

資料 6. 基本設計図

基本設計図リスト

図面番号	図面内容	図面枚数
A-1～D-1	位置図、道路標準横断図	6
E-0～E23	道路平面・縦断図	24
F-1～F-17	排水関連構造物標準図	17
G-1～G-5	付帯関連施設・安全対策施設図	5

TANZANIA NATIONAL ROADS AGENCY
THE UNITED OF TANZANIA
TENDER DOCUMENTS
FOR
THE PROJECT
FOR
THE IMPROVEMENT
OF
MASASI-MANGAKA ROAD

DRAWINGS

AUGUST 2009

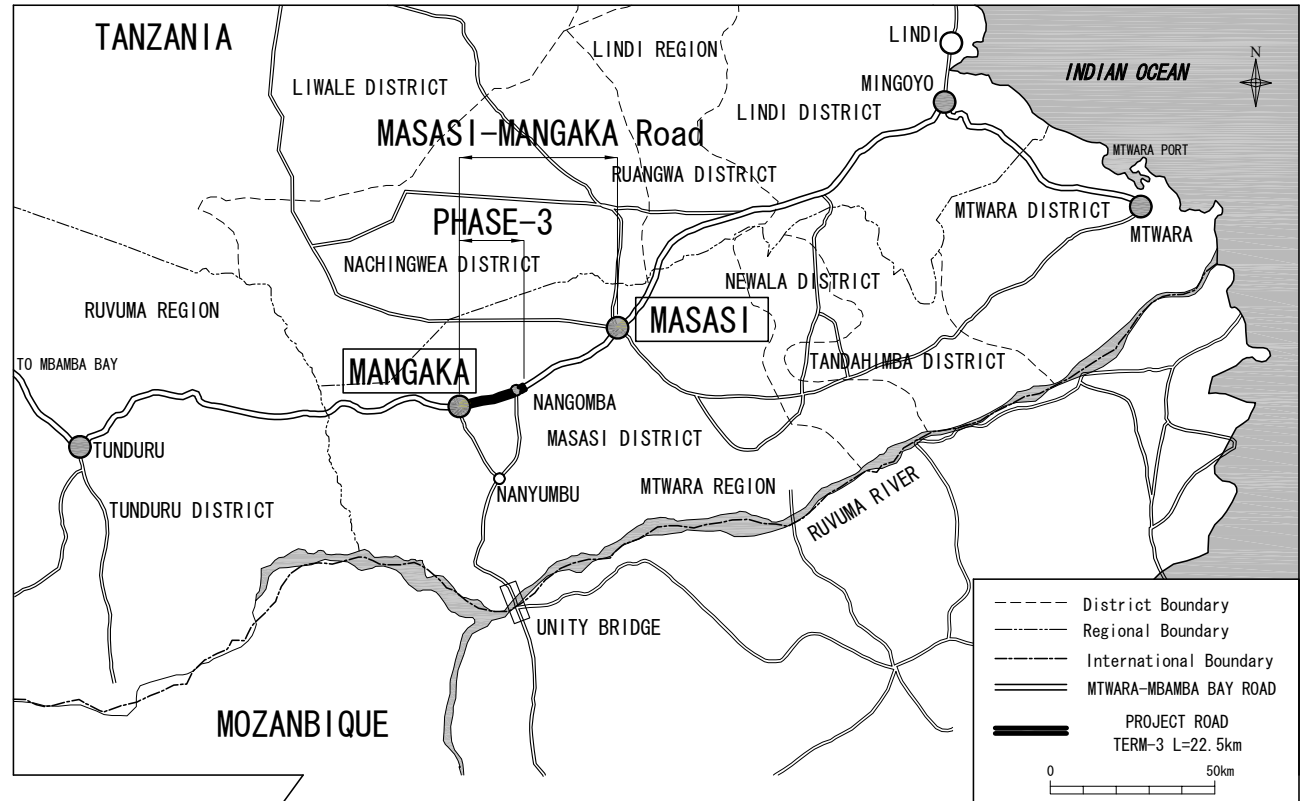
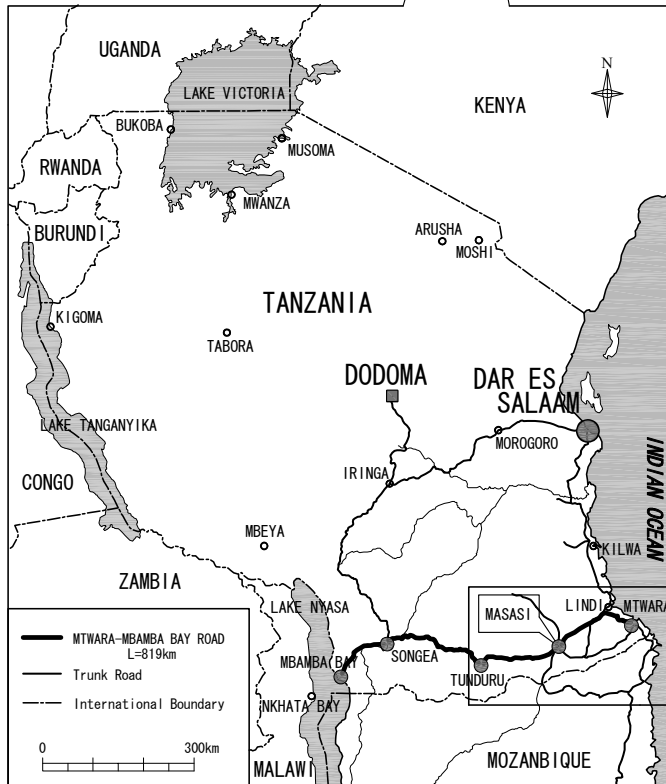
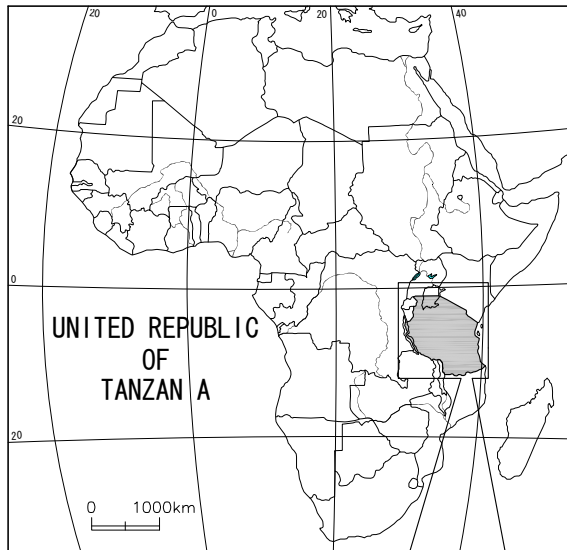
INGEROSEC CORPORATION



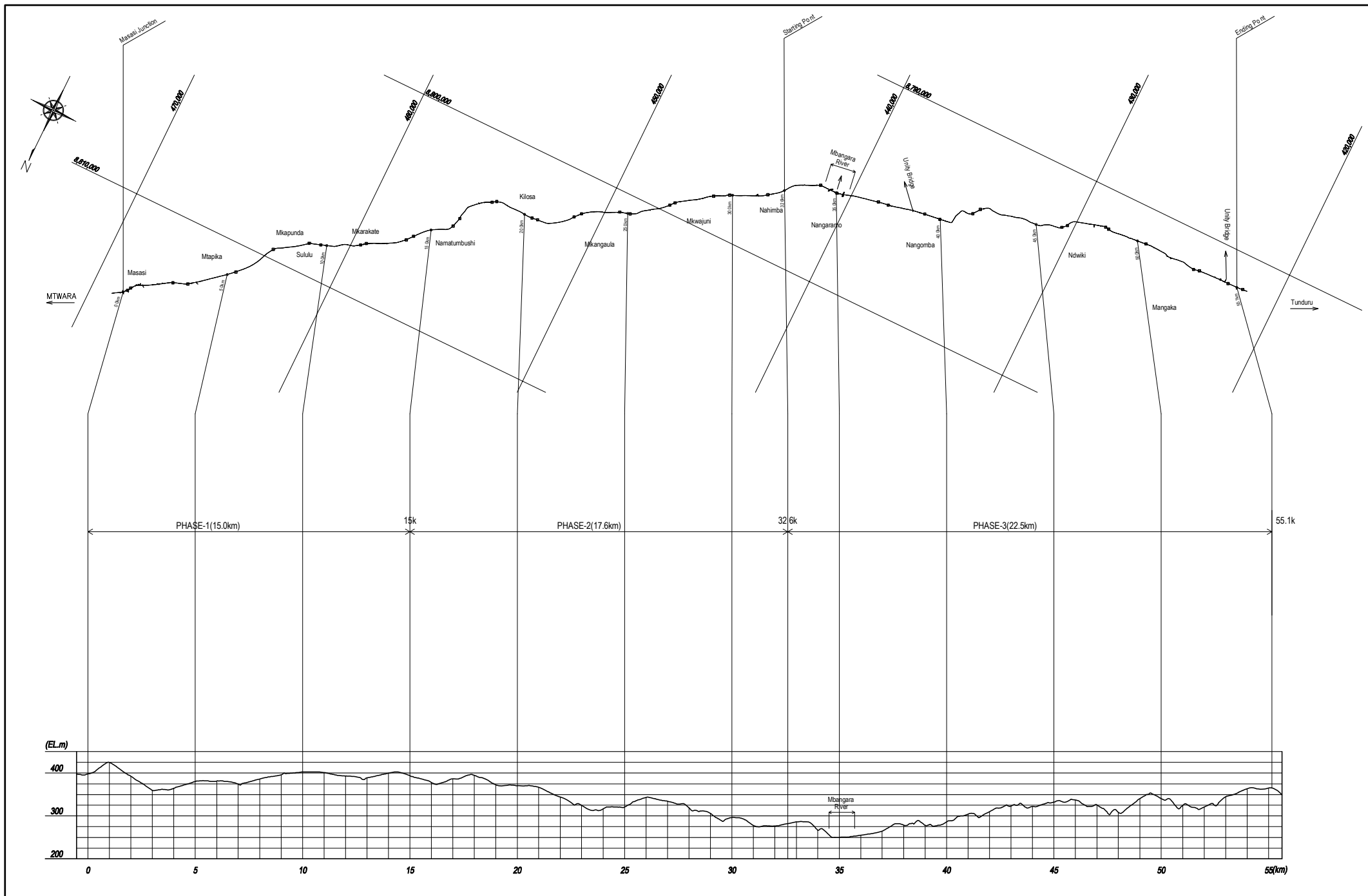
INDEX OF DRAWINGS

DRAWING NO.	DRAWING TITLE	DRAWING NO.	DRAWING TITLE
MR 03 A-1	INDEX OF DRAWINGS	MR 03 F-1	LOCATION AND DIMENSION OF BOX CULVERT
MR 03 B-1	PROJECT LOCATION MAP	MR 03 F-2	BOX CULVERT 5x4x1 MAIN BODY BAR ARRANGEMENT
MR 03 B-2	LAYOUT MAP	MR 03 F-3	BOX CULVERT 5x4x4 MAIN BODY BAR ARRANGEMENT (1/2)
MR 03 B-3	COORDINATES OF BENCH MARKS	MR 03 F-4	BOX CULVERT 5x4x4 MAIN BODY BAR ARRANGEMENT (2/2)
MR 03 C-1	TYPICAL CROSS SECTION	MR 03 F-5	BOX CULVERT 4x3x1 MAIN BODY BAR ARRANGEMENT
MR 03 D-1	ENTRANCE	MR 03 F-6	BOX CULVERT 5x4x1 INLET/OUTLET BAR ARRANGEMENT (1/2)
MR 03 E-0	PLAN AND PROFILE (0/23)	MR 03 F-7	BOX CULVERT 5x4x1 INLET/OUTLET BAR ARRANGEMENT (2/2)
MR 03 E-1	PLAN AND PROFILE (1/23)	MR 03 F-8	BOX CULVERT 5x4x4 INLET/OUTLET BAR ARRANGEMENT (1/2)
MR 03 E-2	PLAN AND PROFILE (2/23)	MR 03 F-9	BOX CULVERT 5x4x4 INLET/OUTLET BAR ARRANGEMENT (2/2)
MR 03 E-3	PLAN AND PROFILE (3/23)	MR 03 F-10	BOX CULVERT 4x3x1 INLET/OUTLET BAR ARRANGEMENT (1/2)
MR 03 E-4	PLAN AND PROFILE (4/23)	MR 03 F-11	BOX CULVERT 4x3x1 INLET/OUTLET BAR ARRANGEMENT (2/2)
MR 03 E-5	PLAN AND PROFILE (5/23)	MR 03 F-12	LOCATION AND DIMENSION OF PIPE CULVERT
MR 03 E-6	PLAN AND PROFILE (6/23)	MR 03 F-13	PIPE CULVERT 360° ENCASMENT BAR ARRANGEMENT
MR 03 E-7	PLAN AND PROFILE (7/23)	MR 03 F-14	TRANSVERSE PIPE CULVERT INLET/OUTLET BAR ARRANGEMENT
MR 03 E-8	PLAN AND PROFILE (8/23)	MR 03 F-15	BRIDGE1 (KM.34+683.8)
MR 03 E-9	PLAN AND PROFILE (9/23)	MR 03 F-16	BRIDGE2 (KM.34+869.2)
MR 03 E-10	PLAN AND PROFILE (10/23)	MR 03 F-17	BRIDGE3 (KM.35+259.0)
MR 03 E-11	PLAN AND PROFILE (11/23)	MR 03 G-1	INCIDENTAL WORKS-1 (DITCH AND ENTRANCE CULVERT)
MR 03 E-12	PLAN AND PROFILE (12/23)	MR 03 G-2	INCIDENTAL WORKS-2 (GUARD RAIL AND GUARD POST)
MR 03 E-13	PLAN AND PROFILE (13/23)	MR 03 G-3	INCIDENTAL WORKS-3 (TRAFFIC SIGNS AND KILOMETER POST)
MR 03 E-14	PLAN AND PROFILE (14/23)	MR 03 G-4	INCIDENTAL WORKS-4 (PAVEMENT MARKINGS AND BUS STOP)
MR 03 E-15	PLAN AND PROFILE (15/23)	MR 03 G-5	INCIDENTAL WORKS-5 (PROJECT INFORMATION BOARD)
MR 03 E-16	PLAN AND PROFILE (16/23)		
MR 03 E-17	PLAN AND PROFILE (17/23)		
MR 03 E-18	PLAN AND PROFILE (18/23)		
MR 03 E-19	PLAN AND PROFILE (19/23)		
MR 03 E-20	PLAN AND PROFILE (20/23)		
MR 03 E-21	PLAN AND PROFILE (21/23)		
MR 03 E-22	PLAN AND PROFILE (22/23)		
MR 03 E-23	PLAN AND PROFILE (23/23)		

Tanzania National Roads Agency (TANROADS) of The United Republic of Tanzania	CONSULTANTS:	PROJECT NAME:	DRAWING TITLE:	Date: Aug. 2009	DRAWING No.:
	INGEROSEC CORPORATION, JAPAN	The Project for the Improvement of Masasi-Mangaka Road	INDEX OF DRAWINGS	Prepared by:	MR 03 A-1
				Checked by:	



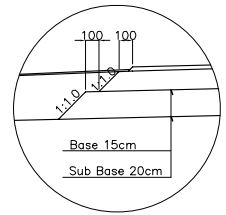
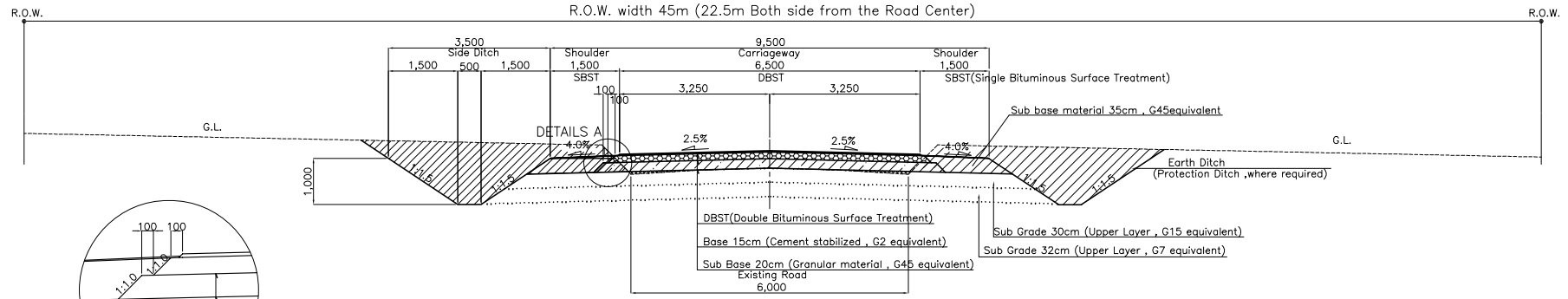
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	INGEROSEC CORPORATION, JAPAN	The Project for the Improvement of Masasi-Mangaka Road	PROJECT LOCATION MAP	Prepared by:	MR 03 B-1
				Checked by:	



Tanzania National Roads Agency (TANROADS) of The United Republic of Tanzania	CONSULTANTS:	PROJECT NAME:	DRAWING TITLE:	Date: Aug. 2009	DRAWING No.:
	INGEROSEC CORPORATION, JAPAN	The Project for the Improvement of Masasi-Mangaka Road	LAYOUT MAP	Prepared by:	MR 03 B-2
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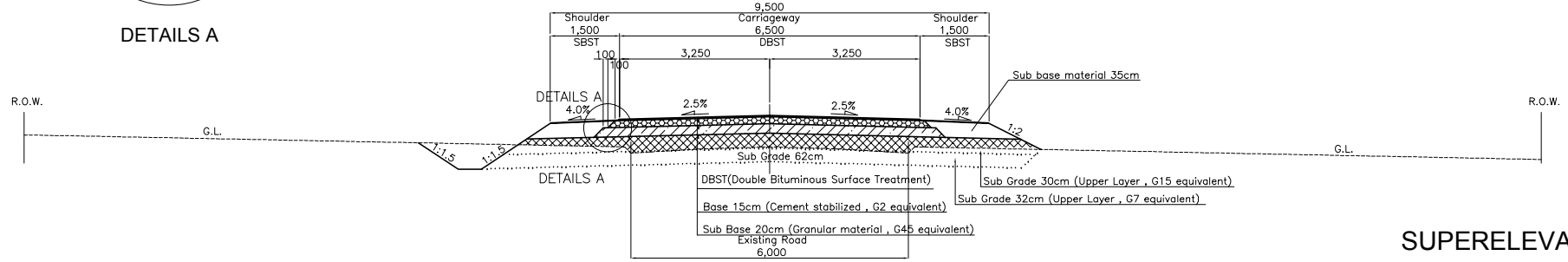
TYPICAL CROSS SECTION

EXCAVATION SECTION

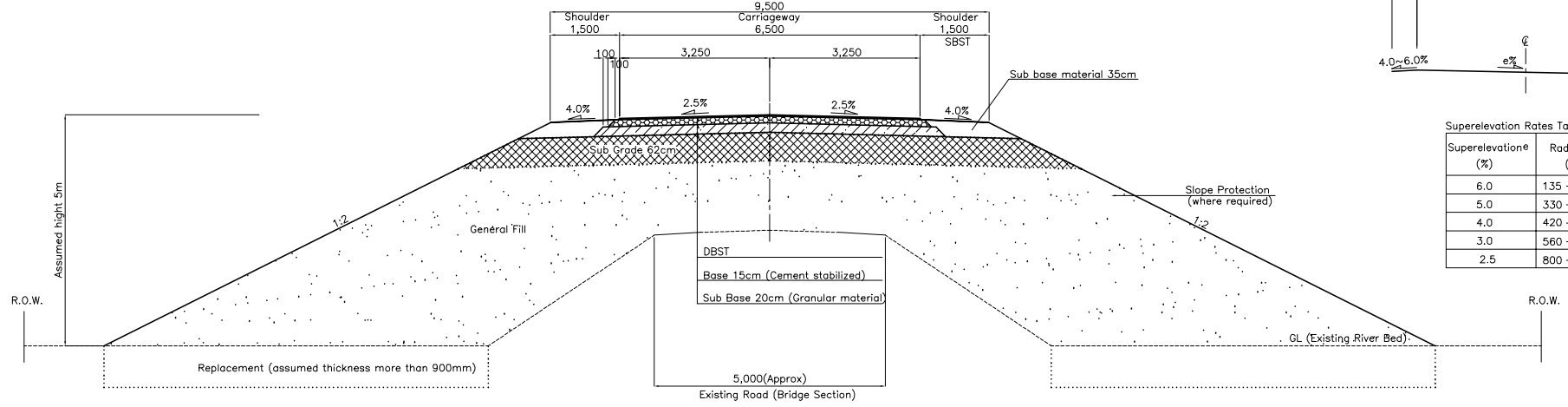


DETAILS A

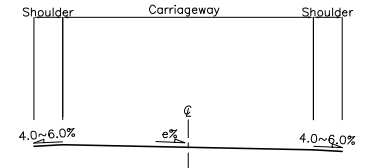
EMBANKMENT SECTION



HIGH EMBANKMENT SECTION (at Mbangara River)



