



ESTUDIOS Y DISEÑOS DEFINITIVOS PARA LA REHABILITACION DE
LA VIA CONEXIÓN E30 - PEDRO VÉLEZ - CARLOS JULIO
AROSEMENA, UBICADA EN EL CANTÓN EL EMPALME DE LA
PROVINCIA DEL GUAYAS



ELEMENTOS DEL TRAZADO VERTICAL

PVI	Station	Grade Out	Curve Length
0	0+000.00	1,51%	
1	0+018.52		
2	0+024.24	2,56%	11.448m
Vertical Curve Information:(sag curve)			
PVC Station:		0+018.52	Elevation: 78.743m
PVI Station:		0+024.24	Elevation: 78.830m
PVT Station:		0+029.96	Elevation: 78.976m
Low Point:		0+018.52	Elevation: 78.743m
Grade in:		1,51%	Grade out: 2,56%
Change:		1,04%	K: 10,97357803
Curve Length:		11.448m	
Headlight Distance:			
3	0+029.96		
4	0+038.70	3,91%	17.462m
Vertical Curve Information:(sag curve)			
PVC Station:		0+029.96	Elevation: 78.976m
PVI Station:		0+038.70	Elevation: 79.190m
PVT Station:		0+047.43	Elevation: 79.531m
Low Point:		0+029.96	Elevation: 78.976m
Grade in:		2,45%	Grade out: 3,91%
Change:		1,46%	K: 11,95477022
Curve Length:		17.462m	
Headlight Distance:			
5	0+047.43		
6	0+048.34	4,25%	1.822m
Vertical Curve Information:(sag curve)			
PVC Station:		0+047.43	Elevation: 79.531m
PVI Station:		0+048.34	Elevation: 79.569m
PVT Station:		0+049.25	Elevation: 79.607m
Low Point:		0+047.43	Elevation: 79.531m
Grade in:		4,08%	Grade out: 4,25%
Change:		0,17%	K: 10,97357952
Curve Length:		1.822m	
Headlight Distance:			
7	0+049.25	4,25%	

Vertical Alignment: RASANTE -2

Description:

Station Range: Start: 0+000.00, End: 0+045.36

PVI	Station	Grade Out	Curve Length
0	0+000.00	-2,81%	
1	0+020.79	0,79%	30.000m
Vertical Curve Information:(sag curve)			
PVC Station:		0+005.79	Elevation: 65.173m
PVI Station:		0+020.79	Elevation: 64.750m
PVT Station:		0+035.79	Elevation: 64.869m
Low Point:		0+029.22	Elevation: 64.843m

PVI	Station	Grade Out	Curve Length	
	Grade in:	-2,81%	Grade out:	0,79%
	Change:	3,60%	K:	8,324426711
	Curve Length:	30.000m		
	Headlight Distance:	136.712m		

Vertical Alignment: RASANTE 4

Description:

Station Range: Start: 0+000.00, End: 0+030.99

PVI	Station	Grade Out	Curve Length
0	0+000.00	1,18%	

Vertical Alignment: RASANTE EJE 5

Description:

Station Range: Start: 16+109.40, End: 16+795.39

PVI	Station	Grade Out	Curve Length	
0	16+109.40	0,17%		
1	16+249.87	-0,28%	80.000m	
Vertical Curve Information:(crest curve)				
	PVC Station:	16+209.87	Elevation:	78.970m
	PVI Station:	16+249.87	Elevation:	79.037m
	PVT Station:	16+289.87	Elevation:	78.927m
	High Point:	16+240.26	Elevation:	78.995m
	Grade in:	0,17%	Grade out:	-0,28%
	Change:	0,44%	K:	179,9660354
	Curve Length:	80.000m		
	Passing Distance:	3,518.659m	Stopping Distance:	1,535.012m
2	16+381.64	1,88%	60.000m	
Vertical Curve Information:(sag curve)				
	PVC Station:	16+351.64	Elevation:	78.757m
	PVI Station:	16+381.64	Elevation:	78.674m
	PVT Station:	16+411.64	Elevation:	79.237m
	Low Point:	16+359.32	Elevation:	78.746m
	Grade in:	-0,28%	Grade out:	1,88%
	Change:	2,15%	K:	27,86640977
	Curve Length:	60.000m		
	Headlight Distance:	649.114m		
3	16+529.14	0,05%	80.000m	
Vertical Curve Information:(crest curve)				
	PVC Station:	16+489.14	Elevation:	80.692m
	PVI Station:	16+529.14	Elevation:	81.443m
	PVT Station:	16+569.14	Elevation:	81.461m
	High Point:	16+569.14	Elevation:	81.461m
	Grade in:	1,88%	Grade out:	0,05%
	Change:	1,83%	K:	43,66980945
	Curve Length:	80.000m		

