



BENCH MARKS - WG 29			
Y	X	DESCRIPTION	ELEVATION
16530.014	2809095.796	BM1-12mm CONCRETE	1395.370
16183.447	2808973.796	BM2-12mm CONCRETE	1396.854
16064.719	2808977.830	BM3-12mm CONCRETE	1404.230
16409.081	2808900.654	BM4-12mm CONCRETE	1400.913

0 PI Name : 1			
Curve direction = START			
-- CIRCULAR SECTION --			
Radius 0.000 Tangent L 0.000			
Int Angle 0.000 Curve L 0.000			
-- CHAINS & COORDINATES --			
Point	Peg Distance	Y	X
PI	0.000	16586.112	2809101.228
CC	0.000	0.000	0.000
BTC	0.000	16586.112	2809101.228
BCC	0.000	16586.112	2809101.228
ECC	0.000	16586.112	2809101.228
ETC	0.000	16586.112	2809101.228

1 PI Name : 2			
Curve direction = RIGHT			
-- CIRCULAR SECTION --			
Radius 1000.000 Tangent L 21.947			
Int Angle 2.3052 Curve L 43.888			
-- CHAINS & COORDINATES --			
Point	Peg Distance	Y	X
PI	16490.486	2809071.078	
CC	16218.972	2810034.653	
BTC	78.052	16511.473	2809078.358
BCC	78.052	16511.473	2809078.358
ECC	121.940	16469.237	2809066.485
ETC	121.940	16469.237	2809066.485

2 PI Name : 3			
Curve direction = LEFT			
-- CIRCULAR SECTION --			
Radius 1000.000 Tangent L 19.779			
Int Angle 2.1558 Curve L 39.553			
-- CHAINS & COORDINATES --			
Point	Peg Distance	Y	X
PI	16432.326	2809056.952	
CC	16701.810	2808093.735	
BTC	140.214	16451.544	2809061.912
BCC	140.214	16451.544	2809061.912
ECC	179.767	16413.456	2809051.259
ETC	179.767	16413.456	2809051.259

3 PI Name : 4			
Curve direction = RIGHT			
-- CIRCULAR SECTION --			
Radius 60.000 Tangent L 59.999			
Int Angle 89.5955 Curve L 94.246			
-- CHAINS & COORDINATES --			
Point	Peg Distance	Y	X
PI	16143.587	2809869.959	
CC	16163.738	2809044.741	
BTC	401.609	16201.037	2809887.290
BCC	401.609	16201.037	2809887.290
ECC	495.855	16126.265	2809027.439
ETC	495.855	16126.265	2809027.439

4 PI Name : 5			
Curve direction = RIGHT			
-- CIRCULAR SECTION --			
Radius 60.000 Tangent L 26.086			
Int Angle 50.1005 Curve L 52.536			
-- CHAINS & COORDINATES --			
Point	Peg Distance	Y	X
PI	16058.431	2809262.739	
CC	16123.951	2809243.149	
BTC	703.066	16066.530	2809225.847
BCC	703.066	16066.530	2809225.847
ECC	755.802	16073.895	2809276.184
ETC	755.802	16073.895	2809276.184

5 PI Name : 6			
Curve direction = RIGHT			
-- CIRCULAR SECTION --			
Radius 1000.000 Tangent L 13.460			
Int Angle 1.3232 Curve L 26.919			
-- CHAINS & COORDINATES --			
Point	Peg Distance	Y	X
PI	16346.297	2809689.191	
CC	17173.665	2809127.969	
BTC	1236.892	16338.886	2809677.955
BCC	1236.892	16338.886	2809677.955
ECC	1263.810	16354.008	2809700.224
ETC	1263.810	16354.008	2809700.224

6 PI Name : 7			
Curve direction = LEFT			
-- CIRCULAR SECTION --			
Radius 1000.000 Tangent L 16.161			
Int Angle 1.5106 Curve L 32.319			
-- CHAINS & COORDINATES --			
Point	Peg Distance	Y	X
PI	16380.668	2809738.370	
CC	15551.753	2810287.876	
BTC	1294.189	16371.410	2809725.124
BCC	1294.189	16371.410	2809725.124
ECC	1326.508	16389.493	2809751.909
ETC	1326.508	16389.493	2809751.909

7 PI Name : 8			
Curve direction = END			
-- CIRCULAR SECTION --			
Radius 0.000 Tangent L 0.000			
Int Angle 0.000 Curve L 0.000			
-- CHAINS & COORDINATES --			
Point	Peg Distance	Y	X
PI	16435.275	2809822.144	
CC	0.000	0.000	0.000
BTC	1410.347	16435.275	2809822.144
BCC	1410.347	16435.275	2809822.144
ECC	1410.347	0.000	0.000
ETC	1410.347	0.000	0.000

						PROJECT		DESIGNED BY		DESIGNED BY		DESIGN APPROVED		APPROVED BY		TITLE		THEMBISILE HANI LOCAL MUNICIPALITY		SCALE		FILE No		DISTRICT		TYPE OF PLANNING	
						CONSTRUCTION OF TWEEFONTEIN-E BUS AND TAXI ROUTE		KUMELCON Project Managers		MZ						TWEEFONTEIN-E ROAD LAYOUT AND SETTING OUT DETAILS		TEL: (031) 986-9100 FAX: (031) 986-9005 WEBSITE: www.thembisilelocalmunicipality.gov.za		1 : 1000		003/19		KNAMHLANGA		DETAIL DESIGN	
								KC								TENDER No						AGENT		DRC No			
								MN								THLM/SCM02/2019-20/TS1A-12						THLM		003-19-01			
								KC																			
No	DATE	AMENDMENTS		HEAD OF DEPT.				Plot 279 WISMAN 1025		Tel: (015) 456-5711 Fax: (015) 456-5726 E-mail: w@wamunicipality.com		for CONSULTING ENGINEER		for MAYOR/LD LOCAL MUNICIPALITY													
												DATE		DATE													