Consorcio Vías Colombia 055	MEMORIA DE CALCULO DE CANTIDADES DEL APU	
ENTIDAD:	INSTITUTO NACIONAL DE VIAS	
NOMBRE DEL PROYECTO:	MEJORAMIENTO, MANTENIMIENTO, GESTIÓN PREDIAL, SOCIAL Y AMBIENTAL SOSTENIBLE DE LA CARRETERA VILLAGARZON - SAN JOSE DEL FRAGUA Y PUENTE SOBRE EL RIO CAQUETA EN LOS DEPARTAMENTOS DE PUTUMAYO, CAUCA Y CAQUETA EN MARCO DE LA REACTIVACIÓN ECONÓMICA, MEDIANTE EL PROGRAMA VIAS PARA LA CONEXION DE TERRITORIOS, EL CRECIMIENTO SOSTENIBLE Y LA REACTIVACIÓN 2.0	

ABSCISA	DISTANCIA	AREA CTE	AREA RELL	VOL CTE	VOL CTE ACUM	VOL RELL	VOL RELL ACUM	SECCION	ALT APROX TER	PROT DE TALUD	ACUM PROT DE TAL
K 2+750		1.60	0.16					Corte	0.000	0	0
K 2+760		0.00	2.56	0.00	0.00	0.00	0.00	Terraplén	0.227	0	0
K 2+770		0.00	4.07	0.00	0.00	0.00	0.00	Terraplén	0.354	0	0
K 2+780		0.00	6.03	0.00	0.00	0.00	0.00	Terraplén	0.514	0	0
K 2+790		0.00	7.27	0.00	0.00	0.00	0.00	Terraplén	0.613	0	0
K 2+800		0.00	8.07	0.00	0.00	0.00	0.00	Terraplén	0.675	0	0
K 2+810		0.00	8.92	0.00	0.00	0.00	0.00	Terraplén	0.740	0	0
K 2+820		0.00	10.75	0.00	0.00	0.00	0.00	Terraplén	0.876	0	0
K 2+830		0.00	11.96	0.00	0.00	0.00	0.00	Terraplén	0.965	0	0
K 2+840		0.00	12.55	0.00	0.00	0.00	0.00	Terraplén	1.007	0	0
K 2+850		0.00	13.36	0.00	0.00	0.00	0.00	Terraplén	1.065	0	0
K 2+860		0.00	14.46	0.00	0.00	0.00	0.00	Terraplén	1.142	0	0
K 2+870		0.00	15.33	0.00	0.00	0.00	0.00	Terraplén	1.202	0	0
K 2+880		0.00	15.73	0.00	0.00	0.00	0.00	Terraplén	1.229	0	0
K 2+890		0.00	16.96	0.00	0.00	0.00	0.00	Terraplén	1.313	0	0
K 2+900		0.00	17.76	0.00	0.00	0.00	0.00	Terraplén	1.366	0	0
K 2+910		0.00	18.5	0.00	0.00	0.00	0.00	Terraplén	1.415	0	0
K 2+920		0.00	18.85	0.00	0.00	0.00	0.00	Terraplén	1.438	0	0
K 2+930		0.00	20.77	0.00	0.00	0.00	0.00	Terraplén	1.562	0	0
K 2+940		0.00	22.47	0.00	0.00	0.00	0.00	Terraplén	1.670	0	0
K 2+950		0.00	23.75	0.00	0.00	0.00	0.00	Terraplén	1.750	0	0
K 2+960		0.00	24.51	0.00	0.00	0.00	0.00	Terraplén	1.796	0	0
K 2+970		0.00	22.81	0.00	0.00	0.00	0.00	Terraplén	1.691	0	0
K 2+980		0.00	22.14	0.00	0.00	0.00	0.00	Terraplén	1.649	0	0
K 2+990		0.00	20.55	0.00	0.00	0.00	0.00	Terraplén	1.548	0	0
K 3+000	10.00	0.00	19.38	0.00	0.00	199.65	199.65	Terraplén	1.473	53.10051865	53.10051865
K 3+010	10.00	0.00	19.08	0.00	0.00	192.30	391.95	Terraplén	1.453	52.39534039	105.495859
K 3+020	10.00	0.00	17.7	0.00	0.00	183.90	575.85	Terraplén	1.362	49.11608251	154.6119416
K 3+030	10.00	0.00	17	0.00	0.00	173.50	749.35	Terraplén	1.315	47.4297312	202.0416728
K 3+040	10.00	0.00	16.55	0.00	0.00	167.75	917.10	Terraplén	1.285	46.3372091	248.3788819
K 3+050	10.00	0.00	15.47	0.00	0.00	160.10	1077.20	Terraplén	1.212	43.68737626	292.0662581
K 3+060	10.00	0.00	14.92	0.00	0.00	151.95	1229.15	Terraplén	1.174	42.32241019	334.3886683
K 3+070	10.00	0.00	15.52	0.00	0.00	152.20	1381.35	Terraplén	1.215	43.8109374	378.1996057
K 3+080	10.00	0.00	15.74	0.00	0.00	156.30	1537.65	Terraplén	1.230	44.35357565	422.5531813
K 3+090	10.00	0.00	16.27	0.00	0.00	160.05	1697.70	Terraplén	1.266	45.65401913	468.2072005
K 3+100	10.00	0.00	16.29	0.00	0.00	162.80	1860.50	Terraplén	1.268	45.70290571	513.9101062
K 3+110	10.00	0.00	16.74	0.00	0.00	165.15	2025.65	Terraplén	1.298	46.79931229	560.7094185
K 3+120	10.00	0.00	18.32	0.00	0.00	175.30	2200.95	Terraplén	1.403	50.59667409	611.3060926
K 3+130	10.00	0.00	18.92	0.00	0.00	186.20	2387.15	Terraplén	1.443	52.01813798	663.3242306
K 3+140	10.00	0.00	20.23	0.00	0.00	195.75	2582.90	Terraplén	1.528	55.08405892	718.4082895
K 3+150	10.00	0.00	27.31	0.00	0.00	237.70	2820.60	Terraplén	1.965	70.8521059	789.2603954
K 3+160	10.00	0.00	24.12	0.00	0.00	257.15	3077.75	Terraplén	1.772	63.90505093	853.1654463
K 3+170	10.00	0.00	25.59	0.00	0.00	248.55	3326.30	Terraplén	1.862	67.13652909	920.3019754
K 3+180	10.00	0.00	23.85	0.00	0.00	247.20	3573.50	Terraplén	1.756	63.30569022	983.6076656
K 3+190	10.00	0.00	26.62	0.00	0.00	252.35	3825.85	Terraplén	1.924	69.36980607	1052.977472
K 3+200	10.00	0.00	28.68	0.00	0.00	276.50	4102.35	Terraplén	2.046	73.76351489	1126.740987
K 3+210	10.00	0.00	27.84	0.00	0.00	282.60	4384.95	Terraplén	1.996	71.98335537	1198.724342
K 3+220	10.00	0.00	29.22	0.00	0.00	285.30	4670.25	Terraplén	2.077	74.89979974	1273.624142
K 3+230	10.00	0.00	33.3	0.00	0.00	312.60	4982.85	Terraplén	2.310	83.29095676	1356.915098
K 3+240	10.00	0.00	30.15	0.00	0.00	317.25	5300.10	Terraplén	2.131	76.84221527	1433.757314
K 3+250	10.00	0.00	27.3	0.00	0.00	287.25	5587.35	Terraplén	1.964	70.8307008	1504.588015
K 3+260	10.00	0.00	26.52	0.00	0.00	269.10	5856.45	Terraplén	1.918	69.15407198	1573.742087
K 3+270	10.00	0.00	25.78	0.00	0.00	261.50	6117.95	Terraplén	1.874	67.55037658	1641.292463
K 3+280	10.00	0.00	25.04	0.00	0.00	254.10	6372.05	Terraplén	1.829	65.93366203	1707.226125
K 3+290	10.00	0.00	21.91	0.00	0.00	234.75	6606.80	Terraplén	1.635	58.94374201	1766.169867
K 3+300	10.00	0.00	20.83	0.00	0.00	213.70	6820.50	Terraplén	1.566	56.47161024	1822.641477
K 3+310	10.00	0.00	19.09	0.00	0.00	199.60	7020.10	Terraplén	1.454	52.41888987	1875.060367
K 3+320	10.00	0.00	17.73	0.00	0.00	184.10	7204.20	Terraplén	1.364	49.1880032	1924.24837
K 3+330	10.00	0.00	17.39	0.00	0.00	175.60	7379.80	Terraplén	1.342	48.37121914	1972.61959
K 3+340	10.00	0.00	15.54	0.00	0.00	164.65	7544.45	Terraplén	1.216	43.8603375	2016.479927
K 3+350	10.00	0.00	13.57	0.00	0.00	145.55	7690.00	Terraplén	1.080	38.92572409	2055.405651
K 3+360	10.00	0.00	13.85	0.00	0.00	137.10	7827.10	Terraplén	1.099	39.63576005	2095.041411
K 3+370	10.00	0.00	12.44	0.00	0.00	131.45	7958.55	Terraplén	0.999	36.02966452	2131.071076
K 3+380	10.00	0.00	11.99	0.00	0.00	122.15	8080.70	Terraplén	0.967	34.86233972	2165.933415
K 3+390	10.00	0.00	11.49	0.00	0.00	117.40	8198.10	Terraplén	0.931	33.55563588	2199.489051
K 3+400	10.00	0.00	10.6	0.00	0.00	110.45	8308.55	Terraplén	0.865	31.20375629	2230.692808
K 3+410	10.00	0.00	10.51	0.00	0.00	105.55	8414.10	Terraplén	0.859	30.96403144	2261.656839
K 3+420	10.00	0.00	11.06	0.00	0.00	107.85	8521.95	Terraplén	0.899	32.42354506	2294.080384
K 3+430	10.00	0.00	11.25	0.00	0.00	111.55	8633.50	Terraplén	0.913	32.92473179	2327.005116
K 3+440	10.00	0.00	11.74	0.00	0.00	114.95	8748.45	Terraplén	0.949	34.21027501	2361.215391
K 3+450	10.00	0.00	12.11	0.00	0.00	119.25	8867.70	Terraplén	0.976	35.17442523	2396.389816
K 3+460	10.00	0.00	12.13	0.00	0.00	121.20	8988.90	Terraplén	0.977	35.22638272	2431.616199
K 3+470	10.00	0.00	12.96	0.00	0.00	125.45	9114.35	Terraplén	1.036	37.36852983	2468.984729
K 3+480	10.00	0.00	14.26	0.00	0.00	136.10	9250.45	Terraplén	1.128	40.67017568	2509.654904
K 3+490	10.00	0.00	14.56	0.00	0.00	144.10	9394.55	Terraplén	1.149	41.42314724	2551.078052
K 3+500	10.00	0.00	15.08	0.00	0.00	148.20	9542.75	Terraplén	1.185	42.72059358	2593.798645
K 3+510	10.00	0.00	14.96	0.00	0.00	150.20	9692.95	Terraplén	1.177	42.42204145	2636.220687
K 3+520	10.00	0.00	22.65	0.00	0.00	188.05	9881.00	Terraplén	1.681	60.61925545	2696.839942
K 3+530	10.00	0.00	19.58	0.00	0.00	211.15	10092.15	Terraplén	1.486	53.56914555	2750.409088
K 3+540	10.00	0.60	16.15	3.00	3.00	178.65	10270.80	Terraplén	1.258	45.36041602	2795.769504
K 3+550	10.00	0.54	13.11	5.70	8.70	146.30	10417.10	Terraplén	1.047	37.75277399	2833.522278
K 3+560	10.00	0.56	11.81	5.50	14.20	124.60	10541.70	Terraplén	0.954	34.39311132	2867.915389
K 3+570	10.00	0.57	10.13	5.65	19.85	109.70	10651.40	Terraplén	0.831	29.94793813	2897.863327
K 3+580	10.00	0.52	13.27	5.45	25.30	117.00	10768.40	Terraplén	1.058	38.16167583	2936.025003
K 3+590	10.00	0.50	14.2	5.10	30.40	137.35	10905.75	Terraplén	1.124	40.51918609	2976.544189
K 3+600	10.00	0.54	13.1	5.20	35.60	136.50	11042.25	Terraplén	1.046	37.72718484	3014.271374
K 3+610	10.00	0.55	10.94	5.45	41.05	120.20	11162.45	Terraplén	0.891	32.10801006	3046.379384
K 3+620	10.00	0.53	11.18	5.40	46.45	110.59	11273.05	Terraplén	0.908	32.73489888	3079.114283
K 3+630	10.00	0.49	11.22	5.10	51.55	111.99	11385.04	Terraplén	0.911	32.84659184	3111.960875
K 3+640	10.00	0.57	12.56	5.30	56.85	118.90	11503.94	Terraplén	1.008	36.33783147	3148.298706
K 3+650	10.00	0.53	13.17	5.50	62.35	128.64	11632.58	Terraplén	1.051	37.9049279	3186.203634
K 3+660	10.00	0.00	12.04	2.65	65.00	126.06	11758.64	Terraplén	0.971	34.99861843	3221.202252
K 3+670	10.00	0.00	12.67	0.00	65.00	123.56	11882.20	Terraplén	1.016	36.62185939	3257.824112
K 3+680	10.00	0.00	12.70	0.00	65.00	126.86	12009.06	Terraplén	1.018	36.70915617	3294.533268

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ABSCISA	DISTANCIA	AREA CTE	AREA RELL	VOL CTE	VOL CTE ACUM	VOL RELL	VOL RELL ACUM	SECCION	ALT APROX TER	PROT DE TALUD	ACUM PROT DE TAL
K 3+690	10.00	0.00	13.47	0.00	65.00	130.85	12139.91	Terraplén	1.072	38.66150112	3333.194769
K 3+700	10.00	0.00	13.12	0.00	65.00	132.92	12272.83	Terraplén	1.048	37.77489031	3370.969659
K 3+710	10.00	0.00	12.85	0.00	65.00	129.83	12402.67	Terraplén	1.028	37.07966346	3408.049323
K 3+720	10.00	0.00	12.21	0.00	65.00	125.30	12527.96	Terraplén	0.983	35.43888772	3443.488211
K 3+730	10.00	0.00	12.33	0.00	65.00	122.71	12650.67	Terraplén	0.991	35.74638704	3479.234598
K 3+740	10.00	0.00	10.75	0.00	65.00	115.38	12766.06	Terraplén	0.876	31.59126421	3510.825862
K 3+750	10.00	0.48	11.35	2.40	67.40	110.47	12876.52	Terraplén	0.920	33.18121648	3544.007078
K 3+760	10.00	0.47	11.54	4.75	72.15	114.45	12990.97	Terraplén	0.934	33.69299191	3577.70007
K 3+770	10.00	0.21	12.27	3.40	75.55	119.07	13110.04	Terraplén	0.987	35.59270807	3613.292778
K 3+780	10.00	0.28	12.56	2.45	78.00	124.15	13234.19	Terraplén	1.008	36.33783147	3649.63061
K 3+790	10.00	0.32	11.57	3.00	81.00	120.64	13354.83	Terraplén	0.936	33.75962846	3683.390238
K 3+800	10.00	0.32	12.31	3.20	84.20	119.36	13474.19	Terraplén	0.990	35.68054191	3719.07078
K 3+810	10.00	0.19	13.01	2.55	86.75	126.57	13600.76	Terraplén	1.040	37.49279914	3756.563579
K 3+820	10.00	0.07	13.33	1.30	88.05	131.69	13732.45	Terraplén	1.063	38.31605707	3794.879636
K 3+830	10.00	0.72	14.94	3.95	92.00	141.36	13873.81	Terraplén	1.175	42.37392161	3837.253558
K 3+840	10.00	1.74	16.19	12.30	104.30	155.68	14029.49	Terraplén	1.261	45.47036684	3882.723925
K 3+850	10.00	2.06	17.43	19.00	123.30	168.14	14197.62	Terraplén	1.344	48.47280599	3931.196731
K 3+860	10.00	2.23	18.58	21.45	144.75	180.08	14377.71	Terraplén	1.421	51.22524739	3982.421978
K 3+870	10.00	2.01	20.84	21.20	165.95	197.12	14574.83	Terraplén	1.567	56.49230655	4038.914285
K 3+880	10.00	1.08	22.36	15.45	181.40	216.02	14790.84	Terraplén	1.663	59.9743496	4098.888634
K 3+890	10.00	0.72	24.42	9.00	190.40	233.94	15024.78	Terraplén	1.791	64.57709615	4163.46573
K 3+900	10.00	0.65	27.11	6.85	197.25	257.67	15282.45	Terraplén	1.953	70.42393666	4233.889667
K 3+910	10.00	0.55	28.74	6.00	203.25	279.24	15561.69	Terraplén	2.049	73.88436031	4307.774027
K 3+920	10.00	0.72	28.15	6.35	209.60	284.45	15846.14	Terraplén	2.015	72.64751934	4380.421547
K 3+930	10.00	0.47	31.87	5.95	215.55	300.13	16146.27	Terraplén	2.230	80.39363747	4460.815184
K 3+940	10.00	0.53	30.80	5.00	220.55	313.35	16459.61	Terraplén	2.168	78.18213833	4538.997323
K 3+950	10.00	0.00	28.83	2.65	223.20	298.14	16757.75	Terraplén	2.055	74.0808505	4613.078173
K 3+960	10.00	0.00	27.12	0.00	223.20	279.75	17037.50	Terraplén	1.954	70.44211324	4683.520286
K 3+970	10.00	0.00	26.10	0.00	223.20	266.10	17303.60	Terraplén	1.893	68.24912081	4751.769407
K 3+980	10.00	0.00	20.52	0.00	223.20	233.09	17536.69	Terraplén	1.546	55.7489355	4807.518343
K 3+990	10.00	0.00	17.94	0.00	223.20	192.29	17728.98	Terraplén	1.378	49.69226963	4857.210612
K 4+000	10.00	0.00	16.31	0.00	223.20	171.23	17900.21	Terraplén	1.269	45.73976888	4902.950381
K 4+010	10.00	0.00	14.53	0.00	223.20	154.19	18054.40	Terraplén	1.147	41.35776466	4944.308146
K 4+020	10.00	0.00	15.36	0.00	223.20	149.45	18203.85	Terraplén	1.204	43.40516278	4987.713309
K 4+030	10.00	0.00	15.09	0.00	223.20	152.25	18356.10	Terraplén	1.186	42.75345365	5030.466762
K 4+040	10.00	0.00	14.60	0.00	223.20	148.47	18504.57	Terraplén	1.152	41.52753833	5071.994301
K 4+050	10.00	0.00	15.05	0.00	223.20	148.26	18652.83	Terraplén	1.183	42.648111	5114.642412
K 4+060	10.00	0.00	14.92	0.00	223.20	149.87	18802.71	Terraplén	1.174	42.33170026	5156.974112
K 4+070	10.00	0.00	14.95	0.00	223.20	149.36	18952.07	Terraplén	1.176	42.39502844	5199.36914
K 4+080	10.00	0.00	15.69	0.00	223.20	153.18	19105.25	Terraplén	1.226	44.2216238	5243.590764
K 4+090	10.00	0.00	16.65	0.00	223.20	161.69	19266.94	Terraplén	1.292	46.58675352	5290.177518
K 4+100	10.00	0.00	18.26	0.00	223.20	174.58	19441.52	Terraplén	1.400	50.46037198	5340.63789
K 4+110	10.00	0.00	21.69	0.00	223.20	199.79	19641.31	Terraplén	1.621	58.45397498	5399.091865
K 4+120	10.00	0.00	23.52	0.00	223.20	226.06	19867.37	Terraplén	1.735	62.56381718	5461.655682
K 4+130	10.00	0.00	22.92	0.00	223.20	232.20	20099.57	Terraplén	1.698	61.23534576	5522.891028
K 4+140	10.00	0.00	23.47	0.00	223.20	231.99	20331.56	Terraplén	1.733	62.46922795	5585.360255
K 4+150	10.00	0.00	21.32	0.00	223.20	223.98	20555.55	Terraplén	1.598	57.60188697	5642.962142
K 4+160	10.00	0.00	20.22	0.00	223.20	207.71	20763.26	Terraplén	1.527	55.06163262	5698.023775
K 4+170	10.00	0.00	19.46	0.00	223.20	198.39	20961.65	Terraplén	1.478	53.28255047	5751.306326
K 4+180	10.00	0.00	19.01	0.00	223.20	192.33	21153.98	Terraplén	1.449	52.22681379	5803.533139
K 4+190	10.00	0.00	20.43	0.00	223.20	197.20	21351.18	Terraplén	1.541	55.5528208	5859.08596
K 4+200	10.00	0.00	19.85	0.00	223.20	201.40	21552.58	Terraplén	1.503	54.19398752	5913.279948
K 4+210	10.00	0.00	20.42	0.00	223.20	201.36	21753.94	Terraplén	1.540	55.53319803	5968.813146
K 4+220	10.00	0.00	22.90	0.00	223.20	216.61	21970.55	Terraplén	1.697	61.17820669	6029.991352
K 4+230	10.00	0.00	23.79	0.00	223.20	233.43	22203.98	Terraplén	1.752	63.16810053	6093.159453
K 4+240	10.00	0.00	24.42	0.00	223.20	241.02	22445.00	Terraplén	1.791	64.55837611	6157.717829
K 4+250	10.00	0.00	25.58	0.00	223.20	249.96	22694.95	Terraplén	1.861	67.10659236	6224.824421
K 4+260	10.00	0.00	23.81	0.00	223.20	246.91	22941.86	Terraplén	1.753	63.205806	6288.030227
K 4+270	10.00	0.00	21.73	0.00	223.20	227.67	23169.53	Terraplén	1.623	58.53124817	6346.561476
K 4+280	10.00	0.00	20.19	0.00	223.20	209.58	23379.11	Terraplén	1.525	54.98292251	6401.544398
K 4+290	10.00	0.00	19.27	0.00	223.20	197.29	23576.39	Terraplén	1.466	52.84505372	6454.389452
K 4+300	10.00	0.00	17.81	0.00	223.20	185.42	23761.82	Terraplén	1.370	49.38817401	6503.777626
K 4+310	10.00	0.00	17.33	0.00	223.20	175.72	23937.54	Terraplén	1.338	48.22792093	6552.005547
K 4+320	10.00	0.00	16.97	0.00	223.20	171.48	24109.02	Terraplén	1.313	47.34766429	6599.353211
K 4+330	10.00	0.00	16.16	0.00	223.20	165.64	24274.66	Terraplén	1.259	45.38739141	6644.740602
K 4+340	10.00	0.00	16.86	0.00	223.20	165.08	24439.74	Terraplén	1.306	47.0806865	6691.821289
K 4+350	10.00	0.00	17.62	0.00	223.20	172.37	24612.11	Terraplén	1.357	48.92089914	6740.742188
K 4+360	10.00	0.00	17.11	0.00	223.20	173.64	24785.76	Terraplén	1.323	47.69618926	6788.438377
K 4+370	10.00	0.00	17.50	0.00	223.20	173.05	24958.81	Terraplén	1.349	48.63587785	6837.074255
K 4+380	10.00	0.00	17.95	0.00	223.20	177.25	25136.06	Terraplén	1.379	49.71252454	6886.78678
K 4+390	10.00	0.00	17.73	0.00	223.20	178.39	25314.44	Terraplén	1.364	49.18515942	6935.971939
K 4+400	10.00	0.00	17.40	0.00	223.20	175.64	25490.08	Terraplén	1.342	48.39121466	6984.363154
K 4+410	10.00	0.00	16.73	0.00	223.20	170.64	25660.72	Terraplén	1.297	46.77213867	7031.135292
K 4+420	10.00	0.00	15.95	0.00	223.20	163.39	25824.11	Terraplén	1.244	44.86791103	7076.003203
K 4+430	10.00	0.00	15.84	0.00	223.20	158.94	25983.05	Terraplén	1.237	44.59717596	7120.600379
K 4+440	10.00	0.00	16.62	0.00	223.20	162.29	26145.33	Terraplén	1.290	46.50429818	7167.104678
K 4+450	10.00	0.00	17.05	0.00	223.20	168.35	26313.68	Terraplén	1.319	47.55276109	7214.657439
K 4+460	10.00	0.00	18.19	0.00	223.20	176.23	26489.91	Terraplén	1.395	50.29893576	7264.956374
K 4+470	10.00	0.00	20.25	0.00	223.20	192.20	26682.11	Terraplén	1.529	55.12064342	7320.077018
K 4+480	10.00	0.00	21.95	0.00	223.20	210.97	26893.09	Terraplén	1.637	59.03276044	7379.109778
K 4+490	10.00	0.00	23.24	0.00	223.20	225.93	27119.02	Terraplén	1.718	61.93867391	7441.048452
K 4+500	10.00	0.00	23.72	0.00	223.20	234.79	27353.81	Terraplén	1.748	63.01720559	7504.065658
K 4+510	10.00	0.00	23.84	0.00	223.20	237.80	27591.61	Terraplén	1.755	63.28119506	7567.346853
K 4+520	10.00	0.00	25.29	0.00	223.20	245.64	27837.24	Terraplén	1.844	66.47724663	7633.8241
K 4+530	10.00	0.00	26.51	0.00	223.20	258.98	28096.22	Terraplén	1.917	69.12919281	7702.953292
K 4+540	10.00	0.00	28.09	0.00	223.20	273.01	28369.23	Terraplén	2.011	72.52162401	7775.474916
K 4+550	10.00	0.00	26.51	0.00	223.20	273.01	28642.24	Terraplén	1.917	69.12919281	7844.604109
K 4+560	10.00	0.00	24.62	0.00	223.20	255.64	28897.88	Terraplén	1.803	65.00716506	7909.611274
K 4+570	10.00	0.00	23.48	0.00	223.20	240.51	29138.39	Terraplén	1.733	62.48814948	7972.099424
K 4+580	10.00	0.00	24.01	0.00	223.20	237.46	29375.84	Terraplén	1.766	63.65770374	8035.757127
K 4+590	10.00	0.00	24.34	0.00	223.20	241.74	29617.58	Terraplén	1.786	64.38981532	8100.146943
K 4+600	10.00	0.00	23.06	0.00	223.20	236.99	29854.57	Terraplén	1.707	61.53980196	8161.686745
K 4+610	10.00	0.00	23.29	0.00	223.20	231.74	30086.31	Terraplén	1.721	62.05248643	8223.739231
K 4+620	10.00	0.00	23.25	0.00	223.20	232.71	30319.02	Terraplén	1.719	61.97661885	8285.71585

Consorcio Vías Colombia 055	MEMORIA DE CALCULO DE CANTIDADES DEL APU	
ENTIDAD:	INSTITUTO NACIONAL DE VIAS	
NOMBRE DEL PROYECTO:	MEJORAMIENTO, MANTENIMIENTO, GESTIÓN PREDIAL, SOCIAL Y AMBIENTAL SOSTENIBLE DE LA CARRETERA VILLAGARZON - SAN JOSE DEL FRAGUA Y PUENTE SOBRE EL RIO CAQUETA EN LOS DEPARTAMENTOS DE PUTUMAYO, CAUCA Y CAQUETA EN MARCO DE LA REACTIVACIÓN ECONÓMICA, MEDIANTE EL PROGRAMA VIAS PARA LA CONEXION DE TERRITORIOS, EL CRECIMIENTO SOSTENIBLE Y LA REACTIVACIÓN 2.0	

ABSCISA	DISTANCIA	AREA CTE	AREA RELL	VOL CTE	VOL CTE ACUM	VOL RELL	VOL RELL ACUM	SECCION	ALT APROX TER	PROT DE TALUD	ACUM PROT DE TAL
K 4+630	10.00	0.00	23.16	0.00	223.20	232.08	30551.10	Terraplén	1.713	61.76782954	8347.48368
K 4+640	10.00	0.00	24.11	0.00	223.20	236.36	30787.45	Terraplén	1.772	63.88326087	8411.36694
K 4+650	10.00	0.00	20.14	0.00	223.20	221.23	31008.68	Terraplén	1.522	54.86479506	8466.231735
K 4+660	10.00	0.00	18.75	0.00	223.20	194.45	31203.13	Terraplén	1.432	51.62653092	8517.858266
K 4+670	10.00	0.00	18.05	0.00	223.20	184.03	31387.16	Terraplén	1.386	49.95540718	8567.813674
K 4+680	10.00	0.00	18.28	0.00	223.20	181.65	31568.81	Terraplén	1.401	50.50070868	8618.314382
K 4+690	10.00	0.00	18.75	0.00	223.20	185.13	31753.94	Terraplén	1.431	51.60648762	8669.92087
K 4+700	10.00	0.00	19.93	0.00	223.20	193.39	31947.33	Terraplén	1.509	54.391535	8724.312405
K 4+710	10.00	0.00	19.10	0.00	223.20	195.17	32142.50	Terraplén	1.455	52.44642696	8776.758832
K 4+720	10.00	0.00	19.13	0.00	223.20	191.14	32333.64	Terraplén	1.456	52.506276	8829.265108
K 4+730	10.00	0.00	18.00	0.00	223.20	185.64	32519.28	Terraplén	1.382	49.8340065	8879.099114
K 4+740	10.00	0.00	17.33	0.00	223.20	176.65	32695.93	Terraplén	1.338	48.22792093	8927.327035
K 4+750	10.00	0.00	15.37	0.00	223.20	163.52	32859.44	Terraplén	1.205	43.44712521	8970.77416
K 4+760	10.00	0.57	16.67	2.85	226.05	160.21	33019.66	Terraplén	1.293	46.62796688	9017.402127
K 4+770	10.00	0.56	17.84	5.65	231.70	172.54	33192.20	Terraplén	1.371	49.449034	9066.851161
K 4+780	10.00	0.51	15.27	5.35	237.05	165.55	33357.75	Terraplén	1.198	43.19519951	9110.046361
K 4+790	10.00	0.57	14.48	5.40	242.45	148.77	33506.52	Terraplén	1.144	41.23032496	9151.276686
K 4+800	10.00	0.51	12.50	5.40	247.85	134.92	33641.44	Terraplén	1.004	36.18469422	9187.46138
K 4+810	10.00	0.53	11.08	5.20	253.05	117.88	33759.32	Terraplén	0.900	32.46652554	9219.927906
K 4+820	10.00	0.53	11.86	5.30	258.35	114.66	33873.98	Terraplén	0.957	34.51297447	9254.44088
K 4+830	10.00	0.56	11.72	5.45	263.80	117.88	33991.86	Terraplén	0.947	34.15888519	9288.599765
K 4+840	10.00	0.52	11.92	5.40	269.20	118.22	34110.08	Terraplén	0.962	34.68973637	9323.289502
K 4+850	10.00	0.46	13.04	4.90	274.10	124.83	34234.91	Terraplén	1.042	37.57964652	9360.869148
K 4+860	10.00	0.55	11.64	5.05	279.15	123.43	34358.34	Terraplén	0.942	33.95937718	9394.828525
K 4+870	10.00	0.46	12.70	5.05	284.20	121.74	34480.08	Terraplén	1.018	36.70915617	9431.537681
K 4+880	10.00	0.44	14.57	4.50	288.70	136.36	34616.44	Terraplén	1.149	41.44267231	9472.980354
K 4+890	10.00	0.52	15.73	4.80	293.50	151.48	34767.92	Terraplén	1.229	44.32602426	9517.306378
K 4+900	10.00	0.50	16.28	5.10	298.60	160.04	34927.96	Terraplén	1.267	45.67763552	9562.984014
K 4+910	10.00	0.53	18.48	5.15	303.75	173.81	35101.78	Terraplén	1.414	50.98405394	9613.968067
K 4+920	10.00	0.56	19.28	5.45	309.20	188.81	35290.59	Terraplén	1.466	52.86496245	9666.83303
K 4+930	10.00	0.48	18.32	5.20	314.40	188.01	35478.60	Terraplén	1.403	50.60151134	9717.434541
K 4+940	10.00	0.56	19.03	5.20	319.60	186.74	35665.33	Terraplén	1.450	52.26676297	9769.701304
K 4+950	10.00	0.00	16.40	2.80	322.40	177.12	35842.45	Terraplén	1.275	45.96740521	9815.668709
K 4+960	10.00	0.00	11.58	0.00	322.40	139.87	35982.33	Terraplén	0.937	33.78183467	9849.450544
K 4+970	10.00	0.00	9.64	0.00	322.40	106.10	36088.43	Terraplén	0.794	28.63920223	9878.089746
K 4+980	10.00	0.00	10.33	0.00	322.40	99.87	36188.30	Terraplén	0.845	30.48487748	9908.574624
K 4+990	10.00	0.00	9.80	0.00	322.40	100.64	36288.94	Terraplén	0.806	29.05118475	9937.625809
K 5+000	10.00	0.00	9.69	0.00	322.40	97.46	36386.39	Terraplén	0.798	28.77664733	9966.402456
K 5+010	10.00	0.00	10.81	0.00	322.40	102.50	36488.89	Terraplén	0.881	31.74870773	9998.151164
K 5+020	10.00	0.00	10.87	0.00	322.40	108.39	36597.28	Terraplén	0.886	31.92845758	10030.07962
K 5+030	10.00	0.00	13.86	0.00	322.40	123.69	36720.97	Terraplén	1.100	39.67221375	10069.75183
K 5+040	10.00	0.00	9.03	0.00	322.40	114.45	36835.42	Terraplén	0.748	26.95741092	10096.70925
K 5+050	10.00	0.00	8.00	0.00	322.40	85.13	36920.55	Terraplén	0.669	24.12978783	10120.83903
K 5+060	10.00	0.00	8.06	0.00	322.40	80.30	37000.84	Terraplén	0.674	24.29476701	10145.1338
K 5+070	10.00	0.00	8.03	0.00	322.40	80.47	37081.31	Terraplén	0.672	24.22408304	10169.35788
K 5+080	10.00	0.00	8.15	0.00	322.40	80.93	37162.24	Terraplén	0.681	24.55366786	10193.91155
K 5+090	10.00	0.00	9.37	0.00	322.40	87.63	37249.87	Terraplén	0.774	27.9041615	10221.81571
K 5+100	10.00	0.00	11.04	0.00	322.40	102.08	37351.94	Terraplén	0.898	32.37697015	10254.19268
K 5+110	10.00	0.00	12.52	0.00	322.40	117.80	37469.74	Terraplén	1.005	36.22846198	10290.42115
K 5+120	10.00	0.00	14.03	0.00	322.40	132.71	37602.45	Terraplén	1.112	40.07911082	10330.50026
K 5+130	10.00	0.00	14.04	0.00	322.40	140.34	37742.79	Terraplén	1.113	40.12188601	10370.62214
K 5+140	10.00	0.00	15.74	0.00	322.40	148.90	37891.69	Terraplén	1.230	44.34689692	10414.96904
K 5+150	10.00	0.00	16.73	0.00	322.40	162.33	38054.02	Terraplén	1.297	46.77213867	10461.74118
K 5+160	10.00	0.00	15.56	0.00	322.40	161.44	38215.46	Terraplén	1.218	43.90804981	10505.64923
K 5+170	10.00	0.00	13.76	0.00	322.40	146.61	38362.07	Terraplén	1.093	39.41472732	10545.06395
K 5+180	10.00	0.00	13.22	0.00	322.40	134.92	38496.99	Terraplén	1.055	38.03486581	10583.09882
K 5+190	10.00	0.00	14.58	0.00	322.40	139.03	38636.01	Terraplén	1.151	41.48511052	10624.58393
K 5+200	10.00	0.00	15.14	0.00	322.40	148.60	38784.61	Terraplén	1.189	42.85873269	10667.44266
K 5+210	10.00	0.00	15.57	0.00	322.40	153.52	38938.13	Terraplén	1.218	43.92897217	10711.37164
K 5+220	10.00	0.00	15.94	0.00	322.40	157.54	39095.67	Terraplén	1.244	44.8471	10756.21874
K 5+230	10.00	0.00	15.75	0.00	322.40	158.47	39254.15	Terraplén	1.231	44.38863481	10800.60737
K 5+240	10.00	0.00	14.09	0.00	322.40	149.24	39403.39	Terraplén	1.116	40.25014768	10840.85752
K 5+250	10.00	0.00	13.65	0.00	322.40	138.73	39542.11	Terraplén	1.085	39.13534549	10879.99286
K 5+260	10.00	0.00	12.93	0.00	322.40	132.92	39675.04	Terraplén	1.034	37.29722926	10917.29009
K 5+270	10.00	0.00	12.36	0.00	322.40	126.44	39801.48	Terraplén	0.993	35.81220627	10953.1023
K 5+280	10.00	0.00	12.33	0.00	322.40	123.43	39924.91	Terraplén	0.991	35.74638704	10988.84869
K 5+290	10.00	0.00	11.86	0.00	322.40	120.93	40045.84	Terraplén	0.957	34.51297447	11023.36166
K 5+300	10.00	0.00	11.45	0.00	322.40	116.53	40162.37	Terraplén	0.928	33.44842773	11056.81009
K 5+310	10.00	0.00	10.91	0.00	322.40	111.78	40274.15	Terraplén	0.888	32.01825845	11088.82835
K 5+320	10.00	0.00	10.70	0.00	322.40	108.05	40382.20	Terraplén	0.873	31.47871149	11120.30706
K 5+330	10.00	0.00	11.09	0.00	322.40	108.98	40491.18	Terraplén	0.902	32.51128491	11152.81834
K 5+340	10.00	0.00	11.69	0.00	322.40	113.94	40605.12	Terraplén	0.946	34.09240921	11186.91075
K 5+350	10.00	0.00	11.21	0.00	322.40	114.53	40719.66	Terraplén	0.910	32.82425932	11219.73501
K 5+360	10.00	0.00	11.96	0.00	322.40	115.85	40835.50	Terraplén	0.965	34.7780469	11254.51306
K 5+370	10.00	0.49	13.62	2.45	324.85	127.88	40963.39	Terraplén	1.083	39.04928983	11293.56235
K 5+380	10.00	0.46	12.04	4.75	329.60	128.31	41091.69	Terraplén	0.971	34.99861843	11328.56097
K 5+390	10.00	0.43	12.52	4.45	334.05	122.80	41214.49	Terraplén	1.005	36.22846198	11364.78943
K 5+400	10.00	0.50	13.62	4.65	338.70	130.68	41345.17	Terraplén	1.083	39.04928983	11403.83872
K 5+410	10.00	0.50	15.37	5.00	343.70	144.96	41490.12	Terraplén	1.205	43.44712521	11447.28584
K 5+420	10.00	0.51	16.51	5.05	348.75	159.41	41649.53	Terraplén	1.282	46.23605431	11493.5219
K 5+430	10.00	0.51	18.17	5.10	353.85	173.39	41822.92	Terraplén	1.393	50.23836023	11543.76026
K 5+440	10.00	0.50	17.71	5.05	358.90	179.41	42002.33	Terraplén	1.363	49.14452914	11592.90479
K 5+450	10.00	0.47	18.08	4.85	363.75	178.98	42181.31	Terraplén	1.388	50.03629588	11642.94108
K 5+460	10.00	0.37	17.90	4.20	367.95	179.92	42361.22	Terraplén	1.375	49.59096113	11692.53205
K 5+470	10.00	0.00	17.82	1.85	369.80	178.60	42539.83	Terraplén	1.370	49.40846295	11741.94051
K 5+480	10.00	0.48	19.86	2.40	372.20	188.43	42728.26	Terraplén	1.504	54.23351381	11796.17402
K 5+490	10.00	0.44	17.45	4.60	376.80	186.57	42914.83	Terraplén	1.346	48.51358779	11844.68761
K 5+500	10.00	0.48	16.91	4.60	381.40	171.78	43086.61	Terraplén	1.309	47.20395655	11891.89157
K 5+510	10.00	0.42	16.16	4.50	385.90	165.34	43251.94	Terraplén	1.259	45.38739141	11937.27896
K 5+520	10.00	0.46	16.91	4.40	390.30	165.34	43417.28	Terraplén	1.309	47.20395655	11984.48291
K 5+530	10.00	0.54	17.39	5.00	395.30	171.48	43588.77	Terraplén	1.342	48.37081104	12032.85373
K 5+540	10.00	0.41	16.58	4.75	400.05	169.87	43758.64	Terraplén	1.288	46.42180466	12079.27553
K 5+550	10.00	0.65	18.92	5.30	405.35	177.50	43936.14	Terraplén	1.442	52.00693794	12131.28247
K 5+560	10.00	0.00	16.99	3.25	408.60	179.53	44115.67	Terraplén	1.315	47.409218	12178.69169

