

CAPÍTULO 3 – NOTAS DE SERVIÇO DE TERRAPLENAGEM

Lado Esquerdo					Eixo					Lado Direito				
Estaca	Offset		Lateral		Bordo	%	Cota Terreno	Cota Projeto	Cota Vermelha	%	Bordo		Lateral	
	Altura	Cota	Distância	Cota							Distância	Cota	Distância	Cota
0+60	0,121	1.247,340	-4,621	1.247,219	-3,000	-0,50	1.247,655	1.247,241	0,414	0,50	3,000	1.247,256	5,500	1.247,269
0+66,097	-0,881	1.246,322	-7,041	1.247,203	-4,219	0,19	1.247,588	1.247,192	0,396	-0,19	3,000	1.247,186	5,500	1.247,182
0+70	-1,491	1.245,716	-8,737	1.247,207	-5,000	0,71	1.247,545	1.247,161	0,384	-0,71	3,000	1.247,140	5,500	1.247,122
0+75	-1,704	1.245,541	-10,057	1.247,245	-6,000	1,37	1.247,505	1.247,143	0,362	-1,37	3,000	1.247,102	5,500	1.247,068
0+80	-1,675	1.245,646	-10,012	1.247,321	-6,000	2,02	1.247,466	1.247,169	0,297	-2,02	3,000	1.247,109	5,500	1.247,058
0+90	-1,728	1.245,871	-10,092	1.247,599	-6,000	3,27	1.247,371	1.247,354	0,017	-3,27	3,000	1.247,256	5,500	1.247,175
0+95	-1,777	1.246,026	-10,166	1.247,803	-6,000	3,87	1.247,513	1.247,513	0,000	-3,87	3,000	1.247,397	5,500	1.247,300
0+96,097	-1,755	1.246,094	-10,001	1.247,849	-5,868	4,00	1.247,550	1.247,554	-0,004	4,00	3,000	1.247,434	5,500	1.247,334
0+100	-1,629	1.246,350	-9,344	1.247,979	-5,400	3,80	1.247,680	1.247,716	-0,036	-3,80	3,000	1.247,602	5,500	1.247,507
0+110	-1,417	1.247,026	-7,825	1.248,443	-4,200	3,30	1.248,005	1.248,254	-0,249	-3,30	3,000	1.248,155	5,500	1.248,073
0+120	-0,791	1.248,305	-5,687	1.249,096	-3,000	2,80	1.249,123	1.248,969	0,154	-2,80	3,000	1.248,885	5,500	1.248,815
0+126,097	-0,625	1.248,979	-5,437	1.249,604	-3,000	2,50	1.249,827	1.249,492	0,335	-2,50	3,000	1.249,417	5,500	1.249,354
0+130	-0,503	1.249,479	-5,255	1.249,982	-3,000	2,70	1.250,279	1.249,861	0,418	-2,70	3,000	1.249,780	5,500	1.249,713
0+140	0,955	1.251,900	-5,455	1.250,945	-3,000	3,20	1.251,277	1.250,802	0,475	-3,20	3,000	1.250,706	5,500	1.250,626
0+150	2,622	1.254,452	-7,122	1.251,830	-3,000	3,70	1.252,287	1.251,663	0,624	-3,70	3,000	1.251,552	5,500	1.251,460
0+156,097	2,062	1.254,392	-6,562	1.252,330	-3,000	4,00	1.252,707	1.252,150	0,557	-4,00	3,000	1.252,030	5,500	1.251,930
0+160	1,691	1.254,317	-6,191	1.252,626	-3,000	4,00	1.252,969	1.252,446	0,523	-4,00	3,000	1.252,326	5,500	1.252,226
0+170	0,687	1.254,017	-5,187	1.253,330	-3,000	4,00	1.253,646	1.253,150	0,496	-4,00	3,000	1.253,030	5,500	1.252,930
0+175,366	0,609	1.254,284	-5,109	1.253,675	-3,000	4,00	1.253,947	1.253,495	0,452	-4,00	3,000	1.253,375	5,500	1.253,275
0+180	0,564	1.254,512	-5,064	1.253,948	-3,000	3,85	1.254,205	1.253,775	0,430	-3,85	3,000	1.253,659	5,500	1.253,563
0+190	0,577	1.255,057	-5,077	1.254,480	-3,000	3,53	1.254,793	1.254,321	0,472	-3,53	3,000	1.254,215	5,500	1.254,127
0+200	0,249	1.255,181	-4,749	1.254,932	-3,000	3,20	1.255,218	1.254,788	0,430	-3,20	3,000	1.254,692	5,500	1.254,612
0+205,366	0,048	1.255,191	-4,548	1.255,143	-3,000	3,03	1.255,429	1.255,006	0,423	-3,03	3,000	1.254,916	5,500	1.254,840
0+220	-0,288	1.255,313	-4,932	1.255,601	-3,000	2,56	1.255,869	1.255,486	0,383	-2,56	3,000	1.255,409	5,500	1.255,345
0+238,151	-0,054	1.256,327	-4,581	1.256,381	-3,000	3,03	1.256,299	1.256,245	0,054	-3,03	5,178	1.256,088	7,678	1.256,012
0+240	-0,120	1.256,372	-4,680	1.256,492	-3,000	3,09	1.256,359	1.256,353	0,006	-3,09	5,400	1.256,186	7,900	1.256,109
0+245	-0,319	1.256,499	-4,978	1.256,818	-3,000	3,25	1.256,520	1.256,671	-0,151	-3,25	6,000	1.256,476	8,500	1.256,395
0+250	-0,551	1.256,634	-5,327	1.257,185	-3,000	3,41	1.256,683	1.257,031	-0,348	-3,41	6,000	1.256,826	8,500	1.256,741

Lado Esquerdo							Eixo				Lado Direito								
Offset			Lateral		Bordo		Cota	Terreno	Projeto	Cota	Vermelha	%	Bordo		Lateral		Offset		
Estaca	Altura	Cota	Distância	Cota	Distância	%							Distância	Cota	Distância	Cota	Distância	Altura	
0+500	-0,151	1.278,626	-4,726	1.278,777	-4,500	1.278,740	-3,000	2,501	1.278,669	1.278,665	0,004	-2,50	3,000	1.278,590	5,500	1.278,527	6,342	1.277,966	-0,561
0+520	-0,193	1.278,366	-4,790	1.278,559	-4,500	1.278,521	-3,000	2,501	1.278,600	1.278,446	0,154	-2,50	3,000	1.278,371	5,500	1.278,309	5,771	1.278,580	0,271
0+540	1,611	1.279,770	-6,112	1.278,159	-4,500	1.278,121	-3,000	2,501	1.277,919	1.278,046	-0,127	-2,50	3,000	1.277,971	5,500	1.277,909	5,592	1.278,001	0,092
0+560	1,652	1.279,411	-6,152	1.277,759	-4,500	1.277,721	-3,000	2,511	1.277,988	1.277,646	0,342	-2,51	3,000	1.277,571	5,500	1.277,508	5,814	1.277,299	-0,209
0+578,337	2,272	1.279,721	-6,772	1.277,449	-4,500	1.277,403	-3,000	3,081	1.277,171	1.277,310	-0,139	-3,08	3,000	1.277,218	5,500	1.277,141	5,809	1.276,935	-0,206
0+580	2,310	1.279,734	-6,810	1.277,424	-4,500	1.277,377	-3,000	3,131	1.277,141	1.277,283	-0,142	-3,13	3,000	1.277,189	5,500	1.277,111	5,792	1.276,917	-0,194
0+585	2,456	1.279,808	-6,957	1.277,352	-4,500	1.277,302	-3,000	3,281	1.277,048	1.277,204	-0,156	-3,28	3,000	1.277,106	5,500	1.277,023	5,736	1.276,866	-0,157
0+590	2,068	1.279,352	-6,568	1.277,284	-4,500	1.277,233	-3,000	3,441	1.276,935	1.277,129	-0,194	-3,44	3,000	1.277,026	5,500	1.276,941	5,690	1.276,814	-0,127
0+595	2,057	1.279,278	-6,557	1.277,221	-4,500	1.277,167	-3,000	3,591	1.276,765	1.277,060	-0,295	-3,59	3,000	1.276,952	5,500	1.276,862	5,697	1.276,731	-0,131
0+600	1,866	1.279,029	-6,366	1.277,163	-4,500	1.277,107	-3,000	3,741	1.276,688	1.276,994	-0,306	-3,74	3,000	1.276,882	5,500	1.276,789	5,551	1.276,755	-0,034
0+605	1,444	1.278,553	-5,944	1.277,109	-4,500	1.277,051	-3,000	3,901	1.276,620	1.276,934	-0,314	-3,90	3,000	1.276,817	5,500	1.276,720	6,789	1.275,860	-0,860
0+608,337	-0,242	1.276,834	-4,863	1.277,076	-4,500	1.277,016	-3,000	4,001	1.276,556	1.276,896	-0,340	-4,00	3,000	1.276,776	5,500	1.276,676	7,857	1.275,105	-1,571
0+610	-0,300	1.276,758	-4,950	1.277,058	-4,500	1.276,998	-3,000	4,001	1.276,530	1.276,878	-0,348	-4,00	3,000	1.276,758	5,500	1.276,658	7,997	1.274,993	-1,665
0+615	-0,269	1.276,738	-4,904	1.277,007	-4,500	1.276,947	-3,000	4,001	1.276,470	1.276,827	-0,357	-4,00	3,000	1.276,707	5,500	1.276,607	8,164	1.274,831	-1,776
0+620	-0,369	1.276,591	-5,054	1.276,960	-4,500	1.276,900	-3,000	4,001	1.276,304	1.276,780	-0,476	-4,00	3,000	1.276,660	5,500	1.276,560	8,185	1.274,770	-1,790
0+625	-0,414	1.276,504	-5,121	1.276,918	-4,500	1.276,858	-3,000	4,001	1.276,564	1.276,738	-0,174	-4,00	3,000	1.276,618	5,500	1.276,518	8,403	1.274,583	-1,935
0+630	-0,197	1.276,684	-4,796	1.276,881	-4,500	1.276,821	-3,000	4,001	1.277,096	1.276,701	0,395	-4,00	3,000	1.276,581	5,500	1.276,481	8,749	1.274,315	-2,166
0+635	-0,267	1.276,581	-4,900	1.276,848	-4,500	1.276,788	-3,000	4,001	1.276,684	1.276,668	0,016	-4,00	3,000	1.276,548	5,500	1.276,448	8,693	1.274,320	-2,128
0+640	-0,185	1.276,635	-4,778	1.276,820	-4,500	1.276,760	-3,000	4,001	1.276,158	1.276,640	-0,482	-4,00	3,000	1.276,520	5,500	1.276,420	8,347	1.274,522	-1,898
0+645	-0,180	1.276,614	-4,769	1.276,794	-4,500	1.276,734	-3,000	4,001	1.276,182	1.276,614	-0,432	-4,00	3,000	1.276,494	5,500	1.276,394	8,139	1.274,635	-1,759
0+650	-0,186	1.276,582	-4,779	1.276,768	-4,500	1.276,708	-3,000	4,001	1.276,352	1.276,588	-0,236	-4,00	3,000	1.276,468	5,500	1.276,368	8,047	1.274,670	-1,698
0+655	-0,188	1.276,554	-4,782	1.276,742	-4,500	1.276,682	-3,000	4,001	1.276,487	1.276,562	-0,075	-4,00	3,000	1.276,442	5,500	1.276,342	7,949	1.274,710	-1,632
0+660	-0,034	1.276,683	-4,551	1.276,717	-4,500	1.276,657	-3,000	4,001	1.276,724	1.276,537	0,187	-4,00	3,000	1.276,417	5,500	1.276,317	7,185	1.275,194	-1,123
0+665	0,953	1.277,644	-5,453	1.276,691	-4,500	1.276,631	-3,000	4,001	1.277,015	1.276,511	0,504	-4,00	3,000	1.276,391	5,500	1.276,291	5,769	1.276,560	0,269
0+666,787	1,354	1.278,036	-5,854	1.276,682	-4,500	1.276,622	-3,000	4,001	1.277,115	1.276,502	0,613	-4,00	3,000	1.276,382	5,500	1.276,282	5,963	1.276,745	0,463
0+670	1,806	1.278,441	-6,306	1.276,635	-4,500	1.276,585	-3,000	3,341	1.277,300	1.276,485	0,815	-3,34	3,000	1.276,385	5,500	1.276,301	6,493	1.277,294	0,993
0+680	3,676	1.280,168	-8,176	1.276,492	-4,500	1.276,472	-3,000	1,301	1.277,778	1.276,433	1,345	-1,30	3,000	1.276,394	5,500	1.276,362	7,196	1.278,058	1,696
0+690	6,173	1.282,521	-10,673	1.276,348	-4,500	1.276,359	-3,000	-0,751	1.277,785	1.276,382	1,403	0,75	3,000	1.276,404	5,500	1.276,423	6,855	1.277,778	1,355

Lado Esquerdo							Eixo				Lado Direito					
Offset			Lateral		Bordo		Cota	Terreno	Projeto	Cota	Bordo		Lateral		Offset	
Estaca	Altura	Cota	Distância	Cota	Distância	%						Distância	Cota	Distância	Cota	Altura
0+700	4,595	1.280,799	-9,095	1.276,204	-3,000	-2,80	1,150	2,80	3,000	1.276,414	5,500	1.276,484	6,426	1.277,410	0,926	
0+705,878	4,009	1.280,129	-8,509	1.276,120	-3,000	-4,00	1,034	4,00	3,000	1.276,420	5,500	1.276,520	6,269	1.277,289	0,769	
0+710	3,698	1.279,817	-8,198	1.276,119	-3,000	-3,56	1,005	3,56	3,000	1.276,385	5,500	1.276,474	6,017	1.276,991	0,517	
0+720	3,210	1.279,325	-7,710	1.276,115	-3,000	-2,48	0,849	2,48	3,000	1.276,302	5,500	1.276,384	5,832	1.276,696	0,332	
0+730	2,874	1.278,952	-7,374	1.276,078	-3,000	-1,41	0,656	1,41	3,000	1.276,184	5,500	1.276,219	5,942	1.276,661	0,442	
0+735,878	2,732	1.278,756	-7,232	1.276,024	-3,000	-0,78	0,568	0,78	3,000	1.276,082	5,500	1.276,102	5,803	1.276,405	0,303	
0+740	2,660	1.278,632	-7,160	1.275,972	-3,000	-0,34	0,520	0,34	3,000	1.275,997	5,500	1.276,006	5,797	1.276,303	0,297	
0+750,383	2,260	1.278,050	-6,760	1.275,790	-3,000	0,78	0,472	-0,78	3,000	1.275,732	5,500	1.275,712	5,825	1.276,037	0,325	
0+755	1,948	1.277,634	-6,448	1.275,686	-3,000	1,27	0,486	-1,27	3,000	1.275,590	5,500	1.275,558	5,871	1.275,929	0,371	
0+760	1,609	1.277,165	-6,109	1.275,556	-3,000	1,81	0,517	-1,81	3,000	1.275,420	5,500	1.275,375	5,885	1.275,760	0,385	
0+765	1,255	1.276,664	-5,755	1.275,409	-3,000	2,35	0,571	-2,35	3,000	1.275,233	5,500	1.275,175	5,849	1.275,524	0,349	
0+770	1,076	1.276,322	-5,576	1.275,246	-3,000	2,89	0,602	-2,89	3,000	1.275,029	5,500	1.274,957	5,701	1.275,158	0,201	
0+775	0,912	1.275,977	-5,412	1.275,065	-3,000	3,42	0,658	-3,42	3,000	1.274,808	5,500	1.274,723	5,521	1.274,744	0,021	
0+780	0,640	1.275,507	-5,141	1.274,867	-3,000	3,96	0,724	-3,96	3,000	1.274,570	5,500	1.274,471	7,255	1.273,301	-1,170	
0+780,383	0,550	1.275,401	-5,050	1.274,851	-3,000	4,00	0,727	-4,00	3,000	1.274,551	5,500	1.274,451	7,267	1.273,273	-1,178	
0+785	0,842	1.275,472	-5,342	1.274,630	-3,000	4,00	0,744	-4,00	3,000	1.274,330	5,500	1.274,230	7,413	1.272,955	-1,275	
0+790	1,064	1.275,437	-5,564	1.274,373	-3,000	4,00	0,998	-4,00	3,000	1.274,073	5,500	1.273,973	8,948	1.271,674	-2,299	
0+795	1,406	1.275,506	-5,906	1.274,100	-3,000	4,00	1,250	-4,00	3,000	1.273,800	5,500	1.273,700	9,824	1.270,817	-2,883	
0+800	1,584	1.275,394	-6,084	1.273,810	-3,000	4,00	1,458	-4,00	3,000	1.273,510	5,500	1.273,410	10,805	1.269,873	-3,537	
0+805	1,916	1.275,418	-6,416	1.273,502	-3,000	4,00	1,688	-4,00	3,000	1.273,202	5,500	1.273,102	11,241	1.269,275	-3,827	
0+807,029	2,243	1.275,616	-6,743	1.273,373	-3,000	4,00	1,783	-4,00	3,000	1.273,073	5,500	1.272,973	11,433	1.269,018	-3,955	
0+810	2,521	1.275,686	-7,021	1.273,165	-3,000	3,71	1,940	-3,71	3,000	1.272,887	5,500	1.272,794	9,819	1.269,914	-2,880	
0+815	3,119	1.275,920	-7,619	1.272,801	-3,000	3,22	2,075	-3,22	3,000	1.272,560	5,500	1.272,480	5,724	1.272,704	0,224	
0+820	3,757	1.276,177	-8,257	1.272,420	-3,000	2,72	2,228	-2,72	3,000	1.272,216	5,500	1.272,148	5,989	1.272,637	0,489	
0+825	4,338	1.276,361	-8,839	1.272,023	-3,000	2,23	2,311	-2,23	3,000	1.271,855	5,500	1.271,800	6,213	1.272,513	0,713	
0+830	4,654	1.276,262	-9,154	1.271,608	-3,000	1,74	2,246	-1,74	3,000	1.271,477	5,500	1.271,434	6,324	1.272,258	0,824	
0+835	4,981	1.276,157	-9,481	1.271,176	-3,000	1,25	2,206	-1,25	3,000	1.271,082	5,500	1.271,051	6,402	1.271,952	0,901	
0+837,029	5,072	1.276,068	-9,572	1.270,996	-3,000	1,05	2,196	-1,05	3,000	1.270,917	5,500	1.270,891	6,462	1.271,853	0,962	

Lado Esquerdo						Eixo				Lado Direito									
Estaca	Offset		Lateral		Bordo		Cota	Terreno	Projeto	Cota	Vermelha	Bordo		Lateral		Offset			
	Altura	Cota	Distância	Cota	Distância	%						Distância	Cota	Distância	Cota	Distância	Cota	Distância	Cota
0+840	5,150	1.275,877	-9,650	1.270,727	-4,500	1.270,715	-3,000	0,751	1.272,878	1.270,693	2,185	-0,75	3,000	1.270,670	5,500	1.270,651	6,646	1.271,797	1,146
0+858,276	5,016	1.273,956	-9,516	1.268,940	-4,500	1.268,956	-3,000	-1,051	1.271,173	1.268,987	2,186	1,05	3,000	1.269,019	5,500	1.269,045	7,053	1.270,598	1,553
0+860	4,944	1.273,704	-9,444	1.268,760	-4,500	1.268,778	-3,000	-1,221	1.271,013	1.268,815	2,198	1,22	3,000	1.268,851	5,500	1.268,882	7,060	1.270,442	1,560
0+865	4,838	1.273,072	-9,338	1.268,234	-4,500	1.268,260	-3,000	-1,711	1.270,537	1.268,311	2,226	1,71	3,000	1.268,362	5,500	1.268,405	7,038	1.269,942	1,537
0+870	5,053	1.272,761	-9,553	1.267,708	-4,500	1.267,741	-3,000	-2,201	1.269,981	1.267,807	2,174	2,20	3,000	1.267,873	5,500	1.267,928	6,956	1.269,384	1,456
0+875	5,067	1.272,249	-9,567	1.267,182	-4,500	1.267,223	-3,000	-2,691	1.269,425	1.267,304	2,121	2,69	3,000	1.267,384	5,500	1.267,452	6,887	1.268,839	1,387
0+880	5,116	1.271,773	-9,617	1.266,657	-4,500	1.266,704	-3,000	-3,191	1.269,006	1.266,800	2,206	3,19	3,000	1.266,896	5,500	1.266,975	6,833	1.268,308	1,333
0+885	5,252	1.271,383	-9,752	1.266,131	-4,500	1.266,186	-3,000	-3,681	1.268,361	1.266,296	2,065	3,68	3,000	1.266,407	5,500	1.266,499	6,853	1.267,852	1,353
0+888,276	5,201	1.270,987	-9,702	1.265,786	-4,500	1.265,846	-3,000	-4,001	1.268,042	1.265,966	2,076	4,00	3,000	1.266,086	5,500	1.266,186	6,943	1.267,629	1,443
0+890	5,167	1.270,780	-9,667	1.265,613	-4,500	1.265,673	-3,000	-4,001	1.267,874	1.265,793	2,081	4,00	3,000	1.265,913	5,500	1.266,013	7,012	1.267,525	1,512
0+895	5,138	1.270,247	-9,638	1.265,109	-4,500	1.265,169	-3,000	-4,001	1.267,307	1.265,289	2,018	4,00	3,000	1.265,409	5,500	1.265,509	6,981	1.266,990	1,481
0+900	4,970	1.269,575	-9,470	1.264,605	-4,500	1.264,665	-3,000	-4,001	1.268,007	1.264,785	3,222	4,00	3,000	1.264,905	5,500	1.265,005	7,048	1.266,553	1,548
0+905	4,729	1.268,831	-9,229	1.264,102	-4,500	1.264,162	-3,000	-4,001	1.268,083	1.264,282	3,801	4,00	3,000	1.264,402	5,500	1.264,502	7,127	1.266,129	1,627
0+910	4,727	1.268,325	-9,227	1.263,598	-4,500	1.263,658	-3,000	-4,001	1.267,482	1.263,778	3,704	4,00	3,000	1.263,898	5,500	1.263,998	7,233	1.265,731	1,733
0+915	5,406	1.268,500	-9,906	1.263,094	-4,500	1.263,154	-3,000	-4,001	1.266,892	1.263,274	3,618	4,00	3,000	1.263,394	5,500	1.263,494	7,324	1.265,318	1,824
0+920	5,400	1.267,991	-9,901	1.262,591	-4,500	1.262,651	-3,000	-4,001	1.266,370	1.262,771	3,599	4,00	3,000	1.262,891	5,500	1.262,991	8,445	1.265,936	2,945
0+925	5,372	1.267,459	-9,872	1.262,087	-4,500	1.262,147	-3,000	-4,001	1.266,528	1.262,267	4,261	4,00	3,000	1.262,387	5,500	1.262,487	8,259	1.265,246	2,759
0+930	5,422	1.267,005	-9,922	1.261,583	-4,500	1.261,643	-3,000	-4,001	1.266,070	1.261,763	4,307	4,00	3,000	1.261,883	5,500	1.261,983	8,258	1.264,741	2,758
0+935	5,517	1.266,597	-10,017	1.261,080	-4,500	1.261,140	-3,000	-4,001	1.265,551	1.261,260	4,291	4,00	3,000	1.261,380	5,500	1.261,480	8,063	1.264,043	2,563
0+940	5,471	1.266,047	-9,971	1.260,576	-4,500	1.260,636	-3,000	-4,001	1.265,008	1.260,756	4,252	4,00	3,000	1.260,876	5,500	1.260,976	8,326	1.263,802	2,826
0+945	5,372	1.265,444	-9,872	1.260,072	-4,500	1.260,132	-3,000	-4,001	1.264,505	1.260,252	4,253	4,00	3,000	1.260,372	5,500	1.260,472	8,378	1.263,350	2,878
0+950	5,248	1.264,817	-9,748	1.259,569	-4,500	1.259,629	-3,000	-4,001	1.263,853	1.259,749	4,104	4,00	3,000	1.259,869	5,500	1.259,969	8,326	1.262,795	2,826
0+955	5,138	1.264,203	-9,638	1.259,065	-4,500	1.259,125	-3,000	-4,001	1.263,289	1.259,245	4,044	4,00	3,000	1.259,365	5,500	1.259,465	8,220	1.262,185	2,720
0+960	5,046	1.263,607	-9,546	1.258,561	-4,500	1.258,621	-3,000	-4,001	1.262,767	1.258,741	4,026	4,00	3,000	1.258,861	5,500	1.258,961	8,173	1.261,634	2,673
0+965	4,968	1.263,026	-9,468	1.258,058	-4,500	1.258,118	-3,000	-4,001	1.262,143	1.258,238	3,905	4,00	3,000	1.258,358	5,500	1.258,458	8,104	1.261,062	2,604
0+970	4,901	1.262,455	-9,401	1.257,554	-4,500	1.257,614	-3,000	-4,001	1.261,486	1.257,734	3,752	4,00	3,000	1.257,854	5,500	1.257,954	8,007	1.260,461	2,507
0+975	4,859	1.261,909	-9,359	1.257,050	-4,500	1.257,110	-3,000	-4,001	1.260,870	1.257,230	3,640	4,00	3,000	1.257,350	5,500	1.257,450	7,957	1.259,907	2,457
0+980	5,238	1.261,785	-9,738	1.256,547	-4,500	1.256,607	-3,000	-4,001	1.260,299	1.256,727	3,572	4,00	3,000	1.256,847	5,500	1.256,947	7,960	1.259,407	2,460

Lado Esquerdo						Eixo				Lado Direito							
Estaca	Offset		Lateral		Bordo		%	Cota	Terreno	Projeto	Cota	Bordo		Lateral		Offset	
	Altura	Cota	Distância	Cota	Distância	Cota						Distância	Cota	Distância	Cota		
0+985	4,883	1.260,926	-9,383	1.256,043	-3,000	-4,00	1.259,901	1.256,223	3,678	4,00	3,000	1.256,343	5,500	1.256,443	7,909	1.258,852	2,409
0+990	5,001	1.260,540	-9,502	1.255,539	-3,000	-4,00	1.259,538	1.255,719	3,819	4,00	3,000	1.255,839	5,500	1.255,939	7,879	1.258,318	2,379
0+995	5,196	1.260,232	-9,696	1.255,036	-3,000	-4,00	1.259,037	1.255,216	3,821	4,00	3,000	1.255,336	5,500	1.255,436	7,644	1.257,580	2,144
1	5,331	1.259,863	-9,831	1.254,532	-3,000	-4,00	1.258,523	1.254,712	3,811	4,00	3,000	1.254,832	5,500	1.254,932	7,638	1.257,070	2,138
1+5	5,514	1.259,542	-10,014	1.254,028	-3,000	-4,00	1.257,904	1.254,208	3,696	4,00	3,000	1.254,328	5,500	1.254,428	7,736	1.256,663	2,235
1+10	5,574	1.259,099	-10,074	1.253,525	-3,000	-4,00	1.257,117	1.253,705	3,412	4,00	3,000	1.253,825	5,500	1.253,925	7,467	1.255,892	1,967
1+15	5,428	1.258,449	-9,928	1.253,021	-3,000	-4,00	1.256,306	1.253,201	3,105	4,00	3,000	1.253,321	5,500	1.253,421	6,978	1.254,899	1,478
1+20	4,385	1.256,902	-8,885	1.252,517	-3,000	-4,00	1.255,166	1.252,697	2,469	4,00	3,000	1.252,817	5,500	1.252,917	5,575	1.252,992	0,075
1+25	3,643	1.255,657	-8,143	1.252,014	-3,000	-4,00	1.253,959	1.252,194	1,765	4,00	3,000	1.252,314	5,500	1.252,414	5,617	1.252,336	-0,078
1+30	3,169	1.254,679	-7,669	1.251,510	-3,000	-4,00	1.252,444	1.251,690	0,754	4,00	3,000	1.251,810	5,500	1.251,910	5,557	1.251,967	0,057
1+35	2,719	1.253,725	-7,219	1.251,006	-3,000	-4,00	1.251,968	1.251,186	0,782	4,00	3,000	1.251,306	5,500	1.251,406	5,611	1.251,517	0,111
1+40	2,619	1.253,122	-7,119	1.250,503	-3,000	-4,00	1.251,138	1.250,683	0,455	4,00	3,000	1.250,803	5,500	1.250,903	5,568	1.250,971	0,068
1+44,509	2,772	1.252,820	-7,272	1.250,048	-3,000	-4,00	1.250,582	1.250,228	0,354	4,00	3,000	1.250,348	5,500	1.250,448	5,572	1.250,520	0,072
1+45	2,772	1.252,772	-7,272	1.250,000	-3,000	-3,98	1.250,543	1.250,179	0,364	3,98	3,000	1.250,298	5,500	1.250,398	5,574	1.250,472	0,074
1+50	2,809	1.252,315	-7,309	1.249,506	-3,000	-3,76	1.250,131	1.249,675	0,456	3,76	3,000	1.249,788	5,500	1.249,882	5,571	1.249,953	0,071
1+55	2,900	1.251,912	-7,400	1.249,012	-3,000	-3,54	1.249,700	1.249,172	0,528	3,54	3,000	1.249,278	5,500	1.249,366	5,559	1.249,425	0,059
1+60	3,035	1.251,554	-7,535	1.248,519	-3,000	-3,32	1.249,232	1.248,668	0,564	3,32	3,000	1.248,768	5,500	1.248,850	5,566	1.248,916	0,066
1+65	3,301	1.251,326	-7,801	1.248,025	-3,000	-3,10	1.248,808	1.248,164	0,644	3,10	3,000	1.248,257	5,500	1.248,335	5,603	1.248,438	0,103
1+70	3,428	1.250,959	-7,928	1.247,531	-3,000	-2,88	1.248,387	1.247,661	0,726	2,88	3,000	1.247,747	5,500	1.247,819	5,666	1.247,985	0,166
1+74,509	3,603	1.250,689	-8,103	1.247,086	-3,000	-2,68	1.247,999	1.247,206	0,793	2,68	3,000	1.247,287	5,500	1.247,354	5,733	1.247,587	0,233
1+80	3,860	1.250,398	-8,360	1.246,538	-3,000	-2,56	1.247,525	1.246,653	0,872	2,56	3,000	1.246,730	5,500	1.246,794	5,838	1.247,132	0,338
1+82,672	3,959	1.250,223	-8,459	1.246,264	-3,000	-2,68	1.247,284	1.246,384	0,900	2,68	3,000	1.246,465	5,500	1.246,532	5,874	1.246,906	0,374
1+90	3,954	1.249,465	-8,454	1.245,511	-3,000	-3,00	1.246,575	1.245,646	0,929	3,00	3,000	1.245,736	5,500	1.245,811	5,943	1.246,254	0,443
1+100	3,975	1.248,459	-8,475	1.244,484	-3,000	-3,44	1.245,622	1.244,639	0,983	3,44	3,000	1.244,742	5,500	1.244,828	6,044	1.245,372	0,544
1+110	4,868	1.248,346	-9,368	1.243,478	-3,000	-3,88	1.244,453	1.243,653	0,800	3,88	3,000	1.243,769	5,500	1.243,866	6,004	1.244,370	0,504
1+112,672	4,972	1.248,188	-9,472	1.243,216	-3,000	-4,00	1.244,142	1.243,396	0,746	4,00	3,000	1.243,516	5,500	1.243,616	5,990	1.244,106	0,490
1+120	5,358	1.247,887	-9,858	1.242,529	-3,000	-4,00	1.243,239	1.242,709	0,530	4,00	3,000	1.242,829	5,500	1.242,929	5,977	1.243,406	0,477
1+130	3,758	1.245,386	-8,259	1.241,628	-3,000	-4,00	1.242,191	1.241,808	0,383	4,00	3,000	1.241,928	5,500	1.242,028	5,833	1.242,361	0,333

Lado Esquerdo						Eixo			Lado Direito									
Offset			Lateral		Bordo		Cota	Cota	Bordo		Lateral		Offset					
Estaca	Altura	Cota	Distância	Cota	Distância	Cota	%	Terreno	Projeto	Vermelha	%	Distância	Cota	Distância	Cota	Altura		
1+140	2,748	1.243,517	-7,248	1.240,769	-4,500	1.240,829	-4,00	1.241,355	1.240,949	0,406	4,00	3,000	1.241,069	5,500	1.241,169	5,523	1.241,154	-0,015
1+142,385	2,774	1.243,344	-7,274	1.240,570	-4,500	1.240,630	-4,00	1.241,148	1.240,750	0,398	4,00	3,000	1.240,870	5,500	1.240,970	5,709	1.240,831	-0,139
1+150	2,879	1.242,872	-7,379	1.239,993	-4,500	1.240,040	-3,00	1.240,566	1.240,133	0,433	3,10	3,000	1.240,226	5,500	1.240,303	5,680	1.240,183	-0,120
1+160	3,067	1.242,339	-7,567	1.239,272	-4,500	1.239,301	-3,00	1.239,769	1.239,359	0,410	1,93	3,000	1.239,417	5,500	1.239,465	5,842	1.239,237	-0,228
1+170	2,224	1.240,818	-6,724	1.238,594	-4,500	1.238,605	-3,00	1.238,655	1.238,627	0,028	0,75	3,000	1.238,650	5,500	1.238,669	5,937	1.238,378	-0,291
1+172,385	1,964	1.240,402	-6,465	1.238,438	-4,500	1.238,445	-3,00	1.238,387	1.238,459	-0,072	0,47	3,000	1.238,473	5,500	1.238,485	5,873	1.238,237	-0,248
1+180	1,104	1.239,062	-5,604	1.237,958	-4,500	1.237,951	-3,00	1.237,587	1.237,939	-0,352	-0,43	3,000	1.237,926	5,500	1.237,915	6,035	1.237,558	-0,357
1+180,307	1,069	1.239,008	-5,569	1.237,939	-4,500	1.237,932	-3,00	1.237,558	1.237,918	-0,360	-0,47	3,000	1.237,904	5,500	1.237,892	6,075	1.237,509	-0,383
1+185	1,009	1.238,665	-5,509	1.237,656	-4,500	1.237,641	-3,00	1.237,203	1.237,610	-0,407	-1,02	3,000	1.237,579	5,500	1.237,554	7,306	1.236,350	-1,204
1+190	0,940	1.238,304	-5,440	1.237,364	-4,500	1.237,340	-3,00	1.236,834	1.237,292	-0,458	-1,61	3,000	1.237,244	5,500	1.237,204	7,493	1.235,876	-1,328
1+195	0,646	1.237,730	-5,146	1.237,084	-4,500	1.237,051	-3,00	1.236,408	1.236,985	-0,577	-2,20	3,000	1.236,919	5,500	1.236,864	7,671	1.235,417	-1,447
1+200	-0,088	1.236,725	-4,632	1.236,813	-4,500	1.236,772	-3,00	1.235,972	1.236,688	-0,716	-2,79	3,000	1.236,604	5,500	1.236,535	8,018	1.234,856	-1,679
1+205	-0,330	1.236,224	-4,995	1.236,554	-4,500	1.236,503	-3,00	1.235,678	1.236,402	-0,724	-3,37	3,000	1.236,301	5,500	1.236,216	7,770	1.234,703	-1,513
1+210	-0,741	1.235,564	-5,612	1.236,305	-4,500	1.236,245	-3,00	1.235,340	1.236,126	-0,786	-3,96	3,000	1.236,008	5,500	1.235,908	7,292	1.234,713	-1,195
1+210,307	-0,770	1.235,520	-5,656	1.236,290	-4,500	1.236,230	-3,00	1.235,318	1.236,110	-0,792	-4,00	3,000	1.235,990	5,500	1.235,890	7,268	1.234,711	-1,179
1+215	-0,661	1.235,381	-5,491	1.236,042	-4,500	1.235,982	-3,00	1.235,178	1.235,862	-0,684	-4,00	3,000	1.235,742	5,500	1.235,642	7,015	1.234,632	-1,010
1+220	-0,791	1.234,996	-5,687	1.235,787	-4,500	1.235,727	-3,00	1.235,024	1.235,607	-0,583	-4,00	3,000	1.235,487	5,500	1.235,387	6,879	1.234,468	-0,919
1+225	-1,037	1.234,507	-6,056	1.235,544	-4,500	1.235,484	-3,00	1.235,037	1.235,364	-0,327	-4,00	3,000	1.235,244	5,500	1.235,144	6,845	1.234,247	-0,897
1+230	-0,877	1.234,434	-5,816	1.235,311	-4,500	1.235,251	-3,00	1.235,036	1.235,131	-0,095	-4,00	3,000	1.235,011	5,500	1.234,911	6,501	1.234,243	-0,668
1+235	-0,500	1.234,588	-5,251	1.235,088	-4,500	1.235,028	-3,00	1.234,942	1.234,908	0,034	-4,00	3,000	1.234,788	5,500	1.234,688	6,068	1.234,310	-0,378
1+240	-0,007	1.234,870	-4,510	1.234,877	-4,500	1.234,817	-3,00	1.234,821	1.234,697	0,124	-4,00	3,000	1.234,577	5,500	1.234,477	5,768	1.234,298	-0,179
1+245	0,142	1.234,817	-4,642	1.234,675	-4,500	1.234,615	-3,00	1.234,761	1.234,495	0,266	-4,00	3,000	1.234,375	5,500	1.234,275	5,560	1.234,335	0,060
1+250	0,301	1.234,786	-4,801	1.234,485	-4,500	1.234,425	-3,00	1.234,649	1.234,305	0,344	-4,00	3,000	1.234,185	5,500	1.234,085	5,784	1.234,369	0,284
1+250,802	0,320	1.234,775	-4,820	1.234,455	-4,500	1.234,395	-3,00	1.234,646	1.234,275	0,371	-4,00	3,000	1.234,155	5,500	1.234,055	5,817	1.234,372	0,317
1+255	0,870	1.235,154	-5,370	1.234,284	-4,500	1.234,231	-3,00	1.234,631	1.234,125	0,506	-3,53	3,000	1.234,019	5,500	1.233,931	5,952	1.234,383	0,452
1+260	0,953	1.235,042	-5,453	1.234,089	-4,500	1.234,045	-3,00	1.234,579	1.233,955	0,624	-2,97	3,000	1.233,866	5,500	1.233,792	6,046	1.234,338	0,546
1+265	1,346	1.235,251	-5,846	1.233,905	-4,500	1.233,869	-3,00	1.234,469	1.233,797	0,672	-2,41	3,000	1.233,724	5,500	1.233,664	6,270	1.234,434	0,770
1+270	1,595	1.235,327	-6,095	1.233,732	-4,500	1.233,704	-3,00	1,851	1.234,375	1.233,649	-1,85	3,000	1.233,593	5,500	1.233,547	6,415	1.234,462	0,915

Lado Esquerdo										Eixo				Lado Direito					
Offset				Lateral		Bordo		Cota		Cota		Cota		Bordo		Lateral		Offset	
Estaca	Altura	Cota	Distância	Cota	Distância	Cota	Distância	%	Terreno	Projeto	Vermelha	%	Distância	Cota	Distância	Cota	Distância	Cota	Altura
1+275	1,818	1.235,387	-6,318	1.233,569	-4,500	1.233,550	-3,000	1,29	1.234,196	1.233,511	0,685	-1,29	3,000	1.233,472	5,500	1.233,440	6,542	1.234,482	1,042
1+280	1,841	1.235,258	-6,341	1.233,417	-4,500	1.233,406	-3,000	0,73	1.233,970	1.233,384	0,586	-0,73	3,000	1.233,362	5,500	1.233,344	6,595	1.234,438	1,094
1+280,802	1,795	1.235,190	-6,456	1.233,395	-4,660	1.233,385	-3,160	0,64	1.233,923	1.233,365	0,558	-0,64	3,000	1.233,346	5,500	1.233,330	6,610	1.234,440	1,110
1+292,265	1,290	1.234,363	-8,243	1.233,073	-6,953	1.233,083	-5,453	-0,64	1.233,250	1.233,118	0,132	0,64	3,000	1.233,137	5,500	1.233,153	6,615	1.234,268	1,115
1+295	1,204	1.234,200	-8,704	1.232,996	-7,500	1.233,010	-6,000	-0,95	1.233,087	1.233,067	0,020	0,95	3,000	1.233,096	5,500	1.233,119	6,589	1.234,208	1,089
1+300	0,893	1.233,763	-8,393	1.232,870	-7,500	1.232,892	-6,000	-1,51	1.232,722	1.232,983	-0,261	1,51	3,000	1.233,028	5,500	1.233,066	6,351	1.233,917	0,851
1+315	-0,480	1.232,074	-8,220	1.232,554	-7,500	1.232,602	-6,000	-3,19	1.231,875	1.232,793	-0,918	3,19	3,000	1.232,889	5,500	1.232,969	6,085	1.232,579	-0,390
1+320	-0,863	1.231,630	-8,194	1.232,493	-6,900	1.232,549	-5,400	-3,75	1.231,583	1.232,751	-1,168	3,75	3,000	1.232,864	5,500	1.232,957	6,600	1.232,223	-0,734
1+322,265	-0,903	1.231,567	-7,983	1.232,470	-6,628	1.232,530	-5,128	-4,00	1.231,553	1.232,735	-1,182	4,00	3,000	1.232,855	5,500	1.232,955	6,966	1.231,985	-0,970
1+331,233	-1,042	1.231,405	-7,114	1.232,447	-5,552	1.232,507	-4,052	-4,00	1.231,460	1.232,669	-1,209	4,00	3,000	1.232,789	5,500	1.232,889	8,901	1.230,622	-2,267
1+340	-0,834	1.231,610	-5,751	1.232,444	-4,500	1.232,498	-3,000	-3,56	1.231,365	1.232,605	-1,240	3,56	3,000	1.232,711	5,500	1.232,800	9,975	1.229,816	-2,984
1+360	-0,852	1.231,491	-5,778	1.232,343	-4,500	1.232,381	-3,000	-2,56	1.231,417	1.232,458	-1,041	2,56	3,000	1.232,535	5,500	1.232,599	8,067	1.230,887	-1,712
1+361,233	-0,903	1.231,433	-5,854	1.232,336	-4,500	1.232,374	-3,000	-2,50	1.231,441	1.232,449	-1,008	2,50	3,148	1.232,528	5,648	1.232,590	8,145	1.230,925	-1,665
1+370	-0,471	1.231,781	-5,207	1.232,252	-4,500	1.232,296	-3,000	-2,94	1.231,687	1.232,385	-0,698	2,94	4,200	1.232,508	6,700	1.232,581	8,788	1.231,189	-1,392
1+380	0,221	1.232,377	-4,721	1.232,156	-4,500	1.232,208	-3,000	-3,44	1.232,015	1.232,311	-0,296	3,44	5,400	1.232,497	7,900	1.232,583	9,239	1.231,690	-0,893
1+385	0,751	1.232,860	-5,251	1.232,109	-4,500	1.232,164	-3,000	-3,69	1.232,369	1.232,275	0,094	3,69	6,000	1.232,496	8,500	1.232,588	9,323	1.232,039	-0,549
1+390	1,273	1.233,334	-5,773	1.232,061	-4,500	1.232,120	-3,000	-3,94	1.232,638	1.232,238	0,400	3,94	6,000	1.232,474	8,500	1.232,573	8,511	1.232,584	0,011
1+391,233	1,433	1.233,482	-5,933	1.232,049	-4,500	1.232,109	-3,000	-4,00	1.232,705	1.232,229	0,476	4,00	6,000	1.232,469	8,500	1.232,569	8,566	1.232,635	0,066
1+398,351	1,887	1.233,884	-6,387	1.231,997	-4,500	1.232,057	-3,000	-4,00	1.233,003	1.232,177	0,826	4,00	6,000	1.232,417	8,500	1.232,517	8,875	1.232,892	0,375
1+400	1,804	1.233,798	-6,304	1.231,994	-4,500	1.232,051	-3,000	-3,78	1.232,985	1.232,165	0,820	3,78	6,000	1.232,391	8,500	1.232,486	8,826	1.232,812	0,326
1+405	1,567	1.233,555	-6,067	1.231,988	-4,500	1.232,034	-3,000	-3,11	1.232,651	1.232,128	0,523	3,11	6,000	1.232,315	8,500	1.232,392	8,611	1.232,503	0,111
1+410	1,333	1.233,314	-5,833	1.231,981	-4,500	1.232,018	-3,000	-2,45	1.232,295	1.232,091	0,204	2,45	5,000	1.232,214	7,500	1.232,275	7,563	1.232,233	-0,042
1+420	0,692	1.232,660	-5,192	1.231,968	-4,500	1.231,984	-3,000	-1,11	1.231,574	1.232,018	-0,444	1,11	3,000	1.232,051	5,500	1.232,079	6,099	1.231,680	-0,399
1+428,351	-0,164	1.231,793	-4,746	1.231,957	-4,500	1.231,957	-3,000	0,00	1.231,054	1.231,957	-0,903	0,00	3,000	1.231,957	5,500	1.231,957	7,332	1.230,736	-1,221
1+440	-0,728	1.231,213	-5,591	1.231,941	-4,500	1.231,918	-3,000	1,55	1.230,224	1.231,871	-1,647	-1,55	3,000	1.231,825	5,500	1.231,786	8,822	1.229,571	-2,215
1+460	-1,188	1.230,649	-6,283	1.231,837	-4,500	1.231,799	-3,000	2,50	1.229,685	1.231,724	-2,039	-2,50	3,000	1.231,649	5,500	1.231,587	11,269	1.227,741	-3,846
1+480	-0,514	1.231,066	-5,271	1.231,580	-4,500	1.231,580	-3,000	0,06	1.229,913	1.231,578	-1,665	-0,06	3,000	1.231,576	5,500	1.231,575	8,743	1.229,413	-2,162
1+480,443	-0,502	1.231,073	-5,253	1.231,575	-4,500	1.231,575	-3,000	0,00	1.229,921	1.231,575	-1,654	0,00	3,000	1.231,575	5,500	1.231,575	8,628	1.229,489	-2,086

Lado Esquerdo						Eixo				Lado Direito										
Offset			Lateral			Bordo			Cota			Bordo			Lateral			Offset		
Estaca	Altura	Cota	Distância	Cota	Distância	%	Terreno	Projeto	Cota	Terreno	Projeto	Vermelha	%	Distância	Cota	Distância	Cota	Distância	Cota	Altura
1+490	-0,220	1.231,227	-4,830	1.231,447	-4,500	1.231,466	-3,000	-1,271	1.230,078	1.231,504	-1,426	1,27	3,000	1.231,543	5,500	1.231,575	7,107	1.230,504	-1,071	
1+500	-0,221	1.231,093	-4,832	1.231,314	-4,500	1.231,353	-3,000	-2,611	1.230,276	1.231,431	-1,155	2,61	3,000	1.231,509	5,500	1.231,575	6,169	1.231,129	-0,446	
1+510	-0,158	1.231,022	-4,737	1.231,180	-4,500	1.231,240	-3,000	-3,941	1.230,712	1.231,358	-0,646	3,94	3,000	1.231,476	5,500	1.231,575	5,538	1.231,613	0,038	
1+510,443	-0,133	1.231,042	-4,699	1.231,175	-4,500	1.231,235	-3,000	-4,001	1.230,733	1.231,355	-0,622	4,00	3,000	1.231,475	5,500	1.231,575	5,563	1.231,638	0,063	
1+520	0,417	1.231,521	-4,917	1.231,104	-4,500	1.231,164	-3,000	-4,001	1.231,184	1.231,284	-0,100	4,00	3,000	1.231,404	5,500	1.231,504	6,213	1.232,217	0,713	
1+530	0,826	1.231,857	-5,326	1.231,031	-4,500	1.231,091	-3,000	-4,001	1.231,530	1.231,211	0,319	4,00	3,000	1.231,331	5,500	1.231,431	6,277	1.232,208	0,777	
1+540	1,066	1.232,024	-5,566	1.230,958	-4,500	1.231,018	-3,000	-4,001	1.231,839	1.231,138	0,701	4,00	3,000	1.231,258	5,500	1.231,358	6,341	1.232,199	0,841	
1+542,530	1,104	1.232,044	-5,604	1.230,940	-4,500	1.231,000	-3,000	-4,001	1.231,866	1.231,120	0,746	4,00	3,000	1.231,240	5,500	1.231,340	6,554	1.232,394	1,054	
1+550	1,206	1.232,147	-5,706	1.230,941	-4,500	1.230,987	-3,000	-3,051	1.232,024	1.231,078	0,946	3,05	3,000	1.231,170	5,500	1.231,246	6,806	1.232,552	1,306	
1+560	1,545	1.232,512	-6,046	1.230,967	-4,500	1.230,993	-3,000	-1,771	1.232,316	1.231,046	1,270	1,77	3,000	1.231,100	5,500	1.231,144	7,270	1.232,914	1,770	
1+570	1,462	1.232,482	-5,962	1.231,020	-4,500	1.231,028	-3,000	-0,491	1.232,543	1.231,042	1,501	0,49	3,000	1.231,057	5,500	1.231,070	7,378	1.232,947	1,877	
1+573,870	1,643	1.232,691	-6,143	1.231,048	-4,500	1.231,048	-3,000	0,001	1.232,617	1.231,048	1,569	0,00	3,000	1.231,048	5,500	1.231,048	7,427	1.232,975	1,927	
1+580	1,925	1.233,026	-6,425	1.231,101	-4,500	1.231,089	-3,000	0,771	1.232,809	1.231,066	1,743	-0,77	3,000	1.231,043	5,500	1.231,024	7,593	1.233,117	2,093	
1+590	1,651	1.232,859	-6,151	1.231,208	-4,500	1.231,178	-3,000	2,021	1.232,926	1.231,117	1,809	-2,02	3,000	1.231,057	5,500	1.231,007	7,841	1.233,348	2,341	
1+600	1,283	1.232,626	-5,783	1.231,343	-4,500	1.231,294	-3,000	3,271	1.232,435	1.231,196	1,239	-3,27	3,000	1.231,098	5,500	1.231,017	7,868	1.233,385	2,368	
1+605,870	0,901	1.232,337	-5,402	1.231,436	-4,500	1.231,376	-3,000	4,001	1.232,195	1.231,256	0,939	-4,00	3,000	1.231,136	5,500	1.231,036	7,481	1.233,017	1,981	
1+610	0,652	1.232,135	-5,152	1.231,483	-4,500	1.231,423	-3,000	4,001	1.232,017	1.231,303	0,714	-4,00	3,000	1.231,183	5,500	1.231,083	7,173	1.232,756	1,673	
1+620	-0,142	1.231,476	-4,714	1.231,618	-4,500	1.231,558	-3,000	4,001	1.231,630	1.231,438	0,192	-4,00	3,000	1.231,318	5,500	1.231,218	6,405	1.232,123	0,905	
1+629,799	-0,294	1.231,482	-4,940	1.231,776	-4,500	1.231,716	-3,000	4,001	1.231,379	1.231,596	-0,217	-4,00	3,000	1.231,476	5,500	1.231,376	5,589	1.231,465	0,089	
1+630	-0,296	1.231,483	-4,944	1.231,779	-4,500	1.231,720	-3,000	3,991	1.231,381	1.231,600	-0,219	-3,99	3,000	1.231,480	5,500	1.231,380	5,570	1.231,450	0,070	
1+640	-0,584	1.231,366	-5,375	1.231,950	-4,500	1.231,897	-3,000	3,561	1.231,346	1.231,790	-0,444	-3,56	3,000	1.231,683	5,500	1.231,594	6,865	1.230,684	-0,910	
1+650	-0,737	1.231,411	-5,605	1.232,148	-4,500	1.232,101	-3,000	3,131	1.231,515	1.232,007	-0,492	-3,13	3,000	1.231,914	5,500	1.231,835	7,013	1.230,826	-1,009	
1+659,799	-0,826	1.231,543	-5,738	1.232,369	-4,500	1.232,329	-3,000	2,701	1.231,643	1.232,247	-0,604	-2,70	3,000	1.232,166	5,500	1.232,099	7,071	1.231,052	-1,047	
1+660	-0,821	1.231,553	-5,731	1.232,374	-4,500	1.232,334	-3,000	2,701	1.231,652	1.232,253	-0,601	-2,70	3,000	1.232,172	5,500	1.232,104	7,025	1.231,088	-1,016	
1+669,273	-0,526	1.232,099	-5,289	1.232,625	-4,500	1.232,585	-3,000	2,661	1.232,046	1.232,505	-0,459	-2,66	3,000	1.232,425	5,500	1.232,359	6,364	1.231,783	-0,576	
1+670	-0,495	1.232,151	-5,243	1.232,646	-4,500	1.232,606	-3,000	2,681	1.232,074	1.232,526	-0,452	-2,68	3,000	1.232,445	5,500	1.232,378	6,324	1.231,829	-0,549	
1+675	-0,286	1.232,515	-4,929	1.232,801	-4,500	1.232,758	-3,000	2,851	1.232,264	1.232,673	-0,409	-2,85	3,000	1.232,587	5,500	1.232,516	6,058	1.232,144	-0,372	
1+680	-0,151	1.232,811	-4,726	1.232,962	-4,500	1.232,917	-3,000	3,021	1.232,483	1.232,826	-0,343	-3,02	3,000	1.232,736	5,500	1.232,660	5,534	1.232,694	0,034	

ENGMETRIA - Ltda.

Projeto: SC-114 - Bentinho - SC

TRECHO

Notas de Serviço de Terraplenagem

Lado Esquerdo					Eixo					Lado Direito				
Offset		Lateral			Bordo		Terreno		Cota		Cota Vermelha		Bordo	
Estaca	Altura	Distância	Cota	Distância	Distância	%	Distância	%	Distância	Cota	Projeto	Vermelha	Distância	Cota
1+685	-0,137	1.232,994	-4,705	1.233,131	-4,500	1.233,083	-3,000	3,19	1.232,824	1.232,987	-0,163	-3,19	3,000	1.232,892
1+690	-0,096	1.233,210	-4,644	1.233,306	-4,500	1.233,255	-3,000	3,35	1.233,162	1.233,155	0,007	-3,35	3,000	1.233,054
1+695	0,007	1.233,495	-4,507	1.233,488	-4,500	1.233,435	-3,000	3,52	1.233,497	1.233,329	0,168	-3,52	3,000	1.233,224
1+700	0,104	1.233,781	-4,604	1.233,677	-4,500	1.233,622	-3,000	3,69	1.233,827	1.233,511	0,316	-3,69	3,000	1.233,308
1+705	0,120	1.233,990	-4,620	1.233,870	-4,500	1.233,812	-3,000	3,86	1.234,154	1.233,696	0,458	-3,86	3,000	1.233,580
1+709,273	0,222	1.234,256	-4,722	1.234,034	-4,500	1.233,974	-3,000	4,00	1.234,427	1.233,854	0,573	-4,00	3,000	1.233,734
1+710	0,260	1.234,321	-4,760	1.234,061	-4,500	1.234,001	-3,000	4,00	1.234,472	1.233,881	0,591	-4,00	3,000	1.233,761
1+715	0,474	1.234,720	-4,974	1.234,246	-4,500	1.234,186	-3,000	4,00	1.234,784	1.234,066	0,718	-4,00	3,000	1.233,946
1+716,197	0,512	1.234,802	-5,012	1.234,290	-4,500	1.234,230	-3,000	4,00	1.234,857	1.234,110	0,747	-4,00	3,000	1.233,990
1+720	0,703	1.235,120	-5,203	1.234,417	-4,500	1.234,362	-3,000	3,69	1.235,090	1.234,251	0,839	-3,69	3,000	1.234,140
1+725	0,951	1.235,534	-5,451	1.234,583	-4,500	1.234,534	-3,000	3,27	1.235,396	1.234,436	0,960	-3,27	3,000	1.234,338
1+730	1,105	1.235,855	-5,605	1.234,750	-4,500	1.234,707	-3,000	2,86	1.235,693	1.234,621	1,072	-2,86	3,000	1.234,535
1+735	1,200	1.236,116	-5,700	1.234,916	-4,500	1.234,879	-3,000	2,45	1.236,003	1.234,806	1,197	-2,45	3,000	1.234,733
1+740	1,344	1.236,426	-5,844	1.235,082	-4,500	1.235,052	-3,000	2,03	1.236,322	1.234,991	1,331	-2,03	3,000	1.234,930
1+745	1,483	1.236,732	-5,983	1.235,249	-4,500	1.235,225	-3,000	1,62	1.236,629	1.235,176	1,453	-1,62	3,000	1.235,127
1+750	1,656	1.237,071	-6,156	1.235,415	-4,500	1.235,397	-3,000	1,21	1.236,937	1.235,361	1,576	-1,21	3,000	1.235,325
1+755	1,739	1.237,321	-6,239	1.235,582	-4,500	1.235,570	-3,000	0,79	1.237,238	1.235,546	1,692	-0,79	3,000	1.235,522
1+756,197	1,763	1.237,384	-6,263	1.235,621	-4,500	1.235,611	-3,000	0,69	1.237,309	1.235,590	1,719	-0,69	3,000	1.235,570
1+760	1,771	1.237,519	-6,271	1.235,748	-4,500	1.235,742	-3,000	0,38	1.237,282	1.235,731	1,551	-0,38	3,000	1.235,720
1+772,966	1,839	1.238,010	-6,339	1.236,171	-4,500	1.236,185	-3,000	-0,87	1.237,668	1.236,211	1,457	0,87	3,000	1.236,237
1+780	2,079	1.238,478	-6,579	1.236,399	-4,500	1.236,423	-3,000	-1,61	1.237,990	1.236,471	1,519	1,61	3,000	1.236,519
1+790	3,112	1.239,834	-7,612	1.236,722	-4,500	1.236,762	-3,000	-2,65	1.238,717	1.236,841	1,876	2,65	3,000	1.236,920
1+800	4,401	1.241,446	-8,901	1.237,045	-4,500	1.237,100	-3,000	-3,69	1.239,591	1.237,211	2,380	3,69	3,000	1.237,322
1+802,966	4,914	1.242,055	-9,414	1.237,141	-4,500	1.237,201	-3,000	-4,00	1.239,976	1.237,321	2,655	4,00	3,000	1.237,441
1+810	5,297	1.242,698	-9,797	1.237,401	-4,500	1.237,461	-3,000	-4,00	1.240,713	1.237,581	3,132	4,00	3,000	1.237,701
1+820	5,247	1.243,018	-9,748	1.237,771	-4,500	1.237,831	-3,000	-4,00	1.240,908	1.237,951	2,957	4,00	3,000	1.238,071
1+823,527	4,847	1.242,749	-9,347	1.237,902	-4,500	1.237,962	-3,000	-4,00	1.240,843	1.238,082	2,761	4,00	3,000	1.238,202
1+830	4,078	1.242,258	-8,578	1.238,180	-4,500	1.238,227	-3,000	-3,14	1.240,730	1.238,321	2,409	3,14	3,000	1.238,415

Lado Esquerdo					Eixo					Lado Direito				
Estaca	Offset		Lateral		Bordo	%	Cota Terreno	Cota Projeto	Cota Vermelha	Bordo		Lateral		Offset
	Altura	Cota	Distância	Cota						Distância	Cota	Distância	Cota	
2+110	4,527	1.253,047	-9,028	1.248,520	-3,000	-3,19	-3,19	1.250,511	1.248,684	1,847	3,000	1.248,759	5,500	1.249,591
2+115	4,892	1.253,556	-9,393	1.248,664	-3,000	-3,62	-3,62	1.251,125	1.248,827	2,298	3,000	1.248,935	5,500	1.250,143
2+119,459	5,173	1.253,958	-9,673	1.248,785	-3,000	-4,00	-4,00	1.251,632	1.248,965	2,667	4,00	1.249,085	5,500	1.250,591
2+120	5,157	1.253,958	-9,657	1.248,801	-3,000	-4,00	-4,00	1.251,669	1.248,981	2,688	4,00	1.249,101	5,500	1.250,630
2+125	4,907	1.253,854	-9,407	1.248,947	-3,000	-4,00	-4,00	1.252,002	1.249,127	2,875	4,00	1.249,247	5,500	1.251,035
2+130	4,698	1.253,782	-9,198	1.249,084	-3,000	-4,00	-4,00	1.252,282	1.249,264	3,018	4,00	1.249,384	5,500	1.251,779
2+135	4,543	1.253,755	-9,044	1.249,212	-3,000	-4,00	-4,00	1.252,433	1.249,392	3,041	4,00	1.249,512	5,500	1.252,000
2+140	4,356	1.253,687	-8,856	1.249,331	-3,000	-4,00	-4,00	1.252,501	1.249,511	2,990	4,00	1.249,631	5,500	1.252,006
2+145	3,702	1.253,144	-8,202	1.249,442	-3,000	-4,00	-4,00	1.252,479	1.249,622	2,857	4,00	1.249,742	5,500	1.252,077
2+150	2,409	1.251,953	-6,909	1.249,544	-3,000	-4,00	-4,00	1.252,407	1.249,724	2,683	4,00	1.249,844	5,500	1.251,881
2+155	2,351	1.251,988	-6,851	1.249,637	-3,000	-4,00	-4,00	1.252,257	1.249,817	2,440	4,00	1.249,937	5,500	1.251,687
2+160	2,275	1.251,996	-6,775	1.249,721	-3,000	-4,00	-4,00	1.252,136	1.249,901	2,235	4,00	1.250,021	5,500	1.251,500
2+165	2,179	1.251,976	-6,679	1.249,797	-3,000	-4,00	-4,00	1.252,044	1.249,977	2,067	4,00	1.250,097	5,500	1.251,301
2+170	2,058	1.251,922	-6,558	1.249,864	-3,000	-4,00	-4,00	1.251,944	1.250,044	1,900	4,00	1.250,164	5,500	1.251,129
2+175	1,804	1.251,726	-6,304	1.249,922	-3,000	-4,00	-4,00	1.251,876	1.250,102	1,774	4,00	1.250,222	5,500	1.250,984
2+180	1,541	1.251,512	-6,041	1.249,971	-3,000	-4,00	-4,00	1.251,770	1.250,151	1,619	4,00	1.250,271	5,500	1.250,901
2+185	1,295	1.251,307	-5,795	1.250,012	-3,000	-4,00	-4,00	1.251,684	1.250,192	1,492	4,00	1.250,312	5,500	1.250,884
2+190	2,766	1.252,810	-7,266	1.250,044	-3,000	-4,00	-4,00	1.251,591	1.250,224	1,367	4,00	1.250,344	5,500	1.250,933
2+195	2,818	1.252,885	-7,318	1.250,067	-3,000	-4,00	-4,00	1.251,516	1.250,247	1,269	4,00	1.250,367	5,500	1.251,016
2+200	2,971	1.253,052	-7,471	1.250,081	-3,000	-4,00	-4,00	1.251,419	1.250,261	1,158	4,00	1.250,381	5,500	1.251,083
2+205	3,097	1.253,184	-7,597	1.250,087	-3,000	-4,00	-4,00	1.251,249	1.250,267	0,982	4,00	1.250,387	5,500	1.251,162
2+210	3,083	1.253,167	-7,583	1.250,084	-3,000	-4,00	-4,00	1.251,186	1.250,264	0,922	4,00	1.250,384	5,500	1.251,165
2+215	3,078	1.253,150	-7,578	1.250,072	-3,000	-4,00	-4,00	1.251,058	1.250,252	0,806	4,00	1.250,372	5,500	1.251,110
2+220	3,070	1.253,121	-7,570	1.250,051	-3,000	-4,00	-4,00	1.250,864	1.250,231	0,633	4,00	1.250,351	5,500	1.250,961
2+225	3,022	1.253,044	-7,522	1.250,022	-3,000	-4,00	-4,00	1.250,817	1.250,202	0,615	4,00	1.250,322	5,500	1.250,731
2+228,235	3,015	1.253,013	-7,515	1.249,998	-3,000	-4,00	-4,00	1.250,771	1.250,178	0,593	4,00	1.250,298	5,500	1.250,645
2+230	3,016	1.253,003	-7,516	1.249,987	-3,000	-3,92	-3,92	1.250,707	1.250,164	0,543	3,92	1.250,281	5,500	1.250,489
2+235	2,933	1.252,883	-7,433	1.249,950	-3,000	-3,69	-3,69	1.250,468	1.250,117	0,351	3,69	1.250,227	5,500	1.249,640

Lado Esquerdo										Eixo				Lado Direito					
Estaca	Offset		Lateral		Bordo		Cota	Terreno	Cota	Projeto	Cota	Vermelha	%	Bordo		Lateral		Offset	
	Altura	Cota	Distância	Cota	Distância	Cota								Distância	Cota	Distância	Cota	Distância	Cota
2+240	2,735	1.252,640	-7,235	1.249,905	-4,500	1.249,957	-3,000	-3,461	1.250,189	1.250,061	0,128	3,46	3,000	1.250,165	5,500	1.250,252	7,754	1.248,749	-1,503
2+245	2,598	1.252,453	-7,098	1.249,855	-4,500	1.249,904	-3,000	-3,241	1.249,905	1.250,001	-0,096	3,24	3,000	1.250,098	5,500	1.250,179	8,946	1.247,882	-2,297
2+250	2,494	1.252,300	-6,995	1.249,806	-4,500	1.249,851	-3,000	-3,011	1.249,630	1.249,941	-0,311	3,01	3,000	1.250,031	5,500	1.250,106	10,041	1.247,079	-3,027
2+255	2,438	1.252,194	-6,939	1.249,756	-4,500	1.249,798	-3,000	-2,781	1.249,310	1.249,881	-0,571	2,78	3,000	1.249,964	5,500	1.250,034	11,026	1.246,350	-3,684
2+258,235	2,344	1.252,068	-6,844	1.249,724	-4,500	1.249,763	-3,000	-2,631	1.249,171	1.249,842	-0,671	2,63	3,000	1.249,921	5,500	1.249,987	11,635	1.245,897	-4,090
2+260	2,185	1.251,891	-6,686	1.249,706	-4,500	1.249,744	-3,000	-2,551	1.249,109	1.249,821	-0,712	2,55	3,000	1.249,898	5,500	1.249,961	11,964	1.245,652	-4,309
2+264,103	1,836	1.251,489	-6,336	1.249,653	-4,500	1.249,693	-3,000	-2,631	1.248,952	1.249,772	-0,820	2,63	3,000	1.249,851	5,500	1.249,917	12,959	1.244,945	-4,972
2+265	1,760	1.251,401	-6,260	1.249,641	-4,500	1.249,681	-3,000	-2,671	1.248,917	1.249,761	-0,844	2,67	3,000	1.249,841	5,500	1.249,908	13,196	1.244,777	-5,131
2+270	1,359	1.250,929	-5,859	1.249,570	-4,500	1.249,614	-3,000	-2,901	1.248,726	1.249,701	-0,975	2,90	3,000	1.249,788	5,500	1.249,861	14,435	1.243,904	-5,957
2+275	-0,036	1.249,464	-4,555	1.249,500	-4,500	1.249,547	-3,000	-3,131	1.248,532	1.249,641	-1,109	3,13	3,000	1.249,735	5,500	1.249,813	15,597	1.243,082	-6,731
2+280	-0,027	1.249,403	-4,540	1.249,430	-4,500	1.249,480	-3,000	-3,361	1.248,415	1.249,581	-1,166	3,36	3,000	1.249,682	5,500	1.249,766	15,861	1.242,859	-6,907
2+285	1,055	1.250,417	-5,555	1.249,362	-4,500	1.249,416	-3,000	-3,591	1.248,329	1.249,523	-1,194	3,59	3,000	1.249,631	5,500	1.249,720	15,304	1.243,184	-6,536
2+290	1,161	1.250,459	-5,661	1.249,298	-4,500	1.249,355	-3,000	-3,811	1.248,271	1.249,470	-1,199	3,81	3,000	1.249,584	5,500	1.249,679	14,535	1.243,656	-6,023
2+294,103	1,371	1.250,620	-5,871	1.249,249	-4,500	1.249,309	-3,000	-4,001	1.248,226	1.249,429	-1,203	4,00	3,000	1.249,549	5,500	1.249,649	13,708	1.244,177	-5,472
2+295	1,439	1.250,679	-5,939	1.249,240	-4,500	1.249,300	-3,000	-4,001	1.248,215	1.249,420	-1,205	4,00	3,000	1.249,540	5,500	1.249,640	13,494	1.244,311	-5,329
2+300	1,390	1.250,585	-5,891	1.249,195	-4,500	1.249,255	-3,000	-4,001	1.248,162	1.249,375	-1,213	4,00	3,000	1.249,495	5,500	1.249,595	13,023	1.244,579	-5,016
2+304,616	1,338	1.250,495	-5,838	1.249,157	-4,500	1.249,217	-3,000	-4,001	1.248,108	1.249,337	-1,229	4,00	3,000	1.249,457	5,500	1.249,557	12,740	1.244,730	-4,827
2+305	1,312	1.250,469	-5,812	1.249,157	-4,500	1.249,216	-3,000	-3,951	1.248,103	1.249,334	-1,231	3,95	3,000	1.249,453	5,500	1.249,552	12,705	1.244,749	-4,803
2+310	0,983	1.250,133	-5,483	1.249,150	-4,500	1.249,199	-3,000	-3,281	1.248,064	1.249,298	-1,234	3,28	3,000	1.249,396	5,500	1.249,478	12,141	1.245,051	-4,427
2+315	0,702	1.249,850	-5,202	1.249,148	-4,500	1.249,187	-3,000	-2,621	1.248,030	1.249,266	-1,236	2,62	3,000	1.249,344	5,500	1.249,409	11,457	1.245,438	-3,971
2+320	0,845	1.249,995	-5,345	1.249,150	-4,500	1.249,179	-3,000	-1,951	1.248,008	1.249,238	-1,230	1,95	3,000	1.249,296	5,500	1.249,345	11,875	1.245,095	-4,250
2+325	0,924	1.250,080	-5,424	1.249,156	-4,500	1.249,176	-3,000	-1,281	1.248,004	1.249,214	-1,210	1,28	3,000	1.249,252	5,500	1.249,284	11,885	1.245,027	-4,257
2+330	1,020	1.250,187	-5,520	1.249,167	-4,500	1.249,176	-3,000	-0,621	1.247,972	1.249,195	-1,223	0,62	3,000	1.249,213	5,500	1.249,228	11,695	1.245,098	-4,130
2+334,616	-0,072	1.249,108	-4,608	1.249,180	-4,500	1.249,180	-3,000	0,001	1.247,981	1.249,180	-1,199	0,00	3,000	1.249,180	5,500	1.249,180	11,443	1.245,218	-3,962
2+340	-0,175	1.249,026	-4,762	1.249,201	-4,500	1.249,190	-3,000	0,721	1.248,031	1.249,169	-1,138	-0,72	3,000	1.249,147	5,500	1.249,129	11,409	1.245,189	-3,940
2+360	-0,600	1.248,680	-5,400	1.249,280	-4,500	1.249,243	-3,000	2,501	1.248,262	1.249,168	-0,906	-2,50	3,000	1.249,093	5,500	1.249,030	9,752	1.246,195	-2,835
2+380	-0,492	1.248,865	-5,238	1.249,357	-4,500	1.249,317	-3,000	2,711	1.248,707	1.249,235	-0,528	-2,71	3,000	1.249,154	5,500	1.249,086	5,721	1.249,306	0,220
2+391,848	-0,315	1.249,131	-4,972	1.249,446	-4,500	1.249,400	-3,000	3,081	1.249,171	1.249,307	-0,136	-3,08	3,000	1.249,215	5,500	1.249,138	5,664	1.249,302	0,164

Lado Esquerdo					Eixo					Lado Direito				
Estaca	Offset		Lateral		Bordo	%	Cota	Terreno	Cota	Projeto	Cota	Bordo		Offset
	Altura	Cota	Distância	Cota								Distância	Cota	
2+395	-0,291	1.249,182	-4,936	1.249,473	-3,000	3,17	1.249,291	1.249,331	-0,040	-3,17	3,000	1.249,235	5,500	1.249,300
2+400	-0,184	1.249,337	-4,777	1.249,521	-3,000	3,33	1.249,519	1.249,371	0,148	-3,33	3,000	1.249,271	5,500	1.249,467
2+405	-0,073	1.249,497	-4,610	1.249,570	-3,000	3,48	1.249,681	1.249,414	0,267	-3,48	3,000	1.249,309	5,500	1.249,679
2+410	-0,011	1.249,609	-4,517	1.249,620	-3,000	3,64	1.249,822	1.249,456	0,366	-3,64	3,000	1.249,347	5,500	1.249,908
2+415	-0,049	1.249,620	-4,574	1.249,669	-3,000	3,79	1.249,912	1.249,499	0,413	-3,79	3,000	1.249,385	5,500	1.249,127
2+420	0,671	1.250,389	-5,171	1.249,718	-3,000	3,94	1.249,995	1.249,541	0,454	-3,94	3,000	1.249,423	5,500	1.250,186
2+421,848	0,536	1.250,273	-5,036	1.249,737	-3,000	4,00	1.250,024	1.249,557	0,467	-4,00	3,000	1.249,437	5,500	1.250,182
2+425	0,304	1.250,068	-4,804	1.249,764	-3,000	4,00	1.250,072	1.249,584	0,488	-4,00	3,000	1.249,464	5,500	1.250,156
2+430	0,417	1.250,223	-4,917	1.249,806	-3,000	4,00	1.250,174	1.249,626	0,548	-4,00	3,000	1.249,506	5,500	1.250,103
2+435	0,579	1.250,428	-5,079	1.249,849	-3,000	4,00	1.250,290	1.249,669	0,621	-4,00	3,000	1.249,549	5,500	1.250,099
2+440	0,528	1.250,419	-5,028	1.249,891	-3,000	4,00	1.250,084	1.249,711	0,353	-4,00	3,000	1.249,591	5,500	1.249,787
2+445	0,426	1.250,360	-4,926	1.249,934	-3,000	4,00	1.249,912	1.249,754	0,158	-4,00	3,000	1.249,634	5,500	1.249,384
2+449,807	0,167	1.250,141	-4,667	1.249,974	-3,000	4,00	1.249,871	1.249,794	0,077	-4,00	3,000	1.249,674	5,500	1.249,164
2+450	0,157	1.250,133	-4,657	1.249,976	-3,000	3,99	1.249,867	1.249,796	0,071	-3,99	3,000	1.249,676	5,500	1.249,154
2+455	-0,149	1.249,858	-4,724	1.250,007	-3,000	3,74	1.249,809	1.249,839	-0,030	-3,74	3,000	1.249,726	5,500	1.249,228
2+460	-0,232	1.249,806	-4,848	1.250,038	-3,000	3,49	1.249,855	1.249,881	-0,026	-3,49	3,000	1.249,776	5,500	1.249,495
2+465	-0,227	1.249,842	-4,841	1.250,069	-3,000	3,24	1.249,886	1.249,924	-0,038	-3,24	3,000	1.249,826	5,500	1.249,833
2+470	-0,252	1.249,849	-4,878	1.250,101	-3,000	2,99	1.249,911	1.249,966	-0,055	-2,99	3,000	1.249,876	5,500	1.250,074
2+475	-0,207	1.249,925	-4,811	1.250,132	-3,000	2,74	1.249,987	1.250,009	-0,022	-2,74	3,000	1.249,926	5,500	1.250,206
2+479,807	-0,039	1.250,123	-4,559	1.250,162	-3,000	2,50	1.250,180	1.250,049	0,131	-2,50	3,000	1.249,974	5,500	1.250,391
2+480	-0,033	1.250,131	-4,549	1.250,164	-3,000	2,51	1.250,189	1.250,051	0,138	-2,51	3,000	1.249,976	5,500	1.250,398
2+490	0,358	1.250,629	-4,858	1.250,271	-3,000	3,01	1.250,626	1.250,136	0,490	-3,01	3,000	1.250,046	5,500	1.250,707
2+500	0,995	1.251,374	-5,495	1.250,379	-3,000	3,51	1.251,281	1.250,221	1,060	-3,51	3,000	1.250,116	5,500	1.251,422
2+509,807	1,992	1.252,476	-6,492	1.250,484	-3,000	4,00	1.251,741	1.250,304	1,437	-4,00	3,000	1.250,184	5,500	1.252,132
2+510	2,014	1.252,500	-6,514	1.250,486	-3,000	4,00	1.251,744	1.250,306	1,438	-4,00	3,000	1.250,186	5,500	1.252,150
2+520	0,794	1.251,365	-5,294	1.250,571	-3,000	4,00	1.251,459	1.250,391	1,068	-4,00	3,000	1.250,271	5,500	1.252,448
2+527,310	0,491	1.251,124	-4,991	1.250,633	-3,000	4,00	1.251,201	1.250,453	0,748	-4,00	3,000	1.250,333	5,500	1.252,176
2+530	0,483	1.251,135	-4,983	1.250,652	-3,000	3,92	1.251,162	1.250,476	0,686	-3,92	3,000	1.250,358	5,500	1.252,064

Lado Esquerdo										Eixo				Lado Direito					
Offset			Lateral			Bordo			Cota		Cota		Bordo		Lateral		Offset		
Estaca	Altura	Cota	Distância	Cota	Distância	%	Terreno	Projeto	Vermelha	%	Distância	Cota	Distância	Cota	Distância	Cota	Altura		
2+540	-0,218	1.250,578	-6,827	1.250,796	-6,500	3,61	1.251,073	1.250,561	0,512	-3,61	3,000	1.250,453	5,500	1.250,362	6,827	1.251,689	1,327		
2+545	-0,616	1.250,247	-8,424	1.250,863	-7,500	3,46	1.251,043	1.250,604	0,439	-3,46	3,000	1.250,500	5,500	1.250,413	6,621	1.251,534	1,121		
2+550	-0,860	1.250,034	-8,791	1.250,894	-7,500	3,30	1.251,011	1.250,646	0,365	-3,30	3,000	1.250,547	5,500	1.250,464	6,625	1.251,589	1,125		
2+557,310	-0,986	1.249,953	-8,979	1.250,939	-7,500	3,08	1.251,007	1.250,708	0,299	-3,08	3,000	1.250,616	5,500	1.250,539	6,588	1.251,627	1,088		
2+560	-0,960	1.249,996	-8,939	1.250,956	-7,500	2,99	1.251,017	1.250,731	0,286	-2,99	3,000	1.250,641	5,500	1.250,566	6,504	1.251,570	1,004		
2+565	-0,911	1.250,076	-8,866	1.250,987	-7,500	2,84	1.251,036	1.250,774	0,262	-2,84	3,000	1.250,688	5,500	1.250,617	6,311	1.251,428	0,811		
2+580	-0,255	1.250,789	-6,083	1.251,044	-5,700	2,50	1.251,240	1.250,901	0,339	-2,50	3,000	1.250,826	5,500	1.250,764	5,974	1.251,237	0,473		
2+590	0,336	1.251,435	-4,836	1.251,099	-4,500	2,50	1.251,500	1.250,986	0,514	-2,50	3,000	1.250,911	5,500	1.250,849	6,512	1.251,861	1,012		
2+600	0,598	1.251,782	-5,098	1.251,184	-4,500	2,50	1.251,664	1.251,071	0,593	-2,50	4,200	1.250,966	6,700	1.250,904	8,045	1.252,249	1,345		
2+615	0,731	1.252,042	-5,231	1.251,311	-4,500	2,50	1.251,828	1.251,199	0,629	-2,50	6,000	1.251,048	8,500	1.250,986	9,597	1.252,083	1,097		
2+620	0,616	1.251,976	-5,116	1.251,360	-4,500	2,66	1.251,794	1.251,241	0,553	-2,66	6,000	1.251,082	8,500	1.251,015	9,386	1.251,901	0,886		
2+633,701	0,279	1.251,775	-4,779	1.251,496	-4,500	3,08	1.251,704	1.251,357	0,347	-3,08	6,000	1.251,173	8,500	1.251,096	9,139	1.251,735	0,639		
2+635	0,207	1.251,716	-4,707	1.251,509	-4,500	3,12	1.251,704	1.251,369	0,335	-3,12	6,000	1.251,181	8,500	1.251,104	9,123	1.251,726	0,622		
2+640	-0,059	1.251,499	-4,589	1.251,558	-4,500	3,27	1.251,705	1.251,411	0,294	-3,27	5,000	1.251,247	7,500	1.251,166	8,236	1.251,902	0,736		
2+650	-0,540	1.251,117	-5,309	1.251,657	-4,500	3,58	1.251,702	1.251,496	0,206	-3,58	3,000	1.251,389	5,500	1.251,299	5,555	1.251,354	0,055		
2+660	-0,454	1.251,302	-5,181	1.251,756	-4,500	3,89	1.251,759	1.251,581	0,178	-3,89	3,000	1.251,464	5,500	1.251,367	6,013	1.251,880	0,513		
2+663,701	-0,350	1.251,442	-5,025	1.251,792	-4,500	4,00	1.251,790	1.251,612	0,178	-4,00	3,000	1.251,492	5,500	1.251,392	6,295	1.252,187	0,795		
2+670	-0,040	1.251,806	-4,561	1.251,846	-4,500	4,00	1.251,837	1.251,666	0,171	-4,00	3,000	1.251,546	5,500	1.251,446	6,450	1.252,396	0,950		
2+680	0,145	1.252,076	-4,645	1.251,931	-4,500	4,00	1.251,995	1.251,751	0,244	-4,00	3,000	1.251,631	5,500	1.251,531	6,522	1.252,553	1,022		
2+680,743	0,148	1.252,085	-4,648	1.251,937	-4,500	4,00	1.252,009	1.251,757	0,252	-4,00	3,000	1.251,637	5,500	1.251,537	6,518	1.252,555	1,018		
2+690	0,203	1.252,205	-4,703	1.252,002	-4,500	3,68	1.252,188	1.251,836	0,352	-3,68	3,000	1.251,726	5,500	1.251,634	6,461	1.252,595	0,961		
2+700	0,166	1.252,237	-4,666	1.252,071	-4,500	3,34	1.252,307	1.251,921	0,386	-3,34	3,000	1.251,821	5,500	1.251,737	6,081	1.252,318	0,581		
2+710	0,046	1.252,187	-4,546	1.252,141	-4,500	2,99	1.252,388	1.252,006	0,382	-2,99	3,000	1.251,916	5,500	1.251,841	5,971	1.252,312	0,471		
2+710,743	0,057	1.252,203	-4,557	1.252,146	-4,500	2,97	1.252,395	1.252,012	0,383	-2,97	3,000	1.251,923	5,500	1.251,849	5,975	1.252,324	0,475		
2+720	0,171	1.252,381	-4,671	1.252,210	-4,500	2,65	1.252,477	1.252,091	0,386	-2,65	3,000	1.252,011	5,500	1.251,945	5,952	1.252,397	0,452		
2+738,007	0,371	1.252,699	-4,871	1.252,328	-4,500	2,92	1.252,608	1.252,197	0,411	-2,92	3,000	1.252,109	5,500	1.252,036	5,985	1.252,521	0,485		
2+740	0,414	1.252,751	-4,915	1.252,337	-4,500	2,98	1.252,626	1.252,203	0,423	-2,98	3,000	1.252,113	5,500	1.252,039	6,030	1.252,569	0,530		
2+750	0,653	1.253,016	-5,153	1.252,363	-4,500	3,29	1.252,717	1.252,215	0,502	-3,29	3,000	1.252,116	5,500	1.252,034	6,245	1.252,779	0,745		

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Notas de Serviço de Terraplenagem

Lado Esquerdo					Eixo					Lado Direito				
Estaca	Offset		Lateral		Bordo	%	Cota	Terreno	Cota	Projeto	Cota	Bordo		Lateral
	Altura	Cota	Distância	Cota								Distância	Cota	
2+760	0,778	1.253,138	-5,278	1.252,360	-3,000	3,60	1.252,819	1.252,198	0,621	-3,60	3,000	1.252,090	5,500	1.252,000
2+770	0,890	1.253,217	-5,390	1.252,327	-3,000	3,91	1.252,902	1.252,151	0,751	-3,91	3,000	1.252,034	5,500	1.251,937
2+773,007	0,933	1.253,245	-5,433	1.252,312	-3,000	4,00	1.252,925	1.252,132	0,793	-4,00	3,000	1.252,012	5,500	1.251,912
2+780	1,057	1.253,313	-5,557	1.252,256	-3,000	4,00	1.252,964	1.252,076	0,888	-4,00	3,000	1.251,956	5,500	1.251,856
2+790	1,123	1.253,274	-5,623	1.252,151	-3,000	4,00	1.253,013	1.251,971	1,042	-4,00	3,000	1.251,851	5,500	1.251,751
2+800	1,270	1.253,288	-5,770	1.252,018	-3,000	4,00	1.253,077	1.251,838	1,239	-4,00	3,000	1.251,718	5,500	1.251,618
2+810	1,529	1.253,384	-6,029	1.251,855	-3,000	4,00	1.253,183	1.251,675	1,508	-4,00	3,000	1.251,555	5,500	1.251,455
2+820	1,455	1.253,118	-5,955	1.251,663	-3,000	4,00	1.252,962	1.251,483	1,479	-4,00	3,000	1.251,363	5,500	1.251,263
2+830	1,250	1.252,691	-5,750	1.251,441	-3,000	4,00	1.252,589	1.251,261	1,328	-4,00	3,000	1.251,141	5,500	1.251,041
2+839,553	1,031	1.252,234	-5,531	1.251,203	-3,000	4,00	1.252,213	1.251,023	1,190	-4,00	3,000	1.250,903	5,500	1.250,803
2+840	1,025	1.252,215	-5,525	1.251,190	-3,000	3,99	1.252,195	1.251,011	1,184	-3,99	3,000	1.250,891	5,500	1.250,792
2+850	0,852	1.251,751	-5,352	1.250,899	-3,000	3,72	1.251,818	1.250,731	1,087	-3,72	3,000	1.250,620	5,500	1.250,527
2+860	0,811	1.251,389	-5,311	1.250,578	-3,000	3,46	1.251,423	1.250,423	1,000	-3,46	3,000	1.250,319	5,500	1.250,232
2+870	0,843	1.251,072	-5,343	1.250,229	-3,000	3,20	1.251,039	1.250,085	0,954	-3,20	3,000	1.249,989	5,500	1.249,909
2+874,553	0,865	1.250,925	-5,365	1.250,060	-3,000	3,08	1.250,855	1.249,921	0,934	-3,08	3,000	1.249,829	5,500	1.249,752
2+880	0,855	1.250,705	-5,355	1.249,850	-3,000	2,93	1.250,556	1.249,718	0,838	-2,93	3,000	1.249,630	5,500	1.249,556
2+900	0,684	1.249,693	-5,184	1.249,009	-3,000	2,50	1.249,426	1.248,896	0,530	-2,50	3,000	1.248,821	5,500	1.248,759
2+920	0,148	1.248,304	-4,648	1.248,156	-3,000	0,37	1.248,079	1.248,139	-0,060	-0,37	3,000	1.248,128	5,500	1.248,119
2+922,747	0,047	1.248,102	-4,547	1.248,055	-3,000	0,00	1.247,870	1.248,055	-0,185	0,00	3,000	1.248,055	5,500	1.248,055
2+925	-0,049	1.247,926	-4,574	1.247,975	-3,000	-0,30	1.247,698	1.247,989	-0,291	0,30	3,000	1.247,998	5,500	1.248,005
2+930	-0,303	1.247,507	-4,954	1.247,810	-3,000	-0,97	1.247,313	1.247,854	-0,541	0,97	3,000	1.247,883	5,500	1.247,907
2+935	-0,636	1.247,024	-5,455	1.247,660	-3,000	-1,63	1.246,897	1.247,734	-0,837	1,63	3,000	1.247,783	5,500	1.247,824
2+940	-1,186	1.246,340	-6,279	1.247,526	-3,000	-2,30	1.246,397	1.247,629	-1,232	2,30	3,000	1.247,698	5,500	1.247,756
2+945	-1,682	1.245,725	-7,023	1.247,407	-3,000	-2,97	1.246,026	1.247,540	-1,514	2,97	3,000	1.247,629	5,500	1.247,704
2+950	-2,071	1.245,232	-7,607	1.247,303	-3,000	-3,63	1.245,726	1.247,467	-1,741	3,63	3,000	1.247,576	5,500	1.247,667
2+952,747	-2,262	1.244,991	-7,894	1.247,253	-3,000	-4,00	1.245,551	1.247,433	-1,882	4,00	3,000	1.247,553	5,500	1.247,653
2+955	-2,037	1.245,192	-7,556	1.247,229	-3,000	-4,00	1.245,477	1.247,409	-1,932	4,00	3,000	1.247,529	5,500	1.247,629
2+960	-2,265	1.244,921	-7,897	1.247,186	-3,000	-4,00	1.245,357	1.247,366	-2,009	4,00	3,000	1.247,486	5,500	1.247,586

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Notas de Serviço de Terraplenagem

Lado Esquerdo										Eixo				Lado Direito					
Offset			Lateral			Bordo			Cota		Bordo		Lateral		Offset				
Estaca	Altura	Cota	Distância	Cota	Distância	%	Terreno	Projeto	Cota	Vermelha	%	Distância	Cota	Distância	Cota	Altura			
2+965	-2,591	1.244,568	-8,387	1.247,159	-4,500	1.247,219	-3,000	-4,00	1.245,282	1.247,339	-2,057	4,00	3,000	1.247,459	5,500	1.247,559	9,210	1.245,086	-2,473
2+970	-2,987	1.244,160	-8,981	1.247,147	-4,500	1.247,207	-3,000	-4,00	1.245,279	1.247,327	-2,048	4,00	3,000	1.247,447	5,500	1.247,547	9,439	1.244,921	-2,626
2+975	-3,196	1.243,954	-9,295	1.247,150	-4,500	1.247,210	-3,000	-4,00	1.245,276	1.247,330	-2,054	4,00	3,000	1.247,450	5,500	1.247,550	9,566	1.244,840	-2,710
2+980	-3,068	1.244,101	-9,102	1.247,169	-4,500	1.247,229	-3,000	-4,00	1.245,285	1.247,349	-2,064	4,00	3,000	1.247,469	5,500	1.247,569	9,470	1.244,922	-2,647
2+981,175	-3,057	1.244,119	-9,086	1.247,176	-4,500	1.247,236	-3,000	-4,00	1.245,287	1.247,356	-2,069	4,00	3,000	1.247,476	5,500	1.247,576	9,448	1.244,944	-2,632
2+985	-3,108	1.244,119	-9,162	1.247,227	-4,500	1.247,279	-3,000	-3,49	1.245,294	1.247,384	-2,090	3,49	3,000	1.247,488	5,500	1.247,576	9,331	1.245,022	-2,554
2+990	-3,278	1.244,028	-9,417	1.247,306	-4,500	1.247,349	-3,000	-2,82	1.245,340	1.247,434	-2,094	2,82	3,000	1.247,518	5,500	1.247,589	9,191	1.245,129	-2,460
2+995	-3,555	1.243,847	-9,832	1.247,402	-4,500	1.247,434	-3,000	-2,16	1.245,387	1.247,499	-2,112	2,16	3,000	1.247,563	5,500	1.247,617	9,156	1.245,180	-2,437
3	-3,919	1.243,593	-10,379	1.247,512	-4,500	1.247,535	-3,000	-1,49	1.245,463	1.247,579	-2,116	1,49	3,000	1.247,624	5,500	1.247,661	8,816	1.245,451	-2,210
3+5	-3,740	1.243,898	-10,110	1.247,638	-4,500	1.247,651	-3,000	-0,82	1.245,656	1.247,675	-2,019	0,82	3,000	1.247,700	5,500	1.247,721	8,049	1.246,021	-1,700
3+10	-3,449	1.244,331	-9,674	1.247,780	-4,500	1.247,782	-3,000	-0,16	1.245,982	1.247,787	-1,805	0,16	3,000	1.247,792	5,500	1.247,795	7,351	1.246,561	-1,234
3+11,175	-3,383	1.244,432	-9,574	1.247,815	-4,500	1.247,815	-3,000	0,00	1.246,069	1.247,815	-1,746	0,00	3,000	1.247,815	5,500	1.247,815	7,224	1.246,666	-1,149
3+15	-2,710	1.245,227	-8,565	1.247,937	-4,500	1.247,929	-3,000	0,51	1.246,460	1.247,914	-1,454	-0,51	3,000	1.247,898	5,500	1.247,886	6,672	1.247,105	-0,781
3+20	-1,528	1.246,581	-6,792	1.248,109	-4,500	1.248,091	-3,000	1,18	1.247,078	1.248,056	-0,978	-1,18	3,000	1.248,021	5,500	1.247,991	5,789	1.247,798	-0,193
3+25	-0,387	1.247,902	-5,081	1.248,289	-4,500	1.248,261	-3,000	1,84	1.247,714	1.248,206	-0,492	-1,84	3,000	1.248,151	5,500	1.248,105	5,820	1.248,425	0,320
3+30	-0,051	1.248,418	-4,577	1.248,469	-4,500	1.248,431	-3,000	2,51	1.248,414	1.248,356	0,058	-2,51	3,000	1.248,281	5,500	1.248,218	6,272	1.248,990	0,772
3+35	0,460	1.249,109	-4,960	1.248,649	-4,500	1.248,601	-3,000	3,18	1.249,045	1.248,506	0,539	-3,18	3,000	1.248,411	5,500	1.248,331	6,752	1.249,583	1,252
3+40	1,047	1.249,876	-5,547	1.248,829	-4,500	1.248,771	-3,000	3,84	1.249,617	1.248,656	0,961	-3,84	3,000	1.248,541	5,500	1.248,445	7,265	1.250,210	1,765
3+41,175	1,232	1.250,103	-5,732	1.248,871	-4,500	1.248,811	-3,000	4,00	1.249,749	1.248,691	1,058	-4,00	3,000	1.248,571	5,500	1.248,471	7,386	1.250,357	1,886
3+45	1,588	1.250,574	-6,088	1.248,986	-4,500	1.248,926	-3,000	4,00	1.250,086	1.248,806	1,280	-4,00	3,000	1.248,686	5,500	1.248,586	7,572	1.250,657	2,071
3+50	1,553	1.250,689	-6,053	1.249,136	-4,500	1.249,076	-3,000	4,00	1.250,328	1.248,956	1,372	-4,00	3,000	1.248,836	5,500	1.248,736	7,526	1.250,762	2,026
3+55	1,506	1.250,792	-6,006	1.249,286	-4,500	1.249,226	-3,000	4,00	1.250,528	1.249,106	1,422	-4,00	3,000	1.248,986	5,500	1.248,886	7,484	1.250,870	1,984
3+59,454	1,388	1.250,808	-5,888	1.249,420	-4,500	1.249,360	-3,000	4,00	1.250,638	1.249,240	1,398	-4,00	3,000	1.249,120	5,500	1.249,020	7,491	1.251,010	1,990
3+60	1,372	1.250,807	-5,872	1.249,435	-4,500	1.249,376	-3,000	3,98	1.250,652	1.249,256	1,396	-3,98	3,000	1.249,137	5,500	1.249,037	7,487	1.251,024	1,987
3+65	1,179	1.250,757	-5,679	1.249,578	-4,500	1.249,521	-3,000	3,83	1.250,782	1.249,406	1,376	-3,83	3,000	1.249,291	5,500	1.249,195	7,429	1.251,124	1,929
3+70	0,980	1.250,701	-5,480	1.249,721	-4,500	1.249,666	-3,000	3,68	1.250,877	1.249,556	1,321	-3,68	3,000	1.249,446	5,500	1.249,354	7,337	1.251,191	1,837
3+75	0,896	1.250,760	-5,397	1.249,864	-4,500	1.249,812	-3,000	3,52	1.250,961	1.249,706	1,255	-3,52	3,000	1.249,600	5,500	1.249,512	7,247	1.251,259	1,747
3+80	0,771	1.250,779	-5,271	1.250,008	-4,500	1.249,957	-3,000	3,37	1.251,021	1.249,856	1,165	-3,37	3,000	1.249,755	5,500	1.249,671	7,155	1.251,326	1,655

ENGMETRIA - Ltda.