SUPERELEVATION

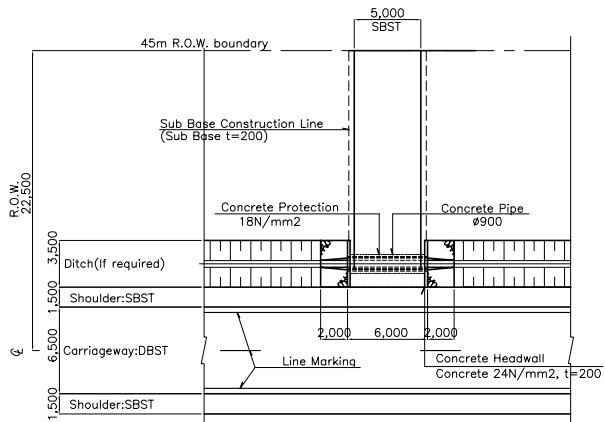


Superelevation (%)	Radius R (m)
6.0	135 - 330
5.0	330 - 420
4.0	420 - 560
3.0	560 - 800
2.5	800 - 3000

Tanzania National Roads Agency (TANROADS) of The United Republic of Tanzania	CONSULTANTS:	PROJECT NAME:	DRAWING TITLE:	Date: Aug. 2009	DRAWING No.:
	INGEROSEC CORPORSTION, JAPAN	The Project for the Improvement of Masasi-Mangaka Road	TYPICAL CROSS SECTION	Prepared by:	MR 03 C-1
			SCALE 1:100	Checked by:	

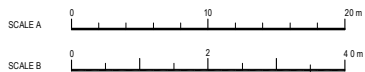
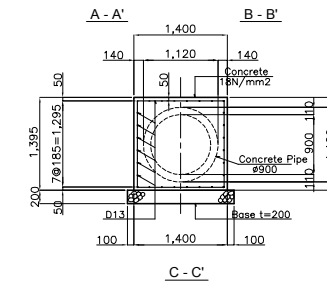
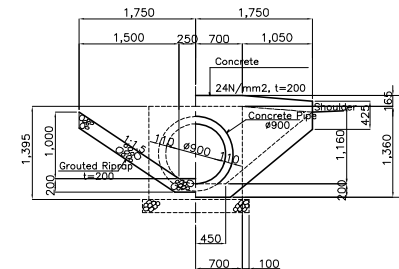
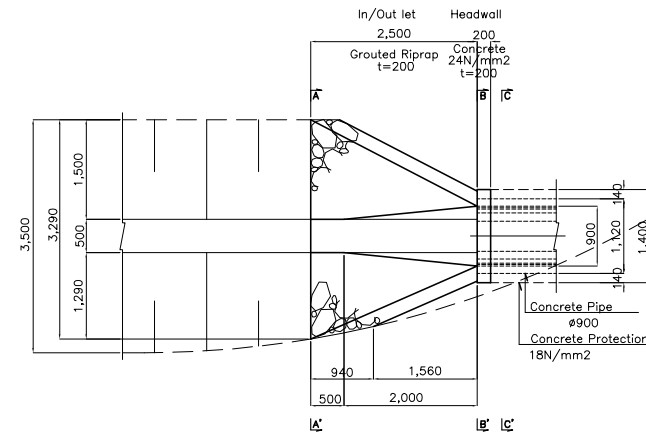
DETAIL OF ENTRANCE

Scale A

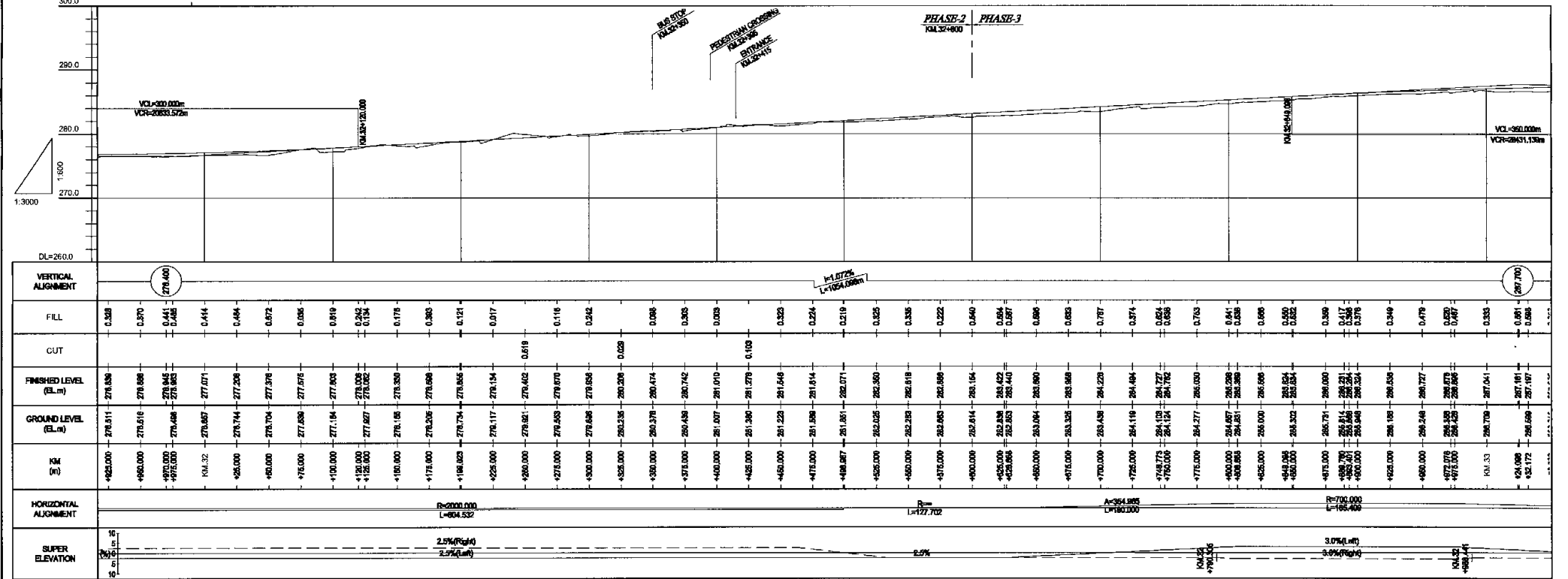
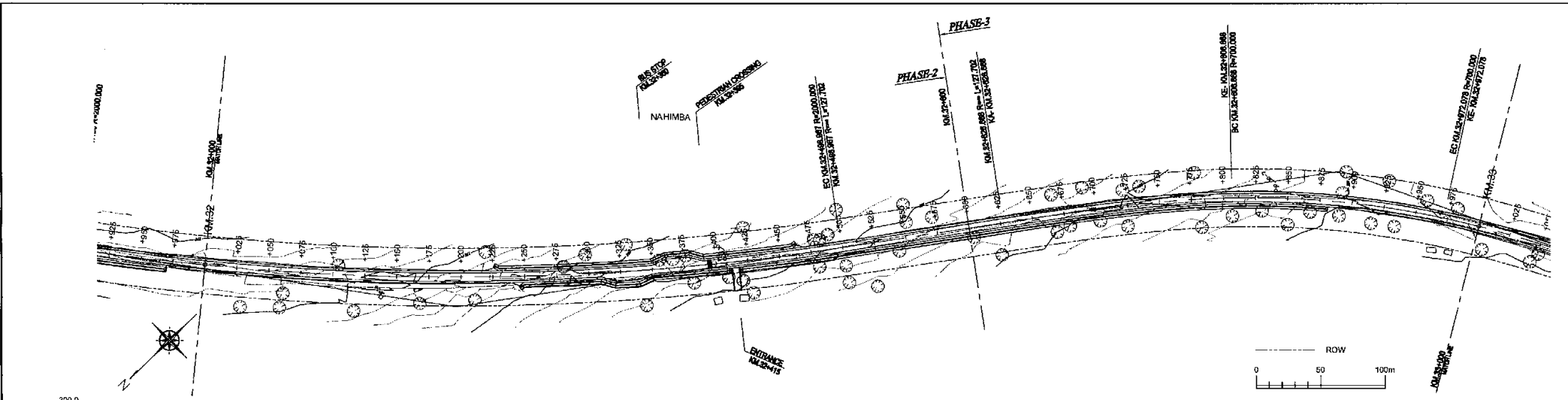


DETAIL OF INLET/OUTLET

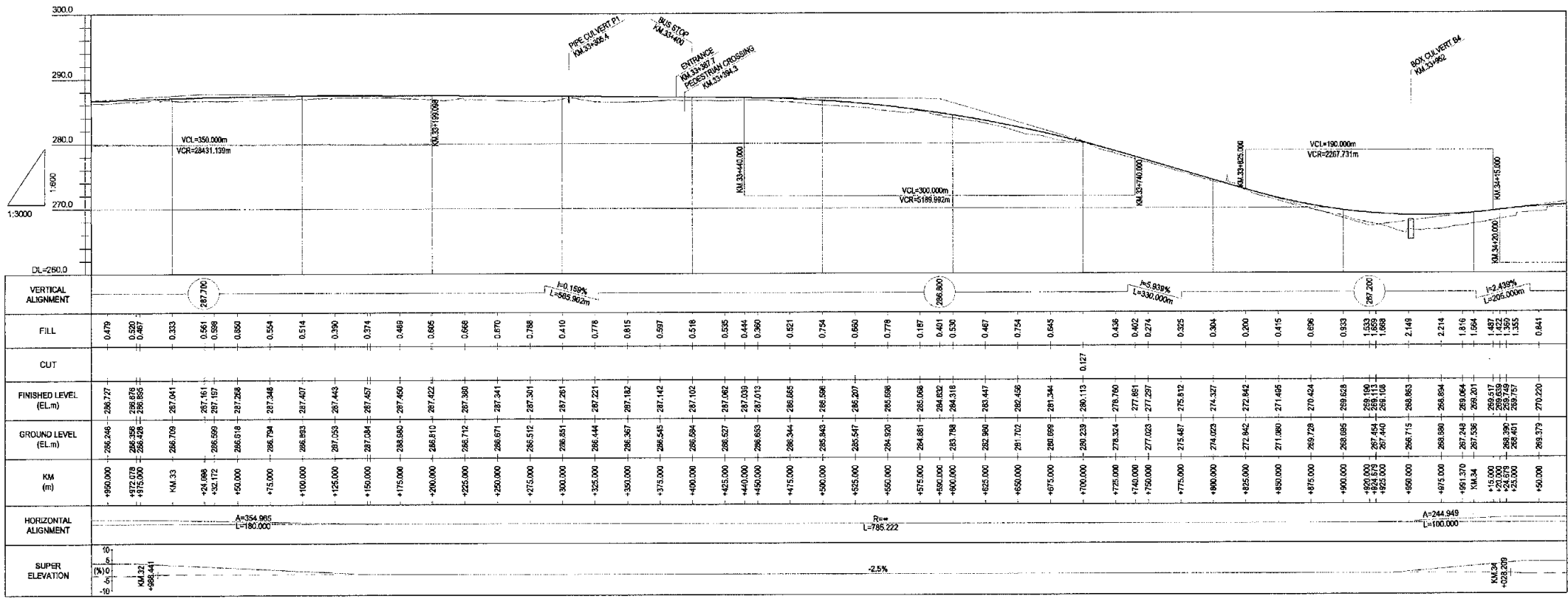
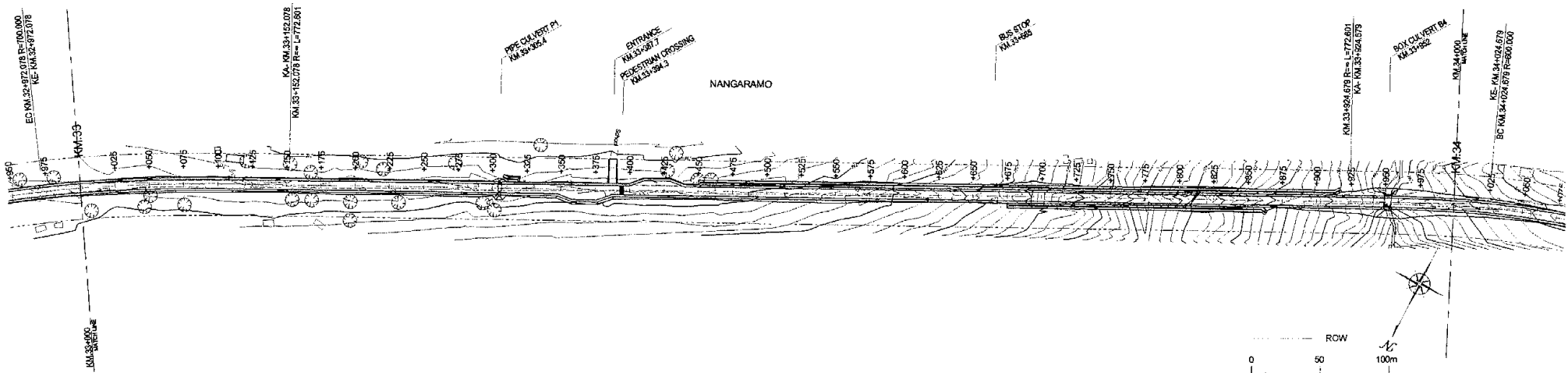
Scale B

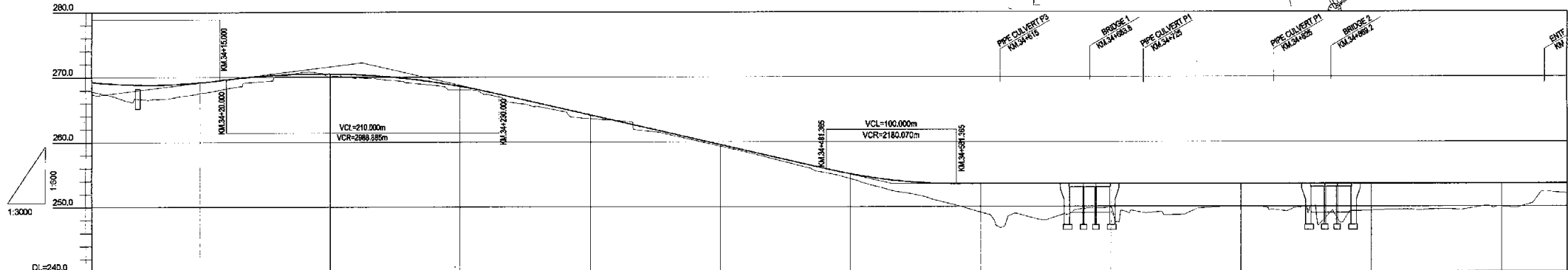
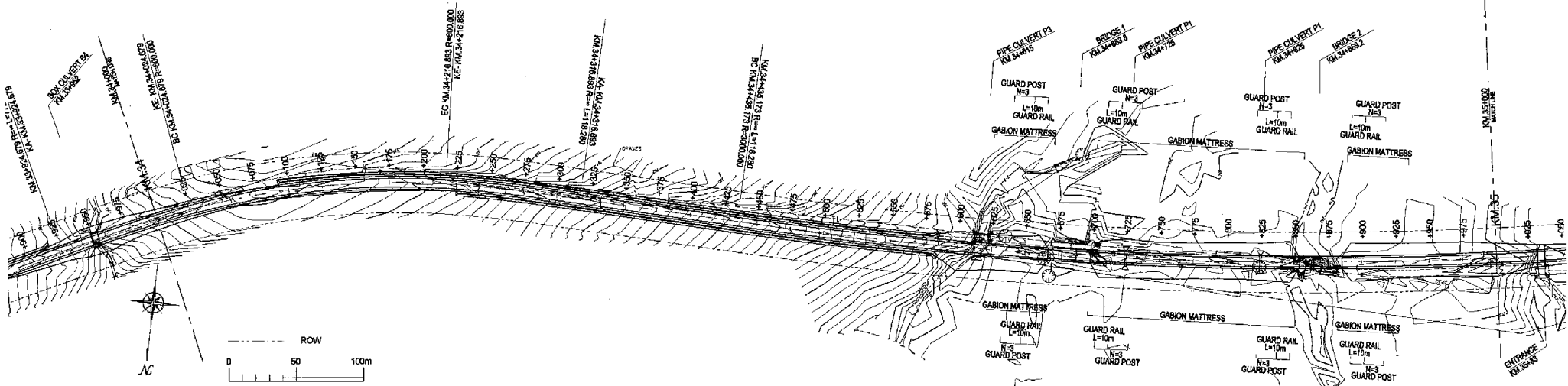


Tanzania National Roads Agency (TANROADS) of The United Republic of Tanzania	CONSULTANTS:	PROJECT NAME:	DRAWING TITLE:	Date: Aug. 2009	DRAWING No.:
	INGEROSEC CORPORATION, JAPAN	The Project for the Improvement of Masasi-Mangaka Road	ENTRANCE	Prepared by:	MR 03 D-1
				Checked by:	

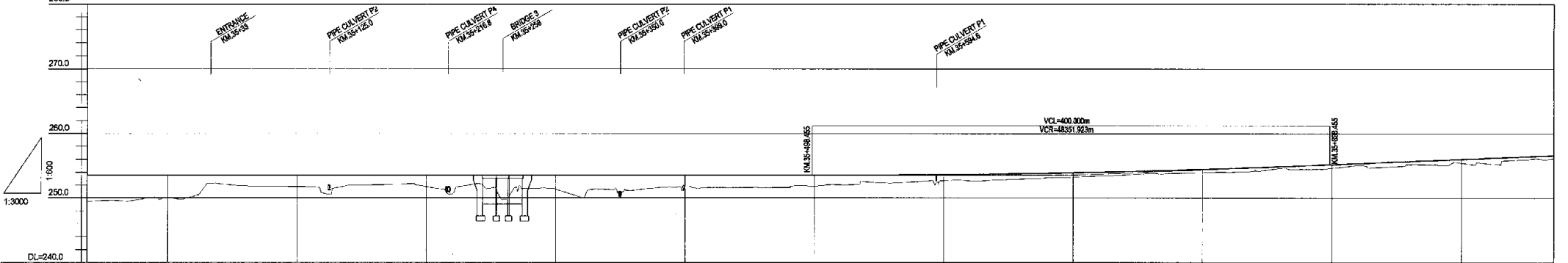
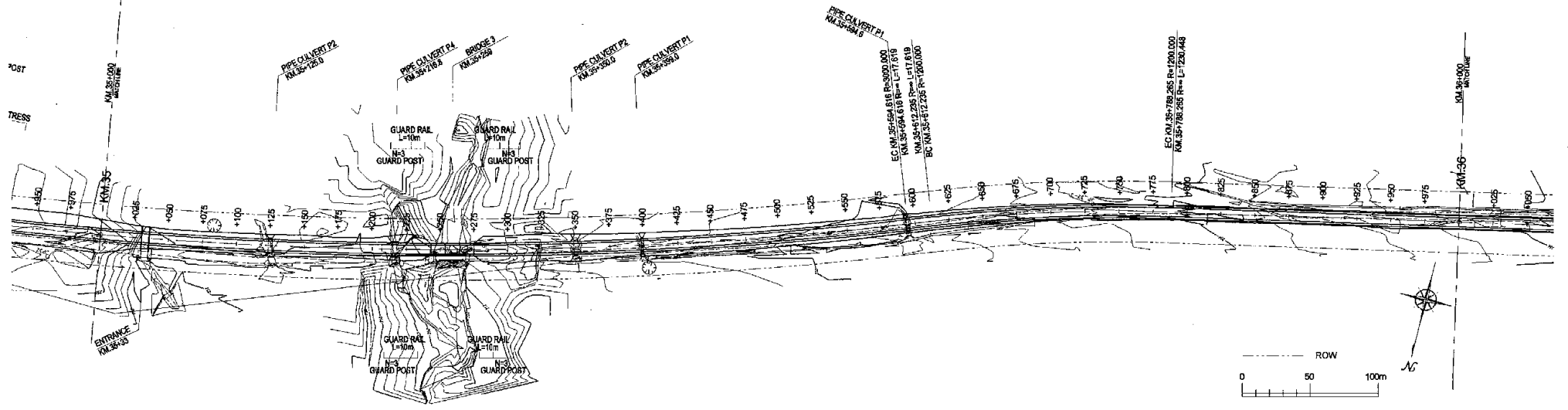