Consorcio Vías Colombia 055	MEMORIA DE CALCULO DE CANTIDADES DEL APU	
ENTIDAD:	INSTITUTO NACIONAL DE VIAS	
NOMBRE DEL PROYECTO:	MEJORAMIENTO, MANTENIMIENTO, GESTIÓN PREDIAL, SOCIAL Y AMBIENTAL SOSTENIBLE DE LA CARRETERA VILLAGARZON - SAN JOSE DEL FRAGUA Y PUENTE SOBRE EL RIO CAQUETA EN LOS DEPARTAMENTOS DE PUTUMAYO, CAUCA Y CAQUETA EN MARCO DE LA REACTIVACIÓN ECONÓMICA, MEDIANTE EL PROGRAMA VIAS PARA LA CONEXION DE TERRITORIOS, EL CRECIMIENTO SOSTENIBLE Y LA REACTIVACIÓN 2.0	

ABSCISA	DISTANCIA	AREA CTE	AREA RELL	VOL CTE	VOL CTE ACUM	VOL RELL	VOL RELL ACUM	SECCION	ALT APROX TER	PROT DE TALUD	ACUM PROT DE TAL
K 5+570	10.00	0.00	18.09	0.00	408.60	175.42	44291.10	Terraplén	1.388	50.05651243	12228.7482
K 5+580	10.00	0.00	17.64	0.00	408.60	178.69	44469.78	Terraplén	1.359	48.98191661	12277.73011
K 5+590	10.00	0.00	17.32	0.00	408.60	174.83	44644.61	Terraplén	1.337	48.20749879	12325.93761
K 5+600	10.00	0.00	17.40	0.00	408.60	173.60	44818.22	Terraplén	1.342	48.39121466	12374.32883
K 5+610	10.00	0.00	18.04	0.00	408.60	177.20	44995.42	Terraplén	1.385	49.93517937	12424.26401
K 5+620	10.00	0.00	18.75	0.00	408.60	183.94	45179.36	Terraplén	1.431	51.60648762	12475.8705
K 5+630	10.00	0.00	19.17	0.00	408.60	189.58	45368.94	Terraplén	1.459	52.60598118	12528.47648
K 5+640	10.00	0.00	19.88	0.00	408.60	195.25	45564.19	Terraplén	1.505	54.2730317	12582.74951
K 5+650	10.00	0.00	22.21	0.00	408.60	210.47	45774.66	Terraplén	1.654	59.62899844	12642.37851
K 5+660	10.00	0.00	20.87	0.00	408.60	215.42	45990.08	Terraplén	1.569	56.5703853	12698.94889
K 5+670	10.00	0.00	20.37	0.00	408.60	206.23	46196.31	Terraplén	1.537	55.41541815	12754.36431
K 5+680	10.00	0.00	20.99	0.00	408.60	206.82	46403.13	Terraplén	1.577	56.84340618	12811.20772
K 5+690	10.00	0.00	21.33	0.00	408.60	211.61	46614.74	Terraplén	1.598	57.62129522	12868.82901
K 5+700	10.00	0.00	21.60	0.00	408.60	214.66	46829.40	Terraplén	1.615	58.24131152	12927.07032
K 5+710	10.00	0.00	20.45	0.00	408.60	210.25	47039.66	Terraplén	1.542	55.59206018	12982.66238
K 5+720	10.00	0.00	21.14	0.00	408.60	207.92	47247.58	Terraplén	1.586	57.17440068	13039.83678
K 5+730	10.00	0.00	20.38	0.00	408.60	207.58	47455.17	Terraplén	1.537	55.43505328	13095.27184
K 5+740	10.00	0.00	19.57	0.00	408.60	199.75	47654.91	Terraplén	1.485	53.54058535	13148.81242
K 5+750	10.00	0.53	18.79	2.65	411.25	191.78	47846.69	Terraplén	1.434	51.70668221	13200.5191
K 5+760	10.00	0.56	17.44	5.45	416.70	181.14	48027.83	Terraplén	1.345	48.49319805	13249.0123
K 5+770	10.00	0.56	16.75	5.60	422.30	170.93	48198.77	Terraplén	1.298	46.81330921	13295.82561
K 5+780	10.00	0.55	15.91	5.55	427.85	163.26	48362.03	Terraplén	1.242	44.76383134	13340.58944
K 5+790	10.00	0.51	14.76	5.30	433.15	153.35	48515.38	Terraplén	1.163	41.93008511	13382.51953
K 5+800	10.00	0.51	13.67	5.10	438.25	142.16	48657.54	Terraplén	1.087	39.17835706	13421.69789
K 5+810	10.00	0.51	13.71	5.10	443.35	136.91	48794.44	Terraplén	1.090	39.28583862	13460.98372
K 5+820	10.00	0.54	13.03	5.25	448.60	133.69	48928.13	Terraplén	1.041	37.5362284	13498.51995
K 5+830	10.00	0.50	12.58	5.20	453.80	128.05	49056.18	Terraplén	1.010	36.40341899	13534.92337
K 5+840	10.00	0.56	10.91	5.30	459.10	117.46	49173.64	Terraplén	0.888	32.01825845	13566.94163
K 5+850	10.00	0.69	9.96	6.25	465.35	104.32	49277.96	Terraplén	0.818	29.48491211	13596.42654
K 5+860	10.00	0.66	10.59	6.75	472.10	102.75	49380.72	Terraplén	0.865	31.18571022	13627.61225
K 5+870	10.00	0.00	9.63	3.30	475.40	101.10	49481.82	Terraplén	0.793	28.59336099	13656.20561
K 5+880	10.00	0.00	8.84	0.00	475.40	92.33	49574.15	Terraplén	0.734	26.44706044	13682.65267
K 5+890	10.00	0.00	10.36	0.00	475.40	96.02	49670.17	Terraplén	0.848	30.57547769	13713.22815
K 5+900	10.00	0.00	9.67	0.00	475.40	100.17	49770.33	Terraplén	0.796	28.70793951	13741.93609
K 5+910	10.00	0.00	9.36	0.00	475.40	95.13	49865.46	Terraplén	0.773	27.85810896	13769.7942
K 5+920	10.00	0.00	9.19	0.00	475.40	92.71	49958.17	Terraplén	0.760	27.39684989	13797.19105
K 5+930	10.00	0.00	9.33	0.00	475.40	92.58	50050.76	Terraplén	0.771	27.7890052	13824.98005
K 5+940	10.00	0.00	9.69	0.00	475.40	95.08	50145.84	Terraplén	0.797	28.75374799	13853.7338
K 5+950	10.00	0.00	10.37	0.00	475.40	100.30	50246.14	Terraplén	0.849	30.59811984	13884.33192
K 5+960	10.00	0.00	11.47	0.00	475.40	109.24	50355.38	Terraplén	0.930	33.51516298	13917.84709
K 5+970	10.00	0.00	11.55	0.00	475.40	115.13	50470.50	Terraplén	0.935	33.71520708	13951.56229
K 5+980	10.00	0.00	11.76	0.00	475.40	116.57	50587.07	Terraplén	0.950	34.26961929	13985.83191
K 5+990	10.00	0.00	12.79	0.00	475.40	122.75	50709.83	Terraplén	1.024	36.92720028	14022.75911
K 6+000	10.00	0.00	12.45	0.00	475.40	126.19	50836.01	Terraplén	1.000	36.05332238	14058.81243
K 6+010	10.00	0.00	12.92	0.00	475.40	126.82	50962.83	Terraplén	1.033	37.25373852	14096.06617
K 6+020	10.00	0.00	12.64	0.00	475.40	127.75	51090.59	Terraplén	1.013	36.53451729	14132.60069
K 6+030	10.00	0.00	12.88	0.00	475.40	127.58	51218.17	Terraplén	1.031	37.16672343	14169.76741
K 6+040	10.00	0.00	10.21	0.00	475.40	115.47	51333.64	Terraplén	0.837	30.16737717	14199.93479
K 6+050	10.00	0.00	7.45	0.00	475.40	88.31	51421.94	Terraplén	0.627	22.58940873	14222.5242
K 6+060	10.00	0.01	5.25	0.05	475.45	63.52	51485.46	Terraplén	0.452	16.292349	14238.81655
K 6+070	10.00	2.45	9.64	12.30	487.75	74.49	51559.95	Terraplén	0.794	28.63920223	14267.45575
K 6+080	10.00	2.57	6.53	25.10	512.85	80.85	51640.80	Corte	0.000	0	14267.45575
K 6+090	10.00	0.13	4.06	13.50	526.35	52.92	51693.72	Terraplén	0.354	12.74878681	14280.20454
K 6+100	10.00	0.00	2.12	0.65	527.00	30.89	51724.61	Terraplén	0.189	6.800442689	14287.00498
K 6+110	10.00	0.00	3.64	0.00	527.00	28.77	51753.39	Terraplén	0.318	11.47112676	14298.47611
K 6+120	10.00	0.00	5.19	0.00	527.00	44.11	51797.50	Terraplén	0.446	16.09357086	14314.56968
K 6+130	10.00	0.00	5.33	0.00	527.00	52.58	51850.08	Terraplén	0.458	16.51565555	14331.08533
K 6+140	10.00	0.00	5.63	0.00	527.00	54.79	51904.87	Terraplén	0.482	17.38088813	14348.46622
K 6+150	10.00	0.00	6.02	0.00	527.00	58.22	51963.09	Terraplén	0.513	18.5104667	14366.97669
K 6+160	10.00	0.00	6.14	0.00	527.00	60.76	52023.85	Terraplén	0.523	18.8525682	14385.82926
K 6+170	10.00	0.00	6.42	0.00	527.00	62.80	52086.65	Terraplén	0.546	19.68016543	14405.50942
K 6+180	10.00	0.00	6.80	0.00	527.00	66.10	52152.75	Terraplén	0.575	20.74450011	14426.25392
K 6+190	10.00	0.00	8.72	0.00	527.00	77.58	52230.33	Terraplén	0.724	26.12143216	14452.37535
K 6+200	10.00	0.00	10.38	0.00	527.00	95.51	52325.84	Terraplén	0.849	30.62075882	14482.99611
K 6+210	10.00	0.00	12.07	0.00	527.00	112.25	52438.09	Terraplén	0.973	35.06473296	14518.06085
K 6+220	10.00	0.00	14.71	0.00	527.00	133.90	52571.99	Terraplén	1.159	41.80306603	14559.86391
K 6+230	10.00	0.00	17.80	0.00	527.00	162.54	52734.53	Terraplén	1.369	49.34758931	14609.2115
K 6+240	10.00	0.00	16.00	0.00	527.00	168.98	52903.51	Terraplén	1.248	44.99272569	14654.20423
K 6+250	10.00	0.00	13.45	0.00	527.00	147.25	53050.76	Terraplén	1.071	38.61835895	14692.82259
K 6+260	10.00	0.00	11.70	0.00	527.00	125.76	53176.52	Terraplén	0.946	34.11457083	14726.93716
K 6+270	10.00	0.00	9.98	0.00	527.00	108.43	53284.95	Terraplén	0.820	29.55328867	14756.49045
K 6+280	10.00	0.00	9.41	0.00	527.00	96.95	53381.90	Terraplén	0.776	27.99622673	14784.48667
K 6+290	10.00	0.00	8.60	0.00	527.00	90.04	53471.94	Terraplén	0.715	25.79513021	14810.2818
K 6+300	10.00	0.00	7.88	0.00	527.00	82.42	53554.36	Terraplén	0.660	23.79930403	14834.08111
K 6+310	10.00	0.00	7.47	0.00	527.00	76.74	53631.10	Terraplén	0.628	22.6370344	14856.71814
K 6+320	10.00	0.00	7.83	0.00	527.00	76.48	53707.58	Terraplén	0.656	23.65745277	14880.37559
K 6+330	10.00	0.00	9.17	0.00	527.00	85.00	53792.58	Terraplén	0.759	27.35065037	14907.72624
K 6+340	10.00	0.00	11.00	0.00	527.00	100.85	53893.43	Terraplén	0.895	32.2649571	14939.9912
K 6+350	10.00	0.00	16.19	0.00	527.00	135.95	54029.38	Terraplén	1.261	45.45833782	14985.44954
K 6+360	10.00	0.00	19.1	0.00	527.00	176.45	54205.83	Terraplén	1.454	52.44243633	15037.89198
K 6+370	10.00	0.00	22.1	0.00	527.00	206.00	54411.83	Terraplén	1.647	59.37534402	15097.26732
K 6+380	10.00	0.00	25.71	0.00	527.00	239.05	54650.88	Terraplén	1.869	67.39800659	15164.66533
K 6+390	10.00	0.00	29.62	0.00	527.00	276.65	54927.53	Terraplén	2.101	75.73747748	15240.4028
K 6+400	10.00	0.00	35.29	0.00	527.00	324.55	55252.08	Terraplén	2.420	87.2670124	15327.66982
K 6+410	10.00	0.00	35.9	0.00	527.00	355.95	55608.03	Terraplén	2.454	88.47141902	15416.14123
K 6+420	10.00	0.00	38.86	0.00	527.00	373.80	55981.83	Terraplén	2.613	94.22456163	15510.3658
K 6+430	10.00	0.00	37.16	0.00	527.00	380.10	56361.93	Terraplén	2.522	90.93857313	15601.30437
K 6+440	10.00	0.00	36.04	0.00	527.00	366.00	56727.93	Terraplén	2.461	88.74691139	15690.05128
K 6+450	10.00	0.00	38.73	0.00	527.00	373.85	57101.78	Terraplén	2.606	93.97497042	15784.02625
K 6+460	10.00	0.53	45.08	2.65	529.65	419.05	57520.83	Terraplén	2.936	105.8601826	15889.88643
K 6+470	10.00	0.47	34.35	5.00	534.65	397.15	57917.98	Terraplén	2.369	85.39795448	15975.28439
K 6+480	10.00	0.50	28.75	4.85	539.50	315.50	58233.48	Terraplén	2.050	73.91116549	16049.19555
K 6+490	10.00	0.52	24.44	5.10	544.60	265.95	58499.43	Terraplén	1.792	64.61303361	16113.80859
K 6+500	10.00	0.59	20.31	5.55	550.15	223.75	58723.18	Terraplén	1.533	55.26966103	16169.07825

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ABSCISA	DISTANCIA	AREA CTE	AREA RELL	VOL CTE	VOL CTE ACUM	VOL RELL	VOL RELL ACUM	SECCION	ALT APROX TER	PROT DE TALUD	ACUM PROT DE TAL
K 6+510	10.00	0.53	15.09	5.60	555.75	177.00	58900.18	Terraplén	1.186	42.74544984	16211.8237
K 6+520	10.00	0.53	13.52	5.30	561.05	143.05	59043.23	Terraplén	1.076	38.79862062	16250.62232
K 6+530	10.00	0.62	12.79	5.75	566.80	131.55	59174.78	Terraplén	1.024	36.93199408	16287.55431
K 6+540	10.00	0.37	14.29	4.95	571.75	135.40	59310.18	Terraplén	1.130	40.74562087	16328.29993
K 6+550	10.00	0.54	17.8	4.55	576.30	160.45	59470.63	Terraplén	1.369	49.35570698	16377.65564
K 6+560	10.00	0.49	14.77	5.15	581.45	162.85	59633.48	Terraplén	1.163	41.94828356	16419.60392
K 6+570	10.00	0.51	14.26	5.00	586.45	145.15	59778.63	Terraplén	1.128	40.67017568	16460.2741
K 6+580	10.00	0.52	14.23	5.15	591.60	142.45	59921.08	Terraplén	1.126	40.59469743	16500.8688
K 6+590	10.00	0.52	14	5.20	596.80	141.15	60062.23	Terraplén	1.110	40.01492805	16540.88373
K 6+600	10.00	0.64	13.2	5.80	602.60	136.00	60198.23	Terraplén	1.053	37.98290259	16578.86663
K 6+610	10.00	0.59	11.57	6.15	608.75	123.85	60322.08	Terraplén	0.936	33.76540236	16612.63203
K 6+620	10.00	0.76	11.19	6.75	615.50	113.80	60435.88	Terraplén	0.909	32.76662739	16645.39866
K 6+630	10.00	0.49	11.29	6.25	621.75	112.40	60548.28	Terraplén	0.916	33.03005038	16678.42871
K 6+640	10.00	0.49	11.98	4.90	626.65	116.35	60664.63	Terraplén	0.966	34.83630618	16713.26501
K 6+650	10.00	0.53	13.99	5.10	631.75	129.85	60794.48	Terraplén	1.109	39.98967625	16753.25469
K 6+660	10.00	0.54	16.79	5.35	637.10	153.90	60948.38	Terraplén	1.301	46.92071959	16800.17541
K 6+670	10.00	0.56	19.17	5.50	642.60	179.80	61128.18	Terraplén	1.459	52.60717732	16852.78259
K 6+680	10.00	0.66	23.57	6.10	648.70	213.70	61341.88	Terraplén	1.738	62.68217799	16915.46477
K 6+690	10.00	0.49	20.6	5.75	654.45	220.85	61562.73	Terraplén	1.552	55.94092894	16971.40569
K 6+700	10.00	0.50	18.68	4.95	659.40	196.40	61759.13	Terraplén	1.427	51.450877	17022.85657
K 6+710	10.00	0.53	18	5.15	664.55	183.40	61942.53	Terraplén	1.382	49.8340065	17072.69058
K 6+720	10.00	0.52	18.77	5.25	669.80	183.85	62126.38	Terraplén	1.433	51.66380563	17124.35438
K 6+730	10.00	0.56	18.15	5.40	675.20	184.60	62310.98	Terraplén	1.392	50.19190532	17174.54629
K 6+740	10.00	0.53	16.21	5.45	680.65	171.80	62482.78	Terraplén	1.262	45.50727841	17220.05357
K 6+750	10.00	0.62	12.94	5.75	686.40	145.75	62628.53	Terraplén	1.035	37.31723124	17257.3708
K 6+760	10.00	0.66	10.29	6.40	692.80	116.15	62744.68	Terraplén	0.842	30.37654377	17287.74734
K 6+770	10.00	0.61	8.23	6.35	699.15	92.60	62837.28	Terraplén	0.687	24.76846486	17312.51581
K 6+780	10.00	0.52	8.04	5.65	704.80	81.35	62918.63	Terraplén	0.672	24.24105012	17336.75686
K 6+790	10.00	0.52	8.21	5.20	710.00	81.25	62999.88	Terraplén	0.685	24.71303132	17361.46989
K 6+800	10.00	0.53	9.3	5.25	715.25	87.55	63087.43	Terraplén	0.768	27.70604111	17389.17593
K 6+810	10.00	0.57	9.95	5.50	720.75	96.25	63183.68	Terraplén	0.817	29.46439348	17418.64032
K 6+820	10.00	0.53	10.5	5.50	726.25	102.25	63285.93	Terraplén	0.858	30.93737352	17449.5777
K 6+830	10.00	0.51	10.9	5.20	731.45	107.00	63392.93	Terraplén	0.888	32.00030222	17481.578
K 6+840	10.00	0.54	12.18	5.25	736.70	115.40	63508.33	Terraplén	0.981	35.35620571	17516.93421
K 6+850	10.00	0.55	13.13	5.45	742.15	126.55	63634.88	Terraplén	1.048	37.8039407	17554.73815
K 6+860	10.00	0.52	14.18	5.35	747.50	136.55	63771.43	Terraplén	1.122	40.46882678	17595.20697
K 6+870	10.00	0.52	15.14	5.20	752.70	146.60	63918.03	Terraplén	1.189	42.86967806	17638.07665
K 6+880	10.00	0.52	15.84	5.20	757.90	154.90	64072.93	Terraplén	1.237	44.59967695	17682.67633
K 6+890	10.00	0.52	16.45	5.20	763.10	161.45	64234.38	Terraplén	1.278	46.09351421	17728.76984
K 6+900	10.00	0.48	18.8	5.00	768.10	176.25	64410.63	Terraplén	1.435	51.73472689	17780.50457
K 6+910	10.00	0.48	19.74	4.80	772.90	192.70	64603.33	Terraplén	1.496	53.94319489	17834.44776
K 6+920	10.00	0.49	18.24	4.85	777.75	189.90	64793.23	Terraplén	1.398	50.4063068	17884.85407
K 6+930	10.00	0.27	19.08	3.80	781.55	186.60	64979.83	Terraplén	1.453	52.39534039	17937.24941
K 6+940	10.00	1.06	20.68	6.65	788.20	198.80	65178.63	Terraplén	1.557	56.12568389	17993.37509
K 6+950	10.00	0.54	18.27	8.00	796.20	194.75	65373.38	Terraplén	1.400	50.47771786	18043.85281
K 6+960	10.00	0.52	17.53	5.30	801.50	179.00	65552.38	Terraplén	1.351	48.70799008	18092.5608
K 6+970	10.00	0.52	18.78	5.20	806.70	181.55	65733.93	Terraplén	1.434	51.6874491	18144.24825
K 6+980	10.00	0.55	21.87	5.35	812.05	203.25	65937.18	Terraplén	1.632	58.8527538	18203.10101
K 6+990	10.00	0.82	22.77	6.85	818.90	223.20	66160.38	Terraplén	1.689	60.88958608	18263.99059
K 7+000	10.00	0.66	26.43	7.40	826.30	246.00	66406.38	Terraplén	1.913	68.9597129	18332.9503
K 7+010	10.00	0.68	26.24	6.70	833.00	263.35	66669.73	Terraplén	1.901	68.54877947	18401.49908
K 7+020	10.00	0.68	29.24	6.80	839.80	277.40	66947.13	Terraplén	2.079	74.94176431	18476.44085
K 7+030	10.00	0.00	25.52	3.40	843.20	273.80	67220.93	Terraplén	1.858	66.98384156	18543.42469
K 7+040	10.00	0.00	23.8	0.00	843.20	246.60	67467.53	Terraplén	1.753	63.19449513	18606.61918
K 7+050	10.00	0.00	21.83	0.00	843.20	228.15	67695.68	Terraplén	1.630	58.7617221	18665.38091
K 7+060	10.00	0.00	19.58	0.00	843.20	207.05	67902.73	Terraplén	1.486	53.56914555	18718.95005
K 7+070	10.00	0.00	16.91	0.00	843.20	182.45	68085.18	Terraplén	1.309	47.21176079	18766.16181
K 7+080	10.00	0.00	14.96	0.00	843.20	159.35	68244.53	Terraplén	1.177	42.42204145	18808.58385
K 7+090	10.00	0.00	13.91	0.00	843.20	144.35	68388.88	Terraplén	1.104	39.78752791	18848.37138
K 7+100	10.00	0.00	13.27	0.00	843.20	135.90	68524.78	Terraplén	1.058	38.16167583	18886.53306
K 7+110	10.00	0.00	12.61	0.00	843.20	129.40	68654.18	Terraplén	1.011	36.46854393	18923.0016
K 7+120	10.00	0.00	11.19	0.00	843.20	119.00	68773.18	Terraplén	0.909	32.76662739	18955.76823
K 7+130	10.00	0.00	10.3	0.00	843.20	107.45	68880.63	Terraplén	0.843	30.40329398	18986.17152
K 7+140	10.00	0.00	9.76	0.00	843.20	100.30	68980.93	Terraplén	0.803	28.95240536	19015.12393
K 7+150	10.00	0.00	9.7	0.00	843.20	97.30	69078.23	Terraplén	0.799	28.79038536	19043.91431
K 7+160	10.00	0.00	9.94	0.00	843.20	98.20	69176.43	Terraplén	0.816	29.43748732	19073.3518
K 7+170	10.00	0.00	10.53	0.00	843.20	102.35	69278.78	Terraplén	0.860	31.01733417	19104.36914
K 7+180	10.00	0.00	11.21	0.00	843.20	108.70	69387.48	Terraplén	0.910	32.81934575	19137.18848
K 7+190	10.00	0.00	12.23	0.00	843.20	117.20	69504.68	Terraplén	0.984	35.48592782	19172.67441
K 7+200	10.00	0.00	14.55	0.00	843.20	133.90	69638.58	Terraplén	1.148	41.39810099	19214.07251
K 7+210	10.00	0.00	16.08	0.00	843.20	153.15	69791.73	Terraplén	1.253	45.18892236	19259.26143
K 7+220	10.00	0.00	18.12	0.00	843.20	171.00	69962.73	Terraplén	1.390	50.12038194	19309.38181
K 7+230	10.00	0.00	19.96	0.00	843.20	190.40	70153.13	Terraplén	1.510	54.45628489	19363.8381
K 7+240	10.00	0.00	20.33	0.00	843.20	201.45	70354.58	Terraplén	1.534	55.31603277	19419.15413
K 7+250	10.00	0.00	21.02	0.00	843.20	206.75	70561.33	Terraplén	1.578	56.90887235	19476.063
K 7+260	10.00	0.00	23.03	0.00	843.20	220.25	70781.58	Terraplén	1.705	61.47400399	19537.53701
K 7+270	10.00	0.00	24.75	0.00	843.20	238.90	71020.48	Terraplén	1.811	65.29646427	19602.83347
K 7+280	10.00	0.00	22.26	0.00	843.20	235.05	71255.53	Terraplén	1.657	59.73804323	19662.57152
K 7+290	10.00	0.00	14.06	0.00	843.20	181.60	71437.13	Terraplén	1.114	40.1663609	19702.73788
K 7+300	10.00	0.00	9.78	0.00	843.20	119.20	71556.33	Terraplén	0.804	29.0063757	19731.74425
K 7+310	10.00	0.00	6.6	0.00	843.20	81.90	71638.23	Terraplén	0.560	20.18423558	19751.92849
K 7+320	10.00	0.00	4.13	0.00	843.20	53.65	71691.88	Terraplén	0.359	12.96080167	19764.88929
K 7+330	10.00	0.00	3.23	0.00	843.20	36.80	71728.68	Terraplén	0.284	10.23737046	19775.12666
K 7+340	10.00	0.02	4.04	0.10	843.30	36.35	71765.03	Terraplén	0.352	12.69077169	19787.81743
K 7+350	10.00	0.00	4.83	0.10	843.40	44.35	71809.38	Terraplén	0.417	15.04406269	19802.8615
K 7+360	10.00	0.00	5.98	0.00	843.40	54.05	71863.43	Terraplén	0.510	18.4037672	19821.26526
K 7+370	10.00	0.00	7.34	0.00	843.40	66.60	71930.03	Terraplén	0.618	22.28234631	19843.54761
K 7+380	10.00	0.00	8.79	0.00	843.40	80.65	72010.68	Terraplén	0.730	26.31270386	19869.86031
K 7+390	10.00	0.00	10.22	0.00	843.40	95.05	72105.73	Terraplén	0.837	30.18916851	19900.04948
K 7+400	10.00	0.00	10.3	0.00	843.40	102.60	72208.33	Terraplén	0.843	30.40329398	19930.45277
K 7+410	10.00	0.00	14.24	0.00	843.40	122.70	72331.03	Terraplén	1.127	40.61986052	19971.07264
K 7+420	10.00	0.00	17.72	0.00	843.40	159.80	72490.83	Terraplén	1.364	49.16403282	20020.23667
K 7+430	10.00	0.00	21.4	0.00	843.40	195.60	72686.43	Terraplén	1.603	57.78036783	20078.01704
K 7+440	10.00	0.00	26.79	0.00	843.40	240.95	72927.38	Terraplén	1.934	69.73602352	20147.75306

