

99054		LOCAÇÃO DE PAVIMENTAÇÃO. AF_10/2018	M			0,43
Unidade	Coefficiente	Preço	Total			
99058	LOCAÇÃO DE PONTO PARA REFERÊNCIA TOPOGRÁFICA. AF_10/2018	0,0500	8,6700	0,4300		
				Total:	0,4300	
				Total Simples:	0,43	
				Encargos Sociais:	0,00	
				Total Geral s/ BDI:	0,43	

93588		TRANSPORTE COM CAMINHÃO BASCULANTE DE 10 M³, EM VIA URBANA EM LEITO NATURAL (UNIDADE: M3XKM). AF_07/2020	M3XKM			2,20
Unidade	Coefficiente	Preço	Total			
91386	CAMINHÃO BASCULANTE 10 M3, TRUCADO CABINE SIMPLES, PESO BRUTO TOTAL 23.000 KG, CARGA ÚTIL MÁXIMA 15.935 KG, DISTÂNCIA ENTRE EIXOS 4,80 M, POTÊNCIA 230 CV INCLUSIVE CAÇAMBA METÁLICA - CHP DIURNO. AF_06/2014	0,0111	183,2700	2,0300		
91387	CAMINHÃO BASCULANTE 10 M3, TRUCADO CABINE SIMPLES, PESO BRUTO TOTAL 23.000 KG, CARGA ÚTIL MÁXIMA 15.935 KG, DISTÂNCIA ENTRE EIXOS 4,80 M, POTÊNCIA 230 CV INCLUSIVE CAÇAMBA METÁLICA - CHI DIURNO. AF_06/2014	0,0045	39,9100	0,1700		
				Total:	2,2000	
				Total Simples:	2,20	
				Encargos Sociais:	0,00	
				Total Geral s/ BDI:	2,20	

100577		REGULARIZAÇÃO E COMPACTAÇÃO DE SUBLEITO DE SOLO PREDOMINANTEMENTE ARENOSO. AF_11/2019	M2			0,77
Unidade	Coefficiente	Preço	Total			
5901	CAMINHÃO PIPA 10.000 L TRUCADO, PESO BRUTO TOTAL 23.000 KG, CARGA ÚTIL MÁXIMA 15.935 KG, DISTÂNCIA ENTRE EIXOS 4,8 M, POTÊNCIA 230 CV, INCLUSIVE TANQUE DE AÇO PARA TRANSPORTE DE ÁGUA - CHP DIURNO. AF_06/2014	0,0011	215,7400	0,2300		
5903	CAMINHÃO PIPA 10.000 L TRUCADO, PESO BRUTO TOTAL 23.000 KG, CARGA ÚTIL MÁXIMA 15.935 KG, DISTÂNCIA ENTRE EIXOS 4,8 M, POTÊNCIA 230 CV, INCLUSIVE TANQUE DE AÇO PARA TRANSPORTE DE ÁGUA - CHI DIURNO. AF_06/2014	0,0020	38,1200	0,0700		
5932	MOTONIVELADORA POTÊNCIA BÁSICA LÍQUIDA (PRIMEIRA MARCHA) 125 HP, PESO BRUTO 13032 KG, LARGURA DA LÂMINA DE 3,7 M - CHP DIURNO. AF_06/2014	0,0001	170,2700	0,0100		
5934	MOTONIVELADORA POTÊNCIA BÁSICA LÍQUIDA (PRIMEIRA MARCHA) 125 HP, PESO BRUTO 13032 KG, LARGURA DA LÂMINA DE 3,7 M - CHI DIURNO. AF_06/2014	0,0030	57,8400	0,1700		
88316	SERVEENTE COM ENCARGOS COMPLEMENTARES	0,0030	14,7800	0,0400		
96463	ROLO COMPACTADOR DE PNEUS, ESTATICO, PRESSAO VARIÁVEL, POTENCIA 110 HP, PESO SEM/COM LASTRO 10,8/27 T, LARGURA DE ROLAGEM 2,30 M - CHP DIURNO. AF_06/2017	0,0010	145,5900	0,1400		
96464	ROLO COMPACTADOR DE PNEUS, ESTATICO, PRESSAO VARIÁVEL, POTENCIA 110 HP, PESO SEM/COM LASTRO 10,8/27 T, LARGURA DE ROLAGEM 2,30 M - CHI DIURNO. AF_06/2017	0,0020	56,6500	0,1100		
				Total:	0,7700	
				Total Simples:	0,77	
				Encargos Sociais:	0,00	
				Total Geral s/ BDI:	0,77	

100574		ESPALHAMENTO DE MATERIAL COM TRATOR DE ESTEIRAS. AF_11/2019	M3			1,03
Unidade	Coefficiente	Preço	Total			
5851	TRATOR DE ESTEIRAS, POTÊNCIA 150 HP, PESO OPERACIONAL 16,7 T, COM RODA MOTRIZ ELEVADA E LÂMINA 3,18 M3 - CHP DIURNO. AF_06/2014	0,0030	178,9600	0,5300		
5853	TRATOR DE ESTEIRAS, POTÊNCIA 150 HP, PESO OPERACIONAL 16,7 T, COM RODA MOTRIZ ELEVADA E LÂMINA 3,18 M3 - CHI DIURNO. AF_06/2014	0,0068	54,5000	0,3700		
88316	SERVEENTE COM ENCARGOS COMPLEMENTARES	0,0090	14,7800	0,1300		
				Total:	1,0300	
				Total Simples:	1,03	
				Encargos Sociais:	0,00	
				Total Geral s/ BDI:	1,03	

96386		EXECUÇÃO E COMPACTAÇÃO DE ATERRO COM SOLO PREDOMINANTEMENTE ARENOSO - EXCLUSIVO SOLO, ESCAVAÇÃO, CARGA E TRANSPORTE. AF_11/2019	M3			5,57
Unidade	Coefficiente	Preço	Total			
5901	CAMINHÃO PIPA 10.000 L TRUCADO, PESO BRUTO TOTAL 23.000 KG, CARGA ÚTIL MÁXIMA 15.935 KG, DISTÂNCIA ENTRE EIXOS 4,8 M, POTÊNCIA 230 CV, INCLUSIVE TANQUE DE AÇO PARA TRANSPORTE DE ÁGUA - CHP DIURNO. AF_06/2014	0,0040	215,7400	0,8600		
5903	CAMINHÃO PIPA 10.000 L TRUCADO, PESO BRUTO TOTAL 23.000 KG, CARGA ÚTIL MÁXIMA 15.935 KG, DISTÂNCIA ENTRE EIXOS 4,8 M, POTÊNCIA 230 CV, INCLUSIVE TANQUE DE AÇO PARA TRANSPORTE DE ÁGUA - CHI DIURNO. AF_06/2014	0,0160	38,1200	0,6000		
5932	MOTONIVELADORA POTÊNCIA BÁSICA LÍQUIDA (PRIMEIRA MARCHA) 125 HP, PESO BRUTO 13032 KG, LARGURA DA LÂMINA DE 3,7 M - CHP DIURNO. AF_06/2014	0,0060	170,2700	1,0200		
5934	MOTONIVELADORA POTÊNCIA BÁSICA LÍQUIDA (PRIMEIRA MARCHA) 125 HP, PESO BRUTO 13032 KG, LARGURA DA LÂMINA DE 3,7 M - CHI DIURNO. AF_06/2014	0,0150	57,8400	0,8600		
88316	SERVEENTE COM ENCARGOS COMPLEMENTARES	0,0210	14,7800	0,3100		
96463	ROLO COMPACTADOR DE PNEUS, ESTATICO, PRESSAO VARIÁVEL, POTENCIA 110 HP, PESO SEM/COM LASTRO 10,8/27 T, LARGURA DE ROLAGEM 2,30 M - CHP DIURNO. AF_06/2017	0,0030	145,5900	0,4300		
96464	ROLO COMPACTADOR DE PNEUS, ESTATICO, PRESSAO VARIÁVEL, POTENCIA 110 HP, PESO SEM/COM LASTRO 10,8/27 T, LARGURA DE ROLAGEM 2,30 M - CHI DIURNO. AF_06/2017	0,0263	56,6500	1,4900		
				Total:	5,5700	
				Total Simples:	5,57	
				Encargos Sociais:	0,00	
				Total Geral s/ BDI:	5,57	

*Arbano Rangel S. Junior*  
Engº Civil - Fiscal  
REP-402614/00-3

**COMPOSIÇÕES DE CUSTOS UNITÁRIOS DA TABELA SEINFRA-CE**

<b>C1937</b>		<b>PLACAS PADRÃO DE OBRA</b>		<b>M2</b>				<b>151,47</b>
<b>MAO DE OBRA</b>				<b>Unidade</b>	<b>Coefficiente</b>	<b>Preço</b>		<b>Total</b>
12543	SERVENTE			H	2,0000	15,5500		31,1000
							<b>Total:</b>	<b>31,1000</b>
<b>MATERIAIS</b>								
10537	CHAPA DE AÇO GALVANIZADA ESP. 0.3MM			M2	1,0200	35,5900		36,3018
11100	ESMALTE SINTETICO			L	1,0000	24,9900		24,9900
11691	PONTALETE / BARROTE DE 3"x3"			M	4,5000	12,6100		56,7450
11725	PREGO 15X15 (1.1/4" x 13) (APROXIMADAMENTE 672UN/KG)			KG	0,1500	15,5400		2,3310
							<b>Total:</b>	<b>120,3678</b>
							<b>Total Simples:</b>	<b>151,47</b>
							<b>Encargos Sociais:</b>	<b>INCLUSO</b>
							<b>Total Geral s/ BDI:</b>	<b>151,47</b>
<b>C4992</b>		<b>MOBILIZAÇÃO DE EQUIPAMENTOS EM CAVALO MECÂNICO C/ PRANCHA DE 3 EIXOS</b>		<b>KM</b>				<b>3,65</b>
<b>EQUIPAMENTOS (CHORARIO)</b>				<b>Unidade</b>	<b>Coefficiente</b>	<b>Preço</b>		<b>Total</b>
10716	CAVALO MECÂNICO C/PRANC. 3 EIXOS (CHP)			H	0,0125	292,0138		3,6502
							<b>Total:</b>	<b>3,6502</b>
							<b>Total Simples:</b>	<b>3,65</b>
							<b>Encargos Sociais:</b>	<b>INCLUSO</b>
							<b>Total Geral s/ BDI:</b>	<b>3,65</b>
<b>C4993</b>		<b>DESMOBILIZAÇÃO DE EQUIPAMENTOS EM CAVALO MECÂNICO C/ PRANCHA DE 3 EIXOS</b>		<b>KM</b>				<b>3,65</b>
<b>EQUIPAMENTOS (CHORARIO)</b>				<b>Unidade</b>	<b>Coefficiente</b>	<b>Preço</b>		<b>Total</b>
10716	CAVALO MECÂNICO C/PRANC. 3 EIXOS (CHP)			H	0,0125	292,0138		3,6502
							<b>Total:</b>	<b>3,6502</b>
							<b>Total Simples:</b>	<b>3,65</b>
							<b>Encargos Sociais:</b>	<b>INCLUSO</b>
							<b>Total Geral s/ BDI:</b>	<b>3,65</b>
<b>C2840</b>		<b>INDENIZAÇÃO DE JAZIDA</b>		<b>M3</b>				<b>1,23</b>
<b>MATERIAIS</b>				<b>Unidade</b>	<b>Coefficiente</b>	<b>Preço</b>		<b>Total</b>
12354	INDENIZAÇÃO DE JAZIDA			M3	1,0000	1,2300		1,2300
							<b>Total:</b>	<b>1,2300</b>
							<b>Total Simples:</b>	<b>1,23</b>
							<b>Encargos Sociais:</b>	<b>INCLUSO</b>
							<b>Total Geral s/ BDI:</b>	<b>1,23</b>
<b>C3211</b>		<b>ESCAVAÇÃO E CARGA DE MATERIAL DE JAZIDA</b>		<b>M3</b>				<b>4,14</b>
<b>EQUIPAMENTOS (CHORARIO)</b>				<b>Unidade</b>	<b>Coefficiente</b>	<b>Preço</b>		<b>Total</b>
10596	CARREGADEIRA DE PNEUS HP 180 (CHI)			H	0,0001	86,9932		0,0065
10666	TRATOR DE ESTEIRAS C/LÂMINA E ESC. HP 155 (CHI)			H	0,0000	75,8322		0,0000
10710	CARREGADEIRA DE PNEUS HP 180 (CHP)			H	0,0074	282,4099		2,1021
10779	TRATOR DE ESTEIRAS C/LÂMINA E ESC. HP 155 (CHP)			H	0,0075	239,2961		1,7992
							<b>Total:</b>	<b>3,9078</b>
<b>MAO DE OBRA</b>								
12543	SERVENTE			H	0,0150	15,5500		0,2338
							<b>Total:</b>	<b>0,2338</b>
							<b>Total Simples:</b>	<b>4,14</b>
							<b>Encargos Sociais:</b>	<b>INCLUSO</b>
							<b>Total Geral s/ BDI:</b>	<b>4,14</b>
<b>C3145</b>		<b>COMPACTAÇÃO DE ATERROS 95% P.N</b>		<b>M3</b>				<b>3,58</b>
<b>EQUIPAMENTOS (CHORARIO)</b>				<b>Unidade</b>	<b>Coefficiente</b>	<b>Preço</b>		<b>Total</b>
10590	CAMINHÃO TANQUE 8.000 I (CHI)			H	0,0000	48,6827		0,0000
10610	COMPAC. PÉ DE CARNEIRO VIBRAT. AUTOPROP. (CHI)			H	0,0027	55,8815		0,1515
10625	GRADE DE DISCOS (CHI)			H	0,0008	2,7079		0,0020
10642	MOTO NIVELADORA (CHI)			H	0,0000	76,5747		0,0000
10667	MOTO NIVELADORA (CHI)			H	0,0008	27,3511		0,0207
10667	TRATOR DE PNEUS (CHI)			H	0,0089	159,4976		1,4178
10698	CAMINHÃO TANQUE 8.000 I (CHP)			H	0,0017	170,9808		0,2964
10723	COMPAC. PÉ DE CARNEIRO VIBRAT. AUTOPROP. (CHP)			H	0,0037	4,0798		0,0150
10739	GRADE DE DISCOS (CHP)			H	0,0044	218,3516		0,9705
10756	MOTO NIVELADORA (CHP)			H	0,0037	97,4393		0,3594
10780	TRATOR DE PNEUS (CHP)							
							<b>Total:</b>	<b>3,2333</b>
<b>MAO DE OBRA</b>								
12543	SERVENTE			H	0,0222	15,5500		0,3456
							<b>Total:</b>	<b>0,3456</b>