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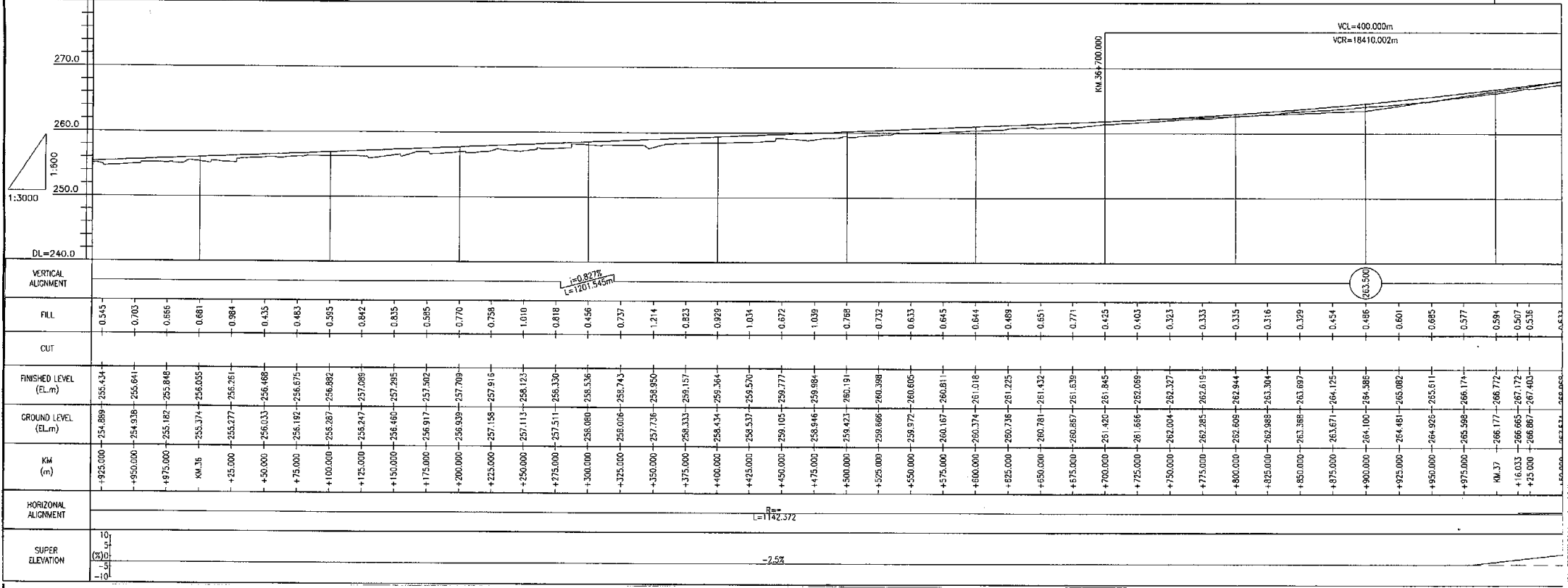
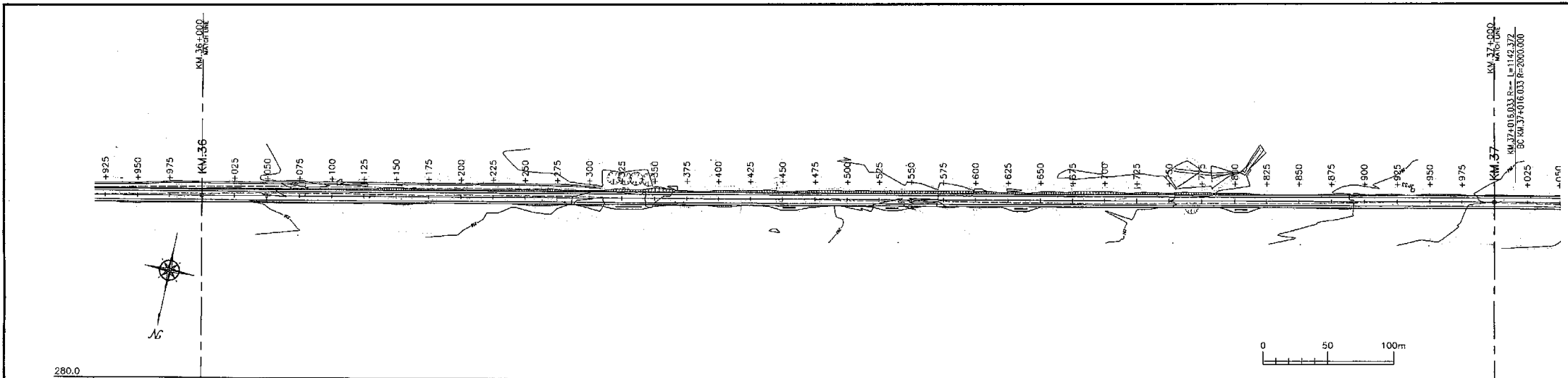




Station (KM)	Vertical Alignment	Fill (m)	Cut (m)	Finished Level (EL.m)	Ground Level (EL.m)	Horizontal Alignment	Super Elevation (%)
34+000	267.200	1.533		269.150	269.150	A=244.949 L=100.000	0
34+010		1.669		268.113	268.113		0
34+020		2.146		268.106	268.106		0
34+030		2.214		268.894	268.894		0
34+040		1.816		269.084	269.084		0
34+050		1.684		269.201	269.201		0
34+060		1.487		269.517	269.517		0
34+070		1.422		269.530	269.530		0
34+080		1.360		269.749	269.749		0
34+090		1.355		269.751	269.751		0
34+100		0.841		270.220	270.220		0
34+110		0.139		270.474	270.474		0
34+120		0.414		270.520	270.520		0
34+130		0.477		270.380	270.380		3.0% (Left)
34+140		0.480		269.847	270.367		3.0% (Right)
34+150		0.491		269.675	270.356		
34+160		0.531		269.983			
34+170		0.571		268.400			
34+180		0.585		268.609			
34+190		0.476		267.856			
34+200		0.472		267.699			
34+210		0.478		267.284			
34+220		0.634		268.468			
34+230		0.628		268.455			
34+240		0.462		268.919			
34+250		0.599		268.173			
34+260		0.089		263.388			
34+270		0.162		263.026			
34+280		0.377		261.879			
34+290		0.293		260.732			
34+300		0.246		259.386			
34+310		0.290		258.439			
34+320		0.325		257.647			
34+330		0.388		257.262			
34+340		0.745		256.145			
34+350		0.820		255.854			
34+360		0.762		255.078			
34+370		1.419		254.289			
34+380		1.628		254.133			
34+390		1.925		253.786			
34+400		3.067		253.569			
34+410		3.377		253.590			
34+420		4.431		253.590			
34+430		4.711		253.590			
34+440		5.632		253.590			
34+450		4.005		253.590			
34+460		3.899		253.590			
34+470		4.529		253.590			
34+480		4.843		253.590			
34+490		3.784		253.590			
34+500		3.536		253.590			
34+510		4.053		253.590			
34+520		3.551		253.590			
34+530		5.308		253.590			
34+540		4.193		253.590			
34+550		4.033		253.590			
34+560		4.012		253.590			
34+570		3.890		253.590			
34+580		3.571		253.590			
34+590		3.179		253.590			
34+600		2.718		253.590			

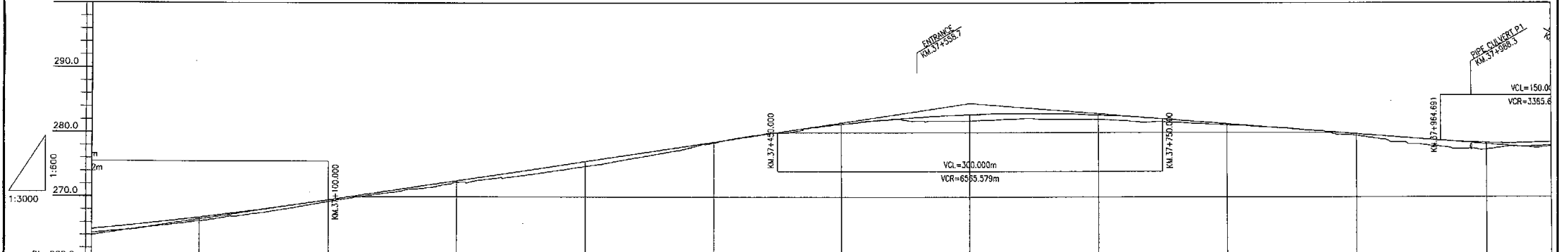
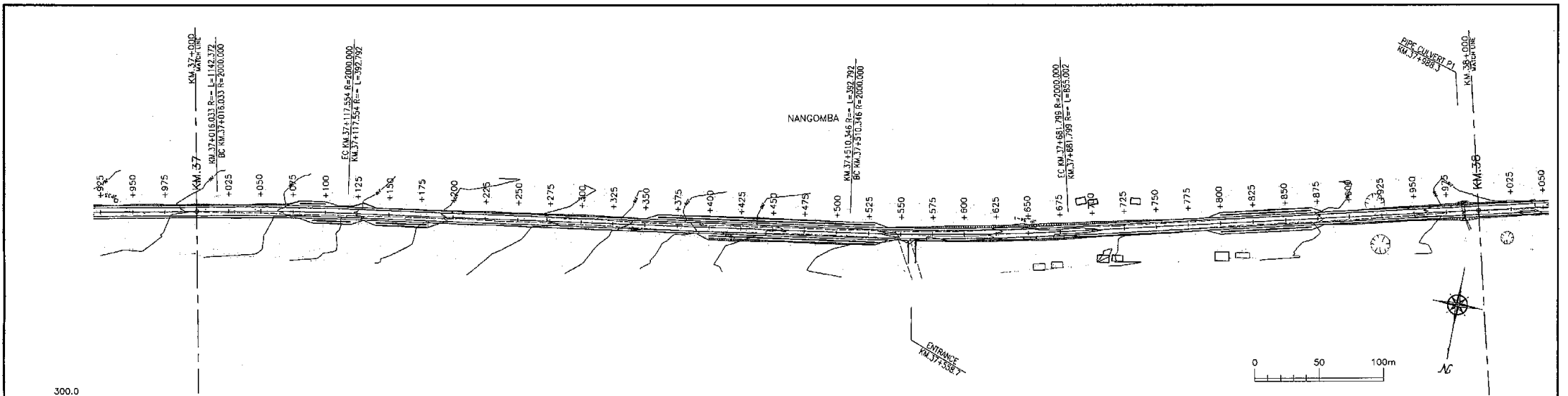


VERTICAL ALIGNMENT	+50.000% L=1167.030m		253.500	
FILL	4.012	3.886	3.671	3.178
CUT	1.544	1.743	1.821	3.038
FINISHED LEVEL (EL.m)	253.560	253.560	253.560	253.560
GROUND LEVEL (EL.m)	249.548	249.670	249.888	250.381
KM	+650.000	+675.000	+700.000	+725.000
HORIZONTAL ALIGNMENT	R=3000.000 L=1159.443		R=1200.000 L=179.030	
SUPER ELEVATION	-2.5%		2.5%(Left) -2.5%(Right)	



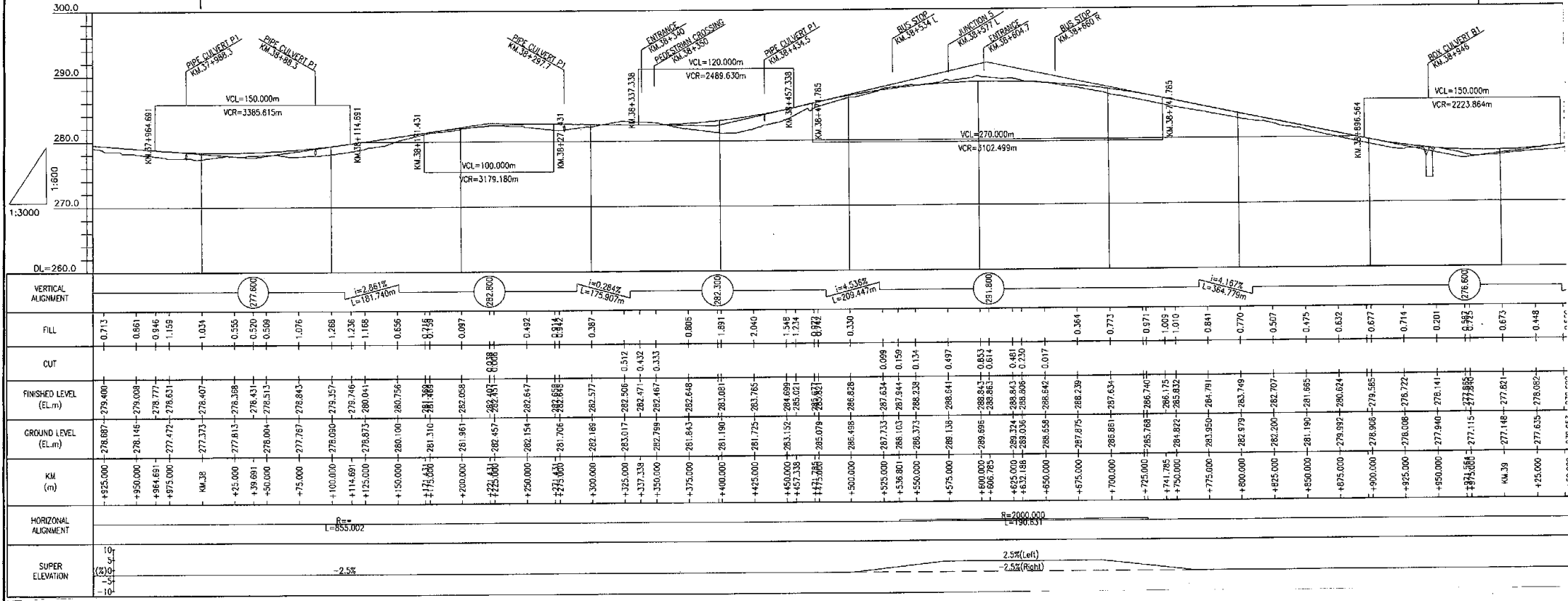
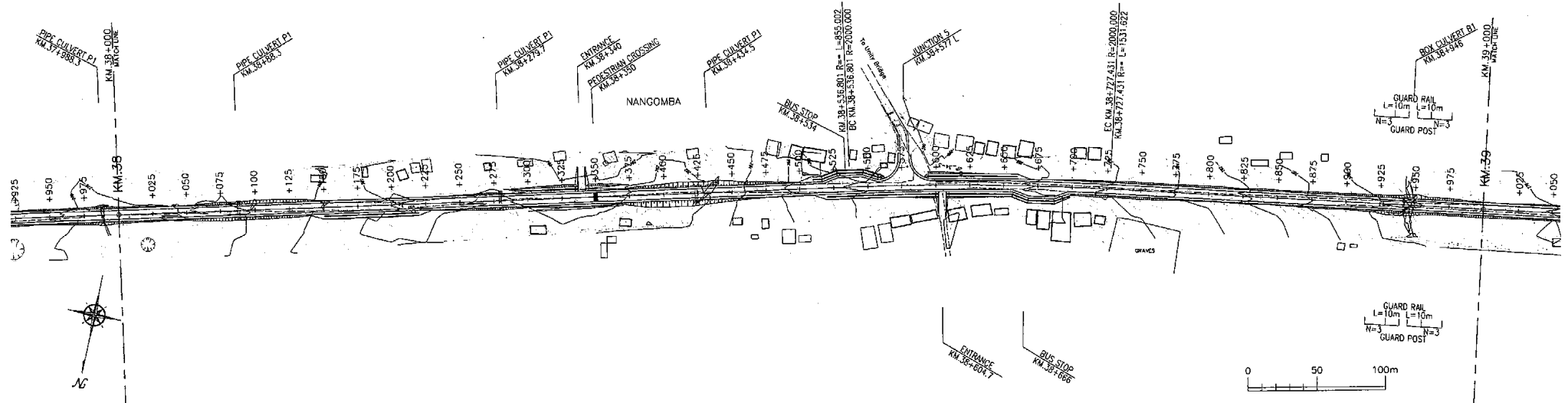
VERTICAL ALIGNMENT	
FILL	0.545
CUT	0.702
FINISHED LEVEL (EL.m)	254.899
GROUND LEVEL (EL.m)	254.939
KM (m)	925.000
HORIZONTAL ALIGNMENT	
SUPER ELEVATION	10%

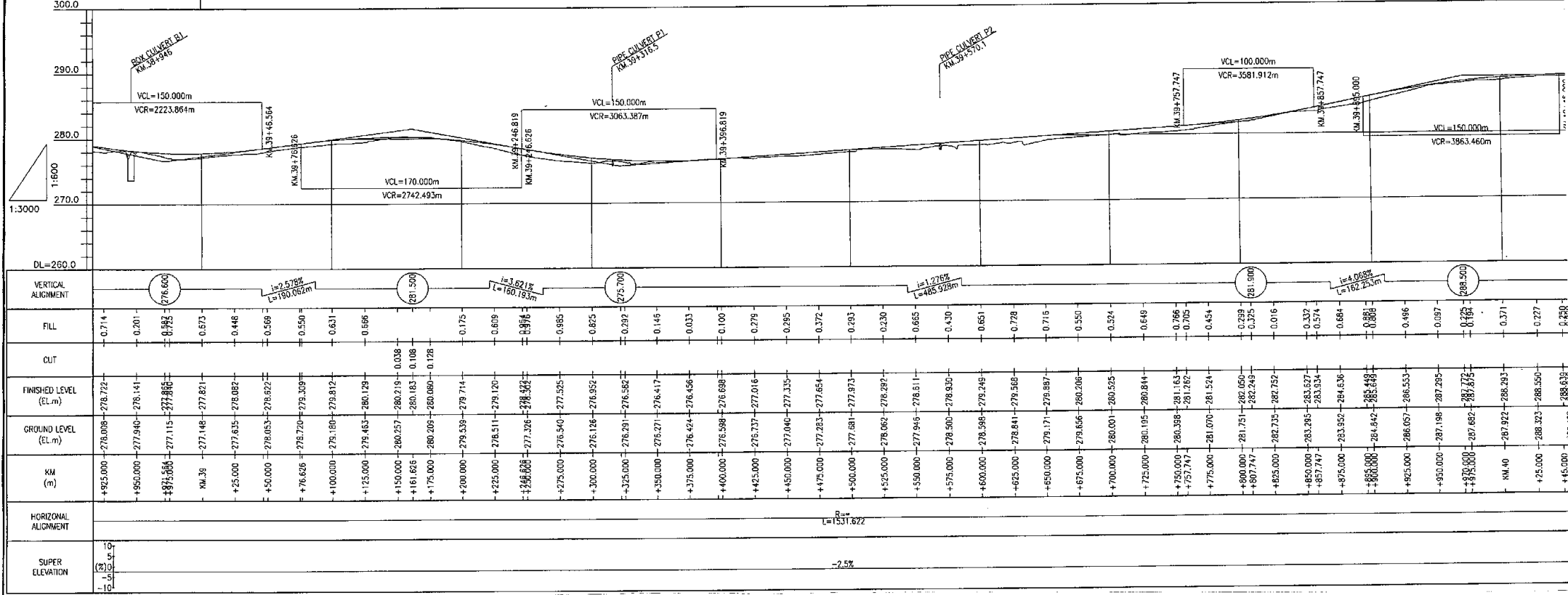
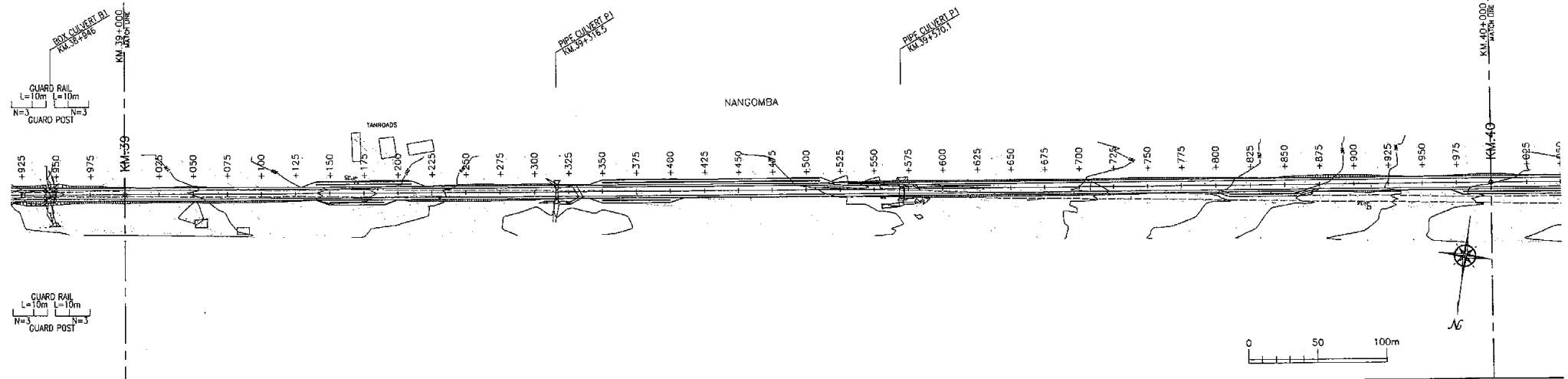
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				Checked by:	