Projeto: SC-114 - Bentinho - SC

TRECHO

Notas de Serviço de Terraplenagem

Lado Esquerdo				Eixo				Lado Direito			
Offset		Lateral		Bordo		Cota		Bordo		Lateral	
Estaca	Altura	Distância	Cota	Distância	Cota	%	Terreno	Distância	Cota	Distância	Cota
3+85	0,6571.250,808	-5,1571.250,151	-4,5001.250,102	-3,000	3,2111.251,076	1,250,006	1,070	-3,21	3,0001.249,910	5,5001.249,829	7,0361.251,365
3+89,454	0,5641.250,842	-5,0641.250,278	-4,5001.250,232	-3,000	3,0811.251,121	1,250,140	0,981	-3,08	3,0001.250,047	5,5001.249,970	6,9421.251,412
3+100	0,5601.251,140	-5,0601.250,580	-4,5001.250,539	-3,000	2,7511.251,342	1,250,456	0,886	-2,75	3,0001.250,373	5,5001.250,305	6,9391.251,744
3+120	0,7221.251,894	-5,2221.251,172	-4,5001.251,133	-3,000	2,5811.252,052	1,251,056	0,996	-2,58	3,0001.250,979	5,5001.250,914	7,5351.252,949
3+140	0,5531.252,346	-5,0531.251,793	-4,5001.251,747	-3,000	3,0411.252,615	1,251,656	0,959	-3,04	3,0001.251,565	5,5001.251,489	7,1331.253,122
3+141,687	0,5461.252,390	-5,0461.251,844	-4,5001.251,798	-3,000	3,0811.252,646	1,251,706	0,940	-3,08	3,0001.251,614	5,5001.251,537	7,0601.253,097
3+150	0,5891.252,670	-5,0891.252,081	-4,5001.252,032	-3,000	3,2711.252,798	1,251,934	0,864	-3,27	3,0001.251,836	5,5001.251,754	6,8301.253,083
3+160	0,7381.253,064	-5,2381.252,326	-4,5001.252,273	-3,000	3,5011.252,960	1,252,169	0,791	-3,50	3,0001.252,064	5,5001.251,976	6,8001.253,276
3+170	1,0101.253,537	-5,5101.252,527	-4,5001.252,471	-3,000	3,7311.253,123	1,252,359	0,764	-3,73	3,0001.252,247	5,5001.252,154	6,9181.253,572
3+180	1,0861.253,770	-5,5861.252,684	-4,5001.252,625	-3,000	3,9611.253,392	1,252,506	0,886	-3,96	3,0001.252,387	5,5001.252,288	7,0931.253,881
3+181,687	1,0801.253,786	-5,5801.252,706	-4,5001.252,646	-3,000	4,0011.253,441	1,252,526	0,915	-4,00	3,0001.252,406	5,5001.252,306	7,1231.253,929
3+190	1,1001.253,889	-5,6001.252,789	-4,5001.252,729	-3,000	4,0011.253,669	1,252,609	1,060	-4,00	3,0001.252,489	5,5001.252,389	7,2801.254,169
3+200	0,3881.253,237	-4,8881.252,849	-4,5001.252,789	-3,000	4,0011.253,309	1,252,669	0,640	-4,00	3,0001.252,549	5,5001.252,449	7,2491.254,198
3+208,742	-0,2311.252,634	-4,8461.252,865	-4,5001.252,805	-3,000	4,0011.252,746	1,252,685	0,061	-4,00	3,0001.252,565	5,5001.252,465	6,9291.253,894
3+210	-0,2741.252,589	-4,9111.252,863	-4,5001.252,803	-3,000	3,9711.252,665	1,252,684	-0,019	-3,97	3,0001.252,565	5,5001.252,466	6,8381.253,804
3+220	-0,5871.252,237	-5,3811.252,824	-4,5001.252,768	-3,000	3,7411.252,235	1,252,656	-0,421	-3,74	3,0001.252,544	5,5001.252,450	5,9201.252,870
3+230	-1,2951.251,469	-6,4431.252,764	-4,5001.252,711	-3,000	3,5111.251,893	1,252,606	-0,713	-3,51	3,0001.252,501	5,5001.252,413	6,0141.252,070
3+240	-1,5151.251,189	-6,7721.252,704	-4,5001.252,654	-3,000	3,2811.251,744	1,252,556	-0,812	-3,28	3,0001.252,458	5,5001.252,376	6,4701.251,729
3+248,742	-1,4561.251,195	-6,6831.252,651	-4,5001.252,605	-3,000	3,0811.251,700	1,252,512	-0,812	-3,08	3,0001.252,420	5,5001.252,343	6,5141.251,667
3+260	-0,9561.251,627	-5,9341.252,583	-4,5001.252,541	-3,000	2,8211.251,804	1,252,456	-0,652	-2,82	3,0001.252,371	5,5001.252,301	6,2181.251,823
3+280	0,1021.252,571	-4,6021.252,469	-4,5001.252,431	-3,000	2,5011.252,223	1,252,356	-0,133	-2,50	3,0001.252,281	5,5001.252,219	5,8901.252,609
3+300	0,1211.252,490	-4,6211.252,369	-4,5001.252,331	-3,000	2,5011.252,330	1,252,256	0,074	-2,50	3,0001.252,181	5,5001.252,119	6,4241.253,043
3+320	-0,0841.252,106	-4,6271.252,190	-4,5001.252,179	-3,000	0,7611.252,066	1,252,156	-0,090	-0,76	3,0001.252,133	5,5001.252,114	6,0051.252,619
3+327,575	-0,1081.252,010	-4,6621.252,118	-4,5001.252,118	-3,000	0,0011.251,934	1,252,118	-0,184	0,00	3,0001.252,118	5,5001.252,118	6,0571.252,675
3+330	-0,0871.252,008	-4,6301.252,095	-4,5001.252,099	-3,000	-0,2411.251,892	1,252,106	-0,214	0,24	3,0001.252,113	5,5001.252,119	6,0731.252,692
3+335	-0,1651.251,883	-4,7481.252,048	-4,5001.252,059	-3,000	-0,7411.251,818	1,252,081	-0,263	0,74	3,0001.252,103	5,5001.252,122	6,0171.252,639
3+340	-0,5301.251,470	-5,2941.252,000	-4,5001.252,019	-3,000	-1,2411.251,740	1,252,056	-0,316	1,24	3,0001.252,093	5,5001.252,124	5,8171.252,440
3+345	-0,7421.251,211	-5,6141.251,953	-4,5001.251,979	-3,000	-1,7411.251,663	1,252,031	-0,368	1,74	3,0001.252,083	5,5001.252,127	5,6361.252,263

Lado Esquerdo						Eixo			Lado Direito										
Estaca	Offset		Lateral		Bordo		Cota	Terreno	Projeto	Vermelha	%	Bordo		Lateral		Offset			
	Altura	Cota	Distância	Cota	Distância	Cota						Distância	Cota	Distância	Cota				
3+350	-0,914	1.250,991	-5,871	1.251,905	-4,500	1.251,939	-3,000	-2,241	1.251,563	1.252,006	-0,443	2,24	3,000	1.252,073	5,500	1.252,129	5,590	1.252,069	-0,060
3+355	-1,002	1.250,856	-6,002	1.251,858	-4,500	1.251,899	-3,000	-2,741	1.251,429	1.251,981	-0,552	2,74	3,000	1.252,063	5,500	1.252,132	5,877	1.251,881	-0,251
3+360	-1,020	1.250,790	-6,030	1.251,810	-4,500	1.251,859	-3,000	-3,241	1.251,297	1.251,956	-0,659	3,24	3,000	1.252,053	5,500	1.252,134	6,255	1.251,631	-0,503
3+365	-1,022	1.250,741	-6,034	1.251,763	-4,500	1.251,819	-3,000	-3,741	1.251,177	1.251,931	-0,754	3,74	3,000	1.252,043	5,500	1.252,137	6,602	1.251,403	-0,734
3+367,575	-1,029	1.250,709	-6,043	1.251,738	-4,500	1.251,798	-3,000	-4,001	1.251,148	1.251,918	-0,770	4,00	3,000	1.252,038	5,500	1.252,138	6,744	1.251,309	-0,829
3+370	-1,057	1.250,669	-6,086	1.251,726	-4,500	1.251,786	-3,000	-4,001	1.251,111	1.251,906	-0,795	4,00	3,000	1.252,026	5,500	1.252,126	6,920	1.251,179	-0,947
3+375	-1,107	1.250,594	-6,160	1.251,701	-4,500	1.251,761	-3,000	-4,001	1.251,057	1.251,881	-0,824	4,00	3,000	1.252,001	5,500	1.252,101	7,057	1.251,063	-1,038
3+379,799	-1,024	1.250,653	-6,037	1.251,677	-4,500	1.251,737	-3,000	-4,001	1.251,014	1.251,857	-0,843	4,00	3,000	1.251,977	5,500	1.252,077	6,943	1.251,115	-0,962
3+380	-1,022	1.250,655	-6,034	1.251,677	-4,500	1.251,737	-3,000	-3,981	1.251,010	1.251,856	-0,846	3,98	3,000	1.251,975	5,500	1.252,075	6,931	1.251,121	-0,954
3+385	-1,069	1.250,605	-6,104	1.251,674	-4,500	1.251,727	-3,000	-3,481	1.250,996	1.251,831	-0,835	3,48	3,000	1.251,935	5,500	1.252,022	6,783	1.251,167	-0,855
3+390	-1,056	1.250,616	-6,084	1.251,672	-4,500	1.251,717	-3,000	-2,981	1.250,965	1.251,806	-0,841	2,98	3,000	1.251,895	5,500	1.251,970	6,659	1.251,198	-0,772
3+395	-0,911	1.250,758	-5,866	1.251,669	-4,500	1.251,707	-3,000	-2,481	1.251,034	1.251,781	-0,747	2,48	3,000	1.251,855	5,500	1.251,917	6,695	1.251,121	-0,796
3+400	-0,848	1.250,819	-5,772	1.251,667	-4,500	1.251,697	-3,000	-1,981	1.251,088	1.251,756	-0,668	1,98	3,000	1.251,815	5,500	1.251,865	6,603	1.251,130	-0,735
3+405	-0,824	1.250,840	-5,735	1.251,664	-4,500	1.251,687	-3,000	-1,481	1.251,159	1.251,731	-0,572	1,48	3,000	1.251,775	5,500	1.251,812	6,369	1.251,233	-0,579
3+410	-0,833	1.250,829	-5,749	1.251,662	-4,500	1.251,677	-3,000	-0,981	1.251,242	1.251,706	-0,464	0,98	3,000	1.251,735	5,500	1.251,760	6,129	1.251,341	-0,419
3+415	-0,587	1.251,072	-5,381	1.251,659	-4,500	1.251,667	-3,000	-0,481	1.251,378	1.251,681	-0,303	0,48	3,000	1.251,695	5,500	1.251,707	5,821	1.251,493	-0,214
3+419,799	-0,332	1.251,325	-4,997	1.251,657	-4,500	1.251,657	-3,000	0,001	1.251,508	1.251,657	-0,149	0,00	3,000	1.251,657	5,500	1.251,657	5,566	1.251,613	-0,044
3+420	-0,322	1.251,335	-4,983	1.251,657	-4,500	1.251,657	-3,000	0,021	1.251,514	1.251,656	-0,142	-0,02	3,000	1.251,655	5,500	1.251,655	5,556	1.251,618	-0,037
3+440	0,821	1.252,468	-5,321	1.251,647	-4,500	1.251,617	-3,000	2,021	1.252,570	1.251,556	1,014	-2,02	3,000	1.251,495	5,500	1.251,445	7,464	1.253,409	1,964
3+460	2,849	1.254,418	-7,349	1.251,569	-4,500	1.251,531	-3,000	2,501	1.254,381	1.251,456	2,925	-2,50	3,000	1.251,381	5,500	1.251,319	9,148	1.254,967	3,648
3+480	3,891	1.255,296	-8,391	1.251,405	-4,500	1.251,367	-3,000	2,501	1.254,999	1.251,292	3,707	-2,50	3,000	1.251,217	5,500	1.251,155	9,952	1.255,607	4,452
3+500	2,964	1.254,093	-7,464	1.251,129	-4,500	1.251,086	-3,000	2,871	1.253,770	1.251,000	2,770	-2,87	3,000	1.250,914	5,500	1.250,842	8,941	1.254,282	3,440
3+506,696	2,384	1.253,396	-6,884	1.251,012	-4,500	1.250,966	-3,000	3,081	1.253,197	1.250,874	2,323	-3,08	3,000	1.250,781	5,500	1.250,704	8,515	1.253,719	3,015
3+510	2,101	1.253,050	-6,601	1.250,949	-4,500	1.250,901	-3,000	3,181	1.252,915	1.250,806	2,109	-3,18	3,000	1.250,711	5,500	1.250,631	8,354	1.253,485	2,854
3+515	1,940	1.252,787	-6,440	1.250,847	-4,500	1.250,797	-3,000	3,331	1.252,646	1.250,697	1,949	-3,33	3,000	1.250,597	5,500	1.250,514	8,299	1.253,313	2,799
3+520	1,803	1.252,540	-6,303	1.250,737	-4,500	1.250,685	-3,000	3,491	1.252,405	1.250,580	1,825	-3,49	3,000	1.250,475	5,500	1.250,388	8,297	1.253,185	2,797
3+525	1,652	1.252,271	-6,152	1.250,619	-4,500	1.250,564	-3,000	3,641	1.252,186	1.250,455	1,731	-3,64	3,000	1.250,346	5,500	1.250,255	8,316	1.253,071	2,816
3+530	1,512	1.252,005	-6,012	1.250,493	-4,500	1.250,436	-3,000	3,791	1.251,962	1.250,322	1,640	-3,79	3,000	1.250,208	5,500	1.250,113	8,362	1.252,975	2,862

Lado Esquerdo				Eixo				Lado Direito			
Offset		Lateral		Bordo		Terreno		Bordo		Lateral	
Estaca	Altura	Cota	Distância	Cota	Distância	%	Cota	Cota	Projeto	Distância	Cota
3+535	1,235	1.251,594	-5,735	1.250,359	-4,500	1.250,299	-3,000	3,951	1.251,681	1.250,181	1,500
3+536,696	1,248	1.251,559	-5,748	1.250,311	-4,500	1.250,251	-3,000	4,001	1.251,592	1.250,131	1,461
3+540	1,275	1.251,487	-5,775	1.250,212	-4,500	1.250,152	-3,000	4,001	1.251,441	1.250,032	1,409
3+545	1,325	1.251,380	-5,825	1.250,055	-4,500	1.249,995	-3,000	4,001	1.251,145	1.249,875	1,270
3+550	1,188	1.251,078	-5,688	1.249,890	-4,500	1.249,830	-3,000	4,001	1.250,767	1.249,710	1,057
3+553,666	1,041	1.250,805	-5,541	1.249,764	-4,500	1.249,704	-3,000	4,001	1.250,546	1.249,584	0,962
3+555	1,010	1.250,719	-5,510	1.249,709	-4,500	1.249,652	-3,000	3,821	1.250,471	1.249,537	0,934
3+560	0,946	1.250,444	-5,447	1.249,498	-4,500	1.249,451	-3,000	3,161	1.250,168	1.249,356	0,812
3+565	0,722	1.250,014	-5,222	1.249,292	-4,500	1.249,254	-3,000	2,491	1.249,899	1.249,180	0,719
3+570	0,428	1.249,531	-4,928	1.249,103	-4,500	1.249,076	-3,000	1,821	1.249,647	1.249,021	0,626
3+575	0,126	1.249,058	-4,626	1.248,932	-4,500	1.248,914	-3,000	1,161	1.249,255	1.248,880	0,375
3+580	-0,703	1.248,075	-5,555	1.248,778	-4,500	1.248,771	-3,000	0,491	1.248,815	1.248,756	0,059
3+583,666	-1,231	1.247,445	-6,347	1.248,676	-4,500	1.248,676	-3,000	0,001	1.248,448	1.248,676	-0,228
3+585	-1,425	1.247,217	-6,637	1.248,642	-4,500	1.248,644	-3,000	-0,181	1.248,294	1.248,650	-0,356
3+590	-2,296	1.246,227	-7,943	1.248,523	-4,500	1.248,536	-3,000	-0,841	1.247,705	1.248,561	-0,856
3+595	-2,665	1.245,757	-8,497	1.248,422	-4,500	1.248,444	-3,000	-1,511	1.247,156	1.248,490	-1,334
3+600	-3,103	1.245,235	-9,155	1.248,338	-4,500	1.248,371	-3,000	-2,181	1.246,650	1.248,436	-1,786
3+605	-3,714	1.244,558	-10,071	1.248,272	-4,500	1.248,314	-3,000	-2,841	1.246,486	1.248,400	-1,914
3+610	-4,218	1.244,005	-10,827	1.248,223	-4,500	1.248,276	-3,000	-3,511	1.246,297	1.248,381	-2,084
3+613,666	-3,991	1.244,207	-10,486	1.248,198	-4,500	1.248,258	-3,000	-4,001	1.246,234	1.248,378	-2,144
3+615	-3,934	1.244,266	-10,401	1.248,200	-4,500	1.248,260	-3,000	-4,001	1.246,215	1.248,380	-2,165
3+620	-3,538	1.244,678	-9,806	1.248,216	-4,500	1.248,276	-3,000	-4,001	1.246,116	1.248,396	-2,280
3+625	-3,394	1.244,856	-9,591	1.248,250	-4,500	1.248,310	-3,000	-4,001	1.246,108	1.248,430	-2,322
3+630	-3,533	1.244,798	-9,799	1.248,301	-4,500	1.248,361	-3,000	-4,001	1.246,110	1.248,481	-2,371
3+633,924	-3,069	1.245,284	-9,103	1.248,353	-4,500	1.248,413	-3,000	-4,001	1.246,225	1.248,533	-2,308
3+635	-2,904	1.245,471	-8,856	1.248,375	-4,500	1.248,433	-3,000	-3,881	1.246,259	1.248,550	-2,291
3+640	-2,303	1.246,194	-7,954	1.248,487	-4,500	1.248,536	-3,000	-3,321	1.246,416	1.248,636	-2,220
3+645	-2,040	1.246,575	-7,560	1.248,615	-4,500	1.248,657	-3,000	-2,761	1.246,729	1.248,740	-2,011

Lado Esquerdo							Eixo				Lado Direito								
Offset			Lateral		Bordo		Cota	Cota	Cota	Bordo		Lateral		Offset					
Estaca	Altura	Cota	Distância	Cota	Distância	%	Terreno	Projeto	Vermelha	%	Distância	Cota	Distância	Cota	Altura				
3+650	-1,903	1.246,859	-7,355	1.248,762	-4,500	1.248,795	-3,000	-2,211	1.247,019	1.248,861	-1,842	2,21	3,000	1.248,927	5,500	1.248,982	7,468	1.247,670	-1,312
3+655	-1,564	1.247,362	-6,845	1.248,926	-4,500	1.248,950	-3,000	-1,651	1.247,398	1.249,000	-1,602	1,65	3,000	1.249,049	5,500	1.249,091	6,797	1.248,226	-0,865
3+660	-1,245	1.247,862	-6,367	1.249,107	-4,500	1.249,123	-3,000	-1,091	1.247,754	1.249,156	-1,402	1,09	3,000	1.249,189	5,500	1.249,216	6,286	1.248,692	-0,524
3+665	-0,946	1.248,360	-5,919	1.249,306	-4,500	1.249,314	-3,000	-0,531	1.248,163	1.249,330	-1,167	0,53	3,000	1.249,346	5,500	1.249,359	5,806	1.249,155	-0,204
3+669,794	-0,791	1.248,722	-5,686	1.249,513	-4,500	1.249,513	-3,000	0,001	1.248,549	1.249,513	-0,964	0,00	3,000	1.249,513	5,500	1.249,513	5,503	1.249,511	-0,002
3+670	-0,801	1.248,721	-5,702	1.249,522	-4,500	1.249,522	-3,000	0,021	1.248,559	1.249,521	-0,962	-0,02	3,000	1.249,520	5,500	1.249,520	5,504	1.249,524	0,004
3+675	-1,067	1.248,690	-6,100	1.249,757	-4,500	1.249,748	-3,000	0,591	1.248,821	1.249,730	-0,909	-0,59	3,000	1.249,712	5,500	1.249,697	5,654	1.249,851	0,154
3+680	-1,347	1.248,661	-6,521	1.250,008	-4,500	1.249,991	-3,000	1,171	1.249,084	1.249,956	-0,872	-1,17	3,000	1.249,921	5,500	1.249,892	5,761	1.250,153	0,261
3+685	-1,640	1.248,638	-6,961	1.250,278	-4,500	1.250,252	-3,000	1,741	1.249,337	1.250,200	-0,863	-1,74	3,000	1.250,148	5,500	1.250,104	5,842	1.250,446	0,342
3+690	-0,911	1.249,654	-5,866	1.250,565	-4,500	1.250,530	-3,000	2,311	1.249,582	1.250,461	-0,879	-2,31	3,000	1.250,392	5,500	1.250,334	5,931	1.250,765	0,431
3+695	-0,817	1.250,052	-5,725	1.250,869	-4,500	1.250,826	-3,000	2,881	1.249,987	1.250,740	-0,753	-2,88	3,000	1.250,653	5,500	1.250,581	6,309	1.251,390	0,809
3+700	-0,798	1.250,393	-5,696	1.251,191	-4,500	1.251,140	-3,000	3,451	1.250,386	1.251,036	-0,650	-3,45	3,000	1.250,932	5,500	1.250,846	6,518	1.251,864	1,018
3+704,794	-0,695	1.250,821	-5,543	1.251,516	-4,500	1.251,456	-3,000	4,001	1.250,959	1.251,336	-0,377	-4,00	3,000	1.251,216	5,500	1.251,116	6,698	1.252,314	1,198
3+705	-0,682	1.250,848	-5,523	1.251,530	-4,500	1.251,470	-3,000	4,001	1.250,983	1.251,350	-0,367	-4,00	3,000	1.251,230	5,500	1.251,130	6,704	1.252,334	1,204
3+710	-0,217	1.251,644	-4,826	1.251,861	-4,500	1.251,801	-3,000	4,001	1.251,598	1.251,681	-0,083	-4,00	3,000	1.251,561	5,500	1.251,461	6,996	1.252,957	1,496
3+715	0,136	1.252,346	-4,636	1.252,210	-4,500	1.252,150	-3,000	4,001	1.252,325	1.252,030	0,295	-4,00	3,000	1.251,910	5,500	1.251,810	7,631	1.253,941	2,131
3+720	0,417	1.252,993	-4,917	1.252,576	-4,500	1.252,516	-3,000	4,001	1.253,060	1.252,396	0,664	-4,00	3,000	1.252,276	5,500	1.252,176	7,914	1.254,590	2,414
3+723,075	0,504	1.253,308	-5,004	1.252,804	-4,500	1.252,744	-3,000	4,001	1.253,399	1.252,624	0,775	-4,00	3,000	1.252,504	5,500	1.252,404	8,025	1.254,929	2,525
3+725	0,587	1.253,528	-5,087	1.252,941	-4,500	1.252,882	-3,000	3,931	1.253,610	1.252,764	0,846	-3,93	3,000	1.252,646	5,500	1.252,548	8,095	1.255,143	2,595
3+730	0,983	1.254,270	-5,483	1.253,287	-4,500	1.253,231	-3,000	3,741	1.254,097	1.253,119	0,978	-3,74	3,000	1.253,007	5,500	1.252,913	8,091	1.255,504	2,591
3+735	0,639	1.254,258	-5,139	1.253,619	-4,500	1.253,566	-3,000	3,551	1.254,345	1.253,460	0,885	-3,55	3,000	1.253,353	5,500	1.253,264	7,649	1.255,413	2,149
3+740	0,333	1.254,271	-4,833	1.253,938	-4,500	1.253,888	-3,000	3,361	1.254,490	1.253,787	0,703	-3,36	3,000	1.253,686	5,500	1.253,602	7,126	1.255,228	1,626
3+745	-0,155	1.254,120	-5,733	1.254,275	-5,500	1.254,228	-4,000	3,181	1.254,535	1.254,101	0,434	-3,18	3,000	1.254,005	5,500	1.253,926	6,528	1.254,954	1,028
3+750	-1,273	1.253,322	-8,410	1.254,595	-6,500	1.254,550	-5,000	2,991	1.254,586	1.254,401	0,185	-2,99	3,000	1.254,311	5,500	1.254,236	6,066	1.254,802	0,566
3+753,075	-1,498	1.253,285	-9,363	1.254,783	-7,115	1.254,740	-5,615	2,871	1.254,665	1.254,578	0,087	-2,87	3,000	1.254,492	5,500	1.254,420	6,002	1.254,922	0,502
3+755	-1,587	1.253,310	-9,881	1.254,897	-7,500	1.254,855	-6,000	2,801	1.254,714	1.254,687	0,027	-2,80	3,000	1.254,603	5,500	1.254,533	5,952	1.254,985	0,452
3+760	-1,546	1.253,610	-9,819	1.255,156	-7,500	1.255,116	-6,000	2,611	1.254,844	1.254,960	-0,116	-2,61	3,000	1.254,881	5,500	1.254,816	5,743	1.255,059	0,243
3+772,950	-1,084	1.254,734	-9,127	1.255,818	-7,500	1.255,775	-6,000	2,871	1.255,396	1.255,603	-0,207	-2,87	3,000	1.255,516	5,500	1.255,445	5,684	1.255,629	0,184

Lado Esquerdo										Eixo				Lado Direito							
Offset				Lateral			Bordo			Cota		Cota		Bordo		Lateral		Offset			
Estaca	Altura	Cota	Distância	Distância	Cota	Distância	%	Terreno	Projeto	Vermelha	%	Distância	Cota	Distância	Cota	Distância	Cota	Distância	Altura		
3+780	-0,507	1.255,624	-7,661	1.256,131	-6,900	1.256,084	-5,400	3,14	1.255,901	1.255,914	-0,013	-3,14	3,000	1.255,820	5,500	1.255,742	6,127	1.256,369	0,627		
3+790	0,124	1.256,634	-5,824	1.256,510	-5,700	1.256,457	-4,200	3,51	1.256,567	1.256,310	0,257	-3,51	3,000	1.256,204	5,500	1.256,116	6,780	1.257,396	1,280		
3+795	0,390	1.257,066	-5,490	1.256,676	-5,100	1.256,620	-3,600	3,70	1.256,916	1.256,487	0,429	-3,70	3,000	1.256,376	5,500	1.256,283	7,124	1.257,907	1,624		
3+800	0,691	1.257,517	-5,191	1.256,826	-4,500	1.256,767	-3,000	3,89	1.257,258	1.256,651	0,607	-3,89	3,000	1.256,534	5,500	1.256,437	7,389	1.258,326	1,889		
3+802,950	0,822	1.257,743	-5,322	1.256,921	-4,500	1.256,861	-3,000	4,00	1.257,458	1.256,741	0,717	-4,00	3,000	1.256,621	5,500	1.256,521	7,455	1.258,476	1,955		
3+810	1,043	1.258,160	-5,543	1.257,117	-4,500	1.257,057	-3,000	4,00	1.257,841	1.256,937	0,904	-4,00	3,000	1.256,817	5,500	1.256,717	7,318	1.258,535	1,818		
3+820	0,721	1.258,070	-5,221	1.257,349	-4,500	1.257,289	-3,000	4,00	1.257,909	1.257,169	0,740	-4,00	3,000	1.257,049	5,500	1.256,949	6,725	1.258,174	1,225		
3+830	0,521	1.258,047	-5,021	1.257,526	-4,500	1.257,466	-3,000	4,00	1.257,945	1.257,346	0,599	-4,00	3,000	1.257,226	5,500	1.257,126	6,352	1.257,978	0,852		
3+833,863	0,505	1.258,085	-5,005	1.257,580	-4,500	1.257,520	-3,000	4,00	1.257,963	1.257,400	0,563	-4,00	3,000	1.257,280	5,500	1.257,180	6,358	1.258,038	0,858		
3+840	0,316	1.257,956	-4,816	1.257,640	-4,500	1.257,583	-3,000	3,81	1.257,983	1.257,469	0,514	-3,81	3,000	1.257,354	5,500	1.257,259	6,712	1.258,471	1,212		
3+850	0,183	1.257,878	-4,683	1.257,695	-4,500	1.257,642	-3,000	3,50	1.258,011	1.257,537	0,474	-3,50	3,000	1.257,432	5,500	1.257,344	6,871	1.258,715	1,371		
3+860	0,349	1.258,043	-4,849	1.257,694	-4,500	1.257,646	-3,000	3,20	1.258,095	1.257,551	0,544	-3,20	3,000	1.257,455	5,500	1.257,375	7,048	1.258,923	1,548		
3+863,863	0,425	1.258,105	-4,925	1.257,680	-4,500	1.257,634	-3,000	3,08	1.258,128	1.257,541	0,587	-3,08	3,000	1.257,449	5,500	1.257,372	7,134	1.259,006	1,634		
3+880	0,481	1.258,011	-4,981	1.257,530	-4,500	1.257,492	-3,000	2,58	1.258,224	1.257,414	0,810	-2,58	3,000	1.257,337	5,500	1.257,272	7,256	1.259,028	1,756		
3+900	0,703	1.257,817	-5,203	1.257,114	-4,500	1.257,096	-3,000	1,20	1.257,646	1.257,060	0,586	-1,20	3,000	1.257,024	5,500	1.256,994	6,881	1.258,375	1,381		
3+909,007	0,632	1.257,461	-5,132	1.256,829	-4,500	1.256,829	-3,000	0,00	1.257,226	1.256,829	0,397	0,00	3,000	1.256,829	5,500	1.256,829	6,593	1.257,922	1,093		
3+910	0,635	1.257,430	-5,135	1.256,795	-4,500	1.256,797	-3,000	-0,13	1.257,196	1.256,801	0,395	0,13	3,000	1.256,805	5,500	1.256,808	6,556	1.257,864	1,056		
3+920	0,700	1.257,121	-5,200	1.256,421	-4,500	1.256,443	-3,000	-1,47	1.256,894	1.256,487	0,407	1,47	3,000	1.256,531	5,500	1.256,568	6,214	1.257,281	0,713		
3+930	0,732	1.256,725	-5,232	1.255,993	-4,500	1.256,035	-3,000	-2,80	1.256,577	1.256,119	0,458	2,80	3,000	1.256,203	5,500	1.256,273	6,282	1.257,055	0,782		
3+939,007	0,803	1.256,363	-5,303	1.255,560	-4,500	1.255,620	-3,000	-4,00	1.256,245	1.255,740	0,505	4,00	3,000	1.255,860	5,500	1.255,960	6,569	1.257,029	1,069		
3+940	0,812	1.256,328	-5,312	1.255,516	-4,500	1.255,576	-3,000	-4,00	1.256,209	1.255,696	0,513	4,00	3,000	1.255,816	5,500	1.255,916	6,608	1.257,024	1,108		
3+950	0,898	1.255,964	-5,398	1.255,066	-4,500	1.255,126	-3,000	-4,00	1.255,780	1.255,246	0,534	4,00	4,200	1.255,414	6,700	1.255,514	8,074	1.256,888	1,374		
3+957,836	0,947	1.255,660	-5,447	1.254,713	-4,500	1.254,773	-3,000	-4,00	1.255,229	1.254,893	0,336	4,00	5,140	1.255,099	7,640	1.255,199	8,427	1.255,986	0,787		
3+960	0,904	1.255,531	-5,404	1.254,627	-4,500	1.254,683	-3,000	-3,76	1.255,079	1.254,796	0,283	3,76	5,400	1.254,999	7,900	1.255,093	8,543	1.255,736	0,643		
3+965	0,762	1.255,188	-5,262	1.254,426	-4,500	1.254,474	-3,000	-3,22	1.254,735	1.254,571	0,164	3,22	6,000	1.254,764	8,500	1.254,844	8,817	1.255,161	0,317		
3+970	0,575	1.254,801	-5,075	1.254,226	-4,500	1.254,266	-3,000	-2,67	1.254,406	1.254,346	0,060	2,67	6,000	1.254,506	8,500	1.254,573	8,628	1.254,701	0,128		
3+980	0,237	1.254,062	-4,737	1.253,825	-4,500	1.253,849	-3,000	-1,58	1.253,777	1.253,896	-0,119	1,58	6,000	1.253,991	8,500	1.254,030	8,501	1.254,030	0,000		
3+985	0,036	1.253,661	-4,536	1.253,625	-4,500	1.253,640	-3,000	-1,03	1.253,487	1.253,671	-0,184	1,03	6,000	1.253,733	8,500	1.253,759	8,590	1.253,699	-0,060		

Estaca	Lado Esquerdo					Eixo					Lado Direito				
	Offset		Lateral		Bordo	Cota	Distância	%	Cota	Terreno	Projeto	Cota	Bordo		Lateral
	Altura	Cota	Distância	Cota									Distância	Cota	
3+987,836	-0,069	1.253,442	-4,603	1.253,511	-3,000	-0,72	1.253,522	-0,72	1.253,352	1.253,543	-0,191	0,72	5,433	1.253,583	7,933
4	0,191	1.253,209	-4,691	1.253,018	-3,000	0,48	1.253,010	0,48	1.253,066	1.252,996	0,070	-0,48	3,000	1.252,982	5,500
4+1,036	0,216	1.253,191	-4,716	1.252,975	-3,000	0,57	1.252,966	0,57	1.253,043	1.252,949	0,094	-0,57	3,000	1.252,932	5,500
4+10	0,441	1.253,047	-4,942	1.252,606	-3,000	1,34	1.252,586	1,34	1.252,857	1.252,546	0,311	-1,34	3,000	1.252,506	5,500
4+20	0,729	1.252,924	-5,229	1.252,195	-3,000	2,19	1.252,162	2,19	1.252,742	1.252,096	0,646	-2,19	3,000	1.252,030	5,500
4+30	0,898	1.252,681	-5,398	1.251,783	-3,000	3,05	1.251,738	3,05	1.252,598	1.251,646	0,952	-3,05	3,000	1.251,554	5,500
4+40	1,030	1.252,402	-5,530	1.251,372	-3,000	3,91	1.251,313	3,91	1.252,300	1.251,196	1,104	-3,91	3,000	1.251,079	5,500
4+41,036	1,046	1.252,375	-5,546	1.251,329	-3,000	4,00	1.251,269	4,00	1.252,288	1.251,149	1,119	-4,00	3,000	1.251,029	5,500
4+50	1,178	1.252,070	-5,678	1.250,892	-3,000	3,25	1.250,843	3,25	1.251,865	1.250,746	1,119	-3,25	3,000	1.250,649	5,500
4+60	1,026	1.251,430	-5,526	1.250,404	-3,000	2,41	1.250,368	2,41	1.251,033	1.250,296	0,737	-2,41	3,000	1.250,224	5,500
4+70	0,862	1.250,779	-5,362	1.249,917	-3,000	1,57	1.249,893	1,57	1.250,149	1.249,846	0,303	-1,57	3,000	1.249,799	5,500
4+80	0,463	1.249,892	-4,963	1.249,429	-3,000	0,73	1.249,418	0,73	1.249,249	1.249,396	-0,147	-0,73	3,000	1.249,374	5,500
4+81,036	0,423	1.249,802	-4,923	1.249,379	-3,000	0,65	1.249,369	0,65	1.249,161	1.249,350	-0,189	-0,65	3,000	1.249,330	5,500
4+96,489	-0,448	1.248,231	-5,172	1.248,679	-3,000	-0,82	1.248,692	-0,82	1.247,363	1.248,716	-1,353	0,82	3,000	1.248,741	5,500
4+100	-0,667	1.247,867	-5,500	1.248,534	-3,000	-1,19	1.248,552	-1,19	1.246,837	1.248,588	-1,751	1,19	3,000	1.248,623	5,500
4+105	-0,971	1.247,366	-5,956	1.248,337	-3,000	-1,72	1.248,363	-1,72	1.246,492	1.248,414	-1,922	1,72	3,000	1.248,466	5,500
4+110	-1,408	1.246,743	-6,613	1.248,151	-3,000	-2,25	1.248,185	-2,25	1.246,253	1.248,252	-1,999	2,25	3,000	1.248,320	5,500
4+115	-1,693	1.246,284	-7,039	1.247,977	-3,000	-2,78	1.248,018	-2,78	1.246,037	1.248,102	-2,065	2,78	3,000	1.248,185	5,500
4+120	-2,034	1.245,780	-7,550	1.247,814	-3,000	-3,31	1.247,863	-3,31	1.245,859	1.247,963	-2,104	3,31	3,000	1.248,062	5,500
4+125	-2,474	1.245,188	-8,212	1.247,662	-3,000	-3,84	1.247,720	-3,84	1.245,720	1.247,835	-2,115	3,84	3,000	1.247,950	5,500
4+126,489	-2,511	1.245,108	-8,267	1.247,619	-3,000	-4,00	1.247,679	-4,00	1.245,680	1.247,799	-2,119	4,00	3,000	1.247,919	5,500
4+130	-2,502	1.245,037	-8,253	1.247,539	-3,000	-4,00	1.247,599	-4,00	1.245,638	1.247,719	-2,081	4,00	3,000	1.247,839	5,500
4+135	-2,600	1.244,834	-8,400	1.247,434	-3,000	-4,00	1.247,494	-4,00	1.245,566	1.247,614	-2,048	4,00	3,000	1.247,734	5,500
4+140	-2,829	1.244,512	-8,744	1.247,341	-3,000	-4,00	1.247,401	-4,00	1.245,525	1.247,521	-1,996	4,00	3,000	1.247,641	5,500
4+145	-3,183	1.244,076	-9,275	1.247,259	-3,000	-4,00	1.247,319	-4,00	1.245,514	1.247,439	-1,925	4,00	3,000	1.247,559	5,500
4+145,575	-3,232	1.244,019	-9,347	1.247,251	-3,000	-4,00	1.247,311	-4,00	1.245,508	1.247,431	-1,923	4,00	3,000	1.247,551	5,500
4+150	-3,257	1.243,957	-9,385	1.247,214	-3,000	-3,45	1.247,266	-3,45	1.245,642	1.247,369	-1,727	3,45	3,000	1.247,472	5,500
4+155	-3,060	1.244,123	-9,090	1.247,183	-3,000	-2,82	1.247,225	-2,82	1.245,785	1.247,310	-1,525	2,82	3,000	1.247,395	5,500

Lado Esquerdo							Eixo				Lado Direito						
Offset			Lateral		Bordo		Cota	Cota	Cota	Bordo		Lateral		Offset			
Estaca	Altura	Cota	Distância	Cota	Distância	%	Terreno	Projeto	Vermelha	%	Distância	Cota	Distância	Cota	Altura		
4+160	-2,974	1.244,190	-8,962	1.247,164	-3,000	-2,20	1.246,042	1.247,263	-1,221	2,20	3,000	1.247,329	5,500	1.247,384	6,950	1.246,417	-0,967
4+165	-2,585	1.244,571	-8,377	1.247,156	-3,000	-1,57	1.246,313	1.247,227	-0,914	1,57	3,000	1.247,274	5,500	1.247,313	6,339	1.246,753	-0,560
4+170	-0,650	1.246,510	-5,475	1.247,160	-3,000	-0,95	1.246,841	1.247,202	-0,361	0,95	3,000	1.247,231	5,500	1.247,254	5,635	1.247,164	-0,090
4+175	0,175	1.247,350	-4,676	1.247,175	-3,000	-0,32	1.247,360	1.247,189	0,171	0,32	3,000	1.247,199	5,500	1.247,207	6,210	1.247,917	0,710
4+177,595	0,392	1.247,579	-4,893	1.247,187	-3,000	0,00	1.247,622	1.247,187	0,435	0,00	3,000	1.247,187	5,500	1.247,187	6,945	1.248,632	1,445
4+180	0,598	1.247,800	-5,098	1.247,202	-3,000	0,32	1.247,862	1.247,188	0,674	-0,32	3,000	1.247,178	5,500	1.247,170	7,619	1.249,289	2,119
4+190	1,293	1.248,586	-5,793	1.247,293	-3,000	1,65	1.248,583	1.247,219	1,364	-1,65	3,000	1.247,169	5,500	1.247,128	8,565	1.250,193	3,065
4+200	1,607	1.249,037	-6,107	1.247,430	-3,000	2,99	1.248,871	1.247,296	1,575	-2,99	3,000	1.247,206	5,500	1.247,132	8,505	1.250,137	3,005
4+207,595	1,543	1.249,095	-6,043	1.247,552	-3,000	4,00	1.248,851	1.247,372	1,479	-4,00	3,000	1.247,252	5,500	1.247,152	7,945	1.249,597	2,445
4+210	1,470	1.249,033	-5,970	1.247,563	-3,000	3,72	1.248,809	1.247,396	1,413	-3,72	3,000	1.247,284	5,500	1.247,191	7,738	1.249,429	2,238
4+220	1,158	1.248,769	-5,658	1.247,611	-3,000	2,55	1.248,609	1.247,496	1,113	-2,55	3,000	1.247,419	5,500	1.247,356	6,868	1.248,724	1,368
4+230	0,850	1.248,508	-5,350	1.247,658	-3,000	1,38	1.248,522	1.247,596	0,926	-1,38	3,000	1.247,555	5,500	1.247,520	6,422	1.248,442	0,922
4+237,595	0,600	1.248,294	-5,100	1.247,694	-3,000	0,50	1.248,528	1.247,672	0,856	-0,50	3,000	1.247,657	5,500	1.247,645	6,477	1.248,622	0,977
4+240	0,522	1.248,228	-5,022	1.247,706	-3,000	0,21	1.248,528	1.247,696	0,832	-0,21	3,000	1.247,690	5,500	1.247,684	6,497	1.248,681	0,997
4+246,070	0,406	1.248,140	-4,906	1.247,734	-3,000	-0,50	1.248,518	1.247,757	0,761	0,50	3,000	1.247,772	5,500	1.247,784	5,724	1.248,008	0,224
4+250	0,517	1.248,270	-5,017	1.247,753	-3,000	-0,95	1.248,491	1.247,796	0,695	0,95	3,000	1.247,825	5,500	1.247,848	5,763	1.248,110	0,262
4+260	0,795	1.248,595	-5,295	1.247,800	-3,000	-2,12	1.248,423	1.247,896	0,527	2,12	3,000	1.247,960	5,500	1.248,013	5,863	1.248,376	0,363
4+270	1,101	1.248,949	-5,601	1.247,848	-3,000	-3,29	1.248,471	1.247,996	0,475	3,29	3,000	1.248,095	5,500	1.248,177	5,905	1.248,582	0,405
4+276,070	1,303	1.249,180	-5,803	1.247,877	-3,000	-4,00	1.248,563	1.248,057	0,506	4,00	3,000	1.248,177	5,500	1.248,277	5,897	1.248,674	0,397
4+280	1,411	1.249,327	-5,911	1.247,916	-3,000	-4,00	1.248,610	1.248,096	0,514	4,00	3,000	1.248,216	5,500	1.248,316	5,910	1.248,726	0,410
4+289,930	1,373	1.249,388	-5,873	1.248,015	-3,000	-4,00	1.248,695	1.248,195	0,500	4,00	3,000	1.248,315	5,500	1.248,415	5,911	1.248,826	0,411
4+290	1,371	1.249,387	-5,871	1.248,016	-3,000	-3,99	1.248,696	1.248,196	0,500	3,99	3,000	1.248,316	5,500	1.248,416	5,911	1.248,827	0,411
4+300	1,092	1.249,268	-5,592	1.248,176	-3,000	-2,66	1.248,746	1.248,296	0,450	2,66	3,000	1.248,376	5,500	1.248,442	6,014	1.248,956	0,514
4+310	1,456	1.249,792	-5,956	1.248,336	-3,000	-1,32	1.248,929	1.248,396	0,533	1,32	3,000	1.248,436	5,500	1.248,469	5,861	1.248,830	0,361
4+319,930	1,500	1.249,995	-6,000	1.248,495	-3,000	0,00	1.249,253	1.248,495	0,758	0,00	3,000	1.248,495	5,500	1.248,495	5,800	1.248,795	0,300
4+320	1,499	1.249,995	-5,999	1.248,496	-3,000	0,01	1.249,256	1.248,496	0,760	-0,01	3,000	1.248,496	5,500	1.248,496	5,799	1.248,795	0,299
4+340	2,217	1.251,026	-6,717	1.248,809	-3,000	2,50	1.250,366	1.248,696	1,670	-2,50	3,000	1.248,621	5,500	1.248,559	6,938	1.249,996	1,437
4+360	2,493	1.251,502	-6,993	1.249,009	-3,000	2,50	1.251,339	1.248,896	2,443	-2,50	3,000	1.248,821	5,500	1.248,759	8,465	1.251,724	2,965

Lado Esquerdo						Eixo				Lado Direito							
Offset			Lateral		Bordo		Cota	Cota	Cota	Bordo		Lateral		Offset			
Estaca	Altura	Cota	Distância	Cota	Distância	%	Terreno	Projeto	Vermelha	%	Distância	Cota	Distância	Cota	Altura		
4+380	2,377	1.251,493	-6,877	1.249,116	-3,000	2,501	1.251,149	1.249,004	2,145	-2,50	3,000	1.248,929	5,500	1.248,866	8,069	1.251,435	2,569
4+400	2,015	1.251,054	-6,515	1.249,039	-3,000	2,501	1.250,649	1.248,926	1,723	-2,50	3,000	1.248,851	5,500	1.248,789	7,661	1.250,950	2,161
4+420	2,155	1.250,931	-6,655	1.248,776	-3,000	2,501	1.250,262	1.248,664	1,598	-2,50	3,000	1.248,589	5,500	1.248,526	7,593	1.250,619	2,093
4+440	1,835	1.250,164	-6,335	1.248,329	-3,000	2,501	1.249,762	1.248,216	1,546	-2,50	3,000	1.248,141	5,500	1.248,079	7,836	1.250,415	2,336
4+460	1,785	1.249,461	-6,285	1.247,676	-3,000	2,061	1.248,981	1.247,584	1,397	-2,06	3,000	1.247,522	5,500	1.247,470	7,800	1.249,770	2,300
4+480	2,085	1.248,854	-6,585	1.246,769	-3,000	0,061	1.247,780	1.246,766	1,014	-0,06	3,000	1.246,764	5,500	1.246,763	7,085	1.248,348	1,585
4+480,598	2,094	1.248,833	-6,595	1.246,739	-3,000	0,001	1.247,743	1.246,739	1,004	0,00	3,000	1.246,739	5,500	1.246,739	7,050	1.248,289	1,550
4+490	1,766	1.248,035	-6,266	1.246,269	-3,000	-0,941	1.247,020	1.246,311	0,709	0,94	3,000	1.246,339	5,500	1.246,363	6,495	1.247,358	0,995
4+500	1,046	1.246,815	-5,547	1.245,769	-3,000	-1,941	1.245,921	1.245,856	0,065	1,94	3,000	1.245,914	5,500	1.245,963	5,923	1.246,386	0,423
4+510	0,044	1.245,313	-4,544	1.245,269	-3,000	-2,941	1.244,666	1.245,401	-0,735	2,94	3,000	1.245,489	5,500	1.245,563	6,162	1.245,121	-0,442
4+520	-0,962	1.243,807	-5,942	1.244,769	-3,000	-3,941	1.243,371	1.244,946	-1,575	3,94	3,000	1.245,064	5,500	1.245,163	8,336	1.243,273	-1,890
4+520,598	-1,064	1.243,675	-6,097	1.244,739	-3,000	-4,001	1.243,295	1.244,919	-1,624	4,00	3,000	1.245,039	5,500	1.245,139	8,461	1.243,165	-1,974
4+530	-2,736	1.241,575	-8,604	1.244,311	-3,000	-4,001	1.242,431	1.244,491	-2,060	4,00	3,000	1.244,611	5,500	1.244,711	8,728	1.242,559	-2,152
4+532,380	-2,946	1.241,257	-8,919	1.244,203	-3,000	-4,001	1.242,267	1.244,383	-2,116	4,00	3,000	1.244,503	5,500	1.244,603	8,671	1.242,489	-2,114
4+540	-3,530	1.240,360	-9,795	1.243,890	-3,000	-3,241	1.241,908	1.244,036	-2,128	3,24	3,000	1.244,133	5,500	1.244,214	7,839	1.242,655	-1,559
4+550	-3,139	1.240,341	-9,208	1.243,480	-3,000	-2,241	1.241,610	1.243,581	-1,971	2,24	3,000	1.243,648	5,500	1.243,704	6,548	1.243,005	-0,699
4+560	-2,814	1.240,256	-8,722	1.243,070	-3,000	-1,241	1.241,504	1.243,126	-1,622	1,24	3,000	1.243,163	5,500	1.243,194	5,904	1.242,925	-0,269
4+570	-2,720	1.239,940	-8,580	1.242,660	-3,000	-0,241	1.241,535	1.242,671	-1,136	0,24	3,000	1.242,678	5,500	1.242,684	5,833	1.243,017	0,333
4+572,380	-2,713	1.239,850	-8,569	1.242,563	-3,000	0,001	1.241,561	1.242,563	-1,002	0,00	3,000	1.242,563	5,500	1.242,563	6,184	1.243,247	0,684
4+580	-2,690	1.239,560	-8,535	1.242,250	-3,000	0,761	1.241,650	1.242,216	-0,566	-0,76	3,000	1.242,193	5,500	1.242,174	7,585	1.244,259	2,085
4+600	0,632	1.242,051	-5,132	1.241,419	-3,000	2,501	1.242,240	1.241,306	0,934	-2,50	3,000	1.241,231	5,500	1.241,169	9,635	1.245,304	4,135
4+620	1,558	1.242,013	-6,058	1.240,455	-3,000	1,311	1.241,806	1.240,396	1,410	-1,31	3,000	1.240,357	5,500	1.240,324	9,064	1.243,888	3,564
4+629,827	1,284	1.241,233	-5,784	1.239,949	-3,000	0,001	1.240,855	1.239,949	0,906	0,00	3,000	1.239,949	5,500	1.239,949	8,228	1.242,677	2,728
4+630	1,272	1.241,212	-5,772	1.239,940	-3,000	-0,021	1.240,835	1.239,941	0,894	0,02	3,000	1.239,942	5,500	1.239,942	8,210	1.242,652	2,710
4+635	0,543	1.240,225	-5,043	1.239,682	-3,000	-0,691	1.240,284	1.239,714	0,570	0,69	3,000	1.239,734	5,500	1.239,751	7,664	1.241,915	2,164
4+640	0,197	1.239,622	-4,697	1.239,425	-3,000	-1,361	1.239,733	1.239,486	0,247	1,36	3,000	1.239,527	5,500	1.239,561	7,093	1.241,154	1,593
4+645	-0,083	1.239,084	-4,625	1.239,167	-3,000	-2,021	1.239,216	1.239,259	-0,043	2,02	3,000	1.239,319	5,500	1.239,370	6,753	1.240,623	1,253
4+650	-0,179	1.238,731	-4,768	1.238,910	-3,000	-2,691	1.238,900	1.239,031	-0,131	2,69	3,000	1.239,112	5,500	1.239,179	5,967	1.239,645	0,466

Lado Esquerdo				Eixo				Lado Direito			
Offset		Lateral		Bordo		Terreno		Bordo		Lateral	
Estaca	Altura	Distância	Cota	Distância	Cota	Distância	%	Distância	Cota	Distância	Cota
4+655	-0,2521.238,400	-4,8771.238,652	-4,5001.238,703	-3,000	-3,361.238,593	1.238,804	-0,211	3,36	3,0001.238,904	5,5001.238,988	5,5891.238,929
4+659,827	-0,3411.238,063	-5,0121.238,404	-4,5001.238,464	-3,000	-4,001.238,439	1.238,584	-0,145	4,00	3,0001.238,704	5,5001.238,804	5,5091.238,798
4+660	-0,3451.238,051	-5,0171.238,396	-4,5001.238,456	-3,000	-4,001.238,433	1.238,576	-0,143	4,00	3,0001.238,696	5,5001.238,796	5,5051.238,793
4+665	-0,3431.237,826	-5,0151.238,169	-4,5001.238,229	-3,000	-4,001.238,277	1.238,349	-0,072	4,00	3,0001.238,469	5,5001.238,569	5,5171.238,586
4+670	-0,0721.237,869	-4,6071.237,941	-4,5001.238,001	-3,000	-4,001.238,195	1.238,121	0,074	4,00	3,0001.238,241	5,5001.238,341	5,5401.238,381
4+675	0,1781.237,892	-4,6781.237,714	-4,5001.237,774	-3,000	-4,001.238,100	1.237,894	0,206	4,00	3,0001.238,014	5,5001.238,114	5,6291.238,243
4+680	0,1171.237,603	-4,6171.237,486	-4,5001.237,546	-3,000	-4,001.237,994	1.237,666	0,328	4,00	3,0001.237,786	5,5001.237,886	6,1411.238,527
4+680,723	0,0941.237,547	-4,5941.237,453	-4,5001.237,513	-3,000	-4,001.237,975	1.237,633	0,342	4,00	3,0001.237,753	5,5001.237,853	6,1601.238,513
4+685	0,0261.237,302	-4,5261.237,276	-4,5001.237,330	-3,000	-3,611.237,911	1.237,439	0,472	3,61	3,0001.237,547	5,5001.237,637	6,1201.238,257
4+690	0,3191.237,388	-4,8191.237,069	-4,5001.237,116	-3,000	-3,161.237,895	1.237,211	0,684	3,16	3,0001.237,306	5,5001.237,385	6,2181.238,103
4+695	0,6821.237,544	-5,1821.236,862	-4,5001.236,902	-3,000	-2,711.237,944	1.236,984	0,960	2,71	3,0001.237,065	5,5001.237,132	6,2591.237,891
4+700	0,9131.237,568	-5,4131.236,655	-4,5001.236,688	-3,000	-2,251.238,125	1.236,766	1,369	2,25	3,0001.236,824	5,5001.236,880	6,5481.237,928
4+705	1,4621.237,909	-5,9621.236,447	-4,5001.236,474	-3,000	-1,801.238,436	1.236,529	1,907	1,80	3,0001.236,583	5,5001.236,628	7,7231.238,851
4+710	2,1851.238,425	-6,6851.236,240	-4,5001.236,261	-3,000	-1,351.238,858	1.236,301	2,557	1,35	3,0001.236,341	5,5001.236,375	8,6431.239,518
4+710,723	2,2901.238,500	-6,7901.236,210	-4,5001.236,230	-3,000	-1,281.238,918	1.236,268	2,650	1,28	3,0001.236,307	5,5001.236,339	8,7731.239,612
4+720	3,6751.239,501	-8,1751.235,826	-4,5001.235,833	-3,000	-0,441.239,664	1.235,846	3,818	0,44	3,0001.235,859	5,5001.235,870	10,4511.240,821
4+739,065	3,6561.238,682	-8,1561.235,026	-4,5001.235,010	-3,000	1,051.238,950	1.234,979	3,971	-1,05	3,0001.234,947	5,5001.234,921	10,0631.239,484
4+740	3,6301.238,616	-8,1301.234,986	-4,5001.234,969	-3,000	1,121.238,873	1.234,936	3,937	-1,12	3,0001.234,903	5,5001.234,875	10,0291.239,404
4+745	3,4801.238,255	-7,9801.234,775	-4,5001.234,753	-3,000	1,481.238,489	1.234,709	3,780	-1,48	3,0001.234,664	5,5001.234,627	9,5151.238,642
4+750	3,3261.237,890	-7,8261.234,564	-4,5001.234,537	-3,000	1,851.238,147	1.234,481	3,666	-1,85	3,0001.234,425	5,5001.234,379	8,8331.237,712
4+755	3,2091.237,563	-7,7091.234,354	-4,5001.234,320	-3,000	2,221.237,800	1.234,254	3,546	-2,22	3,0001.234,187	5,5001.234,131	8,2631.236,893
4+760	3,2011.237,344	-7,7011.234,143	-4,5001.234,104	-3,000	2,591.237,447	1.234,026	3,421	-2,59	3,0001.233,948	5,5001.233,883	8,1271.236,510
4+765	3,1941.237,127	-7,6941.233,933	-4,5001.233,888	-3,000	2,961.237,026	1.233,799	3,227	-2,96	3,0001.233,711	5,5001.233,637	7,9741.236,111
4+770	3,2101.236,934	-7,7101.233,724	-4,5001.233,675	-3,000	3,331.236,547	1.233,575	2,972	-3,33	3,0001.233,475	5,5001.233,391	7,8061.235,697
4+775	3,2611.236,779	-7,7611.233,518	-4,5001.233,463	-3,000	3,701.235,966	1.233,352	2,614	-3,70	3,0001.233,241	5,5001.233,148	7,5471.235,195
4+779,065	3,3211.236,673	-7,8211.233,352	-4,5001.233,292	-3,000	4,001.235,459	1.233,172	2,287	-4,00	3,0001.233,052	5,5001.232,952	7,3181.234,770
4+780	3,2261.236,536	-7,7261.233,310	-4,5001.233,250	-3,000	4,001.235,335	1.233,130	2,205	-4,00	3,0001.233,010	5,5001.232,910	7,2561.234,666
4+785	2,6861.235,777	-7,1861.233,091	-4,5001.233,031	-3,000	4,001.234,629	1.232,911	1,718	-4,00	3,0001.232,791	5,5001.232,691	6,8121.234,003

ENGMETRIA - Ltda.

Projeto: SC-114 - Bentinho - SC

TRECHO

Notas de Serviço de Terraplenagem

Lado Esquerdo							Eixo				Lado Direito								
Offset			Lateral		Bordo		%	Cota	Terreno	Cota	Projeto	Vermelha	%	Bordo		Lateral		Offset	
Estaca	Altura	Cota	Distância	Cota	Distância	Cota								Distância	Cota	Distância	Cota	Distância	Altura
4+789,991	0,888	1.233,762	-5,388	1.232,874	-3,000	1.232,814	-3,000	4,00	1.233,934	1.232,694	1,240	-4,00	3,000	1.232,574	5,500	1.232,474	6,194	1.233,168	0,694
4+790	0,888	1.233,761	-5,388	1.232,873	-3,000	1.232,813	-3,000	4,00	1.233,932	1.232,693	1,239	-4,00	3,000	1.232,573	5,500	1.232,473	6,193	1.233,166	0,693
4+795	0,492	1.233,133	-4,992	1.232,641	-3,000	1.232,587	-3,000	3,65	1.233,268	1.232,477	0,791	-3,65	3,000	1.232,368	5,500	1.232,277	5,823	1.232,599	0,322
4+800	0,089	1.232,501	-4,589	1.232,412	-3,000	1.232,362	-3,000	3,30	1.232,595	1.232,263	0,332	-3,30	3,000	1.232,164	5,500	1.232,082	5,635	1.231,992	-0,090
4+805	-0,496	1.231,688	-5,244	1.232,184	-3,000	1.232,139	-3,000	2,95	1.231,986	1.232,051	-0,065	-2,95	3,000	1.231,962	5,500	1.231,889	7,825	1.230,339	-1,550
4+810	-0,703	1.231,254	-5,554	1.231,957	-3,000	1.231,918	-3,000	2,60	1.231,438	1.231,840	-0,402	-2,60	3,000	1.231,762	5,500	1.231,697	8,517	1.229,686	-2,011
4+815	-0,627	1.231,106	-5,440	1.231,733	-3,000	1.231,699	-3,000	2,25	1.230,977	1.231,632	-0,655	-2,25	3,000	1.231,564	5,500	1.231,508	9,412	1.228,900	-2,608
4+820	-0,658	1.230,852	-5,486	1.231,510	-3,000	1.231,482	-3,000	1,90	1.230,566	1.231,425	-0,859	-1,90	3,000	1.231,368	5,500	1.231,320	10,617	1.227,908	-3,412
4+825	-0,643	1.230,646	-5,465	1.231,289	-3,000	1.231,266	-3,000	1,55	1.230,176	1.231,219	-1,043	-1,55	3,000	1.231,173	5,500	1.231,134	11,367	1.227,223	-3,911
4+829,991	-0,566	1.230,504	-5,349	1.231,070	-3,000	1.231,052	-3,000	1,20	1.229,814	1.231,016	-1,202	-1,20	3,000	1.230,980	5,500	1.230,950	12,190	1.226,490	-4,460
4+840	-0,568	1.230,069	-5,351	1.230,637	-3,000	1.230,630	-3,000	0,50	1.229,070	1.230,615	-1,545	-0,50	3,000	1.230,600	5,500	1.230,587	14,012	1.224,912	-5,675
4+860	-0,003	1.229,790	-4,504	1.229,793	-3,000	1.229,806	-3,000	-0,90	1.228,171	1.229,833	-1,662	0,90	3,000	1.229,860	5,500	1.229,883	12,745	1.225,053	-4,830
4+864,298	-0,001	1.229,614	-4,502	1.229,615	-3,000	1.229,633	-3,000	-1,20	1.228,040	1.229,669	-1,629	1,20	3,000	1.229,705	5,500	1.229,735	12,585	1.225,012	-4,723
4+865	0,069	1.229,655	-4,569	1.229,586	-3,000	1.229,605	-3,000	-1,25	1.228,031	1.229,642	-1,611	1,25	3,000	1.229,680	5,500	1.229,711	12,565	1.225,001	-4,710
4+870	0,296	1.229,677	-4,796	1.229,381	-3,000	1.229,405	-3,000	-1,60	1.227,962	1.229,453	-1,491	1,60	3,000	1.229,501	5,500	1.229,541	12,464	1.224,898	-4,643
4+875	0,540	1.229,718	-5,040	1.229,178	-3,000	1.229,207	-3,000	-1,95	1.227,886	1.229,266	-1,380	1,95	3,000	1.229,324	5,500	1.229,373	12,337	1.224,815	-4,558
4+880	0,787	1.229,764	-5,287	1.228,977	-3,000	1.229,011	-3,000	-2,30	1.227,804	1.229,080	-1,276	2,30	3,000	1.229,149	5,500	1.229,207	12,144	1.224,778	-4,429
4+885	1,206	1.229,983	-5,706	1.228,777	-3,000	1.228,817	-3,000	-2,65	1.227,698	1.228,897	-1,199	2,65	3,000	1.228,976	5,500	1.229,042	11,703	1.224,906	-4,136
4+890	1,620	1.230,200	-6,120	1.228,580	-3,000	1.228,625	-3,000	-3,00	1.227,610	1.228,715	-1,105	3,00	3,000	1.228,805	5,500	1.228,880	11,045	1.225,183	-3,697
4+895	1,984	1.230,368	-6,484	1.228,384	-3,000	1.228,434	-3,000	-3,35	1.227,513	1.228,534	-1,021	3,35	3,000	1.228,635	5,500	1.228,719	9,965	1.225,742	-2,977
4+900	2,429	1.230,619	-6,930	1.228,190	-3,000	1.228,245	-3,000	-3,70	1.227,368	1.228,356	-0,988	3,70	3,000	1.228,467	5,500	1.228,559	6,886	1.227,635	-0,924
4+904,298	2,368	1.230,391	-6,868	1.228,023	-3,000	1.228,083	-3,000	-4,00	1.227,311	1.228,203	-0,892	4,00	3,000	1.228,323	5,500	1.228,423	6,798	1.227,557	-0,866
4+905	2,344	1.230,343	-6,844	1.227,999	-3,000	1.228,059	-3,000	-4,00	1.227,299	1.228,179	-0,880	4,00	3,000	1.228,299	5,500	1.228,399	6,782	1.227,544	-0,855
4+910	2,204	1.230,025	-6,704	1.227,821	-3,000	1.227,881	-3,000	-4,00	1.227,196	1.228,001	-0,805	4,00	3,000	1.228,121	5,500	1.228,221	6,725	1.227,404	-0,817
4+915	2,096	1.229,740	-6,596	1.227,644	-3,000	1.227,704	-3,000	-4,00	1.227,110	1.227,824	-0,714	4,00	3,000	1.227,944	5,500	1.228,044	8,751	1.225,877	-2,167
4+920	2,049	1.229,515	-6,549	1.227,466	-3,000	1.227,526	-3,000	-4,00	1.227,021	1.227,646	-0,625	4,00	3,000	1.227,766	5,500	1.227,866	8,111	1.226,125	-1,741
4+925	1,872	1.229,161	-6,372	1.227,289	-3,000	1.227,349	-3,000	-4,00	1.226,953	1.227,469	-0,516	4,00	3,000	1.227,589	5,500	1.227,689	7,437	1.226,398	-1,291
4+930	1,793	1.228,904	-6,293	1.227,111	-3,000	1.227,171	-3,000	-4,00	1.226,884	1.227,291	-0,407	4,00	3,000	1.227,411	5,500	1.227,511	6,417	1.226,900	-0,611

Lado Esquerdo										Eixo				Lado Direito					
Offset			Lateral		Bordo		Cota	Cota	Cota	Bordo		Lateral		Offset					
Estaca	Altura	Cota	Distância	Cota	Distância	Cota	%	Terreno	Projeto	Vermelha	%	Distância	Cota	Distância	Cota	Altura			
4+935	1,779	1.228,713	-6,279	1.226,934	-3,000	-4,00	1.226,834	1.227,114	-0,280	4,00	3,000	1.227,234	5,500	1.227,334	6,623	1.226,585	-0,749		
4+940	1,797	1.228,553	-6,297	1.226,756	-3,000	-4,00	1.226,725	1.226,936	-0,211	4,00	3,000	1.227,056	5,500	1.227,156	6,910	1.226,216	-0,940		
4+945	1,770	1.228,349	-6,270	1.226,579	-3,000	-4,00	1.226,679	1.226,759	-0,080	4,00	3,000	1.226,879	5,500	1.226,979	6,882	1.226,058	-0,921		
4+950	1,828	1.228,229	-6,328	1.226,401	-3,000	-4,00	1.226,603	1.226,581	0,022	4,00	3,000	1.226,701	5,500	1.226,801	6,690	1.226,008	-0,793		
4+955	1,966	1.228,190	-6,466	1.226,224	-3,000	-4,00	1.226,554	1.226,404	0,150	4,00	3,000	1.226,524	5,500	1.226,624	6,658	1.225,852	-0,772		
4+960	2,096	1.228,142	-6,597	1.226,046	-3,000	-4,00	1.226,486	1.226,226	0,260	4,00	3,000	1.226,346	5,500	1.226,446	6,219	1.225,967	-0,479		
4+965	2,083	1.227,952	-6,583	1.225,869	-3,000	-4,00	1.226,393	1.226,049	0,344	4,00	3,000	1.226,169	5,500	1.226,269	5,759	1.226,096	-0,173		
4+970	2,177	1.227,868	-6,677	1.225,691	-3,000	-4,00	1.226,297	1.225,871	0,426	4,00	3,000	1.225,991	5,500	1.226,091	5,726	1.225,941	-0,150		
4+975	2,308	1.227,822	-6,808	1.225,514	-3,000	-4,00	1.226,211	1.225,694	0,517	4,00	3,000	1.225,814	5,500	1.225,914	6,067	1.225,536	-0,378		
4+980	2,445	1.227,781	-6,945	1.225,336	-3,000	-4,00	1.226,130	1.225,516	0,614	4,00	3,000	1.225,636	5,500	1.225,736	5,953	1.225,434	-0,302		
4+985	2,403	1.227,562	-6,903	1.225,159	-3,000	-4,00	1.225,987	1.225,339	0,648	4,00	3,000	1.225,459	5,500	1.225,559	5,978	1.225,240	-0,319		
4+990	2,547	1.227,528	-7,047	1.224,981	-3,000	-4,00	1.225,814	1.225,161	0,653	4,00	3,000	1.225,281	5,500	1.225,381	5,693	1.225,252	-0,129		
4+995	2,811	1.227,615	-7,311	1.224,804	-3,000	-4,00	1.225,611	1.224,984	0,627	4,00	3,000	1.225,104	5,500	1.225,204	5,659	1.225,363	0,159		
4+997,856	3,006	1.227,708	-7,506	1.224,702	-3,000	-4,00	1.225,483	1.224,882	0,601	4,00	3,000	1.225,002	5,500	1.225,102	5,794	1.225,396	0,294		
5	3,128	1.227,764	-7,628	1.224,636	-3,000	-3,79	1.225,384	1.224,806	0,578	3,79	3,000	1.224,920	5,500	1.225,014	5,743	1.225,256	0,242		
5+5	3,299	1.227,780	-7,799	1.224,481	-3,000	-3,29	1.225,181	1.224,629	0,552	3,29	3,000	1.224,727	5,500	1.224,809	5,539	1.224,848	0,039		
5+10	3,214	1.227,540	-7,714	1.224,326	-3,000	-2,79	1.224,937	1.224,451	0,486	2,79	3,000	1.224,535	5,500	1.224,604	5,660	1.224,497	-0,107		
5+15	3,198	1.227,369	-7,698	1.224,171	-3,000	-2,29	1.224,724	1.224,274	0,450	2,29	3,000	1.224,342	5,500	1.224,399	5,694	1.224,593	0,194		
5+20	3,433	1.227,449	-7,933	1.224,016	-3,000	-1,79	1.224,541	1.224,096	0,445	1,79	3,000	1.224,150	5,500	1.224,194	5,997	1.224,691	0,497		
5+25	3,307	1.227,168	-7,807	1.223,861	-3,000	-1,29	1.224,391	1.223,919	0,472	1,29	3,000	1.223,957	5,500	1.223,989	6,115	1.224,604	0,615		
5+30	3,214	1.226,920	-7,714	1.223,706	-3,000	-0,79	1.224,198	1.223,741	0,457	0,79	3,000	1.223,765	5,500	1.223,784	6,258	1.224,542	0,758		
5+35	3,173	1.226,724	-7,673	1.223,551	-3,000	-0,29	1.224,052	1.223,564	0,488	0,29	3,000	1.223,572	5,500	1.223,579	6,226	1.224,305	0,726		
5+37,856	3,159	1.226,621	-7,659	1.223,462	-3,000	0,00	1.223,979	1.223,462	0,517	0,00	3,000	1.223,462	5,500	1.223,462	6,212	1.224,174	0,712		
5+40	3,152	1.226,548	-7,652	1.223,396	-3,000	0,21	1.223,921	1.223,386	0,535	-0,21	3,000	1.223,380	5,500	1.223,374	6,206	1.224,080	0,706		
5+60	3,526	1.226,302	-8,026	1.222,776	-3,000	2,21	1.223,244	1.222,676	0,568	-2,21	5,400	1.222,556	7,900	1.222,501	8,148	1.222,749	0,248		
5+65	3,636	1.226,247	-8,136	1.222,611	-3,000	2,50	1.223,087	1.222,499	0,588	-2,50	6,000	1.222,349	8,500	1.222,286	8,570	1.222,356	0,070		
5+80	4,016	1.226,095	-8,516	1.222,079	-3,000	2,50	1.222,602	1.221,966	0,636	-2,50	6,000	1.221,816	8,500	1.221,754	8,719	1.221,973	0,219		
5+85	3,518	1.225,423	-8,018	1.221,905	-3,000	2,59	1.222,385	1.221,789	0,596	-2,59	6,000	1.221,633	8,500	1.221,568	8,771	1.221,839	0,271		

Lado Esquerdo						Eixo				Lado Direito									
Estaca	Offset		Lateral		Bordo		Cota	Terreno	Projeto	Cota	Vermelha	%	Bordo		Lateral		Offset		
	Altura	Cota	Distância	Cota	Distância	Cota							Distância	Cota	Distância	Cota			
5+100	1,939	1.223,327	-6,439	1.221,388	-4,500	1.221,344	-3,000	2,941	1.221,776	1.221,256	0,520	-2,94	3,000	1.221,168	5,500	1.221,094	6,360	1.221,954	0,860
5+105,988	1,574	1.222,801	-7,271	1.221,227	-5,698	1.221,181	-4,198	3,081	1.221,467	1.221,051	0,416	-3,08	3,000	1.220,959	5,500	1.220,882	6,313	1.221,695	0,813
5+110	1,253	1.222,382	-7,753	1.221,129	-6,500	1.221,082	-5,000	3,171	1.221,261	1.220,923	0,338	-3,17	3,000	1.220,828	5,500	1.220,749	6,275	1.221,524	0,775
5+115	0,829	1.221,849	-8,329	1.221,020	-7,500	1.220,970	-6,000	3,281	1.221,008	1.220,773	0,235	-3,28	3,000	1.220,675	5,500	1.220,593	6,165	1.221,258	0,665
5+120	0,468	1.221,357	-7,968	1.220,889	-7,500	1.220,838	-6,000	3,401	1.220,772	1.220,634	0,138	-3,40	3,000	1.220,532	5,500	1.220,447	6,036	1.220,983	0,536
5+125	0,338	1.221,108	-7,838	1.220,770	-7,500	1.220,717	-6,000	3,521	1.220,634	1.220,507	0,127	-3,52	3,000	1.220,401	5,500	1.220,313	5,910	1.220,722	0,409
5+130	0,181	1.220,843	-7,681	1.220,662	-7,500	1.220,608	-6,000	3,631	1.220,466	1.220,390	0,076	-3,63	3,000	1.220,281	5,500	1.220,190	5,688	1.220,378	0,188
5+135	0,242	1.220,807	-7,742	1.220,565	-7,500	1.220,509	-6,000	3,751	1.220,279	1.220,284	-0,005	-3,75	3,000	1.220,172	5,500	1.220,078	5,518	1.220,096	0,018
5+140	-0,019	1.220,437	-6,929	1.220,456	-6,900	1.220,398	-5,400	3,861	1.219,919	1.220,189	-0,270	-3,86	3,000	1.220,073	5,500	1.219,977	6,046	1.219,613	-0,364
5+145	-0,463	1.219,893	-6,994	1.220,356	-6,300	1.220,297	-4,800	3,981	1.219,605	1.220,106	-0,501	-3,98	3,000	1.219,986	5,500	1.219,887	6,721	1.219,073	-0,814
5+145,988	-0,440	1.219,898	-6,841	1.220,338	-6,181	1.220,278	-4,681	4,001	1.219,543	1.220,090	-0,547	-4,00	3,000	1.219,970	5,500	1.219,870	6,862	1.218,962	-0,908
5+150	-0,539	1.219,722	-6,509	1.220,261	-5,700	1.220,201	-4,200	4,001	1.219,205	1.220,033	-0,828	-4,00	3,000	1.219,913	5,500	1.219,813	7,318	1.218,601	-1,212
5+155	-0,948	1.219,228	-6,522	1.220,176	-5,100	1.220,116	-3,600	4,001	1.218,601	1.219,972	-1,371	-4,00	3,000	1.219,852	5,500	1.219,752	8,062	1.218,044	-1,708
5+160	-1,318	1.218,783	-6,477	1.220,101	-4,500	1.220,041	-3,000	4,001	1.218,211	1.219,921	-1,710	-4,00	3,000	1.219,801	5,500	1.219,701	8,953	1.217,399	-2,302
5+164,722	-1,681	1.218,382	-7,022	1.220,063	-4,500	1.220,003	-3,000	4,001	1.217,854	1.219,883	-2,029	-4,00	3,000	1.219,763	5,500	1.219,663	10,506	1.216,326	-3,337
5+165	-1,714	1.218,347	-7,071	1.220,061	-4,500	1.220,001	-3,000	3,991	1.217,832	1.219,882	-2,050	-3,99	3,000	1.219,762	5,500	1.219,662	10,512	1.216,321	-3,341
5+170	-1,903	1.218,125	-7,355	1.220,028	-4,500	1.219,969	-3,000	3,881	1.217,720	1.219,853	-2,133	-3,88	3,000	1.219,737	5,500	1.219,640	10,653	1.216,205	-3,435
5+175	-2,051	1.217,954	-7,577	1.220,005	-4,500	1.219,949	-3,000	3,761	1.217,641	1.219,836	-2,195	-3,76	3,000	1.219,723	5,500	1.219,629	9,546	1.216,932	-2,697
5+180	-1,845	1.218,148	-7,268	1.219,993	-4,500	1.219,939	-3,000	3,651	1.217,926	1.219,829	-1,903	-3,65	3,000	1.219,720	5,500	1.219,629	8,809	1.217,423	-2,206
5+185	-1,680	1.218,313	-7,020	1.219,993	-4,500	1.219,940	-3,000	3,531	1.218,157	1.219,834	-1,677	-3,53	3,000	1.219,728	5,500	1.219,640	8,237	1.217,815	-1,825
5+190	-1,416	1.218,588	-6,624	1.220,004	-4,500	1.219,952	-3,000	3,421	1.218,405	1.219,850	-1,445	-3,42	3,000	1.219,747	5,500	1.219,662	7,758	1.218,157	-1,505
5+195	-0,834	1.219,191	-5,751	1.220,025	-4,500	1.219,976	-3,000	3,301	1.218,672	1.219,877	-1,205	-3,30	3,000	1.219,777	5,500	1.219,695	7,206	1.218,558	-1,137
5+200	-0,267	1.219,791	-4,901	1.220,058	-4,500	1.220,010	-3,000	3,191	1.218,988	1.219,914	-0,926	-3,19	3,000	1.219,819	5,500	1.219,739	6,477	1.219,088	-0,651
5+204,722	-0,024	1.220,075	-4,536	1.220,099	-4,500	1.220,053	-3,000	3,081	1.219,338	1.219,960	-0,622	-3,08	3,000	1.219,868	5,500	1.219,791	6,038	1.219,432	-0,359
5+220	1,856	1.222,155	-6,357	1.220,299	-4,500	1.220,258	-3,000	2,721	1.220,285	1.220,176	0,109	-2,72	3,000	1.220,094	5,500	1.220,026	6,316	1.220,842	0,816
5+240	2,200	1.222,839	-6,700	1.220,639	-4,500	1.220,601	-3,000	2,501	1.221,079	1.220,526	0,553	-2,50	3,000	1.220,451	5,500	1.220,389	6,348	1.221,237	0,848
5+260	2,319	1.223,284	-6,819	1.220,965	-4,500	1.220,935	-3,000	1,981	1.221,795	1.220,876	0,919	-1,98	3,000	1.220,817	5,500	1.220,767	5,686	1.220,953	0,186
5+279,804	2,523	1.223,746	-7,023	1.221,223	-4,500	1.221,223	-3,000	0,001	1.223,006	1.221,223	1,783	0,00	3,000	1.221,223	5,500	1.221,223	6,348	1.220,658	-0,565

Estaca	Lado Esquerdo					Eixo					Lado Direito				
	Offset		Lateral		Bordo	Cota	Terreno	Cota	Projeto	Cota Vermelha	%	Bordo		Lateral	Offset
	Altura	Cota	Distância	Cota								Distância	Cota		
5+405	4,576	1.228,004	-9,076	1.223,428	-3,000	1.223,423	0,321	1.223,588	1.223,414	0,174	-0,32	3,000	1.223,404	5,500	1.223,549
5+410	4,479	1.228,015	-8,979	1.223,536	-3,000	1.223,524	0,781	1.223,552	1.223,501	0,051	-0,78	3,000	1.223,478	5,500	1.223,476
5+415	4,143	1.227,787	-8,643	1.223,644	-3,000	1.223,626	1,241	1.223,548	1.223,589	-0,041	-1,24	3,000	1.223,551	5,500	1.220,923
5+420	3,652	1.227,404	-8,152	1.223,752	-3,000	1.223,727	1,701	1.223,671	1.223,676	-0,005	-1,70	3,000	1.223,625	5,500	1.221,157
5+425	1,862	1.225,722	-6,362	1.223,860	-3,000	1.223,828	2,161	1.223,787	1.223,764	0,023	-2,16	3,000	1.223,699	5,500	1.221,325
5+430	-0,266	1.223,703	-4,899	1.223,969	-3,000	1.223,929	2,611	1.223,702	1.223,851	-0,149	-2,61	3,000	1.223,773	5,500	1.221,445
5+435	-0,226	1.223,851	-4,839	1.224,077	-3,000	1.224,031	3,071	1.223,720	1.223,939	-0,219	-3,07	3,000	1.223,846	5,500	1.221,508
5+440	-0,255	1.223,930	-4,882	1.224,185	-3,000	1.224,132	3,531	1.223,642	1.224,026	-0,384	-3,53	3,000	1.223,920	5,500	1.221,476
5+445	-0,294	1.223,999	-4,942	1.224,293	-3,000	1.224,233	3,991	1.223,479	1.224,114	-0,635	-3,99	3,000	1.223,994	5,500	1.221,275
5+445,139	-0,295	1.224,001	-4,942	1.224,296	-3,000	1.224,236	4,001	1.223,473	1.224,116	-0,643	-4,00	3,000	1.223,996	5,500	1.221,268
5+450	-0,317	1.224,084	-4,975	1.224,381	-3,000	1.224,321	4,001	1.223,214	1.224,201	-0,987	-4,00	3,000	1.224,081	5,500	1.220,940
5+455	-0,160	1.224,309	-4,740	1.224,469	-3,000	1.224,409	4,001	1.223,141	1.224,289	-1,148	-4,00	3,000	1.224,169	5,500	1.221,387
5+460	0,979	1.225,535	-5,479	1.224,556	-3,000	1.224,496	4,001	1.223,509	1.224,376	-0,867	-4,00	3,000	1.224,256	5,500	1.221,884
5+465	0,507	1.225,151	-5,007	1.224,644	-3,000	1.224,584	4,001	1.223,887	1.224,464	-0,577	-4,00	3,000	1.224,344	5,500	1.222,267
5+470	0,694	1.225,425	-5,194	1.224,731	-3,000	1.224,671	4,001	1.225,030	1.224,551	0,479	-4,00	3,000	1.224,431	5,500	1.222,825
5+475	0,789	1.225,608	-5,289	1.224,819	-3,000	1.224,759	4,001	1.225,462	1.224,639	0,823	-4,00	3,000	1.224,519	5,500	1.223,330
5+479,625	0,668	1.225,567	-5,168	1.224,899	-3,000	1.224,839	4,001	1.225,634	1.224,719	0,915	-4,00	3,000	1.224,599	5,500	1.223,765
5+480	0,651	1.225,557	-5,151	1.224,906	-3,000	1.224,846	3,991	1.225,643	1.224,726	0,917	-3,99	3,000	1.224,606	5,500	1.223,796
5+485	2,385	1.227,377	-6,885	1.224,992	-3,000	1.224,934	3,881	1.225,749	1.224,818	0,931	-3,88	3,000	1.224,702	5,500	1.224,088
5+490	2,625	1.227,713	-7,126	1.225,088	-3,000	1.225,032	3,761	1.225,710	1.224,919	0,791	-3,76	3,000	1.224,806	5,500	1.224,760
5+495	2,391	1.227,584	-6,891	1.225,193	-3,000	1.225,138	3,651	1.225,655	1.225,029	0,626	-3,65	3,000	1.224,919	5,500	1.224,946
5+500	1,785	1.227,091	-6,285	1.225,306	-3,000	1.225,253	3,531	1.225,598	1.225,147	0,451	-3,53	3,000	1.225,042	5,500	1.225,033
5+505	1,247	1.226,676	-5,747	1.225,429	-3,000	1.225,378	3,411	1.225,550	1.225,275	0,275	-3,41	3,000	1.225,173	5,500	1.224,827
5+510	1,118	1.226,678	-5,618	1.225,560	-3,000	1.225,511	3,301	1.225,553	1.225,412	0,141	-3,30	3,000	1.225,313	5,500	1.223,632
5+515	0,190	1.225,891	-4,690	1.225,701	-3,000	1.225,653	3,181	1.225,575	1.225,557	0,018	-3,18	3,000	1.225,462	5,500	1.223,397
5+519,625	-0,060	1.225,778	-4,591	1.225,838	-3,000	1.225,792	3,081	1.225,596	1.225,700	-0,104	-3,08	3,000	1.225,608	5,500	1.223,153
5+520	-0,068	1.225,792	-4,602	1.225,850	-3,000	1.225,804	3,071	1.225,598	1.225,712	-0,114	-3,07	3,000	1.225,620	5,500	1.223,133
5+540	-0,318	1.226,218	-4,978	1.226,536	-3,000	1.226,497	2,611	1.225,848	1.226,419	-0,571	-2,61	3,000	1.226,341	5,500	1.222,703

ENGMETRIA - Ltda.

Projeto: SC-114 - Bentinho - SC

TRECHO

Notas de Serviço de Terraplenagem

Lado Esquerdo										Eixo				Lado Direito					
Offset			Lateral			Bordo			Cota		Cota		Bordo		Lateral		Offset		
Estaca	Altura	Cota	Distância	Cota	Distância	Cota	Distância	%	Terreno	Projeto	Vermelha	%	Distância	Cota	Distância	Cota	Distância	Cota	Altura
5+560	-0,074	1.227,307	-4,611	1.227,381	-4,500	1.227,344	-3,000	2,501	1.226,809	1.227,269	-0,460	-2,50	3,000	1.227,194	5,500	1.227,131	9,789	1.224,272	-2,859
5+580	3,279	1.231,653	-7,779	1.228,374	-4,500	1.228,337	-3,000	2,501	1.228,404	1.228,262	0,142	-2,50	3,000	1.228,187	5,500	1.228,124	10,266	1.224,947	-3,177
5+600	4,874	1.234,370	-9,374	1.229,496	-4,500	1.229,463	-3,000	2,191	1.229,731	1.229,397	0,334	-2,19	3,000	1.229,332	5,500	1.229,277	5,510	1.229,287	0,010
5+616,438	5,294	1.235,732	-9,794	1.230,438	-4,500	1.230,438	-3,000	0,001	1.230,687	1.230,438	0,249	0,00	3,000	1.230,438	5,500	1.230,438	5,540	1.230,412	-0,026
5+620	5,088	1.235,743	-9,588	1.230,655	-4,500	1.230,662	-3,000	-0,471	1.230,963	1.230,676	0,287	0,47	3,000	1.230,690	5,500	1.230,702	5,634	1.230,613	-0,089
5+630	5,101	1.236,349	-9,601	1.231,248	-4,500	1.231,275	-3,000	-1,811	1.231,754	1.231,329	0,425	1,81	3,000	1.231,383	5,500	1.231,429	5,542	1.231,471	0,042
5+640	5,867	1.237,664	-10,367	1.231,797	-4,500	1.231,844	-3,000	-3,141	1.232,493	1.231,939	0,554	3,14	3,000	1.232,033	5,500	1.232,111	5,843	1.232,454	0,343
5+646,438	6,171	1.238,299	-10,671	1.232,128	-4,500	1.232,188	-3,000	-4,001	1.232,997	1.232,308	0,689	4,00	3,000	1.232,428	5,500	1.232,528	6,010	1.233,038	0,510
5+650	5,933	1.238,257	-10,433	1.232,324	-4,500	1.232,384	-3,000	-4,001	1.233,329	1.232,504	0,825	4,00	3,000	1.232,624	5,500	1.232,724	6,152	1.233,376	0,652
5+660	5,497	1.238,343	-9,997	1.232,846	-4,500	1.232,906	-3,000	-4,001	1.234,247	1.233,026	1,221	4,00	3,000	1.233,146	5,500	1.233,246	6,522	1.234,268	1,022
5+661,215	5,497	1.238,403	-9,997	1.232,906	-4,500	1.232,966	-3,000	-4,001	1.234,358	1.233,086	1,272	4,00	3,000	1.233,206	5,500	1.233,306	6,574	1.234,380	1,074
5+670	5,229	1.238,606	-9,729	1.233,377	-4,500	1.233,419	-3,000	-2,831	1.234,831	1.233,504	1,327	2,83	3,000	1.233,589	5,500	1.233,660	6,701	1.234,861	1,201
5+680	4,926	1.238,797	-9,426	1.233,871	-4,500	1.233,894	-3,000	-1,501	1.235,098	1.233,939	1,159	1,50	3,000	1.233,983	5,500	1.234,021	6,857	1.235,378	1,357
5+690	3,971	1.238,293	-8,471	1.234,322	-4,500	1.234,324	-3,000	-0,161	1.235,812	1.234,329	1,483	0,16	3,000	1.234,334	5,500	1.234,338	6,648	1.235,486	1,148
5+691,215	3,789	1.238,163	-8,290	1.234,374	-4,500	1.234,374	-3,000	0,001	1.235,839	1.234,374	1,465	0,00	3,000	1.234,374	5,500	1.234,374	6,644	1.235,518	1,144
5+700	3,289	1.238,018	-7,789	1.234,729	-4,500	1.234,711	-3,000	1,171	1.236,172	1.234,676	1,496	-1,17	3,000	1.234,641	5,500	1.234,612	6,668	1.235,780	1,168
5+720	2,272	1.237,623	-6,772	1.235,351	-4,500	1.235,314	-3,000	2,501	1.235,880	1.235,239	0,641	-2,50	3,000	1.235,164	5,500	1.235,101	6,550	1.236,151	1,050
5+740	1,982	1.237,721	-6,482	1.235,739	-4,500	1.235,701	-3,000	2,501	1.236,185	1.235,626	0,559	-2,50	3,000	1.235,551	5,500	1.235,489	6,455	1.236,444	0,955
5+760	2,015	1.237,966	-6,515	1.235,951	-4,500	1.235,914	-3,000	2,501	1.236,531	1.235,839	0,692	-2,50	3,000	1.235,764	5,500	1.235,701	6,309	1.236,510	0,809
5+780	2,210	1.238,199	-6,710	1.235,989	-4,500	1.235,951	-3,000	2,501	1.236,749	1.235,876	0,873	-2,50	3,000	1.235,801	5,500	1.235,739	6,414	1.236,653	0,914
5+800	2,673	1.238,524	-7,173	1.235,851	-4,500	1.235,814	-3,000	2,501	1.236,763	1.235,739	1,024	-2,50	3,000	1.235,664	5,500	1.235,601	6,464	1.236,565	0,964
5+820	2,011	1.237,550	-6,511	1.235,539	-4,500	1.235,501	-3,000	2,501	1.235,829	1.235,426	0,403	-2,50	3,000	1.235,351	5,500	1.235,289	5,870	1.235,659	0,370
5+840	1,684	1.236,823	-6,185	1.235,139	-4,500	1.235,101	-3,000	2,501	1.235,094	1.235,026	0,068	-2,50	3,000	1.234,951	5,500	1.234,889	5,592	1.234,981	0,092
5+860	1,152	1.235,891	-5,652	1.234,739	-4,500	1.234,701	-3,000	2,501	1.234,733	1.234,626	0,107	-2,50	5,400	1.234,491	7,900	1.234,429	8,167	1.234,696	0,267
5+865	1,092	1.235,731	-5,592	1.234,639	-4,500	1.234,601	-3,000	2,501	1.234,663	1.234,526	0,137	-2,50	6,000	1.234,376	8,500	1.234,314	8,644	1.234,457	0,143
5+880	1,387	1.235,726	-5,887	1.234,339	-4,500	1.234,301	-3,000	2,501	1.234,494	1.234,226	0,268	-2,50	6,000	1.234,076	8,500	1.234,014	8,600	1.234,114	0,100
5+885	1,462	1.235,701	-5,962	1.234,239	-4,500	1.234,201	-3,000	2,501	1.234,422	1.234,126	0,296	-2,50	6,000	1.233,976	8,500	1.233,914	8,586	1.234,000	0,086
5+900	1,512	1.235,405	-6,012	1.233,893	-4,500	1.233,870	-3,000	1,481	1.234,100	1.233,826	0,274	-1,48	3,000	1.233,782	5,500	1.233,744	6,087	1.234,331	0,587

Lado Esquerdo				Eixo				Lado Direito			
Offset		Lateral		Bordo		Cota		Bordo		Lateral	
Estaca	Altura	Distância	Cota	Distância	Cota	Distância	%	Distância	Cota	Distância	Cota
5+911,117	1,3801.234,984	-5,8801.233,604	-4,5001.233,604	-3,000	0,001.233,901	1.233,604	0,297	0,00	3,0001.233,604	5,5001.233,604	5,8651.233,969
5+920	1,1741.234,547	-5,6741.233,373	-4,5001.233,390	-3,000	-1,181.233,761	1.233,426	0,335	1,18	3,0001.233,462	5,5001.233,491	5,8951.233,886
5+930	0,9731.234,086	-5,4731.233,113	-4,5001.233,150	-3,000	-2,521.233,625	1.233,226	0,399	2,52	3,0001.233,302	5,5001.233,364	5,8931.233,757
5+940	0,7761.233,629	-5,2761.232,853	-4,5001.232,910	-3,000	-3,851.233,491	1.233,026	0,465	3,85	3,0001.233,142	5,5001.233,238	5,8731.233,611
5+941,117	0,8091.233,633	-5,3091.232,824	-4,5001.232,884	-3,000	-4,001.233,475	1.233,004	0,471	4,00	3,0001.233,124	5,5001.233,224	5,8721.233,596
5+950	1,1031.233,749	-5,6031.232,646	-4,5001.232,706	-3,000	-4,001.233,401	1.232,826	0,575	4,00	3,0001.232,946	5,5001.233,046	5,8681.233,414
5+960	1,4761.233,922	-5,9761.232,446	-4,5001.232,506	-3,000	-4,001.233,337	1.232,626	0,711	4,00	3,0001.232,746	5,5001.232,846	5,8831.233,229
5+970	1,6771.233,923	-6,1771.232,246	-4,5001.232,306	-3,000	-4,001.233,212	1.232,426	0,786	4,00	3,0001.232,546	5,5001.232,646	5,9351.233,081
5+972,005	1,7161.233,922	-6,2161.232,206	-4,5001.232,266	-3,000	-4,001.233,178	1.232,386	0,792	4,00	3,0001.232,506	5,5001.232,606	5,8981.233,004
5+980	1,7421.233,857	-6,2421.232,115	-4,5001.232,152	-3,000	-2,461.233,044	1.232,226	0,818	2,46	3,0001.232,300	5,5001.232,362	5,7961.232,658
5+990	1,3721.233,373	-5,8721.232,001	-4,5001.232,010	-3,000	-0,541.232,807	1.232,026	0,781	0,54	3,0001.232,042	5,5001.232,056	5,7001.232,256
6	1,9271.233,815	-6,4271.231,888	-4,5001.231,867	-3,000	1,381.232,526	1.231,826	0,700	-1,38	3,0001.231,785	5,5001.231,750	5,5531.231,803
6+10	1,5601.233,346	-6,0601.231,786	-4,5001.231,737	-3,000	3,301.231,843	1.231,638	0,205	-3,30	3,0001.231,539	5,5001.231,457	7,4891.230,131
6+13,670	1,2761.233,031	-5,7761.231,755	-4,5001.231,695	-3,000	4,001.231,499	1.231,575	-0,076	-4,00	3,0001.231,455	5,5001.231,355	9,7171.228,544
6+20	0,8161.232,460	-5,3161.231,644	-4,5001.231,587	-3,000	3,811.230,903	1.231,473	-0,570	-3,81	3,0001.231,359	5,5001.231,284	12,9211.226,317
6+30	-0,2121.231,277	-4,8181.231,489	-4,5001.231,437	-3,000	3,501.230,206	1.231,332	-1,126	-3,50	3,0001.231,227	5,5001.231,140	14,1291.225,387
6+40	-0,9551.230,403	-5,9321.231,358	-4,5001.231,310	-3,000	3,191.229,654	1.231,215	-1,561	-3,19	3,0001.231,119	5,5001.231,039	15,3011.224,505
6+43,670	-1,2471.230,069	-6,3701.231,316	-4,5001.231,270	-3,000	3,081.229,462	1.231,177	-1,715	-3,08	3,0001.231,085	5,5001.231,008	15,7821.224,154
6+60	-1,0601.230,106	-6,0901.231,166	-4,5001.231,128	-3,000	2,571.229,255	1.231,050	-1,795	-2,57	3,0001.230,973	5,5001.230,909	12,0201.226,562
6+75	-0,1991.230,977	-7,7981.231,176	-7,5001.231,139	-6,000	2,501.229,400	1.230,989	-1,589	-2,50	3,0001.230,914	5,5001.230,851	11,6611.226,744
6+80	-0,2581.230,910	-7,8871.231,168	-7,5001.231,130	-6,000	2,501.229,557	1.230,980	-1,423	-2,50	3,0001.230,905	5,5001.230,843	12,3941.226,247
6+95	-0,2051.230,972	-7,8081.231,177	-7,5001.231,140	-6,000	2,501.230,071	1.230,990	-0,919	-2,50	3,0001.230,915	5,5001.230,852	9,5621.228,144
6+100	-0,2191.230,958	-7,2291.231,177	-6,9001.231,140	-5,400	2,501.230,222	1.231,005	-0,783	-2,50	3,0001.230,930	5,5001.230,867	8,1651.229,090
6+120	0,3571.231,593	-4,8571.231,236	-4,5001.231,198	-3,000	2,501.231,203	1.231,123	0,080	-2,50	3,0001.231,048	5,5001.230,986	6,1871.231,672
6+140	0,8731.232,322	-5,3731.231,449	-4,5001.231,411	-3,000	2,501.231,784	1.231,336	0,448	-2,50	3,0001.231,261	5,5001.231,199	6,2241.231,923
6+160	1,2141.232,819	-5,7151.231,605	-4,5001.231,560	-3,000	2,991.232,052	1.231,470	0,582	-2,99	3,0001.231,381	5,5001.231,306	5,9471.231,753
6+162,771	1,2201.232,828	-5,7201.231,608	-4,5001.231,561	-3,000	3,081.232,074	1.231,469	0,605	-3,08	3,0001.231,377	5,5001.231,300	5,9631.231,763
6+170	1,1931.232,785	-5,6931.231,592	-4,5001.231,542	-3,000	3,301.232,210	1.231,443	0,767	-3,30	3,0001.231,344	5,5001.231,262	6,2611.232,023

Lado Esquerdo										Eixo				Lado Direito					
Estaca	Offset		Lateral		Bordo		Cota	Terreno	Projeto	Vermelha	%	Bordo		Lateral		Offset			
	Altura	Cota	Distância	Cota	Distância	Cota						Distância	Cota	Distância	Cota				
6+180	1,484	1.232,999	-5,984	1.231,515	-4,500	1.231,461	-3,000	3,611	1.232,423	1.231,353	1,070	-3,61	3,000	1.231,245	5,500	1.231,155	6,825	1.232,480	1,325
6+190	1,560	1.232,936	-6,060	1.231,376	-4,500	1.231,318	-3,000	3,911	1.232,288	1.231,200	1,088	-3,91	3,000	1.231,083	5,500	1.230,985	6,559	1.232,044	1,059
6+192,771	1,605	1.232,932	-6,105	1.231,327	-4,500	1.231,267	-3,000	4,001	1.232,193	1.231,147	1,046	-4,00	3,000	1.231,027	5,500	1.230,927	6,383	1.231,810	0,883
6+200	1,213	1.232,378	-5,713	1.231,165	-4,500	1.231,105	-3,000	4,001	1.231,944	1.230,985	0,959	-4,00	3,000	1.230,865	5,500	1.230,765	5,886	1.231,150	0,385
6+210	1,066	1.231,952	-5,566	1.230,886	-4,500	1.230,826	-3,000	4,001	1.231,772	1.230,706	1,066	-4,00	3,000	1.230,586	5,500	1.230,486	5,798	1.230,784	0,298
6+220	1,197	1.231,742	-5,697	1.230,545	-4,500	1.230,485	-3,000	4,001	1.231,711	1.230,365	1,346	-4,00	3,000	1.230,245	5,500	1.230,145	5,706	1.230,351	0,206
6+223,414	1,245	1.231,659	-5,745	1.230,414	-4,500	1.230,354	-3,000	4,001	1.231,672	1.230,234	1,438	-4,00	3,000	1.230,114	5,500	1.230,014	5,831	1.230,345	0,331
6+230	1,491	1.231,517	-5,991	1.230,026	-4,500	1.230,004	-3,000	1,471	1.231,639	1.229,960	1,679	-1,47	3,000	1.229,916	5,500	1.229,880	6,310	1.230,690	0,810
6+240	2,638	1.232,024	-7,139	1.229,386	-4,500	1.229,422	-3,000	-2,381	1.231,397	1.229,493	1,904	2,38	3,000	1.229,565	5,500	1.229,624	7,148	1.231,272	1,648
6+244,202	3,484	1.232,582	-7,984	1.229,098	-4,500	1.229,158	-3,000	-4,001	1.231,234	1.229,278	1,956	4,00	3,000	1.229,398	5,500	1.229,498	7,185	1.231,183	1,685
6+250	3,254	1.232,072	-7,754	1.228,818	-4,500	1.228,866	-3,000	-3,231	1.230,672	1.228,963	1,709	3,23	3,000	1.229,060	5,500	1.229,141	7,193	1.230,834	1,693
6+260	2,648	1.230,933	-7,149	1.228,285	-4,500	1.228,313	-3,000	-1,891	1.229,726	1.228,370	1,356	1,89	3,000	1.228,427	5,500	1.228,474	6,859	1.229,833	1,359
6+270	2,877	1.230,566	-7,377	1.227,689	-4,500	1.227,698	-3,000	-0,561	1.229,194	1.227,715	1,479	0,56	3,000	1.227,731	5,500	1.227,745	6,544	1.228,789	1,044
6+274,202	2,912	1.230,332	-7,412	1.227,420	-4,500	1.227,420	-3,000	0,001	1.228,642	1.227,420	1,222	0,00	3,000	1.227,420	5,500	1.227,420	6,363	1.228,282	0,862
6+280	2,756	1.229,787	-7,256	1.227,031	-4,500	1.227,019	-3,000	0,771	1.227,706	1.226,996	0,710	-0,77	3,000	1.226,973	5,500	1.226,953	6,133	1.227,586	0,633
6+300	1,798	1.227,573	-6,298	1.225,775	-4,500	1.225,737	-3,000	2,501	1.225,021	1.225,662	-0,641	-2,50	3,000	1.225,587	5,500	1.225,525	6,386	1.224,934	-0,591
6+320	-0,377	1.224,396	-5,065	1.224,773	-4,500	1.224,735	-3,000	2,501	1.223,003	1.224,660	-1,657	-2,50	3,000	1.224,585	5,500	1.224,523	11,487	1.220,532	-3,991
6+340	-2,115	1.221,988	-7,673	1.224,103	-4,500	1.224,065	-3,000	2,501	1.221,916	1.223,990	-2,074	-2,50	3,000	1.223,915	5,500	1.223,853	10,838	1.220,294	-3,559
6+360	-2,968	1.220,797	-8,952	1.223,765	-4,500	1.223,727	-3,000	2,501	1.221,674	1.223,652	-1,978	-2,50	3,000	1.223,577	5,500	1.223,515	9,024	1.221,165	-2,350
6+380	-3,937	1.219,822	-10,405	1.223,759	-4,500	1.223,721	-3,000	2,501	1.222,058	1.223,646	-1,588	-2,50	3,000	1.223,571	5,500	1.223,509	7,142	1.222,414	-1,095
6+400	-3,186	1.220,899	-9,279	1.224,085	-4,500	1.224,047	-3,000	2,501	1.223,126	1.223,972	-0,846	-2,50	3,000	1.223,897	5,500	1.223,835	6,148	1.224,483	0,648
6+420	0,563	1.225,306	-5,063	1.224,743	-4,500	1.224,705	-3,000	2,501	1.225,481	1.224,630	0,851	-2,50	3,000	1.224,555	5,500	1.224,493	8,250	1.227,243	2,750
6+440	1,201	1.226,671	-5,701	1.225,470	-4,500	1.225,433	-3,000	2,501	1.226,529	1.225,358	1,171	-2,50	3,000	1.225,283	5,500	1.225,220	9,405	1.229,125	3,905
6+460	1,907	1.227,912	-6,407	1.226,005	-4,500	1.225,967	-3,000	2,501	1.227,080	1.225,892	1,188	-2,50	3,000	1.225,817	5,500	1.225,755	9,487	1.229,742	3,987
6+480	1,752	1.228,099	-6,252	1.226,347	-4,500	1.226,309	-3,000	2,501	1.227,617	1.226,234	1,383	-2,50	3,000	1.226,159	5,500	1.226,097	7,741	1.228,338	2,241
6+500	0,927	1.227,423	-5,427	1.226,496	-4,500	1.226,459	-3,000	2,501	1.226,944	1.226,384	0,560	-2,50	3,000	1.226,309	5,500	1.226,246	5,951	1.226,697	0,451
6+520	0,059	1.226,477	-4,559	1.226,418	-4,500	1.226,392	-3,000	1,731	1.226,510	1.226,340	0,170	-1,73	3,000	1.226,288	5,500	1.226,245	5,748	1.226,079	-0,166
6+532,978	0,125	1.226,374	-4,625	1.226,249	-4,500	1.226,249	-3,000	0,001	1.226,412	1.226,249	0,163	0,00	3,000	1.226,249	5,500	1.226,249	5,752	1.226,081	-0,168

ENGMETRIA - Ltda.

Projeto: SC-114 - Bentinho - SC

TRECHO

Notas de Serviço de Terraplenagem

Lado Esquerdo							Eixo				Lado Direito					
Offset			Lateral		Bordo		Cota	Cota	Cota	Bordo		Lateral		Offset		
Estaca	Altura	Cota	Distância	Cota	Distância	%	Terreno	Projeto	Vermelha	%	Distância	Cota	Distância	Cota	Altura	
6+540	0,262	1.226,420	-4,762	1.226,158	-3,000	-0,94	1.226,346	1.226,200	0,146	0,94	3,000	1.226,228	5,500	1.226,251	5,729	1.226,099
6+560	0,359	1.226,257	-4,859	1.225,898	-3,000	-3,60	1.226,197	1.226,060	0,137	3,60	3,000	1.226,168	5,500	1.226,258	5,823	1.226,043
6+562,978	0,370	1.226,229	-4,870	1.225,859	-3,000	-4,00	1.226,175	1.226,039	0,136	4,00	3,000	1.226,159	5,500	1.226,259	5,875	1.226,009
6+573,143	0,518	1.226,306	-5,018	1.225,788	-3,000	-4,00	1.226,109	1.225,968	0,141	4,00	3,000	1.226,088	5,500	1.226,188	6,136	1.225,764
6+580	0,542	1.226,307	-5,042	1.225,765	-3,000	-3,43	1.226,059	1.225,920	0,139	3,43	3,000	1.226,023	5,500	1.226,109	6,245	1.225,613
6+600	0,471	1.226,171	-4,971	1.225,700	-3,000	-1,78	1.225,629	1.225,780	-0,151	1,78	3,000	1.225,833	5,500	1.225,878	6,226	1.225,394
6+603,143	0,349	1.226,038	-4,849	1.225,689	-3,000	-1,52	1.225,554	1.225,758	-0,204	1,52	3,000	1.225,804	5,500	1.225,842	6,271	1.225,328
6+620	-0,288	1.225,346	-4,931	1.225,634	-3,000	-0,13	1.225,032	1.225,640	-0,608	0,13	3,000	1.225,644	5,500	1.225,647	6,788	1.224,789
6+640	-0,604	1.224,953	-5,406	1.225,557	-3,000	1,26	1.224,876	1.225,500	-0,624	-1,26	3,000	1.225,462	5,500	1.225,431	6,780	1.224,578
6+640,035	-0,604	1.224,953	-5,406	1.225,557	-3,000	1,26	1.224,876	1.225,500	-0,624	-1,26	3,000	1.225,462	5,500	1.225,430	6,779	1.224,577
6+645	-0,589	1.224,948	-5,383	1.225,537	-3,000	1,60	1.224,866	1.225,465	-0,599	-1,60	3,000	1.225,417	5,500	1.225,377	6,685	1.224,587
6+650	-0,513	1.225,005	-5,270	1.225,518	-3,000	1,94	1.224,865	1.225,430	-0,565	-1,94	3,000	1.225,372	5,500	1.225,323	6,362	1.224,748
6+655	-0,432	1.225,066	-5,148	1.225,498	-3,000	2,29	1.224,866	1.225,395	-0,529	-2,29	3,000	1.225,326	5,500	1.225,269	6,017	1.224,924
6+660	-0,334	1.225,144	-5,001	1.225,478	-3,000	2,63	1.224,852	1.225,360	-0,508	-2,63	3,000	1.225,281	5,500	1.225,215	5,661	1.225,108
6+665	-0,315	1.225,144	-4,973	1.225,459	-3,000	2,97	1.224,843	1.225,325	-0,482	-2,97	3,000	1.225,236	5,500	1.225,162	5,604	1.225,266
6+670	-0,526	1.224,913	-5,289	1.225,439	-3,000	3,31	1.224,798	1.225,290	-0,492	-3,31	3,000	1.225,191	5,500	1.225,108	5,921	1.225,529
6+675	-0,497	1.224,922	-5,246	1.225,419	-3,000	3,66	1.224,741	1.225,255	-0,514	-3,66	3,000	1.225,145	5,500	1.225,054	6,104	1.225,658
6+680	-0,484	1.224,916	-5,226	1.225,400	-3,000	4,00	1.224,699	1.225,220	-0,521	-4,00	3,000	1.225,100	5,500	1.225,000	6,095	1.225,595
6+680,035	-0,484	1.224,916	-5,227	1.225,400	-3,000	4,00	1.224,698	1.225,220	-0,522	-4,00	3,000	1.225,100	5,500	1.225,000	6,096	1.225,596
6+685	-0,494	1.224,871	-5,241	1.225,365	-3,000	4,00	1.224,671	1.225,185	-0,514	-4,00	3,000	1.225,065	5,500	1.224,965	6,225	1.225,689
6+690	-0,526	1.224,804	-5,289	1.225,330	-3,000	4,00	1.224,584	1.225,150	-0,566	-4,00	3,000	1.225,030	5,500	1.224,930	6,201	1.225,631
6+691,367	-0,563	1.224,757	-5,344	1.225,320	-3,000	4,00	1.224,549	1.225,140	-0,591	-4,00	3,000	1.225,020	5,500	1.224,920	6,080	1.225,500
6+695	-0,634	1.224,650	-5,451	1.225,284	-3,000	3,75	1.224,409	1.225,115	-0,706	-3,75	3,000	1.225,003	5,500	1.224,909	5,507	1.224,904
6+700	-0,787	1.224,446	-5,680	1.225,233	-3,000	3,40	1.224,301	1.225,080	-0,779	-3,40	3,000	1.224,978	5,500	1.224,893	6,364	1.224,317
6+705	-0,839	1.224,346	-5,758	1.225,185	-3,000	3,05	1.224,245	1.225,048	-0,803	-3,05	3,000	1.224,956	5,500	1.224,880	6,532	1.224,192
6+710	-0,887	1.224,255	-5,830	1.225,142	-3,000	2,71	1.224,175	1.225,021	-0,846	-2,71	3,000	1.224,939	5,500	1.224,872	6,699	1.224,072
6+715	-0,961	1.224,144	-5,942	1.225,105	-3,000	2,36	1.224,179	1.224,999	-0,820	-2,36	3,000	1.224,928	5,500	1.224,869	6,869	1.223,956
6+720	-0,920	1.224,153	-5,880	1.225,073	-3,000	2,01	1.224,218	1.224,982	-0,764	-2,01	3,000	1.224,922	5,500	1.224,871	6,849	1.223,972

Lado Esquerdo							Eixo				Lado Direito								
Offset			Lateral		Bordo		Cota	Cota	Bordo		Lateral		Offset						
Estaca	Altura	Cota	Distância	Cota	Distância	%	Terreno	Projeto	Vermelha	%	Distância	Cota	Distância	Cota	Altura				
6+725	-0,557	1.224,489	-5,335	1.225,046	-4,500	1.225,021	-3,000	1,67	1.224,421	1.224,971	-0,550	-1,67	3,000	1.224,921	5,500	1.224,879	6,142	1.224,451	-0,428
6+730	-0,198	1.224,826	-4,797	1.225,024	-4,500	1.225,004	-3,000	1,32	1.224,630	1.224,965	-0,335	-1,32	3,000	1.224,925	5,500	1.224,892	5,563	1.224,955	0,063
6+731,367	-0,100	1.224,919	-4,650	1.225,019	-4,500	1.225,001	-3,000	1,23	1.224,691	1.224,964	-0,273	-1,23	3,000	1.224,927	5,500	1.224,896	5,722	1.225,118	0,222
6+740	0,324	1.225,320	-4,824	1.224,996	-4,500	1.224,987	-3,000	0,63	1.225,058	1.224,968	0,090	-0,63	3,000	1.224,949	5,500	1.224,934	6,672	1.226,106	1,172
6+760	0,066	1.225,063	-4,566	1.224,997	-4,500	1.225,010	-3,000	-0,92	1.225,296	1.225,038	0,258	0,92	3,000	1.225,066	5,500	1.225,089	8,623	1.228,212	3,123
6+766,703	0,038	1.225,052	-4,538	1.225,014	-4,500	1.225,036	-3,000	-1,48	1.225,349	1.225,080	0,269	1,48	3,000	1.225,125	5,500	1.225,162	7,565	1.227,227	2,065
6+770	0,021	1.225,046	-4,521	1.225,025	-4,500	1.225,052	-3,000	-1,76	1.225,336	1.225,105	0,231	1,76	3,000	1.225,157	5,500	1.225,201	7,037	1.226,738	1,537
6+775	-0,017	1.225,031	-4,526	1.225,048	-4,500	1.225,080	-3,000	-2,18	1.225,317	1.225,146	0,171	2,18	3,000	1.225,211	5,500	1.225,265	6,304	1.226,069	0,804
6+780	0,015	1.225,090	-4,515	1.225,075	-4,500	1.225,114	-3,000	-2,60	1.225,316	1.225,192	0,124	2,60	3,000	1.225,270	5,500	1.225,335	5,589	1.225,424	0,089
6+785	0,554	1.225,662	-5,054	1.225,108	-4,500	1.225,153	-3,000	-3,02	1.225,356	1.225,244	0,112	3,02	3,000	1.225,334	5,500	1.225,410	5,723	1.225,261	-0,149
6+790	1,062	1.226,208	-5,562	1.225,146	-4,500	1.225,197	-3,000	-3,44	1.225,418	1.225,301	0,117	3,44	3,000	1.225,404	5,500	1.225,490	5,779	1.225,304	-0,186
6+795	1,518	1.226,707	-6,018	1.225,189	-4,500	1.225,247	-3,000	-3,86	1.225,674	1.225,363	0,311	3,86	3,000	1.225,478	5,500	1.225,575	5,640	1.225,482	-0,093
6+796,703	1,660	1.226,865	-6,160	1.225,205	-4,500	1.225,265	-3,000	-4,00	1.225,757	1.225,385	0,372	4,00	3,000	1.225,505	5,500	1.225,605	5,592	1.225,544	-0,061
6+800	1,852	1.227,102	-6,352	1.225,250	-4,500	1.225,310	-3,000	-4,00	1.225,916	1.225,430	0,486	4,00	3,000	1.225,550	5,500	1.225,650	5,528	1.225,678	0,028
6+805	2,202	1.227,522	-6,702	1.225,320	-4,500	1.225,380	-3,000	-4,00	1.226,130	1.225,500	0,630	4,00	3,000	1.225,620	5,500	1.225,720	5,552	1.225,772	0,052
6+810	2,558	1.227,948	-7,058	1.225,390	-4,500	1.225,450	-3,000	-4,00	1.226,271	1.225,570	0,701	4,00	3,000	1.225,690	5,500	1.225,790	5,617	1.225,907	0,117
6+810,102	2,564	1.227,955	-7,064	1.225,391	-4,500	1.225,451	-3,000	-4,00	1.226,274	1.225,571	0,703	4,00	3,000	1.225,691	5,500	1.225,791	5,620	1.225,911	0,120
6+815	2,498	1.227,987	-6,998	1.225,489	-4,500	1.225,540	-3,000	-3,35	1.226,295	1.225,640	0,655	3,35	3,000	1.225,740	5,500	1.225,824	5,618	1.225,942	0,118
6+820	2,218	1.227,807	-6,718	1.225,589	-4,500	1.225,630	-3,000	-2,68	1.226,304	1.225,710	0,594	2,68	3,000	1.225,790	5,500	1.225,857	5,702	1.226,059	0,202
6+825	2,025	1.227,714	-6,525	1.225,689	-4,500	1.225,720	-3,000	-2,01	1.226,306	1.225,780	0,526	2,01	3,000	1.225,840	5,500	1.225,891	5,681	1.226,072	0,181
6+830	1,898	1.227,687	-6,398	1.225,789	-4,500	1.225,810	-3,000	-1,35	1.226,317	1.225,850	0,467	1,35	3,000	1.225,890	5,500	1.225,924	5,623	1.226,047	0,123
6+835	1,818	1.227,707	-6,319	1.225,889	-4,500	1.225,900	-3,000	-0,68	1.226,249	1.225,920	0,329	0,68	3,000	1.225,940	5,500	1.225,957	5,535	1.225,934	-0,023
6+840	1,673	1.227,662	-6,173	1.225,989	-4,500	1.225,990	-3,000	-0,01	1.226,153	1.225,990	0,163	0,01	3,000	1.225,990	5,500	1.225,991	5,770	1.225,811	-0,180
6+840,102	1,669	1.227,660	-6,169	1.225,991	-4,500	1.225,991	-3,000	0,00	1.226,151	1.225,991	0,160	0,00	3,000	1.225,991	5,500	1.225,991	5,773	1.225,809	-0,182
6+860	0,211	1.226,594	-4,711	1.226,383	-4,500	1.226,345	-3,000	2,50	1.225,810	1.226,270	-0,460	-2,50	3,000	1.226,195	5,500	1.226,133	6,994	1.225,137	-0,996
6+880	-0,254	1.226,409	-4,882	1.226,663	-4,500	1.226,625	-3,000	2,50	1.226,067	1.226,550	-0,483	-2,50	3,000	1.226,475	5,500	1.226,413	7,035	1.225,390	-1,023
6+900	0,406	1.227,348	-4,906	1.226,942	-4,500	1.226,905	-3,000	2,49	1.226,590	1.226,830	-0,240	-2,49	3,000	1.226,755	5,500	1.226,693	5,861	1.227,054	0,361
6+920	2,304	1.229,436	-6,804	1.227,132	-4,500	1.227,125	-3,000	0,49	1.227,907	1.227,110	0,797	-0,49	3,000	1.227,095	5,500	1.227,083	6,824	1.228,407	1,324

ENGMETRIA - Ltda.