Consorcio Vías Colombia 055	MEMORIA DE CALCULO DE CANTIDADES DEL APU	
ENTIDAD:	INSTITUTO NACIONAL DE VIAS	
NOMBRE DEL PROYECTO:	MEJORAMIENTO, MANTENIMIENTO, GESTIÓN PREDIAL, SOCIAL Y AMBIENTAL SOSTENIBLE DE LA CARRETERA VILLAGARZON - SAN JOSE DEL FRAGUA Y PUENTE SOBRE EL RIO CAQUETA EN LOS DEPARTAMENTOS DE PUTUMAYO, CAUCA Y CAQUETA EN MARCO DE LA REACTIVACIÓN ECONÓMICA, MEDIANTE EL PROGRAMA VIAS PARA LA CONEXION DE TERRITORIOS, EL CRECIMIENTO SOSTENIBLE Y LA REACTIVACIÓN 2.0	

ABSCISA	DISTANCIA	AREA CTE	AREA RELL	VOL CTE	VOL CTE ACUM	VOL RELL	VOL RELL ACUM	SECCION	ALT APROX TER	PROT DE TALUD	ACUM PROT DE TAL
K 7+450	10.00	0.00	27.93	0.00	843.40	273.60	73200.98	Terraplén	2.002	72.17483058	20219.92789
K 7+460	10.00	0.00	22.89	0.00	843.40	254.10	73455.08	Terraplén	1.696	61.1595376	20281.08743
K 7+470	10.00	0.00	19.05	0.00	843.40	209.70	73664.78	Terraplén	1.451	52.32467386	20333.4121
K 7+480	10.00	0.00	14.93	0.00	843.40	169.90	73834.68	Terraplén	1.175	42.34732335	20375.75942
K 7+490	10.00	0.00	12.51	0.00	843.40	137.20	73971.88	Terraplén	1.004	36.21051857	20411.96994
K 7+500	10.00	0.00	10.2	0.00	843.40	113.55	74085.43	Terraplén	0.836	30.13559285	20442.10554
K 7+510	10.00	0.00	9.51	0.00	843.40	98.55	74183.98	Terraplén	0.784	28.27623884	20470.38178
K 7+520	10.00	0.00	9.49	0.00	843.40	95.00	74278.98	Terraplén	0.783	28.22202194	20498.6038
K 7+530	10.00	0.00	9.43	0.00	843.40	94.60	74373.58	Terraplén	0.778	28.05926077	20526.66306
K 7+540	10.00	0.00	8.09	0.00	843.40	87.60	74461.18	Terraplén	0.676	24.38001637	20551.04307
K 7+550	10.00	0.00	9.7	0.00	843.40	88.95	74550.13	Terraplén	0.799	28.79038536	20579.83346
K 7+560	10.00	0.00	10.64	0.00	843.40	101.70	74651.83	Terraplén	0.868	31.31018744	20611.14365
K 7+570	10.00	0.00	12.29	0.00	843.40	114.65	74766.48	Terraplén	0.989	35.64146155	20646.78511
K 7+580	10.00	0.00	14.02	0.00	843.40	131.55	74898.03	Terraplén	1.111	40.06542051	20686.85053
K 7+590	10.00	0.00	10.1	0.00	843.40	120.60	75018.63	Terraplén	0.828	29.86744791	20716.71798
K 7+600	10.00	0.00	8.19	0.00	843.40	91.45	75110.08	Terraplén	0.684	24.65757811	20741.37556
K 7+610	10.00	0.00	7.32	0.00	843.40	77.55	75187.63	Terraplén	0.616	22.22601687	20763.60157
K 7+620	10.00	0.00	6.96	0.00	843.40	71.40	75259.03	Terraplén	0.588	21.20853642	20784.81011
K 7+630	10.00	0.00	6.61	0.00	843.40	67.85	75326.88	Terraplén	0.561	20.2127817	20805.02289
K 7+640	10.00	0.00	6.34	0.00	843.40	64.75	75391.63	Terraplén	0.539	19.44014281	20824.46303
K 7+650	10.00	0.00	6.28	0.00	843.40	63.10	75454.73	Terraplén	0.534	19.26790793	20843.73094
K 7+660	10.00	0.00	6.53	0.00	843.40	64.05	75518.78	Terraplén	0.554	19.98426222	20863.7152
K 7+670	10.00	0.00	6.13	0.00	843.40	63.30	75582.08	Terraplén	0.522	18.83645803	20882.55166
K 7+680	10.00	0.00	6.95	0.00	843.40	65.40	75647.48	Terraplén	0.587	21.18017634	20903.73184
K 7+690	10.00	0.00	7.74	0.00	843.40	73.45	75720.93	Terraplén	0.649	23.40463634	20927.13647
K 7+700	10.00	0.00	8.05	0.00	843.40	78.95	75799.88	Terraplén	0.673	24.26885328	20951.40533
K 7+710	10.00	0.00	8.24	0.00	843.40	81.45	75881.33	Terraplén	0.688	24.79617426	20976.2015
K 7+720	10.00	0.00	9.09	0.00	843.40	86.65	75967.98	Terraplén	0.753	27.13379519	21003.3353
K 7+730	10.00	0.00	9.32	0.00	843.40	92.05	76060.03	Terraplén	0.770	27.76043355	21031.09573
K 7+740	10.00	0.00	9.56	0.00	843.40	94.40	76154.43	Terraplén	0.788	28.41170072	21059.50743
K 7+750	10.00	0.55	9.99	2.75	846.15	97.75	76252.18	Terraplén	0.820	29.57197322	21089.0794
K 7+760	10.00	0.55	10.57	5.50	851.65	102.80	76354.98	Terraplén	0.863	31.12388725	21120.20329
K 7+770	10.00	0.51	10.65	5.30	856.95	106.10	76461.08	Terraplén	0.869	31.33678436	21151.54008
K 7+780	10.00	0.43	8.94	4.70	861.65	97.95	76559.03	Terraplén	0.741	26.7237818	21178.26386
K 7+790	10.00	0.44	8.97	4.35	866.00	89.55	76648.58	Terraplén	0.743	26.80586938	21205.06973
K 7+800	10.00	0.45	9.42	4.45	870.45	91.95	76740.53	Terraplén	0.777	28.03211777	21233.10184
K 7+810	10.00	0.51	10.25	4.80	875.25	98.35	76838.88	Terraplén	0.840	30.26949875	21263.37134
K 7+820	10.00	0.52	11.35	5.15	880.40	108.00	76946.88	Terraplén	0.920	33.18790204	21296.55925
K 7+830	10.00	0.56	13.7	5.40	885.80	125.25	77072.13	Terraplén	1.089	39.25575059	21335.815
K 7+840	10.00	0.51	13.5	5.35	891.15	136.00	77208.13	Terraplén	1.075	38.74775267	21374.56275
K 7+850	10.00	0.61	19.47	5.60	896.75	164.85	77372.98	Terraplén	1.479	53.31154772	21427.8743
K 7+860	10.00	0.00	13.57	3.05	899.80	165.20	77538.18	Terraplén	1.080	38.92572409	21466.80002
K 7+870	10.00	0.00	13.22	0.00	899.80	133.95	77672.13	Terraplén	1.055	38.03399988	21504.83402
K 7+880	10.00	0.00	13.99	0.00	899.80	136.05	77808.18	Terraplén	1.109	39.98967625	21544.8237
K 7+890	10.00	0.00	13.47	0.00	899.80	137.30	77945.48	Terraplén	1.073	38.67142227	21583.49512
K 7+900	10.00	0.00	12.2	0.00	899.80	128.35	78073.83	Terraplén	0.982	35.40810664	21618.90323
K 7+910	10.00	0.00	12.87	0.00	899.80	125.35	78199.18	Terraplén	1.030	37.13756335	21656.04079
K 7+920	10.00	0.00	13.31	0.00	899.80	130.90	78330.08	Terraplén	1.061	38.26374749	21694.30454
K 7+930	10.00	0.00	15.13	0.00	899.80	142.20	78472.28	Terraplén	1.188	42.8448395	21737.14938
K 7+940	10.00	0.00	17.06	0.00	899.80	160.95	78633.23	Terraplén	1.319	47.5748975	21784.72427
K 7+950	10.00	0.00	19.04	0.00	899.80	180.50	78813.73	Terraplén	1.451	52.30111232	21837.02539
K 7+960	10.00	0.00	20.56	0.00	899.80	198.00	79011.73	Terraplén	1.549	55.84848318	21892.87387
K 7+970	10.00	0.00	21.41	0.00	899.80	209.85	79221.58	Terraplén	1.603	57.80324777	21950.67712
K 7+980	10.00	0.00	23.35	0.00	899.80	223.80	79445.38	Terraplén	1.725	62.19086819	22012.86798
K 7+990	10.00	0.00	23.48	0.00	899.80	234.15	79679.53	Terraplén	1.733	62.48133794	22075.34932
K 8+000	10.00	0.00	27.24	0.00	899.80	253.60	79933.13	Terraplén	1.961	70.70222268	22146.05155
K 8+010	10.00	0.00	30.99	0.00	899.80	291.15	80224.28	Terraplén	2.179	78.58122654	22224.63277
K 8+020	10.00	0.00	41.41	0.00	899.80	362.00	80586.28	Terraplén	2.748	99.06579125	22323.69856
K 8+030	10.00	0.00	41.02	0.00	899.80	412.15	80998.43	Terraplén	2.727	98.33197059	22422.03053
K 8+040	10.00	0.00	37.87	0.00	899.80	394.45	81392.88	Terraplén	2.560	92.31682081	22514.34735
K 8+050	10.00	0.00	37.93	0.00	899.80	379.00	81771.88	Terraplén	2.564	92.4329039	22606.78026
K 8+060	10.00	0.00	35.79	0.00	899.80	368.60	82140.48	Terraplén	2.448	88.25471856	22695.03498
K 8+070	10.00	0.00	31.19	0.00	899.80	334.90	82475.38	Terraplén	2.191	78.9931603	22774.02814
K 8+080	10.00	0.00	26.31	0.00	899.80	287.50	82762.88	Terraplén	1.905	68.70027408	22842.72841
K 8+090	10.00	0.00	23.89	0.00	899.80	251.00	83013.88	Terraplén	1.758	63.39460065	22906.12301
K 8+100	10.00	0.00	20.24	0.00	899.80	220.65	83234.53	Terraplén	1.528	55.10726927	22961.23028
K 8+110	10.00	0.00	16.3	0.00	899.80	182.70	83417.23	Terraplén	1.268	45.72734395	23006.95763
K 8+120	10.00	0.00	16.05	0.00	899.80	161.75	83578.98	Terraplén	1.251	45.11537413	23052.073
K 8+130	10.00	0.00	14.67	0.00	899.80	153.60	83732.58	Terraplén	1.157	41.6984171	23093.77142
K 8+140	10.00	0.00	13.73	0.00	899.80	142.00	83874.58	Terraplén	1.091	39.33182007	23133.10324
K 8+150	10.00	0.00	12.87	0.00	899.80	133.00	84007.58	Terraplén	1.030	37.13756335	23170.2408
K 8+160	10.00	0.00	11.89	0.00	899.80	123.80	84131.38	Terraplén	0.960	34.60182083	23204.84262
K 8+170	10.00	0.00	10.45	0.00	899.80	111.70	84243.08	Terraplén	0.854	30.80401829	23235.64664
K 8+180	10.00	0.00	12.62	0.00	899.80	115.35	84358.43	Terraplén	1.012	36.49432468	23272.14096
K 8+190	10.00	0.00	14.16	0.00	899.80	133.90	84492.33	Terraplén	1.121	40.41845274	23312.55942
K 8+200	10.00	0.00	15.33	0.00	899.80	147.45	84639.78	Terraplén	1.202	43.34094077	23355.90036
K 8+210	10.00	0.00	17.18	0.00	899.80	162.55	84802.33	Terraplén	1.328	47.86487782	23403.76524
K 8+220	10.00	0.00	14.56	0.00	899.80	158.70	84961.03	Terraplén	1.149	41.42314724	23445.18838
K 8+230	10.00	0.00	15.18	0.00	899.80	148.70	85109.73	Terraplén	1.192	42.96899699	23488.15738
K 8+240	10.00	0.00	15.54	0.00	899.80	153.60	85263.33	Terraplén	1.216	43.8603375	23532.01772
K 8+250	10.00	0.00	16.48	0.00	899.80	160.10	85423.43	Terraplén	1.280	46.16665776	23578.18437
K 8+260	10.00	0.00	17.51	0.00	899.80	169.95	85593.38	Terraplén	1.350	48.65991846	23626.84429
K 8+270	10.00	0.00	18.56	0.00	899.80	180.35	85773.73	Terraplén	1.419	51.16658628	23678.01088
K 8+280	10.00	0.00	19.8	0.00	899.80	191.80	85965.53	Terraplén	1.500	54.08326913	23732.09415
K 8+290	10.00	0.00	23.28	0.00	899.80	215.40	86180.93	Terraplén	1.721	62.03428092	23794.12843
K 8+300	10.00	0.00	20.41	0.00	899.80	218.45	86399.38	Terraplén	1.539	55.50140477	23849.62983
K 8+310	10.00	0.00	19.22	0.00	899.80	198.15	86597.53	Terraplén	1.462	52.7247593	23902.35459
K 8+320	10.00	0.00	18.86	0.00	899.80	190.40	86787.93	Terraplén	1.439	51.87648716	23954.23108
K 8+330	10.00	0.00	18.92	0.00	899.80	188.90	86976.83	Terraplén	1.443	52.01813798	24006.24922
K 8+340	10.00	0.00	19.91	0.00	899.80	194.15	87170.98	Terraplén	1.507	54.33979785	24060.58902
K 8+350	10.00	0.00	21.03	0.00	899.80	204.70	87375.68	Terraplén	1.579	56.93185805	24117.52087
K 8+360	10.00	0.00	22.26	0.00	899.80	216.45	87592.13	Terraplén	1.657	59.73804323	24177.25892
K 8+370	10.00	0.00	23.57	0.00	899.80	229.15	87821.28	Terraplén	1.738	62.68217799	24239.9411
K 8+380	10.00	0.00	27.13	0.00	899.80	253.50	88074.78	Terraplén	1.954	70.46646729	24310.40756

Consorcio Vías Colombia 055	MEMORIA DE CALCULO DE CANTIDADES DEL APU	
ENTIDAD:	INSTITUTO NACIONAL DE VIAS	
NOMBRE DEL PROYECTO:	MEJORAMIENTO, MANTENIMIENTO, GESTIÓN PREDIAL, SOCIAL Y AMBIENTAL SOSTENIBLE DE LA CARRETERA VILLAGARZON - SAN JOSE DEL FRAGUA Y PUENTE SOBRE EL RIO CAQUETA EN LOS DEPARTAMENTOS DE PUTUMAYO, CAUCA Y CAQUETA EN MARCO DE LA REACTIVACIÓN ECONÓMICA, MEDIANTE EL PROGRAMA VIAS PARA LA CONEXION DE TERRITORIOS, EL CRECIMIENTO SOSTENIBLE Y LA REACTIVACIÓN 2.0	

ABSCISA	DISTANCIA	AREA CTE	AREA RELL	VOL CTE	VOL CTE ACUM	VOL RELL	VOL RELL ACUM	SECCION	ALT APROX TER	PROT DE TALUD	ACUM PROT DE TAL
K 8+390	10.00	0.66	26.9	3.30	903.10	270.15	88344.93	Terraplén	1.941	69.97263321	24380.3802
K 8+400	10.00	0.61	26.59	6.35	909.45	267.45	88612.38	Terraplén	1.922	69.30511017	24449.68531
K 8+410	10.00	0.53	23.59	5.70	915.15	250.90	88863.28	Terraplén	1.740	62.72678092	24512.41209
K 8+420	10.00	0.56	21.75	5.45	920.60	226.70	89089.98	Terraplén	1.625	58.57952798	24570.99162
K 8+430	10.00	0.53	19.46	5.45	926.05	206.05	89296.03	Terraplén	1.478	53.28811194	24624.27973
K 8+440	10.00	0.54	17.66	5.35	931.40	185.60	89481.63	Terraplén	1.360	49.02014371	24673.29987
K 8+450	10.00	0.53	16.34	5.35	936.75	170.00	89651.63	Terraplén	1.271	45.82506325	24719.12493
K 8+460	10.00	0.60	16.32	5.65	942.40	163.30	89814.93	Terraplén	1.270	45.77621033	24764.90114
K 8+470	10.00	0.57	16.2	5.85	948.25	162.60	89977.53	Terraplén	1.261	45.48280981	24810.38395
K 8+480	10.00	0.54	16.03	5.55	953.80	161.15	90138.68	Terraplén	1.250	45.06632497	24855.45028
K 8+490	10.00	0.58	15.6	5.60	959.40	158.15	90296.83	Terraplén	1.221	44.00845441	24899.45873
K 8+500	10.00	0.63	15.57	6.05	965.45	155.85	90452.68	Terraplén	1.219	43.93441158	24943.39315
K 8+510	10.00	0.62	15.24	6.25	971.70	154.05	90606.73	Terraplén	1.196	43.11786952	24986.51101
K 8+520	10.00	0.59	14.02	6.05	977.75	146.30	90753.03	Terraplén	1.111	40.06542051	25026.57644
K 8+530	10.00	0.52	15.47	5.55	983.30	147.45	90900.48	Terraplén	1.212	43.68737626	25070.26381
K 8+540	10.00	0.55	16.65	5.35	988.65	160.60	91061.08	Terraplén	1.292	46.58057069	25116.84438
K 8+550	10.00	0.44	17.63	4.95	993.60	171.40	91232.48	Terraplén	1.358	48.94815616	25165.79254
K 8+560	10.00	0.59	17.54	5.15	998.75	175.85	91408.33	Terraplén	1.352	48.73202108	25214.52456
K 8+570	10.00	0.60	18.97	5.95	1004.70	182.55	91590.88	Terraplén	1.446	52.13609692	25266.66066
K 8+580	10.00	0.56	18.8	5.80	1010.50	188.85	91779.73	Terraplén	1.435	51.73472689	25318.39538
K 8+590	10.00	0.58	19.88	5.70	1016.20	193.40	91973.13	Terraplén	1.505	54.26987058	25372.66525
K 8+600	10.00	0.60	20.06	5.90	1022.10	199.70	92172.83	Terraplén	1.517	54.68904045	25427.35429
K 8+610	10.00	0.55	20.51	5.75	1027.85	202.85	92375.68	Terraplén	1.546	55.73286183	25483.08716
K 8+620	10.00	0.56	22.29	5.55	1033.40	214.00	92589.68	Terraplén	1.659	59.80597282	25542.89313
K 8+630	10.00	0.00	19.85	2.80	1036.20	210.70	92800.38	Terraplén	1.503	54.199917	25597.09305
K 8+640	10.00	0.00	19.19	0.00	1036.20	195.20	92995.58	Terraplén	1.460	52.65421911	25649.74727
K 8+650	10.00	0.00	18.84	0.00	1036.20	190.15	93185.73	Terraplén	1.437	51.82924591	25701.57651
K 8+660	10.00	0.00	18.51	0.00	1036.20	186.75	93372.48	Terraplén	1.416	51.04800122	25752.62451
K 8+670	10.00	0.00	17.03	0.00	1036.20	177.70	93550.18	Terraplén	1.317	47.50232906	25800.12684
K 8+680	10.00	0.00	16.35	0.00	1036.20	166.90	93717.08	Terraplén	1.272	45.84948466	25845.97633
K 8+690	10.00	0.00	16.57	0.00	1036.20	164.60	93881.68	Terraplén	1.287	46.38590804	25892.36223
K 8+700	10.00	0.00	16.9	0.00	1036.20	167.35	94049.03	Terraplén	1.309	47.18752545	25939.54976
K 8+710	10.00	0.00	19.15	0.00	1036.20	180.25	94229.28	Terraplén	1.458	52.5601235	25992.10988
K 8+720	10.00	0.00	20.43	0.00	1036.20	197.90	94427.18	Terraplén	1.541	55.54771908	26047.6576
K 8+730	10.00	0.00	21.28	0.00	1036.20	208.55	94635.73	Terraplén	1.595	57.50559262	26105.16319
K 8+740	10.00	0.00	22.12	0.00	1036.20	217.00	94852.73	Terraplén	1.648	59.42071908	26164.58391
K 8+750	10.00	0.00	22.08	0.00	1036.20	221.00	95073.73	Terraplén	1.646	59.32995817	26223.91387
K 8+760	10.00	0.00	24.74	0.00	1036.20	234.10	95307.83	Terraplén	1.810	65.27445515	26289.18833
K 8+770	10.00	0.00	24.34	0.00	1036.20	245.40	95553.23	Terraplén	1.786	64.39206375	26353.58039
K 8+780	10.00	0.00	14.62	0.00	1036.20	194.80	95748.03	Terraplén	1.153	41.57334868	26395.15374
K 8+790	10.00	0.00	12.62	0.00	1036.20	136.20	95884.23	Terraplén	1.012	36.49432468	26431.64806
K 8+800	10.00	0.00	10.61	0.00	1036.20	116.15	96000.38	Terraplén	0.866	31.2303706	26462.87843
K 8+810	10.00	0.00	8.25	0.00	1036.20	94.30	96094.68	Terraplén	0.688	24.82387876	26487.70231
K 8+820	10.00	0.00	6.4	0.00	1036.20	73.25	96167.93	Terraplén	0.544	19.61218151	26507.3145
K 8+830	10.00	0.00	4.9	0.00	1036.20	56.50	96224.43	Terraplén	0.423	15.25076338	26522.56526
K 8+840	10.00	0.00	4.07	0.00	1036.20	44.85	96269.28	Terraplén	0.354	12.78083779	26535.3461
K 8+850	10.00	0.15	3.67	0.75	1036.95	38.70	96307.98	Terraplén	0.321	11.57529807	26546.92139
K 8+860	10.00	0.79	3.75	4.70	1041.65	37.10	96345.08	Terraplén	0.328	11.81721668	26558.73861
K 8+870	10.00	0.01	4.11	4.00	1045.65	39.30	96384.38	Terraplén	0.358	12.90083861	26571.63945
K 8+880	10.00	0.00	5.06	0.05	1045.70	45.85	96430.23	Terraplén	0.436	15.7221331	26587.36158
K 8+890	10.00	0.00	4.91	0.00	1045.70	49.85	96480.08	Terraplén	0.424	15.2802683	26602.64185
K 8+900	10.00	0.00	5.31	0.00	1045.70	51.10	96531.18	Terraplén	0.456	16.455644	26619.0975
K 8+910	10.00	0.00	5.54	0.00	1045.70	54.25	96585.43	Terraplén	0.475	17.12727905	26636.22477
K 8+920	10.00	0.00	8.15	0.00	1045.70	68.45	96653.88	Terraplén	0.681	24.54661262	26660.77139
K 8+930	10.00	0.00	9.97	0.00	1045.70	90.60	96744.48	Terraplén	0.819	29.51819233	26690.28958
K 8+940	10.00	0.00	11.89	0.00	1045.70	109.30	96853.78	Terraplén	0.960	34.60182083	26724.8914
K 8+950	10.00	0.00	14.25	0.00	1045.70	130.70	96984.48	Terraplén	1.127	40.64501994	26765.53642
K 8+960	10.00	0.00	18.54	0.00	1045.70	163.95	97148.43	Terraplén	1.418	51.11916149	26816.65558
K 8+970	10.00	0.00	23.09	0.00	1045.70	208.15	97356.58	Terraplén	1.709	61.60861863	26878.2642
K 8+980	10.00	0.00	27.82	0.00	1045.70	254.55	97611.13	Terraplén	1.995	71.94078086	26950.20498
K 8+990	10.00	0.00	32.53	0.00	1045.70	301.75	97912.88	Terraplén	2.267	81.73259979	27031.93758
K 9+000	10.00	0.00	39.78	0.00	1045.70	361.55	98274.43	Terraplén	2.662	95.98307659	27127.92066
K 9+010	10.00	0.00	44.46	0.00	1045.70	421.20	98695.63	Terraplén	2.905	104.726069	27232.64673
K 9+020	10.00	0.00	50.01	0.00	1045.70	472.35	99167.98	Terraplén	3.181	114.6924251	27347.33915
K 9+030	10.00	0.00	45.57	0.00	1045.70	477.90	99645.88	Terraplén	2.961	106.7526805	27454.09183
K 9+040	10.00	0.00	39.87	0.00	1045.70	427.20	100073.08	Terraplén	2.667	96.15437614	27550.24621
K 9+050	10.00	0.00	31.05	0.00	1045.70	354.60	100427.68	Terraplén	2.183	78.70489139	27628.9511
K 9+060	10.00	0.00	23.8	0.00	1045.70	274.25	100701.93	Terraplén	1.753	63.19449513	27692.14559
K 9+070	10.00	0.00	22.69	0.00	1045.70	232.45	100934.38	Terraplén	1.684	60.70940788	27752.855
K 9+080	10.00	0.00	17.09	0.00	1045.70	198.90	101133.28	Terraplén	1.322	47.64743656	27800.50244
K 9+090	10.00	0.00	12.93	0.00	1045.70	150.10	101283.38	Terraplén	1.034	37.2915761	27837.79401
K 9+100	10.00	0.00	10.83	0.00	1045.70	118.80	101402.18	Terraplén	0.882	31.81478878	27869.6088
K 9+110	10.00	0.00	7.25	0.00	1045.70	90.40	101492.58	Terraplén	0.611	22.02870121	27891.6375
K 9+120	10.00	0.00	7.54	0.00	1045.70	73.95	101566.53	Terraplén	0.634	22.84451072	27914.48202
K 9+130	10.00	0.00	6.57	0.00	1045.70	70.55	101637.08	Terraplén	0.557	20.09856499	27934.58058
K 9+140	10.00	0.00	6.18	0.00	1045.70	63.75	101700.83	Terraplén	0.526	18.98041202	27953.56099
K 9+150	10.00	0.00	5.44	0.00	1045.70	58.10	101758.93	Terraplén	0.467	16.83563722	27970.39663
K 9+160	10.00	0.00	5.12	0.00	1045.70	52.80	101811.73	Terraplén	0.441	15.89850838	27986.29514
K 9+170	10.00	0.00	4.75	0.00	1045.70	49.35	101861.08	Terraplén	0.411	14.807476	28001.10261
K 9+180	10.00	0.00	4.79	0.00	1045.70	47.70	101908.78	Terraplén	0.414	14.9258171	28016.02843
K 9+190	10.00	0.00	4.85	0.00	1045.70	48.20	101956.98	Terraplén	0.419	15.10314975	28031.13158
K 9+200	10.00	0.00	4.95	0.00	1045.70	49.00	102005.98	Terraplén	0.427	15.39822878	28046.52981
K 9+210	10.00	0.00	4.95	0.00	1045.70	49.50	102055.48	Terraplén	0.427	15.39822878	28061.92804
K 9+220	10.00	0.00	4.79	0.00	1045.70	48.70	102104.18	Terraplén	0.414	14.9258171	28076.85386
K 9+230	10.00	0.00	5.65	0.00	1045.70	52.20	102156.38	Terraplén	0.484	17.44742597	28094.30128
K 9+240	10.00	0.00	5.95	0.00	1045.70	58.00	102214.38	Terraplén	0.508	18.31707917	28112.61836
K 9+250	10.00	0.00	5.34	0.00	1045.70	56.45	102270.83	Terraplén	0.459	16.54342125	28129.16178
K 9+260	10.00	0.00	5.36	0.00	1045.70	53.50	102324.33	Terraplén	0.460	16.60191054	28145.76369
K 9+270	10.00	0.00	5.46	0.00	1045.70	54.10	102378.43	Terraplén	0.469	16.8940114	28162.6577
K 9+280	10.00	0.00	5.76	0.00	1045.70	56.10	102434.53	Terraplén	0.493	17.76688671	28180.42459
K 9+290	10.00	0.00	5.93	0.00	1045.70	58.45	102492.98	Terraplén	0.506	18.2592593	28198.68385
K 9+300	10.00	0.00	6.17	0.00	1045.70	60.50	102553.48	Terraplén	0.526	18.95163223	28217.63548
K 9+310	10.00	0.00	8.17	0.00	1045.70	71.70	102625.18	Terraplén	0.682	24.60210522	28242.23759
K 9+320	10.00	0.00	10.35	0.00	1045.70	92.60	102717.78	Terraplén	0.847	30.53697879	28272.77457

Consorcio Vías Colombia 055	MEMORIA DE CALCULO DE CANTIDADES DEL APU	
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NOMBRE DEL PROYECTO:	MEJORAMIENTO, MANTENIMIENTO, GESTIÓN PREDIAL, SOCIAL Y AMBIENTAL SOSTENIBLE DE LA CARRETERA VILLAGARZON - SAN JOSE DEL FRAGUA Y PUENTE SOBRE EL RIO CAQUETA EN LOS DEPARTAMENTOS DE PUTUMAYO, CAUCA Y CAQUETA EN MARCO DE LA REACTIVACIÓN ECONÓMICA, MEDIANTE EL PROGRAMA VIAS PARA LA CONEXION DE TERRITORIOS, EL CRECIMIENTO SOSTENIBLE Y LA REACTIVACIÓN 2.0	