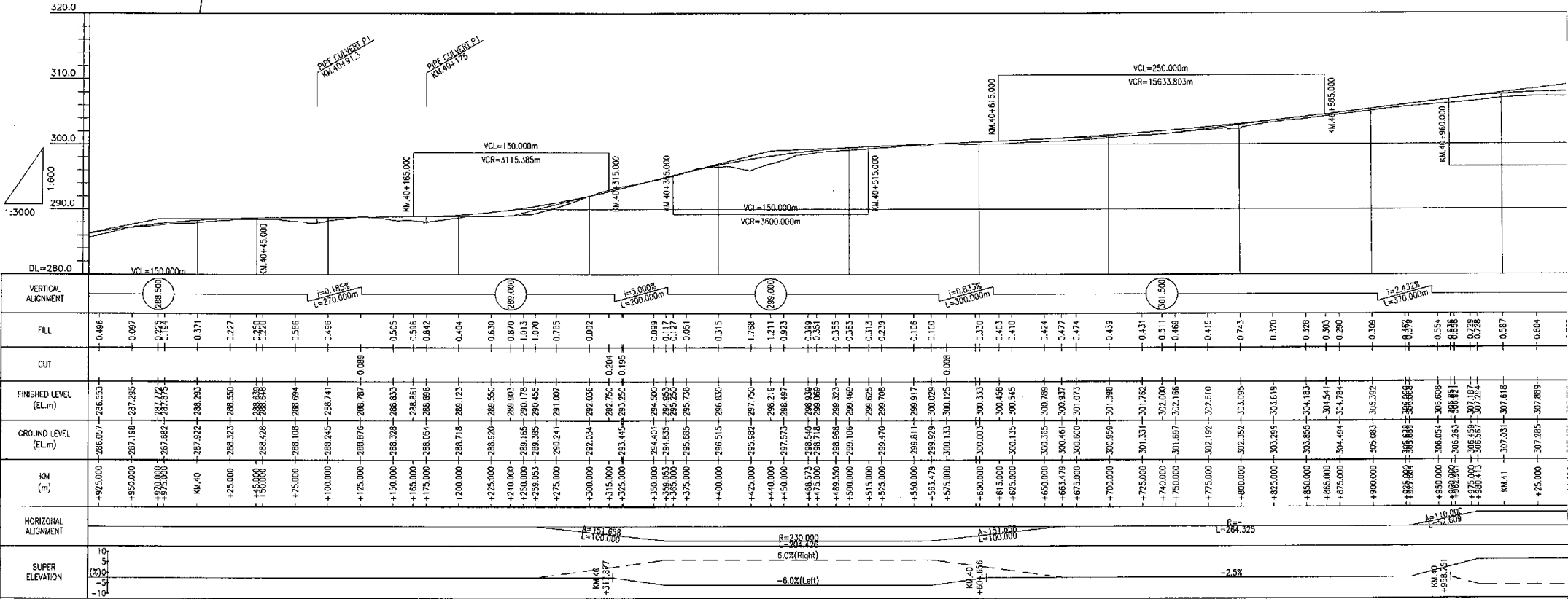
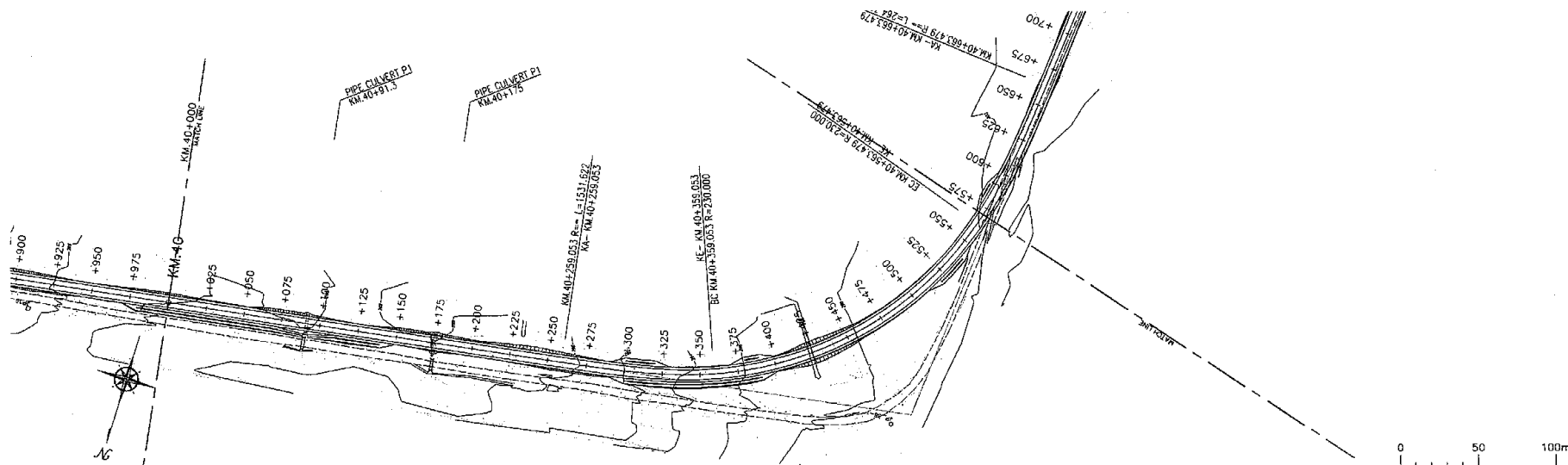
VERTICAL ALIGNMENT	FILL	CUT	FINISHED LEVEL (EL.m)	GROUND LEVEL (EL.m)	KM (m)	HORIZONTAL ALIGNMENT	SUPER ELEVATION
	0.601		+265.082	+264.481	+925.000	R=2000.000 L=701.321	2.5%(Left) -2.5%(Right)
	0.585		+266.611	+264.926	+950.000		
	0.577		+266.174	+265.588	+975.000	R=2000.000 L=701.321	2.5%(Left) -2.5%(Right)
	0.594		+267.772	+266.177	+1000.000		
	0.607		+267.400	+266.659	+1025.000	R=2000.000 L=701.321	2.5%(Left) -2.5%(Right)
	0.633		+268.088	+267.534	+1050.000		
	0.451		+268.767	+268.345	+1075.000	R=2000.000 L=701.321	2.5%(Left) -2.5%(Right)
	0.421		+269.500	+269.260	+1100.000		
	0.240		+270.027	+269.817	+1125.000	R=2000.000 L=701.321	2.5%(Left) -2.5%(Right)
	0.199		+270.250	+270.051	+1150.000		
	0.305		+271.000	+270.695	+1175.000	R=2000.000 L=701.321	2.5%(Left) -2.5%(Right)
	0.405		+271.750	+271.345	+1200.000		
	0.247		+272.500	+272.022	+1225.000	R=2000.000 L=701.321	2.5%(Left) -2.5%(Right)
	0.464		+273.250	+272.786	+1250.000		
	0.693		+274.000	+273.507	+1275.000	R=2000.000 L=701.321	2.5%(Left) -2.5%(Right)
	0.728		+274.750	+274.222	+1300.000		
	0.740		+275.500	+274.960	+1325.000	R=2000.000 L=701.321	2.5%(Left) -2.5%(Right)
	0.702		+276.250	+275.746	+1350.000		
	0.559		+277.000	+276.441	+1375.000	R=2000.000 L=701.321	2.5%(Left) -2.5%(Right)
	0.439		+277.750	+277.111	+1400.000		
	0.111		+278.500	+278.389	+1425.000	R=2000.000 L=701.321	2.5%(Left) -2.5%(Right)
	0.037		+280.000	+279.230	+1450.000		
	0.006		+280.702	+280.702	+1475.000	R=2000.000 L=701.321	2.5%(Left) -2.5%(Right)
	0.017		+281.310	+281.310	+1500.000		
	0.051		+281.533	+281.462	+1525.000	R=2000.000 L=701.321	2.5%(Left) -2.5%(Right)
	0.043		+281.822	+281.864	+1550.000		
	0.331		+282.238	+281.908	+1575.000	R=2000.000 L=701.321	2.5%(Left) -2.5%(Right)
	0.728		+282.560	+281.832	+1600.000		
	0.973		+282.789	+281.783	+1625.000	R=2000.000 L=701.321	2.5%(Left) -2.5%(Right)
	0.881		+282.918	+282.027	+1650.000		
	0.804		+282.954	+282.150	+1675.000	R=2000.000 L=701.321	2.5%(Left) -2.5%(Right)
	0.796		+282.895	+282.095	+1700.000		
	0.770		+282.852	+282.063	+1725.000	R=2000.000 L=701.321	2.5%(Left) -2.5%(Right)
	0.700		+282.740	+282.041	+1750.000		
	0.710		+282.491	+281.781	+1775.000	R=2000.000 L=701.321	2.5%(Left) -2.5%(Right)
	0.457		+282.146	+281.586	+1800.000		
	0.310		+281.754	+281.443	+1825.000	R=2000.000 L=701.321	2.5%(Left) -2.5%(Right)
	0.164		+281.361	+281.193	+1850.000		
	0.094		+280.969	+280.875	+1875.000	R=2000.000 L=701.321	2.5%(Left) -2.5%(Right)
	0.052		+280.577	+280.629	+1900.000		
	0.011		+280.184	+280.173	+1925.000	R=2000.000 L=701.321	2.5%(Left) -2.5%(Right)
	0.254		+279.792	+279.536	+1950.000		
	0.713		+279.400	+278.667	+1975.000	R=2000.000 L=701.321	2.5%(Left) -2.5%(Right)
	0.361		+279.008	+278.146	+2000.000		
	0.946		+278.777	+278.077	+2025.000	R=2000.000 L=701.321	2.5%(Left) -2.5%(Right)
	1.159		+278.631	+277.472	+2050.000		
	1.034		+278.407	+277.373	+2075.000	R=2000.000 L=701.321	2.5%(Left) -2.5%(Right)
	0.355		+278.368	+277.811	+2100.000		
	0.570		+278.431	+278.431	+2125.000	R=2000.000 L=701.321	2.5%(Left) -2.5%(Right)
	0.570		+277.600	+277.600	+2150.000		

Tanzania National Roads Agency (TANROADS) of The United Republic of Tanzania	CONSULTANTS:	PROJECT NAME:	DRAWING TITLE:	Date: Aug, 2009	DRAWING No.:
	INGEROSEC CORPORATION, JAPAN	The Project for the Improvement of Masasi-Mangaka Road	PLAN AND PROFILE (5/23)	Prepared by:	MR 03 E-5
				Checked by:	

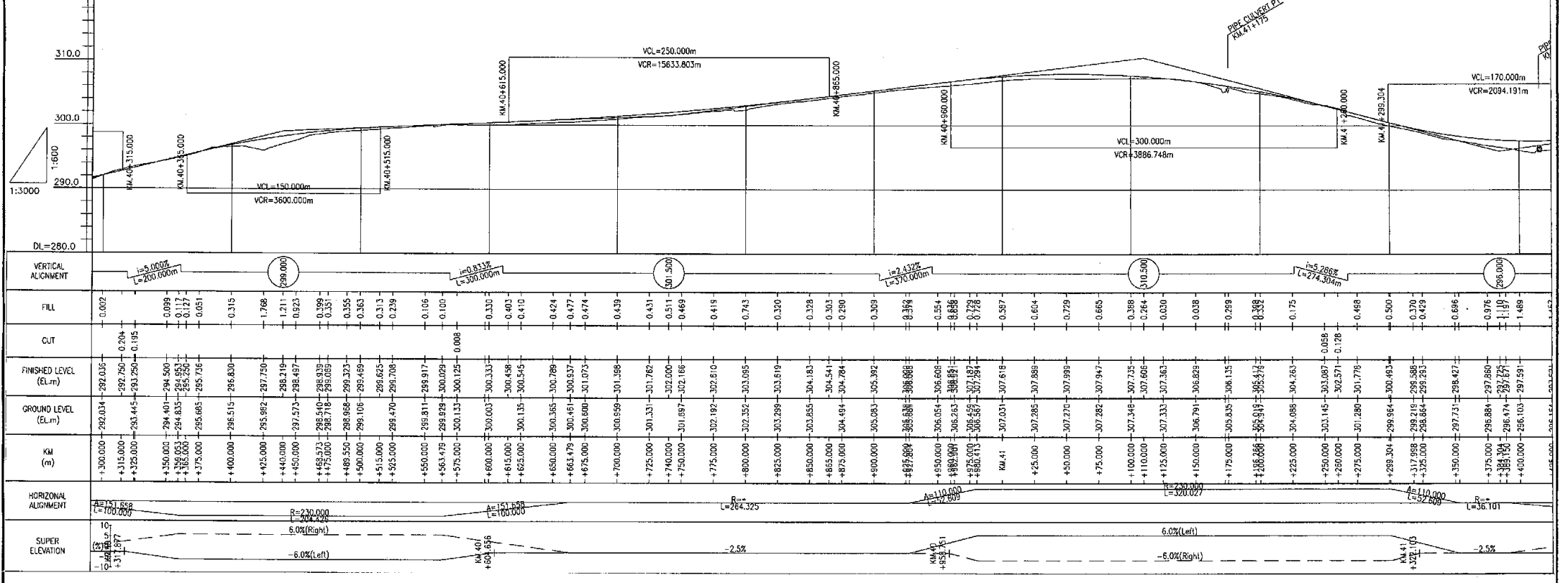
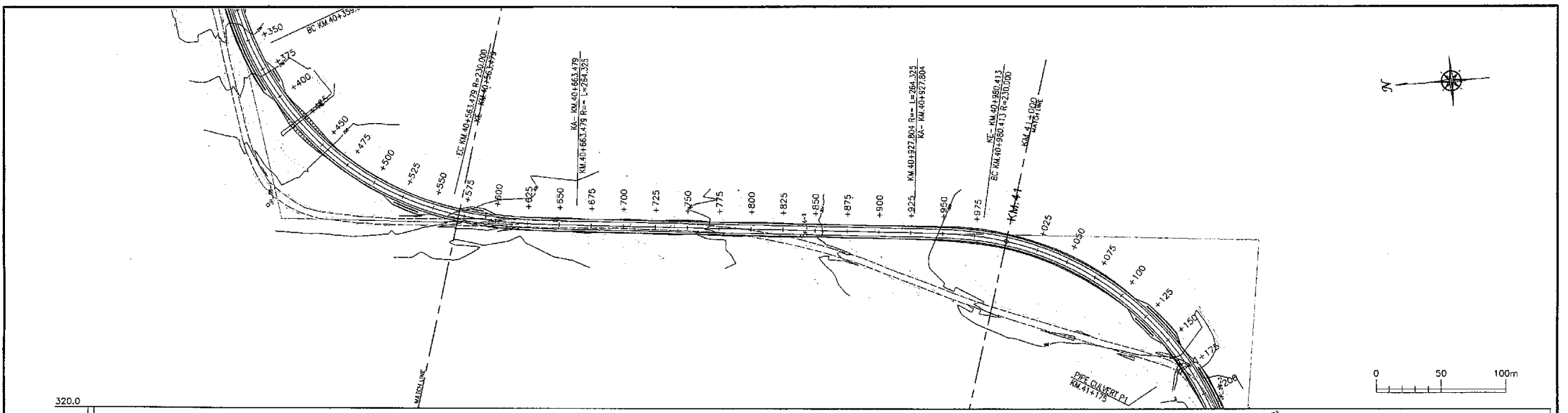




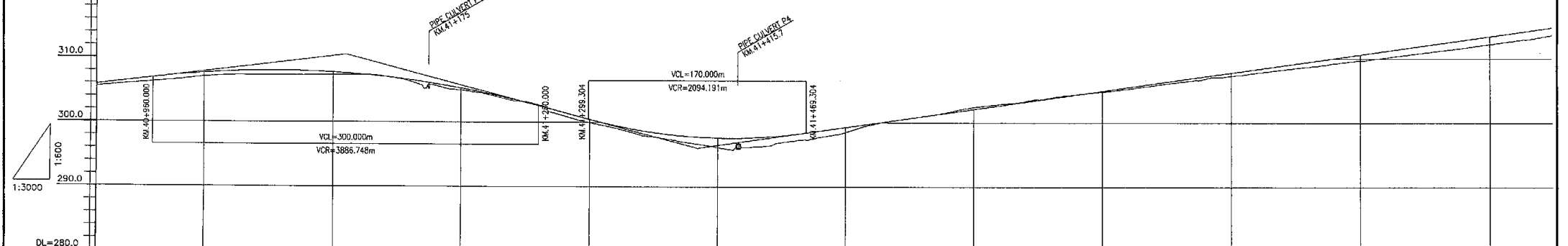
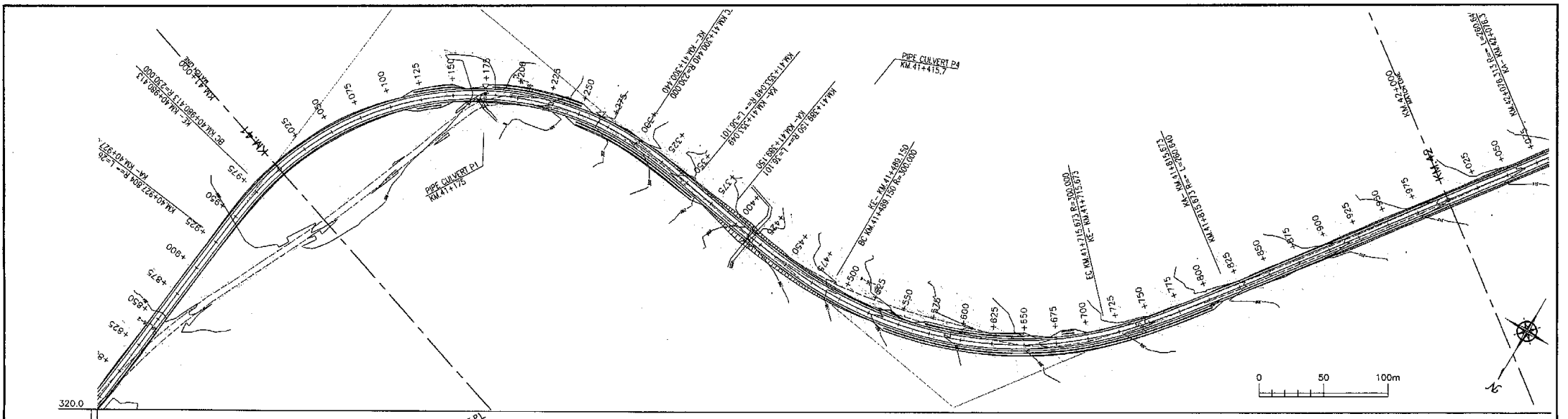
Tanzania National Roads Agency (TANROADS) of The United Republic of Tanzania	CONSULTANTS:	PROJECT NAME:	DRAWING TITLE:	Date: Aug, 2009	DRAWING No.:
	INGEROSEC CORPORATION, JAPAN	The Project for the Improvement of Masasi-Mangaka Road	PLAN AND PROFILE (7/23)	Prepared by:	MR 03 E-7
				Checked by:	



