

# Relatório de Volumes

**Projeto: D:\ARQUIVOS VINICIUS\1- PROJETOS MUNICÍPIOS\ANGELINA\7 - ESTRADA GERAL RIO ENGANO\1\_1\_GRANF\_INFRA\_PAV\_ANG\_RIO ENGANO.dwg**

Alinhamento: ALINHAMENTO ESTRADA RIO ENGANO

Grupo de Seções: SL RIO ENGANO

Estaca Inicial: 0+0.000

Estaca Final: 61+10.000

<b>Estaca</b>	<b>Semi Distância (m)</b>	<b>Área de Corte (m²)</b>	<b>Volume de Corte (m³)</b>	<b>Vol. Reuso (m³)</b>	<b>Área de Aterro (m²)</b>	<b>Volume Aterro (m³)</b>	<b>Vol. Acum. Corte (m³)</b>	<b>Vol. Reuso Acum. (m³)</b>	<b>Vol. Acum. Aterro (m³)</b>	<b>Dif. Vol. Acum. (m³)</b>
0+0.000	0.00	1.07	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00
0+5.140	2.57	0.66	4.45	4.45	0.05	0.28	4.45	4.45	0.28	4.17
0+10.000	2.43	0.16	2.05	2.05	0.23	0.63	6.50	6.50	0.91	5.59
1+0.000	5.00	0.56	3.79	3.79	0.47	3.27	10.29	10.29	4.18	6.11
1+0.305	0.15	0.60	0.18	0.18	0.43	0.14	10.47	10.47	4.32	6.15
1+10.000	4.85	2.79	17.15	17.15	0.00	1.94	27.62	27.62	6.26	21.36
1+15.470	2.74	2.54	15.32	15.32	0.00	0.00	42.93	42.93	6.27	36.67
2+0.000	2.26	0.85	7.70	7.70	0.02	0.04	50.63	50.63	6.30	44.33
2+18.818	9.41	0.13	9.30	9.30	0.64	6.15	59.94	59.94	12.46	47.48
3+0.000	0.59	0.09	0.14	0.14	0.71	0.76	60.07	60.07	13.22	46.85
3+10.000	5.00	0.01	0.55	0.55	0.60	6.24	60.62	60.62	19.46	41.16
3+15.166	2.58	0.11	0.32	0.32	0.52	2.76	60.94	60.94	22.23	38.71
4+0.000	2.42	0.20	0.76	0.76	0.27	1.84	61.70	61.70	24.06	37.63
4+10.000	5.00	0.19	2.00	2.00	0.23	2.45	63.69	63.69	26.51	37.18
4+11.513	0.76	0.19	0.29	0.29	0.26	0.37	63.99	63.99	26.88	37.11
5+0.000	4.24	0.28	1.99	1.99	0.16	1.80	65.98	65.98	28.68	37.30
5+17.646	8.82	0.22	4.41	4.41	0.21	3.25	70.39	70.39	31.92	38.47
6+0.000	1.18	0.18	0.47	0.47	0.30	0.59	70.86	70.86	32.52	38.34
6+7.598	3.80	0.00	0.68	0.68	0.51	3.06	71.54	71.54	35.58	35.96
6+10.000	1.20	0.00	0.00	0.00	0.60	1.32	71.54	71.54	36.90	34.64
6+17.550	3.77	0.00	0.00	0.00	0.68	4.77	71.54	71.54	41.67	29.88
7+0.000	1.23	0.00	0.00	0.00	0.62	1.60	71.55	71.55	43.26	28.28
7+5.053	2.53	0.33	0.83	0.83	0.43	2.66	72.38	72.38	45.93	26.45
7+10.000	2.47	0.80	2.95	2.95	0.21	1.43	75.33	75.33	47.36	27.97
7+14.773	2.39	0.91	4.31	4.31	0.23	0.93	79.65	79.65	48.29	31.35
8+0.000	2.61	0.57	4.07	4.07	0.31	1.25	83.72	83.72	49.55	34.17
8+4.493	2.25	0.35	2.17	2.17	0.12	0.86	85.89	85.89	50.41	35.48
9+0.000	7.75	0.83	9.17	9.17	0.76	6.82	95.06	95.06	57.22	37.83
9+12.219	6.11	0.00	5.13	5.13	1.28	12.45	100.19	100.19	69.68	30.51
10+0.000	3.89	0.06	0.26	0.26	1.34	10.13	100.45	100.45	79.80	20.64
10+2.997	1.50	0.00	0.09	0.09	1.56	4.34	100.54	100.54	84.14	16.40
10+10.000	3.50	0.00	0.00	0.00	1.45	10.50	100.54	100.54	94.65	5.90