ABSCISA	DISTANCIA	AREA CTE	AREA RELL	VOL CTE	VOL CTE ACUM	VOL RELL	VOL RELL ACUM	SECCION	ALT APROX TER	PROT DE TALUD	ACUM PROT DE TAL
K 9+330	10.00	0.00	12.17	0.00	1045.70	112.60	102830.38	Terraplén	0.980	35.33024919	28308.10482
K 9+340	10.00	0.00	16.48	0.00	1045.70	143.25	102973.63	Terraplén	1.280	46.16665776	28354.27147
K 9+350	10.00	0.00	19.21	0.00	1045.70	178.45	103152.08	Terraplén	1.462	52.70124891	28406.97272
K 9+360	10.00	0.00	19.89	0.00	1045.70	195.50	103347.58	Terraplén	1.506	54.29318259	28461.2659
K 9+370	10.00	0.00	21.4	0.00	1045.70	206.45	103554.03	Terraplén	1.603	57.78036783	28519.04627
K 9+380	10.00	0.00	20.15	0.00	1045.70	207.75	103761.78	Terraplén	1.523	54.8982721	28573.94454
K 9+390	10.00	0.00	22.3	0.00	1045.70	212.25	103974.03	Terraplén	1.659	59.82861066	28633.77316
K 9+400	10.00	0.00	23.28	0.00	1045.70	227.90	104201.93	Terraplén	1.721	62.03428092	28695.80744
K 9+410	10.00	0.00	23.47	0.00	1045.70	233.75	104435.68	Terraplén	1.732	62.45900955	28758.26645
K 9+420	10.00	0.00	23.03	0.00	1045.70	232.50	104668.18	Terraplén	1.705	61.47400399	28819.74045
K 9+430	10.00	0.00	23.06	0.00	1045.70	230.45	104898.63	Terraplén	1.707	61.54132304	28881.28177
K 9+440	10.00	0.00	23.12	0.00	1045.70	230.90	105129.53	Terraplén	1.711	61.67589079	28942.95766
K 9+450	10.00	0.00	28.7	0.00	1045.70	259.10	105388.63	Terraplén	2.047	73.80571161	29016.76338
K 9+460	10.00	0.00	28.83	0.00	1045.70	287.65	105676.28	Terraplén	2.055	74.07977925	29090.84315
K 9+470	10.00	0.00	28.39	0.00	1045.70	286.10	105962.38	Terraplén	2.029	73.1506853	29163.99384
K 9+480	10.00	0.00	33.25	0.00	1045.70	308.20	106270.58	Terraplén	2.307	83.19010799	29247.18395
K 9+490	10.00	0.00	33.75	0.00	1045.70	335.00	106605.58	Terraplén	2.335	84.19647483	29331.38042
K 9+500	10.00	0.00	27.57	0.00	1045.70	306.60	106912.18	Terraplén	1.980	71.40784616	29402.78827
K 9+510	10.00	0.00	21.67	0.00	1045.70	246.20	107158.38	Terraplén	1.620	58.39715915	29461.18543
K 9+520	10.00	0.00	20.89	0.00	1045.70	212.80	107371.18	Terraplén	1.570	56.60980276	29517.79523
K 9+530	10.00	0.00	19.6	0.00	1045.70	202.45	107573.63	Terraplén	1.487	53.61594303	29571.41117
K 9+540	10.00	0.00	16.46	0.00	1045.70	180.30	107753.93	Terraplén	1.279	46.11789874	29617.52907
K 9+550	10.00	0.00	15.21	0.00	1045.70	158.35	107912.28	Terraplén	1.194	43.04344911	29660.57252
K 9+560	10.00	0.00	14.08	0.00	1045.70	146.45	108058.73	Terraplén	1.115	40.21680886	29700.78933
K 9+570	10.00	0.00	13.76	0.00	1045.70	139.20	108197.93	Terraplén	1.093	39.40785571	29740.19719
K 9+580	10.00	0.00	14.14	0.00	1045.70	139.50	108337.43	Terraplén	1.120	40.36806393	29780.56525
K 9+590	10.00	0.00	15.13	0.00	1045.70	146.35	108483.78	Terraplén	1.188	42.8448395	29823.41009
K 9+600	10.00	0.00	15.17	0.00	1045.70	151.50	108635.28	Terraplén	1.191	42.94417255	29866.35426
K 9+610	10.00	0.00	15.09	0.00	1045.70	151.30	108786.58	Terraplén	1.186	42.74544984	29909.09971
K 9+620	10.00	0.00	14.51	0.00	1045.70	148.00	108934.58	Terraplén	1.145	41.2978797	29950.39759
K 9+630	10.00	0.00	12.24	0.00	1045.70	133.75	109068.33	Terraplén	0.985	35.51186016	29985.90945
K 9+640	10.00	0.00	11.09	0.00	1045.70	116.65	109184.98	Terraplén	0.901	32.50278157	30018.41223
K 9+650	10.00	0.00	10.02	0.00	1045.70	105.55	109290.53	Terraplén	0.822	29.65261092	30048.06484
K 9+660	10.00	0.00	9.19	0.00	1045.70	96.05	109386.58	Terraplén	0.760	27.40655009	30075.47139
K 9+670	10.00	0.00	9.43	0.00	1045.70	93.10	109479.68	Terraplén	0.778	28.05926077	30103.53066
K 9+680	10.00	0.00	9.06	0.00	1045.70	92.45	109572.13	Terraplén	0.750	27.05187728	30130.58253
K 9+690	10.00	0.00	9.31	0.00	1045.70	91.85	109663.98	Terraplén	0.769	27.73323965	30158.31577
K 9+700	10.00	0.00	10.51	0.00	1045.70	99.10	109763.08	Terraplén	0.859	30.96403144	30189.2798
K 9+710	10.00	0.00	13.81	0.00	1045.70	121.60	109884.68	Terraplén	1.096	39.5345067	30228.81431
K 9+720	10.00	0.00	18.28	0.00	1045.70	160.45	110045.13	Terraplén	1.401	50.50151532	30279.31583
K 9+730	10.00	0.00	25.15	0.00	1045.70	217.15	110262.28	Terraplén	1.835	66.1748207	30345.49065
K 9+740	10.00	0.00	30.65	0.00	1045.70	279.00	110541.28	Terraplén	2.160	77.87908011	30423.36973
K 9+750	10.00	0.00	39.71	0.00	1045.70	351.80	110893.08	Terraplén	2.658	95.84975441	30519.21948
K 9+760	10.00	0.00	37.9	0.00	1045.70	388.05	111281.13	Terraplén	2.562	92.37486987	30611.59435
K 9+770	10.00	0.00	32.25	0.00	1045.70	350.75	111631.88	Terraplén	2.251	81.16309467	30692.75745
K 9+780	10.00	0.00	25.88	0.00	1045.70	290.65	111922.53	Terraplén	1.880	67.767846	30760.52529
K 9+790	10.00	0.00	18.16	0.00	1045.70	220.20	112142.73	Terraplén	1.393	50.21574019	30810.74103
K 9+800	10.00	0.00	12.17	0.00	1045.70	151.65	112294.38	Terraplén	0.980	35.33024919	30846.07128
K 9+810	10.00	0.00	9.1	0.00	1045.70	106.35	112400.73	Terraplén	0.753	27.16109176	30873.23237
K 9+820	10.00	0.00	7.63	0.00	1045.70	83.65	112484.38	Terraplén	0.641	23.09681822	30896.32919
K 9+830	10.00	0.00	9.85	0.00	1045.70	87.40	112571.78	Terraplén	0.810	29.19512926	30925.52432
K 9+840	10.00	0.00	11.54	0.00	1045.70	106.95	112678.73	Terraplén	0.934	33.68677113	30959.21109
K 9+850	10.00	0.00	13.28	0.00	1045.70	124.10	112802.83	Terraplén	1.059	38.1871995	30997.39829
K 9+860	10.00	0.00	14.61	0.00	1045.70	139.45	112942.28	Terraplén	1.152	41.54832415	31038.94661
K 9+870	10.00	0.00	15.79	0.00	1045.70	152.00	113094.28	Terraplén	1.234	44.4766693	31083.42328
K 9+880	10.00	0.00	17.93	0.00	1045.70	168.60	113262.88	Terraplén	1.378	49.66674523	31133.09003
K 9+890	10.00	0.00	16.18	0.00	1045.70	170.55	113433.43	Terraplén	1.260	45.43386244	31178.52389
K 9+900	10.00	0.00	15.74	0.00	1045.70	159.60	113593.03	Terraplén	1.230	44.35357565	31222.87747
K 9+910	10.00	0.00	17.04	0.00	1045.70	163.90	113756.93	Terraplén	1.318	47.5265218	31270.40399
K 9+920	10.00	0.00	18.28	0.00	1045.70	176.60	113933.53	Terraplén	1.401	50.50151532	31320.9055
K 9+930	10.00	0.00	17.17	0.00	1045.70	177.25	114110.78	Terraplén	1.327	47.8407307	31368.74624
K 9+940	10.00	0.00	17.92	0.00	1045.70	175.45	114286.23	Terraplén	1.377	49.64283816	31418.38907
K 9+950	10.00	0.00	20.63	0.00	1045.70	192.75	114478.98	Terraplén	1.553	56.01023337	31474.39931
K 9+960	10.00	0.00	23.08	0.00	1045.70	218.55	114697.53	Terraplén	1.708	61.58618937	31535.9855
K 9+970	10.00	0.00	21.16	0.00	1045.70	221.20	114918.73	Terraplén	1.587	57.23041757	31593.21591
K 9+980	10.00	0.00	19.92	0.00	1045.70	205.40	115124.13	Terraplén	1.508	54.36310109	31647.57901
K 9+990	10.00	0.00	18.68	0.00	1045.70	193.00	115317.13	Terraplén	1.427	51.450877	31699.02989
K 10+000	10.00	0.00	17.37	0.00	1045.70	180.25	115497.38	Terraplén	1.340	48.32305755	31747.35295
K 10+010	10.00	0.00	17.31	0.00	1045.70	173.40	115670.78	Terraplén	1.336	48.17849536	31795.53144
K 10+020	10.00	0.00	17.89	0.00	1045.70	176.00	115846.78	Terraplén	1.375	49.57109803	31845.10254
K 10+030	10.00	0.00	15.37	0.00	1045.70	166.30	116013.08	Terraplén	1.205	43.4399923	31888.54253
K 10+040	10.00	0.00	12.33	0.00	1045.70	138.50	116151.58	Terraplén	0.991	35.74507039	31924.28761
K 10+050	10.00	0.00	9.65	0.00	1045.70	109.90	116261.48	Terraplén	0.795	28.65524357	31952.94285
K 10+060	10.00	0.00	8.02	0.00	1045.70	88.35	116349.83	Terraplén	0.671	24.18542891	31977.12828
K 10+070	10.00	0.00	8.19	0.00	1045.70	81.05	116430.88	Terraplén	0.684	24.65757811	32001.78586
K 10+080	10.00	0.00	9.36	0.00	1045.70	87.75	116518.63	Terraplén	0.773	27.86916278	32029.65502
K 10+090	10.00	0.00	11.82	0.00	1045.70	105.90	116624.53	Terraplén	0.955	34.41921436	32064.07423
K 10+100	10.00	0.01	11.86	0.05	1045.75	118.40	116742.93	Terraplén	0.958	34.52358549	32098.59782
K 10+110	10.00	0.00	11.56	0.05	1045.80	117.10	116860.03	Terraplén	0.936	33.7391961	32132.33701
K 10+120	10.00	0.00	10.06	0.00	1045.80	108.10	116968.13	Terraplén	0.825	29.76006517	32162.09708
K 10+130	10.00	0.00	9.4	0.00	1045.80	97.30	117065.43	Terraplén	0.776	27.97781793	32190.0749
K 10+140	10.00	0.00	9.01	0.00	1045.80	92.05	117157.48	Terraplén	0.746	26.91525336	32216.99015
K 10+150	10.00	0.00	6.84	0.00	1045.80	79.25	117236.73	Terraplén	0.579	20.86786739	32237.85802
K 10+160	10.00	0.00	3.56	0.00	1045.80	52.00	117288.73	Terraplén	0.312	11.24199099	32249.10001
K 10+170	10.00	0.00	5.3	0.00	1045.80	44.30	117333.03	Terraplén	0.456	16.42637335	32265.52638
K 10+180	10.00	0.00	6.31	0.00	1045.80	58.05	117391.08	Terraplén	0.537	19.35404993	32284.88043
K 10+190	10.00	0.00	7.45	0.00	1045.80	68.80	117459.88	Terraplén	0.627	22.59179036	32307.47222
K 10+200	10.00	0.00	9	0.00	1045.80	82.25	117542.13	Terraplén	0.746	26.88791444	32334.36014
K 10+210	10.00	0.00	10.09	0.00	1045.80	95.45	117637.58	Terraplén	0.828	29.84060892	32364.20075
K 10+220	10.00	0.00	10.72	0.00	1045.80	104.05	117741.63	Terraplén	0.874	31.52284141	32395.72359
K 10+230	10.00	0.00	11.49	0.00	1045.80	111.05	117852.68	Terraplén	0.931	33.55563588	32429.27922
K 10+240	10.00	0.00	12.6	0.00	1045.80	120.45	117973.13	Terraplén	1.011	36.44275922	32465.72198
K 10+250	10.00	0.00	13.38	0.00	1045.80	129.90	118103.03	Terraplén	1.066	38.44222547	32504.16421
K 10+260	10.00	0.00	13.31	0.00	1045.80	133.45	118236.48	Terraplén	1.061	38.26374749	32542.42796

Consorcio Vías Colombia 055	MEMORIA DE CALCULO DE CANTIDADES DEL APU	
ENTIDAD:	INSTITUTO NACIONAL DE VIAS	
NOMBRE DEL PROYECTO:	MEJORAMIENTO, MANTENIMIENTO, GESTIÓN PREDIAL, SOCIAL Y AMBIENTAL SOSTENIBLE DE LA CARRETERA VILLAGARZON - SAN JOSE DEL FRAGUA Y PUENTE SOBRE EL RIO CAQUETA EN LOS DEPARTAMENTOS DE PUTUMAYO, CAUCA Y CAQUETA EN MARCO DE LA REACTIVACIÓN ECONÓMICA, MEDIANTE EL PROGRAMA VIAS PARA LA CONEXION DE TERRITORIOS, EL CRECIMIENTO SOSTENIBLE Y LA REACTIVACIÓN 2.0	

ABSCISA	DISTANCIA	AREA CTE	AREA RELL	VOL CTE	VOL CTE ACUM	VOL RELL	VOL RELL ACUM	SECCION	ALT APROX TER	PROT DE TALUD	ACUM PROT DE TAL
K 10+270	10.00	0.00	12.96	0.00	1045.80	131.35	118367.83	Terraplén	1.036	37.36852983	32579.79649
K 10+280	10.00	0.00	12.93	0.00	1045.80	129.45	118497.28	Terraplén	1.034	37.2915761	32617.08806
K 10+290	10.00	0.00	13.34	0.00	1045.80	131.35	118628.63	Terraplén	1.063	38.34026101	32655.42832
K 10+300	10.00	0.00	12.96	0.00	1045.80	131.50	118760.13	Terraplén	1.036	37.36852983	32692.79685
K 10+310	10.00	0.00	13.7	0.00	1045.80	133.30	118893.43	Terraplén	1.089	39.25575059	32732.0526
K 10+320	10.00	0.00	14.61	0.00	1045.80	141.55	119034.98	Terraplén	1.152	41.54832415	32773.60093
K 10+330	10.00	0.00	15.13	0.00	1045.80	148.70	119183.68	Terraplén	1.188	42.8448395	32816.44577
K 10+340	10.00	0.00	15.45	0.00	1045.80	152.90	119336.58	Terraplén	1.210	43.63792741	32860.08369
K 10+350	10.00	0.00	15.64	0.00	1045.80	155.45	119492.03	Terraplén	1.223	44.10712965	32904.19082
K 10+360	10.00	0.00	16.42	0.00	1045.80	160.30	119652.33	Terraplén	1.276	46.02034055	32950.21116
K 10+370	10.00	0.00	16.87	0.00	1045.80	166.45	119818.78	Terraplén	1.307	47.11479972	32997.32596
K 10+380	10.00	0.00	17.22	0.00	1045.80	170.45	119989.23	Terraplén	1.330	47.96143387	33045.2874
K 10+390	10.00	0.00	18.38	0.00	1045.80	178.00	120167.23	Terraplén	1.407	50.73931913	33096.02672
K 10+400	10.00	0.00	19.6	0.00	1045.80	189.90	120357.13	Terraplén	1.487	53.61594303	33149.64266
K 10+410	10.00	0.00	20.63	0.00	1045.80	201.15	120558.28	Terraplén	1.553	56.01023337	33205.65289
K 10+420	10.00	0.00	22.07	0.00	1045.80	213.50	120771.78	Terraplén	1.645	59.3072612	33264.96015
K 10+430	10.00	0.00	22.79	0.00	1045.80	224.30	120996.08	Terraplén	1.690	60.93460428	33325.89476
K 10+440	10.00	0.00	23.32	0.00	1045.80	230.55	121226.63	Terraplén	1.723	62.12377486	33388.01853
K 10+450	10.00	0.00	23.62	0.00	1045.80	234.70	121461.33	Terraplén	1.742	62.79366613	33450.8122
K 10+460	10.00	0.00	23.74	0.00	1045.80	236.80	121698.13	Terraplén	1.749	63.06097717	33513.87318
K 10+470	10.00	0.00	23.96	0.00	1045.80	238.50	121936.63	Terraplén	1.763	63.55009642	33577.42327
K 10+480	10.00	0.00	23.47	0.00	1045.80	237.15	122173.78	Terraplén	1.732	62.45900955	33639.88228
K 10+490	10.00	0.00	22.02	0.00	1045.80	227.45	122401.23	Terraplén	1.642	59.19373585	33699.07602
K 10+500	10.00	0.00	20.92	0.00	1045.80	214.70	122615.93	Terraplén	1.572	56.67886098	33755.75488
K 10+510		0.00	19.98	0.00	1045.80	0.00	122615.93	Terraplén	1.512	0	33755.75488
K 10+520		0.00	18.54	0.00	1045.80	0.00	122615.93	Terraplén	1.418	0	33755.75488
K 10+530		0.00	16.88	0.00	1045.80	0.00	122615.93	Terraplén	1.307	0	33755.75488
K 10+540		0.00	17.35	0.00	1045.80	0.00	122615.93	Terraplén	1.339	0	33755.75488
K 10+550		0.00	17.02	0.00	1045.80	0.00	122615.93	Terraplén	1.317	0	33755.75488
K 10+560		0.00	16.27	0.00	1045.80	0.00	122615.93	Terraplén	1.266	0	33755.75488
K 10+570		0.00	15.55	0.00	1045.80	0.00	122615.93	Terraplén	1.217	0	33755.75488
K 10+580		0.00	14.76	0.00	1045.80	0.00	122615.93	Terraplén	1.163	0	33755.75488
K 10+590		0.00	14.5	0.00	1045.80	0.00	122615.93	Terraplén	1.145	0	33755.75488
K 10+600		0.00	14.27	0.00	1045.80	0.00	122615.93	Terraplén	1.129	0	33755.75488
K 10+610		0.00	14.01	0.00	1045.80	0.00	122615.93	Terraplén	1.111	0	33755.75488
K 10+620		0.00	14.11	0.00	1045.80	0.00	122615.93	Terraplén	1.118	0	33755.75488
K 10+630		0.00	13.37	0.00	1045.80	0.00	122615.93	Terraplén	1.065	0	33755.75488
K 10+640		0.00	12.48	0.00	1045.80	0.00	122615.93	Terraplén	1.002	0	33755.75488
K 10+650		0.00	11.59	0.00	1045.80	0.00	122615.93	Terraplén	0.938	0	33755.75488
K 10+660		0.00	10.22	0.00	1045.80	0.00	122615.93	Terraplén	0.837	0	33755.75488
K 10+670		0.00	9.13	0.00	1045.80	0.00	122615.93	Terraplén	0.756	0	33755.75488
K 10+680		0.00	8.31	0.00	1045.80	0.00	122615.93	Terraplén	0.693	0	33755.75488
K 10+690		0.00	7.87	0.00	1045.80	0.00	122615.93	Terraplén	0.659	0	33755.75488
K 10+700		0.00	7.04	0.00	1045.80	0.00	122615.93	Terraplén	0.595	0	33755.75488
K 10+710		0.00	7.91	0.00	1045.80	0.00	122615.93	Terraplén	0.662	0	33755.75488
K 10+720		0.00	8.91	0.00	1045.80	0.00	122615.93	Terraplén	0.739	0	33755.75488
K 10+730		0.00	9.52	0.00	1045.80	0.00	122615.93	Terraplén	0.785	0	33755.75488
K 10+740		0.00	9.86	0.00	1045.80	0.00	122615.93	Terraplén	0.810	0	33755.75488
K 10+750		0.00	10.29	0.00	1045.80	0.00	122615.93	Terraplén	0.842	0	33755.75488
K 10+760		0.00	11.46	0.00	1045.80	0.00	122615.93	Terraplén	0.928	0	33755.75488
K 10+770		0.00	12.45	0.00	1045.80	0.00	122615.93	Terraplén	1.000	0	33755.75488
K 10+780		0.00	11.21	0.00	1045.80	0.00	122615.93	Terraplén	0.910	0	33755.75488
K 10+790		0.00	10.78	0.00	1045.80	0.00	122615.93	Terraplén	0.879	0	33755.75488
K 10+800		0.00	10.64	0.00	1045.80	0.00	122615.93	Terraplén	0.868	0	33755.75488
K 10+810		0.00	10.13	0.00	1045.80	0.00	122615.93	Terraplén	0.831	0	33755.75488
K 10+820		0.00	10.06	0.00	1045.80	0.00	122615.93	Terraplén	0.825	0	33755.75488
K 10+830		0.00	9.62	0.00	1045.80	0.00	122615.93	Terraplén	0.793	0	33755.75488
K 10+840		0.00	9.74	0.00	1045.80	0.00	122615.93	Terraplén	0.801	0	33755.75488
K 10+850		0.00	9.41	0.00	1045.80	0.00	122615.93	Terraplén	0.777	0	33755.75488
K 10+860		0.00	11.06	0.00	1045.80	0.00	122615.93	Terraplén	0.899	0	33755.75488
K 10+870		0.00	11.39	0.00	1045.80	0.00	122615.93	Terraplén	0.923	0	33755.75488
K 10+880		0.00	12.84	0.00	1045.80	0.00	122615.93	Terraplén	1.028	0	33755.75488
K 10+890		0.00	13.19	0.00	1045.80	0.00	122615.93	Terraplén	1.053	0	33755.75488
K 10+900		0.00	12.61	0.00	1045.80	0.00	122615.93	Terraplén	1.011	0	33755.75488
K 10+910		0.00	13.64	0.00	1045.80	0.00	122615.93	Terraplén	1.085	0	33755.75488
K 10+920		0.00	13.28	0.00	1045.80	0.00	122615.93	Terraplén	1.059	0	33755.75488
K 10+930		0.00	12.68	0.00	1045.80	0.00	122615.93	Terraplén	1.016	0	33755.75488
K 10+940		0.00	11.81	0.00	1045.80	0.00	122615.93	Terraplén	0.954	0	33755.75488
K 10+950		0.00	12.67	0.00	1045.80	0.00	122615.93	Terraplén	1.016	0	33755.75488
K 10+960		0.00	13.14	0.00	1045.80	0.00	122615.93	Terraplén	1.049	0	33755.75488
K 10+970		0.00	13.04	0.00	1045.80	0.00	122615.93	Terraplén	1.042	0	33755.75488
K 10+980		0.00	11.81	0.00	1045.80	0.00	122615.93	Terraplén	0.954	0	33755.75488
K 10+990		0.00	12.32	0.00	1045.80	0.00	122615.93	Terraplén	0.991	0	33755.75488
K 11+000		0.00	12.16	0.00	1045.80	0.00	122615.93	Terraplén	0.979	0	33755.75488
K 11+010		0.00	11.64	0.00	1045.80	0.00	122615.93	Terraplén	0.942	0	33755.75488
K 11+020		0.00	12.04	0.00	1045.80	0.00	122615.93	Terraplén	0.971	0	33755.75488
K 11+030		0.00	12.02	0.00	1045.80	0.00	122615.93	Terraplén	0.969	0	33755.75488
K 11+040		0.00	12.35	0.00	1045.80	0.00	122615.93	Terraplén	0.993	0	33755.75488
K 11+050		0.00	13.11	0.00	1045.80	0.00	122615.93	Terraplén	1.047	0	33755.75488
K 11+060		0.00	14.72	0.00	1045.80	0.00	122615.93	Terraplén	1.160	0	33755.75488
K 11+070		0.00	18.32	0.00	1045.80	0.00	122615.93	Terraplén	1.403	0	33755.75488
K 11+080		0.00	23.07	0.00	1045.80	0.00	122615.93	Terraplén	1.707	0	33755.75488
K 11+090		0.00	25.81	0.00	1045.80	0.00	122615.93	Terraplén	1.875	0	33755.75488
K 11+100		0.00	28.62	0.00	1045.80	0.00	122615.93	Terraplén	2.042	0	33755.75488
K 11+110		0.00	31.91	0.00	1045.80	0.00	122615.93	Terraplén	2.232	0	33755.75488
K 11+120		0.00	34.87	0.00	1045.80	0.00	122615.93	Terraplén	2.397	0	33755.75488
K 11+130		0.00	38.48	0.00	1045.80	0.00	122615.93	Terraplén	2.593	0	33755.75488
K 11+140		0.00	39.82	0.00	1045.80	0.00	122615.93	Terraplén	2.664	0	33755.75488
K 11+150		0.00	40.6	0.00	1045.80	0.00	122615.93	Terraplén	2.705	0	33755.75488
K 11+160		0.00	42.2	0.00	1045.80	0.00	122615.93	Terraplén	2.789	0	33755.75488
K 11+170		0.00	26.71	0.00	1045.80	0.00	122615.93	Terraplén	1.929	0	33755.75488
K 11+180		0.00	60.4	0.00	1045.80	0.00	122615.93	Terraplén	3.670	0	33755.75488
K 11+190		0.00	64.51	0.00	1045.80	0.00	122615.93	Terraplén	3.855	0	33755.75488
K 11+200		0.00	58.34	0.00	1045.80	0.00	122615.93	Terraplén	3.576	0	33755.75488

Consorcio Vías Colombia 055	MEMORIA DE CALCULO DE CANTIDADES DEL APU	
ENTIDAD:	INSTITUTO NACIONAL DE VIAS	
NOMBRE DEL PROYECTO:	MEJORAMIENTO, MANTENIMIENTO, GESTIÓN PREDIAL, SOCIAL Y AMBIENTAL SOSTENIBLE DE LA CARRETERA VILLAGARZON - SAN JOSE DEL FRAGUA Y PUENTE SOBRE EL RIO CAQUETA EN LOS DEPARTAMENTOS DE PUTUMAYO, CAUCA Y CAQUETA EN MARCO DE LA REACTIVACIÓN ECONÓMICA, MEDIANTE EL PROGRAMA VIAS PARA LA CONEXION DE TERRITORIOS, EL CRECIMIENTO SOSTENIBLE Y LA REACTIVACIÓN 2.0	

ABSCISA	DISTANCIA	AREA CTE	AREA RELL	VOL CTE	VOL CTE ACUM	VOL RELL	VOL RELL ACUM	SECCION	ALT APROX TER	PROT DE TALUD	ACUM PROT DE TAL
K 11+210		0.00	55.43	0.00	1045.80	0.00	122615.93	Terraplén	3.441	0	33755.75488
K 11+220		0.00	51.85	0.00	1045.80	0.00	122615.93	Terraplén	3.270	0	33755.75488
K 11+230		0.00	48.69	0.00	1045.80	0.00	122615.93	Terraplén	3.116	0	33755.75488
K 11+240		0.00	44.63	0.00	1045.80	0.00	122615.93	Terraplén	2.913	0	33755.75488
K 11+250		0.00	35.73	0.00	1045.80	0.00	122615.93	Terraplén	2.444	0	33755.75488
K 11+260		0.00	31.79	0.00	1045.80	0.00	122615.93	Terraplén	2.225	0	33755.75488
K 11+270		0.00	28.35	0.00	1045.80	0.00	122615.93	Terraplén	2.026	0	33755.75488
K 11+280		0.00	24.33	0.00	1045.80	0.00	122615.93	Terraplén	1.785	0	33755.75488
K 11+290		0.00	22.8	0.00	1045.80	0.00	122615.93	Terraplén	1.691	0	33755.75488
K 11+300		0.00	18.85	0.00	1045.80	0.00	122615.93	Terraplén	1.438	0	33755.75488
K 11+310		0.00	20.51	0.00	1045.80	0.00	122615.93	Terraplén	1.546	0	33755.75488
K 11+320		0.00	39.44	0.00	1045.80	0.00	122615.93	Terraplén	2.644	0	33755.75488
K 11+330		0.00	39.34	0.00	1045.80	0.00	122615.93	Terraplén	2.639	0	33755.75488
K 11+340		0.00	23.41	0.00	1045.80	0.00	122615.93	Terraplén	1.729	0	33755.75488
K 11+350		0.00	11.43	0.00	1045.80	0.00	122615.93	Terraplén	0.926	0	33755.75488
K 11+360		0.00	9.36	0.00	1045.80	0.00	122615.93	Terraplén	0.773	0	33755.75488
K 11+370		0.00	9.32	0.00	1045.80	0.00	122615.93	Terraplén	0.770	0	33755.75488
K 11+380		0.00	9.36	0.00	1045.80	0.00	122615.93	Terraplén	0.773	0	33755.75488
K 11+390		0.01	5.82	0.00	1045.80	0.00	122615.93	Terraplén	0.498	0	33755.75488
K 11+400		0.35	5.02	0.00	1045.80	0.00	122615.93	Terraplén	0.433	0	33755.75488
K 11+410		0.73	4.35	0.00	1045.80	0.00	122615.93	Terraplén	0.378	0	33755.75488
K 11+420		0.00	8.44	0.00	1045.80	0.00	122615.93	Terraplén	0.703	0	33755.75488
K 11+430		0.00	10.72	0.00	1045.80	0.00	122615.93	Terraplén	0.874	0	33755.75488
K 11+440		0.00	10.94	0.00	1045.80	0.00	122615.93	Terraplén	0.890	0	33755.75488
K 11+450		0.00	11.25	0.00	1045.80	0.00	122615.93	Terraplén	0.913	0	33755.75488
K 11+460		0.00	12.38	0.00	1045.80	0.00	122615.93	Terraplén	0.995	0	33755.75488
K 11+470		0.00	11.51	0.00	1045.80	0.00	122615.93	Terraplén	0.932	0	33755.75488
K 11+480		0.00	10.42	0.00	1045.80	0.00	122615.93	Terraplén	0.852	0	33755.75488
K 11+490		0.00	10.39	0.00	1045.80	0.00	122615.93	Terraplén	0.850	0	33755.75488
K 11+500		0.00	10.15	0.00	1045.80	0.00	122615.93	Terraplén	0.832	0	33755.75488
K 11+510		0.00	11.07	0.00	1045.80	0.00	122615.93	Terraplén	0.900	0	33755.75488
K 11+520		0.00	12.4	0.00	1045.80	0.00	122615.93	Terraplén	0.996	0	33755.75488
K 11+530		0.00	13.99	0.00	1045.80	0.00	122615.93	Terraplén	1.109	0	33755.75488
K 11+540		0.00	14.92	0.00	1045.80	0.00	122615.93	Terraplén	1.174	0	33755.75488
K 11+550		0.00	16.3	0.00	1045.80	0.00	122615.93	Terraplén	1.268	0	33755.75488
K 11+560		0.00	19.49	0.00	1045.80	0.00	122615.93	Terraplén	1.480	0	33755.75488
K 11+570		0.00	16.23	0.00	1045.80	0.00	122615.93	Terraplén	1.264	0	33755.75488
K 11+580		0.00	16.3	0.00	1045.80	0.00	122615.93	Terraplén	1.268	0	33755.75488
K 11+590		0.00	15	0.00	1045.80	0.00	122615.93	Terraplén	1.179	0	33755.75488
K 11+600		0.00	13.34	0.00	1045.80	0.00	122615.93	Terraplén	1.063	0	33755.75488
K 11+610		0.00	11.36	0.00	1045.80	0.00	122615.93	Terraplén	0.921	0	33755.75488
K 11+620		0.00	10.15	0.00	1045.80	0.00	122615.93	Terraplén	0.832	0	33755.75488
K 11+630		0.00	8.41	0.00	1045.80	0.00	122615.93	Terraplén	0.701	0	33755.75488
K 11+640		0.00	9.16	0.00	1045.80	0.00	122615.93	Terraplén	0.758	0	33755.75488
K 11+650		0.00	12.34	0.00	1045.80	0.00	122615.93	Terraplén	0.992	0	33755.75488
K 11+660		0.00	14.98	0.00	1045.80	0.00	122615.93	Terraplén	1.178	0	33755.75488
K 11+670		0.00	16.35	0.00	1045.80	0.00	122615.93	Terraplén	1.272	0	33755.75488
K 11+680		0.00	17.39	0.00	1045.80	0.00	122615.93	Terraplén	1.342	0	33755.75488
K 11+690		0.00	18.52	0.00	1045.80	0.00	122615.93	Terraplén	1.416	0	33755.75488
K 11+700		0.00	17.48	0.00	1045.80	0.00	122615.93	Terraplén	1.348	0	33755.75488
K 11+710		0.00	18.88	0.00	1045.80	0.00	122615.93	Terraplén	1.440	0	33755.75488
K 11+720		0.00	20.01	0.00	1045.80	0.00	122615.93	Terraplén	1.514	0	33755.75488
K 11+730		0.00	20.9	0.00	1045.80	0.00	122615.93	Terraplén	1.571	0	33755.75488
K 11+740		0.00	18.49	0.00	1045.80	0.00	122615.93	Terraplén	1.415	0	33755.75488
K 11+750		0.00	15.84	0.00	1045.80	0.00	122615.93	Terraplén	1.237	0	33755.75488
K 11+760		0.00	14.79	0.00	1045.80	0.00	122615.93	Terraplén	1.165	0	33755.75488
K 11+770		0.00	14.02	0.00	1045.80	0.00	122615.93	Terraplén	1.111	0	33755.75488
K 11+780		0.00	20.46	0.00	1045.80	0.00	122615.93	Terraplén	1.543	0	33755.75488
K 11+790		0.00	25	0.00	1045.80	0.00	122615.93	Terraplén	1.826	0	33755.75488
K 11+800		0.00	28.96	0.00	1045.80	0.00	122615.93	Terraplén	2.062	0	33755.75488
K 11+810		0.00	30.08	0.00	1045.80	0.00	122615.93	Terraplén	2.127	0	33755.75488
K 11+820		0.00	28.09	0.00	1045.80	0.00	122615.93	Terraplén	2.011	0	33755.75488
K 11+830		0.00	27	0.00	1045.80	0.00	122615.93	Terraplén	1.947	0	33755.75488
K 11+840		0.00	27.03	0.00	1045.80	0.00	122615.93	Terraplén	1.948	0	33755.75488
K 11+850		0.00	26.33	0.00	1045.80	0.00	122615.93	Terraplén	1.907	0	33755.75488
K 11+860		0.00	24.77	0.00	1045.80	0.00	122615.93	Terraplén	1.812	0	33755.75488
K 11+870		0.00	19.02	0.00	1045.80	0.00	122615.93	Terraplén	1.449	0	33755.75488
K 11+880		0.00	13.68	0.00	1045.80	0.00	122615.93	Terraplén	1.087	0	33755.75488
K 11+890		0.00	10.22	0.00	1045.80	0.00	122615.93	Terraplén	0.837	0	33755.75488
K 11+900		0.00	22.72	0.00	1045.80	0.00	122615.93	Terraplén	1.686	0	33755.75488
K 11+910		0.00	18.83	0.00	1045.80	0.00	122615.93	Terraplén	1.437	0	33755.75488
K 11+920		0.00	1.62	0.00	1045.80	0.00	122615.93	Terraplén	0.145	0	33755.75488
K 11+930		6.97	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 11+940		15.65	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 11+950		35.86	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 11+960		68.18	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 11+970		53.78	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 11+980		56.99	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 11+990		45.69	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 12+000		37.22	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 12+010		20.96	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 12+020		29.60	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 12+030		24.49	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 12+040		14.00	0.16	0.00	1045.80	0.00	122615.93	Terraplén	0.015	0	33755.75488
K 12+050		4.56	3.83	0.00	1045.80	0.00	122615.93	Terraplén	0.334	0	33755.75488
K 12+060		1.77	2.94	0.00	1045.80	0.00	122615.93	Terraplén	0.259	0	33755.75488
K 12+070		2.14	1.89	0.00	1045.80	0.00	122615.93	Terraplén	0.169	0	33755.75488
K 12+080		0.00	8.85	0.00	1045.80	0.00	122615.93	Terraplén	0.734	0	33755.75488
K 12+090		0.00	49.39	0.00	1045.80	0.00	122615.93	Terraplén	3.151	0	33755.75488
K 12+100		0.00	57.07	0.00	1045.80	0.00	122615.93	Terraplén	3.517	0	33755.75488
K 12+110		0.00	59.46	0.00	1045.80	0.00	122615.93	Terraplén	3.628	0	33755.75488
K 12+120		0.00	27.66	0.00	1045.80	0.00	122615.93	Terraplén	1.986	0	33755.75488
K 12+130		0.00	16.97	0.00	1045.80	0.00	122615.93	Terraplén	1.313	0	33755.75488
K 12+140		0.00	12.76	0.00	1045.80	0.00	122615.93	Terraplén	1.022	0	33755.75488

Consorcio Vías Colombia 055	MEMORIA DE CALCULO DE CANTIDADES DEL APU	
ENTIDAD:	INSTITUTO NACIONAL DE VIAS	
NOMBRE DEL PROYECTO:	MEJORAMIENTO, MANTENIMIENTO, GESTIÓN PREDIAL, SOCIAL Y AMBIENTAL SOSTENIBLE DE LA CARRETERA VILLAGARZON - SAN JOSE DEL FRAGUA Y PUENTE SOBRE EL RIO CAQUETA EN LOS DEPARTAMENTOS DE PUTUMAYO, CAUCA Y CAQUETA EN MARCO DE LA REACTIVACIÓN ECONÓMICA, MEDIANTE EL PROGRAMA VIAS PARA LA CONEXION DE TERRITORIOS, EL CRECIMIENTO SOSTENIBLE Y LA REACTIVACIÓN 2.0	