Tanzania National Roads Agency (TANROADS) of The United Republic of Tanzania	CONSULTANTS: INGEROSEC CORPORATION, JAPAN	PROJECT NAME: The Project for the Improvement of Masasi-Mangaka Road	DRAWING TITLE: PLAN AND PROFILE (8/23)	Date: Aug. 2009	DRAWING No.:
				Prepared by:	MR 03 E-8
				Checked by:	

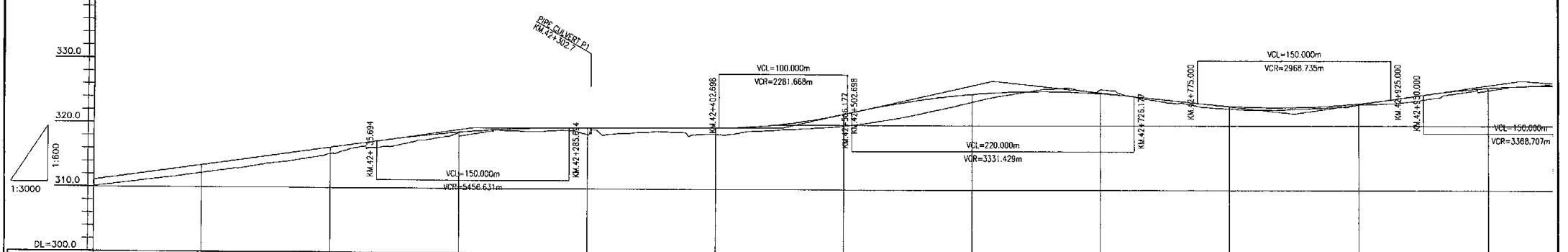
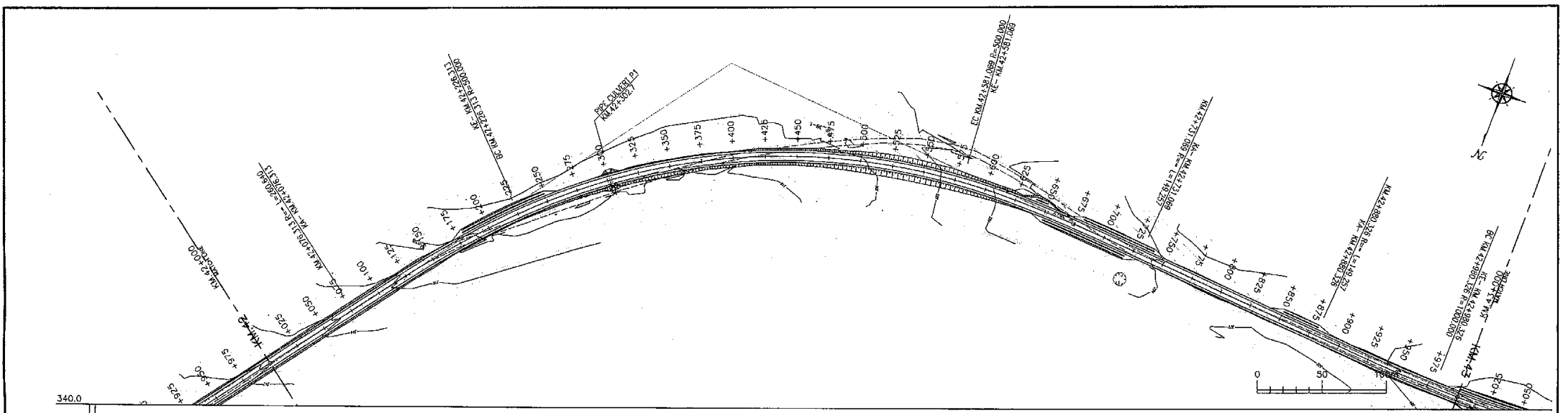


Tanzania National Roads Agency (TANROADS) of The United Republic of Tanzania	CONSULTANTS:	PROJECT NAME:	DRAWING TITLE:	Date: Aug. 2009	DRAWING No.:
	INGEROSEC CORPORATION, JAPAN	The Project for the Improvement of Masasi-Mangaka Road	PLAN AND PROFILE (9/23)	Prepared by:	MR 03 E-9
				Checked by:	



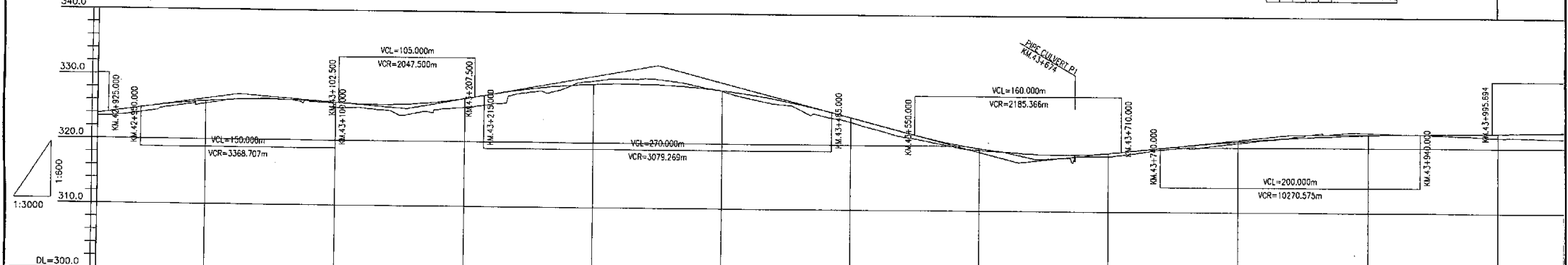
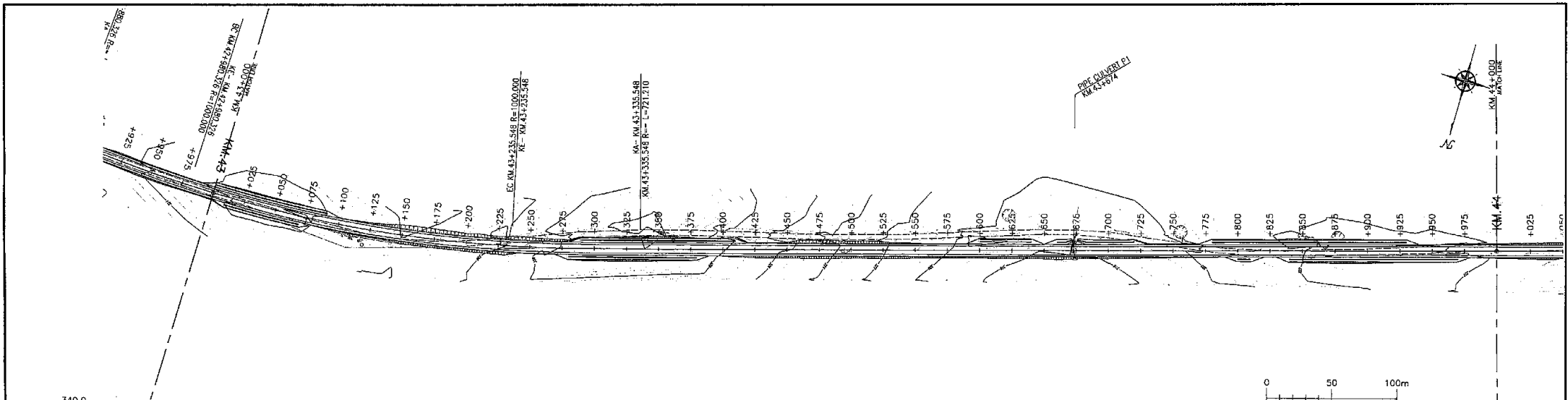
VERTICAL ALIGNMENT	2.432% S10.000m		0.286% L=774.304m		-2.012% L=826.390m	
FILL	0.898	0.554	0.888	0.728	0.597	0.604
CUT						
FINISHED LEVEL (EL.m)	306.608	306.508	307.315	307.606	307.363	306.829
GROUND LEVEL (EL.m)	306.608	306.054	307.348	307.606	307.363	306.829
KM (m)	40.000	40.050	40.100	40.150	40.200	40.250
HORIZONTAL ALIGNMENT	R=110.000 L=27.803		R=300.000 L=300.000		R=173.205 L=100.000	
SUPER ELEVATION	6.0% (Left) 6.0% (Right)		-2.5%		-2.5%	

Tanzania National Roads Agency (TANROADS) of The United Republic of Tanzania	CONSULTANTS:	PROJECT NAME:	DRAWING TITLE:	Date: Aug. 2009	DRAWING No.:
	INGEROSEC CORPORATION, JAPAN	The Project for the Improvement of Masasi-Mangaka Road	PLAN AND PROFILE (10/23)	Prepared by:	MR 03 E-10
				Checked by:	

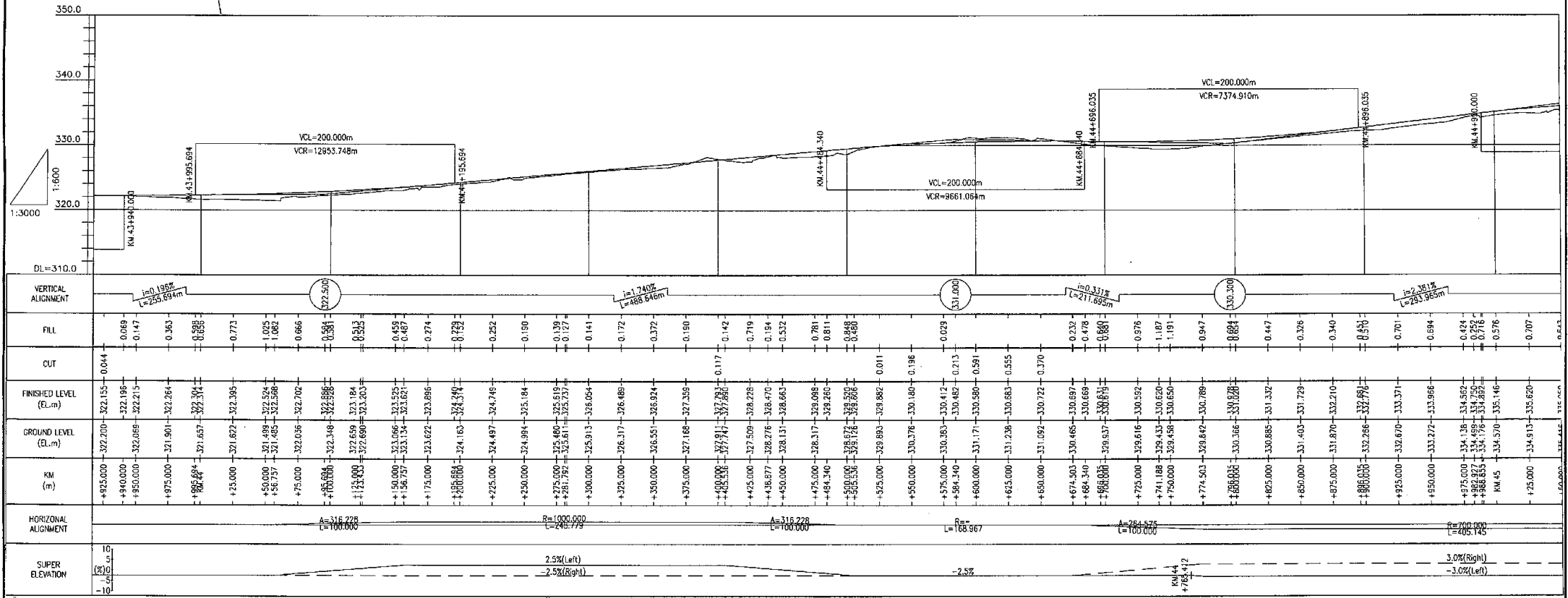
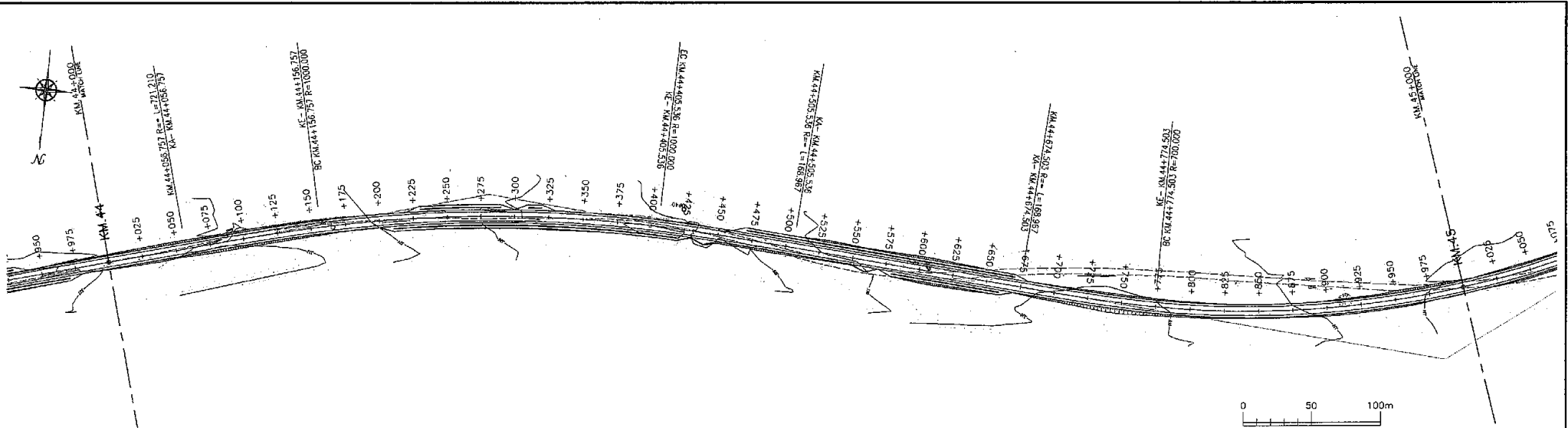


VERTICAL ALIGNMENT	FILL	CUT	FINISHED LEVEL (EL.m)	GROUND LEVEL (EL.m)	KM	HORIZONTAL ALIGNMENT	SUPER ELEVATION
	-0.990		310.320	311.310	+825.000	R=273.861 L=260.640	10% -2.5%
	-1.088		310.919	312.018	+850.000		
	-1.186		311.540	312.728	+875.000		
	-1.202		312.232	313.434	KM 42		
	-1.217		312.925	314.142	+25.000		
	-1.173		313.677	314.850	+50.000		
	-1.203		314.388	315.558	+75.000		
	-0.987		315.278	316.266	+100.000		
	-0.553		316.42	316.973	+125.000		
	-0.989		317.276	317.726	+135.684		
	-1.103		318.580	317.663	+150.000		
	-0.721		317.526	318.074	+175.000		
	-0.414		318.304	318.718	+200.000		
	-0.426		318.885	318.885	+210.684		
	-0.163		318.911	318.074	+225.000		
	-0.423		318.882	319.316	+250.000		
	-0.414		319.028	319.443	+275.000		
	-0.410		319.462	319.583	+285.684		
	-1.046		318.426	318.474	+300.000		
	-0.885		318.600	319.484	+325.000		
	-0.644		318.671	319.515	+350.000		
	-0.759		318.777	319.536	+375.000		
	-1.025		318.531	319.556	+400.000		
	-1.067		318.516	319.583	+411.527		
	-0.672		319.051	319.696	+428.000		
	-0.844		319.246	320.088	+450.000		
	-1.229		319.535	320.764	+475.000		
	-1.826		319.686	321.714	+500.000		
	-1.948		321.968	321.968	+506.177		
	-2.224		320.551	322.775	+625.000		
	-2.255		321.402	323.637	+650.000		
	-1.864		322.487	324.330	+675.000		
	-1.743		322.746	324.460	+681.069		
	-1.221		323.635	324.356	+690.000		
	-0.742		324.094	324.094	+616.177		
	-0.596		324.665	324.175	+628.000		
	-0.339		324.866	325.275	+631.177		
	-0.181		325.487	325.308	+650.000		
	-0.607		325.856	325.249	+675.000		
	-0.647		325.651	325.005	+700.000		
	-0.038		324.307	324.573	+725.000		
	-0.348		324.307	324.713	+730.000		
	-0.428		323.075	323.504	+750.000		
	-0.383		322.697	323.074	+775.000		
	-0.399		322.457	322.856	+800.000		
	-0.258		322.590	322.847	+825.000		
	-0.218		323.881	323.050	+850.000		
	-0.197		323.265	323.462	+875.000		
	-0.586		323.500	324.086	+900.000		
	-0.758		324.066	324.674	+910.688		
	-0.681		324.611	325.459	+925.000		
	-0.403		325.468	325.500	KM 43		
	-0.020		326.145	326.165	+25.000		

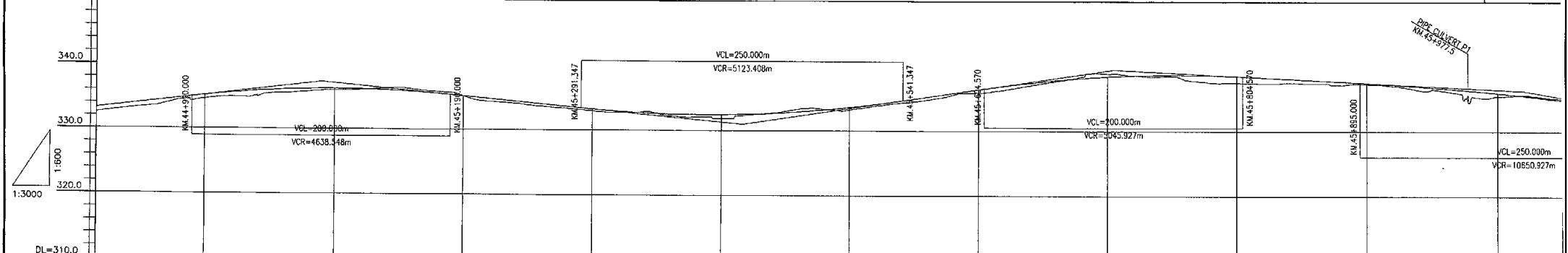
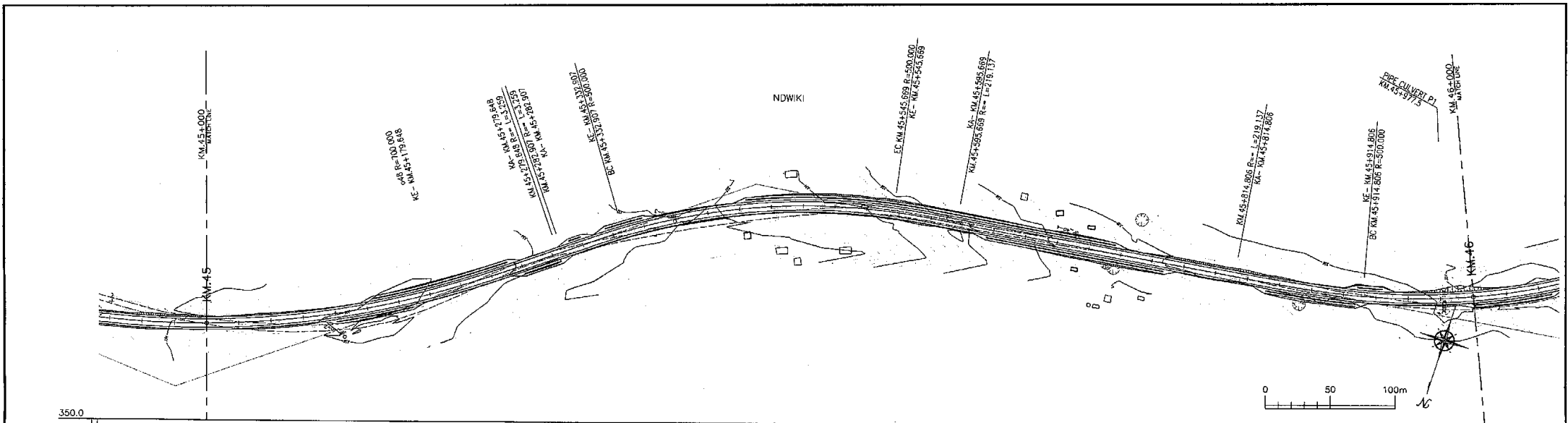
Tanzania National Roads Agency (TANROADS) of The United Republic of Tanzania	CONSULTANTS:	PROJECT NAME:	DRAWING TITLE:	Date: Aug. 2009	DRAWING No.:
	INGEROSEC CORPORATION, JAPAN	The Project for the Improvement of Masasi-Mangaka Road	PLAN AND PROFILE (11/23)	Prepared by:	MR 03 E-11
				Checked by:	