10+13.775	1.89	0.00	0.00	0.00	1.02	4.66	100.54	100.54	99.30	1.24
11+0.000	3.11	0.03	0.09	0.09	0.45	4.59	100.63	100.63	103.89	-3.27
11+7.627	3.81	0.55	2.20	2.20	0.32	2.92	102.82	102.82	106.81	-3.99
11+10.000	1.19	0.68	1.46	1.46	0.29	0.72	104.28	104.28	107.54	-3.25
12+0.000	5.00	0.19	4.41	4.41	0.59	4.36	108.69	108.69	111.90	-3.20
12+0.645	0.32	0.20	0.12	0.12	0.63	0.39	108.82	108.82	112.29	-3.47
12+10.000	4.68	0.03	1.08	1.08	0.78	6.55	109.90	109.90	118.84	-8.95
12+13.664	1.83	0.00	0.06	0.06	0.45	2.25	109.96	109.96	121.09	-11.14
13+0.000	3.17	0.25	0.78	0.78	0.09	1.72	110.74	110.74	122.82	-12.08
13+14.529	7.26	0.24	3.50	3.50	0.49	4.19	114.23	114.23	127.01	-12.77
14+0.000	2.74	0.35	1.61	1.61	0.23	1.89	115.85	115.85	128.90	-13.05
14+9.095	4.55	0.27	2.83	2.83	0.08	1.38	118.68	118.68	130.28	-11.60
14+10.000	0.45	0.29	0.25	0.25	0.07	0.07	118.93	118.93	130.35	-11.42
15+0.000	5.00	0.22	2.58	2.58	0.12	0.95	121.52	121.52	131.30	-9.78
15+3.661	1.83	0.08	0.56	0.56	0.21	0.59	122.08	122.08	131.89	-9.81
16+0.000	8.17	0.00	0.67	0.67	0.57	6.39	122.75	122.75	138.28	-15.53
17+0.000	10.00	0.20	2.05	2.05	0.99	15.67	124.80	124.80	153.95	-29.16
18+0.000	10.00	0.99	11.93	11.93	0.27	12.59	136.73	136.73	166.54	-29.81
18+3.566	1.78	1.30	4.08	4.08	0.24	0.90	140.81	140.81	167.44	-26.63
18+10.000	3.22	1.68	9.52	9.52	0.05	0.94	150.33	150.33	168.38	-18.05
19+0.000	5.00	1.76	17.10	17.10	0.02	0.34	167.44	167.44	168.72	-1.29
19+4.275	2.14	1.67	7.31	7.31	0.01	0.06	174.75	174.75	168.78	5.96
19+10.000	2.86	1.62	9.42	9.42	0.00	0.04	184.16	184.16	168.83	15.34
20+0.000	5.00	1.53	15.73	15.73	0.00	0.00	199.89	199.89	168.84	31.05
20+4.984	2.49	1.23	6.85	6.85	0.00	0.00	206.74	206.74	168.84	37.91
21+0.000	7.51	0.56	13.37	13.37	0.00	0.03	220.11	220.11	168.87	51.24
22+0.000	10.00	0.60	11.58	11.58	0.04	0.43	231.69	231.69	169.30	62.40
23+0.000	10.00	0.69	12.91	12.91	0.00	0.44	244.61	244.61	169.74	74.87
23+10.365	5.18	1.03	8.92	8.92	0.00	0.03	253.52	253.52	169.77	83.76
24+0.000	4.82	0.64	8.07	8.07	0.00	0.00	261.60	261.60	169.77	91.83
24+10.000	5.00	1.15	8.98	8.98	0.00	0.00	270.58	270.58	169.77	100.81
24+13.327	1.66	1.51	4.43	4.43	0.00	0.00	275.00	275.00	169.77	105.23
25+0.000	3.34	1.42	9.76	9.76	0.00	0.00	284.76	284.76	169.77	114.99
25+10.000	5.00	1.11	12.63	12.63	0.03	0.15	297.39	297.39	169.93	127.47
25+16.288	3.14	0.82	6.06	6.06	0.05	0.26	303.45	303.45	170.18	133.27
26+0.000	1.86	0.53	2.50	2.50	0.08	0.25	305.95	305.95	170.43	135.52
27+0.000	10.00	0.03	5.63	5.63	0.92	10.03	311.59	311.59	180.46	131.12
27+6.209	3.10	0.00	0.10	0.10	1.04	6.07	311.68	311.68	186.53	125.15
27+10.000	1.90	0.00	0.00	0.00	1.16	4.15	311.69	311.69	190.68	121.01
27+15.345	2.67	0.00	0.01	0.01	1.22	6.33	311.70	311.70	197.01	114.69
28+0.000	2.33	0.00	0.00	0.00	1.11	5.38	311.70	311.70	202.39	109.32
28+4.482	2.24	0.00	0.00	0.00	0.95	4.57	311.70	311.70	206.96	104.75
28+12.204	3.86	0.11	0.43	0.43	1.09	7.87	312.13	312.13	214.83	97.31
29+0.000	3.90	0.01	0.47	0.47	1.43	9.85	312.60	312.60	224.68	87.93
29+2.741	1.37	0.00	0.02	0.02	1.44	3.96	312.62	312.62	228.63	83.99