ABSCISA	DISTANCIA	AREA CTE	AREA RELL	VOL CTE	VOL CTE ACUM	VOL RELL	VOL RELL ACUM	SECCION	ALT APROX TER	PROT DE TALUD	ACUM PROT DE TAL
K 12+150		0.00	10.34	0.00	1045.80	0.00	122615.93	Terraplén	0.846	0	33755.75488
K 12+160		0.00	8.18	0.00	1045.80	0.00	122615.93	Terraplén	0.683	0	33755.75488
K 12+170		0.00	7.37	0.00	1045.80	0.00	122615.93	Terraplén	0.620	0	33755.75488
K 12+180		0.00	8.31	0.00	1045.80	0.00	122615.93	Terraplén	0.693	0	33755.75488
K 12+190		0.00	8.72	0.00	1045.80	0.00	122615.93	Terraplén	0.724	0	33755.75488
K 12+200		0.00	11.18	0.00	1045.80	0.00	122615.93	Terraplén	0.908	0	33755.75488
K 12+210		0.00	10.61	0.00	1045.80	0.00	122615.93	Terraplén	0.866	0	33755.75488
K 12+220		0.03	7.01	0.00	1045.80	0.00	122615.93	Terraplén	0.592	0	33755.75488
K 12+230		3.40	6.87	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 12+240		11.18	6.42	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 12+250		13.10	6.36	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 12+260		0.26	8.43	0.00	1045.80	0.00	122615.93	Terraplén	0.702	0	33755.75488
K 12+270		0.00	17.23	0.00	1045.80	0.00	122615.93	Terraplén	1.331	0	33755.75488
K 12+280		0.00	25.03	0.00	1045.80	0.00	122615.93	Terraplén	1.828	0	33755.75488
K 12+290		0.00	31.1	0.00	1045.80	0.00	122615.93	Terraplén	2.186	0	33755.75488
K 12+300		0.00	33.14	0.00	1045.80	0.00	122615.93	Terraplén	2.301	0	33755.75488
K 12+310		0.00	33.17	0.00	1045.80	0.00	122615.93	Terraplén	2.303	0	33755.75488
K 12+320		0.00	30.4	0.00	1045.80	0.00	122615.93	Terraplén	2.146	0	33755.75488
K 12+330		0.00	27.92	0.00	1045.80	0.00	122615.93	Terraplén	2.001	0	33755.75488
K 12+340		0.00	14.47	0.00	1045.80	0.00	122615.93	Terraplén	1.143	0	33755.75488
K 12+350		0.00	15.37	0.00	1045.80	0.00	122615.93	Terraplén	1.205	0	33755.75488
K 12+360		0.00	13.88	0.00	1045.80	0.00	122615.93	Terraplén	1.101	0	33755.75488
K 12+370		0.00	14.04	0.00	1045.80	0.00	122615.93	Terraplén	1.113	0	33755.75488
K 12+380		0.00	14.05	0.00	1045.80	0.00	122615.93	Terraplén	1.113	0	33755.75488
K 12+390		0.00	13.86	0.00	1045.80	0.00	122615.93	Terraplén	1.100	0	33755.75488
K 12+400		0.00	12.78	0.00	1045.80	0.00	122615.93	Terraplén	1.024	0	33755.75488
K 12+410		0.00	11.39	0.00	1045.80	0.00	122615.93	Terraplén	0.923	0	33755.75488
K 12+420		0.00	9.48	0.00	1045.80	0.00	122615.93	Terraplén	0.782	0	33755.75488
K 12+430		0.00	9.9	0.00	1045.80	0.00	122615.93	Terraplén	0.813	0	33755.75488
K 12+440		0.00	8.74	0.00	1045.80	0.00	122615.93	Terraplén	0.726	0	33755.75488
K 12+450		0.00	6.92	0.00	1045.80	0.00	122615.93	Terraplén	0.585	0	33755.75488
K 12+460		0.00	8.28	0.00	1045.80	0.00	122615.93	Terraplén	0.691	0	33755.75488
K 12+470		0.00	8.27	0.00	1045.80	0.00	122615.93	Terraplén	0.690	0	33755.75488
K 12+480		0.00	8.96	0.00	1045.80	0.00	122615.93	Terraplén	0.743	0	33755.75488
K 12+490		0.00	10.94	0.00	1045.80	0.00	122615.93	Terraplén	0.890	0	33755.75488
K 12+500		0.00	13.16	0.00	1045.80	0.00	122615.93	Terraplén	1.051	0	33755.75488
K 12+510		0.00	15.06	0.00	1045.80	0.00	122615.93	Terraplén	1.183	0	33755.75488
K 12+520		0.00	17.12	0.00	1045.80	0.00	122615.93	Terraplén	1.324	0	33755.75488
K 12+530		0.00	20.69	0.00	1045.80	0.00	122615.93	Terraplén	1.557	0	33755.75488
K 12+540		0.00	22.07	0.00	1045.80	0.00	122615.93	Terraplén	1.645	0	33755.75488
K 12+550		0.00	20.08	0.00	1045.80	0.00	122615.93	Terraplén	1.518	0	33755.75488
K 12+560		0.00	24.04	0.00	1045.80	0.00	122615.93	Terraplén	1.767	0	33755.75488
K 12+570		0.00	21	0.00	1045.80	0.00	122615.93	Terraplén	1.577	0	33755.75488
K 12+580		0.00	16.4	0.00	1045.80	0.00	122615.93	Terraplén	1.275	0	33755.75488
K 12+590		0.00	15.72	0.00	1045.80	0.00	122615.93	Terraplén	1.229	0	33755.75488
K 12+600		0.00	13.79	0.00	1045.80	0.00	122615.93	Terraplén	1.095	0	33755.75488
K 12+610		0.00	11.44	0.00	1045.80	0.00	122615.93	Terraplén	0.927	0	33755.75488
K 12+620		0.00	10.87	0.00	1045.80	0.00	122615.93	Terraplén	0.885	0	33755.75488
K 12+630		0.00	9.68	0.00	1045.80	0.00	122615.93	Terraplén	0.797	0	33755.75488
K 12+640		0.00	9.28	0.00	1045.80	0.00	122615.93	Terraplén	0.767	0	33755.75488
K 12+650		0.00	9.51	0.00	1045.80	0.00	122615.93	Terraplén	0.784	0	33755.75488
K 12+660		0.00	9.92	0.00	1045.80	0.00	122615.93	Terraplén	0.815	0	33755.75488
K 12+670		0.00	9.23	0.00	1045.80	0.00	122615.93	Terraplén	0.763	0	33755.75488
K 12+680		0.00	8.81	0.00	1045.80	0.00	122615.93	Terraplén	0.731	0	33755.75488
K 12+690		0.00	8.17	0.00	1045.80	0.00	122615.93	Terraplén	0.682	0	33755.75488
K 12+700		0.06	7.58	0.00	1045.80	0.00	122615.93	Terraplén	0.637	0	33755.75488
K 12+710		1.51	6.65	0.00	1045.80	0.00	122615.93	Terraplén	0.564	0	33755.75488
K 12+720		4.49	6.19	0.00	1045.80	0.00	122615.93	Terraplén	0.527	0	33755.75488
K 12+730		3.04	7.2	0.00	1045.80	0.00	122615.93	Terraplén	0.607	0	33755.75488
K 12+740		0.23	8.99	0.00	1045.80	0.00	122615.93	Terraplén	0.745	0	33755.75488
K 12+750		0.00	13.63	0.00	1045.80	0.00	122615.93	Terraplén	1.084	0	33755.75488
K 12+760		0.00	15.66	0.00	1045.80	0.00	122615.93	Terraplén	1.225	0	33755.75488
K 12+770		0.00	17.23	0.00	1045.80	0.00	122615.93	Terraplén	1.331	0	33755.75488
K 12+780		0.00	17.78	0.00	1045.80	0.00	122615.93	Terraplén	1.368	0	33755.75488
K 12+790		0.00	14.74	0.00	1045.80	0.00	122615.93	Terraplén	1.161	0	33755.75488
K 12+800		0.00	10.76	0.00	1045.80	0.00	122615.93	Terraplén	0.877	0	33755.75488
K 12+810		5.36	8.37	0.00	1045.80	0.00	122615.93	Terraplén	0.698	0	33755.75488
K 12+820		10.65	7.31	0.00	1045.80	0.00	122615.93	Terraplén	0.616	0	33755.75488
K 12+830		4.37	6.37	0.00	1045.80	0.00	122615.93	Terraplén	0.542	0	33755.75488
K 12+840		2.06	5.56	0.00	1045.80	0.00	122615.93	Terraplén	0.477	0	33755.75488
K 12+850		0.06	5.99	0.00	1045.80	0.00	122615.93	Terraplén	0.511	0	33755.75488
K 12+860		0.00	7.24	0.00	1045.80	0.00	122615.93	Terraplén	0.610	0	33755.75488
K 12+870		0.00	7.22	0.00	1045.80	0.00	122615.93	Terraplén	0.609	0	33755.75488
K 12+880		0.00	8.21	0.00	1045.80	0.00	122615.93	Terraplén	0.685	0	33755.75488
K 12+890		0.00	8.99	0.00	1045.80	0.00	122615.93	Terraplén	0.745	0	33755.75488
K 12+900		0.00	9.63	0.00	1045.80	0.00	122615.93	Terraplén	0.793	0	33755.75488
K 12+910		0.00	10.48	0.00	1045.80	0.00	122615.93	Terraplén	0.857	0	33755.75488
K 12+920		0.00	17.72	0.00	1045.80	0.00	122615.93	Terraplén	1.364	0	33755.75488
K 12+930		0.00	19.71	0.00	1045.80	0.00	122615.93	Terraplén	1.494	0	33755.75488
K 12+940		0.00	18.6	0.00	1045.80	0.00	122615.93	Terraplén	1.422	0	33755.75488
K 12+950		0.00	17.47	0.00	1045.80	0.00	122615.93	Terraplén	1.347	0	33755.75488
K 12+960		0.00	16.68	0.00	1045.80	0.00	122615.93	Terraplén	1.294	0	33755.75488
K 12+970		0.00	13.64	0.00	1045.80	0.00	122615.93	Terraplén	1.085	0	33755.75488
K 12+980		0.00	11.9	0.00	1045.80	0.00	122615.93	Terraplén	0.960	0	33755.75488
K 12+990		0.00	10.97	0.00	1045.80	0.00	122615.93	Terraplén	0.893	0	33755.75488
K 13+000		0.00	8.15	0.00	1045.80	0.00	122615.93	Terraplén	0.681	0	33755.75488
K 13+010		0.00	14.43	0.00	1045.80	0.00	122615.93	Terraplén	1.140	0	33755.75488
K 13+020		0.00	16.06	0.00	1045.80	0.00	122615.93	Terraplén	1.252	0	33755.75488
K 13+030		0.00	13.62	0.00	1045.80	0.00	122615.93	Terraplén	1.083	0	33755.75488
K 13+040		0.00	14.02	0.00	1045.80	0.00	122615.93	Terraplén	1.111	0	33755.75488
K 13+050		0.00	16.01	0.00	1045.80	0.00	122615.93	Terraplén	1.249	0	33755.75488
K 13+060		0.00	16.71	0.00	1045.80	0.00	122615.93	Terraplén	1.296	0	33755.75488
K 13+070		0.00	15.87	0.00	1045.80	0.00	122615.93	Terraplén	1.239	0	33755.75488
K 13+080		0.00	16.31	0.00	1045.80	0.00	122615.93	Terraplén	1.269	0	33755.75488

Consorcio Vías Colombia 055	MEMORIA DE CALCULO DE CANTIDADES DEL APU	
ENTIDAD:	INSTITUTO NACIONAL DE VIAS	
NOMBRE DEL PROYECTO:	MEJORAMIENTO, MANTENIMIENTO, GESTIÓN PREDIAL, SOCIAL Y AMBIENTAL SOSTENIBLE DE LA CARRETERA VILLAGARZON - SAN JOSE DEL FRAGUA Y PUENTE SOBRE EL RIO CAQUETA EN LOS DEPARTAMENTOS DE PUTUMAYO, CAUCA Y CAQUETA EN MARCO DE LA REACTIVACIÓN ECONÓMICA, MEDIANTE EL PROGRAMA VIAS PARA LA CONEXION DE TERRITORIOS, EL CRECIMIENTO SOSTENIBLE Y LA REACTIVACIÓN 2.0	

ABSCISA	DISTANCIA	AREA CTE	AREA RELL	VOL CTE	VOL CTE ACUM	VOL RELL	VOL RELL ACUM	SECCION	ALT APROX TER	PROT DE TALUD	ACUM PROT DE TAL
K 13+090		0.00	16.97	0.00	1045.80	0.00	122615.93	Terraplén	1.313	0	33755.75488
K 13+100		0.00	17.86	0.00	1045.80	0.00	122615.93	Terraplén	1.373	0	33755.75488
K 13+110		0.00	19.22	0.00	1045.80	0.00	122615.93	Terraplén	1.462	0	33755.75488
K 13+120		0.00	20.9	0.00	1045.80	0.00	122615.93	Terraplén	1.571	0	33755.75488
K 13+130		0.00	18.56	0.00	1045.80	0.00	122615.93	Terraplén	1.419	0	33755.75488
K 13+140		0.00	13.78	0.00	1045.80	0.00	122615.93	Terraplén	1.094	0	33755.75488
K 13+150		0.00	14.28	0.00	1045.80	0.00	122615.93	Terraplén	1.129	0	33755.75488
K 13+160		0.00	13.16	0.00	1045.80	0.00	122615.93	Terraplén	1.051	0	33755.75488
K 13+170		0.00	12.16	0.00	1045.80	0.00	122615.93	Terraplén	0.979	0	33755.75488
K 13+180		0.00	12.15	0.00	1045.80	0.00	122615.93	Terraplén	0.978	0	33755.75488
K 13+190		0.00	12.63	0.00	1045.80	0.00	122615.93	Terraplén	1.013	0	33755.75488
K 13+200		0.00	13.37	0.00	1045.80	0.00	122615.93	Terraplén	1.065	0	33755.75488
K 13+210		0.00	9.59	0.00	1045.80	0.00	122615.93	Terraplén	0.790	0	33755.75488
K 13+220		0.00	10.08	0.00	1045.80	0.00	122615.93	Terraplén	0.827	0	33755.75488
K 13+230		0.00	11.41	0.00	1045.80	0.00	122615.93	Terraplén	0.925	0	33755.75488
K 13+240		0.00	15.37	0.00	1045.80	0.00	122615.93	Terraplén	1.205	0	33755.75488
K 13+250		0.00	12.88	0.00	1045.80	0.00	122615.93	Terraplén	1.031	0	33755.75488
K 13+260		0	14.21	0.00	1045.80	0.00	122615.93	Terraplén	1.124	0	33755.75488
K 13+270		0	14.87	0.00	1045.80	0.00	122615.93	Terraplén	1.170	0	33755.75488
K 13+280		0	13	0.00	1045.80	0.00	122615.93	Terraplén	1.039	0	33755.75488
K 13+290		3.69	0.49	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 13+300		7.64	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 13+310		10.54	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 13+320		10.19	0.01	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 13+330		12.15	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 13+340		10.8	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 13+350		12.98	0.03	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 13+360		13.7	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 13+370		9.78	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 13+380		10.49	0.02	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 13+390		8.53	0.31	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 13+400		6.35	3.19	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 13+410		9.27	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 13+420		10.53	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 13+430		12.44	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 13+440		19.77	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 13+450		14.81	0.03	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 13+460		13.12	0.01	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 13+470		11.39	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 13+480		10.34	3.55	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 13+490		8.84	0.89	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 13+500		13.47	0.03	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 13+510		12.32	0.05	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 13+520		13.54	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 13+530		13.83	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 13+540		12.19	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 13+550		12.83	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 13+560		10.46	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 13+570		9.17	0.08	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 13+580		10.14	0.91	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 13+590		13.44	0.26	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 13+600		13.49	6.12	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 13+610		2.35	14.4	0.00	1045.80	0.00	122615.93	Mixta	0.113	0	33755.75488
K 13+620		6.92	9.37	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 13+630		9.23	8.81	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 13+640		16.55	2.39	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 13+650		18.01	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 13+660		21.53	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 13+670		22.12	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 13+680		22.09	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 13+690		23.07	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 13+700		15.38	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 13+710		14.39	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 13+720		7.19	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 13+730		4.56	0.16	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 13+740		1.82	5.5	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 13+750		0	13.07	0.00	1045.80	0.00	122615.93	Terraplén	1.044	0	33755.75488
K 13+760		0	11.96	0.00	1045.80	0.00	122615.93	Terraplén	0.965	0	33755.75488
K 13+770		0	10.54	0.00	1045.80	0.00	122615.93	Terraplén	0.861	0	33755.75488
K 13+780		3.12	1.04	0.00	1045.80	0.00	122615.93	Terraplén	0.094	0	33755.75488
K 13+790		7.6	0	0.00	1045.80	0.00	122615.93	Terraplén	0.000	0	33755.75488
K 13+800		10.92	0	0.00	1045.80	0.00	122615.93	Terraplén	0.000	0	33755.75488
K 13+810		15.63	0	0.00	1045.80	0.00	122615.93	Terraplén	0.000	0	33755.75488
K 13+820		21.69	0	0.00	1045.80	0.00	122615.93	Terraplén	0.000	0	33755.75488
K 13+830		23.69	0	0.00	1045.80	0.00	122615.93	Terraplén	0.000	0	33755.75488
K 13+840		19.13	0.01	0.00	1045.80	0.00	122615.93	Terraplén	0.001	0	33755.75488
K 13+850		24.94	0	0.00	1045.80	0.00	122615.93	Terraplén	0.000	0	33755.75488
K 13+860		22.86	0	0.00	1045.80	0.00	122615.93	Terraplén	0.000	0	33755.75488
K 13+870		28.08	0	0.00	1045.80	0.00	122615.93	Terraplén	0.000	0	33755.75488
K 13+880		28.63	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 13+890		30.94	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 13+900		28.06	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 13+910		21.63	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 13+920		14.89	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 13+930		14.38	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 13+940		13.42	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 13+950		12.53	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 13+960		11.78	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 13+970		11.66	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 13+980		8.7	0.12	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 13+990		7.71	5.41	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 14+000		7.58	9.44	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 14+010		8.01	4.45	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 14+020		9.28	0.64	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488

Consorcio Vías Colombia 055	MEMORIA DE CALCULO DE CANTIDADES DEL APU	
ENTIDAD:	INSTITUTO NACIONAL DE VIAS	
NOMBRE DEL PROYECTO:	MEJORAMIENTO, MANTENIMIENTO, GESTIÓN PREDIAL, SOCIAL Y AMBIENTAL SOSTENIBLE DE LA CARRETERA VILLAGARZON - SAN JOSE DEL FRAGUA Y PUENTE SOBRE EL RIO CAQUETA EN LOS DEPARTAMENTOS DE PUTUMAYO, CAUCA Y CAQUETA EN MARCO DE LA REACTIVACIÓN ECONÓMICA, MEDIANTE EL PROGRAMA VIAS PARA LA CONEXION DE TERRITORIOS, EL CRECIMIENTO SOSTENIBLE Y LA REACTIVACIÓN 2.0	

ABSCISA	DISTANCIA	AREA CTE	AREA RELL	VOL CTE	VOL CTE ACUM	VOL RELL	VOL RELL ACUM	SECCION	ALT APROX TER	PROT DE TALUD	ACUM PROT DE TAL
K 14+030		12.04	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 14+040		14.46	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 14+050		15.83	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 14+060		21.88	0.17	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 14+070		29	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 14+080		29.81	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 14+090		12.76	0.01	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 14+100		12.86	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 14+110		12.95	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 14+120		13.58	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 14+130		13.11	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 14+140		10.46	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 14+150		7.43	0.16	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 14+160		8.48	0.41	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 14+170		8.9	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 14+180		7.36	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 14+190		7.46	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 14+200		6.45	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 14+210		8.61	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 14+220		13.52	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 14+230		18.66	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 14+240		16.52	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 14+250		17.48	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 14+260		18.97	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 14+270		20.73	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 14+280		19.08	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 14+290		8	4.14	0.00	1045.80	0.00	122615.93	Mixta	0.474	0	33755.75488
K 14+300		1.41	6.31	0.00	1045.80	0.00	122615.93	Mixta	0.488	0	33755.75488
K 14+310		0	10.55	0.00	1045.80	0.00	122615.93	Terraplén	0.862	0	33755.75488
K 14+320		0	21.86	0.00	1045.80	0.00	122615.93	Terraplén	1.632	0	33755.75488
K 14+330		0	12.95	0.00	1045.80	0.00	122615.93	Terraplén	1.036	0	33755.75488
K 14+340		7.08	10.75	0.00	1045.80	0.00	122615.93	Mixta	0.574	0	33755.75488
K 14+350		11.6	9.85	0.00	1045.80	0.00	122615.93	Mixta	0.592	0	33755.75488
K 14+360		9.67	13.94	0.00	1045.80	0.00	122615.93	Mixta	0.588	0	33755.75488
K 14+370		12.25	18.97	0.00	1045.80	0.00	122615.93	Mixta	0.841	0	33755.75488
K 14+380		15.74	7.62	0.00	1045.80	0.00	122615.93	Mixta	0.743	0	33755.75488
K 14+390		21.13	0	0.00	1045.80	0.00	122615.93	Mixta	0.629	0	33755.75488
K 14+400		14.13	0	0.00	1045.80	0.00	122615.93	Mixta	0.524	0	33755.75488
K 14+410		13.25	0	0.00	1045.80	0.00	122615.93	Mixta	0.477	0	33755.75488
K 14+420		12.71	0.41	0.00	1045.80	0.00	122615.93	Mixta	0.415	0	33755.75488
K 14+430		11.73	0	0.00	1045.80	0.00	122615.93	Mixta	0.529	0	33755.75488
K 14+440		14.19	0	0.00	1045.80	0.00	122615.93	Mixta	0.562	0	33755.75488
K 14+450		14.33	0	0.00	1045.80	0.00	122615.93	Mixta	0.523	0	33755.75488
K 14+460		17.26	0	0.00	1045.80	0.00	122615.93	Mixta	0.445	0	33755.75488
K 14+470		19.05	0	0.00	1045.80	0.00	122615.93	Mixta	0.454	0	33755.75488
K 14+480		20.35	0	0.00	1045.80	0.00	122615.93	Mixta	0.456	0	33755.75488
K 14+490		23.26	0	0.00	1045.80	0.00	122615.93	Mixta	0.504	0	33755.75488
K 14+500		30.53	0	0.00	1045.80	0.00	122615.93	Mixta	0.526	0	33755.75488
K 14+510		21.04	0.01	0.00	1045.80	0.00	122615.93	Mixta	0.485	0	33755.75488
K 14+520		18.65	0.14	0.00	1045.80	0.00	122615.93	Mixta	0.508	0	33755.75488
K 14+530		19.63	0.17	0.00	1045.80	0.00	122615.93	Mixta	0.509	0	33755.75488
K 14+540		19.12	0	0.00	1045.80	0.00	122615.93	Mixta	0.536	0	33755.75488
K 14+550		18.92	0	0.00	1045.80	0.00	122615.93	Mixta	0.524	0	33755.75488
K 14+560		25.64	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 14+570		24.72	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 14+580		30.39	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 14+590		31.66	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 14+600		32.46	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 14+610		36.68	0.01	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 14+620		23.71	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 14+630		6.91	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 14+640		8.55	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 14+650		11.39	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 14+660		12.57	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 14+670		15.35	0.2	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 14+680		33.65	0	0.00	1045.80	0.00	122615.93	Mixta	0.588	0	33755.75488
K 14+690		38.26	0.09	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 14+700		35.16	0.02	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 14+710		27.64	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 14+720		21.13	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 14+730		13.34	0	0.00	1045.80	0.00	122615.93	Mixta	0.832	0	33755.75488
K 14+740		13.76	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 14+750		13	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 14+760		23.83	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 14+770		52.03	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 14+780		140.63	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 14+790		194.09	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 14+800		188.85	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 14+810		227.73	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 14+820		206.38	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 14+830		171.75	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 14+840		102.7	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 14+850		73.36	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 14+860		58.69	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 14+870		37.18	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 14+880		24.9	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 14+890		14.07	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 14+900		16.16	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 14+910		13.64	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 14+920		16.96	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 14+930		16.35	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 14+940		24.32	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 14+950		63.44	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 14+960		106.1	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488

Consorcio Vías Colombia 055	MEMORIA DE CALCULO DE CANTIDADES DEL APU	
ENTIDAD:	INSTITUTO NACIONAL DE VIAS	
NOMBRE DEL PROYECTO:	MEJORAMIENTO, MANTENIMIENTO, GESTIÓN PREDIAL, SOCIAL Y AMBIENTAL SOSTENIBLE DE LA CARRETERA VILLAGARZON - SAN JOSE DEL FRAGUA Y PUENTE SOBRE EL RIO CAQUETA EN LOS DEPARTAMENTOS DE PUTUMAYO, CAUCA Y CAQUETA EN MARCO DE LA REACTIVACIÓN ECONÓMICA, MEDIANTE EL PROGRAMA VIAS PARA LA CONEXION DE TERRITORIOS, EL CRECIMIENTO SOSTENIBLE Y LA REACTIVACIÓN 2.0	

ABSCISA	DISTANCIA	AREA CTE	AREA RELL	VOL CTE	VOL CTE ACUM	VOL RELL	VOL RELL ACUM	SECCION	ALT APROX TER	PROT DE TALUD	ACUM PROT DE TAL
K 14+970		114.89	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 14+980		103.19	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 14+990		83.16	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 15+000		53.31	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 15+010		13.93	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 15+020		0.01	12.22	0.00	1045.80	0.00	122615.93	Terraplén	0.983	0	33755.75488
K 15+030		0	20.73	0.00	1045.80	0.00	122615.93	Terraplén	1.560	0	33755.75488
K 15+040		0	44.49	0.00	1045.80	0.00	122615.93	Terraplén	2.906	0	33755.75488
K 15+050		0	67.89	0.00	1045.80	0.00	122615.93	Terraplén	4.004	0	33755.75488
K 15+060		0	79.79	0.00	1045.80	0.00	122615.93	Terraplén	4.506	0	33755.75488
K 15+070		0	75.99	0.00	1045.80	0.00	122615.93	Terraplén	4.349	0	33755.75488
K 15+080		0	70.54	0.00	1045.80	0.00	122615.93	Terraplén	4.118	0	33755.75488
K 15+090		0	63.45	0.00	1045.80	0.00	122615.93	Terraplén	3.808	0	33755.75488
K 15+100		0	56.29	0.00	1045.80	0.00	122615.93	Terraplén	3.481	0	33755.75488
K 15+110		0	48.98	0.00	1045.80	0.00	122615.93	Terraplén	3.131	0	33755.75488
K 15+120		0	47.73	0.00	1045.80	0.00	122615.93	Terraplén	3.069	0	33755.75488
K 15+130		0	57.92	0.00	1045.80	0.00	122615.93	Terraplén	3.557	0	33755.75488
K 15+140		0	64.57	0.00	1045.80	0.00	122615.93	Terraplén	3.858	0	33755.75488
K 15+150		0	61.09	0.00	1045.80	0.00	122615.93	Terraplén	3.702	0	33755.75488
K 15+160		0	51.73	0.00	1045.80	0.00	122615.93	Terraplén	3.264	0	33755.75488
K 15+170		0	28.48	0.00	1045.80	0.00	122615.93	Terraplén	2.034	0	33755.75488
K 15+180		0.02	12.17	0.00	1045.80	0.00	122615.93	Terraplén	0.980	0	33755.75488
K 15+190		5.65	5.29	0.00	1045.80	0.00	122615.93	Terraplén	0.455	0	33755.75488
K 15+200		20.14	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 15+210		13.78	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 15+220		12.28	0.06	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 15+230		10.02	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 15+240		0	13.99	0.00	1045.80	0.00	122615.93	Terraplén	1.109	0	33755.75488
K 15+250		0	28.3	0.00	1045.80	0.00	122615.93	Terraplén	2.024	0	33755.75488
K 15+260		0	43.04	0.00	1045.80	0.00	122615.93	Terraplén	2.832	0	33755.75488
K 15+270		0	36.21	0.00	1045.80	0.00	122615.93	Terraplén	2.471	0	33755.75488
K 15+280		3.45	16.89	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 15+290		12.04	2.89	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 15+300		28.6	1.08	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 15+310		31.29	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 15+320		42.71	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 15+330		49.96	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 15+340		49.48	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 15+350		45.29	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 15+360		32.48	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 15+370		21.5	1.75	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 15+380		12.27	0.12	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 15+390		5.19	3.91	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 15+400		0	26.64	0.00	1045.80	0.00	122615.93	Terraplén	1.925	0	33755.75488
K 15+410		0	30	0.00	1045.80	0.00	122615.93	Terraplén	2.123	0	33755.75488
K 15+420		0	27.02	0.00	1045.80	0.00	122615.93	Terraplén	1.948	0	33755.75488
K 15+430		0	28.97	0.00	1045.80	0.00	122615.93	Terraplén	2.063	0	33755.75488
K 15+440		0	26.68	0.00	1045.80	0.00	122615.93	Terraplén	1.928	0	33755.75488
K 15+450		0	26.88	0.00	1045.80	0.00	122615.93	Terraplén	1.939	0	33755.75488
K 15+460		0	32.67	0.00	1045.80	0.00	122615.93	Terraplén	2.275	0	33755.75488
K 15+470		0	53.51	0.00	1045.80	0.00	122615.93	Terraplén	3.350	0	33755.75488
K 15+480		0	50.87	0.00	1045.80	0.00	122615.93	Terraplén	3.223	0	33755.75488
K 15+490		0	42.75	0.00	1045.80	0.00	122615.93	Terraplén	2.817	0	33755.75488
K 15+500		0	49.87	0.00	1045.80	0.00	122615.93	Terraplén	3.174	0	33755.75488
K 15+510		0	28.89	0.00	1045.80	0.00	122615.93	Terraplén	2.058	0	33755.75488
K 15+520		0	14.87	0.00	1045.80	0.00	122615.93	Terraplén	1.170	0	33755.75488
K 15+530		0	15.93	0.00	1045.80	0.00	122615.93	Terraplén	1.243	0	33755.75488
K 15+540		8.84	0	0.00	1045.80	0.00	122615.93	Terraplén	0.000	0	33755.75488
K 15+550		13.05	1.37	0.00	1045.80	0.00	122615.93	Mixta	0.754	0	33755.75488
K 15+560		13.92	6.92	0.00	1045.80	0.00	122615.93	Mixta	0.727	0	33755.75488
K 15+570		19.13	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 15+580		19.6	1.84	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 15+590		20.94	0.54	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 15+600		22.75	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 15+610		17.95	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 15+620		11.79	0.4	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 15+630		5.95	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 15+640		0	20.75	0.00	1045.80	0.00	122615.93	Terraplén	1.561	0	33755.75488
K 15+650		0	38.09	0.00	1045.80	0.00	122615.93	Terraplén	2.572	0	33755.75488
K 15+660		0	54.52	0.00	1045.80	0.00	122615.93	Terraplén	3.398	0	33755.75488
K 15+670		0	48.1	0.00	1045.80	0.00	122615.93	Terraplén	3.087	0	33755.75488
K 15+680		0	43.15	0.00	1045.80	0.00	122615.93	Terraplén	2.838	0	33755.75488
K 15+690		0	19.3	0.00	1045.80	0.00	122615.93	Terraplén	1.468	0	33755.75488
K 15+700		9.21	0.22	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 15+710		21.75	0.11	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 15+720		37.04	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 15+730		54.23	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 15+740		59.62	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 15+750		58.2	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 15+760		45.83	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 15+770		31.3	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 15+780		6.94	0.55	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 15+790		0	16.02	0.00	1045.80	0.00	122615.93	Terraplén	1.249	0	33755.75488
K 15+800		0	21.43	0.00	1045.80	0.00	122615.93	Terraplén	1.604	0	33755.75488
K 15+810		0	19.72	0.00	1045.80	0.00	122615.93	Terraplén	1.495	0	33755.75488
K 15+820		0	14.1	0.00	1045.80	0.00	122615.93	Terraplén	1.117	0	33755.75488
K 15+830		0	8.83	0.00	1045.80	0.00	122615.93	Terraplén	0.733	0	33755.75488
K 15+840		7.6	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 15+850		12.64	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 15+860		17.55	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 15+870		24.2	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 15+880		29.52	0.22	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 15+890		37.61	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 15+900		48.28	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488

Consorcio Vías Colombia 055	MEMORIA DE CALCULO DE CANTIDADES DEL APU	
ENTIDAD:	INSTITUTO NACIONAL DE VIAS	
NOMBRE DEL PROYECTO:	MEJORAMIENTO, MANTENIMIENTO, GESTIÓN PREDIAL, SOCIAL Y AMBIENTAL SOSTENIBLE DE LA CARRETERA VILLAGARZON - SAN JOSE DEL FRAGUA Y PUENTE SOBRE EL RIO CAQUETA EN LOS DEPARTAMENTOS DE PUTUMAYO, CAUCA Y CAQUETA EN MARCO DE LA REACTIVACIÓN ECONÓMICA, MEDIANTE EL PROGRAMA VIAS PARA LA CONEXION DE TERRITORIOS, EL CRECIMIENTO SOSTENIBLE Y LA REACTIVACIÓN 2.0	