PVI	Station	Grade Out	Curve Length	
	Passing Distance:	884.117m	Stopping Distance:	402.773m
4	16+684.50	-1,38%	50.000m	
	Vertical Curve Information:(crest curve)			
	PVC Station:	16+659.50	Elevation:	81.503m
	PVI Station:	16+684.50	Elevation:	81.514m
	PVT Station:	16+709.50	Elevation:	81.170m
	High Point:	16+661.10	Elevation:	81.503m
	Grade in:	0,05%	Grade out:	-1,38%
	Change:	1,42%	K:	35,13360104
	Curve Length:	50.000m		
	Passing Distance:	1,111.586m	Stopping Distance:	491.978m
5	16+744.51	-0,27%	50.000m	
	Vertical Curve Information:(sag curve)			
	PVC Station:	16+719.51	Elevation:	81.032m
	PVI Station:	16+744.51	Elevation:	80.687m
	PVT Station:	16+769.51	Elevation:	80.620m
	Low Point:	16+769.51	Elevation:	80.620m
	Grade in:	-1,38%	Grade out:	-0,27%
	Change:	1,11%	K:	45,02272887
	Curve Length:	50.000m		
	Headlight Distance:			
6	16+795.39			

Vertical Alignment: RASANTE PV-2

Description:

Station Range: Start: 15+224.10, End: 16+109.40

PVI	Station	Grade Out	Curve Length	
0	15+224.10	4,11%		
1	15+267.30	-1,54%	60.000m	
	Vertical Curve Information:(crest curve)			
	PVC Station:	15+237.30	Elevation:	80.532m
	PVI Station:	15+267.30	Elevation:	81.764m
	PVT Station:	15+297.30	Elevation:	81.303m
	High Point:	15+280.95	Elevation:	81.428m
	Grade in:	4,11%	Grade out:	-1,54%
	Change:	5,65%	K:	10,6283353
	Curve Length:	60.000m		
	Passing Distance:	303.921m	Stopping Distance:	147.722m
2	15+424.56	2,45%	80.000m	
	Vertical Curve Information:(sag curve)			
	PVC Station:	15+384.56	Elevation:	79.960m
	PVI Station:	15+424.56	Elevation:	79.345m
	PVT Station:	15+464.56	Elevation:	80.323m
	Low Point:	15+415.45	Elevation:	79.723m
	Grade in:	-1,54%	Grade out:	2,45%
	Change:	3,98%	K:	20,08135005
	Curve Length:	80.000m		
	Headlight Distance:	160.548m		
3	15+548.63	-1,77%	80.000m	

PVI	Station	Grade Out	Curve Length	
	Vertical Curve Information:(crest curve)			
	PVC Station:	15+508.63	Elevation:	81.401m
	PVI Station:	15+548.63	Elevation:	82.379m
	PVT Station:	15+588.63	Elevation:	81.671m
	High Point:	15+555.03	Elevation:	81.968m
	Grade in:	2,45%	Grade out:	-1,77%
	Change:	4,22%	K:	18,97491749
	Curve Length:	80.000m		
	Passing Distance:	406.776m	Stopping Distance:	197.628m
4	15+737.71	2,27%	80.000m	
	Vertical Curve Information:(sag curve)			
	PVC Station:	15+697.71	Elevation:	79.739m
	PVI Station:	15+737.71	Elevation:	79.031m
	PVT Station:	15+777.71	Elevation:	79.941m
	Low Point:	15+732.72	Elevation:	79.429m
	Grade in:	-1,77%	Grade out:	2,27%
	Change:	4,05%	K:	19,77542992
	Curve Length:	80.000m		
	Headlight Distance:	157.317m		
5	15+872.23	-0,09%	120.000m	
	Vertical Curve Information:(crest curve)			
	PVC Station:	15+812.23	Elevation:	80.726m
	PVI Station:	15+872.23	Elevation:	82.091m
	PVT Station:	15+932.23	Elevation:	82.038m
	High Point:	15+927.75	Elevation:	82.040m
	Grade in:	2,27%	Grade out:	-0,09%
	Change:	2,36%	K:	50,78580031
	Curve Length:	120.000m		
	Passing Distance:	714.444m	Stopping Distance:	341.258m
6	16+044.10	-4,80%	70.000m	
	Vertical Curve Information:(crest curve)			
	PVC Station:	16+009.10	Elevation:	81.970m
	PVI Station:	16+044.10	Elevation:	81.939m
	PVT Station:	16+079.10	Elevation:	80.258m
	High Point:	16+009.10	Elevation:	81.970m
	Grade in:	-0,09%	Grade out:	-4,80%
	Change:	4,72%	K:	14,84339534
	Curve Length:	70.000m		
	Passing Distance:	362.904m	Stopping Distance:	175.922m