**COMPOSIÇÕES DE CUSTOS UNITÁRIOS DA TABELA SEINFRA-CE**

					Total Simples:	3,58
					Encargos Sociais:	INCLUSO
					Total Geral s/ BDI:	3,58
<b>C0424</b>	<b>BOCA DE BUEIRO SIMPLES TUBULAR D= 80cm</b>			<b>UN</b>		<b>1.493,21</b>
	<b>SERVIÇOS</b>			<b>Unidade</b>	<b>Coefficiente</b>	<b>Preço</b>
	C0057	ALVENARIA DE PEDRA ARGAMASSADA (TRAÇO 1:4)		M3	2,6200	366,0827
		C/AGREGADOS PRODUZIDOS (S/TRANSP)				
	C1402	FORMA PLANA CHAPA COMPENSADA RESINADA, ESP.= 10mm		M2	9,1200	58,5611
		P/GALERIA E BUEIROS CAPEADOS				
						<b>Total: 1.493,2139</b>
						<b>Total Simples: 1.493,21</b>
						<b>Encargos Sociais: INCLUSO</b>
						<b>Total Geral s/ BDI: 1.493,21</b>
<b>C0919</b>	<b>CORPO DE BUEIRO SIMPLES TUBULAR D= 80cm</b>			<b>M</b>		<b>408,88</b>
	<b>MAO DE OBRA</b>			<b>Unidade</b>	<b>Coefficiente</b>	<b>Preço</b>
	I2391	PEDREIRO		H	0,1000	20,7700
	I2543	SERVENTE		H	0,4000	15,5500
						<b>Total: 8,2970</b>
	<b>MATERIAIS</b>					
	I2187	TUBO CONCRETO ARMADO, CLASSE PA-1, DN= 800MM (NBR 8890:2018)		M	1,0000	195,5000
						<b>Total: 195,5000</b>
	<b>SERVIÇOS</b>					
	C0057	ALVENARIA DE PEDRA ARGAMASSADA (TRAÇO 1:4)		M3	0,3860	366,0827
		C/AGREGADOS PRODUZIDOS (S/TRANSP)				
	C1402	FORMA PLANA CHAPA COMPENSADA RESINADA, ESP.= 10mm		M2	0,9000	58,5611
		P/GALERIA E BUEIROS CAPEADOS				
	C3324	ARGAMASSA DE CIMENTO E AREIA TRAÇO 1:4 COM AREIA PRODUZIDA		M3	0,0300	369,0982
						<b>Total: 205,0858</b>
						<b>Total Simples: 408,88</b>
						<b>Encargos Sociais: INCLUSO</b>
						<b>Total Geral s/ BDI: 408,88</b>
<b>C0406</b>	<b>BOCA DE BUEIRO DUPLO TUBULAR D= 80cm</b>			<b>UN</b>		<b>2.464,82</b>
	<b>SERVIÇOS</b>			<b>Unidade</b>	<b>Coefficiente</b>	<b>Preço</b>
	C0057	ALVENARIA DE PEDRA ARGAMASSADA (TRAÇO 1:4)		M3	4,5910	366,0827
		C/AGREGADOS PRODUZIDOS (S/TRANSP)				
	C1402	FORMA PLANA CHAPA COMPENSADA RESINADA, ESP.= 10mm		M2	13,3900	58,5611
		P/GALERIA E BUEIROS CAPEADOS				
						<b>Total: 2.464,8188</b>
						<b>Total Simples: 2.464,82</b>
						<b>Encargos Sociais: INCLUSO</b>
						<b>Total Geral s/ BDI: 2.464,82</b>
<b>C0886</b>	<b>CORPO DE BUEIRO DUPLO TUBULAR D= 80cm</b>			<b>M</b>		<b>765,06</b>
	<b>MAO DE OBRA</b>			<b>Unidade</b>	<b>Coefficiente</b>	<b>Preço</b>
	I2391	PEDREIRO		H	0,2000	20,7700
	I2543	SERVENTE		H	0,8000	15,5500
						<b>Total: 16,5940</b>
	<b>MATERIAIS</b>					
	I2187	TUBO CONCRETO ARMADO, CLASSE PA-1, DN= 800MM (NBR 8890:2018)		M	2,0000	195,5000
						<b>Total: 391,0000</b>
	<b>SERVIÇOS</b>					
	C0057	ALVENARIA DE PEDRA ARGAMASSADA (TRAÇO 1:4)		M3	0,7720	366,0827
		C/AGREGADOS PRODUZIDOS (S/TRANSP)				
	C1402	FORMA PLANA CHAPA COMPENSADA RESINADA, ESP.= 10mm		M2	0,9000	58,5611
		P/GALERIA E BUEIROS CAPEADOS				
	C3324	ARGAMASSA DE CIMENTO E AREIA TRAÇO 1:4 COM AREIA PRODUZIDA		M3	0,0600	369,0982
						<b>Total: 357,4667</b>
						<b>Total Simples: 765,06</b>
						<b>Encargos Sociais: INCLUSO</b>
						<b>Total Geral s/ BDI: 765,06</b>



# QUADRO DE CUBAÇÃO

TRECHO: BR 226 Á LOC. DE MONTE GRAVE  
 Estaca Inicial: 0+0.000  
 Estaca Final: 558+13.713

Estaca	Semi Distância (m)	Área de Corte (m <sup>2</sup> )	Volume de Corte (m <sup>3</sup> )	Área de Aterro (m <sup>2</sup> )	Volume Aterro (m <sup>3</sup> )	Vol. Acum. Corte (m <sup>3</sup> )	Vol. Acum. Aterro (m <sup>3</sup> )
0+0.000	0.00	0.00	0.00	0.35	0.00	0.00	0.00
1+0.000	10.00	0.00	0.00	0.00	3.50	0.00	3.50
1+0.574	0.29	0.00	0.00	0.00	0.00	0.00	3.50
1+14.180	6.80	0.00	0.00	0.00	0.00	0.00	3.50
2+0.000	2.91	0.00	0.00	0.00	0.00	0.00	3.50
2+7.786	3.89	0.00	0.00	0.00	0.00	0.00	3.66
3+0.000	6.11	0.00	0.00	0.03	0.16	0.00	3.75
3+7.277	3.64	0.00	0.00	0.00	0.10	0.00	5.41
3+18.309	5.52	0.00	0.00	0.30	1.65	0.00	5.94
4+0.000	0.85	0.00	0.00	0.34	0.54	0.00	5.94
4+9.340	4.67	0.00	0.00	0.49	3.87	0.00	9.82
5+0.000	5.33	0.00	0.00	0.45	5.04	0.00	14.85
5+19.248	9.62	0.00	0.00	0.27	6.99	0.00	21.84
6+0.000	0.38	0.00	0.00	0.27	0.21	0.00	22.04
6+7.030	3.51	0.00	0.00	2.53	9.80	0.00	31.84
6+14.811	3.89	0.00	0.00	6.53	35.24	0.00	67.09
7+0.000	2.59	0.00	0.00	8.60	39.26	0.00	106.35
8+0.000	10.00	0.00	0.00	10.12	187.19	0.00	293.54
9+0.000	10.00	0.00	0.00	9.21	193.32	0.00	486.86
9+5.684	2.84	0.00	0.00	7.79	48.32	0.00	535.18
9+10.886	2.60	0.00	0.00	6.54	37.33	0.00	572.51
9+16.089	2.60	0.00	0.00	4.99	30.04	0.00	602.55
10+0.000	1.96	0.00	0.00	3.90	17.39	0.00	619.94
11+0.000	10.00	0.00	0.00	1.14	50.41	0.00	670.35
12+0.000	10.00	0.00	0.00	2.84	39.82	0.00	710.17
13+0.000	10.00	0.00	0.00	3.96	68.06	0.00	778.23
13+1.137	0.57	0.00	0.00	4.09	4.58	0.00	782.81
13+12.250	5.56	0.00	0.00	0.04	23.69	0.00	806.50
14+0.000	3.88	0.00	0.00	0.03	0.25	0.00	806.75
14+3.363	1.68	0.00	0.00	0.05	0.11	0.00	806.87
14+14.488	5.56	0.00	0.00	0.06	0.58	0.00	807.45
15+0.000	2.76	0.00	0.00	0.53	1.71	0.00	809.16
15+0.742	0.37	0.00	0.00	0.57	0.44	0.00	809.60
15+6.996	3.13	0.00	0.00	0.59	3.88	0.00	813.47
16+0.000	6.50	0.00	0.00	1.73	15.07	0.00	828.54
17+0.000	10.00	0.00	0.00	8.47	101.95	0.00	930.49
17+12.760	6.38	0.00	0.00	6.05	92.63	0.00	1023.12
17+13.453	0.35	0.00	0.00	5.96	4.15	0.00	1027.27
17+14.145	0.35	0.00	0.00	5.88	4.10	0.00	1031.37
18+0.000	2.93	0.00	0.00	5.19	32.41	0.00	1063.78
19+0.000	10.00	0.00	0.00	2.71	79.01	0.00	1142.79
20+0.000	10.00	0.00	0.00	0.65	33.62	0.00	1176.41
20+9.914	4.96	0.00	0.00	0.04	3.40	0.00	1179.81
20+10.638	0.36	0.00	0.00	0.02	0.02	0.00	1179.83
20+11.362	0.36	0.00	0.00	0.02	0.02	0.00	1179.85
21+0.000	4.32	0.00	0.00	0.06	0.34	0.00	1180.19
22+0.000	10.00	0.00	0.00	0.32	3.74	0.00	1183.93
23+0.000	10.00	0.00	0.00	0.59	9.08	0.00	1193.01
24+0.000	10.00	0.00	0.00	1.00	15.92	0.00	1208.93
24+2.863	1.43	0.00	0.00	1.10	3.01	0.00	1211.94
24+5.064	1.10	0.00	0.00	1.12	2.40	0.00	1214.34
24+7.264	1.10	0.00	0.00	1.08	2.39	0.00	1216.73
25+0.000	6.37	0.00	0.00	0.74	11.56	0.00	1228.29
26+0.000	10.00	0.00	0.00	0.37	11.05	0.00	1239.34
27+0.000	10.00	0.00	0.00	0.28	6.50	0.00	1245.84



## QUADRO DE CUBAÇÃO

TRECHO: BR 226 Á LOC. DE MONTE GRAVE

Estaca Inicial: 0+0.000

Estaca Final: 58+13.713

Estaca	Semi Distância (m)	Área de Corte (m <sup>2</sup> )	Volume de Corte (m <sup>3</sup> )	Área de Aterro (m <sup>2</sup> )	Volume Aterro (m <sup>3</sup> )	Vol. Acum. Corte (m <sup>3</sup> )	Vol. Acum. Aterro (m <sup>3</sup> )
27+0.228	0.11	0.00	0.00	0.29	0.07	0.00	1245.90
27+8.258	4.01	0.00	0.00	0.47	3.10	0.00	1249.01
27+16.287	4.01	0.00	0.00	0.78	5.15	0.00	1254.16
28+0.000	1.86	0.00	0.00	0.85	3.03	0.00	1257.18
28+17.127	8.56	0.00	0.00	1.44	19.58	0.00	1276.77
28+19.330	1.10	0.00	0.00	1.49	3.26	0.00	1280.03
29+0.000	0.34	0.00	0.00	1.50	1.01	0.00	1281.04
29+1.533	0.77	0.00	0.00	1.52	2.33	0.00	1283.37
30+0.000	9.23	0.00	0.00	1.49	27.74	0.00	1311.11
31+0.000	10.00	0.00	0.00	1.18	26.64	0.00	1337.75
32+0.000	10.00	0.00	0.00	1.05	22.29	0.00	1360.04
33+0.000	10.00	0.00	0.00	0.87	19.27	0.00	1379.30
33+17.858	8.93	0.00	0.00	0.00	7.85	0.00	1387.16
33+18.075	0.11	0.00	0.00	0.00	0.00	0.00	1387.16
33+18.293	0.11	0.00	0.00	0.00	0.00	0.00	1387.16
34+0.000	0.85	0.00	0.00	0.02	0.02	0.00	1387.18
35+0.000	10.00	0.00	0.00	0.89	9.08	0.00	1396.25
36+0.000	10.00	0.00	0.00	3.73	46.21	0.00	1442.46
37+0.000	10.00	0.00	0.00	9.48	132.04	0.00	1574.51
37+6.319	3.16	0.00	0.00	8.82	57.82	0.00	1632.32
37+6.636	0.16	0.00	0.00	8.76	2.79	0.00	1635.11
37+6.954	0.16	0.00	0.00	8.69	2.77	0.00	1637.88
38+0.000	6.52	0.00	0.00	6.53	99.31	0.00	1737.19
39+0.000	10.00	0.00	0.00	2.16	86.95	0.00	1824.14
40+0.000	10.00	0.00	0.00	0.73	28.97	0.00	1853.11
41+0.000	10.00	0.00	0.00	0.55	12.80	0.00	1865.91
42+0.000	10.00	0.00	0.00	0.88	14.27	0.00	1880.18
42+12.928	6.46	0.00	0.00	0.71	10.28	0.00	1890.46
43+0.000	3.54	0.00	0.00	0.94	5.65	0.00	1896.11
43+7.533	3.77	0.00	0.00	0.57	5.45	0.00	1901.56
44+0.000	6.23	0.00	0.00	0.92	8.92	0.00	1910.48
44+2.137	1.07	0.00	0.00	0.75	1.74	0.00	1912.22
45+0.000	8.93	0.00	0.00	0.00	6.68	0.00	1918.89
46+0.000	10.00	0.00	0.00	0.00	0.03	0.00	1918.92
47+0.000	10.00	0.00	0.00	0.48	4.78	0.00	1923.70
48+0.000	10.00	0.00	0.00	1.84	23.16	0.00	1946.86
49+0.000	10.00	0.00	0.00	3.11	49.45	0.00	1996.31
49+16.441	8.22	0.00	0.00	4.75	64.62	0.00	2060.94
50+0.000	1.78	0.00	0.00	4.32	16.11	0.00	2077.04
50+6.786	3.39	0.00	0.00	3.38	26.15	0.00	2103.19
50+17.131	5.17	0.00	0.00	4.49	40.29	0.00	2143.48
51+0.000	1.43	0.00	0.00	4.49	12.88	0.00	2156.37
52+0.000	10.00	0.00	0.00	4.26	87.45	0.00	2243.82
53+0.000	10.00	0.00	0.00	3.46	77.18	0.00	2321.00
54+0.000	10.00	0.00	0.00	0.38	38.43	0.00	2359.43
54+6.889	3.44	0.00	0.00	0.00	1.32	0.00	2360.75
54+8.922	1.02	0.00	0.00	0.00	0.00	0.00	2360.75
54+10.955	1.02	0.00	0.00	0.00	0.00	0.00	2360.75
55+0.000	4.52	0.00	0.00	0.00	0.00	0.00	2360.75
55+7.757	3.88	0.00	0.00	0.00	0.00	0.00	2360.75
55+14.372	3.31	0.00	0.00	0.00	0.00	0.00	2360.75
56+0.000	2.81	0.00	0.00	0.00	0.00	0.00	2360.75
56+0.987	0.49	0.00	0.00	0.00	0.00	0.00	2360.75
57+0.000	9.51	0.00	0.00	0.04	0.42	0.00	2361.17
58+0.000	10.00	0.00	0.00	0.00	0.44	0.00	2361.61

# QUADRO DE CUBAÇÃO



TRECHO: BR 226 Á LOC. DE MONTE GRAVE  
 Estaca Inicial: 0+0.000  
 Estaca Final: 558+13.713