ABSCISA	DISTANCIA	AREA CTE	AREA RELL	VOL CTE	VOL CTE ACUM	VOL RELL	VOL RELL ACUM	SECCION	ALT APROX TER	PROT DE TALUD	ACUM PROT DE TAL
K 15+910		60.24	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 15+920		69.22	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 15+930		74.46	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 15+940		73.96	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 15+950		73.09	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 15+960		55.58	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 15+970		24.83	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 15+980		20.43	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 15+990		5.63	1.87	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 16+000		0	30.48	0.00	1045.80	0.00	122615.93	Terraplén	2.150	0	33755.75488
K 16+010		0	53.94	0.00	1045.80	0.00	122615.93	Terraplén	3.370	0	33755.75488
K 16+020		0	74.14	0.00	1045.80	0.00	122615.93	Terraplén	4.271	0	33755.75488
K 16+030		0	78.23	0.00	1045.80	0.00	122615.93	Terraplén	4.442	0	33755.75488
K 16+040		0	81.68	0.00	1045.80	0.00	122615.93	Terraplén	4.583	0	33755.75488
K 16+050		0	82.64	0.00	1045.80	0.00	122615.93	Terraplén	4.621	0	33755.75488
K 16+060		0	87.47	0.00	1045.80	0.00	122615.93	Terraplén	4.814	0	33755.75488
K 16+070		0	84.57	0.00	1045.80	0.00	122615.93	Terraplén	4.699	0	33755.75488
K 16+080		0	75.79	0.00	1045.80	0.00	122615.93	Terraplén	4.341	0	33755.75488
K 16+090		0	50.91	0.00	1045.80	0.00	122615.93	Terraplén	3.225	0	33755.75488
K 16+100		0	20.68	0.00	1045.80	0.00	122615.93	Terraplén	1.557	0	33755.75488
K 16+110		0	9.38	0.00	1045.80	0.00	122615.93	Terraplén	0.774	0	33755.75488
K 16+120		12.8	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 16+130		23.32	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 16+140		33.52	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 16+150		34.08	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 16+160		34.96	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 16+170		32.25	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 16+180		27.63	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 16+190		21.52	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 16+200		16.33	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 16+210		12.86	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 16+220		10.42	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 16+230		6.38	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 16+240		4.22	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 16+250		0	10.34	0.00	1045.80	0.00	122615.93	Terraplén	0.846	0	33755.75488
K 16+260		0	12.18	0.00	1045.80	0.00	122615.93	Terraplén	0.981	0	33755.75488
K 16+270		0	10.78	0.00	1045.80	0.00	122615.93	Terraplén	0.879	0	33755.75488
K 16+280		3.09	0.38	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 16+290		4.77	0.41	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 16+300		4.87	2.16	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 16+310		8.59	5.81	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 16+320		21.84	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 16+330		35.68	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 16+340		53.73	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 16+350		73.35	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 16+360		93.08	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 16+370		114.31	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 16+380		133.89	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 16+390		162.9	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 16+400		169.16	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 16+410		216.23	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 16+420		277.2	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 16+430		333.71	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 16+440		274.74	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 16+450		147.12	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 16+460		67.95	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 16+470		18.33	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 16+480		0	42.2	0.00	1045.80	0.00	122615.93	Terraplén	2.789	0	33755.75488
K 16+490		0	83.49	0.00	1045.80	0.00	122615.93	Terraplén	4.656	0	33755.75488
K 16+500		0	115.31	0.00	1045.80	0.00	122615.93	Terraplén	5.847	0	33755.75488
K 16+510		0	148.68	0.00	1045.80	0.00	122615.93	Terraplén	6.954	0	33755.75488
K 16+520		0	154.16	0.00	1045.80	0.00	122615.93	Terraplén	7.125	0	33755.75488
K 16+530		0	146.56	0.00	1045.80	0.00	122615.93	Terraplén	6.887	0	33755.75488
K 16+540		0	142.39	0.00	1045.80	0.00	122615.93	Terraplén	6.754	0	33755.75488
K 16+550		0	113.62	0.00	1045.80	0.00	122615.93	Terraplén	5.788	0	33755.75488
K 16+560		0	91.41	0.00	1045.80	0.00	122615.93	Terraplén	4.968	0	33755.75488
K 16+570		0	83.74	0.00	1045.80	0.00	122615.93	Terraplén	4.666	0	33755.75488
K 16+580		0	85.06	0.00	1045.80	0.00	122615.93	Terraplén	4.718	0	33755.75488
K 16+590		0	76.2	0.00	1045.80	0.00	122615.93	Terraplén	4.358	0	33755.75488
K 16+600		0	86.1	0.00	1045.80	0.00	122615.93	Terraplén	4.760	0	33755.75488
K 16+610		0	87.18	0.00	1045.80	0.00	122615.93	Terraplén	4.802	0	33755.75488
K 16+620		0	74.67	0.00	1045.80	0.00	122615.93	Terraplén	4.294	0	33755.75488
K 16+630		0	63.1	0.00	1045.80	0.00	122615.93	Terraplén	3.792	0	33755.75488
K 16+640		0	57.15	0.00	1045.80	0.00	122615.93	Terraplén	3.521	0	33755.75488
K 16+650		0	59.3	0.00	1045.80	0.00	122615.93	Terraplén	3.620	0	33755.75488
K 16+660		0	44.16	0.00	1045.80	0.00	122615.93	Terraplén	2.889	0	33755.75488
K 16+670		0	38.43	0.00	1045.80	0.00	122615.93	Terraplén	2.590	0	33755.75488
K 16+680		0	32.68	0.00	1045.80	0.00	122615.93	Terraplén	2.275	0	33755.75488
K 16+690		0	22.5	0.00	1045.80	0.00	122615.93	Terraplén	1.672	0	33755.75488
K 16+700		6.89	0.8	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 16+710		11.99	0.19	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 16+720		19.05	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 16+730		21.04	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 16+740		19.22	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 16+750		11.92	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 16+760		9.3	1.46	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 16+770		0	25.82	0.00	1045.80	0.00	122615.93	Terraplén	1.876	0	33755.75488
K 16+780		0	37.63	0.00	1045.80	0.00	122615.93	Terraplén	2.548	0	33755.75488
K 16+790		0	47.45	0.00	1045.80	0.00	122615.93	Terraplén	3.055	0	33755.75488
K 16+800		0	58.54	0.00	1045.80	0.00	122615.93	Terraplén	3.585	0	33755.75488
K 16+810		0	55.36	0.00	1045.80	0.00	122615.93	Terraplén	3.437	0	33755.75488
K 16+820		0	49.43	0.00	1045.80	0.00	122615.93	Terraplén	3.153	0	33755.75488
K 16+830		2.71	31.71	0.00	1045.80	0.00	122615.93	Mixta	0.475	0	33755.75488
K 16+840		14.91	15.82	0.00	1045.80	0.00	122615.93	Mixta	0.512	0	33755.75488

Consorcio Vías Colombia 055	MEMORIA DE CALCULO DE CANTIDADES DEL APU	
ENTIDAD:	INSTITUTO NACIONAL DE VIAS	
NOMBRE DEL PROYECTO:	MEJORAMIENTO, MANTENIMIENTO, GESTIÓN PREDIAL, SOCIAL Y AMBIENTAL SOSTENIBLE DE LA CARRETERA VILLAGARZON - SAN JOSE DEL FRAGUA Y PUENTE SOBRE EL RIO CAQUETA EN LOS DEPARTAMENTOS DE PUTUMAYO, CAUCA Y CAQUETA EN MARCO DE LA REACTIVACIÓN ECONÓMICA, MEDIANTE EL PROGRAMA VIAS PARA LA CONEXION DE TERRITORIOS, EL CRECIMIENTO SOSTENIBLE Y LA REACTIVACIÓN 2.0	

ABSCISA	DISTANCIA	AREA CTE	AREA RELL	VOL CTE	VOL CTE ACUM	VOL RELL	VOL RELL ACUM	SECCION	ALT APROX TER	PROT DE TALUD	ACUM PROT DE TAL
K 16+850		22.74	10.31	0.00	1045.80	0.00	122615.93	Mixta	0.500	0	33755.75488
K 16+860		46.63	13.39	0.00	1045.80	0.00	122615.93	Mixta	0.517	0	33755.75488
K 16+870		8.67	37	0.00	1045.80	0.00	122615.93	Mixta	0.507	0	33755.75488
K 16+880		0	78.09	0.00	1045.80	0.00	122615.93	Terraplén	4.436	0	33755.75488
K 16+890		0	29.34	0.00	1045.80	0.00	122615.93	Terraplén	2.084	0	33755.75488
K 16+900		0	67.8	0.00	1045.80	0.00	122615.93	Terraplén	4.000	0	33755.75488
K 16+910		0	174.88	0.00	1045.80	0.00	122615.93	Terraplén	7.748	0	33755.75488
K 16+920		0	167.46	0.00	1045.80	0.00	122615.93	Terraplén	7.529	0	33755.75488
K 16+930		0	153.84	0.00	1045.80	0.00	122615.93	Terraplén	7.115	0	33755.75488
K 16+940		0	135.6	0.00	1045.80	0.00	122615.93	Terraplén	6.534	0	33755.75488
K 16+950		0	92.97	0.00	1045.80	0.00	122615.93	Terraplén	5.028	0	33755.75488
K 16+960		3.77	3.64	0.00	1045.80	0.00	122615.93	Mixta	0.159	0	33755.75488
K 16+970		22.18	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 16+980		44.07	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 16+990		59.38	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 17+000		60.59	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 17+010		31.72	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 17+020		16.5	0.01	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 17+030		9.25	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 17+040		0	25.83	0.00	1045.80	0.00	122615.93	Terraplén	1.877	0	33755.75488
K 17+050		0	44.39	0.00	1045.80	0.00	122615.93	Terraplén	2.901	0	33755.75488
K 17+060		0	43.46	0.00	1045.80	0.00	122615.93	Terraplén	2.854	0	33755.75488
K 17+070		0	44.34	0.00	1045.80	0.00	122615.93	Terraplén	2.898	0	33755.75488
K 17+080		0	50.89	0.00	1045.80	0.00	122615.93	Terraplén	3.224	0	33755.75488
K 17+090		0	58.35	0.00	1045.80	0.00	122615.93	Terraplén	3.577	0	33755.75488
K 17+100		0	51.7	0.00	1045.80	0.00	122615.93	Terraplén	3.263	0	33755.75488
K 17+110		0	31.93	0.00	1045.80	0.00	122615.93	Terraplén	2.233	0	33755.75488
K 17+120		11.33	0.5	0.00	1045.80	0.00	122615.93	Mixta	0.410	0	33755.75488
K 17+130		14	0.1	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 17+140		22.12	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 17+150		28.92	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 17+160		35.01	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 17+170		23.81	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 17+180		12.52	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 17+190		10.91	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 17+200		9.22	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 17+210		7.37	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 17+220		8.48	0.02	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 17+230		0	7.89	0.00	1045.80	0.00	122615.93	Terraplén	0.661	0	33755.75488
K 17+240		0	11.73	0.00	1045.80	0.00	122615.93	Terraplén	0.948	0	33755.75488
K 17+250		0	15.4	0.00	1045.80	0.00	122615.93	Terraplén	1.207	0	33755.75488
K 17+260		0.16	6.22	0.00	1045.80	0.00	122615.93	Terraplén	0.530	0	33755.75488
K 17+270		9.39	5.31	0.00	1045.80	0.00	122615.93	Terraplén	0.456	0	33755.75488
K 17+280		9.61	0	0.00	1045.80	0.00	122615.93	Mixta	1.261	0	33755.75488
K 17+290		10.46	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 17+300		6.3	0.12	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 17+310		10.3	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 17+320		13.42	0.24	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 17+330		16.13	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 17+340		20.05	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 17+350		22.36	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 17+360		27.02	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 17+370		17.72	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 17+380		11.74	0	0.00	1045.80	0.00	122615.93	Corte	0.000	0	33755.75488
K 17+390	10.00	15.17	0	134.55	1180.35	0.00	122615.93	Corte	0.000	0	33755.75488
K 17+400	10.00	13.87	0	145.20	1325.55	0.00	122615.93	Corte	0.000	0	33755.75488
K 17+410	10.00	11.36	0.15	126.15	1451.70	0.75	122616.68	Corte	0.000	0	33755.75488
K 17+420	10.00	12.91	0	121.35	1573.05	0.75	122617.43	Corte	0.000	0	33755.75488
K 17+430	10.00	12.14	0	125.25	1698.30	0.00	122617.43	Corte	0.000	0	33755.75488
K 17+440	10.00	17.6	0	148.70	1847.00	0.00	122617.43	Corte	0.000	0	33755.75488
K 17+450	10.00	20.72	0	191.60	2038.60	0.00	122617.43	Corte	0.000	0	33755.75488
K 17+460	10.00	19.83	0	202.75	2241.35	0.00	122617.43	Corte	0.000	0	33755.75488
K 17+470	10.00	18.69	0	192.60	2433.95	0.00	122617.43	Corte	0.000	0	33755.75488
K 17+480	10.00	14.84	0	167.65	2601.60	0.00	122617.43	Corte	0.000	0	33755.75488
K 17+490	10.00	12.26	0.02	135.50	2737.10	0.10	122617.53	Corte	0.000	0	33755.75488
K 17+500	10.00	7.08	2.92	96.70	2833.80	14.70	122632.23	Corte	0.000	0	33755.75488
K 17+510	10.00	12.29	0	96.85	2930.65	14.60	122646.83	Corte	0.000	0	33755.75488
K 17+520	10.00	21.07	0	166.80	3097.45	0.00	122646.83	Corte	0.000	0	33755.75488
K 17+530	10.00	30.88	0	259.75	3357.20	0.00	122646.83	Corte	0.000	0	33755.75488
K 17+540	10.00	28.31	0	295.95	3653.15	0.00	122646.83	Corte	0.000	0	33755.75488
K 17+550	10.00	21.41	0	248.60	3901.75	0.00	122646.83	Corte	0.000	0	33755.75488
K 17+560	10.00	20.35	0	208.80	4110.55	0.00	122646.83	Corte	0.000	0	33755.75488
K 17+570	10.00	15.41	0.15	178.80	4289.35	0.75	122647.58	Corte	0.000	0	33755.75488
K 17+580	10.00	11.09	0	132.50	4421.85	0.75	122648.33	Corte	0.000	0	33755.75488
K 17+590	10.00	6.2	0	86.45	4508.30	0.00	122648.33	Corte	0.000	0	33755.75488
K 17+600	10.00	11.14	0	86.70	4595.00	0.00	122648.33	Corte	0.000	0	33755.75488
K 17+610	10.00	15.64	0	133.90	4728.90	0.00	122648.33	Corte	0.000	0	33755.75488
K 17+620	10.00	23.62	0	196.30	4925.20	0.00	122648.33	Corte	0.000	0	33755.75488
K 17+630	10.00	31.07	0	273.45	5198.65	0.00	122648.33	Corte	0.000	0	33755.75488
K 17+640	10.00	41.89	0	364.80	5563.45	0.00	122648.33	Corte	0.000	0	33755.75488
K 17+650	10.00	56.17	0	490.30	6053.75	0.00	122648.33	Corte	0.000	0	33755.75488
K 17+660	10.00	73.55	0	648.60	6702.35	0.00	122648.33	Corte	0.000	0	33755.75488
K 17+670	10.00	65.82	0	696.85	7399.20	0.00	122648.33	Corte	0.000	0	33755.75488
K 17+680	10.00	73.59	0	697.05	8096.25	0.00	122648.33	Corte	0.000	0	33755.75488
K 17+690	10.00	83.84	0	787.15	8883.40	0.00	122648.33	Corte	0.000	0	33755.75488
K 17+700	10.00	74.59	0	792.15	9675.55	0.00	122648.33	Corte	0.000	0	33755.75488
K 17+710	10.00	70.06	0	723.25	10398.80	0.00	122648.33	Corte	0.000	0	33755.75488
K 17+720	10.00	60.33	0	651.95	11050.75	0.00	122648.33	Corte	0.000	0	33755.75488
K 17+730	10.00	65.32	0	628.25	11679.00	0.00	122648.33	Corte	0.000	0	33755.75488
K 17+740	10.00	65.11	0	652.15	12331.15	0.00	122648.33	Corte	0.000	0	33755.75488
K 17+750	10.00	59.34	0	622.25	12953.40	0.00	122648.33	Corte	0.000	0	33755.75488
K 17+760	10.00	48.35	0	538.45	13491.85	0.00	122648.33	Corte	0.000	0	33755.75488
K 17+770	10.00	35.97	0	421.60	13913.45	0.00	122648.33	Corte	0.000	0	33755.75488
K 17+780	10.00	43.44	0.1	397.05	14310.50	0.50	122648.83	Corte	0.000	0	33755.75488

Consorcio Vías Colombia 055	MEMORIA DE CALCULO DE CANTIDADES DEL APU	
ENTIDAD:	INSTITUTO NACIONAL DE VIAS	
NOMBRE DEL PROYECTO:	MEJORAMIENTO, MANTENIMIENTO, GESTIÓN PREDIAL, SOCIAL Y AMBIENTAL SOSTENIBLE DE LA CARRETERA VILLAGARZON - SAN JOSE DEL FRAGUA Y PUENTE SOBRE EL RIO CAQUETA EN LOS DEPARTAMENTOS DE PUTUMAYO, CAUCA Y CAQUETA EN MARCO DE LA REACTIVACIÓN ECONÓMICA, MEDIANTE EL PROGRAMA VIAS PARA LA CONEXION DE TERRITORIOS, EL CRECIMIENTO SOSTENIBLE Y LA REACTIVACIÓN 2.0	

ABSCISA	DISTANCIA	AREA CTE	AREA RELL	VOL CTE	VOL CTE ACUM	VOL RELL	VOL RELL ACUM	SECCION	ALT APROX TER	PROT DE TALUD	ACUM PROT DE TAL
K 17+790	10.00	42.66	0	430.50	14741.00	0.50	122649.33	Corte	0.000	0	33755.75488
K 17+800	10.00	44.31	0	434.85	15175.85	0.00	122649.33	Corte	0.000	0	33755.75488
K 17+810	10.00	45.83	0	450.70	15626.55	0.00	122649.33	Corte	0.000	0	33755.75488
K 17+820	10.00	44.01	0	449.20	16075.75	0.00	122649.33	Corte	0.000	0	33755.75488
K 17+830	10.00	30.94	0	374.75	16450.50	0.00	122649.33	Corte	0.000	0	33755.75488
K 17+840	10.00	21.96	0	264.50	16715.00	0.00	122649.33	Corte	0.000	0	33755.75488
K 17+850	10.00	14.29	0.57	181.25	16896.25	2.85	122652.18	Corte	0.000	0	33755.75488
K 17+860	10.00	5.28	2.75	97.85	16994.10	16.60	122668.78	Corte	0.000	0	33755.75488
K 17+870	10.00	0	16.23	26.40	17020.50	94.90	122763.68	Terraplén	1.264	45.55620549	33801.31109
K 17+880	10.00	0	10.44	0.00	17020.50	133.35	122897.03	Terraplén	0.854	30.77733411	33832.08842
K 17+890	10.00	0	20.9	0.00	17020.50	156.70	123053.73	Terraplén	1.571	56.63282498	33888.72124
K 17+900	10.00	0	23.38	0.00	17020.50	221.40	123275.13	Terraplén	1.727	62.2579383	33950.97918
K 17+910	10.00	0	24.54	0.00	17020.50	239.60	123514.73	Terraplén	1.798	64.83375491	34015.81294
K 17+920	10.00	0	34.97	0.00	17020.50	297.55	123812.28	Terraplén	2.403	86.63253449	34102.44547
K 17+930	10.00	0	33.75	0.00	17020.50	343.60	124155.88	Terraplén	2.335	84.19647483	34186.64195
K 17+940	10.00	0	27.66	0.00	17020.50	307.05	124462.93	Terraplén	1.986	71.59986367	34258.24181
K 17+950	10.00	0	17.84	0.00	17020.50	227.50	124690.43	Terraplén	1.372	49.45146797	34307.69328
K 17+960	10.00	0.15	7.39	0.75	17021.25	126.15	124816.58	Terraplén	0.622	22.42307976	34330.11636
K 17+970	10.00	3.87	3.19	20.10	17041.35	52.90	124869.48	Mixta	0.454	16.3833137	34346.49967
K 17+980	10.00	8.25	1.23	60.60	17101.95	22.10	124891.58	Mixta	0.422	15.20164699	34361.70132
K 17+990	10.00	12.46	0	103.55	17205.50	6.15	124897.73	Mixta	0.401	14.47620268	34376.17752
K 18+000	10.00	21.6	0	170.30	17375.80	0.00	124897.73	Corte	0.000	0	34376.17752
K 18+010	10.00	31.33	0	264.65	17640.45	0.00	124897.73	Corte	0.000	0	34376.17752
K 18+020	10.00	36.1	0	337.15	17977.60	0.00	124897.73	Corte	0.000	0	34376.17752
K 18+030	10.00	29.08	0	325.90	18303.50	0.00	124897.73	Corte	0.000	0	34376.17752
K 18+040	10.00	29.27	0	291.75	18595.25	0.00	124897.73	Corte	0.000	0	34376.17752
K 18+050	10.00	23.59	0	264.30	18859.55	0.00	124897.73	Corte	0.000	0	34376.17752
K 18+060	10.00	20.94	0	222.65	19082.20	0.00	124897.73	Corte	0.000	0	34376.17752
K 18+070	10.00	26.92	0	239.30	19321.50	0.00	124897.73	Corte	0.000	0	34376.17752
K 18+080	10.00	22.91	0	249.15	19570.65	0.00	124897.73	Corte	0.000	0	34376.17752
K 18+090	10.00	15.65	0	192.80	19763.45	0.00	124897.73	Corte	0.000	0	34376.17752
K 18+100	10.00	13.06	0	143.55	19907.00	0.00	124897.73	Corte	0.000	0	34376.17752
K 18+110	10.00	12.65	0	128.55	20035.55	0.00	124897.73	Corte	0.000	0	34376.17752
K 18+120	10.00	15.69	0	141.70	20177.25	0.00	124897.73	Corte	0.000	0	34376.17752
K 18+130	10.00	16.47	0	160.80	20338.05	0.00	124897.73	Corte	0.000	0	34376.17752
K 18+140	10.00	21.7	0	190.85	20528.90	0.00	124897.73	Corte	0.000	0	34376.17752
K 18+150	10.00	20.85	0	212.75	20741.65	0.00	124897.73	Corte	0.000	0	34376.17752
K 18+160	10.00	18.61	0	197.30	20938.95	0.00	124897.73	Corte	0.000	0	34376.17752
K 18+170	10.00	17.26	0	179.35	21118.30	0.00	124897.73	Corte	0.000	0	34376.17752
K 18+180	10.00	12.48	0	148.70	21267.00	0.00	124897.73	Corte	0.000	0	34376.17752
K 18+190	10.00	11.78	0	121.30	21388.30	0.00	124897.73	Corte	0.000	0	34376.17752
K 18+200	10.00	10.52	0	111.50	21499.80	0.00	124897.73	Corte	0.000	0	34376.17752
K 18+210	10.00	9.91	0	102.15	21601.95	0.00	124897.73	Corte	0.000	0	34376.17752
K 18+220	10.00	10.47	0.11	101.90	21703.85	0.55	124898.28	Corte	0.000	0	34376.17752
K 18+230	10.00	13.38	0	119.25	21823.10	0.55	124898.83	Corte	0.000	0	34376.17752
K 18+240	10.00	18.42	0	159.00	21982.10	0.00	124898.83	Corte	0.000	0	34376.17752
K 18+250	10.00	25.16	0	217.90	22200.00	0.00	124898.83	Corte	0.000	0	34376.17752
K 18+260	10.00	18.83	0	219.95	22419.95	0.00	124898.83	Corte	0.000	0	34376.17752
K 18+270	10.00	15.3	0	170.65	22590.60	0.00	124898.83	Corte	0.000	0	34376.17752
K 18+280	10.00	15.19	0	152.45	22743.05	0.00	124898.83	Corte	0.000	0	34376.17752
K 18+290	10.00	16.36	0	157.75	22900.80	0.00	124898.83	Corte	0.000	0	34376.17752
K 18+300	10.00	18.88	0	176.20	23077.00	0.00	124898.83	Corte	0.000	0	34376.17752
K 18+310	10.00	21.5	0	201.90	23278.90	0.00	124898.83	Corte	0.000	0	34376.17752
K 18+320	10.00	13.76	0	176.30	23455.20	0.00	124898.83	Corte	0.000	0	34376.17752
K 18+330	10.00	11.66	0	127.10	23582.30	0.00	124898.83	Corte	0.000	0	34376.17752
K 18+340	10.00	7.61	9.53	96.35	23678.65	47.65	124946.48	Corte	0.000	0	34376.17752
K 18+350	10.00	10.79	0.35	92.00	23770.65	49.40	124995.88	Corte	0.000	0	34376.17752
K 18+360	10.00	14.3	0	125.45	23896.10	1.75	124997.63	Corte	0.000	0	34376.17752
K 18+370	10.00	15.19	0	147.45	24043.55	0.00	124997.63	Corte	0.000	0	34376.17752
K 18+380	10.00	17.95	0.05	165.70	24209.25	0.25	124997.88	Corte	0.000	0	34376.17752
K 18+390	10.00	28.35	0	231.50	24440.75	0.25	124998.13	Corte	0.000	0	34376.17752
K 18+400	10.00	40.4	0.04	343.75	24784.50	0.20	124998.33	Corte	0.000	0	34376.17752
K 18+410	10.00	16.79	0.95	285.95	25070.45	4.95	125003.28	Corte	0.000	0	34376.17752
K 18+420	10.00	0	38.85	83.95	25154.40	199.00	125202.28	Terraplén	2.613	94.2053721	34470.38289
K 18+430	10.00	0	25.95	0.00	25154.40	324.00	125526.28	Terraplén	1.884	67.91993356	34538.30283
K 18+440	10.00	5.8	1.98	29.00	25183.40	139.65	125665.93	Corte	0.000	0	34538.30283
K 18+450	10.00	18.14	1.15	119.70	25303.10	15.65	125681.58	Corte	0.000	0	34538.30283
K 18+460	10.00	9.38	0	137.60	25440.70	5.75	125687.33	Corte	0.000	0	34538.30283
K 18+470	10.00	0	29.35	46.90	25487.60	146.75	125834.08	Terraplén	2.085	75.17241724	34613.47524
K 18+480	10.00	0	51.93	0.00	25487.60	406.40	126240.48	Terraplén	3.274	118.0476338	34731.52288
K 18+490	10.00	0	69.82	0.00	25487.60	608.75	126849.23	Terraplén	4.088	147.3775151	34878.90039
K 18+500	10.00	0	75.8	0.00	25487.60	728.10	127577.33	Terraplén	4.341	156.5164221	35035.41682
K 18+510	10.00	0	71.01	0.00	25487.60	734.05	128311.38	Terraplén	4.139	149.2198313	35184.63665
K 18+520	10.00	0	48.91	0.00	25487.60	599.60	128910.98	Terraplén	3.127	112.7494127	35297.38606
K 18+530	10.00	0	27.31	0.00	25487.60	381.10	129292.08	Terraplén	1.965	70.8521059	35368.23817
K 18+540	10.00	17.28	1	86.40	25574.00	141.55	129433.63	Corte	0.000	0	35368.23817
K 18+550	10.00	41.41	0	293.45	25867.45	5.00	129438.63	Corte	0.000	0	35368.23817
K 18+560	10.00	36.92	0.53	391.65	26259.10	2.65	129441.28	Corte	0.000	0	35368.23817
K 18+570	10.00	25.79	0	313.55	26572.65	2.65	129443.93	Corte	0.000	0	35368.23817
K 18+580	10.00	13.05	0.95	194.20	26766.85	4.75	129448.68	Corte	0.000	0	35368.23817
K 18+590	10.00	0	32.11	65.25	26832.10	165.30	129613.98	Terraplén	2.243	80.8777697	35449.11594
K 18+600	10.00	0	25.79	0.00	26832.10	289.50	129903.48	Terraplén	1.874	67.57213421	35516.68807
K 18+610	10.00	1.97	32.88	9.85	26841.95	293.35	130196.83	Terraplén	2.287	82.44235036	35599.13042
K 18+620	10.00	10.61	5.49	62.90	26904.85	191.85	130388.68	Mixta	0.435	15.66839218	35614.79881
K 18+630	10.00	14.89	0.63	127.50	27032.35	30.60	130419.28	Mixta	0.371	13.3618909	35628.1607
K 18+640	10.00	16.43	0	156.60	27188.95	3.15	130422.43	Corte	0.000	0	35628.1607
K 18+650	10.00	15.93	0.41	161.80	27350.75	2.05	130424.48	Corte	0.000	0	35628.1607
K 18+660	10.00	19	0.04	174.65	27525.40	2.25	130426.73	Corte	0.000	0	35628.1607
K 18+670	10.00	19.75	0	193.75	27719.15	0.20	130426.93	Corte	0.000	0	35628.1607
K 18+680	10.00	14.7	0.88	172.25	27891.40	4.40	130431.33	Corte	0.000	0	35628.1607
K 18+690	10.00	7.18	7.25	109.40	28000.80	40.65	130471.98	Mixta	0.537	19.37387634	35647.53458
K 18+700	10.00	0.01	20	35.95	28036.75	136.25	130608.23	Terraplén	1.513	54.54942204	35702.084
K 18+710	10.00	0	21.74	0.05	28036.80	208.70	130816.93	Terraplén	1.624	58.55674144	35760.64074
K 18+720	10.00	0	36.3	0.00	28036.80	290.20	131107.13	Terraplén	2.476	89.25762838	35849.89837

Consorcio Vías Colombia 055	MEMORIA DE CALCULO DE CANTIDADES DEL APU	
ENTIDAD:	INSTITUTO NACIONAL DE VIAS	
NOMBRE DEL PROYECTO:	MEJORAMIENTO, MANTENIMIENTO, GESTIÓN PREDIAL, SOCIAL Y AMBIENTAL SOSTENIBLE DE LA CARRETERA VILLAGARZON - SAN JOSE DEL FRAGUA Y PUENTE SOBRE EL RIO CAQUETA EN LOS DEPARTAMENTOS DE PUTUMAYO, CAUCA Y CAQUETA EN MARCO DE LA REACTIVACIÓN ECONÓMICA, MEDIANTE EL PROGRAMA VIAS PARA LA CONEXION DE TERRITORIOS, EL CRECIMIENTO SOSTENIBLE Y LA REACTIVACIÓN 2.0	