Projeto: SC-114 - Bentinho - SC

TRECHO

Notas de Serviço de Terraplenagem

Lado Esquerdo										Eixo			Lado Direito					
Offset			Lateral			Bordo			Cota	Terreno	Projeto	Cota Vermelha	Bordo			Lateral		
Estaca	Altura	Cota	Distância	Cota	Distância	Distância	%	Distância					Distância	%	Distância	Distância	Cota	Offset
6+924,886	2,855	1.230,033	-7,355	1.227,178	-4,500	1.227,178	-3,000	0,00	1.228,307	1.227,178	1,129	0,00	3,000	0,00	1.227,178	5,500	1.227,178	1,563
6+925	2,868	1.230,048	-7,368	1.227,180	-4,500	1.227,180	-3,000	-0,01	1.228,316	1.227,180	1,136	0,01	3,000	0,01	1.227,180	5,500	1.227,181	1,567
6+930	2,900	1.230,127	-7,400	1.227,227	-4,500	1.227,235	-3,000	-0,51	1.228,718	1.227,250	1,468	0,51	3,000	0,51	1.227,265	5,500	1.227,278	1,813
6+935	2,540	1.229,815	-7,040	1.227,275	-4,500	1.227,290	-3,000	-1,01	1.229,121	1.227,320	1,801	1,01	3,000	1,01	1.227,350	5,500	1.227,376	1,961
6+940	2,429	1.229,751	-6,929	1.227,322	-4,500	1.227,345	-3,000	-1,51	1.229,405	1.227,390	2,015	1,51	3,000	1,51	1.227,435	5,500	1.227,473	1,972
6+945	2,669	1.230,034	-7,170	1.227,365	-4,500	1.227,395	-3,000	-2,01	1.229,528	1.227,455	2,073	2,01	3,000	2,01	1.227,516	5,500	1.227,566	1,938
6+950	2,909	1.230,308	-7,409	1.227,399	-4,500	1.227,436	-3,000	-2,51	1.229,651	1.227,512	2,139	2,51	3,000	2,51	1.227,587	5,500	1.227,650	1,927
6+955	3,145	1.230,568	-7,645	1.227,423	-4,500	1.227,468	-3,000	-3,01	1.229,775	1.227,559	2,216	3,01	3,000	3,01	1.227,649	5,500	1.227,724	1,945
6+960	3,144	1.230,582	-7,644	1.227,438	-4,500	1.227,491	-3,000	-3,51	1.229,775	1.227,596	2,179	3,51	3,000	3,51	1.227,702	5,500	1.227,789	1,893
6+964,886	2,666	1.230,110	-7,166	1.227,444	-4,500	1.227,504	-3,000	-4,00	1.229,432	1.227,624	1,808	4,00	3,000	4,00	1.227,744	5,500	1.227,844	1,552
6+965	2,654	1.230,099	-7,154	1.227,445	-4,500	1.227,505	-3,000	-4,00	1.229,425	1.227,625	1,800	4,00	3,000	4,00	1.227,745	5,500	1.227,845	1,544
6+970	2,128	1.229,592	-6,628	1.227,464	-4,500	1.227,524	-3,000	-4,00	1.229,085	1.227,644	1,441	4,00	3,000	4,00	1.227,764	5,500	1.227,864	1,241
6+974,954	1,589	1.229,063	-6,089	1.227,474	-4,500	1.227,534	-3,000	-4,00	1.228,757	1.227,654	1,103	4,00	3,000	4,00	1.227,774	5,500	1.227,874	0,972
6+975	1,584	1.229,058	-6,084	1.227,474	-4,500	1.227,534	-3,000	-4,00	1.228,754	1.227,654	1,100	4,00	3,000	4,00	1.227,774	5,500	1.227,874	0,970
6+980	1,058	1.228,556	-5,558	1.227,498	-4,500	1.227,550	-3,000	-3,50	1.228,441	1.227,655	0,786	3,50	3,000	3,50	1.227,760	5,500	1.227,847	0,760
6+985	0,756	1.228,268	-5,256	1.227,512	-4,500	1.227,557	-3,000	-3,00	1.228,415	1.227,647	0,768	3,00	3,000	3,00	1.227,737	5,500	1.227,811	0,547
6+990	0,466	1.227,983	-4,966	1.227,517	-4,500	1.227,554	-3,000	-2,50	1.228,388	1.227,629	0,759	2,50	3,000	2,50	1.227,704	5,500	1.227,766	0,341
6+995	0,294	1.227,806	-4,794	1.227,512	-4,500	1.227,542	-3,000	-2,00	1.228,361	1.227,602	0,759	2,00	3,000	2,00	1.227,662	5,500	1.227,712	0,177
7	0,158	1.227,657	-4,658	1.227,499	-4,500	1.227,521	-3,000	-1,50	1.228,259	1.227,566	0,693	1,50	3,000	1,50	1.227,611	5,500	1.227,648	0,283
7+5	0,100	1.227,576	-4,600	1.227,476	-4,500	1.227,491	-3,000	-1,00	1.228,127	1.227,521	0,606	1,00	3,000	1,00	1.227,551	5,500	1.227,576	0,466
7+10	0,064	1.227,508	-4,564	1.227,444	-4,500	1.227,452	-3,000	-0,50	1.227,989	1.227,467	0,522	0,50	3,000	0,50	1.227,481	5,500	1.227,494	0,665
7+14,954	0,125	1.227,529	-4,625	1.227,404	-4,500	1.227,404	-3,000	0,00	1.227,826	1.227,404	0,422	0,00	3,000	0,00	1.227,404	5,500	1.227,404	0,784
7+20	0,284	1.227,637	-4,784	1.227,353	-4,500	1.227,345	-3,000	0,50	1.227,784	1.227,330	0,454	-0,50	3,000	0,50	1.227,315	5,500	1.227,302	0,916
7+40	1,604	1.228,663	-6,104	1.227,059	-4,500	1.227,021	-3,000	2,50	1.228,142	1.226,946	1,196	-2,50	3,000	2,50	1.226,871	5,500	1.226,809	0,947
7+60	1,530	1.228,079	-6,031	1.226,549	-4,500	1.226,504	-3,000	2,97	1.227,563	1.226,415	1,148	-2,97	3,000	2,97	1.226,326	5,500	1.226,252	1,589
7+63,556	1,537	1.227,981	-6,037	1.226,444	-4,500	1.226,397	-3,000	3,08	1.227,433	1.226,305	1,128	-3,08	3,000	3,08	1.226,213	5,500	1.226,136	1,606
7+80	1,550	1.227,447	-6,050	1.225,897	-4,500	1.225,844	-3,000	3,58	1.226,797	1.225,736	1,061	-3,58	3,000	3,58	1.225,629	5,500	1.225,539	1,638
7+93,556	1,186	1.226,558	-5,686	1.225,372	-4,500	1.225,312	-3,000	4,00	1.225,997	1.225,192	0,805	-4,00	3,000	4,00	1.225,072	5,500	1.224,972	1,116

Lado Esquerdo						Eixo				Lado Direito									
Offset			Lateral		Bordo		Cota		Cota		Bordo		Lateral		Offset				
Estaca	Altura	Cota	Distância	Cota	Distância	Cota	%	Terreno	Projeto	Vermelha	%	Distância	Cota	Distância	Cota	Altura			
7+100	1,010	1.226,100	-5,510	1.225,090	-4,500	1.225,030	-3,000	4,00	1.225,607	1.224,910	0,697	-4,00	3,000	1.224,790	5,500	1.224,690	6,393	1.225,583	0,893
7+104,651	0,993	1.225,917	-6,423	1.224,924	-5,430	1.224,864	-3,930	4,00	1.225,307	1.224,707	0,600	-4,00	3,000	1.224,587	5,500	1.224,487	6,293	1.225,280	0,793
7+115	0,480	1.225,053	-7,980	1.224,573	-7,500	1.224,518	-6,000	3,68	1.224,635	1.224,297	0,338	-3,68	3,000	1.224,186	5,500	1.224,094	6,002	1.224,596	0,502
7+120	0,331	1.224,716	-7,831	1.224,385	-7,500	1.224,332	-6,000	3,53	1.224,366	1.224,120	0,246	-3,53	3,000	1.224,014	5,500	1.223,926	5,876	1.224,302	0,376
7+134,651	0,197	1.224,109	-7,697	1.223,912	-7,500	1.223,866	-6,000	3,08	1.223,845	1.223,681	0,164	-3,08	3,000	1.223,589	5,500	1.223,512	5,517	1.223,529	0,017
7+135	0,189	1.224,091	-7,689	1.223,902	-7,500	1.223,856	-6,000	3,07	1.223,832	1.223,672	0,160	-3,07	3,000	1.223,580	5,500	1.223,503	5,508	1.223,511	0,008
7+140	0,036	1.223,787	-6,936	1.223,751	-6,900	1.223,707	-5,400	2,91	1.223,596	1.223,550	0,046	-2,91	3,000	1.223,463	5,500	1.223,390	5,957	1.223,085	-0,305
7+160	-0,202	1.223,111	-4,803	1.223,313	-4,500	1.223,275	-3,000	2,50	1.222,603	1.223,200	-0,597	-2,50	3,000	1.223,125	5,500	1.223,063	7,820	1.221,516	-1,547
7+180	-1,269	1.221,914	-6,404	1.223,183	-4,500	1.223,146	-3,000	2,52	1.221,949	1.223,070	-1,121	-2,52	3,000	1.222,994	5,500	1.222,931	7,464	1.221,621	-1,310
7+200	-1,439	1.221,855	-6,659	1.223,294	-4,500	1.223,249	-3,000	2,98	1.222,010	1.223,160	-1,150	-2,98	3,000	1.223,071	5,500	1.222,996	7,212	1.221,854	-1,142
7+204,126	-1,524	1.221,820	-6,785	1.223,344	-4,500	1.223,298	-3,000	3,08	1.222,048	1.223,206	-1,158	-3,08	3,495	1.223,098	5,995	1.223,021	7,611	1.221,944	-1,077
7+210	-1,663	1.221,769	-6,995	1.223,432	-4,500	1.223,384	-3,000	3,21	1.222,101	1.223,288	-1,187	-3,21	4,200	1.223,153	6,700	1.223,072	8,200	1.222,072	-1,000
7+220	-1,951	1.221,674	-7,427	1.223,625	-4,500	1.223,573	-3,000	3,44	1.222,231	1.223,470	-1,239	-3,44	5,400	1.223,284	7,900	1.223,198	9,012	1.222,457	-0,741
7+225	-1,959	1.221,783	-7,438	1.223,742	-4,500	1.223,689	-3,000	3,56	1.222,414	1.223,582	-1,168	-3,56	6,000	1.223,368	8,500	1.223,279	9,022	1.222,931	-0,348
7+230	-1,968	1.221,905	-7,452	1.223,873	-4,500	1.223,818	-3,000	3,67	1.222,595	1.223,708	-1,113	-3,67	6,000	1.223,487	8,500	1.223,395	8,562	1.223,354	-0,041
7+240	-1,535	1.222,641	-6,803	1.224,176	-4,500	1.224,117	-3,000	3,90	1.223,297	1.224,000	-0,703	-3,90	6,000	1.223,766	8,500	1.223,668	9,254	1.224,422	0,754
7+244,126	-0,509	1.223,808	-5,264	1.224,317	-4,500	1.224,257	-3,000	4,00	1.223,688	1.224,137	-0,449	-4,00	6,000	1.223,897	8,500	1.223,797	9,552	1.224,849	1,052
7+245	-0,268	1.224,079	-4,902	1.224,347	-4,500	1.224,287	-3,000	4,00	1.223,770	1.224,167	-0,397	-4,00	6,000	1.223,927	8,500	1.223,827	9,609	1.224,936	1,109
7+250	-0,073	1.224,455	-4,609	1.224,528	-4,500	1.224,468	-3,000	4,00	1.224,243	1.224,348	-0,105	-4,00	5,000	1.224,148	7,500	1.224,048	8,788	1.225,336	1,288
7+260	0,427	1.225,357	-4,927	1.224,930	-4,500	1.224,870	-3,000	4,00	1.225,217	1.224,750	0,467	-4,00	3,000	1.224,630	5,500	1.224,530	7,140	1.226,170	1,640
7+270	1,025	1.226,413	-5,525	1.225,388	-4,500	1.225,328	-3,000	4,00	1.226,278	1.225,208	1,070	-4,00	3,000	1.225,088	5,500	1.224,988	7,716	1.227,204	2,216
7+280	1,336	1.227,236	-5,836	1.225,900	-4,500	1.225,840	-3,000	4,00	1.227,153	1.225,720	1,433	-4,00	3,000	1.225,600	5,500	1.225,500	8,049	1.228,049	2,549
7+287,164	1,171	1.227,458	-5,671	1.226,287	-4,500	1.226,227	-3,000	4,00	1.227,278	1.226,107	1,171	-4,00	3,000	1.225,987	5,500	1.225,887	7,752	1.228,139	2,252
7+290	1,038	1.227,469	-5,538	1.226,431	-4,500	1.226,374	-3,000	3,81	1.227,341	1.226,260	1,081	-3,81	3,000	1.226,146	5,500	1.226,051	7,584	1.228,135	2,084
7+300	0,504	1.227,445	-5,004	1.226,941	-4,500	1.226,894	-3,000	3,13	1.227,539	1.226,800	0,739	-3,13	3,000	1.226,706	5,500	1.226,628	6,860	1.227,987	1,359
7+310	0,207	1.227,657	-4,708	1.227,450	-4,500	1.227,414	-3,000	2,45	1.227,637	1.227,340	0,297	-2,45	3,000	1.227,267	5,500	1.227,205	6,238	1.227,943	0,738
7+320	-0,359	1.227,601	-5,038	1.227,960	-4,500	1.227,933	-3,000	1,77	1.227,801	1.227,880	-0,079	-1,77	3,000	1.227,827	5,500	1.227,783	5,719	1.228,002	0,219
7+327,164	-0,332	1.227,993	-4,998	1.228,325	-4,500	1.228,305	-3,000	1,29	1.228,074	1.228,267	-0,193	-1,29	3,000	1.228,228	5,500	1.228,196	5,508	1.228,204	0,008

Lado Esquerdo					Eixo					Lado Direito				
Estaca	Offset		Lateral		Bordo	%	Cota	Terreno	Cota	Projeto	Vermelha	%	Bordo	
	Altura	Cota	Distância	Cota									Distância	Cota
7+340	-0,180	1.228,799	-4,770	1.228,979	-3,000	0,411	1.228,677	1.228,960	-0,283	0,41	3,000	1.228,948	5,500	1.228,937
7+360	0,234	1.230,232	-4,734	1.229,998	-3,000	-0,941	1.230,303	1.230,040	0,263	0,94	3,000	1.230,068	5,500	1.230,092
7+365,044	0,065	1.230,320	-4,565	1.230,255	-3,000	-1,291	1.230,477	1.230,312	0,165	1,29	3,000	1.230,351	5,500	1.230,383
7+380	0,470	1.231,486	-4,970	1.231,016	-3,000	-2,301	1.231,086	1.231,120	-0,034	2,30	3,000	1.231,189	5,500	1.231,247
7+400	0,717	1.232,678	-5,217	1.231,961	-3,000	-3,661	1.232,423	1.232,126	0,297	3,66	3,000	1.232,235	5,500	1.232,327
7+405,044	0,752	1.232,928	-5,252	1.232,176	-3,000	-4,001	1.232,669	1.232,356	0,313	4,00	3,000	1.232,476	5,500	1.232,576
7+420	0,907	1.233,710	-5,407	1.232,803	-3,000	-4,001	1.233,338	1.232,983	0,355	4,00	3,000	1.233,103	5,500	1.233,203
7+422,547	0,975	1.233,876	-5,475	1.232,901	-3,000	-4,001	1.233,495	1.233,081	0,414	4,00	3,000	1.233,201	5,500	1.233,301
7+440	1,226	1.234,816	-5,726	1.233,590	-3,000	-2,251	1.234,521	1.233,691	0,830	2,25	3,000	1.233,759	5,500	1.233,815
7+460	0,949	1.235,189	-5,449	1.234,240	-3,000	-0,251	1.234,567	1.234,251	0,316	0,25	3,000	1.234,259	5,500	1.234,265
7+462,547	0,750	1.235,062	-5,250	1.234,312	-3,000	0,001	1.234,555	1.234,312	0,243	0,00	3,000	1.234,312	5,500	1.234,312
7+480	-0,602	1.234,139	-5,403	1.234,741	-3,000	1,751	1.234,523	1.234,663	-0,140	-1,75	3,000	1.234,611	5,500	1.234,567
7+500	-0,528	1.234,510	-5,292	1.235,038	-3,000	2,501	1.234,625	1.234,926	-0,301	-2,50	3,000	1.234,851	5,500	1.234,788
7+520	0,565	1.235,718	-5,065	1.235,153	-3,000	2,501	1.235,028	1.235,040	-0,012	-2,50	3,000	1.234,965	5,500	1.234,903
7+540	1,401	1.236,594	-5,901	1.235,193	-3,000	2,501	1.235,805	1.235,080	0,725	-2,50	3,000	1.235,005	5,500	1.234,943
7+560	1,184	1.236,417	-5,684	1.235,233	-3,000	2,501	1.236,301	1.235,120	1,181	-2,50	3,000	1.235,045	5,500	1.234,983
7+580	0,433	1.235,720	-4,933	1.235,287	-3,000	2,831	1.236,391	1.235,160	1,231	-2,83	3,000	1.235,075	5,500	1.235,005
7+588,142	0,420	1.235,735	-4,920	1.235,315	-3,000	3,081	1.236,051	1.235,176	0,875	-3,08	3,000	1.235,084	5,500	1.235,007
7+590	0,427	1.235,748	-4,927	1.235,321	-3,000	3,131	1.235,993	1.235,180	0,813	-3,13	3,000	1.235,086	5,500	1.235,008
7+595	0,449	1.235,787	-4,949	1.235,338	-3,000	3,291	1.235,826	1.235,190	0,636	-3,29	3,000	1.235,091	5,500	1.235,009
7+600	0,485	1.235,840	-4,985	1.235,355	-3,000	3,441	1.235,664	1.235,200	0,464	-3,44	3,000	1.235,097	5,500	1.235,011
7+605	0,545	1.235,917	-5,045	1.235,372	-3,000	3,601	1.235,875	1.235,210	0,665	-3,60	3,000	1.235,102	5,500	1.235,012
7+610	0,639	1.236,028	-5,139	1.235,389	-3,000	3,751	1.235,821	1.235,220	0,601	-3,75	3,000	1.235,108	5,500	1.235,014
7+615	0,277	1.235,683	-4,777	1.235,406	-3,000	3,901	1.235,670	1.235,230	0,440	-3,90	3,000	1.235,113	5,500	1.235,015
7+618,142	0,200	1.235,616	-4,700	1.235,416	-3,000	4,001	1.235,582	1.235,236	0,346	-4,00	3,000	1.235,116	5,500	1.235,016
7+620	0,136	1.235,556	-4,636	1.235,420	-3,000	4,001	1.235,553	1.235,240	0,313	-4,00	3,000	1.235,120	5,500	1.235,020
7+625	0,003	1.235,433	-4,503	1.235,430	-3,000	4,001	1.235,472	1.235,250	0,222	-4,00	3,000	1.235,130	5,500	1.235,030
7+630	-0,094	1.235,346	-4,641	1.235,440	-3,000	4,001	1.235,425	1.235,260	0,165	-4,00	3,000	1.235,140	5,500	1.235,040

Estaca	Lado Esquerdo					Eixo					Lado Direito				
	Offset		Lateral		Bordo	Cota	Terreno	Cota	Projeto	Vermelha	%	Bordo		Lateral	Offset
	Altura	Cota	Distância	Cota								Distância	Cota		
7+635	-0,172	1.235,278	-4,759	1.235,450	-3,000	1.235,390	4,00	1.235,459	1.235,270	0,189	-4,00	3,000	1.235,150	5,500	1.234,971
7+638,017	-0,176	1.235,280	-4,763	1.235,456	-3,000	1.235,396	4,00	1.235,516	1.235,276	0,240	-4,00	3,000	1.235,156	5,500	1.234,967
7+640	-0,142	1.235,315	-4,714	1.235,457	-3,000	1.235,398	3,94	1.235,543	1.235,280	0,263	-3,94	3,000	1.235,162	5,500	1.235,148
7+645	-0,062	1.235,398	-4,592	1.235,460	-3,000	1.235,404	3,79	1.235,589	1.235,290	0,299	-3,79	3,000	1.235,176	5,500	1.235,701
7+650	0,042	1.235,505	-4,542	1.235,463	-3,000	1.235,409	3,63	1.235,623	1.235,300	0,323	-3,63	3,000	1.235,191	5,500	1.236,093
7+655	0,224	1.235,690	-4,724	1.235,466	-3,000	1.235,414	3,48	1.235,623	1.235,310	0,313	-3,48	3,000	1.235,206	5,500	1.236,167
7+660	0,407	1.235,877	-4,907	1.235,470	-3,000	1.235,420	3,32	1.235,662	1.235,320	0,342	-3,32	3,000	1.235,220	5,500	1.236,254
7+665	0,499	1.235,972	-4,999	1.235,473	-3,000	1.235,425	3,17	1.235,767	1.235,330	0,437	-3,17	3,000	1.235,235	5,500	1.236,350
7+668,017	0,557	1.236,032	-5,057	1.235,475	-3,000	1.235,428	3,08	1.235,832	1.235,336	0,496	-3,08	3,000	1.235,244	5,500	1.236,405
7+680	0,851	1.236,333	-5,351	1.235,482	-3,000	1.235,441	2,71	1.236,065	1.235,360	0,705	-2,71	3,000	1.235,279	5,500	1.236,496
7+700	0,786	1.236,299	-5,286	1.235,513	-3,000	1.235,475	2,50	1.236,253	1.235,400	0,853	-2,50	3,000	1.235,325	5,500	1.236,363
7+720	1,070	1.236,637	-5,570	1.235,567	-3,000	1.235,525	2,83	1.236,487	1.235,440	1,047	-2,83	3,000	1.235,355	5,500	1.236,767
7+728,168	1,180	1.236,775	-5,680	1.235,595	-3,000	1.235,549	3,08	1.236,416	1.235,456	0,960	-3,08	3,000	1.235,364	5,500	1.236,720
7+740	1,223	1.236,858	-5,723	1.235,635	-3,000	1.235,583	3,44	1.236,276	1.235,480	0,796	-3,44	3,000	1.235,377	5,500	1.236,830
7+758,168	-0,144	1.235,552	-4,717	1.235,696	-3,000	1.235,636	4,00	1.235,854	1.235,516	0,338	-4,00	3,000	1.235,396	5,500	1.236,342
7+760	-0,306	1.235,394	-4,959	1.235,700	-3,000	1.235,640	4,00	1.235,817	1.235,520	0,297	-4,00	3,000	1.235,400	5,500	1.236,298
7+775,500	-0,587	1.235,144	-5,380	1.235,731	-3,000	1.235,671	4,00	1.235,704	1.235,551	0,153	-4,00	3,000	1.235,431	5,500	1.236,165
7+780	-0,573	1.235,161	-5,359	1.235,734	-3,000	1.235,676	3,86	1.235,682	1.235,560	0,122	-3,86	3,000	1.235,444	5,500	1.236,147
7+800	0,125	1.235,871	-4,625	1.235,746	-3,000	1.235,697	3,25	1.235,875	1.235,600	0,275	-3,25	3,000	1.235,503	5,500	1.236,156
7+805,500	0,217	1.235,986	-4,717	1.235,749	-3,000	1.235,703	3,08	1.235,900	1.235,611	0,289	-3,08	3,000	1.235,519	5,500	1.236,136
7+820	0,467	1.236,225	-4,967	1.235,758	-3,000	1.235,719	2,63	1.235,986	1.235,640	0,346	-2,63	3,000	1.235,561	5,500	1.236,124
7+840	0,466	1.236,259	-4,966	1.235,793	-3,000	1.235,755	2,50	1.236,116	1.235,680	0,436	-2,50	3,000	1.235,605	5,500	1.236,368
7+859,852	0,879	1.236,737	-5,379	1.235,858	-3,000	1.235,812	3,08	1.236,378	1.235,720	0,658	-3,08	3,000	1.235,627	5,500	1.236,847
7+860	0,865	1.236,724	-5,365	1.235,859	-3,000	1.235,812	3,08	1.236,385	1.235,720	0,665	-3,08	3,000	1.235,628	5,500	1.236,836
7+880	-0,941	1.234,895	-5,912	1.235,836	-3,000	1.235,780	3,70	1.235,778	1.235,669	0,109	-3,70	3,000	1.235,558	5,500	1.235,609
7+889,852	-0,600	1.235,157	-5,400	1.235,757	-3,000	1.235,697	4,00	1.235,691	1.235,577	0,114	-4,00	3,000	1.235,457	5,500	1.235,635
7+900	-0,108	1.235,509	-4,662	1.235,617	-3,000	1.235,557	4,00	1.235,622	1.235,437	0,185	-4,00	3,000	1.235,317	5,500	1.235,719
7+900,796	-0,077	1.235,527	-4,615	1.235,604	-3,000	1.235,544	4,00	1.235,630	1.235,424	0,206	-4,00	3,000	1.235,304	5,500	1.235,752

ENGMETRIA - Ltda.

Projeto: SC-114 - Bentinho - SC

TRECHO

Notas de Serviço de Terraplenagem

Lado Esquerdo						Eixo				Lado Direito																
Offset			Lateral			Bordo			Terreno			Cota			Vermelha			Bordo			Lateral			Offset		
Estaca	Altura	Cota	Distância	Cota	Distância	%	Distância	Cota	Terreno	Cota	Projeto	Cota	%	Distância	Cota	Distância	Cota	Distância	Cota	Distância	Cota	Distância	Cota	Altura		
7+920	0,799	1.235,900	-5,299	1.235,101	-4,500	1.235,075	-3,000	1,751	1.235,847	1.235,023	0,824	-1,75	3,000	1.234,970	5,500	1.234,926	7,333	1.236,759	1,833							
7+930,796	1,023	1.235,768	-5,523	1.234,745	-4,500	1.234,738	-3,000	0,491	1.235,665	1.234,723	0,942	-0,49	3,000	1.234,709	5,500	1.234,697	7,268	1.236,465	1,768							
7+939,132	1,225	1.235,659	-5,725	1.234,434	-4,500	1.234,442	-3,000	-0,491	1.235,535	1.234,456	1,079	0,49	3,000	1.234,471	5,500	1.234,483	7,222	1.236,205	1,722							
7+940	1,239	1.235,639	-5,739	1.234,400	-4,500	1.234,409	-3,000	-0,591	1.235,521	1.234,427	1,094	0,59	3,000	1.234,444	5,500	1.234,459	7,218	1.236,177	1,718							
7+950	1,187	1.235,168	-5,687	1.233,981	-4,500	1.234,008	-3,000	-1,761	1.235,170	1.234,061	1,109	1,76	3,000	1.234,113	5,500	1.234,157	7,164	1.235,821	1,664							
7+960	1,140	1.234,657	-5,640	1.233,517	-4,500	1.233,561	-3,000	-2,931	1.234,729	1.233,649	1,080	2,93	3,000	1.233,737	5,500	1.233,810	6,929	1.235,239	1,429							
7+969,132	0,572	1.233,626	-5,072	1.233,054	-4,500	1.233,114	-3,000	-4,001	1.233,724	1.233,234	0,490	4,00	3,000	1.233,354	5,500	1.233,454	6,433	1.234,387	0,933							
7+970	0,519	1.233,531	-5,019	1.233,012	-4,500	1.233,072	-3,000	-4,001	1.233,627	1.233,192	0,435	4,00	3,000	1.233,312	5,500	1.233,412	6,392	1.234,304	0,892							
7+977,579	0,029	1.232,665	-4,530	1.232,636	-4,500	1.232,696	-3,000	-4,001	1.232,770	1.232,816	-0,046	4,00	3,000	1.232,936	5,500	1.233,036	5,930	1.233,466	0,430							
7+980	-0,194	1.232,321	-4,791	1.232,515	-4,500	1.232,573	-3,000	-3,891	1.232,498	1.232,690	-0,192	3,89	3,000	1.232,807	5,500	1.232,904	5,771	1.233,175	0,271							
7+990	-0,475	1.231,565	-5,213	1.232,040	-4,500	1.232,092	-3,000	-3,451	1.231,583	1.232,196	-0,613	3,45	3,000	1.232,299	5,500	1.232,385	5,501	1.232,384	-0,001							
8	-0,755	1.230,872	-5,633	1.231,627	-4,500	1.231,672	-3,000	-3,011	1.230,648	1.231,763	-1,115	3,01	3,000	1.231,853	5,500	1.231,928	5,889	1.231,668	-0,260							
8+7,579	-0,825	1.230,530	-5,738	1.231,355	-4,500	1.231,395	-3,000	-2,671	1.230,316	1.231,475	-1,159	2,67	3,000	1.231,555	5,500	1.231,622	6,062	1.231,247	-0,375							
8+15,327	-0,920	1.230,177	-5,880	1.231,097	-4,500	1.231,137	-3,000	-2,671	1.229,973	1.231,218	-1,245	2,67	3,000	1.231,298	5,500	1.231,364	6,451	1.230,730	-0,634							
8+20	-0,984	1.229,966	-5,977	1.230,950	-4,500	1.230,994	-3,000	-2,881	1.229,770	1.231,080	-1,310	2,88	3,000	1.231,166	5,500	1.231,238	6,735	1.230,415	-0,823							
8+25	-1,057	1.229,751	-6,086	1.230,808	-4,500	1.230,855	-3,000	-3,101	1.229,677	1.230,948	-1,271	3,10	3,000	1.231,041	5,500	1.231,118	6,824	1.230,235	-0,883							
8+30	-1,148	1.229,533	-6,222	1.230,681	-4,500	1.230,731	-3,000	-3,321	1.229,574	1.230,831	-1,257	3,32	3,000	1.230,930	5,500	1.231,013	6,948	1.230,048	-0,965							
8+35	-1,262	1.229,307	-6,393	1.230,569	-4,500	1.230,623	-3,000	-3,541	1.229,534	1.230,729	-1,195	3,54	3,000	1.230,835	5,500	1.230,924	7,112	1.229,849	-1,075							
8+40	-1,412	1.229,061	-6,618	1.230,473	-4,500	1.230,530	-3,000	-3,761	1.229,477	1.230,643	-1,166	3,76	3,000	1.230,755	5,500	1.230,850	7,303	1.229,648	-1,202							
8+45	-1,355	1.229,037	-6,533	1.230,392	-4,500	1.230,452	-3,000	-3,991	1.229,410	1.230,571	-1,161	3,99	3,000	1.230,691	5,500	1.230,791	7,268	1.229,612	-1,179							
8+45,327	-1,353	1.229,034	-6,530	1.230,387	-4,500	1.230,447	-3,000	-4,001	1.229,405	1.230,567	-1,162	4,00	3,000	1.230,687	5,500	1.230,787	7,266	1.229,610	-1,177							
8+50	-1,354	1.228,982	-6,531	1.230,336	-4,500	1.230,396	-3,000	-4,001	1.229,342	1.230,516	-1,174	4,00	3,000	1.230,636	5,500	1.230,736	7,261	1.229,562	-1,174							
8+55	-1,473	1.228,822	-6,709	1.230,295	-4,500	1.230,355	-3,000	-4,001	1.229,295	1.230,475	-1,180	4,00	3,000	1.230,595	5,500	1.230,695	7,270	1.229,515	-1,180							
8+60	-1,370	1.228,900	-6,556	1.230,270	-4,500	1.230,330	-3,000	-4,001	1.229,251	1.230,450	-1,199	4,00	3,000	1.230,570	5,500	1.230,670	7,330	1.229,450	-1,220							
8+61,344	-1,356	1.228,909	-6,535	1.230,265	-4,500	1.230,325	-3,000	-4,001	1.229,248	1.230,445	-1,197	4,00	3,000	1.230,565	5,500	1.230,665	7,322	1.229,450	-1,215							
8+65	-1,368	1.228,902	-6,553	1.230,270	-4,500	1.230,324	-3,000	-3,621	1.229,228	1.230,433	-1,205	3,62	3,000	1.230,541	5,500	1.230,631	7,287	1.229,440	-1,191							
8+70	-1,443	1.228,833	-6,665	1.230,276	-4,500	1.230,322	-3,000	-3,091	1.229,184	1.230,415	-1,231	3,09	3,000	1.230,508	5,500	1.230,585	7,323	1.229,370	-1,215							
8+75	-1,564	1.228,718	-6,845	1.230,282	-4,500	1.230,320	-3,000	-2,571	1.229,170	1.230,398	-1,228	2,57	3,000	1.230,475	5,500	1.230,539	7,140	1.229,446	-1,093							

ENGMETRIA - Ltda.

Projeto: SC-114 - Bentinho - SC

TRECHO

Notas de Serviço de Terraplenagem

Lado Esquerdo										Eixo			Lado Direito					
Offset			Lateral			Bordo			Cota	Terreno	Projeto	Cota Vermelha	Bordo			Lateral		
Estaca	Altura	Cota	Distância	Cota	Distância	Cota	Distância	%					Distância	Cota	%	Distância	Cota	Distância
8+80	-1,705	1.228,583	-7,058	1.230,288	-4,500	1.230,319	-3,000	-2,05	1.229,166	1.230,380	-1,214	2,05	3,000	1.230,441	2,05	5,500	1.230,493	6,844
8+85	-1,727	1.228,567	-7,090	1.230,294	-4,500	1.230,317	-3,000	-1,52	1.229,214	1.230,363	-1,149	1,52	3,000	1.230,408	1,52	5,500	1.230,446	6,400
8+90	-1,763	1.228,537	-7,144	1.230,300	-4,500	1.230,315	-3,000	-1,00	1.229,300	1.230,345	-1,045	1,00	3,000	1.230,375	1,00	5,500	1.230,400	5,994
8+91,344	-1,759	1.228,543	-7,139	1.230,302	-4,500	1.230,314	-3,000	-0,86	1.229,340	1.230,340	-1,000	0,86	3,000	1.230,366	0,86	5,500	1.230,388	5,888
8+100	-1,589	1.228,723	-6,883	1.230,312	-4,500	1.230,311	-3,000	0,05	1.229,584	1.230,310	-0,726	-0,05	3,000	1.230,309	-0,05	5,500	1.230,307	5,500
8+107,785	-0,960	1.229,361	-5,939	1.230,321	-4,500	1.230,309	-3,000	0,86	1.229,811	1.230,283	-0,472	-0,86	3,000	1.230,257	-0,86	5,500	1.230,235	5,963
8+110	-0,781	1.229,543	-5,672	1.230,324	-4,500	1.230,308	-3,000	1,09	1.229,876	1.230,275	-0,399	-1,09	3,000	1.230,242	-1,09	5,500	1.230,215	6,006
8+115	-0,031	1.230,299	-4,547	1.230,330	-4,500	1.230,306	-3,000	1,62	1.230,002	1.230,258	-0,256	-1,62	3,000	1.230,209	-1,62	5,500	1.230,169	6,105
8+120	0,007	1.230,343	-4,507	1.230,336	-4,500	1.230,304	-3,000	2,14	1.230,136	1.230,240	-0,104	-2,14	3,000	1.230,176	-2,14	5,500	1.230,122	6,207
8+125	-0,063	1.230,306	-5,594	1.230,369	-5,500	1.230,329	-4,000	2,66	1.230,312	1.230,223	0,089	-2,66	3,000	1.230,143	-2,66	5,500	1.230,076	6,336
8+130	0,045	1.230,457	-6,545	1.230,412	-6,500	1.230,364	-5,000	3,19	1.230,453	1.230,205	0,248	-3,19	3,000	1.230,109	-3,19	5,500	1.230,030	6,469
8+135	0,148	1.230,614	-7,648	1.230,466	-7,500	1.230,410	-6,000	3,71	1.230,548	1.230,188	0,360	-3,71	3,000	1.230,076	-3,71	5,500	1.229,984	6,586
8+137,785	0,244	1.230,722	-7,744	1.230,478	-7,500	1.230,418	-6,000	4,00	1.230,589	1.230,178	0,411	-4,00	3,000	1.230,058	-4,00	5,500	1.229,958	6,532
8+140	0,228	1.230,698	-7,728	1.230,470	-7,500	1.230,410	-6,000	4,00	1.230,553	1.230,170	0,383	-4,00	3,000	1.230,050	-4,00	5,500	1.229,950	6,455
8+145	-0,126	1.230,327	-7,689	1.230,453	-7,500	1.230,393	-6,000	4,00	1.230,408	1.230,153	0,255	-4,00	3,000	1.230,033	-4,00	5,500	1.229,933	6,263
8+146,223	-0,222	1.230,226	-7,833	1.230,448	-7,500	1.230,388	-6,000	4,00	1.230,372	1.230,148	0,224	-4,00	3,000	1.230,028	-4,00	5,500	1.229,928	6,212
8+150	-0,487	1.229,924	-8,230	1.230,411	-7,500	1.230,356	-6,000	3,68	1.230,269	1.230,135	0,134	-3,68	3,000	1.230,025	-3,68	5,500	1.229,932	6,030
8+155	-0,820	1.229,542	-8,729	1.230,362	-7,500	1.230,313	-6,000	3,26	1.230,135	1.230,118	0,017	-3,26	3,000	1.230,020	-3,26	5,500	1.229,938	5,773
8+160	-1,028	1.229,268	-8,442	1.230,296	-6,900	1.230,254	-5,400	2,84	1.230,040	1.230,100	-0,060	-2,84	3,000	1.230,015	-2,84	5,500	1.229,944	5,501
8+165	-1,101	1.229,134	-7,951	1.230,235	-6,300	1.230,199	-4,800	2,42	1.230,024	1.230,083	-0,059	-2,42	3,000	1.230,010	-2,42	5,500	1.229,949	5,722
8+170	-1,154	1.229,025	-7,431	1.230,179	-5,700	1.230,149	-4,200	2,01	1.230,003	1.230,065	-0,062	-2,01	3,000	1.230,005	-2,01	5,500	1.229,955	5,628
8+175	-1,198	1.228,930	-6,897	1.230,128	-5,100	1.230,105	-3,600	1,59	1.229,975	1.230,048	-0,073	-1,59	3,000	1.230,000	-1,59	5,500	1.229,960	5,819
8+176,223	-1,059	1.229,058	-6,542	1.230,117	-4,953	1.230,094	-3,453	1,48	1.229,963	1.230,043	-0,080	-1,48	3,000	1.229,999	-1,48	5,500	1.229,962	5,869
8+180	-0,040	1.230,042	-4,559	1.230,082	-4,500	1.230,065	-3,000	1,17	1.229,947	1.230,030	-0,083	-1,17	3,000	1.229,995	-1,17	5,500	1.229,966	5,852
8+200	0,430	1.230,371	-4,930	1.229,941	-4,500	1.229,947	-3,000	-0,42	1.230,074	1.229,960	0,114	0,42	3,000	1.229,973	0,42	5,500	1.229,983	6,344
8+211,576	0,437	1.230,301	-4,937	1.229,864	-4,500	1.229,883	-3,000	-1,23	1.230,217	1.229,919	0,298	1,23	3,000	1.229,956	1,23	5,500	1.229,987	6,746
8+220	0,530	1.230,339	-5,030	1.229,809	-4,500	1.229,836	-3,000	-1,81	1.230,282	1.229,890	0,392	1,81	3,000	1.229,944	1,81	5,500	1.229,990	6,794
8+230	0,841	1.230,583	-5,341	1.229,742	-4,500	1.229,780	-3,000	-2,50	1.230,293	1.229,855	0,438	2,50	4,200	1.229,960	2,50	6,700	1.230,023	7,341

Lado Esquerdo					Eixo					Lado Direito				
Estaca	Offset		Lateral		Bordo	%	Cota	Terreno	Projeto	Cota	Vermelha	Bordo		Lateral
	Altura	Cota	Distância	Cota								Distância	Cota	
8+240	1,058	1.230,734	-5,558	1.229,676	-3,000	-3,000	-3,20	1.230,278	1.229,820	0,458	3,20	5,400	1.229,993	7,900
8+245	0,936	1.230,579	-5,436	1.229,643	-3,000	-3,000	-3,54	1.230,217	1.229,803	0,414	3,54	6,000	1.230,015	8,500
8+250	0,812	1.230,422	-5,312	1.229,610	-3,000	-3,000	-3,89	1.230,176	1.229,785	0,391	3,89	6,000	1.230,018	8,500
8+251,576	0,774	1.230,373	-5,274	1.229,599	-3,000	-3,000	-4,00	1.230,164	1.229,779	0,385	4,00	6,000	1.230,019	8,500
8+260	0,632	1.230,202	-5,132	1.229,570	-3,000	-3,000	-4,00	1.230,089	1.229,750	0,339	4,00	6,000	1.229,990	8,500
8+265	0,541	1.230,091	-5,042	1.229,550	-3,000	-3,000	-4,00	1.230,051	1.229,730	0,321	4,00	6,000	1.229,970	8,500
8+270	0,400	1.229,923	-4,900	1.229,523	-3,000	-3,000	-4,00	1.230,005	1.229,703	0,302	4,00	5,000	1.229,903	7,500
8+275,638	0,215	1.229,701	-4,715	1.229,486	-3,000	-3,000	-4,00	1.229,926	1.229,666	0,260	4,00	3,872	1.229,821	6,372
8+280	0,133	1.229,663	-4,633	1.229,530	-3,000	-3,000	-2,26	1.229,895	1.229,632	0,263	2,26	3,000	1.229,700	5,500
8+295,676	0,215	1.229,867	-4,716	1.229,652	-3,000	-3,000	4,00	1.230,003	1.229,472	0,531	-4,00	3,000	1.229,352	5,500
8+300	0,336	1.229,917	-4,836	1.229,581	-3,000	-3,000	3,62	1.230,068	1.229,418	0,650	-3,62	3,000	1.229,309	5,500
8+320	0,996	1.230,188	-5,496	1.229,192	-3,000	-3,000	1,88	1.230,284	1.229,108	1,176	-1,88	3,000	1.229,052	5,500
8+335,676	0,448	1.229,269	-4,948	1.228,821	-3,000	-3,000	0,51	1.229,292	1.228,798	0,494	-0,51	3,000	1.228,783	5,500
8+340	0,341	1.229,049	-4,841	1.228,708	-3,000	-3,000	0,13	1.229,004	1.228,702	0,302	-0,13	3,000	1.228,698	5,500
8+347,282	0,211	1.228,712	-4,711	1.228,501	-3,000	-3,000	-0,65	1.228,595	1.228,530	0,065	0,65	3,000	1.228,550	5,500
8+350	0,170	1.228,590	-4,670	1.228,420	-3,000	-3,000	-0,95	1.228,443	1.228,463	-0,020	0,95	3,000	1.228,492	5,500
8+360	0,143	1.228,250	-4,643	1.228,107	-3,000	-3,000	-2,07	1.227,951	1.228,200	-0,249	2,07	3,000	1.228,262	5,500
8+370	0,648	1.228,435	-5,148	1.227,787	-3,000	-3,000	-3,19	1.227,643	1.227,931	-0,288	3,19	3,000	1.228,026	5,500
8+377,282	0,992	1.228,554	-5,492	1.227,562	-3,000	-3,000	-4,00	1.227,425	1.227,742	-0,317	4,00	3,000	1.227,862	5,500
8+380	0,858	1.228,351	-5,358	1.227,493	-3,000	-3,000	-4,00	1.227,249	1.227,673	-0,424	4,00	3,000	1.227,793	5,500
8+386,685	0,492	1.227,820	-4,992	1.227,328	-3,000	-3,000	-4,00	1.226,811	1.227,508	-0,697	4,00	3,000	1.227,628	5,500
8+390	0,224	1.227,491	-4,724	1.227,267	-3,000	-3,000	-3,56	1.226,627	1.227,428	-0,801	3,56	3,000	1.227,534	5,500
8+400	-0,345	1.226,748	-5,018	1.227,093	-3,000	-3,000	-2,22	1.226,183	1.227,193	-1,010	2,22	3,000	1.227,260	5,500
8+410	-0,550	1.226,381	-5,325	1.226,931	-3,000	-3,000	-0,89	1.225,998	1.226,971	-0,973	0,89	3,000	1.226,998	5,500
8+416,685	-0,691	1.226,138	-5,537	1.226,829	-3,000	-3,000	0,00	1.225,851	1.226,829	-0,978	0,00	3,000	1.226,829	5,500
8+420	-0,762	1.226,018	-5,644	1.226,780	-3,000	-3,000	0,44	1.225,831	1.226,760	-0,929	-0,44	3,000	1.226,747	5,500
8+440	-1,192	1.225,294	-6,287	1.226,486	-3,000	-3,000	2,50	1.225,734	1.226,373	-0,639	-2,50	3,000	1.226,298	5,500
8+460	-1,050	1.225,096	-6,075	1.226,146	-3,000	-3,000	2,50	1.225,673	1.226,033	-0,360	-2,50	3,000	1.225,958	5,500

ENGMETRIA - Ltda.

Projeto: SC-114 - Bentinho - SC

TRECHO

Notas de Serviço de Terraplenagem

Lado Esquerdo										Eixo			Lado Direito					
Offset			Lateral			Bordo			Cota	Terreno	Projeto	Cota Vermelha	Bordo			Lateral		
Estaca	Altura	Cota	Distância	Cota	Distância	Cota	Distância	%					Distância	Cota	%	Distância	Cota	Distância
8+480	0,049	1.225,902	-4,549	1.225,853	-4,500	1.225,815	-3,000	2,50	1.225,922	1.225,740	0,182	-2,50	3,000	1.225,665	-2,50	5,500	1.225,603	5,806
8+500	1,407	1.227,006	-5,907	1.225,599	-4,500	1.225,556	-3,000	2,87	1.226,866	1.225,470	1,396	-2,87	3,000	1.225,384	-2,87	5,500	1.225,312	7,262
8+506,616	1,725	1.227,244	-6,226	1.225,519	-4,500	1.225,473	-3,000	3,08	1.227,122	1.225,381	1,741	-3,08	3,000	1.225,288	-3,08	5,500	1.225,211	7,614
8+520	2,396	1.227,753	-6,897	1.225,357	-4,500	1.225,305	-3,000	3,49	1.227,641	1.225,200	2,441	-3,49	3,000	1.225,095	-3,49	5,500	1.225,008	8,410
8+536,616	2,929	1.228,085	-7,429	1.225,156	-4,500	1.225,096	-3,000	4,00	1.228,319	1.224,976	3,343	-4,00	3,000	1.224,856	-4,00	5,500	1.224,756	9,738
8+540	2,943	1.228,053	-7,443	1.225,110	-4,500	1.225,050	-3,000	4,00	1.228,240	1.224,930	3,310	-4,00	3,000	1.224,810	-4,00	5,500	1.224,710	9,652
8+546,852	2,883	1.227,901	-7,383	1.225,018	-4,500	1.224,958	-3,000	4,00	1.228,028	1.224,838	3,190	-4,00	3,000	1.224,718	-4,00	5,500	1.224,618	9,437
8+560	2,783	1.227,597	-7,283	1.224,814	-4,500	1.224,763	-3,000	3,42	1.227,581	1.224,660	2,921	-3,42	3,000	1.224,557	-3,42	5,500	1.224,472	9,115
8+576,852	3,187	1.227,740	-7,687	1.224,553	-4,500	1.224,513	-3,000	2,68	1.226,744	1.224,433	2,311	-2,68	3,000	1.224,352	-2,68	5,500	1.224,285	9,232
8+580	2,743	1.227,247	-7,243	1.224,504	-4,500	1.224,466	-3,000	2,54	1.226,540	1.224,390	2,150	-2,54	3,000	1.224,314	-2,54	5,500	1.224,250	9,259
8+585,041	2,156	1.226,599	-6,656	1.224,443	-4,500	1.224,402	-3,000	2,68	1.226,212	1.224,322	1,890	-2,68	3,000	1.224,242	-2,68	5,500	1.224,175	9,310
8+590	1,691	1.226,076	-6,191	1.224,385	-4,500	1.224,342	-3,000	2,90	1.225,870	1.224,255	1,615	-2,90	3,000	1.224,168	-2,90	5,500	1.224,096	9,278
8+600	0,969	1.225,239	-5,469	1.224,270	-4,500	1.224,220	-3,000	3,34	1.225,276	1.224,120	1,156	-3,34	3,000	1.224,020	-3,34	5,500	1.223,936	9,042
8+610	0,659	1.224,814	-5,159	1.224,155	-4,500	1.224,098	-3,000	3,78	1.224,929	1.223,985	0,944	-3,78	3,000	1.223,872	-3,78	5,500	1.223,777	8,074
8+615,041	0,607	1.224,704	-5,107	1.224,097	-4,500	1.224,037	-3,000	4,00	1.224,805	1.223,917	0,888	-4,00	3,000	1.223,797	-4,00	5,500	1.223,697	7,672
8+620	0,577	1.224,607	-5,077	1.224,030	-4,500	1.223,970	-3,000	4,00	1.224,608	1.223,850	0,758	-4,00	3,000	1.223,730	-4,00	5,500	1.223,630	7,239
8+630	0,339	1.224,234	-4,839	1.223,895	-4,500	1.223,835	-3,000	4,00	1.224,150	1.223,715	0,435	-4,00	3,000	1.223,595	-4,00	5,500	1.223,495	6,510
8+640	0,136	1.223,896	-4,636	1.223,760	-4,500	1.223,700	-3,000	4,00	1.223,946	1.223,580	0,366	-4,00	3,000	1.223,460	-4,00	5,500	1.223,360	6,177
8+643,105	0,096	1.223,814	-4,596	1.223,718	-4,500	1.223,658	-3,000	4,00	1.223,905	1.223,538	0,367	-4,00	3,000	1.223,418	-4,00	5,500	1.223,318	6,231
8+650	0,078	1.223,641	-4,578	1.223,563	-4,500	1.223,524	-3,000	2,62	1.223,823	1.223,445	0,378	-2,62	3,000	1.223,366	-2,62	5,500	1.223,301	6,264
8+660	0,132	1.223,470	-4,632	1.223,338	-4,500	1.223,329	-3,000	0,62	1.223,701	1.223,310	0,391	-0,62	3,000	1.223,291	-0,62	5,500	1.223,276	6,115
8+663,105	0,198	1.223,466	-4,698	1.223,268	-4,500	1.223,268	-3,000	0,00	1.223,656	1.223,268	0,388	0,00	3,000	1.223,268	0,00	5,500	1.223,268	6,153
8+670	0,357	1.223,470	-4,857	1.223,113	-4,500	1.223,134	-3,000	-1,38	1.223,567	1.223,175	0,392	1,38	3,000	1.223,216	1,38	5,500	1.223,251	6,396
8+680	0,631	1.223,519	-5,131	1.222,888	-4,500	1.222,939	-3,000	-3,38	1.223,416	1.223,040	0,376	3,38	3,000	1.223,141	3,38	5,500	1.223,226	6,368
8+683,105	0,737	1.223,555	-5,237	1.222,818	-4,500	1.222,878	-3,000	-4,00	1.223,324	1.222,998	0,326	4,00	3,000	1.223,118	4,00	5,500	1.223,218	6,302
8+690	0,848	1.223,573	-5,348	1.222,725	-4,500	1.222,785	-3,000	-4,00	1.223,132	1.222,905	0,227	4,00	3,000	1.223,025	4,00	5,500	1.223,125	6,287
8+691,118	0,858	1.223,568	-5,358	1.222,710	-4,500	1.222,770	-3,000	-4,00	1.223,102	1.222,890	0,212	4,00	3,000	1.223,010	4,00	5,500	1.223,110	6,241
8+700	-0,168	1.222,442	-4,752	1.222,610	-4,500	1.222,663	-3,000	-3,56	1.222,674	1.222,770	-0,096	3,56	3,000	1.222,877	3,56	5,500	1.222,966	5,658

Lado Esquerdo					Eixo					Lado Direito				
Estaca	Offset		Lateral		Bordo	%	Cota	Terreno	Cota	Projeto	Cota	Bordo		Lateral
	Altura	Cota	Distância	Cota								Distância	Cota	
8+710	-0,789	1.221,708	-5,684	1.222,497	-3,000	-3,06	1.222,058	1.222,635	-0,577	3,06	3,000	1.222,727	5,500	1.222,803
8+720	-1,256	1.221,129	-6,384	1.222,385	-3,000	-2,56	1.221,692	1.222,500	-0,808	2,56	3,000	1.222,577	5,500	1.222,641
8+721,118	-1,237	1.221,135	-6,356	1.222,372	-3,000	-2,50	1.221,690	1.222,485	-0,795	2,50	3,000	1.222,560	5,500	1.222,622
8+730	-1,013	1.221,220	-6,019	1.222,233	-3,000	-2,94	1.221,678	1.222,365	-0,687	2,94	3,000	1.222,453	5,500	1.222,527
8+740	-0,533	1.221,542	-5,299	1.222,075	-3,000	-3,44	1.221,751	1.222,230	-0,479	3,44	3,000	1.222,333	5,500	1.222,419
8+750	0,188	1.222,106	-4,688	1.221,918	-3,000	-3,94	1.221,988	1.222,095	-0,107	3,94	3,000	1.222,213	5,500	1.222,312
8+751,118	0,258	1.222,158	-4,758	1.221,900	-3,000	-4,00	1.222,013	1.222,080	-0,067	4,00	3,000	1.222,200	5,500	1.222,300
8+760	0,951	1.222,731	-5,451	1.221,780	-3,000	-4,00	1.222,412	1.221,960	0,452	4,00	3,000	1.222,080	5,500	1.222,180
8+768,861	1,836	1.223,496	-6,337	1.221,660	-3,000	-4,00	1.223,197	1.221,840	1,357	4,00	3,000	1.221,960	5,500	1.222,060
8+770	1,946	1.223,596	-6,446	1.221,650	-3,000	-3,90	1.223,309	1.221,825	1,484	3,90	3,000	1.221,942	5,500	1.222,039
8+780	2,631	1.224,187	-7,131	1.221,556	-3,000	-2,98	1.223,946	1.221,690	2,256	2,98	3,000	1.221,780	5,500	1.221,854
8+790	2,962	1.224,424	-7,462	1.221,462	-3,000	-2,07	1.224,002	1.221,555	2,447	2,07	3,000	1.221,617	5,500	1.221,669
8+798,861	3,148	1.224,527	-7,648	1.221,379	-3,000	-1,26	1.223,893	1.221,435	2,458	1,26	3,000	1.221,473	5,500	1.221,505
8+800	3,143	1.224,511	-7,643	1.221,368	-3,000	-1,16	1.223,846	1.221,420	2,426	1,16	3,000	1.221,455	5,500	1.221,484
8+820	2,721	1.223,895	-7,221	1.221,174	-3,000	0,54	1.222,948	1.221,150	1,798	-0,54	3,000	1.221,134	5,500	1.221,120
8+826,506	2,258	1.223,366	-6,758	1.221,108	-3,000	1,03	1.222,697	1.221,062	1,635	-1,03	3,000	1.221,031	5,500	1.221,006
8+830	2,007	1.223,080	-6,507	1.221,073	-3,000	1,29	1.222,562	1.221,015	1,547	-1,29	3,000	1.220,976	5,500	1.220,944
8+840	1,505	1.222,476	-6,005	1.220,971	-3,000	2,03	1.222,307	1.220,880	1,427	-2,03	3,000	1.220,819	5,500	1.220,768
8+850	1,319	1.222,189	-5,819	1.220,870	-3,000	2,77	1.222,243	1.220,745	1,498	-2,77	3,000	1.220,662	5,500	1.220,592
8+860	1,320	1.222,088	-5,820	1.220,768	-3,000	3,52	1.222,244	1.220,610	1,634	-3,52	3,000	1.220,505	5,500	1.220,417
8+866,506	1,498	1.222,200	-5,998	1.220,702	-3,000	4,00	1.222,286	1.220,522	1,764	-4,00	3,000	1.220,402	5,500	1.220,302
8+870	1,608	1.222,263	-6,108	1.220,655	-3,000	4,00	1.222,224	1.220,475	1,749	-4,00	3,000	1.220,355	5,500	1.220,255
8+877,502	1,759	1.222,313	-6,259	1.220,554	-3,000	4,00	1.221,966	1.220,374	1,592	-4,00	3,000	1.220,254	5,500	1.220,154
8+880	1,733	1.222,250	-6,233	1.220,517	-3,000	3,94	1.221,798	1.220,340	1,458	-3,94	3,000	1.220,222	5,500	1.220,123
8+890	1,496	1.221,868	-5,996	1.220,372	-3,000	3,71	1.221,201	1.220,205	0,996	-3,71	3,000	1.220,094	5,500	1.220,001
8+900	1,167	1.221,394	-5,667	1.220,227	-3,000	3,48	1.220,776	1.220,070	0,706	-3,48	3,000	1.219,966	5,500	1.219,879
8+910	0,200	1.220,281	-4,700	1.220,081	-3,000	3,25	1.220,293	1.219,935	0,358	-3,25	3,000	1.219,838	5,500	1.219,756
8+917,502	-0,108	1.219,864	-4,662	1.219,972	-3,000	3,08	1.219,986	1.219,834	0,152	-3,08	3,000	1.219,741	5,500	1.219,665

Lado Esquerdo						Eixo				Lado Direito							
Offset		Lateral		Bordo		Cota		Cota		Bordo		Lateral		Offset			
Estaca	Altura	Cota	Distância	Cota	Distância	%	Terreno	Projeto	Vermelha	%	Distância	Cota	Distância	Cota	Altura		
8+920	-0,118	1.219,818	-4,676	1.219,936	-4,500	1.219,891	-3,000	3,021	1.219,948	1.219,800	0,148	-3,02	3,000	1.219,709	5,578	1.219,712	0,078
8+935	-0,234	1.219,564	-7,851	1.219,798	-7,500	1.219,758	-6,000	2,671	1.219,711	1.219,598	0,113	-2,67	3,000	1.219,517	5,695	1.219,320	-0,130
8+940	-0,224	1.219,498	-7,837	1.219,722	-7,500	1.219,683	-6,000	2,561	1.219,662	1.219,530	0,132	-2,56	3,000	1.219,453	5,696	1.219,258	-0,131
8+955	-0,131	1.219,384	-7,697	1.219,515	-7,500	1.219,478	-6,000	2,501	1.219,545	1.219,328	0,217	-2,50	3,000	1.219,253	5,500	1.219,190	0,109
8+960	0,135	1.219,568	-7,035	1.219,433	-6,900	1.219,395	-5,400	2,501	1.219,587	1.219,260	0,327	-2,50	3,000	1.219,185	5,500	1.219,123	0,239
8+980	1,144	1.220,247	-5,644	1.219,103	-4,500	1.219,065	-3,000	2,501	1.219,732	1.218,990	0,742	-2,50	3,000	1.218,915	5,500	1.218,853	0,757
9	1,350	1.220,183	-5,850	1.218,833	-4,500	1.218,795	-3,000	2,501	1.219,601	1.218,720	0,881	-2,50	3,000	1.218,645	5,500	1.218,583	0,898
9+20	1,123	1.219,686	-5,623	1.218,563	-4,500	1.218,525	-3,000	2,501	1.219,117	1.218,450	0,667	-2,50	3,000	1.218,375	5,500	1.218,313	0,879
9+40	1,307	1.219,443	-5,807	1.218,136	-4,500	1.218,099	-3,000	2,501	1.218,739	1.218,024	0,715	-2,50	3,000	1.217,949	5,500	1.217,886	1,252
9+60	1,485	1.218,883	-5,985	1.217,398	-4,500	1.217,360	-3,000	2,501	1.218,126	1.217,285	0,841	-2,50	3,000	1.217,210	5,500	1.217,148	1,191
9+80	1,388	1.217,734	-5,888	1.216,346	-4,500	1.216,309	-3,000	2,501	1.217,274	1.216,234	1,040	-2,50	3,000	1.216,159	5,500	1.216,096	1,478
9+100	1,333	1.216,316	-5,833	1.214,983	-4,500	1.214,945	-3,000	2,501	1.215,283	1.214,870	0,413	-2,50	3,000	1.214,795	5,500	1.214,733	1,505
9+120	0,009	1.213,623	-4,509	1.213,614	-4,500	1.213,571	-3,000	2,871	1.212,910	1.213,485	-0,575	-2,87	3,000	1.213,399	5,500	1.213,327	-0,423
9+128,979	-0,337	1.212,752	-5,006	1.213,089	-4,500	1.213,043	-3,000	3,081	1.212,363	1.212,951	-0,588	-3,08	4,078	1.212,826	6,578	1.212,749	-1,193
9+130	-0,412	1.212,621	-5,118	1.213,033	-4,500	1.212,987	-3,000	3,101	1.212,301	1.212,894	-0,593	-3,10	4,200	1.212,764	6,700	1.212,686	-1,282
9+140	-0,697	1.211,823	-5,545	1.212,520	-4,500	1.212,470	-3,000	3,331	1.211,836	1.212,370	-0,534	-3,33	5,400	1.212,190	7,900	1.212,107	-1,838
9+145	-0,443	1.211,846	-5,164	1.212,289	-4,500	1.212,237	-3,000	3,451	1.211,723	1.212,133	-0,410	-3,45	6,000	1.211,927	8,500	1.211,840	-1,853
9+150	-0,265	1.211,809	-4,898	1.212,074	-4,500	1.212,021	-3,000	3,561	1.211,613	1.211,914	-0,301	-3,56	6,000	1.211,700	8,500	1.211,611	-1,786
9+160	0,027	1.211,723	-4,527	1.211,696	-4,500	1.211,639	-3,000	3,791	1.211,453	1.211,525	-0,072	-3,79	6,000	1.211,297	8,500	1.211,203	-1,281
9+165	0,228	1.211,760	-4,728	1.211,532	-4,500	1.211,473	-3,000	3,911	1.211,413	1.211,356	0,057	-3,91	6,000	1.211,121	8,500	1.211,024	-0,828
9+168,979	0,209	1.211,622	-4,709	1.211,413	-4,500	1.211,353	-3,000	4,001	1.211,384	1.211,233	0,151	-4,00	5,204	1.211,025	7,704	1.210,925	-0,422
9+170	0,207	1.211,591	-4,707	1.211,384	-4,500	1.211,324	-3,000	4,001	1.211,378	1.211,204	0,174	-4,00	5,000	1.211,004	7,500	1.210,904	-0,324
9+180	0,495	1.211,625	-4,995	1.211,130	-4,500	1.211,070	-3,000	4,001	1.211,435	1.210,950	0,485	-4,00	3,000	1.210,830	5,500	1.210,730	0,447
9+181,784	0,619	1.211,710	-5,119	1.211,091	-4,500	1.211,031	-3,000	4,001	1.211,481	1.210,911	0,570	-4,00	3,000	1.210,791	5,500	1.210,691	0,547
9+190	0,840	1.211,741	-5,340	1.210,901	-4,500	1.210,844	-3,000	3,811	1.211,711	1.210,730	0,981	-3,81	3,000	1.210,616	5,500	1.210,520	0,982
9+200	1,177	1.211,848	-5,677	1.210,671	-4,500	1.210,617	-3,000	3,581	1.211,815	1.210,510	1,305	-3,58	3,000	1.210,403	5,500	1.210,313	1,327
9+210	1,314	1.211,755	-5,814	1.210,441	-4,500	1.210,390	-3,000	3,351	1.211,693	1.210,290	1,403	-3,35	3,000	1.210,190	5,500	1.210,106	1,343
9+220	1,267	1.211,477	-5,767	1.210,210	-4,500	1.210,164	-3,000	3,121	1.211,315	1.210,070	1,245	-3,12	3,000	1.209,976	5,500	1.209,899	1,241

ENGMETRIA - Ltda.
Projeto: SC-114 - Bentinho - SC

TRECHO

Notas de Serviço de Terraplenagem

Lado Esquerdo				Eixo				Lado Direito			
Offset		Lateral		Bordo		Cota		Bordo		Lateral	
Estaca	Altura	Distância	Cota	Distância	Cota	%	Terreno	Distância	Cota	Distância	Cota
9+221,784	1,2091.211,378	-5,7091.210,169	-4,5001.210,123	-3,000	3,081.211,186	1,155	3,081.211,186	3,0001.209,938	5,5001.209,862	6,7021.211,064	1,202
9+240	0,2551.210,005	-4,7551.209,750	-4,5001.209,710	-3,000	2,661.209,855	0,225	2,661.209,855	3,0001.209,550	5,5001.209,484	6,4071.210,391	0,907
9+260	-1,1521.208,356	-6,2271.209,508	-4,5001.209,470	-3,000	2,501.208,570	-0,825	2,501.208,570	3,0001.209,320	5,5001.209,258	5,8281.209,040	-0,218
9+280	-1,9071.207,767	-7,3601.209,674	-4,5001.209,639	-3,000	2,301.208,575	-0,995	2,301.208,575	3,0001.209,501	5,5001.209,444	6,6461.208,680	-0,764
9+297,251	-3,4821.206,568	-9,7231.210,050	-4,5001.210,050	-3,000	0,001.208,604	-1,446	0,001.208,604	3,0001.210,050	5,5001.210,050	8,0381.208,358	-1,692
9+300	-3,0681.207,071	-9,1031.210,139	-4,5001.210,144	-3,000	-0,371.208,721	-1,434	-0,371.208,721	3,0001.210,166	5,5001.210,175	8,0321.208,487	-1,688
9+305	-2,3221.207,997	-7,9841.210,319	-4,5001.210,334	-3,000	-1,031.208,929	-1,436	-1,031.208,929	3,0001.210,396	5,5001.210,422	7,2621.209,248	-1,174
9+310	-1,6521.208,873	-6,9781.210,525	-4,5001.210,550	-3,000	-1,701.209,186	-1,415	-1,701.209,186	3,0001.210,652	5,5001.210,695	6,9231.209,746	-0,949
9+315	-1,2361.209,520	-6,3531.210,756	-4,5001.210,792	-3,000	-2,371.209,595	-1,268	-2,371.209,595	3,0001.210,934	5,5001.210,993	6,6371.210,235	-0,758
9+320	-0,8711.210,143	-5,8071.211,014	-4,5001.211,059	-3,000	-3,031.210,169	-0,981	-3,031.210,169	3,0001.211,241	5,5001.211,317	6,3981.210,719	-0,598
9+325	-0,4761.210,800	-5,2131.211,276	-4,5001.211,332	-3,000	-3,701.210,744	-0,699	-3,701.210,744	3,0001.211,554	5,5001.211,646	5,9921.211,318	-0,328
9+327,251	-0,3011.211,089	-4,9521.211,390	-4,5001.211,450	-3,000	-4,001.211,016	-0,554	-4,001.211,016	3,0001.211,690	5,5001.211,790	5,9021.211,522	-0,268
9+330	-0,1041.211,437	-4,6571.211,541	-4,5001.211,601	-3,000	-4,001.211,379	-0,342	-4,001.211,379	3,0001.211,841	5,5001.211,941	5,7861.211,750	-0,191
9+335	0,2301.212,034	-4,7301.211,804	-4,5001.211,864	-3,000	-4,001.212,018	0,034	-4,001.212,018	3,0001.212,104	5,5001.212,204	5,5371.212,180	-0,024
9+340	0,5131.212,566	-5,0131.212,053	-4,5001.212,113	-3,000	-4,001.212,561	0,328	-4,001.212,561	3,0001.212,353	5,5001.212,453	6,0231.212,976	0,523
9+340,691	0,5461.212,633	-5,0461.212,087	-4,5001.212,147	-3,000	-4,001.212,629	0,362	-4,001.212,629	3,0001.212,387	5,5001.212,487	6,0881.213,075	0,588
9+345	0,7201.213,034	-5,2201.212,314	-4,5001.212,365	-3,000	-3,431.213,049	0,581	-3,431.213,049	3,0001.212,570	5,5001.212,656	6,4731.213,629	0,973
9+350	0,7291.213,292	-5,2291.212,563	-4,5001.212,605	-3,000	-2,761.213,524	0,836	-2,761.213,524	3,0001.212,770	5,5001.212,839	6,7801.214,119	1,280
9+355	0,7851.213,584	-5,2851.212,799	-4,5001.212,830	-3,000	-2,091.213,967	1,074	-2,091.213,967	3,0001.212,955	5,5001.213,008	7,1181.214,626	1,618
9+360	1,0221.214,041	-5,5231.213,019	-4,5001.213,041	-3,000	-1,431.214,313	1,230	-1,431.214,313	3,0001.213,126	5,5001.213,162	7,3401.215,002	1,840
9+365	1,1651.214,390	-5,6651.213,225	-4,5001.213,237	-3,000	-0,761.214,626	1,367	-0,761.214,626	3,0001.213,282	5,5001.213,301	7,5711.215,372	2,071
9+370	1,2941.214,711	-5,7941.213,417	-4,5001.213,418	-3,000	-0,091.214,862	1,441	-0,091.214,862	3,0001.213,424	5,5001.213,426	7,8041.215,730	2,304
9+370,691	1,3191.214,761	-5,8191.213,442	-4,5001.213,442	-3,000	0,001.214,894	1,452	0,001.214,894	3,0001.213,442	5,5001.213,442	7,8371.215,779	2,337
9+380	1,4261.215,182	-5,9261.213,756	-4,5001.213,737	-3,000	1,241.215,331	1,631	1,241.215,331	3,0001.213,663	5,5001.213,632	8,0181.216,150	2,518
9+400	1,9031.216,104	-6,4031.214,201	-4,5001.214,162	-3,000	2,621.215,815	1,732	2,621.215,815	3,0001.214,005	5,5001.213,939	7,4861.215,925	1,986
9+419,985	1,0851.215,457	-5,5851.214,372	-4,5001.214,326	-3,000	3,081.215,416	1,183	3,081.215,416	3,0001.214,141	5,5001.214,064	7,2641.215,828	1,764
9+420	1,0841.215,456	-5,5841.214,372	-4,5001.214,326	-3,000	3,081.215,416	1,183	3,081.215,416	3,0001.214,141	5,5001.214,064	7,2641.215,828	1,764
9+440	0,3071.214,616	-4,8071.214,309	-4,5001.214,256	-3,000	3,541.214,596	0,446	3,541.214,596	3,0001.214,044	5,5001.213,955	6,7371.215,192	1,237

Lado Esquerdo						Eixo				Lado Direito									
Offset			Lateral			Bordo			Cota		Bordo		Lateral		Offset				
Estaca	Altura	Cota	Distância	Cota	Distância	%	Terreno	Projeto	Vermelha	%	Distância	Cota	Distância	Cota	Distância	Offset			
9+459,985	-0,736	1.213,394	-5,604	1.214,130	-4,500	1.214,070	-3,000	4,00	1.213,204	1.213,950	-0,746	-4,00	3,000	1.213,830	5,500	1.213,730	5,759	1.213,558	-0,172
9+460	-0,736	1.213,394	-5,604	1.214,130	-4,500	1.214,070	-3,000	4,00	1.213,203	1.213,950	-0,747	-4,00	3,000	1.213,830	5,500	1.213,730	5,762	1.213,555	-0,175
9+472,572	-1,579	1.212,425	-6,869	1.214,004	-4,500	1.213,944	-3,000	4,00	1.212,245	1.213,824	-1,579	-4,00	3,000	1.213,704	5,500	1.213,604	6,848	1.212,705	-0,899
9+480	-2,046	1.211,875	-7,569	1.213,921	-4,500	1.213,864	-3,000	3,80	1.212,008	1.213,750	-1,742	-3,80	3,000	1.213,636	5,500	1.213,541	6,617	1.212,796	-0,745
9+500	-2,729	1.210,968	-8,594	1.213,697	-4,500	1.213,648	-3,000	3,27	1.211,884	1.213,550	-1,666	-3,27	3,000	1.213,452	5,500	1.213,370	6,390	1.212,777	-0,593
9+512,572	-1,509	1.212,048	-6,764	1.213,557	-4,500	1.213,513	-3,000	2,94	1.212,140	1.213,424	-1,284	-2,94	3,000	1.213,336	5,500	1.213,263	5,752	1.213,095	-0,168
9+520	-1,005	1.212,468	-6,007	1.213,473	-4,500	1.213,432	-3,000	2,74	1.212,515	1.213,350	-0,835	-2,74	3,000	1.213,268	5,500	1.213,199	5,712	1.213,411	0,212
9+540	0,703	1.213,981	-5,203	1.213,278	-4,500	1.213,235	-3,000	2,85	1.213,751	1.213,150	0,601	-2,85	3,000	1.213,065	5,500	1.212,993	7,088	1.214,581	1,588
9+545,844	0,673	1.213,901	-5,173	1.213,228	-4,500	1.213,183	-3,000	3,04	1.214,015	1.213,092	0,923	-3,04	3,000	1.213,001	5,500	1.212,925	7,277	1.214,701	1,776
9+550	0,743	1.213,936	-5,243	1.213,193	-4,500	1.213,145	-3,000	3,17	1.213,988	1.213,050	0,938	-3,17	3,000	1.212,955	5,500	1.212,876	7,411	1.214,787	1,911
9+555	0,848	1.213,998	-5,348	1.213,150	-4,500	1.213,100	-3,000	3,33	1.213,898	1.213,000	0,898	-3,33	3,000	1.212,900	5,500	1.212,817	7,546	1.214,863	2,046
9+560	0,886	1.213,993	-5,386	1.213,107	-4,500	1.213,055	-3,000	3,49	1.213,887	1.212,950	0,937	-3,49	3,000	1.212,845	5,500	1.212,758	7,674	1.214,932	2,174
9+565	0,926	1.213,990	-5,426	1.213,064	-4,500	1.213,010	-3,000	3,65	1.213,973	1.212,900	1,073	-3,65	3,000	1.212,790	5,500	1.212,699	7,800	1.214,999	2,300
9+570	0,939	1.213,961	-5,439	1.213,022	-4,500	1.212,964	-3,000	3,81	1.213,714	1.212,850	0,864	-3,81	3,000	1.212,736	5,500	1.212,640	7,877	1.215,017	2,377
9+575	0,938	1.213,917	-5,438	1.212,979	-4,500	1.212,919	-3,000	3,97	1.213,842	1.212,800	1,042	-3,97	3,000	1.212,681	5,500	1.212,582	7,896	1.214,978	2,396
9+575,844	0,927	1.213,899	-5,427	1.212,972	-4,500	1.212,912	-3,000	4,00	1.213,772	1.212,792	0,980	-4,00	3,000	1.212,672	5,500	1.212,572	7,886	1.214,958	2,386
9+580	0,887	1.213,817	-5,387	1.212,930	-4,500	1.212,870	-3,000	4,00	1.213,907	1.212,750	1,157	-4,00	3,000	1.212,630	5,500	1.212,530	7,703	1.214,733	2,203
9+585	0,851	1.213,722	-5,351	1.212,871	-4,500	1.212,811	-3,000	4,00	1.213,671	1.212,691	0,980	-4,00	3,000	1.212,571	5,500	1.212,471	7,486	1.214,457	1,986
9+590	1,068	1.213,863	-5,568	1.212,795	-4,500	1.212,735	-3,000	4,00	1.213,742	1.212,615	1,127	-4,00	3,000	1.212,495	5,500	1.212,395	7,524	1.214,419	2,024
9+595	1,183	1.213,883	-5,683	1.212,700	-4,500	1.212,640	-3,000	4,00	1.213,795	1.212,520	1,275	-4,00	3,000	1.212,400	5,500	1.212,300	7,698	1.214,498	2,198
9+596,420	1,163	1.213,833	-5,663	1.212,670	-4,500	1.212,610	-3,000	4,00	1.213,819	1.212,490	1,329	-4,00	3,000	1.212,370	5,500	1.212,270	7,753	1.214,523	2,253
9+600	1,137	1.213,720	-5,638	1.212,583	-4,500	1.212,525	-3,000	3,89	1.213,860	1.212,408	1,452	-3,89	3,000	1.212,292	5,500	1.212,194	7,897	1.214,591	2,397
9+605	1,228	1.213,675	-5,728	1.212,447	-4,500	1.212,391	-3,000	3,74	1.213,898	1.212,279	1,619	-3,74	3,000	1.212,167	5,500	1.212,073	8,126	1.214,699	2,626
9+610	1,384	1.213,676	-5,884	1.212,292	-4,500	1.212,239	-3,000	3,58	1.213,853	1.212,131	1,722	-3,58	3,000	1.212,024	5,500	1.211,934	8,362	1.214,796	2,862
9+615	1,556	1.213,676	-6,056	1.212,120	-4,500	1.212,069	-3,000	3,43	1.213,746	1.211,966	1,780	-3,43	3,000	1.211,863	5,500	1.211,778	8,350	1.214,628	2,850
9+620	1,581	1.213,512	-6,081	1.211,931	-4,500	1.211,882	-3,000	3,27	1.213,526	1.211,783	1,743	-3,27	3,000	1.211,685	5,500	1.211,603	8,222	1.214,325	2,722
9+625	1,542	1.213,265	-6,042	1.211,723	-4,500	1.211,676	-3,000	3,12	1.213,308	1.211,583	1,725	-3,12	3,000	1.211,489	5,500	1.211,411	8,104	1.214,015	2,604
9+626,420	1,539	1.213,200	-6,039	1.211,661	-4,500	1.211,615	-3,000	3,08	1.213,246	1.211,523	1,723	-3,08	3,000	1.211,430	5,500	1.211,353	8,073	1.213,926	2,573

Lado Esquerdo				Eixo				Lado Direito			
Offset		Lateral		Bordo		Cota		Bordo		Lateral	
Estaca	Altura	Distância	Cota	Distância	Cota	Distância	%	Distância	Cota	Distância	Cota
9+985	0,7321.192,917	-5,2321.192,185	-4,5001.192,232	-3,000	-3,111.193,5391.192,325	1,214	3,11	3,0001.192,418	5,5001.192,496	9,8481.196,844	4,348
9+990	0,6071.192,680	-5,1071.192,073	-4,5001.192,122	-3,000	-3,271.193,3711.192,220	1,151	3,27	3,0001.192,318	5,5001.192,400	9,8361.196,736	4,336
9+995	0,5111.192,471	-5,0111.191,960	-4,5001.192,012	-3,000	-3,441.193,1751.192,115	1,060	3,44	3,0001.192,218	5,5001.192,304	9,2811.196,085	3,781
10	0,5211.192,369	-5,0211.191,848	-4,5001.191,902	-3,000	-3,601.192,9611.192,010	0,951	3,60	3,0001.192,118	5,5001.192,208	9,0171.195,725	3,517
10+5	0,3091.192,044	-4,8091.191,735	-4,5001.191,792	-3,000	-3,771.192,7021.191,905	0,797	3,77	3,0001.192,018	5,5001.192,112	8,1231.194,735	2,623
10+10	0,2391.191,862	-4,7391.191,623	-4,5001.191,682	-3,000	-3,931.192,4481.191,800	0,648	3,93	3,0001.191,918	5,5001.192,016	6,4911.193,007	0,991
10+11,996	0,2281.191,806	-4,7281.191,578	-4,5001.191,638	-3,000	-4,001.192,3541.191,758	0,596	4,00	3,0001.191,878	5,5001.191,978	6,0881.192,565	0,587
10+15	0,1941.191,709	-4,6941.191,515	-4,5001.191,575	-3,000	-4,001.192,2811.191,695	0,586	4,00	3,0001.191,815	5,5001.191,915	5,8311.192,246	0,331
10+20	0,3331.191,743	-4,8331.191,410	-4,5001.191,470	-3,000	-4,001.192,1531.191,590	0,563	4,00	3,0001.191,710	5,5001.191,810	5,6581.191,968	0,158
10+25	0,4221.191,727	-4,9221.191,305	-4,5001.191,365	-3,000	-4,001.192,0301.191,485	0,545	4,00	3,0001.191,605	5,5001.191,705	5,8031.192,008	0,303
10+30	0,3731.191,573	-4,8731.191,200	-4,5001.191,260	-3,000	-4,001.191,9391.191,380	0,559	4,00	3,0001.191,500	5,5001.191,600	6,6901.192,790	1,190
10+35	0,2951.191,390	-4,7951.191,095	-4,5001.191,155	-3,000	-4,001.191,8201.191,275	0,545	4,00	3,0001.191,395	5,5001.191,495	7,6571.193,652	2,157
10+40	0,1881.191,178	-4,6881.190,990	-4,5001.191,050	-3,000	-4,001.191,6471.191,170	0,477	4,00	3,0001.191,290	5,5001.191,390	8,3401.194,230	2,840
10+44,974	0,1441.191,030	-4,6441.190,886	-4,5001.190,946	-3,000	-4,001.191,5431.191,066	0,477	4,00	3,0001.191,186	5,5001.191,286	8,7971.194,583	3,297
10+45	0,1451.191,030	-4,6451.190,885	-4,5001.190,945	-3,000	-4,001.191,5431.191,065	0,478	4,00	3,0001.191,185	5,5001.191,285	8,7991.194,584	3,299
10+50	0,1781.190,981	-4,6781.190,803	-4,5001.190,855	-3,000	-3,501.191,4411.190,960	0,481	3,50	3,0001.191,065	5,5001.191,152	9,0251.194,677	3,525
10+55	0,0571.190,777	-4,5571.190,720	-4,5001.190,765	-3,000	-3,001.191,2881.190,855	0,433	3,00	3,0001.190,945	5,5001.191,020	8,9261.194,446	3,426
10+60	0,0961.190,734	-4,5961.190,638	-4,5001.190,675	-3,000	-2,501.191,1161.190,750	0,366	2,50	3,0001.190,825	5,5001.190,887	9,1961.194,583	3,696
10+65	0,0771.190,632	-4,5771.190,555	-4,5001.190,585	-3,000	-2,001.190,9351.190,645	0,290	2,00	3,0001.190,705	5,5001.190,755	9,1371.194,392	3,637
10+70	0,0191.190,492	-4,5191.190,473	-4,5001.190,495	-3,000	-1,501.190,7381.190,540	0,198	1,50	3,0001.190,585	5,5001.190,622	8,9881.194,110	3,488
10+75	-0,1031.190,287	-4,6541.190,390	-4,5001.190,405	-3,000	-1,001.190,5421.190,435	0,107	1,00	3,0001.190,465	5,5001.190,490	8,7261.193,716	3,226
10+80	-0,3241.189,984	-4,9861.190,308	-4,5001.190,315	-3,000	-0,501.190,3721.190,330	0,042	0,50	3,0001.190,345	5,5001.190,357	8,1671.193,024	2,667
10+84,974	-0,4161.189,810	-5,1241.190,226	-4,5001.190,226	-3,000	0,001.190,2481.190,226	0,022	0,00	3,0001.190,226	5,5001.190,226	7,8601.192,586	2,360
10+100	-0,2541.189,724	-4,8811.189,978	-4,5001.189,955	-3,000	1,501.189,9751.189,910	0,065	-1,50	3,0001.189,865	5,5001.189,827	7,0551.191,382	1,555
10+115	-1,6761.188,107	-10,0151.189,783	-7,5001.189,745	-6,000	2,501.189,7751.189,595	0,180	-2,50	3,0001.189,520	5,5001.189,458	7,5831.191,541	2,083
10+120	-1,3341.188,344	-9,5011.189,678	-7,5001.189,640	-6,000	2,501.189,7651.189,490	0,275	-2,50	3,0001.189,415	5,5001.189,353	7,7331.191,586	2,233
10+135	-0,3431.189,020	-8,0141.189,363	-7,5001.189,325	-6,000	2,501.189,6981.189,175	0,523	-2,50	3,0001.189,100	5,5001.189,038	8,0911.191,629	2,591
10+140	0,2371.189,480	-7,1371.189,243	-6,9001.189,205	-5,400	2,501.189,6611.189,070	0,591	-2,50	3,0001.188,995	5,5001.188,933	8,0671.191,500	2,567

Estaca	Lado Esquerdo					Eixo					Lado Direito				
	Offset		Lateral		Bordo	Cota	Terreno	Cota	Projeto	Cota Vermelha	%	Bordo		Lateral	Offset
	Altura	Cota	Distância	Cota								Distância	Cota		
10+160	0,589	1.189,352	-5,089	1.188,763	-3,000	1.188,725	2,501	1.189,252	1.188,650	0,602	-2,50	3,000	1.188,575	5,500	1.190,826
10+180	0,785	1.189,128	-5,285	1.188,343	-3,000	1.188,305	2,501	1.189,260	1.188,230	1,030	-2,50	5,400	1.188,095	7,900	1.190,837
10+185	0,845	1.189,083	-5,346	1.188,238	-3,000	1.188,200	2,501	1.189,200	1.188,125	1,075	-2,50	6,000	1.187,975	8,500	1.190,943
10+200	1,051	1.188,974	-5,551	1.187,923	-3,000	1.187,885	2,501	1.188,942	1.187,810	1,132	-2,50	6,000	1.187,660	8,500	1.190,677
10+205	1,125	1.188,943	-5,625	1.187,818	-3,000	1.187,780	2,501	1.188,863	1.187,705	1,158	-2,50	6,000	1.187,555	8,500	1.190,457
10+220	1,284	1.188,787	-5,784	1.187,503	-3,000	1.187,465	2,501	1.188,649	1.187,390	1,259	-2,50	3,000	1.187,315	5,500	1.189,828
10+240	1,374	1.188,457	-5,874	1.187,083	-3,000	1.187,045	2,501	1.188,308	1.186,970	1,338	-2,50	3,000	1.186,895	5,500	1.189,710
10+260	1,550	1.188,213	-6,050	1.186,663	-3,000	1.186,625	2,501	1.188,026	1.186,550	1,476	-2,50	3,000	1.186,475	5,500	1.189,225
10+280	1,632	1.187,875	-6,132	1.186,243	-3,000	1.186,205	2,501	1.187,828	1.186,130	1,698	-2,50	3,000	1.186,055	5,500	1.188,479
10+300	1,610	1.187,451	-6,110	1.185,841	-3,000	1.185,798	2,921	1.187,049	1.185,710	1,339	-2,92	3,000	1.185,622	5,500	1.187,815
10+305,135	1,513	1.187,254	-6,013	1.185,741	-3,000	1.185,694	3,081	1.186,893	1.185,602	1,291	-3,08	3,000	1.185,510	5,500	1.187,647
10+320	1,248	1.186,697	-5,748	1.185,449	-3,000	1.185,396	3,531	1.186,486	1.185,290	1,196	-3,53	3,000	1.185,184	5,500	1.187,088
10+335,135	0,883	1.186,035	-5,383	1.185,152	-3,000	1.185,092	4,001	1.186,023	1.184,972	1,051	-4,00	3,000	1.184,852	5,500	1.186,375
10+340	0,737	1.185,787	-5,237	1.185,050	-3,000	1.184,990	4,001	1.185,810	1.184,870	0,940	-4,00	3,000	1.184,750	5,500	1.186,120
10+356,966	-0,003	1.184,691	-4,505	1.184,694	-3,000	1.184,634	4,001	1.184,844	1.184,514	0,330	-4,00	3,000	1.184,394	5,500	1.185,300
10+360	-0,033	1.184,590	-4,550	1.184,623	-3,000	1.184,565	3,851	1.184,718	1.184,450	0,268	-3,85	3,000	1.184,335	5,500	1.185,193
10+380	-0,118	1.184,040	-4,677	1.184,158	-3,000	1.184,115	2,851	1.184,044	1.184,030	0,014	-2,85	3,000	1.183,945	5,500	1.184,213
10+386,966	-0,089	1.183,907	-4,634	1.183,996	-3,000	1.183,959	2,501	1.183,856	1.183,884	-0,028	-2,50	3,000	1.183,809	5,500	1.183,886
10+390	-0,098	1.183,841	-4,647	1.183,939	-3,000	1.183,899	2,651	1.183,771	1.183,820	-0,049	-2,65	3,000	1.183,741	5,500	1.184,034
10+400	-0,010	1.183,741	-4,516	1.183,751	-3,000	1.183,704	3,141	1.183,573	1.183,610	-0,037	-3,14	3,000	1.183,516	5,500	1.184,054
10+410	0,061	1.183,624	-4,561	1.183,563	-3,000	1.183,509	3,631	1.183,378	1.183,400	-0,022	-3,63	3,000	1.183,291	5,500	1.183,864
10+417,636	-0,070	1.183,350	-4,605	1.183,420	-3,000	1.183,360	4,001	1.183,260	1.183,240	0,020	-4,00	3,000	1.183,120	5,500	1.183,644
10+420	-0,138	1.183,232	-4,707	1.183,370	-3,000	1.183,310	4,001	1.183,227	1.183,190	0,037	-4,00	3,000	1.183,070	5,500	1.183,535
10+430	-0,190	1.182,970	-4,786	1.183,160	-3,000	1.183,100	4,001	1.183,042	1.182,980	0,062	-4,00	3,000	1.182,860	5,500	1.183,299
10+440	-0,057	1.182,893	-4,585	1.182,950	-3,000	1.182,890	4,001	1.182,981	1.182,770	0,211	-4,00	3,000	1.182,650	5,500	1.183,260
10+450	0,127	1.182,848	-4,627	1.182,721	-3,000	1.182,661	4,001	1.182,877	1.182,541	0,336	-4,00	3,000	1.182,421	5,500	1.183,283
10+460	0,400	1.182,855	-4,900	1.182,455	-3,000	1.182,395	4,001	1.182,711	1.182,275	0,436	-4,00	3,000	1.182,155	5,500	1.183,342
10+464,401	0,533	1.182,859	-5,033	1.182,326	-3,000	1.182,266	4,001	1.182,669	1.182,146	0,523	-4,00	3,000	1.182,026	5,500	1.183,375

Estaca	Lado Esquerdo					Eixo					Lado Direito				
	Offset		Lateral		Bordo	Cota	Distância	%	Cota	Terreno	Cota	Projeto	Vermelha	%	Bordo
	Altura	Cota	Distância	Cota											
10+470	0,720	1.182,864	-5,220	1.182,144	-3,000	1.182,086	-3,000	3,83	1.181,971	1.182,654	1.181,971	0,683	-3,83	3,000	1.181,856
10+480	0,893	1.182,681	-5,393	1.181,788	-3,000	1.181,736	-3,000	3,52	1.181,630	1.182,607	1.181,630	0,977	-3,52	3,000	1.181,524
10+490	1,273	1.182,669	-5,773	1.181,396	-3,000	1.181,348	-3,000	3,21	1.181,251	1.182,661	1.181,251	1,410	-3,21	3,000	1.181,155
10+494,401	1,321	1.182,532	-5,821	1.181,211	-3,000	1.181,165	-3,000	3,08	1.181,073	1.182,693	1.181,073	1,620	-3,08	3,000	1.180,980
10+500	1,449	1.182,415	-5,949	1.180,966	-3,000	1.180,922	-3,000	2,90	1.180,835	1.182,647	1.180,835	1,812	-2,90	3,000	1.180,748
10+520	1,975	1.181,978	-6,475	1.180,003	-3,000	1.179,965	-3,000	2,50	1.179,890	1.182,180	1.179,890	2,290	-2,50	3,000	1.179,753
10+540	2,066	1.180,974	-6,566	1.178,908	-3,000	1.178,870	-3,000	2,50	1.178,795	1.180,892	1.178,795	2,097	-2,50	3,000	1.178,720
10+560	0,053	1.177,791	-4,553	1.177,738	-3,000	1.177,700	-3,000	2,50	1.177,625	1.178,139	1.177,625	0,514	-2,50	3,000	1.177,550
10+580	-0,791	1.175,801	-5,687	1.176,592	-3,000	1.176,546	-3,000	3,04	1.176,455	1.176,091	1.176,455	-0,364	-3,04	3,000	1.176,364
10+581,129	-0,778	1.175,749	-5,666	1.176,527	-3,000	1.176,481	-3,000	3,08	1.176,389	1.176,003	1.176,389	-0,386	-3,08	3,000	1.176,297
10+590	-0,690	1.175,331	-5,535	1.176,021	-3,000	1.175,971	-3,000	3,35	1.175,870	1.175,417	1.175,870	-0,453	-3,35	3,000	1.175,770
10+600	-0,536	1.174,914	-5,305	1.175,450	-3,000	1.175,395	-3,000	3,66	1.175,285	1.175,012	1.175,285	-0,273	-3,66	3,000	1.175,175
10+610	-0,605	1.174,273	-5,408	1.174,878	-3,000	1.174,819	-3,000	3,97	1.174,700	1.174,609	1.174,700	-0,091	-3,97	3,000	1.174,581
10+611,129	-0,586	1.174,228	-5,378	1.174,814	-3,000	1.174,754	-3,000	4,00	1.174,634	1.174,567	1.174,634	-0,067	-4,00	3,000	1.174,514
10+620	-0,433	1.173,862	-5,149	1.174,295	-3,000	1.174,235	-3,000	4,00	1.174,115	1.174,241	1.174,115	0,126	-4,00	3,000	1.173,995
10+626,442	-0,256	1.173,662	-4,884	1.173,918	-3,000	1.173,858	-3,000	4,00	1.173,738	1.174,009	1.173,738	0,271	-4,00	3,000	1.173,618
10+630	-0,020	1.173,685	-4,530	1.173,705	-3,000	1.173,647	-3,000	3,89	1.173,530	1.173,761	1.173,530	0,231	-3,89	3,000	1.173,413
10+640	0,022	1.173,128	-4,522	1.173,106	-3,000	1.173,052	-3,000	3,58	1.172,945	1.173,304	1.172,945	0,359	-3,58	3,000	1.172,838
10+650	0,118	1.172,665	-4,618	1.172,547	-3,000	1.172,497	-3,000	3,28	1.172,399	1.172,882	1.172,399	0,483	-3,28	3,000	1.172,301
10+656,442	0,067	1.172,295	-4,567	1.172,228	-3,000	1.172,181	-3,000	3,08	1.172,089	1.172,498	1.172,089	0,409	-3,08	3,000	1.171,997
10+660	0,027	1.172,092	-4,527	1.172,065	-3,000	1.172,021	-3,000	2,97	1.171,932	1.172,242	1.171,932	0,310	-2,97	3,000	1.171,843
10+680	-0,199	1.171,145	-4,798	1.171,344	-3,000	1.171,307	-3,000	2,50	1.171,232	1.171,185	1.171,232	-0,047	-2,50	3,000	1.171,157
10+700	-0,474	1.170,466	-5,211	1.170,940	-3,000	1.170,908	-3,000	2,11	1.170,845	1.170,617	1.170,845	-0,228	-2,11	3,000	1.170,782
10+720	-0,941	1.169,836	-5,911	1.170,777	-3,000	1.170,775	-3,000	0,11	1.170,772	1.170,124	1.170,772	-0,648	-0,11	3,000	1.170,768
10+721,085	-0,969	1.169,808	-5,953	1.170,777	-3,000	1.170,777	-3,000	0,00	1.170,777	1.170,103	1.170,777	-0,674	0,00	3,000	1.170,777
10+725	-1,079	1.169,706	-6,119	1.170,785	-3,000	1.170,791	-3,000	-0,39	1.170,802	1.170,024	1.170,802	-0,778	0,39	3,000	1.170,814
10+730	-1,204	1.169,608	-6,307	1.170,812	-3,000	1.170,826	-3,000	-0,89	1.170,853	1.169,954	1.170,853	-0,899	0,89	3,000	1.170,879
10+735	-1,334	1.169,526	-6,501	1.170,860	-3,000	1.170,881	-3,000	-1,39	1.170,922	1.169,918	1.170,922	-1,004	1,39	3,000	1.170,964

ENGMETRIA - Ltda.