Estaca	Semi Distância (m)	Área de Corte (m <sup>2</sup> )	Volume de Corte (m <sup>3</sup> )	Área de Aterro (m <sup>2</sup> )	Volume Aterro (m <sup>3</sup> )	Vol. Acum. Corte (m <sup>3</sup> )	Vol. Acum. Aterro (m <sup>3</sup> )
59+0.000	10.00	0.00	0.00	0.00	0.00	0.00	2361.61
60+0.000	10.00	0.00	0.00	0.05	0.49	0.00	2362.10
60+14.985	7.49	0.00	0.00	0.13	1.32	0.00	2363.42
60+15.178	0.10	0.00	0.00	0.13	0.02	0.00	2363.45
60+15.370	0.10	0.00	0.00	0.13	0.02	0.00	2363.47
61+0.000	2.31	0.00	0.00	0.16	0.67	0.00	2364.15
62+0.000	10.00	0.00	0.00	0.06	2.19	0.00	2366.33
63+0.000	10.00	0.00	0.00	0.00	0.61	0.00	2366.94
64+0.000	10.00	0.00	0.00	0.57	5.75	0.00	2372.70
65+0.000	10.00	0.00	0.00	0.91	14.81	0.00	2387.51
65+6.731	3.37	0.00	0.00	0.15	3.56	0.00	2391.07
65+8.244	0.76	0.00	0.00	0.02	0.12	0.00	2391.20
65+9.756	0.76	0.00	0.00	0.00	0.01	0.00	2391.21
66+0.000	5.12	0.00	0.00	0.00	0.00	0.00	2391.21
67+0.000	10.00	0.00	0.00	0.00	0.00	0.00	2391.21
67+13.867	6.93	0.00	0.00	0.00	0.00	0.00	2391.21
68+0.000	3.07	0.00	0.00	0.00	0.00	0.00	2391.21
68+0.833	0.42	0.00	0.00	0.00	0.00	0.00	2391.21
68+7.799	3.48	0.00	0.00	0.07	0.23	0.00	2391.44
69+0.000	6.10	0.00	0.00	0.36	2.60	0.00	2394.04
69+9.626	4.81	0.00	0.00	0.61	4.66	0.00	2398.70
69+17.357	3.87	0.00	0.00	0.92	5.72	0.00	2404.42
70+0.000	1.32	0.00	0.00	1.08	2.57	0.00	2406.99
70+5.089	2.54	0.00	0.00	1.63	6.77	0.00	2413.76
70+15.597	5.25	0.00	0.00	1.13	14.48	0.00	2428.24
70+19.538	1.97	0.00	0.00	0.99	4.13	0.00	2432.37
71+0.000	0.23	0.00	0.00	0.98	0.46	0.00	2432.82
71+3.479	1.74	0.00	0.00	0.98	3.40	0.00	2436.22
72+0.000	8.26	0.00	0.00	0.71	13.89	0.00	2450.12
72+10.162	5.08	0.00	0.00	0.14	4.28	0.00	2454.40
72+15.026	2.43	0.00	0.00	0.00	0.31	0.00	2454.71
72+19.890	2.43	0.00	0.00	0.00	0.00	0.00	2454.71
73+0.000	0.06	0.00	0.00	0.00	0.00	0.00	2454.71
74+0.000	10.00	0.00	0.00	0.06	0.63	0.00	2455.34
74+2.033	1.02	0.00	0.00	0.11	0.18	0.00	2455.52
74+13.924	5.95	0.00	0.00	0.00	0.66	0.00	2456.18
75+0.000	3.04	0.00	0.00	0.00	0.00	0.00	2456.18
75+5.815	2.91	0.00	0.00	0.00	0.00	0.00	2456.18
76+0.000	7.09	0.00	0.00	0.00	0.00	0.00	2456.18
76+16.579	8.29	0.00	0.00	0.00	0.00	0.00	2456.18
77+0.000	1.71	0.00	0.00	0.00	0.00	0.00	2456.18
77+2.891	1.45	0.00	0.00	0.00	0.00	0.00	2456.18
77+9.202	3.16	0.00	0.00	0.10	0.31	0.00	2456.49
78+0.000	5.40	0.00	0.00	0.41	2.75	0.00	2459.23
79+0.000	10.00	0.00	0.00	0.51	9.18	0.00	2468.41
79+10.350	5.18	0.00	0.00	0.00	2.63	0.00	2471.04
79+11.879	0.76	0.00	0.00	0.00	0.00	0.00	2471.04
79+13.408	0.76	0.00	0.00	0.02	0.02	0.00	2471.06
80+0.000	3.30	0.00	0.00	0.12	0.48	0.00	2471.54
81+0.000	10.00	0.00	0.00	0.51	6.30	0.00	2477.84
81+15.551	7.78	0.00	0.00	1.28	13.91	0.00	2491.75
82+0.000	2.22	0.00	0.00	1.48	6.01	0.00	2497.76
82+2.175	1.09	0.00	0.00	1.66	3.35	0.00	2501.11
82+8.799	3.31	0.00	0.00	1.10	8.89	0.00	2510.00
83+0.000	5.60	0.00	0.00	0.49	8.87	0.00	2518.87

# QUADRO DE CUBAÇÃO



TRECHO: BR 226 Á LOC. DE MONTE GRAVE  
 Estaca Inicial: 0+0.000  
 Estaca Final: 558+13.713

Estaca	Semi Distância (m)	Área de Corte (m <sup>2</sup> )	Volume de Corte (m <sup>3</sup> )	Área de Aterro (m <sup>2</sup> )	Volume Aterro (m <sup>3</sup> )	Vol. Acum. Corte (m <sup>3</sup> )	Vol. Acum. Aterro (m <sup>3</sup> )
83+7.484	3.74	0.00	0.00	0.21	2.60	0.00	2521.47
83+10.263	1.39	0.00	0.00	0.15	0.46	0.00	2521.94
83+13.043	1.39	0.00	0.00	0.13	0.36	0.00	2522.30
84+0.000	3.48	0.00	0.00	0.12	0.88	0.00	2523.17
84+7.151	3.58	0.00	0.00	0.10	0.80	0.00	2523.97
84+12.328	2.59	0.00	0.00	0.08	0.44	0.00	2524.41
84+17.505	2.59	0.00	0.00	0.00	0.19	0.00	2524.60
85+0.000	1.25	0.00	0.00	0.00	0.00	0.00	2524.60
86+0.000	10.00	0.00	0.00	0.00	0.00	0.00	2524.60
87+0.000	10.00	0.00	0.00	0.00	0.00	0.00	2524.60
87+5.251	2.63	0.00	0.00	0.75	1.96	0.00	2526.56
87+14.032	4.39	0.00	0.00	1.17	8.32	0.00	2534.88
88+0.000	2.98	0.00	0.00	0.53	5.09	0.00	2539.97
88+2.812	1.41	0.00	0.00	0.38	1.31	0.00	2541.28
89+0.000	8.59	0.00	0.00	0.69	9.22	0.00	2550.50
89+3.141	1.57	0.00	0.00	0.09	1.22	0.00	2551.72
89+12.217	4.54	0.00	0.00	0.00	0.45	0.00	2552.16
90+0.000	3.89	0.00	0.00	0.00	0.00	0.00	2552.16
90+1.293	0.65	0.00	0.00	0.00	0.00	0.00	2552.16
91+0.000	9.35	0.00	0.00	0.22	2.08	0.00	2554.24
92+0.000	10.00	0.00	0.00	7.19	74.13	0.00	2628.37
92+5.437	2.72	0.00	0.00	9.34	44.94	0.00	2673.31
92+5.604	0.08	0.00	0.00	9.25	1.48	0.00	2674.79
92+5.771	0.08	0.00	0.00	9.17	1.47	0.00	2676.26
93+0.000	7.11	0.00	0.00	3.88	92.80	0.00	2769.06
93+11.180	5.59	0.00	0.00	2.23	34.14	0.00	2803.20
93+14.181	1.50	0.00	0.00	1.52	6.24	0.00	2809.44
93+17.183	1.50	0.00	0.00	0.67	3.60	0.00	2813.04
94+0.000	1.41	0.00	0.00	0.15	1.16	0.00	2814.20
95+0.000	10.00	0.00	0.00	0.10	2.46	0.00	2816.65
95+19.671	9.84	0.00	0.00	0.14	2.35	0.00	2819.00
96+0.000	0.16	0.00	0.00	0.14	0.04	0.00	2819.04
96+3.181	1.59	0.00	0.00	0.20	0.44	0.00	2819.48
96+6.691	1.75	0.00	0.00	0.28	0.72	0.00	2820.20
96+16.371	4.84	0.00	0.00	0.00	1.34	0.00	2821.54
96+18.627	1.13	0.00	0.00	0.00	0.00	0.00	2821.54
97+0.000	0.69	0.00	0.00	0.00	0.00	0.00	2821.54
97+0.882	0.44	0.00	0.00	0.00	0.00	0.00	2821.54
98+0.000	9.56	0.00	0.00	1.78	16.97	0.00	2838.51
99+0.000	10.00	0.00	0.00	8.37	101.48	0.00	2939.99
99+0.540	0.27	0.00	0.00	8.42	4.53	0.00	2944.52
99+4.466	1.96	0.00	0.00	8.86	33.03	0.00	2977.55
99+8.393	1.96	0.00	0.00	9.81	35.90	0.00	3013.45
100+0.000	5.80	0.00	0.00	10.44	117.49	0.00	3130.94
100+19.902	9.95	0.00	0.00	9.05	193.93	0.00	3324.86
101+0.000	0.05	0.00	0.00	9.04	0.89	0.00	3325.75
101+1.519	0.76	0.00	0.00	8.76	13.84	0.00	3339.60
101+3.137	0.81	0.00	0.00	8.47	14.26	0.00	3353.86
102+0.000	8.43	0.00	0.00	5.09	114.35	0.00	3468.21
103+0.000	10.00	0.00	0.00	1.31	64.03	0.00	3532.24
104+0.000	10.00	0.00	0.00	0.31	16.20	0.00	3548.44
104+14.889	7.44	0.00	0.00	0.00	2.28	0.00	3550.71
104+15.228	0.17	0.00	0.00	0.00	0.00	0.00	3550.71
104+15.567	0.17	0.00	0.00	0.00	0.00	0.00	3550.71
105+0.000	2.22	0.00	0.00	0.02	0.05	0.00	3550.76



## QUADRO DE CUBAÇÃO

TRECHO: BR 226 Á LOC. DE MONTE GRAVE

Estaca Inicial: 0+0.000

Estaca Final: 558+13.713

Estaca	Semi Distância (m)	Área de Corte (m <sup>2</sup> )	Volume de Corte (m <sup>3</sup> )	Área de Aterro (m <sup>2</sup> )	Volume Aterro (m <sup>3</sup> )	Vol. Acum. Corte (m <sup>3</sup> )	Vol. Acum. Aterro (m <sup>3</sup> )
105+12.919	6.46	0.00	0.00	0.77	5.09	0.00	3555.85
105+16.282	1.68	0.00	0.00	1.22	3.37	0.00	3559.22
105+19.644	1.68	0.00	0.00	0.97	3.59	0.00	3562.82
106+0.000	0.18	0.00	0.00	0.94	0.34	0.00	3563.16
107+0.000	10.00	0.00	0.00	1.10	20.46	0.00	3583.62
107+7.817	3.91	0.00	0.00	0.65	6.84	0.00	3590.46
107+14.232	3.21	0.00	0.00	0.20	2.74	0.00	3593.20
108+0.000	2.88	0.00	0.00	0.00	0.43	0.00	3593.63
108+0.646	0.32	0.00	0.00	0.00	0.00	0.00	3593.63
108+10.947	5.15	0.00	0.00	0.26	1.33	0.00	3594.96
108+12.232	0.64	0.00	0.00	0.20	0.28	0.00	3595.24
108+13.518	0.64	0.00	0.00	0.17	0.23	0.00	3595.47
109+0.000	3.24	0.00	0.00	0.29	1.50	0.00	3596.97
110+0.000	10.00	0.00	0.00	0.00	2.92	0.00	3599.89
111+0.000	10.00	0.00	0.00	0.08	0.82	0.00	3600.71
112+0.000	10.00	0.00	0.00	6.83	69.16	0.00	3669.87
112+9.988	4.99	0.00	0.00	11.26	90.36	0.00	3760.24
112+11.170	0.59	0.00	0.00	11.62	13.71	0.00	3773.94
112+12.352	0.59	0.00	0.00	11.61	14.05	0.00	3787.99
113+0.000	3.82	0.00	0.00	8.59	77.22	0.00	3865.22
113+7.917	3.96	0.00	0.00	2.11	42.36	0.00	3907.58
113+8.845	0.46	0.00	0.00	1.42	1.59	0.00	3909.17
113+9.774	0.46	0.00	0.00	0.87	1.01	0.00	3910.18
114+0.000	5.11	0.00	0.00	0.03	4.60	0.00	3914.78
115+0.000	10.00	0.00	0.00	1.24	12.65	0.00	3927.42
115+7.052	3.53	0.00	0.00	0.49	6.09	0.00	3933.51
115+10.075	1.51	0.00	0.00	0.97	1.56	0.00	3935.07
115+13.097	1.51	0.00	0.00	1.11	2.23	0.00	3937.30
116+0.000	3.45	0.00	0.00	1.21	8.00	0.00	3945.30
116+19.033	9.52	0.00	0.00	0.00	11.51	0.00	3956.80
117+0.000	0.48	0.00	0.00	0.02	0.00	0.00	3956.81
117+2.663	1.33	0.00	0.00	0.30	0.46	0.00	3957.27
117+6.294	1.82	0.00	0.00	0.64	1.86	0.00	3959.13
118+0.000	6.85	0.00	0.00	1.15	12.29	0.00	3971.42
118+17.156	8.58	0.00	0.00	0.87	17.39	0.00	3988.81
118+19.724	1.28	0.00	0.00	0.99	2.34	0.00	3991.15
119+0.000	0.14	0.00	0.00	1.01	0.26	0.00	3991.41
119+2.293	1.15	0.00	0.00	1.19	2.38	0.00	3993.79
120+0.000	8.85	0.00	0.00	2.65	34.00	0.00	4027.79
121+0.000	10.00	0.00	0.00	1.24	38.88	0.00	4066.67
121+13.159	6.58	0.00	0.00	0.00	8.15	0.00	4074.82
121+17.340	2.09	0.00	0.00	0.00	0.00	0.00	4074.82
122+0.000	1.33	0.00	0.00	0.00	0.00	0.00	4074.82
122+1.522	0.76	0.00	0.00	0.06	0.03	0.00	4074.86
123+0.000	9.24	0.00	0.00	0.00	0.65	0.00	4075.50
123+6.077	3.04	0.00	0.00	0.13	0.42	0.00	4075.92
123+7.314	0.62	0.00	0.00	0.30	0.26	0.00	4076.18
123+8.552	0.62	0.00	0.00	0.35	0.40	0.00	4076.58
124+0.000	5.72	0.00	0.00	0.65	5.76	0.00	4082.34
125+0.000	10.00	0.00	0.00	1.48	21.28	0.00	4103.62
126+0.000	10.00	0.00	0.00	1.70	31.81	0.00	4135.43
126+11.001	5.50	0.00	0.00	0.94	14.53	0.00	4149.96
126+11.707	0.35	0.00	0.00	0.84	0.62	0.00	4150.58
126+12.412	0.35	0.00	0.00	0.74	0.54	0.00	4151.12
127+0.000	3.79	0.00	0.00	0.07	3.07	0.00	4154.19



# QUADRO DE CUBAÇÃO



TRECHO: BR 226 À LOC. DE MONTE GRAVE  
 Estaca Inicial: 0+0.000  
 Estaca Final: 558+13.713

Estaca	Semi Distância (m)	Área de Corte (m <sup>2</sup> )	Volume de Corte (m <sup>3</sup> )	Área de Aterro (m <sup>2</sup> )	Volume Aterro (m <sup>3</sup> )	Vol. Acum. Corte (m <sup>3</sup> )	Vol. Acum. Aterro (m <sup>3</sup> )
128+0.000	10.00	0.00	0.00	0.00	0.67	0.00	4154.87
128+1.654	0.83	0.00	0.00	0.00	0.00	0.00	4154.87
128+5.184	1.77	0.00	0.00	0.63	0.92	0.00	4155.78
128+8.714	1.77	0.00	0.00	2.24	4.44	0.00	4160.23
129+0.000	5.64	0.00	0.00	6.85	51.30	0.00	4211.53
129+19.169	9.58	0.00	0.00	7.28	135.52	0.00	4347.05
130+0.000	0.42	0.00	0.00	7.29	5.88	0.00	4352.94
130+0.697	0.35	0.00	0.00	7.32	4.92	0.00	4357.85
130+2.224	0.76	0.00	0.00	7.50	10.84	0.00	4368.70
131+0.000	8.89	0.00	0.00	9.33	149.55	0.00	4518.25
132+0.000	10.00	0.00	0.00	0.15	94.79	0.00	4613.05
133+0.000	10.00	0.00	0.00	0.00	1.49	0.00	4614.54
133+0.594	0.30	0.00	0.00	0.00	0.00	0.00	4614.54
133+5.480	2.44	0.00	0.00	0.00	0.00	0.00	4614.54
133+10.365	2.44	0.00	0.00	0.00	0.00	0.00	4614.54
134+0.000	4.82	0.00	0.00	0.00	0.00	0.00	4614.54
134+4.199	2.10	0.00	0.00	0.00	0.00	0.00	4614.54
134+6.320	1.06	0.00	0.00	0.00	0.00	0.00	4614.54
134+8.442	1.06	0.00	0.00	0.00	0.00	0.00	4614.54
135+0.000	5.78	0.00	0.00	0.00	0.00	0.00	4614.54
135+12.486	6.24	0.00	0.00	0.00	0.00	0.00	4614.54
135+17.156	2.33	0.00	0.00	0.00	0.00	0.00	4614.54
136+0.000	1.42	0.00	0.00	0.00	0.00	0.00	4614.54
136+1.826	0.91	0.00	0.00	0.00	2.76	0.00	4639.66
137+0.000	9.09	0.00	0.00	2.76	25.12	0.00	4700.77
138+0.000	10.00	0.00	0.00	3.35	61.10	0.00	4752.79
138+12.053	6.03	0.00	0.00	5.28	52.02	0.00	4793.04
138+19.401	3.67	0.00	0.00	5.03	40.26	0.00	4796.17
139+0.000	0.30	0.00	0.00	4.87	3.13	0.00	4820.57
139+6.749	3.37	0.00	0.00	2.18	24.40	0.00	4834.98
140+0.000	6.63	0.00	0.00	0.00	14.41	0.00	4835.75
141+0.000	10.00	0.00	0.00	0.08	0.77	0.00	4850.44
142+0.000	10.00	0.00	0.00	1.39	14.69	0.00	4870.29
143+0.000	10.00	0.00	0.00	0.59	19.85	0.00	4873.23
143+9.908	4.95	0.00	0.00	0.00	2.94	0.00	4873.23
143+10.959	0.53	0.00	0.00	0.00	0.00	0.00	4873.23
143+12.011	0.53	0.00	0.00	0.00	0.00	0.00	4873.23
144+0.000	3.99	0.00	0.00	0.00	0.00	0.00	4873.23
145+0.000	10.00	0.00	0.00	0.00	0.00	0.00	4873.23
146+0.000	10.00	0.00	0.00	0.24	2.44	0.00	4875.67
147+0.000	10.00	0.00	0.00	0.24	4.84	0.00	4880.50
147+10.337	5.17	0.00	0.00	0.73	5.03	0.00	4885.53
147+11.568	0.62	0.00	0.00	0.77	1.08	0.00	4886.61
147+12.799	0.62	0.00	0.00	0.75	1.08	0.00	4887.69
148+0.000	3.60	0.00	0.00	0.94	6.08	0.00	4893.77
149+0.000	10.00	0.00	0.00	1.70	26.34	0.00	4920.11
150+0.000	10.00	0.00	0.00	0.38	20.75	0.00	4940.86
150+17.588	8.79	0.00	0.00	1.44	16.01	0.00	4956.87
150+19.091	0.75	0.00	0.00	1.53	2.88	0.00	4959.75
151+0.000	0.45	0.00	0.00	1.39	1.72	0.00	4961.46
151+0.594	0.30	0.00	0.00	1.23	1.01	0.00	4962.47
152+0.000	9.70	0.00	0.00	0.47	16.43	0.00	4978.91
153+0.000	10.00	0.00	0.00	1.35	18.19	0.00	4997.09
154+0.000	10.00	0.00	0.00	2.00	33.51	0.00	5030.61
155+0.000	10.00	0.00	0.00	1.80	37.99	0.00	5068.60



