



- ### NOTES
- ALL MATERIAL AND WORKMANSHIP MUST COMPLY WITH THE REQUIREMENTS OF THE LATEST RELEVANT SABS REQUIREMENTS.
 - ALL DIMENSIONS ARE IN MILLIMETERS.
 - DO NOT SCALE FROM THESE DRAWINGS.
 - ALL DIMENSIONS MUST BE CHECKED AND APPROVED ON SITE.
 - ALL CONSTRUCTION TO BE DONE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR MUNICIPAL CIVIL ENGINEERING WORKS, THIRD EDITION 2005 AND THE STANDARD OF DETAIL DRAWINGS.
 - THESE DRAWINGS MUST BE READ IN CONJUNCTION WITH THE CITY OF TSHWANE STANDARD DRAWINGS.
 - THIS DRAWING MUST BE READ IN CONJUNCTION WITH THE STANDARD SPECIFICATIONS FOR MUNICIPAL CIVIL ENGINEERING WORKS.
 - THE SIGNATURE OR INITIALS ON THIS DRAWING, OF ANY DIRECTOR OF THE WATER AND SANITATION DEPARTMENT, IN NO WAY RELIEVES ANY RESPONSIBILITY WHATSOEVER FROM THE CONSULTANT.
 - THE CONSULTANT REMAINS RESPONSIBLE TO ENSURE THAT ALL THE DRAWINGS, STANDARD DRAWINGS, STANDARDS AND SPECIFICATIONS OF WATER AND SANITATION DEPARTMENT HAVE BEEN MET AND ARE COMPLIED WITH.
 - FINAL POSITION OF SERVICES TO BE DETERMINED ON SITE.
 - NEW PIPES SHALL BE GRADE A STEEL PIPE IN ACCORDANCE WITH SANS 109 SPECIFICATIONS AS SHOWN ON THE CIVIL SETTING DRAWINGS.
 - ALL ISOLATING VALVES TO BE BUTTERFLY VALVES WITH 800 KPa DIFFERENTIAL PRESSURE AND FLANGED ENDS AS PER SANDOZ TABLE 1000.
 - ALL FLANGES TO BE WELD STEEL, GALVALUME TO FACE, 100 OR 200 KPa.
 - ALL BURIED STEEL PIPES, FLANGES AND EQUIPMENTS MUST BE CORROSION PROTECTED USING GENCO PRODUCTS.
 - PIPE BEDDING TO BE DONE IN ACCORDANCE TO SANS 1009 DB.
 - PIPE BEDDING TO BE DONE IN ACCORDANCE TO SANS 1009 LB BEDDING (PPSP) FOR FLEXIBLE PIPES.
 - DEPTH OF PIPES BELOW FINAL GROUND VARIES FROM MINIMUM OF 1.0m TO A MAXIMUM DEPTH OF 1.6m.
 - PIPES TO BE PLACED AT 5m FROM BOUNDARY.
 - ALL DIMENSIONS MUST BE CHECKED AND APPROVED ON SITE AND ANY DISCREPANCIES FOUND SHOULD BE REPORTED TO THE ENGINEER.

Coordinate List

Lo 27

Hammanskraal West Bulk Water Pipeline			
Node	YLo	XLo	XL0
Const			
W1	76 992.343	2 811 544.631	
W2	77 238.384	2 811 547.657	
W3	77 376.183	2 811 548.232	
W4	76 793.422	2 811 644.290	
W5	76 679.260	2 811 705.327	
W6	77 375.535	2 811 703.535	
W7	76 407.992	2 811 833.513	
W8	76 366.216	2 811 854.022	
W9	76 799.227	2 811 930.332	
W10	75 916.848	2 812 010.342	
W11	77 698.247	2 812 030.024	
W12	75 806.393	2 812 031.992	
W13	75 823.826	2 812 033.671	
W14	75 878.308	2 812 038.918	
W15	77 304.965	2 812 040.033	
W16	77 730.292	2 812 142.725	
W17	77 763.586	2 812 273.289	
W18	77 784.188	2 812 285.460	
W19	77 827.077	2 812 426.046	
W20	77 827.615	2 812 435.909	
W21	78 114.869	2 812 543.399	
W22	78 293.515	2 813 268.741	
W23	78 341.169	2 813 845.670	
W24	78 517.737	2 814 541.481	
W25	78 399.286	2 814 551.146	
W26	78 526.741	2 814 602.266	
W27	78 522.753	2 814 602.578	
W28	78 102.862	2 812 981.562	
W29	77 146.297	2 812 181.962	