Projeto: SC-114 - Bentinho - SC

TRECHO

Notas de Serviço de Terraplenagem

Lado Esquerdo					Eixo					Lado Direito				
Estaca	Offset		Lateral		Bordo	%	Cota Terreno	Cota Projeto	Cota Vermelha	%	Bordo		Lateral	
	Altura	Cota	Distância	Cota							Distância	Cota	Distância	Cota
10+740	-1,471	1.169,456	-6,706	1.170,927	-3,000	-1,891	1.169,897	1.171,012	-1,115	1,89	3,000	1.171,068	5,500	1.171,116
10+745	-1,643	1.169,370	-6,964	1.171,013	-3,000	-2,391	1.169,839	1.171,121	-1,282	2,39	3,000	1.171,192	5,500	1.171,252
10+750	-1,740	1.169,379	-7,110	1.171,119	-3,000	-2,891	1.169,792	1.171,249	-1,457	2,89	3,000	1.171,336	5,500	1.171,408
10+755	-1,449	1.169,796	-6,673	1.171,245	-3,000	-3,391	1.169,784	1.171,397	-1,613	3,39	3,000	1.171,499	5,500	1.171,584
10+760	-1,310	1.170,080	-6,465	1.171,390	-3,000	-3,891	1.169,839	1.171,565	-1,726	3,89	3,000	1.171,682	5,500	1.171,779
10+761,085	-1,349	1.170,075	-6,523	1.171,424	-3,000	-4,001	1.169,865	1.171,604	-1,739	4,00	3,000	1.171,724	5,500	1.171,824
10+765	-1,514	1.170,058	-6,772	1.171,572	-3,000	-4,001	1.169,963	1.171,752	-1,789	4,00	3,000	1.171,872	5,500	1.171,972
10+770	-1,564	1.170,215	-6,845	1.171,779	-3,000	-4,001	1.170,146	1.171,959	-1,813	4,00	3,000	1.172,079	5,500	1.172,179
10+775	-1,298	1.170,708	-6,447	1.172,006	-3,000	-4,001	1.170,367	1.172,186	-1,819	4,00	3,000	1.172,306	5,500	1.172,406
10+779,474	-1,152	1.171,073	-6,228	1.172,225	-3,000	-4,001	1.170,810	1.172,405	-1,595	4,00	3,000	1.172,525	5,500	1.172,625
10+780	-1,135	1.171,118	-6,203	1.172,253	-3,000	-3,971	1.170,867	1.172,432	-1,565	3,97	3,000	1.172,551	5,500	1.172,650
10+785	-0,973	1.171,560	-5,960	1.172,533	-3,000	-3,641	1.171,332	1.172,697	-1,365	3,64	3,000	1.172,807	5,500	1.172,898
10+790	-0,691	1.172,142	-5,537	1.172,833	-3,000	-3,321	1.172,009	1.172,983	-0,974	3,32	3,000	1.173,082	5,500	1.173,165
10+795	-0,758	1.172,395	-5,636	1.173,153	-3,000	-2,991	1.172,755	1.173,287	-0,532	2,99	3,000	1.173,377	5,500	1.173,452
10+800	-0,111	1.173,381	-4,666	1.173,492	-3,000	-2,671	1.173,561	1.173,612	-0,051	2,67	3,000	1.173,692	5,500	1.173,758
10+805	0,315	1.174,165	-4,815	1.173,850	-3,000	-2,341	1.174,321	1.173,956	0,365	2,34	3,000	1.174,026	5,500	1.174,084
10+810	0,459	1.174,687	-4,959	1.174,228	-3,000	-2,021	1.174,944	1.174,319	0,625	2,02	3,000	1.174,380	5,500	1.174,430
10+815	0,568	1.175,194	-5,068	1.174,626	-3,000	-1,691	1.175,557	1.174,702	0,855	1,69	3,000	1.174,753	5,500	1.174,795
10+819,474	0,648	1.175,647	-5,148	1.174,999	-3,000	-1,401	1.176,106	1.175,062	1,044	1,40	3,000	1.175,104	5,500	1.175,139
10+820	0,696	1.175,739	-5,196	1.175,043	-3,000	-1,371	1.176,171	1.175,105	1,066	1,37	3,000	1.175,146	5,500	1.175,180
10+840	3,392	1.180,144	-7,892	1.176,752	-3,000	-0,071	1.178,834	1.176,755	2,079	0,07	3,000	1.176,757	5,500	1.176,759
10+860	2,805	1.181,276	-7,305	1.178,471	-3,000	1,471	1.180,559	1.178,405	2,154	-1,47	3,000	1.178,361	5,500	1.178,324
10+862,691	2,600	1.181,302	-7,100	1.178,702	-3,000	1,671	1.180,739	1.178,627	2,112	-1,67	3,000	1.178,577	5,500	1.178,535
10+880	1,266	1.181,457	-5,766	1.180,191	-3,000	3,021	1.181,153	1.180,055	1,098	-3,02	3,000	1.179,965	5,500	1.179,889
10+892,691	-0,120	1.181,162	-4,680	1.181,282	-3,000	4,001	1.181,426	1.181,102	0,324	-4,00	3,000	1.180,982	5,500	1.180,882
10+900	-0,347	1.181,538	-5,021	1.181,885	-3,000	4,001	1.181,568	1.181,705	-0,137	-4,00	3,000	1.181,585	5,500	1.181,485
10+910	-0,542	1.182,168	-5,313	1.182,710	-3,000	4,001	1.181,758	1.182,530	-0,772	-4,00	3,000	1.182,410	5,500	1.182,310
10+920	-0,996	1.182,539	-5,994	1.183,535	-3,000	4,001	1.181,927	1.183,355	-1,428	-4,00	3,000	1.183,235	5,500	1.183,135

Lado Esquerdo					Eixo					Lado Direito				
Estaca	Offset		Lateral		Bordo	%	Cota Terreno	Cota Projeto	Cota Vermelha	%	Bordo		Lateral	
	Altura	Cota	Distância	Cota							Distância	Cota	Distância	Cota
10+923,736	-1,179	1.182,664	-6,268	1.183,843	-3,000	4,00	1.181,974	1.183,663	-1,689	-4,00	3,000	1.183,543	5,500	1.183,443
10+930	-1,394	1.182,953	-6,591	1.184,347	-3,000	3,71	1.182,108	1.184,180	-2,072	-3,71	3,000	1.184,069	5,500	1.183,976
10+940	-1,713	1.183,439	-7,070	1.185,152	-3,000	3,26	1.182,371	1.185,005	-2,634	-3,26	3,000	1.184,907	5,500	1.184,826
10+950	-1,802	1.184,154	-7,203	1.185,956	-3,000	2,80	1.182,978	1.185,830	-2,852	-2,80	3,000	1.185,746	5,500	1.185,676
10+953,736	-1,706	1.184,551	-7,059	1.186,257	-3,000	2,63	1.183,361	1.186,138	-2,777	-2,63	3,000	1.186,059	5,500	1.185,994
10+959,418	-1,604	1.185,121	-6,906	1.186,725	-3,000	2,63	1.183,943	1.186,607	-2,664	-2,63	3,000	1.186,528	5,500	1.186,462
10+960	-1,595	1.185,180	-6,893	1.186,775	-3,000	2,66	1.184,003	1.186,655	-2,652	-2,66	3,000	1.186,575	5,500	1.186,509
10+970	-1,258	1.186,362	-6,387	1.187,620	-3,000	3,11	1.185,255	1.187,480	-2,225	-3,11	3,000	1.187,387	5,500	1.187,309
10+980	-0,660	1.187,806	-5,491	1.188,466	-3,000	3,57	1.186,885	1.188,305	-1,420	-3,57	3,000	1.188,198	5,500	1.188,109
10+989,418	-0,376	1.188,886	-5,064	1.189,262	-3,000	4,00	1.188,359	1.189,082	-0,723	-4,00	3,000	1.188,962	5,500	1.188,862
10+990	-0,355	1.188,955	-5,032	1.189,310	-3,000	4,00	1.188,446	1.189,130	-0,684	-4,00	3,000	1.189,010	5,500	1.188,910
11	0,757	1.190,892	-5,257	1.190,135	-3,000	4,00	1.189,810	1.189,955	-0,145	-4,00	3,000	1.189,835	5,500	1.189,735
11+2,335	0,971	1.191,299	-5,471	1.190,328	-3,000	4,00	1.190,085	1.190,148	-0,063	-4,00	3,000	1.190,028	5,500	1.189,928
11+10	1,617	1.192,534	-6,117	1.190,917	-3,000	3,06	1.190,767	1.190,780	-0,013	-3,06	3,000	1.190,688	5,500	1.190,612
11+20	1,251	1.192,938	-5,751	1.191,687	-3,000	1,82	1.191,154	1.191,605	-0,451	-1,82	3,000	1.191,550	5,500	1.191,505
11+30	-0,028	1.192,429	-4,542	1.192,457	-3,000	0,59	1.191,453	1.192,430	-0,977	-0,59	3,000	1.192,412	5,500	1.192,398
11+32,335	-0,080	1.192,556	-4,619	1.192,636	-3,000	0,30	1.191,580	1.192,623	-1,043	-0,30	3,000	1.192,614	5,500	1.192,606
11+37,241	-0,152	1.192,862	-4,727	1.193,014	-3,000	-0,30	1.191,830	1.193,027	-1,197	0,30	3,000	1.193,036	5,500	1.193,044
11+40	-0,191	1.193,035	-4,787	1.193,226	-3,000	-0,64	1.191,970	1.193,255	-1,285	0,64	3,000	1.193,274	5,500	1.193,290
11+50	-0,360	1.193,636	-5,040	1.193,996	-3,000	-1,87	1.192,570	1.194,080	-1,510	1,87	3,000	1.194,136	5,500	1.194,183
11+60	-0,513	1.194,252	-5,270	1.194,765	-3,000	-3,11	1.193,364	1.194,905	-1,541	3,11	3,000	1.194,998	5,500	1.195,076
11+67,241	-0,489	1.194,833	-5,234	1.195,322	-3,000	-4,00	1.194,065	1.195,502	-1,437	4,00	3,000	1.195,622	5,500	1.195,722
11+70	-0,256	1.195,294	-4,883	1.195,550	-3,000	-4,00	1.194,432	1.195,730	-1,298	4,00	3,000	1.195,850	5,500	1.195,950
11+80	1,112	1.197,487	-5,612	1.196,375	-3,000	-4,00	1.195,900	1.196,555	-0,655	4,00	3,000	1.196,675	5,500	1.196,775
11+90	2,187	1.199,387	-6,687	1.197,200	-3,000	-4,00	1.197,708	1.197,380	0,328	4,00	3,000	1.197,500	5,500	1.197,600
11+100	2,695	1.200,720	-7,195	1.198,025	-3,000	-4,00	1.198,606	1.198,205	0,401	4,00	3,000	1.198,325	5,500	1.198,425
11+110	3,631	1.202,481	-8,131	1.198,850	-3,000	-4,00	1.199,811	1.199,030	0,781	4,00	3,000	1.199,150	5,500	1.199,250
11+115,912	3,529	1.202,867	-8,029	1.199,338	-3,000	-4,00	1.200,671	1.199,518	1,153	4,00	3,000	1.199,638	5,500	1.199,738

Lado Esquerdo					Eixo					Lado Direito				
Estaca	Offset		Lateral		Bordo	%	Cota	Terreno	Projeto	Cota	Vermelha	%	Bordo	
	Altura	Cota	Distância	Cota									Distância	Cota
11+120	3,398	1.203,098	-7,898	1.199,700	-3,000	-3,45	1.201,226	1.199,855	1,371	3,45	3,000	1.199,959	5,500	1.200,045
11+130	3,533	1.204,118	-8,033	1.200,585	-3,000	-2,12	1.202,656	1.200,680	1,976	2,12	3,000	1.200,744	5,500	1.200,797
11+140	3,872	1.205,342	-8,372	1.201,470	-3,000	-0,79	1.204,142	1.201,505	2,637	0,79	3,000	1.201,529	5,500	1.201,548
11+145,912	4,046	1.206,039	-8,546	1.201,993	-3,000	0,00	1.205,028	1.201,993	3,035	0,00	3,000	1.201,993	5,500	1.201,993
11+150	3,985	1.206,340	-8,485	1.202,355	-3,000	0,55	1.205,638	1.202,330	3,308	-0,55	3,000	1.202,314	5,500	1.202,300
11+160	4,353	1.207,593	-8,853	1.203,240	-3,000	1,88	1.206,981	1.203,155	3,826	-1,88	3,000	1.203,099	5,500	1.203,052
11+170	5,022	1.209,126	-9,522	1.204,104	-3,000	3,21	1.208,124	1.203,960	4,164	-3,21	3,000	1.203,864	5,500	1.203,783
11+175,912	5,273	1.209,870	-9,773	1.204,597	-3,000	4,00	1.208,649	1.204,417	4,232	-4,00	3,000	1.204,297	5,500	1.204,197
11+180	5,437	1.210,341	-9,937	1.204,904	-3,000	4,00	1.208,901	1.204,724	4,177	-4,00	3,000	1.204,604	5,500	1.204,504
11+190	5,453	1.211,082	-9,953	1.205,629	-3,000	4,00	1.209,397	1.205,449	3,948	-4,00	3,000	1.205,329	5,500	1.205,229
11+193,970	5,289	1.211,194	-9,789	1.205,905	-3,000	4,00	1.209,561	1.205,725	3,836	-4,00	3,000	1.205,605	5,500	1.205,505
11+200	5,090	1.211,393	-9,590	1.206,303	-3,000	3,78	1.209,728	1.206,133	3,595	-3,78	3,000	1.206,020	5,500	1.205,925
11+210	4,547	1.211,477	-9,048	1.206,930	-3,000	3,41	1.209,901	1.206,777	3,124	-3,41	3,000	1.206,674	5,500	1.206,589
11+220	3,782	1.211,299	-8,282	1.207,517	-3,000	3,03	1.210,005	1.207,380	2,625	-3,03	3,000	1.207,289	5,500	1.207,213
11+223,970	3,488	1.211,226	-7,988	1.207,738	-3,000	2,89	1.210,042	1.207,608	2,434	-2,89	3,000	1.207,522	5,500	1.207,450
11+240	2,587	1.211,173	-7,087	1.208,586	-3,000	2,67	1.210,169	1.208,466	1,703	-2,67	3,000	1.208,386	5,500	1.208,319
11+244,802	2,389	1.211,218	-6,889	1.208,829	-3,000	2,81	1.210,223	1.208,703	1,520	-2,81	3,000	1.208,619	5,500	1.208,548
11+260	1,730	1.211,268	-6,230	1.209,538	-3,000	3,26	1.210,302	1.209,391	0,911	-3,26	3,000	1.209,293	5,500	1.209,212
11+280	0,969	1.211,298	-5,470	1.210,329	-3,000	3,86	1.210,404	1.210,155	0,249	-3,86	3,000	1.210,039	5,500	1.209,943
11+284,802	0,857	1.211,351	-5,357	1.210,494	-3,000	4,00	1.210,420	1.210,314	0,106	-4,00	3,000	1.210,194	5,500	1.210,094
11+298,170	-0,209	1.210,680	-4,813	1.210,889	-3,000	4,00	1.210,376	1.210,709	-0,333	-4,00	3,000	1.210,589	5,500	1.210,489
11+300	-0,222	1.210,714	-4,832	1.210,936	-3,000	3,96	1.210,371	1.210,758	-0,387	-3,96	3,000	1.210,639	5,500	1.210,540
11+315	-0,027	1.211,348	-7,540	1.211,375	-6,000	3,61	1.210,307	1.211,104	-0,797	-3,61	3,000	1.210,996	5,500	1.210,905
11+320	-0,001	1.211,461	-7,502	1.211,462	-6,000	3,50	1.210,323	1.211,199	-0,876	-3,50	3,000	1.211,095	5,500	1.211,007
11+335	0,384	1.212,045	-7,884	1.211,661	-6,000	3,15	1.210,652	1.211,425	-0,773	-3,15	3,000	1.211,330	5,500	1.211,252
11+338,170	0,456	1.212,136	-7,575	1.211,680	-5,620	3,08	1.210,722	1.211,461	-0,739	-3,08	3,000	1.211,369	5,500	1.211,292
11+340	0,499	1.212,188	-7,399	1.211,689	-5,400	3,03	1.210,763	1.211,480	-0,717	-3,03	3,000	1.211,389	5,500	1.211,313
11+360	0,889	1.212,685	-5,389	1.211,796	-3,000	2,57	1.211,664	1.211,680	-0,016	-2,57	3,000	1.211,603	5,500	1.211,538

Lado Esquerdo										Eixo				Lado Direito					
Estaca	Offset		Lateral		Bordo		Cota		Cota Vermelha	%	Bordo		Cota		Lateral		Offset		
	Altura	Cota	Distância	Cota	Distância	Cota	Terreno	Projeto			Distância	Cota	Distância	Cota	Distância	Cota			
11+380	0,903	1.212,896	-5,403	1.211,993	-3,000	2,501	1.211,930	1.211,880	0,050	-2,50	5,400	1.211,745	7,900	1.211,683	7,994	1.211,777	7,994	1.211,777	0,094
11+385	0,891	1.212,934	-5,391	1.212,043	-3,000	2,501	1.211,946	1.211,930	0,016	-2,50	6,000	1.211,780	8,500	1.211,718	8,503	1.211,721	8,503	1.211,721	0,003
11+400	1,294	1.213,487	-5,794	1.212,193	-3,000	2,501	1.212,267	1.212,080	0,187	-2,50	6,000	1.211,930	8,500	1.211,868	8,500	1.211,868	8,500	1.211,868	0,000
11+405	1,405	1.213,648	-5,905	1.212,243	-3,000	2,501	1.212,352	1.212,130	0,222	-2,50	6,000	1.211,980	8,500	1.211,918	8,513	1.211,931	8,513	1.211,931	0,013
11+420	1,702	1.214,095	-6,202	1.212,393	-3,000	2,501	1.212,594	1.212,280	0,314	-2,50	3,000	1.212,205	5,500	1.212,143	5,777	1.212,420	5,777	1.212,420	0,277
11+440	1,804	1.214,397	-6,304	1.212,593	-3,000	2,501	1.212,745	1.212,480	0,265	-2,50	3,000	1.212,405	5,500	1.212,343	5,753	1.212,596	5,753	1.212,596	0,253
11+460	1,838	1.214,631	-6,338	1.212,793	-3,000	2,501	1.212,830	1.212,680	0,150	-2,50	3,000	1.212,605	5,500	1.212,543	5,591	1.212,634	5,591	1.212,634	0,091
11+480	1,879	1.214,872	-6,379	1.212,993	-3,000	2,501	1.212,855	1.212,880	-0,025	-2,50	3,000	1.212,805	5,500	1.212,743	5,576	1.212,819	5,576	1.212,819	0,076
11+500	2,358	1.215,554	-6,858	1.213,196	-3,000	2,581	1.213,488	1.213,080	0,408	-2,58	3,000	1.213,003	5,500	1.212,938	5,869	1.213,307	5,869	1.213,307	0,369
11+516,276	2,322	1.215,703	-6,822	1.213,381	-3,000	3,081	1.213,816	1.213,243	0,573	-3,08	3,000	1.213,150	5,500	1.213,074	6,038	1.213,612	6,038	1.213,612	0,538
11+520	2,259	1.215,683	-6,759	1.213,424	-3,000	3,191	1.213,851	1.213,280	0,571	-3,19	3,000	1.213,184	5,500	1.213,104	6,002	1.213,606	6,002	1.213,606	0,502
11+530	2,302	1.215,839	-6,802	1.213,537	-3,000	3,501	1.213,925	1.213,380	0,545	-3,50	3,000	1.213,275	5,500	1.213,188	6,134	1.213,822	6,134	1.213,822	0,634
11+540	2,390	1.216,041	-6,890	1.213,651	-3,000	3,811	1.214,004	1.213,480	0,524	-3,81	3,000	1.213,366	5,500	1.213,271	6,242	1.214,013	6,242	1.214,013	0,742
11+546,276	2,437	1.216,160	-6,937	1.213,723	-3,000	4,001	1.214,085	1.213,543	0,542	-4,00	3,000	1.213,423	5,500	1.213,323	6,217	1.214,040	6,217	1.214,040	0,717
11+550	2,588	1.216,348	-7,088	1.213,760	-3,000	4,001	1.214,184	1.213,580	0,604	-4,00	3,000	1.213,460	5,500	1.213,360	6,209	1.214,069	6,209	1.214,069	0,709
11+560	2,927	1.216,787	-7,427	1.213,860	-3,000	4,001	1.214,651	1.213,680	0,971	-4,00	3,000	1.213,560	5,500	1.213,460	6,124	1.214,084	6,124	1.214,084	0,624
11+564,324	2,993	1.216,896	-7,493	1.213,903	-3,000	4,001	1.214,884	1.213,723	1,161	-4,00	3,000	1.213,603	5,500	1.213,503	6,057	1.214,060	6,057	1.214,060	0,557
11+570	1,559	1.215,511	-6,059	1.213,952	-3,000	3,831	1.215,326	1.213,780	1,546	-3,83	3,000	1.213,665	5,500	1.213,570	5,916	1.213,986	5,916	1.213,986	0,416
11+580	2,203	1.216,241	-6,703	1.214,038	-3,000	3,521	1.215,755	1.213,880	1,875	-3,52	3,000	1.213,774	5,500	1.213,687	5,689	1.213,876	5,689	1.213,876	0,189
11+590	2,326	1.216,440	-6,826	1.214,114	-3,000	3,211	1.215,000	1.213,970	1,030	-3,21	3,000	1.213,873	5,500	1.213,793	5,592	1.213,885	5,592	1.213,885	0,092
11+594,324	2,083	1.216,223	-6,583	1.214,140	-3,000	3,081	1.214,598	1.214,002	0,596	-3,08	3,000	1.213,910	5,500	1.213,833	5,718	1.213,688	5,718	1.213,688	-0,145
11+600	1,305	1.215,474	-5,805	1.214,169	-3,000	2,901	1.214,323	1.214,038	0,285	-2,90	3,000	1.213,951	5,500	1.213,879	6,290	1.213,352	6,290	1.213,352	-0,527
11+620	1,462	1.215,688	-5,962	1.214,226	-3,000	2,501	1.214,796	1.214,113	0,683	-2,50	3,000	1.214,038	5,500	1.213,976	5,578	1.214,053	5,578	1.214,053	0,077
11+640	1,105	1.215,323	-5,605	1.214,218	-3,000	2,501	1.214,722	1.214,105	0,617	-2,50	3,000	1.214,030	5,500	1.213,968	5,792	1.214,260	5,792	1.214,260	0,292
11+660	0,470	1.214,596	-4,970	1.214,126	-3,000	2,501	1.214,579	1.214,013	0,566	-2,50	3,000	1.213,938	5,500	1.213,876	5,706	1.213,739	5,706	1.213,739	-0,137
11+680	0,330	1.214,281	-4,830	1.213,951	-3,000	2,501	1.214,226	1.213,838	0,388	-2,50	3,000	1.213,763	5,500	1.213,701	6,743	1.212,872	6,743	1.212,872	-0,829
11+700	0,664	1.214,357	-5,164	1.213,693	-3,000	2,501	1.214,188	1.213,580	0,608	-2,50	3,000	1.213,505	5,500	1.213,443	5,935	1.213,153	5,935	1.213,153	-0,290
11+720	0,269	1.213,662	-4,769	1.213,393	-3,000	2,501	1.213,600	1.213,280	0,320	-2,50	3,000	1.213,205	5,500	1.213,143	7,011	1.212,136	7,011	1.212,136	-1,007

Lado Esquerdo										Eixo				Lado Direito					
Offset			Lateral			Bordo			Cota		Cota		Bordo		Lateral		Offset		
Estaca	Altura	Cota	Distância	Cota	Distância	%	Terreno	Projeto	Vermelha	%	Distância	Cota	Distância	Cota	Distância	Cota	Distância	Altura	
11+740	-0,337	1.212,756	-5,006	1.213,093	-4,500	1.213,055	-3,000	2,50	1.212,580	1.212,980	-0,400	-2,50	3,000	1.212,905	5,500	1.212,843	8,511	1.210,836	-2,007
11+760	-0,595	1.212,198	-5,393	1.212,793	-4,500	1.212,755	-3,000	2,50	1.212,051	1.212,680	-0,629	-2,50	3,000	1.212,605	5,500	1.212,543	8,916	1.210,266	-2,277
11+780	-0,707	1.211,786	-5,561	1.212,493	-4,500	1.212,455	-3,000	2,50	1.211,799	1.212,380	-0,581	-2,50	3,000	1.212,305	5,500	1.212,243	9,074	1.209,861	-2,382
11+800	-0,682	1.211,497	-5,522	1.212,179	-4,500	1.212,146	-3,000	2,20	1.211,676	1.212,080	-0,404	-2,20	3,000	1.212,014	5,500	1.211,959	7,487	1.210,634	-1,325
11+816,508	0,207	1.212,039	-4,708	1.211,832	-4,500	1.211,832	-3,000	0,00	1.211,676	1.211,832	-0,156	0,00	3,000	1.211,832	5,500	1.211,832	7,155	1.210,729	-1,103
11+820	0,491	1.212,250	-4,991	1.211,759	-4,500	1.211,766	-3,000	-0,47	1.211,677	1.211,780	-0,103	0,47	3,000	1.211,794	5,500	1.211,806	7,077	1.210,755	-1,051
11+830	0,477	1.212,026	-4,977	1.211,549	-4,500	1.211,576	-3,000	-1,80	1.211,619	1.211,630	-0,011	1,80	3,000	1.211,684	5,500	1.211,729	7,136	1.210,638	-1,091
11+840	0,600	1.211,939	-5,100	1.211,339	-4,500	1.211,386	-3,000	-3,13	1.211,524	1.211,480	0,044	3,13	3,000	1.211,574	5,500	1.211,652	7,214	1.210,509	-1,143
11+846,508	1,070	1.212,272	-5,570	1.211,202	-4,500	1.211,262	-3,000	-4,00	1.211,469	1.211,382	0,087	4,00	3,000	1.211,502	5,500	1.211,602	7,114	1.210,526	-1,076
11+850	1,203	1.212,353	-5,703	1.211,150	-4,500	1.211,210	-3,000	-4,00	1.211,443	1.211,330	0,113	4,00	3,000	1.211,450	5,500	1.211,550	7,038	1.210,525	-1,025
11+860	0,155	1.211,155	-4,655	1.211,000	-4,500	1.211,060	-3,000	-4,00	1.211,377	1.211,180	0,197	4,00	3,000	1.211,300	5,500	1.211,400	6,600	1.210,667	-0,733
11+870	0,900	1.211,750	-5,400	1.210,850	-4,500	1.210,910	-3,000	-4,00	1.211,409	1.211,030	0,379	4,00	3,000	1.211,150	5,500	1.211,250	6,637	1.210,492	-0,758
11+879,904	0,847	1.211,548	-5,347	1.210,701	-4,500	1.210,761	-3,000	-4,00	1.211,456	1.210,881	0,575	4,00	3,000	1.211,001	5,500	1.211,101	6,509	1.210,428	-0,673
11+880	0,845	1.211,546	-5,345	1.210,701	-4,500	1.210,760	-3,000	-3,99	1.211,456	1.210,880	0,576	3,99	3,000	1.211,000	5,500	1.211,099	6,506	1.210,428	-0,671
11+890	1,060	1.211,671	-5,560	1.210,611	-4,500	1.210,650	-3,000	-2,65	1.211,554	1.210,730	0,824	2,65	3,000	1.210,810	5,500	1.210,876	5,526	1.210,902	0,026
11+900	1,366	1.211,887	-5,866	1.210,521	-4,500	1.210,540	-3,000	-1,32	1.211,665	1.210,580	1,085	1,32	3,000	1.210,620	5,500	1.210,653	6,027	1.211,180	0,527
11+909,904	1,644	1.212,075	-6,144	1.210,431	-4,500	1.210,431	-3,000	0,00	1.211,664	1.210,431	1,233	0,00	3,000	1.210,431	5,500	1.210,431	6,243	1.211,174	0,743
11+920	2,233	1.212,574	-6,733	1.210,341	-4,500	1.210,320	-3,000	1,35	1.211,658	1.210,280	1,378	-1,35	3,000	1.210,240	5,500	1.210,206	6,445	1.211,151	0,945
11+940	1,770	1.211,863	-6,270	1.210,093	-4,500	1.210,055	-3,000	2,50	1.211,582	1.209,980	1,602	-2,50	3,000	1.209,905	5,500	1.209,843	6,829	1.211,172	1,329
11+960	2,099	1.211,892	-6,599	1.209,793	-4,500	1.209,755	-3,000	2,50	1.211,529	1.209,680	1,849	-2,50	3,000	1.209,605	5,500	1.209,543	6,889	1.210,932	1,389
11+980	2,317	1.211,810	-6,817	1.209,493	-4,500	1.209,455	-3,000	2,50	1.211,297	1.209,380	1,917	-2,50	3,000	1.209,305	5,500	1.209,243	7,374	1.211,117	1,874
12	2,071	1.211,280	-6,571	1.209,209	-4,500	1.209,166	-3,000	2,87	1.210,573	1.209,080	1,493	-2,87	3,000	1.208,994	5,500	1.208,922	7,366	1.210,787	1,865
12+6,818	1,866	1.210,982	-6,366	1.209,116	-4,500	1.209,070	-3,000	3,08	1.210,299	1.208,978	1,321	-3,08	3,000	1.208,885	5,500	1.208,809	7,146	1.210,454	1,645
12+20	1,431	1.210,368	-5,931	1.208,937	-4,500	1.208,884	-3,000	3,48	1.209,773	1.208,780	0,993	-3,48	3,000	1.208,676	5,500	1.208,588	6,770	1.209,858	1,270
12+36,818	0,889	1.209,597	-5,389	1.208,708	-4,500	1.208,648	-3,000	4,00	1.209,303	1.208,528	0,775	-4,00	3,000	1.208,408	5,500	1.208,308	6,920	1.209,728	1,420
12+40	0,923	1.209,583	-5,423	1.208,660	-4,500	1.208,600	-3,000	4,00	1.209,223	1.208,480	0,743	-4,00	3,000	1.208,360	5,500	1.208,260	6,873	1.209,633	1,373
12+50,544	0,863	1.209,365	-5,363	1.208,502	-4,500	1.208,442	-3,000	4,00	1.209,029	1.208,322	0,707	-4,00	3,000	1.208,202	5,500	1.208,102	6,528	1.209,130	1,028
12+60	0,917	1.209,220	-5,417	1.208,303	-4,500	1.208,262	-3,000	2,74	1.208,866	1.208,180	0,686	-2,74	3,000	1.208,098	5,500	1.208,029	6,186	1.208,715	0,686

Lado Esquerdo										Eixo				Lado Direito					
Offset				Lateral		Bordo		Cota		Cota		Cota		Bordo		Lateral		Offset	
Estaca	Altura	Cota	Distância	Cota	Distância	Cota	Distância	%	Terreno	Projeto	Vermelha	%	Distância	Cota	Distância	Cota	Distância	Cota	Altura
12+80	0,367	1.208,250	-4,867	1.207,883	-4,500	1.207,882	-3,000	0,07	1.207,934	1.207,880	0,054	-0,07	3,000	1.207,878	5,500	1.207,876	5,528	1.207,904	0,028
12+80,544	0,343	1.208,215	-4,843	1.207,872	-4,500	1.207,872	-3,000	0,00	1.207,908	1.207,872	0,036	0,00	3,000	1.207,872	5,500	1.207,872	5,511	1.207,883	0,011
12+90	0,256	1.207,929	-4,757	1.207,673	-4,500	1.207,692	-3,000	-1,26	1.207,601	1.207,730	-0,129	1,26	3,000	1.207,768	5,500	1.207,799	6,050	1.207,432	-0,367
12+100	0,134	1.207,597	-4,634	1.207,463	-4,500	1.207,502	-3,000	-2,59	1.207,281	1.207,580	-0,299	2,59	3,000	1.207,658	5,500	1.207,723	6,591	1.206,996	-0,727
12+110	0,063	1.207,316	-4,563	1.207,253	-4,500	1.207,312	-3,000	-3,93	1.206,814	1.207,430	-0,616	3,93	3,000	1.207,548	5,500	1.207,646	6,858	1.206,741	-0,905
12+110,544	0,077	1.207,319	-4,577	1.207,242	-4,500	1.207,302	-3,000	-4,00	1.206,770	1.207,422	-0,652	4,00	3,000	1.207,542	5,500	1.207,642	6,868	1.206,730	-0,912
12+120	0,101	1.207,201	-4,602	1.207,100	-4,500	1.207,160	-3,000	-4,00	1.205,849	1.207,280	-1,431	4,00	3,000	1.207,400	5,500	1.207,500	6,808	1.206,628	-0,872
12+130	-0,575	1.206,375	-5,362	1.206,950	-4,500	1.207,010	-3,000	-4,00	1.205,294	1.207,130	-1,836	4,00	3,000	1.207,250	5,500	1.207,350	8,611	1.205,276	-2,074
12+140	-1,231	1.205,569	-6,346	1.206,800	-4,500	1.206,860	-3,000	-4,00	1.204,168	1.206,980	-2,812	4,00	3,000	1.207,100	5,500	1.207,200	9,881	1.204,279	-2,921
12+142,514	-1,393	1.205,370	-6,590	1.206,763	-4,500	1.206,823	-3,000	-4,00	1.203,894	1.206,943	-3,049	4,00	3,000	1.207,063	5,500	1.207,163	9,746	1.204,332	-2,831
12+150	-1,967	1.204,722	-7,451	1.206,689	-4,500	1.206,737	-3,000	-3,19	1.203,845	1.206,833	-2,988	3,19	3,000	1.206,929	5,500	1.207,009	10,187	1.203,885	-3,124
12+160	-2,626	1.203,971	-8,439	1.206,597	-4,500	1.206,629	-3,000	-2,12	1.203,524	1.206,693	-3,169	2,12	3,000	1.206,756	5,500	1.206,809	12,830	1.201,922	-4,887
12+170	-2,639	1.203,872	-8,459	1.206,511	-4,500	1.206,527	-3,000	-1,04	1.203,284	1.206,558	-3,274	1,04	3,000	1.206,589	5,500	1.206,615	13,870	1.201,035	-5,580
12+172,514	-2,657	1.203,834	-8,485	1.206,491	-4,500	1.206,502	-3,000	-0,77	1.203,224	1.206,525	-3,301	0,77	3,000	1.206,549	5,500	1.206,568	14,184	1.200,779	-5,789
12+180	-2,707	1.203,725	-8,560	1.206,432	-4,500	1.206,431	-3,000	0,03	1.203,058	1.206,430	-3,372	-0,03	3,000	1.206,429	5,500	1.206,428	15,243	1.199,933	-6,495
12+186,863	-2,170	1.204,210	-7,754	1.206,380	-4,500	1.206,369	-3,000	0,77	1.203,143	1.206,346	-3,203	-0,77	3,000	1.206,323	5,500	1.206,303	14,245	1.200,473	-5,830
12+200	-1,514	1.204,777	-6,772	1.206,291	-4,500	1.206,258	-3,000	2,19	1.203,225	1.206,193	-2,968	-2,19	3,000	1.206,127	5,500	1.206,072	11,531	1.202,051	-4,021
12+216,863	-0,451	1.205,741	-5,177	1.206,192	-4,500	1.206,132	-3,000	4,00	1.204,573	1.206,012	-1,439	-4,00	3,000	1.205,892	5,500	1.205,792	6,868	1.204,880	-0,912
12+220	-0,256	1.205,904	-4,884	1.206,160	-4,500	1.206,100	-3,000	4,00	1.204,845	1.205,980	-1,135	-4,00	3,000	1.205,860	5,500	1.205,760	6,342	1.205,199	-0,561
12+235	0,343	1.206,480	-7,843	1.206,137	-7,500	1.206,077	-6,000	4,00	1.206,315	1.205,837	0,478	-4,00	3,000	1.205,717	5,500	1.205,617	5,554	1.205,670	0,053
12+240	0,474	1.206,567	-7,974	1.206,093	-7,500	1.206,033	-6,000	4,00	1.206,536	1.205,793	0,743	-4,00	3,000	1.205,673	5,500	1.205,573	5,503	1.205,576	0,003
12+248,172	0,462	1.206,485	-7,962	1.206,023	-7,500	1.205,963	-6,000	4,00	1.206,586	1.205,723	0,863	-4,00	3,981	1.205,564	6,481	1.205,464	6,978	1.205,962	0,498
12+255	0,471	1.206,424	-7,971	1.205,953	-7,500	1.205,896	-6,000	3,79	1.206,555	1.205,668	0,887	-3,79	4,800	1.205,486	7,300	1.205,392	7,687	1.205,779	0,387
12+260	0,541	1.206,422	-7,441	1.205,881	-6,900	1.205,826	-5,400	3,64	1.206,499	1.205,630	0,869	-3,64	5,400	1.205,434	7,900	1.205,343	8,030	1.205,473	0,130
12+265	0,393	1.206,206	-6,693	1.205,813	-6,300	1.205,760	-4,800	3,48	1.206,147	1.205,593	0,554	-3,48	6,000	1.205,384	8,500	1.205,297	8,509	1.205,291	-0,006
12+278,172	-0,042	1.205,607	-4,782	1.205,649	-4,719	1.205,603	-3,219	3,08	1.205,225	1.205,504	-0,279	-3,08	6,000	1.205,319	8,500	1.205,243	8,987	1.204,919	-0,324
12+280	-0,096	1.205,532	-4,644	1.205,628	-4,500	1.205,583	-3,000	3,02	1.205,098	1.205,493	-0,395	-3,02	6,000	1.205,311	8,500	1.205,236	9,058	1.204,864	-0,372
12+285	-0,310	1.205,281	-4,965	1.205,591	-4,500	1.205,548	-3,000	2,87	1.204,866	1.205,462	-0,596	-2,87	6,000	1.205,290	8,500	1.205,218	9,319	1.204,672	-0,546

ENGMETRIA - Ltda.

Projeto: SC-114 - Bentinho - SC

TRECHO

Notas de Serviço de Terraplenagem

Lado Esquerdo						Eixo				Lado Direito							
Offset			Lateral			Bordo		Cota		Vermelha		Bordo		Lateral		Offset	
Estaca	Altura	Cota	Distância	Cota	Distância	%	Terreno	Projeto	Cota	Distância	Cota	Distância	Cota	Distância	Cota	Altura	
12+300	-1,236	1.204,257	-6,354	1.205,493	-3,000	2,50	1.204,184	1.205,380	-1,196	-2,50	3,000	1.205,305	5,500	1.205,243	7,049	1.204,210	-1,033
12+320	-1,021	1.204,375	-6,032	1.205,396	-3,000	2,57	1.203,873	1.205,280	-1,407	-2,57	3,000	1.205,203	5,500	1.205,139	8,525	1.203,122	-2,017
12+336,486	-0,681	1.204,655	-5,522	1.205,336	-3,000	3,08	1.203,994	1.205,198	-1,204	-3,08	3,000	1.205,105	5,500	1.205,028	8,169	1.203,249	-1,779
12+340	-0,607	1.204,716	-5,410	1.205,323	-3,000	3,19	1.204,021	1.205,180	-1,159	-3,19	3,000	1.205,084	5,500	1.205,005	8,060	1.203,299	-1,706
12+350	-0,563	1.204,724	-5,345	1.205,287	-3,000	3,49	1.204,286	1.205,130	-0,844	-3,49	3,000	1.205,025	5,500	1.204,938	6,844	1.204,042	-0,896
12+360	-0,537	1.204,714	-5,305	1.205,251	-3,000	3,80	1.204,575	1.205,080	-0,505	-3,80	3,000	1.204,966	5,500	1.204,871	5,731	1.204,717	-0,154
12+366,486	-0,714	1.204,514	-5,571	1.205,228	-3,000	4,00	1.204,375	1.205,048	-0,673	-4,00	3,000	1.204,928	5,500	1.204,828	6,158	1.204,389	-0,439
12+370	-0,809	1.204,401	-5,714	1.205,210	-3,000	4,00	1.204,266	1.205,030	-0,764	-4,00	3,000	1.204,910	5,500	1.204,810	6,371	1.204,229	-0,581
12+377,612	-1,025	1.204,147	-6,038	1.205,172	-3,000	4,00	1.204,037	1.204,992	-0,955	-4,00	3,000	1.204,872	5,500	1.204,772	6,867	1.203,861	-0,911
12+380	-1,083	1.204,063	-6,125	1.205,146	-3,000	3,68	1.203,967	1.204,980	-1,013	-3,68	3,000	1.204,870	5,500	1.204,778	7,072	1.203,730	-1,048
12+390	-1,392	1.203,644	-6,587	1.205,036	-3,000	2,35	1.203,420	1.204,930	-1,510	-2,35	3,000	1.204,860	5,500	1.204,801	8,400	1.202,867	-1,934
12+400	-1,698	1.203,228	-7,047	1.204,926	-3,000	1,01	1.202,861	1.204,880	-2,019	-1,01	3,000	1.204,850	5,500	1.204,824	9,620	1.202,077	-2,747
12+407,612	-2,146	1.202,696	-7,719	1.204,842	-3,000	0,00	1.202,766	1.204,842	-2,076	0,00	3,000	1.204,842	5,500	1.204,842	9,644	1.202,079	-2,763
12+410	-2,220	1.202,596	-7,831	1.204,816	-3,000	-0,32	1.202,730	1.204,830	-2,100	0,32	3,000	1.204,840	5,500	1.204,848	9,616	1.202,104	-2,744
12+415	-2,355	1.202,406	-8,033	1.204,761	-3,000	-0,99	1.202,642	1.204,805	-2,163	0,99	3,000	1.204,835	5,500	1.204,859	9,538	1.202,167	-2,692
12+420	-2,325	1.202,381	-7,988	1.204,706	-3,000	-1,65	1.202,525	1.204,780	-2,255	1,65	3,000	1.204,830	5,500	1.204,871	9,357	1.202,299	-2,572
12+425	-2,210	1.202,441	-7,815	1.204,651	-3,000	-2,32	1.202,501	1.204,755	-2,254	2,32	3,000	1.204,825	5,500	1.204,883	8,909	1.202,610	-2,273
12+430	-2,117	1.202,479	-7,676	1.204,596	-3,000	-2,99	1.202,467	1.204,730	-2,263	2,99	3,000	1.204,820	5,500	1.204,894	8,540	1.202,868	-2,026
12+435	-1,968	1.202,573	-7,452	1.204,541	-3,000	-3,65	1.202,373	1.204,705	-2,332	3,65	3,000	1.204,815	5,500	1.204,906	8,524	1.202,890	-2,016
12+437,612	-1,889	1.202,623	-7,334	1.204,512	-3,000	-4,00	1.202,482	1.204,692	-2,210	4,00	3,000	1.204,812	5,500	1.204,912	8,431	1.202,958	-1,954
12+440	-1,832	1.202,668	-7,248	1.204,500	-3,000	-4,00	1.202,750	1.204,680	-1,930	4,00	3,000	1.204,800	5,500	1.204,900	8,411	1.202,960	-1,940
12+445	-1,477	1.202,998	-6,716	1.204,475	-3,000	-4,00	1.203,286	1.204,655	-1,369	4,00	3,000	1.204,775	5,500	1.204,875	7,925	1.203,258	-1,617
12+445,926	-1,402	1.203,068	-6,603	1.204,470	-3,000	-4,00	1.203,390	1.204,650	-1,260	4,00	3,000	1.204,770	5,500	1.204,870	7,815	1.203,327	-1,543
12+450	-1,093	1.203,381	-6,140	1.204,474	-3,000	-3,46	1.203,556	1.204,630	-1,074	3,46	3,000	1.204,734	5,500	1.204,820	7,675	1.203,370	-1,450
12+455	-0,756	1.203,723	-5,635	1.204,479	-3,000	-2,79	1.203,127	1.204,605	-1,478	2,79	3,000	1.204,689	5,500	1.204,758	7,227	1.203,607	-1,151
12+460	-0,663	1.203,821	-5,495	1.204,484	-3,000	-2,12	1.203,435	1.204,580	-1,145	2,12	3,000	1.204,644	5,500	1.204,697	7,022	1.203,682	-1,015
12+465	-0,731	1.203,758	-5,596	1.204,489	-3,000	-1,46	1.203,579	1.204,555	-0,976	1,46	3,000	1.204,599	5,500	1.204,635	6,725	1.203,818	-0,817
12+470	-0,775	1.203,719	-5,662	1.204,494	-3,000	-0,79	1.203,724	1.204,530	-0,806	0,79	3,000	1.204,554	5,500	1.204,573	6,447	1.203,942	-0,631

Lado Esquerdo										Eixo				Lado Direito					
Offset					Lateral			Bordo		Cota		Vermelha		Bordo		Lateral		Offset	
Estaca	Altura	Cota	Distância	Cota	Distância	Cota	Distância	%	Terreno	Projeto	Cota	Distância	Cota	Distância	Cota	Distância	Cota	Distância	Altura
12+475	-0,510	1.203,989	-5,265	1.204,499	-4,500	1.204,501	-3,000	-0,121	203,378	1.204,505	-1,127	0,12	3,000	1.204,509	5,500	1.204,512	6,182	1.204,058	-0,454
12+475,926	-0,474	1.204,026	-5,211	1.204,500	-4,500	1.204,500	-3,000	0,001	203,278	1.204,500	-1,222	0,00	3,000	1.204,500	5,500	1.204,500	6,132	1.204,078	-0,422
12+480	-0,313	1.204,191	-4,970	1.204,504	-4,500	1.204,496	-3,000	0,541	203,102	1.204,480	-1,378	-0,54	3,000	1.204,464	5,500	1.204,450	6,022	1.204,102	-0,348
12+500	-0,027	1.204,466	-4,540	1.204,493	-4,500	1.204,455	-3,000	2,501	204,166	1.204,380	-0,214	-2,50	3,000	1.204,305	5,500	1.204,243	5,543	1.204,214	-0,029
12+520	0,425	1.204,840	-4,925	1.204,415	-4,500	1.204,370	-3,000	3,001	204,503	1.204,280	0,223	-3,00	3,000	1.204,190	5,500	1.204,115	6,016	1.204,631	0,516
12+522,934	0,491	1.204,895	-4,991	1.204,404	-4,500	1.204,358	-3,000	3,081	204,529	1.204,265	0,264	-3,08	3,000	1.204,173	5,500	1.204,096	6,026	1.204,622	0,526
12+530	0,511	1.204,888	-5,011	1.204,377	-4,500	1.204,328	-3,000	3,261	204,593	1.204,230	0,363	-3,26	3,000	1.204,132	5,500	1.204,051	6,049	1.204,600	0,549
12+540	0,516	1.204,855	-5,016	1.204,339	-4,500	1.204,286	-3,000	3,531	204,654	1.204,180	0,474	-3,53	3,000	1.204,074	5,500	1.203,986	6,071	1.204,556	0,570
12+550	0,440	1.204,741	-4,940	1.204,301	-4,500	1.204,244	-3,000	3,791	204,599	1.204,130	0,469	-3,79	3,000	1.204,016	5,500	1.203,922	6,053	1.204,475	0,553
12+557,934	0,303	1.204,573	-4,803	1.204,270	-4,500	1.204,210	-3,000	4,001	204,534	1.204,090	0,444	-4,00	3,000	1.203,970	5,500	1.203,870	6,328	1.204,698	0,828
12+560	0,290	1.204,550	-4,791	1.204,260	-4,500	1.204,200	-3,000	4,001	204,499	1.204,080	0,419	-4,00	3,000	1.203,960	5,500	1.203,860	6,420	1.204,780	0,920
12+570	0,217	1.204,427	-4,717	1.204,210	-4,500	1.204,150	-3,000	4,001	204,325	1.204,030	0,295	-4,00	3,000	1.203,910	5,500	1.203,810	6,463	1.204,773	0,963
12+580	0,089	1.204,249	-4,589	1.204,160	-4,500	1.204,100	-3,000	4,001	204,215	1.203,980	0,235	-4,00	3,000	1.203,860	5,500	1.203,760	5,868	1.204,128	0,368
12+590	-0,106	1.204,004	-4,659	1.204,110	-4,500	1.204,050	-3,000	4,001	204,212	1.203,930	0,282	-4,00	3,000	1.203,810	5,500	1.203,710	5,526	1.203,736	0,026
12+590,090	-0,110	1.204,000	-4,665	1.204,110	-4,500	1.204,050	-3,000	4,001	204,212	1.203,930	0,282	-4,00	3,000	1.203,810	5,500	1.203,710	5,522	1.203,732	0,022
12+600	-0,197	1.203,827	-4,795	1.204,024	-4,500	1.203,976	-3,000	3,201	204,224	1.203,880	0,344	-3,20	3,000	1.203,784	5,500	1.203,704	5,981	1.204,185	0,481
12+610	0,627	1.204,565	-5,127	1.203,938	-4,500	1.203,902	-3,000	2,401	204,235	1.203,830	0,405	-2,40	3,000	1.203,758	5,500	1.203,698	5,904	1.204,101	0,403
12+620	1,134	1.204,986	-5,634	1.203,852	-4,500	1.203,828	-3,000	1,601	204,231	1.203,780	0,451	-1,60	3,000	1.203,732	5,500	1.203,692	5,877	1.204,069	0,377
12+625,090	1,010	1.204,818	-5,510	1.203,808	-4,500	1.203,790	-3,000	1,191	204,229	1.203,755	0,474	-1,19	3,000	1.203,719	5,500	1.203,689	5,840	1.204,029	0,340
12+640	0,723	1.204,403	-5,223	1.203,680	-4,500	1.203,680	-3,000	-0,011	204,199	1.203,680	0,519	0,01	3,000	1.203,680	5,500	1.203,680	6,172	1.204,352	0,672
12+654,748	0,558	1.204,105	-5,058	1.203,547	-4,500	1.203,567	-3,000	-1,321	204,078	1.203,606	0,472	1,32	3,000	1.203,646	5,500	1.203,679	6,010	1.204,189	0,510
12+660	0,561	1.204,060	-5,061	1.203,499	-4,500	1.203,526	-3,000	-1,791	204,046	1.203,580	0,466	1,79	3,000	1.203,634	5,500	1.203,679	5,921	1.204,100	0,421
12+680	0,842	1.204,161	-5,342	1.203,319	-4,500	1.203,373	-3,000	-3,581	203,947	1.203,480	0,467	3,58	3,000	1.203,587	5,500	1.203,677	5,817	1.203,994	0,317
12+684,748	0,753	1.204,029	-5,254	1.203,276	-4,500	1.203,336	-3,000	-4,001	203,921	1.203,456	0,465	4,00	3,000	1.203,576	5,500	1.203,676	5,727	1.203,903	0,227
12+695,565	0,547	1.203,769	-5,047	1.203,222	-4,500	1.203,282	-3,000	-4,001	203,867	1.203,402	0,465	4,00	3,000	1.203,522	5,500	1.203,622	5,874	1.203,996	0,374
12+700	0,531	1.203,741	-5,031	1.203,210	-4,500	1.203,267	-3,000	-3,781	203,847	1.203,380	0,467	3,78	3,000	1.203,493	5,500	1.203,588	5,830	1.203,918	0,330
12+720	1,349	1.204,504	-5,849	1.203,155	-4,500	1.203,197	-3,000	-2,781	203,777	1.203,280	0,497	2,78	3,000	1.203,363	5,500	1.203,433	5,568	1.203,501	0,068
12+725,565	1,438	1.204,578	-5,938	1.203,140	-4,500	1.203,177	-3,000	-2,501	203,760	1.203,252	0,508	2,50	3,000	1.203,327	5,500	1.203,390	5,593	1.203,483	0,093

Lado Esquerdo					Eixo					Lado Direito				
Estaca	Offset		Lateral		Bordo	%	Cota	Terreno	Projeto	Cota	Vermelha	Bordo		Offset
	Altura	Cota	Distância	Cota								Distância	Cota	
12+740	1,632	1.204,667	-6,132	1.203,035	-3,000	-3,221	1.203,734	1.203,180	0,554	3,22	3,000	1.203,277	5,500	1.203,647
12+755,565	2,037	1.204,959	-6,537	1.202,922	-3,000	-4,001	1.203,769	1.203,102	0,667	4,00	3,000	1.203,222	5,500	1.203,823
12+760	2,123	1.205,023	-6,623	1.202,900	-3,000	-4,001	1.203,775	1.203,080	0,695	4,00	3,000	1.203,200	5,500	1.203,821
12+780	2,618	1.205,368	-7,118	1.202,750	-3,000	-4,001	1.203,814	1.202,930	0,884	4,00	3,000	1.203,050	5,500	1.203,642
12+788,209	2,873	1.205,533	-7,374	1.202,660	-3,000	-4,001	1.203,771	1.202,840	0,931	4,00	3,000	1.202,960	5,500	1.203,674
12+800	3,134	1.205,705	-7,634	1.202,571	-3,000	-2,431	1.203,700	1.202,680	1,020	2,43	3,000	1.202,753	5,500	1.203,828
12+818,209	1,960	1.204,325	-6,460	1.202,365	-3,000	0,001	1.203,423	1.202,365	1,058	0,00	3,000	1.202,365	5,500	1.202,874
12+820	2,036	1.204,377	-6,536	1.202,341	-3,000	0,241	1.203,419	1.202,330	1,089	-0,24	3,000	1.202,323	5,500	1.202,997
12+840	3,051	1.205,044	-7,551	1.201,993	-3,000	2,501	1.203,379	1.201,880	1,499	-2,50	3,000	1.201,805	5,500	1.202,649
12+860	4,175	1.205,559	-8,675	1.201,384	-3,000	1,211	1.203,205	1.201,330	1,875	-1,21	3,000	1.201,294	5,500	1.202,671
12+869,076	4,012	1.205,059	-8,513	1.201,047	-3,000	0,001	1.202,834	1.201,047	1,787	0,00	3,000	1.201,047	5,500	1.202,582
12+870	3,997	1.205,009	-8,497	1.201,012	-3,000	-0,121	1.202,784	1.201,018	1,766	0,12	3,000	1.201,021	5,500	1.202,578
12+875	3,929	1.204,745	-8,429	1.200,816	-3,000	-0,791	1.202,514	1.200,852	1,662	0,79	3,000	1.200,876	5,500	1.202,559
12+880	3,748	1.204,362	-8,248	1.200,614	-3,000	-1,461	1.202,156	1.200,680	1,476	1,46	3,000	1.200,724	5,500	1.202,330
12+885	3,431	1.203,837	-7,931	1.200,406	-3,000	-2,121	1.201,708	1.200,502	1,206	2,12	3,000	1.200,566	5,500	1.201,878
12+890	3,186	1.203,378	-7,686	1.200,192	-3,000	-2,791	1.201,256	1.200,318	0,938	2,79	3,000	1.200,401	5,500	1.201,431
12+895	3,026	1.202,997	-7,526	1.199,971	-3,000	-3,461	1.200,722	1.200,127	0,595	3,46	3,000	1.200,231	5,500	1.200,969
12+899,076	2,970	1.202,757	-7,470	1.199,787	-3,000	-4,001	1.200,254	1.199,967	0,287	4,00	3,000	1.200,087	5,500	1.200,478
12+900	2,904	1.202,654	-7,404	1.199,750	-3,000	-4,001	1.200,148	1.199,930	0,218	4,00	3,000	1.200,050	5,500	1.200,316
12+905	2,654	1.202,204	-7,154	1.199,550	-3,000	-4,001	1.199,577	1.199,730	-0,153	4,00	3,000	1.199,850	5,500	1.199,507
12+910	2,456	1.201,806	-6,956	1.199,350	-3,000	-4,001	1.199,000	1.199,530	-0,530	4,00	3,000	1.199,650	5,500	1.198,977
12+913,058	2,362	1.201,590	-6,862	1.199,228	-3,000	-4,001	1.198,693	1.199,408	-0,715	4,00	3,000	1.199,528	5,500	1.198,811
12+915	2,315	1.201,477	-6,815	1.199,162	-3,000	-3,741	1.198,484	1.199,330	-0,846	3,74	3,000	1.199,442	5,500	1.198,714
12+920	2,106	1.201,098	-6,606	1.198,992	-3,000	-3,071	1.198,021	1.199,130	-1,109	3,07	3,000	1.199,222	5,500	1.198,293
12+925	1,917	1.200,739	-6,417	1.198,822	-3,000	-2,411	1.197,857	1.198,930	-1,073	2,41	3,000	1.199,002	5,500	1.197,887
12+930	1,747	1.200,399	-6,247	1.198,652	-3,000	-1,741	1.197,912	1.198,730	-0,818	1,74	3,000	1.198,782	5,500	1.197,753
12+935	1,585	1.200,067	-6,085	1.198,482	-3,000	-1,071	1.197,371	1.198,530	-1,159	1,07	3,000	1.198,562	5,500	1.197,272
12+940	1,287	1.199,599	-5,787	1.198,312	-3,000	-0,411	1.197,329	1.198,330	-1,001	0,41	3,000	1.198,342	5,500	1.197,029

TRECHO

Notas de Serviço de Terraplenagem

Lado Esquerdo										Eixo				Lado Direito			
Offset			Lateral			Bordo			Cota	Cota Vermelha	Bordo		Lateral		Offset		
Estaca	Altura	Cota	Distância	Cota	Distância	%	Terreno	Projeto			Distância	Cota	Distância	Cota	Distância	Cota	Altura
12+943,058	1,1081.199,316	-5,6081.198,208	-4,5001.198,208	-4,5001.198,208	-3,000	0,001.197,4151.198,208	0,00	-0,793	0,00	3,0001.198,208	5,5001.198,208	7,4211.196,928	-1,280				
12+960	0,2691.197,901	-4,7691.197,632	-4,5001.197,598	-4,5001.197,598	-3,000	2,261.197,1591.197,530	-2,26	-0,371	-2,26	3,0001.197,462	5,5001.197,406	6,8441.196,510	-0,896				
12+980	0,2881.197,131	-4,7881.196,843	-4,5001.196,805	-4,5001.196,805	-3,000	2,501.196,1791.196,730	-2,50	-0,551	-2,50	3,0001.196,655	5,5001.196,593	6,6101.195,853	-0,740				
13	-0,3831.195,660	-5,0751.196,043	-4,5001.196,005	-4,5001.196,005	-3,000	2,501.194,8701.195,930	-2,50	-1,060	-2,50	3,0001.195,855	5,5001.195,793	7,2391.194,634	-1,159				
13+20	-0,2141.195,029	-4,8211.195,243	-4,5001.195,205	-4,5001.195,205	-3,000	2,501.194,2121.195,130	-2,50	-0,918	-2,50	3,0001.195,055	5,5001.194,993	6,7061.194,189	-0,804				
13+40	0,3641.194,807	-4,8641.194,443	-4,5001.194,405	-4,5001.194,405	-3,000	2,501.193,5741.194,330	-2,50	-0,756	-2,50	3,0001.194,255	5,5001.194,193	7,4761.192,876	-1,317				
13+58,827	2,5971.196,174	-7,0971.193,577	-4,5001.193,577	-4,5001.193,577	-3,000	0,001.193,3281.193,577	0,00	-0,249	0,00	3,0001.193,577	5,5001.193,577	5,8341.193,355	-0,222				
13+60	2,7041.196,227	-7,2051.193,523	-4,5001.193,525	-4,5001.193,525	-3,000	-0,161.193,4041.193,530	0,16	-0,126	0,16	3,0001.193,535	5,5001.193,539	5,7791.193,353	-0,186				
13+80	3,6401.196,243	-8,1401.192,603	-4,5001.192,645	-4,5001.192,645	-3,000	-2,821.193,9641.192,730	2,82	1,234	2,82	3,0001.192,815	5,5001.192,885	5,7961.193,181	0,296				
13+88,827	3,1541.195,351	-7,6541.192,197	-4,5001.192,257	-4,5001.192,257	-3,000	-4,001.193,3921.192,377	4,00	1,015	4,00	3,0001.192,497	5,5001.192,597	5,8601.192,957	0,360				
13+100	2,6141.194,364	-7,1141.191,750	-4,5001.191,810	-4,5001.191,810	-3,000	-4,001.192,9881.191,930	4,00	1,058	4,00	3,0001.192,050	5,5001.192,150	6,1011.192,751	0,601				
13+100,392	2,6051.194,339	-7,1051.191,734	-4,5001.191,794	-4,5001.191,794	-3,000	-4,001.192,9771.191,914	4,00	1,063	4,00	3,0001.192,034	5,5001.192,134	6,1141.192,748	0,614				
13+120	2,4691.193,458	-6,9691.190,989	-4,5001.191,036	-4,5001.191,036	-3,000	-3,131.192,4971.191,130	3,13	1,367	3,13	3,0001.191,224	5,5001.191,302	6,6461.192,448	1,146				
13+130,392	3,0931.193,687	-7,5931.190,594	-4,5001.190,634	-4,5001.190,634	-3,000	-2,671.192,3221.190,714	2,67	1,608	2,67	3,0001.190,795	5,5001.190,861	6,8121.192,173	1,312				
13+138,236	3,3741.193,654	-7,8741.190,280	-4,5001.190,320	-4,5001.190,320	-3,000	-2,671.192,2531.190,401	2,67	1,852	2,67	3,0001.190,481	5,5001.190,548	6,8501.191,898	1,350				
13+140	3,4271.193,633	-7,9271.190,206	-4,5001.190,247	-4,5001.190,247	-3,000	-2,751.192,2641.190,330	2,75	1,934	2,75	3,0001.190,413	5,5001.190,481	6,8451.191,826	1,345				
13+150	3,5311.193,317	-8,0311.189,786	-4,5001.189,834	-4,5001.189,834	-3,000	-3,191.191,6591.189,930	3,19	1,729	3,19	3,0001.190,026	5,5001.190,106	6,9221.191,527	1,421				
13+160	3,6901.193,056	-8,1901.189,366	-4,5001.189,421	-4,5001.189,421	-3,000	-3,641.191,4611.189,530	3,64	1,931	3,64	3,0001.189,639	5,5001.189,730	6,9741.191,204	1,474				
13+168,236	3,6941.192,715	-8,1941.189,021	-4,5001.189,081	-4,5001.189,081	-3,000	-4,001.191,1581.189,201	4,00	1,957	4,00	3,0001.189,321	5,5001.189,421	6,9641.190,885	1,464				
13+170	3,6091.192,559	-8,1091.188,950	-4,5001.188,950	-4,5001.189,010	-3,000	-4,001.191,1291.189,130	4,00	1,999	4,00	3,0001.189,250	5,5001.189,350	6,9851.190,835	1,485				
13+180	3,1911.191,741	-7,6911.188,550	-4,5001.188,610	-4,5001.188,610	-3,000	-4,001.190,6541.188,730	4,00	1,924	4,00	3,0001.188,850	5,5001.188,950	7,1141.190,564	1,614				
13+190	2,8671.191,017	-7,3671.188,150	-4,5001.188,210	-4,5001.188,210	-3,000	-4,001.190,1141.188,330	4,00	1,784	4,00	3,0001.188,450	5,5001.188,550	6,9251.189,975	1,425				
13+192,582	2,7941.190,841	-7,2941.188,047	-4,5001.188,107	-4,5001.188,107	-3,000	-4,001.189,9741.188,227	4,00	1,747	4,00	3,0001.188,347	5,5001.188,447	6,8801.189,827	1,380				
13+200	2,4141.190,209	-6,9141.187,795	-4,5001.187,840	-4,5001.187,840	-3,000	-3,011.189,4131.187,930	3,01	1,483	3,01	3,0001.188,020	5,5001.188,096	6,6481.189,244	1,148				
13+210	1,8681.189,323	-6,3681.187,455	-4,5001.187,480	-4,5001.187,480	-3,000	-1,681.188,5891.187,530	1,68	1,059	1,68	3,0001.187,580	5,5001.187,622	6,2801.188,402	0,780				
13+220	1,2851.188,400	-5,7851.187,115	-4,5001.187,120	-4,5001.187,120	-3,000	-0,341.187,3961.187,130	0,34	0,266	0,34	3,0001.187,140	5,5001.187,149	5,5251.187,174	0,025				
13+222,582	1,1241.188,151	-5,6241.187,027	-4,5001.187,027	-4,5001.187,027	-3,000	0,001.187,0441.187,027	0,00	0,017	0,00	3,0001.187,027	5,5001.187,027	5,7501.186,860	-0,167				
13+240	-0,0491.186,386	-4,5741.186,435	-4,5001.186,400	-4,5001.186,400	-3,000	2,321.185,5271.186,330	-2,32	-0,803	-2,32	3,0001.186,260	5,5001.186,202	6,3901.185,608	-0,594				

Lado Esquerdo					Eixo					Lado Direito				
Estaca	Offset		Lateral		Bordo	%	Cota Terreno	Cota Projeto	Cota Vermelha	Bordo		Lateral		Offset
	Altura	Cota	Distância	Cota						Distância	Cota	Distância	Cota	
13+260	-0,740	1.184,903	-5,610	1.185,643	-3,000	2,501	1.184,306	1.185,530	-1,224	-2,50	3,000	1.185,455	5,500	1.184,556
13+280	-1,157	1.183,686	-6,236	1.184,843	-3,000	2,521	1.183,286	1.184,730	-1,444	-2,52	3,000	1.184,654	5,500	1.183,585
13+298,186	-1,067	1.183,173	-6,100	1.184,240	-3,000	3,081	1.182,698	1.184,101	-1,403	-3,08	3,000	1.184,009	5,500	1.182,572
13+300	-1,014	1.183,176	-6,020	1.184,190	-3,000	3,131	1.182,692	1.184,049	-1,357	-3,13	3,000	1.183,955	5,500	1.182,483
13+310	-1,462	1.182,492	-6,692	1.183,954	-3,000	3,441	1.182,563	1.183,799	-1,236	-3,44	3,000	1.183,696	5,500	1.182,010
13+320	-1,496	1.182,280	-6,744	1.183,776	-3,000	3,751	1.182,440	1.183,608	-1,168	-3,75	3,000	1.183,495	5,500	1.181,554
13+328,186	-1,424	1.182,252	-6,637	1.183,676	-3,000	4,001	1.182,285	1.183,496	-1,211	-4,00	3,000	1.183,376	5,500	1.182,133
13+330	-1,382	1.182,275	-6,573	1.183,657	-3,000	4,001	1.182,246	1.183,477	-1,231	-4,00	3,000	1.183,357	5,500	1.182,226
13+340	-1,301	1.182,284	-6,451	1.183,585	-3,000	4,001	1.182,153	1.183,405	-1,252	-4,00	3,000	1.183,285	5,500	1.182,789
13+350	-1,274	1.182,299	-6,412	1.183,573	-3,000	4,001	1.182,151	1.183,393	-1,242	-4,00	3,000	1.183,273	5,500	1.181,850
13+360	-1,653	1.181,968	-6,979	1.183,621	-3,000	4,001	1.182,266	1.183,441	-1,175	-4,00	3,000	1.183,321	5,500	1.179,169
13+370	-0,345	1.183,464	-7,017	1.183,809	-5,000	4,001	1.182,463	1.183,549	-1,086	-4,00	3,000	1.183,429	5,500	1.178,141
13+375	-0,007	1.183,918	-7,510	1.183,925	-6,000	4,001	1.182,589	1.183,625	-1,036	-4,00	3,000	1.183,505	5,500	1.178,522
13+380	0,345	1.184,361	-7,845	1.184,016	-6,000	4,001	1.182,730	1.183,716	-0,986	-4,00	3,000	1.183,596	5,500	1.178,928
13+390	0,270	1.184,513	-7,770	1.184,243	-6,000	4,001	1.183,199	1.183,943	-0,744	-4,00	3,000	1.183,823	5,500	1.182,462
13+395	0,267	1.184,646	-7,767	1.184,379	-6,000	4,001	1.183,523	1.184,079	-0,556	-4,00	3,000	1.183,959	5,500	1.182,898
13+400	0,225	1.184,731	-7,125	1.184,506	-5,400	4,001	1.183,844	1.184,230	-0,386	-4,00	3,000	1.184,110	5,500	1.183,265
13+400,026	0,224	1.184,731	-7,121	1.184,507	-5,397	4,001	1.183,845	1.184,231	-0,386	-4,00	3,000	1.184,111	5,500	1.183,266
13+410	0,264	1.185,051	-5,964	1.184,787	-4,200	3,691	1.184,478	1.184,577	-0,099	-3,69	3,000	1.184,466	5,500	1.183,809
13+420	0,460	1.185,595	-4,960	1.185,135	-3,000	3,391	1.185,122	1.184,983	0,139	-3,39	3,000	1.184,881	5,500	1.184,886
13+430	0,877	1.186,464	-5,377	1.185,587	-3,000	3,081	1.185,755	1.185,449	0,306	-3,08	4,200	1.185,319	6,700	1.185,174
13+430,026	0,878	1.186,467	-5,378	1.185,589	-3,000	3,081	1.185,757	1.185,450	0,307	-3,08	4,203	1.185,321	6,703	1.185,176
13+440	1,631	1.187,730	-6,131	1.186,099	-3,000	2,771	1.186,387	1.185,974	0,413	-2,77	5,400	1.185,825	7,900	1.185,560
13+445	1,905	1.188,282	-6,405	1.186,377	-3,000	2,621	1.186,702	1.186,260	0,442	-2,62	6,000	1.186,103	8,500	1.185,717
13+460	2,105	1.189,423	-6,605	1.187,318	-3,000	2,501	1.187,671	1.187,205	0,466	-2,50	6,000	1.187,055	8,500	1.186,610
13+465	2,151	1.189,806	-6,651	1.187,655	-3,000	2,501	1.188,017	1.187,543	0,474	-2,50	6,000	1.187,393	8,500	1.187,204
13+480	2,297	1.190,973	-6,797	1.188,676	-3,000	2,691	1.188,831	1.188,555	0,276	-2,69	3,000	1.188,474	5,500	1.189,391
13+492,595	1,019	1.190,563	-5,519	1.189,544	-3,000	3,081	1.188,736	1.189,405	-0,669	-3,08	3,000	1.189,313	5,500	1.190,274

ENGMETRIA - Ltda.

Projeto: SC-114 - Bentinho - SC

TRECHO

Notas de Serviço de Terraplenagem

Lado Esquerdo					Eixo					Lado Direito				
Estaca	Offset		Lateral		Bordo	%	Cota Terreno	Cota Projeto	Cota Vermelha	%	Bordo		Lateral	
	Altura	Cota	Distância	Cota							Distância	Cota	Distância	Cota
13+500	0,713	1.190,767	-5,213	1.190,054	-3,000	3,301	1.189,434	1.189,905	-0,471	-3,30	3,000	1.189,806	5,500	1.189,723
13+510	0,733	1.191,476	-5,233	1.190,743	-3,000	3,611	1.190,806	1.190,580	0,226	-3,61	3,000	1.190,472	5,500	1.190,381
13+520	1,068	1.192,499	-5,569	1.191,431	-3,000	3,921	1.191,719	1.191,255	0,464	-3,92	3,000	1.191,137	5,500	1.191,039
13+522,595	1,117	1.192,727	-5,617	1.191,610	-3,000	4,001	1.191,913	1.191,430	0,483	-4,00	3,000	1.191,310	5,500	1.191,210
13+530	0,643	1.192,753	-5,144	1.192,110	-3,000	4,001	1.192,521	1.191,930	0,591	-4,00	3,000	1.191,810	5,500	1.191,710
13+540	0,455	1.193,240	-4,955	1.192,785	-3,000	4,001	1.193,462	1.192,605	0,857	-4,00	3,000	1.192,485	5,500	1.192,385
13+549,839	2,749	1.196,176	-7,249	1.193,427	-3,000	4,001	1.194,382	1.193,247	1,135	-4,00	3,000	1.193,127	5,500	1.193,027
13+550	2,761	1.196,198	-7,261	1.193,437	-3,000	4,001	1.194,399	1.193,257	1,142	-4,00	3,000	1.193,137	5,500	1.193,037
13+560	3,203	1.197,231	-7,703	1.194,028	-3,000	3,691	1.195,414	1.193,862	1,552	-3,69	3,000	1.193,752	5,500	1.193,660
13+570	3,438	1.198,012	-7,938	1.194,574	-3,000	3,381	1.196,386	1.194,422	1,964	-3,38	3,000	1.194,320	5,500	1.194,236
13+579,839	3,576	1.198,641	-8,076	1.195,065	-3,000	3,081	1.197,097	1.194,927	2,170	-3,08	3,000	1.194,834	5,500	1.194,757
13+580	3,574	1.198,647	-8,074	1.195,073	-3,000	3,071	1.197,106	1.194,934	2,172	-3,07	3,000	1.194,842	5,500	1.194,765
13+600	3,393	1.199,327	-7,893	1.195,934	-3,000	2,501	1.197,879	1.195,821	2,058	-2,50	3,000	1.195,746	5,500	1.195,684
13+620	2,750	1.199,385	-7,250	1.196,635	-3,000	2,501	1.197,568	1.196,523	1,045	-2,50	3,000	1.196,448	5,500	1.196,385
13+640	1,981	1.199,132	-6,481	1.197,151	-3,000	2,501	1.197,210	1.197,039	0,171	-2,50	3,000	1.196,964	5,500	1.196,901
13+660	1,629	1.199,111	-6,129	1.197,482	-3,000	2,501	1.196,730	1.197,370	-0,640	-2,50	3,000	1.197,295	5,500	1.197,232
13+680	1,782	1.199,393	-6,282	1.197,611	-3,000	2,121	1.196,240	1.197,515	-1,275	-2,12	3,000	1.197,452	5,500	1.197,399
13+700	2,318	1.199,799	-6,818	1.197,481	-3,000	0,121	1.196,606	1.197,476	-0,870	-0,12	3,000	1.197,472	5,500	1.197,469
13+701,178	2,390	1.199,857	-6,890	1.197,467	-3,000	0,001	1.196,632	1.197,467	-0,835	0,00	3,000	1.197,467	5,500	1.197,467
13+710	2,206	1.199,553	-6,706	1.197,347	-3,000	-0,881	1.196,822	1.197,386	-0,564	0,88	3,000	1.197,413	5,500	1.197,435
13+720	2,295	1.199,461	-6,795	1.197,166	-3,000	-1,881	1.196,758	1.197,251	-0,493	1,88	3,000	1.197,307	5,500	1.197,354
13+730	2,417	1.199,356	-6,917	1.196,939	-3,000	-2,881	1.196,727	1.197,069	-0,342	2,88	3,000	1.197,155	5,500	1.197,227
13+740	3,119	1.199,795	-7,619	1.196,666	-3,000	-3,881	1.196,786	1.196,840	-0,054	3,88	3,000	1.196,957	5,500	1.197,054
13+741,178	3,246	1.199,876	-7,746	1.196,630	-3,000	-4,001	1.196,759	1.196,810	-0,051	4,00	3,000	1.196,930	5,500	1.197,030
13+750	2,997	1.199,383	-7,497	1.196,386	-3,000	-4,001	1.196,492	1.196,566	-0,074	4,00	3,000	1.196,686	5,500	1.196,786
13+753,849	2,951	1.199,219	-7,451	1.196,268	-3,000	-4,001	1.196,331	1.196,448	-0,117	4,00	3,000	1.196,568	5,500	1.196,668
13+760	2,660	1.198,748	-7,160	1.196,088	-3,000	-3,491	1.196,122	1.196,245	-0,123	3,49	3,000	1.196,349	5,500	1.196,437
13+770	2,465	1.198,222	-6,965	1.195,757	-3,000	-2,671	1.195,823	1.195,877	-0,054	2,67	3,000	1.195,957	5,500	1.196,024

ENGMETRIA - Ltda.

Projeto: SC-114 - Bentinho - SC

TRECHO

Notas de Serviço de Terraplenagem

Lado Esquerdo										Eixo			Lado Direito					
Offset					Lateral					Bordo			Terreno			Cota		
Estaca	Altura	Cota	Distância	Cota	Distância	Cota	Distância	%	Cota	Projeto	Cota	Vermelha	%	Distância	Cota	Distância	Cota	Altura
13+780	2,294	1.197,675	-6,794	1.195,381	-4,500	1.195,409	-3,000	-1,84	1.195,386	1.195,464	-0,078	1,84	3,000	1.195,519	5,500	1.195,565	5,595	1.195,502
13+790	2,119	1.197,077	-6,619	1.194,958	-4,500	1.194,973	-3,000	-1,02	1.194,886	1.195,004	-0,118	1,02	3,000	1.195,034	5,500	1.195,060	6,162	1.194,619
13+793,849	2,069	1.196,852	-6,569	1.194,783	-4,500	1.194,794	-3,000	-0,70	1.194,686	1.194,815	-0,129	0,70	3,000	1.194,836	5,500	1.194,853	5,858	1.194,614
13+800	0,835	1.195,324	-5,335	1.194,489	-4,500	1.194,492	-3,000	-0,19	1.194,540	1.194,498	0,042	0,19	3,000	1.194,503	5,500	1.194,508	5,568	1.194,463
13+810,830	1,703	1.195,640	-6,203	1.193,937	-4,500	1.193,924	-3,000	0,88	1.194,277	1.193,897	0,380	-0,88	3,000	1.193,871	5,500	1.193,849	5,751	1.194,100
13+820	2,991	1.196,420	-7,491	1.193,429	-4,500	1.193,401	-3,000	1,84	1.194,275	1.193,346	0,929	-1,84	3,000	1.193,291	5,500	1.193,245	5,976	1.193,721
13+830	3,943	1.196,773	-8,443	1.192,830	-4,500	1.192,787	-3,000	2,87	1.194,327	1.192,701	1,626	-2,87	3,000	1.192,615	5,500	1.192,543	6,316	1.193,359
13+840	4,509	1.196,695	-9,009	1.192,186	-4,500	1.192,127	-3,000	3,91	1.194,164	1.192,009	2,155	-3,91	3,000	1.191,892	5,500	1.191,794	6,556	1.192,850
13+840,830	4,526	1.196,656	-9,026	1.192,130	-4,500	1.192,070	-3,000	4,00	1.194,112	1.191,950	2,162	-4,00	3,000	1.191,830	5,500	1.191,730	6,574	1.192,804
13+849,911	4,552	1.196,010	-9,052	1.191,458	-4,500	1.191,398	-3,000	4,00	1.192,941	1.191,278	1,663	-4,00	3,000	1.191,158	5,500	1.191,058	6,224	1.191,782
13+850	4,551	1.196,002	-9,051	1.191,451	-4,500	1.191,391	-3,000	4,00	1.192,928	1.191,272	1,656	-4,00	3,000	1.191,152	5,500	1.191,052	6,219	1.191,771
13+860	4,288	1.194,941	-8,788	1.190,653	-4,500	1.190,598	-3,000	3,69	1.191,403	1.190,487	0,916	-3,69	3,000	1.190,377	5,500	1.190,284	6,093	1.190,877
13+870	3,885	1.193,694	-8,385	1.189,809	-4,500	1.189,758	-3,000	3,38	1.190,063	1.189,657	0,406	-3,38	3,000	1.189,555	5,500	1.189,471	6,092	1.190,063
13+879,911	3,435	1.192,361	-7,935	1.188,926	-4,500	1.188,880	-3,000	3,08	1.188,733	1.188,788	-0,055	-3,08	3,000	1.188,696	5,500	1.188,619	5,534	1.188,597
13+880	3,430	1.192,348	-7,930	1.188,918	-4,500	1.188,872	-3,000	3,07	1.188,721	1.188,780	-0,059	-3,07	3,000	1.188,688	5,500	1.188,611	5,539	1.188,585
13+900	2,072	1.189,165	-6,572	1.187,093	-4,500	1.187,055	-3,000	2,50	1.186,194	1.186,980	-0,786	-2,50	3,000	1.186,905	5,500	1.186,843	6,423	1.186,228
13+920	1,782	1.187,069	-6,282	1.185,287	-4,500	1.185,252	-3,000	2,39	1.184,364	1.185,180	-0,816	-2,39	3,000	1.185,108	5,500	1.185,049	9,540	1.182,356
13+937,901	2,542	1.186,111	-7,042	1.183,569	-4,500	1.183,569	-3,000	0,00	1.182,949	1.183,569	-0,620	0,00	3,000	1.183,569	5,500	1.183,569	6,272	1.183,054
13+940	2,718	1.186,085	-7,218	1.183,367	-4,500	1.183,372	-3,000	-0,28	1.182,734	1.183,380	-0,646	0,28	3,000	1.183,388	5,500	1.183,395	6,119	1.182,982
13+945	3,099	1.185,994	-7,599	1.182,895	-4,500	1.182,909	-3,000	-0,95	1.182,331	1.182,937	-0,606	0,95	3,000	1.182,966	5,500	1.182,989	5,860	1.182,749
13+950	3,490	1.185,926	-7,990	1.182,436	-4,500	1.182,460	-3,000	-1,61	1.182,375	1.182,509	-0,134	1,61	3,000	1.182,557	5,500	1.182,597	5,852	1.182,362
13+955	3,926	1.185,918	-8,426	1.181,992	-4,500	1.182,026	-3,000	-2,28	1.182,305	1.182,095	0,210	2,28	3,000	1.182,163	5,500	1.182,220	5,853	1.181,985
13+960	4,466	1.186,028	-8,966	1.181,562	-4,500	1.181,607	-3,000	-2,95	1.182,306	1.181,695	0,611	2,95	3,000	1.181,783	5,500	1.181,857	5,857	1.181,619
13+965	4,934	1.186,081	-9,435	1.181,147	-4,500	1.181,201	-3,000	-3,61	1.181,611	1.181,310	0,301	3,61	3,000	1.181,418	5,500	1.181,508	5,910	1.181,234
13+967,901	5,115	1.186,028	-9,615	1.180,913	-4,500	1.180,973	-3,000	-4,00	1.181,028	1.181,093	-0,065	4,00	3,000	1.181,213	5,500	1.181,313	5,987	1.180,988
13+970	5,174	1.185,933	-9,674	1.180,759	-4,500	1.180,819	-3,000	-4,00	1.180,460	1.180,939	-0,479	4,00	3,000	1.181,059	5,500	1.181,159	6,046	1.180,795
13+975	4,587	1.184,989	-9,087	1.180,402	-4,500	1.180,462	-3,000	-4,00	1.180,036	1.180,582	-0,546	4,00	3,000	1.180,702	5,500	1.180,802	6,352	1.180,234
13+980	4,102	1.184,162	-8,602	1.180,060	-4,500	1.180,120	-3,000	-4,00	1.179,663	1.180,240	-0,577	4,00	3,000	1.180,360	5,500	1.180,460	7,012	1.179,452

Lado Esquerdo										Eixo				Lado Direito					
Offset			Lateral		Bordo		Cota	Cota	Cota	Bordo		Lateral		Offset					
Estaca	Altura	Cota	Distância	Cota	Distância	%	Terreno	Projeto	Vermelha	%	Distância	Cota	Distância	Cota	Altura				
13+985	3,732	1.183,464	-8,232	1.179,732	-3,000	-4,00	1.179,248	1.179,912	-0,664	4,00	3,000	1.180,032	5,500	1.180,132	9,614	1.177,389			
13+988,662	3,540	1.183,041	-8,040	1.179,501	-3,000	-4,00	1.178,891	1.179,681	-0,790	4,00	3,000	1.179,801	5,500	1.179,901	10,629	1.176,481			
13+990	3,474	1.182,901	-7,974	1.179,427	-3,000	-3,82	1.178,785	1.179,599	-0,814	3,82	3,000	1.179,713	5,500	1.179,809	10,669	1.176,363			
13+995	3,345	1.182,503	-7,845	1.179,158	-3,000	-3,15	1.178,423	1.179,300	-0,877	3,15	3,000	1.179,394	5,500	1.179,473	10,131	1.176,386			
14	3,100	1.182,003	-7,600	1.178,903	-3,000	-2,49	1.178,131	1.179,015	-0,884	2,49	3,000	1.179,090	5,500	1.179,152	9,699	1.176,353			
14+5	3,275	1.181,938	-7,775	1.178,663	-3,000	-1,82	1.178,133	1.178,745	-0,612	1,82	3,000	1.178,799	5,500	1.178,845	9,357	1.176,274			
14+10	3,577	1.182,014	-8,077	1.178,437	-3,000	-1,15	1.178,057	1.178,489	-0,432	1,15	3,000	1.178,523	5,500	1.178,552	9,084	1.176,163			
14+15	5,014	1.183,239	-9,514	1.178,225	-3,000	-0,49	1.178,016	1.178,247	-0,231	0,49	3,000	1.178,262	5,500	1.178,274	8,737	1.176,116			
14+18,662	6,217	1.184,296	-10,717	1.178,079	-3,000	0,00	1.177,988	1.178,079	-0,091	0,00	3,000	1.178,079	5,500	1.178,079	6,146	1.177,649			
14+20	6,653	1.184,681	-11,153	1.178,028	-3,000	0,18	1.177,975	1.178,020	-0,045	-0,18	3,000	1.178,015	5,500	1.178,010	6,151	1.177,576			
14+25	8,237	1.186,082	-12,737	1.177,845	-3,000	0,85	1.177,919	1.177,807	0,112	-0,85	3,000	1.177,782	5,500	1.177,761	5,835	1.177,538			
14+30	9,410	1.187,087	-13,910	1.177,677	-3,000	1,51	1.177,850	1.177,609	0,241	-1,51	3,000	1.177,563	5,500	1.177,526	5,544	1.177,570			
14+35	9,698	1.187,221	-14,198	1.177,523	-3,000	2,18	1.177,792	1.177,425	0,367	-2,18	3,000	1.177,359	5,500	1.177,305	5,504	1.177,302			
14+40	9,743	1.187,126	-14,243	1.177,383	-3,000	2,85	1.177,743	1.177,255	0,488	-2,85	3,000	1.177,170	5,500	1.177,099	5,837	1.177,436			
14+45	9,476	1.186,727	-13,976	1.177,251	-3,000	3,51	1.177,625	1.177,093	0,532	-3,51	3,000	1.176,987	5,500	1.176,899	6,127	1.177,526			
14+48,662	9,049	1.186,202	-13,549	1.177,153	-3,000	4,00	1.177,532	1.176,973	0,559	-4,00	3,000	1.176,853	5,500	1.176,753	6,185	1.177,437			
14+50	8,853	1.185,963	-13,353	1.177,110	-3,000	4,00	1.177,497	1.176,930	0,567	-4,00	3,000	1.176,810	5,500	1.176,710	6,144	1.177,354			
14+55	1,111	1.178,059	-5,611	1.176,948	-3,000	4,00	1.177,301	1.176,768	0,533	-4,00	3,000	1.176,648	5,500	1.176,548	6,046	1.177,094			
14+60	1,516	1.178,301	-6,016	1.176,785	-3,000	4,00	1.177,030	1.176,605	0,425	-4,00	3,000	1.176,485	5,500	1.176,385	6,018	1.176,903			
14+65	0,791	1.177,414	-5,291	1.176,623	-3,000	4,00	1.176,912	1.176,443	0,469	-4,00	3,000	1.176,323	5,500	1.176,223	5,900	1.176,623			
14+70	1,216	1.177,676	-5,716	1.176,460	-3,000	4,00	1.176,779	1.176,280	0,499	-4,00	3,000	1.176,160	5,500	1.176,060	5,746	1.176,306			
14+75	1,828	1.178,126	-6,329	1.176,298	-3,000	4,00	1.176,678	1.176,118	0,560	-4,00	3,000	1.175,998	5,500	1.175,898	5,966	1.176,364			
14+80	1,553	1.177,688	-6,053	1.176,135	-3,000	4,00	1.176,554	1.175,955	0,599	-4,00	3,000	1.175,835	5,500	1.175,735	6,159	1.176,393			
14+85	1,287	1.177,260	-5,787	1.175,973	-3,000	4,00	1.176,366	1.175,793	0,573	-4,00	3,000	1.175,673	5,500	1.175,573	6,321	1.176,394			
14+87,070	1,191	1.177,096	-5,691	1.175,905	-3,000	4,00	1.176,272	1.175,725	0,547	-4,00	3,000	1.175,605	5,500	1.175,505	6,381	1.176,386			
14+90	1,107	1.176,894	-5,607	1.175,787	-3,000	3,48	1.176,109	1.175,630	0,479	-3,48	3,000	1.175,526	5,500	1.175,439	6,302	1.176,241			
14+95	0,546	1.176,130	-5,046	1.175,584	-3,000	2,59	1.176,100	1.175,468	0,632	-2,59	3,000	1.175,390	5,500	1.175,325	6,152	1.175,977			
14+100	0,395	1.175,777	-4,895	1.175,382	-3,000	1,71	1.175,872	1.175,305	0,567	-1,71	3,000	1.175,254	5,500	1.175,211	6,225	1.175,936			

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Notas de Serviço de Terraplenagem

Lado Esquerdo					Eixo					Lado Direito				
Estaca	Offset		Lateral		Bordo	%	Cota Terreno	Cota Projeto	Cota Vermelha	%	Bordo		Lateral	
	Altura	Cota	Distância	Cota							Distância	Cota	Distância	Cota
14+105	0,629	1.175,813	-5,129	1.175,184	-3,000	0,821	1.175,338	1.175,148	0,190	-0,82	3,000	1.175,123	5,500	1.175,103
14+110	0,653	1.175,650	-5,153	1.174,997	-3,000	-0,071	1.174,864	1.175,001	-0,137	0,07	3,000	1.175,003	5,500	1.175,004
14+115	0,343	1.175,164	-4,843	1.174,821	-3,000	-0,961	1.174,765	1.174,864	-0,099	0,96	3,000	1.174,892	5,500	1.174,916
14+120	0,253	1.174,907	-4,753	1.174,654	-3,000	-1,841	1.174,576	1.174,737	-0,161	1,84	3,000	1.174,792	5,500	1.174,839
14+125	0,145	1.174,643	-4,645	1.174,498	-3,000	-2,731	1.174,477	1.174,621	-0,144	2,73	3,000	1.174,703	5,500	1.174,771
14+130	0,024	1.174,376	-4,524	1.174,352	-3,000	-3,621	1.174,354	1.174,515	-0,161	3,62	3,000	1.174,623	5,500	1.174,714
14+132,145	0,067	1.174,359	-4,567	1.174,292	-3,000	-4,001	1.174,309	1.174,472	-0,163	4,00	3,000	1.174,592	5,500	1.174,692
14+135	0,084	1.174,336	-4,584	1.174,252	-3,000	-3,701	1.174,249	1.174,419	-0,170	3,70	3,000	1.174,530	5,500	1.174,623
14+140	0,091	1.174,281	-4,591	1.174,190	-3,000	-3,181	1.174,175	1.174,334	-0,159	3,18	3,000	1.174,429	5,500	1.174,509
14+145	0,071	1.174,210	-4,571	1.174,139	-3,000	-2,661	1.174,167	1.174,258	-0,091	2,66	3,000	1.174,338	5,500	1.174,405
14+150	0,004	1.174,101	-4,504	1.174,097	-3,000	-2,141	1.174,139	1.174,193	-0,054	2,14	3,000	1.174,258	5,500	1.174,311
14+155	-0,060	1.174,006	-4,590	1.174,066	-3,000	-1,621	1.174,073	1.174,139	-0,066	1,62	3,000	1.174,187	5,500	1.174,228
14+160	-0,192	1.173,853	-4,788	1.174,045	-3,000	-1,101	1.174,031	1.174,094	-0,063	1,10	3,000	1.174,127	5,500	1.174,155
14+162,145	-0,259	1.173,780	-4,889	1.174,039	-3,000	-0,871	1.174,022	1.174,078	-0,056	0,87	3,000	1.174,105	5,500	1.174,126
14+178,929	-0,414	1.173,644	-5,121	1.174,058	-3,000	0,871	1.174,059	1.174,019	0,040	-0,87	3,000	1.173,993	5,500	1.173,971
14+180	-0,412	1.173,652	-5,118	1.174,064	-3,000	0,991	1.174,065	1.174,019	0,046	-0,99	3,000	1.173,990	5,500	1.173,965
14+190	-0,053	1.174,082	-4,579	1.174,135	-3,000	2,031	1.174,117	1.174,043	0,074	-2,03	3,000	1.173,983	5,500	1.173,932
14+200	-0,931	1.173,316	-5,897	1.174,247	-3,000	3,071	1.174,127	1.174,109	0,018	-3,07	3,000	1.174,016	5,500	1.173,940
14+208,929	-1,825	1.172,628	-9,023	1.174,453	-4,786	4,001	1.174,150	1.174,201	-0,051	4,00	3,000	1.174,081	5,500	1.173,981
14+210	-1,932	1.172,543	-9,398	1.174,475	-5,000	4,001	1.174,167	1.174,215	-0,048	4,00	3,000	1.174,095	5,500	1.173,995
14+215	-2,411	1.172,172	-11,116	1.174,583	-6,000	4,001	1.174,254	1.174,283	-0,029	4,00	3,000	1.174,163	5,500	1.174,063
14+220	-1,958	1.172,704	-10,437	1.174,662	-6,000	4,001	1.174,356	1.174,362	-0,006	4,00	3,000	1.174,242	5,500	1.174,142
14+227,183	-1,704	1.173,089	-10,056	1.174,793	-6,000	4,001	1.174,559	1.174,493	0,066	4,00	3,000	1.174,373	5,500	1.174,273
14+230	-1,739	1.173,105	-10,109	1.174,844	-6,000	3,911	1.174,653	1.174,551	0,102	-3,91	3,000	1.174,433	5,500	1.174,335
14+235	-1,854	1.173,088	-10,280	1.174,942	-6,000	3,761	1.174,843	1.174,660	0,183	-3,76	3,000	1.174,547	5,500	1.174,453
14+240	-1,331	1.173,698	-8,897	1.175,029	-5,400	3,611	1.175,017	1.174,780	0,237	-3,61	3,000	1.174,672	5,500	1.174,582
14+250	0,043	1.175,233	-5,743	1.175,190	-4,200	3,301	1.175,256	1.175,002	0,254	-3,30	3,000	1.174,903	5,500	1.174,821
14+257,183	0,393	1.175,670	-5,231	1.175,277	-3,338	3,081	1.175,475	1.175,128	0,347	-3,08	3,000	1.175,035	5,500	1.174,959

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Notas de Serviço de Terraplenagem

Lado Esquerdo					Eixo					Lado Direito				
Estaca	Offset		Lateral		Bordo		Terreno		Cota	Projeto		Bordo		Offset
	Altura	Cota	Distância	Cota	Distância	%	Distância	%		Vermelha	Cota	Distância	Cota	
14+260	0,211	1.175,515	-4,711	1.175,304	-3,000	2,991	1.175,534	1.175,169	0,365	-2,99	3,000	1.175,079	5,500	1.177,372
14+280	0,068	1.175,517	-4,568	1.175,449	-3,000	2,501	1.175,776	1.175,337	0,439	-2,50	5,400	1.175,202	7,900	1.178,184
14+285	0,109	1.175,565	-4,609	1.175,456	-3,000	2,501	1.175,823	1.175,344	0,479	-2,50	6,000	1.175,194	8,500	1.178,349
14+300	0,392	1.175,787	-4,892	1.175,395	-3,000	2,501	1.175,796	1.175,283	0,513	-2,50	6,000	1.175,133	8,500	1.178,030
14+305	0,569	1.175,916	-5,069	1.175,347	-3,000	2,501	1.175,769	1.175,234	0,535	-2,50	6,000	1.175,084	8,500	1.177,868
14+320	0,266	1.175,385	-4,766	1.175,119	-3,000	2,501	1.175,457	1.175,007	0,450	-2,50	3,000	1.174,932	5,500	1.176,910
14+340	0,305	1.174,927	-4,805	1.174,622	-3,000	2,501	1.174,818	1.174,509	0,309	-2,50	3,000	1.174,434	5,500	1.176,288
14+360	0,450	1.174,308	-4,950	1.173,858	-3,000	1,501	1.174,088	1.173,790	0,278	-2,50	3,000	1.173,715	5,500	1.175,212
14+380	-0,167	1.172,771	-4,751	1.172,938	-3,000	-0,501	1.173,355	1.172,960	0,395	-2,50	3,000	1.172,885	5,500	1.174,432
14+400	0,023	1.172,034	-4,750	1.172,011	-3,250	-2,501	1.172,397	1.172,130	0,267	-2,50	3,250	1.172,049	4,750	1.173,124
14+420	0,449	1.171,630	-4,750	1.171,181	-3,250	-2,501	1.171,436	1.171,300	0,136	-2,50	3,250	1.171,219	4,750	1.171,796
14+440	0,446	1.170,797	-4,750	1.170,351	-3,250	-2,501	1.170,840	1.170,470	0,370	-2,50	3,250	1.170,389	4,750	1.171,399
14+455,179	1,020	1.170,625	-4,751	1.169,605	-3,250	-2,501	1.170,497	1.169,724	0,773	-2,50	3,250	1.169,643	4,750	1.170,853
14+460	0,714	1.170,034	-4,751	1.169,320	-3,250	-2,501	1.170,155	1.169,439	0,716	-2,50	3,250	1.169,357	4,750	1.170,590
14+480	0,856	1.168,742	-4,751	1.167,886	-3,250	-2,501	1.168,425	1.168,004	0,421	-2,50	3,250	1.167,923	4,750	1.168,860
14+490,465	0,659	1.167,633	-4,751	1.166,974	-3,250	-2,501	1.167,491	1.167,093	0,398	-2,50	3,250	1.167,012	4,750	1.167,651
14+500	0,864	1.166,912	-4,751	1.166,048	-3,250	-2,501	1.166,567	1.166,167	0,400	-2,50	3,250	1.166,086	4,750	1.166,714
14+510,000	1,317	1.166,296	-4,751	1.164,979	-3,250	-2,501	1.165,567	1.165,098	0,469	-2,50	3,250	1.165,016	4,750	1.165,595
14+520	0,948	1.164,863	-4,751	1.163,915	-3,250	-2,501	1.164,357	1.164,034	0,323	-2,50	3,250	1.163,953	4,750	1.164,627
14+540	0,227	1.162,354	-4,750	1.162,127	-3,250	-2,501	1.162,342	1.162,245	0,097	-2,50	3,250	1.162,164	4,750	1.162,828
14+560	0,396	1.161,185	-4,750	1.160,789	-3,250	-2,501	1.161,153	1.160,908	0,245	-2,50	3,250	1.160,827	4,750	1.161,295
14+580	0,723	1.160,627	-4,751	1.159,904	-3,250	-2,501	1.160,431	1.160,023	0,408	-2,50	3,250	1.159,941	4,750	1.160,185
14+600	0,998	1.160,242	-4,751	1.159,244	-3,250	-2,501	1.159,774	1.159,363	0,411	-2,50	3,250	1.159,281	4,750	1.159,392
14+600,667	1,001	1.160,223	-4,751	1.159,222	-3,250	-2,501	1.159,753	1.159,341	0,412	-2,50	3,250	1.159,259	4,750	1.159,370
14+605	1,079	1.160,160	-4,751	1.159,081	-3,250	-2,501	1.159,612	1.159,199	0,413	-2,50	3,250	1.159,118	4,750	1.159,237
14+610	1,226	1.160,148	-4,751	1.158,922	-3,250	-2,501	1.159,448	1.159,040	0,408	-2,50	3,250	1.158,959	4,750	1.159,087
14+615	0,618	1.159,384	-4,751	1.158,766	-3,250	-2,501	1.159,244	1.158,885	0,359	-2,50	3,250	1.158,804	4,750	1.158,843
14+620	-0,297	1.158,318	-4,750	1.158,615	-3,250	-2,501	1.159,025	1.158,734	0,291	-2,50	3,250	1.158,653	4,750	1.158,576

Lado Esquerdo										Eixo					Lado Direito																			
Offset					Lateral					Bordo					Cota					Bordo					Lateral					Offset				
Estaca	Altura	Cota	Distância	Cota	Distância	Cota	Distância	%	Terreno	Projeto	Vermelha	Cota	Distância	%	Distância	Cota	Distância	%	Distância	Cota	Distância	%	Distância	Cota	Distância	Altura								
14+620,937	-0,338	1.158,249	-4,750	1.158,587	-4,750	1.158,625	-3,250	-2,50	1.158,983	1.158,706	0,277			-2,50	3,250	1.158,625	4,750	1.158,587	4,750	1.158,536	-0,051													
14+640	0,615	1.158,665	-4,751	1.158,050	-4,750	1.158,087	-3,250	-2,50	1.158,568	1.158,168	0,400			-2,50	3,250	1.158,087	4,750	1.158,050	4,750	1.158,283	0,233													

CAPÍTULO 4 – ELEMENTOS PARA LOCAÇÃO

4.1. Coordenadas do Eixo Projetado

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Coordenadas do Eixo Projetado

Estaca	PNH	PNV	Norte	Este	Cota	Az. Seção	Grade
0		V0	6.880.044,6712	598.640,9707	1.245,183	159°48'07"	1.245,183
0+4,738	PC1		6.880.043,0354	598.636,5240	1.245,454	159°48'07"	1.245,455
0+20			6.880.036,0245	598.623,0131	1.246,350	145°20'54"	1.246,329
0+30		PCV1	6.880.029,6862	598.615,2931	1.246,902	135°52'41"	1.246,902
0+40			6.880.022,1641	598.608,7213	1.247,357	126°24'27"	1.247,366
0+40,839	PT1		6.880.021,4855	598.608,2280	1.247,380	125°36'47"	1.247,395
0+48,044	PC2		6.880.015,6279	598.604,0324	1.247,575	125°36'47"	1.247,581
0+59,596	PT2		6.880.005,6013	598.598,3375	1.247,660	113°34'43"	1.247,644
0+60		PTV1	6.880.005,2314	598.598,1760	1.247,655	113°34'43"	1.247,641
0+66,097	TE3		6.879.999,6436	598.595,7373	1.247,588	113°34'43"	1.247,592
0+70		PCV2	6.879.996,0671	598.594,1747	1.247,545	113°38'32"	1.247,561
0+75			6.879.991,4908	598.592,1603	1.247,505	113°54'36"	1.247,543
0+80			6.879.986,9275	598.590,1161	1.247,466	114°23'12"	1.247,569
0+90			6.879.977,8729	598.585,8732	1.247,371	115°58'01"	1.247,754
0+95			6.879.973,3983	598.583,6421	1.247,513	117°04'15"	1.247,913
0+96,097	TS3		6.879.972,4227	598.583,1406	1.247,550	117°20'28"	1.247,954
0+100			6.879.968,9691	598.581,3190	1.247,680	118°15'24"	1.248,116
0+110			6.879.960,2412	598.576,4395	1.248,005	120°01'13"	1.248,654
0+120			6.879.951,6296	598.571,3559	1.249,123	120°56'54"	1.249,369
0+126,097	TE4		6.879.946,4065	598.568,2112	1.249,827	121°06'13"	1.249,892
0+130		PCCV3	6.879.943,0662	598.566,1924	1.250,279	121°14'11"	1.250,261
0+140			6.879.934,5734	598.560,9130	1.251,277	122°47'12"	1.251,202
0+150			6.879.926,3125	598.555,2805	1.252,287	126°04'42"	1.252,063
0+156,097	EC4		6.879.921,4743	598.551,5739	1.252,707	128°56'22"	1.252,550
0+160			6.879.918,4826	598.549,0672	1.252,969	130°58'43"	1.252,846
0+170			6.879.911,2424	598.542,1748	1.253,646	136°12'08"	1.253,550
0+175,366	CE4		6.879.907,6243	598.538,2118	1.253,947	139°00'21"	1.253,895
0+180			6.879.904,6556	598.534,6546	1.254,205	141°14'22"	1.254,175
0+190			6.879.898,6602	598.526,6526	1.254,793	144°47'09"	1.254,721
0+200			6.879.893,0447	598.518,3793	1.255,218	146°35'27"	1.255,188
0+205,366	ET4		6.879.890,1029	598.513,8909	1.255,429	146°50'30"	1.255,406
0+220		PCCV4	6.879.882,0990	598.501,6403	1.255,869	146°50'30"	1.255,886
0+238,151	TE5		6.879.872,1711	598.486,4448	1.256,299	146°50'30"	1.256,645
0+240			6.879.871,1600	598.484,8970	1.256,359	146°51'17"	1.256,753
0+245			6.879.868,4310	598.480,7072	1.256,520	147°01'15"	1.257,071
0+250			6.879.865,7213	598.476,5051	1.256,683	147°22'41"	1.257,431
0+260			6.879.860,4161	598.468,0289	1.257,414	148°39'54"	1.258,273
0+265			6.879.857,8493	598.463,7378	1.257,787	149°35'43"	1.258,755
0+268,151	EC5		6.879.856,2706	598.461,0109	1.258,024	150°16'46"	1.259,080
0+270			6.879.855,3598	598.459,4017	1.258,164	150°42'11"	1.259,278
0+280		PTV4	6.879.850,6423	598.450,5854	1.259,448	152°59'42"	1.260,446
0+290			6.879.846,2809	598.441,5871	1.260,754	155°17'13"	1.261,696
0+293,752	CE5		6.879.844,7379	598.438,1672	1.261,262	156°08'48"	1.262,165
0+300			6.879.842,2780	598.432,4241	1.262,101	157°25'46"	1.262,946
0+310			6.879.838,5659	598.423,1388	1.263,453	158°51'43"	1.264,196
0+320			6.879.835,0247	598.413,7870	1.264,887	159°31'50"	1.265,446
0+323,752	ET5		6.879.833,7147	598.410,2710	1.265,426	159°35'04"	1.265,915
0+340			6.879.828,0470	598.395,0437	1.267,802	159°35'04"	1.267,946

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Coordenadas do Eixo Projetado

Estaca	PNH	PNV	Norte	Este	Cota	Az. Seção	Grade
0+360		PCV5	6.879.821,0705	598.376,2999	1.270,721	159°35'04"	1.270,446
0+374,896	TE6		6.879.815,8743	598.362,3394	1.272,673	159°35'04"	1.272,207
0+380			6.879.814,0905	598.357,5575	1.273,185	159°27'36"	1.272,765
0+390			6.879.810,5161	598.348,2180	1.274,159	158°29'43"	1.273,788
0+400			6.879.806,7081	598.338,9722	1.274,849	156°34'32"	1.274,721
0+410			6.879.802,5167	598.329,8939	1.275,529	153°42'02"	1.275,563
0+414,896	EC6		6.879.800,2820	598.325,5379	1.275,827	151°56'42"	1.275,942
0+420			6.879.797,8055	598.321,0755	1.276,105	149°59'44"	1.276,315
0+430			6.879.792,5198	598.312,5885	1.276,618	146°10'32"	1.276,976
0+434,433	CE6		6.879.789,9985	598.308,9433	1.276,913	144°28'58"	1.277,240
0+440			6.879.786,6846	598.304,4699	1.277,251	142°30'15"	1.277,546
0+450			6.879.780,3949	598.296,6975	1.277,885	139°41'37"	1.278,026
0+460			6.879.773,7930	598.289,1864	1.278,527	137°50'16"	1.278,415
0+470			6.879.767,0129	598.281,8368	1.278,886	136°56'13"	1.278,713
0+474,433	ET6		6.879.763,9825	598.278,6013	1.278,874	136°50'36"	1.278,816
0+480			6.879.760,1743	598.274,5399	1.278,808	136°50'36"	1.278,921
0+500			6.879.746,4944	598.259,9502	1.278,669	136°50'36"	1.279,065
0+520		PTV5	6.879.732,8144	598.245,3605	1.278,600	136°50'36"	1.278,846
0+540			6.879.719,1345	598.230,7708	1.277,919	136°50'36"	1.278,446
0+560		PCV6	6.879.705,4546	598.216,1811	1.277,988	136°50'36"	1.278,046
0+578,337	TE7		6.879.692,9122	598.202,8047	1.277,171	136°50'36"	1.277,710
0+580			6.879.691,7750	598.201,5910	1.277,141	136°53'54"	1.277,683
0+585			6.879.688,3798	598.197,9208	1.277,048	137°43'35"	1.277,604
0+590			6.879.685,0705	598.194,1730	1.276,935	139°32'58"	1.277,529
0+595			6.879.681,9157	598.190,2945	1.276,765	142°22'01"	1.277,460
0+600			6.879.678,9907	598.186,2403	1.276,688	146°10'46"	1.277,394
0+605			6.879.676,3791	598.181,9785	1.276,620	150°59'11"	1.277,334
0+608,337	EC7		6.879.674,8556	598.179,0102	1.276,556	154°44'53"	1.277,296
0+610			6.879.674,1724	598.177,4942	1.276,530	156°44'00"	1.277,278
0+615			6.879.672,4399	598.172,8063	1.276,470	162°42'06"	1.277,227
0+620			6.879.671,2042	598.167,9635	1.276,304	168°40'12"	1.277,180
0+625			6.879.670,4788	598.163,0189	1.276,564	174°38'17"	1.277,138
0+630			6.879.670,2715	598.158,0255	1.277,096	180°36'23"	1.277,101
0+635			6.879.670,5845	598.153,0376	1.276,684	186°34'29"	1.277,068
0+640		PTV6	6.879.671,4144	598.148,1090	1.276,158	192°32'36"	1.277,040
0+645			6.879.672,7523	598.143,2939	1.276,182	198°30'41"	1.277,014
0+650			6.879.674,5836	598.138,6438	1.276,352	204°28'47"	1.276,988
0+655			6.879.676,8885	598.134,2092	1.276,487	210°26'53"	1.276,962
0+660			6.879.679,6421	598.130,0383	1.276,724	216°25'00"	1.276,937
0+665			6.879.682,8143	598.126,1765	1.277,015	222°23'05"	1.276,911
0+666,787	PC8		6.879.684,0435	598.124,8790	1.277,115	224°31'02"	1.276,902
0+670			6.879.686,2611	598.122,5541	1.277,300	222°46'36"	1.276,885
0+680			6.879.692,6955	598.114,9044	1.277,778	217°21'35"	1.276,833
0+690			6.879.698,3793	598.106,6810	1.277,785	211°56'34"	1.276,782
0+700			6.879.703,2612	598.097,9582	1.277,480	206°31'33"	1.276,730
0+705,878	CE8		6.879.705,7381	598.092,6303	1.277,334	203°20'33"	1.276,700
0+710			6.879.707,3006	598.088,8162	1.277,284	201°15'47"	1.276,679
0+720		PCV7	6.879.710,5932	598.079,3760	1.277,076	197°29'36"	1.276,627

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0+730			6.879.713,4100	598.069,7812	1.276,797	195°31'45"	1.276,541
0+735,878	ET8		6.879.714,9631	598.064,1121	1.276,627	195°13'02"	1.276,459
0+740			6.879.716,0450	598.060,1348	1.276,507	195°13'02"	1.276,387
0+750,383	TE9		6.879.718,7702	598.050,1161	1.276,227	195°13'02"	1.276,155
0+755			6.879.719,9909	598.045,6634	1.276,114	195°33'23"	1.276,028
0+760			6.879.721,3738	598.040,8583	1.275,992	196°41'21"	1.275,875
0+765			6.879.722,8844	598.036,0925	1.275,875	198°37'03"	1.275,704
0+770			6.879.724,5873	598.031,3919	1.275,718	201°20'31"	1.275,516
0+775			6.879.726,5435	598.026,7913	1.275,569	204°51'43"	1.275,311
0+780			6.879.728,8094	598.022,3352	1.275,413	209°10'41"	1.275,089
0+780,383	EC9		6.879.728,9970	598.022,0017	1.275,398	209°32'28"	1.275,071
0+785			6.879.731,4257	598.018,0764	1.275,194	213°57'00"	1.274,850
0+790			6.879.734,3875	598.014,0498	1.275,191	218°43'29"	1.274,593
0+795			6.879.737,6742	598.010,2838	1.275,170	223°29'57"	1.274,320
0+800			6.879.741,2632	598.006,8042	1.275,088	228°16'27"	1.274,030
0+805			6.879.745,1289	598.003,6358	1.275,010	233°02'55"	1.273,722
0+807,029	CE9		6.879.746,7712	598.002,4434	1.274,976	234°59'12"	1.273,593
0+810			6.879.749,2444	598.000,7976	1.274,938	237°41'00"	1.273,398
0+815			6.879.753,5606	597.998,2756	1.274,731	241°35'14"	1.273,056
0+820			6.879.758,0230	597.996,0222	1.274,526	244°41'43"	1.272,698
0+825			6.879.762,5878	597.993,9820	1.274,233	247°00'28"	1.272,322
0+830			6.879.767,2180	597.992,0954	1.273,775	248°31'27"	1.271,929
0+835			6.879.771,8844	597.990,2996	1.273,326	249°14'42"	1.271,520
0+837,029	ET9		6.879.773,7822	597.989,5820	1.273,144	249°18'38"	1.271,348
0+840			6.879.776,5614	597.988,5325	1.272,878	249°18'38"	1.271,093
0+858,276	TE10		6.879.793,6587	597.982,0755	1.271,173	249°18'38"	1.269,387
0+860		PTV7	6.879.795,2714	597.981,4661	1.271,013	249°16'38"	1.269,215
0+865			6.879.799,9420	597.979,6814	1.270,537	248°48'10"	1.268,711
0+870			6.879.804,5886	597.977,8352	1.269,981	247°45'59"	1.268,207
0+875			6.879.809,1915	597.975,8827	1.269,425	246°10'06"	1.267,704
0+880			6.879.813,7277	597.973,7805	1.269,006	244°00'31"	1.267,200
0+885			6.879.818,1702	597.971,4871	1.268,361	241°17'14"	1.266,696
0+888,276	EC10		6.879.821,0146	597.969,8622	1.268,042	239°11'59"	1.266,366
0+890			6.879.822,4864	597.968,9645	1.267,874	238°02'15"	1.266,193
0+895			6.879.826,6481	597.966,1945	1.267,307	234°40'02"	1.265,689
0+900			6.879.830,6398	597.963,1846	1.268,007	231°17'49"	1.265,185
0+905			6.879.834,4476	597.959,9452	1.268,084	227°55'35"	1.264,682
0+910			6.879.838,0584	597.956,4876	1.267,482	224°33'22"	1.264,178
0+915			6.879.841,4596	597.952,8237	1.266,892	221°11'09"	1.263,674
0+920			6.879.844,6396	597.948,9661	1.266,370	217°48'56"	1.263,171
0+925			6.879.847,5873	597.944,9283	1.266,528	214°26'42"	1.262,667
0+930			6.879.850,2925	597.940,7242	1.266,070	211°04'29"	1.262,163
0+935			6.879.852,7459	597.936,3683	1.265,551	207°42'16"	1.261,660
0+940			6.879.854,9389	597.931,8757	1.265,008	204°20'03"	1.261,156
0+945			6.879.856,8641	597.927,2620	1.264,505	200°57'50"	1.260,652
0+950			6.879.858,5146	597.922,5431	1.263,853	197°35'36"	1.260,149
0+955			6.879.859,8849	597.917,7352	1.263,289	194°13'23"	1.259,645
0+960			6.879.860,9702	597.912,8552	1.262,767	190°51'10"	1.259,141

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Estaca	PNH	PNV	Norte	Este	Cota	Az. Seção	Grade
0+965			6.879.861,7667	597.907,9198	1.262,143	187°28'57"	1.258,638
0+970			6.879.862,2717	597.902,9461	1.261,486	184°06'43"	1.258,134
0+975			6.879.862,4834	597.897,9513	1.260,870	180°44'30"	1.257,630
0+980			6.879.862,4010	597.892,9527	1.260,299	177°22'17"	1.257,127
0+985			6.879.862,0250	597.887,9675	1.259,901	174°00'04"	1.256,623
0+990			6.879.861,3565	597.883,0132	1.259,538	170°37'51"	1.256,119
0+995			6.879.860,3980	597.878,1066	1.259,037	167°15'37"	1.255,616
1			6.879.859,1526	597.873,2650	1.258,523	163°53'24"	1.255,112
1+5			6.879.857,6247	597.868,5049	1.257,904	160°31'11"	1.254,608
1+10			6.879.855,8197	597.863,8428	1.257,117	157°08'58"	1.254,105
1+15			6.879.853,7437	597.859,2950	1.256,306	153°46'44"	1.253,601
1+20			6.879.851,4039	597.854,8770	1.255,166	150°24'31"	1.253,097
1+25			6.879.848,8084	597.850,6043	1.253,959	147°02'18"	1.252,594
1+30			6.879.845,9662	597.846,4915	1.252,444	143°40'05"	1.252,090
1+35			6.879.842,8872	597.842,5530	1.251,968	140°17'51"	1.251,586
1+40			6.879.839,5819	597.838,8022	1.251,138	136°55'38"	1.251,083
1+44,509	CE10		6.879.836,4169	597.835,5918	1.250,582	133°53'17"	1.250,628
1+45			6.879.836,0621	597.835,2525	1.250,543	133°33'35"	1.250,579
1+50			6.879.832,3465	597.831,9075	1.250,131	130°31'32"	1.250,075
1+55			6.879.828,4744	597.828,7447	1.249,700	128°03'10"	1.249,572
1+60			6.879.824,4840	597.825,7321	1.249,232	126°08'31"	1.249,068
1+65			6.879.820,4096	597.822,8344	1.248,808	124°47'34"	1.248,564
1+70			6.879.816,2817	597.820,0130	1.248,387	124°00'20"	1.248,061
1+74,509	ET10		6.879.812,5372	597.817,5012	1.247,999	123°46'37"	1.247,606
1+80			6.879.807,9728	597.814,4483	1.247,525	123°46'37"	1.247,053
1+82,672	TE11		6.879.805,7518	597.812,9628	1.247,284	123°46'37"	1.246,784
1+90			6.879.799,6527	597.808,9008	1.246,575	123°26'07"	1.246,046
1+100		PCV8	6.879.791,2431	597.803,4903	1.245,622	121°51'56"	1.245,039
1+110			6.879.782,6322	597.798,4079	1.244,453	119°01'22"	1.244,053
1+112,672	EC11		6.879.780,2850	597.797,1312	1.244,142	118°02'51"	1.243,796
1+120			6.879.773,7360	597.793,8449	1.243,239	115°14'54"	1.243,109
1+130			6.879.764,5559	597.789,8840	1.242,191	111°25'43"	1.242,208
1+140			6.879.755,1323	597.786,5434	1.241,355	107°36'32"	1.241,349
1+142,385	CE11		6.879.752,8535	597.785,8400	1.241,148	106°41'53"	1.241,150
1+150			6.879.745,5113	597.783,8222	1.240,566	104°09'30"	1.240,533
1+160			6.879.735,7660	597.781,5821	1.239,769	101°56'42"	1.239,759
1+170			6.879.725,9624	597.779,6109	1.238,655	101°00'17"	1.239,027
1+172,385	ET11		6.879.723,6211	597.779,1567	1.238,387	100°58'06"	1.238,859
1+180			6.879.716,1451	597.777,7078	1.237,587	100°58'06"	1.238,339
1+180,307	TE12		6.879.715,8435	597.777,6493	1.237,558	100°58'06"	1.238,318
1+185			6.879.711,2380	597.776,7470	1.237,203	101°19'08"	1.238,010
1+190			6.879.706,3442	597.775,7224	1.236,834	102°27'49"	1.237,692
1+195			6.879.701,4799	597.774,5664	1.236,408	104°24'15"	1.237,385
1+200			6.879.696,6674	597.773,2131	1.235,972	107°08'26"	1.237,088
1+205			6.879.691,9357	597.771,5986	1.235,678	110°40'22"	1.236,802
1+210			6.879.687,3265	597.769,6639	1.235,340	115°00'02"	1.236,526
1+210,307	EC12		6.879.687,0486	597.769,5335	1.235,318	115°17'32"	1.236,510
1+215			6.879.682,8882	597.767,3646	1.235,178	119°46'26"	1.236,262