# QUADRO DE CUBAÇÃO

TRECHO: BR 226 Á LOC. DE MONTE GRAVE  
 Estaca Inicial: 0+0.000  
 Estaca Final: 558+13.713

Estaca	Semi Distância (m)	Área de Corte (m <sup>2</sup> )	Volume de Corte (m <sup>3</sup> )	Área de Aterro (m <sup>2</sup> )	Volume Aterro (m <sup>3</sup> )	Vol. Acum. Corte (m <sup>3</sup> )	Vol. Acum. Aterro (m <sup>3</sup> )
156+0.000	10.00	0.00	0.00	0.98	27.78	0.00	5096.37
156+0.813	0.41	0.00	0.00	0.94	0.78	0.00	5097.15
156+1.012	0.10	0.00	0.00	0.93	0.19	0.00	5097.34
156+1.211	0.10	0.00	0.00	0.92	0.19	0.00	5097.53
157+0.000	9.39	0.00	0.00	0.18	10.31	0.00	5107.84
158+0.000	10.00	0.00	0.00	0.00	1.79	0.00	5109.63
158+18.273	9.14	0.00	0.00	0.00	0.00	0.00	5109.63
158+19.260	0.49	0.00	0.00	0.02	0.01	0.00	5109.64
159+0.000	0.37	0.00	0.00	0.15	0.07	0.00	5109.71
159+0.247	0.12	0.00	0.00	0.19	0.05	0.00	5109.76
160+0.000	9.88	0.00	0.00	0.13	3.21	0.00	5112.97
161+0.000	10.00	0.00	0.00	0.10	2.33	0.00	5115.29
162+0.000	10.00	0.00	0.00	1.09	11.89	0.00	5127.18
163+0.000	10.00	0.00	0.00	2.55	36.38	0.00	5163.55
164+0.000	10.00	0.00	0.00	3.07	56.14	0.00	5219.70
164+6.905	3.45	0.00	0.00	2.47	19.12	0.00	5238.82
164+10.296	1.70	0.00	0.00	2.10	7.83	0.00	5246.65
164+13.688	1.70	0.00	0.00	1.91	6.82	0.00	5253.47
165+0.000	3.16	0.00	0.00	1.60	11.09	0.00	5264.57
166+0.000	10.00	0.00	0.00	0.39	19.95	0.00	5284.52
166+19.822	9.91	0.00	0.00	0.00	3.91	0.00	5288.43
167+0.000	0.09	0.00	0.00	0.00	0.00	0.00	5288.43
167+1.095	0.55	0.00	0.00	0.00	0.00	0.00	5288.43
167+2.368	0.64	0.00	0.00	0.00	0.00	0.00	5288.43
168+0.000	8.82	0.00	0.00	0.60	5.33	0.00	5293.77
169+0.000	10.00	0.00	0.00	2.51	31.04	0.00	5324.81
170+0.000	10.00	0.00	0.00	1.86	43.68	0.00	5368.49
171+0.000	10.00	0.00	0.00	0.66	25.16	0.00	5393.65
172+0.000	10.00	0.00	0.00	0.47	11.22	0.00	5404.88
172+13.658	6.83	0.00	0.00	1.02	10.19	0.00	5415.06
172+14.538	0.44	0.00	0.00	1.07	1.09	0.00	5416.16
172+15.418	0.44	0.00	0.00	1.07	1.12	0.00	5417.27
173+0.000	2.29	0.00	0.00	0.89	4.49	0.00	5421.76
174+0.000	10.00	0.00	0.00	0.37	12.54	0.00	5434.30
175+0.000	10.00	0.00	0.00	0.24	6.02	0.00	5440.32
176+0.000	10.00	0.00	0.00	0.07	3.03	0.00	5443.35
176+0.565	0.28	0.00	0.00	0.06	0.04	0.00	5443.39
176+2.088	0.76	0.00	0.00	0.05	0.11	0.00	5443.50
176+3.611	0.76	0.00	0.00	0.00	0.06	0.00	5443.56
177+0.000	8.19	0.00	0.00	0.00	0.06	0.00	5443.62
178+0.000	10.00	0.00	0.00	0.64	6.43	0.00	5450.05
179+0.000	10.00	0.00	0.00	1.05	16.94	0.00	5466.99
180+0.000	10.00	0.00	0.00	1.52	25.76	0.00	5492.75
180+5.125	2.56	0.00	0.00	2.23	9.61	0.00	5502.36
180+5.271	0.07	0.00	0.00	2.25	0.33	0.00	5502.68
180+5.417	0.07	0.00	0.00	2.27	0.33	0.00	5503.01
181+0.000	7.29	0.00	0.00	1.82	29.78	0.00	5532.80
182+0.000	10.00	0.00	0.00	0.18	20.02	0.00	5552.82
182+10.241	5.12	0.00	0.00	0.00	0.94	0.00	5553.76
182+11.823	0.79	0.00	0.00	0.00	0.00	0.00	5553.76
182+13.405	0.79	0.00	0.00	0.00	0.00	0.00	5553.76
183+0.000	3.30	0.00	0.00	0.00	0.00	0.00	5553.76
184+0.000	10.00	0.00	0.00	0.78	7.76	0.00	5561.52
185+0.000	10.00	0.00	0.00	1.45	22.29	0.00	5583.81
185+18.282	9.14	0.00	0.00	1.40	26.04	0.00	5609.85

Jarbas Piccolotto S. Junior  
 Engº Civil - Fisco  
 RNP-100814100-3



# QUADRO DE CUBAÇÃO

TRECHO: BR 226 Á LOC. DE MONTE GRAVE  
 Estaca Inicial: 0+0.000  
 Estaca Final: 558+13.713

Estaca	Semi Distância (m)	Área de Corte (m <sup>2</sup> )	Volume de Corte (m <sup>3</sup> )	Área de Aterro (m <sup>2</sup> )	Volume Aterro (m <sup>3</sup> )	Vol. Acum. Corte (m <sup>3</sup> )	Vol. Acum. Aterro (m <sup>3</sup> )
185+18.562	0.14	0.00	0.00	1.37	0.34	0.00	5610.19
185+18.842	0.14	0.00	0.00	1.35	0.33	0.00	5610.52
186+0.000	0.58	0.00	0.00	1.30	1.54	0.00	5612.06
187+0.000	10.00	0.00	0.00	0.07	13.73	0.00	5625.79
188+0.000	10.00	0.00	0.00	0.00	0.68	0.00	5626.47
188+1.760	0.88	0.00	0.00	0.00	0.00	0.00	5626.47
188+3.898	1.07	0.00	0.00	0.00	0.00	0.00	5626.47
188+6.036	1.07	0.00	0.00	0.00	0.00	0.00	5626.47
189+0.000	6.98	0.00	0.00	0.00	0.00	0.00	5626.47
189+8.779	4.39	0.00	0.00	0.36	1.60	0.00	5628.07
189+12.718	1.97	0.00	0.00	0.85	2.91	0.00	5630.98
189+16.658	1.97	0.00	0.00	0.64	3.55	0.00	5634.53
190+0.000	1.67	0.00	0.00	0.37	1.69	0.00	5636.22
191+0.000	10.00	0.00	0.00	0.72	10.92	0.00	5647.13
191+5.028	2.51	0.00	0.00	1.24	4.92	0.00	5652.06
191+6.268	0.62	0.00	0.00	1.34	1.36	0.00	5653.42
191+7.508	0.62	0.00	0.00	1.51	1.53	0.00	5654.94
192+0.000	6.25	0.00	0.00	3.22	29.56	0.00	5684.50
193+0.000	10.00	0.00	0.00	7.95	111.76	0.00	5796.26
194+0.000	10.00	0.00	0.00	8.51	164.65	0.00	5960.91
194+7.149	3.57	0.00	0.00	6.73	54.50	0.00	6015.41
194+8.843	0.85	0.00	0.00	6.35	10.89	0.00	6026.29
194+10.536	0.85	0.00	0.00	6.06	10.24	0.00	6036.54
195+0.000	4.73	0.00	0.00	5.89	56.54	0.00	6093.08
196+0.000	10.00	0.00	0.00	2.60	84.88	0.00	6177.95
196+16.524	8.26	0.00	0.00	0.09	22.22	0.00	6200.18
196+18.348	0.91	0.00	0.00	0.10	0.16	0.00	6200.34
197+0.000	0.83	0.00	0.00	0.13	0.18	0.00	6200.52
197+0.172	0.09	0.00	0.00	0.14	0.02	0.00	6200.54
198+0.000	9.91	0.00	0.00	0.97	10.99	0.00	6211.52
198+12.878	6.44	0.00	0.00	1.57	16.32	0.00	6227.84
198+14.476	0.80	0.00	0.00	1.51	3.09	0.00	6230.93
198+16.075	0.80	0.00	0.00	1.12	2.64	0.00	6233.57
199+0.000	1.96	0.00	0.00	0.62	3.41	0.00	6236.98
200+0.000	10.00	0.00	0.00	0.55	11.68	0.00	6248.66
201+0.000	10.00	0.00	0.00	0.04	5.95	0.00	6254.61
202+0.000	10.00	0.00	0.00	0.00	0.45	0.00	6255.05
203+0.000	10.00	0.00	0.00	0.67	6.72	0.00	6261.78
203+8.694	4.35	0.00	0.00	0.00	2.92	0.00	6264.70
203+9.675	0.49	0.00	0.00	0.00	0.00	0.00	6264.70
203+10.655	0.49	0.00	0.00	0.00	0.00	0.00	6264.70
204+0.000	4.67	0.00	0.00	0.00	0.00	0.00	6264.70
205+0.000	10.00	0.00	0.00	0.06	0.56	0.00	6265.26
205+17.130	8.56	0.00	0.00	0.00	0.48	0.00	6265.74
205+18.220	0.55	0.00	0.00	0.00	0.00	0.00	6265.74
205+19.311	0.55	0.00	0.00	0.00	0.00	0.00	6265.74
206+0.000	0.34	0.00	0.00	0.00	0.00	0.00	6265.74
207+0.000	10.00	0.00	0.00	0.00	0.06	0.00	6265.79
208+0.000	10.00	0.00	0.00	0.00	0.06	0.00	6265.85
209+0.000	10.00	0.00	0.00	2.95	29.53	0.00	6295.38
209+16.886	8.44	0.00	0.00	1.84	40.46	0.00	6335.84
210+0.000	1.56	0.00	0.00	1.83	5.43	0.00	6341.27
210+4.009	2.00	0.00	0.00	2.17	7.84	0.00	6349.11
210+11.132	3.56	0.00	0.00	3.15	19.29	0.00	6368.40
211+0.000	4.43	0.00	0.00	7.67	47.97	0.00	6416.37



## QUADRO DE CUBAÇÃO

TRECHO: BR 226 Á LOC. DE MONTE GRAVE  
 Estaca Inicial: 0+0.000  
 Estaca Final: 558+13.713

Estaca	Semi Distância (m)	Área de Corte (m <sup>2</sup> )	Volume de Corte (m <sup>3</sup> )	Área de Aterro (m <sup>2</sup> )	Volume Aterro (m <sup>3</sup> )	Vol. Acum. Corte (m <sup>3</sup> )	Vol. Acum. Aterro (m <sup>3</sup> )
212+0.000	10.00	0.00	0.00	10.31	179.77	0.00	6596.14
213+0.000	10.00	0.00	0.00	2.81	131.21	0.00	6727.35
214+0.000	10.00	0.00	0.00	0.06	28.77	0.00	6756.12
215+0.000	10.00	0.00	0.00	0.49	5.49	0.00	6761.61
215+2.680	1.34	0.00	0.00	0.39	1.18	0.00	6762.78
215+4.172	0.75	0.00	0.00	0.25	0.56	0.00	6763.35
215+5.664	0.75	0.00	0.00	0.06	0.27	0.00	6763.62
216+0.000	7.17	0.00	0.00	0.00	0.46	0.00	6764.08
217+0.000	10.00	0.00	0.00	0.00	0.00	0.00	6764.08
218+0.000	10.00	0.00	0.00	0.00	0.00	0.00	6764.08
218+15.046	7.52	0.00	0.00	0.00	0.00	0.00	6764.08
218+15.523	0.24	0.00	0.00	0.00	0.00	0.00	6764.08
218+15.999	0.24	0.00	0.00	0.00	0.00	0.00	6764.08
219+0.000	2.00	0.00	0.00	0.05	0.10	0.00	6764.18
220+0.000	10.00	0.00	0.00	1.11	11.66	0.00	6775.85
221+0.000	10.00	0.00	0.00	1.49	26.05	0.00	6801.90
222+0.000	10.00	0.00	0.00	1.27	27.61	0.00	6829.51
223+0.000	10.00	0.00	0.00	0.70	19.73	0.00	6849.24
223+17.136	8.57	0.00	0.00	0.05	6.48	0.00	6855.72
224+0.000	1.43	0.00	0.00	0.00	0.08	0.00	6855.80
224+1.138	0.57	0.00	0.00	0.00	0.00	0.00	6855.80
224+5.139	2.00	0.00	0.00	0.19	0.35	0.00	6856.14
225+0.000	7.43	0.00	0.00	1.09	9.48	0.00	6865.62
226+0.000	10.00	0.00	0.00	1.97	30.58	0.00	6896.20
226+18.439	9.22	0.00	0.00	2.40	40.26	0.00	6936.46
227+0.000	0.78	0.00	0.00	2.32	3.79	0.00	6940.25
227+0.236	0.12	0.00	0.00	2.31	0.56	0.00	6940.81
227+2.033	0.90	0.00	0.00	2.16	4.10	0.00	6944.91
228+0.000	8.98	0.00	0.00	0.54	24.24	0.00	6969.15
229+0.000	10.00	0.00	0.00	0.00	5.38	0.00	6974.53
229+6.592	3.30	0.00	0.00	0.00	0.00	0.00	6974.53
229+9.320	1.36	0.00	0.00	0.00	0.00	0.00	6974.53
229+12.048	1.36	0.00	0.00	0.00	0.00	0.00	6974.53
230+0.000	3.98	0.00	0.00	0.00	0.00	0.00	6974.53
231+0.000	10.00	0.00	0.00	0.00	0.00	0.00	6974.53
232+0.000	10.00	0.00	0.00	0.00	0.00	0.00	6974.53
233+0.000	10.00	0.00	0.00	0.04	0.36	0.00	6974.89
234+0.000	10.00	0.00	0.00	0.12	1.61	0.00	6976.50
235+0.000	10.00	0.00	0.00	0.02	1.40	0.00	6977.90
235+4.022	2.01	0.00	0.00	0.20	0.43	0.00	6978.33
235+5.668	0.82	0.00	0.00	0.31	0.48	0.00	6978.81
235+7.313	0.82	0.00	0.00	0.37	0.64	0.00	6979.46
236+0.000	6.34	0.00	0.00	0.41	4.93	0.00	6984.39
237+0.000	10.00	0.00	0.00	0.23	6.39	0.00	6990.78
238+0.000	10.00	0.00	0.00	0.00	2.34	0.00	6993.12
239+0.000	10.00	0.00	0.00	0.00	0.00	0.00	6993.12
240+0.000	10.00	0.00	0.00	0.21	2.05	0.00	6995.17
241+0.000	10.00	0.00	0.00	0.31	5.16	0.00	7000.33
242+0.000	10.00	0.00	0.00	0.36	6.75	0.00	7007.08
243+0.000	10.00	0.00	0.00	0.60	9.61	0.00	7016.70
243+13.285	6.64	0.00	0.00	0.67	8.41	0.00	7025.11
243+15.606	1.16	0.00	0.00	0.54	1.49	0.00	7026.59
243+17.928	1.16	0.00	0.00	0.42	1.14	0.00	7027.74
244+0.000	1.04	0.00	0.00	0.39	0.84	0.00	7028.58
245+0.000	10.00	0.00	0.00	0.36	7.50	0.00	7036.08

