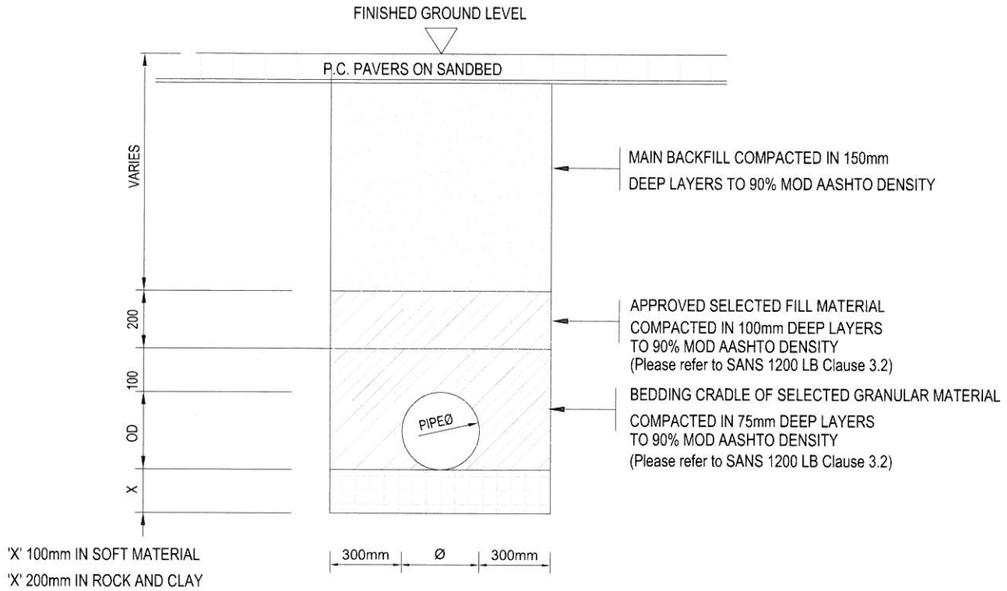
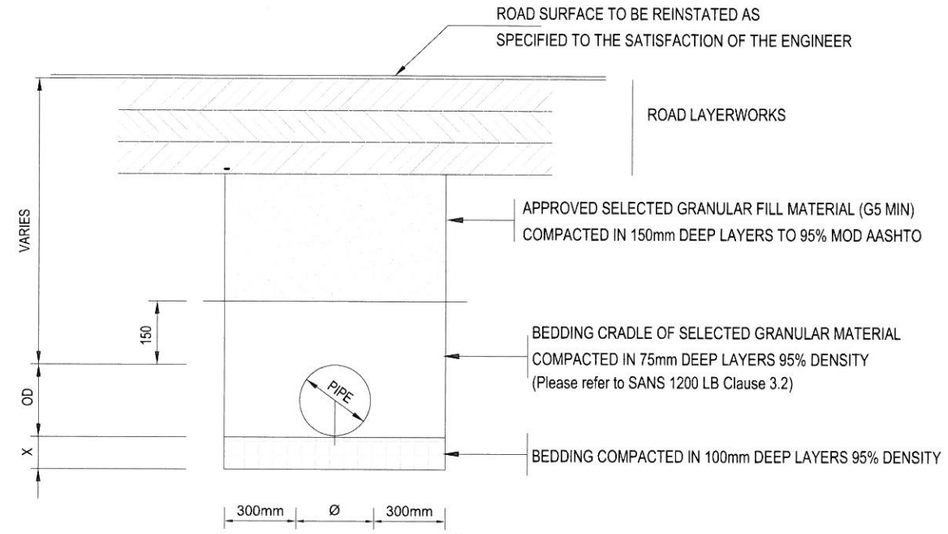


TYPICAL TRENCH SECTION ACROSS PAVED WALKWAYS AND OPEN GROUND



TYPICAL TRENCH SECTION BENEATH ROAD

NOTES:

1. PIPE SIDE ALLOWANCE OF 300mm TYPICAL FOR UP TO 700mm Dia.
FOR PIPES GREATER THAN 700mm REFER TO SANS 1200DB CLUASES 5.2
"MINIMUM BASE WIDTHS."
2. COMPATION OF MAIN FILL TO MINIMUM MOD AASHTO OR THAT OF
SURROUNDING IN SITU UNDISTURBED GROUND AND AS DIRECTED BY THE ENGINEER.
3. DIMENSIONS IN MILLIMETERS (mm)
4. REFER ALSO TO JRA AND OTHER SERVICE PROVIDERS SPECIFICATIONS FOR BEDDING
DETAILS IN ROAD RESERVES OR WHERE THE PIPE INTERSECT WITH OTHER SERVICES.

CONSULTING ENGINEERS
CAPEX DESIGN SECTION
SWISS HOUSE
7TH FLOOR

DESIGNED	B.M.KHUMALO	MAY 2017	
DRAWN	B.M.KHUMALO	MAY 2017	
CHECKED	J.GUMBO	DATE: 19/7/17	
	SIGNATURE:		
	ECSA REG. No: 20137806		
APPROVED BY:	T.MPANDAGUTA	DATE:	
	SIGNATURE:		
	ECSA REG. No: 20170150		

Johannesburg Water

17 HARRISON STREET
MARSHALLTOWN
2107

TEL: (011) 688-1400

FAX: (011) 688-1529

Joburg

STANDARD DETAIL
SEWER BEDDING DETAILS

AMENDMENTS

SCALE	REV:	DESCRIPTION	APPROVED	DATE:

DRAWING No.JW100-DET02-W01

PROJECT No. | REV.

A3 ORIGINAL PAGE SIZE | SHEET 2 OF

FILE No.

COORDINATE LIST
LO29

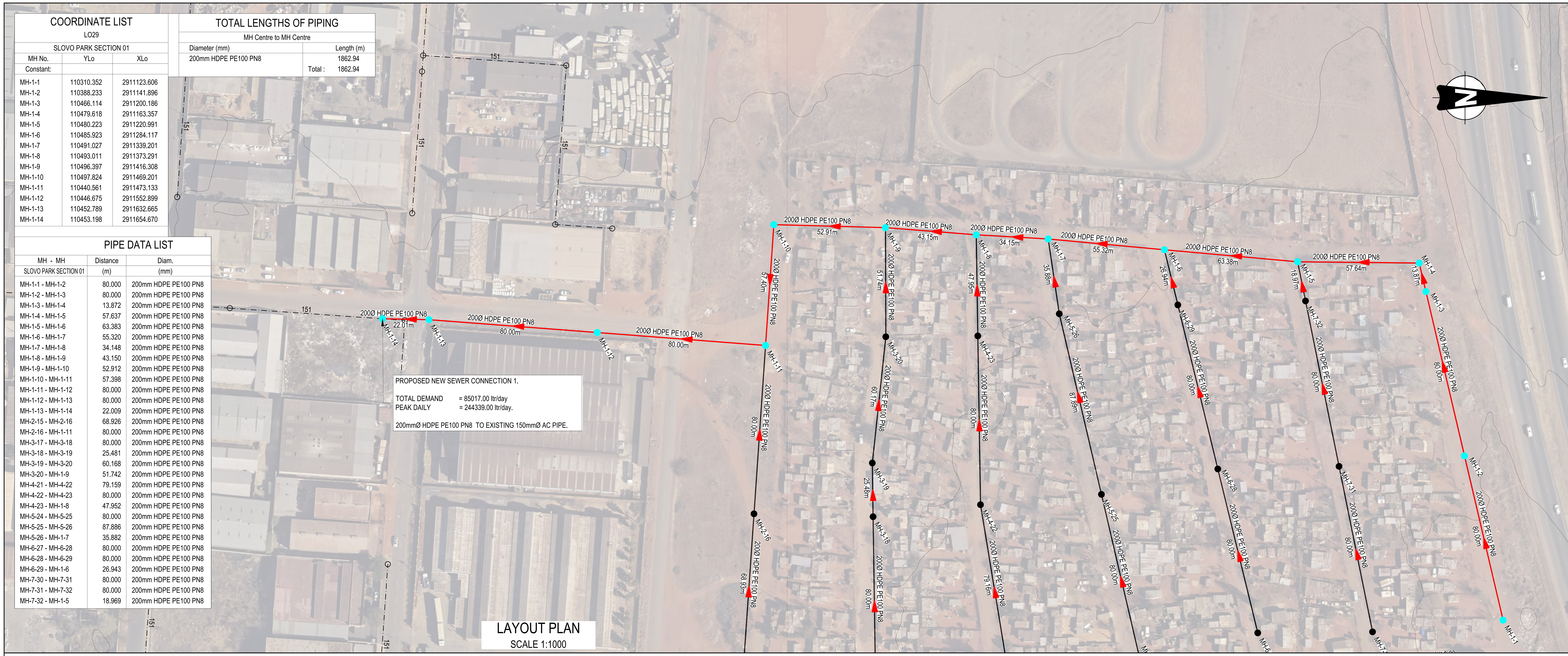
SLOVO PARK SECTION 01		
MH No.	YLo	XLo
Constant:		
MH-1-1	110310.352	2911123.606
MH-1-2	110388.233	2911141.896
MH-1-3	110466.114	2911200.186
MH-1-4	110479.618	2911163.357
MH-1-5	110480.223	2911220.991
MH-1-6	110485.923	2911284.117
MH-1-7	110491.027	2911339.201
MH-1-8	110493.011	2911373.291
MH-1-9	110496.397	2911416.308
MH-1-10	110497.824	2911469.201
MH-1-11	110440.561	2911473.133
MH-1-12	110446.675	2911552.899
MH-1-13	110452.789	2911632.665
MH-1-14	110453.198	2911654.670

TOTAL LENGTHS OF PIPING
MH Centre to MH Centre

Diameter (mm)	Length (m)
200mm HDPE PE100 PN8	1862.94
Total :	1862.94

PIPE DATA LIST

MH - MH	Distance	Diam.
SLOVO PARK SECTION 01	(m)	(mm)
MH-1-1 - MH-1-2	80.000	200mm HDPE PE100 PN8
MH-1-2 - MH-1-3	80.000	200mm HDPE PE100 PN8
MH-1-3 - MH-1-4	13.872	200mm HDPE PE100 PN8
MH-1-4 - MH-1-5	57.637	200mm HDPE PE100 PN8
MH-1-5 - MH-1-6	63.383	200mm HDPE PE100 PN8
MH-1-6 - MH-1-7	55.320	200mm HDPE PE100 PN8
MH-1-7 - MH-1-8	34.148	200mm HDPE PE100 PN8
MH-1-8 - MH-1-9	43.150	200mm HDPE PE100 PN8
MH-1-9 - MH-1-10	52.912	200mm HDPE PE100 PN8
MH-1-10 - MH-1-11	57.398	200mm HDPE PE100 PN8
MH-1-11 - MH-1-12	80.000	200mm HDPE PE100 PN8
MH-1-12 - MH-1-13	80.000	200mm HDPE PE100 PN8
MH-1-13 - MH-1-14	22.009	200mm HDPE PE100 PN8
MH-2-15 - MH-2-16	68.926	200mm HDPE PE100 PN8
MH-2-16 - MH-1-11	80.000	200mm HDPE PE100 PN8
MH-3-17 - MH-3-18	80.000	200mm HDPE PE100 PN8
MH-3-18 - MH-3-19	25.481	200mm HDPE PE100 PN8
MH-3-19 - MH-3-20	60.168	200mm HDPE PE100 PN8
MH-3-20 - MH-1-9	51.742	200mm HDPE PE100 PN8
MH-4-21 - MH-4-22	79.159	200mm HDPE PE100 PN8
MH-4-22 - MH-4-23	80.000	200mm HDPE PE100 PN8
MH-4-23 - MH-1-8	47.952	200mm HDPE PE100 PN8
MH-5-24 - MH-5-25	80.000	200mm HDPE PE100 PN8
MH-5-25 - MH-5-26	87.886	200mm HDPE PE100 PN8
MH-5-26 - MH-1-7	35.882	200mm HDPE PE100 PN8
MH-6-27 - MH-6-28	80.000	200mm HDPE PE100 PN8
MH-6-28 - MH-6-29	80.000	200mm HDPE PE100 PN8
MH-6-29 - MH-1-6	26.943	200mm HDPE PE100 PN8
MH-7-30 - MH-7-31	80.000	200mm HDPE PE100 PN8
MH-7-31 - MH-7-32	80.000	200mm HDPE PE100 PN8
MH-7-32 - MH-1-5	18.969	200mm HDPE PE100 PN8



PROPOSED NEW SEWER CONNECTION 1.

TOTAL DEMAND = 85017.00 ltr/day
PEAK DAILY = 244339.00 ltr/day.

200mmØ HDPE PE100 PN8 TO EXISTING 150mmØ AC PIPE.

LAYOUT PLAN
SCALE 1:1000

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SEWER:

1. ALL PIPES TO BE LAID IN ACCORDANCE WITH SANS 1200, LATEST REVISION AND THE REQUIREMENTS OF JOHANNESBURG WATER SOC LTD.
2. ALL PIPES TO LAID UNDER TRENCH CONDITIONS UNLESS OTHERWISE SHOWN.
3. ALL CONSTRUCTION WORK TO BE CARRIED OUT IN STRICT ACCORDANCE WITH REQUIREMENTS OF JOHANNESBURG WATER.
4. SEWERS GENERALLY 1,5m FROM BOUNDARIES UNLESS OTHERWISE SHOWN.
5. DO NOT SCALE FROM THESE DRAWINGS.
6. THIS DRAWING MUST BE READ IN CONJUNCTION WITH THE STANDARD SPECIFICATIONS FOR MUNICIPAL CIVIL ENGINEERING WORKS.
7. THE FINAL PIPE ROUTE TO BE DETERMINED ON SITE AFTER EXPOSING OF EXISTING SERVICES.
8. ALL WORKS TO BE APPROVED BY EMPLOYEE AGENT REPRESENTATIVE BEFORE CONSTRUCTION.
9. CONTRACTOR TO CONFIRM LEVELS OF EXISTING PIPES BEFORE COMMENCING CONSTRUCTION.
10. POSITIONS OF ALL EXISTING SERVICES ARE APPROXIMATED AND MUST BE VERIFIED ON SITE.
11. ALL MATERIALS USED IN INSTALLING SEWER MAINS SHALL COMPLY WITH THE RELEVANT SABS SPECIFICATION AND WITH THE MINIMUM REQUIREMENTS OF JOHANNESBURG WATER (SOC) LTD.
12. THE POSITION AND DEPTH OF ALL EXISTING SERVICES ON THE SITE AND OFF THE SITE WHERE AFFECTED BY THE WORKS SHALL BE CONFIRMED PRIOR TO ANY CONSTRUCTION WORK ON THE INSTALLATION OF WATER OR SEWER MAINS BEING COMMENCED.
13. THE CONTRACTOR SHALL CARRY OUT WORKS TO TIE-IN CONNECTIONS TO EXISTING SEWER MANHOLES AND MAINS.
14. POSITIONS OF ALL EXISTING SERVICES ARE APPROXIMATED AND MUST BE VERIFIED ON SITE BY ENGINEER REPRESENTATIVE AND CONTRACTOR.

PIPE ANCHOR
1. GRADE: BETWEEN 1:10 AND 1:6: ANCHOR BLOCKS SHALL BE INSTALLED AT INTERVALS NOT EXCEEDING 12 METERS.

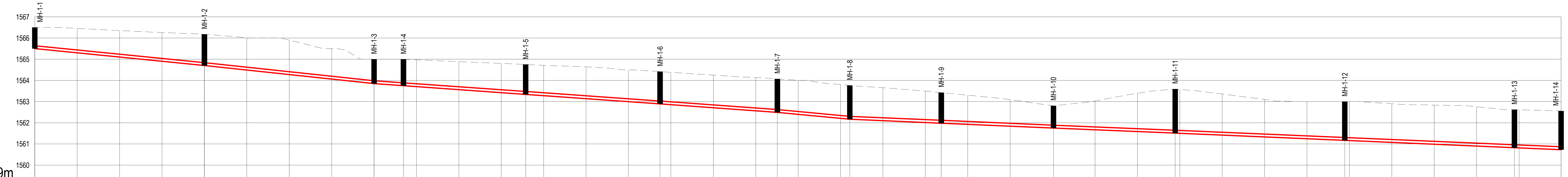
SEWER MANHOLES
1. SEWER MANHOLES ARE TO BE SPACED AT A MAXIMUM OF 80 METERS.

LEGEND
- 200mmØ HDPE PE100 PN8 PIPE
- NEW SEWER MANHOLE (MH)
- FLOW DIRECTION
- NEW SEWER PIPE AND MANHOLE NOT WITHIN INDICATED LONG SECTION
- EXISTING SEWER PIPE
- EXISTING SEWER MANHOLE
- CONTOURS
- 0000 BM00 BENCHMARK

LONGITUDINAL SECTION LEGEND:
PIPE -
NGL -

SCALES:
Horizontal 1:1000
Vertical 1:100

Datum : 1559m



CHAINAGE (m)	DEPTH TO INVERTS	INVERT LEVEL	GROUND LEVEL
0.000	-1.000	1565.500	1566.500
20.000	-1.153	1565.300	1566.453
40.000	-1.252	1565.100	1566.352
60.000	-1.359	1564.900	1566.259
80.000	-1.473	1564.700	1566.173
100.000	-1.521	1564.488	1566.009
120.000	-1.627	1564.275	1565.902
140.000	-1.437	1564.063	1565.500
200.000	-1.150	1563.850	1565.000
173.872	-1.247	1563.750	1564.997
180.000	-1.265	1563.706	1564.971
200.000	-1.322	1563.564	1564.886
220.000	-1.379	1563.422	1564.801
231.508	-1.412	1563.340	1564.752
240.000	-1.431	1563.280	1564.711
260.000	-1.499	1563.138	1564.637
280.000	-1.504	1562.996	1564.500
294.891	-1.523	1562.890	1564.413
300.000	-1.527	1562.853	1564.380
320.000	-1.543	1562.708	1564.251
340.000	-1.571	1562.564	1564.135
350.211	-1.579	1562.490	1564.069
360.000	-1.603	1562.397	1564.000
380.000	-1.597	1562.206	1563.803
384.359	-1.596	1562.165	1563.761
400.000	-1.559	1562.098	1563.657
420.000	-1.486	1562.012	1563.498
427.509	-1.443	1561.980	1563.423
440.000	-1.377	1561.926	1563.303
460.000	-1.253	1561.839	1563.092
480.421	-1.048	1561.750	1562.798
500.000	-1.358	1561.668	1563.026
520.000	-1.806	1561.585	1563.391
537.819	-2.079	1561.510	1563.589
540.000	-2.071	1561.501	1563.572
560.000	-1.942	1561.416	1563.358
580.000	-1.771	1561.331	1563.102
600.000	-1.754	1561.246	1563.000
617.819	-1.830	1561.170	1563.000
620.000	-1.839	1561.161	1563.000
640.000	-1.821	1561.074	1562.895
660.000	-1.845	1560.988	1562.833
680.000	-1.854	1560.902	1562.756
697.819	-1.792	1560.825	1562.617
700.000	-1.795	1560.816	1562.611
719.828	-1.826	1560.730	1562.556

PIPE GRADES			HYDRAULICS DESIGN: Q (l/s)	V (m/s)	MAX.(0.67D): Q (l/s)	V (m/s)
80.000m	1: 100	1.000 %			9.83	0.96
80.000m	1: 94.118	1.063 %	0.08	0.25	10.14	0.99
13.872m	1: 138.720	0.721 %	0.17	0.27	8.35	0.82
57.636m	1: 140.576	0.711 %	0.17	0.27	8.29	0.81
63.383m	1: 140.851	0.710 %	0.64	0.40	8.29	0.81
55.320m	1: 138.300	0.723 %	1.10	0.48	8.36	0.82
34.148m	1: 105.071	0.952 %	1.56	0.58	9.59	0.94
43.150m	1: 233.243	0.429 %	2.01	0.47	6.44	0.63
52.912m	1: 230.052	0.435 %	2.52	0.50	6.48	0.64
57.398m	1: 239.158	0.418 %	2.61	0.50	6.36	0.62
80.000m	1: 235.294	0.425 %	2.82	0.52	6.41	0.63
80.000m	1: 231.884	0.431 %	2.82	0.52	6.46	0.63
22.010m	1: 231.684	0.432 %	2.82	0.52	6.46	0.63

PIPE DETAILS: 200mm HDPE PE100 PN8, Class B rigid pipe bedding

MH-1-1 - MH-1-14

ISSUED FOR TENDER

REFER TO DRAWING No:

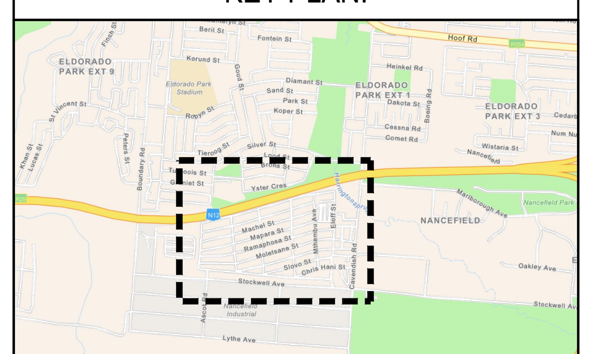
GENERAL LAYOUTS
- JW14478-SLV-MGLP-000 - MASTER GENERAL LAYOUT PLAN
- JW14478-SLV-GLP-S1-000 - GENERAL LAYOUT PLAN

LAYOUT AND LONGITUDINAL SECTIONS
- JW14478-SLV-S1-LS-01 - LAYOUT AND LONGITUDINAL SECTION SHEET 1 OF 3
- JW14478-SLV-S1-LS-02 - LAYOUT AND LONGITUDINAL SECTION SHEET 2 OF 3
- JW14478-SLV-S1-LS-03 - LAYOUT AND LONGITUDINAL SECTION SHEET 3 OF 3

STANDARD DETAILS

JW100-DET02-W01:	BEDDING DETAIL
JW100-DET01-S01:	MANHOLE DETAILS FOR SEWER
JW100-DET01.1-W01:	NAMEBOARD

KEY PLAN:



CONSULTING ENGINEERS
CAPEX - ENGINEERING SERVICE UNIT
TURBINE HALL - 3RD FLOOR
65 NTEMI PILISO STREET
NEWTOWN
JOHANNESBURG
2113

DESIGNED	S.KHUZWAYO	OCT 2024
	SIGNATURE:	
DRAWN	R.MUDAU	OCT 2024
	SIGNATURE:	
CHECKED	M.SAMBO	OCT 2024
	SIGNATURE:	
APPROVED BY:	P.MOGOLOLA	OCT 2024
	SIGNATURE:	ECSA REG. No: 2018300335

Johannesburg Water

JOHANNESBURG WATER SOC Ltd
TURBINE HALL
65 NTEMI PILISO STREET
NEWTOWN
JOHANNESBURG
2113
TEL: +27 (0)11 688 1400
FAX: +27(0)11 688-1528

Municipality:

Joburg
a world class African city

Project description:

NANCEFIELD - SLOVO PARK (SECTION 1)
PROVISION OF BASIC SANITATION SERVICES
LAYOUT PLAN AND LONG SECTION
MH-1-1 - MH-1-14

SCALE: AS SHOWN

AMENDMENTS

REV	DESCRIPTION	DATE	BY	APV
A	ISSUED FOR TENDER	10/18/2024	SK	PM

DRAWING No: JW14478-SLV-S1-LS-01

PROJECT No.: S1405
DISCIPLINARY: SEWER - REV.: A
ORIGINAL PAGE SIZE: A1
SHEET 1 OF 3
FILE No.

COORDINATE LIST

LO29

SLOVO PARK SECTION 01

MH No.	YLo	XLo
Constant:		
MH-2-15	110291.984	2911483.333
MH-2-16	110360.748	2911478.612
MH-3-17	110279.363	2911420.958
MH-3-18	110359.354	2911422.164
MH-3-19	110384.832	2911422.548
MH-3-20	110444.655	2911416.120
MH-4-21	110286.962	2911358.430
MH-4-22	110365.075	2911371.258
MH-4-23	110445.065	2911372.529

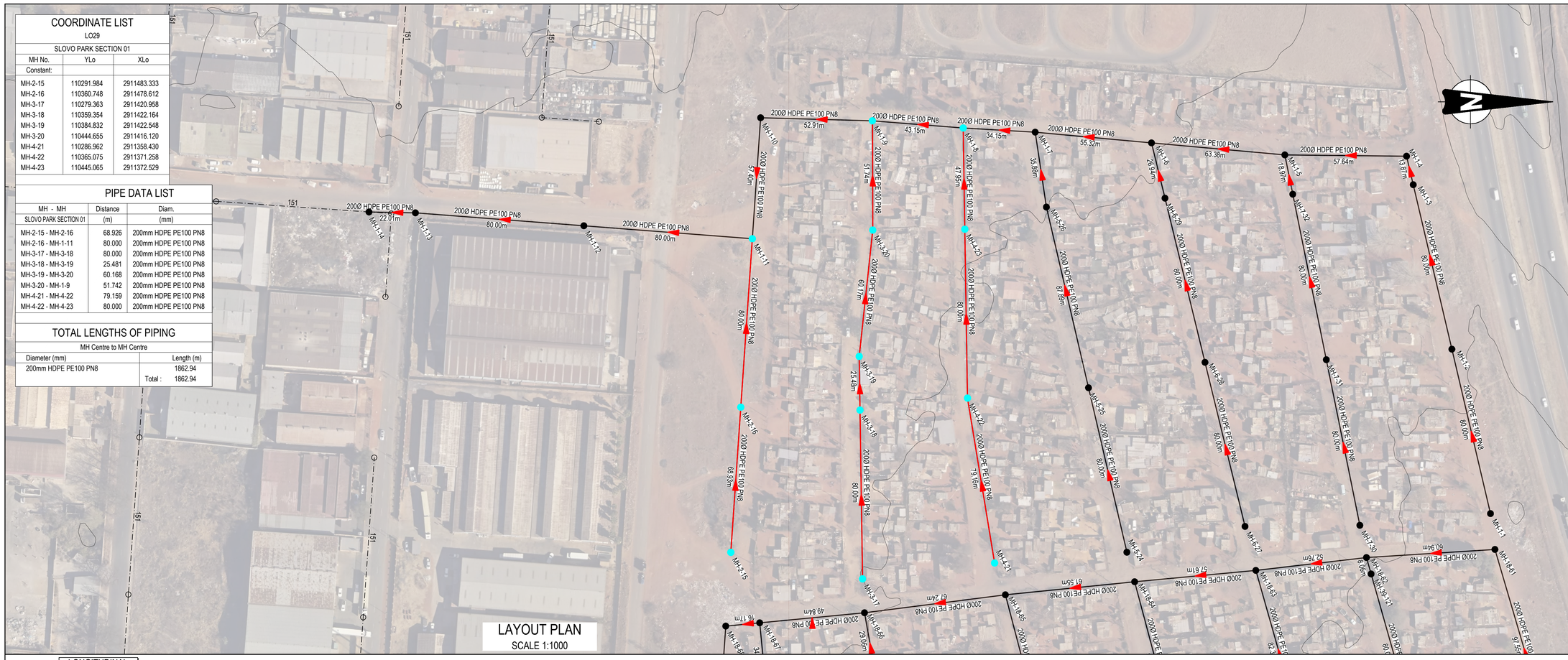
PIPE DATA LIST

MH - MH	Distance	Diam.
SLOVO PARK SECTION 01	(m)	(mm)
MH-2-15 - MH-2-16	68.926	200mm HDPE PE100 PN8
MH-2-16 - MH-1-11	80.000	200mm HDPE PE100 PN8
MH-3-17 - MH-3-18	80.000	200mm HDPE PE100 PN8
MH-3-18 - MH-3-19	25.481	200mm HDPE PE100 PN8
MH-3-19 - MH-3-20	60.168	200mm HDPE PE100 PN8
MH-3-20 - MH-1-9	51.742	200mm HDPE PE100 PN8
MH-4-21 - MH-4-22	79.159	200mm HDPE PE100 PN8
MH-4-22 - MH-4-23	80.000	200mm HDPE PE100 PN8