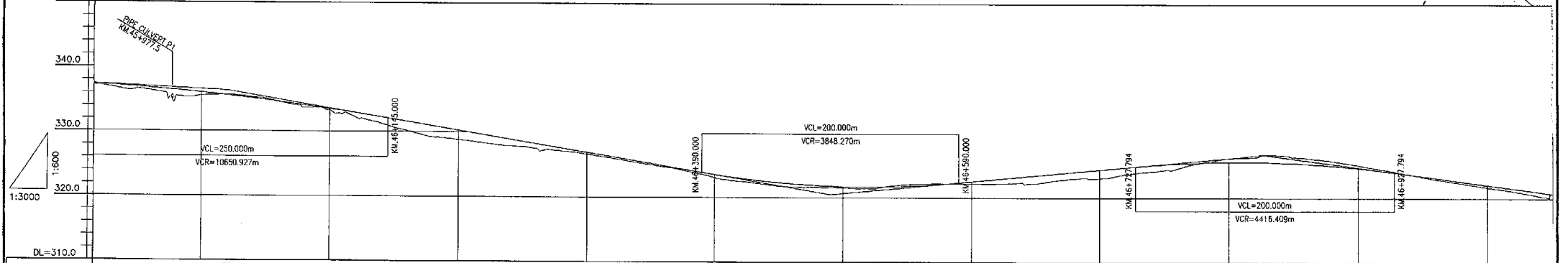
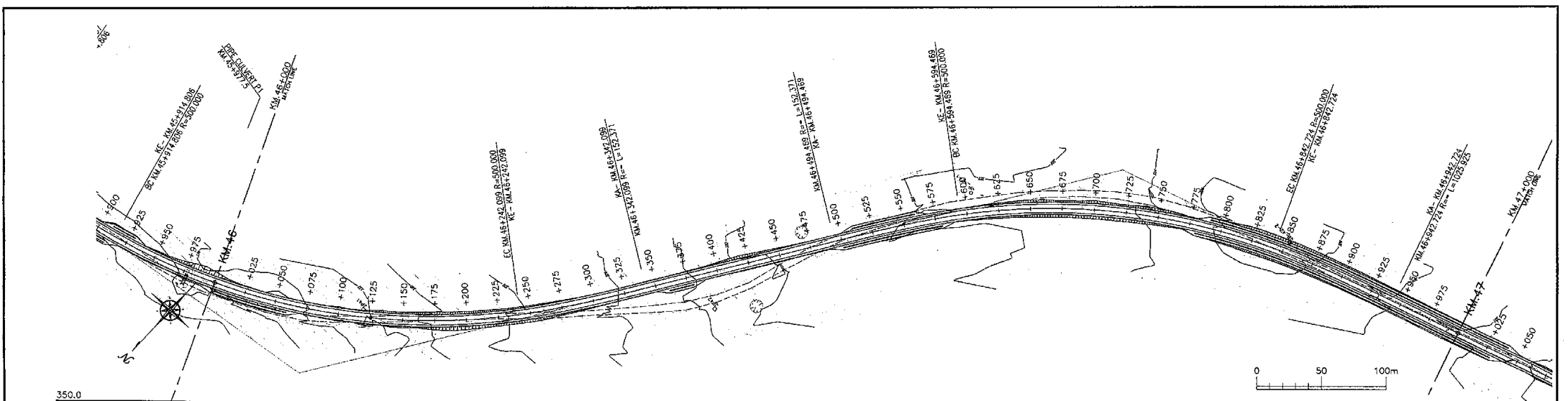
VERTICAL ALIGNMENT	FILL	CUT	FINISHED LEVEL (EL.m)	GROUND LEVEL (EL.m)	KM (m)	HORIZONTAL ALIGNMENT	SUPER ELEVATION
$i = -2.914\%$ $L = 175.000m$	-0.586		323.500	323.500	+925.000	$R = 1800.000$ $L = 255.221$	10% (Right)
$i = 1.536\%$ $L = 140.000m$	-0.754		324.086	324.086	+884.886		2.5% (Left)
$i = 3.590\%$ $L = 195.000m$	-0.38		324.472	324.472	+845.000		
$i = 5.170\%$ $L = 280.000m$	0.403		324.858	324.858	+805.000		
$i = 1.96\%$ $L = 255.694m$	0.020	0.088	325.244	325.244	+765.000		
	0.492		325.630	325.630	+725.000		
	0.783		326.016	326.016	+685.000		
	0.862		326.402	326.402	+645.000		
	0.665		326.788	326.788	+605.000		
	1.698		327.174	327.174	+565.000		
	1.534		327.560	327.560	+525.000		
	1.355		327.946	327.946	+485.000		
	1.456		328.332	328.332	+445.000		
	1.305		328.718	328.718	+405.000		
	1.586		329.104	329.104	+365.000		
	0.660		329.490	329.490	+325.000		
	0.515		329.876	329.876	+285.000		
	0.892		330.262	330.262	+245.000		
	0.385		330.648	330.648	+205.000		
	0.477		331.034	331.034	+165.000		
	0.735		331.420	331.420	+125.000		
	0.751		331.806	331.806	+85.000		
	0.809		332.192	332.192	+45.000		
	0.388		332.578	332.578	+5.000		
	0.094		332.964	332.964	-35.000		
	0.686		333.350	333.350	-75.000		
	0.572		333.736	333.736	-115.000		
	0.929		334.122	334.122	-155.000		
	0.872		334.508	334.508	-195.000		
	0.712		334.894	334.894	-235.000		
	0.797		335.280	335.280	-275.000		
	0.595		335.666	335.666	-315.000		
	0.406		336.052	336.052	-355.000		
	0.253		336.438	336.438	-395.000		
	0.443		336.824	336.824	-435.000		
	0.656		337.210	337.210	-475.000		
	0.246		337.596	337.596	-515.000		
	0.506		337.982	337.982	-555.000		
	0.469		338.368	338.368	-595.000		
	0.374		338.754	338.754	-635.000		
	0.256		339.140	339.140	-675.000		
	0.263		339.526	339.526	-715.000		
	0.450		339.912	339.912	-755.000		
	0.264		340.298	340.298	-795.000		
	0.100		340.684	340.684	-835.000		
	0.069		341.070	341.070	-875.000		
	0.147		341.456	341.456	-915.000		
	0.353		341.842	341.842	-955.000		
	0.659		342.228	342.228	-995.000		
	0.773		342.614	342.614	-1035.000		
			343.000	343.000	-1075.000		



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	INGEROSEC CORPORATION, JAPAN	The Project for the Improvement of Masasi-Mangaka Road	PLAN AND PROFILE (13/23)	Prepared by:	MR 03 E-13
				Checked by:	

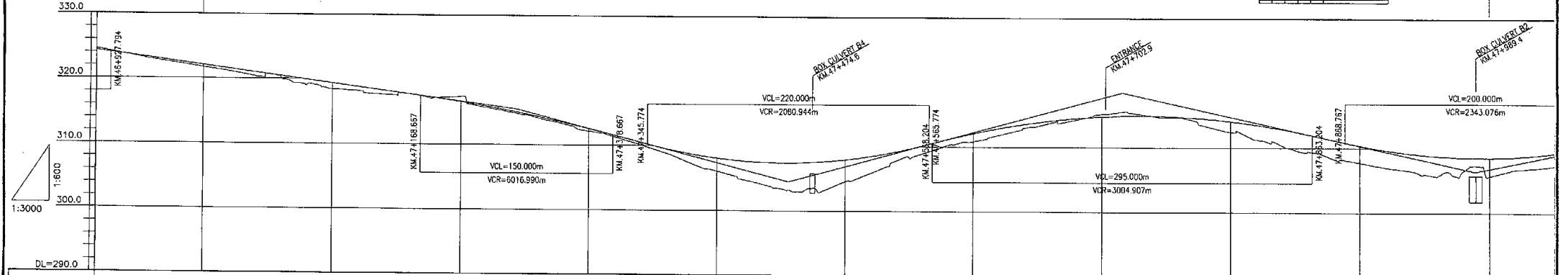
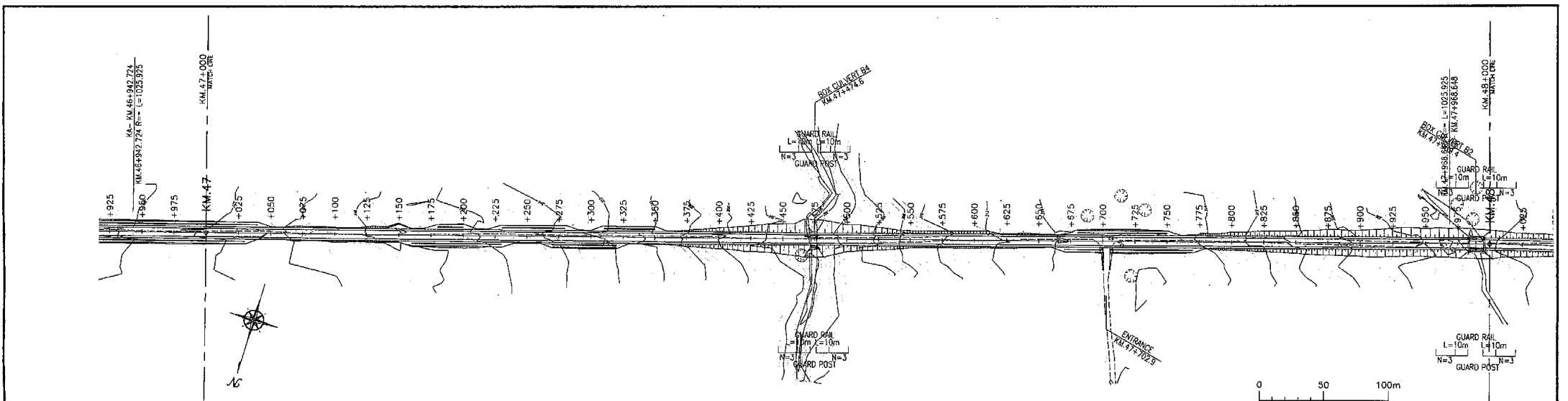


VERTICAL ALIGNMENT	FILL	CUT	FINISHED LEVEL (EL.m)	GROUND LEVEL (EL.m)	KM	HORIZONTAL ALIGNMENT	SUPER ELEVATION (%)
$i = 2.381\%$ $L = 293.985m$	0.701	-0.884	333.371	332.570	+825.000	$R = 700.000$ $L = 405.145$	10% (Right), -3.0% (Left)
$i = 1.303\%$ $L = 326.347m$	0.482	-0.304	336.164	334.882	+975.000	$R = 500.000$ $L = 212.787$	4.0% (Left), -4.0% (Right)
$i = 2.949\%$ $L = 286.223m$	0.218	-0.109	338.744	337.452	+825.000	$R = 158.114$ $L = 89.778$	-2.5%
$i = 1.048\%$ $L = 375.430m$	0.501	-0.141	336.300	335.258	+950.000	$R = 200.000$ $L = 100.000$	



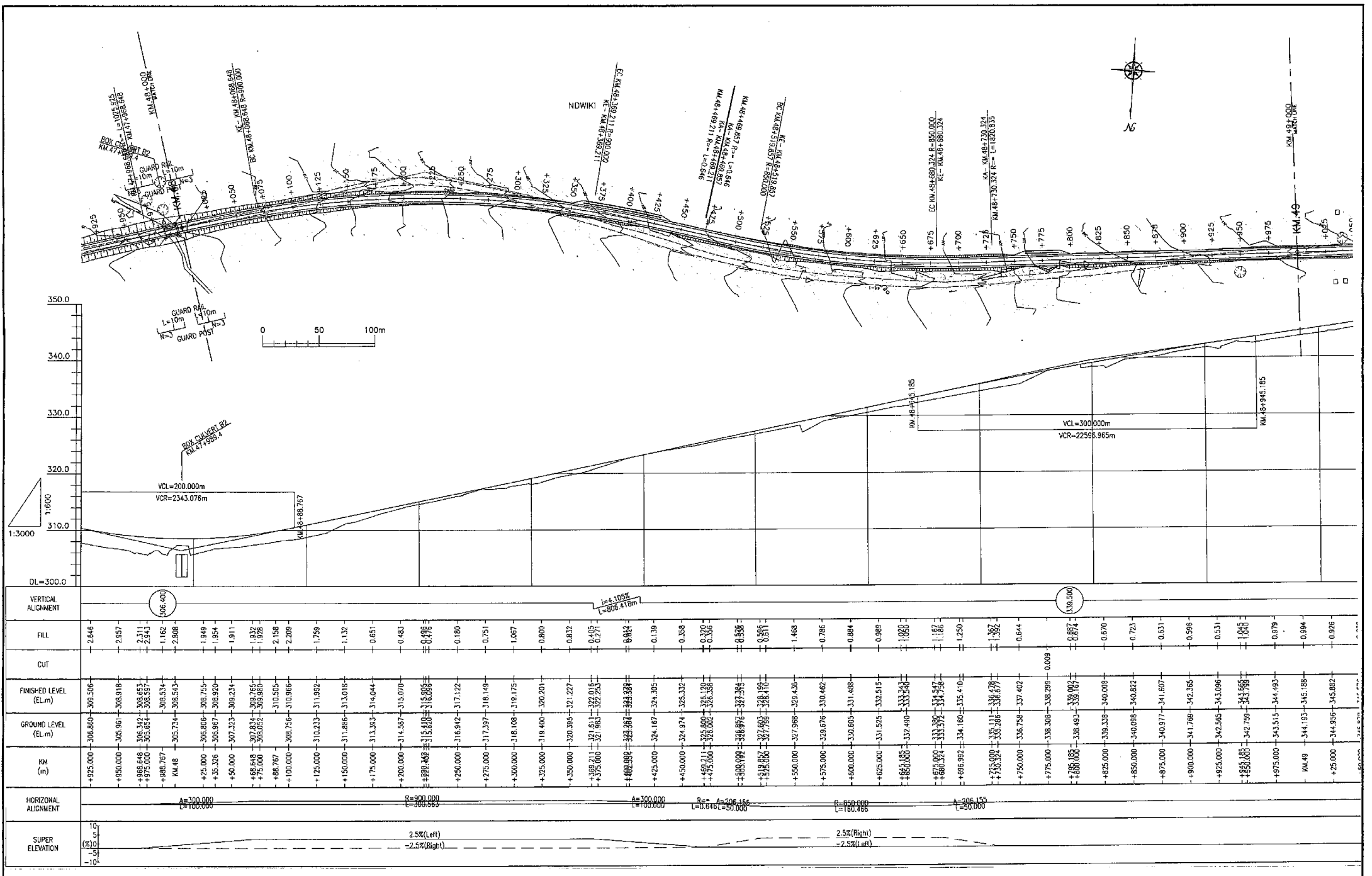
VERTICAL ALIGNMENT	FILL	CUT	FINISHED LEVEL (EL.m)	GROUND LEVEL (EL.m)	KM (m)	HORIZONTAL ALIGNMENT	SUPER ELEVATION (%)
DL=310.0	0.270		+925.000 -337.001 -337.222	+925.000 -337.001 -337.222	+925.000		
	0.279		+950.000 -336.589 -336.868	+950.000 -336.589 -336.868	+950.000		
	1.273		+975.000 -335.183 -336.456	+975.000 -335.183 -336.456	+975.000		
	0.501		KM 46 -335.484 -335.995	KM 46 -335.484 -335.995	KM 46		
			+98.000 -335.597 -335.958	+98.000 -335.597 -335.958	+98.000		
			+50.000 -335.040 -334.986	+50.000 -335.040 -334.986	+50.000		
			+75.000 -334.049 -334.221	+75.000 -334.049 -334.221	+75.000		
			+84.557 -333.717 -333.958	+84.557 -333.717 -333.958	+84.557		
			+92.843 -333.756 -333.724	+92.843 -333.756 -333.724	+92.843		
			+100.000 -333.353 -333.516	+100.000 -333.353 -333.516	+100.000		
			+125.000 -332.052 -332.751	+125.000 -332.052 -332.751	+125.000		
			+150.000 -330.625 -331.530	+150.000 -330.625 -331.530	+150.000		
			+175.000 -328.380 -331.089	+175.000 -328.380 -331.089	+175.000		
			+200.000 -326.863 -330.249	+200.000 -326.863 -330.249	+200.000		
			+225.000 -326.180 -329.409	+225.000 -326.180 -329.409	+225.000		
			+242.089 -327.831 -328.834	+242.089 -327.831 -328.834	+242.089		
			+250.000 -327.789 -328.969	+250.000 -327.789 -328.969	+250.000		
			+275.000 -327.218 -327.728	+275.000 -327.218 -327.728	+275.000		
			+300.000 -326.626 -326.887	+300.000 -326.626 -326.887	+300.000		
			+325.000 -325.830 -326.047	+325.000 -325.830 -326.047	+325.000		
			+342.099 -325.257 -325.472	+342.099 -325.257 -325.472	+342.099		
			+350.000 -325.017 -325.206	+350.000 -325.017 -325.206	+350.000		
			+375.000 -324.153 -324.366	+375.000 -324.153 -324.366	+375.000		
			+390.000 -323.882 -323.538	+390.000 -323.882 -323.538	+390.000		
			+400.000 -323.034 -323.538	+400.000 -323.034 -323.538	+400.000		
			+425.000 -322.425 -322.844	+425.000 -322.425 -322.844	+425.000		
			+450.000 -321.788 -322.312	+450.000 -321.788 -322.312	+450.000		
			+475.000 -321.655 -321.943	+475.000 -321.655 -321.943	+475.000		
			+480.000 -321.162 -321.768	+480.000 -321.162 -321.768	+480.000		
			+500.000 -321.353 -321.738	+500.000 -321.353 -321.738	+500.000		
			+525.000 -321.489 -321.693	+525.000 -321.489 -321.693	+525.000		
			+550.000 -322.073 -321.809	+550.000 -322.073 -321.809	+550.000		
			+561.171 -322.206 -321.914	+561.171 -322.206 -321.914	+561.171		
			+575.000 -322.239 -322.089	+575.000 -322.239 -322.089	+575.000		
			+590.000 -322.246 -322.175	+590.000 -322.246 -322.175	+590.000		
			+600.000 -322.219 -322.319	+600.000 -322.219 -322.319	+600.000		
			+625.000 -322.226 -322.978	+625.000 -322.226 -322.978	+625.000		
			+650.000 -322.246 -323.437	+650.000 -322.246 -323.437	+650.000		
			+675.000 -322.873 -323.886	+675.000 -322.873 -323.886	+675.000		
			+700.000 -323.038 -324.354	+700.000 -323.038 -324.354	+700.000		
			+721.211 -323.626 -324.744	+721.211 -323.626 -324.744	+721.211		
			+727.794 -323.820 -324.865	+727.794 -323.820 -324.865	+727.794		
			+750.000 -324.331 -325.216	+750.000 -324.331 -325.216	+750.000		
			+775.000 -325.335 -325.479	+775.000 -325.335 -325.479	+775.000		
			+800.000 -326.166 -325.800	+800.000 -326.166 -325.800	+800.000		
			+825.000 -326.759 -326.528	+825.000 -326.759 -326.528	+825.000		
			+842.724 -326.605 -325.479	+842.724 -326.605 -325.479	+842.724		
			+850.000 -326.350 -325.417	+850.000 -326.350 -325.417	+850.000		
			+875.000 -325.887 -325.113	+875.000 -325.887 -325.113	+875.000		
			+900.000 -325.112 -324.668	+900.000 -325.112 -324.668	+900.000		
			+925.000 -324.226 -324.081	+925.000 -324.226 -324.081	+925.000		
			+942.724 -323.584 -323.685	+942.724 -323.584 -323.685	+942.724		
			+950.000 -323.292 -323.409	+950.000 -323.292 -323.409	+950.000		
			+975.000 -322.483 -322.736	+975.000 -322.483 -322.736	+975.000		
			KM 47 -321.710 -322.082	KM 47 -321.710 -322.082	KM 47		
			+975.000 -320.930 -321.388	+975.000 -320.930 -321.388	+975.000		