ABSCISA	DISTANCIA	AREA CTE	AREA RELL	VOL CTE	VOL CTE ACUM	VOL RELL	VOL RELL ACUM	SECCION	ALT APROX TER	PROT DE TALUD	ACUM PROT DE TAL
K 18+730	10.00	0	36.83	0.00	28036.80	365.65	131472.78	Terraplén	2.504	90.29506508	35940.19344
K 18+740	10.00	0	23.59	0.00	28036.80	302.10	131774.88	Terraplén	1.740	62.72678092	36002.92022
K 18+750	10.00	3.61	9.94	18.05	28054.85	167.65	131942.53	Terraplén	0.816	29.43748732	36032.3577
K 18+760	10.00	17.37	0	104.90	28159.75	49.70	131992.23	Corte	0.000	0	36032.3577
K 18+770	10.00	24.09	0	207.30	28367.05	0.00	131992.23	Corte	0.000	0	36032.3577
K 18+780	10.00	23.9	0	239.95	28607.00	0.00	131992.23	Corte	0.000	0	36032.3577
K 18+790	10.00	17.51	0	207.05	28814.05	0.00	131992.23	Corte	0.000	0	36032.3577
K 18+800	10.00	17.85	0.08	176.80	28990.85	0.40	131992.63	Corte	0.000	0	36032.3577
K 18+810	10.00	1.7	16.42	97.75	29088.60	82.50	132075.13	Terraplén	1.276	46.02034055	36078.37805
K 18+820	10.00	1.17	18.68	14.35	29102.95	175.50	132250.63	Terraplén	1.427	51.450877	36129.82892
K 18+830	10.00	0	32.11	5.85	29108.80	253.95	132504.58	Terraplén	2.243	80.8777697	36210.70669
K 18+840	10.00	0	42.63	0.00	29108.80	373.70	132878.28	Terraplén	2.811	101.3464072	36312.0531
K 18+850	10.00	0	70.57	0.00	29108.80	566.00	133444.28	Terraplén	4.120	148.5400504	36460.59315
K 18+860	10.00	0	65.02	0.00	29108.80	677.95	134122.23	Terraplén	3.878	139.8194053	36600.41255
K 18+870	10.00	0	68.25	0.00	29108.80	666.35	134788.58	Terraplén	4.020	144.9281181	36745.34067
K 18+880	10.00	0	75.37	0.00	29108.80	718.10	135506.68	Terraplén	4.323	155.8689712	36901.20964
K 18+890	10.00	0	84.73	0.00	29108.80	800.50	136307.18	Terraplén	4.705	169.6479663	37070.85761
K 18+900	10.00	0	88.2	0.00	29108.80	864.65	137171.83	Terraplén	4.842	174.5987011	37245.45631
K 18+910	10.00	0	110.06	0.00	29108.80	991.30	138163.13	Terraplén	5.661	204.1124114	37449.56872
K 18+920	10.00	0	114.63	0.00	29108.80	1123.45	139286.58	Terraplén	5.823	209.9603302	37659.52905
K 18+930	10.00	0	80.27	0.00	29108.80	974.50	140261.08	Terraplén	4.525	163.1626806	37822.69173
K 18+940	10.00	0	71.05	0.00	29108.80	756.60	141017.68	Terraplén	4.140	149.2815479	37971.97328
K 18+950	10.00	0	69.26	0.00	29108.80	701.55	141719.23	Terraplén	4.063	146.5063199	38118.4796
K 18+960	10.00	0	69.5	0.00	29108.80	693.80	142413.03	Terraplén	4.074	146.880023	38265.35962
K 18+970	10.00	0	56.1	0.00	29108.80	628.00	143041.03	Terraplén	3.472	125.1837683	38390.54339
K 18+980	10.00	0	45.18	0.00	29108.80	506.40	143547.43	Terraplén	2.941	106.0425972	38496.58599
K 18+990	10.00	0	45.85	0.00	29108.80	455.15	144002.58	Terraplén	2.975	107.261182	38603.84717
K 19+000	10.00	0	37.16	0.00	29108.80	415.05	144417.63	Terraplén	2.522	90.93857313	38694.78575
K 19+010	10.00	0	29.91	0.00	29108.80	335.35	144752.98	Terraplén	2.117	76.34268375	38771.12843
K 19+020	10.00	0	23.7	0.00	29108.80	268.05	145021.03	Terraplén	1.747	62.97191429	38834.10034
K 19+030	10.00	0	13.59	0.00	29108.80	186.45	145207.48	Terraplén	1.081	38.97653895	38873.07688
K 19+040	10.00	9.25	0.09	46.25	29155.05	68.40	145275.88	Corte	0.000	0	38873.07688
K 19+050	10.00	14.31	0	117.80	29272.85	0.45	145276.33	Corte	0.000	0	38873.07688
K 19+060	10.00	12.76	0	135.35	29408.20	0.00	145276.33	Corte	0.000	0	38873.07688
K 19+070	10.00	12.46	0	126.10	29534.30	0.00	145276.33	Corte	0.000	0	38873.07688
K 19+080	10.00	16.35	0	144.05	29678.35	0.00	145276.33	Corte	0.000	0	38873.07688
K 19+090	10.00	20.83	0	185.90	29864.25	0.00	145276.33	Corte	0.000	0	38873.07688
K 19+100	10.00	29.69	0	252.60	30116.85	0.00	145276.33	Corte	0.000	0	38873.07688
K 19+110	10.00	15.75	6.11	227.20	30344.05	30.55	145306.88	Mixta	0.675	24.32995923	38897.40684
K 19+120	10.00	14.64	10.08	151.95	30496.00	80.95	145387.83	Mixta	0.710	25.58329314	38922.99013
K 19+130	10.00	9.5	18.2	120.70	30616.70	141.40	145529.23	Mixta	0.750	27.04163457	38950.03177
K 19+140	10.00	0	27.91	47.50	30664.20	230.55	145759.78	Terraplén	2.001	72.13229609	39022.16407
K 19+150	10.00	0	34.38	0.00	30664.20	311.45	146071.23	Terraplén	2.370	85.45785389	39107.62192
K 19+160	10.00	0	48.5	0.00	30664.20	414.40	146485.63	Terraplén	3.107	112.0212347	39219.64315
K 19+170	10.00	0	58.7	0.00	30664.20	536.00	147021.63	Terraplén	3.593	129.5344753	39349.17763
K 19+180	10.00	0	54.83	0.00	30664.20	567.65	147589.28	Terraplén	3.412	123.0315932	39472.20922
K 19+190	10.00	0	36	0.00	30664.20	454.15	148043.43	Terraplén	2.459	88.66823444	39560.87746
K 19+200	10.00	0	24.72	0.00	30664.20	303.60	148347.03	Terraplén	1.809	65.23042953	39626.10789
K 19+210	10.00	0	15.5	0.00	30664.20	201.10	148548.13	Terraplén	1.214	43.76152339	39669.86941
K 19+220	10.00	0	11.21	0.00	30664.20	133.55	148681.68	Terraplén	0.910	32.81934575	39702.68876
K 19+230	10.00	3.43	0.71	17.15	30681.35	59.60	148741.28	Corte	0.000	0	39702.68876
K 19+240	10.00	3.99	15.95	37.10	30718.45	83.30	148824.58	Mixta	0.970	34.9863166	39737.67507
K 19+250	10.00	5.72	13.24	48.55	30767.00	145.95	148970.53	Mixta	0.961	34.65255509	39772.32763
K 19+260	10.00	7.34	16.73	65.30	30832.30	149.85	149120.38	Mixta	0.870	31.36339046	39803.69102
K 19+270	10.00	11.03	7.72	91.85	30924.15	122.25	149242.63	Mixta	0.812	29.28976399	39832.98078
K 19+280	10.00	16.83	0.06	139.30	31063.45	38.90	149281.53	Mixta	0.739	26.64405597	39859.62484
K 19+290	10.00	39.86	0	283.45	31346.90	0.30	149281.83	Corte	0.000	0	39859.62484
K 19+300	10.00	51.79	0	458.25	31805.15	0.00	149281.83	Corte	0.000	0	39859.62484
K 19+310	10.00	11.99	0.13	318.90	32124.05	0.65	149282.48	Corte	0.000	0	39859.62484
K 19+320	10.00	12.39	1.3	121.90	32245.95	7.15	149289.63	Corte	0.000	0	39859.62484
K 19+330	10.00	11.12	0.51	117.55	32363.50	9.05	149298.68	Corte	0.000	0	39859.62484
K 19+340	10.00	14.27	1.1	126.95	32490.45	8.05	149306.73	Corte	0.000	0	39859.62484
K 19+350	10.00	11.88	2.16	130.75	32621.20	16.30	149323.03	Corte	0.000	0	39859.62484
K 19+360	10.00	0	17.99	59.40	32680.60	100.75	149423.78	Terraplén	1.381	49.81012147	39909.43496
K 19+370	10.00	0	29.78	0.00	32680.60	238.85	149662.63	Terraplén	2.110	76.07160249	39985.50656
K 19+380	10.00	0	21.62	0.00	32680.60	257.00	149919.63	Terraplén	1.616	58.28308969	40043.78965
K 19+390	10.00	5.07	2.02	25.35	32705.95	118.20	150037.83	Mixta	0.646	23.29028535	40067.07994
K 19+400	10.00	20.95	0.11	130.10	32836.05	10.65	150048.48	Corte	0.000	0	40067.07994
K 19+410	10.00	1.72	13.63	113.35	32949.40	68.70	150117.18	Terraplén	1.084	39.07812331	40106.15806
K 19+420	10.00	0.3	9.64	10.10	32959.50	116.35	150233.53	Terraplén	0.794	28.62820153	40134.78626
K 19+430	10.00	10.19	2.49	52.45	33011.95	60.65	150294.18	Corte	0.000	0	40134.78626
K 19+440	10.00	7.74	3.66	89.65	33101.60	30.75	150324.93	Corte	0.000	0	40134.78626
K 19+450	10.00	8.89	2.66	83.15	33184.75	31.60	150356.53	Corte	0.000	0	40134.78626
K 19+460	10.00	11.96	0	104.25	33289.00	13.30	150369.83	Corte	0.000	0	40134.78626
K 19+470	10.00	12.24	0	121.00	33410.00	0.00	150369.83	Corte	0.000	0	40134.78626
K 19+480	10.00	12.97	0	126.05	33536.05	0.00	150369.83	Corte	0.000	0	40134.78626
K 19+490	10.00	12.53	0.35	127.50	33663.55	1.75	150371.58	Corte	0.000	0	40134.78626
K 19+500	10.00	13.98	0	132.55	33796.10	1.75	150373.33	Corte	0.000	0	40134.78626
K 19+510	10.00	14.25	0	141.15	33937.25	0.00	150373.33	Corte	0.000	0	40134.78626
K 19+520	10.00	20.15	0	172.00	34109.25	0.00	150373.33	Corte	0.000	0	40134.78626
K 19+530	10.00	25.29	0	227.20	34336.45	0.00	150373.33	Corte	0.000	0	40134.78626
K 19+540	10.00	25.91	0	256.00	34592.45	0.00	150373.33	Corte	0.000	0	40134.78626
K 19+550	10.00	28.49	0	272.00	34864.45	0.00	150373.33	Corte	0.000	0	40134.78626
K 19+560	10.00	36.49	0	324.90	35189.35	0.00	150373.33	Corte	0.000	0	40134.78626
K 19+570	10.00	34.08	0	352.85	35542.20	0.00	150373.33	Corte	0.000	0	40134.78626
K 19+580	10.00	28.79	0	314.35	35856.55	0.00	150373.33	Corte	0.000	0	40134.78626
K 19+590	10.00	25.25	0	270.20	36126.75	0.00	150373.33	Corte	0.000	0	40134.78626
K 19+600	10.00	25.42	0	253.35	36380.10	0.00	150373.33	Corte	0.000	0	40134.78626
K 19+610	10.00	22.28	0	238.50	36618.60	0.00	150373.33	Corte	0.000	0	40134.78626
K 19+620	10.00	12.09	0	171.85	36790.45	0.00	150373.33	Corte	0.000	0	40134.78626
K 19+630	10.00	11.22	0	116.55	36907.00	0.00	150373.33	Corte	0.000	0	40134.78626
K 19+640	10.00	13.45	0	123.35	37030.35	0.00	150373.33	Corte	0.000	0	40134.78626
K 19+650	10.00	13.66	0	135.55	37165.90	0.00	150373.33	Corte	0.000	0	40134.78626
K 19+660	10.00	13.07	0	133.65	37299.55	0.00	150373.33	Corte	0.000	0	40134.78626

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ENTIDAD:	INSTITUTO NACIONAL DE VIAS	
NOMBRE DEL PROYECTO:	MEJORAMIENTO, MANTENIMIENTO, GESTIÓN PREDIAL, SOCIAL Y AMBIENTAL SOSTENIBLE DE LA CARRETERA VILLAGARZON - SAN JOSE DEL FRAGUA Y PUENTE SOBRE EL RIO CAQUETA EN LOS DEPARTAMENTOS DE PUTUMAYO, CAUCA Y CAQUETA EN MARCO DE LA REACTIVACIÓN ECONÓMICA, MEDIANTE EL PROGRAMA VIAS PARA LA CONEXION DE TERRITORIOS, EL CRECIMIENTO SOSTENIBLE Y LA REACTIVACIÓN 2.0	

ABSCISA	DISTANCIA	AREA CTE	AREA RELL	VOL CTE	VOL CTE ACUM	VOL RELL	VOL RELL ACUM	SECCION	ALT APROX TER	PROT DE TALUD	ACUM PROT DE TAL
K 19+670	10.00	11.55	0	123.10	37422.65	0.00	150373.33	Corte	0.000	0	40134.78626
K 19+680	10.00	5.6	1.24	85.75	37508.40	6.20	150379.53	Corte	0.000	0	40134.78626
K 19+690	10.00	9.11	0	73.55	37581.95	6.20	150385.73	Corte	0.000	0	40134.78626
K 19+700	10.00	6.62	0.86	78.65	37660.60	4.30	150390.03	Corte	0.000	0	40134.78626
K 19+710	10.00	6.34	1.62	64.80	37725.40	12.40	150402.43	Corte	0.000	0	40134.78626
K 19+720	10.00	6.49	1.7	64.15	37789.55	16.60	150419.03	Corte	0.000	0	40134.78626
K 19+730	10.00	1.97	4.86	42.30	37831.85	32.80	150451.83	Corte	0.000	0	40134.78626
K 19+740	10.00	4.91	0	34.40	37866.25	24.30	150476.13	Corte	0.000	0	40134.78626
K 19+750	10.00	5.53	0.23	52.20	37918.45	1.15	150477.28	Corte	0.000	0	40134.78626
K 19+760	10.00	6.12	0.14	58.25	37976.70	1.85	150479.13	Corte	0.000	0	40134.78626
K 19+770	10.00	7.17	0	66.45	38043.15	0.70	150479.83	Corte	0.000	0	40134.78626
K 19+780	10.00	7.4	0.01	72.85	38116.00	0.05	150479.88	Corte	0.000	0	40134.78626
K 19+790	10.00	5.56	3.41	64.80	38180.80	17.10	150496.98	Corte	0.000	0	40134.78626
K 19+800	10.00	5.53	0.9	55.45	38236.25	21.55	150518.53	Corte	0.000	0	40134.78626
K 19+810	10.00	6.42	0.55	59.75	38296.00	7.25	150525.78	Corte	0.000	0	40134.78626
K 19+820	10.00	8.25	0	73.35	38369.35	2.75	150528.53	Corte	0.000	0	40134.78626
K 19+830	10.00	9.84	0	90.45	38459.80	0.00	150528.53	Corte	0.000	0	40134.78626
K 19+840	10.00	9.19	0	95.15	38554.95	0.00	150528.53	Corte	0.000	0	40134.78626
K 19+850	10.00	7.82	0.43	85.05	38640.00	2.15	150530.68	Corte	0.000	0	40134.78626
K 19+860	10.00	3.28	8.47	55.50	38695.50	44.50	150575.18	Corte	0.000	0	40134.78626
K 19+870	10.00	3.09	11.11	31.85	38727.35	97.90	150673.08	Mixta	1.590	57.34621254	40192.13247
K 19+880	10.00	0	15.49	15.45	38742.80	133.00	150806.08	Terraplén	1.213	43.73681117	40235.86929
K 19+890	10.00	4.03	6.84	20.15	38762.95	111.65	150917.73	Mixta	1.333	48.07718807	40283.94647
K 19+900	10.00	4.85	6.19	44.40	38807.35	65.15	150982.88	Mixta	1.091	39.35244569	40323.29892
K 19+910	10.00	7.6	0.14	62.25	38869.60	31.65	151014.53	Corte	0.000	0	40323.29892
K 19+920	10.00	12.29	0	99.45	38969.05	0.70	151015.23	Corte	0.000	0	40323.29892
K 19+930	10.00	16.98	0	146.35	39115.40	0.00	151015.23	Corte	0.000	0	40323.29892
K 19+940	10.00	22.93	0	199.55	39314.95	0.00	151015.23	Corte	0.000	0	40323.29892
K 19+950	10.00	43.09	0	330.10	39645.05	0.00	151015.23	Corte	0.000	0	40323.29892
K 19+960	10.00	33.86	0	384.75	40029.80	0.00	151015.23	Corte	0.000	0	40323.29892
K 19+970	10.00	22.96	0	284.10	40313.90	0.00	151015.23	Corte	0.000	0	40323.29892
K 19+980	10.00	29.13	0.13	260.45	40574.35	0.65	151015.88	Corte	0.000	0	40323.29892
K 19+990	10.00	27.16	0	281.45	40855.80	0.65	151016.53	Corte	0.000	0	40323.29892
K 20+000	10.00	37.53	0	323.45	41179.25	0.00	151016.53	Corte	0.000	0	40323.29892
K 20+010	10.00	54.5	0	460.15	41639.40	0.00	151016.53	Corte	0.000	0	40323.29892
K 20+020	10.00	68.74	0	616.20	42255.60	0.00	151016.53	Corte	0.000	0	40323.29892
K 20+030	10.00	55.87	0	623.05	42878.65	0.00	151016.53	Corte	0.000	0	40323.29892
K 20+040	10.00	30.48	0	431.75	43310.40	0.00	151016.53	Corte	0.000	0	40323.29892
K 20+050	10.00	17.97	0.03	242.25	43552.65	0.15	151016.68	Corte	0.000	0	40323.29892
K 20+060	10.00	13.9	0	159.35	43712.00	0.15	151016.83	Corte	0.000	0	40323.29892
K 20+070	10.00	22.45	0	181.75	43893.75	0.00	151016.83	Corte	0.000	0	40323.29892
K 20+080	10.00	26.86	0	246.55	44140.30	0.00	151016.83	Corte	0.000	0	40323.29892
K 20+090	10.00	35.43	0	311.45	44451.75	0.00	151016.83	Corte	0.000	0	40323.29892
K 20+100	10.00	50.67	0	430.50	44882.25	0.00	151016.83	Corte	0.000	0	40323.29892
K 20+110	10.00	28.3	0	394.85	45277.10	0.00	151016.83	Corte	0.000	0	40323.29892
K 20+120	10.00	11.99	1.84	201.45	45478.55	9.20	151026.03	Corte	0.000	0	40323.29892
K 20+130	10.00	17.18	6.50	145.85	45624.40	41.70	151067.73	Corte	0.000	0	40323.29892
K 20+140	10.00	48.17	6.83	326.75	45951.15	66.65	151134.38	Corte	0.000	0	40323.29892
K 20+150	10.00	33.72	5.91	409.45	46360.60	63.70	151198.08	Corte	0.000	0	40323.29892
K 20+160	10.00	34.08	4.20	339.00	46699.60	50.55	151248.63	Corte	0.000	0	40323.29892
K 20+170	10.00	36.27	3.44	351.75	47051.35	38.20	151286.83	Corte	0.000	0	40323.29892
K 20+180	10.00	37.4	0.00	368.35	47419.70	17.20	151304.03	Corte	0.000	0	40323.29892
K 20+190	10.00	30.91	0.00	341.55	47761.25	0.00	151304.03	Corte	0.000	0	40323.29892
K 20+200	10.00	15.89	0.52	234.00	47995.25	2.60	151306.63	Corte	0.000	0	40323.29892
K 20+210	10.00	11.05	1.14	134.70	48129.95	8.30	151314.93	Corte	0.000	0	40323.29892
K 20+220	10.00	13.24	0.03	121.45	48251.40	5.85	151320.78	Corte	0.000	0	40323.29892
K 20+230	10.00	15.68	0.61	144.60	48396.00	3.20	151323.98	Corte	0.000	0	40323.29892
K 20+240	10.00	22.64	0.00	191.60	48587.60	3.05	151327.03	Corte	0.000	0	40323.29892
K 20+250	10.00	30.28	0.00	264.60	48852.20	0.00	151327.03	Corte	0.000	0	40323.29892
K 20+260	10.00	34.29	0.00	322.85	49175.05	0.00	151327.03	Corte	0.000	0	40323.29892
K 20+270	10.00	35.79	0.00	350.40	49525.45	0.00	151327.03	Corte	0.000	0	40323.29892
K 20+280	10.00	40.62	0.00	382.05	49907.50	0.00	151327.03	Corte	0.000	0	40323.29892
K 20+290	10.00	21.33	0.33	309.75	50217.25	1.65	151328.68	Corte	0.000	0	40323.29892
K 20+300	10.00	24.55	0.00	229.40	50446.65	1.65	151330.33	Corte	0.000	0	40323.29892
K 20+310	10.00	22.2	0.00	233.75	50680.40	0.00	151330.33	Corte	0.000	0	40323.29892
K 20+320	10.00	19.11	0.00	206.55	50886.95	0.00	151330.33	Corte	0.000	0	40323.29892
K 20+330	10.00	16.12	0.00	176.15	51063.10	0.00	151330.33	Corte	0.000	0	40323.29892
K 20+340	10.00	14.63	0.00	153.75	51216.85	0.00	151330.33	Corte	0.000	0	40323.29892
K 20+350	10.00	14.31	0.09	144.70	51361.55	0.45	151330.78	Corte	0.000	0	40323.29892
K 20+360	10.00	6.87	2.38	105.90	51467.45	12.35	151343.13	Corte	0.000	0	40323.29892
K 20+370	10.00	2.82	17.21	48.45	51515.90	97.95	151441.08	Corte	0.000	0	40323.29892
K 20+380	10.00	0	35.40	14.10	51530.00	263.05	151704.13	Terraplén	2.426	87.48468981	40410.78361
K 20+390	10.00	0	53.46	0.00	51530.00	444.30	152148.43	Terraplén	3.347	120.689372	40531.47298
K 20+400	10.00	0	28.51	0.00	51530.00	409.85	152558.28	Terraplén	2.036	73.40449214	40604.87747
K 20+410	10.00	0	23.27	0.00	51530.00	258.90	152817.18	Terraplén	1.720	62.01190097	40666.88937
K 20+420	10.00	0	18.62	0.00	51530.00	209.45	153026.63	Terraplén	1.423	51.30878687	40718.19816
K 20+430	10.00	0	14.54	0.00	51530.00	165.80	153192.43	Terraplén	1.147	41.37305111	40759.57121
K 20+440	10.00	0	16.50	0.00	51530.00	155.20	153347.63	Terraplén	1.282	46.2154034	40805.78662
K 20+450	10.00	0	11.52	0.00	51530.00	140.10	153487.73	Terraplén	0.933	33.63432952	40839.42094
K 20+460	10.00	0	12.79	0.00	51530.00	121.55	153609.28	Terraplén	1.024	36.93199408	40876.35294
K 20+470	10.00	0	11.72	0.00	51530.00	122.55	153731.83	Terraplén	0.947	34.15799902	40910.51094
K 20+480	10.00	0	10.90	0.00	51530.00	113.10	153844.93	Terraplén	0.888	32.00030222	40942.51124
K 20+490	10.00	4.51	8.54	22.55	51552.55	97.20	153942.13	Corte	0.000	0	40942.51124
K 20+500	10.00	4.33	8.87	44.20	51596.75	87.05	154029.18	Corte	0.000	0	40942.51124
K 20+510	10.00	0	13.06	21.65	51618.40	109.65	154138.83	Terraplén	1.044	37.62478954	40980.13603
K 20+520	10.00	0	12.61	0.00	51618.40	128.35	154267.18	Terraplén	1.011	36.46854393	41016.60457
K 20+530	10.00	0	12.91	0.00	51618.40	127.60	154394.78	Terraplén	1.033	37.24025412	41053.84483
K 20+540	10.00	0	12.12	0.00	51618.40	125.15	154519.93	Terraplén	0.976	35.200406	41089.04523
K 20+550	10.00	0	15.93	0.00	51618.40	140.25	154660.18	Terraplén	1.243	44.82087461	41133.86611
K 20+560	10.00	0	13.12	0.00	51618.40	145.25	154805.43	Terraplén	1.048	37.77835927	41171.64447
K 20+570	10.00	0	13.01	0.00	51618.40	130.65	154936.08	Terraplén	1.040	37.49670823	41209.14118
K 20+580	10.00	0	11.43	0.00	51618.40	122.20	155058.28	Terraplén	0.926	33.39813602	41242.53931
K 20+590	10.00	0	11.17	0.00	51618.40	113.00	155171.28	Terraplén	0.907	32.71389212	41275.2532
K 20+600	10.00	0	10.92	0.00	51618.40	110.45	155281.73	Terraplén	0.889	32.05326743	41307.30647

Consorcio Vías Colombia 055	MEMORIA DE CALCULO DE CANTIDADES DEL APU	
ENTIDAD:	INSTITUTO NACIONAL DE VIAS	
NOMBRE DEL PROYECTO:	MEJORAMIENTO, MANTENIMIENTO, GESTIÓN PREDIAL, SOCIAL Y AMBIENTAL SOSTENIBLE DE LA CARRETERA VILLAGARZON - SAN JOSE DEL FRAGUA Y PUENTE SOBRE EL RIO CAQUETA EN LOS DEPARTAMENTOS DE PUTUMAYO, CAUCA Y CAQUETA EN MARCO DE LA REACTIVACIÓN ECONÓMICA, MEDIANTE EL PROGRAMA VIAS PARA LA CONEXION DE TERRITORIOS, EL CRECIMIENTO SOSTENIBLE Y LA REACTIVACIÓN 2.0	

ABSCISA	DISTANCIA	AREA CTE	AREA RELL	VOL CTE	VOL CTE ACUM	VOL RELL	VOL RELL ACUM	SECCION	ALT APROX TER	PROT DE TALUD	ACUM PROT DE TAL
K 20+610	10.00	0	10.59	0.00	51618.40	107.55	155389.28	Terraplén	0.865	31.17713763	41338.48361
K 20+620	10.00	0	10.27	0.00	51618.40	104.30	155493.58	Terraplén	0.841	30.32303011	41368.80664
K 20+630	10.00	0	10.67	0.00	51618.40	104.70	155598.28	Terraplén	0.871	31.38996519	41400.1966
K 20+640	10.00	0	10.93	0.00	51618.40	108.00	155706.28	Terraplén	0.890	32.07974361	41432.27635
K 20+650	10.00	0	10.80	0.00	51618.40	108.65	155814.93	Terraplén	0.880	31.73521852	41464.01157
K 20+660	10.00	0	9.92	0.00	51618.40	103.60	155918.53	Terraplén	0.815	29.38366151	41493.39523
K 20+670	10.00	0	10.09	0.00	51618.40	100.05	156018.58	Terraplén	0.828	29.84060892	41523.23584
K 20+680	10.00	0	10.63	0.00	51618.40	103.60	156122.18	Terraplén	0.868	31.28358617	41554.51942
K 20+690	10.00	0	11.49	0.00	51618.40	110.60	156232.78	Terraplén	0.931	33.55563588	41588.07506
K 20+700	10.00	0	10.79	0.00	51618.40	111.40	156344.18	Terraplén	0.879	31.70868648	41619.78375
K 20+710	10.00	0	11.84	0.00	51618.40	113.15	156457.33	Terraplén	0.956	34.47140812	41654.25515
K 20+720	10.00	0	11.07	0.00	51618.40	114.55	156571.88	Terraplén	0.900	32.44996148	41686.70512
K 20+730	10.00	0	11.40	0.00	51618.40	112.35	156684.23	Terraplén	0.924	33.31932968	41720.02444
K 20+740	10.00	0	11.66	0.00	51618.40	115.30	156799.53	Terraplén	0.943	34.00107204	41754.02552
K 20+750	10.00	0	11.72	0.00	51618.40	116.90	156916.43	Terraplén	0.947	34.15799902	41788.18352
K 20+760	10.00	0	11.46	0.00	51618.40	115.90	157032.33	Terraplén	0.928	33.47690474	41821.66042
K 20+770	10.00	0	12.35	0.00	51618.40	119.05	157151.38	Terraplén	0.993	35.79685077	41857.45727
K 20+780	10.00	0	11.82	0.00	51618.40	120.85	157272.23	Terraplén	0.955	34.41921436	41891.87649
K 20+790	10.00	0	12.08	0.00	51618.40	119.50	157391.73	Terraplén	0.973	35.09645863	41926.97294
K 20+800	10.00	0	12.29	0.00	51618.40	121.85	157513.58	Terraplén	0.989	35.64146155	41962.61441
K 20+810	10.00	0	11.93	0.00	51618.40	121.10	157634.68	Terraplén	0.963	34.70607736	41997.32048
K 20+820	10.00	0	12.32	0.00	51618.40	121.25	157755.93	Terraplén	0.991	35.7191742	42033.03966
K 20+830	10.00	0	12.48	0.00	51618.40	124.00	157879.93	Terraplén	1.002	36.13303357	42069.17269
K 20+840	10.00	0	11.24	0.00	51618.40	118.60	157998.53	Terraplén	0.912	32.89839161	42102.07108
K 20+850	10.00	0	10.60	0.00	51618.40	109.20	158107.73	Terraplén	0.865	31.20375629	42133.27484
K 20+860	10.00	0	10.01	0.00	51618.40	103.05	158210.78	Terraplén	0.822	29.62573617	42162.90058
K 20+870	10.00	0	10.56	0.00	51618.40	102.85	158313.63	Terraplén	0.862	31.09725552	42193.99783
K 20+880	10.00	0	10.47	0.00	51618.40	105.15	158418.78	Terraplén	0.856	30.85737352	42224.8552
K 20+890	10.00	0	11.05	0.00	51618.40	107.60	158526.38	Terraplén	0.899	32.39712438	42257.25233
K 20+900	10.00	0	10.98	0.00	51618.40	110.15	158636.53	Terraplén	0.893	32.21206033	42289.46439
K 20+910	10.00	0	10.07	0.00	51618.40	105.25	158741.78	Terraplén	0.826	29.78691755	42319.25131
K 20+920	10.00	0	10.89	0.00	51618.40	104.80	158846.58	Terraplén	0.887	31.97381318	42351.22512
K 20+930	10.00	0	11.81	0.00	51618.40	113.50	158960.08	Terraplén	0.954	34.39311132	42385.61823
K 20+940	10.00	0	11.92	0.00	51618.40	118.65	159078.73	Terraplén	0.962	34.68001935	42420.29825
K 20+950	10.00	0	12.72	0.00	51618.40	123.20	159201.93	Terraplén	1.019	36.75191506	42457.05017
K 20+960	10.00	0	11.90	0.00	51618.40	123.10	159325.03	Terraplén	0.960	34.62789109	42491.67806
K 20+970	10.00	0	11.73	0.00	51618.40	118.15	159443.18	Terraplén	0.948	34.18413907	42525.8622
K 20+980	10.00	0	11.98	0.00	51618.40	118.55	159561.73	Terraplén	0.966	34.83630618	42560.6985
K 20+990	10.00	0	11.16	0.00	51618.40	115.70	159677.43	Terraplén	0.907	32.68751814	42593.38602
K 21+000	10.00	0	10.21	0.00	51618.40	106.85	159784.28	Terraplén	0.837	30.1623829	42623.5484
K 21+010	10.00	0	9.20	0.00	51618.40	97.05	159881.33	Terraplén	0.761	27.43379985	42650.9822
K 21+020	10.00	0	11.58	0.00	51618.40	103.90	159985.23	Terraplén	0.937	33.79160446	42684.77381
K 21+030	10.00	0	11.58	0.00	51618.40	115.80	160101.03	Terraplén	0.937	33.79160446	42718.56541
K 21+040	10.00	0	10.15	0.00	51618.40	108.65	160209.68	Terraplén	0.832	30.001576	42748.56699
K 21+050	10.00	0	9.40	0.00	51618.40	97.75	160307.43	Terraplén	0.776	27.97781793	42776.54481
K 21+060	10.00	0	8.85	0.00	51618.40	91.25	160398.68	Terraplén	0.734	26.47726331	42803.02207
K 21+070	10.00	0	8.84	0.00	51618.40	88.45	160487.13	Terraplén	0.734	26.44984864	42829.47192
K 21+080	10.00	0	9.19	0.00	51618.40	90.15	160577.28	Terraplén	0.760	27.40655009	42856.87847
K 21+090	10.00	0	8.49	0.00	51618.40	88.40	160665.68	Terraplén	0.707	25.48732084	42882.36579
K 21+100	10.00	3.25	8.40	16.25	51634.65	84.45	160750.13	Corte	0.000	0	42882.36579
K 21+110	10.00	0	8.36	16.25	51650.90	83.80	160833.93	Terraplén	0.697	25.12830498	42907.49409
K 21+120	10.00	0	8.45	0.00	51650.90	84.05	160917.98	Terraplén	0.704	25.37694187	42932.87104
K 21+130	10.00	0	9.04	0.00	51650.90	87.45	161005.43	Terraplén	0.749	26.99724183	42959.86828
K 21+140	10.00	0	9.19	0.00	51650.90	91.15	161096.58	Terraplén	0.760	27.40655009	42987.27483
K 21+150	10.00	0	9.62	0.00	51650.90	94.05	161190.63	Terraplén	0.793	28.57410376	43015.84893
K 21+160	10.00	0	10.13	0.00	51650.90	98.75	161289.38	Terraplén	0.831	29.94793813	43045.79687
K 21+170	10.00	0	10.60	0.00	51650.90	103.65	161393.03	Terraplén	0.865	31.20375629	43077.00063
K 21+180	10.00	0	10.75	0.00	51650.90	106.75	161499.78	Terraplén	0.876	31.60251521	43108.60314
K 21+190	10.00	0	11.92	0.00	51650.90	113.35	161613.13	Terraplén	0.962	34.68001935	43143.28316
K 21+200	10.00	0	14.34	0.00	51650.90	131.30	161744.43	Terraplén	1.134	40.87128952	43184.15445
K 21+210	10.00	0	11.50	0.00	51650.90	129.20	161873.63	Terraplén	0.931	33.58187126	43217.73632
K 21+220	10.00	5.81	6.52	29.05	51679.95	90.10	161963.73	Corte	0.000	0	43217.73632
K 21+230	10.00	5.98	6.55	58.95	51738.90	65.35	162029.08	Corte	0.000	0	43217.73632
K 21+240	10.00	5.83	6.82	59.05	51797.95	66.85	162095.93	Corte	0.000	0	43217.73632
K 21+250	10.00	6.5	6.22	61.65	51859.60	65.20	162161.13	Corte	0.000	0	43217.73632
K 21+260	10.00	6.85	5.78	66.75	51926.35	60.00	162221.13	Corte	0.000	0	43217.73632
K 21+270	10.00	5.81	6.74	63.30	51989.65	62.60	162283.73	Corte	0.000	0	43217.73632
K 21+280	10.00	5.46	6.88	56.35	52046.00	68.10	162351.83	Corte	0.000	0	43217.73632
K 21+290	10.00	4.46	7.53	49.60	52095.60	72.05	162423.88	Corte	0.000	0	43217.73632
K 21+300	10.00	3.18	8.41	38.20	52133.80	79.70	162503.58	Corte	0.000	0	43217.73632
K 21+310	10.00	0	10.88	15.90	52149.70	96.45	162600.03	Terraplén	0.886	31.94731985	43249.68364
K 21+320	10.00	0	11.29	0.00	52149.70	110.85	162710.88	Terraplén	0.916	33.03005038	43282.71369
K 21+330	10.00	0	9.39	0.00	52149.70	103.40	162814.28	Terraplén	0.775	27.95066108	43310.66435
K 21+340	10.00	0	8.92	0.00	52149.70	91.55	162905.83	Terraplén	0.740	26.6690331	43337.33338
K 21+350	10.00	0	9.65	0.00	52149.70	92.85	162998.68	Terraplén	0.795	28.65524357	43365.98863
K 21+360	10.00	0	11.37	0.00	52149.70	105.10	163103.78	Terraplén	0.922	33.24048567	43399.22911
K 21+370	10.00	0	10.49	0.00	52149.70	109.30	163213.08	Terraplén	0.857	30.91071123	43430.13983
K 21+380	10.00	0	9.52	0.00	52149.70	100.05	163313.13	Terraplén	0.785	28.30334039	43458.44317
K 21+390	10.00	0	9.00	0.00	52149.70	92.60	163405.73	Terraplén	0.746	26.88791444	43485.33108
K 21+400	10.00	0	8.60	0.00	52149.70	88.00	163493.73	Terraplén	0.715	25.79046385	43511.12154
K 21+410	10.00	3.34	8.27	16.70	52166.40	84.35	163578.08	Corte	0.000	0	43511.12154
K 21+420	10.00	2.19	9.54	27.65	52194.05	89.05	163667.13	Corte	0.000	0	43511.12154
K 21+430	10.00	0	10.34	10.95	52205.00	99.40	163766.53	Terraplén	0.846	30.51025065	43541.63179
K 21+440	10.00	0	10.43	0.00	52205.00	103.85	163870.38	Terraplén	0.853	30.75064553	43572.38244
K 21+450	10.00	0	11.14	0.00	52205.00	107.85	163978.23	Terraplén	0.905	32.63475746	43605.0172
K 21+460	10.00	0	10.73	0.00	52205.00	109.35	164087.58	Terraplén	0.875	31.54940367	43636.5666
K 21+470	10.00	0	11.12	0.00	52205.00	109.25	164196.83	Terraplén	0.904	32.58197983	43669.14858
K 21+480	10.00	0	9.85	0.00	52205.00	104.85	164301.68	Terraplén	0.810	29.19512926	43698.34371
K 21+490	10.00	0	10.70	0.00	52205.00	102.75	164404.43	Terraplén	0.873	31.46970391	43729.81341
K 21+500	10.00	0	11.05	0.00	52205.00	108.75	164513.18	Terraplén	0.899	32.39712438	43762.21054
K 21+510	10.00	0	11.17	0.00	52205.00	111.10	164624.28	Terraplén	0.907	32.71389212	43794.92443
K 21+520	10.00	0	12.85	0.00	52205.00	120.10	164744.38	Terraplén	1.029	37.08619451	43832.01063
K 21+530	10.00	0	12.75	0.00	52205.00	128.00	164872.38	Terraplén	1.021	36.82911536	43868.83974
K 21+540	10.00	0	12.12	0.00	52205.00	124.35	164996.73	Terraplén	0.976	35.200406	43904.04015