  
 Jarbas Pinheiro S. Júnior  
 Engº Civil - Fiscal  
 RNP-100814100-3



## QUADRO DE CUBAÇÃO

TRECHO: BR 226 Á LOC. DE MONTE GRAVE  
 Estaca Inicial: 0+0.000  
 Estaca Final: 558+13.713

Estaca	Semi Distância (m)	Área de Corte (m <sup>2</sup> )	Volume de Corte (m <sup>3</sup> )	Área de Aterro (m <sup>2</sup> )	Volume Aterro (m <sup>3</sup> )	Vol. Acum. Corte (m <sup>3</sup> )	Vol. Acum. Aterro (m <sup>3</sup> )
246+0.000	10.00	0.00	0.00	0.12	4.77	0.00	7040.84
247+0.000	10.00	0.00	0.00	0.00	1.17	0.00	7042.02
248+0.000	10.00	0.00	0.00	0.00	0.00	0.00	7042.02
248+17.827	8.91	0.00	0.00	0.63	5.60	0.00	7047.62
249+0.000	1.09	0.00	0.00	0.85	1.65	0.00	7049.27
249+0.853	0.43	0.00	0.00	0.93	0.78	0.00	7050.06
249+3.878	1.51	0.00	0.00	1.09	3.16	0.00	7053.22
250+0.000	8.06	0.00	0.00	0.72	14.57	0.00	7067.79
250+10.596	5.30	0.00	0.00	0.82	8.13	0.00	7075.92
250+12.396	0.90	0.00	0.00	0.77	1.43	0.00	7077.35
250+14.196	0.90	0.00	0.00	0.71	1.32	0.00	7078.68
251+0.000	2.90	0.00	0.00	0.52	3.58	0.00	7082.26
252+0.000	10.00	0.00	0.00	0.05	5.70	0.00	7087.96
253+0.000	10.00	0.00	0.00	0.00	0.47	0.00	7088.42
254+0.000	10.00	0.00	0.00	0.56	5.63	0.00	7094.06
254+16.131	8.07	0.00	0.00	1.07	13.19	0.00	7107.25
254+16.734	0.30	0.00	0.00	1.09	0.68	0.00	7107.93
254+17.337	0.30	0.00	0.00	1.10	0.69	0.00	7108.62
255+0.000	1.33	0.00	0.00	1.13	2.97	0.00	7111.59
256+0.000	10.00	0.00	0.00	1.08	22.16	0.00	7133.75
257+0.000	10.00	0.00	0.00	0.37	14.51	0.00	7148.26
257+2.363	1.18	0.00	0.00	0.30	0.78	0.00	7149.05
257+3.284	0.46	0.00	0.00	0.28	0.25	0.00	7149.29
257+4.205	0.46	0.00	0.00	0.26	0.23	0.00	7149.52
258+0.000	7.90	0.00	0.00	0.08	2.75	0.00	7152.27
259+0.000	10.00	0.00	0.00	0.03	1.09	0.00	7153.37
260+0.000	10.00	0.00	0.00	0.03	0.51	0.00	7153.88
261+0.000	10.00	0.00	0.00	0.00	0.26	0.00	7154.14
262+0.000	10.00	0.00	0.00	0.05	0.52	0.00	7154.66
262+5.517	2.76	0.00	0.00	0.13	0.51	0.00	7155.17
262+5.672	0.08	0.00	0.00	0.13	0.02	0.00	7155.19
262+5.828	0.08	0.00	0.00	0.13	0.02	0.00	7155.21
263+0.000	7.09	0.00	0.00	0.28	2.93	0.00	7158.13
264+0.000	10.00	0.00	0.00	0.23	5.07	0.00	7163.20
265+0.000	10.00	0.00	0.00	0.98	12.09	0.00	7175.29
266+0.000	10.00	0.00	0.00	1.18	21.59	0.00	7196.87
267+0.000	10.00	0.00	0.00	0.98	21.57	0.00	7218.44
268+0.000	10.00	0.00	0.00	1.51	24.87	0.00	7243.31
268+1.576	0.79	0.00	0.00	1.55	2.41	0.00	7245.73
268+1.906	0.17	0.00	0.00	1.57	0.41	0.00	7246.14
268+2.237	0.17	0.00	0.00	1.59	0.42	0.00	7246.56
269+0.000	8.88	0.00	0.00	0.84	21.54	0.00	7268.09
270+0.000	10.00	0.00	0.00	0.06	9.01	0.00	7277.10
271+0.000	10.00	0.00	0.00	0.00	0.62	0.00	7277.73
271+16.316	8.16	0.00	0.00	0.00	0.00	0.00	7277.73
271+18.210	0.95	0.00	0.00	0.00	0.00	0.00	7277.73
272+0.000	0.90	0.00	0.00	0.00	0.00	0.00	7277.73
272+0.103	0.05	0.00	0.00	0.00	1.21	0.00	7278.94
273+0.000	9.95	0.00	0.00	0.12	2.13	0.00	7281.07
274+0.000	10.00	0.00	0.00	0.09	0.61	0.00	7281.69
274+13.450	6.73	0.00	0.00	0.00	0.00	0.00	7281.69
274+15.329	0.94	0.00	0.00	0.00	0.00	0.00	7281.69
274+17.207	0.94	0.00	0.00	0.00	0.00	0.00	7281.69
275+0.000	1.40	0.00	0.00	0.00	0.00	0.00	7281.69
276+0.000	10.00	0.00	0.00	0.00	0.06	0.00	7281.74

Jarbas Procopio S. Junior  
 Eng<sup>o</sup> Civil - Fisco  
 RNP-100814100-3



## QUADRO DE CUBAÇÃO

TRECHO: BR 226 Á LOC. DE MONTE GRAVE  
 Estaca Inicial: 0+0.000  
 Estaca Final: 558+13.713


Estaca	Semi Distância (m)	Área de Corte (m <sup>2</sup> )	Volume de Corte (m <sup>3</sup> )	Área de Aterro (m <sup>2</sup> )	Volume Aterro (m <sup>3</sup> )	Vol. Acum. Corte (m <sup>3</sup> )	Vol. Acum. Aterro (m <sup>3</sup> )
277+0.000	10.00	0.00	0.00	0.05	0.60	0.00	7282.35
278+0.000	10.00	0.00	0.00	0.60	6.59	0.00	7288.94
278+8.026	4.01	0.00	0.00	0.41	4.09	0.00	7293.03
278+8.084	0.03	0.00	0.00	0.41	0.02	0.00	7293.05
278+8.142	0.03	0.00	0.00	0.40	0.02	0.00	7293.08
279+0.000	5.93	0.00	0.00	0.25	3.86	0.00	7296.94
280+0.000	10.00	0.00	0.00	1.47	17.20	0.00	7314.14
281+0.000	10.00	0.00	0.00	6.36	78.33	0.00	7392.46
281+8.959	4.48	0.00	0.00	10.37	74.95	0.00	7467.41
281+10.260	0.65	0.00	0.00	9.79	12.97	0.00	7480.38
281+11.561	0.65	0.00	0.00	9.24	11.95	0.00	7492.33
282+0.000	4.22	0.00	0.00	5.21	61.00	0.00	7553.33
283+0.000	10.00	0.00	0.00	0.03	52.40	0.00	7605.73
284+0.000	10.00	0.00	0.00	2.65	26.74	0.00	7632.47
284+19.192	9.60	0.00	0.00	5.07	74.06	0.00	7706.52
285+0.000	0.40	0.00	0.00	5.20	4.47	0.00	7710.99
285+0.727	0.36	0.00	0.00	5.29	4.08	0.00	7715.07
285+2.263	0.77	0.00	0.00	5.46	8.76	0.00	7723.83
286+0.000	8.87	0.00	0.00	3.69	81.12	0.00	7804.95
287+0.000	10.00	0.00	0.00	0.69	43.73	0.00	7848.69
288+0.000	10.00	0.00	0.00	0.42	11.09	0.00	7859.77
288+19.011	9.51	0.00	0.00	0.33	7.15	0.00	7866.92
289+0.000	0.49	0.00	0.00	0.35	0.26	0.00	7867.18
289+0.357	0.18	0.00	0.00	0.37	0.10	0.00	7867.28
289+1.703	0.67	0.00	0.00	0.45	0.42	0.00	7867.70
290+0.000	9.15	0.00	0.00	1.73	19.98	0.00	7887.68
291+0.000	10.00	0.00	0.00	2.12	38.49	0.00	7926.16
292+0.000	10.00	0.00	0.00	0.63	27.44	0.00	7953.60
293+0.000	10.00	0.00	0.00	0.21	8.37	0.00	7961.97
293+18.473	9.24	0.00	0.00	0.00	2.01	0.00	7963.98
294+0.000	0.76	0.00	0.00	0.02	0.03	0.00	7964.00
294+0.061	0.03	0.00	0.00	0.02	0.00	0.00	7964.00
294+1.648	0.79	0.00	0.00	0.00	0.02	0.00	7964.02
295+0.000	9.18	0.00	0.00	0.00	0.03	0.00	7964.05
295+12.451	6.23	0.00	0.00	0.00	0.00	0.00	7964.05
295+13.479	0.51	0.00	0.00	0.00	0.00	0.00	7964.05
295+14.507	0.51	0.00	0.00	0.00	0.00	0.00	7964.05
296+0.000	2.75	0.00	0.00	0.00	0.00	0.00	7964.05
297+0.000	10.00	0.00	0.00	0.00	0.00	0.00	7964.05
298+0.000	10.00	0.00	0.00	0.56	5.57	0.00	7969.63
298+6.327	3.16	0.00	0.00	0.88	4.53	0.00	7974.16
298+8.690	1.18	0.00	0.00	0.94	2.17	0.00	7976.33
298+11.054	1.18	0.00	0.00	1.00	2.31	0.00	7978.64
299+0.000	4.47	0.00	0.00	1.14	9.58	0.00	7988.22
300+0.000	10.00	0.00	0.00	1.28	24.22	0.00	8012.45
301+0.000	10.00	0.00	0.00	0.71	19.84	0.00	8032.29
301+9.109	4.55	0.00	0.00	0.47	5.35	0.00	8037.64
301+9.894	0.39	0.00	0.00	0.41	0.37	0.00	8038.02
301+10.679	0.39	0.00	0.00	0.35	0.32	0.00	8038.33
302+0.000	4.66	0.00	0.00	0.01	1.69	0.00	8040.02
303+0.000	10.00	0.00	0.00	0.00	0.10	0.00	8040.12
304+0.000	10.00	0.00	0.00	0.08	0.77	0.00	8040.89
305+0.000	10.00	0.00	0.00	0.14	2.21	0.00	8043.10
305+18.109	9.05	0.00	0.00	0.18	2.93	0.00	8046.03
305+18.781	0.34	0.00	0.00	0.15	0.14	0.00	8046.17



# QUADRO DE CUBAÇÃO

TRECHO: BR 226 Á LOC. DE MONTE GRAVE  
 Estaca Inicial: 0+0.000  
 Estaca Final: 558+13.713

Estaca	Semi Distância (m)	Área de Corte (m <sup>2</sup> )	Volume de Corte (m <sup>3</sup> )	Área de Aterro (m <sup>2</sup> )	Volume Aterro (m <sup>3</sup> )	Vol. Acum. Corte (m <sup>3</sup> )	Vol. Acum. Aterro (m <sup>3</sup> )
305+19.453	0.34	0.00	0.00	0.11	0.11	0.00	8046.28
306+0.000	0.27	0.00	0.00	0.09	0.06	0.00	8046.34
307+0.000	10.00	0.00	0.00	0.00	0.89	0.00	8047.23
308+0.000	10.00	0.00	0.00	0.07	0.65	0.00	8047.88
309+0.000	10.00	0.00	0.00	0.27	3.38	0.00	8051.26
309+5.509	2.75	0.00	0.00	0.31	1.60	0.00	8052.85
309+6.518	0.50	0.00	0.00	0.29	0.31	0.00	8053.16
309+7.527	0.50	0.00	0.00	0.26	0.28	0.00	8053.45
310+0.000	6.24	0.00	0.00	0.02	1.77	0.00	8055.22
311+0.000	10.00	0.00	0.00	0.03	0.54	0.00	8055.76
312+0.000	10.00	0.00	0.00	0.40	4.33	0.00	8060.09
312+15.779	7.89	0.00	0.00	0.34	5.83	0.00	8065.92
312+16.355	0.29	0.00	0.00	0.33	0.21	0.00	8066.13
312+16.931	0.29	0.00	0.00	0.33	0.21	0.00	8066.34
313+0.000	1.53	0.00	0.00	0.24	0.86	0.00	8067.20
314+0.000	10.00	0.00	0.00	0.52	7.56	0.00	8074.76
315+0.000	10.00	0.00	0.00	0.00	5.21	0.00	8079.97
315+11.501	5.75	0.00	0.00	0.00	0.00	0.00	8079.97
315+15.540	2.02	0.00	0.00	0.00	0.00	0.00	8079.97
315+19.578	2.02	0.00	0.00	0.00	0.00	0.00	8079.97
316+0.000	0.21	0.00	0.00	0.00	0.11	0.00	8080.08
317+0.000	10.00	0.00	0.00	0.01	0.24	0.00	8080.32
318+0.000	10.00	0.00	0.00	0.00	0.16	0.00	8080.47
318+14.708	7.35	0.00	0.00	0.00	0.00	0.00	8080.48
318+15.182	0.24	0.00	0.00	0.00	0.00	0.00	8080.48
318+15.656	0.24	0.00	0.00	0.00	0.00	0.00	8080.48
319+0.000	2.17	0.00	0.00	0.05	0.13	0.00	8080.61
320+0.000	10.00	0.00	0.00	0.32	3.69	0.00	8084.30
321+0.000	10.00	0.00	0.00	1.65	19.63	0.00	8103.93
322+0.000	10.00	0.00	0.00	0.08	17.23	0.00	8121.16
323+0.000	10.00	0.00	0.00	0.00	0.76	0.00	8121.92
324+0.000	10.00	0.00	0.00	0.06	0.60	0.00	8122.52
324+4.042	2.02	0.00	0.00	0.14	0.39	0.00	8122.91
324+4.220	0.09	0.00	0.00	0.13	0.02	0.00	8122.93
324+4.398	0.09	0.00	0.00	0.13	0.02	0.00	8122.95
325+0.000	7.80	0.00	0.00	0.75	6.93	0.00	8129.88
326+0.000	10.00	0.00	0.00	0.03	7.83	0.00	8137.71
327+0.000	10.00	0.00	0.00	0.73	7.60	0.00	8145.32
328+0.000	10.00	0.00	0.00	0.00	7.32	0.00	8152.64
328+7.859	3.93	0.00	0.00	0.00	0.00	0.00	8152.64
328+9.324	0.73	0.00	0.00	0.00	0.00	0.00	8152.64
328+10.789	0.73	0.00	0.00	0.05	0.05	0.00	8152.68
329+0.000	4.61	0.00	0.00	0.40	2.06	0.00	8154.74
329+15.295	7.65	0.00	0.00	1.68	15.87	0.00	8170.61
329+18.895	1.80	0.00	0.00	2.04	7.17	0.00	8177.78
330+0.000	0.55	0.00	0.00	1.95	2.36	0.00	8180.14
330+2.495	1.25	0.00	0.00	1.59	4.69	0.00	8184.84
331+0.000	8.75	0.00	0.00	0.06	14.46	0.00	8199.30
331+9.493	4.75	0.00	0.00	0.14	0.93	0.00	8200.23
331+11.113	0.81	0.00	0.00	0.12	0.22	0.00	8200.45
331+12.734	0.81	0.00	0.00	0.06	0.16	0.00	8200.61
332+0.000	3.63	0.00	0.00	0.00	0.22	0.00	8200.83
333+0.000	10.00	0.00	0.00	0.00	0.00	0.00	8200.83
334+0.000	10.00	0.00	0.00	0.33	3.30	0.00	8204.13
334+6.177	3.09	0.00	0.00	1.00	4.10	0.00	8208.23