29+10.000	3.63	0.00	0.00	0.00	1.06	9.14	312.62	312.62	237.77	74.85
29+13.278	1.64	0.00	0.00	0.00	1.03	3.44	312.62	312.62	241.21	71.41
30+0.000	3.36	0.00	0.00	0.00	0.91	6.49	312.62	312.62	247.70	64.92
30+3.978	1.99	0.00	0.01	0.01	0.74	3.28	312.64	312.64	250.99	61.65
30+10.000	3.01	0.12	0.40	0.40	0.43	3.43	313.04	313.04	254.42	58.62
30+16.749	3.37	0.53	2.25	2.25	0.16	1.91	315.29	315.29	256.33	58.96
31+0.000	1.63	0.60	1.88	1.88	0.12	0.43	317.17	317.17	256.76	60.41
31+9.519	4.76	0.37	4.71	4.71	0.09	0.91	321.88	321.88	257.67	64.21
32+0.000	5.24	0.43	4.19	4.19	0.08	0.88	326.07	326.07	258.55	67.52
32+9.014	4.51	0.77	5.40	5.40	0.20	1.26	331.47	331.47	259.81	71.66
32+10.000	0.49	0.84	0.79	0.79	0.23	0.21	332.27	332.27	260.02	72.24
33+0.000	5.00	0.67	7.66	7.66	0.87	5.50	339.92	339.92	265.52	74.40
33+2.350	1.18	0.06	0.86	0.86	1.12	2.34	340.78	340.78	267.86	72.92
33+10.000	3.82	0.00	0.24	0.24	1.96	11.79	341.02	341.02	279.65	61.37
33+15.687	2.84	0.00	0.04	0.04	2.25	12.00	341.06	341.06	291.65	49.41
34+0.000	2.16	0.02	0.05	0.05	2.16	9.50	341.11	341.11	301.15	39.96
35+0.000	10.00	0.61	6.32	6.32	0.02	21.79	347.43	347.43	322.94	24.49
36+0.000	10.00	0.34	9.58	9.58	0.18	1.98	357.02	357.02	324.92	32.09
36+3.206	1.60	0.20	0.87	0.87	0.31	0.78	357.89	357.89	325.70	32.19
36+10.000	3.40	0.49	2.34	2.34	0.07	1.30	360.23	360.23	327.01	33.22
36+14.361	2.18	0.23	1.57	1.57	0.12	0.42	361.80	361.80	327.42	34.38
37+0.000	2.82	0.14	1.03	1.03	0.19	0.86	362.83	362.83	328.28	34.55
37+5.517	2.76	0.40	1.48	1.48	0.19	1.03	364.31	364.31	329.32	34.99
37+19.815	7.15	1.51	13.67	13.67	0.01	1.44	377.98	377.98	330.75	47.23
38+0.000	0.09	1.53	0.28	0.28	0.01	0.00	378.26	378.26	330.76	47.51
38+9.430	4.71	2.13	17.18	17.18	0.03	0.19	395.44	395.44	330.95	64.49
38+10.000	0.29	2.07	1.20	1.20	0.02	0.02	396.64	396.64	330.97	65.67
38+19.044	4.52	0.19	10.15	10.15	0.08	0.45	406.79	406.79	331.41	75.38
39+0.000	0.48	0.17	0.18	0.18	0.12	0.09	406.97	406.97	331.51	75.46
39+19.623	9.81	0.69	8.50	8.50	0.00	1.22	415.46	415.46	332.73	82.74
40+0.000	0.19	0.70	0.26	0.26	0.00	0.00	415.73	415.73	332.73	83.00
40+10.000	5.00	1.33	10.09	10.09	0.00	0.05	425.82	425.82	332.78	93.04
40+10.571	0.29	1.31	0.75	0.75	0.00	0.00	426.57	426.57	332.78	93.79
41+0.000	4.71	0.54	8.68	8.68	0.00	0.00	435.26	435.26	332.78	102.47
41+1.520	0.76	0.59	0.86	0.86	0.00	0.00	436.12	436.12	332.78	103.34
42+0.000	9.24	1.47	19.09	19.09	0.11	1.01	455.21	455.21	333.80	121.41
42+2.204	1.10	0.89	2.61	2.61	0.54	0.72	457.81	457.81	334.51	123.30
42+10.000	3.90	0.66	6.08	6.08	0.72	4.89	463.90	463.90	339.40	124.49
43+0.000	5.00	0.38	5.22	5.22	0.54	6.25	469.12	469.12	345.66	123.46
43+3.393	1.70	0.18	0.95	0.95	0.54	1.83	470.07	470.07	347.49	122.58
43+10.000	3.30	0.11	0.96	0.96	0.43	3.16	471.02	471.02	350.65	120.37
44+0.000	5.00	0.22	1.64	1.64	0.24	3.31	472.67	472.67	353.96	118.71
44+4.582	2.29	0.43	1.49	1.49	0.04	0.65	474.16	474.16	354.61	119.55
44+4.582	0.00	0.00	0.00	0.00	0.00	0.00	474.16	474.16	354.61	119.55
44+10.000	2.71	1.37	3.73	3.73	0.00	0.00	477.89	477.89	354.61	123.28