Vertical Alignment: RASANTE PV-1

Description:

Station Range: Start: 0+000.00, End: 15+224.07

PVI	Station	Grade Out	Curve Length	
0	0+000.00	-0,67%		
1	0+114.77	1,04%	100.000m	
	Vertical Curve Information:(sag curve)			
	PVC Station:	0+064.77	Elevation:	64.884m
	PVI Station:	0+114.77	Elevation:	64.550m

PVI	Station	Grade Out	Curve Length	
	PVT Station:	0+164.77	Elevation:	65.070m
	Low Point:	0+103.92	Elevation:	64.753m
	Grade in:	-0,67%	Grade out:	1,04%
	Change:	1,71%	K:	58,52136319
	Curve Length:	100.000m		
	Headlight Distance:			
2	0+344.97	-0,86%	120.000m	
	Vertical Curve Information:(crest curve)			
	PVC Station:	0+284.97	Elevation:	66.320m
	PVI Station:	0+344.97	Elevation:	66.944m
	PVT Station:	0+404.97	Elevation:	66.427m
	High Point:	0+350.62	Elevation:	66.661m
	Grade in:	1,04%	Grade out:	-0,86%
	Change:	1,90%	K:	63,13405834
	Curve Length:	120.000m		
	Passing Distance:	873.568m	Stopping Distance:	409.644m
3	0+526.14	1,19%	130.000m	
	Vertical Curve Information:(sag curve)			
	PVC Station:	0+461.14	Elevation:	65.944m
	PVI Station:	0+526.14	Elevation:	65.384m
	PVT Station:	0+591.14	Elevation:	66.158m
	Low Point:	0+515.68	Elevation:	65.709m
	Grade in:	-0,86%	Grade out:	1,19%
	Change:	2,05%	K:	63,34872306
	Curve Length:	130.000m		
	Headlight Distance:	1,087.280m		
4	0+845.89	-6,44%	250.000m	
	Vertical Curve Information:(crest curve)			
	PVC Station:	0+720.89	Elevation:	67.704m
	PVI Station:	0+845.89	Elevation:	69.193m
	PVT Station:	0+970.89	Elevation:	61.148m
	High Point:	0+759.93	Elevation:	67.936m
	Grade in:	1,19%	Grade out:	-6,44%
	Change:	7,63%	K:	32,7782366
	Curve Length:	250.000m		
	Passing Distance:	327.748m	Stopping Distance:	208.728m
5	1+077.82	-0,02%	60.000m	
	Vertical Curve Information:(sag curve)			
	PVC Station:	1+047.82	Elevation:	56.197m
	PVI Station:	1+077.82	Elevation:	54.266m
	PVT Station:	1+107.82	Elevation:	54.261m
	Low Point:	1+107.82	Elevation:	54.261m
	Grade in:	-6,44%	Grade out:	-0,02%
	Change:	6,42%	K:	9,348575716
	Curve Length:	60.000m		
	Headlight Distance:	84.010m		
6	1+255.78	5,14%	150.000m	
	Vertical Curve Information:(sag curve)			
	PVC Station:	1+180.78	Elevation:	54.248m
	PVI Station:	1+255.78	Elevation:	54.235m
	PVT Station:	1+330.78	Elevation:	58.089m
	Low Point:	1+181.29	Elevation:	54.248m
	Grade in:	-0,02%	Grade out:	5,14%
	Change:	5,16%	K:	29,08415373