  
 Jarbas Piccoppo S. Junior  
 Engº Civil - Fiscal  
 RNP-100814100-3



# QUADRO DE CUBAÇÃO

TRECHO: BR 226 Á LOC. DE MONTE GRAVE  
 Estaca Inicial: 0+0.000  
 Estaca Final: 558+13.713

Estaca	Semi Distância (m)	Área de Corte (m <sup>2</sup> )	Volume de Corte (m <sup>3</sup> )	Área de Aterro (m <sup>2</sup> )	Volume Aterro (m <sup>3</sup> )	Vol. Acum. Corte (m <sup>3</sup> )	Vol. Acum. Aterro (m <sup>3</sup> )
334+7.806	0.81	0.00	0.00	1.22	1.86	0.00	8210.09
334+9.435	0.81	0.00	0.00	1.34	2.12	0.00	8212.21
335+0.000	5.28	0.00	0.00	0.25	8.38	0.00	8220.59
335+16.087	8.04	0.00	0.00	0.03	2.23	0.00	8222.83
335+18.586	1.25	0.00	0.00	0.00	0.03	0.00	8222.86
336+0.000	0.71	0.00	0.00	0.00	0.00	0.00	8222.86
336+1.084	0.54	0.00	0.00	0.00	0.00	0.00	8222.90
337+0.000	9.46	0.00	0.00	0.00	0.04	0.00	8227.43
338+0.000	10.00	0.00	0.00	0.45	4.53	0.00	8240.01
339+0.000	10.00	0.00	0.00	0.81	12.58	0.00	8248.08
340+0.000	10.00	0.00	0.00	0.00	8.07	0.00	8248.08
341+0.000	10.00	0.00	0.00	0.00	0.00	0.00	8248.08
341+1.629	0.81	0.00	0.00	0.00	0.00	0.00	8248.08
341+2.411	0.39	0.00	0.00	0.00	0.00	0.00	8248.08
341+3.193	0.39	0.00	0.00	0.00	0.00	0.00	8248.08
342+0.000	8.40	0.00	0.00	0.11	0.93	0.00	8249.01
343+0.000	10.00	0.00	0.00	0.00	1.11	0.00	8250.12
344+0.000	10.00	0.00	0.00	0.06	0.64	0.00	8250.76
345+0.000	10.00	0.00	0.00	0.12	1.88	0.00	8252.64
345+3.063	1.53	0.00	0.00	0.10	0.34	0.00	8252.98
345+4.026	0.48	0.00	0.00	0.10	0.10	0.00	8253.08
345+4.990	0.48	0.00	0.00	0.11	0.10	0.00	8253.18
346+0.000	7.51	0.00	0.00	0.29	2.96	0.00	8256.14
347+0.000	10.00	0.00	0.00	1.54	18.24	0.00	8274.38
347+17.520	8.76	0.00	0.00	3.48	43.99	0.00	8318.38
348+0.000	1.24	0.00	0.00	3.85	9.14	0.00	8327.52
348+0.079	0.04	0.00	0.00	3.87	0.30	0.00	8327.82
348+2.638	1.28	0.00	0.00	4.22	10.43	0.00	8338.26
349+0.000	8.68	0.00	0.00	5.88	87.74	0.00	8425.99
350+0.000	10.00	0.00	0.00	3.29	91.73	0.00	8517.72
350+0.413	0.21	0.00	0.00	3.24	1.35	0.00	8519.07
350+3.355	1.47	0.00	0.00	3.07	9.37	0.00	8528.45
350+6.296	1.47	0.00	0.00	3.65	9.86	0.00	8538.30
351+0.000	6.85	0.00	0.00	6.96	72.70	0.00	8611.00
352+0.000	10.00	0.00	0.00	10.83	177.87	0.00	8788.87
353+0.000	10.00	0.00	0.00	7.23	180.60	0.00	8969.47
354+0.000	10.00	0.00	0.00	4.44	116.70	0.00	9086.17
354+3.771	1.89	0.00	0.00	3.33	14.66	0.00	9100.83
354+4.539	0.38	0.00	0.00	3.14	2.50	0.00	9103.32
354+5.307	0.38	0.00	0.00	2.96	2.34	0.00	9105.66
355+0.000	7.35	0.00	0.00	0.57	25.95	0.00	9131.61
356+0.000	10.00	0.00	0.00	0.00	5.69	0.00	9137.30
356+3.548	1.77	0.00	0.00	0.00	0.00	0.00	9137.30
356+7.214	1.83	0.00	0.00	0.00	0.00	0.00	9137.30
356+10.881	1.83	0.00	0.00	0.00	0.00	0.00	9137.30
357+0.000	4.56	0.00	0.00	0.00	0.00	0.00	9137.30
358+0.000	10.00	0.00	0.00	1.61	16.13	0.00	9153.43
359+0.000	10.00	0.00	0.00	2.55	41.64	0.00	9195.07
360+0.000	10.00	0.00	0.00	1.27	38.21	0.00	9233.28
361+0.000	10.00	0.00	0.00	0.00	12.71	0.00	9245.99
361+6.456	3.23	0.00	0.00	0.00	0.00	0.00	9245.99
361+7.507	0.53	0.00	0.00	0.00	0.00	0.00	9245.99
361+8.557	0.53	0.00	0.00	0.00	0.00	0.00	9245.99
362+0.000	5.72	0.00	0.00	0.73	4.18	0.00	9250.17
362+16.532	8.27	0.00	0.00	1.18	15.77	0.00	9265.94

  
 Jarbas Piccolini S. Júnior  
 Eng<sup>o</sup> Civil - Fiscal  
 RNP-100814100-3



# QUADRO DE CUBAÇÃO



TRECHO: BR 226 Á LOC. DE MONTE GRAVE

Estaca Inicial: 0+0.000

Estaca Final: 558+13.713

Estaca	Semi Distância (m)	Área de Corte (m <sup>2</sup> )	Volume de Corte (m <sup>3</sup> )	Área de Aterro (m <sup>2</sup> )	Volume Aterro (m <sup>3</sup> )	Vol. Acum. Corte (m <sup>3</sup> )	Vol. Acum. Aterro (m <sup>3</sup> )
363+0.000	1.73	0.00	0.00	0.50	2.55	0.00	9268.49
363+0.130	0.06	0.00	0.00	0.49	0.06	0.00	9268.56
363+3.728	1.80	0.00	0.00	0.38	1.22	0.00	9269.78
364+0.000	8.14	0.00	0.00	0.15	4.25	0.00	9274.03
364+14.073	7.04	0.00	0.00	0.72	6.11	0.00	9280.14
364+15.123	0.53	0.00	0.00	0.83	1.01	0.00	9281.15
364+16.173	0.53	0.00	0.00	0.85	1.09	0.00	9282.24
365+0.000	1.91	0.00	0.00	0.79	3.13	0.00	9285.37
366+0.000	10.00	0.00	0.00	0.11	8.98	0.00	9294.35
367+0.000	10.00	0.00	0.00	1.15	12.54	0.00	9306.89
368+0.000	10.00	0.00	0.00	0.94	20.82	0.00	9327.71
368+1.032	0.52	0.00	0.00	0.88	0.94	0.00	9328.65
368+2.256	0.61	0.00	0.00	0.85	0.76	0.00	9329.41
368+3.479	0.61	0.00	0.00	0.90	0.77	0.00	9330.18
369+0.000	8.26	0.00	0.00	2.46	27.73	0.00	9357.91
370+0.000	10.00	0.00	0.00	2.86	53.23	0.00	9411.13
371+0.000	10.00	0.00	0.00	1.19	40.49	0.00	9451.62
372+0.000	10.00	0.00	0.00	0.11	12.93	0.00	9464.56
372+1.838	0.92	0.00	0.00	0.04	0.14	0.00	9464.70
372+4.600	1.38	0.00	0.00	0.00	0.05	0.00	9464.75
372+7.362	1.38	0.00	0.00	0.01	0.02	0.00	9464.76
373+0.000	6.32	0.00	0.00	1.54	9.84	0.00	9474.60
373+4.049	2.02	0.00	0.00	1.68	6.53	0.00	9481.13
373+5.778	0.86	0.00	0.00	1.48	2.53	0.00	9483.67
373+7.507	0.86	0.00	0.00	1.40	2.28	0.00	9485.95
374+0.000	6.25	0.00	0.00	1.53	18.32	0.00	9504.27
375+0.000	10.00	0.00	0.00	0.61	21.42	0.00	9525.69
376+0.000	10.00	0.00	0.00	0.72	13.32	0.00	9539.01
377+0.000	10.00	0.00	0.00	2.02	27.39	0.00	9566.40
377+9.397	4.70	0.00	0.00	1.54	16.72	0.00	9583.13
377+9.663	0.13	0.00	0.00	1.49	0.38	0.00	9583.51
377+9.929	0.13	0.00	0.00	1.45	0.37	0.00	9583.88
378+0.000	5.04	0.00	0.00	0.50	9.84	0.00	9593.71
379+0.000	10.00	0.00	0.00	0.34	8.42	0.00	9602.13
380+0.000	10.00	0.00	0.00	0.07	4.10	0.00	9606.23
381+0.000	10.00	0.00	0.00	0.12	1.92	0.00	9608.15
382+0.000	10.00	0.00	0.00	0.20	3.20	0.00	9611.35
382+12.692	6.35	0.00	0.00	0.60	5.10	0.00	9616.45
382+14.927	1.12	0.00	0.00	2.10	3.00	0.00	9619.45
382+17.161	1.12	0.00	0.00	3.80	6.35	0.00	9625.80
383+0.000	1.42	0.00	0.00	5.59	13.33	0.00	9639.13
384+0.000	10.00	0.00	0.00	8.12	137.05	0.00	9776.18
384+1.271	0.64	0.00	0.00	7.57	9.97	0.00	9786.15
384+2.246	0.49	0.00	0.00	7.24	7.35	0.00	9793.50
384+3.221	0.49	0.00	0.00	6.94	6.99	0.00	9800.48
385+0.000	8.39	0.00	0.00	3.35	86.26	0.00	9886.74
386+0.000	10.00	0.00	0.00	4.76	81.08	0.00	9967.82
386+1.741	0.87	0.00	0.00	5.35	8.80	0.00	9976.62
386+4.352	1.31	0.00	0.00	6.04	15.29	0.00	9991.91
386+6.963	1.31	0.00	0.00	6.58	16.80	0.00	10008.70
387+0.000	6.52	0.00	0.00	4.53	72.40	0.00	10081.10
388+0.000	10.00	0.00	0.00	0.46	49.92	0.00	10131.02
389+0.000	10.00	0.00	0.00	0.00	4.63	0.00	10135.65
390+0.000	10.00	0.00	0.00	0.56	5.61	0.00	10141.26
390+4.424	2.21	0.00	0.00	1.71	5.03	0.00	10146.29

# QUADRO DE CUBAÇÃO



TRECHO: BR 226 Á LOC. DE MONTE GRAVE  
 Estaca Inicial: 0+0.000  
 Estaca Final: 558+13.713

Estaca	Semi Distância (m)	Área de Corte (m <sup>2</sup> )	Volume de Corte (m <sup>3</sup> )	Área de Aterro (m <sup>2</sup> )	Volume Aterro (m <sup>3</sup> )	Vol. Acum. Corte (m <sup>3</sup> )	Vol. Acum. Aterro (m <sup>3</sup> )
390+6.237	0.91	0.00	0.00	2.21	3.67	0.00	10149.97
390+8.051	0.91	0.00	0.00	2.48	4.26	0.00	10154.23
391+0.000	5.97	0.00	0.00	2.31	28.62	0.00	10182.84
392+0.000	10.00	0.00	0.00	1.37	36.75	0.00	10219.60
393+0.000	10.00	0.00	0.00	0.00	13.69	0.00	10233.28
393+0.516	0.26	0.00	0.00	0.00	0.00	0.00	10233.28
393+2.545	1.01	0.00	0.00	0.00	0.00	0.00	10233.28
393+4.574	1.01	0.00	0.00	0.00	0.00	0.00	10233.28
394+0.000	7.71	0.00	0.00	0.00	0.00	0.00	10233.28
394+0.000	7.71	0.00	0.00	3.16	31.62	0.00	10264.91
395+0.000	10.00	0.00	0.00	4.24	61.47	0.00	10326.38
395+16.613	8.31	0.00	0.00	4.25	3.02	0.00	10329.40
395+17.279	0.33	0.00	0.00	4.24	3.02	0.00	10332.43
395+17.945	0.33	0.00	0.00	4.16	8.63	0.00	10341.06
396+0.000	1.03	0.00	0.00	4.16	8.63	0.00	10341.06
397+0.000	10.00	0.00	0.00	2.97	71.28	0.00	10412.33
398+0.000	10.00	0.00	0.00	1.48	44.52	0.00	10456.85
398+9.840	4.92	0.00	0.00	0.45	9.51	0.00	10466.35
398+12.328	1.24	0.00	0.00	0.24	0.95	0.00	10467.30
398+14.815	1.24	0.00	0.00	0.01	0.35	0.00	10467.65
399+0.000	2.59	0.00	0.00	0.00	0.05	0.00	10467.70
400+0.000	10.00	0.00	0.00	1.06	10.73	0.00	10478.42
401+0.000	10.00	0.00	0.00	0.19	12.56	0.00	10490.98
401+5.903	2.95	0.00	0.00	0.01	0.60	0.00	10491.57
401+8.069	1.08	0.00	0.00	0.00	0.01	0.00	10491.59
401+10.236	1.08	0.00	0.00	0.00	0.00	0.00	10491.59
402+0.000	4.88	0.00	0.00	0.00	0.00	0.00	10491.59
403+0.000	10.00	0.00	0.00	0.00	0.00	0.00	10491.59
403+11.118	5.56	0.00	0.00	0.65	3.59	0.00	10495.18
403+12.187	0.53	0.00	0.00	0.60	0.68	0.00	10495.85
403+13.256	0.53	0.00	0.00	0.64	0.67	0.00	10496.52
404+0.000	3.37	0.00	0.00	0.99	5.48	0.00	10502.00
405+0.000	10.00	0.00	0.00	2.12	31.01	0.00	10533.01
406+0.000	10.00	0.00	0.00	2.60	47.13	0.00	10580.14
407+0.000	10.00	0.00	0.00	0.82	34.19	0.00	10614.32
407+0.552	0.28	0.00	0.00	0.81	0.45	0.00	10614.77
407+1.671	0.56	0.00	0.00	0.79	0.91	0.00	10615.69
407+2.789	0.56	0.00	0.00	0.78	0.90	0.00	10616.59
408+0.000	8.61	0.00	0.00	0.79	13.48	0.00	10630.07
409+0.000	10.00	0.00	0.00	0.11	8.99	0.00	10639.06
409+9.454	4.73	0.00	0.00	0.02	0.60	0.00	10639.66
409+10.745	0.65	0.00	0.00	0.02	0.03	0.00	10639.69
409+12.037	0.65	0.00	0.00	0.01	0.03	0.00	10639.72
410+0.000	3.98	0.00	0.00	0.11	0.49	0.00	10640.20
411+0.000	10.00	0.00	0.00	0.36	4.68	0.00	10644.88
412+0.000	10.00	0.00	0.00	1.14	14.99	0.00	10659.87
412+8.824	4.41	0.00	0.00	1.45	11.44	0.00	10671.31
412+10.376	0.78	0.00	0.00	1.49	2.17	0.00	10673.48
412+11.928	0.78	0.00	0.00	1.56	2.30	0.00	10675.78
413+0.000	4.04	0.00	0.00	0.56	8.58	0.00	10684.36
414+0.000	10.00	0.00	0.00	0.00	5.65	0.00	10690.01
415+0.000	10.00	0.00	0.00	0.00	0.00	0.00	10690.01
415+11.848	5.92	0.00	0.00	0.00	0.00	0.00	10690.01
415+13.199	0.68	0.00	0.00	0.02	0.01	0.00	10690.02
415+14.550	0.68	0.00	0.00	0.20	0.15	0.00	10690.16
416+0.000	2.73	0.00	0.00	1.04	3.37	0.00	10693.54