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Estaca	PNH	PNV	Norte	Este	Cota	Az. Seção	Grade
1+220			6.879.678,6569	597.764,7040	1.235,024	124°32'53"	1.236,007
1+225			6.879.674,6612	597.761,7001	1.235,037	129°19'23"	1.235,764
1+230			6.879.670,9297	597.758,3743	1.235,036	134°05'52"	1.235,531
1+235			6.879.667,4880	597.754,7494	1.234,942	138°52'21"	1.235,308
1+240			6.879.664,3601	597.750,8508	1.234,821	143°38'48"	1.235,097
1+245			6.879.661,5673	597.746,7049	1.234,761	148°25'18"	1.234,895
1+250			6.879.659,1294	597.742,3411	1.234,649	153°11'47"	1.234,705
1+250,802	CE12		6.879.658,7729	597.741,6236	1.234,646	153°57'41"	1.234,675
1+255			6.879.657,0571	597.737,7930	1.234,631	157°41'23"	1.234,525
1+260			6.879.655,3153	597.733,1066	1.234,579	161°23'55"	1.234,355
1+265			6.879.653,8472	597.728,3281	1.234,469	164°18'41"	1.234,197
1+270			6.879.652,5899	597.723,4891	1.234,375	166°25'42"	1.234,049
1+275			6.879.651,4784	597.718,6143	1.234,196	167°44'59"	1.233,911
1+280			6.879.650,4455	597.713,7217	1.233,970	168°16'31"	1.233,784
1+280,802	ET12		6.879.650,2827	597.712,9369	1.233,923	168°17'08"	1.233,765
1+292,265	TE13		6.879.647,9551	597.701,7119	1.233,250	168°17'08"	1.233,518
1+295			6.879.647,3995	597.699,0339	1.233,087	168°15'47"	1.233,467
1+300			6.879.646,3768	597.694,1399	1.232,722	168°06'25"	1.233,383
1+315			6.879.643,1397	597.679,4934	1.231,875	166°44'35"	1.233,193
1+320		PTV8	6.879.641,9623	597.674,6344	1.231,583	165°59'24"	1.233,151
1+322,265	EC13		6.879.641,4065	597.672,4383	1.231,553	165°35'59"	1.233,135
1+331,233	CE13		6.879.639,0548	597.663,7846	1.231,460	163°59'38"	1.233,069
1+340			6.879.636,5335	597.655,3884	1.231,365	162°39'13"	1.233,005
1+360			6.879.630,2817	597.636,3911	1.231,417	161°18'46"	1.232,858
1+361,233	TE14		6.879.629,8866	597.635,2230	1.231,441	161°18'30"	1.232,849
1+370			6.879.627,0602	597.626,9241	1.231,687	160°57'44"	1.232,785
1+380			6.879.623,7087	597.617,5028	1.232,015	159°43'20"	1.232,711
1+385			6.879.621,9382	597.612,8267	1.232,369	158°45'53"	1.232,675
1+390			6.879.620,0807	597.608,1846	1.232,638	157°34'55"	1.232,638
1+391,233	EC14		6.879.619,6078	597.607,0477	1.232,705	157°15'20"	1.232,629
1+398,351	CE14		6.879.616,7464	597.600,5310	1.233,003	155°19'58"	1.232,577
1+400			6.879.616,0524	597.599,0349	1.232,985	154°53'58"	1.232,565
1+405			6.879.613,8841	597.594,5298	1.232,651	153°44'07"	1.232,528
1+410			6.879.611,6334	597.590,0651	1.232,295	152°47'47"	1.232,491
1+420			6.879.606,9572	597.581,2258	1.231,574	151°35'39"	1.232,418
1+428,351	ET14		6.879.602,9578	597.573,8950	1.231,054	151°16'48"	1.232,357
1+440			6.879.597,3600	597.563,6789	1.230,224	151°16'48"	1.232,271
1+460			6.879.587,7495	597.546,1393	1.229,685	151°16'48"	1.232,124
1+480			6.879.578,1389	597.528,5998	1.229,913	151°16'48"	1.231,978
1+480,443	TE15		6.879.577,9262	597.528,2115	1.229,921	151°16'48"	1.231,975
1+490			6.879.573,3196	597.519,8380	1.230,078	150°59'22"	1.231,904
1+500			6.879.568,4072	597.511,1275	1.230,276	150°03'45"	1.231,831
1+510			6.879.563,3072	597.502,5265	1.230,712	148°29'57"	1.231,758
1+510,443	EC15		6.879.563,0755	597.502,1490	1.230,733	148°24'55"	1.231,755
1+520			6.879.557,9409	597.494,0885	1.231,184	146°35'24"	1.231,684
1+530			6.879.552,2967	597.485,8346	1.231,530	144°40'49"	1.231,611
1+540		PCV9	6.879.546,3802	597.477,7727	1.231,839	142°46'13"	1.231,538
1+542,530	CE15		6.879.544,8412	597.475,7650	1.231,866	142°17'13"	1.231,520

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Estaca	PNH	PNV	Norte	Este	Cota	Az. Seção	Grade
1+550			6.879.540,2044	597.469,9085	1.232,024	141°01'50"	1.231,478
1+560			6.879.533,8307	597.462,2028	1.232,316	139°52'50"	1.231,446
1+570			6.879.527,3444	597.454,5922	1.232,543	139°20'24"	1.231,442
1+573,870	TE16		6.879.524,8212	597.451,6578	1.232,617	139°17'40"	1.231,448
1+580			6.879.520,8308	597.447,0041	1.232,809	139°34'29"	1.231,466
1+590			6.879.514,4410	597.439,3128	1.232,926	141°14'07"	1.231,517
1+600			6.879.508,3799	597.431,3601	1.232,435	144°23'18"	1.231,596
1+605,870	EC16		6.879.505,0654	597.426,5161	1.232,195	146°56'02"	1.231,656
1+610			6.879.502,8720	597.423,0169	1.232,017	148°54'20"	1.231,703
1+620			6.879.498,0699	597.414,2483	1.231,630	153°40'50"	1.231,838
1+629,799	CE16		6.879.494,0884	597.405,2974	1.231,379	158°21'33"	1.231,996
1+630			6.879.494,0145	597.405,1105	1.231,381	158°27'18"	1.232,000
1+640			6.879.490,6872	597.395,6826	1.231,346	162°24'06"	1.232,190
1+650			6.879.487,8827	597.386,0844	1.231,515	164°45'26"	1.232,407
1+659,799	ET16		6.879.485,3906	597.376,6077	1.231,643	165°31'16"	1.232,647
1+660			6.879.485,3404	597.376,4133	1.231,652	165°31'16"	1.232,653
1+669,273	TE17		6.879.483,0221	597.367,4353	1.232,046	165°31'16"	1.232,905
1+670			6.879.482,8403	597.366,7314	1.232,074	165°31'33"	1.232,926
1+675			6.879.481,5991	597.361,8879	1.232,264	165°47'51"	1.233,073
1+680			6.879.480,3986	597.357,0337	1.232,483	166°29'27"	1.233,226
1+685			6.879.479,2751	597.352,1621	1.232,824	167°36'19"	1.233,387
1+690			6.879.478,2645	597.347,2655	1.233,162	169°08'28"	1.233,555
1+695			6.879.477,4035	597.342,3404	1.233,497	171°05'53"	1.233,729
1+700		PTV9	6.879.476,7295	597.337,3859	1.233,827	173°28'36"	1.233,911
1+705			6.879.476,2800	597.332,4072	1.234,154	176°16'34"	1.234,096
1+709,273	EC17		6.879.476,1021	597.328,1383	1.234,427	179°00'09"	1.234,254
1+710			6.879.476,0925	597.327,4113	1.234,472	179°29'34"	1.234,281
1+715			6.879.476,1953	597.322,4131	1.234,784	182°51'47"	1.234,466
1+716,197	CE17		6.879.476,2635	597.321,2176	1.234,857	183°40'13"	1.234,510
1+720			6.879.476,5891	597.317,4288	1.235,090	186°06'42"	1.234,651
1+725			6.879.477,2474	597.312,4729	1.235,396	188°57'04"	1.234,836
1+730			6.879.478,1324	597.307,5522	1.235,693	191°22'08"	1.235,021
1+735			6.879.479,2062	597.302,6691	1.236,003	193°21'56"	1.235,206
1+740			6.879.480,4317	597.297,8218	1.236,322	194°56'28"	1.235,391
1+745			6.879.481,7724	597.293,0050	1.236,629	196°05'43"	1.235,576
1+750			6.879.483,1921	597.288,2108	1.236,937	196°49'41"	1.235,761
1+755			6.879.484,6556	597.283,4298	1.237,238	197°08'22"	1.235,946
1+756,197	ET17		6.879.485,0085	597.282,2860	1.237,309	197°09'06"	1.235,990
1+760			6.879.486,1300	597.278,6521	1.237,282	197°09'06"	1.236,131
1+772,966	TE18		6.879.489,9536	597.266,2628	1.237,668	197°09'06"	1.236,611
1+780			6.879.492,0206	597.259,5393	1.237,990	196°57'45"	1.236,871
1+790			6.879.494,8718	597.249,9546	1.238,717	196°02'36"	1.237,241
1+800			6.879.497,5046	597.240,3076	1.239,591	194°21'36"	1.237,611
1+802,966	EC18		6.879.498,2243	597.237,4304	1.239,976	193°42'50"	1.237,721
1+810			6.879.499,7955	597.230,5744	1.240,713	192°06'06"	1.237,981
1+820			6.879.501,6959	597.220,7572	1.240,908	189°48'35"	1.238,351
1+823,527	CE18		6.879.502,2722	597.217,2781	1.240,843	189°00'06"	1.238,482
1+830			6.879.503,2081	597.210,8732	1.240,730	187°40'41"	1.238,721

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Estaca	PNH	PNV	Norte	Este	Cota	Az. Seção	Grade
1+840			6.879.504,4107	597.200,9457	1.240,568	186°15'46"	1.239,091
1+850			6.879.505,4339	597.190,9986	1.240,347	185°36'41"	1.239,461
1+853,527	ET18		6.879.505,7769	597.187,4883	1.240,180	185°33'50"	1.239,592
1+860			6.879.506,4045	597.181,0454	1.240,190	185°33'50"	1.239,831
1+880			6.879.508,3436	597.161,1397	1.240,186	185°33'50"	1.240,571
1+900			6.879.510,2827	597.141,2339	1.240,465	185°33'50"	1.241,311
1+920			6.879.512,2218	597.121,3281	1.241,004	185°33'50"	1.242,051
1+940			6.879.514,1609	597.101,4223	1.242,022	185°33'50"	1.242,791
1+960			6.879.516,1001	597.081,5166	1.243,215	185°33'50"	1.243,531
1+972,639	TE19		6.879.517,3255	597.068,9367	1.243,887	185°33'50"	1.243,999
1+980			6.879.518,0480	597.061,6116	1.244,215	185°46'15"	1.244,271
1+990			6.879.519,1244	597.051,6695	1.244,399	186°42'55"	1.244,641
2			6.879.520,4306	597.041,7559	1.244,600	188°25'24"	1.245,011
2+2,639	EC19		6.879.520,8302	597.039,1469	1.244,668	189°00'06"	1.245,109
2+10			6.879.522,0887	597.031,8946	1.244,865	190°41'19"	1.245,381
2+20			6.879.524,1394	597.022,1082	1.245,113	192°58'49"	1.245,751
2+26,026	CE19		6.879.525,5636	597.016,2529	1.245,315	194°21'41"	1.245,974
2+30			6.879.526,5785	597.012,4107	1.245,450	195°12'43"	1.246,121
2+40			6.879.529,3480	597.002,8024	1.245,773	196°49'05"	1.246,491
2+50			6.879.532,3222	596.993,2548	1.246,104	197°39'38"	1.246,861
2+56,026	ET19		6.879.534,1597	596.987,5158	1.246,300	197°47'57"	1.247,084
2+60			6.879.535,3744	596.983,7322	1.246,490	197°47'57"	1.247,231
2+80			6.879.541,4880	596.964,6896	1.247,714	197°47'57"	1.247,971
2+89,459	TE20		6.879.544,3795	596.955,6831	1.248,420	197°47'57"	1.248,321
2+90			6.879.544,5449	596.955,1680	1.248,460	197°47'46"	1.248,341
2+95			6.879.546,0633	596.950,4042	1.248,801	197°28'25"	1.248,526
2+100		PCV10	6.879.547,5327	596.945,6251	1.249,287	196°37'13"	1.248,711
2+105			6.879.548,9086	596.940,8182	1.249,900	195°14'12"	1.248,892
2+110			6.879.550,1456	596.935,9738	1.250,511	193°19'21"	1.249,064
2+115			6.879.551,1974	596.931,0861	1.251,125	190°52'40"	1.249,227
2+119,459	EC20		6.879.551,9408	596.926,6899	1.251,632	188°15'00"	1.249,365
2+120			6.879.552,0168	596.926,1544	1.251,669	187°54'20"	1.249,381
2+125			6.879.552,5667	596.921,1853	1.252,002	184°43'21"	1.249,527
2+130			6.879.552,8397	596.916,1934	1.252,282	181°32'22"	1.249,664
2+135			6.879.552,8352	596.911,1940	1.252,433	178°21'22"	1.249,792
2+140			6.879.552,5530	596.906,2027	1.252,501	175°10'24"	1.249,911
2+145			6.879.551,9942	596.901,2346	1.252,479	171°59'24"	1.250,022
2+150			6.879.551,1603	596.896,3053	1.252,407	168°48'25"	1.250,124
2+155			6.879.550,0540	596.891,4299	1.252,257	165°37'26"	1.250,217
2+160			6.879.548,6787	596.886,6235	1.252,136	162°26'27"	1.250,301
2+165			6.879.547,0386	596.881,9007	1.252,044	159°15'28"	1.250,377
2+170			6.879.545,1389	596.877,2764	1.251,944	156°04'28"	1.250,444
2+175			6.879.542,9852	596.872,7647	1.251,876	152°53'29"	1.250,502
2+180			6.879.540,5845	596.868,3796	1.251,770	149°42'30"	1.250,551
2+185			6.879.537,9438	596.864,1344	1.251,684	146°31'31"	1.250,592
2+190			6.879.535,0716	596.860,0425	1.251,591	143°20'32"	1.250,624
2+195			6.879.531,9765	596.856,1164	1.251,516	140°09'33"	1.250,647
2+200			6.879.528,6683	596.852,3683	1.251,419	136°58'34"	1.250,661

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Estaca	PNH	PNV	Norte	Este	Cota	Az. Seção	Grade
2+205			6.879.525,1570	596.848,8095	1.251,249	133°47'34"	1.250,667
2+210			6.879.521,4535	596.845,4512	1.251,186	130°36'35"	1.250,664
2+215			6.879.517,5693	596.842,3038	1.251,058	127°25'36"	1.250,652
2+220			6.879.513,5164	596.839,3770	1.250,864	124°14'37"	1.250,631
2+225			6.879.509,3070	596.836,6796	1.250,817	121°03'38"	1.250,602
2+228,235	CE20		6.879.506,5064	596.835,0606	1.250,771	119°00'04"	1.250,578
2+230			6.879.504,9546	596.834,2198	1.250,707	117°54'37"	1.250,564
2+235			6.879.500,4804	596.831,9890	1.250,468	115°10'47"	1.250,517
2+240		PTV10	6.879.495,9144	596.829,9527	1.250,189	112°58'47"	1.250,461
2+245			6.879.491,2817	596.828,0715	1.249,905	111°18'37"	1.250,401
2+250			6.879.486,6045	596.826,3044	1.249,630	110°10'16"	1.250,341
2+255			6.879.481,9008	596.824,6088	1.249,310	109°33'46"	1.250,281
2+258,235	ET20		6.879.478,8511	596.823,5296	1.249,171	109°27'06"	1.250,242
2+260			6.879.477,1870	596.822,9419	1.249,109	109°27'06"	1.250,221
2+264,103	TE21		6.879.473,3184	596.821,5756	1.248,952	109°27'06"	1.250,172
2+265			6.879.472,4726	596.821,2769	1.248,917	109°26'31"	1.250,161
2+270			6.879.467,7532	596.819,6253	1.248,726	109°02'12"	1.250,101
2+275			6.879.463,0141	596.818,0317	1.248,532	108°02'03"	1.250,041
2+280		PCV11	6.879.458,2398	596.816,5461	1.248,415	106°26'06"	1.249,981
2+285			6.879.453,4195	596.815,2196	1.248,329	104°14'21"	1.249,923
2+290			6.879.448,5460	596.814,1041	1.248,271	101°26'47"	1.249,870
2+294,103	EC21		6.879.444,5071	596.813,3838	1.248,226	98°42'31"	1.249,829
2+295			6.879.443,6197	596.813,2530	1.248,215	98°03'59"	1.249,820
2+300			6.879.438,6503	596.812,7065	1.248,162	94°29'07"	1.249,775
2+304,616	CE21		6.879.434,0411	596.812,4785	1.248,108	91°10'46"	1.249,737
2+305			6.879.433,6571	596.812,4715	1.248,103	90°54'23"	1.249,734
2+310			6.879.428,6582	596.812,5380	1.248,064	87°40'10"	1.249,698
2+315			6.879.423,6691	596.812,8606	1.248,030	85°01'47"	1.249,666
2+320			6.879.418,6967	596.813,3869	1.248,008	82°59'11"	1.249,638
2+325			6.879.413,7434	596.814,0642	1.248,004	81°32'25"	1.249,614
2+330			6.879.408,8041	596.814,8407	1.247,972	80°41'27"	1.249,595
2+334,616	ET21		6.879.404,2511	596.815,6008	1.247,981	80°26'12"	1.249,580
2+340			6.879.398,9414	596.816,4954	1.248,031	80°26'12"	1.249,569
2+360			6.879.379,2194	596.819,8182	1.248,262	80°26'12"	1.249,568
2+380			6.879.359,4974	596.823,1410	1.248,707	80°26'12"	1.249,635
2+391,848	TE22		6.879.347,8139	596.825,1094	1.249,171	80°26'12"	1.249,707
2+395			6.879.344,7050	596.825,6288	1.249,291	80°40'26"	1.249,731
2+400		PTV11	6.879.339,7634	596.826,3895	1.249,519	82°01'23"	1.249,771
2+405			6.879.334,7990	596.826,9819	1.249,681	84°33'58"	1.249,814
2+410			6.879.329,8101	596.827,3015	1.249,822	88°18'10"	1.249,856
2+415			6.879.324,8120	596.827,2432	1.249,912	93°13'59"	1.249,899
2+420			6.879.319,8436	596.826,7038	1.249,995	99°21'25"	1.249,941
2+421,848	EC22		6.879.318,0274	596.826,3631	1.250,024	101°55'21"	1.249,957
2+425			6.879.314,9722	596.825,5911	1.250,072	106°26'15"	1.249,984
2+430			6.879.310,2773	596.823,8806	1.250,174	113°35'58"	1.250,026
2+435			6.879.305,8324	596.821,5982	1.250,290	120°45'41"	1.250,069
2+440			6.879.301,7067	596.818,7794	1.250,064	127°55'23"	1.250,111
2+445			6.879.297,9646	596.815,4681	1.249,912	135°05'07"	1.250,154

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Estaca	PNH	PNV	Norte	Este	Cota	Az. Seção	Grade
2+449,807	CE22		6.879.294,7833	596.811,8689	1.249,871	141°58'12"	1.250,194
2+450			6.879.294,6648	596.811,7166	1.249,867	142°14'44"	1.250,196
2+455			6.879.291,8418	596.807,5930	1.249,809	148°45'53"	1.250,239
2+460			6.879.289,4588	596.803,1990	1.249,855	154°05'26"	1.250,281
2+465			6.879.287,4461	596.798,6236	1.249,886	158°13'19"	1.250,324
2+470			6.879.285,7190	596.793,9320	1.249,911	161°09'36"	1.250,366
2+475			6.879.284,1849	596.789,1733	1.249,987	162°54'16"	1.250,409
2+479,807	TE23		6.879.282,8013	596.784,5698	1.250,180	163°27'22"	1.250,449
2+480			6.879.282,7463	596.784,3844	1.250,189	163°27'23"	1.250,451
2+490			6.879.279,9375	596.774,7874	1.250,627	164°08'05"	1.250,536
2+500			6.879.277,3524	596.765,1274	1.251,281	166°07'10"	1.250,621
2+509,807	EC23		6.879.275,2511	596.755,5522	1.251,741	169°20'03"	1.250,704
2+510			6.879.275,2155	596.755,3625	1.251,744	169°24'35"	1.250,706
2+520			6.879.273,7151	596.745,4773	1.251,459	173°19'43"	1.250,791
2+527,310	CE23		6.879.273,0476	596.738,1982	1.251,201	176°11'36"	1.250,853
2+530			6.879.272,8930	596.735,5127	1.251,162	177°12'01"	1.250,876
2+540			6.879.272,6777	596.725,5165	1.251,073	180°06'52"	1.250,961
2+545			6.879.272,7322	596.720,5164	1.251,043	181°04'54"	1.251,004
2+550			6.879.272,8570	596.715,5180	1.251,011	181°43'21"	1.251,046
2+557,310	ET23		6.879.273,1064	596.708,2123	1.251,007	182°04'17"	1.251,108
2+560			6.879.273,2036	596.705,5244	1.251,017	182°04'17"	1.251,131
2+565			6.879.273,3843	596.700,5273	1.251,036	182°04'17"	1.251,174
2+580			6.879.273,9265	596.685,5375	1.251,240	182°04'17"	1.251,301
2+590			6.879.274,2880	596.675,5436	1.251,500	182°04'17"	1.251,386
2+600			6.879.274,6494	596.665,5506	1.251,664	182°04'17"	1.251,471
2+615			6.879.275,1916	596.650,5600	1.251,828	182°04'17"	1.251,599
2+620			6.879.275,3723	596.645,5636	1.251,794	182°04'17"	1.251,641
2+633,701	TE24		6.879.275,8675	596.631,8716	1.251,703	182°04'17"	1.251,757
2+635			6.879.275,9145	596.630,5735	1.251,704	182°04'37"	1.251,769
2+640			6.879.276,0999	596.625,5769	1.251,705	182°11'52"	1.251,811
2+650			6.879.276,5368	596.615,5865	1.251,702	182°55'01"	1.251,896
2+660			6.879.277,1546	596.605,6059	1.251,759	184°16'23"	1.251,981
2+663,701	EC24		6.879.277,4512	596.601,9168	1.251,790	184°56'10"	1.252,012
2+670			6.879.278,0591	596.595,6473	1.251,837	186°08'21"	1.252,066
2+680			6.879.279,2940	596.585,7243	1.251,995	188°02'57"	1.252,151
2+680,743	CE24		6.879.279,3989	596.584,9890	1.252,009	188°11'27"	1.252,157
2+690			6.879.280,8445	596.575,8459	1.252,188	189°41'10"	1.252,236
2+700			6.879.282,6223	596.566,0050	1.252,307	190°41'18"	1.252,321
2+710			6.879.284,5173	596.556,1865	1.252,388	191°03'14"	1.252,406
2+710,743	ET24		6.879.284,6598	596.555,4573	1.252,395	191°03'21"	1.252,412
2+720		PCV12	6.879.286,4350	596.546,3718	1.252,477	191°03'21"	1.252,491
2+738,007	TE25		6.879.289,8882	596.528,6987	1.252,608	191°03'21"	1.252,597
2+740			6.879.290,2704	596.526,7430	1.252,626	191°04'00"	1.252,603
2+750			6.879.292,2149	596.516,9336	1.252,717	191°26'53"	1.252,615
2+760			6.879.294,2711	596.507,1477	1.252,819	192°22'31"	1.252,598
2+770			6.879.296,5319	596.497,4066	1.252,902	193°50'54"	1.252,551
2+773,007	EC25		6.879.297,2654	596.494,4904	1.252,925	194°23'53"	1.252,532
2+780			6.879.299,0829	596.487,7382	1.252,964	195°44'01"	1.252,476

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Estaca	PNH	PNV	Norte	Este	Cota	Az. Seção	Grade
2+790			6.879.301,9546	596.478,1596	1.253,013	197°38'36"	1.252,371
2+800			6.879.305,1437	596.468,6825	1.253,077	199°33'12"	1.252,238
2+810			6.879.308,6470	596.459,3165	1.253,183	201°27'47"	1.252,075
2+820			6.879.312,4603	596.450,0729	1.252,962	203°22'23"	1.251,883
2+830			6.879.316,5799	596.440,9610	1.252,589	205°16'58"	1.251,661
2+839,553	CE25		6.879.320,7966	596.432,3897	1.252,213	207°06'26"	1.251,423
2+840			6.879.321,0005	596.431,9921	1.252,195	207°11'32"	1.251,411
2+850			6.879.325,7019	596.423,1663	1.251,818	208°48'17"	1.251,131
2+860			6.879.330,6083	596.414,4531	1.251,423	209°52'18"	1.250,823
2+870			6.879.335,6352	596.405,8083	1.251,039	210°23'35"	1.250,485
2+874,553	ET25		6.879.337,9413	596.401,8825	1.250,855	210°26'59"	1.250,321
2+880			6.879.340,7016	596.397,1869	1.250,556	210°26'59"	1.250,118
2+900		PCCV13	6.879.350,8372	596.379,9454	1.249,426	210°26'59"	1.249,296
2+920			6.879.360,9728	596.362,7039	1.248,079	210°26'59"	1.248,539
2+922,747	TE26		6.879.362,3652	596.360,3353	1.247,870	210°26'59"	1.248,455
2+925			6.879.363,5063	596.358,3927	1.247,698	210°23'21"	1.248,389
2+930			6.879.366,0180	596.354,0694	1.247,313	209°49'22"	1.248,254
2+935			6.879.368,4642	596.349,7087	1.246,897	208°39'37"	1.248,134
2+940			6.879.370,7982	596.345,2877	1.246,397	206°54'09"	1.248,029
2+945			6.879.372,9725	596.340,7850	1.246,026	204°32'54"	1.247,940
2+950			6.879.374,9358	596.336,1872	1.245,726	201°35'54"	1.247,867
2+952,747	EC26		6.879.375,9057	596.333,6173	1.245,551	199°43'27"	1.247,833
2+955			6.879.376,6361	596.331,4860	1.245,477	198°06'47"	1.247,809
2+960			6.879.378,0413	596.326,6889	1.245,357	194°32'18"	1.247,766
2+965			6.879.379,1447	596.321,8125	1.245,282	190°57'46"	1.247,739
2+970			6.879.379,9419	596.316,8773	1.245,279	187°23'15"	1.247,727
2+975			6.879.380,4297	596.311,9019	1.245,276	183°48'45"	1.247,730
2+980			6.879.380,6063	596.306,9064	1.245,285	180°14'15"	1.247,749
2+981,175	CE26		6.879.380,6026	596.305,7312	1.245,287	179°23'50"	1.247,756
2+985			6.879.380,4750	596.301,9087	1.245,294	176°50'12"	1.247,784
2+990			6.879.380,0719	596.296,9254	1.245,340	174°00'55"	1.247,834
2+995			6.879.379,4499	596.291,9646	1.245,387	171°47'23"	1.247,899
3			6.879.378,6613	596.287,0276	1.245,463	170°09'36"	1.247,979
3+5			6.879.377,7581	596.282,1097	1.245,656	169°07'34"	1.248,075
3+10			6.879.376,7919	596.277,2039	1.245,982	168°41'17"	1.248,187
3+11,175	TE27		6.879.376,5612	596.276,0518	1.246,069	168°40'18"	1.248,215
3+15			6.879.375,8149	596.272,3003	1.246,460	168°54'16"	1.248,314
3+20		PTV13	6.879.374,8902	596.267,3868	1.247,078	169°54'40"	1.248,456
3+25			6.879.374,0862	596.262,4519	1.247,714	171°42'49"	1.248,606
3+30			6.879.373,4722	596.257,4902	1.248,414	174°18'43"	1.248,756
3+35			6.879.373,1185	596.252,5034	1.249,045	177°42'21"	1.248,906
3+40			6.879.373,0953	596.247,5048	1.249,617	181°53'44"	1.249,056
3+41,175	EC27		6.879.373,1452	596.246,3298	1.249,749	182°59'44"	1.249,091
3+45			6.879.373,4667	596.242,5190	1.250,086	186°38'54"	1.249,206
3+50			6.879.374,2517	596.237,5824	1.250,328	191°25'23"	1.249,356
3+55			6.879.375,4449	596.232,7284	1.250,528	196°11'51"	1.249,506
3+59,454	CE27		6.879.376,8448	596.228,5015	1.250,638	200°27'02"	1.249,640
3+60			6.879.377,0379	596.227,9906	1.250,652	200°58'02"	1.249,656

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Estaca	PNH	PNV	Norte	Este	Cota	Az. Seção	Grade
3+65			6.879.379,0054	596.223,3954	1.250,782	205°15'25"	1.249,806
3+70			6.879.381,2805	596.218,9439	1.250,877	208°45'04"	1.249,956
3+75			6.879.383,7928	596.214,6214	1.250,961	211°26'58"	1.250,106
3+80			6.879.386,4768	596.210,4030	1.251,021	213°21'07"	1.250,256
3+85			6.879.389,2706	596.206,2566	1.251,076	214°27'32"	1.250,406
3+89,454	ET27		6.879.391,8042	596.202,5934	1.251,121	214°46'28"	1.250,540
3+100			6.879.397,8192	596.193,9308	1.251,342	214°46'28"	1.250,856
3+120			6.879.409,2262	596.177,5028	1.252,052	214°46'28"	1.251,456
3+140		PCV14	6.879.420,6331	596.161,0747	1.252,615	214°46'28"	1.252,056
3+141,687	TE28		6.879.421,5951	596.159,6893	1.252,646	214°46'28"	1.252,106
3+150			6.879.426,3429	596.152,8656	1.252,798	214°56'22"	1.252,334
3+160			6.879.432,1099	596.144,6956	1.252,960	215°34'31"	1.252,569
3+170			6.879.438,0004	596.136,6153	1.253,123	216°41'18"	1.252,759
3+180			6.879.444,0803	596.128,6758	1.253,392	218°16'44"	1.252,906
3+181,687	EC28		6.879.445,1288	596.127,3546	1.253,441	218°35'39"	1.252,926
3+190			6.879.450,4038	596.120,9300	1.253,669	220°10'55"	1.253,009
3+200			6.879.456,9823	596.113,3987	1.253,309	222°05'31"	1.253,069
3+208,742	CE28		6.879.462,9359	596.106,9978	1.252,746	223°45'41"	1.253,085
3+210			6.879.463,8079	596.106,0911	1.252,665	223°59'52"	1.253,084
3+220		PTV14	6.879.470,8594	596.099,0009	1.252,235	225°36'32"	1.253,056
3+230			6.879.478,0787	596.092,0816	1.251,893	226°44'33"	1.253,006
3+240			6.879.485,4054	596.085,2757	1.251,744	227°23'55"	1.252,956
3+248,742	ET28		6.879.491,8527	596.079,3720	1.251,700	227°34'52"	1.252,912
3+260			6.879.500,1638	596.071,7779	1.251,804	227°34'52"	1.252,856
3+280			6.879.514,9284	596.058,2870	1.252,223	227°34'52"	1.252,756
3+300			6.879.529,6931	596.044,7961	1.252,330	227°34'52"	1.252,656
3+320			6.879.544,4578	596.031,3052	1.252,066	227°34'52"	1.252,556
3+327,575	TE29		6.879.550,0495	596.026,1958	1.251,934	227°34'52"	1.252,518
3+330			6.879.551,8390	596.024,5592	1.251,892	227°29'49"	1.252,506
3+335			6.879.555,5078	596.021,1622	1.251,818	226°47'29"	1.252,481
3+340			6.879.559,1133	596.017,6975	1.251,740	225°22'11"	1.252,456
3+345			6.879.562,6086	596.014,1233	1.251,663	223°13'55"	1.252,431
3+350			6.879.565,9451	596.010,4000	1.251,563	220°22'40"	1.252,406
3+355			6.879.569,0676	596.006,4959	1.251,429	216°48'28"	1.252,381
3+360			6.879.571,9153	596.002,3870	1.251,297	212°31'15"	1.252,356
3+365			6.879.574,4202	595.998,0621	1.251,177	207°31'07"	1.252,331
3+367,575	EC29		6.879.575,5532	595.995,7500	1.251,148	204°39'46"	1.252,318
3+370			6.879.576,5113	595.993,5226	1.251,111	201°53'02"	1.252,306
3+375			6.879.578,1400	595.988,7975	1.251,057	196°09'16"	1.252,281
3+379,799	CE29		6.879.579,2522	595.984,1307	1.251,014	190°39'17"	1.252,257
3+380			6.879.579,2890	595.983,9329	1.251,010	190°25'29"	1.252,256
3+385			6.879.579,9582	595.978,9799	1.250,996	185°04'56"	1.252,231
3+390			6.879.580,1944	595.973,9869	1.250,965	180°27'21"	1.252,206
3+395			6.879.580,0584	595.968,9897	1.251,034	176°32'44"	1.252,181
3+400			6.879.579,6130	595.964,0100	1.251,088	173°21'05"	1.252,156
3+405			6.879.578,9218	595.959,0586	1.251,159	170°52'25"	1.252,131
3+410			6.879.578,0478	595.954,1358	1.251,242	169°06'43"	1.252,106
3+415			6.879.577,0535	595.949,2357	1.251,378	168°03'59"	1.252,081

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Estaca	PNH	PNV	Norte	Este	Cota	Az. Seção	Grade
3+419,799	ET29		6.879.576,0432	595.944,5443	1.251,508	167°44'11"	1.252,057
3+420			6.879.576,0005	595.944,3477	1.251,514	167°44'11"	1.252,056
3+440			6.879.571,7523	595.924,8041	1.252,570	167°44'11"	1.251,956
3+460		PCV15	6.879.567,5041	595.905,2604	1.254,381	167°44'11"	1.251,856
3+480			6.879.563,2559	595.885,7168	1.254,999	167°44'11"	1.251,692
3+500			6.879.559,0078	595.866,1732	1.253,770	167°44'11"	1.251,400
3+506,696	TE30		6.879.557,5855	595.859,6303	1.253,197	167°44'11"	1.251,274
3+510			6.879.556,8877	595.856,4009	1.252,915	167°56'42"	1.251,206
3+515			6.879.555,8840	595.851,5027	1.252,646	169°03'12"	1.251,097
3+520			6.879.555,0162	595.846,5786	1.252,405	171°07'01"	1.250,980
3+525			6.879.554,3677	595.841,6217	1.252,186	174°08'07"	1.250,855
3+530			6.879.554,0227	595.836,6346	1.251,962	178°06'30"	1.250,722
3+535			6.879.554,0657	595.831,6364	1.251,681	183°02'12"	1.250,581
3+536,696	EC30		6.879.554,1831	595.829,9445	1.251,592	184°55'31"	1.250,531
3+540			6.879.554,5754	595.826,6642	1.251,441	188°42'42"	1.250,432
3+545			6.879.555,5783	595.821,7682	1.251,145	194°26'27"	1.250,275
3+550			6.879.557,0650	595.816,9965	1.250,767	200°10'14"	1.250,110
3+553,666	CE30		6.879.558,4540	595.813,6048	1.250,546	204°22'17"	1.249,984
3+555			6.879.559,0204	595.812,3970	1.250,471	205°51'58"	1.249,937
3+560		PCCV16	6.879.561,4013	595.808,0017	1.250,168	210°51'49"	1.249,756
3+565			6.879.564,1212	595.803,8078	1.249,899	214°54'21"	1.249,580
3+570			6.879.567,0970	595.799,7905	1.249,647	217°59'36"	1.249,421
3+575			6.879.570,2528	595.795,9127	1.249,255	220°07'33"	1.249,280
3+580			6.879.573,5197	595.792,1272	1.248,815	221°18'13"	1.249,156
3+583,666	TE31		6.879.575,9474	595.789,3807	1.248,448	221°33'38"	1.249,076
3+585			6.879.576,8322	595.788,3824	1.248,294	221°31'35"	1.249,050
3+590			6.879.580,1283	595.784,6226	1.247,705	220°47'39"	1.248,961
3+595			6.879.583,3441	595.780,7942	1.247,156	219°06'25"	1.248,890
3+600			6.879.586,4131	595.776,8471	1.246,650	216°27'53"	1.248,836
3+605			6.879.589,2621	595.772,7395	1.246,486	212°52'05"	1.248,800
3+610			6.879.591,8120	595.768,4401	1.246,297	208°18'58"	1.248,781
3+613,666	EC31		6.879.593,4420	595.765,1553	1.246,234	204°22'17"	1.248,778
3+615			6.879.593,9762	595.763,9330	1.246,215	202°50'34"	1.248,780
3+620			6.879.595,6839	595.759,2356	1.246,116	197°06'46"	1.248,796
3+625			6.879.596,9139	595.754,3917	1.246,108	191°23'01"	1.248,830
3+630			6.879.597,6543	595.749,4489	1.246,110	185°39'14"	1.248,881
3+633,924	CE31		6.879.597,8873	595.745,5329	1.246,225	181°09'27"	1.248,933
3+635			6.879.597,8976	595.744,4570	1.246,259	179°56'35"	1.248,950
3+640			6.879.597,6619	595.739,4639	1.246,416	174°47'04"	1.249,036
3+645			6.879.597,0127	595.734,5077	1.246,729	170°25'30"	1.249,140
3+650			6.879.596,0227	595.729,6076	1.247,019	166°51'50"	1.249,261
3+655			6.879.594,7638	595.724,7691	1.247,398	164°06'05"	1.249,400
3+660			6.879.593,3064	595.719,9862	1.247,754	162°08'15"	1.249,556
3+665			6.879.591,7190	595.715,2453	1.248,163	160°58'21"	1.249,730
3+669,794	TE32		6.879.590,1367	595.710,7199	1.248,549	160°36'20"	1.249,913
3+670			6.879.590,0683	595.710,5256	1.248,559	160°36'21"	1.249,921
3+675			6.879.588,4164	595.705,8064	1.248,821	160°54'05"	1.250,130
3+680			6.879.586,8113	595.701,0708	1.249,084	161°44'32"	1.250,356

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Estaca	PNH	PNV	Norte	Este	Cota	Az. Seção	Grade
3+685			6.879.585,2988	595.696,3055	1.249,337	163°07'44"	1.250,600
3+690			6.879.583,9248	595.691,4982	1.249,582	165°03'41"	1.250,861
3+695			6.879.582,7369	595.686,6418	1.249,987	167°32'21"	1.251,140
3+700			6.879.581,7834	595.681,7338	1.250,386	170°33'47"	1.251,436
3+704,794	EC32		6.879.581,1347	595.676,9835	1.250,959	173°58'28"	1.251,736
3+705			6.879.581,1134	595.676,7786	1.250,983	174°07'55"	1.251,750
3+710			6.879.580,7683	595.671,7915	1.251,598	177°57'06"	1.252,081
3+715			6.879.580,7562	595.666,7924	1.252,325	181°46'17"	1.252,430
3+720		PCCV17	6.879.581,0772	595.661,8034	1.253,060	185°35'29"	1.252,796
3+723,075	CE32		6.879.581,4394	595.658,7502	1.253,399	187°56'25"	1.253,024
3+725			6.879.581,7292	595.656,8471	1.253,610	189°21'49"	1.253,164
3+730			6.879.582,6870	595.651,9404	1.254,097	192°37'12"	1.253,519
3+735			6.879.583,8951	595.647,0890	1.254,345	195°14'23"	1.253,860
3+740			6.879.585,2971	595.642,2896	1.254,490	197°13'22"	1.254,187
3+745			6.879.586,8378	595.637,5333	1.254,535	198°34'09"	1.254,501
3+750			6.879.588,4638	595.632,8051	1.254,586	199°16'45"	1.254,801
3+753,075	ET32		6.879.589,4831	595.629,9039	1.254,665	199°23'58"	1.254,978
3+755			6.879.590,1225	595.628,0882	1.254,714	199°23'58"	1.255,087
3+760			6.879.591,7833	595.623,3719	1.254,844	199°23'58"	1.255,360
3+772,950	TE33		6.879.596,0846	595.611,1574	1.255,396	199°23'58"	1.256,003
3+780			6.879.598,4395	595.604,5121	1.255,901	199°44'19"	1.256,314
3+790			6.879.601,9326	595.595,1427	1.256,567	201°22'56"	1.256,710
3+795			6.879.603,8073	595.590,5075	1.256,916	202°42'57"	1.256,887
3+800			6.879.605,8030	595.585,9230	1.257,258	204°23'26"	1.257,051
3+802,950	EC33		6.879.607,0475	595.583,2487	1.257,458	205°32'18"	1.257,141
3+810			6.879.610,2457	595.576,9667	1.257,841	208°25'25"	1.257,337
3+820			6.879.615,3156	595.568,3493	1.257,909	212°30'58"	1.257,569
3+830			6.879.620,9873	595.560,1162	1.257,945	216°36'31"	1.257,746
3+833,863	CE33		6.879.623,3338	595.557,0470	1.257,963	218°11'23"	1.257,800
3+840			6.879.627,2254	595.552,3025	1.257,983	220°26'40"	1.257,869
3+850			6.879.633,8961	595.544,8535	1.258,011	223°01'04"	1.257,937
3+860			6.879.640,8092	595.537,6284	1.258,095	224°13'37"	1.257,951
3+863,863	ET33		6.879.643,5071	595.534,8633	1.258,128	224°19'43"	1.257,941
3+880			6.879.654,7831	595.523,3199	1.258,224	224°19'43"	1.257,814
3+900			6.879.668,7585	595.509,0131	1.257,646	224°19'43"	1.257,460
3+909,007	TE34		6.879.675,0521	595.502,5703	1.257,226	224°19'43"	1.257,229
3+910			6.879.675,7459	595.501,8599	1.257,196	224°19'21"	1.257,201
3+920			6.879.682,6986	595.494,6720	1.256,894	223°33'33"	1.256,887
3+930			6.879.689,4728	595.487,3173	1.256,577	221°31'23"	1.256,519
3+939,007	EC34		6.879.695,2795	595.480,4331	1.256,245	218°35'57"	1.256,140
3+940		PTV17	6.879.695,8966	595.479,6547	1.256,209	218°13'11"	1.256,096
3+950			6.879.701,8168	595.471,5983	1.255,780	214°24'00"	1.255,646
3+957,836	CE34		6.879.706,0734	595.465,0194	1.255,229	211°24'24"	1.255,293
3+960			6.879.707,1879	595.463,1648	1.255,079	210°36'36"	1.255,196
3+965			6.879.709,6711	595.458,8249	1.254,735	208°59'49"	1.254,971
3+970			6.879.712,0433	595.454,4236	1.254,406	207°42'08"	1.254,746
3+980			6.879.716,5485	595.445,4966	1.253,777	206°04'05"	1.254,296
3+985			6.879.718,7304	595.440,9975	1.253,487	205°43'42"	1.254,071

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Estaca	PNH	PNV	Norte	Este	Cota	Az. Seção	Grade
3+987,836	ET34		6.879.719,9600	595.438,4419	1.253,352	205°40'37"	1.253,943
4			6.879.725,2305	595.427,4794	1.253,066	205°40'37"	1.253,396
4+1,036	TE35		6.879.725,6792	595.426,5461	1.253,043	205°40'37"	1.253,349
4+10			6.879.729,5769	595.418,4739	1.252,857	205°58'01"	1.252,946
4+20			6.879.734,0251	595.409,5173	1.252,742	206°58'29"	1.252,496
4+30			6.879.738,6853	595.400,6706	1.252,598	208°42'15"	1.252,046
4+40			6.879.743,6655	595.391,9992	1.252,300	211°09'19"	1.251,596
4+41,036	TS35		6.879.744,2035	595.391,1144	1.252,268	211°27'02"	1.251,549
4+50			6.879.749,0396	595.383,5662	1.251,865	213°44'53"	1.251,146
4+60			6.879.754,7393	595.375,3494	1.251,033	215°37'38"	1.250,696
4+70			6.879.760,6542	595.367,2872	1.250,149	216°47'03"	1.250,246
4+80		PCV18	6.879.766,6813	595.359,3070	1.249,249	217°13'12"	1.249,796
4+81,036	ET35		6.879.767,3077	595.358,4824	1.249,161	217°13'25"	1.249,750
4+96,489	TE36		6.879.776,6560	595.346,1771	1.247,363	217°13'25"	1.249,116
4+100			6.879.778,7760	595.343,3785	1.246,837	216°59'18"	1.248,988
4+105			6.879.781,7497	595.339,3589	1.246,492	215°50'25"	1.248,814
4+110			6.879.784,6080	595.335,2568	1.246,253	213°44'14"	1.248,652
4+115			6.879.787,2786	595.331,0304	1.246,037	210°40'46"	1.248,502
4+120			6.879.789,6832	595.326,6479	1.245,859	206°40'00"	1.248,363
4+125			6.879.791,7372	595.322,0908	1.245,720	201°41'56"	1.248,235
4+126,489	EC36		6.879.792,2677	595.320,6996	1.245,680	200°02'06"	1.248,199
4+130			6.879.793,3538	595.317,3616	1.245,638	196°00'42"	1.248,119
4+135			6.879.794,4906	595.312,4947	1.245,566	190°16'56"	1.248,014
4+140			6.879.795,1358	595.307,5387	1.245,525	184°33'10"	1.247,921
4+145			6.879.795,2830	595.302,5428	1.245,514	178°49'23"	1.247,839
4+145,575	CE36		6.879.795,2679	595.301,9685	1.245,508	178°09'53"	1.247,831
4+150			6.879.794,9397	595.297,5570	1.245,642	173°26'40"	1.247,769
4+155			6.879.794,1685	595.292,6181	1.245,785	168°57'14"	1.247,710
4+160			6.879.793,0508	595.287,7451	1.246,042	165°21'28"	1.247,663
4+165			6.879.791,6672	595.282,9412	1.246,313	162°39'26"	1.247,627
4+170			6.879.790,0956	595.278,1948	1.246,841	160°51'03"	1.247,602
4+175			6.879.788,4118	595.273,4869	1.247,360	159°56'21"	1.247,589
4+177,595	TE37		6.879.787,5182	595.271,0506	1.247,622	159°49'07"	1.247,587
4+180			6.879.786,6891	595.268,7927	1.247,862	159°52'24"	1.247,588
4+190			6.879.783,3371	595.259,3719	1.248,583	161°16'09"	1.247,619
4+200		PTV18	6.879.780,3724	595.249,8225	1.248,871	164°33'00"	1.247,696
4+207,595	TS37		6.879.778,5790	595.242,4457	1.248,851	168°18'06"	1.247,772
4+210			6.879.778,1184	595.240,0839	1.248,809	169°36'26"	1.247,796
4+220			6.879.776,7086	595.230,1858	1.248,609	173°51'59"	1.247,896
4+230			6.879.775,8737	595.220,2218	1.248,522	176°14'26"	1.247,996
4+237,595	ET37		6.879.775,4236	595.212,6402	1.248,528	176°47'03"	1.248,072
4+240			6.879.775,2887	595.210,2386	1.248,528	176°47'03"	1.248,096
4+246,070	TE38		6.879.774,9482	595.204,1782	1.248,518	176°47'03"	1.248,157
4+250			6.879.774,7266	595.200,2545	1.248,491	176°44'06"	1.248,196
4+260			6.879.774,1168	595.190,2730	1.248,423	176°09'59"	1.248,296
4+270			6.879.773,3525	595.180,3026	1.248,471	174°57'41"	1.248,396
4+276,070	EC38		6.879.772,7665	595.174,2610	1.248,563	173°55'09"	1.248,457
4+280			6.879.772,3246	595.170,3559	1.248,610	173°10'07"	1.248,496

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Estaca	PNH	PNV	Norte	Este	Cota	Az. Seção	Grade
4+289,930	CE38		6.879.770,9806	595.160,5178	1.248,695	171°16'20"	1.248,595
4+290			6.879.770,9699	595.160,4486	1.248,696	171°15'32"	1.248,596
4+300			6.879.769,3044	595.150,5884	1.248,746	169°40'18"	1.248,696
4+310			6.879.767,4209	595.140,7677	1.248,929	168°43'17"	1.248,796
4+319,930	ET38		6.879.765,4433	595.131,0367	1.249,253	168°24'27"	1.248,895
4+320			6.879.765,4292	595.130,9679	1.249,256	168°24'27"	1.248,896
4+340			6.879.761,4101	595.111,3759	1.250,366	168°24'27"	1.249,096
4+360		PCV19	6.879.757,3911	595.091,7838	1.251,339	168°24'27"	1.249,296
4+380			6.879.753,3721	595.072,1918	1.251,149	168°24'27"	1.249,404
4+400			6.879.749,3531	595.052,5998	1.250,649	168°24'27"	1.249,326
4+420			6.879.745,3341	595.033,0078	1.250,262	168°24'27"	1.249,064
4+440			6.879.741,3151	595.013,4157	1.249,762	168°24'27"	1.248,616
4+460			6.879.737,2961	594.993,8237	1.248,981	168°24'27"	1.247,984
4+480		PTV19	6.879.733,2770	594.974,2317	1.247,780	168°24'27"	1.247,166
4+480,598	TE39		6.879.733,1568	594.973,6457	1.247,743	168°24'27"	1.247,139
4+490			6.879.731,2433	594.964,4405	1.247,020	167°57'19"	1.246,711
4+500			6.879.729,0456	594.954,6855	1.245,921	166°28'54"	1.246,256
4+510			6.879.726,5113	594.945,0125	1.244,666	163°59'06"	1.245,801
4+520			6.879.723,4733	594.935,4871	1.243,371	160°27'55"	1.245,346
4+520,598	EC39		6.879.723,2720	594.934,9237	1.243,295	160°13'20"	1.245,319
4+530			6.879.719,7961	594.926,1897	1.242,431	156°22'28"	1.244,891
4+532,380	CE39		6.879.718,8239	594.924,0178	1.242,267	155°24'02"	1.244,783
4+540			6.879.715,4767	594.917,1731	1.241,908	152°34'45"	1.244,436
4+550			6.879.710,6434	594.908,4199	1.241,610	149°46'40"	1.243,981
4+560			6.879.705,4638	594.899,8662	1.241,504	147°59'58"	1.243,526
4+570			6.879.700,0963	594.891,4290	1.241,535	147°14'40"	1.243,071
4+572,380	ET39		6.879.698,8079	594.889,4279	1.241,561	147°12'56"	1.242,963
4+580			6.879.694,6818	594.883,0216	1.241,650	147°12'56"	1.242,616
4+600			6.879.683,8522	594.866,2073	1.242,240	147°12'56"	1.241,706
4+620			6.879.673,0226	594.849,3931	1.241,806	147°12'56"	1.240,796
4+629,827	TE40		6.879.667,7013	594.841,1312	1.240,855	147°12'56"	1.240,349
4+630			6.879.667,6076	594.840,9857	1.240,835	147°12'54"	1.240,341
4+635			6.879.664,8873	594.836,7905	1.240,284	146°42'16"	1.240,114
4+640			6.879.662,0953	594.832,6431	1.239,733	145°14'21"	1.239,886
4+645			6.879.659,1641	594.828,5926	1.239,216	142°49'07"	1.239,659
4+650			6.879.656,0323	594.824,6959	1.238,900	139°26'36"	1.239,431
4+655			6.879.652,6460	594.821,0188	1.238,593	135°06'47"	1.239,204
4+659,827	EC40		6.879.649,0965	594.817,7499	1.238,439	130°01'36"	1.238,984
4+660			6.879.648,9640	594.817,6390	1.238,433	129°49'44"	1.238,976
4+665			6.879.644,9704	594.814,6335	1.238,277	124°05'56"	1.238,749
4+670			6.879.640,6969	594.812,0419	1.238,195	118°22'10"	1.238,521
4+675			6.879.636,1861	594.809,8899	1.238,100	112°38'23"	1.238,294
4+680			6.879.631,4831	594.808,1990	1.237,994	106°54'38"	1.238,066
4+680,723	CE40		6.879.630,7902	594.807,9938	1.237,975	106°04'57"	1.238,033
4+685			6.879.626,6368	594.806,9776	1.237,911	101°31'50"	1.237,839
4+690			6.879.621,7028	594.806,1756	1.237,895	97°05'43"	1.237,611
4+695			6.879.616,7248	594.805,7159	1.237,944	93°36'54"	1.237,384
4+700			6.879.611,7287	594.805,5176	1.238,125	91°05'22"	1.237,156

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Estaca	PNH	PNV	Norte	Este	Cota	Az. Seção	Grade
4+705			6.879.606,7293	594.805,4980	1.238,436	89°31'09"	1.236,929
4+710			6.879.601,7299	594.805,5738	1.238,858	88°54'13"	1.236,701
4+710,723	ET40		6.879.601,0070	594.805,5877	1.238,918	88°53'37"	1.236,668
4+720			6.879.591,7314	594.805,7668	1.239,664	88°53'37"	1.236,246
4+739,065	TE41		6.879.572,6696	594.806,1349	1.238,950	88°53'37"	1.235,379
4+740			6.879.571,7351	594.806,1529	1.238,873	88°54'18"	1.235,336
4+745			6.879.566,7355	594.806,2337	1.238,489	89°21'08"	1.235,109
4+750			6.879.561,7356	594.806,2470	1.238,147	90°27'03"	1.234,881
4+755			6.879.556,7370	594.806,1361	1.237,800	92°12'01"	1.234,654
4+760		PCV20	6.879.551,7462	594.805,8443	1.237,447	94°36'02"	1.234,426
4+765			6.879.546,7745	594.805,3154	1.237,026	97°39'09"	1.234,199
4+770			6.879.541,8432	594.804,4947	1.236,547	101°21'18"	1.233,975
4+775			6.879.536,9821	594.803,3296	1.235,966	105°42'32"	1.233,752
4+779,065	EC41		6.879.533,1099	594.802,0951	1.235,459	109°43'42"	1.233,572
4+780			6.879.532,2328	594.801,7722	1.235,335	110°42'08"	1.233,530
4+785			6.879.527,6421	594.799,7945	1.234,629	115°54'40"	1.233,311
4+789,991	CE41		6.879.523,2578	594.797,4129	1.233,934	121°06'38"	1.233,094
4+790			6.879.523,2501	594.797,4082	1.233,932	121°07'12"	1.233,093
4+795			6.879.519,0875	594.794,6410	1.233,268	126°00'07"	1.232,877
4+800			6.879.515,1579	594.791,5519	1.232,595	130°13'57"	1.232,663
4+805			6.879.511,4470	594.788,2015	1.231,986	133°48'46"	1.232,451
4+810			6.879.507,9323	594.784,6460	1.231,438	136°44'29"	1.232,240
4+815			6.879.504,5827	594.780,9343	1.230,977	139°01'09"	1.232,032
4+820			6.879.501,3615	594.777,1109	1.230,566	140°38'44"	1.231,825
4+825			6.879.498,2274	594.773,2146	1.230,176	141°37'16"	1.231,619
4+829,991	ET41		6.879.495,1435	594.769,2904	1.229,814	141°56'44"	1.231,416
4+840			6.879.488,9741	594.761,4094	1.229,070	141°56'44"	1.231,015
4+860			6.879.476,6459	594.745,6609	1.228,171	141°56'44"	1.230,233
4+864,298	TE42		6.879.473,9963	594.742,2762	1.228,040	141°56'44"	1.230,069
4+865			6.879.473,5635	594.741,7234	1.228,031	141°56'30"	1.230,042
4+870			6.879.470,4748	594.737,7916	1.227,962	141°41'12"	1.229,853
4+875			6.879.467,3549	594.733,8844	1.227,886	141°02'03"	1.229,666
4+880			6.879.464,1777	594.730,0243	1.227,804	139°59'01"	1.229,480
4+885			6.879.460,9165	594.726,2338	1.227,698	138°32'06"	1.229,297
4+890			6.879.457,5480	594.722,5391	1.227,610	136°41'19"	1.229,115
4+895			6.879.454,0499	594.718,9669	1.227,513	134°26'40"	1.228,934
4+900		PTV20	6.879.450,4032	594.715,5476	1.227,368	131°48'09"	1.228,756
4+904,298	EC42		6.879.447,1364	594.712,7544	1.227,311	129°12'47"	1.228,603
4+905			6.879.446,5908	594.712,3127	1.227,299	128°45'58"	1.228,579
4+910			6.879.442,6073	594.709,2918	1.227,196	125°34'59"	1.228,401
4+915			6.879.438,4623	594.706,4968	1.227,110	122°24'00"	1.228,224
4+920			6.879.434,1688	594.703,9366	1.227,021	119°13'02"	1.228,046
4+925			6.879.429,7390	594.701,6182	1.226,953	116°02'02"	1.227,869
4+930			6.879.425,1876	594.699,5496	1.226,884	112°51'02"	1.227,691
4+935			6.879.420,5285	594.697,7369	1.226,834	109°40'03"	1.227,514
4+940			6.879.415,7764	594.696,1858	1.226,725	106°29'05"	1.227,336
4+945			6.879.410,9445	594.694,9008	1.226,679	103°18'05"	1.227,159
4+950			6.879.406,0492	594.693,8861	1.226,603	100°07'06"	1.226,981

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Estaca	PNH	PNV	Norte	Este	Cota	Az. Seção	Grade
4+955			6.879.401,1051	594.693,1449	1.226,554	96°56'07"	1.226,804
4+960			6.879.396,1279	594.692,6793	1.226,486	93°45'09"	1.226,626
4+965			6.879.391,1316	594.692,4908	1.226,393	90°34'08"	1.226,449
4+970			6.879.386,1331	594.692,5800	1.226,297	87°23'09"	1.226,271
4+975			6.879.381,1472	594.692,9467	1.226,211	84°12'10"	1.226,094
4+980			6.879.376,1898	594.693,5895	1.226,130	81°01'12"	1.225,916
4+985			6.879.371,2748	594.694,5068	1.225,987	77°50'12"	1.225,739
4+990			6.879.366,4188	594.695,6955	1.225,814	74°39'13"	1.225,561
4+995			6.879.361,6364	594.697,1520	1.225,611	71°28'13"	1.225,384
4+997,856	CE42		6.879.358,9435	594.698,1023	1.225,483	69°39'09"	1.225,282
5			6.879.356,9424	594.698,8712	1.225,384	68°19'27"	1.225,206
5+5			6.879.352,3441	594.700,8341	1.225,181	65°30'38"	1.225,029
5+10			6.879.347,8402	594.703,0046	1.224,937	63°05'41"	1.224,851
5+15			6.879.343,4235	594.705,3478	1.224,724	61°04'37"	1.224,674
5+20			6.879.339,0835	594.707,8299	1.224,541	59°27'26"	1.224,496
5+25			6.879.334,8060	594.710,4191	1.224,391	58°14'07"	1.224,319
5+30			6.879.330,5756	594.713,0842	1.224,198	57°24'40"	1.224,141
5+35			6.879.326,3744	594.715,7953	1.224,052	56°59'06"	1.223,964
5+37,856	ET42		6.879.323,9807	594.717,3532	1.223,979	56°55'12"	1.223,862
5+40			6.879.322,1844	594.718,5233	1.223,921	56°55'12"	1.223,786
5+60			6.879.305,4263	594.729,4395	1.223,244	56°55'12"	1.223,076
5+65			6.879.301,2365	594.732,1687	1.223,087	56°55'12"	1.222,899
5+80			6.879.288,6681	594.740,3557	1.222,602	56°55'12"	1.222,366
5+85			6.879.284,4784	594.743,0849	1.222,385	56°55'12"	1.222,189
5+100		PCV21	6.879.271,9099	594.751,2719	1.221,776	56°55'12"	1.221,656
5+105,988	TE43		6.879.266,8929	594.754,5400	1.221,467	56°55'12"	1.221,451
5+110			6.879.263,5282	594.756,7253	1.221,261	57°09'02"	1.221,323
5+115			6.879.259,3086	594.759,4075	1.221,008	58°05'00"	1.221,173
5+120			6.879.255,0295	594.761,9942	1.220,772	59°43'57"	1.221,034
5+125			6.879.250,6632	594.764,4289	1.220,634	62°05'51"	1.220,907
5+130			6.879.246,1860	594.766,6535	1.220,466	65°10'44"	1.220,790
5+135			6.879.241,5837	594.768,6054	1.220,279	68°58'35"	1.220,684
5+140			6.879.236,8520	594.770,2186	1.219,919	73°29'26"	1.220,589
5+145			6.879.232,0016	594.771,4238	1.219,605	78°43'12"	1.220,506
5+145,988	EC43		6.879.231,0309	594.771,6076	1.219,543	79°50'18"	1.220,490
5+150			6.879.227,0577	594.772,1563	1.219,205	84°26'09"	1.220,433
5+155			6.879.222,0653	594.772,3917	1.218,601	90°09'55"	1.220,372
5+160			6.879.217,0740	594.772,1275	1.218,211	95°53'43"	1.220,321
5+164,722	CE43		6.879.212,4066	594.771,4215	1.217,854	101°18'24"	1.220,283
5+165			6.879.212,1342	594.771,3663	1.217,832	101°37'27"	1.220,282
5+170			6.879.207,2919	594.770,1275	1.217,720	106°57'21"	1.220,253
5+175			6.879.202,5749	594.768,4735	1.217,641	111°34'16"	1.220,236
5+180			6.879.197,9934	594.766,4738	1.217,926	115°28'13"	1.220,229
5+185			6.879.193,5436	594.764,1946	1.218,157	118°39'13"	1.220,234
5+190			6.879.189,2115	594.761,6988	1.218,405	121°07'13"	1.220,250
5+195			6.879.184,9740	594.759,0452	1.218,672	122°52'16"	1.220,277
5+200			6.879.180,8023	594.756,2895	1.218,988	123°54'20"	1.220,314
5+204,722	ET43		6.879.176,8929	594.753,6408	1.219,338	124°13'30"	1.220,360

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Estaca	PNH	PNV	Norte	Este	Cota	Az. Seção	Grade
5+220		PTV21	6.879.164,2606	594.745,0479	1.220,285	124°13'30"	1.220,576
5+240			6.879.147,7239	594.733,7991	1.221,079	124°13'30"	1.220,926
5+260			6.879.131,1872	594.722,5502	1.221,795	124°13'30"	1.221,276
5+279,804	TE44		6.879.114,8122	594.711,4114	1.223,006	124°13'30"	1.221,623
5+280			6.879.114,6504	594.711,3013	1.222,998	124°13'28"	1.221,626
5+285			6.879.110,5119	594.708,4950	1.222,747	123°58'59"	1.221,714
5+290			6.879.106,3510	594.705,7225	1.222,463	123°17'39"	1.221,801
5+295			6.879.102,1465	594.703,0168	1.222,284	122°09'27"	1.221,889
5+300			6.879.097,8793	594.700,4117	1.222,380	120°34'25"	1.221,976
5+305			6.879.093,5315	594.697,9424	1.222,467	118°32'29"	1.222,064
5+310			6.879.089,0904	594.695,6463	1.222,555	116°03'43"	1.222,151
5+315			6.879.084,5460	594.693,5623	1.222,637	113°08'06"	1.222,239
5+319,804	EC44		6.879.080,0784	594.691,7978	1.222,690	109°54'03"	1.222,323
5+320			6.879.079,8944	594.691,7314	1.222,692	109°45'39"	1.222,326
5+325			6.879.075,1388	594.690,1889	1.222,708	106°10'47"	1.222,414
5+330			6.879.070,2964	594.688,9466	1.222,755	102°35'55"	1.222,501
5+335			6.879.065,3859	594.688,0091	1.222,765	99°01'03"	1.222,589
5+340			6.879.060,4267	594.687,3803	1.222,820	95°26'13"	1.222,676
5+345			6.879.055,4374	594.687,0623	1.222,872	91°51'20"	1.222,764
5+350			6.879.050,4382	594.687,0566	1.222,951	88°16'29"	1.222,851
5+355			6.879.045,4484	594.687,3632	1.223,007	84°41'37"	1.222,939
5+358,469	CE44		6.879.042,0028	594.687,7587	1.223,051	82°12'34"	1.222,999
5+360			6.879.040,4878	594.687,9806	1.223,079	81°07'57"	1.223,026
5+365			6.879.035,5728	594.688,8938	1.223,172	77°53'14"	1.223,114
5+370			6.879.030,7127	594.690,0661	1.223,236	75°03'30"	1.223,201
5+375			6.879.025,9111	594.691,4595	1.223,262	72°38'45"	1.223,289
5+380			6.879.021,1665	594.693,0366	1.223,362	70°38'59"	1.223,376
5+385			6.879.016,4736	594.694,7610	1.223,447	69°04'12"	1.223,464
5+390			6.879.011,8230	594.696,5972	1.223,518	67°54'24"	1.223,551
5+395			6.879.007,2037	594.698,5107	1.223,561	67°09'35"	1.223,639
5+400			6.879.002,6024	594.700,4677	1.223,569	66°49'45"	1.223,726
5+401,469	TE45		6.879.001,2522	594.701,0459	1.223,572	66°48'41"	1.223,752
5+405			6.878.998,0051	594.702,4332	1.223,588	66°58'30"	1.223,814
5+410			6.878.993,3919	594.704,3614	1.223,552	67°45'58"	1.223,901
5+415			6.878.988,7421	594.706,1991	1.223,548	69°12'48"	1.223,989
5+420			6.878.984,0374	594.707,8919	1.223,671	71°19'01"	1.224,076
5+425			6.878.979,2658	594.709,3834	1.223,787	74°04'34"	1.224,164
5+430			6.878.974,4208	594.710,6158	1.223,702	77°29'29"	1.224,251
5+435			6.878.969,5060	594.711,5291	1.223,720	81°33'46"	1.224,339
5+440			6.878.964,5358	594.712,0628	1.223,642	86°17'25"	1.224,426
5+445			6.878.959,5387	594.712,1564	1.223,479	91°40'24"	1.224,514
5+445,139	EC45		6.878.959,3990	594.712,1525	1.223,473	91°49'57"	1.224,516
5+450			6.878.954,5557	594.711,7613	1.223,214	97°24'10"	1.224,601
5+455			6.878.949,6378	594.710,8704	1.223,141	103°07'56"	1.224,689
5+460			6.878.944,8332	594.709,4930	1.223,509	108°51'43"	1.224,776
5+465			6.878.940,1905	594.707,6429	1.223,887	114°35'29"	1.224,864
5+470			6.878.935,7556	594.705,3386	1.225,030	120°19'16"	1.224,951
5+475			6.878.931,5728	594.702,6029	1.225,462	126°03'02"	1.225,039

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5+479,625	CE45		6.878.927,9644	594.699,7120	1.225,634	131°21'03"	1.225,119
5+480		PCV22	6.878.927,6839	594.699,4633	1.225,643	131°46'42"	1.225,126
5+485			6.878.924,1187	594.695,9601	1.225,749	137°05'46"	1.225,218
5+490			6.878.920,8695	594.692,1616	1.225,710	141°41'52"	1.225,319
5+495			6.878.917,9100	594.688,1327	1.225,655	145°34'59"	1.225,429
5+500			6.878.915,2038	594.683,9292	1.225,598	148°45'08"	1.225,547
5+505			6.878.912,7069	594.679,5976	1.225,550	151°12'19"	1.225,675
5+510			6.878.910,3699	594.675,1776	1.225,553	152°56'31"	1.225,812
5+515			6.878.908,1399	594.670,7025	1.225,575	153°57'45"	1.225,957
5+519,625	ET45		6.878.906,1245	594.666,5397	1.225,596	154°16'08"	1.226,100
5+520			6.878.905,9618	594.666,2020	1.225,598	154°16'08"	1.226,112
5+540			6.878.897,2788	594.648,1851	1.225,848	154°16'08"	1.226,819
5+560			6.878.888,5959	594.630,1683	1.226,809	154°16'08"	1.227,669
5+580			6.878.879,9130	594.612,1514	1.228,404	154°16'08"	1.228,662
5+600			6.878.871,2301	594.594,1346	1.229,731	154°16'08"	1.229,797
5+616,438	TE46		6.878.864,0936	594.579,3266	1.230,687	154°16'08"	1.230,838
5+620		PCCV23	6.878.862,5464	594.576,1181	1.230,963	154°13'43"	1.231,076
5+630			6.878.858,1642	594.567,1296	1.231,754	153°41'01"	1.231,729
5+640			6.878.853,6470	594.558,2080	1.232,493	152°30'07"	1.232,339
5+646,438	EC46		6.878.850,6221	594.552,5251	1.232,997	151°24'15"	1.232,708
5+650			6.878.848,8987	594.549,4078	1.233,329	150°43'26"	1.232,904
5+660			6.878.843,8640	594.540,7681	1.234,247	148°48'51"	1.233,426
5+661,215	CE46		6.878.843,2328	594.539,7300	1.234,358	148°34'55"	1.233,486
5+670			6.878.838,5548	594.532,2943	1.234,831	147°09'00"	1.233,904
5+680			6.878.833,0473	594.523,9478	1.235,098	146°07'03"	1.234,339
5+690			6.878.827,4361	594.515,6705	1.235,812	145°43'19"	1.234,729
5+691,215	ET46		6.878.826,7517	594.514,6666	1.235,839	145°43'02"	1.234,774
5+700			6.878.821,8034	594.507,4078	1.236,172	145°43'02"	1.235,076
5+720			6.878.810,5378	594.490,8824	1.235,880	145°43'02"	1.235,639
5+740			6.878.799,2722	594.474,3571	1.236,185	145°43'02"	1.236,026
5+760			6.878.788,0067	594.457,8317	1.236,531	145°43'02"	1.236,239
5+780			6.878.776,7411	594.441,3064	1.236,749	145°43'02"	1.236,276
5+800			6.878.765,4756	594.424,7810	1.236,763	145°43'02"	1.236,139
5+820		PTV23	6.878.754,2100	594.408,2557	1.235,829	145°43'02"	1.235,826
5+840			6.878.742,9445	594.391,7303	1.235,094	145°43'02"	1.235,426
5+860			6.878.731,6789	594.375,2050	1.234,733	145°43'02"	1.235,026
5+865			6.878.728,8625	594.371,0736	1.234,663	145°43'02"	1.234,926
5+880			6.878.720,4134	594.358,6796	1.234,494	145°43'02"	1.234,626
5+885			6.878.717,5970	594.354,5483	1.234,422	145°43'02"	1.234,526
5+900			6.878.709,1478	594.342,1543	1.234,100	145°43'02"	1.234,226
5+911,117	TE47		6.878.702,8860	594.332,9688	1.233,901	145°43'02"	1.234,004
5+920			6.878.697,8685	594.325,6383	1.233,761	145°23'41"	1.233,826
5+930			6.878.692,1181	594.317,4576	1.233,625	144°15'38"	1.233,626
5+940			6.878.686,1493	594.309,4344	1.233,491	142°18'32"	1.233,426
5+941,117	EC47		6.878.685,4645	594.308,5524	1.233,475	142°02'25"	1.233,404
5+950			6.878.679,8688	594.301,6541	1.233,401	139°51'46"	1.233,226
5+960			6.878.673,2608	594.294,1491	1.233,337	137°24'42"	1.233,026
5+970			6.878.666,3384	594.286,9339	1.233,212	134°57'37"	1.232,826

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Estaca	PNH	PNV	Norte	Este	Cota	Az. Seção	Grade
5+972,005	PC48		6.878.664,9136	594.285,5232	1.233,178	134°28'11"	1.232,786
5+980			6.878.659,3600	594.279,7730	1.233,044	137°31'25"	1.232,626
5+990			6.878.652,8580	594.272,1780	1.232,807	141°20'36"	1.232,426
6		PCV24	6.878.646,8762	594.264,1664	1.232,526	145°09'47"	1.232,226
6+10			6.878.641,4416	594.255,7745	1.231,843	148°58'58"	1.232,038
6+13,670	CE48		6.878.639,5902	594.252,6084	1.231,499	150°23'02"	1.231,975
6+20			6.878.636,5707	594.247,0453	1.230,903	152°32'48"	1.231,873
6+30			6.878.632,1625	594.238,0703	1.230,206	154°55'25"	1.231,732
6+40			6.878.628,0285	594.228,9648	1.229,654	156°01'39"	1.231,615
6+43,670	ET48		6.878.626,5408	594.225,6100	1.229,462	156°06'48"	1.231,577
6+60			6.878.619,9283	594.210,6786	1.229,255	156°06'48"	1.231,450
6+75			6.878.613,8544	594.196,9635	1.229,400	156°06'48"	1.231,389
6+80			6.878.611,8297	594.192,3916	1.229,557	156°06'48"	1.231,380
6+95			6.878.605,7558	594.178,6765	1.230,071	156°06'48"	1.231,390
6+100			6.878.603,7312	594.174,1047	1.230,222	156°06'48"	1.231,405
6+120			6.878.595,6326	594.155,8177	1.231,203	156°06'48"	1.231,523
6+140		PCCV25	6.878.587,5340	594.137,5307	1.231,784	156°06'48"	1.231,736
6+160			6.878.579,4355	594.119,2438	1.232,052	156°06'48"	1.231,870
6+162,771	TE49		6.878.578,3136	594.116,7105	1.232,074	156°06'48"	1.231,869
6+170			6.878.575,3997	594.110,0948	1.232,210	156°27'37"	1.231,843
6+180			6.878.571,5183	594.100,8787	1.232,423	158°05'02"	1.231,753
6+190			6.878.568,0084	594.091,5165	1.232,288	161°02'05"	1.231,600
6+192,771	EC49		6.878.567,1316	594.088,8880	1.232,193	162°05'15"	1.231,547
6+200			6.878.565,0818	594.081,9560	1.231,944	164°58'00"	1.231,385
6+210			6.878.562,8257	594.072,2163	1.231,772	168°56'58"	1.231,106
6+220			6.878.561,2514	594.062,3427	1.231,711	172°55'56"	1.230,765
6+223,414	PC50		6.878.560,8715	594.058,9495	1.231,672	174°17'30"	1.230,634
6+230			6.878.560,0508	594.052,4156	1.231,639	171°23'21"	1.230,360
6+240			6.878.558,1750	594.042,5960	1.231,397	166°58'55"	1.229,893
6+244,202	CE50		6.878.557,1627	594.038,5189	1.231,234	165°07'49"	1.229,678
6+250			6.878.555,5584	594.032,9477	1.230,672	162°49'19"	1.229,363
6+260			6.878.552,3507	594.023,4770	1.229,726	160°00'03"	1.228,770
6+270			6.878.548,8002	594.014,1290	1.229,194	158°38'56"	1.228,115
6+274,202	ET50		6.878.547,2644	594.010,2177	1.228,642	158°31'09"	1.227,820
6+280		PCCV26	6.878.545,1412	594.004,8223	1.227,706	158°31'09"	1.227,396
6+300			6.878.537,8174	593.986,2115	1.225,021	158°31'09"	1.226,062
6+320			6.878.530,4937	593.967,6007	1.223,003	158°31'09"	1.225,060
6+340			6.878.523,1699	593.948,9898	1.221,916	158°31'09"	1.224,390
6+360			6.878.515,8461	593.930,3790	1.221,674	158°31'09"	1.224,052
6+380			6.878.508,5224	593.911,7682	1.222,058	158°31'09"	1.224,046
6+400			6.878.501,1986	593.893,1574	1.223,126	158°31'09"	1.224,372
6+420		PCCV27	6.878.493,8749	593.874,5466	1.225,481	158°31'09"	1.225,030
6+440			6.878.486,5511	593.855,9358	1.226,529	158°31'09"	1.225,758
6+460			6.878.479,2273	593.837,3249	1.227,080	158°31'09"	1.226,292
6+480			6.878.471,9036	593.818,7141	1.227,617	158°31'09"	1.226,634
6+500			6.878.464,5798	593.800,1033	1.226,944	158°31'09"	1.226,784
6+520		PTV27	6.878.457,2560	593.781,4925	1.226,510	158°31'09"	1.226,740
6+532,978	TE51		6.878.452,5038	593.769,4163	1.226,412	158°31'09"	1.226,649

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Estaca	PNH	PNV	Norte	Este	Cota	Az. Seção	Grade
6+540			6.878.449,9272	593.762,8836	1.226,346	158°23'05"	1.226,600
6+560			6.878.442,3183	593.744,3885	1.226,197	156°31'37"	1.226,460
6+562,978	EC51		6.878.441,1214	593.741,6621	1.226,175	156°03'49"	1.226,439
6+573,143	CE51		6.878.436,8629	593.732,4323	1.226,109	154°23'59"	1.226,368
6+580			6.878.433,8441	593.726,2754	1.226,059	153°24'20"	1.226,320
6+600			6.878.424,6114	593.708,5347	1.225,629	151°58'16"	1.226,180
6+603,143	ET51		6.878.423,1337	593.705,7610	1.225,554	151°56'39"	1.226,158
6+620			6.878.415,2052	593.690,8847	1.225,032	151°56'39"	1.226,040
6+640			6.878.405,7985	593.673,2349	1.224,876	151°56'39"	1.225,900
6+640,035	TE52		6.878.405,7821	593.673,2039	1.224,876	151°56'39"	1.225,900
6+645			6.878.403,4559	593.668,8176	1.224,866	152°17'50"	1.225,865
6+650			6.878.401,1683	593.664,3717	1.224,865	153°22'00"	1.225,830
6+655			6.878.398,9922	593.659,8703	1.224,866	155°09'07"	1.225,795
6+660			6.878.396,9860	593.655,2908	1.224,852	157°39'13"	1.225,760
6+665			6.878.395,2110	593.650,6172	1.224,843	160°52'18"	1.225,725
6+670			6.878.393,7310	593.645,8423	1.224,798	164°48'20"	1.225,690
6+675			6.878.392,6126	593.640,9704	1.224,741	169°27'21"	1.225,655
6+680			6.878.391,9238	593.636,0199	1.224,699	174°49'21"	1.225,620
6+680,035	EC52		6.878.391,9207	593.635,9851	1.224,698	174°51'45"	1.225,620
6+685			6.878.391,7221	593.631,0261	1.224,671	180°33'07"	1.225,585
6+690			6.878.392,0200	593.626,0371	1.224,584	186°16'53"	1.225,550
6+691,367	CE52		6.878.392,1880	593.624,6809	1.224,549	187°50'51"	1.225,540
6+695			6.878.392,8104	593.621,1023	1.224,409	191°49'18"	1.225,515
6+700		PCV28	6.878.394,0457	593.616,2585	1.224,301	196°40'23"	1.225,480
6+705			6.878.395,6566	593.611,5266	1.224,245	200°48'27"	1.225,448
6+710			6.878.397,5759	593.606,9105	1.224,175	204°13'34"	1.225,421
6+715			6.878.399,7390	593.602,4031	1.224,179	206°55'43"	1.225,399
6+720			6.878.402,0851	593.597,9875	1.224,218	208°54'55"	1.225,382
6+725			6.878.404,5553	593.593,6409	1.224,421	210°11'07"	1.225,371
6+730			6.878.407,0946	593.589,3337	1.224,630	210°44'21"	1.225,365
6+731,367	ET52		6.878.407,7937	593.588,1590	1.224,691	210°45'57"	1.225,364
6+740			6.878.412,2099	593.580,7406	1.225,058	210°45'57"	1.225,368
6+760			6.878.422,4405	593.563,5553	1.225,296	210°45'57"	1.225,438
6+766,703	TE53		6.878.425,8691	593.557,7960	1.225,349	210°45'57"	1.225,480
6+770			6.878.427,5535	593.554,9617	1.225,336	210°38'10"	1.225,505
6+775			6.878.430,0791	593.550,6465	1.225,317	209°56'39"	1.225,546
6+780			6.878.432,5299	593.546,2881	1.225,316	208°39'19"	1.225,592
6+785			6.878.434,8587	593.541,8641	1.225,356	206°46'11"	1.225,644
6+790			6.878.437,0172	593.537,3545	1.225,418	204°17'14"	1.225,701
6+795			6.878.438,9543	593.532,7456	1.225,674	201°12'29"	1.225,763
6+796,703	EC53		6.878.439,5541	593.531,1518	1.225,757	200°01'22"	1.225,785
6+800		PTV28	6.878.440,6189	593.528,0314	1.225,916	197°39'41"	1.225,830
6+805			6.878.441,9860	593.523,2231	1.226,130	194°04'50"	1.225,900
6+810			6.878.443,0501	593.518,3384	1.226,271	190°29'59"	1.225,970
6+810,102	CE53		6.878.443,0687	593.518,2376	1.226,274	190°25'34"	1.225,971
6+815			6.878.443,8152	593.513,3975	1.226,295	187°12'17"	1.226,040
6+820			6.878.444,3210	593.508,4238	1.226,304	184°30'24"	1.226,110
6+825			6.878.444,6180	593.503,4327	1.226,306	182°24'20"	1.226,180

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6+830			6.878.444,7580	593.498,4348	1.226,317	180°54'05"	1.226,250
6+835			6.878.444,7927	593.493,4350	1.226,249	179°59'38"	1.226,320
6+840			6.878.444,7743	593.488,4353	1.226,153	179°41'00"	1.226,390
6+840,102	ET53		6.878.444,7737	593.488,3331	1.226,151	179°41'00"	1.226,391
6+860			6.878.444,6637	593.468,4356	1.225,810	179°41'00"	1.226,670
6+880			6.878.444,5531	593.448,4359	1.226,067	179°41'00"	1.226,950
6+900			6.878.444,4426	593.428,4362	1.226,590	179°41'00"	1.227,230
6+920			6.878.444,3320	593.408,4365	1.227,907	179°41'00"	1.227,510
6+924,886	TE54		6.878.444,3050	593.403,5506	1.228,307	179°41'00"	1.227,578
6+925			6.878.444,3043	593.403,4366	1.228,316	179°40'59"	1.227,580
6+930			6.878.444,2711	593.398,4367	1.228,718	179°29'45"	1.227,650
6+935			6.878.444,2060	593.393,4371	1.229,121	178°57'02"	1.227,720
6+940		PCV29	6.878.444,0776	593.388,4388	1.229,405	178°02'50"	1.227,790
6+945			6.878.443,8548	593.383,4439	1.229,528	176°47'08"	1.227,855
6+950			6.878.443,5065	593.378,4562	1.229,651	175°09'58"	1.227,912
6+955			6.878.443,0019	593.373,4820	1.229,775	173°11'18"	1.227,959
6+960			6.878.442,3104	593.368,5304	1.229,775	170°51'09"	1.227,996
6+964,886	EC54		6.878.441,4257	593.363,7256	1.229,432	168°13'27"	1.228,024
6+965			6.878.441,4024	593.363,6140	1.229,425	168°09'32"	1.228,025
6+970			6.878.440,2545	593.358,7481	1.229,085	165°17'38"	1.228,044
6+974,954	CE54		6.878.438,8786	593.353,9891	1.228,757	162°27'19"	1.228,054
6+975			6.878.438,8647	593.353,9452	1.228,754	162°25'44"	1.228,054
6+980			6.878.437,2419	593.349,2168	1.228,441	159°44'48"	1.228,055
6+985			6.878.435,4138	593.344,5629	1.228,415	157°25'20"	1.228,047
6+990			6.878.433,4129	593.339,9810	1.228,388	155°27'21"	1.228,029
6+995			6.878.431,2701	593.335,4636	1.228,361	153°50'52"	1.228,002
7			6.878.429,0153	593.331,0014	1.228,259	152°35'52"	1.227,966
7+5			6.878.426,6772	593.326,5814	1.228,127	151°42'21"	1.227,921
7+10			6.878.424,2845	593.322,1911	1.227,989	151°10'19"	1.227,867
7+14,954	ET54		6.878.421,8869	593.317,8560	1.227,826	150°59'46"	1.227,804
7+20			6.878.419,4404	593.313,4432	1.227,784	150°59'46"	1.227,730
7+40			6.878.409,7430	593.295,9514	1.228,142	150°59'46"	1.227,346
7+60			6.878.400,0457	593.278,4597	1.227,563	150°59'46"	1.226,815
7+63,556	TE55		6.878.398,3215	593.275,3496	1.227,433	150°59'46"	1.226,705
7+80			6.878.390,4102	593.260,9339	1.226,797	151°44'02"	1.226,136
7+93,556	EC55		6.878.384,1529	593.248,9091	1.225,997	153°27'06"	1.225,592
7+100		PCCV30	6.878.381,3259	593.243,1183	1.225,607	154°30'24"	1.225,310
7+104,651	CE55		6.878.379,3519	593.238,9066	1.225,307	155°16'05"	1.225,107
7+115			6.878.375,1456	593.229,4513	1.224,635	156°40'12"	1.224,697
7+120			6.878.373,1853	593.224,8520	1.224,366	157°08'16"	1.224,520
7+134,651	ET55		6.878.367,5852	593.211,3132	1.223,845	157°43'25"	1.224,081
7+135			6.878.367,4529	593.210,9902	1.223,832	157°43'25"	1.224,072
7+140			6.878.365,5576	593.206,3638	1.223,596	157°43'25"	1.223,950
7+160			6.878.357,9761	593.187,8565	1.222,603	157°43'25"	1.223,600
7+180			6.878.350,3946	593.169,3491	1.221,949	157°43'25"	1.223,470
7+200			6.878.342,8131	593.150,8418	1.222,010	157°43'25"	1.223,560
7+204,126	TE56		6.878.341,2490	593.147,0237	1.222,048	157°43'25"	1.223,606
7+210			6.878.339,0262	593.141,5865	1.222,101	157°50'50"	1.223,688

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7+220			6.878.335,3089	593.132,3033	1.222,231	158°37'33"	1.223,870
7+225			6.878.333,5121	593.127,6372	1.222,414	159°17'02"	1.223,982
7+230			6.878.331,7764	593.122,9482	1.222,595	160°07'15"	1.224,108
7+240			6.878.328,5485	593.113,4843	1.223,297	162°19'55"	1.224,400
7+244,126	EC56		6.878.327,3341	593.109,5410	1.223,688	163°27'11"	1.224,537
7+245			6.878.327,0870	593.108,7027	1.223,770	163°42'13"	1.224,567
7+250			6.878.325,7441	593.103,8865	1.224,243	165°08'09"	1.224,748
7+260			6.878.323,4215	593.094,1612	1.225,217	168°00'02"	1.225,150
7+270			6.878.321,5878	593.084,3317	1.226,278	170°51'56"	1.225,608
7+280		PTV30	6.878.320,2478	593.074,4230	1.227,153	173°43'49"	1.226,120
7+287,164	CE56		6.878.319,5931	593.067,2896	1.227,278	175°46'57"	1.226,507
7+290			6.878.319,4041	593.064,4600	1.227,341	176°33'58"	1.226,660
7+300			6.878.319,0164	593.054,4678	1.227,539	178°52'11"	1.227,200
7+310			6.878.318,9680	593.044,4686	1.227,637	180°27'26"	1.227,740
7+320			6.878.319,1343	593.034,4698	1.227,801	181°19'42"	1.228,280
7+327,164	ET56		6.878.319,3157	593.027,3084	1.228,074	181°30'44"	1.228,667
7+340			6.878.319,6544	593.014,4765	1.228,677	181°30'44"	1.229,360
7+360			6.878.320,1821	592.994,4835	1.230,303	181°30'44"	1.230,440
7+365,044	TE57		6.878.320,3152	592.989,4414	1.230,477	181°30'44"	1.230,712
7+380		PCV31	6.878.320,6944	592.974,4901	1.231,086	181°20'03"	1.231,520
7+400			6.878.321,0400	592.954,4932	1.232,423	180°32'23"	1.232,526
7+405,044	EC57		6.878.321,0745	592.949,4494	1.232,669	180°14'20"	1.232,756
7+420			6.878.321,0126	592.934,4936	1.233,338	179°17'12"	1.233,383
7+422,547	CE57		6.878.320,9773	592.931,9472	1.233,495	179°07'29"	1.233,481
7+440			6.878.320,5661	592.914,4990	1.234,521	178°15'21"	1.234,091
7+460			6.878.319,8692	592.894,5112	1.234,567	177°51'23"	1.234,651
7+462,547	ET57		6.878.319,7738	592.891,9661	1.234,555	177°51'05"	1.234,712
7+480			6.878.319,1194	592.874,5252	1.234,523	177°51'05"	1.235,063
7+500			6.878.318,3696	592.854,5393	1.234,625	177°51'05"	1.235,326
7+520		PTV31	6.878.317,6197	592.834,5533	1.235,028	177°51'05"	1.235,440
7+540			6.878.316,8699	592.814,5674	1.235,805	177°51'05"	1.235,480
7+560			6.878.316,1200	592.794,5815	1.236,301	177°51'05"	1.235,520
7+580			6.878.315,3702	592.774,5955	1.236,391	177°51'05"	1.235,560
7+588,142	TE58		6.878.315,0649	592.766,4595	1.236,051	177°51'05"	1.235,576
7+590			6.878.314,9960	592.764,6028	1.235,993	177°55'02"	1.235,580
7+595			6.878.314,8436	592.759,6052	1.235,826	178°44'59"	1.235,590
7+600			6.878.314,8056	592.754,6052	1.235,664	180°32'13"	1.235,600
7+605			6.878.314,9651	592.749,6085	1.235,875	183°16'44"	1.235,610
7+610			6.878.315,4049	592.744,6288	1.235,821	186°58'34"	1.235,620
7+615			6.878.316,2061	592.739,6948	1.235,670	191°37'41"	1.235,630
7+618,142	EC58		6.878.316,9289	592.736,6375	1.235,582	195°02'24"	1.235,636
7+620			6.878.317,4444	592.734,8523	1.235,553	197°10'10"	1.235,640
7+625			6.878.319,1565	592.730,1571	1.235,472	202°53'56"	1.235,650
7+630			6.878.321,3289	592.725,6560	1.235,425	208°37'42"	1.235,660
7+635			6.878.323,9397	592.721,3942	1.235,459	214°21'29"	1.235,670
7+638,017	CE58		6.878.325,7167	592.718,9562	1.235,516	217°48'56"	1.235,676
7+640			6.878.326,9626	592.717,4136	1.235,543	220°00'46"	1.235,680
7+645			6.878.330,3414	592.713,7301	1.235,589	224°53'10"	1.235,690

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7+650			6.878.333,9930	592.710,3160	1.235,623	228°48'17"	1.235,700
7+655			6.878.337,8433	592.707,1269	1.235,623	231°46'05"	1.235,710
7+660			6.878.341,8284	592.704,1077	1.235,662	233°46'36"	1.235,720
7+665			6.878.345,8930	592.701,1959	1.235,767	234°49'50"	1.235,730
7+668,017	ET58		6.878.348,3628	592.699,4631	1.235,832	235°00'15"	1.235,736
7+680			6.878.358,1792	592.692,5907	1.236,065	235°00'15"	1.235,760
7+700			6.878.374,5631	592.681,1204	1.236,253	235°00'15"	1.235,800
7+720			6.878.390,9470	592.669,6501	1.236,487	235°00'15"	1.235,840
7+728,168	TE59		6.878.397,6381	592.664,9656	1.236,416	235°00'15"	1.235,856
7+740			6.878.407,3426	592.658,1966	1.236,276	235°18'05"	1.235,880
7+758,168	EC59		6.878.422,4024	592.648,0351	1.235,854	236°54'51"	1.235,916
7+760			6.878.423,9394	592.647,0382	1.235,817	237°08'51"	1.235,920
7+775,500	CE59		6.878.437,1023	592.638,8559	1.235,704	239°07'15"	1.235,951
7+780			6.878.440,9757	592.636,5645	1.235,682	239°39'03"	1.235,960
7+800			6.878.458,3739	592.626,7011	1.235,875	240°58'00"	1.236,000
7+805,500	ET59		6.878.463,1844	592.624,0357	1.235,900	241°01'51"	1.236,011
7+820			6.878.475,8705	592.617,0125	1.235,986	241°01'51"	1.236,040
7+840			6.878.493,3681	592.607,3257	1.236,116	241°01'51"	1.236,080
7+859,852	TE60		6.878.510,7360	592.597,7107	1.236,378	241°01'51"	1.236,120
7+860		PCV32	6.878.510,8657	592.597,6389	1.236,385	241°01'51"	1.236,120
7+880			6.878.528,4069	592.588,0318	1.235,778	241°48'22"	1.236,069
7+889,852	EC60		6.878.537,1253	592.583,4442	1.235,691	242°44'59"	1.235,977
7+900			6.878.546,1937	592.578,8895	1.235,622	243°54'45"	1.235,837
7+900,796	CE60		6.878.546,9086	592.578,5401	1.235,630	244°00'13"	1.235,824
7+920			6.878.564,2947	592.570,3845	1.235,847	245°30'00"	1.235,423
7+930,796	ET60		6.878.574,1298	592.565,9331	1.235,665	245°43'21"	1.235,123
7+939,132	TE61		6.878.581,7293	592.562,5054	1.235,535	245°43'21"	1.234,856
7+940			6.878.582,5202	592.562,1487	1.235,521	245°43'13"	1.234,827
7+950			6.878.591,6264	592.558,0153	1.235,170	245°20'48"	1.234,461
7+960			6.878.600,6812	592.553,7727	1.234,729	244°20'11"	1.234,049
7+969,132	EC61		6.878.608,8639	592.549,7181	1.233,724	242°51'28"	1.233,634
7+970			6.878.609,6358	592.549,3210	1.233,627	242°41'31"	1.233,592
7+977,579	CE61		6.878.616,3249	592.545,7596	1.232,770	241°14'41"	1.233,216
7+980		PCCV33	6.878.618,4429	592.544,5865	1.232,498	240°48'03"	1.233,090
7+990			6.878.627,1053	592.539,5911	1.231,583	239°21'49"	1.232,596
8			6.878.635,6690	592.534,4272	1.230,648	238°33'46"	1.232,163
8+7,579	ET61		6.878.642,1269	592.530,4606	1.230,316	238°22'47"	1.231,875
8+15,327	TE62		6.878.648,7249	592.526,3983	1.229,973	238°22'47"	1.231,618
8+20			6.878.652,6981	592.523,9388	1.229,770	237°57'46"	1.231,480
8+25			6.878.656,9083	592.521,2418	1.229,677	236°35'34"	1.231,348
8+30			6.878.661,0291	592.518,4107	1.229,574	234°16'05"	1.231,231
8+35			6.878.665,0064	592.515,3817	1.229,534	230°59'17"	1.231,129
8+40			6.878.668,7761	592.512,0989	1.229,477	226°45'13"	1.231,043
8+45			6.878.672,2632	592.508,5179	1.229,410	221°33'50"	1.230,971
8+45,327	EC62		6.878.672,4794	592.508,2725	1.229,405	221°11'28"	1.230,967
8+50			6.878.675,3882	592.504,6174	1.229,342	215°50'10"	1.230,916
8+55			6.878.678,1082	592.500,4244	1.229,295	210°06'24"	1.230,875
8+60		PTV33	6.878.680,3959	592.495,9810	1.229,251	204°22'38"	1.230,850

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Estaca	PNH	PNV	Norte	Este	Cota	Az. Seção	Grade
8+61,344	CE62		6.878.680,9340	592.494,7498	1.229,248	202°50'15"	1.230,845
8+65			6.878.682,2337	592.491,3334	1.229,228	198°54'12"	1.230,833
8+70			6.878.683,6573	592.486,5417	1.229,184	194°20'58"	1.230,815
8+75			6.878.684,7368	592.481,6605	1.229,170	190°45'02"	1.230,798
8+80			6.878.685,5490	592.476,7270	1.229,166	188°06'23"	1.230,780
8+85			6.878.686,1741	592.471,7668	1.229,214	186°25'03"	1.230,763
8+90			6.878.686,6942	592.466,7939	1.229,300	185°41'00"	1.230,745
8+91,344	ET62		6.878.686,8267	592.465,4565	1.229,340	185°38'56"	1.230,740
8+100			6.878.687,6788	592.456,8421	1.229,584	185°38'56"	1.230,710
8+107,785	TE63		6.878.688,4450	592.449,0953	1.229,811	185°38'56"	1.230,683
8+110			6.878.688,6637	592.446,8911	1.229,876	185°41'44"	1.230,675
8+115			6.878.689,1760	592.441,9175	1.230,002	186°08'45"	1.230,658
8+120			6.878.689,7481	592.436,9500	1.230,136	187°04'25"	1.230,640
8+125			6.878.690,4211	592.431,9960	1.230,312	188°28'44"	1.230,623
8+130			6.878.691,2360	592.427,0631	1.230,453	190°21'41"	1.230,605
8+135			6.878.692,2329	592.422,1638	1.230,548	192°43'18"	1.230,588
8+137,785	EC63		6.878.692,8816	592.419,4555	1.230,589	194°14'35"	1.230,578
8+140			6.878.693,4505	592.417,3144	1.230,553	195°30'45"	1.230,570
8+145			6.878.694,9074	592.412,5324	1.230,408	198°22'37"	1.230,553
8+146,223	CE63		6.878.695,3004	592.411,3734	1.230,372	199°04'42"	1.230,548
8+150			6.878.696,5992	592.407,8269	1.230,269	201°06'22"	1.230,535
8+155			6.878.698,4947	592.403,2005	1.230,135	203°22'17"	1.230,518
8+160			6.878.700,5524	592.398,6442	1.230,040	205°09'33"	1.230,500
8+165			6.878.702,7329	592.394,1444	1.230,024	206°28'11"	1.230,483
8+170			6.878.704,9971	592.389,6865	1.230,003	207°18'10"	1.230,465
8+175			6.878.707,3074	592.385,2523	1.229,975	207°39'30"	1.230,448
8+176,223	ET63		6.878.707,8753	592.384,1691	1.229,963	207°40'21"	1.230,443
8+180			6.878.709,6293	592.380,8245	1.229,947	207°40'21"	1.230,430
8+200			6.878.718,9176	592.363,1122	1.230,074	207°40'21"	1.230,360
8+211,576	TE64		6.878.724,2937	592.352,8604	1.230,217	207°40'21"	1.230,319
8+220			6.878.728,1972	592.345,3952	1.230,282	207°28'10"	1.230,290
8+230			6.878.732,7576	592.336,4958	1.230,293	206°42'01"	1.230,255
8+240			6.878.737,1533	592.327,5139	1.230,278	205°21'29"	1.230,220
8+245			6.878.739,2606	592.322,9798	1.230,217	204°28'20"	1.230,203
8+250			6.878.741,2918	592.318,4111	1.230,176	203°26'35"	1.230,185
8+251,576	EC64		6.878.741,9144	592.316,9632	1.230,164	203°05'20"	1.230,179
8+260		PCV34	6.878.745,0868	592.309,1598	1.230,089	201°09'30"	1.230,150
8+265			6.878.746,8448	592.304,4792	1.230,051	200°00'45"	1.230,130
8+270			6.878.748,5088	592.299,7643	1.230,005	198°51'59"	1.230,103
8+275,638	PC65		6.878.750,2715	592.294,4094	1.229,926	197°34'29"	1.230,066
8+280			6.878.751,6164	592.290,2595	1.229,895	198°20'23"	1.230,032
8+295,676	CE65		6.878.756,9033	592.275,5052	1.230,003	201°05'17"	1.229,872
8+300			6.878.758,4846	592.271,4813	1.230,068	201°48'19"	1.229,818
8+320			6.878.766,3234	592.253,0829	1.230,284	204°03'22"	1.229,508
8+335,676	ET65		6.878.772,8032	592.238,8083	1.229,292	204°35'41"	1.229,198
8+340			6.878.774,6026	592.234,8771	1.229,004	204°35'41"	1.229,102
8+347,282	TE66		6.878.777,6332	592.228,2561	1.228,595	204°35'41"	1.228,930
8+350			6.878.778,7636	592.225,7843	1.228,443	204°32'18"	1.228,863

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8+360		PCCV35	6.878.782,8432	592.216,6541	1.227,951	203°21'33"	1.228,600
8+370			6.878.786,6103	592.207,3922	1.227,643	200°39'08"	1.228,331
8+377,282	EC66		6.878.789,0112	592.200,5182	1.227,425	197°43'10"	1.228,142
8+380			6.878.789,8104	592.197,9200	1.227,249	196°28'24"	1.228,073
8+386,685	CE66		6.878.791,5337	592.191,4620	1.226,811	193°24'33"	1.227,908
8+390			6.878.792,2612	592.188,2279	1.226,627	191°58'25"	1.227,828
8+400			6.878.794,0301	592.178,3868	1.226,183	188°39'38"	1.227,593
8+410			6.878.795,3596	592.168,4762	1.225,998	186°52'31"	1.227,371
8+416,685	ET66		6.878.796,1334	592.161,8361	1.225,851	186°32'01"	1.227,229
8+420			6.878.796,5107	592.158,5424	1.225,831	186°32'01"	1.227,160
8+440			6.878.798,7864	592.138,6723	1.225,734	186°32'01"	1.226,773
8+460			6.878.801,0622	592.118,8022	1.225,673	186°32'01"	1.226,433
8+480		PTV35	6.878.803,3380	592.098,9321	1.225,922	186°32'01"	1.226,140
8+500			6.878.805,6137	592.079,0620	1.226,866	186°32'01"	1.225,870
8+506,616	TE67		6.878.806,3665	592.072,4893	1.227,122	186°32'01"	1.225,781
8+520			6.878.807,9234	592.059,1959	1.227,641	186°58'21"	1.225,600
8+536,616	EC67		6.878.810,1617	592.042,7323	1.228,319	188°44'15"	1.225,376
8+540			6.878.810,6903	592.039,3896	1.228,240	189°14'05"	1.225,330
8+546,852	CE67		6.878.811,8492	592.032,6367	1.228,028	190°14'28"	1.225,238
8+560			6.878.814,3728	592.019,7332	1.227,581	191°44'58"	1.225,060
8+576,852	ET67		6.878.817,9378	592.003,2630	1.226,744	192°26'42"	1.224,833
8+580			6.878.818,6162	592.000,1887	1.226,540	192°26'42"	1.224,790
8+585,041	TE68		6.878.819,7026	591.995,2658	1.226,212	192°26'42"	1.224,722
8+590			6.878.820,7746	591.990,4241	1.225,870	192°33'44"	1.224,655
8+600			6.878.823,0169	591.980,6792	1.225,276	193°30'48"	1.224,520
8+610			6.878.825,5015	591.970,9929	1.224,929	195°25'09"	1.224,385
8+615,041	EC68		6.878.826,8961	591.966,1488	1.224,805	196°44'32"	1.224,317
8+620			6.878.828,3832	591.961,4184	1.224,608	198°09'46"	1.224,250
8+630			6.878.831,7367	591.951,9983	1.224,150	201°01'39"	1.224,115
8+640			6.878.835,5566	591.942,7581	1.223,946	203°53'32"	1.223,980
8+643,105	CE68		6.878.836,8363	591.939,9287	1.223,905	204°46'55"	1.223,938
8+650			6.878.839,8215	591.933,7137	1.223,823	206°25'00"	1.223,845
8+660			6.878.844,3792	591.924,8134	1.223,701	207°34'39"	1.223,710
8+663,105	TE69		6.878.845,8191	591.922,0620	1.223,656	207°38'48"	1.223,668
8+670			6.878.849,0029	591.915,9461	1.223,567	207°12'31"	1.223,575
8+680			6.878.853,4278	591.906,9795	1.223,416	205°00'58"	1.223,440
8+683,105	EC69		6.878.854,7148	591.904,1556	1.223,324	203°57'36"	1.223,398
8+690			6.878.857,3742	591.897,7947	1.223,132	201°25'06"	1.223,305
8+691,118	CE69		6.878.857,7786	591.896,7528	1.223,102	201°00'23"	1.223,290
8+700			6.878.860,7476	591.888,3826	1.222,674	198°13'00"	1.223,170
8+710			6.878.863,6919	591.878,8264	1.222,058	196°14'09"	1.223,035
8+720			6.878.866,4075	591.869,2023	1.221,692	195°29'03"	1.222,900
8+721,118	TE70		6.878.866,7059	591.868,1248	1.221,690	195°28'35"	1.222,885
8+730			6.878.869,0614	591.859,5609	1.221,678	195°10'56"	1.222,765
8+740			6.878.871,6034	591.849,8895	1.221,751	194°08'49"	1.222,630
8+750			6.878.873,9070	591.840,1589	1.221,988	192°21'57"	1.222,495
8+751,118	EC70		6.878.874,1434	591.839,0685	1.222,013	192°07'13"	1.222,480
8+760			6.878.875,8574	591.830,3538	1.222,412	190°07'58"	1.222,360

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Estaca	PNH	PNV	Norte	Este	Cota	Az. Seção	Grade
8+768,861	CE70		6.878.877,2651	591.821,6059	1.223,197	188°09'01"	1.222,240
8+770			6.878.877,4241	591.820,4781	1.223,309	187°54'01"	1.222,225
8+780			6.878.878,6338	591.810,5518	1.223,946	186°07'14"	1.222,090
8+790			6.878.879,5994	591.800,5988	1.224,002	185°05'12"	1.221,955
8+798,861	ET70		6.878.880,3550	591.791,7701	1.223,893	184°47'38"	1.221,835
8+800			6.878.880,4502	591.790,6350	1.223,846	184°47'38"	1.221,820
8+820			6.878.882,1217	591.770,7049	1.222,948	184°47'38"	1.221,550
8+826,506	TE71		6.878.882,6654	591.764,2222	1.222,697	184°47'38"	1.221,462
8+830			6.878.882,9585	591.760,7405	1.222,562	184°50'55"	1.221,415
8+840			6.878.883,8569	591.750,7805	1.222,307	185°36'33"	1.221,280
8+850			6.878.884,9649	591.740,8429	1.222,243	187°15'53"	1.221,145
8+860			6.878.886,4371	591.730,9522	1.222,244	189°48'57"	1.221,010
8+866,506	EC71		6.878.887,6620	591.724,5635	1.222,286	191°57'21"	1.220,922
8+870			6.878.888,4231	591.721,1534	1.222,224	193°12'26"	1.220,875
8+877,502	CE71		6.878.890,3078	591.713,8922	1.221,966	195°53'38"	1.220,774
8+880			6.878.891,0102	591.711,4951	1.221,798	196°45'37"	1.220,740
8+890			6.878.894,1482	591.702,0012	1.221,201	199°40'12"	1.220,605
8+900			6.878.897,6912	591.692,6506	1.220,776	201°41'05"	1.220,470
8+910			6.878.901,4888	591.683,3998	1.220,293	202°48'14"	1.220,335
8+917,502	ET71		6.878.904,4166	591.676,4927	1.219,986	203°03'21"	1.220,234
8+920			6.878.905,3949	591.674,1943	1.219,948	203°03'21"	1.220,200
8+935			6.878.911,2693	591.660,3924	1.219,711	203°03'21"	1.219,998
8+940			6.878.913,2274	591.655,7918	1.219,662	203°03'21"	1.219,930
8+955			6.878.919,1019	591.641,9899	1.219,545	203°03'21"	1.219,728
8+960			6.878.921,0600	591.637,3894	1.219,587	203°03'21"	1.219,660
8+980			6.878.928,8925	591.618,9869	1.219,732	203°03'21"	1.219,390
9			6.878.936,7250	591.600,5844	1.219,601	203°03'21"	1.219,120
9+20		PCV36	6.878.944,5576	591.582,1819	1.219,117	203°03'21"	1.218,850
9+40			6.878.952,3901	591.563,7794	1.218,739	203°03'21"	1.218,424
9+60			6.878.960,2227	591.545,3770	1.218,126	203°03'21"	1.217,685
9+80			6.878.968,0552	591.526,9745	1.217,274	203°03'21"	1.216,634
9+100		PCCV37	6.878.975,8878	591.508,5720	1.215,283	203°03'21"	1.215,270
9+120			6.878.983,7203	591.490,1695	1.212,910	203°03'21"	1.213,885
9+128,979	TE72		6.878.987,2367	591.481,9078	1.212,363	203°03'21"	1.213,351
9+130			6.878.987,6365	591.480,9684	1.212,301	203°03'39"	1.213,294
9+140			6.878.991,5870	591.471,7817	1.211,836	203°38'09"	1.212,770
9+145			6.878.993,6157	591.467,2119	1.211,723	204°16'53"	1.212,533
9+150			6.878.995,7053	591.462,6696	1.211,613	205°09'56"	1.212,314
9+160			6.879.000,1402	591.453,7075	1.211,453	207°39'02"	1.211,925
9+165			6.879.002,5206	591.449,3108	1.211,413	209°15'03"	1.211,756
9+168,979	EC72		6.879.004,5076	591.445,8636	1.211,384	210°41'43"	1.211,633
9+170			6.879.005,0318	591.444,9874	1.211,378	211°05'07"	1.211,604
9+180		PTV37	6.879.010,4765	591.436,6017	1.211,435	214°54'18"	1.211,350
9+181,784	CE72		6.879.011,5059	591.435,1450	1.211,481	215°35'11"	1.211,311
9+190			6.879.016,4554	591.428,5882	1.211,711	218°24'08"	1.211,130
9+200			6.879.022,8509	591.420,9014	1.211,815	220°57'36"	1.210,910
9+210			6.879.029,5211	591.413,4519	1.211,693	222°33'46"	1.210,690
9+220			6.879.036,3369	591.406,1341	1.211,315	223°12'38"	1.210,470