44+17.726	3.86	2.76	15.99	15.99	0.00	0.00	493.88	493.88	354.61	139.27
45+0.000	1.14	3.15	6.73	6.73	0.00	0.00	500.60	500.60	354.61	146.00
45+10.000	5.00	4.23	36.89	36.89	0.00	0.00	537.49	537.49	354.61	182.88
45+10.870	0.43	4.36	3.74	3.74	0.00	0.00	541.23	541.23	354.61	186.62
46+0.000	4.57	6.29	48.62	48.62	0.00	0.00	589.84	589.84	354.61	235.24
47+0.000	10.00	3.89	101.77	101.77	0.00	0.00	691.61	691.61	354.61	337.01
48+0.000	10.00	2.53	64.19	64.19	0.05	0.48	755.80	755.80	355.09	400.71
48+19.814	9.91	0.45	29.51	29.51	0.30	3.46	785.31	785.31	358.55	426.75
49+0.000	0.09	0.44	0.08	0.08	0.30	0.06	785.39	785.39	358.61	426.78
49+10.000	5.00	0.02	2.36	2.36	1.12	7.06	787.75	787.75	365.67	422.07
50+0.000	5.00	0.40	2.16	2.16	0.28	6.98	789.90	789.90	372.65	417.25
50+2.199	1.10	0.25	0.72	0.72	0.51	0.87	790.62	790.62	373.52	417.10
50+10.000	3.90	0.00	0.98	0.98	0.46	3.75	791.59	791.59	377.27	414.33
51+0.000	5.00	6.97	36.21	36.21	0.44	4.49	827.80	827.80	381.76	446.04
51+4.585	2.29	4.61	27.57	27.57	0.34	1.77	855.37	855.37	383.53	471.84
52+0.000	7.71	0.14	36.58	36.58	0.32	5.09	891.95	891.95	388.62	503.33
53+0.000	10.00	0.02	1.57	1.57	0.37	6.96	893.52	893.52	395.58	497.94
54+0.000	10.00	0.00	0.24	0.24	0.73	11.02	893.77	893.77	406.60	487.16
55+0.000	10.00	0.12	1.26	1.26	0.59	13.23	895.02	895.02	419.84	475.19
55+6.100	3.05	0.18	0.91	0.91	0.52	3.39	895.93	895.93	423.23	472.70
55+10.000	1.95	0.29	0.91	0.91	0.42	1.84	896.83	896.83	425.07	471.76
55+18.599	4.30	0.06	1.48	1.48	0.31	3.15	898.32	898.32	428.22	470.10
56+0.000	0.70	0.16	0.15	0.15	0.25	0.39	898.47	898.47	428.61	469.85
56+10.000	5.00	1.01	5.78	5.78	0.09	1.72	904.24	904.24	430.33	473.91
56+11.097	0.55	0.96	1.08	1.08	0.08	0.09	905.32	905.32	430.42	474.90
57+0.000	4.45	1.09	9.13	9.13	0.20	1.26	914.45	914.45	431.68	482.77
57+11.541	5.77	1.87	17.09	17.09	0.13	1.90	931.54	931.54	433.58	497.96
58+0.000	4.23	1.65	15.03	15.03	0.03	0.64	946.57	946.57	434.22	512.35
58+9.066	4.53	0.68	10.56	10.56	4.08	18.00	957.14	957.14	452.23	504.91
58+10.000	0.47	0.69	0.64	0.64	4.04	3.79	957.77	957.77	456.02	501.75
59+0.000	5.00	1.52	11.03	11.03	0.03	19.61	968.80	968.80	475.63	493.17
59+6.591	3.30	2.23	12.41	12.41	0.02	0.16	981.21	981.21	475.78	505.42
60+0.000	6.70	0.45	17.93	17.93	0.17	1.31	999.14	999.14	477.09	522.05
61+0.000	10.00	0.26	7.12	7.12	0.22	3.90	1006.25	1006.25	480.99	525.26
61+10.000	5.00	0.00	1.32	1.32	0.00	1.08	1007.58	1007.58	482.07	525.50