TOTAL LENGTHS OF PIPING

MH Centre to MH Centre

Diameter (mm)	Length (m)
200mm HDPE PE100 PN8	1862.94
Total :	1862.94



LAYOUT PLAN

SCALE 1:1000

LONGITUDINAL SECTION LEGEND:

PIPE -

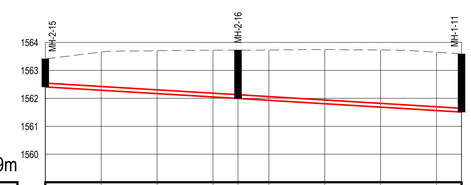
NGL -

SCALES:

Horizontal 1:1000

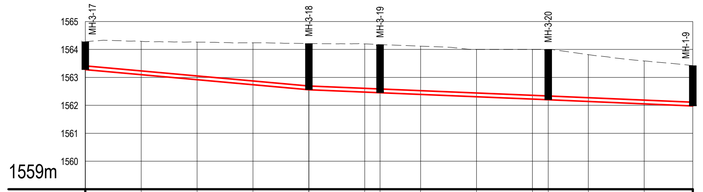
Vertical 1:100

Datum : 1559m



DEPTH TO INVERTS	1.001	1.366	1.534	1.675	1.730	1.801	1.943	2.048	2.087	2.079
INVERT LEVEL	1562.410	1562.290	1562.169	1562.049	1561.995	1561.928	1561.807	1561.685	1561.564	1561.510
GROUND LEVEL	1563.411	1563.656	1563.703	1563.724	1563.725	1563.729	1563.750	1563.733	1563.651	1563.589
CHAINAGE (m)	0.000	20.000	40.000	60.000	68.926	80.000	100.000	120.000	140.000	148.926
PIPE GRADES	68.926m					80.000m				
	1: 166.087					1: 164.948				
	0.602 %					0.606 %				
PIPE DETAILS	200mm HDPE PE100 PN8 Class B rigid pipe bedding									
DESIGN: HYDRAULICS Q (l/s)						0.11				
V (m/s)						0.23				
MAX.(0.67D): Q (l/s)				7.63		7.66				
V (m/s)				0.75		0.75				

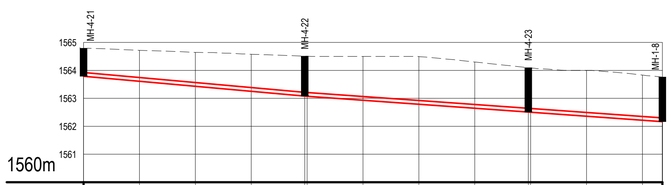
MH-2-15 - MH-1-11



1559m

DEPTH TO INVERTS	1.002	1.193	1.345	1.499	1.651	1.726	1.724	1.728	1.693	1.777	1.800	1.675	1.536	1.443
INVERT LEVEL	1563.275	1563.096	1562.918	1562.739	1562.560	1562.474	1562.450	1562.390	1562.307	1562.223	1562.200	1562.139	1562.054	1561.980
GROUND LEVEL	1564.277	1564.289	1564.263	1564.238	1564.211	1564.200	1564.174	1564.118	1564.000	1564.000	1564.000	1563.814	1563.590	1563.423
CHAINAGE (m)	0.000	20.000	40.000	60.000	80.000	100.000	105.481	120.000	140.000	200.000	165.649	180.000	200.000	217.391
PIPE GRADES	80.000m					25.481m		60.168m				51.742m		
	1: 111.888					1: 231.645		1: 240.672				1: 235.191		
	0.894 %					0.432 %		0.416 %				0.425 %		
PIPE DETAILS	200mm HDPE PE100 PN8 Class B rigid pipe bedding													
DESIGN: HYDRAULICS Q (l/s)						0.22		0.22				0.45		
V (m/s)						0.25		0.25				0.30		
MAX.(0.67D): Q (l/s)				9.30		6.46		6.34				6.41		
V (m/s)				0.91		0.63		0.62				0.63		

MH-3-17 - MH-1-9



1560m

DEPTH TO INVERTS	1.002	1.108	1.214	1.327	1.428	1.431	1.568	1.706	1.654	1.587	1.585	1.640	1.616	1.596
INVERT LEVEL	1563.790	1563.611	1563.431	1563.252	1563.080	1563.074	1562.932	1562.789	1562.647	1562.510	1562.504	1562.360	1562.216	1562.165
GROUND LEVEL	1564.792	1564.719	1564.645	1564.579	1564.508	1564.505	1564.500	1564.495	1564.301	1564.097	1564.089	1564.000	1563.832	1563.761
CHAINAGE (m)	0.000	20.000	40.000	60.000	79.159	80.000	100.000	120.000	140.000	159.159	200.000	180.000	200.000	207.111
PIPE GRADES	79.159m					80.000m						47.952m		
	1: 111.492					1: 140.351						1: 138.991		
	0.897 %					0.712 %						0.719 %		
PIPE DETAILS	200mm HDPE PE100 PN8 Class B rigid pipe bedding													
DESIGN: HYDRAULICS Q (l/s)								0.19				0.39		
V (m/s)								0.28				0.35		
MAX.(0.67D): Q (l/s)				9.31				8.30				8.34		
V (m/s)				0.91				0.81				0.82		

MH-4-21 - MH-1-8

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SEWER:

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2. ALL PIPES TO LAID UNDER TRENCH CONDITIONS UNLESS OTHERWISE SHOWN.
3. ALL CONSTRUCTION WORK TO BE CARRIED OUT IN STRICT ACCORDANCE WITH REQUIREMENTS OF JOHANNESBURG WATER.
4. SEWERS GENERALLY 1,5m FROM BOUNDARIES UNLESS OTHERWISE SHOWN.
5. DO NOT SCALE FROM THESE DRAWINGS.
6. THIS DRAWING MUST BE READ IN CONJUNCTION WITH THE STANDARD SPECIFICATIONS FOR MUNICIPAL CIVIL ENGINEERING WORKS.
7. THE FINAL PIPE ROUTE TO BE DETERMINED ON SITE AFTER EXPOSING OF EXISTING SERVICES.
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PIPE ANCHOR
1. GRADE: BETWEEN 1:10 AND 1:6: ANCHOR BLOCKS SHALL BE INSTALLED AT INTERVALS NOT EXCEEDING 12 METERS.

SEWER MANHOLES
1. SEWER MANHOLES ARE TO BE SPACED AT A MAXIMUM OF 80 METERS.

LEGEND

- 200mmØ HDPE PE100 PN8 PIPE
- NEW SEWER MANHOLE (MH)
- FLOW DIRECTION
- NEW SEWER PIPE AND MANHOLE NOT WITHIN INDICATED LONG SECTION
- EXISTING SEWER PIPE
- EXISTING SEWER MANHOLE
- CONTOURS
- 0000 △ BM00 BENCHMARK

ISSUED FOR TENDER

REFER TO DRAWING No:

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JW14478-SLV-MGLP-000 - MASTER GENERAL LAYOUT PLAN
JW14478-SLV-GLP-S1-000 - GENERAL LAYOUT PLAN

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JW14478-SLV-S1-LS-01 - LAYOUT AND LONGITUDINAL SECTION SHEET 1 OF 3
JW14478-SLV-S1-LS-02 - LAYOUT AND LONGITUDINAL SECTION SHEET 2 OF 3
JW14478-SLV-S1-LS-03 - LAYOUT AND LONGITUDINAL SECTION SHEET 3 OF 3

STANDARD DETAILS

JW100-DET02-W01:	BEDDING DETAIL
JW100-DET01-S01:	MANHOLE DETAILS FOR SEWER
JW100-DET01.1-W01:	NAMEBOARD

KEY PLAN:

CONSULTING ENGINEERS
CAPEX - ENGINEERING SERVICE UNIT
TURBINE HALL - 3RD FLOOR
65 NTEMI PILISO STREET
NEWTOWN
JOHANNESBURG
2113

DESIGNED	S.KHUZWAYO	OCT 2024
SIGNATURE:		
DRAWN	R.MUDAU	OCT 2024
SIGNATURE:		
CHECKED	M.SAMBO	OCT 2024
SIGNATURE:		
APPROVED BY:	P.MOGOLOLA	OCT 2024
SIGNATURE:		ECSA REG. No: 2018300335

Johannesburg Water

JOHANNESBURG WATER SOC Ltd
TURBINE HALL
65 NTEMI PILISO STREET
NEWTOWN
JOHANNESBURG
2113
TEL: +27 (0)11 688 1400
FAX: +27(0)11 688-1528

Municipality: Joburg — a world class African city

Project description:

NANCEFIELD - SLOVO PARK (SECTION 1)
PROVISION OF BASIC SANITATION SERVICES
LAYOUT PLAN AND LONG SECTION
MH-2-15 - MH-1-11 & MH-3-17 - MH-1-9 & MH-4-21 - MH-1-8

SCALE: AS SHOWN

AMENDMENTS

REV	DESCRIPTION	DATE	BY	APV
A	ISSUED FOR TENDER	10/18/2024	SK	PM

DRAWING No: JW14478-SLV-S1-LS-02

S1405	SEWER	-	A
PROJECT No.	DISCIPLINARY		REV.

A1 ORIGINAL PAGE SIZE — SHEET 2 OF 3

FILE No.

COORDINATE LIST

LO29

SLOVO PARK SECTION 01		
MH No.	YLo	XLo
Constant:		
MH-5-24	110292.037	2911295.789
MH-5-25	110369.947	2911313.957
MH-5-26	110455.537	2911333.916
MH-6-27	110304.296	2911239.853
MH-6-28	110382.021	2911258.795
MH-6-29	110459.746	2911277.737
MH-7-30	110304.817	2911185.460
MH-7-31	110383.224	2911201.342
MH-7-32	110461.632	2911217.225

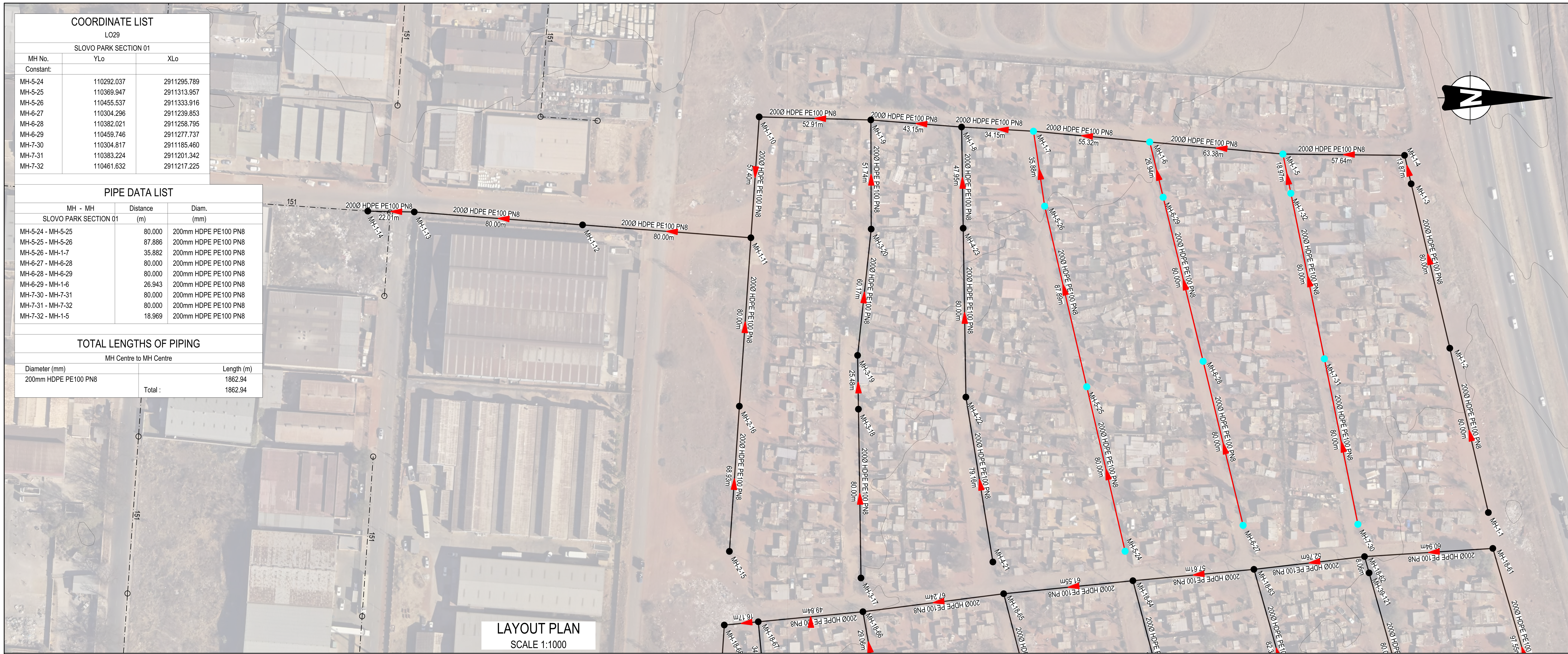
PIPE DATA LIST

MH - MH SLOVO PARK SECTION 01	Distance (m)	Diam. (mm)
MH-5-24 - MH-5-25	80.000	200mm HDPE PE100 PN8
MH-5-25 - MH-5-26	87.886	200mm HDPE PE100 PN8
MH-5-26 - MH-1-7	35.882	200mm HDPE PE100 PN8
MH-6-27 - MH-6-28	80.000	200mm HDPE PE100 PN8
MH-6-28 - MH-6-29	80.000	200mm HDPE PE100 PN8
MH-6-29 - MH-1-6	26.943	200mm HDPE PE100 PN8
MH-7-30 - MH-7-31	80.000	200mm HDPE PE100 PN8
MH-7-31 - MH-7-32	80.000	200mm HDPE PE100 PN8
MH-7-32 - MH-1-5	18.969	200mm HDPE PE100 PN8

TOTAL LENGTHS OF PIPING

MH Centre to MH Centre

Diameter (mm)	Length (m)
200mm HDPE PE100 PN8	1862.94
Total :	1862.94



LAYOUT PLAN
SCALE 1:1000

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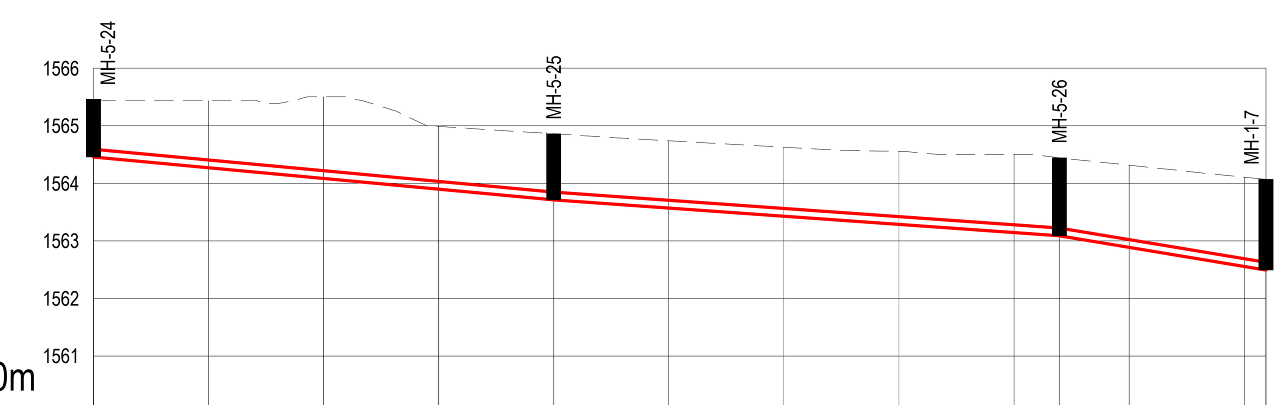
- EXISTING SEWER MANHOLE
- CONTOURS
- 0000 BM00 BENCHMARK

LONGITUDINAL SECTION LEGEND:
PIPE -
NGL -

SCALES:
Horizontal 1:1000
Vertical 1:100

Datum : 1560m

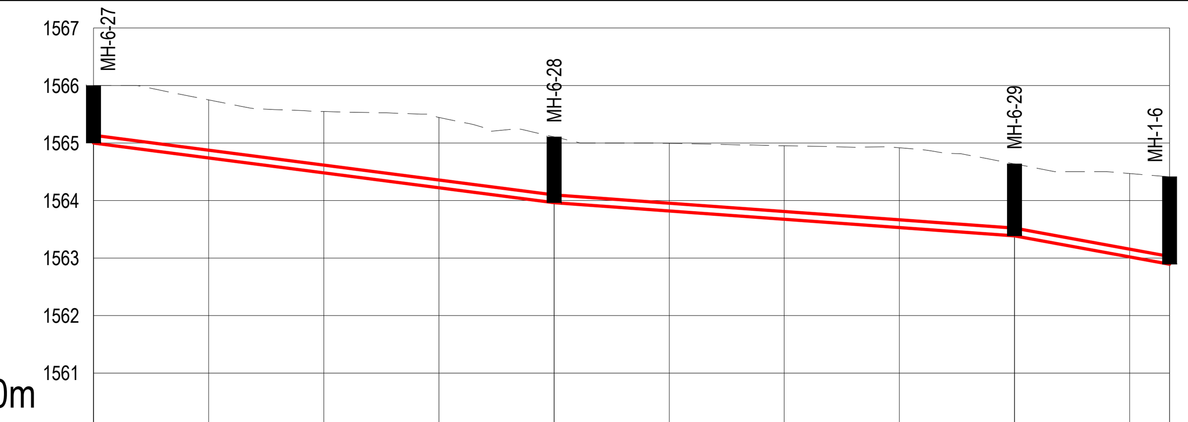


DEPTH TO INVERTS	-1.002	-1.163	-1.417	-1.091	-1.148	-1.169	-1.198	-1.270	-1.359	-1.357	-1.431	-1.552	-1.579
INVERT LEVEL	1564.455	1564.269	1564.083	1563.896	1563.710	1563.568	1563.426	1563.283	1563.141	1563.085	1562.884	1562.552	1562.490
GROUND LEVEL	1565.457	1565.432	1565.500	1564.987	1564.858	1564.737	1564.624	1564.553	1564.500	1564.442	1564.315	1564.104	1564.069
CHAINAGE (m)	0.000	20.000	40.000	60.000	80.000	100.000	120.000	140.000	200.000	167.886	180.000	200.000	203.768

	MH-5-24 - MH-5-25	MH-5-25 - MH-5-26	MH-5-26 - MH-1-7
PIPE GRADES	80.000m 1: 107.383 0.931 %	87.886m 1: 140.618 0.711 %	35.882m 1: 60.306 1.658 %
PIPE DETAILS	200mm HDPE PE100 PN8 Class B rigid pipe bedding		
HYDRAULICS DESIGN: Q (l/s) / V (m/s)		0.18 0.28	0.35 0.46
HYDRAULICS MAX.(0.67D): Q (l/s) / V (m/s)	9.49 0.93	8.29 0.81	12.66 1.24

MH-5-24 - MH-1-7

1560m

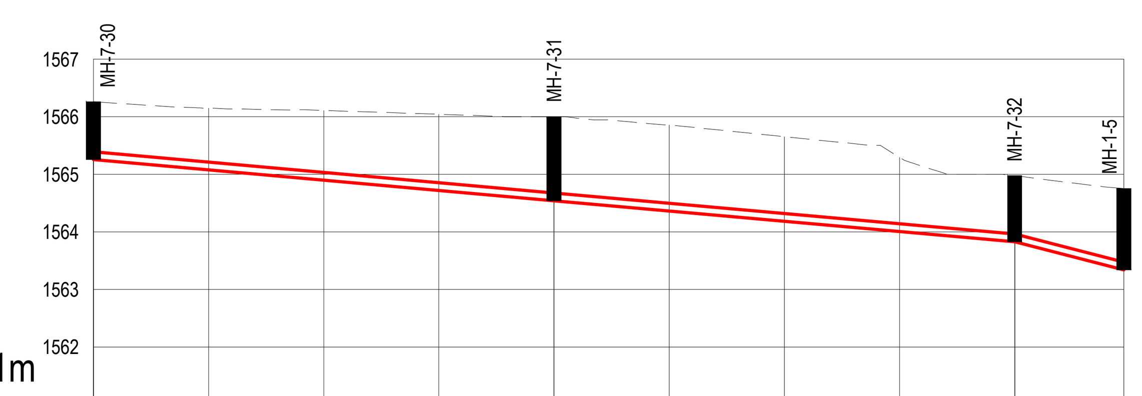


DEPTH TO INVERTS	-1.000	-1.009	-1.066	-1.225	-1.145	-1.178	-1.279	-1.388	-1.251	-1.450	-1.523
INVERT LEVEL	1565.000	1564.740	1564.480	1564.220	1563.960	1563.816	1563.673	1563.529	1563.385	1563.018	1562.890
GROUND LEVEL	1566.000	1565.749	1565.546	1565.445	1565.105	1564.994	1564.952	1564.917	1564.636	1564.468	1564.413
CHAINAGE (m)	0.000	20.000	40.000	60.000	80.000	100.000	120.000	140.000	200.000	180.000	186.943

	MH-6-27 - MH-6-28	MH-6-28 - MH-6-29	MH-6-29 - MH-1-6
PIPE GRADES	80.000m 1: 76.923 1.300 %	80.000m 1: 139.130 0.719 %	26.943m 1: 54.430 1.837 %
PIPE DETAILS	200mm HDPE PE100 PN8 Class B rigid pipe bedding		
HYDRAULICS DESIGN: Q (l/s) / V (m/s)		0.18 0.28	0.37 0.48
HYDRAULICS MAX.(0.67D): Q (l/s) / V (m/s)	11.21 1.10	8.34 0.82	13.33 1.31

MH-6-27 - MH-1-6

1561m



DEPTH TO INVERTS	-1.003	-1.071	-1.209	-1.322	-1.460	-1.492	-1.469	-1.288	-1.148	-1.412
INVERT LEVEL	1565.255	1565.076	1564.898	1564.719	1564.540	1564.361	1564.183	1564.004	1563.825	1563.340
GROUND LEVEL	1566.258	1566.147	1566.107	1566.041	1566.000	1565.853	1565.652	1565.292	1564.973	1564.752
CHAINAGE (m)	0.000	20.000	40.000	60.000	80.000	100.000	120.000	140.000	200.000	178.969

	MH-7-30 - MH-7-31	MH-7-31 - MH-7-32	MH-7-32 - MH-1-5
PIPE GRADES	80.000m	80.000m 1: 111.888 0.894 %	18.969m 1: 39.111 2.557 %
PIPE DETAILS	200mm HDPE PE100 PN8 Class B rigid pipe bedding		
HYDRAULICS DESIGN: Q (l/s) / V (m/s)		0.18 0.30	0.37 0.54
HYDRAULICS MAX.(0.67D): Q (l/s) / V (m/s)	9.30 0.91	9.30 0.91	15.72 1.54

MH-7-30 - MH-1-5

ISSUED FOR TENDER

REFER TO DRAWING No:

GENERAL LAYOUTS
- JW14478-SLV-MGLP-000 - MASTER GENERAL LAYOUT PLAN
- JW14478-SLV-GLP-S1-000 - GENERAL LAYOUT PLAN

LAYOUT AND LONGITUDINAL SECTIONS
- JW14478-SLV-S1-LS-01 - LAYOUT AND LONGITUDINAL SECTION SHEET 1 OF 3
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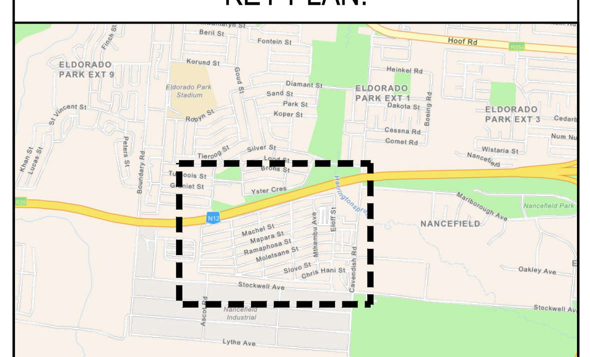
- JW14478-SLV-S1-LS-03 - LAYOUT AND LONGITUDINAL SECTION SHEET 3 OF 3

STANDARD DETAILS
- JW100-DET02-W01: BEDDING DETAIL
- JW100-DET01-S01: MANHOLE DETAILS FOR SEWER
- JW100-DET01.1-W01: NAMEBOARD

KEY PLAN:



CONSULTING ENGINEERS
CAPEX - ENGINEERING SERVICE UNIT
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65 NTEMI PILISO STREET
NEWTOWN
JOHANNESBURG
2113

DESIGNED	S.KHUZWAYO	OCT 2024
	SIGNATURE:	
DRAWN	R.MUDAU	OCT 2024
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CHECKED	M.SAMBO	OCT 2024
	SIGNATURE:	
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Johannesburg Water

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NEWTOWN
JOHANNESBURG
2113
TEL: +27 (0)11 688 1400
FAX: +27(0)11 688-1528

Municipality:

a world class African city

Project description:

NANCEFIELD - SLOVO PARK (SECTION 1)
PROVISION OF BASIC SANITATION SERVICES
LAYOUT PLAN AND LONG SECTION
MH-5-24 - MH-1-7 & MH-6-27 - MH-1-6 & MH-7-30 - MH-1-5

SCALE: AS SHOWN

AMENDMENTS

REV	DESCRIPTION	DATE	BY	APV
A	ISSUED FOR TENDER	10/18/2024	SK	PM

DRAWING No: JW14478-SLV-S1-LS-03

PROJECT No.	DISCIPLINARY	REV.
S1405	SEWER	A

ORIGINAL PAGE SIZE: A1 — SHEET 3 OF 3

FILE No.