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Estaca	PNH	PNV	Norte	Este	Cota	Az. Seção	Grade
9+221,784	ET72		6.879.037,5584	591.404,8343	1.211,186	223°13'33"	1.210,431
9+240		PCV38	6.879.050,0343	591.391,5608	1.209,855	223°13'33"	1.210,030
9+260			6.879.063,7318	591.376,9876	1.208,570	223°13'33"	1.209,795
9+280			6.879.077,4293	591.362,4143	1.208,575	223°13'33"	1.209,970
9+297,251	TE73		6.879.089,2441	591.349,8441	1.208,604	223°13'33"	1.210,450
9+300			6.879.091,1253	591.347,8397	1.208,721	223°05'40"	1.210,555
9+305			6.879.094,5168	591.344,1657	1.208,929	222°10'59"	1.210,765
9+310			6.879.097,8210	591.340,4133	1.209,186	220°24'13"	1.211,001
9+315			6.879.100,9776	591.336,5363	1.209,595	217°45'22"	1.211,263
9+320		PCCV39	6.879.103,9210	591.332,4956	1.210,169	214°14'26"	1.211,550
9+325			6.879.106,5790	591.328,2619	1.210,744	209°51'24"	1.211,843
9+327,251	EC73		6.879.107,6613	591.326,2884	1.211,016	207°35'59"	1.211,970
9+330			6.879.108,8735	591.323,8214	1.211,379	204°44'09"	1.212,121
9+335			6.879.110,7565	591.319,1914	1.212,018	199°31'38"	1.212,384
9+340			6.879.112,2114	591.314,4096	1.212,561	194°19'07"	1.212,633
9+340,691	CE73		6.879.112,3781	591.313,7392	1.212,629	193°35'56"	1.212,667
9+345			6.879.113,2342	591.309,5171	1.213,049	189°25'57"	1.212,868
9+350			6.879.113,8734	591.304,5592	1.213,524	185°24'21"	1.213,088
9+355			6.879.114,2008	591.299,5705	1.213,967	182°14'51"	1.213,293
9+360			6.879.114,2906	591.294,5715	1.214,313	179°57'26"	1.213,483
9+365			6.879.114,2185	591.289,5723	1.214,626	178°32'06"	1.213,659
9+370			6.879.114,0602	591.284,5748	1.214,862	177°58'52"	1.213,821
9+370,691	ET73		6.879.114,0358	591.283,8843	1.214,894	177°58'22"	1.213,842
9+380			6.879.113,7065	591.274,5809	1.215,331	177°58'22"	1.214,100
9+400			6.879.112,9991	591.254,5934	1.215,815	177°58'22"	1.214,483
9+419,985	TE74		6.879.112,2921	591.234,6213	1.215,416	177°58'22"	1.214,633
9+420			6.879.112,2916	591.234,6060	1.215,416	177°58'22"	1.214,633
9+440		PTV39	6.879.111,6258	591.214,6171	1.214,596	178°19'53"	1.214,550
9+459,985	EC74		6.879.111,2103	591.194,6370	1.213,204	179°24'19"	1.214,350
9+460			6.879.111,2102	591.194,6217	1.213,203	179°24'23"	1.214,350
9+472,572	CE74		6.879.111,1787	591.182,0499	1.212,245	180°18'24"	1.214,224
9+480			6.879.111,2508	591.174,6222	1.212,008	180°47'21"	1.214,150
9+500			6.879.111,6882	591.154,6272	1.211,884	181°35'51"	1.213,950
9+512,572	ET74		6.879.112,0594	591.142,0607	1.212,140	181°44'21"	1.213,824
9+520			6.879.112,2848	591.134,6361	1.212,515	181°44'21"	1.213,750
9+540			6.879.112,8918	591.114,6453	1.213,751	181°44'21"	1.213,550
9+545,844	TE75		6.879.113,0691	591.108,8040	1.214,014	181°44'21"	1.213,492
9+550			6.879.113,1992	591.104,6500	1.213,988	181°54'14"	1.213,450
9+555			6.879.113,3896	591.099,6537	1.213,898	182°32'23"	1.213,400
9+560			6.879.113,6562	591.094,6608	1.213,887	183°39'10"	1.213,350
9+565			6.879.114,0405	591.089,6758	1.213,973	185°14'36"	1.213,300
9+570			6.879.114,5837	591.084,7057	1.213,714	187°18'40"	1.213,250
9+575			6.879.115,3265	591.079,7616	1.213,842	189°51'24"	1.213,200
9+575,844	EC75		6.879.115,4744	591.078,9306	1.213,772	190°20'00"	1.213,192
9+580		PCV40	6.879.116,3046	591.074,8587	1.213,907	192°42'53"	1.213,150
9+585			6.879.117,5266	591.070,0109	1.213,671	195°34'46"	1.213,091
9+590			6.879.118,9893	591.065,2301	1.213,742	198°26'39"	1.213,015
9+595			6.879.120,6891	591.060,5285	1.213,795	201°18'32"	1.212,920

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Estaca	PNH	PNV	Norte	Este	Cota	Az. Seção	Grade
9+596,420	CE75		6.879.121,2145	591.059,2091	1.213,819	202°07'22"	1.212,890
9+600			6.879.122,6194	591.055,9167	1.213,860	204°03'05"	1.212,808
9+605			6.879.124,7508	591.051,3939	1.213,898	206°20'09"	1.212,679
9+610			6.879.127,0424	591.046,9502	1.213,853	208°08'33"	1.212,531
9+615			6.879.129,4547	591.042,5707	1.213,746	209°28'18"	1.212,366
9+620			6.879.131,9498	591.038,2381	1.213,526	210°19'24"	1.212,183
9+625			6.879.134,4914	591.033,9320	1.213,308	210°41'52"	1.211,983
9+626,420	ET75		6.879.135,2166	591.032,7111	1.213,246	210°43'02"	1.211,923
9+640			6.879.142,1531	591.021,0366	1.212,384	210°43'02"	1.211,275
9+660			6.879.152,3691	591.003,8426	1.210,391	210°43'02"	1.210,083
9+675,790	TE76		6.879.160,4348	590.990,2677	1.209,942	210°43'02"	1.208,942
9+680			6.879.162,5911	590.986,6521	1.209,229	210°59'57"	1.208,608
9+685			6.879.165,2011	590.982,3872	1.208,344	212°04'02"	1.208,195
9+690			6.879.167,9193	590.978,1909	1.208,191	213°55'51"	1.207,765
9+695			6.879.170,8008	590.974,1052	1.207,619	216°35'25"	1.207,316
9+700		PTV40	6.879.173,8958	590.970,1795	1.207,286	220°02'43"	1.206,850
9+705			6.879.177,2476	590.966,4706	1.206,866	224°17'48"	1.206,375
9+705,790	EC76		6.879.177,8029	590.965,9087	1.206,796	225°02'28"	1.206,300
9+710			6.879.180,8838	590.963,0409	1.206,413	229°03'41"	1.205,900
9+715			6.879.184,7930	590.959,9257	1.205,936	233°50'09"	1.205,425
9+719,126	CE76		6.879.188,2052	590.957,6073	1.205,519	237°46'34"	1.205,033
9+720			6.879.188,9476	590.957,1468	1.205,428	238°35'48"	1.204,950
9+725			6.879.193,3097	590.954,7046	1.204,915	242°46'11"	1.204,475
9+730			6.879.197,8215	590.952,5511	1.204,457	246°03'01"	1.204,000
9+735			6.879.202,4345	590.950,6232	1.204,056	248°26'19"	1.203,525
9+740		PCV41	6.879.207,1100	590.948,8528	1.203,552	249°56'05"	1.203,050
9+745			6.879.211,8180	590.947,1682	1.203,003	250°32'21"	1.202,582
9+745,886	TE77		6.879.212,6534	590.946,8731	1.202,899	250°33'11"	1.202,500
9+750			6.879.216,5307	590.945,4976	1.202,411	250°17'40"	1.202,126
9+755			6.879.221,2247	590.943,7755	1.201,762	249°17'02"	1.201,684
9+760			6.879.225,8749	590.941,9400	1.201,081	247°30'35"	1.201,256
9+765			6.879.230,4534	590.939,9306	1.200,495	244°58'16"	1.200,840
9+770			6.879.234,9229	590.937,6908	1.199,950	241°40'07"	1.200,438
9+770,886	EC77		6.879.235,6984	590.937,2665	1.199,849	241°00'14"	1.200,368
9+775			6.879.239,2402	590.935,1746	1.199,502	237°51'39"	1.200,049
9+780			6.879.243,3819	590.932,3758	1.199,021	234°02'29"	1.199,673
9+783,769	CE77		6.879.246,3760	590.930,0869	1.198,632	231°09'43"	1.199,398
9+785			6.879.247,3285	590.929,3071	1.198,505	230°14'27"	1.199,310
9+790			6.879.251,0737	590.925,9955	1.198,035	226°53'47"	1.198,961
9+795			6.879.254,6389	590.922,4906	1.197,768	224°11'18"	1.198,624
9+800			6.879.258,0549	590.918,8401	1.197,337	222°07'01"	1.198,301
9+805			6.879.261,3580	590.915,0864	1.197,041	220°40'55"	1.197,992
9+810			6.879.264,5873	590.911,2692	1.196,759	219°53'02"	1.197,695
9+813,769	ET77		6.879.266,9980	590.908,3720	1.196,542	219°42'10"	1.197,480
9+820			6.879.270,9783	590.903,5782	1.196,205	219°42'10"	1.197,141
9+840			6.879.283,7544	590.888,1908	1.195,373	219°42'10"	1.196,193
9+851,639	TE78		6.879.291,1893	590.879,2364	1.194,984	219°42'10"	1.195,738
9+860			6.879.296,5222	590.872,7966	1.194,773	219°28'49"	1.195,456

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Estaca	PNH	PNV	Norte	Este	Cota	Az. Seção	Grade
9+870			6.879.302,8298	590.865,0373	1.194,515	218°37'47"	1.195,166
9+880		PTV41	6.879.308,9781	590.857,1507	1.194,457	217°08'33"	1.194,930
9+881,639	EC78		6.879.309,9641	590.855,8418	1.194,456	216°50'17"	1.194,896
9+890			6.879.314,8831	590.849,0812	1.194,484	215°14'29"	1.194,720
9+900			6.879.320,5163	590.840,8190	1.194,521	213°19'53"	1.194,510
9+910			6.879.325,8707	590.832,3742	1.194,545	211°25'18"	1.194,300
9+920			6.879.330,9410	590.823,7551	1.194,666	209°30'42"	1.194,090
9+930			6.879.335,7209	590.814,9723	1.194,825	207°36'07"	1.193,880
9+931,424	CE78		6.879.336,3777	590.813,7088	1.194,847	207°19'48"	1.193,850
9+940			6.879.340,2162	590.806,0397	1.194,834	205°55'34"	1.193,670
9+950			6.879.344,4975	590.797,0030	1.194,844	204°52'50"	1.193,460
9+960			6.879.348,6641	590.787,9121	1.194,492	204°28'18"	1.193,250
9+961,424	ET78		6.879.349,2538	590.786,6163	1.194,433	204°27'54"	1.193,220
9+971,996	TE79		6.879.353,6321	590.776,9934	1.193,986	204°27'54"	1.192,998
9+975			6.879.354,8750	590.774,2586	1.193,882	204°23'36"	1.192,935
9+980			6.879.356,9253	590.769,6981	1.193,710	203°57'19"	1.192,830
9+985			6.879.358,9246	590.765,1154	1.193,539	203°07'10"	1.192,725
9+990			6.879.360,8408	590.760,4973	1.193,371	201°53'08"	1.192,620
9+995			6.879.362,6410	590.755,8328	1.193,175	200°15'14"	1.192,515
10			6.879.364,2913	590.751,1131	1.192,961	198°13'28"	1.192,410
10+5			6.879.365,7566	590.746,3332	1.192,702	195°47'49"	1.192,305
10+10			6.879.367,0014	590.741,4912	1.192,448	192°58'18"	1.192,200
10+11,996	EC79		6.879.367,4286	590.739,5414	1.192,354	191°43'58"	1.192,158
10+15			6.879.367,9902	590.736,5906	1.192,281	189°49'13"	1.192,095
10+20			6.879.368,7058	590.731,6425	1.192,153	186°38'13"	1.191,990
10+25			6.879.369,1455	590.726,6627	1.192,030	183°27'15"	1.191,885
10+30			6.879.369,3080	590.721,6660	1.191,939	180°16'16"	1.191,780
10+35			6.879.369,1927	590.716,6679	1.191,820	177°05'16"	1.191,675
10+40			6.879.368,8002	590.711,6838	1.191,647	173°54'17"	1.191,570
10+44,974	CE79		6.879.368,1356	590.706,7549	1.191,543	170°44'17"	1.191,466
10+45			6.879.368,1314	590.706,7292	1.191,543	170°43'17"	1.191,465
10+50			6.879.367,1944	590.701,8184	1.191,441	167°44'22"	1.191,360
10+55			6.879.366,0200	590.696,9587	1.191,288	165°09'19"	1.191,255
10+60			6.879.364,6443	590.692,1522	1.191,116	162°58'08"	1.191,150
10+65			6.879.363,1027	590.687,3958	1.190,935	161°10'50"	1.191,045
10+70			6.879.361,4298	590.682,6841	1.190,738	159°47'24"	1.190,940
10+75			6.879.359,6592	590.678,0082	1.190,542	158°47'50"	1.190,835
10+80			6.879.357,8241	590.673,3573	1.190,372	158°12'09"	1.190,730
10+84,974	ET79		6.879.355,9664	590.668,7430	1.190,248	158°00'20"	1.190,626
10+100			6.879.350,3390	590.654,8108	1.189,975	158°00'20"	1.190,310
10+115			6.879.344,7212	590.640,9023	1.189,775	158°00'20"	1.189,995
10+120			6.879.342,8487	590.636,2664	1.189,765	158°00'20"	1.189,890
10+135			6.879.337,2309	590.622,3579	1.189,698	158°00'20"	1.189,575
10+140			6.879.335,3584	590.617,7220	1.189,661	158°00'20"	1.189,470
10+160			6.879.327,8681	590.599,1776	1.189,252	158°00'20"	1.189,050
10+180			6.879.320,3778	590.580,6332	1.189,260	158°00'20"	1.188,630
10+185			6.879.318,5051	590.575,9969	1.189,200	158°00'20"	1.188,525
10+200			6.879.312,8875	590.562,0887	1.188,942	158°00'20"	1.188,210

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Estaca	PNH	PNV	Norte	Este	Cota	Az. Seção	Grade
10+205			6.879.311,0148	590.557,4525	1.188,863	158°00'20"	1.188,105
10+220			6.879.305,3972	590.543,5443	1.188,649	158°00'20"	1.187,790
10+240			6.879.297,9068	590.524,9999	1.188,308	158°00'20"	1.187,370
10+260			6.879.290,4165	590.506,4555	1.188,012	158°00'20"	1.186,950
10+280			6.879.282,9262	590.487,9111	1.187,828	158°00'20"	1.186,530
10+300			6.879.275,4359	590.469,3667	1.187,049	158°00'20"	1.186,110
10+305,135	TE80		6.879.273,5128	590.464,6054	1.186,893	158°00'20"	1.186,002
10+320			6.879.267,9869	590.450,8057	1.186,486	158°31'13"	1.185,690
10+335,135	EC80		6.879.262,6180	590.436,6555	1.186,023	160°06'07"	1.185,372
10+340			6.879.260,9894	590.432,0713	1.185,810	160°46'54"	1.185,270
10+356,966	CE80		6.879.255,7377	590.415,9397	1.184,844	163°09'09"	1.184,914
10+360			6.879.254,8688	590.413,0328	1.184,718	163°33'19"	1.184,850
10+380			6.879.249,5244	590.393,7608	1.184,044	165°08'09"	1.184,430
10+386,966	TE81		6.879.247,7463	590.387,0255	1.183,856	165°14'56"	1.184,284
10+390			6.879.246,9744	590.384,0914	1.183,771	165°17'14"	1.184,220
10+400			6.879.244,4793	590.374,4077	1.183,573	165°57'15"	1.184,010
10+410			6.879.242,1676	590.364,6789	1.183,378	167°27'05"	1.183,800
10+417,636	EC81		6.879.240,6148	590.357,2050	1.183,260	169°09'14"	1.183,640
10+420			6.879.240,1822	590.354,8809	1.183,227	169°45'21"	1.183,590
10+430			6.879.238,6230	590.345,0041	1.183,042	172°18'08"	1.183,380
10+440		PCV42	6.879.237,5041	590.335,0677	1.182,981	174°50'56"	1.183,170
10+450			6.879.236,8279	590.325,0914	1.182,877	177°23'43"	1.182,941
10+460			6.879.236,5955	590.315,0949	1.182,711	179°56'30"	1.182,675
10+464,401	CE81		6.879.236,6341	590.310,6946	1.182,669	181°03'44"	1.182,546
10+470			6.879.236,8032	590.305,0983	1.182,654	182°21'18"	1.182,371
10+480			6.879.237,3700	590.295,1143	1.182,607	184°00'07"	1.182,030
10+490			6.879.238,1496	590.285,1452	1.182,661	184°47'59"	1.181,651
10+494,401	ET81		6.879.238,5220	590.280,7600	1.182,693	184°52'55"	1.181,473
10+500			6.879.238,9986	590.275,1809	1.182,647	184°52'55"	1.181,235
10+520			6.879.240,7007	590.255,2535	1.182,180	184°52'55"	1.180,290
10+540		PTV42	6.879.242,4028	590.235,3260	1.180,892	184°52'55"	1.179,195
10+560			6.879.244,1048	590.215,3986	1.178,139	184°52'55"	1.178,025
10+580			6.879.245,8069	590.195,4711	1.176,091	184°52'55"	1.176,855
10+581,129	TE82		6.879.245,9030	590.194,3466	1.176,003	184°52'55"	1.176,789
10+590			6.879.246,6708	590.185,5089	1.175,417	185°07'57"	1.176,270
10+600			6.879.247,6330	590.175,5551	1.175,012	186°00'56"	1.175,685
10+610			6.879.248,8035	590.165,6244	1.174,609	187°32'07"	1.175,100
10+611,129	EC82		6.879.248,9536	590.164,5054	1.174,567	187°44'49"	1.175,034
10+620			6.879.250,2792	590.155,7341	1.174,241	189°26'28"	1.174,515
10+626,442	CE82		6.879.251,4041	590.149,3907	1.174,009	190°40'18"	1.174,138
10+630			6.879.252,0829	590.145,8981	1.173,761	191°18'39"	1.173,930
10+640		PCV43	6.879.254,1698	590.136,1190	1.173,304	192°40'33"	1.173,345
10+650			6.879.256,4352	590.126,3785	1.172,882	193°24'15"	1.172,799
10+656,442	ET82		6.879.257,9382	590.120,1143	1.172,498	193°32'11"	1.172,489
10+660			6.879.258,7709	590.116,6556	1.172,242	193°32'11"	1.172,332
10+680			6.879.263,4521	590.097,2112	1.171,185	193°32'11"	1.171,632
10+700			6.879.268,1334	590.077,7668	1.170,617	193°32'11"	1.171,245
10+720			6.879.272,8146	590.058,3223	1.170,124	193°32'11"	1.171,172

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Estaca	PNH	PNV	Norte	Este	Cota	Az. Seção	Grade
10+721,085	TE83		6.879.273,0685	590.057,2677	1.170,103	193°32'11"	1.171,177
10+725			6.879.273,9818	590.053,4607	1.170,024	193°23'57"	1.171,202
10+730			6.879.275,1193	590.048,5918	1.169,954	192°49'29"	1.171,253
10+735			6.879.276,1888	590.043,7076	1.169,918	191°48'10"	1.171,322
10+740			6.879.277,1519	590.038,8011	1.169,897	190°20'00"	1.171,412
10+745			6.879.277,9695	590.033,8689	1.169,839	188°24'58"	1.171,521
10+750			6.879.278,6022	590.028,9095	1.169,792	186°03'05"	1.171,649
10+755			6.879.279,0104	590.023,9267	1.169,784	183°14'20"	1.171,797
10+760			6.879.279,1540	590.018,9291	1.169,839	179°58'43"	1.171,965
10+761,085	EC83		6.879.279,1464	590.017,8444	1.169,865	179°12'45"	1.172,004
10+765			6.879.278,9968	590.013,9327	1.169,963	176°24'31"	1.172,152
10+770			6.879.278,5279	590.008,9555	1.170,146	172°49'39"	1.172,359
10+775			6.879.277,7490	590.004,0174	1.170,367	169°14'47"	1.172,586
10+779,474	CE83		6.879.276,7918	589.999,6476	1.170,810	166°02'32"	1.172,805
10+780			6.879.276,6632	589.999,1373	1.170,867	165°40'04"	1.172,832
10+785			6.879.275,2832	589.994,3325	1.171,332	162°21'29"	1.173,097
10+790			6.879.273,6464	589.989,6086	1.172,009	159°29'44"	1.173,383
10+795			6.879.271,7939	589.984,9648	1.172,755	157°04'50"	1.173,687
10+800			6.879.269,7649	589.980,3949	1.173,561	155°06'48"	1.174,012
10+805			6.879.267,5981	589.975,8893	1.174,321	153°35'38"	1.174,356
10+810			6.879.265,3298	589.971,4336	1.174,944	152°31'19"	1.174,719
10+815			6.879.262,9957	589.967,0118	1.175,557	151°53'51"	1.175,102
10+819,474	ET83		6.879.260,8800	589.963,0697	1.176,106	151°43'06"	1.175,462
10+820		PTV43	6.879.260,6306	589.962,6062	1.176,171	151°43'06"	1.175,505
10+840			6.879.251,1545	589.944,9936	1.178,834	151°43'06"	1.177,155
10+860			6.879.241,6784	589.927,3810	1.180,559	151°43'06"	1.178,805
10+862,691	TE84		6.879.240,4036	589.925,0117	1.180,739	151°43'06"	1.179,027
10+880			6.879.232,3723	589.909,6792	1.181,153	153°37'33"	1.180,455
10+892,691	EC84		6.879.227,0836	589.898,1458	1.181,426	157°26'52"	1.181,502
10+900			6.879.224,4458	589.891,3297	1.181,568	160°14'24"	1.182,105
10+910			6.879.221,3812	589.881,8132	1.181,758	164°03'34"	1.182,930
10+920			6.879.218,9571	589.872,1130	1.181,927	167°52'46"	1.183,755
10+923,736	CE84		6.879.218,2182	589.868,4509	1.181,974	169°18'23"	1.184,063
10+930			6.879.217,1758	589.862,2747	1.182,108	171°26'57"	1.184,580
10+940			6.879.215,9135	589.852,3553	1.182,371	173°50'05"	1.185,405
10+950			6.879.214,9546	589.842,4016	1.182,978	174°56'49"	1.186,230
10+953,736	ET84		6.879.214,6294	589.838,6798	1.183,361	175°02'09"	1.186,538
10+959,418	TE85		6.879.214,1377	589.833,0191	1.183,943	175°02'09"	1.187,007
10+960			6.879.214,0873	589.832,4392	1.184,003	175°02'15"	1.187,055
10+970			6.879.213,2548	589.822,4741	1.185,255	175°34'14"	1.187,880
10+980			6.879.212,5982	589.812,4958	1.186,885	177°03'31"	1.188,705
10+989,418	EC85		6.879.212,2901	589.803,0836	1.188,359	179°19'59"	1.189,482
10+990			6.879.212,2842	589.802,5016	1.188,446	179°29'59"	1.189,530
11			6.879.212,4468	589.792,5039	1.189,810	182°21'53"	1.190,355
11+2,335	CE85		6.879.212,5568	589.790,1715	1.190,085	183°02'01"	1.190,548
11+10			6.879.213,0965	589.782,5259	1.190,767	184°56'56"	1.191,180
11+20			6.879.214,1168	589.772,5784	1.191,154	186°36'15"	1.192,005
11+30			6.879.215,3414	589.762,6537	1.191,453	187°18'17"	1.192,830

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Estaca	PNH	PNV	Norte	Este	Cota	Az. Seção	Grade
11+32,335	ET85		6.879.215,6390	589.760,3378	1.191,580	187°19'51"	1.193,023
11+37,241	TE86		6.879.216,2650	589.755,4715	1.191,830	187°19'51"	1.193,427
11+40			6.879.216,6163	589.752,7352	1.191,970	187°16'56"	1.193,655
11+50			6.879.217,8167	589.742,8074	1.192,570	186°17'40"	1.194,480
11+60			6.879.218,7351	589.732,8506	1.193,364	184°02'00"	1.195,305
11+67,241	EC86		6.879.219,0980	589.725,6189	1.194,065	181°36'04"	1.195,902
11+70			6.879.219,1497	589.722,8605	1.194,432	180°32'50"	1.196,130
11+80			6.879.218,9120	589.712,8654	1.195,900	176°43'40"	1.196,955
11+90			6.879.218,0089	589.702,9079	1.197,708	172°54'28"	1.197,780
11+100			6.879.216,4445	589.693,0332	1.198,606	169°05'18"	1.198,605
11+110			6.879.214,2257	589.683,2840	1.199,811	165°16'06"	1.199,430
11+115,912	CE86		6.879.212,6103	589.677,5981	1.200,671	163°00'38"	1.199,918
11+120			6.879.211,3650	589.673,7042	1.201,226	161°33'19"	1.200,255
11+130			6.879.207,9645	589.664,3014	1.202,656	158°53'34"	1.201,080
11+140			6.879.204,2333	589.655,0235	1.204,142	157°30'12"	1.201,905
11+145,912	TE87		6.879.201,9572	589.649,5676	1.205,028	157°16'52"	1.202,393
11+150			6.879.200,3797	589.645,7962	1.205,638	157°20'27"	1.202,730
11+160		PCV44	6.879.196,5700	589.636,5500	1.206,981	157°59'34"	1.203,555
11+170			6.879.192,9244	589.627,2389	1.208,124	159°21'44"	1.204,360
11+175,912	EC87		6.879.190,8949	589.621,6885	1.208,649	160°30'33"	1.204,817
11+180			6.879.189,5605	589.617,8242	1.208,901	161°23'20"	1.205,124
11+190			6.879.186,5478	589.608,2897	1.209,397	163°32'28"	1.205,849
11+193,970	CE87		6.879.185,4515	589.604,4742	1.209,561	164°23'43"	1.206,125
11+200			6.879.183,8908	589.598,6494	1.209,728	165°33'46"	1.206,533
11+210			6.879.181,5230	589.588,9344	1.209,901	166°55'25"	1.207,177
11+220			6.879.179,3254	589.579,1785	1.210,005	167°34'01"	1.207,780
11+223,970	ET87		6.879.178,4733	589.575,3014	1.210,042	167°37'25"	1.208,008
11+240			6.879.175,0374	589.559,6436	1.210,169	167°37'25"	1.208,866
11+244,802	TE88		6.879.174,0082	589.554,9534	1.210,223	167°37'25"	1.209,103
11+260			6.879.170,7864	589.540,1006	1.210,302	168°02'14"	1.209,791
11+280			6.879.166,9088	589.520,4809	1.210,404	169°50'30"	1.210,555
11+284,802	EC88		6.879.166,0881	589.515,7499	1.210,420	170°29'18"	1.210,714
11+298,170	CE88		6.879.164,0997	589.502,5312	1.210,376	172°24'11"	1.211,109
11+300			6.879.163,8618	589.500,7165	1.210,371	172°39'33"	1.211,158
11+315			6.879.162,1769	589.485,8122	1.210,307	174°18'24"	1.211,504
11+320			6.879.161,6976	589.480,8350	1.210,323	174°40'37"	1.211,599
11+335			6.879.160,3982	589.465,8917	1.210,652	175°15'00"	1.211,825
11+338,170	ET88		6.879.160,1364	589.462,7325	1.210,722	175°16'05"	1.211,861
11+340		PTV44	6.879.159,9854	589.460,9085	1.210,763	175°16'05"	1.211,880
11+360			6.879.158,3355	589.440,9767	1.211,664	175°16'05"	1.212,080
11+380			6.879.156,6856	589.421,0449	1.211,930	175°16'05"	1.212,280
11+385			6.879.156,2731	589.416,0621	1.211,946	175°16'05"	1.212,330
11+400			6.879.155,0356	589.401,1131	1.212,267	175°16'05"	1.212,480
11+405			6.879.154,6232	589.396,1303	1.212,352	175°16'05"	1.212,530
11+420			6.879.153,3857	589.381,1812	1.212,594	175°16'05"	1.212,680
11+440			6.879.151,7358	589.361,2494	1.212,745	175°16'05"	1.212,880
11+460			6.879.150,0859	589.341,3176	1.212,830	175°16'05"	1.213,080
11+480			6.879.148,4359	589.321,3857	1.212,855	175°16'05"	1.213,280

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11+500			6.879.146,7860	589.301,4539	1.213,488	175°16'05"	1.213,480
11+516,276	TE89		6.879.145,4433	589.285,2331	1.213,816	175°16'05"	1.213,643
11+520			6.879.145,1370	589.281,5220	1.213,851	175°18'43"	1.213,680
11+530			6.879.144,3588	589.271,5521	1.213,925	175°52'03"	1.213,780
11+540			6.879.143,7327	589.261,5721	1.214,004	177°03'34"	1.213,880
11+546,276	EC89		6.879.143,4672	589.255,3016	1.214,085	178°07'58"	1.213,943
11+550			6.879.143,3690	589.251,5789	1.214,184	178°50'38"	1.213,980
11+560			6.879.143,3339	589.241,5797	1.214,651	180°45'14"	1.214,080
11+564,324	CE89		6.879.143,4219	589.237,2566	1.214,884	181°34'47"	1.214,123
11+570			6.879.143,6287	589.231,5844	1.215,326	182°33'40"	1.214,180
11+580		PCV45	6.879.144,1919	589.221,6006	1.215,755	183°47'29"	1.214,280
11+590			6.879.144,9141	589.211,6266	1.215,000	184°23'06"	1.214,370
11+594,324	ET89		6.879.145,2477	589.207,3155	1.214,598	184°26'40"	1.214,402
11+600			6.879.145,6875	589.201,6567	1.214,323	184°26'40"	1.214,438
11+620			6.879.147,2373	589.181,7168	1.214,796	184°26'40"	1.214,513
11+640			6.879.148,7872	589.161,7770	1.214,722	184°26'40"	1.214,505
11+660			6.879.150,3370	589.141,8371	1.214,579	184°26'40"	1.214,413
11+680			6.879.151,8868	589.121,8972	1.214,226	184°26'40"	1.214,238
11+700		PTV45	6.879.153,4367	589.101,9574	1.214,188	184°26'40"	1.213,980
11+720			6.879.154,9865	589.082,0175	1.213,600	184°26'40"	1.213,680
11+740			6.879.156,5363	589.062,0777	1.212,580	184°26'40"	1.213,380
11+760			6.879.158,0861	589.042,1378	1.212,051	184°26'40"	1.213,080
11+780			6.879.159,6360	589.022,1979	1.211,799	184°26'40"	1.212,780
11+800			6.879.161,1858	589.002,2581	1.211,676	184°26'40"	1.212,480
11+816,508	TE90		6.879.162,4651	588.985,7993	1.211,676	184°26'40"	1.212,232
11+820			6.879.162,7349	588.982,3181	1.211,677	184°24'20"	1.212,180
11+830			6.879.163,4652	588.972,3444	1.211,619	183°51'54"	1.212,030
11+840			6.879.164,0460	588.962,3619	1.211,524	182°41'16"	1.211,880
11+846,508	EC90		6.879.164,2908	588.955,8582	1.211,469	181°34'47"	1.211,782
11+850			6.879.164,3668	588.952,3671	1.211,443	180°54'46"	1.211,730
11+860			6.879.164,3594	588.942,3679	1.211,377	179°00'10"	1.211,580
11+870			6.879.164,0188	588.932,3738	1.211,409	177°05'35"	1.211,430
11+879,904	CE90		6.879.163,3534	588.922,4931	1.211,456	175°12'05"	1.211,281
11+880			6.879.163,3453	588.922,3974	1.211,456	175°11'00"	1.211,280
11+890			6.879.162,3587	588.912,4465	1.211,554	173°35'52"	1.211,130
11+900			6.879.161,1522	588.902,5197	1.211,665	172°38'56"	1.210,980
11+909,904	ET90		6.879.159,8493	588.892,7018	1.211,664	172°20'12"	1.210,831
11+920			6.879.158,5030	588.882,6959	1.211,658	172°20'12"	1.210,680
11+940			6.879.155,8360	588.862,8745	1.211,582	172°20'12"	1.210,380
11+960			6.879.153,1689	588.843,0532	1.211,529	172°20'12"	1.210,080
11+980			6.879.150,5019	588.823,2318	1.211,297	172°20'12"	1.209,780
12			6.879.147,8349	588.803,4104	1.210,573	172°20'12"	1.209,480
12+6,818	TE91		6.879.146,9257	588.796,6531	1.210,299	172°20'12"	1.209,378
12+20			6.879.145,1926	588.783,5857	1.209,773	172°39'44"	1.209,180
12+36,818	EC91		6.879.143,2171	588.766,8844	1.209,303	174°01'20"	1.208,928
12+40			6.879.142,8956	588.763,7188	1.209,223	174°22'48"	1.208,880
12+50,544	CE91		6.879.141,9715	588.753,2152	1.209,029	175°33'53"	1.208,722
12+60			6.879.141,3186	588.743,7823	1.208,866	176°27'36"	1.208,580

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Estaca	PNH	PNV	Norte	Este	Cota	Az. Seção	Grade
12+80			6.879.140,2648	588.723,8103	1.207,934	177°14'59"	1.208,280
12+80,544	TE92		6.879.140,2387	588.723,2664	1.207,908	177°15'01"	1.208,272
12+90			6.879.139,7647	588.713,8223	1.207,601	176°52'45"	1.208,130
12+100			6.879.139,1278	588.703,8433	1.207,281	175°40'44"	1.207,980
12+110			6.879.138,2098	588.693,8855	1.206,814	173°38'53"	1.207,830
12+110,544	EC92		6.879.138,1490	588.693,3471	1.206,770	173°30'49"	1.207,822
12+120			6.879.136,8881	588.683,9767	1.205,849	171°09'30"	1.207,680
12+130			6.879.135,1367	588.674,1316	1.205,294	168°40'01"	1.207,530
12+140		PCV46	6.879.132,9592	588.664,3728	1.204,168	166°10'34"	1.207,380
12+142,514	CE92		6.879.132,3450	588.661,9345	1.203,894	165°32'59"	1.207,343
12+150			6.879.130,3691	588.654,7143	1.203,845	163°55'03"	1.207,233
12+160			6.879.127,4658	588.645,1457	1.203,524	162°27'47"	1.207,093
12+170			6.879.124,3891	588.635,6304	1.203,284	161°50'21"	1.206,958
12+172,514	ET92		6.879.123,6048	588.633,2419	1.203,224	161°48'47"	1.206,925
12+180			6.879.121,2684	588.626,1303	1.203,058	161°48'47"	1.206,830
12+186,863	TE93		6.879.119,1262	588.619,6096	1.203,143	161°48'47"	1.206,746
12+200			6.879.115,0499	588.607,1216	1.203,225	162°08'33"	1.206,593
12+216,863	EC93		6.879.110,0484	588.591,0173	1.204,573	163°31'55"	1.206,412
12+220			6.879.109,1687	588.588,0067	1.204,845	163°53'28"	1.206,380
12+235			6.879.105,2234	588.573,5349	1.206,315	165°36'37"	1.206,237
12+240			6.879.104,0052	588.568,6861	1.206,536	166°10'59"	1.206,193
12+248,172	CE93		6.879.102,1185	588.560,7350	1.206,586	167°07'10"	1.206,123
12+255			6.879.100,6384	588.554,0694	1.206,555	167°48'46"	1.206,068
12+260			6.879.099,6004	588.549,1783	1.206,499	168°12'28"	1.206,030
12+265			6.879.098,5921	588.544,2811	1.206,147	168°30'25"	1.205,993
12+278,172	ET93		6.879.096,0174	588.531,3632	1.205,225	168°50'18"	1.205,904
12+280			6.879.095,6635	588.529,5698	1.205,098	168°50'18"	1.205,893
12+285			6.879.094,6956	588.524,6643	1.204,866	168°50'18"	1.205,862
12+300		PTV46	6.879.091,7920	588.509,9481	1.204,184	168°50'18"	1.205,780
12+320			6.879.087,9204	588.490,3264	1.203,873	168°50'18"	1.205,680
12+336,486	TE94		6.879.084,7292	588.474,1525	1.203,994	168°50'18"	1.205,598
12+340			6.879.084,0497	588.470,7045	1.204,021	168°52'40"	1.205,580
12+350			6.879.082,1580	588.460,8854	1.204,286	169°25'11"	1.205,530
12+360			6.879.080,4140	588.451,0385	1.204,575	170°35'54"	1.205,480
12+366,486	EC94		6.879.079,4138	588.444,6305	1.204,375	171°42'11"	1.205,448
12+370			6.879.078,9271	588.441,1504	1.204,266	172°22'27"	1.205,430
12+377,612	CE94		6.879.078,0127	588.433,5932	1.204,037	173°49'41"	1.205,392
12+380			6.879.077,7652	588.431,2182	1.203,967	174°15'58"	1.205,380
12+390			6.879.076,9004	588.421,2558	1.203,420	175°42'20"	1.205,330
12+400			6.879.076,2307	588.411,2785	1.202,861	176°30'31"	1.205,280
12+407,612	TE95		6.879.075,7835	588.403,6795	1.202,766	176°41'35"	1.205,242
12+410			6.879.075,6449	588.401,2955	1.202,730	176°37'59"	1.205,230
12+415			6.879.075,3326	588.396,3053	1.202,642	176°07'07"	1.205,205
12+420			6.879.074,9528	588.391,3200	1.202,525	175°04'43"	1.205,180
12+425			6.879.074,4596	588.386,3443	1.202,501	173°30'44"	1.205,155
12+430			6.879.073,8078	588.381,3873	1.202,467	171°25'12"	1.205,130
12+435			6.879.072,9529	588.376,4613	1.202,373	168°48'06"	1.205,105
12+437,612	EC95		6.879.072,4111	588.373,9073	1.202,482	167°13'29"	1.205,092

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Estaca	PNH	PNV	Norte	Este	Cota	Az. Seção	Grade
12+440			6.879.071,8525	588.371,5858	1.202,750	165°43'03"	1.205,080
12+445			6.879.070,4861	588.366,7766	1.203,286	162°33'40"	1.205,055
12+445,926	CE95		6.879.070,2043	588.365,8953	1.203,390	161°58'38"	1.205,050
12+450			6.879.068,8612	588.362,0493	1.203,556	159°34'49"	1.205,030
12+455			6.879.067,0130	588.357,4039	1.203,127	157°06'56"	1.205,005
12+460			6.879.064,9874	588.352,8323	1.203,435	155°10'37"	1.204,980
12+465			6.879.062,8293	588.348,3227	1.203,579	153°45'53"	1.204,955
12+470			6.879.060,5810	588.343,8568	1.203,724	152°52'42"	1.204,930
12+475			6.879.058,2842	588.339,4155	1.203,378	152°31'04"	1.204,905
12+475,926	ET95		6.879.057,8568	588.338,5940	1.203,278	152°30'32"	1.204,900
12+480			6.879.055,9760	588.334,9796	1.203,102	152°30'32"	1.204,880
12+500			6.879.046,7438	588.317,2380	1.204,166	152°30'32"	1.204,780
12+520			6.879.037,5115	588.299,4963	1.204,503	152°30'32"	1.204,680
12+522,934	TE96		6.879.036,1570	588.296,8933	1.204,529	152°30'32"	1.204,665
12+530			6.879.032,9012	588.290,6221	1.204,593	152°40'20"	1.204,630
12+540			6.879.028,3635	588.281,7114	1.204,654	153°27'45"	1.204,580
12+550			6.879.024,0002	588.272,7134	1.204,599	154°54'26"	1.204,530
12+557,934	EC96		6.879.020,7327	588.265,4838	1.204,534	156°31'10"	1.204,490
12+560			6.879.019,9176	588.263,5859	1.204,499	156°59'35"	1.204,480
12+570			6.879.016,1941	588.254,3052	1.204,325	159°17'06"	1.204,430
12+580			6.879.012,8450	588.244,8838	1.204,215	161°34'36"	1.204,380
12+590			6.879.009,8751	588.235,3353	1.204,212	163°52'07"	1.204,330
12+590,090	CE96		6.879.009,8502	588.235,2491	1.204,212	163°53'21"	1.204,330
12+600			6.879.007,2717	588.225,6811	1.204,224	165°50'20"	1.204,280
12+610			6.879.004,9459	588.215,9553	1.204,235	167°09'16"	1.204,230
12+620			6.879.002,7882	588.206,1912	1.204,231	167°48'54"	1.204,180
12+625,090	ET96		6.879.001,7188	588.201,2146	1.204,229	167°53'59"	1.204,155
12+640			6.878.998,5934	588.186,6360	1.204,199	167°53'59"	1.204,080
12+654,748	TE97		6.878.995,5018	588.172,2153	1.204,078	167°53'59"	1.204,006
12+660			6.878.994,3991	588.167,0807	1.204,046	167°50'23"	1.203,980
12+680			6.878.990,0092	588.147,5689	1.203,947	166°30'38"	1.203,880
12+684,748	EC97		6.878.988,8793	588.142,9570	1.203,921	165°56'20"	1.203,856
12+695,565	CE97		6.878.986,1221	588.132,4979	1.203,867	164°31'29"	1.203,802
12+700			6.878.984,9182	588.128,2295	1.203,847	163°59'17"	1.203,780
12+720			6.878.979,1258	588.109,0871	1.203,777	162°37'53"	1.203,680
12+725,565	TE98		6.878.977,4604	588.103,7772	1.203,760	162°33'50"	1.203,652
12+740			6.878.973,0952	588.090,0181	1.203,734	162°03'59"	1.203,580
12+755,565	EC98		6.878.968,1153	588.075,2742	1.203,770	160°24'55"	1.203,502
12+760		PCV47	6.878.966,6056	588.071,1041	1.203,775	159°46'48"	1.203,480
12+780			6.878.959,2269	588.052,5172	1.203,814	156°54'55"	1.203,330
12+788,209	CE98		6.878.955,9310	588.044,9993	1.203,771	155°44'22"	1.203,240
12+800			6.878.950,9490	588.034,3126	1.203,700	154°22'57"	1.203,080
12+818,209	ET98		6.878.942,9254	588.017,9671	1.203,423	153°35'27"	1.202,765
12+820			6.878.942,1287	588.016,3628	1.203,419	153°35'27"	1.202,730
12+840			6.878.933,2332	587.998,4500	1.203,379	153°35'27"	1.202,280
12+860			6.878.924,3376	587.980,5372	1.203,205	153°35'27"	1.201,730
12+869,076	TE99		6.878.920,3006	587.972,4079	1.202,834	153°35'27"	1.201,447
12+870			6.878.919,8896	587.971,5804	1.202,784	153°34'38"	1.201,418

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12+875			6.878.917,6485	587.967,1108	1.202,514	153°01'56"	1.201,252
12+880			6.878.915,3345	587.962,6792	1.202,156	151°41'30"	1.201,080
12+885			6.878.912,8867	587.958,3191	1.201,708	149°33'18"	1.200,902
12+890			6.878.910,2489	587.954,0721	1.201,256	146°37'22"	1.200,718
12+895			6.878.907,3691	587.949,9859	1.200,722	142°53'41"	1.200,527
12+899,076	EC99		6.878.904,8113	587.946,8132	1.200,254	139°16'01"	1.200,367
12+900		PTV47	6.878.904,2033	587.946,1180	1.200,148	138°23'06"	1.200,330
12+905			6.878.900,7305	587.942,5222	1.199,577	133°36'36"	1.200,130
12+910			6.878.896,9708	587.939,2282	1.199,000	128°50'07"	1.199,930
12+913,058	CE99		6.878.894,5415	587.937,3725	1.198,693	125°54'57"	1.199,808
12+915			6.878.892,9510	587.936,2584	1.198,484	124°07'17"	1.199,730
12+920			6.878.888,7123	587.933,6077	1.198,021	120°03'12"	1.199,530
12+925			6.878.884,3129	587.931,2338	1.197,857	116°46'54"	1.199,330
12+930			6.878.879,7995	587.929,0832	1.197,912	114°18'20"	1.199,130
12+935			6.878.875,2109	587.927,0976	1.197,371	112°37'31"	1.198,930
12+940			6.878.870,5785	587.925,2150	1.197,329	111°44'26"	1.198,730
12+943,058	ET99		6.878.867,7364	587.924,0873	1.197,415	111°35'31"	1.198,608
12+960			6.878.851,9829	587.917,8527	1.197,159	111°35'31"	1.197,930
12+980			6.878.833,3864	587.910,4929	1.196,179	111°35'31"	1.197,130
13			6.878.814,7898	587.903,1330	1.194,870	111°35'31"	1.196,330
13+20			6.878.796,1932	587.895,7732	1.194,212	111°35'31"	1.195,530
13+40			6.878.777,5966	587.888,4134	1.193,574	111°35'31"	1.194,730
13+58,827	TE100		6.878.760,0912	587.881,4854	1.193,328	111°35'31"	1.193,977
13+60			6.878.759,0001	587.881,0536	1.193,404	111°35'21"	1.193,930
13+80			6.878.740,3651	587.873,7919	1.193,964	110°44'08"	1.193,130
13+88,827	EC100		6.878.732,0885	587.870,7255	1.193,392	109°52'23"	1.192,777
13+100			6.878.721,5388	587.867,0450	1.192,988	108°35'33"	1.192,330
13+100,392	CE100		6.878.721,1675	587.866,9203	1.192,977	108°32'52"	1.192,314
13+120			6.878.702,4848	587.860,9690	1.192,497	107°02'06"	1.191,530
13+130,392	ET100		6.878.692,5418	587.857,9485	1.192,322	106°49'44"	1.191,114
13+138,236	TE101		6.878.685,0332	587.855,6774	1.192,253	106°49'44"	1.190,801
13+140			6.878.683,3449	587.855,1669	1.192,264	106°48'57"	1.190,730
13+150			6.878.673,7617	587.852,3093	1.191,659	106°15'15"	1.190,330
13+160			6.878.664,1318	587.849,6156	1.191,461	104°51'44"	1.189,930
13+168,236	EC101		6.878.656,1414	587.847,6198	1.191,158	103°05'32"	1.189,601
13+170			6.878.654,4218	587.847,2268	1.191,129	102°39'10"	1.189,530
13+180			6.878.644,6203	587.845,2492	1.190,654	100°09'42"	1.189,130
13+190			6.878.634,7417	587.843,6994	1.190,114	97°40'14"	1.188,730
13+192,582	CE101		6.878.632,1809	587.843,3692	1.189,974	97°01'38"	1.188,627
13+200			6.878.624,8064	587.842,5707	1.189,413	95°24'28"	1.188,330
13+210			6.878.614,8389	587.841,7672	1.188,589	93°56'52"	1.187,930
13+220			6.878.604,8584	587.841,1456	1.187,396	93°19'06"	1.187,530
13+222,582	ET101		6.878.602,2806	587.840,9970	1.187,046	93°17'26"	1.187,427
13+240			6.878.584,8914	587.839,9972	1.185,527	93°17'26"	1.186,730
13+260			6.878.564,9244	587.838,8492	1.184,306	93°17'26"	1.185,930
13+280		PCV48	6.878.544,9573	587.837,7012	1.183,286	93°17'26"	1.185,130
13+298,186	TE102		6.878.526,8010	587.836,6574	1.182,698	93°17'26"	1.184,501
13+300			6.878.524,9904	587.836,5530	1.182,692	93°19'00"	1.184,449

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13+310			6.878.515,0113	587.835,9031	1.182,563	94°24'04"	1.184,199
13+320			6.878.505,0604	587.834,9262	1.182,440	97°04'38"	1.184,008
13+328,186	EC102		6.878.496,9689	587.833,6915	1.182,285	100°27'09"	1.183,896
13+330			6.878.495,1875	587.833,3489	1.182,246	101°19'07"	1.183,877
13+340			6.878.485,4755	587.830,9803	1.182,153	106°05'35"	1.183,805
13+350			6.878.475,9936	587.827,8113	1.182,151	110°52'05"	1.183,793
13+360			6.878.466,8090	587.823,8643	1.182,266	115°38'33"	1.183,841
13+370			6.878.457,9842	587.819,1662	1.182,463	120°25'02"	1.183,949
13+375			6.878.453,7264	587.816,5456	1.182,589	122°48'16"	1.184,025
13+380			6.878.449,5817	587.813,7502	1.182,730	125°11'30"	1.184,116
13+390			6.878.441,6586	587.807,6532	1.183,199	129°58'00"	1.184,343
13+395			6.878.437,8945	587.804,3626	1.183,523	132°21'14"	1.184,479
13+400			6.878.434,2710	587.800,9183	1.183,844	134°44'28"	1.184,630
13+400,026	CE102		6.878.434,2524	587.800,8999	1.183,845	134°45'13"	1.184,631
13+410			6.878.427,4351	587.793,6222	1.184,478	138°43'27"	1.184,977
13+420			6.878.421,0148	587.785,9565	1.185,122	141°06'56"	1.185,383
13+430			6.878.414,8099	587.778,1144	1.185,755	141°54'56"	1.185,849
13+430,026	ET102		6.878.414,7938	587.778,0939	1.185,757	141°54'56"	1.185,850
13+440			6.878.408,6417	587.770,2434	1.186,387	141°54'56"	1.186,374
13+445			6.878.405,5575	587.766,3078	1.186,702	141°54'56"	1.186,660
13+460		PTV48	6.878.396,3052	587.754,5014	1.187,671	141°54'56"	1.187,605
13+465			6.878.393,2211	587.750,5658	1.188,017	141°54'56"	1.187,943
13+480			6.878.383,9688	587.738,7593	1.188,831	141°54'56"	1.188,955
13+492,595	TE103		6.878.376,2000	587.728,8459	1.188,736	141°54'56"	1.189,805
13+500			6.878.371,6395	587.723,0118	1.189,434	142°07'30"	1.190,305
13+510			6.878.365,5568	587.715,0747	1.190,806	143°04'21"	1.190,980
13+520			6.878.359,6601	587.706,9986	1.191,719	144°47'03"	1.191,655
13+522,595	EC103		6.878.358,1741	587.704,8714	1.191,913	145°21'12"	1.191,830
13+530			6.878.354,0551	587.698,7180	1.192,521	147°03'01"	1.192,330
13+540		PCV49	6.878.348,7853	587.690,2199	1.193,462	149°20'32"	1.193,005
13+549,839	CE103		6.878.343,9363	587.681,6600	1.194,382	151°35'49"	1.193,647
13+550			6.878.343,8598	587.681,5183	1.194,399	151°38'02"	1.193,657
13+560			6.878.339,2649	587.672,6364	1.195,414	153°31'53"	1.194,262
13+570			6.878.334,9069	587.663,6367	1.196,386	154°39'54"	1.194,822
13+579,839	ET103		6.878.330,7350	587.654,7260	1.197,097	155°02'05"	1.195,327
13+580			6.878.330,6668	587.654,5796	1.197,106	155°02'05"	1.195,334
13+600			6.878.322,2255	587.636,4483	1.197,879	155°02'05"	1.196,221
13+620			6.878.313,7841	587.618,3171	1.197,568	155°02'05"	1.196,923
13+640			6.878.305,3428	587.600,1858	1.197,210	155°02'05"	1.197,439
13+660			6.878.296,9014	587.582,0545	1.196,730	155°02'05"	1.197,770
13+680			6.878.288,4600	587.563,9232	1.196,240	155°02'05"	1.197,915
13+700			6.878.280,0187	587.545,7919	1.196,606	155°02'05"	1.197,876
13+701,178	TE104		6.878.279,5216	587.544,7242	1.196,632	155°02'05"	1.197,867
13+710			6.878.275,7782	587.536,7359	1.196,822	154°36'22"	1.197,786
13+720			6.878.271,3845	587.527,7529	1.196,758	153°04'59"	1.197,651
13+730			6.878.266,6691	587.518,9357	1.196,727	150°27'30"	1.197,469
13+740			6.878.261,4727	587.510,3936	1.196,786	146°43'53"	1.197,240
13+741,178	EC104		6.878.260,8223	587.509,4117	1.196,759	146°13'12"	1.197,210

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13+750			6.878.255,6723	587.502,2511	1.196,492	142°19'55"	1.196,966
13+753,849	CE104		6.878.253,2755	587.499,2397	1.196,331	140°38'08"	1.196,848
13+760			6.878.249,2686	587.494,5731	1.196,122	138°07'58"	1.196,645
13+770			6.878.242,3800	587.487,3263	1.195,823	134°57'15"	1.196,277
13+780			6.878.235,1655	587.480,4020	1.195,386	132°52'38"	1.195,864
13+790			6.878.227,7693	587.473,6724	1.194,886	131°54'09"	1.195,404
13+793,849	ET104		6.878.224,9021	587.471,1045	1.194,686	131°49'15"	1.195,215
13+800			6.878.220,3179	587.467,0028	1.194,540	131°49'15"	1.194,898
13+810,830	TE105		6.878.212,2473	587.459,7816	1.194,277	131°49'15"	1.194,297
13+820			6.878.205,4324	587.453,6455	1.194,275	132°21'22"	1.193,746
13+830			6.878.198,1375	587.446,8067	1.194,327	134°09'37"	1.193,101
13+840			6.878.191,1406	587.439,6634	1.194,164	137°14'16"	1.192,409
13+840,830	EC105		6.878.190,5790	587.439,0528	1.194,112	137°33'01"	1.192,350
13+849,911	CE105		6.878.184,6562	587.432,1707	1.192,941	141°01'09"	1.191,678
13+850			6.878.184,6002	587.432,1015	1.192,928	141°03'11"	1.191,672
13+860			6.878.178,5473	587.424,1428	1.191,403	144°13'30"	1.190,887
13+870			6.878.172,8520	587.415,9239	1.190,063	146°07'24"	1.190,057
13+879,911	ET105		6.878.167,3876	587.407,6555	1.188,733	146°44'55"	1.189,188
13+880		PTV49	6.878.167,3387	587.407,5809	1.188,721	146°44'55"	1.189,180
13+900			6.878.156,3724	587.390,8554	1.186,194	146°44'55"	1.187,380
13+920			6.878.145,4062	587.374,1299	1.184,364	146°44'55"	1.185,580
13+937,901	TE106		6.878.135,5907	587.359,1596	1.182,949	146°44'55"	1.183,969
13+940		PCV50	6.878.134,4395	587.357,4048	1.182,734	146°41'54"	1.183,780
13+945			6.878.131,6784	587.353,2360	1.182,331	146°10'23"	1.183,337
13+950			6.878.128,8588	587.349,1069	1.182,375	145°04'36"	1.182,909
13+955			6.878.125,9406	587.345,0471	1.182,305	143°24'34"	1.182,495
13+960			6.878.122,8859	587.341,0894	1.182,306	141°10'16"	1.182,095
13+965			6.878.119,6597	587.337,2698	1.181,611	138°21'41"	1.181,710
13+967,901	EC106		6.878.117,6973	587.335,1334	1.181,028	136°28'10"	1.181,493
13+970			6.878.116,2327	587.333,6299	1.180,460	135°01'52"	1.181,339
13+975			6.878.112,5955	587.330,2002	1.180,036	131°36'17"	1.180,982
13+980			6.878.108,7600	587.326,9942	1.179,663	128°10'43"	1.180,640
13+985			6.878.104,7393	587.324,0228	1.179,248	124°45'07"	1.180,312
13+988,662	CE106		6.878.101,6863	587.322,0023	1.178,891	122°14'35"	1.180,081
13+990			6.878.100,5491	587.321,2974	1.178,785	121°20'48"	1.179,999
13+995			6.878.096,2110	587.318,8124	1.178,423	118°21'31"	1.179,700
14			6.878.091,7600	587.316,5345	1.178,131	115°56'29"	1.179,415
14+5			6.878.087,2279	587.314,4239	1.178,133	114°05'45"	1.179,145
14+10			6.878.082,6396	587.312,4374	1.178,057	112°49'15"	1.178,889
14+15			6.878.078,0176	587.310,5303	1.178,016	112°07'02"	1.178,647
14+18,662	TE107		6.878.074,6227	587.309,1576	1.177,988	111°57'50"	1.178,479
14+20			6.878.073,3815	587.308,6568	1.177,975	111°59'32"	1.178,420
14+25			6.878.068,7535	587.306,7655	1.177,919	112°35'43"	1.178,207
14+30			6.878.064,1587	587.304,7939	1.177,850	113°59'02"	1.178,009
14+35			6.878.059,6277	587.302,6805	1.177,792	116°09'31"	1.177,825
14+40		PTV50	6.878.055,1957	587.300,3661	1.177,743	119°07'08"	1.177,655
14+45			6.878.050,9077	587.297,7971	1.177,625	122°51'52"	1.177,493
14+48,662	EC107		6.878.047,8876	587.295,7255	1.177,532	126°06'23"	1.177,373

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14+50			6.878.046,8153	587.294,9252	1.177,497	127°22'05"	1.177,330
14+55			6.878.042,9708	587.291,7306	1.177,301	132°04'56"	1.177,168
14+60			6.878.039,4016	587.288,2306	1.177,030	136°47'48"	1.177,005
14+65			6.878.036,1326	587.284,4496	1.176,912	141°30'37"	1.176,843
14+70			6.878.033,1852	587.280,4125	1.176,779	146°13'28"	1.176,680
14+75			6.878.030,5795	587.276,1467	1.176,678	150°56'19"	1.176,518
14+80			6.878.028,3330	587.271,6810	1.176,554	155°39'12"	1.176,355
14+85			6.878.026,4615	587.267,0464	1.176,366	160°22'01"	1.176,193
14+87,070	PC108		6.878.025,7990	587.265,0844	1.176,272	162°19'07"	1.176,125
14+90			6.878.024,8639	587.262,3078	1.176,109	160°27'12"	1.176,030
14+95			6.878.023,0610	587.257,6449	1.176,100	157°16'12"	1.175,868
14+100		PCV51	6.878.021,0021	587.253,0896	1.175,872	154°05'14"	1.175,705
14+105			6.878.018,6932	587.248,6549	1.175,338	150°54'14"	1.175,548
14+110			6.878.016,1417	587.244,3557	1.174,864	147°43'15"	1.175,401
14+115			6.878.013,3555	587.240,2047	1.174,765	144°32'16"	1.175,264
14+120			6.878.010,3433	587.236,2152	1.174,576	141°21'17"	1.175,137
14+125			6.878.007,1137	587.232,3985	1.174,477	138°10'17"	1.175,021
14+130			6.878.003,6774	587.228,7673	1.174,354	134°59'18"	1.174,915
14+132,145	CE108		6.878.002,1440	587.227,2705	1.174,309	133°37'27"	1.174,872
14+135			6.878.000,0474	587.225,3328	1.174,249	131°53'35"	1.174,819
14+140			6.877.996,2478	587.222,0829	1.174,175	129°16'41"	1.174,734
14+145			6.877.992,3186	587.218,9918	1.174,167	127°11'38"	1.174,658
14+150			6.877.988,2928	587.216,0267	1.174,139	125°38'24"	1.174,593
14+155			6.877.984,2013	587.213,1529	1.174,073	124°37'00"	1.174,539
14+160			6.877.980,0718	587.210,3332	1.174,031	124°07'25"	1.174,494
14+162,145	ET108		6.877.978,2957	587.209,1311	1.174,022	124°04'30"	1.174,478
14+178,929	TE109		6.877.964,3934	587.199,7274	1.174,059	124°04'30"	1.174,419
14+180			6.877.963,5061	587.199,1271	1.174,065	124°04'56"	1.174,419
14+190			6.877.955,2515	587.193,4830	1.174,117	124°51'19"	1.174,443
14+200			6.877.947,1383	587.187,6376	1.174,127	126°54'05"	1.174,509
14+208,929	EC109		6.877.940,1289	587.182,1081	1.174,150	129°48'16"	1.174,601
14+210			6.877.939,3086	587.181,4196	1.174,167	130°12'49"	1.174,615
14+215			6.877.935,5449	587.178,1284	1.174,254	132°07'24"	1.174,683
14+220			6.877.931,8928	587.174,7134	1.174,356	134°02'00"	1.174,762
14+227,183	CE109		6.877.926,8505	587.169,5993	1.174,559	136°46'37"	1.174,893
14+230			6.877.924,9401	587.167,5291	1.174,653	137°48'09"	1.174,951
14+235			6.877.921,6346	587.163,7778	1.174,843	139°22'26"	1.175,060
14+240		PCCV52	6.877.918,4223	587.159,9459	1.175,017	140°37'37"	1.175,180
14+250			6.877.912,1987	587.152,1194	1.175,256	142°10'41"	1.175,402
14+257,183	ET109		6.877.907,8158	587.146,4286	1.175,475	142°30'23"	1.175,528
14+260			6.877.906,1009	587.144,1932	1.175,534	142°30'23"	1.175,569
14+280			6.877.893,9275	587.128,3248	1.175,776	142°30'23"	1.175,737
14+285			6.877.890,8844	587.124,3580	1.175,823	142°30'23"	1.175,744
14+300			6.877.881,7541	587.112,4563	1.175,796	142°30'23"	1.175,683
14+305			6.877.878,7109	587.108,4895	1.175,769	142°30'23"	1.175,634
14+320			6.877.869,5806	587.096,5879	1.175,457	142°30'23"	1.175,407
14+340			6.877.857,4072	587.080,7194	1.174,818	142°30'23"	1.174,909
14+360		PTV52	6.877.845,2338	587.064,8510	1.174,068	142°30'23"	1.174,190

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Coordenadas do Eixo Projetado

Estaca	PNH	PNV	Norte	Este	Cota	Az. Seção	Grade
14+380			6.877.833,0603	587.048,9825	1.173,355	142°30'23"	1.173,360
14+400			6.877.820,8869	587.033,1141	1.172,397	142°30'23"	1.172,530
14+420			6.877.808,7135	587.017,2456	1.171,436	142°30'23"	1.171,700
14+440		PCV53	6.877.796,5401	587.001,3772	1.170,840	142°30'23"	1.170,870
14+455,179	PC110		6.877.787,3011	586.989,3339	1.170,497	142°30'23"	1.170,124
14+460			6.877.784,3897	586.985,4911	1.170,155	143°11'50"	1.169,839
14+480			6.877.772,8137	586.969,1843	1.168,425	146°03'43"	1.168,404
14+490,465	PT110		6.877.767,0853	586.960,4265	1.167,491	147°33'39"	1.167,493
14+500			6.877.761,9708	586.952,3795	1.166,567	147°33'39"	1.166,567
14+510,000		PCCV54	6.877.756,6067	586.943,9397	1.165,567	147°33'39"	1.165,498
14+520			6.877.751,2427	586.935,5003	1.164,357	147°33'39"	1.164,434
14+540			6.877.740,5147	586.918,6210	1.162,342	147°33'39"	1.162,645
14+560			6.877.729,7866	586.901,7418	1.161,153	147°33'39"	1.161,308
14+580		PTV54	6.877.719,0586	586.884,8625	1.160,431	147°33'39"	1.160,423
14+600		PCV55	6.877.708,3305	586.867,9833	1.159,774	147°33'39"	1.159,763
14+600,667	PC111		6.877.707,9726	586.867,4202	1.159,753	147°33'39"	1.159,741
14+605			6.877.705,5699	586.863,8148	1.159,612	145°04'42"	1.159,599
14+610			6.877.702,6064	586.859,7884	1.159,448	142°12'49"	1.159,440
14+615			6.877.699,4453	586.855,9151	1.159,244	139°20'55"	1.159,285
14+620			6.877.696,0947	586.852,2048	1.159,025	136°29'03"	1.159,134
14+620,937	PT111		6.877.695,4466	586.851,5286	1.158,983	135°56'51"	1.159,106
14+640		V56	6.877.682,1917	586.837,8280	1.158,568	135°56'51"	1.158,568

4.2. Elementos do Projeto Geométrico Horizontal

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Projeto Geométrico Horizontal

Nome	Estaca	Norte	Este	Linha	Raio	Parâmetro	AC/AZ	Extensão
PI-0	0	6.880.044,6712	598.640,9707					
				TANG	-	-	249°48'07"	4,738
PC1	0+4,738	6.880.043,0354	598.636,5240					
				CIRC	60,500	-	34°11'20"	36,101
PT1	0+40,839	6.880.021,4855	598.608,2280					
				TANG	-	-	215°36'47"	7,205
PC2	0+48,044	6.880.015,6279	598.604,0324					
				CIRC	55,000	-	12°02'04"	11,552
PT2	0+59,596	6.880.005,6013	598.598,3375					
				TANG	-	-	203°34'43"	6,500
TE3	0+66,097	6.879.999,6436	598.595,7373					
				ESP	228,430	82,782	3°45'45"	30,000
TS3	0+96,097	6.879.972,4227	598.583,1406					
				ESP	228,430	82,782	3°45'45"	30,000
TE4	0+126,097	6.879.946,4065	598.568,2112					
				ESP	109,680	57,362	7°50'09"	30,000
EC4	0+156,097	6.879.921,4743	598.551,5739					
				CIRC	109,680	-	10°03'59"	19,270
CE4	0+175,366	6.879.907,6243	598.538,2118					
				ESP	109,680	57,362	7°50'09"	30,000
ET4	0+205,366	6.879.890,1029	598.513,8909					
				TANG	-	-	236°50'30"	32,785
TE5	0+238,151	6.879.872,1711	598.486,4448					
				ESP	250,000	86,603	3°26'16"	30,000
EC5	0+268,151	6.879.856,2706	598.461,0109					
				CIRC	250,000	-	5°52'02"	25,601
CE5	0+293,752	6.879.844,7379	598.438,1672					
				ESP	250,000	86,603	3°26'16"	30,000
ET5	0+323,752	6.879.833,7147	598.410,2710					
				TANG	-	-	249°35'04"	51,144
TE6	0+374,896	6.879.815,8743	598.362,3394					
				ESP	150,000	77,460	7°38'22"	40,000
EC6	0+414,896	6.879.800,2820	598.325,5379					
				CIRC	150,000	-	7°27'44"	19,536
CE6	0+434,433	6.879.789,9985	598.308,9433					
				ESP	150,000	77,460	7°38'22"	40,000
ET6	0+474,433	6.879.763,9825	598.278,6013					
				TANG	-	-	226°50'36"	103,904
TE7	0+578,337	6.879.692,9122	598.202,8047					
				ESP	48,000	37,947	17°54'18"	30,000
EC7	0+608,337	6.879.674,8556	598.179,0102					
				CIRC	48,000	-	69°46'12"	58,450
PC8	0+666,787	6.879.684,0435	598.124,8790					
				CIRC	105,770	-	21°10'28"	39,091
CE8	0+705,878	6.879.705,7381	598.092,6303					
				ESP	105,770	56,330	8°07'32"	30,000
ET8	0+735,878	6.879.714,9631	598.064,1121					
				TANG	-	-	285°13'02"	14,504

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Projeto Geométrico Horizontal

Nome	Estaca	Norte	Este	Linha	Raio	Parâmetro	AC/AZ	Extensão
TE9	0+750,383	6.879.718,7702	598.050,1161					
				ESP	60,000	42,426	14°19'26"	30,000
EC9	0+780,383	6.879.728,9970	598.022,0017					
				CIRC	60,000	-	25°26'44"	26,647
CE9	0+807,029	6.879.746,7712	598.002,4434					
				ESP	60,000	42,426	14°19'26"	30,000
ET9	0+837,029	6.879.773,7822	597.989,5820					
				TANG	-	-	339°18'38"	21,247
TE10	0+858,276	6.879.793,6587	597.982,0755					
				ESP	85,000	50,498	10°06'40"	30,000
EC10	0+888,276	6.879.821,0146	597.969,8622					
				CIRC	85,000	-	105°18'41"	156,233
CE10	1+44,509	6.879.836,4169	597.835,5918					
				ESP	85,000	50,498	10°06'40"	30,000
ET10	1+74,509	6.879.812,5372	597.817,5012					
				TANG	-	-	213°46'37"	8,163
TE11	1+82,672	6.879.805,7518	597.812,9628					
				ESP	150,000	67,082	5°43'46"	30,000
EC11	1+112,672	6.879.780,2850	597.797,1312					
				CIRC	150,000	-	11°20'58"	29,713
CE11	1+142,385	6.879.752,8535	597.785,8400					
				ESP	150,000	67,082	5°43'46"	30,000
ET11	1+172,385	6.879.723,6211	597.779,1567					
				TANG	-	-	190°58'06"	7,922
TE12	1+180,307	6.879.715,8435	597.777,6493					
				ESP	60,000	42,426	14°19'26"	30,000
EC12	1+210,307	6.879.687,0486	597.769,5335					
				CIRC	60,000	-	38°40'09"	40,494
CE12	1+250,802	6.879.658,7729	597.741,6236					
				ESP	60,000	42,426	14°19'26"	30,000
ET12	1+280,802	6.879.650,2827	597.712,9369					
				TANG	-	-	258°17'08"	11,464
TE13	1+292,265	6.879.647,9551	597.701,7119					
				ESP	320,000	97,980	2°41'09"	30,000
EC13	1+322,265	6.879.641,4065	597.672,4383					
				CIRC	320,000	-	1°36'20"	8,968
CE13	1+331,233	6.879.639,0548	597.663,7846					
				ESP	320,000	97,980	2°41'09"	30,000
TE14	1+361,233	6.879.629,8866	597.635,2230					
				ESP	212,070	79,763	4°03'09"	30,000
EC14	1+391,233	6.879.619,6078	597.607,0477					
				CIRC	212,070	-	1°55'23"	7,118
CE14	1+398,351	6.879.616,7464	597.600,5310					
				ESP	212,070	79,763	4°03'09"	30,000
ET14	1+428,351	6.879.602,9578	597.573,8950					
				TANG	-	-	241°16'48"	52,092
TE15	1+480,443	6.879.577,9262	597.528,2115					
				ESP	300,000	94,868	2°51'53"	30,000

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Projeto Geométrico Horizontal

Nome	Estaca	Norte	Este	Linha	Raio	Parâmetro	AC/AZ	Extensão
EC15	1+510,443	6.879.563,0755	597.502,1490					
				CIRC	300,000	-	6°07'41"	32,087
CE15	1+542,530	6.879.544,8412	597.475,7650					
				ESP	300,000	96,964	2°59'34"	31,340
TE16	1+573,870	6.879.524,8212	597.451,6578					
				ESP	120,000	61,968	7°38'22"	32,000
EC16	1+605,870	6.879.505,0654	597.426,5161					
				CIRC	120,000	-	11°25'32"	23,930
CE16	1+629,799	6.879.494,0884	597.405,2974					
				ESP	120,000	60,000	7°09'43"	30,000
ET16	1+659,799	6.879.485,3906	597.376,6077					
				TANG	-	-	255°31'16"	9,473
TE17	1+669,273	6.879.483,0221	597.367,4353					
				ESP	85,000	58,310	13°28'53"	40,000
EC17	1+709,273	6.879.476,1021	597.328,1383					
				CIRC	85,000	-	4°40'03"	6,924
CE17	1+716,197	6.879.476,2635	597.321,2176					
				ESP	85,000	58,310	13°28'53"	40,000
ET17	1+756,197	6.879.485,0085	597.282,2860					
				TANG	-	-	287°09'06"	16,769
TE18	1+772,966	6.879.489,9536	597.266,2628					
				ESP	250,000	86,603	3°26'16"	30,000
EC18	1+802,966	6.879.498,2243	597.237,4304					
				CIRC	250,000	-	4°42'44"	20,561
CE18	1+823,527	6.879.502,2722	597.217,2781					
				ESP	250,000	86,603	3°26'16"	30,000
ET18	1+853,527	6.879.505,7769	597.187,4883					
				TANG	-	-	275°33'50"	119,113
TE19	1+972,639	6.879.517,3255	597.068,9367					
				ESP	250,000	86,603	3°26'16"	30,000
EC19	2+2,639	6.879.520,8302	597.039,1469					
				CIRC	250,000	-	5°21'35"	23,387
CE19	2+26,026	6.879.525,5636	597.016,2529					
				ESP	250,000	86,603	3°26'16"	30,000
ET19	2+56,026	6.879.534,1597	596.987,5158					
				TANG	-	-	287°47'57"	33,433
TE20	2+89,459	6.879.544,3795	596.955,6831					
				ESP	90,000	51,962	9°32'57"	30,000
EC20	2+119,459	6.879.551,9408	596.926,6899					
				CIRC	90,000	-	69°14'56"	108,776
CE20	2+228,235	6.879.506,5064	596.835,0606					
				ESP	90,000	51,962	9°32'57"	30,000
ET20	2+258,235	6.879.478,8511	596.823,5296					
				TANG	-	-	199°27'06"	5,868
TE21	2+264,103	6.879.473,3184	596.821,5756					
				ESP	80,000	48,990	10°44'35"	30,000
EC21	2+294,103	6.879.444,5071	596.813,3838					
				CIRC	80,000	-	7°31'45"	10,513

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Projeto Geométrico Horizontal

Nome	Estaca	Norte	Este	Linha	Raio	Parâmetro	AC/AZ	Extensão
CE21	2+304,616	6.879.434,0411	596.812,4785					
				ESP	80,000	48,990	10°44'35"	30,000
ET21	2+334,616	6.879.404,2511	596.815,6008					
				TANG	-	-	170°26'12"	57,233
TE22	2+391,848	6.879.347,8139	596.825,1094					
				ESP	40,000	34,641	21°29'09"	30,000
EC22	2+421,848	6.879.318,0274	596.826,3631					
				CIRC	40,000	-	40°02'51"	27,958
CE22	2+449,807	6.879.294,7833	596.811,8689					
				ESP	40,000	34,641	21°29'09"	30,000
TE23	2+479,807	6.879.282,8013	596.784,5698					
				ESP	146,210	66,229	5°52'41"	30,000
EC23	2+509,807	6.879.275,2511	596.755,5522					
				CIRC	146,210	-	6°51'33"	17,504
CE23	2+527,310	6.879.273,0476	596.738,1982					
				ESP	146,210	66,229	5°52'41"	30,000
ET23	2+557,310	6.879.273,1064	596.708,2123					
				TANG	-	-	272°04'17"	76,391
TE24	2+633,701	6.879.275,8675	596.631,8716					
				ESP	300,000	94,868	2°51'53"	30,000
EC24	2+663,701	6.879.277,4512	596.601,9168					
				CIRC	300,000	-	3°15'17"	17,042
CE24	2+680,743	6.879.279,3989	596.584,9890					
				ESP	300,000	94,868	2°51'53"	30,000
ET24	2+710,743	6.879.284,6598	596.555,4573					
				TANG	-	-	281°03'21"	27,265
TE25	2+738,007	6.879.289,8882	596.528,6987					
				ESP	300,000	102,470	3°20'32"	35,000
EC25	2+773,007	6.879.297,2654	596.494,4904					
				CIRC	300,000	-	12°42'34"	66,546
CE25	2+839,553	6.879.320,7966	596.432,3897					
				ESP	300,000	102,470	3°20'32"	35,000
ET25	2+874,553	6.879.337,9413	596.401,8825					
				TANG	-	-	300°26'59"	48,194
TE26	2+922,747	6.879.362,3652	596.360,3353					
				ESP	80,130	49,030	10°43'32"	30,000
EC26	2+952,747	6.879.375,9057	596.333,6173					
				CIRC	80,130	-	20°19'36"	28,428
CE26	2+981,175	6.879.380,6026	596.305,7312					
				ESP	80,130	49,030	10°43'32"	30,000
TE27	3+11,175	6.879.376,5612	596.276,0518					
				ESP	60,000	42,426	14°19'26"	30,000
EC27	3+41,175	6.879.373,1452	596.246,3298					
				CIRC	60,000	-	17°27'18"	18,279
CE27	3+59,454	6.879.376,8448	596.228,5015					
				ESP	60,000	42,426	14°19'26"	30,000
ET27	3+89,454	6.879.391,8042	596.202,5934					
				TANG	-	-	304°46'28"	52,233

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Projeto Geométrico Horizontal

Nome	Estaca	Norte	Este	Linha	Raio	Parâmetro	AC/AZ	Extensão
TE28	3+141,687	6.879.421,5951	596.159,6893					
				ESP	300,000	109,545	3°49'11"	40,000
EC28	3+181,687	6.879.445,1288	596.127,3546					
				CIRC	300,000	-	5°10'02"	27,055
CE28	3+208,742	6.879.462,9359	596.106,9978					
				ESP	300,000	109,545	3°49'11"	40,000
ET28	3+248,742	6.879.491,8527	596.079,3720					
				TANG	-	-	317°34'52"	78,833
TE29	3+327,575	6.879.550,0495	596.026,1958					
				ESP	50,000	44,721	22°55'06"	40,000
EC29	3+367,575	6.879.575,5532	595.995,7500					
				CIRC	50,000	-	14°00'29"	12,224
CE29	3+379,799	6.879.579,2522	595.984,1307					
				ESP	50,000	44,721	22°55'06"	40,000
ET29	3+419,799	6.879.576,0432	595.944,5443					
				TANG	-	-	257°44'11"	86,897
TE30	3+506,696	6.879.557,5855	595.859,6303					
				ESP	50,000	38,730	17°11'19"	30,000
EC30	3+536,696	6.879.554,1831	595.829,9445					
				CIRC	50,000	-	19°26'46"	16,970
CE30	3+553,666	6.879.558,4540	595.813,6048					
				ESP	50,000	38,730	17°11'19"	30,000
TE31	3+583,666	6.879.575,9474	595.789,3807					
				ESP	50,000	38,730	17°11'19"	30,000
EC31	3+613,666	6.879.593,4420	595.765,1553					
				CIRC	50,000	-	23°12'50"	20,258
CE31	3+633,924	6.879.597,8873	595.745,5329					
				ESP	50,000	42,350	20°33'07"	35,870
TE32	3+669,794	6.879.590,1367	595.710,7199					
				ESP	75,000	51,235	13°22'08"	35,000
EC32	3+704,794	6.879.581,1347	595.676,9835					
				CIRC	75,000	-	13°57'57"	18,281
CE32	3+723,075	6.879.581,4394	595.658,7502					
				ESP	75,000	47,434	11°27'33"	30,000
ET32	3+753,075	6.879.589,4831	595.629,9039					
				TANG	-	-	289°23'58"	19,875
TE33	3+772,950	6.879.596,0846	595.611,1574					
				ESP	140,000	64,807	6°08'20"	30,000
EC33	3+802,950	6.879.607,0475	595.583,2487					
				CIRC	140,000	-	12°39'06"	30,914
CE33	3+833,863	6.879.623,3338	595.557,0470					
				ESP	140,000	64,807	6°08'20"	30,000
ET33	3+863,863	6.879.643,5071	595.534,8633					
				TANG	-	-	314°19'43"	45,143
TE34	3+909,007	6.879.675,0521	595.502,5703					
				ESP	150,000	67,082	5°43'46"	30,000
EC34	3+939,007	6.879.695,2795	595.480,4331					
				CIRC	150,000	-	7°11'33"	18,830

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Projeto Geométrico Horizontal

Nome	Estaca	Norte	Este	Linha	Raio	Parâmetro	AC/AZ	Extensão
CE34	3+957,836	6.879.706,0734	595.465,0194					
				ESP	150,000	67,082	5°43'46"	30,000
ET34	3+987,836	6.879.719,9600	595.438,4419					
				TANG	-	-	295°40'37"	13,199
TE35	4+1,036	6.879.725,6792	595.426,5461					
				ESP	198,490	89,104	5°46'23"	40,000
TS35	4+41,036	6.879.744,2035	595.391,1144					
				ESP	198,490	89,104	5°46'23"	40,000
ET35	4+81,036	6.879.767,3077	595.358,4824					
				TANG	-	-	307°13'25"	15,454
TE36	4+96,489	6.879.776,6560	595.346,1771					
				ESP	50,000	38,730	17°11'19"	30,000
EC36	4+126,489	6.879.792,2677	595.320,6996					
				CIRC	50,000	-	21°52'13"	19,085
CE36	4+145,575	6.879.795,2679	595.301,9685					
				ESP	50,000	40,012	18°20'46"	32,020
TE37	4+177,595	6.879.787,5182	595.271,0506					
				ESP	101,320	55,133	8°28'57"	30,000
TS37	4+207,595	6.879.778,5790	595.242,4457					
				ESP	101,320	55,133	8°28'57"	30,000
ET37	4+237,595	6.879.775,4236	595.212,6402					
				TANG	-	-	266°47'03"	8,475
TE38	4+246,070	6.879.774,9482	595.204,1782					
				ESP	300,000	94,868	2°51'53"	30,000
EC38	4+276,070	6.879.772,7665	595.174,2610					
				CIRC	300,000	-	2°38'49"	13,860
CE38	4+289,930	6.879.770,9806	595.160,5178					
				ESP	300,000	94,868	2°51'53"	30,000
ET38	4+319,930	6.879.765,4433	595.131,0367					
				TANG	-	-	258°24'27"	160,668
TE39	4+480,598	6.879.733,1568	594.973,6457					
				ESP	140,000	74,833	8°11'06"	40,000
EC39	4+520,598	6.879.723,2720	594.934,9237					
				CIRC	140,000	-	4°49'18"	11,782
CE39	4+532,380	6.879.718,8239	594.924,0178					
				ESP	140,000	74,833	8°11'06"	40,000
ET39	4+572,380	6.879.698,8079	594.889,4279					
				TANG	-	-	237°12'56"	57,447
TE40	4+629,827	6.879.667,7013	594.841,1312					
				ESP	50,000	38,730	17°11'19"	30,000
EC40	4+659,827	6.879.649,0965	594.817,7499					
				CIRC	50,000	-	23°56'40"	20,895
CE40	4+680,723	6.879.630,7902	594.807,9938					
				ESP	50,000	38,730	17°11'19"	30,000
ET40	4+710,723	6.879.601,0070	594.805,5877					
				TANG	-	-	178°53'37"	28,343
TE41	4+739,065	6.879.572,6696	594.806,1349					
				ESP	55,000	46,904	20°50'05"	40,000

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Projeto Geométrico Horizontal

Nome	Estaca	Norte	Este	Linha	Raio	Parâmetro	AC/AZ	Extensão
EC41	4+779,065	6.879.533,1099	594.802,0951					
				CIRC	55,000	-	11°22'56"	10,926
CE41	4+789,991	6.879.523,2578	594.797,4129					
				ESP	55,000	46,904	20°50'05"	40,000
ET41	4+829,991	6.879.495,1435	594.769,2904					
				TANG	-	-	231°56'44"	34,307
TE42	4+864,298	6.879.473,9963	594.742,2762					
				ESP	90,000	60,000	12°43'57"	40,000
EC42	4+904,298	6.879.447,1364	594.712,7544					
				CIRC	90,000	-	59°33'39"	93,558
CE42	4+997,856	6.879.358,9435	594.698,1023					
				ESP	90,000	60,000	12°43'57"	40,000
ET42	5+37,856	6.879.323,9807	594.717,3532					
				TANG	-	-	146°55'12"	68,131
TE43	5+105,988	6.879.266,8929	594.754,5400					
				ESP	50,000	44,721	22°55'06"	40,000
EC43	5+145,988	6.879.231,0309	594.771,6076					
				CIRC	50,000	-	21°28'06"	18,735
CE43	5+164,722	6.879.212,4066	594.771,4215					
				ESP	50,000	44,721	22°55'06"	40,000
ET43	5+204,722	6.879.176,8929	594.753,6408					
				TANG	-	-	214°13'30"	75,082
TE44	5+279,804	6.879.114,8122	594.711,4114					
				ESP	80,000	56,569	14°19'26"	40,000
EC44	5+319,804	6.879.080,0784	594.691,7978					
				CIRC	80,000	-	27°41'29"	38,664
CE44	5+358,469	6.879.042,0028	594.687,7587					
				ESP	80,000	58,652	15°23'54"	43,000
TE45	5+401,469	6.879.001,2522	594.701,0459					
				ESP	50,000	46,728	25°01'16"	43,670
EC45	5+445,139	6.878.959,3990	594.712,1525					
				CIRC	50,000	-	39°31'06"	34,486
CE45	5+479,625	6.878.927,9644	594.699,7120					
				ESP	50,000	44,721	22°55'06"	40,000
ET45	5+519,625	6.878.906,1245	594.666,5397					
				TANG	-	-	244°16'08"	96,813
TE46	5+616,438	6.878.864,0936	594.579,3266					
				ESP	300,000	94,868	2°51'53"	30,000
EC46	5+646,438	6.878.850,6221	594.552,5251					
				CIRC	300,000	-	2°49'20"	14,777
CE46	5+661,215	6.878.843,2328	594.539,7300					
				ESP	300,000	94,868	2°51'53"	30,000
ET46	5+691,215	6.878.826,7517	594.514,6666					
				TANG	-	-	235°43'02"	219,902
TE47	5+911,117	6.878.702,8860	594.332,9688					
				ESP	233,740	83,739	3°40'37"	30,000
EC47	5+941,117	6.878.685,4645	594.308,5524					
				CIRC	233,740	-	7°34'17"	30,888

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Projeto Geométrico Horizontal

Nome	Estaca	Norte	Este	Linha	Raio	Parâmetro	AC/AZ	Extensão
PC48	5+972,005	6.878.664,9136	594.285,5232					
				CIRC	150,000	-	15°54'50"	41,665
CE48	6+13,670	6.878.639,5902	594.252,6084					
				ESP	150,000	67,082	5°43'46"	30,000
ET48	6+43,670	6.878.626,5408	594.225,6100					
				TANG	-	-	246°06'48"	119,101
TE49	6+162,771	6.878.578,3136	594.116,7105					
				ESP	143,860	65,695	5°58'27"	30,000
EC49	6+192,771	6.878.567,1316	594.088,8880					
				CIRC	143,860	-	12°12'17"	30,644
PC50	6+223,414	6.878.560,8715	594.058,9495					
				CIRC	130,000	-	9°09'41"	20,787
CE50	6+244,202	6.878.557,1627	594.038,5189					
				ESP	130,000	62,450	6°36'40"	30,000
ET50	6+274,202	6.878.547,2644	594.010,2177					
				TANG	-	-	248°31'09"	258,776
TE51	6+532,978	6.878.452,5038	593.769,4163					
				ESP	350,000	102,470	2°27'20"	30,000
EC51	6+562,978	6.878.441,1214	593.741,6621					
				CIRC	350,000	-	1°39'51"	10,165
CE51	6+573,143	6.878.436,8629	593.732,4323					
				ESP	350,000	102,470	2°27'20"	30,000
ET51	6+603,143	6.878.423,1337	593.705,7610					
				TANG	-	-	241°56'39"	36,892
TE52	6+640,035	6.878.405,7821	593.673,2039					
				ESP	50,000	44,721	22°55'06"	40,000
EC52	6+680,035	6.878.391,9207	593.635,9851					
				CIRC	50,000	-	12°59'06"	11,332
CE52	6+691,367	6.878.392,1880	593.624,6809					
				ESP	50,000	44,721	22°55'06"	40,000
ET52	6+731,367	6.878.407,7937	593.588,1590					
				TANG	-	-	300°45'57"	35,336
TE53	6+766,703	6.878.425,8691	593.557,7960					
				ESP	80,000	48,990	10°44'35"	30,000
EC53	6+796,703	6.878.439,5541	593.531,1518					
				CIRC	80,000	-	9°35'48"	13,399
CE53	6+810,102	6.878.443,0687	593.518,2376					
				ESP	80,000	48,990	10°44'35"	30,000
ET53	6+840,102	6.878.444,7737	593.488,3331					
				TANG	-	-	269°41'00"	84,784
TE54	6+924,886	6.878.444,3050	593.403,5506					
				ESP	100,000	63,246	11°27'33"	40,000
EC54	6+964,886	6.878.441,4257	593.363,7256					
				CIRC	100,000	-	5°46'08"	10,068
CE54	6+974,954	6.878.438,8786	593.353,9891					
				ESP	100,000	63,246	11°27'33"	40,000
ET54	7+14,954	6.878.421,8869	593.317,8560					
				TANG	-	-	240°59'46"	48,602

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Projeto Geométrico Horizontal

Nome	Estaca	Norte	Este	Linha	Raio	Parâmetro	AC/AZ	Extensão
TE55	7+63,556	6.878.398,3215	593.275,3496					
				ESP	350,000	102,470	2°27'20"	30,000
EC55	7+93,556	6.878.384,1529	593.248,9091					
				CIRC	350,000	-	1°48'59"	11,095
CE55	7+104,651	6.878.379,3519	593.238,9066					
				ESP	350,000	102,470	2°27'20"	30,000
ET55	7+134,651	6.878.367,5852	593.211,3132					
				TANG	-	-	247°43'25"	69,475
TE56	7+204,126	6.878.341,2490	593.147,0237					
				ESP	200,000	89,443	5°43'46"	40,000
EC56	7+244,126	6.878.327,3341	593.109,5410					
				CIRC	200,000	-	12°19'46"	43,038
CE56	7+287,164	6.878.319,5931	593.067,2896					
				ESP	200,000	89,443	5°43'46"	40,000
ET56	7+327,164	6.878.319,3157	593.027,3084					
				TANG	-	-	271°30'44"	37,880
TE57	7+365,044	6.878.320,3152	592.989,4414					
				ESP	900,000	189,737	1°16'24"	40,000
EC57	7+405,044	6.878.321,0745	592.949,4494					
				CIRC	900,000	-	1°06'51"	17,503
CE57	7+422,547	6.878.320,9773	592.931,9472					
				ESP	900,000	189,737	1°16'24"	40,000
ET57	7+462,547	6.878.319,7738	592.891,9661					
				TANG	-	-	267°51'05"	125,595
TE58	7+588,142	6.878.315,0649	592.766,4595					
				ESP	50,000	38,730	17°11'19"	30,000
EC58	7+618,142	6.878.316,9289	592.736,6375					
				CIRC	50,000	-	22°46'32"	19,875
CE58	7+638,017	6.878.325,7167	592.718,9562					
				ESP	50,000	38,730	17°11'19"	30,000
ET58	7+668,017	6.878.348,3628	592.699,4631					
				TANG	-	-	325°00'15"	60,151
TE59	7+728,168	6.878.397,6381	592.664,9656					
				ESP	450,000	116,190	1°54'35"	30,000
EC59	7+758,168	6.878.422,4024	592.648,0351					
				CIRC	450,000	-	2°12'24"	17,332
CE59	7+775,500	6.878.437,1023	592.638,8559					
				ESP	450,000	116,190	1°54'35"	30,000
ET59	7+805,500	6.878.463,1844	592.624,0357					
				TANG	-	-	331°01'51"	54,352
TE60	7+859,852	6.878.510,7360	592.597,7107					
				ESP	500,000	122,474	1°43'08"	30,000
EC60	7+889,852	6.878.537,1253	592.583,4442					
				CIRC	500,000	-	1°15'15"	10,944
CE60	7+900,796	6.878.546,9086	592.578,5401					
				ESP	500,000	122,474	1°43'08"	30,000
ET60	7+930,796	6.878.574,1298	592.565,9331					
				TANG	-	-	335°43'21"	8,337

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Projeto Geométrico Horizontal

Nome	Estaca	Norte	Este	Linha	Raio	Parâmetro	AC/AZ	Extensão
TE61	7+939,132	6.878.581,7293	592.562,5054					
				ESP	300,000	94,868	2°51'53"	30,000
EC61	7+969,132	6.878.608,8639	592.549,7181					
				CIRC	300,000	-	1°36'47"	8,446
CE61	7+977,579	6.878.616,3249	592.545,7596					
				ESP	300,000	94,868	2°51'53"	30,000
ET61	8+7,579	6.878.642,1269	592.530,4606					
				TANG	-	-	328°22'47"	7,748
TE62	8+15,327	6.878.648,7249	592.526,3983					
				ESP	50,000	38,730	17°11'19"	30,000
EC62	8+45,327	6.878.672,4794	592.508,2725					
				CIRC	50,000	-	18°21'13"	16,017
CE62	8+61,344	6.878.680,9340	592.494,7498					
				ESP	50,000	38,730	17°11'19"	30,000
ET62	8+91,344	6.878.686,8267	592.465,4565					
				TANG	-	-	275°38'56"	16,441
TE63	8+107,785	6.878.688,4450	592.449,0953					
				ESP	100,000	54,772	8°35'40"	30,000
EC63	8+137,785	6.878.692,8816	592.419,4555					
				CIRC	100,000	-	4°50'06"	8,439
CE63	8+146,223	6.878.695,3004	592.411,3734					
				ESP	100,000	54,772	8°35'40"	30,000
ET63	8+176,223	6.878.707,8753	592.384,1691					
				TANG	-	-	297°40'21"	35,353
TE64	8+211,576	6.878.724,2937	592.352,8604					
				ESP	250,000	100,000	4°35'01"	40,000
EC64	8+251,576	6.878.741,9144	592.316,9632					
				CIRC	250,000	-	5°30'52"	24,062
PC65	8+275,638	6.878.750,2715	592.294,4094					
				CIRC	326,770	-	3°30'48"	20,039
CE65	8+295,676	6.878.756,9033	592.275,5052					
				ESP	326,770	114,328	3°30'24"	40,000
ET65	8+335,676	6.878.772,8032	592.238,8083					
				TANG	-	-	294°35'41"	11,605
TE66	8+347,282	6.878.777,6332	592.228,2561					
				ESP	125,000	61,237	6°52'32"	30,000
EC66	8+377,282	6.878.789,0112	592.200,5182					
				CIRC	125,000	-	4°18'36"	9,403
CE66	8+386,685	6.878.791,5337	592.191,4620					
				ESP	125,000	61,237	6°52'32"	30,000
ET66	8+416,685	6.878.796,1334	592.161,8361					
				TANG	-	-	276°32'01"	89,931
TE67	8+506,616	6.878.806,3665	592.072,4893					
				ESP	390,000	108,167	2°12'13"	30,000
EC67	8+536,616	6.878.810,1617	592.042,7323					
				CIRC	390,000	-	1°30'14"	10,236
CE67	8+546,852	6.878.811,8492	592.032,6367					
				ESP	390,000	108,167	2°12'13"	30,000

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Projeto Geométrico Horizontal

Nome	Estaca	Norte	Este	Linha	Raio	Parâmetro	AC/AZ	Extensão
ET67	8+576,852	6.878.817,9378	592.003,2630					
				TANG	-	-	282°26'42"	8,190
TE68	8+585,041	6.878.819,7026	591.995,2658					
				ESP	200,000	77,460	4°17'50"	30,000
EC68	8+615,041	6.878.826,8961	591.966,1488					
				CIRC	200,000	-	8°02'23"	28,064
CE68	8+643,105	6.878.836,8363	591.939,9287					
				ESP	200,000	63,246	2°51'53"	20,000
TE69	8+663,105	6.878.845,8191	591.922,0620					
				ESP	155,420	55,753	3°41'11"	20,000
EC69	8+683,105	6.878.854,7148	591.904,1556					
				CIRC	155,420	-	2°57'14"	8,013
CE69	8+691,118	6.878.857,7786	591.896,7528					
				ESP	155,420	68,283	5°31'47"	30,000
TE70	8+721,118	6.878.866,7059	591.868,1248					
				ESP	256,070	87,648	3°21'23"	30,000
EC70	8+751,118	6.878.874,1434	591.839,0685					
				CIRC	256,070	-	3°58'12"	17,743
CE70	8+768,861	6.878.877,2651	591.821,6059					
				ESP	256,070	87,648	3°21'23"	30,000
ET70	8+798,861	6.878.880,3550	591.791,7701					
				TANG	-	-	274°47'38"	27,645
TE71	8+826,506	6.878.882,6654	591.764,2222					
				ESP	160,000	80,000	7°09'43"	40,000
EC71	8+866,506	6.878.887,6620	591.724,5635					
				CIRC	160,000	-	3°56'16"	10,997
CE71	8+877,502	6.878.890,3078	591.713,8922					
				ESP	160,000	80,000	7°09'43"	40,000
ET71	8+917,502	6.878.904,4166	591.676,4927					
				TANG	-	-	293°03'21"	211,477
TE72	9+128,979	6.878.987,2367	591.481,9078					
				ESP	150,000	77,460	7°38'22"	40,000
EC72	9+168,979	6.879.004,5076	591.445,8636					
				CIRC	150,000	-	4°53'28"	12,805
CE72	9+181,784	6.879.011,5059	591.435,1450					
				ESP	150,000	77,460	7°38'22"	40,000
ET72	9+221,784	6.879.037,5584	591.404,8343					
				TANG	-	-	313°13'33"	75,467
TE73	9+297,251	6.879.089,2441	591.349,8441					
				ESP	55,000	40,620	15°37'34"	30,000
EC73	9+327,251	6.879.107,6613	591.326,2884					
				CIRC	55,000	-	14°00'03"	13,440
CE73	9+340,691	6.879.112,3781	591.313,7392					
				ESP	55,000	40,620	15°37'34"	30,000
ET73	9+370,691	6.879.114,0358	591.283,8843					
				TANG	-	-	267°58'22"	49,294
TE74	9+419,985	6.879.112,2921	591.234,6213					
				ESP	800,000	178,885	1°25'57"	40,000

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Projeto Geométrico Horizontal

Nome	Estaca	Norte	Este	Linha	Raio	Parâmetro	AC/AZ	Extensão
EC74	9+459,985	6.879.111,2103	591.194,6370					
				CIRC	800,000	-	0°54'05"	12,587
CE74	9+472,572	6.879.111,1787	591.182,0499					
				ESP	800,000	178,885	1°25'57"	40,000
ET74	9+512,572	6.879.112,0594	591.142,0607					
				TANG	-	-	271°44'21"	33,272
TE75	9+545,844	6.879.113,0691	591.108,8040					
				ESP	100,000	54,772	8°35'40"	30,000
EC75	9+575,844	6.879.115,4744	591.078,9306					
				CIRC	100,000	-	11°47'21"	20,576
CE75	9+596,420	6.879.121,2145	591.059,2091					
				ESP	100,000	54,772	8°35'40"	30,000
ET75	9+626,420	6.879.135,2166	591.032,7111					
				TANG	-	-	300°43'02"	49,370
TE76	9+675,790	6.879.160,4348	590.990,2677					
				ESP	60,000	42,426	14°19'26"	30,000
EC76	9+705,790	6.879.177,8029	590.965,9087					
				CIRC	60,000	-	12°44'06"	13,336
CE76	9+719,126	6.879.188,2052	590.957,6073					
				ESP	60,000	40,070	12°46'37"	26,760
TE77	9+745,886	6.879.212,6534	590.946,8731					
				ESP	75,000	43,301	9°32'57"	25,000
EC77	9+770,886	6.879.235,6984	590.937,2665					
				CIRC	75,000	-	9°50'30"	12,883
CE77	9+783,769	6.879.246,3760	590.930,0869					
				ESP	75,000	47,434	11°27'33"	30,000
ET77	9+813,769	6.879.266,9980	590.908,3720					
				TANG	-	-	309°42'10"	37,870
TE78	9+851,639	6.879.291,1893	590.879,2364					
				ESP	300,000	94,868	2°51'53"	30,000
EC78	9+881,639	6.879.309,9641	590.855,8418					
				CIRC	300,000	-	9°30'30"	49,785
CE78	9+931,424	6.879.336,3777	590.813,7088					
				ESP	300,000	94,868	2°51'53"	30,000
ET78	9+961,424	6.879.349,2538	590.786,6163					
				TANG	-	-	294°27'54"	10,572
TE79	9+971,996	6.879.353,6321	590.776,9934					
				ESP	90,000	60,000	12°43'57"	40,000
EC79	10+11,996	6.879.367,4286	590.739,5414					
				CIRC	90,000	-	20°59'41"	32,978
CE79	10+44,974	6.879.368,1356	590.706,7549					
				ESP	90,000	60,000	12°43'57"	40,000
ET79	10+84,974	6.879.355,9664	590.668,7430					
				TANG	-	-	248°00'20"	220,161
TE80	10+305,135	6.879.273,5128	590.464,6054					
				ESP	410,000	110,905	2°05'46"	30,000
EC80	10+335,135	6.879.262,6180	590.436,6555					
				CIRC	410,000	-	3°03'03"	21,831

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Projeto Geométrico Horizontal

Nome	Estaca	Norte	Este	Linha	Raio	Parâmetro	AC/AZ	Extensão
CE80	10+356,966	6.879.255,7377	590.415,9397					
				ESP	410,000	110,905	2°05'46"	30,000
TE81	10+386,966	6.879.247,7463	590.387,0255					
				ESP	225,000	83,071	3°54'18"	30,670
EC81	10+417,636	6.879.240,6148	590.357,2050					
				CIRC	225,000	-	11°54'31"	46,765
CE81	10+464,401	6.879.236,6341	590.310,6946					
				ESP	225,000	82,158	3°49'11"	30,000
ET81	10+494,401	6.879.238,5220	590.280,7600					
				TANG	-	-	274°52'55"	86,728
TE82	10+581,129	6.879.245,9030	590.194,3466					
				ESP	300,000	94,868	2°51'53"	30,000
EC82	10+611,129	6.879.248,9536	590.164,5054					
				CIRC	300,000	-	2°55'29"	15,314
CE82	10+626,442	6.879.251,4041	590.149,3907					
				ESP	300,000	94,868	2°51'53"	30,000
ET82	10+656,442	6.879.257,9382	590.120,1143					
				TANG	-	-	283°32'11"	64,642
TE83	10+721,085	6.879.273,0685	590.057,2677					
				ESP	80,000	56,569	14°19'26"	40,000
EC83	10+761,085	6.879.279,1464	590.017,8444					
				CIRC	80,000	-	13°10'13"	18,389
CE83	10+779,474	6.879.276,7918	589.999,6476					
				ESP	80,000	56,569	14°19'26"	40,000
ET83	10+819,474	6.879.260,8800	589.963,0697					
				TANG	-	-	241°43'06"	43,217
TE84	10+862,691	6.879.240,4036	589.925,0117					
				ESP	150,000	67,082	5°43'46"	30,000
EC84	10+892,691	6.879.227,0836	589.898,1458					
				CIRC	150,000	-	11°51'30"	31,045
CE84	10+923,736	6.879.218,2182	589.868,4509					
				ESP	150,000	67,082	5°43'46"	30,000
ET84	10+953,736	6.879.214,6294	589.838,6798					
				TANG	-	-	265°02'09"	5,682
TE85	10+959,418	6.879.214,1377	589.833,0191					
				ESP	200,000	77,460	4°17'50"	30,000
EC85	10+989,418	6.879.212,2901	589.803,0836					
				CIRC	200,000	-	3°42'02"	12,917
CE85	11+2,335	6.879.212,5568	589.790,1715					
				ESP	200,000	77,460	4°17'50"	30,000
ET85	11+32,335	6.879.215,6390	589.760,3378					
				TANG	-	-	277°19'51"	4,906
TE86	11+37,241	6.879.216,2650	589.755,4715					
				ESP	150,000	67,082	5°43'46"	30,000
EC86	11+67,241	6.879.219,0980	589.725,6189					
				CIRC	150,000	-	18°35'26"	48,670
CE86	11+115,912	6.879.212,6103	589.677,5981					
				ESP	150,000	67,082	5°43'46"	30,000

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Projeto Geométrico Horizontal

Nome	Estaca	Norte	Este	Linha	Raio	Parâmetro	AC/AZ	Extensão
TE87	11+145,912	6.879.201,9572	589.649,5676					
				ESP	266,230	89,369	3°13'41"	30,000
EC87	11+175,912	6.879.190,8949	589.621,6885					
				CIRC	266,230	-	3°53'11"	18,058
CE87	11+193,970	6.879.185,4515	589.604,4742					
				ESP	266,230	89,369	3°13'41"	30,000
ET87	11+223,970	6.879.178,4733	589.575,3014					
				TANG	-	-	257°37'25"	20,832
TE88	11+244,802	6.879.174,0082	589.554,9534					
				ESP	400,000	126,491	2°51'53"	40,000
EC88	11+284,802	6.879.166,0881	589.515,7499					
				CIRC	400,000	-	1°54'53"	13,368
CE88	11+298,170	6.879.164,0997	589.502,5312					
				ESP	400,000	126,491	2°51'53"	40,000
ET88	11+338,170	6.879.160,1364	589.462,7325					
				TANG	-	-	265°16'05"	178,106
TE89	11+516,276	6.879.145,4433	589.285,2331					
				ESP	300,000	94,868	2°51'53"	30,000
EC89	11+546,276	6.879.143,4672	589.255,3016					
				CIRC	300,000	-	3°26'49"	18,048
CE89	11+564,324	6.879.143,4219	589.237,2566					
				ESP	300,000	94,868	2°51'53"	30,000
ET89	11+594,324	6.879.145,2477	589.207,3155					
				TANG	-	-	274°26'40"	222,184
TE90	11+816,508	6.879.162,4651	588.985,7993					
				ESP	300,000	94,868	2°51'53"	30,000
EC90	11+846,508	6.879.164,2908	588.955,8582					
				CIRC	300,000	-	6°22'41"	33,396
CE90	11+879,904	6.879.163,3534	588.922,4931					
				ESP	300,000	94,868	2°51'53"	30,000
ET90	11+909,904	6.879.159,8493	588.892,7018					
				TANG	-	-	262°20'12"	96,914
TE91	12+6,818	6.879.146,9257	588.796,6531					
				ESP	509,870	123,677	1°41'08"	30,000
EC91	12+36,818	6.879.143,2171	588.766,8844					
				CIRC	509,870	-	1°32'33"	13,726
CE91	12+50,544	6.879.141,9715	588.753,2152					
				ESP	509,870	123,677	1°41'08"	30,000
TE92	12+80,544	6.879.140,2387	588.723,2664					
				ESP	230,000	83,066	3°44'12"	30,000
EC92	12+110,544	6.879.138,1490	588.693,3471					
				CIRC	230,000	-	7°57'51"	31,970
CE92	12+142,514	6.879.132,3450	588.661,9345					
				ESP	230,000	83,066	3°44'12"	30,000
ET92	12+172,514	6.879.123,6048	588.633,2419					
				TANG	-	-	251°48'47"	14,349
TE93	12+186,863	6.879.119,1262	588.619,6096					
				ESP	500,000	122,474	1°43'08"	30,000

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Projeto Geométrico Horizontal

Nome	Estaca	Norte	Este	Linha	Raio	Parâmetro	AC/AZ	Extensão
EC93	12+216,863	6.879.110,0484	588.591,0173					
				CIRC	500,000	-	3°35'16"	31,308
CE93	12+248,172	6.879.102,1185	588.560,7350					
				ESP	500,000	122,474	1°43'08"	30,000
ET93	12+278,172	6.879.096,0174	588.531,3632					
				TANG	-	-	258°50'18"	58,314
TE94	12+336,486	6.879.084,7292	588.474,1525					
				ESP	300,000	94,868	2°51'53"	30,000
EC94	12+366,486	6.879.079,4138	588.444,6305					
				CIRC	300,000	-	2°07'30"	11,127
CE94	12+377,612	6.879.078,0127	588.433,5932					
				ESP	300,000	94,868	2°51'53"	30,000
TE95	12+407,612	6.879.075,7835	588.403,6795					
				ESP	90,770	52,183	9°28'06"	30,000
EC95	12+437,612	6.879.072,4111	588.373,9073					
				CIRC	90,770	-	5°14'51"	8,313
CE95	12+445,926	6.879.070,2043	588.365,8953					
				ESP	90,770	52,183	9°28'06"	30,000
ET95	12+475,926	6.879.057,8568	588.338,5940					
				TANG	-	-	242°30'32"	47,009
TE96	12+522,934	6.879.036,1570	588.296,8933					
				ESP	250,000	93,541	4°00'39"	35,000
EC96	12+557,934	6.879.020,7327	588.265,4838					
				CIRC	250,000	-	7°22'10"	32,156
CE96	12+590,090	6.879.009,8502	588.235,2491					
				ESP	250,000	93,541	4°00'39"	35,000
ET96	12+625,090	6.879.001,7188	588.201,2146					
				TANG	-	-	257°53'59"	29,658
TE97	12+654,748	6.878.995,5018	588.172,2153					
				ESP	438,280	114,666	1°57'39"	30,000
EC97	12+684,748	6.878.988,8793	588.142,9570					
				CIRC	438,280	-	1°24'51"	10,817
CE97	12+695,565	6.878.986,1221	588.132,4979					
				ESP	438,280	114,666	1°57'39"	30,000
TE98	12+725,565	6.878.977,4604	588.103,7772					
				ESP	400,000	109,545	2°08'55"	30,000
EC98	12+755,565	6.878.968,1153	588.075,2742					
				CIRC	400,000	-	4°40'33"	32,644
CE98	12+788,209	6.878.955,9310	588.044,9993					
				ESP	400,000	109,545	2°08'55"	30,000
ET98	12+818,209	6.878.942,9254	588.017,9671					
				TANG	-	-	243°35'27"	50,868
TE99	12+869,076	6.878.920,3006	587.972,4079					
				ESP	60,000	42,426	14°19'26"	30,000
EC99	12+899,076	6.878.904,8113	587.946,8132					
				CIRC	60,000	-	13°21'04"	13,981
CE99	12+913,058	6.878.894,5415	587.937,3725					
				ESP	60,000	42,426	14°19'26"	30,000

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Nome	Estaca	Norte	Este	Linha	Raio	Parâmetro	AC/AZ	Extensão
ET99	12+943,058	6.878.867,7364	587.924,0873					
				TANG	-	-	201°35'31"	115,769
TE100	13+58,827	6.878.760,0912	587.881,4854					
				ESP	500,000	122,474	1°43'08"	30,000
EC100	13+88,827	6.878.732,0885	587.870,7255					
				CIRC	500,000	-	1°19'31"	11,565
CE100	13+100,392	6.878.721,1675	587.866,9203					
				ESP	500,000	122,474	1°43'08"	30,000
ET100	13+130,392	6.878.692,5418	587.857,9485					
				TANG	-	-	196°49'44"	7,845
TE101	13+138,236	6.878.685,0332	587.855,6774					
				ESP	230,000	83,066	3°44'12"	30,000
EC101	13+168,236	6.878.656,1414	587.847,6198					
				CIRC	230,000	-	6°03'54"	24,346
CE101	13+192,582	6.878.632,1809	587.843,3692					
				ESP	230,000	83,066	3°44'12"	30,000
ET101	13+222,582	6.878.602,2806	587.840,9970					
				TANG	-	-	183°17'26"	75,604
TE102	13+298,186	6.878.526,8010	587.836,6574					
				ESP	120,000	60,000	7°09'43"	30,000
EC102	13+328,186	6.878.496,9689	587.833,6915					
				CIRC	120,000	-	34°18'04"	71,840
CE102	13+400,026	6.878.434,2524	587.800,8999					
				ESP	120,000	60,000	7°09'43"	30,000
ET102	13+430,026	6.878.414,7938	587.778,0939					
				TANG	-	-	231°54'56"	62,569
TE103	13+492,595	6.878.376,2000	587.728,8459					
				ESP	250,000	86,603	3°26'16"	30,000
EC103	13+522,595	6.878.358,1741	587.704,8714					
				CIRC	250,000	-	6°14'38"	27,244
CE103	13+549,839	6.878.343,9363	587.681,6600					
				ESP	250,000	86,603	3°26'16"	30,000
ET103	13+579,839	6.878.330,7350	587.654,7260					
				TANG	-	-	245°02'05"	121,339
TE104	13+701,178	6.878.279,5216	587.544,7242					
				ESP	130,000	72,111	8°48'53"	40,000
EC104	13+741,178	6.878.260,8223	587.509,4117					
				CIRC	130,000	-	5°35'04"	12,671
CE104	13+753,849	6.878.253,2755	587.499,2397					
				ESP	130,000	72,111	8°48'53"	40,000
ET104	13+793,849	6.878.224,9021	587.471,1045					
				TANG	-	-	221°49'15"	16,981
TE105	13+810,830	6.878.212,2473	587.459,7816					
				ESP	150,000	67,082	5°43'46"	30,000
EC105	13+840,830	6.878.190,5790	587.439,0528					
				CIRC	150,000	-	3°28'08"	9,081
CE105	13+849,911	6.878.184,6562	587.432,1707					
				ESP	150,000	67,082	5°43'46"	30,000

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Projeto Geométrico Horizontal

Nome	Estaca	Norte	Este	Linha	Raio	Parâmetro	AC/AZ	Extensão
ET105	13+879,911	6.878.167,3876	587.407,6555					
				TANG	-	-	236°44'55"	57,990
TE106	13+937,901	6.878.135,5907	587.359,1596					
				ESP	83,610	50,083	10°16'45"	30,000
EC106	13+967,901	6.878.117,6973	587.335,1334					
				CIRC	83,610	-	14°13'35"	20,760
CE106	13+988,662	6.878.101,6863	587.322,0023					
				ESP	83,610	50,083	10°16'45"	30,000
TE107	14+18,662	6.878.074,6227	587.309,1576					
				ESP	60,770	42,698	14°08'33"	30,000
EC107	14+48,662	6.878.047,8876	587.295,7255					
				CIRC	60,770	-	36°12'47"	38,409
PC108	14+87,070	6.878.025,7990	587.265,0844					
				CIRC	90,000	-	28°41'39"	45,074
CE108	14+132,145	6.878.002,1440	587.227,2705					
				ESP	90,000	51,962	9°32'57"	30,000
ET108	14+162,145	6.877.978,2957	587.209,1311					
				TANG	-	-	214°04'30"	16,784
TE109	14+178,929	6.877.964,3934	587.199,7274					
				ESP	150,000	67,082	5°43'46"	30,000
EC109	14+208,929	6.877.940,1289	587.182,1081					
				CIRC	150,000	-	6°58'21"	18,254
CE109	14+227,183	6.877.926,8505	587.169,5993					
				ESP	150,000	67,082	5°43'46"	30,000
ET109	14+257,183	6.877.907,8158	587.146,4286					
				TANG	-	-	232°30'23"	197,996
PC110	14+455,179	6.877.787,3011	586.989,3339					
				CIRC	400,000	-	5°03'16"	35,286
PT110	14+490,465	6.877.767,0853	586.960,4265					
				TANG	-	-	237°33'39"	110,202
PC111	14+600,667	6.877.707,9726	586.867,4202					
				CIRC	100,000	-	11°36'49"	20,269
PT111	14+620,937	6.877.695,4466	586.851,5286					
				TANG	-	-	225°56'51"	19,063
PI-112	14+640,000	6.877.682,1917	586.837,8280					

4.3. Elementos do Projeto Geométrico Vertical

ENGMETRIA - Ltda.