Tanzania National Roads Agency (TANROADS) of The United Republic of Tanzania	CONSULTANTS:	PROJECT NAME:	DRAWING TITLE:	Date: Aug. 2009	DRAWING NO.:
	INGEROSEC CORPORATION, JAPAN	The Project for the Improvement of Masasi-Mangaka Road	PLAN AND PROFILE (15/23)	Prepared by:	MR 03 E-15
				Checked by:	

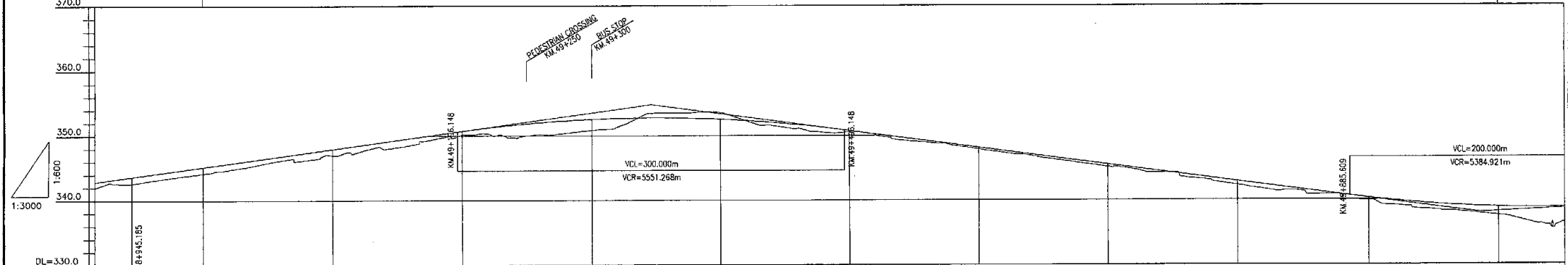
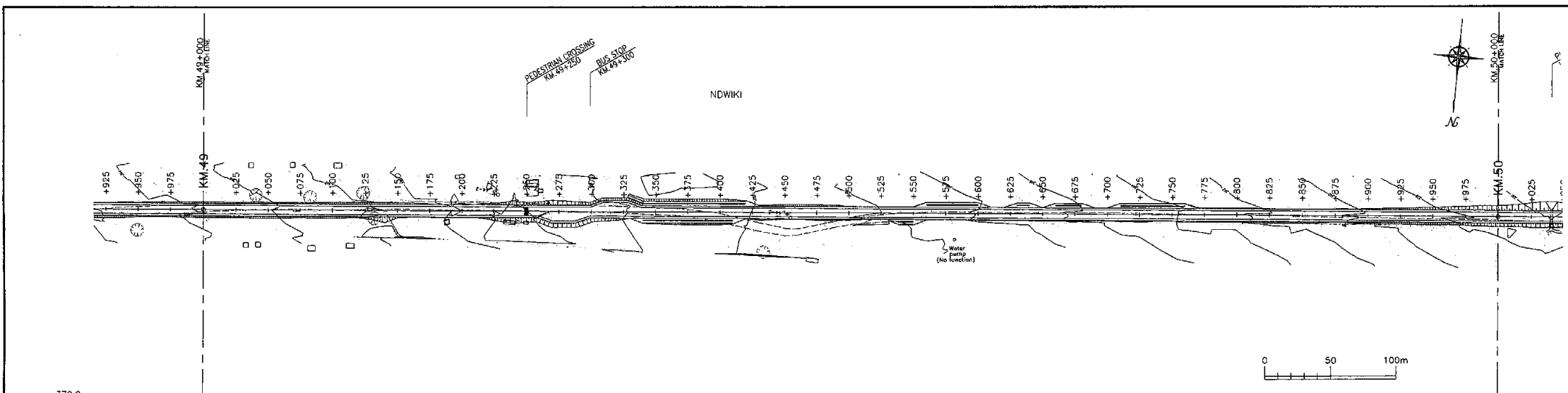


VERTICAL ALIGNMENT	FILL	CUT	FINISHED LEVEL (EL.m)	GROUND LEVEL (EL.m)	KM (m)	HORIZONTAL ALIGNMENT	SUPER ELEVATION
$i=2.693\%$ $L=415.873m$	0.145	0.145	+925.000 - 324.226 - 324.081	324.081	+925.000		10
	0.041	0.117	+942.724 - 323.564 - 323.695	323.695	+942.724		5
	0.253	0.352	+950.000 - 323.392 - 323.409	323.409	+950.000		0
	0.458	0.552	+975.000 - 322.483 - 322.736	322.736	+975.000		-5
	0.018	0.736	KM.47 - 321.710 - 322.062	322.062	KM.47		-10
	0.931	0.877	+25.000 - 320.930 - 321.389	321.389	+25.000		
	0.448	0.021	+50.000 - 320.698 - 320.716	320.716	+50.000		
	0.168	0.771	+75.000 - 319.307 - 320.042	320.042	+75.000		
	0.200	0.200	+100.000 - 318.438 - 319.368	319.368	+100.000		
	0.214	0.214	+125.000 - 317.819 - 318.695	318.695	+125.000		
	0.158	0.266	+150.000 - 317.575 - 318.022	318.022	+150.000		
	0.208	0.208	+168.667 - 317.177 - 317.340	317.340	+168.667		
	0.403	0.403	+175.000 - 317.177 - 317.340	317.340	+175.000		
	0.200	0.200	+200.000 - 317.366 - 316.584	316.584	+200.000		
	0.214	0.214	+225.000 - 315.539 - 315.739	315.739	+225.000		
	0.158	0.266	+243.667 - 314.612 - 314.780	314.780	+243.667		
	0.208	0.208	+250.000 - 314.612 - 314.780	314.780	+250.000		
	0.403	0.403	+275.000 - 313.508 - 313.717	313.717	+275.000		
	0.200	0.200	+300.000 - 312.147 - 312.550	312.550	+300.000		
	0.214	0.214	+318.667 - 310.996 - 311.282	311.282	+318.667		
	0.158	0.266	+325.000 - 310.996 - 311.282	311.282	+325.000		
	0.208	0.208	+345.724 - 309.486 - 309.385	309.385	+345.724		
	0.403	0.403	+350.000 - 309.486 - 309.385	309.385	+350.000		
	0.200	0.200	+375.000 - 307.658 - 308.094	308.094	+375.000		
	0.214	0.214	+400.000 - 306.110 - 308.099	308.099	+400.000		
	0.158	0.266	+425.000 - 304.610 - 307.604	307.604	+425.000		
	0.208	0.208	+450.000 - 303.415 - 307.410	307.410	+450.000		
	0.403	0.403	+453.724 - 307.407 - 307.407	307.407	+453.724		
	0.200	0.200	+475.000 - 303.520 - 307.515	307.515	+475.000		
	0.214	0.214	+500.000 - 304.571 - 307.922	307.922	+500.000		
	0.158	0.266	+525.000 - 306.313 - 308.628	308.628	+525.000		
	0.208	0.208	+550.000 - 308.321 - 308.635	308.635	+550.000		
	0.403	0.403	+565.774 - 310.425 - 310.914	310.914	+565.774		
	0.200	0.200	+575.000 - 308.883 - 310.914	310.914	+575.000		
	0.214	0.214	+600.000 - 310.845 - 312.100	312.100	+600.000		
	0.158	0.266	+625.000 - 312.091 - 313.078	313.078	+625.000		
	0.208	0.208	+650.000 - 313.260 - 313.848	313.848	+650.000		
	0.403	0.403	+675.000 - 314.069 - 314.410	314.410	+675.000		
	0.200	0.200	+700.000 - 315.147 - 314.784 - 0.383	314.784	+700.000		
	0.214	0.214	+715.704 - 314.880 - 0.633	0.633	+715.704		
	0.158	0.266	+725.000 - 315.291 - 314.910 - 0.381	314.910	+725.000		
	0.208	0.208	+750.000 - 314.719 - 314.846	314.846	+750.000		
	0.403	0.403	+775.000 - 313.606 - 314.576	314.576	+775.000		
	0.200	0.200	+800.000 - 312.443 - 314.100	314.100	+800.000		
	0.214	0.214	+825.000 - 311.113 - 313.414	313.414	+825.000		
	0.158	0.266	+850.000 - 309.714 - 312.520	312.520	+850.000		
	0.208	0.208	+863.704 - 311.964 - 2.610	2.610	+863.704		
	0.403	0.403	+875.000 - 308.705 - 311.441	311.441	+875.000		
	0.200	0.200	+886.767 - 310.831 - 2.680	2.680	+886.767		
	0.214	0.214	+900.000 - 307.761 - 310.360	310.360	+900.000		
	0.158	0.266	+925.000 - 306.860 - 305.506	305.506	+925.000		
	0.208	0.208	+950.000 - 305.961 - 308.918	308.918	+950.000		
	0.403	0.403	+966.648 - 306.342 - 305.653	305.653	+966.648		
	0.200	0.200	+975.000 - 305.654 - 308.597	308.597	+975.000		
	0.214	0.214	+988.767 - 308.534 - 1.162	1.162	+988.767		
	0.158	0.266	KM.49 - 305.734 - 308.543	308.543	KM.49		
	0.208	0.208	+25.000 - 306.065 - 308.755	308.755	+25.000		
	0.403	0.403	+35.376 - 306.967 - 308.920	308.920	+35.376		

Tanzania National Roads Agency (TANROADS) of The United Republic of Tanzania	CONSULTANTS:	PROJECT NAME:	DRAWING TITLE:	Date: Aug, 2009	DRAWING No.:
	INGEROSEC CORPORATION, JAPAN	The Project for the Improvement of Masasi-Mangaka Road	PLAN AND PROFILE (16/23)	Prepared by:	MR 03 E-16
				Checked by:	

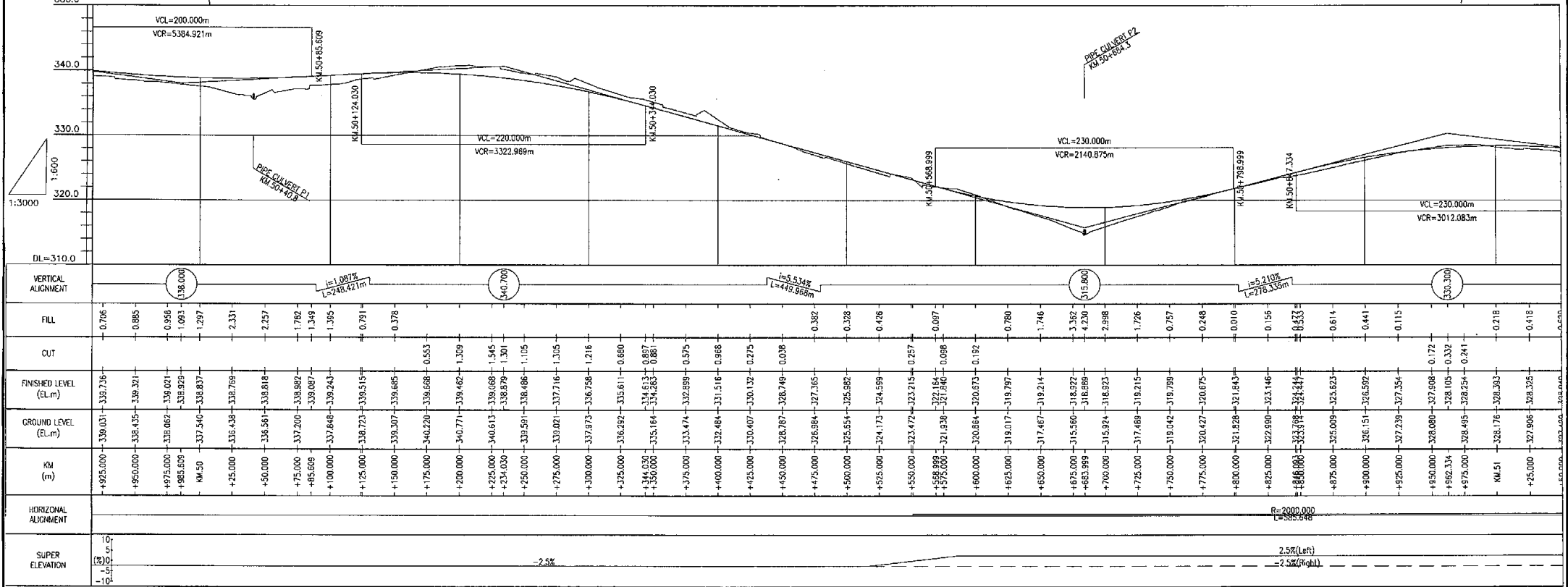
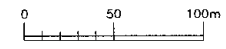
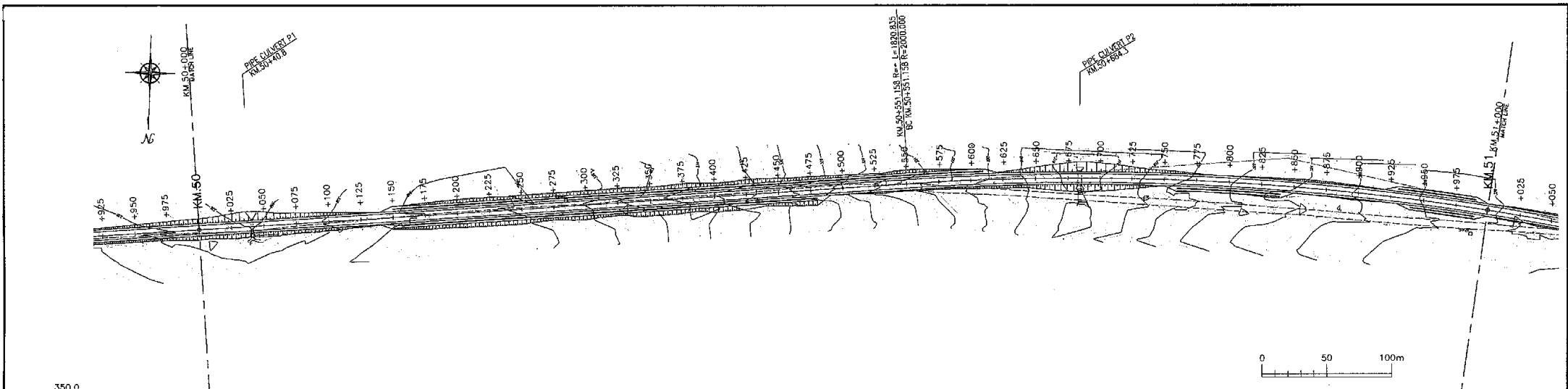


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	INGEROSEC CORPORATION, JAPAN	The Project for the Improvement of Masasi-Mangaka Road	PLAN AND PROFILE (17/23)	Prepared by:	MR 03 E-17
				Checked by:	

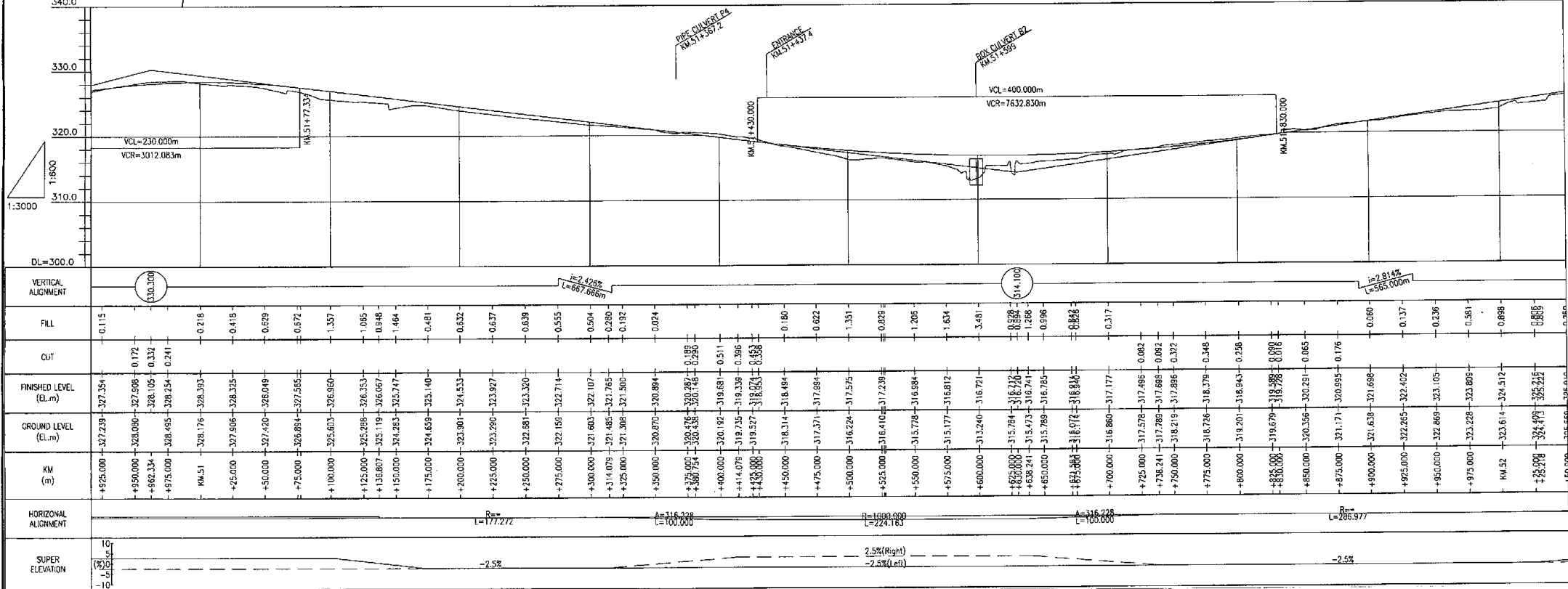
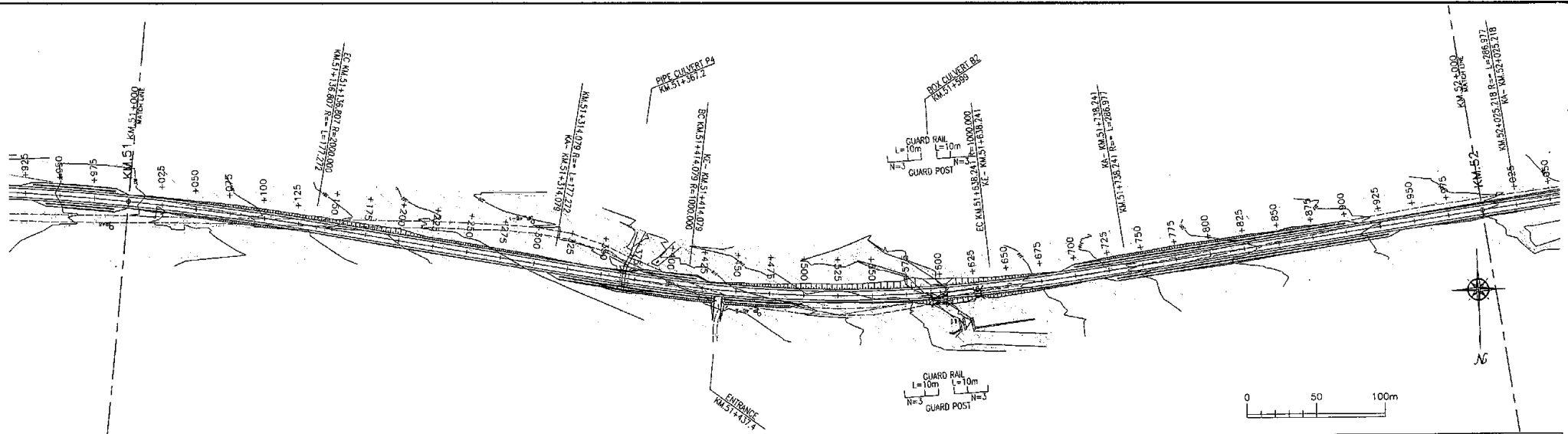