COORDINATE LIST

LO29

SLOVO PARK SECTION 02		
MH No.	YLo	XLo
Constant:		
MH-8-1	109783.309	2910967.325
MH-8-2	109860.037	2910989.972
MH-8-3	109910.707	2911004.928
MH-8-4	109905.788	2911066.883
MH-8-5	109903.370	2911127.956
MH-8-6	109901.857	2911188.278
MH-8-7	109899.093	2911247.919
MH-8-8	109895.781	2911314.610
MH-8-9	109892.885	2911372.911
MH-8-10	109888.104	2911433.074
MH-8-11	109885.733	2911494.603
MH-8-12	109974.161	2911537.727

PIPE DATA LIST

MH - MH	Distance	Diam.
SLOVO PARK SECTION 02	(m)	(mm)
MH-8-1 - MH-8-2	80.000	200mm HDPE PE100 PN8
MH-8-2 - MH-8-3	52.831	200mm HDPE PE100 PN8
MH-8-3 - MH-8-4	62.149	200mm HDPE PE100 PN8
MH-8-4 - MH-8-5	61.122	200mm HDPE PE100 PN8
MH-8-5 - MH-8-6	60.341	200mm HDPE PE100 PN8
MH-8-6 - MH-8-7	59.706	200mm HDPE PE100 PN8
MH-8-7 - MH-8-8	66.773	200mm HDPE PE100 PN8
MH-8-8 - MH-8-9	58.372	200mm HDPE PE100 PN8
MH-8-9 - MH-8-10	60.353	200mm HDPE PE100 PN8
MH-8-10 - MH-8-11	61.574	200mm HDPE PE100 PN8
MH-8-11 - MH-8-12	98.383	200mm HDPE PE100 PN8

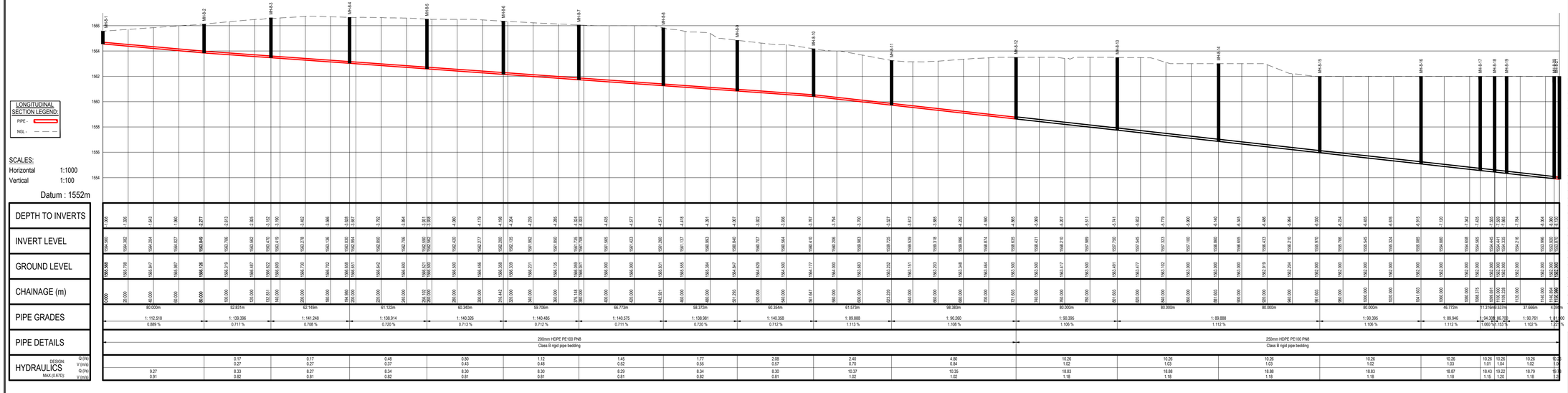
TOTAL LENGTHS OF PIPING

MH Centre to MH Centre

Diameter (mm)	Length (m)
250mm HDPE PE100 PN8	429.39
200mm HDPE PE100 PN8	7371.24
Total :	7800.63

LAYOUT PLAN

SCALE 1:1000



MH-8-1 - MH-8-21

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- 0000 BM00 BENCHMARK

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JW14478-SLV-S2-LS-01 - LAYOUT AND LONGITUDINAL SECTION SHEET 1 OF 14
JW14478-SLV-S2-LS-02 - LAYOUT AND LONGITUDINAL SECTION SHEET 2 OF 14
JW14478-SLV-S2-LS-03 - LAYOUT AND LONGITUDINAL SECTION SHEET 3 OF 14
JW14478-SLV-S2-LS-01 - LAYOUT AND LONGITUDINAL SECTION SHEET 4 OF 14
JW14478-SLV-S2-LS-02 - LAYOUT AND LONGITUDINAL SECTION SHEET 5 OF 14
JW14478-SLV-S2-LS-03 - LAYOUT AND LONGITUDINAL SECTION SHEET 6 OF 14
JW14478-SLV-S2-LS-01 - LAYOUT AND LONGITUDINAL SECTION SHEET 7 OF 14
JW14478-SLV-S2-LS-02 - LAYOUT AND LONGITUDINAL SECTION SHEET 8 OF 14
JW14478-SLV-S2-LS-03 - LAYOUT AND LONGITUDINAL SECTION SHEET 9 OF 14
JW14478-SLV-S2-LS-01 - LAYOUT AND LONGITUDINAL SECTION SHEET 10 OF 14
JW14478-SLV-S2-LS-02 - LAYOUT AND LONGITUDINAL SECTION SHEET 11 OF 14
JW14478-SLV-S2-LS-03 - LAYOUT AND LONGITUDINAL SECTION SHEET 12 OF 14
JW14478-SLV-S2-LS-02 - LAYOUT AND LONGITUDINAL SECTION SHEET 13 OF 14
JW14478-SLV-S2-LS-03 - LAYOUT AND LONGITUDINAL SECTION SHEET 14 OF 14

STANDARD DETAILS

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DRAWN	R.MUDAU	OCT 2024
	SIGNATURE:	
CHECKED	M.SAMBO	OCT 2024
	SIGNATURE:	
APPROVED BY:	P.MOGOLOLA	OCT 2024
	SIGNATURE:	ECSA REG. No: 2018300335

Johannesburg Water

JOHANNESBURG WATER SOC Ltd
TURBINE HALL
65 NTEMI PILISO STREET
NEWTOWN
JOHANNESBURG
2113
TEL: +27 (0)11 688 1400
FAX: +27(0)11 688-1528

Municipality: Joburg — a world class African city

Project description:

NANCEFIELD - SLOVO PARK (SECTION 2)
PROVISION OF BASIC SANITATION SERVICES
LAYOUT PLAN AND LONG SECTION
MH-8-1 - MH-8-21 (1 of 2)

SCALE: AS SHOWN

AMENDMENTS

REV	DESCRIPTION	DATE	BY	APV
A	ISSUED FOR TENDER	18/10/2024	SK	PM

DRAWING No: JW14478-SLV-S2-LS-04

S1405 PROJECT No. | SEWER DISCIPLINARY | A REV.

A1 ORIGINAL PAGE SIZE | SHEET 1 OF 14

FILE No.

COORDINATE LIST

LO29

SLOVO PARK SECTION 02		
MH No.	YLo	XLo
Constant:		
MH-8-12	109974.161	2911537.727
MH-8-13	109979.659	2911617.538
MH-8-14	109985.157	2911697.349
MH-8-15	109990.655	2911777.200
MH-8-16	109996.153	2911856.970
MH-8-17	109998.375	2911903.689
MH-8-18	110009.679	2911903.152
MH-8-19	110016.157	2911910.150
MH-8-20	110053.762	2911907.995
MH-8-21	110053.996	2911912.083

PIPE DATA LIST

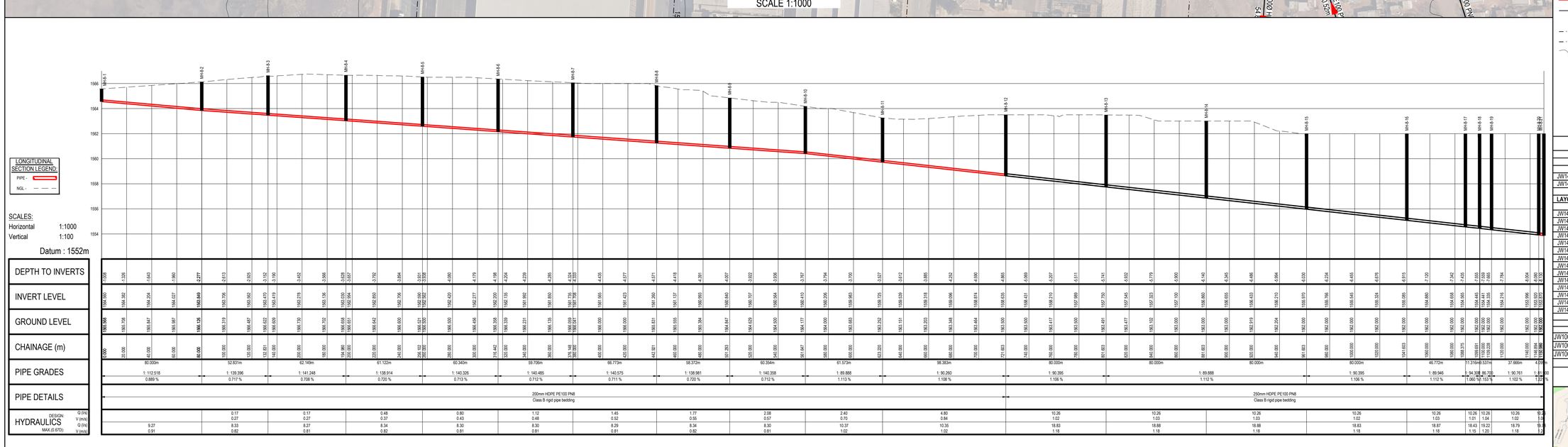
MH - MH	Distance	Diam.
SLOVO PARK SECTION 02	(m)	(mm)
MH-8-12 - MH-8-13	80.000	250mm HDPE PE100 PN8
MH-8-13 - MH-8-14	80.000	250mm HDPE PE100 PN8
MH-8-14 - MH-8-15	80.000	250mm HDPE PE100 PN8
MH-8-15 - MH-8-16	80.000	250mm HDPE PE100 PN8
MH-8-16 - MH-8-17	46.772	250mm HDPE PE100 PN8
MH-8-17 - MH-8-18	11.317	250mm HDPE PE100 PN8
MH-8-18 - MH-8-19	9.537	250mm HDPE PE100 PN8
MH-8-19 - MH-8-20	37.666	250mm HDPE PE100 PN8
MH-8-20 - MH-8-21	4.094	250mm HDPE PE100 PN8

TOTAL LENGTHS OF PIPING

MH Centre to MH Centre		
Diameter (mm)		Length (m)
250mm HDPE PE100 PN8		429.39
200mm HDPE PE100 PN8		7371.24
	Total :	7800.63

LAYOUT PLAN

SCALE 1:1000



MH-8-1 - MH-8-21

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2. ALL PIPES TO LAID UNDER TRENCH CONDITIONS UNLESS OTHERWISE SHOWN.
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5. DO NOT SCALE FROM THESE DRAWINGS.
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12. THE POSITION AND DEPTH OF ALL EXISTING SERVICES ON THE SITE AND OFF THE SITE WHERE AFFECTED BY THE WORKS SHALL BE CONFIRMED PRIOR TO ANY CONSTRUCTION WORK ON THE INSTALLATION OF WATER OR SEWER MAINS BEING COMMENCED.
13. THE CONTRACTOR SHALL CARRY OUT WORKS TO TIE-IN CONNECTIONS TO EXISTING SEWER MANHOLES AND MAINS.
14. POSITIONS OF ALL EXISTING SERVICES ARE APPROXIMATED AND MUST BE VERIFIED ON SITE BY ENGINEER REPRESENTATIVE AND CONTRACTOR.

PIPE ANCHOR
1. GRADE: BETWEEN 1:10 AND 1:6: ANCHOR BLOCKS SHALL BE INSTALLED AT INTERVALS NOT EXCEEDING 12 METERS.

SEWER MANHOLES
1. SEWER MANHOLES ARE TO BE SPACED AT A MAXIMUM OF 80 METERS.

LEGEND

- 200mmØ HDPE PE100 PN8 PIPE
- 250mmØ HDPE PE100 PN8
- NEW SEWER MANHOLE (MH)
- FLOW DIRECTION
- NEW SEWER PIPE AND MANHOLE NOT WITHIN INDICATED LONG SECTION
- EXISTING SEWER PIPE
- EXISTING SEWER MANHOLE
- CONTOURS
- 0000 BM00 BENCHMARK

ISSUED FOR TENDER

REFER TO DRAWING No:

GENERAL LAYOUTS

JW14478-SLV-MGLP-000 - MASTER GENERAL LAYOUT PLAN
JW14478-SLV-GLP-S1-000 - GENERAL LAYOUT PLAN

LAYOUT AND LONGITUDINAL SECTIONS

JW14478-SLV-S2-LS-01 - LAYOUT AND LONGITUDINAL SECTION SHEET 1 OF 14
JW14478-SLV-S2-LS-02 - LAYOUT AND LONGITUDINAL SECTION SHEET 2 OF 14
JW14478-SLV-S2-LS-03 - LAYOUT AND LONGITUDINAL SECTION SHEET 3 OF 14
JW14478-SLV-S2-LS-01 - LAYOUT AND LONGITUDINAL SECTION SHEET 4 OF 14
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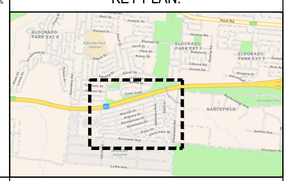
JW14478-SLV-S2-LS-02 - LAYOUT AND LONGITUDINAL SECTION SHEET 13 OF 14
JW14478-SLV-S2-LS-03 - LAYOUT AND LONGITUDINAL SECTION SHEET 14 OF 14

STANDARD DETAILS

JW100-DET02-W01:	BEDDING DETAIL
JW100-DET01-S01:	MANHOLE DETAILS FOR SEWER
JW100-DET01.1-W01:	NAMEBOARD

KEY PLAN:



CONSULTING ENGINEERS
CAPEX - ENGINEERING SERVICE UNIT
TURBINE HALL - 3RD FLOOR
65 NTEMI PILISO STREET
NEWTOWN
JOHANNESBURG
2113

DESIGNED	S.KHUZWAYO	OCT 2024
	SIGNATURE:	
DRAWN	R.MUDAU	OCT 2024
	SIGNATURE:	
CHECKED	M.SAMBO	OCT 2024
	SIGNATURE:	
APPROVED BY:	P.MOGOLOLA	OCT 2024
	SIGNATURE:	ECSA REG. No: 2018300335

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Project description:

NANCEFIELD - SLOVO PARK (SECTION 2)
PROVISION OF BASIC SANITATION SERVICES
LAYOUT PLAN AND LONG SECTION
MH-8-1 - MH-8-21 (2 of 2)

SCALE: AS SHOWN

AMENDMENTS

REV	DESCRIPTION	DATE	BY	APV
A	ISSUED FOR TENDER	18/10/2024	SK	PM

DRAWING No: JW14478-SLV-S2-LS-05

S1405	SEWER	-	A
PROJECT No.	DISCIPLINARY		REV.
A1	SHEET 2	OF	14
ORIGINAL PAGE SIZE			

FILE No.

COORDINATE LIST

LO29

SLOVO PARK SECTION 02		
MH No.	YLo	XLo
Constant:		
MH-8-1	109783.309	2910967.325
MH-8-2	109860.037	2910989.972
MH-8-3	109910.707	2911004.928
MH-8-4	109905.788	2911066.883
MH-8-5	109903.370	2911127.956
MH-8-6	109901.857	2911188.278
MH-8-7	109899.093	2911247.919
MH-8-8	109895.781	2911314.610
MH-8-9	109892.885	2911372.911
MH-8-10	109888.104	2911433.074
MH-8-11	109885.733	2911494.603
MH-8-12	109974.161	2911537.727

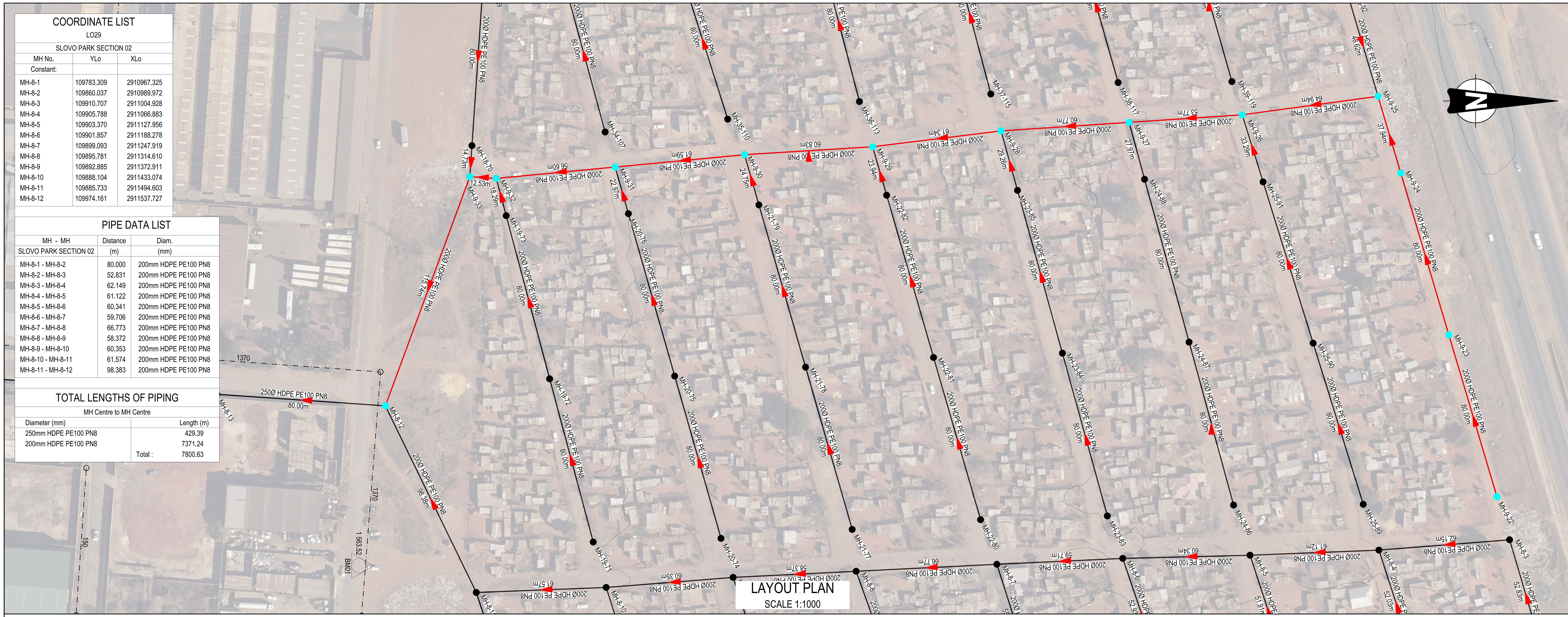
PIPE DATA LIST

MH - MH	Distance	Diam.
SLOVO PARK SECTION 02	(m)	(mm)
MH-8-1 - MH-8-2	80.000	200mm HDPE PE100 PN8
MH-8-2 - MH-8-3	52.831	200mm HDPE PE100 PN8
MH-8-3 - MH-8-4	62.149	200mm HDPE PE100 PN8
MH-8-4 - MH-8-5	61.122	200mm HDPE PE100 PN8
MH-8-5 - MH-8-6	60.341	200mm HDPE PE100 PN8
MH-8-6 - MH-8-7	59.706	200mm HDPE PE100 PN8
MH-8-7 - MH-8-8	66.773	200mm HDPE PE100 PN8
MH-8-8 - MH-8-9	58.372	200mm HDPE PE100 PN8
MH-8-9 - MH-8-10	60.353	200mm HDPE PE100 PN8
MH-8-10 - MH-8-11	61.574	200mm HDPE PE100 PN8
MH-8-11 - MH-8-12	98.383	200mm HDPE PE100 PN8

TOTAL LENGTHS OF PIPING

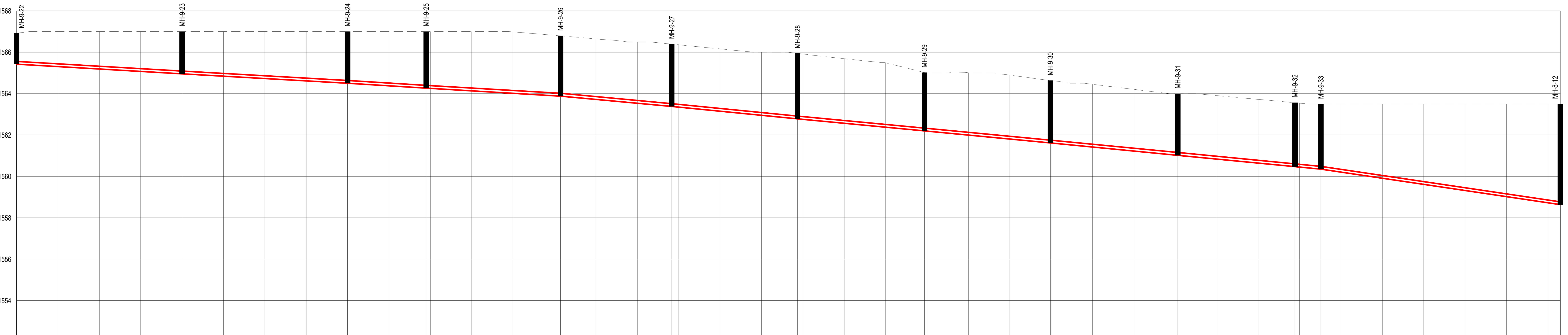
MH Centre to MH Centre

Diameter (mm)		Length (m)
250mm HDPE PE100 PN8		429.39
200mm HDPE PE100 PN8		7371.24
	Total :	7800.63



LAYOUT PLAN

SCALE 1:1000



LONGITUDINAL SECTION LEGEND:

PIPE -

NGL -

SCALES:

Horizontal 1:1000

Vertical 1:100

Datum : 1552m

DEPTH TO INVERTS	-1.498	-1.696	-1.812	-1.929	-2.045	-2.159	-2.272	-2.386	-2.500	-2.624	-2.735	-2.747	-2.866	-2.966	-2.911
INVERT LEVEL	1565.420	1565.304	1565.188	1565.071	1564.955	1564.841	1564.728	1564.614	1564.500	1564.376	1564.265	1564.253	1564.134	1564.016	1563.880
GROUND LEVEL	1566.918	1567.000	1567.000	1567.000	1567.000	1567.000	1567.000	1567.000	1567.000	1567.000	1567.000	1567.000	1567.000	1566.982	1566.791
CHAINAGE (m)	0.000	20.000	40.000	60.000	80.000	100.000	120.000	140.000	200.000	180.000	197.941	200.000	220.000	240.000	262.876

DEPTH TO INVERTS	-2.921	-2.965	-3.012	-3.012	-3.012	-3.048	-3.165	-3.158	-3.123	-3.110	-2.818	-2.812	-3.016	-3.091	-3.020
INVERT LEVEL	1563.721	1563.535	1563.380	1563.347	1563.149	1562.952	1562.780	1562.756	1562.566	1562.377	1562.200	1562.188	1561.996	1561.803	1561.615
GROUND LEVEL	1566.642	1566.500	1566.392	1566.359	1566.161	1566.000	1565.945	1565.914	1565.689	1565.487	1565.018	1565.000	1565.012	1564.894	1564.635
CHAINAGE (m)	280.000	300.000	316.648	320.000	340.000	360.000	377.420	380.000	400.000	420.000	438.760	440.000	460.000	480.000	499.587

DEPTH TO INVERTS	-3.019	-3.032	-2.980	-2.980	-3.069	-3.080	-3.090	-3.090	-3.150	-3.294	-3.590	-3.886	-4.183	-4.479	-4.775	-4.865
INVERT LEVEL	1561.611	1561.418	1561.225	1561.020	1560.837	1560.643	1560.470	1560.449	1560.350	1560.206	1559.910	1559.614	1559.317	1559.021	1558.725	1558.635
GROUND LEVEL	1564.630	1564.450	1564.205	1564.000	1563.906	1563.723	1563.560	1563.539	1563.500	1563.500	1563.500	1563.500	1563.500	1563.500	1563.500	1563.500
CHAINAGE (m)	500.000	520.000	540.000	561.181	580.000	600.000	617.781	620.000	630.314	640.000	660.000	680.000	700.000	720.000	740.000	746.051

PIPE GRADES	HYDRAULICS DESIGN: Q (l/s)	V (m/s)	MAX.(0.67D): Q (l/s)	V (m/s)
80.000m 1: 172.043 0.581 %			7.50	0.74
80.000m 1: 175.824 0.569 %	0.12	0.23	7.42	0.73
37.941m 1: 161.451 0.619 %	0.24	0.29	7.74	0.76
64.935m 1: 168.662 0.593 %	0.27	0.29	7.57	0.74
53.772m 1: 107.544 0.930 %	0.72	0.46	9.48	0.93
60.772m 1: 101.287 0.987 %	1.12	0.54	9.77	0.96
61.340m 1: 105.759 0.946 %	1.55	0.58	9.56	0.94
60.827m 1: 103.978 0.962 %	1.92	0.62	9.64	0.95
61.594m 1: 103.519 0.966 %	2.35	0.66	9.66	0.95
56.600m 1: 102.909 0.972 %	2.74	0.69	9.69	0.95
12.533m 1: 104.442 0.957 %	3.11	0.71	9.62	0.94
115.737m 1: 67.485 1.482 %	5.39	0.97	11.97	1.17

PIPE DETAILS: 200mm HDPE PE100 PN8 Class B rigid pipe bedding

MH-9-22 - MH-8-12

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PIPE ANCHOR

1. GRADE: BETWEEN 1:10 AND 1:6: ANCHOR BLOCKS SHALL BE INSTALLED AT INTERVALS NOT EXCEEDING 12 METERS.

SEWER MANHOLES

1. SEWER MANHOLES ARE TO BE SPACED AT A MAXIMUM OF 80 METERS.

LEGEND

- 200mmØ HDPE PE100 PN8 PIPE
- 250mmØ HDPE PE100 PN8
- NEW SEWER MANHOLE (MH)
- FLOW DIRECTION
- NEW SEWER PIPE AND MANHOLE NOT WITHIN INDICATED LONG SECTION
- EXISTING SEWER PIPE
- EXISTING SEWER MANHOLE
- CONTOURS
- 0000 BM00 BENCHMARK

ISSUED FOR TENDER

REFER TO DRAWING No:

GENERAL LAYOUTS

- JW14478-SLV-MGLP-000 - MASTER GENERAL LAYOUT PLAN
- JW14478-SLV-GLP-S1-000 - GENERAL LAYOUT PLAN

LAYOUT AND LONGITUDINAL SECTIONS

- JW14478-SLV-S2-LS-01 - LAYOUT AND LONGITUDINAL SECTION SHEET 1 OF 14
- JW14478-SLV-S2-LS-02 - LAYOUT AND LONGITUDINAL SECTION SHEET 2 OF 14
- JW14478-SLV-S2-LS-03 - LAYOUT AND LONGITUDINAL SECTION SHEET 3 OF 14
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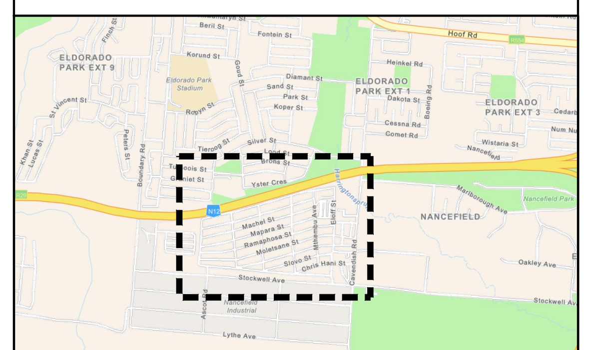
- JW14478-SLV-S2-LS-02 - LAYOUT AND LONGITUDINAL SECTION SHEET 13 OF 14
- JW14478-SLV-S2-LS-03 - LAYOUT AND LONGITUDINAL SECTION SHEET 14 OF 14

STANDARD DETAILS

JW100-DET02-W01:	BEDDING DETAIL
JW100-DET01-S01:	MANHOLE DETAILS FOR SEWER
JW100-DET01.1-W01:	NAMEBOARD

KEY PLAN:



CONSULTING ENGINEERS
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DESIGNED	S.KHUZWAYO	OCT 2024
	SIGNATURE:	
DRAWN	R.MUDAU	OCT 2024
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CHECKED	M.SAMBO	OCT 2024
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Johannesburg Water

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TEL: +27 (0)11 688 1400
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Municipality: Joburg a world class African city

Project description:

NANCEFIELD - SLOVO PARK (SECTION 2)
PROVISION OF BASIC SANITATION SERVICES
LAYOUT PLAN AND LONG SECTION
MH-9-22 - MH-8-12

SCALE: AS SHOWN

AMENDMENTS

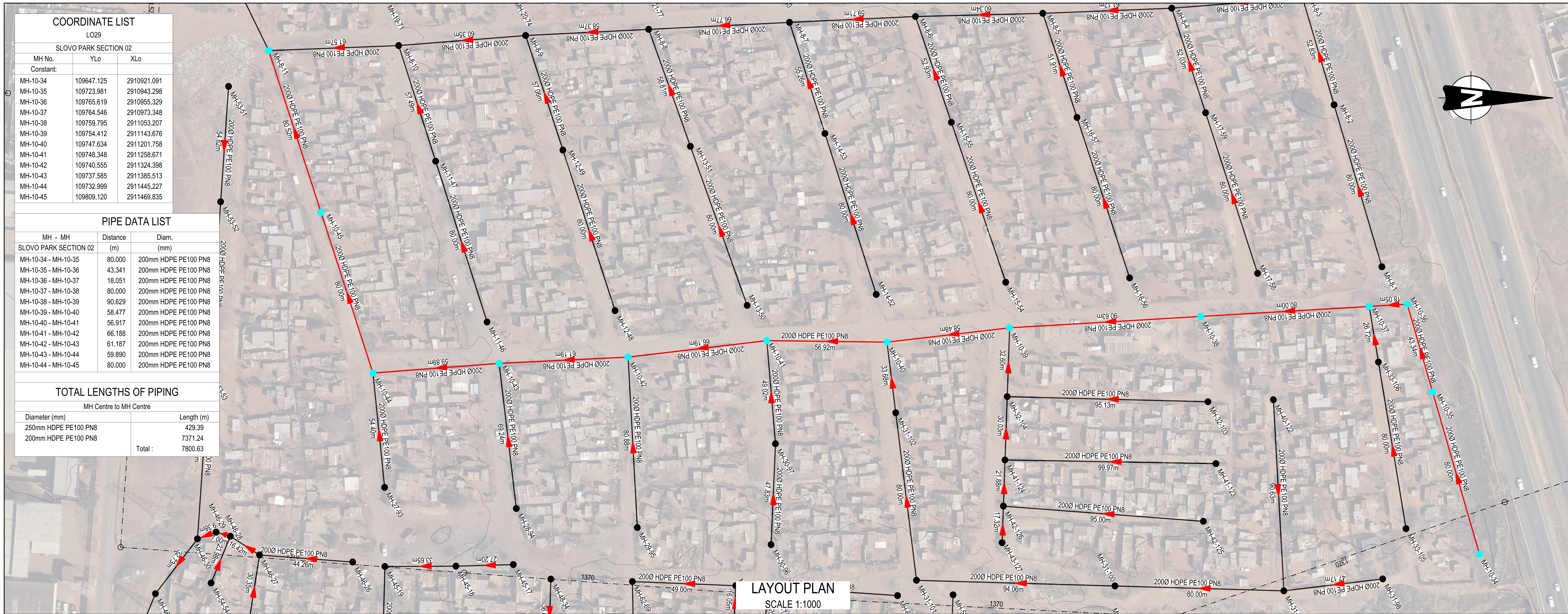
REV	DESCRIPTION	DATE	BY	APV
A	ISSUED FOR TENDER	18/10/2024	SK	PM

DRAWING No: JW14478-SLV-S2-LS-06

PROJECT No.	DISCIPLINARY	REV.
S1405	SEWER	A

ORIGINAL PAGE SIZE: A1 — SHEET 3 OF 14

FILE No.