# QUADRO DE CUBAÇÃO

TRECHO: BR 226 Á LOC. DE MONTE GRAVE

Estaca Inicial: 0+0.000

Estaca Final: 558+13.713

Estaca	Semi-Distância (m)	Área de Corte (m <sup>2</sup> )	Volume de Corte (m <sup>3</sup> )	Área de Aterro (m <sup>2</sup> )	Volume Aterro (m <sup>3</sup> )	Vol. Acum. Corte (m <sup>3</sup> )	Vol. Acum. Aterro (m <sup>3</sup> )
417+0.000	10.00	0.00	0.00	1.30	23.42	0.00	10716.96
417+17.685	8.84	0.00	0.00	4.24	48.98	0.00	10765.94
417+18.362	0.34	0.00	0.00	4.43	2.92	0.00	10768.85
417+19.039	0.34	0.00	0.00	4.50	3.02	0.00	10771.87
418+0.000	0.48	0.00	0.00	4.51	4.33	0.00	10776.20
419+0.000	10.00	0.00	0.00	4.44	89.44	0.00	10865.64
420+0.000	10.00	0.00	0.00	1.01	54.50	0.00	10920.14
421+0.000	10.00	0.00	0.00	2.34	33.56	0.00	10953.70
421+1.947	0.97	0.00	0.00	1.90	4.13	0.00	10957.83
421+5.284	1.67	0.00	0.00	1.29	4.66	0.00	10962.49
421+8.621	1.67	0.00	0.00	1.20	3.36	0.00	10965.85
422+0.000	5.69	0.00	0.00	1.04	12.74	0.00	10978.59
422+0.406	0.20	0.00	0.00	0.98	0.41	0.00	10979.00
422+3.890	1.74	0.00	0.00	0.76	2.46	0.00	10981.46
422+7.374	1.74	0.00	0.00	0.97	2.52	0.00	10983.98
423+0.000	6.31	0.00	0.00	1.34	14.60	0.00	10998.58
424+0.000	10.00	0.00	0.00	0.00	13.41	0.00	11011.99
424+7.461	3.73	0.00	0.00	0.00	0.00	0.00	11011.99
424+10.339	1.44	0.00	0.00	0.00	0.00	0.00	11011.99
424+13.218	1.44	0.00	0.00	0.00	0.00	0.00	11011.99
425+0.000	3.39	0.00	0.00	0.00	0.00	0.00	11039.17
426+0.000	10.00	0.00	0.00	2.72	27.18	0.00	11125.00
427+0.000	10.00	0.00	0.00	5.86	85.82	0.00	11275.48
428+0.000	10.00	0.00	0.00	9.18	150.48	0.00	11430.95
428+14.974	7.49	0.00	0.00	11.58	155.47	0.00	11445.67
428+16.256	0.64	0.00	0.00	11.77	14.71	0.00	11460.72
428+17.538	0.64	0.00	0.00	11.97	15.06	0.00	11460.72
429+0.000	1.23	0.00	0.00	11.89	29.37	0.00	11490.09
430+0.000	10.00	0.00	0.00	6.96	188.45	0.00	11678.54
430+6.121	3.06	0.00	0.00	5.17	37.11	0.00	11715.65
430+8.320	1.10	0.00	0.00	4.67	10.54	0.00	11726.19
430+10.520	1.10	0.00	0.00	3.92	9.09	0.00	11735.27
431+0.000	4.74	0.00	0.00	1.59	26.10	0.00	11761.38
432+0.000	10.00	0.00	0.00	0.93	25.18	0.00	11786.55
433+0.000	10.00	0.00	0.00	0.93	18.63	0.00	11805.18
433+5.549	2.77	0.00	0.00	0.72	4.58	0.00	11809.77
433+13.579	4.01	0.00	0.00	0.00	3.11	0.00	11812.88
434+0.000	3.21	0.00	0.00	0.09	0.21	0.00	11813.09
434+1.609	0.80	0.00	0.00	0.21	0.17	0.00	11813.26
435+0.000	9.20	0.00	0.00	0.30	4.69	0.00	11817.95
435+15.170	7.59	0.00	0.00	0.00	2.31	0.00	11820.26
435+18.442	1.64	0.00	0.00	0.16	0.21	0.00	11820.48
436+0.000	0.78	0.00	0.00	0.31	0.31	0.00	11820.78
436+1.713	0.86	0.00	0.00	0.51	0.60	0.00	11821.39
437+0.000	9.14	0.00	0.00	2.06	23.46	0.00	11844.85
438+0.000	10.00	0.00	0.00	0.97	30.26	0.00	11875.11
439+0.000	10.00	0.00	0.00	0.03	9.93	0.00	11885.04
439+6.656	3.33	0.00	0.00	0.94	3.24	0.00	11888.27
439+12.205	2.77	0.00	0.00	1.52	7.69	0.00	11895.96
439+17.755	2.77	0.00	0.00	0.79	7.08	0.00	11903.04
440+0.000	1.12	0.00	0.00	0.93	1.93	0.00	11904.97
441+0.000	10.00	0.00	0.00	1.89	28.23	0.00	11933.20
442+0.000	10.00	0.00	0.00	1.80	36.89	0.00	11970.09
443+0.000	10.00	0.00	0.00	3.58	53.74	0.00	12023.83
443+1.494	0.75	0.00	0.00	3.37	5.19	0.00	12029.02



# QUADRO DE CUBAÇÃO

TRECHO: BR 226 À LOC. DE MONTE GRAVE  
 Estaca Inicial: 0+0.000  
 Estaca Final: 558+13.713

Estaca	Semi Distância (m)	Área de Corte (m <sup>2</sup> )	Volume de Corte (m <sup>3</sup> )	Área de Aterro (m <sup>2</sup> )	Volume Aterro (m <sup>3</sup> )	Vol. Acum. Corte (m <sup>3</sup> )	Vol. Acum. Aterro (m <sup>3</sup> )
443+5.145	1.83	0.00	0.00	3.37	11.05	0.00	12040.08
443+8.796	1.83	0.00	0.00	4.53	12.68	0.00	12052.76
444+0.000	5.60	0.00	0.00	10.36	83.45	0.00	12136.20
445+0.000	10.00	0.00	0.00	1.32	116.83	0.00	12253.03
445+19.878	9.94	0.00	0.00	3.11	44.03	0.00	12297.06
446+0.000	0.06	0.00	0.00	3.14	0.38	0.00	12297.44
446+1.405	0.70	0.00	0.00	3.17	4.62	0.00	12302.07
446+2.932	0.76	0.00	0.00	2.33	4.42	0.00	12306.49
447+0.000	8.53	0.00	0.00	0.00	19.90	0.00	12326.39
448+0.000	10.00	0.00	0.00	0.00	0.00	0.00	12326.39
449+0.000	10.00	0.00	0.00	0.00	0.00	0.00	12326.39
450+0.000	10.00	0.00	0.00	0.00	0.00	0.00	12326.39
450+7.764	3.88	0.00	0.00	0.00	0.00	0.00	12326.39
450+8.564	0.40	0.00	0.00	0.00	0.00	0.00	12326.39
450+9.364	0.40	0.00	0.00	0.00	0.00	0.00	12326.39
451+0.000	5.32	0.00	0.00	0.00	0.00	0.00	12326.39
452+0.000	10.00	0.00	0.00	0.00	0.00	0.00	12326.39
453+0.000	10.00	0.00	0.00	0.00	0.00	0.00	12326.39
453+4.293	2.15	0.00	0.00	0.00	0.00	0.00	12326.39
453+5.377	0.54	0.00	0.00	0.00	0.00	0.00	12326.39
453+6.462	0.54	0.00	0.00	0.00	0.00	0.00	12326.39
454+0.000	6.77	0.00	0.00	0.00	0.00	0.00	12326.39
455+0.000	10.00	0.00	0.00	1.24	12.39	0.00	12338.77
456+0.000	10.00	0.00	0.00	1.26	25.03	0.00	12363.80
456+6.943	3.47	0.00	0.00	1.07	8.10	0.00	12371.91
456+7.465	0.26	0.00	0.00	1.05	0.49	0.00	12372.40
456+7.987	0.26	0.00	0.00	1.04	0.48	0.00	12372.88
457+0.000	6.01	0.00	0.00	0.52	9.37	0.00	12382.25
458+0.000	10.00	0.00	0.00	0.41	9.34	0.00	12391.59
458+5.834	2.92	0.00	0.00	0.60	2.96	0.00	12394.56
458+7.933	1.05	0.00	0.00	0.60	1.29	0.00	12395.84
458+10.033	1.05	0.00	0.00	0.52	1.18	0.00	12397.02
459+0.000	4.98	0.00	0.00	0.31	4.15	0.00	12401.17
460+0.000	10.00	0.00	0.00	0.00	3.11	0.00	12404.28
461+0.000	10.00	0.00	0.00	0.00	0.00	0.00	12404.28
462+0.000	10.00	0.00	0.00	0.00	0.00	0.00	12404.28
463+0.000	10.00	0.00	0.00	0.00	0.00	0.00	12404.28
464+0.000	10.00	0.00	0.00	0.00	0.00	0.00	12404.28
465+0.000	10.00	0.00	0.00	0.00	0.00	0.00	12404.28
465+3.776	1.89	0.00	0.00	0.00	0.00	0.00	12404.28
465+3.901	0.06	0.00	0.00	0.00	0.00	0.00	12404.28
465+4.026	0.06	0.00	0.00	0.00	0.00	0.00	12404.28
466+0.000	7.99	0.00	0.00	0.00	0.00	0.00	12404.28
467+0.000	10.00	0.00	0.00	0.15	1.50	0.00	12405.78
467+11.729	5.86	0.00	0.00	0.49	3.78	0.00	12409.56
467+12.450	0.36	0.00	0.00	0.34	0.31	0.00	12409.87
467+13.170	0.36	0.00	0.00	0.24	0.23	0.00	12410.09
468+0.000	3.41	0.00	0.00	0.00	0.82	0.00	12410.92
469+0.000	10.00	0.00	0.00	0.35	3.50	0.00	12414.41
470+0.000	10.00	0.00	0.00	0.44	7.92	0.00	12422.33
471+0.000	10.00	0.00	0.00	0.22	6.67	0.00	12429.00
472+0.000	10.00	0.00	0.00	0.08	3.05	0.00	12432.05
473+0.000	10.00	0.00	0.00	0.02	1.01	0.00	12433.06
474+0.000	10.00	0.00	0.00	0.06	0.76	0.00	12433.82
474+11.605	5.80	0.00	0.00	0.22	1.58	0.00	12435.40



# QUADRO DE CUBAÇÃO

TRECHO: BR 226 Á LOC. DE MONTE GRAVE  
 Estaca Inicial: 0+0.000  
 Estaca Final: 558+13.713

Estaca	Semi Distância (m)	Área de Corte (m <sup>2</sup> )	Volume de Corte (m <sup>3</sup> )	Área de Aterro (m <sup>2</sup> )	Volume Aterro (m <sup>3</sup> )	Vol. Acum. Corte (m <sup>3</sup> )	Vol. Acum. Aterro (m <sup>3</sup> )
474+11.937	0.17	0.00	0.00	0.24	0.08	0.00	12435.48
474+12.269	0.17	0.00	0.00	0.26	0.09	0.00	12435.57
475+0.000	3.87	0.00	0.00	0.69	3.67	0.00	12439.24
476+0.000	10.00	0.00	0.00	1.79	24.80	0.00	12464.04
477+0.000	10.00	0.00	0.00	2.74	45.35	0.00	12509.39
478+0.000	10.00	0.00	0.00	2.14	48.82	0.00	12558.21
479+0.000	10.00	0.00	0.00	1.24	33.83	0.00	12592.04
479+2.724	1.36	0.00	0.00	1.20	3.33	0.00	12595.37
479+3.450	0.36	0.00	0.00	1.14	1.07	0.00	12596.43
479+4.175	0.36	0.00	0.00	1.04	0.99	0.00	12597.42
480+0.000	7.91	0.00	0.00	0.63	13.21	0.00	12610.63
481+0.000	10.00	0.00	0.00	0.86	14.83	0.00	12625.46
482+0.000	10.00	0.00	0.00	0.89	17.43	0.00	12642.89
482+10.653	5.33	0.00	0.00	0.19	5.71	0.00	12648.60
482+11.788	0.57	0.00	0.00	0.21	0.19	0.00	12648.79
482+12.924	0.57	0.00	0.00	0.11	0.16	0.00	12648.95
483+0.000	3.54	0.00	0.00	0.09	0.71	0.00	12649.66
484+0.000	10.00	0.00	0.00	1.58	16.71	0.00	12666.37
485+0.000	10.00	0.00	0.00	2.52	40.97	0.00	12707.33
485+18.933	9.47	0.00	0.00	1.32	36.31	0.00	12743.64
485+19.529	0.30	0.00	0.00	1.25	0.74	0.00	12744.38
486+0.000	0.24	0.00	0.00	1.19	0.55	0.00	12744.94
486+0.125	0.06	0.00	0.00	1.18	0.15	0.00	12745.08
487+0.000	9.94	0.00	0.00	0.11	12.77	0.00	12757.85
488+0.000	10.00	0.00	0.00	0.80	9.11	0.00	12766.96
489+0.000	10.00	0.00	0.00	1.00	18.01	0.00	12784.97
490+0.000	10.00	0.00	0.00	0.67	16.68	0.00	12801.65
491+0.000	10.00	0.00	0.00	0.32	9.92	0.00	12811.58
491+17.190	8.59	0.00	0.00	0.02	2.92	0.00	12814.50
491+18.593	0.70	0.00	0.00	0.07	0.04	0.00	12814.54
491+19.995	0.70	0.00	0.00	0.19	0.14	0.00	12814.68
492+0.000	0.00	0.00	0.00	0.19	0.00	0.00	12814.68
493+0.000	10.00	0.00	0.00	1.90	20.88	0.00	12835.56
494+0.000	10.00	0.00	0.00	2.14	40.41	0.00	12875.97
494+8.415	4.21	0.00	0.00	2.11	17.90	0.00	12893.87
494+9.083	0.33	0.00	0.00	2.06	1.33	0.00	12895.20
494+9.750	0.33	0.00	0.00	2.01	1.30	0.00	12896.50
495+0.000	5.13	0.00	0.00	1.46	17.77	0.00	12914.27
496+0.000	10.00	0.00	0.00	0.64	20.94	0.00	12935.21
497+0.000	10.00	0.00	0.00	0.00	6.39	0.00	12941.60
497+5.693	2.85	0.00	0.00	0.00	0.00	0.00	12941.60
497+7.358	0.83	0.00	0.00	0.00	0.00	0.00	12941.60
497+9.022	0.83	0.00	0.00	0.00	0.00	0.00	12941.60
498+0.000	5.49	0.00	0.00	0.66	3.61	0.00	12945.22
499+0.000	10.00	0.00	0.00	1.71	23.65	0.00	12968.86
500+0.000	10.00	0.00	0.00	0.50	22.03	0.00	12990.89
501+0.000	10.00	0.00	0.00	1.03	15.31	0.00	13006.21
501+17.384	8.69	0.00	0.00	0.35	12.05	0.00	13018.26
501+18.188	0.40	0.00	0.00	0.48	0.43	0.00	13018.69
501+18.992	0.40	0.00	0.00	0.57	0.55	0.00	13019.24
502+0.000	0.50	0.00	0.00	0.55	0.56	0.00	13019.80
503+0.000	10.00	0.00	0.00	1.39	19.36	0.00	13039.16
504+0.000	10.00	0.00	0.00	0.00	13.89	0.00	13053.06
504+5.901	2.95	0.00	0.00	0.00	0.00	0.00	13053.06
504+7.080	0.59	0.00	0.00	0.00	0.00	0.00	13053.06