PVI	Station	Grade Out	Curve Length	
	Curve Length:	150.000m		
	Headlight Distance:	171.987m		
7	1+524.07	0,05%	150.000m	
	Vertical Curve Information:(crest curve)			
	PVC Station:	1+449.07	Elevation:	64.170m
	PVI Station:	1+524.07	Elevation:	68.024m
	PVT Station:	1+599.07	Elevation:	68.061m
	High Point:	1+599.07	Elevation:	68.061m
	Grade in:	5,14%	Grade out:	0,05%
	Change:	5,09%	K:	29,46191969
	Curve Length:	150.000m		
	Passing Distance:	378.725m	Stopping Distance:	205.531m
8	1+991.50	-0,07%		
9	2+240.00	-0,40%	160.000m	
	Vertical Curve Information:(crest curve)			
	PVC Station:	2+160.00	Elevation:	68.128m
	PVI Station:	2+240.00	Elevation:	68.069m
	PVT Station:	2+320.00	Elevation:	67.747m
	High Point:	2+160.00	Elevation:	68.128m
	Grade in:	-0,07%	Grade out:	-0,40%
	Change:	0,33%	K:	486,274433
	Curve Length:	160.000m		
	Passing Distance:	4,779.728m	Stopping Distance:	2,099.787m
10	2+483.19	0,09%	100.000m	
	Vertical Curve Information:(sag curve)			
	PVC Station:	2+433.19	Elevation:	67.292m
	PVI Station:	2+483.19	Elevation:	67.091m
	PVT Station:	2+533.19	Elevation:	67.136m
	Low Point:	2+514.72	Elevation:	67.128m
	Grade in:	-0,40%	Grade out:	0,09%
	Change:	0,49%	K:	202,6981494
	Curve Length:	100.000m		
	Headlight Distance:			
11	2+958.96	-0,37%	120.000m	
	Vertical Curve Information:(crest curve)			
	PVC Station:	2+898.96	Elevation:	67.470m
	PVI Station:	2+958.96	Elevation:	67.525m
	PVT Station:	3+018.96	Elevation:	67.303m
	High Point:	2+922.73	Elevation:	67.481m
	Grade in:	0,09%	Grade out:	-0,37%
	Change:	0,46%	K:	260,8120501
	Curve Length:	120.000m		
	Passing Distance:	3,420.916m	Stopping Distance:	1,504.410m
12	3+282.56	-0,06%	160.000m	
	Vertical Curve Information:(sag curve)			
	PVC Station:	3+202.56	Elevation:	66.626m
	PVI Station:	3+282.56	Elevation:	66.331m
	PVT Station:	3+362.56	Elevation:	66.282m
	Low Point:	3+362.56	Elevation:	66.282m
	Grade in:	-0,37%	Grade out:	-0,06%
	Change:	0,31%	K:	519,376844
	Curve Length:	160.000m		
	Headlight Distance:			
13	3+662.03	-1,84%	100.000m	

PVI	Station	Grade Out	Curve Length	
	Vertical Curve Information:(crest curve)			
	PVC Station:	3+612.03	Elevation:	66.130m
	PVI Station:	3+662.03	Elevation:	66.099m
	PVT Station:	3+712.03	Elevation:	65.181m
	High Point:	3+612.03	Elevation:	66.130m
	Grade in:	-0,06%	Grade out:	-1,84%
	Change:	1,78%	K:	56,31294067
	Curve Length:	100.000m		
	Passing Distance:	920.802m	Stopping Distance:	424.242m
14	3+775.75	-0,04%	70.000m	
	Vertical Curve Information:(sag curve)			
	PVC Station:	3+740.75	Elevation:	64.653m
	PVI Station:	3+775.75	Elevation:	64.011m
	PVT Station:	3+810.75	Elevation:	63.998m
	Low Point:	3+810.75	Elevation:	63.998m
	Grade in:	-1,84%	Grade out:	-0,04%
	Change:	1,80%	K:	38,8576148
	Curve Length:	70.000m		
	Headlight Distance:	4,702.186m		
15	4+140.00	-0,30%	160.000m	
	Vertical Curve Information:(crest curve)			
	PVC Station:	4+060.00	Elevation:	63.910m
	PVI Station:	4+140.00	Elevation:	63.882m
	PVT Station:	4+220.00	Elevation:	63.645m
	High Point:	4+060.00	Elevation:	63.910m
	Grade in:	-0,04%	Grade out:	-0,30%
	Change:	0,26%	K:	611,8316087
	Curve Length:	160.000m		
	Passing Distance:	5,993.209m	Stopping Distance:	2,621.300m
16	4+338.52	2,20%	60.000m	
	Vertical Curve Information:(sag curve)			
	PVC Station:	4+308.52	Elevation:	63.382m
	PVI Station:	4+338.52	Elevation:	63.293m
	PVT Station:	4+368.52	Elevation:	63.954m
	Low Point:	4+315.65	Elevation:	63.372m
	Grade in:	-0,30%	Grade out:	2,20%
	Change:	2,50%	K:	24,00869775
	Curve Length:	60.000m		
	Headlight Distance:	364.885m		
17	4+402.40	0,00%	35.000m	
	Vertical Curve Information:(crest curve)			
	PVC Station:	4+384.90	Elevation:	64.315m
	PVI Station:	4+402.40	Elevation:	64.700m
	PVT Station:	4+419.90	Elevation:	64.700m
	High Point:	4+419.90	Elevation:	64.700m
	Grade in:	2,20%	Grade out:	0,00%
	Change:	2,20%	K:	15,89219645
	Curve Length:	35.000m		
	Passing Distance:	719.646m	Stopping Distance:	319.259m
18	4+452.43	-1,02%	35.000m	
	Vertical Curve Information:(crest curve)			
	PVC Station:	4+434.93	Elevation:	64.700m
	PVI Station:	4+452.43	Elevation:	64.700m
	PVT Station:	4+469.93	Elevation:	64.522m