COORDINATE LIST

LO29

SLOVO PARK SECTION 02		
MH No.	YLo	XLo
Constant:		
MH-10-34	109647.125	2910921.091
MH-10-35	109723.981	2910943.298
MH-10-36	109765.619	2910955.329
MH-10-37	109764.546	2910973.348
MH-10-38	109759.795	2911053.207
MH-10-39	109754.412	2911143.676
MH-10-40	109747.634	2911201.758
MH-10-41	109748.348	2911258.671
MH-10-42	109740.555	2911324.398
MH-10-43	109737.585	2911385.513
MH-10-44	109732.999	2911445.227
MH-10-45	109809.120	2911469.835

PIPE DATA LIST

MH - MH	Distance	Diam.
SLOVO PARK SECTION 02	(m)	(mm)
MH-10-34 - MH-10-35	80.000	200mm HDPE PE100 PN8
MH-10-35 - MH-10-36	43.341	200mm HDPE PE100 PN8
MH-10-36 - MH-10-37	18.051	200mm HDPE PE100 PN8
MH-10-37 - MH-10-38	80.000	200mm HDPE PE100 PN8
MH-10-38 - MH-10-39	90.629	200mm HDPE PE100 PN8
MH-10-39 - MH-10-40	58.477	200mm HDPE PE100 PN8
MH-10-40 - MH-10-41	56.917	200mm HDPE PE100 PN8
MH-10-41 - MH-10-42	66.188	200mm HDPE PE100 PN8
MH-10-42 - MH-10-43	61.187	200mm HDPE PE100 PN8
MH-10-43 - MH-10-44	59.890	200mm HDPE PE100 PN8
MH-10-44 - MH-10-45	80.000	200mm HDPE PE100 PN8

TOTAL LENGTHS OF PIPING

MH Centre to MH Centre

Diameter (mm)	Length (m)
250mm HDPE PE100 PN8	429.39
200mm HDPE PE100 PN8	7371.24
Total :	7800.63

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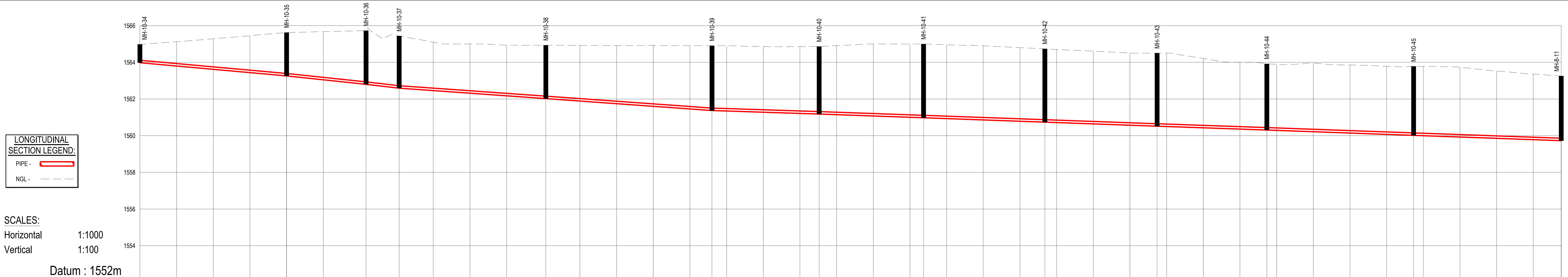
1. GRADE: BETWEEN 1:10 AND 1:6: ANCHOR BLOCKS SHALL BE INSTALLED AT INTERVALS NOT EXCEEDING 12 METERS.

SEWER MANHOLES
1. SEWER MANHOLES ARE TO BE SPACED AT A MAXIMUM OF 80 METERS.

LEGEND

- 200mmØ HDPE PE100 PN8 PIPE
- NEW SEWER MANHOLE (MH)
- FLOW DIRECTION
- NEW SEWER PIPE AND MANHOLE NOT WITHIN INDICATED LONG SECTION
- EXISTING SEWER PIPE
- EXISTING SEWER MANHOLE
- CONTOURS
- 0000 BM00 BENCHMARK

ISSUED FOR TENDER



SCALES:
Horizontal 1:1000
Vertical 1:100

Datum : 1552m

CHAINAGE (m)	GROUND LEVEL	INVERT LEVEL	DEPTH TO INVERTS
0.000	1564.978	1563.980	-0.998
20.000	1565.126	1563.800	-1.326
40.000	1565.285	1563.620	-1.665
60.000	1565.454	1563.440	-2.014
80.000	1565.622	1563.260	-2.362
100.000	1565.673	1563.048	-2.625
123.340	1565.728	1562.800	-2.928
141.392	1565.436	1562.590	-2.846
200.000	1565.100	1562.457	-2.643
180.000	1565.000	1562.315	-2.685
200.000	1564.935	1562.172	-2.763
221.392	1564.932	1562.020	-2.912
240.000	1564.924	1561.887	-3.037
260.000	1564.915	1561.743	-3.172
280.000	1564.924	1561.600	-3.324
300.000	1564.906	1561.456	-3.450
312.021	1564.905	1561.370	-3.535
320.000	1564.902	1561.344	-3.558
340.000	1564.864	1561.279	-3.585
360.000	1564.856	1561.214	-3.642
370.498	1564.864	1561.180	-3.684
380.000	1564.907	1561.146	-3.761
400.000	1565.000	1561.074	-3.926
420.000	1564.996	1561.002	-3.994
427.414	1564.997	1560.975	-4.022
440.000	1564.958	1560.929	-4.029
460.000	1564.902	1560.857	-4.045
480.000	1564.802	1560.784	-4.018
493.602	1564.734	1560.735	-3.999
500.000	1564.703	1560.712	-3.991
520.000	1564.607	1560.640	-3.967
540.000	1564.512	1560.568	-3.944
554.789	1564.500	1560.515	-3.985
560.000	1564.500	1560.497	-4.003
580.000	1564.208	1560.427	-3.781
600.000	1564.000	1560.356	-3.644
614.679	1563.915	1560.305	-3.610
620.000	1563.892	1560.286	-3.606
640.000	1563.956	1560.213	-3.743
660.000	1563.853	1560.141	-3.712
680.000	1563.785	1560.068	-3.717
694.679	1563.782	1560.015	-3.767
700.000	1563.773	1559.996	-3.777
720.000	1563.734	1559.924	-3.810
740.000	1563.524	1559.852	-3.672
760.000	1563.356	1559.780	-3.576
775.196	1563.252	1559.725	-3.527

PIPE GRADES (length)	Grade	%	HYDRAULICS DESIGN Q (l/s)	DESIGN V (m/s)	MAX.(0.67D) Q (l/s)	MAX.(0.67D) V (m/s)
80.000m	1: 111.111	0.900 %			9.33	0.92
43.340m	1: 94.217	1.061 %	0.12	0.28	10.13	0.99
18.052m	1: 85.962	1.163 %	0.12	0.29	10.61	1.04
80.000m	1: 140.351	0.712 %	0.29	0.32	8.30	0.81
90.629m	1: 139.429	0.717 %	0.37	0.34	8.33	0.82
58.477m	1: 307.774	0.325 %	0.95	0.35	5.60	0.55
56.916m	1: 277.639	0.360 %	1.47	0.41	5.90	0.58
66.188m	1: 275.783	0.363 %	1.68	0.42	5.92	0.58
61.187m	1: 278.123	0.360 %	1.87	0.43	5.90	0.58
59.890m	1: 285.190	0.351 %	2.03	0.44	5.82	0.57
80.000m	1: 275.862	0.362 %	2.03	0.45	5.92	0.58
80.517m	1: 277.645	0.360 %	2.40	0.46	5.90	0.58

PIPE DETAILS: 200mm HDPE PE100 PN8, Class B rigid pipe bedding

MH-10-34 - MH-8-11

REFER TO DRAWING No:

GENERAL LAYOUTS

JW14478-SLV-MGLP-000 - MASTER GENERAL LAYOUT PLAN
JW14478-SLV-GLP-S1-000 - GENERAL LAYOUT PLAN

LAYOUT AND LONGITUDINAL SECTIONS

JW14478-SLV-S2-LS-01 - LAYOUT AND LONGITUDINAL SECTION SHEET 1 OF 14
JW14478-SLV-S2-LS-02 - LAYOUT AND LONGITUDINAL SECTION SHEET 2 OF 14
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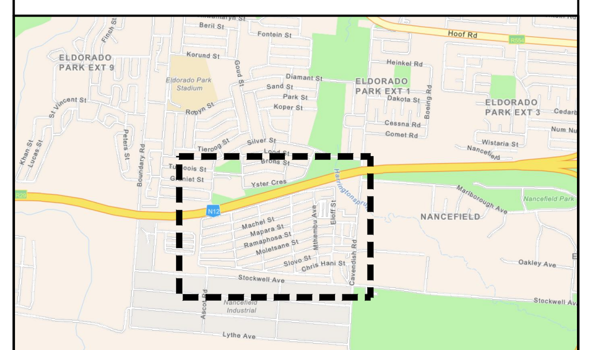
JW14478-SLV-S2-LS-02 - LAYOUT AND LONGITUDINAL SECTION SHEET 13 OF 14
JW14478-SLV-S2-LS-03 - LAYOUT AND LONGITUDINAL SECTION SHEET 14 OF 14

STANDARD DETAILS

JW100-DET02-W01:	BEDDING DETAIL
JW100-DET01-S01:	MANHOLE DETAILS FOR SEWER
JW100-DET01.1-W01:	NAMEBOARD

KEY PLAN:



CONSULTING ENGINEERS
CAPEX - ENGINEERING SERVICE UNIT
TURBINE HALL - 3RD FLOOR
65 NTEMI PILISO STREET
NEWTOWN
JOHANNESBURG
2113

DESIGNED	S.KHUZWAYO	OCT 2024
	SIGNATURE:	
DRAWN	R.MUDAU	OCT 2024
	SIGNATURE:	
CHECKED	M.SAMBO	OCT 2024
	SIGNATURE:	
APPROVED BY:	P.MOGOLOLA	OCT 2024
	SIGNATURE:	ECSA REG. No: 2018300335

Johannesburg Water

JOHANNESBURG WATER SOC Ltd
TURBINE HALL
65 NTEMI PILISO STREET
NEWTOWN
JOHANNESBURG
2113
TEL: +27 (0)11 688 1400
FAX: +27(0)11 688-1528

Municipality:

Joburg — a world class African city

Project description:

NANCEFIELD - SLOVO PARK (SECTION 2)
PROVISION OF BASIC SANITATION SERVICES
LAYOUT PLAN AND LONG SECTION
MH-10-34 - MH-8-11

SCALE: AS SHOWN

AMENDMENTS

REV	DESCRIPTION	DATE	BY	APV
A	ISSUED FOR TENDER	18/10/2024	SK	PM

DRAWING No: JW14478-SLV-S2-LS-07

PROJECT No.	DISCIPLINARY	REV.
S1405	SEWER	A

ORIGINAL PAGE SIZE: A1 — SHEET 4 OF 14

FILE No.

COORDINATE LIST

LO29

SLOVO PARK SECTION 02		
MH No.	YLo	XLo
Constant:		
MH-11-46	109757.150	2911391.183
MH-11-47	109833.347	2911415.558
MH-12-48	109762.534	2911330.553
MH-12-49	109838.618	2911355.276
MH-13-50	109765.026	2911268.014
MH-13-51	109840.384	2911294.869
MH-14-52	109770.230	2911206.825
MH-14-53	109846.449	2911231.131

PIPE DATA LIST

MH - MH	Distance	Diam.
SLOVO PARK SECTION 02	(m)	(mm)
MH-11-46 - MH-11-47	80.000	200mm HDPE PE100 PN8
MH-11-47 - MH-8-10	57.491	200mm HDPE PE100 PN8
MH-12-48 - MH-12-49	80.000	200mm HDPE PE100 PN8
MH-12-49 - MH-8-9	57.061	200mm HDPE PE100 PN8
MH-13-50 - MH-13-51	80.000	200mm HDPE PE100 PN8
MH-13-51 - MH-8-8	58.810	200mm HDPE PE100 PN8
MH-14-52 - MH-14-53	80.000	200mm HDPE PE100 PN8
MH-14-53 - MH-8-7	55.257	200mm HDPE PE100 PN8
MH-15-54 - MH-15-55	80.000	200mm HDPE PE100 PN8

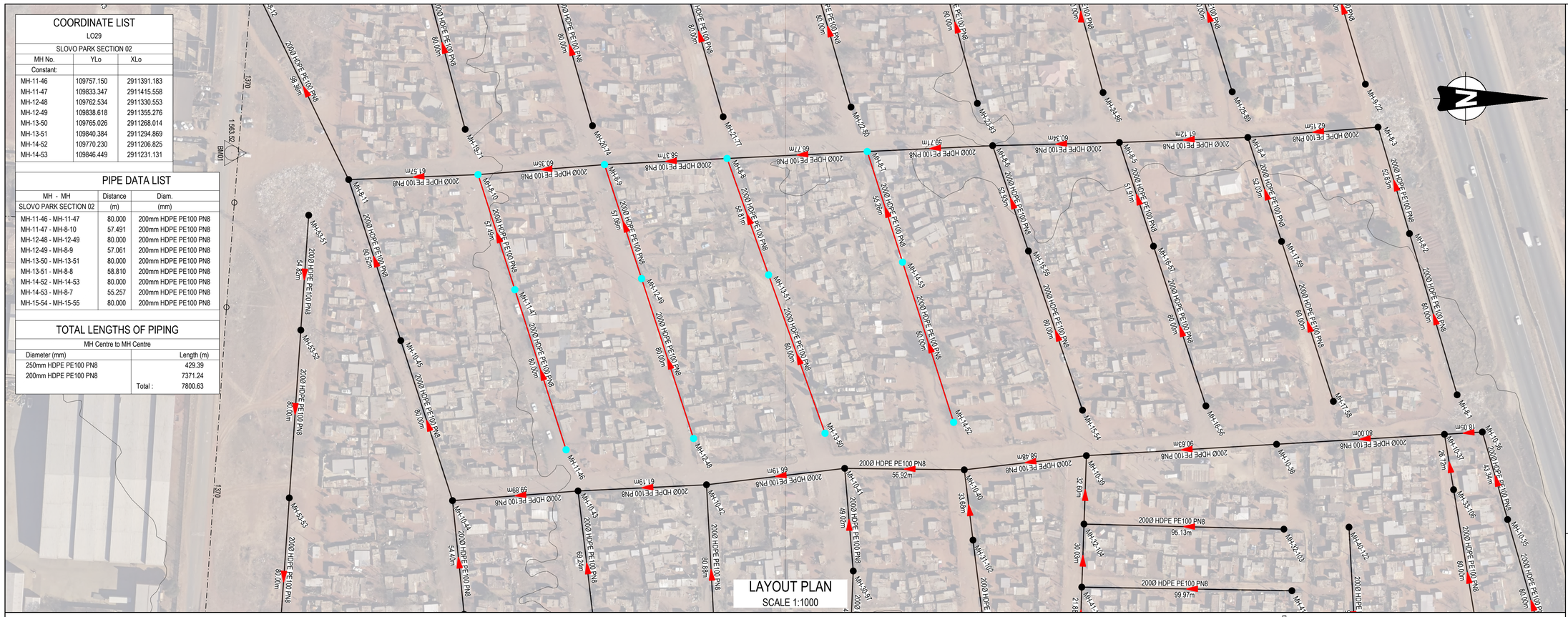
TOTAL LENGTHS OF PIPING

MH Centre to MH Centre

Diameter (mm)	Length (m)
250mm HDPE PE100 PN8	429.39
200mm HDPE PE100 PN8	7371.24
Total :	7800.63

LAYOUT PLAN

SCALE 1:1000

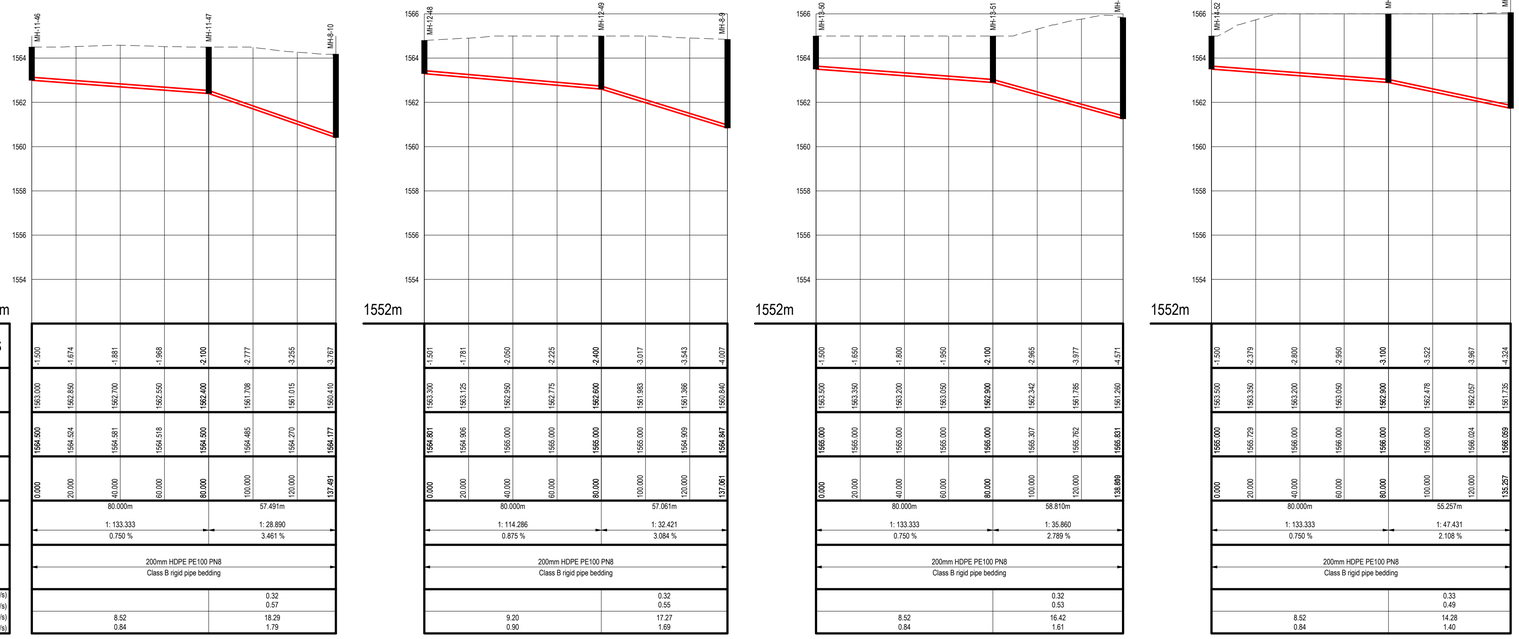


LONGITUDINAL SECTIONS

LONGITUDINAL SECTION LEGEND:
PIPE -
NGL -

SCALES:
Horizontal 1:1000
Vertical 1:100

Datum : 1552m



MH-11-46 - MH-8-10 | MH-12-48 - MH-8-9 | MH-13-50 - MH-8-8 | MH-14-52 - MH-8-7

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LEGEND

- 200mmØ HDPE PE100 PN8 PIPE
- NEW SEWER MANHOLE (MH)
- FLOW DIRECTION
- NEW SEWER PIPE AND MANHOLE NOT WITHIN INDICATED LONG SECTION
- EXISTING SEWER PIPE
- EXISTING SEWER MANHOLE
- CONTOURS
- 0000 BM00 BENCHMARK

ISSUED FOR TENDER

REFER TO DRAWING No:

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JW14478-SLV-MGLP-000 - MASTER GENERAL LAYOUT PLAN
JW14478-SLV-GLP-S1-000 - GENERAL LAYOUT PLAN

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JW14478-SLV-S2-LS-03 - LAYOUT AND LONGITUDINAL SECTION SHEET 14 OF 14

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JW100-DET02-W01: BEDDING DETAIL
JW100-DET01-S01: MANHOLE DETAILS FOR SEWER
JW100-DET01.1-W01: NAMEBOARD

KEY PLAN:

CONSULTING ENGINEERS
CAPEX - ENGINEERING SERVICE UNIT
TURBINE HALL - 3RD FLOOR
65 NTEMI PILISO STREET
NEWTOWN
JOHANNESBURG
2113

DESIGNED	S.KHUZWAYO	OCT 2024	
	SIGNATURE:		
DRAWN	R.MUDAU	OCT 2024	
	SIGNATURE:		
CHECKED	M.SAMBO	OCT 2024	
	SIGNATURE:		
APPROVED BY:	P.MOGOLOLA	OCT 2024	
	SIGNATURE:	ECSA REG. No: 2018300335	

Johannesburg Water

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TURBINE HALL
65 NTEMI PILISO STREET
NEWTOWN
JOHANNESBURG
2113
TEL: +27 (0)11 688 1400
FAX: +27(0)11 688-1528

Municipality: Joburg — a world class African city

Project description:

NANCEFIELD - SLOVO PARK (SECTION 2)
PROVISION OF BASIC SANITATION SERVICES
LAYOUT PLAN AND LONG SECTION
MH-11-46 - MH-8-10 & MH-12-48 - MH-8-9 & MH-13-50 - MH-8-8 & MH-14-52 - MH-8-7

SCALE: AS SHOWN

AMENDMENTS

REV	DESCRIPTION	DATE	BY	APV
A	ISSUED FOR TENDER	18/10/2024	SK	PM

DRAWING No: JW14478-SLV-S2-LS-08

S1405 — PROJECT No.
SEWER - A — DISCIPLINARY / REV.
A1 — ORIGINAL PAGE SIZE
SHEET 5 OF 14
FILE No.

COORDINATE LIST

LO29

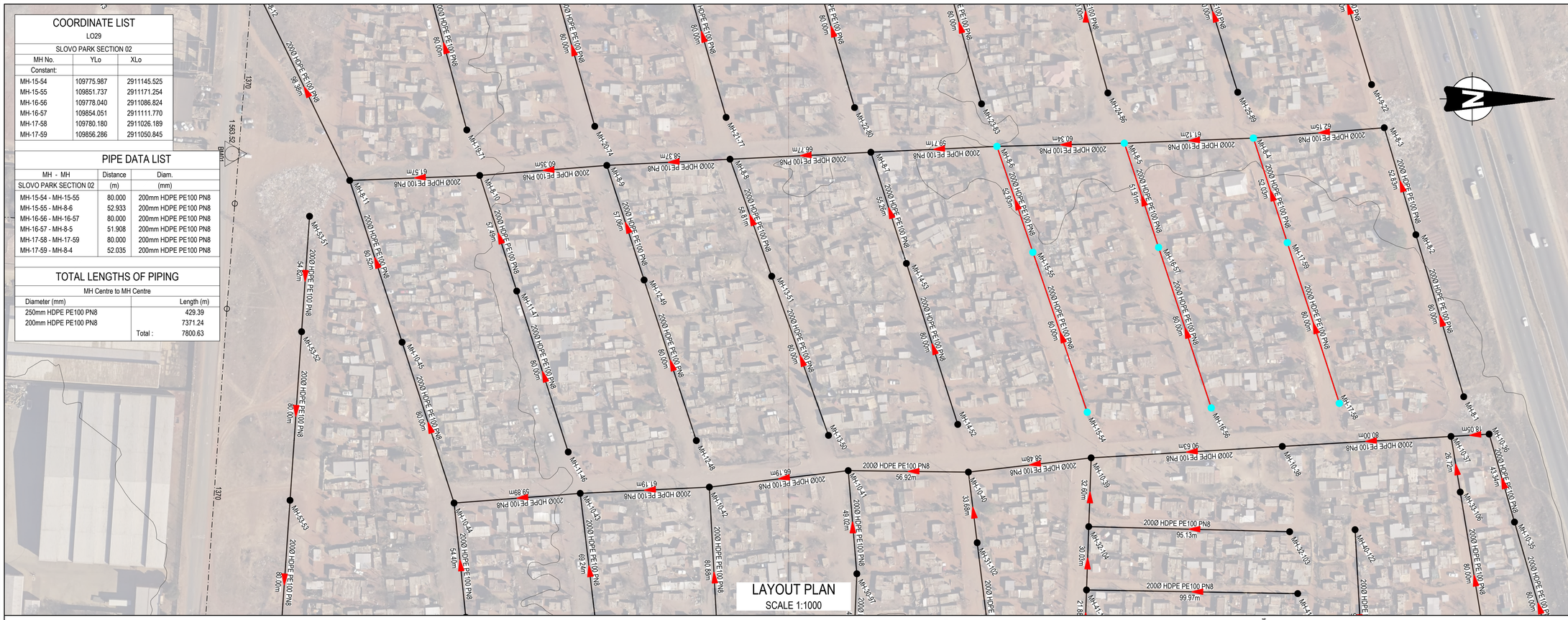
SLOVO PARK SECTION 02		
MH No.	YLo	XLo
Constant:		
MH-15-54	109775.987	2911145.525
MH-15-55	109851.737	2911171.254
MH-16-56	109778.040	2911086.824
MH-16-57	109854.051	2911111.770
MH-17-58	109780.180	2911026.189
MH-17-59	109856.286	2911050.845