Pipe Data List

Node	Node	Length	Dia
Hammanskraal West Pipeline			
W1	W4	246.04	800
W1	W4	221.60	800
W2	W3	137.80	800
W4	W6	155.30	800
W4	W5	127.16	800
W5	W7	302.22	800
W6	W11	459.06	800
W7	W8	46.54	800
W8	W9	183.60	800
W9	W10	236.24	800
W10	W14	102.70	800
W11	W15	11.60	800
W12	W13	17.51	800
W13	W14	54.73	800
W15	W16	105.98	800
W16	W17	134.74	800
W17	W18	23.93	800
W18	W19	154.65	800
W19	W20	154.00	800
W20	W21	588.38	800
W21	W22	365.92	800
W22	W23	578.89	800
W23	W25	707.87	800
W24	W25	118.88	800
W24	W27	61.30	800
W26	W27	4.00	800

FOR REVIEW

REFERENCE DRAWINGS

NUMBER	TITLE

CITY OF TSHWANE
WATER AND SANITATION
DEPARTMENT

AMENDMENTS

NR	DATE	APPROVED	DESCRIPTION	PAR

WATER AND SANITATION

FOR INTERNAL APPROVAL - NO LEGAL SIGNATURE APPLICABLE

DIRECTOR: WATER AND SANITATION - PLANNING			
NAME	Prof. Reg. No	SIGNATURE	DATE
REGIONAL DIRECTOR: (1,2,3,4,5,6 or 7)			
NAME	Prof. Reg. No	SIGNATURE	DATE
DIRECTOR: SYSTEM DEVELOPMENT			
NAME	Prof. Reg. No	SIGNATURE	DATE
DIRECTOR: BULK WATER			
NAME	Prof. Reg. No	SIGNATURE	DATE
DIRECTOR: INFRASTRUCTURE PROVISION			
NAME	Prof. Reg. No	SIGNATURE	DATE
DIRECTOR: WASTE WATER TREATMENT			
NAME	Prof. Reg. No	SIGNATURE	DATE
NAME	Prof. Reg. No	SIGNATURE	DATE

CONSULTANT DETAIL

2 Lynwood Galleries
354 Rosemary Road
Lynwood, Tshwane
Tel: (012) 361 3629
Fax: (012) 361 3525

Nyeleti
Engineered to Excel

I, **F de Lange** Prof Reg Nr. **800102**
HEREBY CERTIFY THAT THE SERVICES WILL HAVE BEEN INSTALLED
ACCORDING TO NOTE 9 OF THE ABOVE NOTES AND TO THE
DRAWING

SIGNATURE DATE **11/09/2017**

CONSULTANT DRAWING NUMBER:

DESIGNED

NAME: **P Sekoala** Pr Eng. Prof Reg No: _____
DATE: **12/08/2017**

DRAWN

NAME: **P Sekoala** Prof Reg No: _____
DATE: **08/09/2017**

CHECKED

NAME: **F de Lange** Pr Eng. Prof Reg No: **800102**
DATE: **08/09/2017**

INFORMATION OFFICE CHECKED

NAME: _____ Pr Eng. Prof Reg No: _____
DATE: _____

DESIGN OFFICE APPROVAL

NAME: _____ Pr Eng. Prof Reg No: _____
DATE: _____

CONTRACT

No: _____

PROJECT

No: _____

SHEET

No: _____

PAPER SIZE:

A0

SCALE:

NTS

DATE:

11/09/2017

PROJECT STATUS

RECORDED SIGN WHEN APPLICABLE

CONCEPT DRAWING

TENDER DRAWING

APPROVED CONSTRUCTION DRAWING

AS BUILT DRAWING

PROJECT ENGINEER OF COT:

NAME: _____ Pr Eng. Prof Reg No: _____
DATE: _____

INSPECTOR OF WORKS OF COT:

NAME: _____ Prof Reg No: _____
DATE: _____

LOCATION OF PROJECT:

HAMMANSKRAAL WEST

DESCRIPTION OF PROJECT:

**BULK WATER SUPPLY PIPELINE
GENERAL LAYOUT 1 OF 1**

WBS No. : _____

COT DRAWING NUMBER: _____