PVI	Station	Grade Out	Curve Length	
	High Point:	4+434.93	Elevation:	64.700m
	Grade in:	0,00%	Grade out:	-1,02%
	Change:	1,02%	K:	34,39224331
	Curve Length:	35.000m		
	Passing Distance:	1,537.011m	Stopping Distance:	670.535m
19	4+545.43	0,82%	60.000m	
	Vertical Curve Information:(sag curve)			
	PVC Station:	4+515.43	Elevation:	64.059m
	PVI Station:	4+545.43	Elevation:	63.754m
	PVT Station:	4+575.43	Elevation:	64.000m
	Low Point:	4+548.65	Elevation:	63.890m
	Grade in:	-1,02%	Grade out:	0,82%
	Change:	1,84%	K:	32,64259712
	Curve Length:	60.000m		
	Headlight Distance:	2,755.840m		
20	4+737.53	0,68%		
21	5+030.19	0,34%	100.000m	
	Vertical Curve Information:(crest curve)			
	PVC Station:	4+980.19	Elevation:	66.990m
	PVI Station:	5+030.19	Elevation:	67.332m
	PVT Station:	5+080.19	Elevation:	67.501m
	High Point:	5+080.19	Elevation:	67.501m
	Grade in:	0,68%	Grade out:	0,34%
	Change:	0,35%	K:	289,1976227
	Curve Length:	100.000m		
	Passing Distance:	4,522.043m	Stopping Distance:	1,971.935m
22	5+299.97	1,02%	100.000m	
	Vertical Curve Information:(sag curve)			
	PVC Station:	5+249.97	Elevation:	68.076m
	PVI Station:	5+299.97	Elevation:	68.245m
	PVT Station:	5+349.97	Elevation:	68.752m
	Low Point:	5+249.97	Elevation:	68.076m
	Grade in:	0,34%	Grade out:	1,02%
	Change:	0,68%	K:	147,7020909
	Curve Length:	100.000m		
	Headlight Distance:			
23	5+684.71	-0,10%	120.000m	
	Vertical Curve Information:(crest curve)			
	PVC Station:	5+624.71	Elevation:	71.542m
	PVI Station:	5+684.71	Elevation:	72.151m
	PVT Station:	5+744.71	Elevation:	72.090m
	High Point:	5+733.70	Elevation:	72.096m
	Grade in:	1,02%	Grade out:	-0,10%
	Change:	1,12%	K:	107,3362693
	Curve Length:	120.000m		
	Passing Distance:	1,443.173m	Stopping Distance:	654.442m
24	5+972.33	0,44%	100.000m	
	Vertical Curve Information:(sag curve)			
	PVC Station:	5+922.33	Elevation:	71.908m
	PVI Station:	5+972.33	Elevation:	71.856m
	PVT Station:	6+022.33	Elevation:	72.075m
	Low Point:	5+941.32	Elevation:	71.898m
	Grade in:	-0,10%	Grade out:	0,44%
	Change:	0,54%	K:	185,2146906