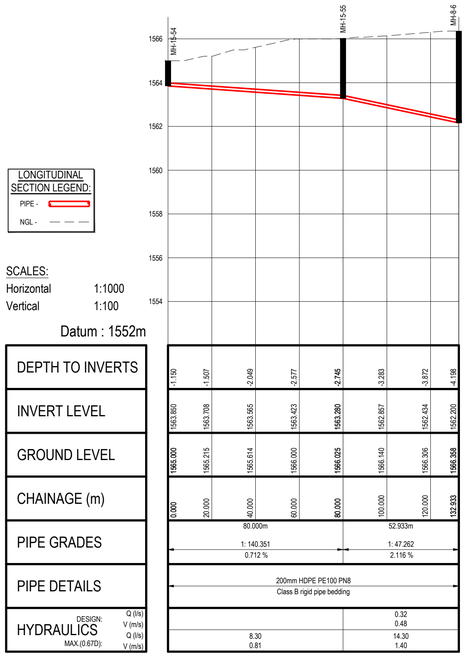
PIPE DATA LIST

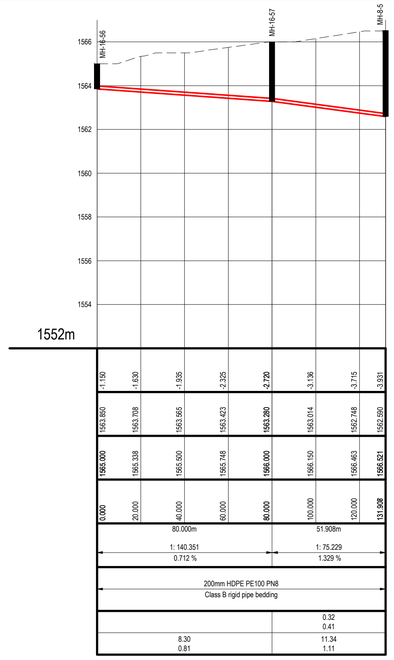
MH - MH	Distance	Diam.
SLOVO PARK SECTION 02	(m)	(mm)
MH-15-54 - MH-15-55	80.000	200mm HDPE PE100 PN8
MH-15-55 - MH-8-6	52.933	200mm HDPE PE100 PN8
MH-16-56 - MH-16-57	80.000	200mm HDPE PE100 PN8
MH-16-57 - MH-8-5	51.908	200mm HDPE PE100 PN8
MH-17-58 - MH-17-59	80.000	200mm HDPE PE100 PN8
MH-17-59 - MH-8-4	52.035	200mm HDPE PE100 PN8

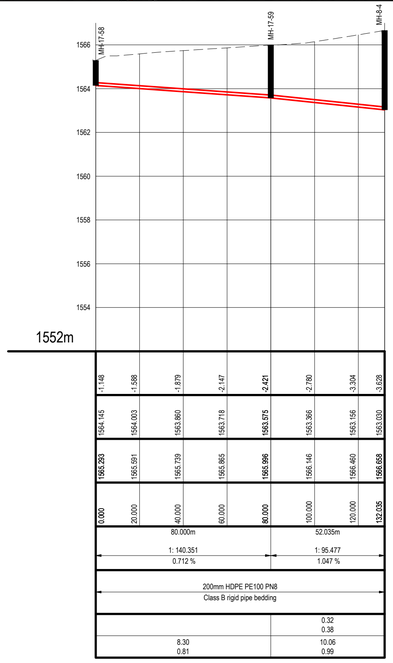
TOTAL LENGTHS OF PIPING

MH Centre to MH Centre	
Diameter (mm)	Length (m)
250mm HDPE PE100 PN8	429.39
200mm HDPE PE100 PN8	7371.24
Total :	7800.63









LONGITUDINAL SECTION LEGEND:
PIPE -
NGL -

SCALES:
Horizontal 1:1000
Vertical 1:100

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LEGEND

- 200mmØ HDPE PE100 PN8 PIPE
- NEW SEWER MANHOLE (MH)
- FLOW DIRECTION
- NEW SEWER PIPE AND MANHOLE NOT WITHIN INDICATED LONG SECTION
- EXISTING SEWER PIPE
- EXISTING SEWER MANHOLE
- CONTOURS
- 0000 BM00 BENCHMARK

ISSUED FOR TENDER

REFER TO DRAWING No:

GENERAL LAYOUTS

JW14478-SLV-MGLP-000 - MASTER GENERAL LAYOUT PLAN
JW14478-SLV-GLP-S1-000 - GENERAL LAYOUT PLAN

LAYOUT AND LONGITUDINAL SECTIONS

JW14478-SLV-S2-LS-01 - LAYOUT AND LONGITUDINAL SECTION SHEET 1 OF 14
JW14478-SLV-S2-LS-02 - LAYOUT AND LONGITUDINAL SECTION SHEET 2 OF 14
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JW14478-SLV-S2-LS-03 - LAYOUT AND LONGITUDINAL SECTION SHEET 14 OF 14

STANDARD DETAILS

JW100-DET02-W01:	BEDDING DETAIL
JW100-DET01-S01:	MANHOLE DETAILS FOR SEWER
JW100-DET01.1-W01:	NAMEBOARD

KEY PLAN:

CONSULTING ENGINEERS
CAPEX - ENGINEERING SERVICE UNIT
TURBINE HALL - 3RD FLOOR
65 NTEMI PILISO STREET
NEWTOWN
JOHANNESBURG
2113

DESIGNED	S.KHUZWAYO	OCT 2024	SIGNATURE:
DRAWN	R.MUDAU	OCT 2024	SIGNATURE:
CHECKED	M.SAMBO	OCT 2024	SIGNATURE:
APPROVED BY:	P.MOGOLOLA	OCT 2024	SIGNATURE: ECSA REG. No: 2018300335

Johannesburg Water

JOHANNESBURG WATER SOC Ltd
TURBINE HALL
65 NTEMI PILISO STREET
NEWTOWN
JOHANNESBURG
2113
TEL: +27 (0)11 688 1400
FAX: +27(0)11 688-1528

Municipality: Joburg — a world class African city

Project description:

NANCEFIELD - SLOVO PARK (SECTION 2)
PROVISION OF BASIC SANITATION SERVICES
LAYOUT PLAN AND LONG SECTION
MH-15-54 - MH-8-6 & MH-16-56 - MH-8-5 & MH-17-58 - MH-8-4

SCALE: AS SHOWN

AMENDMENTS

REV	DESCRIPTION	DATE	BY	APV
A	ISSUED FOR TENDER	18/10/2024	SK	PM

DRAWING No: JW14478-SLV-S2-LS-09

PROJECT No.	DISCIPLINARY	REV.
S1405	SEWER	A

ORIGINAL PAGE SIZE	SHEET	OF
A1	6	14

FILE No.

COORDINATE LIST

LO29

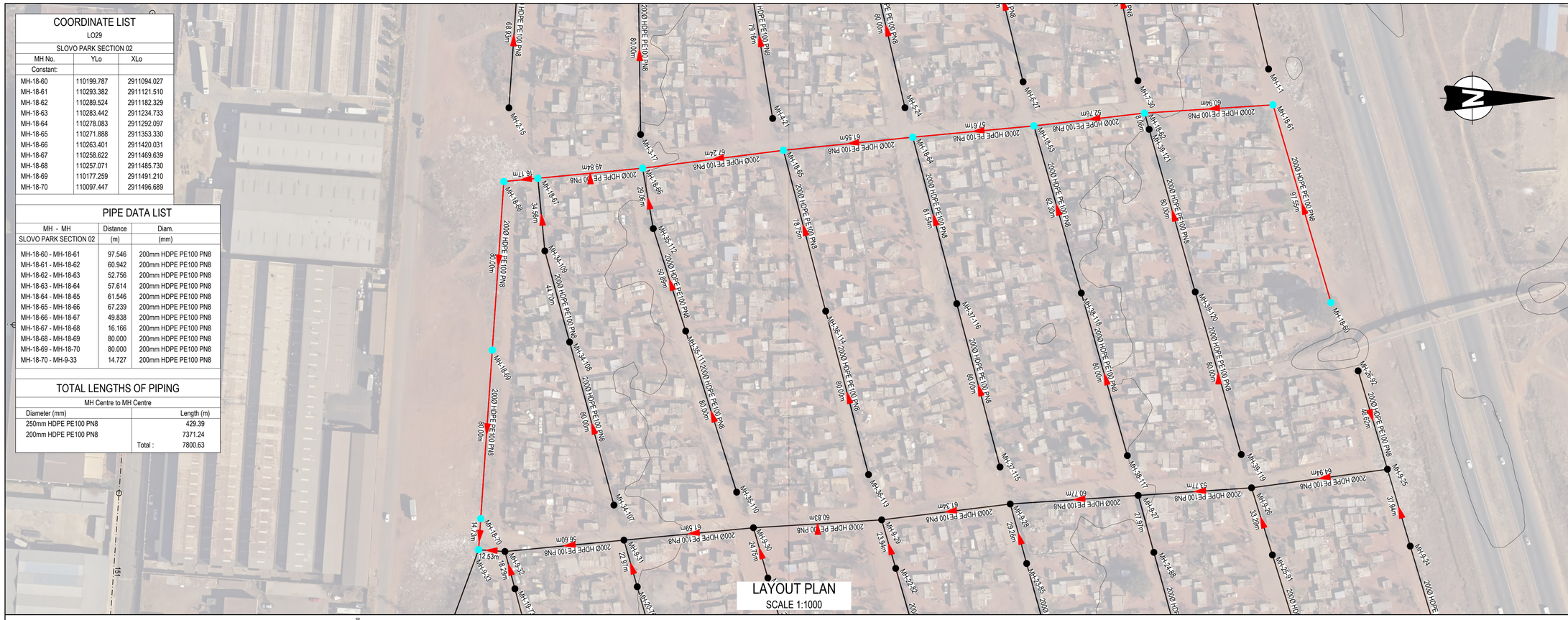
SLOVO PARK SECTION 02		
MH No.	YLo	XLo
Constant:		
MH-18-60	110199.787	2911094.027
MH-18-61	110293.382	2911121.510
MH-18-62	110289.524	2911182.329
MH-18-63	110283.442	2911234.733
MH-18-64	110278.083	2911292.097
MH-18-65	110271.888	2911353.330
MH-18-66	110263.401	2911420.031
MH-18-67	110258.622	2911469.639
MH-18-68	110257.071	2911485.730
MH-18-69	110177.259	2911491.210
MH-18-70	110097.447	2911496.689

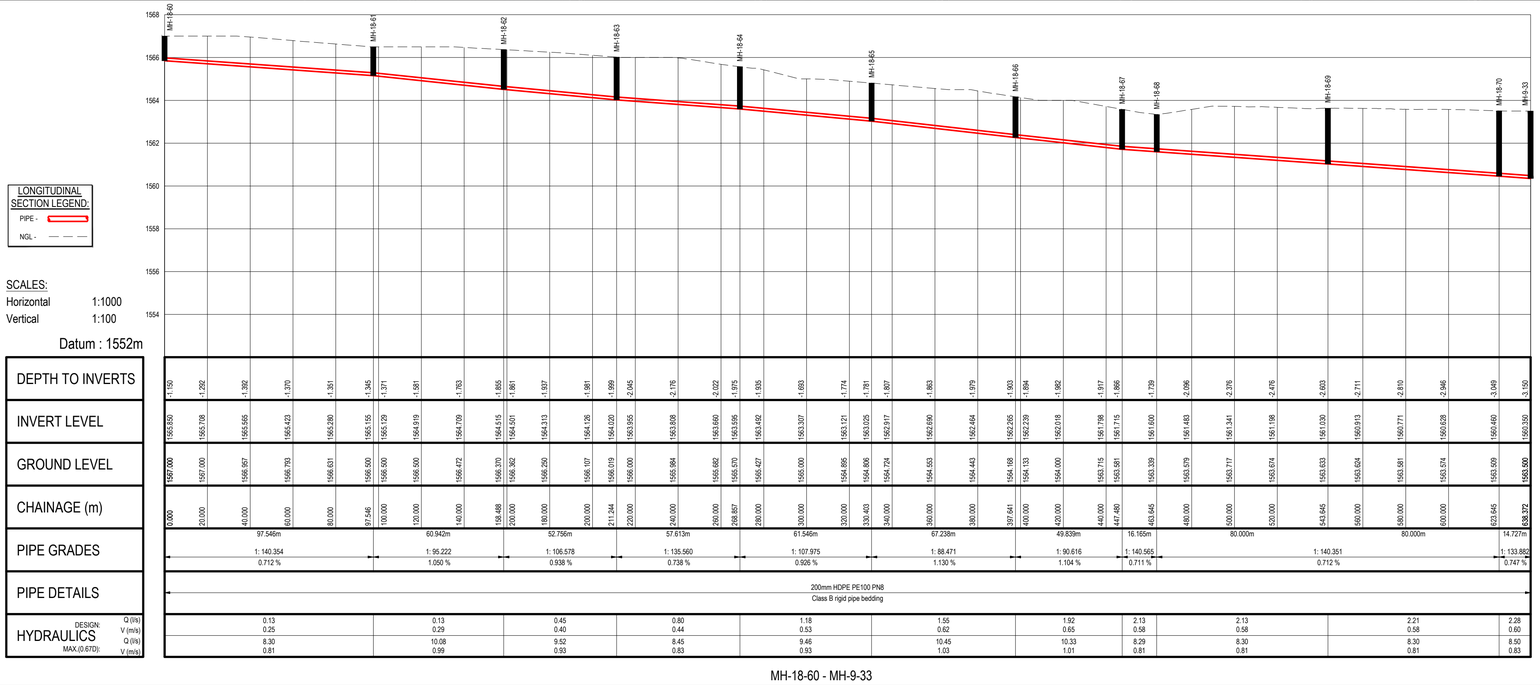
PIPE DATA LIST

MH - MH	Distance	Diam.
SLOVO PARK SECTION 02	(m)	(mm)
MH-18-60 - MH-18-61	97.546	200mm HDPE PE100 PN8
MH-18-61 - MH-18-62	60.942	200mm HDPE PE100 PN8
MH-18-62 - MH-18-63	52.756	200mm HDPE PE100 PN8
MH-18-63 - MH-18-64	57.614	200mm HDPE PE100 PN8
MH-18-64 - MH-18-65	61.546	200mm HDPE PE100 PN8
MH-18-65 - MH-18-66	67.239	200mm HDPE PE100 PN8
MH-18-66 - MH-18-67	49.838	200mm HDPE PE100 PN8
MH-18-67 - MH-18-68	16.166	200mm HDPE PE100 PN8
MH-18-68 - MH-18-69	80.000	200mm HDPE PE100 PN8
MH-18-69 - MH-18-70	80.000	200mm HDPE PE100 PN8
MH-18-70 - MH-9-33	14.727	200mm HDPE PE100 PN8

TOTAL LENGTHS OF PIPING

MH Centre to MH Centre		
Diameter (mm)		Length (m)
250mm HDPE PE100 PN8		429.39
200mm HDPE PE100 PN8		7371.24
	Total :	7800.63





MH-18-60 - MH-9-33

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ISSUED FOR TENDER

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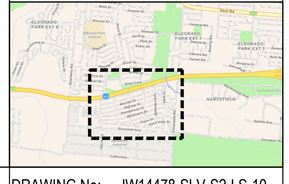
JW14478-SLV-S2-LS-03 - LAYOUT AND LONGITUDINAL SECTION SHEET 14 OF 14

STANDARD DETAILS

JW100-DET02-W01:	BEDDING DETAIL
JW100-DET01-S01:	MANHOLE DETAILS FOR SEWER
JW100-DET01.1-W01:	NAMEBOARD

KEY PLAN:



CONSULTING ENGINEERS
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TURBINE HALL - 3RD FLOOR
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NEWTOWN
JOHANNESBURG
2113

DESIGNED	S.KHUZWAYO	OCT 2024	SIGNATURE:
DRAWN	R.MUDAU	OCT 2024	SIGNATURE:
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Johannesburg Water

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JOHANNESBURG
2113
TEL: +27 (0)11 688 1400
FAX: +27(0)11 688-1528

Municipality: Joburg — a world class African city

Project description:

NANCEFIELD - SLOVO PARK (SECTION 2)
PROVISION OF BASIC SANITATION SERVICES
LAYOUT PLAN AND LONG SECTION
MH-18-60 - MH-9-33

SCALE: AS SHOWN

REV	DESCRIPTION	DATE	BY	APV
A	ISSUED FOR TENDER	18/10/2024	SK	PM

DRAWING No: JW14478-SLV-S2-LS-10

PROJECT No.	DISCIPLINARY	REV.
S1405	SEWER	A

ORIGINAL PAGE SIZE: A1 — SHEET 7 OF 14

FILE No.

COORDINATE LIST

LO29

SLOVO PARK SECTION 02		
MH No.	YLo	XLo
Constant:		
MH-19-71	109909.649	2911439.205
MH-19-72	109986.942	2911459.840
MH-19-73	110064.235	2911480.474

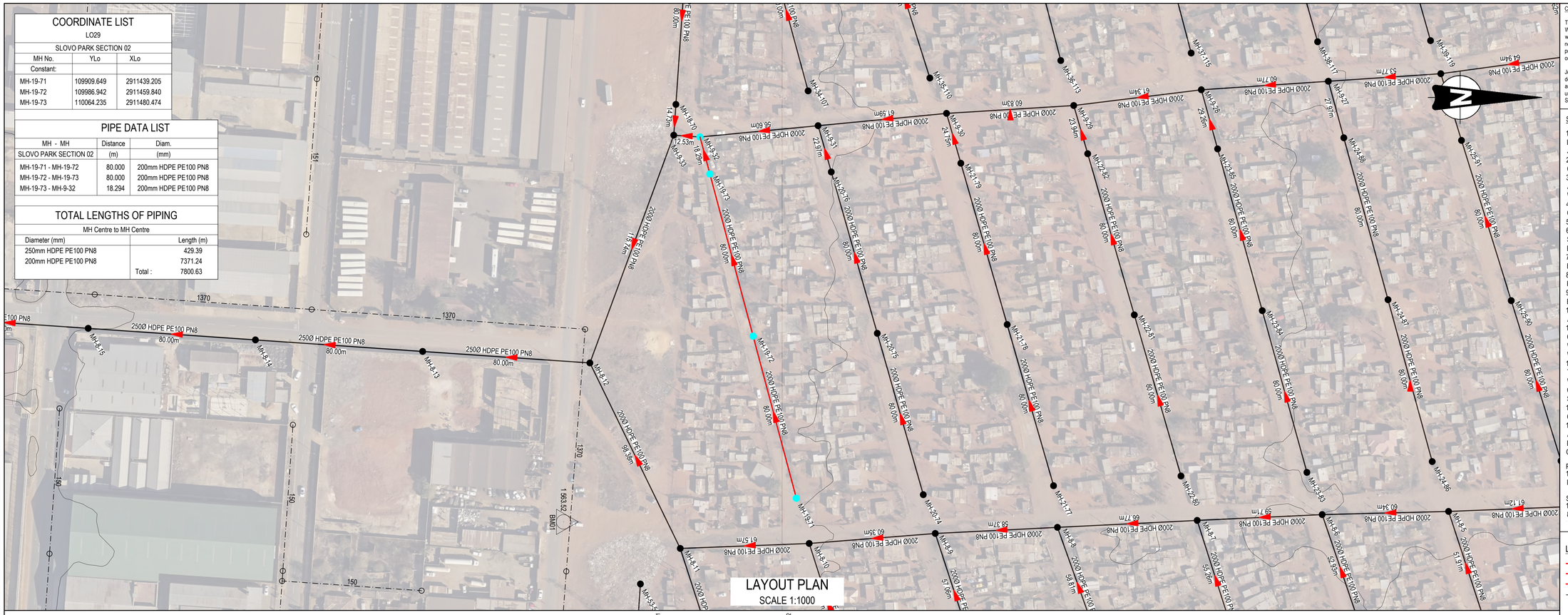
PIPE DATA LIST

MH - MH	Distance	Diam.
SLOVO PARK SECTION 02	(m)	(mm)
MH-19-71 - MH-19-72	80.000	200mm HDPE PE100 PN8
MH-19-72 - MH-19-73	80.000	200mm HDPE PE100 PN8
MH-19-73 - MH-9-32	18.294	200mm HDPE PE100 PN8

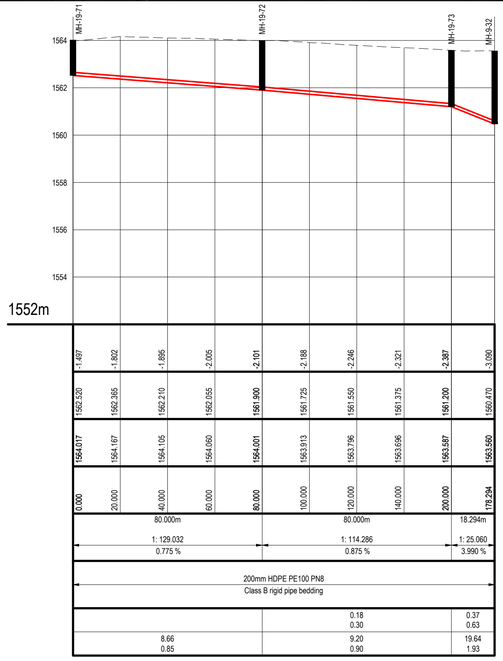
TOTAL LENGTHS OF PIPING

MH Centre to MH Centre

Diameter (mm)	Length (m)
250mm HDPE PE100 PN8	429.39
200mm HDPE PE100 PN8	7371.24
Total :	7800.63



LAYOUT PLAN
SCALE 1:1000



MH-19-71 - MH-9-32

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JW100-DET02-W01:	BEDDING DETAIL
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Municipality:

Joburg
a world class African city

Project description:

NANCEFIELD - SLOVO PARK (SECTION 2)
PROVISION OF BASIC SANITATION SERVICES
LAYOUT PLAN AND LONG SECTION
MH-19-71 - MH-9-32

SCALE: AS SHOWN

AMENDMENTS

REV	DESCRIPTION	DATE	BY	APV
A	ISSUED FOR TENDER	18/10/2024	SK	PM

DRAWING No: JW14478-SLV-S2-LS-11

PROJECT No.	DISCIPLINARY	REV.
S1405	SEWER	A

ORIGINAL PAGE SIZE	SHEET	OF
A1	8	14

FILE No.

COORDINATE LIST

LO29

SLOVO PARK SECTION 02		
MH No.	YLo	XLo
Constant:		
MH-20-74	109911.352	2911378.638
MH-20-75	109988.280	2911400.592
MH-20-76	110065.209	2911422.546
MH-21-77	109915.607	2911316.475
MH-21-78	109992.491	2911338.585
MH-21-79	110069.375	2911360.696
MH-22-80	109920.241	2911255.662
MH-22-81	109997.084	2911277.914
MH-22-82	110073.927	2911300.167

PIPE DATA LIST

MH - MH	Distance	Diam.
SLOVO PARK SECTION 02	(m)	(mm)
MH-20-74 - MH-20-75	80.000	200mm HDPE PE100 PN8
MH-20-75 - MH-20-76	80.000	200mm HDPE PE100 PN8
MH-20-76 - MH-9-31	22.971	200mm HDPE PE100 PN8
MH-21-77 - MH-21-78	80.000	200mm HDPE PE100 PN8
MH-21-78 - MH-21-79	80.000	200mm HDPE PE100 PN8
MH-21-79 - MH-9-30	24.751	200mm HDPE PE100 PN8
MH-22-80 - MH-22-81	80.000	200mm HDPE PE100 PN8
MH-22-81 - MH-22-82	80.000	200mm HDPE PE100 PN8
MH-22-82 - MH-9-29	23.937	200mm HDPE PE100 PN8

TOTAL LENGTHS OF PIPING

MH Centre to MH Centre

Diameter (mm)	Length (m)
250mm HDPE PE100 PN8	429.39
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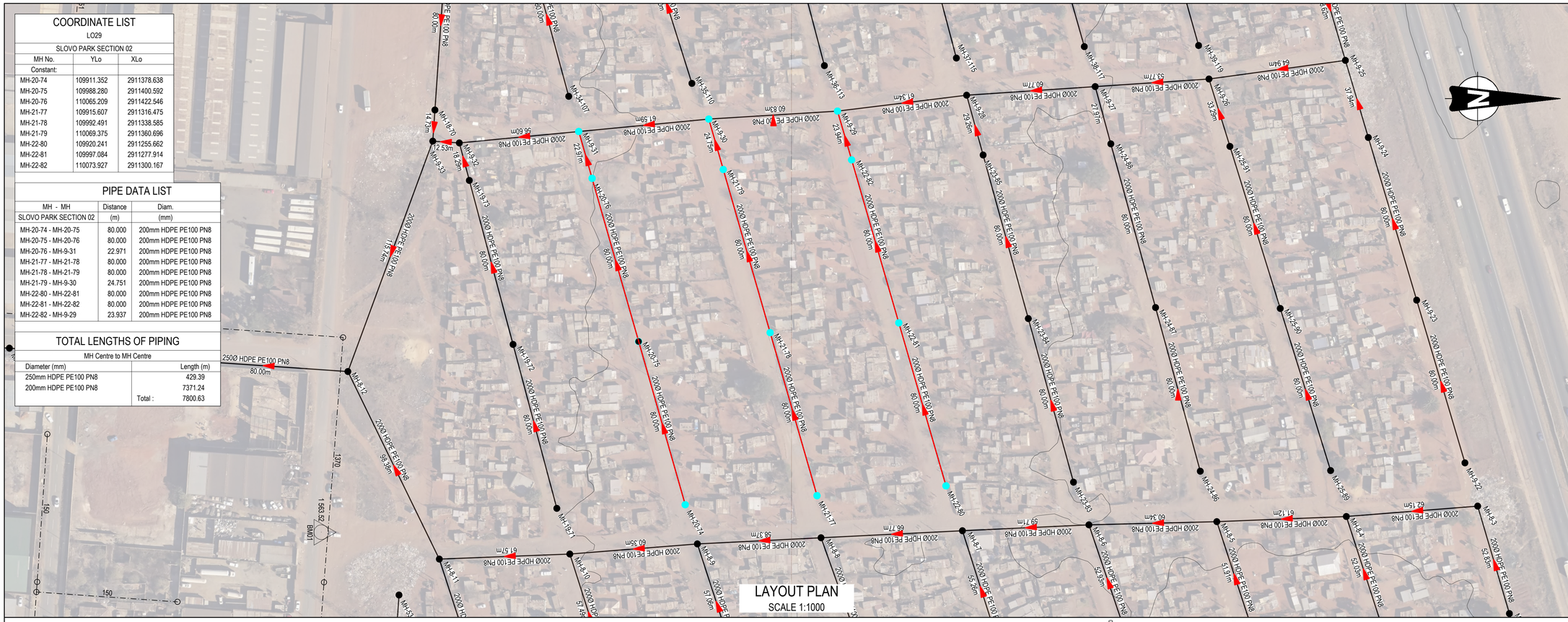

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SEWER:

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2. ALL PIPES TO LAID UNDER TRENCH CONDITIONS UNLESS OTHERWISE SHOWN.
3. ALL CONSTRUCTION WORK TO BE CARRIED OUT IN STRICT ACCORDANCE WITH REQUIREMENTS OF JOHANNESBURG WATER.
4. SEWERS GENERALLY 1,5m FROM BOUNDARIES UNLESS OTHERWISE SHOWN.
5. DO NOT SCALE FROM THESE DRAWINGS.
6. THIS DRAWING MUST BE READ IN CONJUNCTION WITH THE STANDARD SPECIFICATIONS FOR MUNICIPAL CIVIL ENGINEERING WORKS.
7. THE FINAL PIPE ROUTE TO BE DETERMINED ON SITE AFTER EXPOSING OF EXISTING SERVICES.
8. ALL WORKS TO BE APPROVED BY EMPLOYEE AGENT REPRESENTATIVE BEFORE CONSTRUCTION.
9. CONTRACTOR TO CONFIRM LEVELS OF EXISTING PIPES BEFORE COMMENCING CONSTRUCTION.
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PIPE ANCHOR
1. GRADE: BETWEEN 1:10 AND 1:6: ANCHOR BLOCKS SHALL BE INSTALLED AT INTERVALS NOT EXCEEDING 12 METERS.

SEWER MANHOLES
1. SEWER MANHOLES ARE TO BE SPACED AT A MAXIMUM OF 80 METERS.

