18	13.11	37.85	21527.83
153+0.000	0.00	0.83	1.72	18.99	38.68	21546.82
154+0.000	0.00	0.00	3.60	53.23	38.68	21600.05
155+0.000	0.00	0.00	2.35	59.50	38.68	21659.55



Quadro de Cubação

Alinhamento: Perfil Longitudinal - Trecho 03



<u>Estaca</u>	<u>Área de Corte (m²)</u>	<u>Volume de Corte (m³)</u>	<u>Área de Aterro (m²)</u>	<u>Volume Aterro (m³)</u>	<u>Vol. Acum. Corte (m³)</u>	<u>Vol. Acum. Aterro (m³)</u>
156+0.000	0.00	0.00	2.74	50.90	38.68	21710.45
157+0.000	0.00	0.00	4.60	73.49	38.68	21783.94
158+0.000	0.00	0.00	3.33	79.23	38.68	21863.17
159+0.000	0.00	0.00	7.72	110.48	38.68	21973.65
160+0.000	0.00	0.00	22.35	300.69	38.68	22274.34
161+0.000	0.00	0.00	6.84	291.85	38.68	22566.19
162+0.000	0.00	0.00	0.71	75.67	38.68	22641.85
163+0.000	0.00	0.00	3.79	44.97	38.68	22686.82
164+0.000	0.00	0.00	23.07	268.48	38.68	22955.30
165+0.000	0.00	0.00	4.38	274.47	38.68	23229.77
166+0.000	0.00	0.00	5.68	100.62	38.68	23330.39
167+0.000	0.18	1.84	6.50	118.49	40.52	23448.88
168+0.000	0.00	1.77	15.10	216.09	42.29	23664.97
169+0.000	0.00	0.00	18.18	338.04	42.29	24003.01
170+0.000	0.00	0.00	12.27	305.25	42.29	24308.26
171+0.000	0.42	4.19	0.30	125.72	46.48	24433.97
172+0.000	0.20	6.18	0.46	7.61	52.66	24441.59
173+0.000	0.00	2.04	1.16	16.15	54.70	24457.74
174+0.000	0.00	0.00	0.34	15.04	54.70	24472.78
175+0.000	0.00	0.00	1.01	13.55	54.70	24486.33
176+0.000	0.00	0.00	2.37	33.79	54.70	24520.12
177+0.000	0.00	0.00	2.70	50.69	54.70	24570.81
178+0.000	0.00	0.00	14.23	169.36	54.70	24740.17
179+0.000	0.00	0.00	18.25	324.83	54.70	25065.00
180+0.000	0.00	0.00	7.31	255.07	54.70	25320.07
181+0.000	0.00	0.00	1.93	92.48	54.70	25412.55
182+0.000	0.00	0.00	15.41	173.65	54.70	25586.20
183+0.000	0.00	0.00	25.18	405.98	54.70	25992.19
184+0.000	0.00	0.00	7.36	325.36	54.70	26317.55
185+0.000	0.00	0.00	1.78	91.37	54.70	26408.92
186+0.000	0.00	0.03	0.35	21.25	54.73	26430.17
187+0.000	0.00	0.03	0.74	10.83	54.76	26441.00
188+0.000	0.00	0.00	1.42	21.46	54.76	26462.46
189+0.000	0.00	0.00	0.86	22.75	54.76	26485.21
190+0.000	0.15	1.47	0.02	8.86	56.23	26494.07
190+9.137	0.26	1.85	0.00	0.10	58.08	26494.17



PREFEITURA MUNICIPAL DE PIQUET CARNEIRO / CE

CONSTRUÇÃO DE ESTRADA VICINAL DA LOCALIDADE DE SÃO LUIS À MACAMBIRA E TRECHOS ADJACENTES SUPLEMENTARES, NO MUNICÍPIO DE PIQUET CARNEIRO - CE.