VERTICAL ALIGNMENT	FILL	CUT	FINISHED LEVEL (EL.m)	GROUND LEVEL (EL.m)	KM (±)	HORIZONTAL ALIGNMENT	SUPER ELEVATION
	0.531		342.580	343.086	+925.000		10
	1.916		342.759	343.665	+930.000		5
	0.979		343.515	344.493	+975.000		0
	0.994		344.193	345.188	KM.49		-5
	0.926		344.956	346.882	+25.000		-10
	0.689		345.878	346.576	+50.000		
	1.121		346.150	347.270	+75.000		
	0.960		347.004	347.965	+100.000		
	0.807		347.852	348.859	+125.000		
	1.093		348.260	348.353	+150.000		
	0.678		349.370	350.047	+175.000		
	0.533		350.187	350.935	+200.000		
	1.386		348.975	351.361	+225.000		
	1.883		349.985	351.888	+250.000		
	1.986		350.278	352.264	+275.000		
	1.704		350.843	352.547	+300.000		
	0.880		351.737	352.717	+325.000		
	0.716		353.505	352.775	+350.000		
	0.789		353.519	352.720	+375.000		
	0.991		353.544	352.553	+400.000		
	0.323		351.950	352.272	+425.000		
	0.637		351.242	351.880	+450.000		
	0.821		350.534	351.374	+475.000		
	0.782		350.576	350.858	+500.000		
	0.284		348.817	350.101	+525.000		
	0.358		348.085	349.444	+550.000		
	0.102		346.686	348.788	+575.000		
	0.250		347.881	348.131	+600.000		
	0.305		347.169	347.474	+625.000		
	0.316		346.501	346.817	+650.000		
	0.346		345.814	346.160	+675.000		
	0.389		345.115	345.504	+700.000		
	0.348		344.489	344.847	+725.000		
	0.046		344.236	344.190	+750.000		
	0.376		343.157	343.533	+775.000		
	0.589		342.277	342.875	+800.000		
	0.716		341.503	342.220	+825.000		
	0.250		341.313	341.563	+850.000		
	0.080		340.826	340.905	+875.000		
	0.673		340.627	340.627	+885.609		
	0.357		338.911	340.268	+900.000		
	0.706		339.031	339.726	+925.000		
	0.885		338.435	339.321	+950.000		
	0.958		338.062	339.021	+975.000		
	1.053		338.929	338.929	+985.609		
	1.297		337.540	338.837	KM.50		
	2.331		336.438	338.769	+25.000		

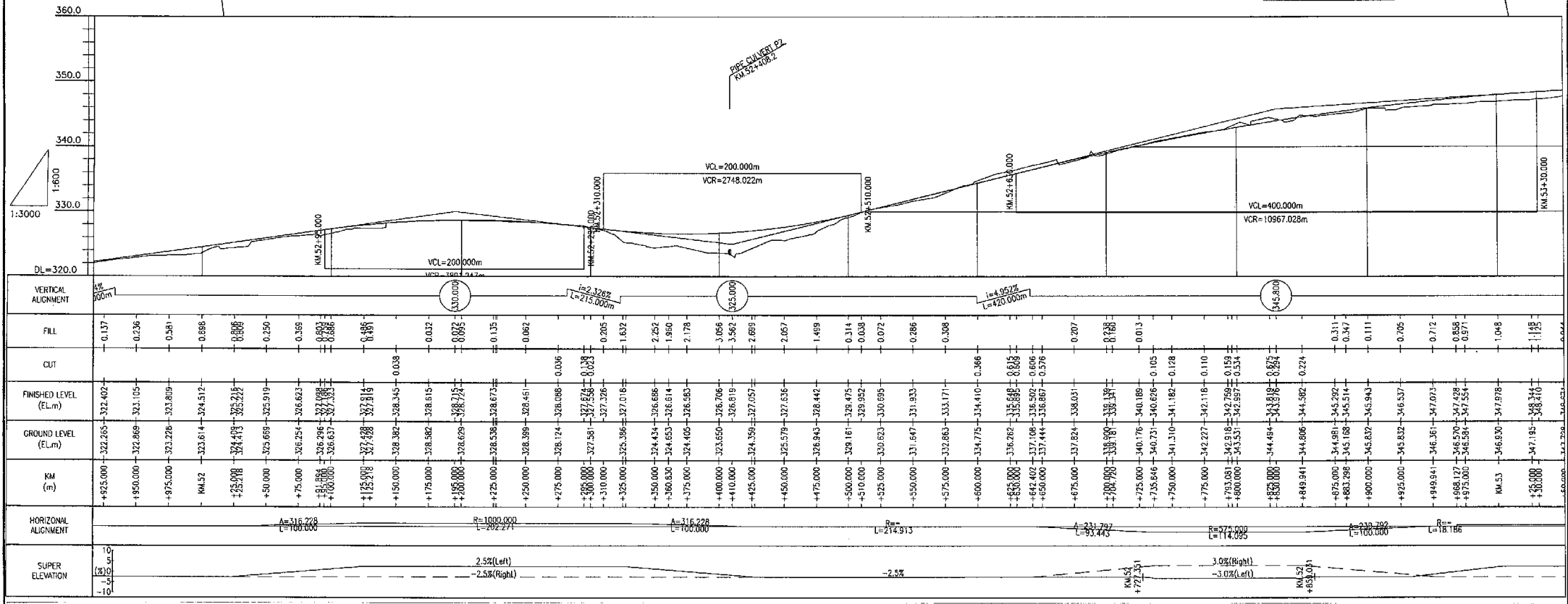
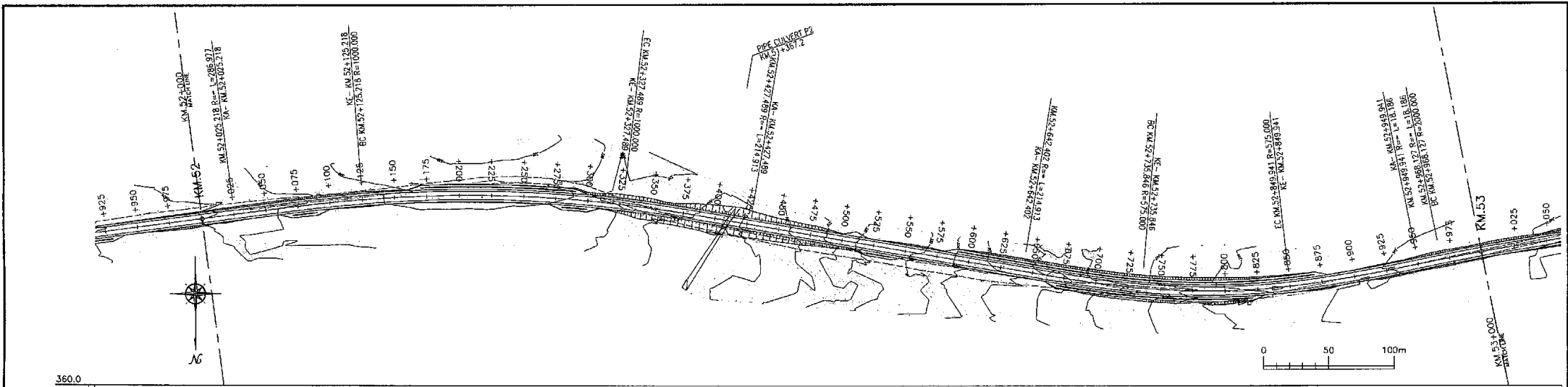
Tanzania National Roads Agency (TANROADS) of The United Republic of Tanzania	CONSULTANTS:	PROJECT NAME:	DRAWING TITLE:	Date: Aug. 2009	DRAWING No.:
	INGEROSEC CORPORATION, JAPAN	The Project for the Improvement of Masasi-Mangaka Road	PLAN AND PROFILE (18/23)	Prepared by:	MR 03 E-18
				Checked by:	



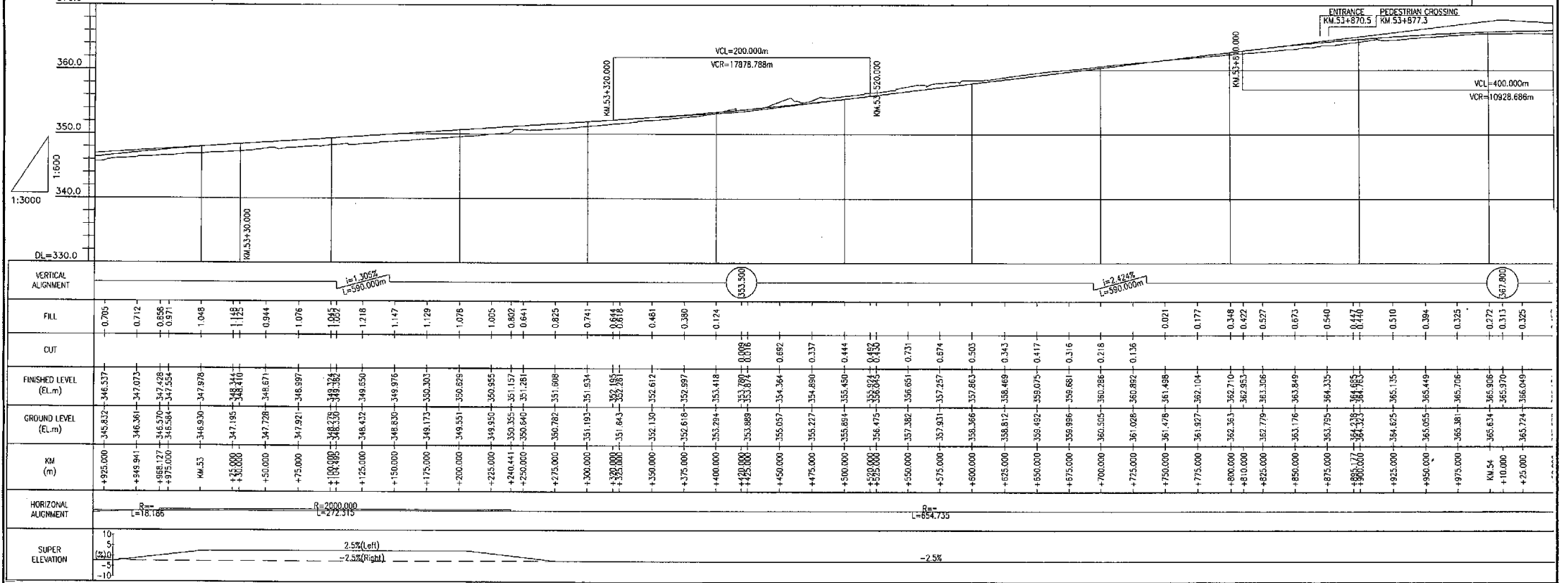
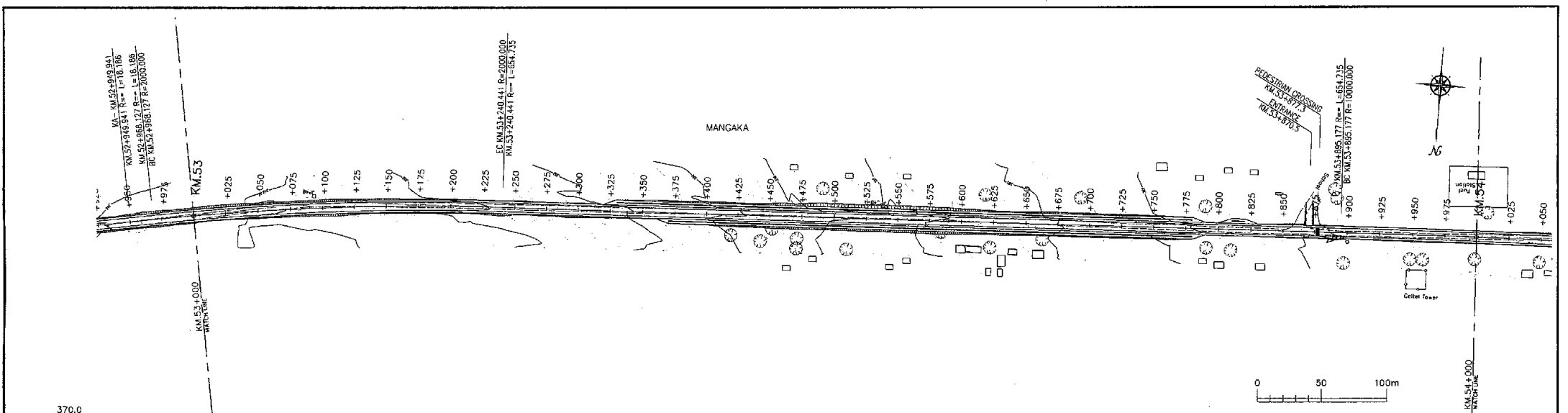
Tanzania National Roads Agency (TANROADS) of The United Republic of Tanzania	CONSULTANTS:	PROJECT NAME:	DRAWING TITLE:	Date: Aug. 2009	DRAWING No.:
	INGEROSEC CORPORATION, JAPAN	The Project for the Improvement of Masasi-Mangaka Road	PLAN AND PROFILE (19/23)	Prepared by:	MR 03 E-19
				Checked by:	



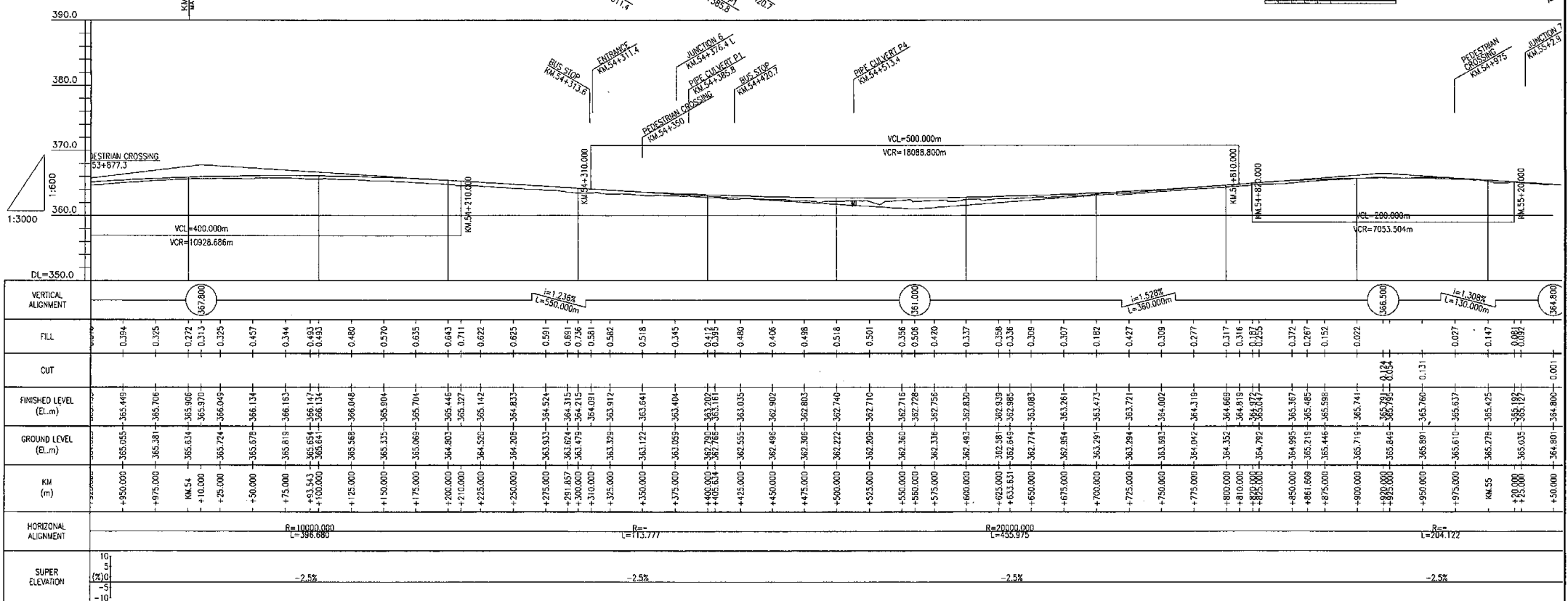
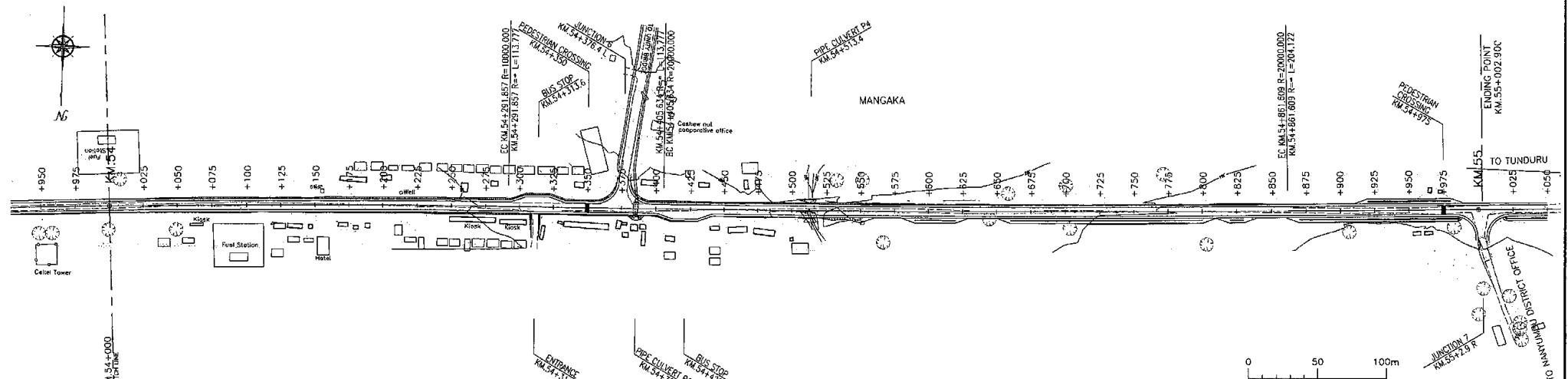
Tanzania National Roads Agency (TANROADS) of The United Republic of Tanzania	CONSULTANTS:	PROJECT NAME:	DRAWING TITLE:	Date: Aug. 2009	DRAWING No.:
	INGEROSEC CORPORATION, JAPAN	The Project for the Improvement of Masasi-Mangaka Road	PLAN AND PROFILE (20/23)	Prepared by:	MR 03 E-20
				Checked by:	



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	INGEROSEC CORPORATION, JAPAN	The Project for the Improvement of Masasi-Mangaka Road	PLAN AND PROFILE (21/23)	Prepared by:	MR 03 E-21
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	INGEROSEC CORPORATION, JAPAN	The Project for the Improvement of Masasi-Mangaka Road	PLAN AND PROFILE (22/23)	Prepared by:	MR 03 E-22
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Tanzania National Roads Agency (TANROADS) of The United Republic of Tanzania	CONSULTANTS:	PROJECT NAME:	DRAWING TITLE:	Date: Aug. 2009	DRAWING No.:
	INGEROSEC CORPORATION, JAPAN	The Project for the Improvement of Masasi-Mangaka Road	PLAN AND PROFILE (23/23)	Prepared by:	MR 03 E-23
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