LEGEND

- 200mmØ HDPE PE100 PN8 PIPE
- NEW SEWER MANHOLE (MH)
- FLOW DIRECTION
- NEW SEWER PIPE AND MANHOLE NOT WITHIN INDICATED LONG SECTION
- EXISTING SEWER PIPE
- EXISTING SEWER MANHOLE
- CONTOURS
- 0000 BM00 BENCHMARK

ISSUED FOR TENDER

REFER TO DRAWING No:

GENERAL LAYOUTS

JW14478-SLV-MGLP-000 - MASTER GENERAL LAYOUT PLAN
JW14478-SLV-GLP-S1-000 - GENERAL LAYOUT PLAN

LAYOUT AND LONGITUDINAL SECTIONS

JW14478-SLV-S2-LS-01 - LAYOUT AND LONGITUDINAL SECTION SHEET 1 OF 14
JW14478-SLV-S2-LS-02 - LAYOUT AND LONGITUDINAL SECTION SHEET 2 OF 14
JW14478-SLV-S2-LS-03 - LAYOUT AND LONGITUDINAL SECTION SHEET 3 OF 14
JW14478-SLV-S2-LS-01 - LAYOUT AND LONGITUDINAL SECTION SHEET 4 OF 14
JW14478-SLV-S2-LS-02 - LAYOUT AND LONGITUDINAL SECTION SHEET 5 OF 14
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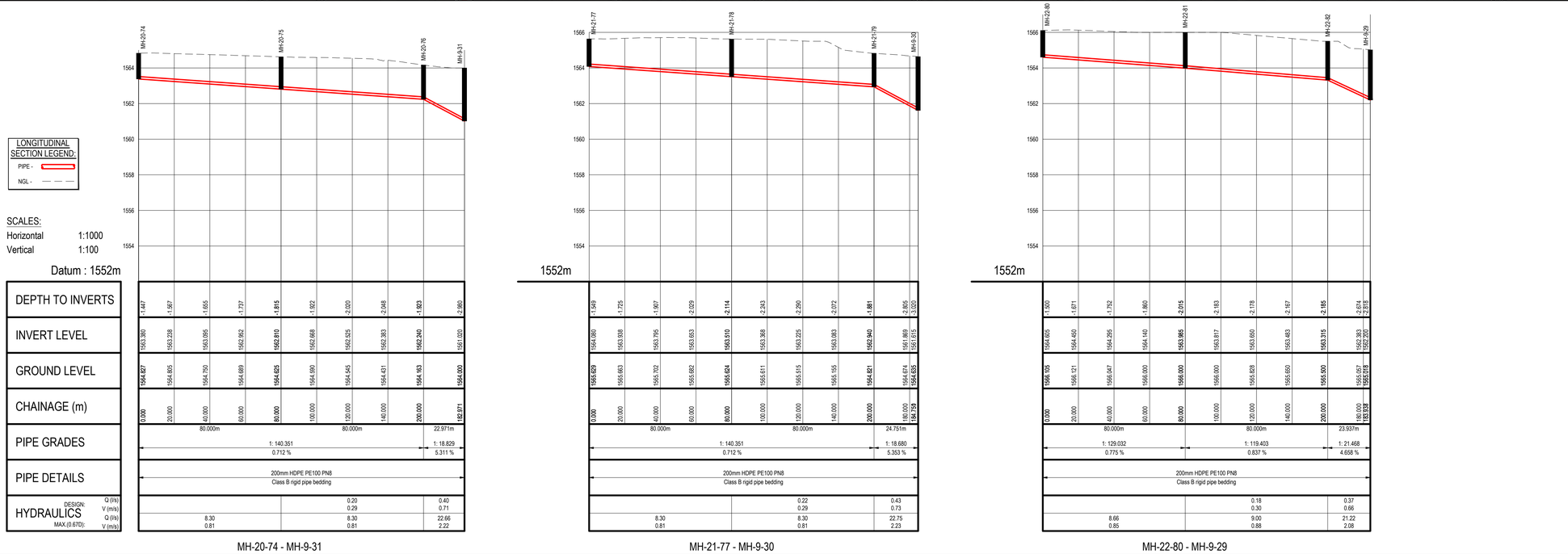
JW14478-SLV-S2-LS-01 - LAYOUT AND LONGITUDINAL SECTION SHEET 10 OF 14
JW14478-SLV-S2-LS-02 - LAYOUT AND LONGITUDINAL SECTION SHEET 11 OF 14
JW14478-SLV-S2-LS-03 - LAYOUT AND LONGITUDINAL SECTION SHEET 12 OF 14
JW14478-SLV-S2-LS-02 - LAYOUT AND LONGITUDINAL SECTION SHEET 13 OF 14
JW14478-SLV-S2-LS-03 - LAYOUT AND LONGITUDINAL SECTION SHEET 14 OF 14

STANDARD DETAILS

JW100-DET02-W01:	BEDDING DETAIL
JW100-DET01-S01:	MANHOLE DETAILS FOR SEWER
JW100-DET01.1-W01:	NAMEBOARD

KEY PLAN:



DRAWING No:	JW14478-SLV-S2-LS-12

PROJECT No.	DISCIPLINARY	REV.
S1405	SEWER	A
ORIGINAL PAGE SIZE	SHEET	OF
A1	9	14

FILE No.

CONSULTING ENGINEERS
CAPEX - ENGINEERING SERVICE UNIT
TURBINE HALL - 3RD FLOOR
65 NTEMI PILISO STREET
NEWTOWN
JOHANNESBURG
2113

DESIGNED	S.KHUZWAYO	OCT 2024
	SIGNATURE:	
DRAWN	R.MUDAU	OCT 2024
	SIGNATURE:	
CHECKED	M.SAMBO	OCT 2024
	SIGNATURE:	
APPROVED BY:	P.MOGOLOLA	OCT 2024
	SIGNATURE:	ECSA REG. No: 2018300335

Johannesburg Water

JOHANNESBURG WATER SOC Ltd
TURBINE HALL
65 NTEMI PILISO STREET
NEWTOWN
JOHANNESBURG
2113
TEL: +27 (0)11 688 1400
FAX: +27(0)11 688-1528

Municipality: Joburg — a world class African city

Project description:

NANCEFIELD - SLOVO PARK (SECTION 2)
PROVISION OF BASIC SANITATION SERVICES
LAYOUT PLAN AND LONG SECTION
MH-20-74 - MH-9-31 & MH-21-77 - MH-9-30 & MH-22-80 - MH-9-29

SCALE: AS SHOWN

AMENDMENTS

REV	DESCRIPTION	DATE	BY	APV
A	ISSUED FOR TENDER	18/10/2024	SK	PM

COORDINATE LIST

LO29

SLOVO PARK SECTION 02		
MH No.	YLo	XLo
Constant:		
MH-23-83	109921.990	2911195.569
MH-23-84	109999.104	2911216.864
MH-23-85	110076.218	2911238.158
MH-24-86	109927.151	2911135.761
MH-24-87	110004.322	2911156.848
MH-24-88	110081.493	2911177.935
MH-25-89	109927.481	2911074.289
MH-25-90	110003.877	2911098.032
MH-25-91	110080.272	2911121.775
MH-26-92	110167.451	2911081.164

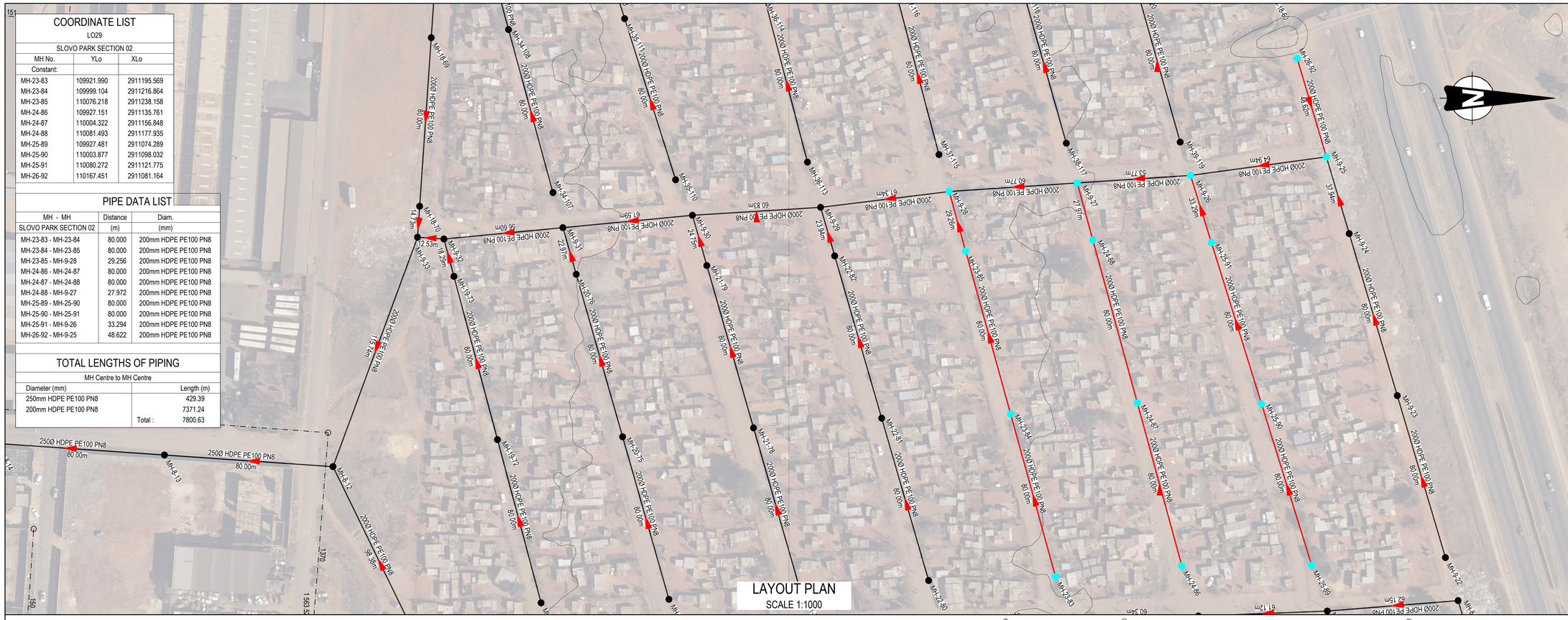
PIPE DATA LIST

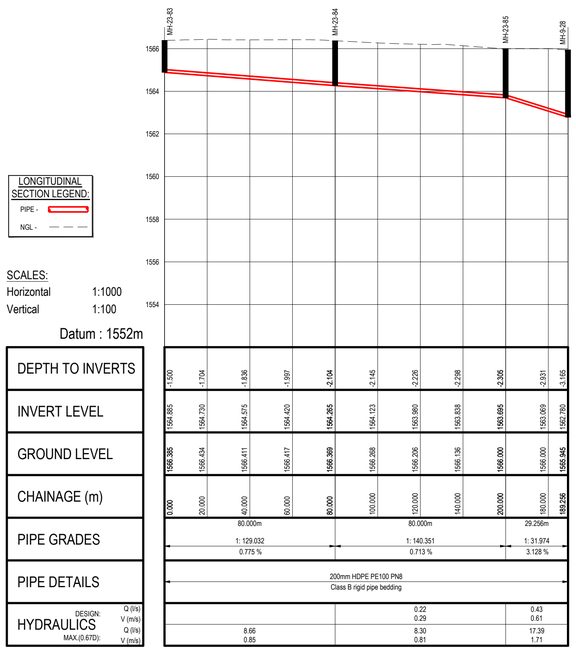
MH - MH	Distance	Diam.
SLOVO PARK SECTION 02	(m)	(mm)
MH-23-83 - MH-23-84	80.000	200mm HDPE PE100 PN8
MH-23-84 - MH-23-85	80.000	200mm HDPE PE100 PN8
MH-23-85 - MH-9-28	29.256	200mm HDPE PE100 PN8
MH-24-86 - MH-24-87	80.000	200mm HDPE PE100 PN8
MH-24-87 - MH-24-88	80.000	200mm HDPE PE100 PN8
MH-24-88 - MH-9-27	27.972	200mm HDPE PE100 PN8
MH-25-89 - MH-25-90	80.000	200mm HDPE PE100 PN8
MH-25-90 - MH-25-91	80.000	200mm HDPE PE100 PN8
MH-25-91 - MH-9-26	33.294	200mm HDPE PE100 PN8
MH-26-92 - MH-9-25	48.622	200mm HDPE PE100 PN8

TOTAL LENGTHS OF PIPING

MH Centre to MH Centre

Diameter (mm)	Length (m)
250mm HDPE PE100 PN8	429.39
200mm HDPE PE100 PN8	7371.24
Total :	7800.63





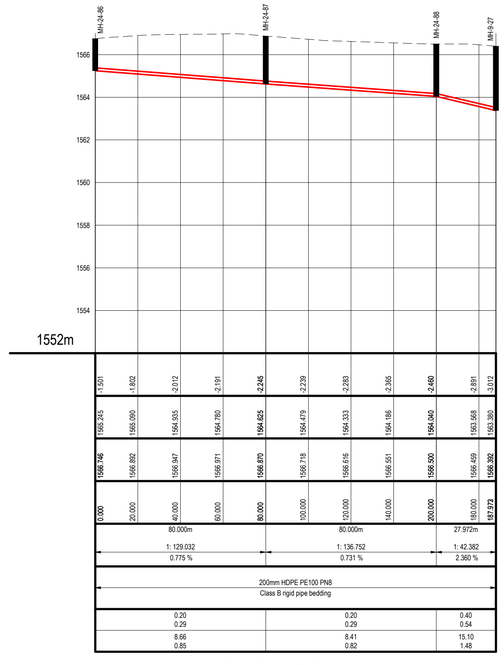
LONGITUDINAL SECTION LEGEND:
PIPE -
NGL -

SCALES:
Horizontal 1:1000
Vertical 1:100

Datum : 1552m

DEPTH TO INVERTS	-1.500	-1.704	-1.836	-1.997	-2.104	-2.145	-2.226	-2.298	-2.305	-2.931	-3.185
INVERT LEVEL	1565.895	1564.730	1564.575	1564.420	1564.255	1564.123	1563.960	1563.838	1563.695	1563.069	1562.780
GROUND LEVEL	1566.395	1566.434	1566.411	1566.417	1566.359	1566.268	1566.206	1566.136	1566.000	1566.000	1565.965
CHAINAGE (m)	0.000	20.000	40.000	60.000	80.000	100.000	120.000	140.000	200.000	180.000	189.256
PIPE GRADES	80.000m				80.000m					29.256m	
	1: 129.032					1: 140.351				1: 31.974	
	0.775 %					0.713 %				3.128 %	
PIPE DETAILS	200mm HDPE PE100 PN8 Class B rigid pipe bedding										
HYDRAULICS DESIGN: Q (l/s)										0.22	0.43
HYDRAULICS DESIGN: V (m/s)										0.29	0.61
HYDRAULICS MAX.(0.67D): Q (l/s)										17.39	
HYDRAULICS MAX.(0.67D): V (m/s)	8.66					8.30				0.81	
	0.85					0.81				1.71	

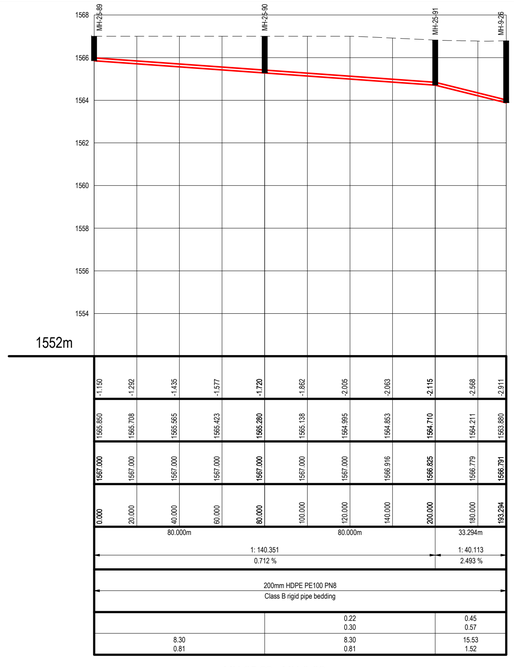
MH-23-83 - MH-9-28



1552m

DEPTH TO INVERTS	-1.501	-1.802	-2.012	-2.191	-2.245	-2.239	-2.283	-2.395	-2.480	-2.891	-3.012
INVERT LEVEL	1565.245	1564.955	1564.535	1564.780	1564.625	1564.479	1564.333	1564.166	1564.040	1563.568	1563.380
GROUND LEVEL	1566.746	1566.892	1566.947	1566.971	1566.870	1566.718	1566.616	1566.561	1566.520	1566.459	1566.392
CHAINAGE (m)	0.000	20.000	40.000	60.000	80.000	100.000	120.000	140.000	200.000	180.000	187.972
PIPE GRADES	80.000m				80.000m					27.972m	
	1: 129.032					1: 136.752				1: 42.382	
	0.775 %					0.731 %				2.360 %	
PIPE DETAILS	200mm HDPE PE100 PN8 Class B rigid pipe bedding										
HYDRAULICS DESIGN: Q (l/s)										0.20	0.40
HYDRAULICS DESIGN: V (m/s)										0.29	0.54
HYDRAULICS MAX.(0.67D): Q (l/s)										15.10	
HYDRAULICS MAX.(0.67D): V (m/s)	8.66					8.41				0.82	
	0.85					0.82				1.48	

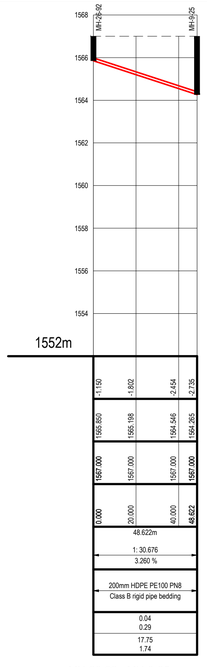
MH-24-86 - MH-9-27



1552m

DEPTH TO INVERTS	-1.150	-1.292	-1.435	-1.577	-1.720	-1.862	-2.005	-2.063	-2.115	-2.568	-2.911
INVERT LEVEL	1565.850	1565.708	1565.565	1565.423	1565.280	1565.138	1564.995	1564.853	1564.710	1564.211	1563.880
GROUND LEVEL	1567.000	1567.000	1567.000	1567.000	1567.000	1567.000	1567.000	1566.916	1566.825	1566.779	1566.791
CHAINAGE (m)	0.000	20.000	40.000	60.000	80.000	100.000	120.000	140.000	200.000	180.000	193.294
PIPE GRADES	80.000m				80.000m					33.294m	
	1: 140.351									1: 40.113	
	0.712 %									2.493 %	
PIPE DETAILS	200mm HDPE PE100 PN8 Class B rigid pipe bedding										
HYDRAULICS DESIGN: Q (l/s)										0.22	0.45
HYDRAULICS DESIGN: V (m/s)										0.30	0.57
HYDRAULICS MAX.(0.67D): Q (l/s)										15.53	
HYDRAULICS MAX.(0.67D): V (m/s)	8.30									0.81	
	0.81									1.52	

MH-25-89 - MH-9-26



1552m

DEPTH TO INVERTS	-1.150	-1.802	-2.454	-2.775
INVERT LEVEL	1565.850	1565.198	1564.546	1564.225
GROUND LEVEL	1567.000	1567.000	1567.000	1567.000
CHAINAGE (m)	0.000	20.000	40.000	48.622
PIPE GRADES	48.622m			
	1: 30.676			
	3.260 %			
PIPE DETAILS	200mm HDPE PE100 PN8 Class B rigid pipe bedding			
HYDRAULICS DESIGN: Q (l/s)				0.04
HYDRAULICS DESIGN: V (m/s)				0.29
HYDRAULICS MAX.(0.67D): Q (l/s)				17.75
HYDRAULICS MAX.(0.67D): V (m/s)				1.74

MH-26-92 - MH-9-25

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1. SEWER MANHOLES ARE TO BE SPACED AT A MAXIMUM OF 80 METERS.

LEGEND

- 200mmØ HDPE PE100 PN8 PIPE
- NEW SEWER MANHOLE (MH)
- FLOW DIRECTION
- NEW SEWER PIPE AND MANHOLE NOT WITHIN INDICATED LONG SECTION
- EXISTING SEWER PIPE
- EXISTING SEWER MANHOLE
- CONTOURS
- 0000 BM00 BENCHMARK

ISSUED FOR TENDER

REFER TO DRAWING No:

GENERAL LAYOUTS
JW14478-SLV-MGLP-000 - MASTER GENERAL LAYOUT PLAN
JW14478-SLV-GLP-S1-000 - GENERAL LAYOUT PLAN
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JW14478-SLV-S2-LS-01 - LAYOUT AND LONGITUDINAL SECTION SHEET 1 OF 14
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STANDARD DETAILS
JW100-DET02-W01: BEDDING DETAIL
JW100-DET01-S01: MANHOLE DETAILS FOR SEWER
JW100-DET01.1-W01: NAMEBOARD

KEY PLAN:

CONSULTING ENGINEERS
CAPEX - ENGINEERING SERVICE UNIT
TURBINE HALL - 3RD FLOOR
65 NTEMI PILISO STREET
NEWTOWN
JOHANNESBURG
2113

DESIGNED	S.KHUZWAYO	OCT 2024
	SIGNATURE:	
DRAWN	R.MUDAU	OCT 2024
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CHECKED	M.SAMBO	OCT 2024
	SIGNATURE:	
APPROVED BY:	P.MOGOLOLA	OCT 2024
	SIGNATURE:	ECSA REG. No: 2018300335

Johannesburg Water

JOHANNESBURG WATER SOC Ltd
TURBINE HALL
65 NTEMI PILISO STREET
NEWTOWN
JOHANNESBURG
2113
TEL: +27 (0)11 688 1400
FAX: +27(0)11 688-1528

Municipality: Joburg — a world class African city

Project description:

NANCEFIELD - SLOVO PARK (SECTION 2)
PROVISION OF BASIC SANITATION SERVICES
LAYOUT PLAN AND LONG SECTION
MH-23-83 - MH-9-28 & MH-24-86 - MH-9-27 & MH-25-89 - MH-9-26 & MH-26-92 - MH-9-25

SCALE: AS SHOWN

REV	DESCRIPTION	DATE	BY	APV
A	ISSUED FOR TENDER	18/10/2024	SK	PM

DRAWING No: JW14478-SLV-S2-LS-13

S1405	SEWER	-	A	
PROJECT No.	DISCIPLINARY		REV.	
A1	SHEET 10	OF	14	
ORIGINAL PAGE SIZE				

FILE No.

COORDINATE LIST

LO29

SLOVO PARK SECTION 02		
MH No.	YLo	XLo
Constant:		
MH-27-93	109678.883	2911439.703
MH-28-94	109668.829	2911377.309
MH-29-95	109659.790	2911320.032
MH-30-96	109651.719	2911256.666
MH-30-97	109699.503	2911254.576
MH-31-98	109635.485	2910966.940
MH-31-99	109629.869	2911013.777
MH-31-100	109632.142	2911093.745
MH-31-101	109634.815	2911187.765
MH-31-102	109714.206	2911197.612
MH-32-103	109719.406	2911049.721
MH-32-104	109721.833	2911144.815
MH-33-105	109659.258	2910955.921
MH-33-106	109738.184	2910968.985

PIPE DATA LIST

MH - MH	Distance	Diam.
SLOVO PARK SECTION 02	(m)	(mm)
MH-27-93 - MH-10-44	54.397	200mm HDPE PE100 PN8
MH-28-94 - MH-10-43	69.244	200mm HDPE PE100 PN8
MH-29-95 - MH-10-42	80.882	200mm HDPE PE100 PN8
MH-30-96 - MH-30-97	47.830	200mm HDPE PE100 PN8
MH-30-97 - MH-10-41	49.016	200mm HDPE PE100 PN8
MH-31-98 - MH-31-99	47.173	200mm HDPE PE100 PN8
MH-31-99 - MH-31-100	80.000	200mm HDPE PE100 PN8
MH-31-100 - MH-31-101	94.058	200mm HDPE PE100 PN8
MH-31-101 - MH-31-102	80.000	200mm HDPE PE100 PN8
MH-31-102 - MH-10-40	33.684	200mm HDPE PE100 PN8
MH-32-103 - MH-32-104	95.125	200mm HDPE PE100 PN8
MH-32-104 - MH-10-39	32.599	200mm HDPE PE100 PN8
MH-33-105 - MH-33-106	80.000	200mm HDPE PE100 PN8
MH-33-106 - MH-10-37	26.721	200mm HDPE PE100 PN8

TOTAL LENGTHS OF PIPING

MH Centre to MH Centre

Diameter (mm)	Length (m)
250mm HDPE PE100 PN8	429.39
200mm HDPE PE100 PN8	7371.24
Total :	7800.63

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2. ALL PIPES TO LAID UNDER TRENCH CONDITIONS UNLESS OTHERWISE SHOWN.
3. ALL CONSTRUCTION WORK TO BE CARRIED OUT IN STRICT ACCORDANCE WITH REQUIREMENTS OF JOHANNESBURG WATER.
4. SEWERS GENERALLY 1,5m FROM BOUNDARIES UNLESS OTHERWISE SHOWN.
5. DO NOT SCALE FROM THESE DRAWINGS.
6. THIS DRAWING MUST BE READ IN CONJUNCTION WITH THE STANDARD SPECIFICATIONS FOR MUNICIPAL CIVIL ENGINEERING WORKS.
7. THE FINAL PIPE ROUTE TO BE DETERMINED ON SITE AFTER EXPOSING OF EXISTING SERVICES.
8. ALL WORKS TO BE APPROVED BY EMPLOYEE AGENT REPRESENTATIVE BEFORE CONSTRUCTION.
9. CONTRACTOR TO CONFIRM LEVELS OF EXISTING PIPES BEFORE COMMENCING CONSTRUCTION.
10. POSITIONS OF ALL EXISTING SERVICES ARE APPROXIMATED AND MUST BE VERIFIED ON SITE.
11. ALL MATERIALS USED IN INSTALLING SEWER MAINS SHALL COMPLY WITH THE RELEVANT SABS SPECIFICATION AND WITH THE MINIMUM REQUIREMENTS OF JOHANNESBURG WATER (SOC) LTD.
12. THE POSITION AND DEPTH OF ALL EXISTING SERVICES ON THE SITE AND OFF THE SITE WHERE AFFECTED BY THE WORKS SHALL BE CONFIRMED PRIOR TO ANY CONSTRUCTION WORK ON THE INSTALLATION OF WATER OR SEWER MAINS BEING COMMENCED.
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PIPE ANCHOR
1. GRADE: BETWEEN 1:10 AND 1:6: ANCHOR BLOCKS SHALL BE INSTALLED AT INTERVALS NOT EXCEEDING 12 METERS.

SEWER MANHOLES
1. SEWER MANHOLES ARE TO BE SPACED AT A MAXIMUM OF 80 METERS.