ZONA RURAL

COMPOSIÇÃO DE BDI - SERVIÇOS

COD	DESCRIÇÃO	%
Despesas indiretas		
AC	Administração central	
DF	Despesas financeiras	4,01
R	Riscos	1,11
		0,56
Benefício		
S + G	Garantia/seguros	
L	Lucro	0,40
		7,30
I Impostos		
	PIS	8,65
	COFINS	0,65
	ISS	3,00
	CPRB (4,5%, Apenas quando tiver desoneração INSS)	5,00
	TOTAL DOS IMPOSTOS	8,65
		BDI =
		24,66%

$$BDI = \frac{(1 + AC + S + R + G)(1 + DF)(1 + L)}{(1 - I)} - 1$$



Francisco Antônio Santos
ENG CIVIL CREA 8550-D



CONSTRUÇÃO DE ESTRADA VICINAL DA LOCALIDADE DE SÃO LUIS À MACAMBIRA E TRECHOS ADJACENTES SUPLEMENTARES, NO MUNICÍPIO DE PIQUET CARNEIRO - CE.

ZONA RURAL

ENCARGOS SOCIAIS PARA SERVIÇOS DA TABELA SEINFRA-CE

CÓDIGO	DESCRIÇÃO	COM DESONERAÇÃO		SEM DESONERAÇÃO	
		HORISTA %	MENSALISTA %	HORISTA %	MENSALISTA %
GRUPO A					
A1	INSS	0,00%	0,00%	20,00%	20,00%
A2	SESI	1,50%	1,50%	1,50%	1,50%
A3	SENAI	1,00%	1,00%	1,00%	1,00%
A4	INCRA	0,20%	0,20%	0,20%	0,20%
A5	SEBRAE	0,60%	0,60%	0,60%	0,60%
A6	Salário Educação	2,50%	2,50%	2,50%	2,50%
A7	Seguro Contra Acidentes de Trabalho	3,00%	3,00%	3,00%	3,00%
A8	FGTS	8,00%	8,00%	8,00%	8,00%
A9	SECONCI	0,00%	0,00%	0,00%	0,00%
A	Total	16,80%	16,80%	36,80%	36,80%
GRUPO B					
B1	Repouso Semanal Remunerado	17,85%	Não Incide	17,85%	Não Incide
B2	Feriados	3,71%	Não Incide	3,71%	Não Incide
B3	Auxílio - Enfermidade	0,92%	0,71%	0,92%	0,71%
B4	13º Salário	10,83%	8,33%	10,83%	8,33%
B5	Licença Paternidade	0,07%	0,06%	0,07%	0,06%
B6	Faltas Justificadas	0,72%	0,56%	0,72%	0,56%
B7	Dias de Chuvas	1,55%	Não Incide	1,55%	Não Incide
B8	Auxílio Acidente de Trabalho	0,11%	0,09%	0,11%	0,09%
B9	Férias Gozadas	9,18%	7,07%	9,18%	7,07%
B10	Salário Maternidade	0,03%	0,02%	0,03%	0,02%
B	Total	44,97%	16,84%	44,97%	16,84%
GRUPO C					
C1	Aviso Prévio Indenizado	5,60%	4,31%	5,60%	4,31%
C2	Aviso Prévio Trabalhado	0,13%	0,10%	0,13%	0,10%
C3	Férias Indenizadas	4,40%	3,39%	4,40%	3,39%
C4	Depósito Rescisão Sem Justa Causa	4,81%	3,70%	4,81%	3,70%
C5	Indenização Adicional	0,47%	0,36%	0,47%	0,36%
C	Total	15,41%	11,86%	15,41%	11,86%
GRUPO D					
D1	Reincidência de Grupo A sobre Grupo B	7,55%	2,83%	16,55%	6,20%
D2	Reincidência de Grupo A sobre Aviso Prévio Trabalhado e Reincidência de FGTS sobre Aviso Prévio Indenizado	0,47%	0,36%	0,50%	0,38%
D	Total	8,02%	3,19%	17,05%	6,58%
TOTAL(A+B+C+D)		85,20%	48,69%	114,23%	72,08%

Francisco Antônio Santos
ENG CIVIL CREA 8504-D