Consorcio Vías Colombia 055	MEMORIA DE CALCULO DE CANTIDADES DEL APU	
ENTIDAD:	INSTITUTO NACIONAL DE VIAS	
NOMBRE DEL PROYECTO:	MEJORAMIENTO, MANTENIMIENTO, GESTIÓN PREDIAL, SOCIAL Y AMBIENTAL SOSTENIBLE DE LA CARRETERA VILLAGARZON - SAN JOSE DEL FRAGUA Y PUENTE SOBRE EL RIO CAQUETA EN LOS DEPARTAMENTOS DE PUTUMAYO, CAUCA Y CAQUETA EN MARCO DE LA REACTIVACIÓN ECONÓMICA, MEDIANTE EL PROGRAMA VIAS PARA LA CONEXION DE TERRITORIOS, EL CRECIMIENTO SOSTENIBLE Y LA REACTIVACIÓN 2.0	

ABSCISA	DISTANCIA	AREA CTE	AREA RELL	VOL CTE	VOL CTE ACUM	VOL RELL	VOL RELL ACUM	SECCION	ALT APROX TER	PROT DE TALUD	ACUM PROT DE TAL
K 21+550	10.00	0	13.87	0.00	52205.00	129.95	165126.68	Terraplén	1.101	39.68636428	43943.72651
K 21+560	10.00	0	16.59	0.00	52205.00	152.30	165278.98	Terraplén	1.288	46.43459366	43990.1611
K 21+570	10.00	0	15.08	0.00	52205.00	158.35	165437.33	Terraplén	1.185	42.72059358	44032.8817
K 21+580	10.00	0	17.00	0.00	52205.00	160.40	165597.73	Terraplén	1.315	47.4297312	44080.31143
K 21+590	10.00	0	14.81	0.00	52205.00	159.05	165756.78	Terraplén	1.166	42.04812948	44122.35956
K 21+600	10.00	0	13.18	0.00	52205.00	139.95	165896.73	Terraplén	1.052	37.9317899	44160.29135
K 21+610	10.00	0	11.94	0.00	52205.00	125.60	166022.33	Terraplén	0.963	34.73213128	44195.02348
K 21+620	10.00	0	12.06	0.00	52205.00	120.00	166142.33	Terraplén	0.972	35.04446063	44230.06794
K 21+630	10.00	0	11.54	0.00	52205.00	118.00	166260.33	Terraplén	0.934	33.68677113	44263.75471
K 21+640	10.00	0	12.00	0.00	52205.00	117.70	166378.03	Terraplén	0.968	34.88836919	44298.64308
K 21+650	10.00	0	11.61	0.00	52205.00	118.05	166496.08	Terraplén	0.939	33.87018588	44332.51327
K 21+660	10.00	0	11.45	0.00	52205.00	115.30	166611.38	Terraplén	0.928	33.45065267	44365.96392
K 21+670	10.00	0	10.85	0.00	52205.00	111.50	166722.88	Terraplén	0.884	31.8678141	44397.83173
K 21+680	10.00	0	10.10	0.00	52205.00	104.75	166827.63	Terraplén	0.828	29.86744791	44427.69918
K 21+690	10.00	0	11.37	0.00	52205.00	107.35	166934.98	Terraplén	0.922	33.24048567	44460.93967
K 21+700	10.00	0	11.07	0.00	52205.00	112.20	167047.18	Terraplén	0.900	32.44996148	44493.38963
K 21+710	10.00	0	10.76	0.00	52205.00	109.15	167156.33	Terraplén	0.877	31.6290645	44525.01869
K 21+720	10.00	0	9.61	0.00	52205.00	101.85	167258.18	Terraplén	0.792	28.54704803	44553.56574
K 21+730	10.00	0	11.13	0.00	52205.00	103.70	167361.88	Terraplén	0.904	32.60837077	44586.17411
K 21+740	10.00	0	12.22	0.00	52205.00	116.75	167478.63	Terraplén	0.983	35.45999146	44621.6341
K 21+750	10.00	0	13.76	0.00	52205.00	129.90	167608.53	Terraplén	1.093	39.40785571	44661.04196
K 21+760	10.00	0	11.90	0.00	52205.00	128.30	167736.83	Terraplén	0.960	34.62789109	44695.66985
K 21+770	10.00	0	9.94	0.00	52205.00	109.20	167846.03	Terraplén	0.816	29.43748732	44725.10734
K 21+780	10.00	0	8.89	0.00	52205.00	94.15	167940.18	Terraplén	0.737	26.58687451	44751.69421
K 21+790	10.00	0	9.24	0.00	52205.00	90.65	168030.83	Terraplén	0.764	27.54275224	44779.23696
K 21+800	10.00	0	9.63	0.00	52205.00	94.35	168125.18	Terraplén	0.793	28.60115493	44807.83812
K 21+810	10.00	0	8.86	0.00	52205.00	92.45	168217.63	Terraplén	0.735	26.50467324	44834.34279
K 21+820	10.00	0	8.92	0.00	52205.00	88.90	168306.53	Terraplén	0.740	26.6690331	44861.01183
K 21+830	10.00	0	8.98	0.00	52205.00	89.50	168396.03	Terraplén	0.744	26.83322245	44887.84505
K 21+840	10.00	0	9.87	0.00	52205.00	94.25	168490.28	Terraplén	0.811	29.24901816	44917.09407
K 21+850	10.00	0	10.35	0.00	52205.00	101.10	168591.38	Terraplén	0.847	30.53697879	44947.63105
K 21+860	10.00	0	9.92	0.00	52205.00	101.35	168692.73	Terraplén	0.815	29.38366151	44977.01471
K 21+870	10.00	0	9.81	0.00	52205.00	98.65	168791.38	Terraplén	0.807	29.08729723	45006.102
K 21+880	10.00	0	10.02	0.00	52205.00	99.15	168890.53	Terraplén	0.822	29.65261092	45035.75461
K 21+890	10.00	0	9.98	0.00	52205.00	100.00	168990.53	Terraplén	0.819	29.54508502	45065.2997
K 21+900	10.00	0	9.94	0.00	52205.00	99.60	169090.13	Terraplén	0.816	29.43748732	45094.73719
K 21+910	10.00	0	9.89	0.00	52205.00	99.15	169189.28	Terraplén	0.813	29.30288902	45124.04008
K 21+920	10.00	0	9.82	0.00	52205.00	98.55	169287.83	Terraplén	0.807	29.11426202	45153.15434
K 21+930	10.00	0	10.46	0.00	52205.00	101.40	169389.23	Terraplén	0.855	30.8306981	45183.98504
K 21+940	10.00	0	9.99	0.00	52205.00	102.25	169491.48	Terraplén	0.820	29.57197322	45213.55701
K 21+950	10.00	0	9.83	0.00	52205.00	99.10	169590.58	Terraplén	0.808	29.14122229	45242.69823
K 21+960	10.00	0	9.68	0.00	52205.00	97.55	169688.13	Terraplén	0.797	28.73634231	45271.43457
K 21+970	10.00	0	9.55	0.00	52205.00	96.15	169784.28	Terraplén	0.787	28.38461752	45299.81919
K 21+980	10.00	0	10.98	0.00	52205.00	102.65	169886.93	Terraplén	0.893	32.21206033	45332.03125
K 21+990	10.00	0	9.52	0.00	52205.00	102.50	169989.43	Terraplén	0.785	28.30334039	45360.33459
K 22+000	10.00	0.01	9.81	0.05	52205.05	96.65	170086.08	Terraplén	0.807	29.08729723	45389.42189
K 22+010	10.00	0.06	8.76	0.35	52205.40	92.85	170178.93	Terraplén	0.727	26.23035979	45415.65225
K 22+020	10.00	0.08	9.54	0.70	52206.10	91.50	170270.43	Terraplén	0.786	28.35752973	45444.00978
K 22+030	10.00	0.13	9.45	1.05	52207.15	94.95	170365.38	Terraplén	0.780	28.11353292	45472.12331
K 22+040	10.00	0.18	8.78	1.55	52208.70	91.15	170456.53	Terraplén	0.729	26.28526061	45498.40857
K 22+050	10.00	0.13	8.53	1.55	52210.25	86.55	170543.08	Terraplén	0.710	25.5976223	45524.00619
K 22+060	10.00	0.07	9.47	1.00	52211.25	90.00	170633.08	Terraplén	0.781	28.16778664	45552.17398
K 22+070	10.00	0.05	13.70	0.60	52211.85	115.85	170748.93	Terraplén	1.089	39.25575059	45591.42973
K 22+080	10.00	0.01	17.69	0.30	52212.15	156.95	170905.88	Terraplén	1.362	49.09210259	45640.52183
K 22+090	10.00	0.01	15.97	0.10	52212.25	168.30	171074.18	Terraplén	1.246	44.91909571	45685.44093
K 22+100	10.00	0	18.91	0.05	52212.30	174.40	171248.58	Terraplén	1.442	51.9945371	45737.43547
K 22+110	10.00	0	19.90	0.00	52212.30	194.05	171442.63	Terraplén	1.506	54.31649168	45791.75196
K 22+120	10.00	0	22.01	0.00	52212.30	209.55	171652.18	Terraplén	1.641	59.17102268	45850.92298
K 22+130	10.00	0	20.87	0.00	52212.30	214.40	171866.58	Terraplén	1.569	56.56374987	45907.48673
K 22+140	10.00	0	19.47	0.00	52212.30	201.70	172068.28	Terraplén	1.479	53.31154772	45960.79828
K 22+150	10.00	0	20.67	0.00	52212.30	200.70	172268.98	Terraplén	1.556	56.10259947	46016.90088
K 22+160	10.00	0	19.10	0.00	52212.30	198.85	172467.83	Terraplén	1.454	52.44243633	46069.34332
K 22+170	10.00	0	19.04	0.00	52212.30	190.70	172658.53	Terraplén	1.451	52.30111232	46121.64443
K 22+180	10.00	0	19.44	0.00	52212.30	192.40	172850.93	Terraplén	1.477	53.24123147	46174.88566
K 22+190	10.00	0	19.03	0.00	52212.30	192.35	173043.28	Terraplén	1.450	52.27754776	46227.16321
K 22+200	10.00	0	20.25	0.00	52212.30	196.40	173239.68	Terraplén	1.529	55.13047674	46282.29368
K 22+210	10.00	0	21.60	0.00	52212.30	209.25	173448.93	Terraplén	1.615	58.23744271	46340.53113
K 22+220	10.00	0	21.63	0.00	52212.30	216.15	173665.08	Terraplén	1.617	58.30590906	46398.83704
K 22+230	10.00	0	25.12	0.00	52212.30	233.75	173898.83	Terraplén	1.834	66.10907933	46464.94611
K 22+240	10.00	0	26.37	0.00	52212.30	257.45	174156.28	Terraplén	1.909	68.83003547	46533.77615
K 22+250	10.00	0	23.34	0.00	52212.30	248.55	174404.83	Terraplén	1.724	62.16850633	46595.94466
K 22+260	10.00	0	24.59	0.00	52212.30	239.65	174644.48	Terraplén	1.801	64.94402261	46660.88868
K 22+270	10.00	0	37.16	0.00	52212.30	308.75	174953.23	Terraplén	2.522	90.93857313	46751.82725
K 22+280	10.00	0	42.05	0.00	52212.30	396.05	175349.28	Terraplén	2.781	100.2649772	46852.09223
K 22+290	10.00	0	50.85	0.00	52212.30	464.50	175813.78	Terraplén	3.222	116.1659196	46968.25815
K 22+300	10.00	0	59.56	0.00	52212.30	552.05	176365.83	Terraplén	3.632	130.957689	47099.21584
K 22+310	10.00	0	85.22	0.00	52212.30	723.90	177089.73	Terraplén	4.725	170.3519832	47269.56782
K 22+320	10.00	0	18.40	0.00	52212.30	518.08	177607.80	Terraplén	1.408	50.77496296	47320.34278
K 22+330	10.00	0	58.45	0.00	52212.30	384.23	177992.03	Terraplén	3.581	129.1192929	47449.46208
K 22+340	10.00	0	40.82	0.00	52212.30	496.35	178488.38	Terraplén	2.717	97.95474237	47547.41682
K 22+350	10.00	0	25.70	0.00	52212.30	332.60	178820.98	Terraplén	1.869	67.37622992	47614.79305
K 22+360	10.00	0	29.42	0.00	52212.30	275.60	179096.58	Terraplén	2.089	75.3190625	47690.11211
K 22+370	10.00	0	35.77	0.00	52212.30	325.95	179422.53	Terraplén	2.447	88.21529552	47778.32741
K 22+380	10.00	0	40.07	0.00	52212.30	379.20	179801.73	Terraplén	2.677	96.53458132	47874.86199
K 22+390	10.00	0	38.45	0.00	52212.30	392.60	180194.33	Terraplén	2.591	93.43644913	47968.29844
K 22+400	10.00	0	37.39	0.00	52212.30	379.20	180573.53	Terraplén	2.535	91.38598055	48059.68442
K 22+410	10.00	0	37.69	0.00	52212.30	375.40	180948.93	Terraplén	2.551	91.96820988	48151.65263
K 22+420	10.00	0	38.43	0.00	52212.30	380.60	181329.53	Terraplén	2.590	93.397934	48245.05056
K 22+430	10.00	0	35.12	0.00	52212.30	367.75	181697.28	Terraplén	2.411	86.93017537	48331.98074
K 22+440	10.00	0	34.48	0.00	52212.30	348.00	182045.28	Terraplén	2.376	85.65739931	48417.63814
K 22+450	10.00	0.009	36.00	0.05	52212.35	352.40	182397.68	Terraplén	2.459	88.66823444	48506.30637
K 22+460	10.00	0.013	48.93	0.11	52212.46	424.65	182822.33	Terraplén	3.128	112.7848781	48619.09125
K 22+470	10.00	0.013	38.29	0.13	52212.59	436.10	183258.43	Terraplén	2.583	93.12814329	48712.21939
K 22+480	10.00	0.013	35.32	0.13	52212.72	368.05	183626.48	Terraplén	2.422	87.32640043	48799.54579

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ABSCISA	DISTANCIA	AREA CTE	AREA RELL	VOL CTE	VOL CTE ACUM	VOL RELL	VOL RELL ACUM	SECCION	ALT APROX TER	PROT DE TALUD	ACUM PROT DE TAL
K 22+490	10.00	0.013	33.40	0.13	52212.85	343.60	183970.08	Terraplén	2.316	83.49251244	48883.03831
K 22+500	10.00	0.016	34.77	0.15	52212.99	340.85	184310.93	Terraplén	2.392	86.23504736	48969.27335
K 22+510	10.00	0.018	35.92	0.17	52213.16	353.45	184664.38	Terraplén	2.455	88.51079618	49057.78415
K 22+520	10.00	0.025	35.64	0.22	52213.38	357.80	185022.18	Terraplén	2.440	87.95887325	49145.74302
K 22+530	10.00	0.011	39.49	0.18	52213.56	375.65	185397.83	Terraplén	2.647	95.43023216	49241.17325
K 22+540	10.00	0.007	42.16	0.09	52213.65	408.25	185806.08	Terraplén	2.787	100.4704632	49341.64372
K 22+550	10.00	0.007	42.18	0.07	52213.72	421.70	186227.78	Terraplén	2.788	100.5078048	49442.15152
K 22+560	10.00	0.008	38.28	0.08	52213.79	402.30	186630.08	Terraplén	2.582	93.10886013	49535.26038
K 22+570	10.00	0.007	37.32	0.08	52213.87	378.00	187008.08	Terraplén	2.531	91.24990816	49626.51029
K 22+580	10.00	0.012	37.60	0.10	52213.96	374.60	187382.68	Terraplén	2.546	91.79370041	49718.30399
K 22+590	10.00	0.008	39.78	0.10	52214.06	386.90	187769.58	Terraplén	2.662	95.98307659	49814.28707
K 22+600	10.00	0.005	39.89	0.07	52214.13	398.35	188167.93	Terraplén	2.668	96.19242522	49910.47949
K 22+610	10.00	0.006	38.11	0.06	52214.18	390.00	188557.93	Terraplén	2.573	92.78079287	50003.26029
K 22+620	10.00	0.008	38.28	0.07	52214.25	381.95	188939.88	Terraplén	2.582	93.10886013	50096.36915
K 22+630	10.00	0.003	40.04	0.06	52214.31	391.60	189331.48	Terraplén	2.676	96.47759094	50192.84674
K 22+640	10.00	0.007	41.59	0.05	52214.36	408.15	189739.63	Terraplén	2.757	99.40369149	50292.25043
K 22+650	10.00	0.004	40.90	0.06	52214.41	412.45	190152.08	Terraplén	2.721	98.105708	50390.35614
K 22+660	10.00	0.007	42.82	0.06	52214.47	418.60	190570.68	Terraplén	2.821	101.6995787	50492.05572
K 22+670	10.00	0.011	43.66	0.09	52214.56	432.40	191003.08	Terraplén	2.864	103.2546046	50595.31032
K 22+680	10.00	0.012	47.14	0.12	52214.67	454.00	191457.08	Terraplén	3.039	109.5900746	50704.90039
K 22+690	10.00	0.006	57.16	0.09	52214.76	521.50	191978.58	Terraplén	3.521	126.966357	50831.86675
K 22+700	10.00	0.011	57.10	0.09	52214.85	571.30	192549.88	Terraplén	3.519	126.865784	50958.73254
K 22+710	10.00	0.198	60.89	1.05	52215.89	589.95	193139.83	Terraplén	3.693	133.1436406	51091.87618
K 22+720	10.00	1.444	47.14	8.21	52224.10	540.15	193679.98	Terraplén	3.039	109.5900746	51201.46625
K 22+730	10.00	0.007	57.16	7.26	52231.36	521.50	194201.48	Terraplén	3.521	126.966357	51328.43261
K 22+740	10.00	0.007	57.10	0.07	52231.43	571.30	194772.78	Terraplén	3.519	126.865784	51455.29839
K 22+750	10.00		500	0.04	52231.46	2785.50	197558.28	Puente	0.000	0	51455.29839
K 22+760	10.00			0.00	52231.46	2500.00	200058.28	Puente	0.000	0	51455.29839
K 22+770	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 22+780	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 22+790	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 22+800	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 22+810	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 22+820	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 22+830	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 22+840	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 22+850	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 22+860	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 22+870	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 22+880	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 22+890	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 22+900	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 22+910	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 22+920	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 22+930	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 22+940	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 22+950	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 22+960	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 22+970	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 22+980	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 22+990	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 23+000	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 23+010	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 23+020	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 23+030	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 23+040	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 23+050	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 23+060	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 23+070	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 23+080	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 23+090	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 23+100	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 23+110	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 23+120	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 23+130	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 23+140	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 23+150	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 23+160	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 23+170	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 23+180	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 23+190	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 23+200	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 23+210	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 23+220	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 23+230	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 23+240	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 23+250	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 23+260	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 23+270	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 23+280	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 23+290	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 23+300	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 23+310	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 23+320	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 23+330	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 23+340	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 23+350	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 23+360	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 23+370	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 23+380	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 23+390	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 23+400	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 23+410	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 23+420	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839

Consorcio Vías Colombia 055	MEMORIA DE CALCULO DE CANTIDADES DEL APU	
ENTIDAD:	INSTITUTO NACIONAL DE VIAS	
NOMBRE DEL PROYECTO:	MEJORAMIENTO, MANTENIMIENTO, GESTIÓN PREDIAL, SOCIAL Y AMBIENTAL SOSTENIBLE DE LA CARRETERA VILLAGARZON - SAN JOSE DEL FRAGUA Y PUENTE SOBRE EL RIO CAQUETA EN LOS DEPARTAMENTOS DE PUTUMAYO, CAUCA Y CAQUETA EN MARCO DE LA REACTIVACIÓN ECONÓMICA, MEDIANTE EL PROGRAMA VIAS PARA LA CONEXION DE TERRITORIOS, EL CRECIMIENTO SOSTENIBLE Y LA REACTIVACIÓN 2.0	

ABSCISA	DISTANCIA	AREA CTE	AREA RELL	VOL CTE	VOL CTE ACUM	VOL RELL	VOL RELL ACUM	SECCION	ALT APROX TER	PROT DE TALUD	ACUM PROT DE TAL
K 23+430	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 23+440	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 23+450	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 23+460	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 23+470	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 23+480	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 23+490	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 23+500	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 23+510	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 23+520	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 23+530	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 23+540	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 23+550	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 23+560	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 23+570	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 23+580	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 23+590	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 23+600	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 23+610	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 23+620	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 23+630	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 23+640	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 23+650	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 23+660	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 23+670	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 23+680	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 23+690	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 23+700	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 23+710	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 23+720	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 23+730	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 23+740	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 23+750	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 23+760	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 23+770	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 23+780	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 23+790	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 23+800	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 23+810	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 23+820	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 23+830	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 23+840	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 23+850	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 23+860	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 23+870	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 23+880	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 23+890	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 23+900	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 23+910	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 23+920	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 23+930	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 23+940	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 23+950	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 23+960	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 23+970	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 23+980	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 23+990	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 24+000	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 24+010	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 24+020	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 24+030	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 24+040	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 24+050	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 24+060	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 24+070	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 24+080	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 24+090	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 24+100	10.00			0.00	52231.46	0.00	200058.28	Puente	0.000	0	51455.29839
K 24+110	10.00	0.004	51.02	0.02	52231.48	255.12	200313.40	Terraplén	3.230	116.4717262	51571.77012
K 24+120	10.00	0.004	51.02	0.04	52231.52	510.25	200823.65	Terraplén	3.230	116.4717262	51688.24184
K 24+130	10.00	0.005	50.31	0.05	52231.57	506.68	201330.33	Terraplén	3.196	115.2223515	51803.4642
K 24+140	10.00	0.009	34.49	0.07	52231.64	423.99	201754.32	Terraplén	2.376	85.66920665	51889.1334
K 24+150	10.00	0.007	35.89	0.08	52231.72	351.86	202106.19	Terraplén	2.453	88.44589885	51977.5793
K 24+160	10.00	0.006	42.91	0.07	52231.78	393.98	202500.17	Terraplén	2.825	101.8656447	52079.44495
K 24+170	10.00	0.003	45.64	0.05	52231.83	442.75	202942.92	Terraplén	2.964	106.8799075	52186.32485
K 24+180	10.00	0.005	48.24	0.04	52231.87	469.41	203412.33	Terraplén	3.094	111.5614698	52297.88632
K 24+190	10.00	0.003	49.44	0.04	52231.91	488.42	203900.75	Terraplén	3.153	113.6917526	52411.57808
K 24+200	10.00	0.003	48.61	0.03	52231.94	490.24	204390.99	Terraplén	3.112	112.2092773	52523.78735
K 24+210	10.00	0.004	43.60	0.04	52231.97	461.04	204852.03	Terraplén	2.861	103.1488939	52626.93625
K 24+220	10.00	0.004	44.33	0.04	52232.01	439.67	205291.70	Terraplén	2.898	104.4889017	52731.42515
K 24+230	10.00	0.004	42.87	0.04	52232.05	436.01	205727.71	Terraplén	2.823	101.7949548	52833.2201
K 24+240	10.00	0.005	38.13	0.05	52232.10	405.02	206132.73	Terraplén	2.574	92.82451139	52926.04461
K 24+250	10.00	0.003	44.17	0.04	52232.14	411.50	206544.23	Terraplén	2.890	104.1906368	53030.23525
K 24+260	10.00	0.002	40.86	0.03	52232.16	425.16	206969.39	Terraplén	2.719	98.03627614	53128.27153
K 24+270	10.00	0.005	35.54	0.04	52232.20	382.03	207351.42	Terraplén	2.434	87.76553019	53216.03706
K 24+280	10.00	0.006	33.05	0.06	52232.25	342.95	207694.37	Terraplén	2.296	82.7818726	53298.81893
K 24+290	10.00	0.014	19.77	0.10	52232.35	264.08	207958.44	Terraplén	1.498	54.00857602	53352.82751
K 24+300	10.00	0.007	23.91	0.11	52232.46	218.39	208176.84	Terraplén	1.760	63.44099579	53416.2685
K 24+310	10.00	0.005	29.88	0.06	52232.52	268.94	208445.78	Terraplén	2.115	76.27415445	53492.54266
K 24+320	10.00	0.011	23.89	0.08	52232.60	268.83	208714.61	Terraplén	1.758	63.39122279	53555.93388
K 24+330	10.00	0.016	16.43	0.14	52232.73	201.58	208916.18	Terraplén	1.277	46.03751468	53601.97139
K 24+340	10.00	0.013	19.62	0.15	52232.88	180.21	209096.40	Terraplén	1.488	53.65262399	53655.62402
K 24+350	10.00	0.008	21.21	0.11	52232.98	204.11	209300.51	Terraplén	1.590	57.33870091	53712.96272
K 24+360	10.00	0.009	18.46	0.09	52233.07	198.35	209498.86	Terraplén	1.413	50.9369358	53763.89965

Consorcio Vías Colombia 055	MEMORIA DE CALCULO DE CANTIDADES DEL APU	
ENTIDAD:	**INSTITUTO NACIONAL DE VIAS**	
NOMBRE DEL PROYECTO:	MEJORAMIENTO, MANTENIMIENTO, GESTIÓN PREDIAL, SOCIAL Y AMBIENTAL SOSTENIBLE DE LA CARRETERA VILLAGARZON - SAN JOSE DEL FRAGUA Y PUENTE SOBRE EL RIO CAQUETA EN LOS DEPARTAMENTOS DE PUTUMAYO, CAUCA Y CAQUETA EN MARCO DE LA REACTIVACIÓN ECONÓMICA, MEDIANTE EL PROGRAMA VIAS PARA LA CONEXION DE TERRITORIOS, EL CRECIMIENTO SOSTENIBLE Y LA REACTIVACIÓN 2.0	

ABSCISA	DISTANCIA	AREA CTE	AREA RELL	VOL CTE	VOL CTE ACUM	VOL RELL	VOL RELL ACUM	SECCION	ALT APROX TER	PROT DE TALUD	ACUM PROT DE TAL
K 24+370	10.00	0.004	24.77	0.07	52233.13	216.17	209715.03	Terraplén	1.812	65.34029911	53829.23995
K 24+380	10.00	0.009	24.22	0.07	52233.20	244.95	209959.98	Terraplén	1.779	64.12657061	53893.36652
K 24+390	10.00	0.008	7.13	0.09	52233.28	156.73	210116.71	Terraplén	0.601	21.67696395	53915.04349
K 24+400	10.00	1.499	0.65	7.54	52240.82	38.89	210155.60	Terraplén	0.059	2.132746493	53917.17623
K 24+410	10.00	0	25.35	7.50	52248.31	130.00	210285.60	Terraplén	1.847	66.60536853	53983.7816
K 24+420			27.25	0.00	52248.31	0.00	210285.60	Intersección	0.000	0	53983.7816
K 24+430			7.66	0.00	52248.31	0.00	210285.60	Intersección	0.000	0	53983.7816
K 24+440			26.04	0.00	52248.31	0.00	210285.60	Intersección	0.000	0	53983.7816
K 24+450			26.63	0.00	52248.31	0.00	210285.60	Intersección	0.000	0	53983.7816
K 24+460			19.85	0.00	52248.31	0.00	210285.60	Intersección	0.000	0	53983.7816
K 24+470			22.80	0.00	52248.31	0.00	210285.60	Intersección	0.000	0	53983.7816
K 24+480			24.52	0.00	52248.31	0.00	210285.60	Intersección	0.000	0	53983.7816
K 24+490			26.36	0.00	52248.31	0.00	210285.60	Intersección	0.000	0	53983.7816
K 24+500			25.35	0.00	52248.31	0.00	210285.60	Intersección	0.000	0	53983.7816
K 24+510			27.25	0.00	52248.31	0.00	210285.60	Intersección	0.000	0	53983.7816
K 24+520			7.66	0.00	52248.31	0.00	210285.60	Intersección	0.000	0	53983.7816
K 24+530			26.04	0.00	52248.31	0.00	210285.60	Intersección	0.000	0	53983.7816
K 24+540			26.63	0.00	52248.31	0.00	210285.60	Intersección	0.000	0	53983.7816
K 24+550			19.85	0.00	52248.31	0.00	210285.60	Intersección	0.000	0	53983.7816
K 24+560			22.80	0.00	52248.31	0.00	210285.60	Intersección	0.000	0	53983.7816
K 24+570			24.52	0.00	52248.31	0.00	210285.60	Intersección	0.000	0	53983.7816
K 24+580			26.36	0.00	52248.31	0.00	210285.60	Intersección	0.000	0	53983.7816
K 24+590			25.35	0.00	52248.31	0.00	210285.60	Intersección	0.000	0	53983.7816
K 24+600			27.25	0.00	52248.31	0.00	210285.60	Intersección	0.000	0	53983.7816
K 24+610			7.66	0.00	52248.31	0.00	210285.60	Intersección	0.000	0	53983.7816
K 24+620			26.04	0.00	52248.31	0.00	210285.60	Intersección	0.000	0	53983.7816
K 24+630			26.63	0.00	52248.31	0.00	210285.60	Intersección	0.000	0	53983.7816
K 24+640			19.85	0.00	52248.31	0.00	210285.60	Intersección	0.000	0	53983.7816
K 24+650			22.80	0.00	52248.31	0.00	210285.60	Intersección	0.000	0	53983.7816
K 24+660			24.52	0.00	52248.31	0.00	210285.60	Intersección	0.000	0	53983.7816
K 24+670			26.36	0.00	52248.31	0.00	210285.60	Intersección	0.000	0	53983.7816
K 24+680			25.35	0.00	52248.31	0.00	210285.60	Intersección	0.000	0	53983.7816
K 24+690			27.25	0.00	52248.31	0.00	210285.60	Intersección	0.000	0	53983.7816
K 24+700			7.66	0.00	52248.31	0.00	210285.60	Intersección	0.000	0	53983.7816
K 24+710			26.04	0.00	52248.31	0.00	210285.60	Intersección	0.000	0	53983.7816
K 24+720			26.63	0.00	52248.31	0.00	210285.60	Intersección	0.000	0	53983.7816
K 24+730			19.85	0.00	52248.31	0.00	210285.60	Intersección	0.000	0	53983.7816
K 24+740			22.80	0.00	52248.31	0.00	210285.60	Intersección	0.000	0	53983.7816
K 24+750			24.52	0.00	52248.31	0.00	210285.60	Intersección	0.000	0	53983.7816
K 24+760			26.36	0.00	52248.31	0.00	210285.60	Intersección	0.000	0	53983.7816
K 24+770			25.35	0.00	52248.31	0.00	210285.60	Intersección	0.000	0	53983.7816
K 24+780			27.25	0.00	52248.31	0.00	210285.60	Intersección	0.000	0	53983.7816
K 24+790			7.66	0.00	52248.31	0.00	210285.60	Intersección	0.000	0	53983.7816
K 24+800			26.04	0.00	52248.31	0.00	210285.60	Intersección	0.000	0	53983.7816
K 24+810			26.63	0.00	52248.31	0.00	210285.60	Intersección	0.000	0	53983.7816
K 24+820			19.85	0.00	52248.31	0.00	210285.60	Intersección	0.000	0	53983.7816
K 24+830			22.80	0.00	52248.31	0.00	210285.60	Intersección	0.000	0	53983.7816
K 24+840			24.52	0.00	52248.31	0.00	210285.60	Intersección	0.000	0	53983.7816
K 24+850			26.36	0.00	52248.31	0.00	210285.60	Intersección	0.000	0	53983.7816
K 24+860			25.35	0.00	52248.31	0.00	210285.60	Intersección	0.000	0	53983.7816
K 24+870			27.25	0.00	52248.31	0.00	210285.60	Intersección	0.000	0	53983.7816
K 24+880			7.66	0.00	52248.31	0.00	210285.60	Intersección	0.000	0	53983.7816
K 24+890			26.04	0.00	52248.31	0.00	210285.60	Intersección	0.000	0	53983.7816
K 24+900			26.63	0.00	52248.31	0.00	210285.60	Intersección	0.000	0	53983.7816
K 24+910			19.85	0.00	52248.31	0.00	210285.60	Intersección	0.000	0	53983.7816
K 24+920			22.80	0.00	52248.31	0.00	210285.60	Intersección	0.000	0	53983.7816
K 24+930			24.52	0.00	52248.31	0.00	210285.60	Intersección	0.000	0	53983.7816
K 24+940			26.36	0.00	52248.31	0.00	210285.60	Intersección	0.000	0	53983.7816
K 24+950			28.34	0.00	52248.31	0.00	210285.60	Intersección	0.000	0	53983.7816
K 24+960			30.47	0.00	52248.31	0.00	210285.60	Intersección	0.000	0	53983.7816
K 24+970			32.77	0.00	52248.31	0.00	210285.60	Intersección	0.000	0	53983.7816
K 24+980			35.23	0.00	52248.31	0.00	210285.60	Intersección	0.000	0	53983.7816
K 24+990			37.88	0.00	52248.31	0.00	210285.60	Intersección	0.000	0	53983.7816
K 25+000		0	40.73	0.97	52249.28	1868.61	212154.20	Terraplén	2.712	0	53983.7816

TRAMO	LONGITUD									AREA TALUD	
1	7,750									33,756	M2
2	5,350									17,573	M2
3	900									2,528	M2
TOTAL	**14,000**									**53,857**	**M2**