LEGEND

- 200mmØ HDPE PE100 PN8 PIPE
- NEW SEWER MANHOLE (MH)
- FLOW DIRECTION
- NEW SEWER PIPE AND MANHOLE NOT WITHIN INDICATED LONG SECTION
- EXISTING SEWER PIPE
- EXISTING SEWER MANHOLE
- CONTOURS
- 0000 BM00 BENCHMARK

ISSUED FOR TENDER

REFER TO DRAWING No:

GENERAL LAYOUTS
JW14478-SLV-MGLP-000 - MASTER GENERAL LAYOUT PLAN
JW14478-SLV-GLP-S1-000 - GENERAL LAYOUT PLAN
LAYOUT AND LONGITUDINAL SECTIONS
JW14478-SLV-S2-LS-01 - LAYOUT AND LONGITUDINAL SECTION SHEET 1 OF 14
JW14478-SLV-S2-LS-02 - LAYOUT AND LONGITUDINAL SECTION SHEET 2 OF 14
JW14478-SLV-S2-LS-03 - LAYOUT AND LONGITUDINAL SECTION SHEET 3 OF 14
JW14478-SLV-S2-LS-01 - LAYOUT AND LONGITUDINAL SECTION SHEET 4 OF 14
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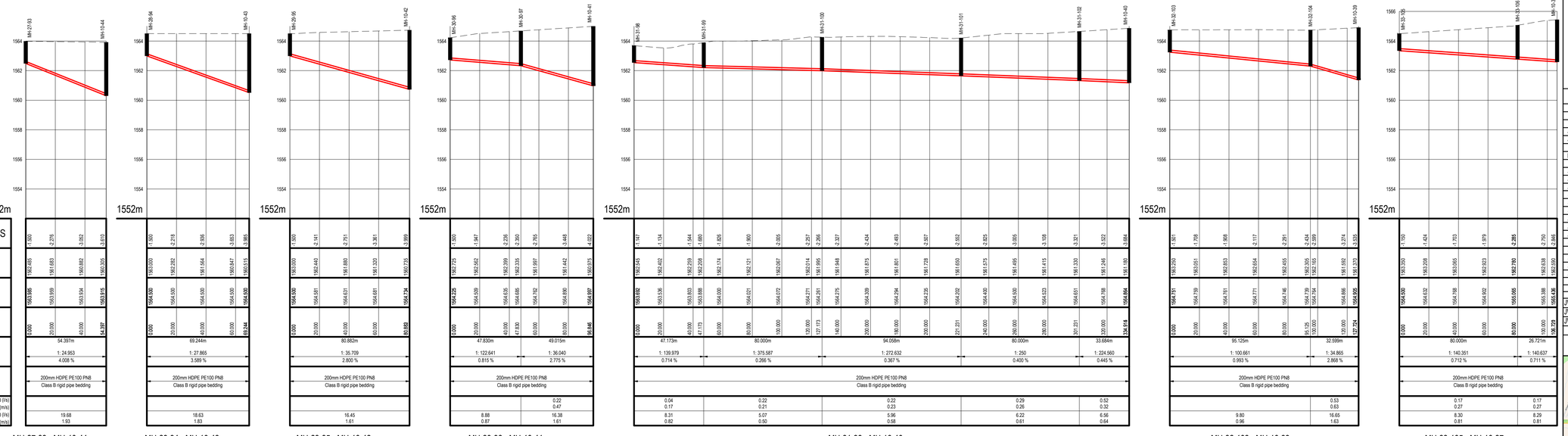
JW14478-SLV-S2-LS-03 - LAYOUT AND LONGITUDINAL SECTION SHEET 14 OF 14
STANDARD DETAILS
JW100-DET02-W01: BEDDING DETAIL
JW100-DET01-S01: MANHOLE DETAILS FOR SEWER
JW100-DET01.1-W01: NAMEBOARD

KEY PLAN:

LONGITUDINAL SECTION LEGEND:
PIPE -
NGL -

SCALES:
Horizontal 1:1000
Vertical 1:100

Datum : 1552m



CONSULTING ENGINEERS CAPEX - ENGINEERING SERVICE UNIT TURBINE HALL - 3RD FLOOR 65 NTEMI PILISO STREET NEWTOWN JOHANNESBURG 2113	DESIGNED: S.KHUZWAYO — OCT 2024 SIGNATURE: DRAWN: R.MUDAU — OCT 2024 SIGNATURE: CHECKED: M.SAMBO — OCT 2024 SIGNATURE: APPROVED BY: P.MOGOLOLA — OCT 2024 SIGNATURE: — ECSA REG. No: 2018300335	Johannesburg Water JOHANNESBURG WATER SOC Ltd TURBINE HALL 65 NTEMI PILISO STREET NEWTOWN JOHANNESBURG 2113 TEL: +27 (0)11 688 1400 FAX: +27(0)11 688-1528

Municipality: Joburg — a world class African city

Project description:

NANCEFIELD - SLOVO PARK (SECTION 2)
PROVISION OF BASIC SANITATION SERVICES
LAYOUT PLAN AND LONG SECTION
MH-27-93 - MH-10-44 & MH-28-94 - MH-10-43 & MH-29-95 - MH-10-42 & MH-30-96 - MH-10-41.....

SCALE: AS SHOWN

AMENDMENTS

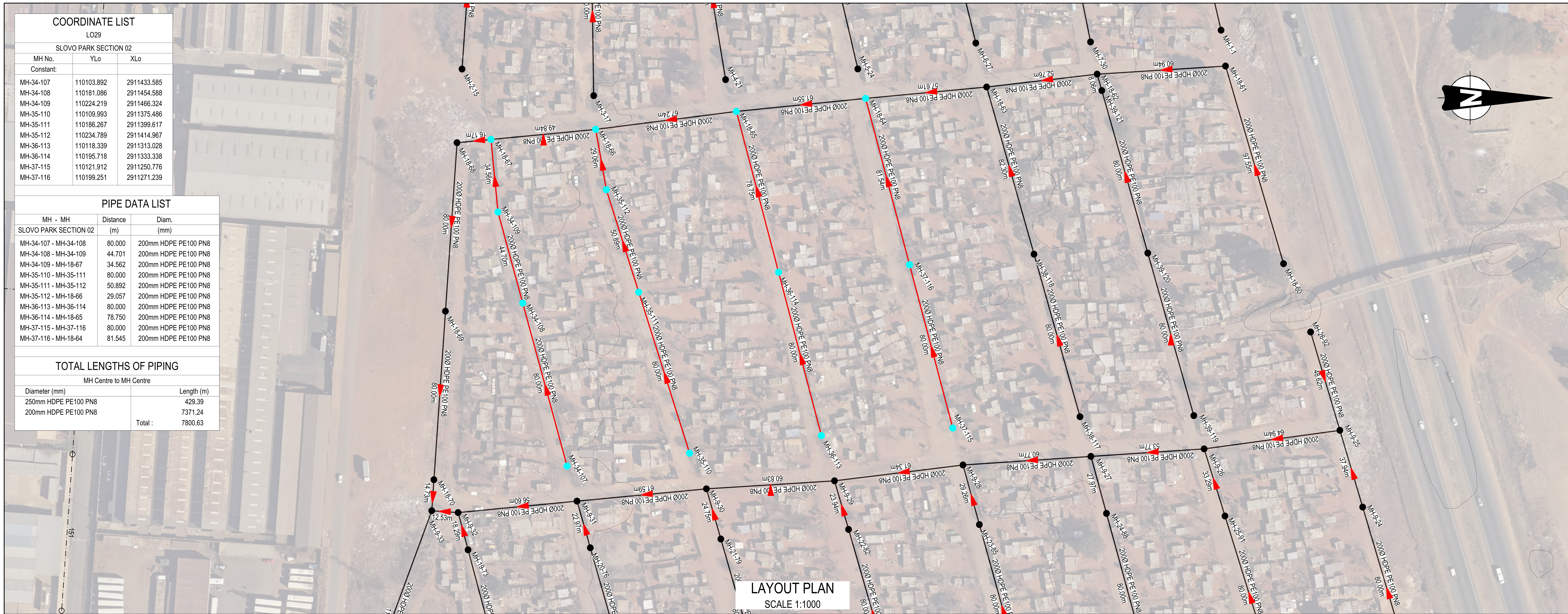
REV	DESCRIPTION	DATE	BY	APV
A	ISSUED FOR TENDER	18/10/2024	SK	PM

DRAWING No: JW14478-SLV-S2-LS-14

S1405 PROJECT No. | SEWER DISCIPLINARY | A REV.

A1 ORIGINAL PAGE SIZE | SHEET 11 OF 14

FILE No.



COORDINATE LIST

LO29

SLOVO PARK SECTION 02		
MH No.	YLo	XLo
Constant:		
MH-34-107	110103.892	2911433.585
MH-34-108	110181.086	2911454.588
MH-34-109	110224.219	2911466.324
MH-35-110	110109.993	2911375.486
MH-35-111	110186.267	2911399.617
MH-35-112	110234.789	2911414.967
MH-36-113	110118.339	2911313.028
MH-36-114	110195.718	2911333.338
MH-37-115	110121.912	2911250.776
MH-37-116	110199.251	2911271.239

PIPE DATA LIST

MH - MH	Distance	Diam.
SLOVO PARK SECTION 02	(m)	(mm)
MH-34-107 - MH-34-108	80.000	200mm HDPE PE100 PN8
MH-34-108 - MH-34-109	44.701	200mm HDPE PE100 PN8
MH-34-109 - MH-18-67	34.562	200mm HDPE PE100 PN8
MH-35-110 - MH-35-111	80.000	200mm HDPE PE100 PN8
MH-35-111 - MH-35-112	50.892	200mm HDPE PE100 PN8
MH-35-112 - MH-18-66	29.057	200mm HDPE PE100 PN8
MH-36-113 - MH-36-114	80.000	200mm HDPE PE100 PN8
MH-36-114 - MH-18-65	78.750	200mm HDPE PE100 PN8
MH-37-115 - MH-37-116	80.000	200mm HDPE PE100 PN8
MH-37-116 - MH-18-64	81.545	200mm HDPE PE100 PN8

TOTAL LENGTHS OF PIPING

MH Centre to MH Centre

Diameter (mm)		Length (m)
250mm HDPE PE100 PN8		429.39
200mm HDPE PE100 PN8		7371.24
	Total :	7800.63

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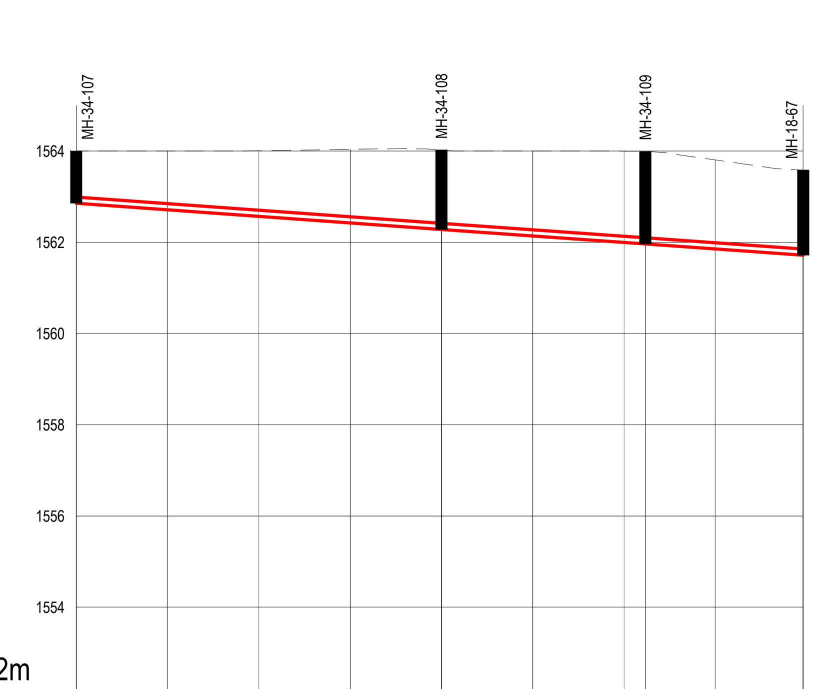
- CONTOURS
- 0000 BM00 BENCHMARK

ISSUED FOR TENDER

LONGITUDINAL SECTION LEGEND:
PIPE -
NGL -

SCALES:
Horizontal 1:1000
Vertical 1:100

Datum : 1552m

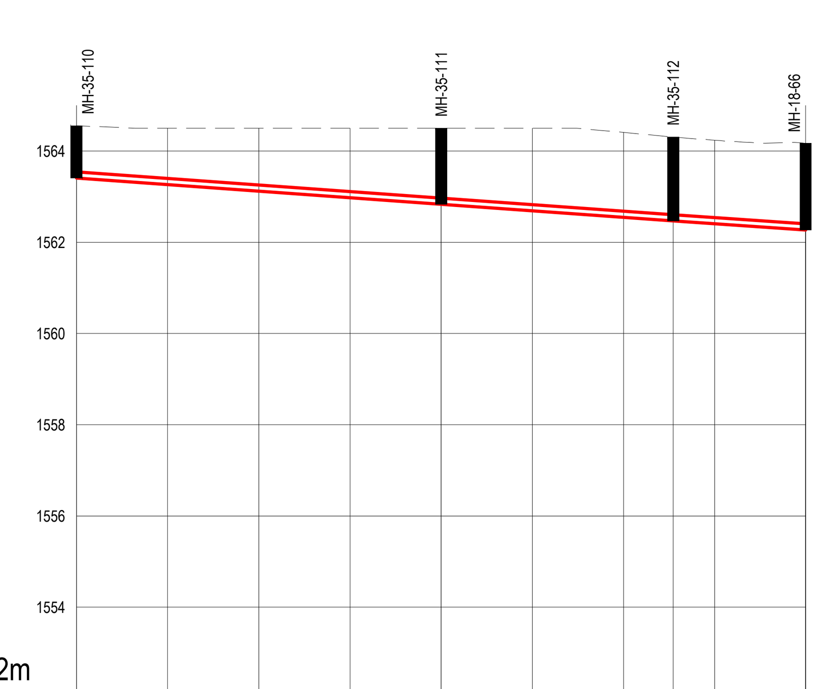


DEPTH TO INVERTS	-1.147	-1.290	-1.438	-1.612	-1.741	-1.863	-1.999	-2.029	-1.950	-1.866
INVERT LEVEL	1562.853	1562.710	1562.567	1562.423	1562.280	1562.137	1561.994	1561.960	1561.852	1561.715
GROUND LEVEL	1564.000	1564.000	1564.005	1564.035	1564.021	1564.000	1563.993	1563.989	1563.802	1563.581
CHAINAGE (m)	0.000	20.000	40.000	60.000	80.000	100.000	120.000	124.701	140.000	159.263

PIPE GRADES	80.000m 1: 139.616 0.716 %	44.701m 1: 139.691 0.716 %	34.562m 1: 141.069 0.709 %
PIPE DETAILS	200mm HDPE PE100 PN8 Class B rigid pipe bedding		
HYDRAULICS DESIGN: Q (l/s) V (m/s)		0.11 0.24	0.22 0.29
MAX.(0.67D): Q (l/s) V (m/s)	8.32 0.82	8.32 0.82	8.28 0.81

MH-34-107 - MH-18-67

1552m

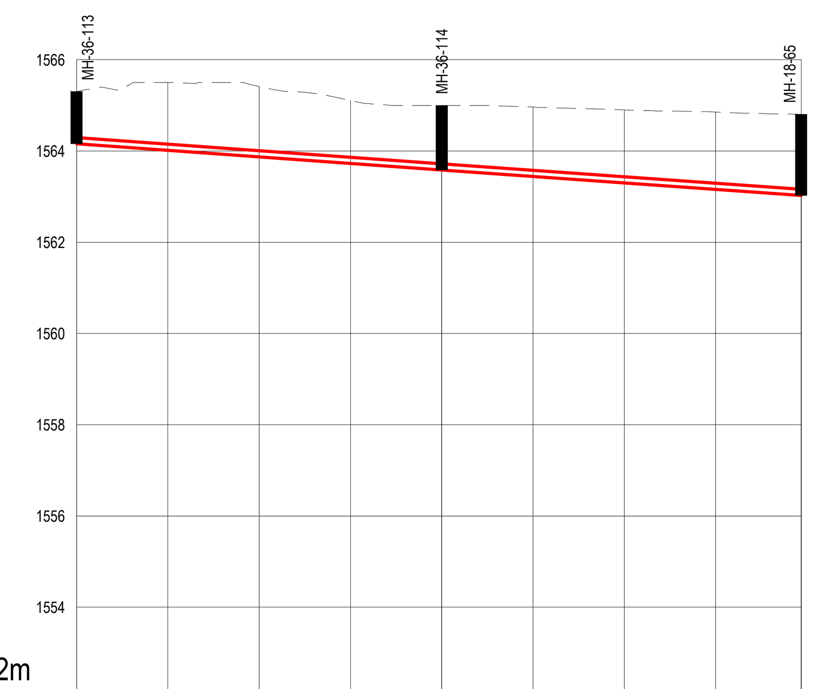


DEPTH TO INVERTS	-1.147	-1.238	-1.382	-1.526	-1.670	-1.811	-1.858	-1.835	-1.829	-1.903
INVERT LEVEL	1563.406	1563.262	1563.118	1562.974	1562.830	1562.689	1562.547	1562.470	1562.406	1562.265
GROUND LEVEL	1564.553	1564.500	1564.500	1564.500	1564.500	1564.500	1564.405	1564.305	1564.235	1564.168
CHAINAGE (m)	0.000	20.000	40.000	60.000	80.000	100.000	120.000	130.892	140.000	159.949

PIPE GRADES	80.000m 1: 138.889 0.720 %	50.892m 1: 141.367 0.707 %	29.057m 1: 141.741 0.706 %
PIPE DETAILS	200mm HDPE PE100 PN8 Class B rigid pipe bedding		
HYDRAULICS DESIGN: Q (l/s) V (m/s)		0.18 0.28	0.37 0.34
MAX.(0.67D): Q (l/s) V (m/s)	8.34 0.82	8.27 0.81	8.26 0.81

MH-35-110 - MH-18-66

1552m

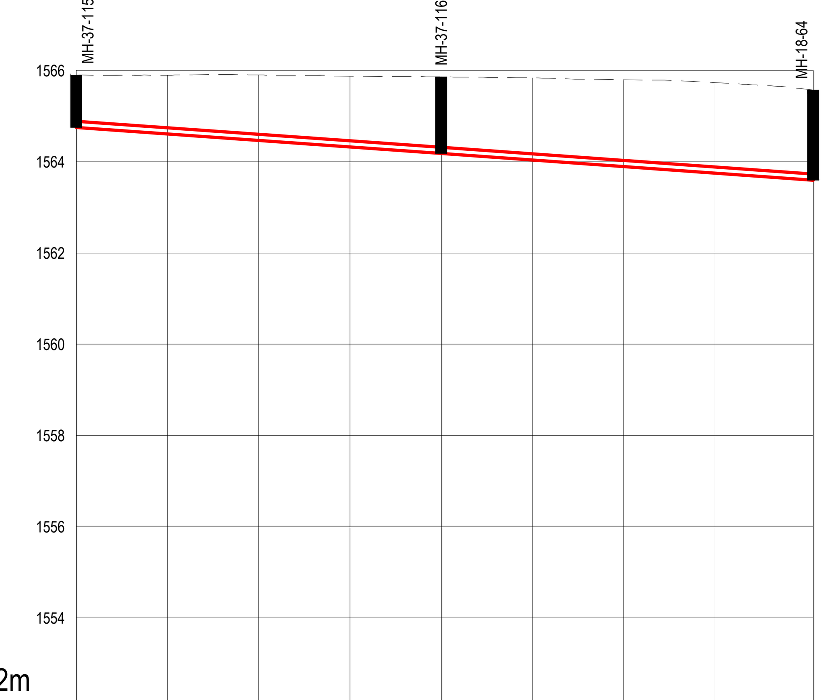


DEPTH TO INVERTS	-1.147	-1.485	-1.542	-1.379	-1.415	-1.519	-1.599	-1.696	-1.781
INVERT LEVEL	1564.158	1564.015	1563.872	1563.728	1563.585	1563.443	1563.301	1563.158	1563.025
GROUND LEVEL	1565.305	1565.500	1565.414	1565.107	1565.000	1564.962	1564.900	1564.854	1564.806
CHAINAGE (m)	0.000	20.000	40.000	60.000	80.000	100.000	120.000	140.000	158.749

PIPE GRADES	80.000m 1: 139.616 0.716 %	78.749m 1: 140.623 0.711 %
PIPE DETAILS	200mm HDPE PE100 PN8 Class B rigid pipe bedding	
HYDRAULICS DESIGN: Q (l/s) V (m/s)		0.37 0.34
MAX.(0.67D): Q (l/s) V (m/s)	8.32 0.82	8.29 0.81

MH-36-113 - MH-18-65

1552m



DEPTH TO INVERTS	-1.147	-1.287	-1.436	-1.552	-1.680	-1.801	-1.903	-1.985	-1.975
INVERT LEVEL	1564.750	1564.608	1564.465	1564.323	1564.180	1564.037	1563.893	1563.750	1563.595
GROUND LEVEL	1565.897	1565.895	1565.901	1565.875	1565.860	1565.838	1565.796	1565.735	1565.570
CHAINAGE (m)	0.000	20.000	40.000	60.000	80.000	100.000	120.000	140.000	161.545

PIPE GRADES	80.000m 1: 140.351 0.712 %	81.545m 1: 139.393 0.717 %
PIPE DETAILS	200mm HDPE PE100 PN8 Class B rigid pipe bedding	
HYDRAULICS DESIGN: Q (l/s) V (m/s)		0.38 0.35
MAX.(0.67D): Q (l/s) V (m/s)	8.30 0.81	8.33 0.82

MH-37-115 - MH-18-64

REFER TO DRAWING No:

GENERAL LAYOUTS
- JW14478-SLV-MGLP-000 - MASTER GENERAL LAYOUT PLAN
- JW14478-SLV-GLP-S1-000 - GENERAL LAYOUT PLAN

LAYOUT AND LONGITUDINAL SECTIONS
- JW14478-SLV-S2-LS-01 - LAYOUT AND LONGITUDINAL SECTION SHEET 1 OF 14
- JW14478-SLV-S2-LS-02 - LAYOUT AND LONGITUDINAL SECTION SHEET 2 OF 14
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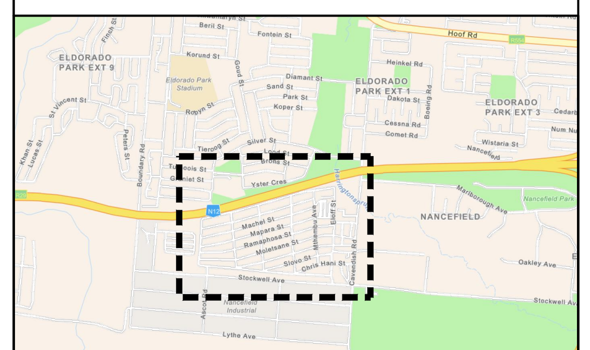
- JW14478-SLV-S2-LS-02 - LAYOUT AND LONGITUDINAL SECTION SHEET 13 OF 14
- JW14478-SLV-S2-LS-03 - LAYOUT AND LONGITUDINAL SECTION SHEET 14 OF 14

STANDARD DETAILS

JW100-DET02-W01:	BEDDING DETAIL
JW100-DET01-S01:	MANHOLE DETAILS FOR SEWER
JW100-DET01.1-W01:	NAMEBOARD

KEY PLAN:



CONSULTING ENGINEERS
CAPEX - ENGINEERING SERVICE UNIT
TURBINE HALL - 3RD FLOOR
65 NTEMI PILISO STREET
NEWTOWN
JOHANNESBURG
2113

DESIGNED	S.KHUZWAYO	OCT 2024
	SIGNATURE:	
DRAWN	R.MUDAU	OCT 2024
	SIGNATURE:	
CHECKED	M.SAMBO	OCT 2024
	SIGNATURE:	
APPROVED BY:	P.MOGOLOLA	OCT 2024
	SIGNATURE:	ECSA REG. No: 2018300335

Johannesburg Water

JOHANNESBURG WATER SOC Ltd
TURBINE HALL
65 NTEMI PILISO STREET
NEWTOWN
JOHANNESBURG
2113
TEL: +27 (0)11 688 1400
FAX: +27(0)11 688-1528

Municipality:

Joburg
a world class African city

Project description:

NANCEFIELD - SLOVO PARK (SECTION 2)
PROVISION OF BASIC SANITATION SERVICES
LAYOUT PLAN AND LONG SECTION
MH-34-107 - MH-18-67 & MH-35-110 - MH-18-66 & MH-36-113 - MH-18-65 & MH-37-115 - MH-18-64

SCALE: AS SHOWN

AMENDMENTS

REV	DESCRIPTION	DATE	BY	APV
A	ISSUED FOR TENDER	18/10/2024	SK	PM

DRAWING No: JW14478-SLV-S2-LS-15

PROJECT No.	S1405
DISCIPLINARY	SEWER
REV.	A
ORIGINAL PAGE SIZE	A1
SHEET	12 OF 14

FILE No.

COORDINATE LIST

LO29

SLOVO PARK SECTION 02

MH No.	YLo	XLo
Constant:		
MH-38-117	110127.297	2911190.451
MH-38-118	110204.262	2911212.278
MH-39-119	110127.821	2911136.554
MH-39-120	110204.797	2911158.344
MH-39-121	110281.772	2911180.135

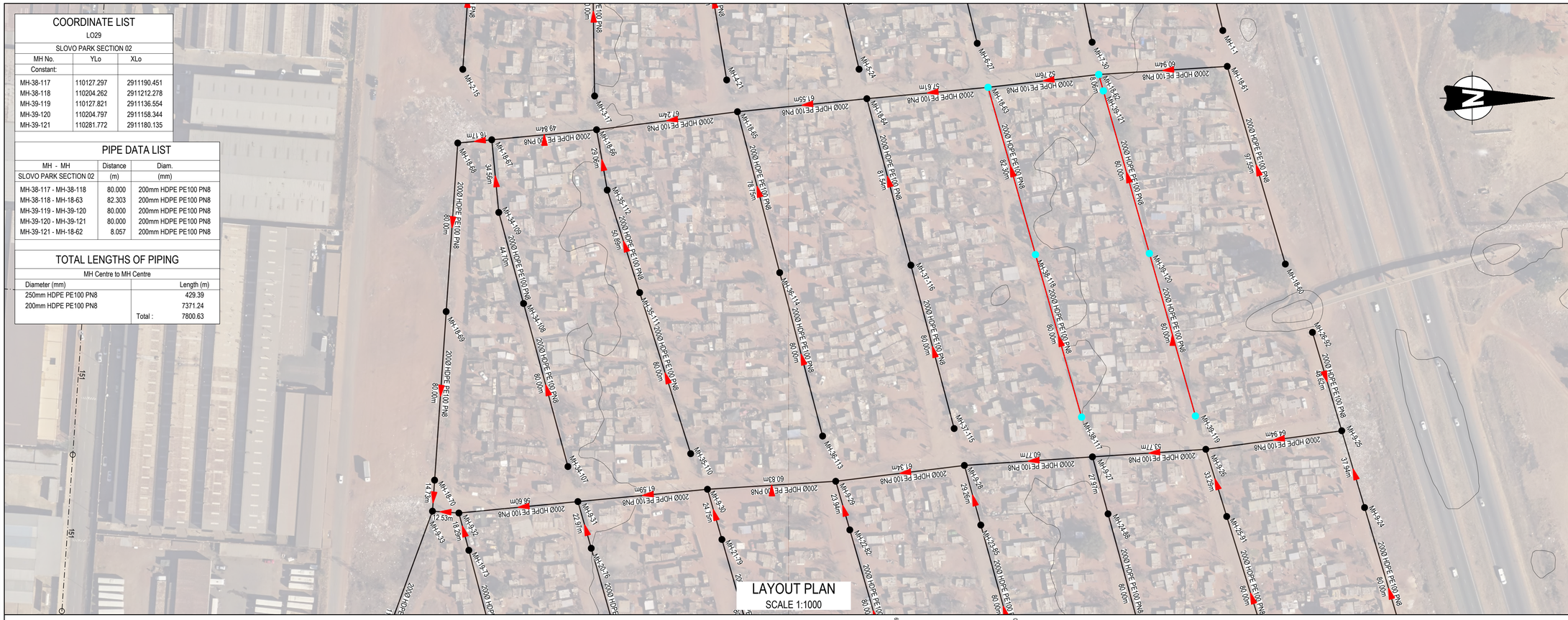
PIPE DATA LIST

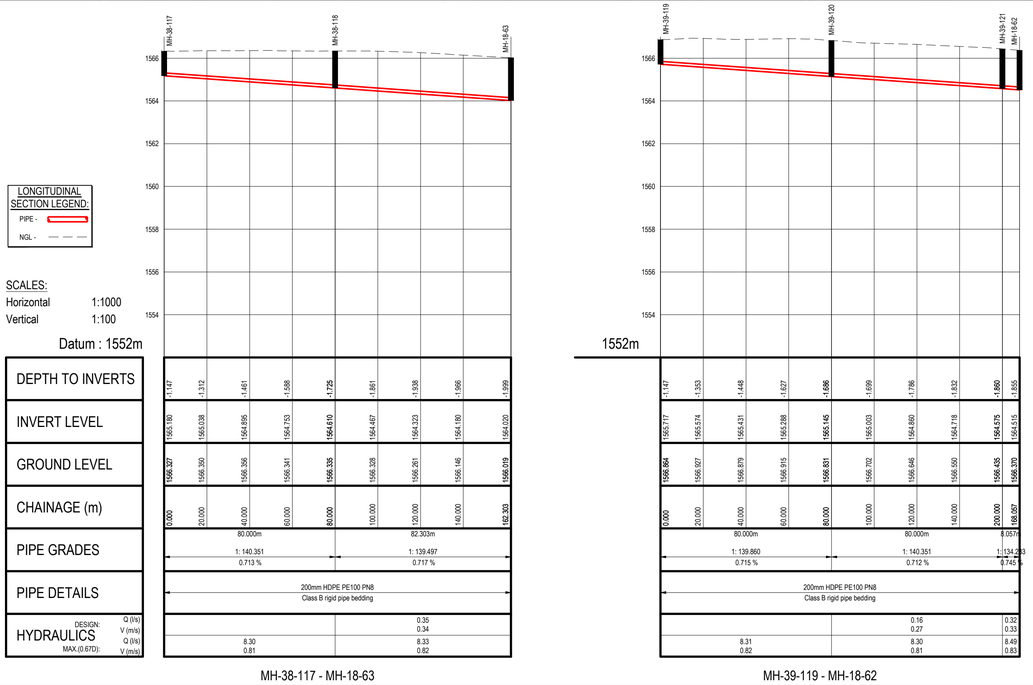
MH - MH	Distance	Diam.
SLOVO PARK SECTION 02	(m)	(mm)
MH-38-117 - MH-38-118	80.000	200mm HDPE PE100 PN8
MH-38-118 - MH-18-63	82.303	200mm HDPE PE100 PN8
MH-39-119 - MH-39-120	80.000	200mm HDPE PE100 PN8
MH-39-120 - MH-39-121	80.000	200mm HDPE PE100 PN8
MH-39-121 - MH-18-62	8.057	200mm HDPE PE100 PN8