PVI	Station	Grade Out	Curve Length	
	Curve Length:	100.000m		
	Headlight Distance:			
25	6+553.17	-0,53%	120.000m	
	Vertical Curve Information:(crest curve)			
	PVC Station:	6+493.17	Elevation:	74.134m
	PVI Station:	6+553.17	Elevation:	74.397m
	PVT Station:	6+613.17	Elevation:	74.081m
	High Point:	6+547.64	Elevation:	74.253m
	Grade in:	0,44%	Grade out:	-0,53%
	Change:	0,96%	K:	124,5421569
	Curve Length:	120.000m		
	Passing Distance:	1,664.894m	Stopping Distance:	749.730m
26	6+973.31	0,20%	120.000m	
	Vertical Curve Information:(sag curve)			
	PVC Station:	6+913.31	Elevation:	72.502m
	PVI Station:	6+973.31	Elevation:	72.186m
	PVT Station:	7+033.31	Elevation:	72.304m
	Low Point:	7+000.74	Elevation:	72.272m
	Grade in:	-0,53%	Grade out:	0,20%
	Change:	0,72%	K:	166,1538335
	Curve Length:	120.000m		
	Headlight Distance:			
27	7+808.64	0,85%	120.000m	
	Vertical Curve Information:(sag curve)			
	PVC Station:	7+748.64	Elevation:	73.706m
	PVI Station:	7+808.64	Elevation:	73.824m
	PVT Station:	7+868.64	Elevation:	74.336m
	Low Point:	7+748.64	Elevation:	73.706m
	Grade in:	0,20%	Grade out:	0,85%
	Change:	0,66%	K:	182,3121522
	Curve Length:	120.000m		
	Headlight Distance:			
28	8+311.69	-0,57%	120.000m	
	Vertical Curve Information:(crest curve)			
	PVC Station:	8+251.69	Elevation:	77.608m
	PVI Station:	8+311.69	Elevation:	78.121m
	PVT Station:	8+371.69	Elevation:	77.777m
	High Point:	8+323.47	Elevation:	77.915m
	Grade in:	0,85%	Grade out:	-0,57%
	Change:	1,43%	K:	84,02965504
	Curve Length:	120.000m		
	Passing Distance:	1,142.836m	Stopping Distance:	525.367m
29	8+946.88	0,25%	200.000m	
	Vertical Curve Information:(sag curve)			
	PVC Station:	8+846.88	Elevation:	75.050m
	PVI Station:	8+946.88	Elevation:	74.476m
	PVT Station:	9+046.88	Elevation:	74.726m
	Low Point:	8+986.18	Elevation:	74.650m
	Grade in:	-0,57%	Grade out:	0,25%
	Change:	0,82%	K:	242,7697354
	Curve Length:	200.000m		
	Headlight Distance:			
30	10+031.25	0,83%	120.000m	
	Vertical Curve Information:(sag curve)			
	PVC Station:	9+971.25	Elevation:	77.037m