Projeto: SC-114 - Bentinho - SC

TRECHO

Projeto Vertical

Nome	Estaca	Cota	Rampa (%)	Raio Vertical	Extensão
V0	0	1.245,183			
			5,728	-	30,000
PCV1	0+30,000	1.246,902			
			Parábola	-459,540	30,000
PTV1	0+60,000	1.247,641			
			-0,800	-	10,000
PCV2	0+70,000	1.247,561			
			Parábola	566,037	60,000
PCCV3	0+130,000	1.250,261			
			Parábola	-1.267,606	90,000
PCCV4	0+220,000	1.255,886			
			Parábola	612,245	60,000
PTV4	0+280,000	1.260,446			
			12,500	-	80,000
PCV5	0+360,000	1.270,446			
			Parábola	-1.103,448	160,000
PTV5	0+520,000	1.278,846			
			-2,000	-	40,000
PCV6	0+560,000	1.278,046			
			Parábola	5.390,071	80,000
PTV6	0+640,000	1.277,040			
			-0,516	-	80,000
PCV7	0+720,000	1.276,627			
			Parábola	-1.464,811	140,000
PTV7	0+860,000	1.269,215			
			-10,073	-	240,000
PCV8	1+100,000	1.245,039			
			Parábola	2.355,480	220,000
PTV8	1+320,000	1.233,151			
			-0,733	-	220,000
PCV9	1+540,000	1.231,538			
			Parábola	3.608,958	160,000
PTV9	1+700,000	1.233,911			
			3,700	-	400,000
PCV10	2+100,000	1.248,711			
			Parábola	-2.857,143	140,000
PTV10	2+240,000	1.250,461			
			-1,200	-	40,000
PCV11	2+280,000	1.249,981			
			Parábola	5.853,659	120,000
PTV11	2+400,000	1.249,771			
			0,850	-	320,000
PCV12	2+720,000	1.252,491			
			Parábola	-3.428,571	180,000
PCCV13	2+900,000	1.249,296			
			Parábola	1.621,622	120,000
PTV13	3+20,000	1.248,456			
			3,000	-	120,000

ENGMETRIA - Ltda.

Projeto: SC-114 - Bentinho - SC

TRECHO

Projeto Vertical

Nome	Estaca	Cota	Rampa (%)	Raio Vertical	Extensão
PCV14	3+140,000	1.252,056			
			Parábola	-2.285,714	80,000
PTV14	3+220,000	1.253,056			
			-0,500	-	240,000
PCV15	3+460,000	1.251,856			
			Parábola	-3.125,000	100,000
PCCV16	3+560,000	1.249,756			
			Parábola	1.428,571	160,000
PCCV17	3+720,000	1.252,796			
			Parábola	-1.833,333	220,000
PTV17	3+940,000	1.256,096			
			-4,500	-	140,000
PCV18	4+80,000	1.249,796			
			Parábola	2.181,818	120,000
PTV18	4+200,000	1.247,696			
			1,000	-	160,000
PCV19	4+360,000	1.249,296			
			Parábola	-2.162,162	120,000
PTV19	4+480,000	1.247,166			
			-4,550	-	280,000
PCV20	4+760,000	1.234,426			
			Parábola	14.000,000	140,000
PTV20	4+900,000	1.228,756			
			-3,550	-	200,000
PCV21	5+100,000	1.221,656			
			Parábola	2.264,151	120,000
PTV21	5+220,000	1.220,576			
			1,750	-	260,000
PCV22	5+480,000	1.225,126			
			Parábola	2.800,000	140,000
PCCV23	5+620,000	1.231,076			
			Parábola	-2.285,714	200,000
PTV23	5+820,000	1.235,826			
			-2,000	-	180,000
PCV24	6	1.232,226			
			Parábola	4.242,424	140,000
PCCV25	6+140,000	1.231,736			
			Parábola	-1.590,909	140,000
PCCV26	6+280,000	1.227,396			
			Parábola	1.204,819	140,000
PCCV27	6+420,000	1.225,030			
			Parábola	-2.074,689	100,000
PTV27	6+520,000	1.226,740			
			-0,700	-	180,000
PCV28	6+700,000	1.225,480			
			Parábola	4.761,905	100,000
PTV28	6+800,000	1.225,830			
			1,400	-	140,000

ENGMETRIA - Ltda.

Projeto: SC-114 - Bentinho - SC

TRECHO

Projeto Vertical

Nome	Estaca	Cota	Rampa (%)	Raio Vertical	Extensão
PCV29	6+940,000	1.227,790			
			Parábola	-2.711,864	160,000
PCCV30	7+100,000	1.225,310			
			Parábola	1.818,182	180,000
PTV30	7+280,000	1.226,120			
			5,400	-	100,000
PCV31	7+380,000	1.231,520			
			Parábola	-2.692,308	140,000
PTV31	7+520,000	1.235,440			
			0,200	-	340,000
PCV32	7+860,000	1.236,120			
			Parábola	-2.201,835	120,000
PCCV33	7+980,000	1.233,090			
			Parábola	1.632,653	80,000
PTV33	8+60,000	1.230,850			
			-0,350	-	200,000
PCV34	8+260,000	1.230,150			
			Parábola	-4.166,667	100,000
PCCV35	8+360,000	1.228,600			
			Parábola	8.571,429	120,000
PTV35	8+480,000	1.226,140			
			-1,350	-	540,000
PCV36	9+20,000	1.218,850			
			Parábola	-1.280,000	80,000
PCCV37	9+100,000	1.215,270			
			Parábola	1.481,481	80,000
PTV37	9+180,000	1.211,350			
			-2,200	-	60,000
PCV38	9+240,000	1.210,030			
			Parábola	975,610	80,000
PCCV39	9+320,000	1.211,550			
			Parábola	-1.714,286	120,000
PTV39	9+440,000	1.214,550			
			-1,000	-	140,000
PCV40	9+580,000	1.213,150			
			Parábola	-1.411,765	120,000
PTV40	9+700,000	1.206,850			
			-9,500	-	40,000
PCV41	9+740,000	1.203,050			
			Parábola	1.891,892	140,000
PTV41	9+880,000	1.194,930			
			-2,100	-	560,000
PCV42	10+440,000	1.183,170			
			Parábola	-2.666,668	100,000
PTV42	10+540,000	1.179,195			
			-5,850	-	100,000
PCV43	10+640,000	1.173,345			
			Parábola	1.276,596	180,000

ENGMETRIA - Ltda.

Projeto: SC-114 - Bentinho - SC

TRECHO

Projeto Vertical

Nome	Estaca	Cota	Rampa (%)	Raio Vertical	Extensão
PTV43	10+820,000	1.175,505			
			8,250	-	340,000
PCV44	11+160,000	1.203,555			
			Parábola	-2.482,759	180,000
PTV44	11+340,000	1.211,880			
			1,000	-	240,000
PCV45	11+580,000	1.214,280			
			Parábola	-4.800,000	120,000
PTV45	11+700,000	1.213,980			
			-1,500	-	440,000
PCV46	12+140,000	1.207,380			
			Parábola	16.000,000	160,000
PTV46	12+300,000	1.205,780			
			-0,500	-	460,000
PCV47	12+760,000	1.203,480			
			Parábola	-3.999,999	140,000
PTV47	12+900,000	1.200,330			
			-4,000	-	380,000
PCV48	13+280,000	1.185,130			
			Parábola	1.674,419	180,000
PTV48	13+460,000	1.187,605			
			6,750	-	80,000
PCV49	13+540,000	1.193,005			
			Parábola	-2.158,731	340,000
PTV49	13+880,000	1.189,180			
			-9,000	-	60,000
PCV50	13+940,000	1.183,780			
			Parábola	1.739,130	100,000
PTV50	14+40,000	1.177,655			
			-3,250	-	60,000
PCV51	14+100,000	1.175,705			
			Parábola	2.434,783	140,000
PCCV52	14+240,000	1.175,180			
			Parábola	-1.804,511	120,000
PTV52	14+360,000	1.174,190			
			-4,150	-	80,000
PCV53	14+440,000	1.170,870			
			Parábola	-992,908	70,000
PCCV54	14+510,000	1.165,498			
			Parábola	886,076	70,000
PTV54	14+580,000	1.160,423			
			-3,300	-	20,000
PCV55	14+600,000	1.159,763			
			Parábola	6.355,562	40,000
V56	14+640,000	1.158,568			

CAPÍTULO 5 – CÁLCULO DOS VOLUMES DE TERRAPLENAGEM

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Projeto: SC-114 - Bentinho - SC

TRECHO

Volume

Cálculo de Volume por Comparação de Perfis: Terreno x Projeto

Km	Área Corte	Área Aterro	Semi-Dis.	Vol.Corte	Vol.Aterro	V.C.Acum.	V.A.Acum.
0+60	2,269	0,000					
			3,049	12,971	2,994	12,971	2,994
0+66,097	1,986	0,982					
			1,952	8,040	7,933	21,011	10,927
0+70	2,134	3,083					
			2,500	10,558	21,683	31,569	32,610
0+75	2,089	5,590					
			2,500	9,148	29,223	40,717	61,833
0+80	1,570	6,099					
			5,000	8,795	72,400	49,512	134,233
0+90	0,189	8,381					
			2,500	1,162	43,733	50,674	177,966
0+95	0,276	9,112					
			0,549	0,302	9,925	50,976	187,891
0+96,097	0,274	8,983					
			1,952	0,806	33,673	51,782	221,564
0+100	0,139	8,272					
			5,000	0,715	79,095	52,497	300,659
0+110	0,004	7,547					
			5,000	2,320	44,730	54,817	345,389
0+120	0,460	1,399					
			3,049	6,521	5,798	61,338	351,187
0+126,097	1,679	0,503					
			1,952	8,019	1,647	69,357	352,834
0+130	2,430	0,341					
			5,000	48,135	1,705	117,492	354,539
0+140	7,197	0,000					
			5,000	106,410	0,000	223,902	354,539
0+150	14,085	0,000					
			3,049	75,252	0,000	299,154	354,539
0+156,097	10,600	0,000					
			1,952	37,379	0,000	336,533	354,539
0+160	8,554	0,000					
			5,000	76,985	0,000	413,518	354,539
0+170	6,843	0,000					
			2,683	38,957	0,000	452,475	354,539
0+175,366	7,677	0,000					
			2,317	35,508	0,000	487,983	354,539
0+180	7,648	0,000					
			5,000	78,050	0,000	566,033	354,539
0+190	7,962	0,000					
			5,000	67,005	0,000	633,038	354,539
0+200	5,439	0,000					
			2,683	25,666	0,000	658,704	354,539
0+205,366	4,127	0,000					

ENGMETRIA - Ltda.

Projeto: SC-114 - Bentinho - SC

TRECHO

Volume

Cálculo de Volume por Comparação de Perfis: Terreno x Projeto

Km	Área Corte	Área Aterro	Semi-Dis.	Vol.Corte	Vol.Aterro	V.C.Acum.	V.A.Acum.
0+205,366	4,127	0,000					
			7,317	43,587	0,600	702,291	355,139
0+220	1,830	0,082					
			9,076	16,608	14,294	718,899	369,433
0+238,151	0,000	1,493					
			0,925	0,000	3,522	718,899	372,955
0+240	0,000	2,317					
			2,500	0,170	19,697	719,069	392,652
0+245	0,068	5,562					
			2,500	0,213	36,020	719,282	428,672
0+250	0,017	8,846					
			5,000	1,625	82,815	720,907	511,487
0+260	0,308	7,717					
			2,500	2,045	39,570	722,952	551,057
0+265	0,510	8,111					
			1,576	1,812	25,989	724,764	577,046
0+268,151	0,640	8,385					
			0,925	1,225	15,858	725,989	592,904
0+270	0,685	8,768					
			5,000	5,030	82,075	731,019	674,979
0+280	0,321	7,647					
			5,000	3,285	74,135	734,304	749,114
0+290	0,336	7,180					
			1,876	1,291	25,857	735,595	774,971
0+293,752	0,352	6,603					
			3,124	2,062	38,522	737,657	813,493
0+300	0,308	5,728					
			5,000	2,490	53,245	740,147	866,738
0+310	0,190	4,921					
			5,000	5,045	38,505	745,192	905,243
0+320	0,819	2,780					
			1,876	3,373	8,888	748,565	914,131
0+323,752	0,979	1,958					
			8,124	37,752	17,004	786,317	931,135
0+340	3,668	0,135					
			10,000	134,860	1,350	921,177	932,485
0+360	9,818	0,000					
			7,448	165,904	0,000	1.087,081	932,485
0+374,896	12,457	0,000					
			2,552	62,557	0,000	1.149,638	932,485
0+380	12,056	0,000					
			5,000	122,380	0,000	1.272,018	932,485
0+390	12,420	0,000					
			5,000	102,765	0,000	1.374,783	932,485
0+400	8,133	0,000					

ENGMETRIA - Ltda.

Projeto: SC-114 - Bentinho - SC

TRECHO

Volume

Cálculo de Volume por Comparação de Perfis: Terreno x Projeto

Km	Área Corte	Área Aterro	Semi-Dis.	Vol.Corte	Vol.Aterro	V.C.Acum.	V.A.Acum.
0+400	8,133	0,000					
			5,000	68,825	0,000	1.443,608	932,485
0+410	5,632	0,000					
			2,448	19,895	0,999	1.463,503	933,484
0+414,896	2,495	0,408					
			2,552	7,865	5,515	1.471,368	938,999
0+420	0,587	1,753					
			5,000	3,410	30,565	1.474,778	969,564
0+430	0,095	4,360					
			2,217	0,530	18,246	1.475,308	987,810
0+434,433	0,144	3,872					
			2,784	0,874	19,947	1.476,182	1.007,757
0+440	0,170	3,294					
			5,000	5,400	28,810	1.481,582	1.036,567
0+450	0,910	2,468					
			5,000	25,790	12,340	1.507,372	1.048,907
0+460	4,248	0,000					
			5,000	51,705	0,000	1.559,077	1.048,907
0+470	6,093	0,000					
			2,217	22,934	0,000	1.582,011	1.048,907
0+474,433	4,254	0,000					
			2,784	17,530	0,000	1.599,541	1.048,907
0+480	2,044	0,000					
			10,000	20,440	22,950	1.619,981	1.071,857
0+500	0,000	2,295					
			10,000	4,360	30,580	1.624,341	1.102,437
0+520	0,436	0,763					
			10,000	43,820	10,760	1.668,161	1.113,197
0+540	3,946	0,313					
			10,000	87,160	21,620	1.755,321	1.134,817
0+560	4,770	1,849					
			9,169	97,049	32,667	1.852,370	1.167,484
0+578,337	5,815	1,714					
			0,832	9,319	2,789	1.861,689	1.170,273
0+580	5,392	1,640					
			2,500	22,325	7,865	1.884,014	1.178,138
0+585	3,538	1,506					
			2,500	15,235	7,442	1.899,249	1.185,580
0+590	2,556	1,471					
			2,500	12,655	7,675	1.911,904	1.193,255
0+595	2,506	1,599					
			2,500	9,945	9,258	1.921,849	1.202,513
0+600	1,472	2,104					
			2,500	4,113	15,025	1.925,962	1.217,538
0+605	0,173	3,906					

ENGMETRIA - Ltda.

Projeto: SC-114 - Bentinho - SC

TRECHO

Volume

Cálculo de Volume por Comparação de Perfis: Terreno x Projeto

Km	Área Corte	Área Aterro	Semi-Dis.	Vol.Corte	Vol.Aterro	V.C.Acum.	V.A.Acum.
0+605	0,173	3,906					
			1,669	0,289	15,961	1.926,251	1.233,499
0+608,337	0,000	5,660					
			0,832	0,000	10,056	1.926,251	1.243,555
0+610	0,000	6,434					
			2,500	0,080	34,303	1.926,331	1.277,858
0+615	0,032	7,287					
			2,500	0,460	40,142	1.926,791	1.318,000
0+620	0,152	8,770					
			2,500	0,948	44,875	1.927,739	1.362,875
0+625	0,227	9,180					
			2,500	4,348	49,857	1.932,087	1.412,732
0+630	1,512	10,763					
			2,500	4,475	51,195	1.936,562	1.463,927
0+635	0,278	9,715					
			2,500	0,740	48,360	1.937,302	1.512,287
0+640	0,018	9,629					
			2,500	0,045	46,078	1.937,347	1.558,365
0+645	0,000	8,802					
			2,500	0,000	39,862	1.937,347	1.598,227
0+650	0,000	7,143					
			2,500	0,000	32,060	1.937,347	1.630,287
0+655	0,000	5,681					
			2,500	0,157	17,890	1.937,504	1.648,177
0+660	0,063	1,475					
			2,500	7,588	3,688	1.945,092	1.651,865
0+665	2,972	0,000					
			0,894	6,705	0,000	1.951,797	1.651,865
0+666,787	4,532	0,000					
			1,607	19,975	0,000	1.971,772	1.651,865
0+670	7,902	0,000					
			5,000	126,595	0,000	2.098,367	1.651,865
0+680	17,417	0,000					
			5,000	212,645	0,000	2.311,012	1.651,865
0+690	25,112	0,000					
			5,000	231,770	0,000	2.542,782	1.651,865
0+700	21,242	0,000					
			2,939	114,915	0,000	2.657,697	1.651,865
0+705,878	17,858	0,000					
			2,061	70,857	0,000	2.728,554	1.651,865
0+710	16,522	0,000					
			5,000	151,020	0,000	2.879,574	1.651,865
0+720	13,682	0,000					
			5,000	123,100	0,000	3.002,674	1.651,865
0+730	10,938	0,000					

ENGMETRIA - Ltda.

Projeto: SC-114 - Bentinho - SC

TRECHO

Volume

Cálculo de Volume por Comparação de Perfis: Terreno x Projeto

Km	Área Corte	Área Aterro	Semi-Dis.	Vol.Corte	Vol.Aterro	V.C.Acum.	V.A.Acum.
0+730	10,938	0,000					
			2,939	60,396	0,000	3.063,070	1.651,865
0+735,878	9,612	0,000					
			2,061	37,898	0,000	3.100,968	1.651,865
0+740	8,776	0,000					
			5,192	81,169	0,000	3.182,137	1.651,865
0+750,383	6,859	0,000					
			2,309	30,082	0,000	3.212,219	1.651,865
0+755	6,172	0,000					
			2,500	29,238	0,000	3.241,457	1.651,865
0+760	5,523	0,000					
			2,500	26,172	0,000	3.267,629	1.651,865
0+765	4,946	0,000					
			2,500	24,245	0,000	3.291,874	1.651,865
0+770	4,752	0,000					
			2,500	22,942	0,000	3.314,816	1.651,865
0+775	4,425	0,000					
			2,500	22,280	4,780	3.337,096	1.656,645
0+780	4,487	1,912					
			0,192	1,729	0,765	3.338,825	1.657,410
0+780,383	4,540	2,084					
			2,309	21,700	15,709	3.360,525	1.673,119
0+785	4,860	4,721					
			2,500	29,388	26,555	3.389,913	1.699,674
0+790	6,895	5,901					
			2,500	39,570	29,087	3.429,483	1.728,761
0+795	8,933	5,734					
			2,500	49,378	31,312	3.478,861	1.760,073
0+800	10,818	6,791					
			2,500	58,938	32,435	3.537,799	1.792,508
0+805	12,757	6,183					
			1,015	27,468	10,310	3.565,267	1.802,818
0+807,029	14,318	3,980					
			1,486	46,431	7,676	3.611,698	1.810,494
0+810	16,938	1,187					
			2,500	96,352	2,968	3.708,050	1.813,462
0+815	21,603	0,000					
			2,500	118,962	0,000	3.827,012	1.813,462
0+820	25,982	0,000					
			2,500	140,760	0,000	3.967,772	1.813,462
0+825	30,322	0,000					
			2,500	153,150	0,000	4.120,922	1.813,462
0+830	30,938	0,000					
			2,500	155,197	0,000	4.276,119	1.813,462
0+835	31,141	0,000					

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Volume

Cálculo de Volume por Comparação de Perfis: Terreno x Projeto

Km	Área Corte	Área Aterro	Semi-Dis.	Vol.Corte	Vol.Aterro	V.C.Acum.	V.A.Acum.
0+835	31,141	0,000					
			1,015	63,148	0,000	4.339,267	1.813,462
0+837,029	31,104	0,000					
			1,486	92,471	0,000	4.431,738	1.813,462
0+840	31,145	0,000					
			9,138	573,318	0,000	5.005,056	1.813,462
0+858,276	31,595	0,000					
			0,862	54,873	0,000	5.059,929	1.813,462
0+860	32,063	0,000					
			2,500	162,873	0,000	5.222,802	1.813,462
0+865	33,086	0,000					
			2,500	161,238	0,000	5.384,040	1.813,462
0+870	31,409	0,000					
			2,500	154,028	0,000	5.538,068	1.813,462
0+875	30,202	0,000					
			2,500	149,880	0,000	5.687,948	1.813,462
0+880	29,750	0,000					
			2,500	148,483	0,000	5.836,431	1.813,462
0+885	29,643	0,000					
			1,638	98,865	0,000	5.935,296	1.813,462
0+888,276	30,714	0,000					
			0,862	53,493	0,000	5.988,789	1.813,462
0+890	31,343	0,000					
			2,500	162,745	0,000	6.151,534	1.813,462
0+895	33,755	0,000					
			2,500	176,225	0,000	6.327,759	1.813,462
0+900	36,735	0,000					
			2,500	191,095	0,000	6.518,854	1.813,462
0+905	39,703	0,000					
			2,500	205,780	0,000	6.724,634	1.813,462
0+910	42,609	0,000					
			2,500	225,240	0,000	6.949,874	1.813,462
0+915	47,487	0,000					
			2,500	247,650	0,000	7.197,524	1.813,462
0+920	51,573	0,000					
			2,500	264,243	0,000	7.461,767	1.813,462
0+925	54,124	0,000					
			2,500	273,227	0,000	7.734,994	1.813,462
0+930	55,167	0,000					
			2,500	278,673	0,000	8.013,667	1.813,462
0+935	56,302	0,000					
			2,500	285,043	0,000	8.298,710	1.813,462
0+940	57,715	0,000					
			2,500	287,017	0,000	8.585,727	1.813,462
0+945	57,092	0,000					

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Volume

Cálculo de Volume por Comparação de Perfis: Terreno x Projeto

Km	Área Corte	Área Aterro	Semi-Dis.	Vol.Corte	Vol.Aterro	V.C.Acum.	V.A.Acum.
0+945	57,092	0,000					
			2,500	280,210	0,000	8.865,937	1.813,462
0+950	54,992	0,000					
			2,500	271,325	0,000	9.137,262	1.813,462
0+955	53,538	0,000					
			2,500	265,100	0,000	9.402,362	1.813,462
0+960	52,502	0,000					
			2,500	258,128	0,000	9.660,490	1.813,462
0+965	50,749	0,000					
			2,500	249,027	0,000	9.909,517	1.813,462
0+970	48,862	0,000					
			2,500	240,947	0,000	10.150,464	1.813,462
0+975	47,517	0,000					
			2,500	238,000	0,000	10.388,464	1.813,462
0+980	47,683	0,000					
			2,500	238,438	0,000	10.626,902	1.813,462
0+985	47,692	0,000					
			2,500	241,498	0,000	10.868,400	1.813,462
0+990	48,907	0,000					
			2,500	243,028	0,000	11.111,428	1.813,462
0+995	48,304	0,000					
			2,500	243,938	0,000	11.355,366	1.813,462
1	49,271	0,000					
			2,500	245,652	0,000	11.601,018	1.813,462
1+5	48,990	0,000					
			2,500	237,658	0,000	11.838,676	1.813,462
1+10	46,073	0,000					
			2,500	214,023	0,000	12.052,699	1.813,462
1+15	39,536	0,000					
			2,500	166,153	0,000	12.218,852	1.813,462
1+20	26,925	0,000					
			2,500	109,755	0,050	12.328,607	1.813,512
1+25	16,977	0,020					
			2,500	72,407	0,098	12.401,014	1.813,610
1+30	11,986	0,019					
			2,500	53,833	0,048	12.454,847	1.813,658
1+35	9,547	0,000					
			2,500	44,770	0,000	12.499,617	1.813,658
1+40	8,361	0,000					
			2,255	35,375	0,000	12.534,992	1.813,658
1+44,509	7,330	0,000					
			0,246	3,569	0,000	12.538,561	1.813,658
1+45	7,208	0,000					
			2,500	35,110	0,000	12.573,671	1.813,658
1+50	6,836	0,000					

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Volume

Cálculo de Volume por Comparação de Perfis: Terreno x Projeto

Km	Área Corte	Área Aterro	Semi-Dis.	Vol.Corte	Vol.Aterro	V.C.Acum.	V.A.Acum.
1+50	6,836	0,000					
			2,500	35,213	0,000	12.608,884	1.813,658
1+55	7,249	0,000					
			2,500	37,855	0,000	12.646,739	1.813,658
1+60	7,893	0,000					
			2,500	43,108	0,000	12.689,847	1.813,658
1+65	9,350	0,000					
			2,500	51,388	0,000	12.741,235	1.813,658
1+70	11,205	0,000					
			2,255	54,669	0,000	12.795,904	1.813,658
1+74,509	13,044	0,000					
			2,746	77,945	0,000	12.873,849	1.813,658
1+80	15,346	0,000					
			1,336	42,013	0,000	12.915,862	1.813,658
1+82,672	16,101	0,000					
			3,664	118,241	0,000	13.034,103	1.813,658
1+90	16,170	0,000					
			5,000	165,595	0,000	13.199,698	1.813,658
1+100	16,949	0,000					
			5,000	168,520	0,000	13.368,218	1.813,658
1+110	16,755	0,000					
			1,336	44,518	0,000	13.412,736	1.813,658
1+112,672	16,567	0,000					
			3,664	121,183	0,000	13.533,919	1.813,658
1+120	16,507	0,000					
			5,000	127,585	0,000	13.661,504	1.813,658
1+130	9,010	0,000					
			5,000	69,180	0,025	13.730,684	1.813,683
1+140	4,826	0,005					
			1,193	11,093	0,061	13.741,777	1.813,744
1+142,385	4,476	0,046					
			3,808	33,654	0,666	13.775,431	1.814,410
1+150	4,363	0,129					
			5,000	42,825	1,825	13.818,256	1.816,235
1+160	4,202	0,236					
			5,000	28,450	6,380	13.846,706	1.822,615
1+170	1,488	1,040					
			1,193	3,287	3,276	13.849,993	1.825,891
1+172,385	1,268	1,707					
			3,808	6,854	21,794	13.856,847	1.847,685
1+180	0,532	4,017					
			0,154	0,158	1,249	13.857,005	1.848,934
1+180,307	0,500	4,121					
			2,347	2,372	22,400	13.859,377	1.871,334
1+185	0,511	5,425					

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Volume

Cálculo de Volume por Comparação de Perfis: Terreno x Projeto

Km	Área Corte	Área Aterro	Semi-Dis.	Vol.Corte	Vol.Aterro	V.C.Acum.	V.A.Acum.
1+185	0,511	5,425					
			2,500	2,515	30,220	13.861,892	1.901,554
1+190	0,495	6,663					
			2,500	1,992	36,953	13.863,884	1.938,507
1+195	0,302	8,118					
			2,500	0,755	45,440	13.864,639	1.983,947
1+200	0,000	10,058					
			2,500	0,000	52,290	13.864,639	2.036,237
1+205	0,000	10,858					
			2,500	0,000	54,518	13.864,639	2.090,755
1+210	0,000	10,949					
			0,154	0,000	3,357	13.864,639	2.094,112
1+210,307	0,000	10,920					
			2,347	0,000	47,838	13.864,639	2.141,950
1+215	0,000	9,467					
			2,500	0,000	44,830	13.864,639	2.186,780
1+220	0,000	8,465					
			2,500	0,000	45,817	13.864,639	2.232,597
1+225	0,000	9,862					
			2,500	0,000	37,100	13.864,639	2.269,697
1+230	0,000	4,978					
			2,500	0,227	16,730	13.864,866	2.286,427
1+235	0,091	1,714					
			2,500	0,227	4,605	13.865,093	2.291,032
1+240	0,000	0,128					
			2,500	2,463	0,320	13.867,556	2.291,352
1+245	0,985	0,000					
			2,500	7,900	0,000	13.875,456	2.291,352
1+250	2,175	0,000					
			0,401	1,833	0,000	13.877,289	2.291,352
1+250,802	2,396	0,000					
			2,099	12,527	0,000	13.889,816	2.291,352
1+255	3,572	0,000					
			2,500	20,415	0,000	13.910,231	2.291,352
1+260	4,594	0,000					
			2,500	26,605	0,000	13.936,836	2.291,352
1+265	6,048	0,000					
			2,500	32,265	0,000	13.969,101	2.291,352
1+270	6,858	0,000					
			2,500	34,300	0,000	14.003,401	2.291,352
1+275	6,862	0,000					
			2,500	32,695	0,000	14.036,096	2.291,352
1+280	6,216	0,000					
			0,401	5,065	0,000	14.041,161	2.291,352
1+280,802	6,415	0,000					

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Cálculo de Volume por Comparação de Perfis: Terreno x Projeto

Km	Área Corte	Área Aterro	Semi-Dis.	Vol.Corte	Vol.Aterro	V.C.Acum.	V.A.Acum.
1+280,802	6,415	0,000					
			5,732	61,465	0,344	14.102,626	2.291,696
1+292,265	4,309	0,060					
			1,368	10,612	0,659	14.113,238	2.292,355
1+295	3,451	0,422					
			2,500	14,633	9,513	14.127,871	2.301,868
1+300	2,402	3,383					
			7,500	18,015	126,292	14.145,886	2.428,160
1+315	0,000	13,456					
			2,500	0,000	77,865	14.145,886	2.506,025
1+320	0,000	17,690					
			1,133	0,000	40,448	14.145,886	2.546,473
1+322,265	0,000	18,026					
			4,484	0,000	172,692	14.145,886	2.719,165
1+331,233	0,000	20,487					
			4,384	0,000	179,425	14.145,886	2.898,590
1+340	0,000	20,445					
			10,000	0,000	354,840	14.145,886	3.253,430
1+360	0,000	15,039					
			0,617	0,000	18,345	14.145,886	3.271,775
1+361,233	0,000	14,718					
			4,384	0,000	115,001	14.145,886	3.386,776
1+370	0,000	11,517					
			5,000	0,475	96,415	14.146,361	3.483,191
1+380	0,095	7,766					
			2,500	1,395	23,908	14.147,756	3.507,099
1+385	0,463	1,797					
			2,500	12,003	4,492	14.159,759	3.511,591
1+390	4,338	0,000					
			0,617	6,014	0,000	14.165,773	3.511,591
1+391,233	5,417	0,000					
			3,559	58,158	0,000	14.223,931	3.511,591
1+398,351	10,924	0,000					
			0,825	17,883	0,000	14.241,814	3.511,591
1+400	10,766	0,000					
			2,500	42,743	0,000	14.284,557	3.511,591
1+405	6,331	0,000					
			2,500	20,935	0,305	14.305,492	3.511,896
1+410	2,043	0,122					
			5,000	11,470	28,665	14.316,962	3.540,561
1+420	0,251	5,611					
			4,176	1,048	71,222	14.318,010	3.611,783
1+428,351	0,000	11,446					
			5,825	0,000	196,792	14.318,010	3.808,575
1+440	0,000	22,341					

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Km	Área Corte	Área Aterro	Semi-Dis.	Vol.Corte	Vol.Aterro	V.C.Acum.	V.A.Acum.
1+440	0,000	22,341					
			10,000	0,000	555,570	14.318,010	4.364,145
1+460	0,000	33,216					
			10,000	0,000	552,260	14.318,010	4.916,405
1+480	0,000	22,010					
			0,222	0,000	9,685	14.318,010	4.926,090
1+480,443	0,000	21,714					
			4,779	0,000	182,128	14.318,010	5.108,218
1+490	0,000	16,400					
			5,000	0,000	142,255	14.318,010	5.250,473
1+500	0,000	12,051					
			5,000	0,055	92,985	14.318,065	5.343,458
1+510	0,011	6,546					
			0,222	0,008	2,846	14.318,073	5.346,304
1+510,443	0,025	6,305					
			4,779	1,969	35,261	14.320,042	5.381,565
1+520	0,387	1,074					
			5,000	17,145	5,370	14.337,187	5.386,935
1+530	3,042	0,000					
			5,000	46,030	0,000	14.383,217	5.386,935
1+540	6,164	0,000					
			1,265	17,310	0,000	14.400,527	5.386,935
1+542,530	7,520	0,000					
			3,735	65,075	0,000	14.465,602	5.386,935
1+550	9,903	0,000					
			5,000	120,045	0,000	14.585,647	5.386,935
1+560	14,106	0,000					
			5,000	153,670	0,000	14.739,317	5.386,935
1+570	16,628	0,000					
			1,935	67,874	0,000	14.807,191	5.386,935
1+573,870	18,449	0,000					
			3,065	121,947	0,000	14.929,138	5.386,935
1+580	21,338	0,000					
			5,000	216,200	0,000	15.145,338	5.386,935
1+590	21,902	0,000					
			5,000	199,430	0,000	15.344,768	5.386,935
1+600	17,984	0,000					
			2,935	96,896	0,000	15.441,664	5.386,935
1+605,870	15,030	0,000					
			2,065	54,217	0,000	15.495,881	5.386,935
1+610	11,225	0,000					
			5,000	67,370	1,590	15.563,251	5.388,525
1+620	2,249	0,318					
			4,900	11,073	22,905	15.574,324	5.411,430
1+629,799	0,011	4,357					

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Volume

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Km	Área Corte	Área Aterro	Semi-Dis.	Vol.Corte	Vol.Aterro	V.C.Acum.	V.A.Acum.
1+629,799	0,011	4,357					
			0,101	0,002	0,882	15.574,326	5.412,312
1+630	0,007	4,415					
			5,000	0,035	62,210	15.574,361	5.474,522
1+640	0,000	8,027					
			5,000	0,000	92,245	15.574,361	5.566,767
1+650	0,000	10,422					
			4,900	0,000	100,964	15.574,361	5.667,731
1+659,799	0,000	10,185					
			0,101	0,000	2,037	15.574,361	5.669,768
1+660	0,000	10,087					
			4,637	0,320	76,270	15.574,681	5.746,038
1+669,273	0,069	6,363					
			0,364	0,063	4,541	15.574,744	5.750,579
1+670	0,105	6,130					
			2,500	1,230	27,142	15.575,974	5.777,721
1+675	0,387	4,727					
			2,500	2,773	19,878	15.578,747	5.797,599
1+680	0,722	3,224					
			2,500	5,165	12,175	15.583,912	5.809,774
1+685	1,344	1,646					
			2,500	9,365	4,855	15.593,277	5.814,629
1+690	2,402	0,296					
			2,500	18,435	0,740	15.611,712	5.815,369
1+695	4,972	0,000					
			2,500	31,910	0,000	15.643,622	5.815,369
1+700	7,792	0,000					
			2,500	40,478	0,000	15.684,100	5.815,369
1+705	8,399	0,000					
			2,137	37,171	0,000	15.721,271	5.815,369
1+709,273	8,999	0,000					
			0,364	6,583	0,000	15.727,854	5.815,369
1+710	9,111	0,000					
			2,500	47,790	0,000	15.775,644	5.815,369
1+715	10,005	0,000					
			0,599	12,078	0,000	15.787,722	5.815,369
1+716,197	10,175	0,000					
			1,902	39,673	0,000	15.827,395	5.815,369
1+720	10,689	0,000					
			2,500	55,853	0,000	15.883,248	5.815,369
1+725	11,652	0,000					
			2,500	60,962	0,000	15.944,210	5.815,369
1+730	12,733	0,000					
			2,500	66,583	0,000	16.010,793	5.815,369
1+735	13,900	0,000					

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Volume

Cálculo de Volume por Comparação de Perfis: Terreno x Projeto

Km	Área Corte	Área Aterro	Semi-Dis.	Vol.Corte	Vol.Aterro	V.C.Acum.	V.A.Acum.
1+735	13,900	0,000					
			2,500	72,525	0,000	16.083,318	5.815,369
1+740	15,110	0,000					
			2,500	77,278	0,000	16.160,596	5.815,369
1+745	15,801	0,000					
			2,500	80,990	0,000	16.241,586	5.815,369
1+750	16,595	0,000					
			2,500	85,145	0,000	16.326,731	5.815,369
1+755	17,463	0,000					
			0,599	21,032	0,000	16.347,763	5.815,369
1+756,197	17,679	0,000					
			1,902	63,594	0,000	16.411,357	5.815,369
1+760	15,765	0,000					
			6,483	198,827	0,000	16.610,184	5.815,369
1+772,966	14,904	0,000					
			3,517	104,370	0,000	16.714,554	5.815,369
1+780	14,772	0,000					
			5,000	170,765	0,000	16.885,319	5.815,369
1+790	19,381	0,000					
			5,000	239,810	0,000	17.125,129	5.815,369
1+800	28,581	0,000					
			1,483	93,131	0,000	17.218,260	5.815,369
1+802,966	34,218	0,000					
			3,517	267,897	0,000	17.486,157	5.815,369
1+810	41,954	0,000					
			5,000	412,745	0,000	17.898,902	5.815,369
1+820	40,595	0,000					
			1,764	135,828	0,000	18.034,730	5.815,369
1+823,527	36,427	0,000					
			3,237	211,994	0,000	18.246,724	5.815,369
1+830	29,074	0,000					
			5,000	245,925	0,000	18.492,649	5.815,369
1+840	20,111	0,000					
			5,000	170,895	0,000	18.663,544	5.815,369
1+850	14,068	0,000					
			1,764	45,909	0,000	18.709,453	5.815,369
1+853,527	11,965	0,000					
			3,237	63,753	0,000	18.773,206	5.815,369
1+860	7,733	0,000					
			10,000	80,860	1,920	18.854,066	5.817,289
1+880	0,353	0,192					
			10,000	3,530	76,640	18.857,596	5.893,929
1+900	0,000	7,472					
			10,000	0,000	172,990	18.857,596	6.066,919
1+920	0,000	9,827					

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Volume

Cálculo de Volume por Comparação de Perfis: Terreno x Projeto

Km	Área Corte	Área Aterro	Semi-Dis.	Vol.Corte	Vol.Aterro	V.C.Acum.	V.A.Acum.
1+920	0,000	9,827					
			10,000	1,610	151,760	18.859,206	6.218,679
1+940	0,161	5,349					
			10,000	20,940	56,250	18.880,146	6.274,929
1+960	1,933	0,276					
			6,320	33,702	1,744	18.913,848	6.276,673
1+972,639	3,400	0,000					
			3,681	27,118	0,000	18.940,966	6.276,673
1+980	3,968	0,000					
			5,000	37,135	0,150	18.978,101	6.276,823
1+990	3,459	0,030					
			5,000	30,160	1,190	19.008,261	6.278,013
2	2,573	0,208					
			1,320	6,217	0,621	19.014,478	6.278,634
2+2,639	2,139	0,263					
			3,681	10,206	4,328	19.024,684	6.282,962
2+10	0,634	0,913					
			5,000	3,815	25,405	19.028,499	6.308,367
2+20	0,129	4,168					
			3,013	0,422	26,701	19.028,921	6.335,068
2+26,026	0,011	4,694					
			1,987	0,022	19,359	19.028,943	6.354,427
2+30	0,000	5,049					
			5,000	0,000	64,770	19.028,943	6.419,197
2+40	0,000	7,905					
			5,000	0,000	78,415	19.028,943	6.497,612
2+50	0,000	7,778					
			3,013	0,000	51,905	19.028,943	6.549,517
2+56,026	0,000	9,449					
			1,987	0,000	36,471	19.028,943	6.585,988
2+60	0,000	8,906					
			10,000	0,860	111,230	19.029,803	6.697,218
2+80	0,086	2,217					
			4,730	9,757	13,820	19.039,560	6.711,038
2+89,459	1,977	0,705					
			0,271	1,110	0,366	19.040,670	6.711,404
2+90	2,125	0,648					
			2,500	15,095	2,237	19.055,765	6.713,641
2+95	3,913	0,247					
			2,500	32,635	0,617	19.088,400	6.714,258
2+100	9,141	0,000					
			2,500	65,605	0,000	19.154,005	6.714,258
2+105	17,101	0,000					
			2,500	104,663	0,000	19.258,668	6.714,258
2+110	24,764	0,000					

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Volume

Cálculo de Volume por Comparação de Perfis: Terreno x Projeto

Km	Área Corte	Área Aterro	Semi-Dis.	Vol.Corte	Vol.Aterro	V.C.Acum.	V.A.Acum.
2+110	24,764	0,000					
			2,500	139,153	0,000	19.397,821	6.714,258
2+115	30,897	0,000					
			2,230	148,153	0,000	19.545,974	6.714,258
2+119,459	35,554	0,000					
			0,271	19,269	0,000	19.565,243	6.714,258
2+120	35,681	0,000					
			2,500	180,550	0,000	19.745,793	6.714,258
2+125	36,539	0,000					
			2,500	185,285	0,000	19.931,078	6.714,258
2+130	37,575	0,000					
			2,500	183,173	0,000	20.114,251	6.714,258
2+135	35,694	0,000					
			2,500	172,843	0,000	20.287,094	6.714,258
2+140	33,443	0,000					
			2,500	162,503	0,000	20.449,597	6.714,258
2+145	31,558	0,000					
			2,500	151,090	0,000	20.600,687	6.714,258
2+150	28,878	0,000					
			2,500	137,340	0,000	20.738,027	6.714,258
2+155	26,058	0,000					
			2,500	123,970	0,000	20.861,997	6.714,258
2+160	23,530	0,000					
			2,500	110,828	0,000	20.972,825	6.714,258
2+165	20,801	0,000					
			2,500	97,980	0,000	21.070,805	6.714,258
2+170	18,391	0,000					
			2,500	87,115	0,000	21.157,920	6.714,258
2+175	16,455	0,000					
			2,500	78,632	0,000	21.236,552	6.714,258
2+180	14,998	0,000					
			2,500	70,237	0,000	21.306,789	6.714,258
2+185	13,097	0,000					
			2,500	64,030	0,000	21.370,819	6.714,258
2+190	12,515	0,000					
			2,500	61,468	0,000	21.432,287	6.714,258
2+195	12,072	0,000					
			2,500	60,265	0,000	21.492,552	6.714,258
2+200	12,034	0,000					
			2,500	58,570	0,000	21.551,122	6.714,258
2+205	11,394	0,000					
			2,500	55,733	0,000	21.606,855	6.714,258
2+210	10,899	0,000					
			2,500	49,742	0,000	21.656,597	6.714,258
2+215	8,998	0,000					

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Volume

Cálculo de Volume por Comparação de Perfis: Terreno x Projeto

Km	Área Corte	Área Aterro	Semi-Dis.	Vol.Corte	Vol.Aterro	V.C.Acum.	V.A.Acum.
2+215	8,998	0,000					
			2,500	40,172	0,000	21.696,769	6.714,258
2+220	7,071	0,000					
			2,500	33,348	0,000	21.730,117	6.714,258
2+225	6,268	0,000					
			1,618	19,921	0,000	21.750,038	6.714,258
2+228,235	6,048	0,000					
			0,883	10,220	0,003	21.760,258	6.714,261
2+230	5,533	0,003					
			2,500	17,183	1,840	21.777,441	6.716,101
2+235	1,340	0,733					
			2,500	4,023	10,868	21.781,464	6.726,969
2+240	0,269	3,614					
			2,500	1,698	27,282	21.783,162	6.754,251
2+245	0,410	7,299					
			2,500	2,938	44,793	21.786,100	6.799,044
2+250	0,765	10,618					
			2,500	5,005	61,178	21.791,105	6.860,222
2+255	1,237	13,853					
			1,618	4,144	48,336	21.795,249	6.908,558
2+258,235	1,325	16,030					
			0,883	2,142	29,472	21.797,391	6.938,030
2+260	1,102	17,366					
			2,052	3,611	78,669	21.801,002	7.016,699
2+264,103	0,658	20,981					
			0,449	0,551	19,215	21.801,553	7.035,914
2+265	0,571	21,861					
			2,500	1,865	123,000	21.803,418	7.158,914
2+270	0,175	27,339					
			2,500	0,438	151,453	21.803,856	7.310,367
2+275	0,000	33,242					
			2,500	0,000	171,768	21.803,856	7.482,135
2+280	0,000	35,465					
			2,500	0,335	173,843	21.804,191	7.655,978
2+285	0,134	34,072					
			2,500	0,797	165,722	21.804,988	7.821,700
2+290	0,185	32,217					
			2,052	1,137	128,327	21.806,125	7.950,027
2+294,103	0,369	30,336					
			0,449	0,359	26,996	21.806,484	7.977,023
2+295	0,432	29,855					
			2,500	2,293	144,363	21.808,777	8.121,386
2+300	0,485	27,890					
			2,308	2,601	125,428	21.811,378	8.246,814
2+304,616	0,642	26,455					

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Cálculo de Volume por Comparação de Perfis: Terreno x Projeto

Km	Área Corte	Área Aterro	Semi-Dis.	Vol.Corte	Vol.Aterro	V.C.Acum.	V.A.Acum.
2+304,616	0,642	26,455					
			0,192	0,250	10,125	21.811,628	8.256,939
2+305	0,658	26,277					
			2,500	2,757	124,638	21.814,385	8.381,577
2+310	0,445	23,578					
			2,500	1,988	109,575	21.816,373	8.491,152
2+315	0,350	20,252					
			2,500	1,950	100,110	21.818,323	8.591,262
2+320	0,430	19,792					
			2,500	2,220	98,833	21.820,543	8.690,095
2+325	0,458	19,741					
			2,500	1,560	98,645	21.822,103	8.788,740
2+330	0,166	19,717					
			2,308	0,383	90,889	21.822,486	8.879,629
2+334,616	0,000	19,663					
			2,692	0,000	105,586	21.822,486	8.985,215
2+340	0,000	19,559					
			10,000	0,000	330,020	21.822,486	9.315,235
2+360	0,000	13,443					
			10,000	13,940	192,840	21.836,426	9.508,075
2+380	1,394	5,841					
			5,924	14,460	48,441	21.850,886	9.556,516
2+391,848	1,047	2,336					
			1,576	2,826	5,912	21.853,712	9.562,428
2+395	0,746	1,415					
			2,500	5,490	4,745	21.859,202	9.567,173
2+400	1,450	0,483					
			2,500	10,245	1,653	21.869,447	9.568,826
2+405	2,648	0,178					
			2,500	14,160	0,607	21.883,607	9.569,433
2+410	3,016	0,065					
			2,500	16,535	0,180	21.900,142	9.569,613
2+415	3,598	0,007					
			2,500	18,493	0,018	21.918,635	9.569,631
2+420	3,799	0,000					
			0,924	7,082	0,000	21.925,717	9.569,631
2+421,848	3,866	0,000					
			1,576	12,381	0,000	21.938,098	9.569,631
2+425	3,990	0,000					
			2,500	21,698	0,000	21.959,796	9.569,631
2+430	4,689	0,000					
			2,500	26,078	0,000	21.985,874	9.569,631
2+435	5,742	0,000					
			2,500	23,047	0,000	22.008,921	9.569,631
2+440	3,477	0,000					

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Volume

Cálculo de Volume por Comparação de Perfis: Terreno x Projeto

Km	Área Corte	Área Aterro	Semi-Dis.	Vol.Corte	Vol.Aterro	V.C.Acum.	V.A.Acum.
2+440	3,477	0,000					
			2,500	9,392	0,567	22.018,313	9.570,198
2+445	0,280	0,227					
			2,404	0,673	3,194	22.018,986	9.573,392
2+449,807	0,000	1,102					
			0,097	0,000	0,217	22.018,986	9.573,609
2+450	0,000	1,148					
			2,500	0,000	7,445	22.018,986	9.581,054
2+455	0,000	1,830					
			2,500	0,000	9,445	22.018,986	9.590,499
2+460	0,000	1,948					
			2,500	0,000	9,520	22.018,986	9.600,019
2+465	0,000	1,860					
			2,500	0,000	9,400	22.018,986	9.609,419
2+470	0,000	1,900					
			2,500	0,000	8,023	22.018,986	9.617,442
2+475	0,000	1,309					
			2,404	0,502	3,615	22.019,488	9.621,057
2+479,807	0,209	0,195					
			0,097	0,044	0,036	22.019,532	9.621,093
2+480	0,244	0,177					
			5,000	18,100	0,885	22.037,632	9.621,978
2+490	3,376	0,000					
			5,000	68,770	0,000	22.106,402	9.621,978
2+500	10,378	0,000					
			4,904	127,913	0,000	22.234,315	9.621,978
2+509,807	15,708	0,000					
			0,097	3,031	0,000	22.237,346	9.621,978
2+510	15,698	0,000					
			5,000	133,985	0,000	22.371,331	9.621,978
2+520	11,099	0,000					
			3,655	66,777	0,000	22.438,108	9.621,978
2+527,310	7,171	0,000					
			1,345	18,028	0,000	22.456,136	9.621,978
2+530	6,233	0,000					
			5,000	48,830	1,175	22.504,966	9.623,153
2+540	3,533	0,235					
			2,500	16,370	4,772	22.521,336	9.627,925
2+545	3,015	1,674					
			2,500	14,552	11,107	22.535,888	9.639,032
2+550	2,806	2,769					
			3,655	19,251	23,100	22.555,139	9.662,132
2+557,310	2,461	3,551					
			1,345	6,405	9,582	22.561,544	9.671,714
2+560	2,301	3,573					

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Volume

Cálculo de Volume por Comparação de Perfis: Terreno x Projeto

Km	Área Corte	Área Aterro	Semi-Dis.	Vol.Corte	Vol.Aterro	V.C.Acum.	V.A.Acum.
2+560	2,301	3,573					
			2,500	10,623	17,958	22.572,167	9.689,672
2+565	1,948	3,610					
			7,500	26,805	30,637	22.598,972	9.720,309
2+580	1,626	0,475					
			5,000	26,855	2,375	22.625,827	9.722,684
2+590	3,745	0,000					
			5,000	50,150	0,000	22.675,977	9.722,684
2+600	6,285	0,000					
			7,500	104,835	0,000	22.780,812	9.722,684
2+615	7,693	0,000					
			2,500	35,782	0,000	22.816,594	9.722,684
2+620	6,620	0,000					
			6,851	73,937	0,034	22.890,531	9.722,718
2+633,701	4,173	0,005					
			0,650	5,177	0,006	22.895,708	9.722,724
2+635	3,797	0,004					
			2,500	14,522	0,095	22.910,230	9.722,819
2+640	2,012	0,034					
			5,000	10,060	3,870	22.920,290	9.726,689
2+650	0,000	0,740					
			5,000	0,000	8,040	22.920,290	9.734,729
2+660	0,000	0,868					
			1,851	0,000	2,668	22.920,290	9.737,397
2+663,701	0,000	0,574					
			3,150	1,764	2,809	22.922,054	9.740,206
2+670	0,560	0,318					
			5,000	11,325	2,275	22.933,379	9.742,481
2+680	1,705	0,137					
			0,372	1,285	0,095	22.934,664	9.742,576
2+680,743	1,755	0,119					
			4,629	17,755	0,551	22.952,419	9.743,127
2+690	2,081	0,000					
			5,000	19,395	0,000	22.971,814	9.743,127
2+700	1,798	0,000					
			5,000	19,550	0,000	22.991,364	9.743,127
2+710	2,112	0,000					
			0,372	1,580	0,000	22.992,944	9.743,127
2+710,743	2,140	0,000					
			4,629	19,704	0,000	23.012,648	9.743,127
2+720	2,117	0,000					
			9,004	41,758	0,000	23.054,406	9.743,127
2+738,007	2,521	0,000					
			0,997	5,269	0,000	23.059,675	9.743,127
2+740	2,767	0,000					

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Volume

Cálculo de Volume por Comparação de Perfis: Terreno x Projeto

Km	Área Corte	Área Aterro	Semi-Dis.	Vol.Corte	Vol.Aterro	V.C.Acum.	V.A.Acum.
2+740	2,767	0,000					
			5,000	34,335	0,000	23.094,010	9.743,127
2+750	4,100	0,000					
			5,000	48,575	0,000	23.142,585	9.743,127
2+760	5,615	0,000					
			5,000	62,740	0,000	23.205,325	9.743,127
2+770	6,933	0,000					
			1,504	21,392	0,000	23.226,717	9.743,127
2+773,007	7,295	0,000					
			3,497	54,878	0,000	23.281,595	9.743,127
2+780	8,400	0,000					
			5,000	92,115	0,000	23.373,710	9.743,127
2+790	10,023	0,000					
			5,000	113,515	0,000	23.487,225	9.743,127
2+800	12,680	0,000					
			5,000	145,440	0,000	23.632,665	9.743,127
2+810	16,408	0,000					
			5,000	164,010	0,000	23.796,675	9.743,127
2+820	16,394	0,000					
			5,000	155,535	0,000	23.952,210	9.743,127
2+830	14,713	0,000					
			4,777	132,839	0,000	24.085,049	9.743,127
2+839,553	13,098	0,000					
			0,224	5,825	0,000	24.090,874	9.743,127
2+840	12,964	0,000					
			5,000	115,805	0,000	24.206,679	9.743,127
2+850	10,197	0,000					
			5,000	96,060	0,000	24.302,739	9.743,127
2+860	9,015	0,000					
			5,000	86,465	0,000	24.389,204	9.743,127
2+870	8,278	0,000					
			2,277	37,749	0,000	24.426,953	9.743,127
2+874,553	8,304	0,000					
			2,724	43,374	0,000	24.470,327	9.743,127
2+880	7,622	0,000					
			10,000	128,290	0,000	24.598,617	9.743,127
2+900	5,207	0,000					
			10,000	52,070	12,530	24.650,687	9.755,657
2+920	0,000	1,253					
			1,374	0,014	5,542	24.650,701	9.761,199
2+922,747	0,010	2,782					
			1,127	0,039	7,497	24.650,740	9.768,696
2+925	0,025	3,873					
			2,500	0,063	26,140	24.650,803	9.794,836
2+930	0,000	6,583					

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Volume

Cálculo de Volume por Comparação de Perfis: Terreno x Projeto

Km	Área Corte	Área Aterro	Semi-Dis.	Vol.Corte	Vol.Aterro	V.C.Acum.	V.A.Acum.
2+930	0,000	6,583					
			2,500	0,000	42,598	24.650,803	9.837,434
2+935	0,000	10,456					
			2,500	0,000	64,657	24.650,803	9.902,091
2+940	0,000	15,407					
			2,500	0,000	89,873	24.650,803	9.991,964
2+945	0,000	20,542					
			2,500	0,000	114,743	24.650,803	10.106,707
2+950	0,000	25,355					
			1,374	0,000	73,881	24.650,803	10.180,588
2+952,747	0,000	28,435					
			1,127	0,000	64,502	24.650,803	10.245,090
2+955	0,000	28,824					
			2,500	0,000	147,185	24.650,803	10.392,275
2+960	0,000	30,050					
			2,500	0,000	154,588	24.650,803	10.546,863
2+965	0,000	31,785					
			2,500	0,000	162,190	24.650,803	10.709,053
2+970	0,000	33,091					
			2,500	0,000	166,593	24.650,803	10.875,646
2+975	0,000	33,546					
			2,500	0,000	167,653	24.650,803	11.043,299
2+980	0,000	33,515					
			0,588	0,000	39,407	24.650,803	11.082,706
2+981,175	0,000	33,561					
			1,913	0,000	128,818	24.650,803	11.211,524
2+985	0,000	33,795					
			2,500	0,000	169,570	24.650,803	11.381,094
2+990	0,000	34,033					
			2,500	0,000	172,100	24.650,803	11.553,194
2+995	0,000	34,807					
			2,500	0,000	175,798	24.650,803	11.728,992
3	0,000	35,512					
			2,500	0,000	170,883	24.650,803	11.899,875
3+5	0,000	32,841					
			2,500	0,000	153,045	24.650,803	12.052,920
3+10	0,000	28,377					
			0,588	0,000	32,659	24.650,803	12.085,579
3+11,175	0,000	27,213					
			1,913	0,000	91,565	24.650,803	12.177,144
3+15	0,000	20,664					
			2,500	0,000	81,435	24.650,803	12.258,579
3+20	0,000	11,910					
			2,500	0,577	43,695	24.651,380	12.302,274
3+25	0,231	5,568					

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Volume

Cálculo de Volume por Comparação de Perfis: Terreno x Projeto

Km	Área Corte	Área Aterro	Semi-Dis.	Vol.Corte	Vol.Aterro	V.C.Acum.	V.A.Acum.
3+25	0,231	5,568					
			2,500	1,067	13,963	24.652,447	12.316,237
3+30	0,196	0,017					
			2,500	13,950	0,043	24.666,397	12.316,280
3+35	5,384	0,000					
			2,500	39,608	0,000	24.706,005	12.316,280
3+40	10,459	0,000					
			0,588	13,031	0,000	24.719,036	12.316,280
3+41,175	11,722	0,000					
			1,913	49,620	0,000	24.768,656	12.316,280
3+45	14,223	0,000					
			2,500	70,883	0,000	24.839,539	12.316,280
3+50	14,130	0,000					
			2,500	71,020	0,000	24.910,559	12.316,280
3+55	14,278	0,000					
			2,227	63,890	0,000	24.974,449	12.316,280
3+59,454	14,411	0,000					
			0,273	7,871	0,000	24.982,320	12.316,280
3+60	14,421	0,000					
			2,500	71,805	0,000	25.054,125	12.316,280
3+65	14,301	0,000					
			2,500	69,210	0,000	25.123,335	12.316,280
3+70	13,383	0,000					
			2,500	64,682	0,000	25.188,017	12.316,280
3+75	12,490	0,000					
			2,500	59,325	0,000	25.247,342	12.316,280
3+80	11,240	0,000					
			2,500	53,092	0,000	25.300,434	12.316,280
3+85	9,997	0,000					
			2,227	42,010	0,000	25.342,444	12.316,280
3+89,454	8,867	0,000					
			5,273	89,188	0,000	25.431,632	12.316,280
3+100	8,047	0,000					
			10,000	180,770	0,000	25.612,402	12.316,280
3+120	10,030	0,000					
			10,000	186,770	0,000	25.799,172	12.316,280
3+140	8,647	0,000					
			0,844	14,372	0,000	25.813,544	12.316,280
3+141,687	8,391	0,000					
			4,157	66,080	0,000	25.879,624	12.316,280
3+150	7,507	0,000					
			5,000	75,135	0,000	25.954,759	12.316,280
3+160	7,520	0,000					
			5,000	80,195	0,000	26.034,954	12.316,280
3+170	8,519	0,000					

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Volume

Cálculo de Volume por Comparação de Perfis: Terreno x Projeto

Km	Área Corte	Área Aterro	Semi-Dis.	Vol.Corte	Vol.Aterro	V.C.Acum.	V.A.Acum.
3+170	8,519	0,000					
			5,000	91,575	0,000	26.126,529	12.316,280
3+180	9,796	0,000					
			0,844	16,746	0,000	26.143,275	12.316,280
3+181,687	10,057	0,000					
			4,157	90,487	0,000	26.233,762	12.316,280
3+190	11,713	0,000					
			5,000	96,335	0,000	26.330,097	12.316,280
3+200	7,554	0,000					
			4,371	41,131	2,264	26.371,228	12.318,544
3+208,742	1,856	0,518					
			0,629	2,089	0,957	26.373,317	12.319,501
3+210	1,465	1,003					
			5,000	8,250	33,575	26.381,567	12.353,076
3+220	0,185	5,712					
			5,000	0,925	79,830	26.382,492	12.432,906
3+230	0,000	10,254					
			5,000	0,000	110,745	26.382,492	12.543,651
3+240	0,000	11,895					
			4,371	0,000	104,852	26.382,492	12.648,503
3+248,742	0,000	12,093					
			5,629	0,000	118,153	26.382,492	12.766,656
3+260	0,000	8,897					
			10,000	0,000	100,300	26.382,492	12.866,956
3+280	0,000	1,133					
			10,000	1,310	15,780	26.383,802	12.882,736
3+300	0,131	0,445					
			10,000	2,450	27,410	26.386,252	12.910,146
3+320	0,114	2,296					
			3,788	1,307	18,631	26.387,559	12.928,777
3+327,575	0,231	2,623					
			1,213	0,605	6,404	26.388,164	12.935,181
3+330	0,268	2,659					
			2,500	1,385	15,302	26.389,549	12.950,483
3+335	0,286	3,462					
			2,500	0,990	20,280	26.390,539	12.970,763
3+340	0,110	4,650					
			2,500	0,333	26,480	26.390,872	12.997,243
3+345	0,023	5,942					
			2,500	0,057	32,477	26.390,929	13.029,720
3+350	0,000	7,049					
			2,500	0,000	37,795	26.390,929	13.067,515
3+355	0,000	8,069					
			2,500	0,000	43,267	26.390,929	13.110,782
3+360	0,000	9,238					

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Volume

Cálculo de Volume por Comparação de Perfis: Terreno x Projeto

Km	Área Corte	Área Aterro	Semi-Dis.	Vol.Corte	Vol.Aterro	V.C.Acum.	V.A.Acum.
3+360	0,000	9,238					
			2,500	0,000	49,782	26.390,929	13.160,564
3+365	0,000	10,675					
			1,288	0,000	27,734	26.390,929	13.188,298
3+367,575	0,000	10,866					
			1,213	0,000	26,613	26.390,929	13.214,911
3+370	0,000	11,083					
			2,500	0,000	55,523	26.390,929	13.270,434
3+375	0,000	11,126					
			2,400	0,000	53,132	26.390,929	13.323,566
3+379,799	0,000	11,017					
			0,101	0,000	2,214	26.390,929	13.325,780
3+380	0,000	11,013					
			2,500	0,000	53,868	26.390,929	13.379,648
3+385	0,000	10,534					
			2,500	0,000	50,840	26.390,929	13.430,488
3+390	0,000	9,802					
			2,500	0,000	47,108	26.390,929	13.477,596
3+395	0,000	9,041					
			2,500	0,000	43,627	26.390,929	13.521,223
3+400	0,000	8,410					
			2,500	0,000	39,822	26.390,929	13.561,045
3+405	0,000	7,519					
			2,500	0,000	35,032	26.390,929	13.596,077
3+410	0,000	6,494					
			2,500	0,000	28,152	26.390,929	13.624,229
3+415	0,000	4,767					
			2,400	0,000	18,999	26.390,929	13.643,228
3+419,799	0,000	3,151					
			0,101	0,000	0,627	26.390,929	13.643,855
3+420	0,000	3,085					
			10,000	93,440	30,850	26.484,369	13.674,705
3+440	9,344	0,000					
			10,000	478,920	0,000	26.963,289	13.674,705
3+460	38,548	0,000					
			10,000	904,720	0,000	27.868,009	13.674,705
3+480	51,924	0,000					
			10,000	868,700	0,000	28.736,709	13.674,705
3+500	34,946	0,000					
			3,348	211,584	0,000	28.948,293	13.674,705
3+506,696	28,251	0,000					
			1,652	88,243	0,000	29.036,536	13.674,705
3+510	25,165	0,000					
			2,500	120,745	0,000	29.157,281	13.674,705
3+515	23,133	0,000					

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Volume

Cálculo de Volume por Comparação de Perfis: Terreno x Projeto

Km	Área Corte	Área Aterro	Semi-Dis.	Vol.Corte	Vol.Aterro	V.C.Acum.	V.A.Acum.
3+515	23,133	0,000					
			2,500	111,498	0,000	29.268,779	13.674,705
3+520	21,466	0,000					
			2,500	104,583	0,000	29.373,362	13.674,705
3+525	20,367	0,000					
			2,500	100,042	0,000	29.473,404	13.674,705
3+530	19,650	0,000					
			2,500	91,190	0,000	29.564,594	13.674,705
3+535	16,826	0,000					
			0,848	27,945	0,000	29.592,539	13.674,705
3+536,696	16,128	0,000					
			1,652	51,987	0,000	29.644,526	13.674,705
3+540	15,341	0,000					
			2,500	73,552	0,000	29.718,078	13.674,705
3+545	14,080	0,000					
			2,500	66,825	0,000	29.784,903	13.674,705
3+550	12,650	0,000					
			1,833	44,426	0,000	29.829,329	13.674,705
3+553,666	11,587	0,000					
			0,667	15,270	0,000	29.844,599	13.674,705
3+555	11,307	0,000					
			2,500	54,443	0,000	29.899,042	13.674,705
3+560	10,470	0,000					
			2,500	50,213	0,000	29.949,255	13.674,705
3+565	9,615	0,000					
			2,500	44,555	0,000	29.993,810	13.674,705
3+570	8,207	0,000					
			2,500	31,165	0,000	30.024,975	13.674,705
3+575	4,259	0,000					
			2,500	11,615	1,148	30.036,590	13.675,853
3+580	0,387	0,459					
			1,833	1,179	7,963	30.037,769	13.683,816
3+583,666	0,256	3,885					
			0,667	0,273	6,265	30.038,042	13.690,081
3+585	0,153	5,508					
			2,500	0,382	45,725	30.038,424	13.735,806
3+590	0,000	12,782					
			2,500	0,000	81,317	30.038,424	13.817,123
3+595	0,000	19,745					
			2,500	0,000	115,985	30.038,424	13.933,108
3+600	0,000	26,649					
			2,500	0,000	143,460	30.038,424	14.076,568
3+605	0,000	30,735					
			2,500	0,000	167,417	30.038,424	14.243,985
3+610	0,000	36,232					

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Volume

Cálculo de Volume por Comparação de Perfis: Terreno x Projeto

Km	Área Corte	Área Aterro	Semi-Dis.	Vol. Corte	Vol. Aterro	V.C.Acum.	V.A.Acum.
3+610	0,000	36,232					
			1,833	0,000	134,077	30.038,424	14.378,062
3+613,666	0,000	36,914					
			0,667	0,000	49,299	30.038,424	14.427,361
3+615	0,000	36,998					
			2,500	0,000	187,303	30.038,424	14.614,664
3+620	0,000	37,923					
			2,500	0,000	189,820	30.038,424	14.804,484
3+625	0,000	38,005					
			2,500	0,000	189,718	30.038,424	14.994,202
3+630	0,000	37,882					
			1,962	0,000	143,871	30.038,424	15.138,073
3+633,924	0,000	35,447					
			0,538	0,000	37,781	30.038,424	15.175,854
3+635	0,000	34,778					
			2,500	0,000	166,432	30.038,424	15.342,286
3+640	0,000	31,795					
			2,500	0,000	149,693	30.038,424	15.491,979
3+645	0,000	28,082					
			2,500	0,000	131,435	30.038,424	15.623,414
3+650	0,000	24,492					
			2,500	0,000	111,255	30.038,424	15.734,669
3+655	0,000	20,010					
			2,500	0,000	90,525	30.038,424	15.825,194
3+660	0,000	16,200					
			2,500	0,000	72,377	30.038,424	15.897,571
3+665	0,000	12,751					
			2,397	0,000	53,669	30.038,424	15.951,240
3+669,794	0,000	9,639					
			0,103	0,000	1,985	30.038,424	15.953,225
3+670	0,000	9,637					
			2,500	0,147	48,400	30.038,571	16.001,625
3+675	0,059	9,723					
			2,500	0,482	49,080	30.039,053	16.050,705
3+680	0,134	9,909					
			2,500	0,895	49,945	30.039,948	16.100,650
3+685	0,224	10,069					
			2,500	1,480	49,763	30.041,428	16.150,413
3+690	0,368	9,836					
			2,500	3,273	46,388	30.044,701	16.196,801
3+695	0,941	8,719					
			2,500	5,915	41,280	30.050,616	16.238,081
3+700	1,425	7,793					
			2,397	7,119	30,950	30.057,735	16.269,031
3+704,794	1,545	5,119					

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Volume

Cálculo de Volume por Comparação de Perfis: Terreno x Projeto

Km	Área Corte	Área Aterro	Semi-Dis.	Vol.Corte	Vol.Aterro	V.C.Acum.	V.A.Acum.
3+704,794	1,545	5,119					
			0,103	0,319	1,042	30.058,054	16.270,073
3+705	1,548	5,002					
			2,500	8,315	16,850	30.066,369	16.286,923
3+710	1,778	1,738					
			2,500	16,355	4,345	30.082,724	16.291,268
3+715	4,764	0,000					
			2,500	35,442	0,000	30.118,166	16.291,268
3+720	9,413	0,000					
			1,538	30,693	0,000	30.148,859	16.291,268
3+723,075	10,550	0,000					
			0,963	21,055	0,000	30.169,914	16.291,268
3+725	11,325	0,000					
			2,500	59,540	0,000	30.229,454	16.291,268
3+730	12,491	0,000					
			2,500	56,785	0,000	30.286,239	16.291,268
3+735	10,223	0,000					
			2,500	42,752	0,000	30.328,991	16.291,268
3+740	6,878	0,000					
			2,500	23,965	0,230	30.352,956	16.291,498
3+745	2,708	0,092					
			2,500	8,728	7,498	30.361,684	16.298,996
3+750	0,783	2,907					
			1,538	2,063	11,834	30.363,747	16.310,830
3+753,075	0,559	4,790					
			0,963	0,938	10,387	30.364,685	16.321,217
3+755	0,416	6,002					
			2,500	1,267	33,175	30.365,952	16.354,392
3+760	0,091	7,268					
			6,475	0,952	96,601	30.366,904	16.450,993
3+772,950	0,056	7,651					
			3,525	1,033	39,018	30.367,937	16.490,011
3+780	0,237	3,418					
			5,000	11,910	17,480	30.379,847	16.507,491
3+790	2,145	0,078					
			2,500	16,873	0,195	30.396,720	16.507,686
3+795	4,604	0,000					
			2,500	29,613	0,000	30.426,333	16.507,686
3+800	7,241	0,000					
			1,475	23,880	0,000	30.450,213	16.507,686
3+802,950	8,949	0,000					
			3,525	70,179	0,000	30.520,392	16.507,686
3+810	10,960	0,000					
			5,000	90,475	0,000	30.610,867	16.507,686
3+820	7,135	0,000					

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Volume

Cálculo de Volume por Comparação de Perfis: Terreno x Projeto

Km	Área Corte	Área Aterro	Semi-Dis.	Vol.Corte	Vol.Aterro	V.C.Acum.	V.A.Acum.
3+820	7,135	0,000					
			5,000	57,765	0,000	30.668,632	16.507,686
3+830	4,418	0,000					
			1,932	16,408	0,000	30.685,040	16.507,686
3+833,863	4,077	0,000					
			3,069	23,775	0,000	30.708,815	16.507,686
3+840	3,671	0,000					
			5,000	41,445	0,000	30.750,260	16.507,686
3+850	4,618	0,000					
			5,000	50,460	0,000	30.800,720	16.507,686
3+860	5,474	0,000					
			1,932	22,347	0,000	30.823,067	16.507,686
3+863,863	6,096	0,000					
			8,069	113,072	0,000	30.936,139	16.507,686
3+880	7,918	0,000					
			10,000	124,350	0,000	31.060,489	16.507,686
3+900	4,517	0,000					
			4,504	31,371	0,000	31.091,860	16.507,686
3+909,007	2,449	0,000					
			0,497	2,408	0,000	31.094,268	16.507,686
3+910	2,400	0,000					
			5,000	24,775	0,000	31.119,043	16.507,686
3+920	2,555	0,000					
			5,000	29,715	0,000	31.148,758	16.507,686
3+930	3,388	0,000					
			4,504	35,605	0,000	31.184,363	16.507,686
3+939,007	4,518	0,000					
			0,497	4,543	0,000	31.188,906	16.507,686
3+940	4,633	0,000					
			5,000	54,405	0,000	31.243,311	16.507,686
3+950	6,248	0,000					
			3,918	42,749	0,016	31.286,060	16.507,702
3+957,836	4,663	0,004					
			1,082	9,326	0,026	31.295,386	16.507,728
3+960	3,956	0,020					
			2,500	14,872	0,370	31.310,258	16.508,098
3+965	1,993	0,128					
			2,500	5,745	1,283	31.316,003	16.509,381
3+970	0,305	0,385					
			5,000	1,525	15,230	31.317,528	16.524,611
3+980	0,000	2,661					
			2,500	0,097	16,410	31.317,625	16.541,021
3+985	0,039	3,903					
			1,418	0,133	11,613	31.317,758	16.552,634
3+987,836	0,055	4,287					

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Projeto: SC-114 - Bentinho - SC

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Volume

Cálculo de Volume por Comparação de Perfis: Terreno x Projeto

Km	Área Corte	Área Aterro	Semi-Dis.	Vol.Corte	Vol.Aterro	V.C.Acum.	V.A.Acum.
3+987,836	0,055	4,287					
			6,082	0,335	29,571	31.318,093	16.582,205
4	0,000	0,575					
			0,518	0,000	0,485	31.318,093	16.582,690
4+1,036	0,000	0,362					
			4,482	6,633	1,622	31.324,726	16.584,312
4+10	1,480	0,000					
			5,000	32,625	0,000	31.357,351	16.584,312
4+20	5,045	0,000					
			5,000	69,955	0,000	31.427,306	16.584,312
4+30	8,946	0,000					
			5,000	106,550	0,000	31.533,856	16.584,312
4+40	12,364	0,000					
			0,518	12,994	0,000	31.546,850	16.584,312
4+41,036	12,720	0,000					
			4,482	117,648	0,000	31.664,498	16.584,312
4+50	13,529	0,000					
			5,000	104,825	0,000	31.769,323	16.584,312
4+60	7,436	0,000					
			5,000	49,920	0,000	31.819,243	16.584,312
4+70	2,548	0,000					
			5,000	15,970	11,570	31.835,213	16.595,882
4+80	0,646	2,314					
			0,518	0,668	2,623	31.835,881	16.598,505
4+81,036	0,644	2,749					
			7,727	4,976	126,452	31.840,857	16.724,957
4+96,489	0,000	13,617					
			1,756	0,000	54,124	31.840,857	16.779,081
4+100	0,000	17,214					
			2,500	0,000	97,950	31.840,857	16.877,031
4+105	0,000	21,966					
			2,500	0,000	117,428	31.840,857	16.994,459
4+110	0,000	25,005					
			2,500	0,000	130,443	31.840,857	17.124,902
4+115	0,000	27,172					
			2,500	0,000	140,427	31.840,857	17.265,329
4+120	0,000	28,999					
			2,500	0,000	150,553	31.840,857	17.415,882
4+125	0,000	31,222					
			0,745	0,000	46,915	31.840,857	17.462,797
4+126,489	0,000	31,793					
			1,756	0,000	110,384	31.840,857	17.573,181
4+130	0,000	31,086					
			2,500	0,000	153,923	31.840,857	17.727,104
4+135	0,000	30,483					

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Volume

Cálculo de Volume por Comparação de Perfis: Terreno x Projeto

Km	Área Corte	Área Aterro	Semi-Dis.	Vol.Corte	Vol.Aterro	V.C.Acum.	V.A.Acum.
4+135	0,000	30,483					
			2,500	0,000	163,535	31.840,857	17.890,639
4+140	0,000	34,931					
			2,500	0,000	166,993	31.840,857	18.057,632
4+145	0,000	31,866					
			0,288	0,000	18,181	31.840,857	18.075,813
4+145,575	0,000	31,374					
			2,213	0,000	132,077	31.840,857	18.207,890
4+150	0,000	28,322					
			2,500	0,000	129,380	31.840,857	18.337,270
4+155	0,000	23,430					
			2,500	0,000	105,335	31.840,857	18.442,605
4+160	0,000	18,704					
			2,500	0,000	81,123	31.840,857	18.523,728
4+165	0,000	13,745					
			2,500	0,000	48,470	31.840,857	18.572,198
4+170	0,000	5,643					
			2,500	0,458	14,223	31.841,315	18.586,421
4+175	0,183	0,046					
			1,298	4,348	0,060	31.845,663	18.586,481
4+177,595	3,168	0,000					
			1,203	11,526	0,000	31.857,189	18.586,481
4+180	6,417	0,000					
			5,000	127,350	0,000	31.984,539	18.586,481
4+190	19,053	0,000					
			5,000	204,970	0,000	32.189,509	18.586,481
4+200	21,941	0,000					
			3,798	152,272	0,000	32.341,781	18.586,481
4+207,595	18,157	0,000					
			1,203	41,505	0,000	32.383,286	18.586,481
4+210	16,359	0,000					
			5,000	133,830	0,000	32.517,116	18.586,481
4+220	10,407	0,000					
			5,000	89,715	0,000	32.606,831	18.586,481
4+230	7,536	0,000					
			3,798	51,832	0,000	32.658,663	18.586,481
4+237,595	6,113	0,000					
			1,203	14,141	0,000	32.672,804	18.586,481
4+240	5,647	0,000					
			3,035	31,974	0,000	32.704,778	18.586,481
4+246,070	4,888	0,000					
			1,965	18,852	0,000	32.723,630	18.586,481
4+250	4,706	0,000					
			5,000	44,385	0,000	32.768,015	18.586,481
4+260	4,171	0,000					

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Volume

Cálculo de Volume por Comparação de Perfis: Terreno x Projeto

Km	Área Corte	Área Aterro	Semi-Dis.	Vol.Corte	Vol.Aterro	V.C.Acum.	V.A.Acum.
4+260	4,171	0,000					
			5,000	41,985	0,000	32.810,000	18.586,481
4+270	4,226	0,000					
			3,035	26,775	0,000	32.836,775	18.586,481
4+276,070	4,596	0,000					
			1,965	18,514	0,000	32.855,289	18.586,481
4+280	4,826	0,000					
			4,965	47,614	0,000	32.902,903	18.586,481
4+289,930	4,764	0,000					
			0,035	0,333	0,000	32.903,236	18.586,481
4+290	4,758	0,000					
			5,000	47,295	0,000	32.950,531	18.586,481
4+300	4,701	0,000					
			5,000	54,105	0,000	33.004,636	18.586,481
4+310	6,120	0,000					
			4,965	69,793	0,000	33.074,429	18.586,481
4+319,930	7,937	0,000					
			0,035	0,556	0,000	33.074,985	18.586,481
4+320	7,944	0,000					
			10,000	269,100	0,000	33.344,085	18.586,481
4+340	18,966	0,000					
			10,000	503,660	0,000	33.847,745	18.586,481
4+360	31,400	0,000					
			10,000	572,610	0,000	34.420,355	18.586,481
4+380	25,861	0,000					
			10,000	460,270	0,000	34.880,625	18.586,481
4+400	20,166	0,000					
			10,000	403,660	0,000	35.284,285	18.586,481
4+420	20,200	0,000					
			10,000	389,270	0,000	35.673,555	18.586,481
4+440	18,727	0,000					
			10,000	364,780	0,000	36.038,335	18.586,481
4+460	17,751	0,000					
			10,000	312,670	0,000	36.351,005	18.586,481
4+480	13,516	0,000					
			0,299	8,037	0,000	36.359,042	18.586,481
4+480,598	13,364	0,000					
			4,701	98,904	0,000	36.457,946	18.586,481
4+490	7,675	0,000					
			5,000	42,595	2,150	36.500,541	18.588,631
4+500	0,844	0,430					
			5,000	4,265	44,915	36.504,806	18.633,546
4+510	0,009	8,553					
			5,000	0,045	142,970	36.504,851	18.776,516
4+520	0,000	20,041					

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Volume

Cálculo de Volume por Comparação de Perfis: Terreno x Projeto

Km	Área Corte	Área Aterro	Semi-Dis.	Vol.Corte	Vol.Aterro	V.C.Acum.	V.A.Acum.
4+520	0,000	20,041					
			0,299	0,000	12,217	36.504,851	18.788,733
4+520,598	0,000	20,819					
			4,701	0,000	240,875	36.504,851	19.029,608
4+530	0,000	30,420					
			1,190	0,000	75,329	36.504,851	19.104,937
4+532,380	0,000	32,882					
			3,810	0,000	250,267	36.504,851	19.355,204
4+540	0,000	32,805					
			5,000	0,000	306,300	36.504,851	19.661,504
4+550	0,000	28,455					
			5,000	0,000	260,630	36.504,851	19.922,134
4+560	0,000	23,671					
			5,000	0,620	200,225	36.505,471	20.122,359
4+570	0,124	16,374					
			1,190	0,657	36,776	36.506,128	20.159,135
4+572,380	0,428	14,530					
			3,810	11,514	89,143	36.517,642	20.248,278
4+580	2,594	8,867					
			10,000	216,880	88,670	36.734,522	20.336,948
4+600	19,094	0,000					
			10,000	415,180	0,000	37.149,702	20.336,948
4+620	22,424	0,000					
			4,914	175,628	0,000	37.325,330	20.336,948
4+629,827	13,320	0,000					
			0,087	2,286	0,000	37.327,616	20.336,948
4+630	13,113	0,000					
			2,500	52,095	0,000	37.379,711	20.336,948
4+635	7,725	0,000					
			2,500	26,983	0,010	37.406,694	20.336,958
4+640	3,068	0,004					
			2,500	9,698	3,725	37.416,392	20.340,683
4+645	0,811	1,486					
			2,500	2,065	10,730	37.418,457	20.351,413
4+650	0,015	2,806					
			2,500	0,038	16,683	37.418,495	20.368,096
4+655	0,000	3,867					
			2,414	0,000	17,358	37.418,495	20.385,454
4+659,827	0,000	3,325					
			0,087	0,000	0,574	37.418,495	20.386,028
4+660	0,000	3,306					
			2,500	0,000	14,815	37.418,495	20.400,843
4+665	0,000	2,620					
			2,500	0,000	8,270	37.418,495	20.409,113
4+670	0,000	0,688					

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Volume

Cálculo de Volume por Comparação de Perfis: Terreno x Projeto

Km	Área Corte	Área Aterro	Semi-Dis.	Vol.Corte	Vol.Aterro	V.C.Acum.	V.A.Acum.
4+670	0,000	0,688					
			2,500	0,055	1,720	37.418,550	20.410,833
4+675	0,022	0,000					
			2,500	3,558	0,000	37.422,108	20.410,833
4+680	1,401	0,000					
			0,362	1,069	0,000	37.423,177	20.410,833
4+680,723	1,557	0,000					
			2,139	9,347	0,000	37.432,524	20.410,833
4+685	2,814	0,000					
			2,500	19,973	0,000	37.452,497	20.410,833
4+690	5,175	0,000					
			2,500	34,133	0,000	37.486,630	20.410,833
4+695	8,478	0,000					
			2,500	52,558	0,000	37.539,188	20.410,833
4+700	12,545	0,000					
			2,500	82,025	0,000	37.621,213	20.410,833
4+705	20,265	0,000					
			2,500	128,470	0,000	37.749,683	20.410,833
4+710	31,123	0,000					
			0,362	23,122	0,000	37.772,805	20.410,833
4+710,723	32,839	0,000					
			4,639	415,610	0,000	38.188,415	20.410,833
4+720	56,761	0,000					
			9,533	1.084,341	0,000	39.272,756	20.410,833
4+739,065	56,991	0,000					
			0,468	52,953	0,000	39.325,709	20.410,833
4+740	56,278	0,000					
			2,500	268,618	0,000	39.594,327	20.410,833
4+745	51,169	0,000					
			2,500	242,890	0,000	39.837,217	20.410,833
4+750	45,987	0,000					
			2,500	222,075	0,000	40.059,292	20.410,833
4+755	42,843	0,000					
			2,500	210,320	0,000	40.269,612	20.410,833
4+760	41,285	0,000					
			2,500	199,898	0,000	40.469,510	20.410,833
4+765	38,674	0,000					
			2,500	185,023	0,000	40.654,533	20.410,833
4+770	35,335	0,000					
			2,500	165,055	0,000	40.819,588	20.410,833
4+775	30,687	0,000					
			2,033	114,566	0,000	40.934,154	20.410,833
4+779,065	25,680	0,000					
			0,468	23,418	0,000	40.957,572	20.410,833
4+780	24,413	0,000					

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Volume

Cálculo de Volume por Comparação de Perfis: Terreno x Projeto

Km	Área Corte	Área Aterro	Semi-Dis.	Vol.Corte	Vol.Aterro	V.C.Acum.	V.A.Acum.
4+780	24,413	0,000					
			2,500	104,007	0,000	41.061,579	20.410,833
4+785	17,190	0,000					
			2,496	69,447	0,000	41.131,026	20.410,833
4+789,991	10,639	0,000					
			0,005	0,096	0,000	41.131,122	20.410,833
4+790	10,635	0,000					
			2,500	40,445	0,000	41.171,567	20.410,833
4+795	5,543	0,000					
			2,500	16,105	0,253	41.187,672	20.411,086
4+800	0,899	0,101					
			2,500	2,248	12,650	41.189,920	20.423,736
4+805	0,000	4,959					
			2,500	0,000	36,330	41.189,920	20.460,066
4+810	0,000	9,573					
			2,500	0,000	58,420	41.189,920	20.518,486
4+815	0,000	13,795					
			2,500	0,000	81,215	41.189,920	20.599,701
4+820	0,000	18,691					
			2,500	0,000	103,002	41.189,920	20.702,703
4+825	0,000	22,510					
			2,496	0,000	119,178	41.189,920	20.821,881
4+829,991	0,000	25,247					
			5,005	0,000	289,425	41.189,920	21.111,306
4+840	0,000	32,586					
			10,000	0,000	623,000	41.189,920	21.734,306
4+860	0,000	29,714					
			2,149	0,000	124,358	41.189,920	21.858,664
4+864,298	0,000	28,154					
			0,351	0,000	19,652	41.189,920	21.878,316
4+865	0,001	27,836					
			2,500	0,110	133,487	41.190,030	22.011,803
4+870	0,043	25,559					
			2,500	0,490	121,835	41.190,520	22.133,638
4+875	0,153	23,175					
			2,500	1,305	109,215	41.191,825	22.242,853
4+880	0,369	20,511					
			2,500	3,322	92,668	41.195,147	22.335,521
4+885	0,960	16,556					
			2,500	7,625	72,443	41.202,772	22.407,964
4+890	2,090	12,421					
			2,500	12,100	58,213	41.214,872	22.466,177
4+895	2,750	10,864					
			2,500	15,895	49,810	41.230,767	22.515,987
4+900	3,608	9,060					

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Volume

Cálculo de Volume por Comparação de Perfis: Terreno x Projeto

Km	Área Corte	Área Aterro	Semi-Dis.	Vol.Corte	Vol.Aterro	V.C.Acum.	V.A.Acum.
4+900	3,608	9,060					
			2,149	16,038	36,993	41.246,805	22.552,980
4+904,298	3,855	8,154					
			0,351	2,706	5,683	41.249,511	22.558,663
4+905	3,853	8,037					
			2,500	19,602	38,392	41.269,113	22.597,055
4+910	3,988	7,320					
			2,500	18,565	36,385	41.287,678	22.633,440
4+915	3,438	7,234					
			2,500	16,172	34,915	41.303,850	22.668,355
4+920	3,031	6,732					
			2,500	13,655	31,822	41.317,505	22.700,177
4+925	2,431	5,997					
			2,500	11,445	27,052	41.328,950	22.727,229
4+930	2,147	4,824					
			2,500	10,043	21,980	41.338,993	22.749,209
4+935	1,870	3,968					
			2,500	9,345	18,477	41.348,338	22.767,686
4+940	1,868	3,423					
			2,500	7,177	14,672	41.355,515	22.782,358
4+945	1,003	2,446					
			2,500	3,785	8,797	41.359,300	22.791,155
4+950	0,511	1,073					
			2,500	2,990	3,962	41.362,290	22.795,117
4+955	0,685	0,512					
			2,500	4,650	1,683	41.366,940	22.796,800
4+960	1,175	0,161					
			2,500	6,280	0,568	41.373,220	22.797,368
4+965	1,337	0,066					
			2,500	8,300	0,343	41.381,520	22.797,711
4+970	1,983	0,071					
			2,500	11,845	0,690	41.393,365	22.798,401
4+975	2,755	0,205					
			2,500	16,692	0,867	41.410,057	22.799,268
4+980	3,922	0,142					
			2,500	21,070	0,730	41.431,127	22.799,998
4+985	4,506	0,150					
			2,500	24,843	0,400	41.455,970	22.800,398
4+990	5,431	0,010					
			2,500	28,592	0,025	41.484,562	22.800,423
4+995	6,006	0,000					
			1,428	17,791	0,000	41.502,353	22.800,423
4+997,856	6,453	0,000					
			1,072	14,166	0,000	41.516,519	22.800,423
5	6,762	0,000					

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Volume

Cálculo de Volume por Comparação de Perfis: Terreno x Projeto

Km	Área Corte	Área Aterro	Semi-Dis.	Vol.Corte	Vol.Aterro	V.C.Acum.	V.A.Acum.
5	6,762	0,000					
			2,500	34,885	0,000	41.551,404	22.800,423
5+5	7,192	0,000					
			2,500	37,503	0,015	41.588,907	22.800,438
5+10	7,809	0,006					
			2,500	37,935	0,015	41.626,842	22.800,453
5+15	7,365	0,000					
			2,500	37,532	0,000	41.664,374	22.800,453
5+20	7,648	0,000					
			2,500	38,850	0,000	41.703,224	22.800,453
5+25	7,892	0,000					
			2,500	40,593	0,000	41.743,817	22.800,453
5+30	8,345	0,000					
			2,500	43,690	0,000	41.787,507	22.800,453
5+35	9,131	0,000					
			1,428	26,836	0,000	41.814,343	22.800,453
5+37,856	9,662	0,000					
			1,072	20,903	0,000	41.835,246	22.800,453
5+40	9,837	0,000					
			10,000	241,620	0,000	42.076,866	22.800,453
5+60	14,325	0,000					
			2,500	73,630	0,000	42.150,496	22.800,453
5+65	15,127	0,000					
			7,500	249,345	0,000	42.399,841	22.800,453
5+80	18,119	0,000					
			2,500	81,052	0,000	42.480,893	22.800,453
5+85	14,302	0,000					
			7,500	131,917	0,480	42.612,810	22.800,933
5+100	3,287	0,064					
			2,994	20,239	0,368	42.633,049	22.801,301
5+105,988	3,473	0,059					
			2,006	13,701	0,271	42.646,750	22.801,572
5+110	3,357	0,076					
			2,500	15,635	0,485	42.662,385	22.802,057
5+115	2,897	0,118					
			2,500	11,980	0,823	42.674,365	22.802,880
5+120	1,895	0,211					
			2,500	7,345	0,905	42.681,710	22.803,785
5+125	1,043	0,151					
			2,500	2,738	1,250	42.684,448	22.805,035
5+130	0,052	0,349					
			2,500	0,130	2,542	42.684,578	22.807,577
5+135	0,000	0,668					
			2,500	0,000	9,582	42.684,578	22.817,159
5+140	0,000	3,165					

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Volume

Cálculo de Volume por Comparação de Perfis: Terreno x Projeto

Km	Área Corte	Área Aterro	Semi-Dis.	Vol.Corte	Vol.Aterro	V.C.Acum.	V.A.Acum.
5+140	0,000	3,165					
			2,500	0,035	23,360	42.684,613	22.840,519
5+145	0,014	6,179					
			0,494	0,008	6,357	42.684,621	22.846,876
5+145,988	0,003	6,689					
			2,006	0,006	33,673	42.684,627	22.880,549
5+150	0,000	10,097					
			2,500	0,000	67,188	42.684,627	22.947,737
5+155	0,000	16,778					
			2,500	0,000	102,550	42.684,627	23.050,287
5+160	0,000	24,242					
			2,361	0,000	132,428	42.684,627	23.182,715
5+164,722	0,000	31,848					
			0,139	0,000	8,885	42.684,627	23.191,600
5+165	0,000	32,073					
			2,500	0,000	165,367	42.684,627	23.356,967
5+170	0,000	34,074					
			2,500	0,000	166,685	42.684,627	23.523,652
5+175	0,000	32,600					
			2,500	0,000	149,665	42.684,627	23.673,317
5+180	0,000	27,266					
			2,500	0,000	125,580	42.684,627	23.798,897
5+185	0,000	22,966					
			2,500	0,000	105,340	42.684,627	23.904,237
5+190	0,000	19,170					
			2,500	0,000	84,418	42.684,627	23.988,655
5+195	0,000	14,597					
			2,500	0,000	62,720	42.684,627	24.051,375
5+200	0,000	10,491					
			2,361	0,000	43,119	42.684,627	24.094,494
5+204,722	0,000	7,772					
			7,639	16,989	63,610	42.701,616	24.158,104
5+220	2,224	0,555					
			10,000	96,470	5,550	42.798,086	24.163,654
5+240	7,423	0,000					
			10,000	152,150	0,000	42.950,236	24.163,654
5+260	7,792	0,000					
			9,902	153,758	1,683	43.103,994	24.165,337
5+279,804	7,736	0,170					
			0,098	1,516	0,033	43.105,510	24.165,370
5+280	7,730	0,166					
			2,500	37,835	0,730	43.143,345	24.166,100
5+285	7,404	0,126					
			2,500	36,282	0,537	43.179,627	24.166,637
5+290	7,109	0,089					

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Volume

Cálculo de Volume por Comparação de Perfis: Terreno x Projeto

Km	Área Corte	Área Aterro	Semi-Dis.	Vol.Corte	Vol.Aterro	V.C.Acum.	V.A.Acum.
5+290	7,109	0,089					
			2,500	35,260	0,370	43.214,887	24.167,007
5+295	6,995	0,059					
			2,500	35,830	0,215	43.250,717	24.167,222
5+300	7,337	0,027					
			2,500	37,308	0,068	43.288,025	24.167,290
5+305	7,586	0,000					
			2,500	38,485	0,000	43.326,510	24.167,290
5+310	7,808	0,000					
			2,500	42,490	0,000	43.369,000	24.167,290
5+315	9,188	0,000					
			2,402	44,937	0,000	43.413,937	24.167,290
5+319,804	9,520	0,000					
			0,098	1,866	0,000	43.415,803	24.167,290
5+320	9,518	0,000					
			2,500	46,898	0,000	43.462,701	24.167,290
5+325	9,241	0,000					
			2,500	44,450	0,000	43.507,151	24.167,290
5+330	8,539	0,000					
			2,500	42,482	0,000	43.549,633	24.167,290
5+335	8,454	0,000					
			2,500	41,745	0,000	43.591,378	24.167,290
5+340	8,244	0,000					
			2,500	42,065	0,000	43.633,443	24.167,290
5+345	8,582	0,000					
			2,500	42,840	0,000	43.676,283	24.167,290
5+350	8,554	0,000					
			2,500	44,245	0,000	43.720,528	24.167,290
5+355	9,144	0,000					
			1,735	32,858	0,000	43.753,386	24.167,290
5+358,469	9,800	0,000					
			0,766	15,274	0,000	43.768,660	24.167,290
5+360	10,153	0,000					
			2,500	55,275	0,000	43.823,935	24.167,290
5+365	11,957	0,000					
			2,500	64,567	0,000	43.888,502	24.167,290
5+370	13,870	0,000					
			2,500	73,490	0,000	43.961,992	24.167,290
5+375	15,526	0,000					
			2,500	80,063	0,000	44.042,055	24.167,290
5+380	16,499	0,000					
			2,500	83,608	0,000	44.125,663	24.167,290
5+385	16,944	0,000					
			2,500	80,955	0,000	44.206,618	24.167,290
5+390	15,438	0,000					

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Km	Área Corte	Área Aterro	Semi-Dis.	Vol.Corte	Vol.Aterro	V.C.Acum.	V.A.Acum.
5+390	15,438	0,000					
			2,500	73,588	0,000	44.280,206	24.167,290
5+395	13,997	0,000					
			2,500	65,550	0,000	44.345,756	24.167,290
5+400	12,223	0,000					
			0,735	17,582	0,000	44.363,338	24.167,290
5+401,469	11,715	0,000					
			1,766	39,157	0,000	44.402,495	24.167,290
5+405	10,464	0,000					
			2,500	45,583	0,000	44.448,078	24.167,290
5+410	7,769	0,000					
			2,500	31,720	8,400	44.479,798	24.175,690
5+415	4,919	3,360					
			2,500	18,595	20,345	44.498,393	24.196,035
5+420	2,519	4,778					
			2,500	7,410	29,088	44.505,803	24.225,123
5+425	0,445	6,857					
			2,500	1,113	39,247	44.506,916	24.264,370
5+430	0,000	8,842					
			2,500	0,000	49,700	44.506,916	24.314,070
5+435	0,000	11,038					
			2,500	0,000	61,365	44.506,916	24.375,435
5+440	0,000	13,508					
			2,500	0,000	72,047	44.506,916	24.447,482
5+445	0,000	15,311					
			0,070	0,000	2,131	44.506,916	24.449,613
5+445,139	0,000	15,356					
			2,431	0,000	79,813	44.506,916	24.529,426
5+450	0,000	17,482					
			2,500	0,015	86,073	44.506,931	24.615,499
5+455	0,006	16,947					
			2,500	2,985	75,405	44.509,916	24.690,904
5+460	1,188	13,215					
			2,500	6,463	58,915	44.516,379	24.749,819
5+465	1,397	10,351					
			2,500	10,350	40,063	44.526,729	24.789,882
5+470	2,743	5,674					
			2,500	18,470	20,130	44.545,199	24.810,012
5+475	4,645	2,378					
			2,313	23,974	7,539	44.569,173	24.817,551
5+479,625	5,722	0,882					
			0,188	2,157	0,317	44.571,330	24.817,868
5+480	5,780	0,806					
			2,500	30,987	2,563	44.602,317	24.820,431
5+485	6,615	0,219					

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Cálculo de Volume por Comparação de Perfis: Terreno x Projeto

Km	Área Corte	Área Aterro	Semi-Dis.	Vol.Corte	Vol.Aterro	V.C.Acum.	V.A.Acum.
5+485	6,615	0,219					
			2,500	33,125	0,547	44.635,442	24.820,978
5+490	6,635	0,000					
			2,500	29,895	0,000	44.665,337	24.820,978
5+495	5,323	0,000					
			2,500	21,270	0,000	44.686,607	24.820,978
5+500	3,185	0,000					
			2,500	9,915	0,190	44.696,522	24.821,168
5+505	0,781	0,076					
			2,500	1,952	3,598	44.698,474	24.824,766
5+510	0,000	1,363					
			2,500	0,020	13,998	44.698,494	24.838,764
5+515	0,008	4,236					
			2,313	0,018	26,129	44.698,512	24.864,893
5+519,625	0,000	7,063					
			0,188	0,000	2,696	44.698,512	24.867,589
5+520	0,000	7,314					
			10,000	0,000	230,230	44.698,512	25.097,819
5+540	0,000	15,709					
			10,000	0,000	262,160	44.698,512	25.359,979
5+560	0,000	10,507					
			10,000	39,020	134,180	44.737,532	25.494,159
5+580	3,902	2,911					
			10,000	158,640	29,110	44.896,172	25.523,269
5+600	11,962	0,000					
			8,219	200,461	1,036	45.096,633	25.524,305
5+616,438	12,428	0,126					
			1,781	42,637	0,677	45.139,270	25.524,982
5+620	11,512	0,254					
			5,000	122,980	1,270	45.262,250	25.526,252
5+630	13,084	0,000					
			5,000	155,870	0,000	45.418,120	25.526,252
5+640	18,090	0,000					
			3,219	126,198	0,000	45.544,318	25.526,252
5+646,438	21,114	0,000					
			1,781	76,337	0,000	45.620,655	25.526,252
5+650	21,748	0,000					
			5,000	231,845	0,000	45.852,500	25.526,252
5+660	24,621	0,000					
			0,608	30,187	0,000	45.882,687	25.526,252
5+661,215	25,070	0,000					
			4,393	217,134	0,000	46.099,821	25.526,252
5+670	24,363	0,000					
			5,000	241,315	0,000	46.341,136	25.526,252
5+680	23,900	0,000					

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Cálculo de Volume por Comparação de Perfis: Terreno x Projeto

