






























BENCHMARK DATA (WGS84)			
NAME	X COORD	Y COORD	ELEVATION
BM1	-10725.196	2240.328	968.194
BM2	-10717.239	2240.266	959.450
BM3	-10729.083	2183.604	957.142
BM4	-11029.531	2183.008	955.552
BM5	-11275.307	2187.255	951.814
BM6	-11675.035	2185.650	948.085
BM7	-12205.266	2187.977	955.702
BM8	-12299.959	2184.616	955.866
BM9	-12340.877	2183.105	951.830
BM10	-12422.593	2185.659	957.330
BM11	-12609.654	2183.561	967.912
BM12	-12688.449	2182.354	965.972
BM13	-13301.908	2182.877	971.313
BM14	-13327.729	2182.244	972.385
BM15	-13509.619	2183.988	973.769
BM16	-13943.782	2183.908	981.939
BM17	-14667.586	2179.504	924.584
BM18	-14642.867	2186.525	928.633

ALIGNMENT DATA: ROAD 2						
SEGMENT	CHAINAGE	Y-COORD	X-COORD	RADIUS	D.A. / BEARING	LENGTH
C1	BC: Km 0.000	BC: -11403.802	BC: 2781789.139	750.00m	Δ: 17°26'20"	228.287 m
	PI: -11493.026	PI: 2787116.533				
	EC: Km 0.228	EC: -11599.909	EC: 2781674.006			
L1	Km 0.228 to Km 0.372	-11599.909 -11733.904	2781674.006 2781620.690		248°18'10"	144.213 m
	BC: Km 0.372	BC: -11733.904	BC: 2781620.690	1500.00m	Δ: 1°44'50"	45.729 m
	PI: Km 0.418	PI: -11736.151	PI: 2781652.237			
EC: Km 0.418	EC: -11776.645	EC: 2781604.435				
L2	Km 0.418 to Km 0.583	-11776.645 -11931.269	2781604.435 2781548.329		250°03'10"	164.432 m
	BC: Km 0.583	BC: -11931.269	BC: 2781548.329			
	EC: Km 0.583	EC: -11931.269	EC: 2781548.329			

ERF BOUNDARIES / ROAD RESERVE	
BENCHMARKS / REFERENCE POINTS	
EXISTING GROUND ELEVATIONS	
EXISTING FENCE-LINE	
EXISTING WALL	
EXISTING GUARDRAIL	
EXISTING ROAD SIGN	
EXISTING SIGN BOARD	
EXISTING DISTANCE MARKER	
EXISTING REFUSE BIN	
EXISTING TRAFFIC SIGNAL	
EXISTING STREET LIGHT POLE	
EXISTING ELECTRICAL MAST/POLE	
EXISTING ELEC. LINE	
EXISTING ELEC. OVERHEAD LINE	
EXISTING ELEC. MANHOLE	
EXISTING ELEC. BOX/TRANSFORMER	
EXISTING SEWER PIPE	
EXISTING SEWER MANHOLE	
EXISTING SEWER CLEANING EYE	
EXISTING STORMWATER PIPE	
EXISTING STORMWATER MANHOLE	
EXISTING WATER PIPE	
EXISTING WATER END CAP	
EXISTING WATER VALVE	
EXISTING WATER METER	
EXISTING WATER TAP	
EXISTING TELKOM CABLE	
EXISTING TELKOM MANHOLE	
EXISTING TELEPHONE POLE	

[illegible]

DESIGNED BY: RALEMA CONSULTING ENGINEERS

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S. Bapela-Pr Tech Eng
DESIGNED





M. Jikwana
DRAWN

S. Bapela-Pr Tech Eng
CHECKED

RALEMA CONSULTING	DEPARTMENT
ISSUED BY:	RECEIVED BY:
.....
DATE:	DATE:

CLIENT ADDRESS 		GROBLERSDAL PRIVATE BAG X5006 Groblersdal 0950
		Tel: (013) 962 1828 Fax: (013) 962 1017

CIENT	ELIAS MOTSOLEDI LOCAL MUNICIPALITY	CONTRACT No. EMLM 202023	IPW No. *****	SHEET 1 of 1
PROJECT TITLE	UPGRADING OF KGOBOKWANE-KGAPHAMADI ROADS, BRIDGES AND STORMWATER			
DRAWING TITLE	ROAD 2: km 0+000 to 0+583: LAYOUT PLAN AND SETTING OUT DATA			

SCALE	TYPES OF PLANNING	STATUS
1:500	 PLANNING  CONSTRUCTION  AS-BUILT	 PLANNING
REVISION	PLAN No.	
00	RCE73_EMLM_05_2LP_01	