PVI	Station	Grade Out	Curve Length	
	PVI Station:	10+031.25	Elevation:	77.187m
	PVT Station:	10+091.25	Elevation:	77.687m
	Low Point:	9+971.25	Elevation:	77.037m
	Grade in:	0,25%	Grade out:	0,83%
	Change:	0,58%	K:	205,6193118
	Curve Length:	120.000m		
	Headlight Distance:			
31	10+330.22	-0,53%	200.000m	
	Vertical Curve Information:(crest curve)			
	PVC Station:	10+230.22	Elevation:	78.846m
	PVI Station:	10+330.22	Elevation:	79.679m
	PVT Station:	10+430.22	Elevation:	79.151m
	High Point:	10+352.63	Elevation:	79.356m
	Grade in:	0,83%	Grade out:	-0,53%
	Change:	1,36%	K:	146,8421181
	Curve Length:	200.000m		
	Passing Distance:	1,235.356m	Stopping Distance:	587.938m
32	11+302.00	0,51%	200.000m	
	Vertical Curve Information:(sag curve)			
	PVC Station:	11+202.00	Elevation:	75.073m
	PVI Station:	11+302.00	Elevation:	74.545m
	PVT Station:	11+402.00	Elevation:	75.054m
	Low Point:	11+303.85	Elevation:	74.804m
	Grade in:	-0,53%	Grade out:	0,51%
	Change:	1,04%	K:	192,7561382
	Curve Length:	200.000m		
	Headlight Distance:			
33	11+986.05	0,32%		
34	12+341.72	-0,70%	120.000m	
	Vertical Curve Information:(crest curve)			
	PVC Station:	12+281.72	Elevation:	78.961m
	PVI Station:	12+341.72	Elevation:	79.150m
	PVT Station:	12+401.72	Elevation:	78.731m
	High Point:	12+319.10	Elevation:	79.020m
	Grade in:	0,32%	Grade out:	-0,70%
	Change:	1,01%	K:	118,4435594
	Curve Length:	120.000m		
	Passing Distance:	1,586.306m	Stopping Distance:	715.955m
35	12+691.03	0,49%	200.000m	
	Vertical Curve Information:(sag curve)			
	PVC Station:	12+591.03	Elevation:	77.411m
	PVI Station:	12+691.03	Elevation:	76.713m
	PVT Station:	12+791.03	Elevation:	77.205m
	Low Point:	12+708.33	Elevation:	77.002m
	Grade in:	-0,70%	Grade out:	0,49%
	Change:	1,19%	K:	168,156377
	Curve Length:	200.000m		
	Headlight Distance:			
36	13+306.74	-0,38%	200.000m	
	Vertical Curve Information:(crest curve)			
	PVC Station:	13+206.74	Elevation:	79.250m
	PVI Station:	13+306.74	Elevation:	79.741m
	PVT Station:	13+406.74	Elevation:	79.359m
	High Point:	13+319.29	Elevation:	79.526m
	Grade in:	0,49%	Grade out:	-0,38%

PVI	Station	Grade Out	Curve Length	
	Change:	0,87%	K:	228,8498932
	Curve Length:	200.000m		
	Passing Distance:	1,869.424m	Stopping Distance:	860.440m
37	13+644.35	1,29%	200.000m	
	Vertical Curve Information:(sag curve)			
	PVC Station:	13+544.35	Elevation:	78.833m
	PVI Station:	13+644.35	Elevation:	78.451m
	PVT Station:	13+744.35	Elevation:	79.736m
	Low Point:	13+590.18	Elevation:	78.746m
	Grade in:	-0,38%	Grade out:	1,29%
	Change:	1,67%	K:	119,9409815
	Curve Length:	200.000m		
	Headlight Distance:			
38	14+023.91	1,10%		
39	14+288.88	-2,27%	120.000m	
	Vertical Curve Information:(crest curve)			
	PVC Station:	14+228.88	Elevation:	85.585m
	PVI Station:	14+288.88	Elevation:	86.245m
	PVT Station:	14+348.88	Elevation:	84.882m
	High Point:	14+268.02	Elevation:	85.801m
	Grade in:	1,10%	Grade out:	-2,27%
	Change:	3,37%	K:	35,5715937
	Curve Length:	120.000m		
	Passing Distance:	518.388m	Stopping Distance:	257.000m
40	14+747.30	1,08%	300.000m	
	Vertical Curve Information:(sag curve)			
	PVC Station:	14+597.30	Elevation:	79.235m
	PVI Station:	14+747.30	Elevation:	75.825m
	PVT Station:	14+897.30	Elevation:	77.441m
	Low Point:	14+800.84	Elevation:	76.921m
	Grade in:	-2,27%	Grade out:	1,08%
	Change:	3,35%	K:	89,54395049
	Curve Length:	300.000m		
	Headlight Distance:	437.777m		
41	15+126.45	0,08%	100.000m	
	Vertical Curve Information:(crest curve)			
	PVC Station:	15+076.45	Elevation:	79.371m
	PVI Station:	15+126.45	Elevation:	79.909m
	PVT Station:	15+176.45	Elevation:	79.951m
	High Point:	15+176.45	Elevation:	79.951m
	Grade in:	1,08%	Grade out:	0,08%
	Change:	0,99%	K:	100,5636769
	Curve Length:	100.000m		
	Passing Distance:	1,605.079m	Stopping Distance:	718.321m
42	15+224.07			

Vertical Alignment: RASANTE EJE 3

Description:

Station Range: Start: 0+000.00, End: 0+056.04

PVI	Station	Grade Out	Curve Length
PVI	Station	Grade Out	Curve Length
0	0+000.00	0,47%	