Km	Área Corte	Área Aterro	Semi-Dis.	Vol.Corte	Vol.Aterro	V.C.Acum.	V.A.Acum.
5+680	23,900	0,000					
			5,000	230,020	0,000	46.571,156	25.526,252
5+690	22,104	0,000					
			0,608	26,601	0,000	46.597,757	25.526,252
5+691,215	21,683	0,000					
			4,393	179,662	0,000	46.777,419	25.526,252
5+700	19,219	0,000					
			10,000	311,220	0,000	47.088,639	25.526,252
5+720	11,903	0,000					
			10,000	211,740	0,000	47.300,379	25.526,252
5+740	9,271	0,000					
			10,000	188,390	0,000	47.488,769	25.526,252
5+760	9,568	0,000					
			10,000	208,610	0,000	47.697,379	25.526,252
5+780	11,293	0,000					
			10,000	256,430	0,000	47.953,809	25.526,252
5+800	14,350	0,000					
			10,000	216,130	0,000	48.169,939	25.526,252
5+820	7,263	0,000					
			10,000	94,140	1,570	48.264,079	25.527,822
5+840	2,151	0,157					
			10,000	56,120	1,680	48.320,199	25.529,502
5+860	3,461	0,011					
			2,500	17,580	0,072	48.337,779	25.529,574
5+865	3,571	0,018					
			7,500	62,730	0,135	48.400,509	25.529,709
5+880	4,793	0,000					
			2,500	24,848	0,000	48.425,357	25.529,709
5+885	5,146	0,000					
			7,500	71,715	0,000	48.497,072	25.529,709
5+900	4,416	0,000					
			5,559	45,457	0,000	48.542,529	25.529,709
5+911,117	3,762	0,000					
			4,442	29,727	0,000	48.572,256	25.529,709
5+920	2,931	0,000					
			5,000	27,260	0,000	48.599,516	25.529,709
5+930	2,521	0,000					
			5,000	26,990	0,000	48.626,506	25.529,709
5+940	2,877	0,000					
			0,559	3,242	0,000	48.629,748	25.529,709
5+941,117	2,927	0,000					
			4,442	30,753	0,000	48.660,501	25.529,709
5+950	3,997	0,000					
			5,000	46,835	0,000	48.707,336	25.529,709
5+960	5,370	0,000					

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Km	Área Corte	Área Aterro	Semi-Dis.	Vol.Corte	Vol.Aterro	V.C.Acum.	V.A.Acum.
5+960	5,370	0,000					
			5,000	57,365	0,000	48.764,701	25.529,709
5+970	6,103	0,000					
			1,003	12,340	0,000	48.777,041	25.529,709
5+972,005	6,206	0,000					
			3,998	50,161	0,000	48.827,202	25.529,709
5+980	6,342	0,000					
			5,000	62,735	0,000	48.889,937	25.529,709
5+990	6,205	0,000					
			5,000	56,140	0,000	48.946,077	25.529,709
6	5,023	0,000					
			5,000	29,365	8,850	48.975,442	25.538,559
6+10	0,850	1,770					
			1,835	2,195	12,889	48.977,637	25.551,448
6+13,670	0,346	5,254					
			3,165	1,257	67,677	48.978,894	25.619,125
6+20	0,051	16,129					
			5,000	0,255	210,070	48.979,149	25.829,195
6+30	0,000	25,885					
			5,000	0,000	312,390	48.979,149	26.141,585
6+40	0,000	36,593					
			1,835	0,000	143,903	48.979,149	26.285,488
6+43,670	0,000	41,828					
			8,165	0,000	609,052	48.979,149	26.894,540
6+60	0,000	32,765					
			7,500	0,000	464,805	48.979,149	27.359,345
6+75	0,000	29,209					
			2,500	0,000	139,975	48.979,149	27.499,320
6+80	0,000	26,781					
			7,500	0,000	317,670	48.979,149	27.816,990
6+95	0,000	15,575					
			2,500	0,000	69,585	48.979,149	27.886,575
6+100	0,000	12,259					
			10,000	9,720	125,730	48.988,869	28.012,305
6+120	0,972	0,314					
			10,000	51,160	3,140	49.040,029	28.015,445
6+140	4,144	0,000					
			10,000	93,430	0,000	49.133,459	28.015,445
6+160	5,199	0,000					
			1,386	14,736	0,000	49.148,195	28.015,445
6+162,771	5,437	0,000					
			3,615	45,008	0,000	49.193,203	28.015,445
6+170	7,015	0,000					
			5,000	85,235	0,000	49.278,438	28.015,445
6+180	10,032	0,000					

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Km	Área Corte	Área Aterro	Semi-Dis.	Vol.Corte	Vol.Aterro	V.C.Acum.	V.A.Acum.
6+180	10,032	0,000					
			5,000	98,285	0,000	49.376,723	28.015,445
6+190	9,625	0,000					
			1,386	25,586	0,000	49.402,309	28.015,445
6+192,771	8,842	0,000					
			3,615	57,095	0,000	49.459,404	28.015,445
6+200	6,954	0,000					
			5,000	74,695	0,000	49.534,099	28.015,445
6+210	7,985	0,000					
			5,000	92,295	0,000	49.626,394	28.015,445
6+220	10,474	0,000					
			1,707	38,370	0,000	49.664,764	28.015,445
6+223,414	12,004	0,000					
			3,293	90,538	0,000	49.755,302	28.015,445
6+230	15,490	0,000					
			5,000	178,415	0,000	49.933,717	28.015,445
6+240	20,193	0,000					
			2,101	90,538	0,000	50.024,255	28.015,445
6+244,202	22,900	0,000					
			2,899	130,487	0,000	50.154,742	28.015,445
6+250	22,111	0,000					
			5,000	210,780	0,000	50.365,522	28.015,445
6+260	20,045	0,000					
			5,000	194,235	0,000	50.559,757	28.015,445
6+270	18,802	0,000					
			2,101	75,023	0,000	50.634,780	28.015,445
6+274,202	16,906	0,000					
			2,899	90,460	0,000	50.725,240	28.015,445
6+280	14,298	0,000					
			10,000	174,740	53,830	50.899,980	28.069,275
6+300	3,176	5,383					
			10,000	31,760	286,180	50.931,740	28.355,455
6+320	0,000	23,235					
			10,000	0,000	564,230	50.931,740	28.919,685
6+340	0,000	33,188					
			10,000	0,000	648,910	50.931,740	29.568,595
6+360	0,000	31,703					
			10,000	0,000	570,220	50.931,740	30.138,815
6+380	0,000	25,319					
			10,000	5,100	379,510	50.936,840	30.518,325
6+400	0,510	12,632					
			10,000	118,090	126,320	51.054,930	30.644,645
6+420	11,299	0,000					
			10,000	321,080	0,000	51.376,010	30.644,645
6+440	20,809	0,000					

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Km	Área Corte	Área Aterro	Semi-Dis.	Vol.Corte	Vol.Aterro	V.C.Acum.	V.A.Acum.
6+440	20,809	0,000					
			10,000	443,710	0,000	51.819,720	30.644,645
6+460	23,562	0,000					
			10,000	412,810	0,000	52.232,530	30.644,645
6+480	17,719	0,000					
			10,000	224,430	0,000	52.456,960	30.644,645
6+500	4,724	0,000					
			10,000	47,240	2,100	52.504,200	30.646,745
6+520	0,000	0,210					
			6,489	0,000	4,828	52.504,200	30.651,573
6+532,978	0,000	0,534					
			3,511	0,000	3,083	52.504,200	30.654,656
6+540	0,000	0,344					
			10,000	0,000	12,390	52.504,200	30.667,046
6+560	0,000	0,895					
			1,489	0,000	2,880	52.504,200	30.669,926
6+562,978	0,000	1,039					
			5,083	1,372	11,842	52.505,572	30.681,768
6+573,143	0,270	1,291					
			3,429	2,033	8,252	52.507,605	30.690,020
6+580	0,323	1,116					
			10,000	5,980	41,440	52.513,585	30.731,460
6+600	0,275	3,028					
			1,572	0,574	10,916	52.514,159	30.742,376
6+603,143	0,090	3,918					
			8,429	0,759	104,707	52.514,918	30.847,083
6+620	0,000	8,505					
			10,000	0,000	173,730	52.514,918	31.020,813
6+640	0,000	8,868					
			0,018	0,000	0,310	52.514,918	31.021,123
6+640,035	0,000	8,870					
			2,483	0,000	43,158	52.514,918	31.064,281
6+645	0,000	8,515					
			2,500	0,000	40,870	52.514,918	31.105,151
6+650	0,000	7,833					
			2,500	0,000	37,295	52.514,918	31.142,446
6+655	0,000	7,085					
			2,500	0,000	33,303	52.514,918	31.175,749
6+660	0,000	6,236					
			2,500	0,092	29,253	52.515,010	31.205,002
6+665	0,037	5,465					
			2,500	1,000	26,022	52.516,010	31.231,024
6+670	0,363	4,944					
			2,500	3,545	23,148	52.519,555	31.254,172
6+675	1,055	4,315					

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Volume

Cálculo de Volume por Comparação de Perfis: Terreno x Projeto

Km	Área Corte	Área Aterro	Semi-Dis.	Vol.Corte	Vol.Aterro	V.C.Acum.	V.A.Acum.
6+675	1,055	4,315					
			2,500	6,002	20,778	52.525,557	31.274,950
6+680	1,346	3,996					
			0,018	0,047	0,140	52.525,604	31.275,090
6+680,035	1,348	3,993					
			2,483	7,668	20,352	52.533,272	31.295,442
6+685	1,741	4,205					
			2,500	8,645	21,630	52.541,917	31.317,072
6+690	1,717	4,447					
			0,684	1,889	6,449	52.543,806	31.323,521
6+691,367	1,047	4,988					
			1,817	1,902	22,165	52.545,708	31.345,686
6+695	0,000	7,214					
			2,500	0,000	41,490	52.545,708	31.387,176
6+700	0,000	9,382					
			2,500	0,000	50,715	52.545,708	31.437,891
6+705	0,000	10,904					
			2,500	0,000	57,405	52.545,708	31.495,296
6+710	0,000	12,058					
			2,500	0,000	60,108	52.545,708	31.555,404
6+715	0,000	11,985					
			2,500	0,000	58,078	52.545,708	31.613,482
6+720	0,000	11,246					
			2,500	0,000	46,610	52.545,708	31.660,092
6+725	0,000	7,398					
			2,500	0,063	28,485	52.545,771	31.688,577
6+730	0,025	3,996					
			0,684	0,104	4,938	52.545,875	31.693,515
6+731,367	0,127	3,228					
			4,317	13,014	14,167	52.558,889	31.707,682
6+740	2,888	0,054					
			10,000	117,140	0,540	52.676,029	31.708,222
6+760	8,826	0,000					
			3,352	43,224	0,000	52.719,253	31.708,222
6+766,703	4,071	0,000					
			1,649	10,422	0,000	52.729,675	31.708,222
6+770	2,251	0,000					
			2,500	6,110	0,117	52.735,785	31.708,339
6+775	0,193	0,047					
			2,500	0,482	0,977	52.736,267	31.709,316
6+780	0,000	0,344					
			2,500	1,975	1,650	52.738,242	31.710,966
6+785	0,790	0,316					
			2,500	7,828	1,365	52.746,070	31.712,331
6+790	2,341	0,230					

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Cálculo de Volume por Comparação de Perfis: Terreno x Projeto

Km	Área Corte	Área Aterro	Semi-Dis.	Vol.Corte	Vol.Aterro	V.C.Acum.	V.A.Acum.
6+790	2,341	0,230					
			2,500	14,592	0,708	52.760,662	31.713,039
6+795	3,496	0,053					
			0,852	6,387	0,063	52.767,049	31.713,102
6+796,703	4,005	0,021					
			1,649	14,955	0,035	52.782,004	31.713,137
6+800	5,067	0,000					
			2,500	28,048	0,000	52.810,052	31.713,137
6+805	6,152	0,000					
			2,500	34,303	0,000	52.844,355	31.713,137
6+810	7,569	0,000					
			0,051	0,774	0,000	52.845,129	31.713,137
6+810,102	7,600	0,000					
			2,449	35,165	0,000	52.880,294	31.713,137
6+815	6,759	0,000					
			2,500	31,063	0,000	52.911,357	31.713,137
6+820	5,666	0,000					
			2,500	25,785	0,000	52.937,142	31.713,137
6+825	4,648	0,000					
			2,500	20,907	0,000	52.958,049	31.713,137
6+830	3,715	0,000					
			2,500	14,748	0,003	52.972,797	31.713,140
6+835	2,184	0,001					
			2,500	7,837	0,360	52.980,634	31.713,500
6+840	0,951	0,143					
			0,051	0,096	0,015	52.980,730	31.713,515
6+840,102	0,925	0,149					
			9,949	9,382	71,673	52.990,112	31.785,188
6+860	0,018	7,055					
			10,000	0,180	138,970	52.990,292	31.924,158
6+880	0,000	6,842					
			10,000	3,200	97,410	52.993,492	32.021,568
6+900	0,320	2,899					
			10,000	96,460	28,990	53.089,952	32.050,558
6+920	9,326	0,000					
			2,443	55,669	0,000	53.145,621	32.050,558
6+924,886	13,461	0,000					
			0,057	1,540	0,000	53.147,161	32.050,558
6+925	13,550	0,000					
			2,500	78,390	0,000	53.225,551	32.050,558
6+930	17,806	0,000					
			2,500	98,160	0,000	53.323,711	32.050,558
6+935	21,458	0,000					
			2,500	112,330	0,000	53.436,041	32.050,558
6+940	23,474	0,000					

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Cálculo de Volume por Comparação de Perfis: Terreno x Projeto

Km	Área Corte	Área Aterro	Semi-Dis.	Vol. Corte	Vol. Aterro	V.C.Acum.	V.A.Acum.
6+940	23,474	0,000					
			2,500	119,827	0,000	53.555,868	32.050,558
6+945	24,457	0,000					
			2,500	125,290	0,000	53.681,158	32.050,558
6+950	25,659	0,000					
			2,500	132,155	0,000	53.813,313	32.050,558
6+955	27,203	0,000					
			2,500	135,387	0,000	53.948,700	32.050,558
6+960	26,952	0,000					
			2,443	118,507	0,000	54.067,207	32.050,558
6+964,886	21,557	0,000					
			0,057	2,451	0,000	54.069,658	32.050,558
6+965	21,435	0,000					
			2,500	94,940	0,000	54.164,598	32.050,558
6+970	16,541	0,000					
			2,477	70,907	0,000	54.235,505	32.050,558
6+974,954	12,085	0,000					
			0,023	0,555	0,000	54.236,060	32.050,558
6+975	12,044	0,000					
			2,500	49,950	0,000	54.286,010	32.050,558
6+980	7,936	0,000					
			2,500	35,913	0,000	54.321,923	32.050,558
6+985	6,429	0,000					
			2,500	29,035	0,000	54.350,958	32.050,558
6+990	5,185	0,000					
			2,500	23,038	0,000	54.373,996	32.050,558
6+995	4,030	0,000					
			2,500	18,578	0,000	54.392,574	32.050,558
7	3,401	0,000					
			2,500	16,660	0,000	54.409,234	32.050,558
7+5	3,263	0,000					
			2,500	15,833	0,000	54.425,067	32.050,558
7+10	3,070	0,000					
			2,477	14,840	0,000	54.439,907	32.050,558
7+14,954	2,921	0,000					
			2,523	17,219	0,000	54.457,126	32.050,558
7+20	3,904	0,000					
			10,000	174,050	0,000	54.631,176	32.050,558
7+40	13,501	0,000					
			10,000	266,560	0,000	54.897,736	32.050,558
7+60	13,155	0,000					
			1,778	46,386	0,000	54.944,122	32.050,558
7+63,556	12,934	0,000					
			8,222	203,675	0,000	55.147,797	32.050,558
7+80	11,838	0,000					

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Km	Área Corte	Área Aterro	Semi-Dis.	Vol.Corte	Vol.Aterro	V.C.Acum.	V.A.Acum.
7+80	11,838	0,000					
			6,778	138,529	0,000	55.286,326	32.050,558
7+93,556	8,600	0,000					
			3,222	50,196	0,000	55.336,522	32.050,558
7+100	6,979	0,000					
			2,326	30,978	0,000	55.367,500	32.050,558
7+104,651	6,342	0,000					
			5,175	49,235	0,000	55.416,735	32.050,558
7+115	3,173	0,000					
			2,500	11,967	0,005	55.428,702	32.050,563
7+120	1,614	0,002					
			7,326	11,823	1,993	55.440,525	32.052,556
7+134,651	0,000	0,270					
			0,175	0,000	0,098	55.440,525	32.052,654
7+135	0,000	0,289					
			2,500	0,000	3,508	55.440,525	32.056,162
7+140	0,000	1,114					
			10,000	0,000	111,610	55.440,525	32.167,772
7+160	0,000	10,047					
			10,000	0,000	258,440	55.440,525	32.426,212
7+180	0,000	15,797					
			10,000	0,000	313,670	55.440,525	32.739,882
7+200	0,000	15,570					
			2,063	0,000	66,214	55.440,525	32.806,096
7+204,126	0,000	16,526					
			2,937	0,000	101,247	55.440,525	32.907,343
7+210	0,000	17,947					
			5,000	0,000	187,525	55.440,525	33.094,868
7+220	0,000	19,558					
			2,500	0,000	94,282	55.440,525	33.189,150
7+225	0,000	18,155					
			2,500	0,000	86,603	55.440,525	33.275,753
7+230	0,000	16,486					
			5,000	5,575	131,035	55.446,100	33.406,788
7+240	1,115	9,721					
			2,063	6,228	31,902	55.452,328	33.438,690
7+244,126	1,904	5,743					
			0,437	1,745	4,725	55.454,073	33.443,415
7+245	2,090	5,069					
			2,500	10,165	17,465	55.464,238	33.460,880
7+250	1,976	1,917					
			5,000	31,650	9,585	55.495,888	33.470,465
7+260	4,354	0,000					
			5,000	82,220	0,000	55.578,108	33.470,465
7+270	12,090	0,000					

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Cálculo de Volume por Comparação de Perfis: Terreno x Projeto

Km	Área Corte	Área Aterro	Semi-Dis.	Vol.Corte	Vol.Aterro	V.C.Acum.	V.A.Acum.
7+270	12,090	0,000					
			5,000	149,295	0,000	55.727,403	33.470,465
7+280	17,769	0,000					
			3,582	117,404	0,000	55.844,807	33.470,465
7+287,164	15,007	0,000					
			1,418	39,470	0,000	55.884,277	33.470,465
7+290	12,828	0,000					
			5,000	94,795	0,000	55.979,072	33.470,465
7+300	6,131	0,000					
			5,000	37,090	0,080	56.016,162	33.470,545
7+310	1,287	0,016					
			5,000	6,435	13,750	56.022,597	33.484,295
7+320	0,000	2,734					
			3,582	0,000	24,651	56.022,597	33.508,946
7+327,164	0,000	4,148					
			6,418	0,058	58,776	56.022,655	33.567,722
7+340	0,009	5,010					
			10,000	39,750	50,320	56.062,405	33.618,042
7+360	3,966	0,022					
			2,522	15,283	0,055	56.077,688	33.618,097
7+365,044	2,094	0,000					
			7,478	24,132	15,091	56.101,820	33.633,188
7+380	1,133	2,018					
			10,000	37,160	20,180	56.138,980	33.653,368
7+400	2,583	0,000					
			2,522	13,218	0,000	56.152,198	33.653,368
7+405,044	2,658	0,000					
			7,478	50,746	0,090	56.202,944	33.653,458
7+420	4,128	0,012					
			1,274	11,165	0,019	56.214,109	33.653,477
7+422,547	4,639	0,003					
			8,727	107,580	0,026	56.321,689	33.653,503
7+440	7,689	0,000					
			10,000	114,640	0,000	56.436,329	33.653,503
7+460	3,775	0,000					
			1,274	8,094	0,000	56.444,423	33.653,503
7+462,547	2,581	0,000					
			8,727	22,575	23,867	56.466,998	33.677,370
7+480	0,006	2,735					
			10,000	0,060	70,380	56.467,058	33.747,750
7+500	0,000	4,303					
			10,000	11,880	45,650	56.478,938	33.793,400
7+520	1,188	0,262					
			10,000	104,620	2,620	56.583,558	33.796,020
7+540	9,274	0,000					

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Km	Área Corte	Área Aterro	Semi-Dis.	Vol.Corte	Vol.Aterro	V.C.Acum.	V.A.Acum.
7+540	9,274	0,000					
			10,000	218,110	0,000	56.801,668	33.796,020
7+560	12,537	0,000					
			10,000	216,670	0,000	57.018,338	33.796,020
7+580	9,130	0,000					
			4,071	66,834	0,000	57.085,172	33.796,020
7+588,142	7,287	0,000					
			0,929	13,156	0,000	57.098,328	33.796,020
7+590	6,874	0,000					
			2,500	31,638	0,000	57.129,966	33.796,020
7+595	5,781	0,000					
			2,500	27,713	0,000	57.157,679	33.796,020
7+600	5,304	0,000					
			2,500	25,652	0,000	57.183,331	33.796,020
7+605	4,957	0,000					
			2,500	23,380	0,000	57.206,711	33.796,020
7+610	4,395	0,000					
			2,500	17,978	0,000	57.224,689	33.796,020
7+615	2,796	0,000					
			1,571	7,798	0,000	57.232,487	33.796,020
7+618,142	2,168	0,000					
			0,929	3,671	0,000	57.236,158	33.796,020
7+620	1,784	0,000					
			2,500	6,162	0,278	57.242,320	33.796,298
7+625	0,681	0,111					
			2,500	2,110	2,455	57.244,430	33.798,753
7+630	0,163	0,871					
			2,500	1,860	5,570	57.246,290	33.804,323
7+635	0,581	1,357					
			1,509	1,561	2,925	57.247,851	33.807,248
7+638,017	0,454	0,582					
			0,992	1,063	0,842	57.248,914	33.808,090
7+640	0,618	0,267					
			2,500	3,945	0,785	57.252,859	33.808,875
7+645	0,960	0,047					
			2,500	6,623	0,117	57.259,482	33.808,992
7+650	1,689	0,000					
			2,500	11,558	0,000	57.271,040	33.808,992
7+655	2,934	0,000					
			2,500	18,580	0,000	57.289,620	33.808,992
7+660	4,498	0,000					
			2,500	24,225	0,000	57.313,845	33.808,992
7+665	5,192	0,000					
			1,509	16,280	0,000	57.330,125	33.808,992
7+668,017	5,600	0,000					

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Km	Área Corte	Área Aterro	Semi-Dis.	Vol.Corte	Vol.Aterro	V.C.Acum.	V.A.Acum.
7+668,017	5,600	0,000					
			5,992	77,153	0,000	57.407,278	33.808,992
7+680	7,277	0,000					
			10,000	149,860	0,000	57.557,138	33.808,992
7+700	7,709	0,000					
			10,000	181,850	0,000	57.738,988	33.808,992
7+720	10,476	0,000					
			4,084	84,788	0,000	57.823,776	33.808,992
7+728,168	10,285	0,000					
			5,916	118,285	0,000	57.942,061	33.808,992
7+740	9,709	0,000					
			9,084	111,524	1,026	58.053,585	33.810,018
7+758,168	2,568	0,113					
			0,916	4,250	0,485	58.057,835	33.810,503
7+760	2,072	0,417					
			7,750	25,203	14,407	58.083,038	33.824,910
7+775,500	1,180	1,442					
			2,250	4,912	6,606	58.087,950	33.831,516
7+780	1,003	1,494					
			10,000	25,990	14,940	58.113,940	33.846,456
7+800	1,596	0,000					
			2,750	9,779	0,000	58.123,719	33.846,456
7+805,500	1,960	0,000					
			7,250	32,212	0,000	58.155,931	33.846,456
7+820	2,483	0,000					
			10,000	56,970	0,000	58.212,901	33.846,456
7+840	3,214	0,000					
			9,926	103,508	0,000	58.316,409	33.846,456
7+859,852	7,214	0,000					
			0,074	1,064	0,000	58.317,473	33.846,456
7+860	7,161	0,000					
			10,000	72,370	22,560	58.389,843	33.869,016
7+880	0,076	2,256					
			4,926	1,980	18,985	58.391,823	33.888,001
7+889,852	0,326	1,598					
			5,074	4,222	8,951	58.396,045	33.896,952
7+900	0,506	0,166					
			0,398	0,482	0,100	58.396,527	33.897,052
7+900,796	0,704	0,084					
			9,602	100,034	0,807	58.496,561	33.897,859
7+920	9,714	0,000					
			5,398	109,520	0,000	58.606,081	33.897,859
7+930,796	10,575	0,000					
			4,168	92,884	0,000	58.698,965	33.897,859
7+939,132	11,710	0,000					

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Volume

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Km	Área Corte	Área Aterro	Semi-Dis.	Vol.Corte	Vol.Aterro	V.C.Acum.	V.A.Acum.
7+939,132	11,710	0,000					
			0,434	10,224	0,000	58.709,189	33.897,859
7+940	11,847	0,000					
			5,000	119,925	0,000	58.829,114	33.897,859
7+950	12,138	0,000					
			5,000	116,630	0,000	58.945,744	33.897,859
7+960	11,188	0,000					
			4,566	71,303	0,000	59.017,047	33.897,859
7+969,132	4,428	0,000					
			0,434	3,584	0,000	59.020,631	33.897,859
7+970	3,829	0,000					
			3,790	14,510	5,180	59.035,141	33.903,039
7+977,579	0,000	1,367					
			1,211	0,069	5,620	59.035,210	33.908,659
7+980	0,057	3,276					
			5,000	0,285	50,220	59.035,495	33.958,879
7+990	0,000	6,768					
			5,000	0,000	91,035	59.035,495	34.049,914
8	0,000	11,439					
			3,790	0,000	90,099	59.035,495	34.140,013
8+7,579	0,000	12,337					
			3,874	0,000	101,658	59.035,495	34.241,671
8+15,327	0,000	13,904					
			2,337	0,000	67,826	59.035,495	34.309,497
8+20	0,000	15,125					
			2,500	0,000	75,623	59.035,495	34.385,120
8+25	0,000	15,124					
			2,500	0,000	77,047	59.035,495	34.462,167
8+30	0,000	15,695					
			2,500	0,000	79,297	59.035,495	34.541,464
8+35	0,000	16,024					
			2,500	0,000	80,970	59.035,495	34.622,434
8+40	0,000	16,364					
			2,500	0,000	81,245	59.035,495	34.703,679
8+45	0,000	16,134					
			0,164	0,000	5,275	59.035,495	34.708,954
8+45,327	0,000	16,128					
			2,337	0,000	75,644	59.035,495	34.784,598
8+50	0,000	16,247					
			2,500	0,000	82,440	59.035,495	34.867,038
8+55	0,000	16,729					
			2,500	0,000	83,697	59.035,495	34.950,735
8+60	0,000	16,750					
			0,672	0,000	22,583	59.035,495	34.973,318
8+61,344	0,000	16,856					

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Volume

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Km	Área Corte	Área Aterro	Semi-Dis.	Vol.Corte	Vol.Aterro	V.C.Acum.	V.A.Acum.
8+61,344	0,000	16,856					
			1,828	0,000	62,192	59.035,495	35.035,510
8+65	0,000	17,166					
			2,500	0,000	86,990	59.035,495	35.122,500
8+70	0,000	17,630					
			2,500	0,000	87,815	59.035,495	35.210,315
8+75	0,000	17,496					
			2,500	0,000	86,300	59.035,495	35.296,615
8+80	0,000	17,024					
			2,500	0,000	81,303	59.035,495	35.377,918
8+85	0,000	15,497					
			2,500	0,000	72,662	59.035,495	35.450,580
8+90	0,000	13,568					
			0,672	0,000	17,825	59.035,495	35.468,405
8+91,344	0,000	12,957					
			4,328	0,320	95,956	59.035,815	35.564,361
8+100	0,074	9,214					
			3,893	2,040	56,846	59.037,855	35.621,207
8+107,785	0,450	5,390					
			1,108	1,112	10,928	59.038,967	35.632,135
8+110	0,554	4,477					
			2,500	3,365	18,123	59.042,332	35.650,258
8+115	0,792	2,772					
			2,500	4,030	11,550	59.046,362	35.661,808
8+120	0,820	1,848					
			2,500	4,050	5,655	59.050,412	35.667,463
8+125	0,800	0,414					
			2,500	8,202	1,035	59.058,614	35.668,498
8+130	2,481	0,000					
			2,500	16,415	0,000	59.075,029	35.668,498
8+135	4,085	0,000					
			1,393	12,492	0,000	59.087,521	35.668,498
8+137,785	4,886	0,000					
			1,108	10,243	0,000	59.097,764	35.668,498
8+140	4,363	0,000					
			2,500	16,478	0,255	59.114,242	35.668,753
8+145	2,228	0,102					
			0,612	2,496	0,247	59.116,738	35.669,000
8+146,223	1,853	0,302					
			1,889	4,971	3,048	59.121,709	35.672,048
8+150	0,779	1,312					
			2,500	2,208	12,570	59.123,917	35.684,618
8+155	0,104	3,716					
			2,500	0,260	24,285	59.124,177	35.708,903
8+160	0,000	5,998					

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Km	Área Corte	Área Aterro	Semi-Dis.	Vol.Corte	Vol.Aterro	V.C.Acum.	V.A.Acum.
8+160	0,000	5,998					
			2,500	0,000	32,610	59.124,177	35.741,513
8+165	0,000	7,046					
			2,500	0,000	35,170	59.124,177	35.776,683
8+170	0,000	7,022					
			2,500	0,000	32,260	59.124,177	35.808,943
8+175	0,000	5,882					
			0,612	0,000	6,859	59.124,177	35.815,802
8+176,223	0,000	5,334					
			1,889	0,000	17,074	59.124,177	35.832,876
8+180	0,000	3,707					
			10,000	2,260	41,260	59.126,437	35.874,136
8+200	0,226	0,419					
			5,788	16,120	2,506	59.142,557	35.876,642
8+211,576	2,559	0,014					
			4,212	26,632	0,059	59.169,189	35.876,701
8+220	3,764	0,000					
			5,000	39,920	0,000	59.209,109	35.876,701
8+230	4,220	0,000					
			5,000	42,720	0,000	59.251,829	35.876,701
8+240	4,324	0,000					
			2,500	21,015	0,018	59.272,844	35.876,719
8+245	4,082	0,007					
			2,500	18,095	0,517	59.290,939	35.877,236
8+250	3,156	0,200					
			0,788	4,745	0,352	59.295,684	35.877,588
8+251,576	2,865	0,247					
			4,212	19,556	3,416	59.315,240	35.881,004
8+260	1,778	0,564					
			2,500	7,485	3,670	59.322,725	35.884,674
8+265	1,216	0,904					
			2,500	4,615	3,492	59.327,340	35.888,166
8+270	0,630	0,493					
			2,819	3,529	1,584	59.330,869	35.889,750
8+275,638	0,622	0,069					
			2,181	3,241	0,166	59.334,110	35.889,916
8+280	0,864	0,007					
			7,838	40,138	0,055	59.374,248	35.889,971
8+295,676	4,257	0,000					
			2,162	20,595	0,000	59.394,843	35.889,971
8+300	5,269	0,000					
			10,000	168,090	0,000	59.562,933	35.889,971
8+320	11,540	0,000					
			7,838	125,941	0,000	59.688,874	35.889,971
8+335,676	4,528	0,000					

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Volume

Cálculo de Volume por Comparação de Perfis: Terreno x Projeto

Km	Área Corte	Área Aterro	Semi-Dis.	Vol.Corte	Vol.Aterro	V.C.Acum.	V.A.Acum.
8+335,676	4,528	0,000					
			2,162	14,743	0,000	59.703,617	35.889,971
8+340	2,291	0,000					
			3,641	8,342	0,845	59.711,959	35.890,816
8+347,282	0,000	0,232					
			1,359	0,000	1,829	59.711,959	35.892,645
8+350	0,000	1,114					
			5,000	0,455	27,845	59.712,414	35.920,490
8+360	0,091	4,455					
			5,000	3,805	41,115	59.716,219	35.961,605
8+370	0,670	3,768					
			3,641	8,425	25,949	59.724,644	35.987,554
8+377,282	1,644	3,359					
			1,359	4,029	10,493	59.728,673	35.998,047
8+380	1,321	4,362					
			3,343	5,592	39,645	59.734,265	36.037,692
8+386,685	0,352	7,499					
			1,658	0,685	27,496	59.734,950	36.065,188
8+390	0,061	9,090					
			5,000	0,305	108,685	59.735,255	36.173,873
8+400	0,000	12,647					
			5,000	0,000	128,285	59.735,255	36.302,158
8+410	0,000	13,010					
			3,343	0,000	88,235	59.735,255	36.390,393
8+416,685	0,000	13,388					
			1,658	0,000	43,156	59.735,255	36.433,549
8+420	0,000	12,649					
			10,000	0,000	228,560	59.735,255	36.662,109
8+440	0,000	10,207					
			10,000	0,000	171,100	59.735,255	36.833,209
8+460	0,000	6,903					
			10,000	0,000	69,280	59.735,255	36.902,489
8+480	0,000	0,025					
			10,000	143,900	0,250	59.879,155	36.902,739
8+500	14,390	0,000					
			3,308	110,567	0,000	59.989,722	36.902,739
8+506,616	19,034	0,000					
			6,692	327,440	0,000	60.317,162	36.902,739
8+520	29,896	0,000					
			8,308	623,233	0,000	60.940,395	36.902,739
8+536,616	45,120	0,000					
			1,692	151,972	0,000	61.092,367	36.902,739
8+540	44,698	0,000					
			3,426	299,049	0,000	61.391,416	36.902,739
8+546,852	42,590	0,000					

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Km	Área Corte	Área Aterro	Semi-Dis.	Vol.Corte	Vol.Aterro	V.C.Acum.	V.A.Acum.
8+546,852	42,590	0,000					
			6,574	533,230	0,000	61.924,646	36.902,739
8+560	38,522	0,000					
			8,426	611,584	0,000	62.536,230	36.902,739
8+576,852	34,061	0,000					
			1,574	102,467	0,000	62.638,697	36.902,739
8+580	31,039	0,000					
			2,521	145,640	0,000	62.784,337	36.902,739
8+585,041	26,743	0,000					
			2,480	122,963	0,000	62.907,300	36.902,739
8+590	22,849	0,000					
			5,000	196,930	0,000	63.104,230	36.902,739
8+600	16,537	0,000					
			5,000	140,555	0,000	63.244,785	36.902,739
8+610	11,574	0,000					
			2,521	56,958	0,000	63.301,743	36.902,739
8+615,041	11,024	0,000					
			2,480	49,845	0,000	63.351,588	36.902,739
8+620	9,079	0,000					
			5,000	62,815	0,000	63.414,403	36.902,739
8+630	3,484	0,000					
			5,000	26,900	0,240	63.441,303	36.902,979
8+640	1,896	0,048					
			1,553	6,135	0,106	63.447,438	36.903,085
8+643,105	2,056	0,020					
			3,448	14,638	0,069	63.462,076	36.903,154
8+650	2,190	0,000					
			5,000	20,320	0,000	63.482,396	36.903,154
8+660	1,874	0,000					
			1,553	5,931	0,000	63.488,327	36.903,154
8+663,105	1,946	0,000					
			3,448	14,514	0,000	63.502,841	36.903,154
8+670	2,264	0,000					
			5,000	24,820	0,000	63.527,661	36.903,154
8+680	2,700	0,000					
			1,553	8,547	0,000	63.536,208	36.903,154
8+683,105	2,805	0,000					
			3,448	17,344	0,000	63.553,552	36.903,154
8+690	2,226	0,000					
			0,559	2,298	0,000	63.555,850	36.903,154
8+691,118	1,885	0,000					
			4,441	8,420	11,240	63.564,270	36.914,394
8+700	0,011	2,531					
			5,000	0,055	56,335	63.564,325	36.970,729
8+710	0,000	8,736					

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Km	Área Corte	Área Aterro	Semi-Dis.	Vol.Corte	Vol.Aterro	V.C.Acum.	V.A.Acum.
8+710	0,000	8,736					
			5,000	0,000	107,765	63.564,325	37.078,494
8+720	0,000	12,817					
			0,559	0,000	14,244	63.564,325	37.092,738
8+721,118	0,000	12,664					
			4,441	0,000	107,041	63.564,325	37.199,779
8+730	0,000	11,439					
			5,000	0,000	98,755	63.564,325	37.298,534
8+740	0,000	8,312					
			5,000	0,065	57,425	63.564,390	37.355,959
8+750	0,013	3,173					
			0,559	0,007	3,235	63.564,397	37.359,194
8+751,118	0,000	2,615					
			4,441	17,253	11,613	63.581,650	37.370,807
8+760	3,885	0,000					
			4,431	82,771	0,000	63.664,421	37.370,807
8+768,861	14,797	0,000					
			0,570	17,729	0,000	63.682,150	37.370,807
8+770	16,333	0,000					
			5,000	214,030	0,000	63.896,180	37.370,807
8+780	26,473	0,000					
			5,000	283,615	0,000	64.179,795	37.370,807
8+790	30,250	0,000					
			4,431	274,288	0,000	64.454,083	37.370,807
8+798,861	31,659	0,000					
			0,570	35,862	0,000	64.489,945	37.370,807
8+800	31,312	0,000					
			10,000	546,140	0,000	65.036,085	37.370,807
8+820	23,302	0,000					
			3,253	138,161	0,000	65.174,246	37.370,807
8+826,506	19,170	0,000					
			1,747	63,407	0,000	65.237,653	37.370,807
8+830	17,125	0,000					
			5,000	156,090	0,000	65.393,743	37.370,807
8+840	14,093	0,000					
			5,000	143,120	0,000	65.536,863	37.370,807
8+850	14,531	0,000					
			5,000	154,385	0,000	65.691,248	37.370,807
8+860	16,346	0,000					
			3,253	113,953	0,000	65.805,201	37.370,807
8+866,506	18,684	0,000					
			1,747	66,891	0,000	65.872,092	37.370,807
8+870	19,605	0,000					
			3,751	148,806	0,000	66.020,898	37.370,807
8+877,502	20,066	0,000					

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Km	Área Corte	Área Aterro	Semi-Dis.	Vol.Corte	Vol.Aterro	V.C.Acum.	V.A.Acum.
8+877,502	20,066	0,000					
			1,249	47,654	0,000	66.068,552	37.370,807
8+880	18,088	0,000					
			5,000	144,810	0,000	66.213,362	37.370,807
8+890	10,874	0,000					
			5,000	86,360	0,000	66.299,722	37.370,807
8+900	6,398	0,000					
			5,000	41,735	0,000	66.341,457	37.370,807
8+910	1,949	0,000					
			3,751	7,374	2,161	66.348,831	37.372,968
8+917,502	0,017	0,576					
			1,249	0,030	1,479	66.348,861	37.374,447
8+920	0,007	0,608					
			7,500	0,052	20,213	66.348,913	37.394,660
8+935	0,000	2,087					
			2,500	0,000	9,360	66.348,913	37.404,020
8+940	0,000	1,657					
			7,500	3,083	13,635	66.351,996	37.417,655
8+955	0,411	0,161					
			2,500	6,035	0,402	66.358,031	37.418,057
8+960	2,003	0,000					
			10,000	96,710	0,000	66.454,741	37.418,057
8+980	7,668	0,000					
			10,000	163,260	0,000	66.618,001	37.418,057
9	8,658	0,000					
			10,000	152,900	0,000	66.770,901	37.418,057
9+20	6,632	0,000					
			10,000	147,620	0,000	66.918,521	37.418,057
9+40	8,130	0,000					
			10,000	175,160	0,000	67.093,681	37.418,057
9+60	9,386	0,000					
			10,000	209,200	0,000	67.302,881	37.418,057
9+80	11,534	0,000					
			10,000	172,420	0,000	67.475,301	37.418,057
9+100	5,708	0,000					
			10,000	57,080	64,220	67.532,381	37.482,277
9+120	0,000	6,422					
			4,490	0,000	72,209	67.532,381	37.554,486
9+128,979	0,000	9,662					
			0,511	0,000	10,124	67.532,381	37.564,610
9+130	0,000	10,170					
			5,000	0,000	115,545	67.532,381	37.680,155
9+140	0,000	12,939					
			2,500	0,000	62,127	67.532,381	37.742,282
9+145	0,000	11,912					

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Km	Área Corte	Área Aterro	Semi-Dis.	Vol.Corte	Vol.Aterro	V.C.Acum.	V.A.Acum.
9+145	0,000	11,912					
			2,500	0,000	55,523	67.532,381	37.797,805
9+150	0,000	10,297					
			5,000	0,230	81,760	67.532,611	37.879,565
9+160	0,046	6,055					
			2,500	0,555	23,025	67.533,166	37.902,590
9+165	0,176	3,155					
			1,990	0,848	7,886	67.534,014	37.910,476
9+168,979	0,250	0,809					
			0,511	0,322	0,659	67.534,336	37.911,135
9+170	0,380	0,481					
			5,000	20,610	2,405	67.554,946	37.913,540
9+180	3,742	0,000					
			0,892	7,495	0,000	67.562,441	37.913,540
9+181,784	4,660	0,000					
			4,108	56,986	0,000	67.619,427	37.913,540
9+190	9,212	0,000					
			5,000	107,710	0,000	67.727,137	37.913,540
9+200	12,330	0,000					
			5,000	132,280	0,000	67.859,417	37.913,540
9+210	14,126	0,000					
			5,000	137,240	0,000	67.996,657	37.913,540
9+220	13,322	0,000					
			0,892	23,009	0,000	68.019,666	37.913,540
9+221,784	12,473	0,000					
			9,108	136,757	0,064	68.156,423	37.913,604
9+240	2,542	0,007					
			10,000	25,420	99,170	68.181,843	38.012,774
9+260	0,000	9,910					
			10,000	0,000	244,060	68.181,843	38.256,834
9+280	0,000	14,496					
			8,626	0,000	340,630	68.181,843	38.597,464
9+297,251	0,000	24,995					
			1,375	0,000	67,235	68.181,843	38.664,699
9+300	0,000	23,921					
			2,500	0,000	114,255	68.181,843	38.778,954
9+305	0,000	21,781					
			2,500	0,000	102,138	68.181,843	38.881,092
9+310	0,000	19,074					
			2,500	0,000	87,415	68.181,843	38.968,507
9+315	0,000	15,892					
			2,500	0,000	69,590	68.181,843	39.038,097
9+320	0,000	11,944					
			2,500	0,000	49,670	68.181,843	39.087,767
9+325	0,000	7,924					

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Volume

Cálculo de Volume por Comparação de Perfis: Terreno x Projeto

Km	Área Corte	Área Aterro	Semi-Dis.	Vol.Corte	Vol.Aterro	V.C.Acum.	V.A.Acum.
9+325	0,000	7,924					
			1,126	0,000	15,989	68.181,843	39.103,756
9+327,251	0,000	6,282					
			1,375	0,000	14,790	68.181,843	39.118,546
9+330	0,000	4,478					
			2,500	0,000	14,473	68.181,843	39.133,019
9+335	0,000	1,311					
			2,500	3,308	3,575	68.185,151	39.136,594
9+340	1,323	0,119					
			0,346	1,031	0,063	68.186,182	39.136,657
9+340,691	1,660	0,064					
			2,155	12,671	0,138	68.198,853	39.136,795
9+345	4,221	0,000					
			2,500	28,445	0,000	68.227,298	39.136,795
9+350	7,157	0,000					
			2,500	43,343	0,000	68.270,641	39.136,795
9+355	10,180	0,000					
			2,500	56,777	0,000	68.327,418	39.136,795
9+360	12,531	0,000					
			2,500	67,915	0,000	68.395,333	39.136,795
9+365	14,635	0,000					
			2,500	77,745	0,000	68.473,078	39.136,795
9+370	16,463	0,000					
			0,346	11,466	0,000	68.484,544	39.136,795
9+370,691	16,725	0,000					
			4,655	170,648	0,000	68.655,192	39.136,795
9+380	19,938	0,000					
			10,000	404,400	0,000	69.059,592	39.136,795
9+400	20,502	0,000					
			9,993	351,316	0,000	69.410,908	39.136,795
9+419,985	14,656	0,000					
			0,008	0,220	0,000	69.411,128	39.136,795
9+420	14,650	0,000					
			10,000	212,740	0,000	69.623,868	39.136,795
9+440	6,624	0,000					
			9,993	66,190	76,213	69.690,058	39.213,008
9+459,985	0,000	7,627					
			0,008	0,000	0,115	69.690,058	39.213,123
9+460	0,000	7,646					
			6,286	0,000	169,169	69.690,058	39.382,292
9+472,572	0,000	19,266					
			3,714	0,000	149,767	69.690,058	39.532,059
9+480	0,000	21,059					
			10,000	0,000	416,400	69.690,058	39.948,459
9+500	0,000	20,581					

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Volume

Cálculo de Volume por Comparação de Perfis: Terreno x Projeto

Km	Área Corte	Área Aterro	Semi-Dis.	Vol.Corte	Vol.Aterro	V.C.Acum.	V.A.Acum.
9+500	0,000	20,581					
			6,286	0,000	219,865	69.690,058	40.168,324
9+512,572	0,000	14,396					
			3,714	0,234	87,171	69.690,292	40.255,495
9+520	0,063	9,075					
			10,000	76,370	90,750	69.766,662	40.346,245
9+540	7,574	0,000					
			2,922	54,861	0,000	69.821,523	40.346,245
9+545,844	11,201	0,000					
			2,078	48,569	0,000	69.870,092	40.346,245
9+550	12,172	0,000					
			2,500	62,628	0,000	69.932,720	40.346,245
9+555	12,879	0,000					
			2,500	66,195	0,000	69.998,915	40.346,245
9+560	13,599	0,000					
			2,500	70,922	0,000	70.069,837	40.346,245
9+565	14,770	0,000					
			2,500	76,907	0,000	70.146,744	40.346,245
9+570	15,993	0,000					
			2,500	83,395	0,000	70.230,139	40.346,245
9+575	17,365	0,000					
			0,422	14,699	0,000	70.244,838	40.346,245
9+575,844	17,467	0,000					
			2,078	70,328	0,000	70.315,166	40.346,245
9+580	16,377	0,000					
			2,500	74,912	0,000	70.390,078	40.346,245
9+585	13,588	0,000					
			2,500	64,795	0,000	70.454,873	40.346,245
9+590	12,330	0,000					
			2,500	66,820	0,000	70.521,693	40.346,245
9+595	14,398	0,000					
			0,710	20,751	0,000	70.542,444	40.346,245
9+596,420	14,829	0,000					
			1,790	55,170	0,000	70.597,614	40.346,245
9+600	15,992	0,000					
			2,500	84,905	0,000	70.682,519	40.346,245
9+605	17,970	0,000					
			2,500	94,555	0,000	70.777,074	40.346,245
9+610	19,852	0,000					
			2,500	103,008	0,000	70.880,082	40.346,245
9+615	21,351	0,000					
			2,500	104,760	0,000	70.984,842	40.346,245
9+620	20,553	0,000					
			2,500	101,285	0,000	71.086,127	40.346,245
9+625	19,961	0,000					

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Cálculo de Volume por Comparação de Perfis: Terreno x Projeto

Km	Área Corte	Área Aterro	Semi-Dis.	Vol.Corte	Vol.Aterro	V.C.Acum.	V.A.Acum.
9+625	19,961	0,000					
			0,710	28,272	0,000	71.114,399	40.346,245
9+626,420	19,859	0,000					
			6,790	255,338	0,000	71.369,737	40.346,245
9+640	17,746	0,000					
			10,000	343,240	0,000	71.712,977	40.346,245
9+660	16,578	0,000					
			7,895	276,167	0,000	71.989,144	40.346,245
9+675,790	18,402	0,000					
			2,105	76,723	0,000	72.065,867	40.346,245
9+680	18,046	0,000					
			2,500	87,918	0,000	72.153,785	40.346,245
9+685	17,121	0,000					
			2,500	84,775	0,000	72.238,560	40.346,245
9+690	16,789	0,000					
			2,500	80,638	0,000	72.319,198	40.346,245
9+695	15,466	0,000					
			2,500	75,615	0,000	72.394,813	40.346,245
9+700	14,780	0,000					
			2,500	73,228	0,000	72.468,041	40.346,245
9+705	14,511	0,000					
			0,395	11,506	0,000	72.479,547	40.346,245
9+705,790	14,619	0,000					
			2,105	64,691	0,000	72.544,238	40.346,245
9+710	16,113	0,000					
			2,500	84,415	0,000	72.628,653	40.346,245
9+715	17,653	0,000					
			2,063	73,119	0,000	72.701,772	40.346,245
9+719,126	17,790	0,000					
			0,437	15,605	0,000	72.717,377	40.346,245
9+720	17,919	0,000					
			2,500	92,555	0,000	72.809,932	40.346,245
9+725	19,103	0,000					
			2,500	99,525	0,000	72.909,457	40.346,245
9+730	20,707	0,000					
			2,500	95,255	0,000	73.004,712	40.346,245
9+735	17,395	0,000					
			2,500	72,360	0,000	73.077,072	40.346,245
9+740	11,549	0,000					
			2,500	44,975	0,000	73.122,047	40.346,245
9+745	6,441	0,000					
			0,443	5,479	0,000	73.127,526	40.346,245
9+745,886	5,926	0,000					
			2,057	21,325	0,000	73.148,851	40.346,245
9+750	4,441	0,000					

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Volume

Cálculo de Volume por Comparação de Perfis: Terreno x Projeto

Km	Área Corte	Área Aterro	Semi-Dis.	Vol.Corte	Vol.Aterro	V.C.Acum.	V.A.Acum.
9+750	4,441	0,000					
			2,500	17,940	0,030	73.166,791	40.346,275
9+755	2,735	0,012					
			2,500	8,037	1,358	73.174,828	40.347,633
9+760	0,480	0,531					
			2,500	1,200	6,478	73.176,028	40.354,111
9+765	0,000	2,060					
			2,500	0,147	13,985	73.176,175	40.368,096
9+770	0,059	3,534					
			0,443	0,050	3,219	73.176,225	40.371,315
9+770,886	0,053	3,732					
			2,057	0,247	15,549	73.176,472	40.386,864
9+775	0,067	3,827					
			2,500	0,420	19,907	73.176,892	40.406,771
9+780	0,101	4,136					
			1,885	0,396	16,292	73.177,288	40.423,063
9+783,769	0,109	4,509					
			0,616	0,131	5,580	73.177,419	40.428,643
9+785	0,104	4,556					
			2,500	0,518	23,215	73.177,937	40.451,858
9+790	0,103	4,730					
			2,500	2,155	19,500	73.180,092	40.471,358
9+795	0,759	3,070					
			2,500	5,542	16,545	73.185,634	40.487,903
9+800	1,458	3,548					
			2,500	8,102	19,598	73.193,736	40.507,501
9+805	1,783	4,291					
			2,500	8,600	23,655	73.202,336	40.531,156
9+810	1,657	5,171					
			1,885	5,605	20,837	73.207,941	40.551,993
9+813,769	1,317	5,886					
			3,116	6,315	37,617	73.214,256	40.589,610
9+820	0,710	6,188					
			10,000	9,490	119,690	73.223,746	40.709,300
9+840	0,239	5,781					
			5,820	2,008	64,899	73.225,754	40.774,199
9+851,639	0,106	5,371					
			4,181	1,589	48,243	73.227,343	40.822,442
9+860	0,274	6,169					
			5,000	1,600	60,415	73.228,943	40.882,857
9+870	0,046	5,914					
			5,000	2,620	34,370	73.231,563	40.917,227
9+880	0,478	0,960					
			0,820	0,923	1,256	73.232,486	40.918,483
9+881,639	0,648	0,573					

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Volume

Cálculo de Volume por Comparação de Perfis: Terreno x Projeto

Km	Área Corte	Área Aterro	Semi-Dis.	Vol.Corte	Vol.Aterro	V.C.Acum.	V.A.Acum.
9+881,639	0,648	0,573					
			4,181	12,567	2,395	73.245,053	40.920,878
9+890	2,358	0,000					
			5,000	38,150	0,000	73.283,203	40.920,878
9+900	5,272	0,000					
			5,000	69,490	0,000	73.352,693	40.920,878
9+910	8,626	0,000					
			5,000	104,450	0,000	73.457,143	40.920,878
9+920	12,264	0,000					
			5,000	142,950	0,000	73.600,093	40.920,878
9+930	16,326	0,000					
			0,712	23,741	0,000	73.623,834	40.920,878
9+931,424	17,018	0,000					
			4,288	162,644	0,000	73.786,478	40.920,878
9+940	20,912	0,000					
			5,000	233,405	0,000	74.019,883	40.920,878
9+950	25,769	0,000					
			5,000	245,215	0,000	74.265,098	40.920,878
9+960	23,274	0,000					
			0,712	32,939	0,000	74.298,037	40.920,878
9+961,424	22,989	0,000					
			5,286	228,540	0,000	74.526,577	40.920,878
9+971,996	20,246	0,000					
			1,502	59,961	0,000	74.586,538	40.920,878
9+975	19,675	0,000					
			2,500	94,998	0,000	74.681,536	40.920,878
9+980	18,324	0,000					
			2,500	86,618	0,000	74.768,154	40.920,878
9+985	16,323	0,000					
			2,500	74,460	0,000	74.842,614	40.920,878
9+990	13,461	0,000					
			2,500	61,608	0,000	74.904,222	40.920,878
9+995	11,182	0,000					
			2,500	50,913	0,000	74.955,135	40.920,878
10	9,183	0,000					
			2,500	40,515	0,000	74.995,650	40.920,878
10+5	7,023	0,000					
			2,500	30,642	0,000	75.026,292	40.920,878
10+10	5,234	0,000					
			0,998	10,031	0,000	75.036,323	40.920,878
10+11,996	4,817	0,000					
			1,502	13,489	0,000	75.049,812	40.920,878
10+15	4,164	0,000					
			2,500	19,735	0,263	75.069,547	40.921,141
10+20	3,730	0,105					

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Km	Área Corte	Área Aterro	Semi-Dis.	Vol.Corte	Vol.Aterro	V.C.Acum.	V.A.Acum.
10+20	3,730	0,105					
			2,500	18,558	0,263	75.088,105	40.921,404
10+25	3,693	0,000					
			2,500	17,563	0,000	75.105,668	40.921,404
10+30	3,332	0,000					
			2,500	18,427	0,000	75.124,095	40.921,404
10+35	4,039	0,000					
			2,500	21,815	0,000	75.145,910	40.921,404
10+40	4,687	0,000					
			2,487	26,633	0,000	75.172,543	40.921,404
10+44,974	6,022	0,000					
			0,013	0,157	0,000	75.172,700	40.921,404
10+45	6,039	0,000					
			2,500	32,540	0,000	75.205,240	40.921,404
10+50	6,977	0,000					
			2,500	34,915	0,000	75.240,155	40.921,404
10+55	6,989	0,000					
			2,500	36,122	0,000	75.276,277	40.921,404
10+60	7,460	0,000					
			2,500	36,907	0,000	75.313,184	40.921,404
10+65	7,303	0,000					
			2,500	34,980	0,150	75.348,164	40.921,554
10+70	6,689	0,060					
			2,500	31,052	0,752	75.379,216	40.922,306
10+75	5,732	0,241					
			2,500	25,100	1,745	75.404,316	40.924,051
10+80	4,308	0,457					
			2,487	18,359	2,917	75.422,675	40.926,968
10+84,974	3,074	0,716					
			7,513	34,560	11,209	75.457,235	40.938,177
10+100	1,526	0,776					
			7,500	26,910	34,380	75.484,145	40.972,557
10+115	2,062	3,808					
			2,500	14,543	15,105	75.498,688	40.987,662
10+120	3,755	2,234					
			7,500	112,162	17,715	75.610,850	41.005,377
10+135	11,200	0,128					
			2,500	58,697	0,320	75.669,547	41.005,697
10+140	12,279	0,000					
			10,000	241,850	0,000	75.911,397	41.005,697
10+160	11,906	0,000					
			10,000	301,980	0,000	76.213,377	41.005,697
10+180	18,292	0,000					
			2,500	100,115	0,000	76.313,492	41.005,697
10+185	21,754	0,000					

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Volume

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Km	Área Corte	Área Aterro	Semi-Dis.	Vol.Corte	Vol.Aterro	V.C.Acum.	V.A.Acum.
10+185	21,754	0,000					
			7,500	343,688	0,000	76.657,180	41.005,697
10+200	24,071	0,000					
			2,500	120,410	0,000	76.777,590	41.005,697
10+205	24,093	0,000					
			7,500	312,180	0,000	77.089,770	41.005,697
10+220	17,531	0,000					
			10,000	386,330	0,000	77.476,100	41.005,697
10+240	21,102	0,000					
			10,000	443,030	0,000	77.919,130	41.005,697
10+260	23,201	0,000					
			10,000	441,850	0,000	78.360,980	41.005,697
10+280	20,984	0,000					
			10,000	386,000	0,000	78.746,980	41.005,697
10+300	17,616	0,000					
			2,568	87,588	0,000	78.834,568	41.005,697
10+305,135	16,498	0,000					
			7,433	222,968	0,000	79.057,536	41.005,697
10+320	13,501	0,000					
			7,568	184,738	0,000	79.242,274	41.005,697
10+335,135	10,911	0,000					
			2,433	48,022	0,000	79.290,296	41.005,697
10+340	8,831	0,000					
			8,483	96,452	0,170	79.386,748	41.005,867
10+356,966	2,539	0,020					
			1,517	6,851	0,147	79.393,599	41.006,014
10+360	1,977	0,077					
			10,000	19,770	16,350	79.413,369	41.022,364
10+380	0,000	1,558					
			3,483	0,000	11,769	79.413,369	41.034,133
10+386,966	0,000	1,821					
			1,517	0,000	5,011	79.413,369	41.039,144
10+390	0,000	1,482					
			5,000	1,535	13,960	79.414,904	41.053,104
10+400	0,307	1,310					
			5,000	4,840	11,630	79.419,744	41.064,734
10+410	0,661	1,016					
			3,818	4,563	6,464	79.424,307	41.071,198
10+417,636	0,534	0,677					
			1,182	1,130	1,493	79.425,437	41.072,691
10+420	0,422	0,586					
			5,000	6,145	4,235	79.431,582	41.076,926
10+430	0,807	0,261					
			5,000	12,710	1,470	79.444,292	41.078,396
10+440	1,735	0,033					

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Volume

Cálculo de Volume por Comparação de Perfis: Terreno x Projeto

Km	Área Corte	Área Aterro	Semi-Dis.	Vol.Corte	Vol.Aterro	V.C.Acum.	V.A.Acum.
10+440	1,735	0,033					
			5,000	22,130	0,615	79.466,422	41.079,011
10+450	2,691	0,090					
			5,000	44,355	0,450	79.510,777	41.079,461
10+460	6,180	0,000					
			2,201	30,888	0,000	79.541,665	41.079,461
10+464,401	7,857	0,000					
			2,800	50,293	0,000	79.591,958	41.079,461
10+470	10,108	0,000					
			5,000	112,170	0,000	79.704,128	41.079,461
10+480	12,326	0,000					
			5,000	137,930	0,000	79.842,058	41.079,461
10+490	15,260	0,000					
			2,201	71,386	0,000	79.913,444	41.079,461
10+494,401	17,181	0,000					
			2,800	100,958	0,000	80.014,402	41.079,461
10+500	18,882	0,000					
			10,000	467,440	0,000	80.481,842	41.079,461
10+520	27,862	0,000					
			10,000	524,170	0,000	81.006,012	41.079,461
10+540	24,555	0,000					
			10,000	275,580	0,000	81.281,592	41.079,461
10+560	3,003	0,000					
			10,000	30,140	62,760	81.311,732	41.142,221
10+580	0,011	6,276					
			0,565	0,010	7,141	81.311,742	41.149,362
10+581,129	0,007	6,375					
			4,436	0,040	53,670	81.311,782	41.203,032
10+590	0,002	5,725					
			5,000	4,465	48,100	81.316,247	41.251,132
10+600	0,891	3,895					
			5,000	16,630	31,470	81.332,877	41.282,602
10+610	2,435	2,399					
			0,565	2,693	2,559	81.335,570	41.285,161
10+611,129	2,336	2,135					
			4,436	22,688	12,189	81.358,258	41.297,350
10+620	2,779	0,613					
			3,221	20,228	2,615	81.378,486	41.299,965
10+626,442	3,501	0,199					
			1,779	12,752	0,388	81.391,238	41.300,353
10+630	3,667	0,019					
			5,000	47,250	0,095	81.438,488	41.300,448
10+640	5,783	0,000					
			5,000	65,020	0,000	81.503,508	41.300,448
10+650	7,221	0,000					

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Volume

Cálculo de Volume por Comparação de Perfis: Terreno x Projeto

Km	Área Corte	Área Aterro	Semi-Dis.	Vol.Corte	Vol.Aterro	V.C.Acum.	V.A.Acum.
10+650	7,221	0,000					
			3,221	41,509	0,000	81.545,017	41.300,448
10+656,442	5,666	0,000					
			1,779	17,646	0,000	81.562,663	41.300,448
10+660	4,253	0,000					
			10,000	43,370	5,500	81.606,033	41.305,948
10+680	0,084	0,550					
			10,000	1,620	47,520	81.607,653	41.353,468
10+700	0,078	4,202					
			10,000	0,780	136,520	81.608,433	41.489,988
10+720	0,000	9,450					
			0,543	0,000	10,479	81.608,433	41.500,467
10+721,085	0,000	9,867					
			1,958	0,000	42,280	81.608,433	41.542,747
10+725	0,000	11,732					
			2,500	0,000	64,663	81.608,433	41.607,410
10+730	0,000	14,133					
			2,500	0,000	75,468	81.608,433	41.682,878
10+735	0,000	16,054					
			2,500	0,000	86,208	81.608,433	41.769,086
10+740	0,000	18,429					
			2,500	0,000	99,315	81.608,433	41.868,401
10+745	0,000	21,297					
			2,500	0,000	113,688	81.608,433	41.982,089
10+750	0,000	24,178					
			2,500	0,000	128,988	81.608,433	42.111,077
10+755	0,000	27,417					
			2,500	0,000	140,223	81.608,433	42.251,300
10+760	0,000	28,672					
			0,543	0,000	30,944	81.608,433	42.282,244
10+761,085	0,000	28,368					
			1,958	0,000	107,310	81.608,433	42.389,554
10+765	0,000	26,452					
			2,500	0,000	131,225	81.608,433	42.520,779
10+770	0,000	26,038					
			2,500	0,000	126,623	81.608,433	42.647,402
10+775	0,000	24,611					
			2,237	0,000	104,003	81.608,433	42.751,405
10+779,474	0,000	21,881					
			0,263	0,000	11,419	81.608,433	42.762,824
10+780	0,000	21,538					
			2,500	0,000	100,143	81.608,433	42.862,967
10+785	0,000	18,519					
			2,500	0,000	80,618	81.608,433	42.943,585
10+790	0,000	13,728					

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Cálculo de Volume por Comparação de Perfis: Terreno x Projeto

Km	Área Corte	Área Aterro	Semi-Dis.	Vol.Corte	Vol.Aterro	V.C.Acum.	V.A.Acum.
10+790	0,000	13,728					
			2,500	0,000	55,333	81.608,433	42.998,918
10+795	0,000	8,405					
			2,500	0,000	28,660	81.608,433	43.027,578
10+800	0,000	3,059					
			2,500	4,143	8,178	81.612,576	43.035,756
10+805	1,657	0,212					
			2,500	14,340	0,530	81.626,916	43.036,286
10+810	4,079	0,000					
			2,500	28,388	0,000	81.655,304	43.036,286
10+815	7,276	0,000					
			2,237	38,586	0,000	81.693,890	43.036,286
10+819,474	9,973	0,000					
			0,263	5,312	0,000	81.699,202	43.036,286
10+820	10,226	0,000					
			10,000	368,340	0,000	82.067,542	43.036,286
10+840	26,608	0,000					
			10,000	512,740	0,000	82.580,282	43.036,286
10+860	24,666	0,000					
			1,346	65,761	0,000	82.646,043	43.036,286
10+862,691	24,209	0,000					
			8,655	296,702	0,000	82.942,745	43.036,286
10+880	10,074	0,000					
			6,346	69,090	2,392	83.011,835	43.038,678
10+892,691	0,814	0,377					
			3,655	2,975	16,043	83.014,810	43.054,721
10+900	0,000	4,013					
			5,000	0,000	77,715	83.014,810	43.132,436
10+910	0,000	11,530					
			5,000	0,000	157,515	83.014,810	43.289,951
10+920	0,000	19,973					
			1,868	0,000	81,663	83.014,810	43.371,614
10+923,736	0,000	23,744					
			3,132	0,000	166,826	83.014,810	43.538,440
10+930	0,000	29,521					
			5,000	0,000	339,375	83.014,810	43.877,815
10+940	0,000	38,354					
			5,000	0,000	403,690	83.014,810	44.281,505
10+950	0,000	42,384					
			1,868	0,000	155,817	83.014,810	44.437,322
10+953,736	0,000	41,030					
			2,841	0,000	229,547	83.014,810	44.666,869
10+959,418	0,000	39,768					
			0,291	0,000	23,109	83.014,810	44.689,978
10+960	0,000	39,646					

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Cálculo de Volume por Comparação de Perfis: Terreno x Projeto

Km	Área Corte	Área Aterro	Semi-Dis.	Vol.Corte	Vol.Aterro	V.C.Acum.	V.A.Acum.
10+960	0,000	39,646					
			5,000	0,000	349,410	83.014,810	45.039,388
10+970	0,000	30,236					
			5,000	0,000	242,130	83.014,810	45.281,518
10+980	0,000	18,190					
			4,709	0,000	135,478	83.014,810	45.416,996
10+989,418	0,000	10,580					
			0,291	0,000	6,048	83.014,810	45.423,044
10+990	0,000	10,203					
			5,000	0,690	72,545	83.015,500	45.495,589
11	0,138	4,306					
			1,168	0,431	8,544	83.015,931	45.504,133
11+2,335	0,231	3,012					
			3,833	6,335	16,537	83.022,266	45.520,670
11+10	1,422	1,303					
			5,000	10,210	21,685	83.032,476	45.542,355
11+20	0,620	3,034					
			5,000	3,100	51,535	83.035,576	45.593,890
11+30	0,000	7,273					
			1,168	0,000	18,033	83.035,576	45.611,923
11+32,335	0,000	8,173					
			2,453	0,000	44,897	83.035,576	45.656,820
11+37,241	0,000	10,130					
			1,380	0,000	29,525	83.035,576	45.686,345
11+40	0,000	11,273					
			5,000	0,000	131,830	83.035,576	45.818,175
11+50	0,000	15,093					
			5,000	0,000	159,735	83.035,576	45.977,910
11+60	0,000	16,854					
			3,621	0,000	116,200	83.035,576	46.094,110
11+67,241	0,000	15,241					
			1,380	0,000	38,491	83.035,576	46.132,601
11+70	0,000	12,661					
			5,000	7,905	85,720	83.043,481	46.218,321
11+80	1,581	4,483					
			5,000	28,200	22,730	83.071,681	46.241,051
11+90	4,059	0,063					
			5,000	57,875	0,315	83.129,556	46.241,366
11+100	7,516	0,000					
			5,000	94,000	0,000	83.223,556	46.241,366
11+110	11,284	0,000					
			2,956	72,658	0,000	83.296,214	46.241,366
11+115,912	13,296	0,000					
			2,044	58,534	0,000	83.354,748	46.241,366
11+120	15,341	0,000					

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Km	Área Corte	Área Aterro	Semi-Dis.	Vol.Corte	Vol.Aterro	V.C.Acum.	V.A.Acum.
11+120	15,341	0,000					
			5,000	193,925	0,000	83.548,673	46.241,366
11+130	23,444	0,000					
			5,000	294,045	0,000	83.842,718	46.241,366
11+140	35,365	0,000					
			2,956	231,452	0,000	84.074,170	46.241,366
11+145,912	42,934	0,000					
			2,044	185,734	0,000	84.259,904	46.241,366
11+150	47,934	0,000					
			5,000	531,955	0,000	84.791,859	46.241,366
11+160	58,457	0,000					
			5,000	609,435	0,000	85.401,294	46.241,366
11+170	63,430	0,000					
			2,956	378,049	0,000	85.779,343	46.241,366
11+175,912	64,462	0,000					
			2,044	263,345	0,000	86.042,688	46.241,366
11+180	64,376	0,000					
			5,000	625,360	0,000	86.668,048	46.241,366
11+190	60,696	0,000					
			1,985	235,250	0,000	86.903,298	46.241,366
11+193,970	57,818	0,000					
			3,015	334,385	0,000	87.237,683	46.241,366
11+200	53,089	0,000					
			5,000	480,755	0,000	87.718,438	46.241,366
11+210	43,062	0,000					
			5,000	379,185	0,000	88.097,623	46.241,366
11+220	32,775	0,000					
			1,985	123,122	0,000	88.220,745	46.241,366
11+223,970	29,251	0,000					
			8,015	383,862	0,000	88.604,607	46.241,366
11+240	18,642	0,000					
			2,401	83,255	0,000	88.687,862	46.241,366
11+244,802	16,033	0,000					
			7,599	186,502	0,000	88.874,364	46.241,366
11+260	8,510	0,000					
			10,000	98,150	0,190	88.972,514	46.241,556
11+280	1,305	0,019					
			2,401	3,621	1,052	88.976,135	46.242,608
11+284,802	0,203	0,419					
			6,684	1,357	36,715	88.977,492	46.279,323
11+298,170	0,000	5,074					
			0,915	0,000	9,790	88.977,492	46.289,113
11+300	0,000	5,626					
			7,500	0,000	106,823	88.977,492	46.395,936
11+315	0,000	8,617					

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Cálculo de Volume por Comparação de Perfis: Terreno x Projeto

Km	Área Corte	Área Aterro	Semi-Dis.	Vol.Corte	Vol.Aterro	V.C.Acum.	V.A.Acum.
11+315	0,000	8,617					
			2,500	0,005	43,040	88.977,497	46.438,976
11+320	0,002	8,599					
			7,500	2,430	116,025	88.979,927	46.555,001
11+335	0,322	6,871					
			1,585	1,165	20,925	88.981,092	46.575,926
11+338,170	0,413	6,331					
			0,915	0,810	11,295	88.981,902	46.587,221
11+340	0,472	6,013					
			10,000	10,430	64,340	88.992,332	46.651,561
11+360	0,571	0,421					
			10,000	27,600	4,430	89.019,932	46.655,991
11+380	2,189	0,022					
			2,500	12,453	0,098	89.032,385	46.656,089
11+385	2,792	0,017					
			7,500	49,778	0,128	89.082,163	46.656,217
11+400	3,845	0,000					
			2,500	20,498	0,000	89.102,661	46.656,217
11+405	4,354	0,000					
			7,500	70,965	0,000	89.173,626	46.656,217
11+420	5,108	0,000					
			10,000	103,910	0,000	89.277,536	46.656,217
11+440	5,283	0,000					
			10,000	89,270	0,000	89.366,806	46.656,217
11+460	3,644	0,000					
			10,000	64,020	2,130	89.430,826	46.658,347
11+480	2,758	0,213					
			10,000	96,990	2,130	89.527,816	46.660,477
11+500	6,941	0,000					
			8,138	126,342	0,000	89.654,158	46.660,477
11+516,276	8,584	0,000					
			1,862	30,978	0,000	89.685,136	46.660,477
11+520	8,053	0,000					
			5,000	78,185	0,000	89.763,321	46.660,477
11+530	7,584	0,000					
			5,000	75,220	0,000	89.838,541	46.660,477
11+540	7,460	0,000					
			3,138	46,885	0,000	89.885,426	46.660,477
11+546,276	7,481	0,000					
			1,862	29,040	0,000	89.914,466	46.660,477
11+550	8,115	0,000					
			5,000	95,185	0,000	90.009,651	46.660,477
11+560	10,922	0,000					
			2,162	47,681	0,000	90.057,332	46.660,477
11+564,324	11,132	0,000					

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Km	Área Corte	Área Aterro	Semi-Dis.	Vol.Corte	Vol.Aterro	V.C.Acum.	V.A.Acum.
11+564,324	11,132	0,000					
			2,838	68,620	0,000	90.125,952	46.660,477
11+570	13,047	0,000					
			5,000	145,035	0,000	90.270,987	46.660,477
11+580	15,960	0,000					
			5,000	132,005	0,000	90.402,992	46.660,477
11+590	10,441	0,000					
			2,162	35,876	0,123	90.438,868	46.660,600
11+594,324	6,153	0,057					
			2,838	23,033	2,688	90.461,901	46.663,288
11+600	1,963	0,890					
			10,000	75,660	8,900	90.537,561	46.672,188
11+620	5,603	0,000					
			10,000	111,320	0,000	90.648,881	46.672,188
11+640	5,529	0,000					
			10,000	70,360	2,140	90.719,241	46.674,328
11+660	1,507	0,214					
			10,000	25,140	23,850	90.744,381	46.698,178
11+680	1,007	2,171					
			10,000	48,770	25,350	90.793,151	46.723,528
11+700	3,870	0,364					
			10,000	47,860	35,460	90.841,011	46.758,988
11+720	0,916	3,182					
			10,000	9,160	122,900	90.850,171	46.881,888
11+740	0,000	9,108					
			10,000	0,000	239,220	90.850,171	47.121,108
11+760	0,000	14,814					
			10,000	0,000	287,960	90.850,171	47.409,068
11+780	0,000	13,982					
			10,000	0,000	234,600	90.850,171	47.643,668
11+800	0,000	9,478					
			8,254	0,652	121,912	90.850,823	47.765,580
11+816,508	0,079	5,292					
			1,746	0,190	18,352	90.851,013	47.783,932
11+820	0,030	5,219					
			5,000	0,670	50,190	90.851,683	47.834,122
11+830	0,104	4,819					
			5,000	1,790	46,255	90.853,473	47.880,377
11+840	0,254	4,432					
			3,254	3,631	28,948	90.857,104	47.909,325
11+846,508	0,862	4,464					
			1,746	3,066	15,756	90.860,170	47.925,081
11+850	0,894	4,560					
			5,000	6,800	30,855	90.866,970	47.955,936
11+860	0,466	1,611					

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Km	Área Corte	Área Aterro	Semi-Dis.	Vol.Corte	Vol.Aterro	V.C.Acum.	V.A.Acum.
11+860	0,466	1,611					
			5,000	12,350	14,100	90.879,320	47.970,036
11+870	2,004	1,209					
			4,952	24,963	11,251	90.904,283	47.981,287
11+879,904	3,037	1,063					
			0,048	0,292	0,102	90.904,575	47.981,389
11+880	3,044	1,055					
			5,000	43,085	5,275	90.947,660	47.986,664
11+890	5,573	0,000					
			5,000	72,065	0,000	91.019,725	47.986,664
11+900	8,840	0,000					
			4,952	99,104	0,000	91.118,829	47.986,664
11+909,904	11,173	0,000					
			5,048	128,648	0,000	91.247,477	47.986,664
11+920	14,312	0,000					
			10,000	298,370	0,000	91.545,847	47.986,664
11+940	15,525	0,000					
			10,000	335,840	0,000	91.881,687	47.986,664
11+960	18,059	0,000					
			10,000	383,850	0,000	92.265,537	47.986,664
11+980	20,326	0,000					
			10,000	377,760	0,000	92.643,297	47.986,664
12	17,450	0,000					
			3,409	111,157	0,000	92.754,454	47.986,664
12+6,818	15,157	0,000					
			6,591	173,818	0,000	92.928,272	47.986,664
12+20	11,215	0,000					
			8,409	166,523	0,000	93.094,795	47.986,664
12+36,818	8,588	0,000					
			1,591	27,303	0,000	93.122,098	47.986,664
12+40	8,573	0,000					
			5,272	81,800	0,000	93.203,898	47.986,664
12+50,544	6,943	0,000					
			4,728	61,979	0,000	93.265,877	47.986,664
12+60	6,166	0,000					
			10,000	61,660	8,430	93.327,537	47.995,094
12+80	0,000	0,843					
			0,272	0,000	0,519	93.327,537	47.995,613
12+80,544	0,000	1,064					
			4,728	0,052	20,278	93.327,589	48.015,891
12+90	0,011	3,225					
			5,000	0,150	42,395	93.327,739	48.058,286
12+100	0,019	5,254					
			5,000	0,115	66,700	93.327,854	48.124,986
12+110	0,004	8,086					

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Volume

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Km	Área Corte	Área Aterro	Semi-Dis.	Vol. Corte	Vol. Aterro	V.C.Acum.	V.A.Acum.
12+110	0,004	8,086					
			0,272	0,003	4,436	93.327,857	48.129,422
12+110,544	0,007	8,222					
			4,728	0,076	96,432	93.327,933	48.225,854
12+120	0,009	12,174					
			5,000	0,045	176,725	93.327,978	48.402,579
12+130	0,000	23,171					
			5,000	0,000	288,665	93.327,978	48.691,244
12+140	0,000	34,562					
			1,257	0,000	89,519	93.327,978	48.780,763
12+142,514	0,000	36,654					
			3,743	0,000	300,462	93.327,978	49.081,225
12+150	0,000	43,619					
			5,000	0,000	504,035	93.327,978	49.585,260
12+160	0,000	57,188					
			5,000	0,000	611,570	93.327,978	50.196,830
12+170	0,000	65,126					
			1,257	0,000	166,030	93.327,978	50.362,860
12+172,514	0,000	66,958					
			3,743	0,000	518,009	93.327,978	50.880,869
12+180	0,000	71,436					
			3,432	0,000	444,324	93.327,978	51.325,193
12+186,863	0,000	58,048					
			6,569	0,000	630,412	93.327,978	51.955,605
12+200	0,000	37,927					
			8,432	0,000	445,849	93.327,978	52.401,454
12+216,863	0,000	14,952					
			1,569	0,000	41,796	93.327,978	52.443,250
12+220	0,000	11,695					
			7,500	26,317	87,712	93.354,295	52.530,962
12+235	3,509	0,000					
			2,500	23,335	0,000	93.377,630	52.530,962
12+240	5,825	0,000					
			4,086	53,841	0,000	93.431,471	52.530,962
12+248,172	7,352	0,000					
			3,414	53,839	0,000	93.485,310	52.530,962
12+255	8,418	0,000					
			2,500	41,363	0,000	93.526,673	52.530,962
12+260	8,127	0,000					
			2,500	32,803	0,000	93.559,476	52.530,962
12+265	4,994	0,000					
			6,586	34,162	18,263	93.593,638	52.549,225
12+278,172	0,193	2,773					
			0,914	0,394	6,073	93.594,032	52.555,298
12+280	0,238	3,871					

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Volume

Cálculo de Volume por Comparação de Perfis: Terreno x Projeto

Km	Área Corte	Área Aterro	Semi-Dis.	Vol.Corte	Vol.Aterro	V.C.Acum.	V.A.Acum.
12+280	0,238	3,871					
			2,500	0,627	27,930	93.594,659	52.583,228
12+285	0,013	7,301					
			7,500	0,097	171,878	93.594,756	52.755,106
12+300	0,000	15,616					
			10,000	0,000	352,840	93.594,756	53.107,946
12+320	0,000	19,668					
			8,243	0,000	300,292	93.594,756	53.408,238
12+336,486	0,000	16,762					
			1,757	0,000	57,614	93.594,756	53.465,852
12+340	0,000	16,029					
			5,000	0,000	136,440	93.594,756	53.602,292
12+350	0,000	11,259					
			5,000	0,000	90,460	93.594,756	53.692,752
12+360	0,000	6,833					
			3,243	0,000	52,066	93.594,756	53.744,818
12+366,486	0,000	9,222					
			1,757	0,000	34,736	93.594,756	53.779,554
12+370	0,000	10,548					
			3,806	0,000	91,580	93.594,756	53.871,134
12+377,612	0,000	13,514					
			1,194	0,000	33,372	93.594,756	53.904,506
12+380	0,000	14,436					
			5,000	0,000	179,810	93.594,756	54.084,316
12+390	0,000	21,526					
			5,000	0,000	259,775	93.594,756	54.344,091
12+400	0,000	30,429					
			3,806	0,000	243,942	93.594,756	54.588,033
12+407,612	0,000	33,665					
			1,194	0,000	81,247	93.594,756	54.669,280
12+410	0,000	34,381					
			2,500	0,000	175,528	93.594,756	54.844,808
12+415	0,000	35,830					
			2,500	0,000	175,712	93.594,756	55.020,520
12+420	0,000	34,455					
			2,500	0,000	167,683	93.594,756	55.188,203
12+425	0,000	32,618					
			2,500	0,000	159,998	93.594,756	55.348,201
12+430	0,000	31,381					
			2,500	0,000	152,470	93.594,756	55.500,671
12+435	0,000	29,607					
			1,306	0,000	76,051	93.594,756	55.576,722
12+437,612	0,000	28,625					
			1,194	0,000	67,145	93.594,756	55.643,867
12+440	0,000	27,610					

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Volume

Cálculo de Volume por Comparação de Perfis: Terreno x Projeto

Km	Área Corte	Área Aterro	Semi-Dis.	Vol.Corte	Vol.Aterro	V.C.Acum.	V.A.Acum.
12+440	0,000	27,610					
			2,500	0,000	123,485	93.594,756	55.767,352
12+445	0,000	21,784					
			0,463	0,000	19,731	93.594,756	55.787,083
12+445,926	0,000	20,832					
			2,037	0,000	78,581	93.594,756	55.865,664
12+450	0,000	17,745					
			2,500	0,000	82,032	93.594,756	55.947,696
12+455	0,000	15,068					
			2,500	0,000	72,537	93.594,756	56.020,233
12+460	0,000	13,947					
			2,500	0,000	65,988	93.594,756	56.086,221
12+465	0,000	12,448					
			2,500	0,000	58,288	93.594,756	56.144,509
12+470	0,000	10,867					
			2,500	0,000	52,638	93.594,756	56.197,147
12+475	0,000	10,188					
			0,463	0,000	9,473	93.594,756	56.206,620
12+475,926	0,000	10,273					
			2,037	0,000	42,107	93.594,756	56.248,727
12+480	0,000	10,398					
			10,000	0,420	149,580	93.595,176	56.398,307
12+500	0,042	4,560					
			10,000	12,520	46,310	93.607,696	56.444,617
12+520	1,210	0,071					
			1,467	3,970	0,156	93.611,666	56.444,773
12+522,934	1,496	0,035					
			3,533	13,266	0,124	93.624,932	56.444,897
12+530	2,259	0,000					
			5,000	27,170	0,000	93.652,102	56.444,897
12+540	3,175	0,000					
			5,000	30,575	0,000	93.682,677	56.444,897
12+550	2,940	0,000					
			3,967	22,612	0,000	93.705,289	56.444,897
12+557,934	2,760	0,000					
			1,033	5,594	0,000	93.710,883	56.444,897
12+560	2,655	0,000					
			5,000	21,765	0,000	93.732,648	56.444,897
12+570	1,698	0,000					
			5,000	12,960	1,570	93.745,608	56.446,467
12+580	0,894	0,314					
			5,000	8,525	4,990	93.754,133	56.451,457
12+590	0,811	0,684					
			0,045	0,073	0,062	93.754,206	56.451,519
12+590,090	0,806	0,690					

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Cálculo de Volume por Comparação de Perfis: Terreno x Projeto

Km	Área Corte	Área Aterro	Semi-Dis.	Vol.Corte	Vol.Aterro	V.C.Acum.	V.A.Acum.
12+590,090	0,806	0,690					
			4,955	11,357	5,351	93.765,563	56.456,870
12+600	1,486	0,390					
			5,000	16,005	2,235	93.781,568	56.459,105
12+610	1,715	0,057					
			5,000	23,125	0,285	93.804,693	56.459,390
12+620	2,910	0,000					
			2,545	16,334	0,000	93.821,027	56.459,390
12+625,090	3,508	0,000					
			7,455	59,036	0,000	93.880,063	56.459,390
12+640	4,411	0,000					
			7,374	54,464	0,000	93.934,527	56.459,390
12+654,748	2,975	0,000					
			2,626	14,734	0,000	93.949,261	56.459,390
12+660	2,636	0,000					
			10,000	56,080	0,000	94.005,341	56.459,390
12+680	2,972	0,000					
			2,374	13,451	0,000	94.018,792	56.459,390
12+684,748	2,694	0,000					
			5,409	27,113	0,000	94.045,905	56.459,390
12+695,565	2,319	0,000					
			2,218	10,303	0,000	94.056,208	56.459,390
12+700	2,327	0,000					
			10,000	62,270	0,000	94.118,478	56.459,390
12+720	3,900	0,000					
			2,783	21,962	0,000	94.140,440	56.459,390
12+725,565	3,993	0,000					
			7,218	69,873	0,000	94.210,313	56.459,390
12+740	5,688	0,000					
			7,783	94,293	0,000	94.304,606	56.459,390
12+755,565	6,428	0,000					
			2,218	29,834	0,000	94.334,440	56.459,390
12+760	7,026	0,000					
			10,000	173,180	0,000	94.507,620	56.459,390
12+780	10,292	0,000					
			4,105	87,836	0,000	94.595,456	56.459,390
12+788,209	11,108	0,000					
			5,896	135,915	0,000	94.731,371	56.459,390
12+800	11,946	0,000					
			9,105	191,258	0,000	94.922,629	56.459,390
12+818,209	9,061	0,000					
			0,896	16,882	0,000	94.939,511	56.459,390
12+820	9,791	0,000					
			10,000	261,010	0,000	95.200,521	56.459,390
12+840	16,310	0,000					

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Cálculo de Volume por Comparação de Perfis: Terreno x Projeto

Km	Área Corte	Área Aterro	Semi-Dis.	Vol.Corte	Vol.Aterro	V.C.Acum.	V.A.Acum.
12+840	16,310	0,000					
			10,000	428,710	0,000	95.629,231	56.459,390
12+860	26,561	0,000					
			4,538	238,780	0,000	95.868,011	56.459,390
12+869,076	26,057	0,000					
			0,462	23,863	0,000	95.891,874	56.459,390
12+870	25,594	0,000					
			2,500	120,253	0,000	96.012,127	56.459,390
12+875	22,507	0,000					
			2,500	102,658	0,000	96.114,785	56.459,390
12+880	18,556	0,000					
			2,500	84,240	0,000	96.199,025	56.459,390
12+885	15,140	0,000					
			2,500	67,362	0,000	96.266,387	56.459,390
12+890	11,805	0,000					
			2,500	46,890	0,000	96.313,277	56.459,390
12+895	6,951	0,000					
			2,038	20,162	0,035	96.333,439	56.459,425
12+899,076	2,942	0,017					
			0,462	2,542	0,059	96.335,981	56.459,484
12+900	2,561	0,110					
			2,500	13,293	6,645	96.349,274	56.466,129
12+905	2,756	2,548					
			2,500	17,050	19,133	96.366,324	56.485,262
12+910	4,064	5,105					
			1,529	13,704	17,530	96.380,028	56.502,792
12+913,058	4,899	6,360					
			0,971	9,919	13,008	96.389,947	56.515,800
12+915	5,316	7,037					
			2,500	26,917	38,240	96.416,864	56.554,040
12+920	5,451	8,259					
			2,500	25,095	43,330	96.441,959	56.597,370
12+925	4,587	9,073					
			2,500	20,470	46,133	96.462,429	56.643,503
12+930	3,601	9,380					
			2,500	15,908	48,245	96.478,337	56.691,748
12+935	2,762	9,918					
			2,500	11,853	49,078	96.490,190	56.740,826
12+940	1,979	9,713					
			1,529	5,298	28,843	96.495,488	56.769,669
12+943,058	1,486	9,151					
			8,471	16,722	131,309	96.512,210	56.900,978
12+960	0,488	6,350					
			10,000	6,170	119,550	96.518,380	57.020,528
12+980	0,129	5,605					

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Volume

Cálculo de Volume por Comparação de Perfis: Terreno x Projeto

Km	Área Corte	Área Aterro	Semi-Dis.	Vol.Corte	Vol.Aterro	V.C.Acum.	V.A.Acum.
12+980	0,129	5,605					
			10,000	1,290	167,570	96.519,670	57.188,098
13	0,000	11,152					
			10,000	0,000	213,200	96.519,670	57.401,298
13+20	0,000	10,168					
			10,000	1,080	171,820	96.520,750	57.573,118
13+40	0,108	7,014					
			9,414	45,486	73,915	96.566,236	57.647,033
13+58,827	4,724	0,838					
			0,587	5,918	0,776	96.572,154	57.647,809
13+60	5,367	0,485					
			10,000	212,570	4,850	96.784,724	57.652,659
13+80	15,890	0,000					
			4,414	129,677	0,000	96.914,401	57.652,659
13+88,827	13,492	0,000					
			5,587	148,422	0,000	97.062,823	57.652,659
13+100	13,076	0,000					
			0,196	5,135	0,000	97.067,958	57.652,659
13+100,392	13,124	0,000					
			9,804	289,836	0,000	97.357,794	57.652,659
13+120	16,439	0,000					
			5,196	192,704	0,000	97.550,498	57.652,659
13+130,392	20,648	0,000					
			3,922	176,976	0,000	97.727,474	57.652,659
13+138,236	24,476	0,000					
			0,882	44,022	0,000	97.771,496	57.652,659
13+140	25,436	0,000					
			5,000	265,120	0,000	98.036,616	57.652,659
13+150	27,588	0,000					
			5,000	276,950	0,000	98.313,566	57.652,659
13+160	27,802	0,000					
			4,118	225,757	0,000	98.539,323	57.652,659
13+168,236	27,020	0,000					
			0,882	47,148	0,000	98.586,471	57.652,659
13+170	26,436	0,000					
			5,000	245,550	0,000	98.832,021	57.652,659
13+180	22,674	0,000					
			5,000	213,955	0,000	99.045,976	57.652,659
13+190	20,117	0,000					
			1,291	51,244	0,000	99.097,220	57.652,659
13+192,582	19,576	0,000					
			3,709	131,510	0,000	99.228,730	57.652,659
13+200	15,881	0,000					
			5,000	132,105	0,000	99.360,835	57.652,659
13+210	10,540	0,000					

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Cálculo de Volume por Comparação de Perfis: Terreno x Projeto

Km	Área Corte	Área Aterro	Semi-Dis.	Vol.Corte	Vol.Aterro	V.C.Acum.	V.A.Acum.
13+210	10,540	0,000					
			5,000	69,440	0,000	99.430,275	57.652,659
13+220	3,348	0,000					
			1,291	6,106	0,110	99.436,381	57.652,769
13+222,582	1,382	0,085					
			8,709	12,036	79,653	99.448,417	57.732,422
13+240	0,000	9,061					
			10,000	0,000	239,000	99.448,417	57.971,422
13+260	0,000	14,839					
			10,000	0,000	330,660	99.448,417	58.302,082
13+280	0,000	18,227					
			9,093	0,000	345,952	99.448,417	58.648,034
13+298,186	0,000	19,819					
			0,907	0,000	35,882	99.448,417	58.683,916
13+300	0,000	19,742					
			5,000	0,000	205,785	99.448,417	58.889,701
13+310	0,000	21,415					
			5,000	0,000	220,055	99.448,417	59.109,756
13+320	0,000	22,596					
			4,093	0,000	173,903	99.448,417	59.283,659
13+328,186	0,000	19,892					
			0,907	0,000	35,363	99.448,417	59.319,022
13+330	0,000	19,097					
			5,000	0,000	177,510	99.448,417	59.496,532
13+340	0,000	16,405					
			5,000	0,000	178,060	99.448,417	59.674,592
13+350	0,000	19,207					
			5,000	0,000	237,450	99.448,417	59.912,042
13+360	0,000	28,283					
			5,000	0,000	254,775	99.448,417	60.166,817
13+370	0,000	22,672					
			2,500	0,000	107,100	99.448,417	60.273,917
13+375	0,000	20,168					
			2,500	1,053	93,807	99.449,470	60.367,724
13+380	0,421	17,355					
			5,000	5,510	131,955	99.454,980	60.499,679
13+390	0,681	9,036					
			2,500	3,207	38,695	99.458,187	60.538,374
13+395	0,602	6,442					
			2,500	2,297	27,895	99.460,484	60.566,269
13+400	0,317	4,716					
			0,013	0,008	0,123	99.460,492	60.566,392
13+400,026	0,313	4,715					
			4,987	1,641	39,422	99.462,133	60.605,814
13+410	0,016	3,190					

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Cálculo de Volume por Comparação de Perfis: Terreno x Projeto

Km	Área Corte	Área Aterro	Semi-Dis.	Vol.Corte	Vol.Aterro	V.C.Acum.	V.A.Acum.
13+410	0,016	3,190					
			5,000	0,080	16,155	99.462,213	60.621,969
13+420	0,000	0,041					
			5,000	8,530	0,265	99.470,743	60.622,234
13+430	1,706	0,012					
			0,013	0,044	0,000	99.470,787	60.622,234
13+430,026	1,711	0,012					
			4,987	26,990	0,793	99.497,777	60.623,027
13+440	3,701	0,147					
			2,500	20,578	1,318	99.518,355	60.624,345
13+445	4,530	0,380					
			7,500	87,360	5,063	99.605,715	60.629,408
13+460	7,118	0,295					
			2,500	38,998	0,810	99.644,713	60.630,218
13+465	8,481	0,029					
			7,500	105,645	0,218	99.750,358	60.630,436
13+480	5,605	0,000					
			6,298	44,473	33,811	99.794,831	60.664,247
13+492,595	1,457	5,369					
			3,703	12,133	35,192	99.806,964	60.699,439
13+500	1,820	4,136					
			5,000	26,630	20,970	99.833,594	60.720,409
13+510	3,506	0,058					
			5,000	39,730	0,290	99.873,324	60.720,699
13+520	4,440	0,000					
			1,298	11,854	0,000	99.885,178	60.720,699
13+522,595	4,696	0,000					
			3,703	40,498	0,000	99.925,676	60.720,699
13+530	6,242	0,000					
			5,000	72,170	0,000	99.997,846	60.720,699
13+540	8,192	0,000					
			4,920	104,569	0,000	100.102,415	60.720,699
13+549,839	13,064	0,000					
			0,081	2,114	0,000	100.104,529	60.720,699
13+550	13,196	0,000					
			5,000	166,090	0,000	100.270,619	60.720,699
13+560	20,022	0,000					
			5,000	228,070	0,000	100.498,689	60.720,699
13+570	25,592	0,000					
			4,920	269,825	0,000	100.768,514	60.720,699
13+579,839	29,256	0,000					
			0,081	4,713	0,000	100.773,227	60.720,699
13+580	29,287	0,000					
			10,000	572,050	0,000	101.345,277	60.720,699
13+600	27,918	0,000					

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Volume

Cálculo de Volume por Comparação de Perfis: Terreno x Projeto

Km	Área Corte	Área Aterro	Semi-Dis.	Vol.Corte	Vol.Aterro	V.C.Acum.	V.A.Acum.
13+600	27,918	0,000					
			10,000	442,150	0,000	101.787,427	60.720,699
13+620	16,297	0,000					
			10,000	207,700	0,030	101.995,127	60.720,729
13+640	4,473	0,003					
			10,000	63,820	50,160	102.058,947	60.770,889
13+660	1,909	5,013					
			10,000	37,840	158,600	102.096,787	60.929,489
13+680	1,875	10,847					
			10,000	48,210	178,940	102.144,997	61.108,429
13+700	2,946	7,047					
			0,589	3,525	8,102	102.148,522	61.116,531
13+701,178	3,038	6,709					
			4,411	29,470	47,498	102.177,992	61.164,029
13+710	3,643	4,059					
			5,000	35,095	33,225	102.213,087	61.197,254
13+720	3,376	2,586					
			5,000	31,995	23,240	102.245,082	61.220,494
13+730	3,023	2,062					
			5,000	34,420	17,630	102.279,502	61.238,124
13+740	3,861	1,464					
			0,589	4,622	1,720	102.284,124	61.239,844
13+741,178	3,986	1,456					
			4,411	38,040	12,404	102.322,164	61.252,248
13+750	4,638	1,356					
			1,925	18,864	5,008	102.341,028	61.257,256
13+753,849	5,164	1,246					
			3,076	29,995	6,157	102.371,023	61.263,413
13+760	4,589	0,756					
			5,000	40,780	6,585	102.411,803	61.269,998
13+770	3,567	0,561					
			5,000	28,355	6,625	102.440,158	61.276,623
13+780	2,104	0,764					
			5,000	18,255	13,515	102.458,413	61.290,138
13+790	1,547	1,939					
			1,925	5,781	7,752	102.464,194	61.297,890
13+793,849	1,457	2,089					
			3,076	6,618	7,849	102.470,812	61.305,739
13+800	0,695	0,463					
			5,415	31,900	2,507	102.502,712	61.308,246
13+810,830	5,196	0,000					
			4,585	77,982	0,000	102.580,694	61.308,246
13+820	11,812	0,000					
			5,000	163,080	0,000	102.743,774	61.308,246
13+830	20,804	0,000					

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Volume

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Km	Área Corte	Área Aterro	Semi-Dis.	Vol.Corte	Vol.Aterro	V.C.Acum.	V.A.Acum.
13+830	20,804	0,000					
			5,000	234,690	0,000	102.978,464	61.308,246
13+840	26,134	0,000					
			0,415	21,721	0,000	103.000,185	61.308,246
13+840,830	26,205	0,000					
			4,541	207,133	0,000	103.207,318	61.308,246
13+849,911	19,414	0,000					
			0,045	1,723	0,000	103.209,041	61.308,246
13+850	19,316	0,000					
			5,000	158,350	0,000	103.367,391	61.308,246
13+860	12,354	0,000					
			5,000	97,900	0,090	103.465,291	61.308,336
13+870	7,226	0,018					
			4,956	49,218	2,156	103.514,509	61.310,492
13+879,911	2,706	0,417					
			0,045	0,240	0,038	103.514,749	61.310,530
13+880	2,682	0,433					
			10,000	37,480	83,210	103.552,229	61.393,740
13+900	1,066	7,888					
			10,000	23,600	186,560	103.575,829	61.580,300
13+920	1,294	10,768					
			8,951	52,137	123,239	103.627,966	61.703,539
13+937,901	4,531	3,001					
			1,050	10,224	5,953	103.638,190	61.709,492
13+940	5,211	2,671					
			2,500	30,780	11,915	103.668,970	61.721,407
13+945	7,101	2,095					
			2,500	41,850	9,353	103.710,820	61.730,760
13+950	9,639	1,646					
			2,500	54,002	7,635	103.764,822	61.738,395
13+955	11,962	1,408					
			2,500	59,553	6,845	103.824,375	61.745,240
13+960	11,859	1,330					
			2,500	61,528	6,970	103.885,903	61.752,210
13+965	12,752	1,458					
			1,451	37,184	4,917	103.923,087	61.757,127
13+967,901	12,883	1,932					
			1,050	26,654	4,384	103.949,741	61.761,511
13+970	12,514	2,245					
			2,500	52,135	14,158	104.001,876	61.775,669
13+975	8,340	3,418					
			2,500	33,983	21,047	104.035,859	61.796,716
13+980	5,253	5,001					
			2,500	21,355	31,508	104.057,214	61.828,224
13+985	3,289	7,602					

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Volume

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Km	Área Corte	Área Aterro	Semi-Dis.	Vol.Corte	Vol.Aterro	V.C.Acum.	V.A.Acum.
13+985	3,289	7,602					
			1,831	10,475	31,762	104.067,689	61.859,986
13+988,662	2,432	9,745					
			0,669	3,073	13,423	104.070,762	61.873,409
13+990	2,162	10,320					
			2,500	9,135	56,067	104.079,897	61.929,476
13+995	1,492	12,107					
			2,500	7,252	61,140	104.087,149	61.990,616
14	1,409	12,349					
			2,500	7,938	57,293	104.095,087	62.047,909
14+5	1,766	10,568					
			2,500	10,688	47,165	104.105,775	62.095,074
14+10	2,509	8,298					
			2,500	13,647	34,858	104.119,422	62.129,932
14+15	2,950	5,645					
			1,831	12,118	13,119	104.131,540	62.143,051
14+18,662	3,668	1,520					
			0,669	5,261	1,748	104.136,801	62.144,799
14+20	4,196	1,093					
			2,500	29,447	3,375	104.166,248	62.148,174
14+25	7,583	0,257					
			2,500	48,530	0,843	104.214,778	62.149,017
14+30	11,829	0,080					
			2,500	67,990	0,200	104.282,768	62.149,217
14+35	15,367	0,000					
			2,500	80,680	0,000	104.363,448	62.149,217
14+40	16,905	0,000					
			2,500	80,660	0,000	104.444,108	62.149,217
14+45	15,359	0,000					
			1,831	50,213	0,000	104.494,321	62.149,217
14+48,662	12,065	0,000					
			0,669	15,026	0,000	104.509,347	62.149,217
14+50	10,395	0,000					
			2,500	37,040	0,000	104.546,387	62.149,217
14+55	4,421	0,000					
			2,500	23,270	0,000	104.569,657	62.149,217
14+60	4,887	0,000					
			2,500	22,413	0,000	104.592,070	62.149,217
14+65	4,078	0,000					
			2,500	18,172	0,000	104.610,242	62.149,217
14+70	3,191	0,000					
			2,500	20,505	0,000	104.630,747	62.149,217
14+75	5,011	0,000					
			2,500	27,965	0,000	104.658,712	62.149,217
14+80	6,175	0,000					

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Volume

Cálculo de Volume por Comparação de Perfis: Terreno x Projeto

Km	Área Corte	Área Aterro	Semi-Dis.	Vol.Corte	Vol.Aterro	V.C.Acum.	V.A.Acum.
14+80	6,175	0,000					
			2,500	29,100	0,000	104.687,812	62.149,217
14+85	5,465	0,000					
			1,035	10,985	0,006	104.698,797	62.149,223
14+87,070	5,149	0,006					
			1,465	14,508	0,057	104.713,305	62.149,280
14+90	4,754	0,033					
			2,500	24,363	0,083	104.737,668	62.149,363
14+95	4,991	0,000					
			2,500	23,500	0,000	104.761,168	62.149,363
14+100	4,409	0,000					
			2,500	17,810	0,288	104.778,978	62.149,651
14+105	2,715	0,115					
			2,500	10,725	1,218	104.789,703	62.150,869
14+110	1,575	0,372					
			2,500	3,985	2,745	104.793,688	62.153,614
14+115	0,019	0,726					
			2,500	0,047	6,330	104.793,735	62.159,944
14+120	0,000	1,806					
			2,500	0,000	9,518	104.793,735	62.169,462
14+125	0,000	2,001					
			2,500	0,370	11,505	104.794,105	62.180,967
14+130	0,148	2,601					
			1,073	0,347	5,612	104.794,452	62.186,579
14+132,145	0,176	2,632					
			1,428	0,525	7,554	104.794,977	62.194,133
14+135	0,192	2,660					
			2,500	0,893	13,378	104.795,870	62.207,511
14+140	0,165	2,691					
			2,500	0,600	13,705	104.796,470	62.221,216
14+145	0,075	2,791					
			2,500	0,275	14,870	104.796,745	62.236,086
14+150	0,035	3,157					
			2,500	0,248	15,740	104.796,993	62.251,826
14+155	0,064	3,139					
			2,500	0,333	15,933	104.797,326	62.267,759
14+160	0,069	3,234					
			1,073	0,139	6,994	104.797,465	62.274,753
14+162,145	0,061	3,287					
			8,392	0,713	34,869	104.798,178	62.309,622
14+178,929	0,024	0,868					
			0,536	0,062	0,886	104.798,240	62.310,508
14+180	0,092	0,786					
			5,000	5,525	6,230	104.803,765	62.316,738
14+190	1,013	0,460					

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Km	Área Corte	Área Aterro	Semi-Dis.	Vol.Corte	Vol.Aterro	V.C.Acum.	V.A.Acum.
14+190	1,013	0,460					
			5,000	11,060	6,855	104.814,825	62.323,593
14+200	1,199	0,911					
			4,465	25,282	10,733	104.840,107	62.334,326
14+208,929	4,464	1,493					
			0,536	4,800	1,586	104.844,907	62.335,912
14+210	4,500	1,468					
			2,500	20,948	7,250	104.865,855	62.343,162
14+215	3,879	1,432					
			2,500	16,150	9,213	104.882,005	62.352,375
14+220	2,581	2,253					
			3,592	16,571	21,901	104.898,576	62.374,276
14+227,183	2,033	3,845					
			1,409	6,085	10,752	104.904,661	62.385,028
14+230	2,287	3,789					
			2,500	12,875	19,793	104.917,536	62.404,821
14+235	2,863	4,128					
			2,500	15,432	15,810	104.932,968	62.420,631
14+240	3,310	2,196					
			5,000	37,360	11,230	104.970,328	62.431,861
14+250	4,162	0,050					
			3,592	33,085	0,180	105.003,413	62.432,041
14+257,183	5,050	0,000					
			1,409	14,639	0,000	105.018,052	62.432,041
14+260	5,343	0,000					
			10,000	179,980	0,000	105.198,032	62.432,041
14+280	12,655	0,000					
			2,500	69,147	0,000	105.267,179	62.432,041
14+285	15,004	0,000					
			7,500	217,485	0,000	105.484,664	62.432,041
14+300	13,994	0,000					
			2,500	69,603	0,000	105.554,267	62.432,041
14+305	13,847	0,000					
			7,500	145,553	0,000	105.699,820	62.432,041
14+320	5,560	0,000					
			10,000	100,380	0,580	105.800,200	62.432,621
14+340	4,478	0,058					
			10,000	87,600	0,580	105.887,800	62.433,201
14+360	4,282	0,000					
			10,000	92,730	0,180	105.980,530	62.433,381
14+380	4,991	0,018					
			10,000	63,610	0,500	106.044,140	62.433,881
14+400	1,370	0,032					
			10,000	21,010	0,320	106.065,150	62.434,201
14+420	0,731	0,000					

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Km	Área Corte	Área Aterro	Semi-Dis.	Vol.Corte	Vol.Aterro	V.C.Acum.	V.A.Acum.
14+420	0,731	0,000					
			10,000	37,730	0,000	106.102,880	62.434,201
14+440	3,042	0,000					
			7,590	64,852	0,000	106.167,732	62.434,201
14+455,179	5,503	0,000					
			2,411	25,568	0,000	106.193,300	62.434,201
14+460	5,104	0,000					
			10,000	88,670	0,000	106.281,970	62.434,201
14+480	3,763	0,000					
			5,233	36,633	0,000	106.318,603	62.434,201
14+490,465	3,238	0,000					
			4,768	33,415	0,000	106.352,018	62.434,201
14+500	3,771	0,000					
			5,000	38,305	0,000	106.390,323	62.434,201
14+510,000	3,890	0,000					
			5,000	29,565	0,000	106.419,888	62.434,201
14+520	2,023	0,000					
			10,000	20,230	1,330	106.440,118	62.435,531
14+540	0,000	0,133					
			10,000	8,010	1,330	106.448,128	62.436,861
14+560	0,801	0,000					
			10,000	32,120	0,000	106.480,248	62.436,861
14+580	2,411	0,000					
			10,000	53,530	0,000	106.533,778	62.436,861
14+600	2,942	0,000					
			0,334	1,959	0,000	106.535,737	62.436,861
14+600,667	2,932	0,000					
			2,167	12,583	0,000	106.548,320	62.436,861
14+605	2,876	0,000					
			2,500	13,305	0,000	106.561,625	62.436,861
14+610	2,446	0,000					
			2,500	9,315	1,062	106.570,940	62.437,923
14+615	1,280	0,425					
			2,500	5,093	3,357	106.576,033	62.441,280
14+620	0,757	0,918					
			0,469	0,653	0,698	106.576,686	62.441,978
14+620,937	0,637	0,572					
			9,532	28,261	5,452	106.604,947	62.447,430
14+640	2,328	0,000					

	Corte	Aterro
Áreas	14.065,4040 m²	9.237,767 m²
Volumes	106.604,947 m³	62.447,430 m³