Jarbas Rocco de S. Junior  
 Engº Civil - Fiscal  
 RNP-100814100-3

# QUADRO DE CUBAÇÃO



TRECHO: BR 226 À LOC. DE MONTE GRAVE

Estaca Inicial: 0+0.000

Estaca Final: 558+13.713

Estaca	Semi Distância (m)	Área de Corte (m <sup>2</sup> )	Volume de Corte (m <sup>3</sup> )	Área de Aterro (m <sup>2</sup> )	Volume Aterro (m <sup>3</sup> )	Vol. Acum. Corte (m <sup>3</sup> )	Vol. Acum. Aterro (m <sup>3</sup> )
504+8.259	0.59	0.00	0.00	0.00	0.00	0.00	13053.06
505+0.000	5.87	0.00	0.00	0.00	0.00	0.00	13053.06
506+0.000	10.00	0.00	0.00	0.00	0.00	0.00	13053.06
507+0.000	10.00	0.00	0.00	0.00	0.00	0.00	13053.06
508+0.000	10.00	0.00	0.00	0.14	1.38	0.00	13054.44
509+0.000	10.00	0.00	0.00	0.80	9.38	0.00	13063.82
509+12.753	6.38	0.00	0.00	3.36	26.55	0.00	13090.37
509+14.378	0.81	0.00	0.00	3.87	5.88	0.00	13096.25
509+16.002	0.81	0.00	0.00	3.22	5.67	0.00	13101.91
510+0.000	2.00	0.00	0.00	1.33	9.11	0.00	13111.02
511+0.000	10.00	0.00	0.00	0.00	13.33	0.00	13124.35
511+1.188	0.59	0.00	0.00	0.00	0.00	0.00	13124.35
511+3.350	1.08	0.00	0.00	0.00	0.00	0.00	13124.35
511+5.511	1.08	0.00	0.00	0.00	0.00	0.00	13124.35
512+0.000	7.24	0.00	0.00	0.00	0.00	0.00	13124.35
513+0.000	10.00	0.00	0.00	0.00	0.00	0.00	13124.35
514+0.000	10.00	0.00	0.00	0.00	0.00	0.00	13124.35
515+0.000	10.00	0.00	0.00	0.00	0.00	0.00	13124.35
516+0.000	10.00	0.00	0.00	0.00	0.00	0.00	13124.35
516+8.538	4.27	0.00	0.00	0.00	0.00	0.00	13124.35
516+14.381	2.92	0.00	0.00	0.65	1.60	0.00	13125.96
517+0.000	2.81	0.00	0.00	0.74	0.14	0.00	13126.10
517+0.224	0.11	0.00	0.00	0.74	0.14	0.00	13126.10
518+0.000	9.89	0.00	0.00	0.79	15.12	0.00	13141.21
518+16.392	8.20	0.00	0.00	0.00	6.52	0.00	13147.73
519+0.000	1.80	0.00	0.00	0.06	0.09	0.00	13147.82
519+0.540	0.27	0.00	0.00	0.08	0.03	0.00	13147.85
519+4.687	2.07	0.00	0.00	0.45	0.87	0.00	13148.71
520+0.000	7.66	0.00	0.00	1.37	13.97	0.00	13162.68
521+0.000	10.00	0.00	0.00	0.85	22.23	0.00	13184.91
522+0.000	10.00	0.00	0.00	0.00	8.51	0.00	13193.42
522+16.898	8.45	0.00	0.00	0.00	0.00	0.00	13193.42
523+0.000	1.55	0.00	0.00	0.00	0.00	0.00	13193.42
523+0.793	0.40	0.00	0.00	0.00	0.00	0.00	13193.42
523+4.688	1.95	0.00	0.00	0.00	0.00	0.00	13193.42
524+0.000	7.66	0.00	0.00	0.84	6.46	0.00	13199.88
525+0.000	10.00	0.00	0.00	2.30	31.43	0.00	13231.31
526+0.000	10.00	0.00	0.00	0.74	30.37	0.00	13261.68
527+0.000	10.00	0.00	0.00	0.00	7.37	0.00	13269.06
527+6.274	3.14	0.00	0.00	0.00	0.00	0.00	13269.06
527+8.290	1.01	0.00	0.00	0.00	0.00	0.00	13269.06
527+10.306	1.01	0.00	0.00	0.00	0.00	0.00	13269.06
528+0.000	4.85	0.00	0.00	0.00	0.00	0.00	13269.06
529+0.000	10.00	0.00	0.00	0.00	0.00	0.00	13269.06
530+0.000	10.00	0.00	0.00	0.32	3.22	0.00	13272.27
531+0.000	10.00	0.00	0.00	1.31	16.28	0.00	13288.55
532+0.000	10.00	0.00	0.00	0.07	13.81	0.00	13302.36
533+0.000	10.00	0.00	0.00	0.04	1.11	0.00	13303.48
534+0.000	10.00	0.00	0.00	0.40	4.36	0.00	13307.83
535+0.000	10.00	0.00	0.00	0.65	10.52	0.00	13318.35
536+0.000	10.00	0.00	0.00	0.51	11.59	0.00	13329.95
537+0.000	10.00	0.00	0.00	0.00	5.07	0.00	13335.01
537+10.266	5.13	0.00	0.00	0.00	0.00	0.00	13335.01
537+11.527	0.63	0.00	0.00	0.00	0.00	0.00	13335.01
537+12.787	0.63	0.00	0.00	0.00	0.00	0.00	13335.01



## QUADRO DE CUBAÇÃO

TRECHO: BR 226 Á LOC. DE MONTE GRAVE

Estaca Inicial: 0+0.000

Estaca Final: 558+13.713


Estaca	Semi Distância (m)	Área de Corte (m <sup>2</sup> )	Volume de Corte (m <sup>3</sup> )	Área de Aterro (m <sup>2</sup> )	Volume Aterro (m <sup>3</sup> )	Vol. Acum. Corte (m <sup>3</sup> )	Vol. Acum. Aterro (m <sup>3</sup> )
538+0.000	3.61	0.00	0.00	0.00	0.00	0.00	13335.01
539+0.000	10.00	0.00	0.00	0.22	2.19	0.00	13337.20
540+0.000	10.00	0.00	0.00	0.01	2.29	0.00	13339.49
540+19.208	9.60	0.00	0.00	0.23	2.34	0.00	13341.83
540+19.434	0.11	0.00	0.00	0.21	0.05	0.00	13341.88
540+19.659	0.11	0.00	0.00	0.19	0.05	0.00	13341.93
541+0.000	0.17	0.00	0.00	0.16	0.06	0.00	13341.99
542+0.000	10.00	0.00	0.00	0.00	1.60	0.00	13343.59
543+0.000	10.00	0.00	0.00	0.00	0.00	0.00	13343.59
544+0.000	10.00	0.00	0.00	0.00	0.00	0.00	13343.59
545+0.000	10.00	0.00	0.00	0.00	0.02	0.00	13343.61
546+0.000	10.00	0.00	0.00	0.06	0.60	0.00	13344.22
547+0.000	10.00	0.00	0.00	0.18	2.42	0.00	13346.63
548+0.000	10.00	0.00	0.00	0.84	10.27	0.00	13356.90
548+3.735	1.87	0.00	0.00	1.07	3.57	0.00	13360.47
548+3.767	0.02	0.00	0.00	1.06	0.03	0.00	13360.50
548+3.799	0.02	0.00	0.00	1.06	0.03	0.00	13360.53
549+0.000	8.10	0.00	0.00	0.04	8.94	0.00	13369.47
550+0.000	10.00	0.00	0.00	0.00	0.44	0.00	13369.91
551+0.000	10.00	0.00	0.00	1.19	11.90	0.00	13381.81
552+0.000	10.00	0.00	0.00	0.96	21.55	0.00	13403.35
553+0.000	10.00	0.00	0.00	0.80	17.62	0.00	13420.98
554+0.000	10.00	0.00	0.00	0.22	10.21	0.00	13431.19
555+0.000	10.00	0.00	0.00	0.14	3.62	0.00	13434.81
555+8.763	4.38	0.00	0.00	0.27	1.81	0.00	13436.62
555+9.233	0.24	0.00	0.00	0.28	0.13	0.00	13436.75
555+9.704	0.24	0.00	0.00	0.30	0.13	0.00	13436.88
556+0.000	5.15	0.00	0.00	0.50	4.08	0.00	13440.96
557+0.000	10.00	0.00	0.00	0.40	9.01	0.00	13449.97
558+0.000	10.00	0.00	0.00	0.08	4.80	0.00	13454.77
558+13.713	6.86	0.00	0.00	0.21	1.93	0.00	13456.69



## QUADRO DE CUBAÇÃO

TRECHO: SEDE Á LOC. DE CARNAUBINHA  
 Estaca Inicial: 0+0.000  
 Estaca Final: 729+15.925

Estaca	Semi Distância (m)	Área de Corte (m <sup>2</sup> )	Volume de Corte (m <sup>3</sup> )	Área de Aterro (m <sup>2</sup> )	Volume Aterro (m <sup>3</sup> )	Vol. Acum. Corte (m <sup>3</sup> )	Vol. Acum. Aterro (m <sup>3</sup> )
0+0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1+0.000	10.00	0.00	0.00	0.81	8.11	0.00	8.11
1+9.100	4.55	0.00	0.00	0.03	3.82	0.00	11.93
2+0.000	5.45	0.00	0.00	0.08	0.59	0.00	12.52
2+7.859	3.93	0.00	0.00	0.39	1.88	0.00	14.40
3+0.000	6.07	0.00	0.00	0.08	2.93	0.00	17.33
3+6.617	3.31	0.00	0.00	0.08	0.53	0.00	17.86
4+0.000	6.69	0.00	0.00	0.22	2.01	0.00	19.87
5+0.000	10.00	0.00	0.00	0.17	3.91	0.00	23.79
6+0.000	10.00	0.00	0.00	0.04	2.13	0.00	25.92
6+7.887	3.94	0.00	0.00	0.09	0.51	0.00	26.43
6+9.801	0.96	0.00	0.00	0.11	0.19	0.00	26.62
6+11.714	0.96	0.00	0.00	0.13	0.23	0.00	26.85
7+0.000	4.14	0.00	0.00	0.00	0.57	0.00	27.42
8+0.000	10.00	0.00	0.00	0.39	3.89	0.00	31.31
9+0.000	10.00	0.00	0.00	0.21	5.92	0.00	37.24
10+0.000	10.00	0.00	0.00	0.14	3.43	0.00	40.67
10+15.513	7.76	0.00	0.00	0.00	1.06	0.00	41.73
11+0.000	2.24	0.00	0.00	0.00	0.00	0.00	41.73
11+2.078	1.04	0.00	0.00	0.00	0.00	0.00	41.73
11+8.643	3.28	0.00	0.00	0.06	0.18	0.00	41.91
11+18.277	4.82	0.00	0.00	0.34	1.91	0.00	43.82
12+0.000	0.86	0.00	0.00	0.42	0.62	0.00	44.44
12+4.648	2.32	0.00	0.00	0.66	2.41	0.00	46.85
12+11.018	3.19	0.00	0.00	0.57	3.81	0.00	50.66
13+0.000	4.49	0.00	0.00	0.79	6.12	0.00	56.78
14+0.000	10.00	0.00	0.00	0.41	11.95	0.00	68.73
14+15.842	7.92	0.00	0.00	0.00	3.22	0.00	71.95
14+18.026	1.09	0.00	0.00	0.00	0.00	0.00	71.95
15+0.000	0.99	0.00	0.00	0.00	0.00	0.00	71.95
15+0.211	0.11	0.00	0.00	0.00	0.00	0.00	71.95
16+0.000	9.89	0.00	0.00	0.05	0.49	0.00	72.44
16+13.653	6.83	0.00	0.00	0.00	0.34	0.00	72.78
16+15.831	1.09	0.00	0.00	0.01	0.01	0.00	72.79
16+18.009	1.09	0.00	0.00	0.05	0.07	0.00	72.86
17+0.000	1.00	0.00	0.00	0.09	0.14	0.00	73.00
18+0.000	10.00	0.00	0.00	1.62	17.08	0.00	90.08
18+19.390	9.69	0.00	0.00	0.30	18.59	0.00	108.67
19+0.000	0.31	0.00	0.00	0.30	0.18	0.00	108.86
19+3.185	1.59	0.00	0.00	0.29	0.90	0.00	109.76
19+6.981	1.90	0.00	0.00	0.11	0.73	0.00	110.49
20+0.000	6.51	0.00	0.00	0.00	0.75	0.00	111.24
21+0.000	10.00	0.00	0.00	0.05	0.54	0.00	111.77
21+4.010	2.01	0.00	0.00	0.14	0.38	0.00	112.16
21+8.121	2.06	0.00	0.00	0.07	0.42	0.00	112.57
21+12.232	2.06	0.00	0.00	0.00	0.14	0.00	112.71
22+0.000	3.88	0.00	0.00	0.04	0.16	0.00	112.87
23+0.000	10.00	0.00	0.00	0.22	2.64	0.00	115.51
24+0.000	10.00	0.00	0.00	0.57	7.95	0.00	123.47
24+11.928	5.96	0.00	0.00	0.50	6.37	0.00	129.84
24+13.473	0.77	0.00	0.00	0.48	0.75	0.00	130.59
24+15.018	0.77	0.00	0.00	0.48	0.73	0.00	131.32
25+0.000	2.49	0.00	0.00	0.49	2.40	0.00	133.72
26+0.000	10.00	0.00	0.00	1.08	15.69	0.00	149.41
26+11.319	5.66	0.00	0.00	1.56	14.96	0.00	164.37
26+17.921	3.30	0.00	0.00	1.35	9.75	0.00	174.12
27+0.000	1.04	0.00	0.00	1.05	2.53	0.00	176.65
27+4.524	2.26	0.00	0.00	0.00	2.41	0.00	179.06
27+13.702	4.59	0.00	0.00	0.00	0.03	0.00	179.09
27+19.766	3.03	0.00	0.00	0.00	0.02	0.00	179.11
28+0.000	0.12	0.00	0.00	0.00	0.00	0.00	179.11
28+5.830	2.92	0.00	0.00	0.00	0.00	0.00	179.11
29+0.000	7.08	0.00	0.00	0.04	0.30	0.00	179.41
30+0.000	10.00	0.00	0.00	0.00	0.43	0.00	179.83
31+0.000	10.00	0.00	0.00	0.04	0.40	0.00	180.23
31+4.531	2.27	0.00	0.00	0.16	0.45	0.00	180.68
31+6.534	1.00	0.00	0.00	0.14	0.31	0.00	180.99
31+8.538	1.00	0.00	0.00	0.00	0.14	0.00	181.13
32+0.000	5.73	0.00	0.00	0.00	0.00	0.00	181.13
33+0.000	10.00	0.00	0.00	0.05	0.47	0.00	181.60

  
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 Eng.º de Obras  
 RPP-400814100-3