TOTAL LENGTHS OF PIPING

MH Centre to MH Centre

Diameter (mm)	Length (m)
250mm HDPE PE100 PN8	429.39
200mm HDPE PE100 PN8	7371.24
Total :	7800.63





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- NEW SEWER MANHOLE (MH)
- FLOW DIRECTION
- NEW SEWER PIPE AND MANHOLE NOT WITHIN INDICATED LONG SECTION
- EXISTING SEWER PIPE
- EXISTING SEWER MANHOLE
- CONTOURS
- 0000 BM00 BENCHMARK

ISSUED FOR TENDER

REFER TO DRAWING No:

GENERAL LAYOUTS

JW14478-SLV-MGLP-000 - MASTER GENERAL LAYOUT PLAN
JW14478-SLV-GLP-S1-000 - GENERAL LAYOUT PLAN

LAYOUT AND LONGITUDINAL SECTIONS

JW14478-SLV-S2-LS-01 - LAYOUT AND LONGITUDINAL SECTION SHEET 1 OF 14
JW14478-SLV-S2-LS-02 - LAYOUT AND LONGITUDINAL SECTION SHEET 2 OF 14
JW14478-SLV-S2-LS-03 - LAYOUT AND LONGITUDINAL SECTION SHEET 3 OF 14
JW14478-SLV-S2-LS-01 - LAYOUT AND LONGITUDINAL SECTION SHEET 4 OF 14
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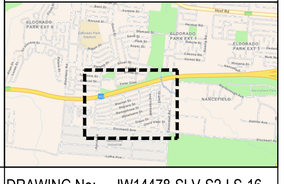
JW14478-SLV-S2-LS-03 - LAYOUT AND LONGITUDINAL SECTION SHEET 14 OF 14

STANDARD DETAILS

JW100-DET02-W01:	BEDDING DETAIL
JW100-DET01-S01:	MANHOLE DETAILS FOR SEWER
JW100-DET01.1-W01:	NAMEBOARD

KEY PLAN:



CONSULTING ENGINEERS
CAPEX - ENGINEERING SERVICE UNIT
TURBINE HALL - 3RD FLOOR
65 NTEMI PILISO STREET
NEWTOWN
JOHANNESBURG
2113

DESIGNED	S.KHUZWAYO	OCT 2024	
DRAWN	R.MUDAU	OCT 2024	
CHECKED	M.SAMBO	OCT 2024	
APPROVED BY:	P.MOGOLOLA	OCT 2024	ECSA REG. No: 2018300335

Johannesburg Water

JOHANNESBURG WATER SOC Ltd
TURBINE HALL
65 NTEMI PILISO STREET
NEWTOWN
JOHANNESBURG
2113
TEL: +27 (0)11 688 1400
FAX: +27(0)11 688-1528

Municipality: Joburg — a world class African city

Project description:

NANCEFIELD - SLOVO PARK (SECTION 2)
PROVISION OF BASIC SANITATION SERVICES
LAYOUT PLAN AND LONG SECTION
MH-38-117 - MH-18-63 & MH-39-119 - MH-18-62

SCALE: AS SHOWN

AMENDMENTS

REV	DESCRIPTION	DATE	BY	APV
A	ISSUED FOR TENDER	18/10/2024	SK	PM

DRAWING No: JW14478-SLV-S2-LS-16

PROJECT No.	DISCIPLINARY	REV.
S1405	SEWER	A

ORIGINAL PAGE SIZE: A1 — SHEET 13 OF 14

FILE No.

COORDINATE LIST

LO29

SLOVO PARK SECTION 02		
MH No.	YLo	XLo
Constant:		
MH-40-122	109720.364	2911018.763
MH-41-123	109690.098	2911045.907
MH-41-124	109691.820	2911145.865
MH-42-125	109662.777	2911051.896
MH-42-126	109669.953	2911146.629
MH-43-127	109652.649	2911147.234

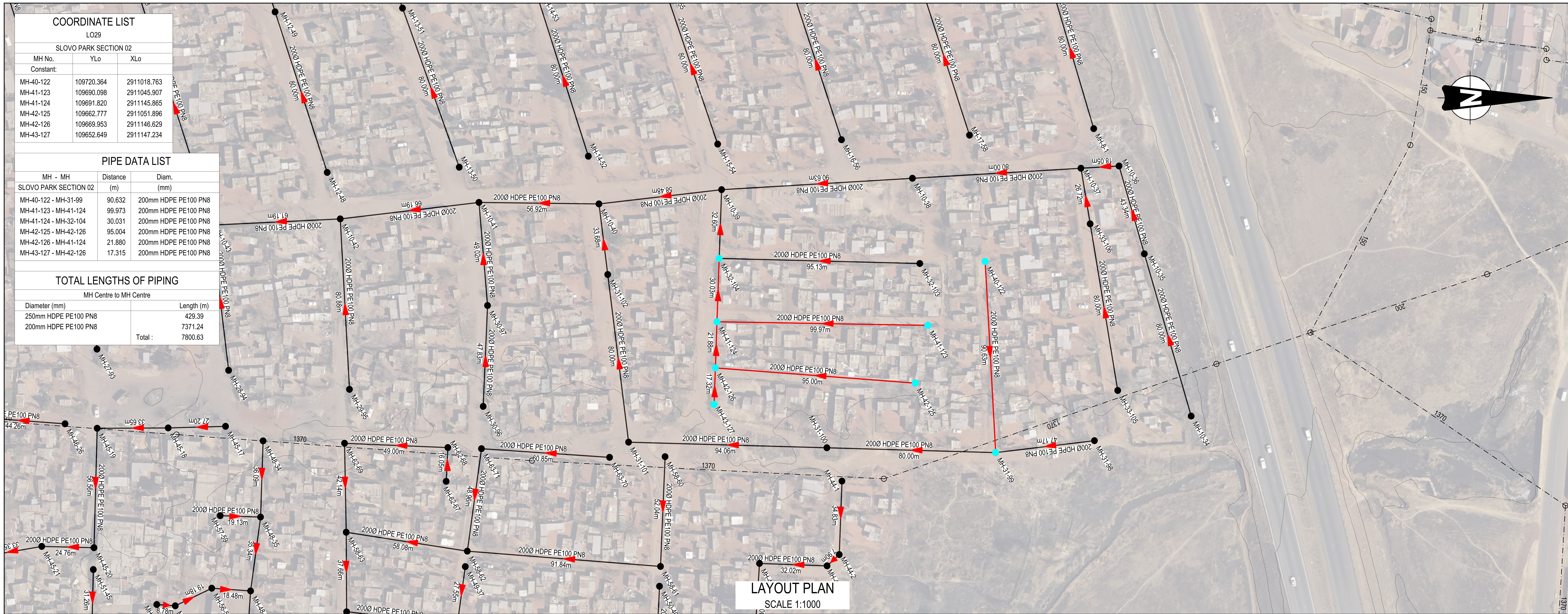
PIPE DATA LIST

MH - MH	Distance	Diam.
SLOVO PARK SECTION 02	(m)	(mm)
MH-40-122 - MH-31-99	90.632	200mm HDPE PE100 PN8
MH-41-123 - MH-41-124	99.973	200mm HDPE PE100 PN8
MH-41-124 - MH-32-104	30.031	200mm HDPE PE100 PN8
MH-42-125 - MH-42-126	95.004	200mm HDPE PE100 PN8
MH-42-126 - MH-41-124	21.880	200mm HDPE PE100 PN8
MH-43-127 - MH-42-126	17.315	200mm HDPE PE100 PN8

TOTAL LENGTHS OF PIPING

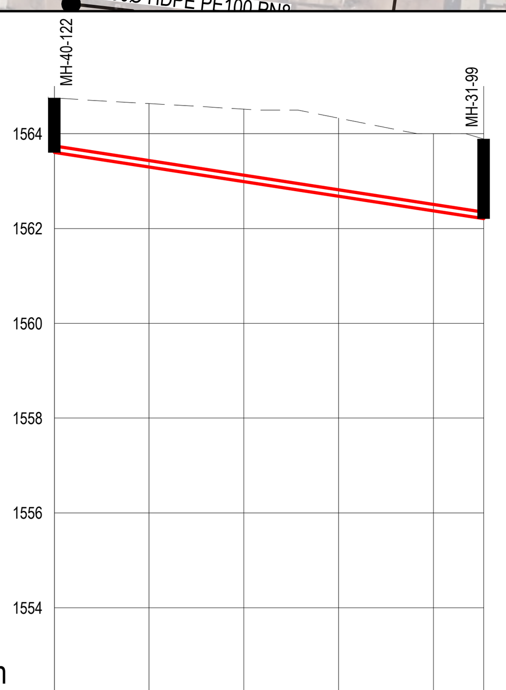
MH Centre to MH Centre

Diameter (mm)	Length (m)
250mm HDPE PE100 PN8	429.39
200mm HDPE PE100 PN8	7371.24
Total :	7800.63



LAYOUT PLAN

SCALE 1:1000



LONGITUDINAL SECTION LEGEND:
PIPE -
NGL -

SCALES:
Horizontal 1:1000
Vertical 1:100

Datum : 1552m

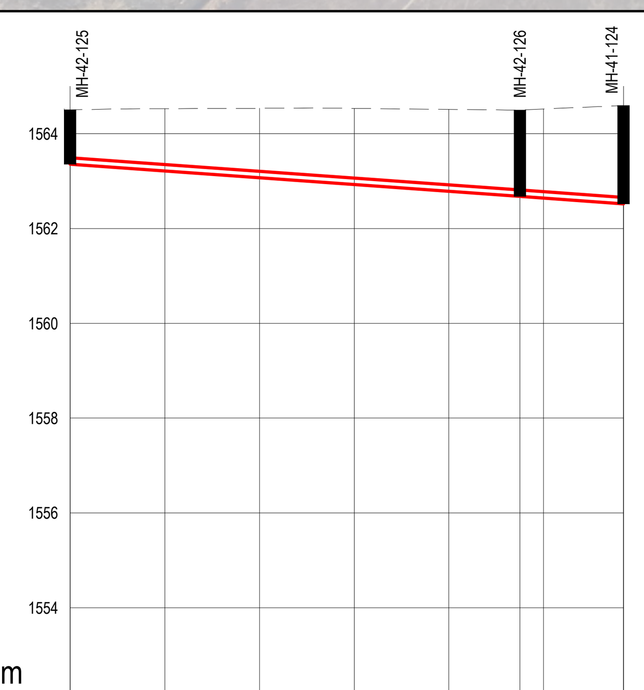
DEPTH TO INVERTS	-1.147	-1.340	-1.532	-1.650	-1.628	-1.680
INVERT LEVEL	1563.603	1563.295	1562.987	1562.679	1562.372	1562.208
GROUND LEVEL	1564.750	1564.635	1564.519	1564.329	1564.000	1563.888
CHAINAGE (m)	0.000	20.000	40.000	60.000	80.000	90.632
PIPE GRADES	90.632m 1: 64.969 1.539 %					
PIPE DETAILS	200mm HDPE PE100 PN8 Class B rigid pipe bedding					
HYDRAULICS DESIGN: Q (l/s) V (m/s)	0.18 0.37					
MAX.(0.67D): Q (l/s) V (m/s)	12.20 1.20					

MH-40-122 - MH-31-99

1552m

DEPTH TO INVERTS	-1.147	-1.352	-1.546	-1.744	-1.908	-2.070	-2.070	-2.309	-2.432
INVERT LEVEL	1563.472	1563.282	1563.092	1562.902	1562.712	1562.522	1562.522	1562.379	1562.307
GROUND LEVEL	1564.619	1564.634	1564.638	1564.646	1564.620	1564.592	1564.592	1564.688	1564.739
CHAINAGE (m)	0.000	20.000	40.000	60.000	80.000	99.973	100.000	120.000	130.004
PIPE GRADES	99.973m 1: 105.235 0.950 %						30.031m 1: 139.679 0.716 %		
PIPE DETAILS	200mm HDPE PE100 PN8 Class B rigid pipe bedding								
HYDRAULICS DESIGN	0.17 0.30						0.37 0.34		
HYDRAULICS MAX.(0.67D)	9.59 0.94						8.32 0.82		

MH-41-123 - MH-32-104



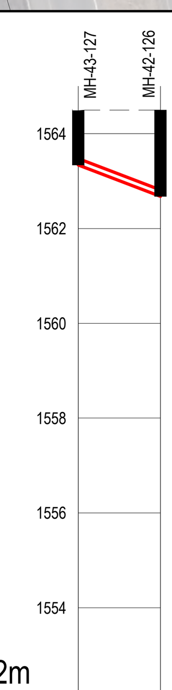
LONGITUDINAL SECTION LEGEND:
PIPE -
NGL -

SCALES:
Horizontal 1:1000
Vertical 1:100

Datum : 1552m

DEPTH TO INVERTS	-1.147	-1.313	-1.464	-1.604	-1.727	-1.822	-1.877	-2.070
INVERT LEVEL	1563.357	1563.214	1563.071	1562.928	1562.785	1562.678	1562.642	1562.522
GROUND LEVEL	1564.504	1564.527	1564.535	1564.532	1564.512	1564.500	1564.519	1564.592
CHAINAGE (m)	0.000	20.000	40.000	60.000	80.000	95.004	100.000	116.884
PIPE GRADES	95.004m 1: 139.918 0.715 %						21.880m 1: 140.256 0.713 %	
PIPE DETAILS	200mm HDPE PE100 PN8 Class B rigid pipe bedding							
HYDRAULICS DESIGN: Q (l/s) V (m/s)	0.20 0.29						0.20 0.29	
MAX.(0.67D): Q (l/s) V (m/s)	8.31 0.82						8.30 0.81	

MH-42-125 - MH-41-124



1552m

DEPTH TO INVERTS	-1.147	-1.822
INVERT LEVEL	1563.338	1562.678
GROUND LEVEL	1564.485	1564.500
CHAINAGE (m)	0.000	17.315
PIPE GRADES	17.315m 1: 26.235 3.812 %	
PIPE DETAILS	200mm HDPE PE100 PN8 Class B rigid pipe bedding	
HYDRAULICS DESIGN		
HYDRAULICS MAX.(0.67D)	19.20 1.88	

MH-43-127 - MH-42-126

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2. ALL PIPES TO LAID UNDER TRENCH CONDITIONS UNLESS OTHERWISE SHOWN.
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5. DO NOT SCALE FROM THESE DRAWINGS.
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PIPE ANCHOR
1. GRADE: BETWEEN 1:10 AND 1:6: ANCHOR BLOCKS SHALL BE INSTALLED AT INTERVALS NOT EXCEEDING 12 METERS.

SEWER MANHOLES
1. SEWER MANHOLES ARE TO BE SPACED AT A MAXIMUM OF 80 METERS.

LEGEND

- 200mmØ HDPE PE100 PN8 PIPE
- NEW SEWER MANHOLE (MH)
- FLOW DIRECTION
- NEW SEWER PIPE AND MANHOLE NOT WITHIN INDICATED LONG SECTION
- EXISTING SEWER PIPE
- EXISTING SEWER MANHOLE
- CONTOURS
- 0000 BM00 BENCHMARK

ISSUED FOR TENDER

REFER TO DRAWING No:

GENERAL LAYOUTS

JW14478-SLV-MGLP-000 - MASTER GENERAL LAYOUT PLAN
JW14478-SLV-GLP-S1-000 - GENERAL LAYOUT PLAN

LAYOUT AND LONGITUDINAL SECTIONS

JW14478-SLV-S2-LS-01 - LAYOUT AND LONGITUDINAL SECTION SHEET 1 OF 14
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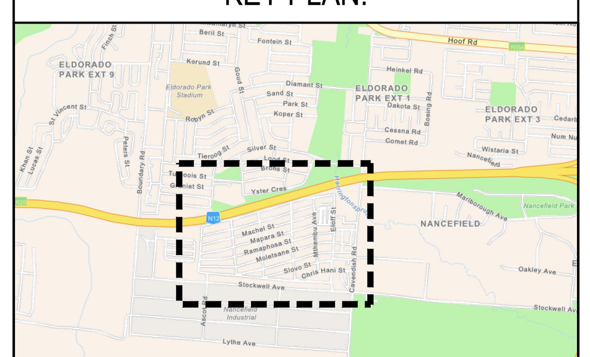
JW14478-SLV-S2-LS-03 - LAYOUT AND LONGITUDINAL SECTION SHEET 14 OF 14

STANDARD DETAILS

JW100-DET02-W01:	BEDDING DETAIL
JW100-DET01-S01:	MANHOLE DETAILS FOR SEWER
JW100-DET01.1-W01:	NAMEBOARD

KEY PLAN:



CONSULTING ENGINEERS
CAPEX - ENGINEERING SERVICE UNIT
TURBINE HALL - 3RD FLOOR
65 NTEMI PILISO STREET
NEWTOWN
JOHANNESBURG
2113

DESIGNED	S.KHUZWAYO	OCT 2024
	SIGNATURE:	
DRAWN	R.MUDAU	OCT 2024
	SIGNATURE:	
CHECKED	M.SAMBO	OCT 2024
	SIGNATURE:	
APPROVED BY:	P.MOGOLOLA	OCT 2024
	SIGNATURE:	ECSA REG. No: 2018300335

Johannesburg Water

JOHANNESBURG WATER SOC Ltd
TURBINE HALL
65 NTEMI PILISO STREET
NEWTOWN
JOHANNESBURG
2113
TEL: +27 (0)11 688 1400
FAX: +27(0)11 688-1528

Municipality:

Joburg
a world class African city

Project description:

NANCEFIELD - SLOVO PARK (SECTION 2)
PROVISION OF BASIC SANITATION SERVICES
LAYOUT PLAN AND LONG SECTION
MH-40-122 - MH-31-99 & MH-41-123 - MH-32-104 & MH-42-125 - MH-41-124 & MH-43-127 - MH-42-126

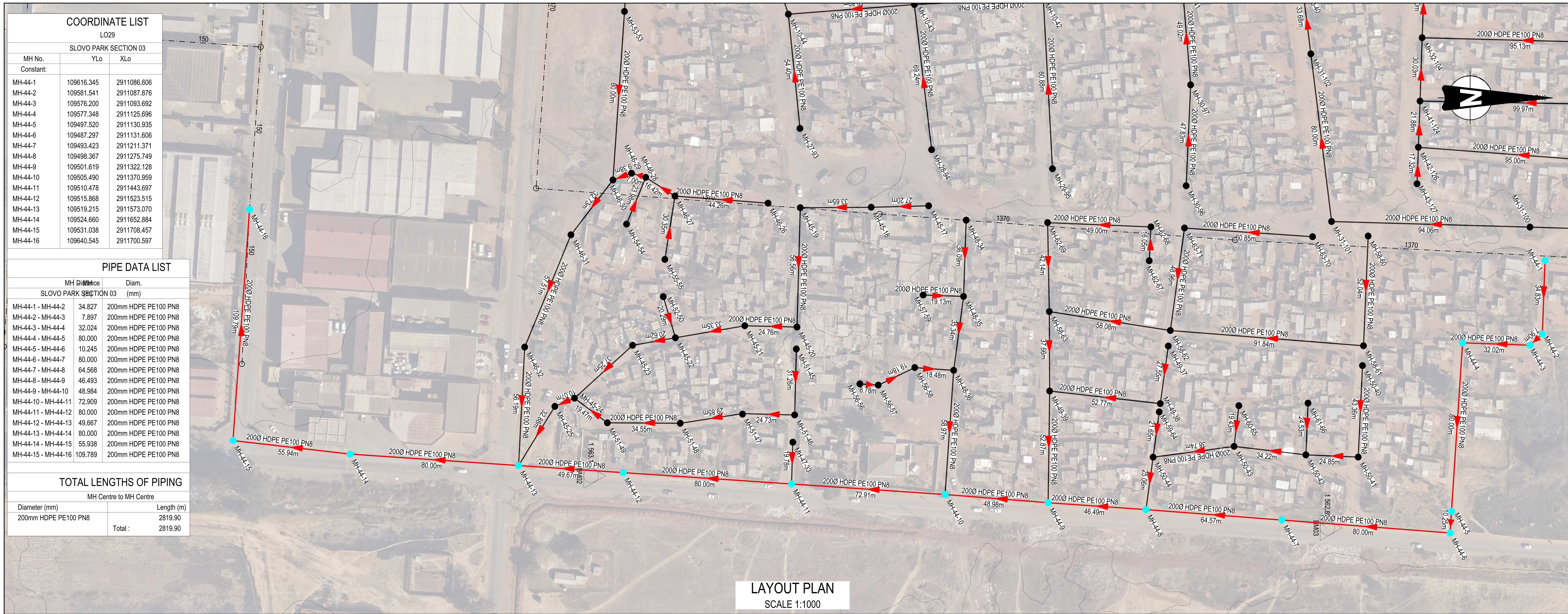
SCALE: AS SHOWN

AMENDMENTS

REV	DESCRIPTION	DATE	BY	APV
A	ISSUED FOR TENDER	18/10/2024	SK	PM

DRAWING No: JW14478-SLV-S2-LS-17

PROJECT No.: S1405
DISCIPLINARY: SEWER - REV.: A
ORIGINAL PAGE SIZE: A1
SHEET 14 OF 14
FILE No.



LAYOUT PLAN
SCALE 1:1000

COORDINATE LIST

LO29

SLOVO PARK SECTION 03

MH No.	YLo	XLo
Constant:		
MH-44-1	109616.345	2911086.606
MH-44-2	109581.541	2911087.876
MH-44-3	109576.200	2911093.692
MH-44-4	109577.348	2911125.696
MH-44-5	109497.520	2911130.935
MH-44-6	109487.297	2911131.606
MH-44-7	109493.423	2911211.371
MH-44-8	109498.367	2911275.749
MH-44-9	109501.619	2911322.128
MH-44-10	109505.490	2911370.959
MH-44-11	109510.478	2911443.697
MH-44-12	109515.868	2911523.515
MH-44-13	109519.215	2911573.070
MH-44-14	109524.660	2911652.884
MH-44-15	109531.038	2911708.457
MH-44-16	109640.545	2911700.597

PIPE DATA LIST

SLOVO PARK SECTION 03

MH	Distance (m)	Diam. (mm)
MH-44-1 - MH-44-2	34.827	200mm HDPE PE100 PN8
MH-44-2 - MH-44-3	7.897	200mm HDPE PE100 PN8
MH-44-3 - MH-44-4	32.024	200mm HDPE PE100 PN8
MH-44-4 - MH-44-5	80.000	200mm HDPE PE100 PN8
MH-44-5 - MH-44-6	10.245	200mm HDPE PE100 PN8
MH-44-6 - MH-44-7	80.000	200mm HDPE PE100 PN8
MH-44-7 - MH-44-8	64.568	200mm HDPE PE100 PN8
MH-44-8 - MH-44-9	46.493	200mm HDPE PE100 PN8
MH-44-9 - MH-44-10	48.984	200mm HDPE PE100 PN8
MH-44-10 - MH-44-11	72.909	200mm HDPE PE100 PN8
MH-44-11 - MH-44-12	80.000	200mm HDPE PE100 PN8
MH-44-12 - MH-44-13	49.667	200mm HDPE PE100 PN8
MH-44-13 - MH-44-14	80.000	200mm HDPE PE100 PN8
MH-44-14 - MH-44-15	55.938	200mm HDPE PE100 PN8
MH-44-15 - MH-44-16	109.789	200mm HDPE PE100 PN8

TOTAL LENGTHS OF PIPING

MH Centre to MH Centre

Diameter (mm)	Length (m)
200mm HDPE PE100 PN8	2819.90
Total :	2819.90

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1. SEWER MANHOLES ARE TO BE SPACED AT A MAXIMUM OF 80 METERS.

LEGEND

- 200mmØ HDPE PE100 PN8 PIPE
- NEW SEWER MANHOLE (MH)
- FLOW DIRECTION
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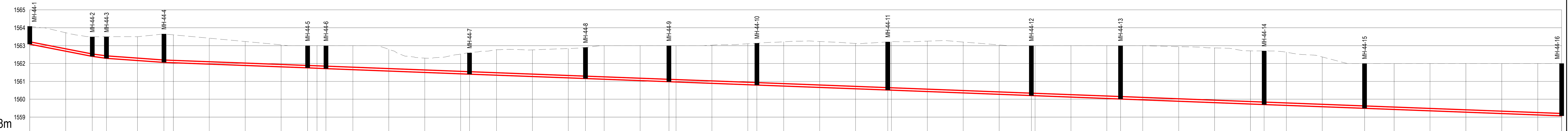
- EXISTING SEWER PIPE
- EXISTING SEWER MANHOLE
- CONTOURS
- 0000 BM00 BENCHMARK

LONGITUDINAL SECTION LEGEND:
PIPE -
NGL -

SCALES:
Horizontal 1:1000
Vertical 1:100

Datum : 1558m



CHAINAGE (m)	DEPTH TO INVERTS	INVERT LEVEL	GROUND LEVEL
0.000	-0.998	1563.080	1564.078
20.000	-1.032	1562.689	1563.721
34.827	-1.093	1562.400	1563.493
42.724	-1.204	1562.290	1563.494
60.000	-1.333	1562.166	1563.499
74.748	-1.592	1562.060	1563.652
80.000	-1.563	1562.040	1563.603
100.000	-1.452	1561.964	1563.416
120.000	-1.343	1561.887	1563.230
140.000	-1.231	1561.811	1563.042
154.748	-1.245	1561.755	1563.000
200.000	-1.266	1561.734	1563.000
164.993	-1.285	1561.715	1563.000
180.000	-1.343	1561.657	1563.000
200.000	-1.213	1561.579	1562.792
220.000	-0.801	1561.502	1562.303
240.000	-1.104	1561.424	1562.528
244.993	-1.187	1561.405	1562.592
260.000	-1.424	1561.348	1562.772
280.000	-1.489	1561.272	1562.761
300.000	-1.643	1561.196	1562.839
309.561	-1.738	1561.200	1562.898
320.000	-1.880	1561.120	1563.000
340.000	-1.958	1561.042	1563.000
356.054	-2.020	1560.980	1563.000
360.000	-2.035	1560.965	1563.000
380.000	-2.138	1560.890	1563.028
400.000	-2.290	1560.814	1563.104
405.038	-2.342	1560.795	1563.137
420.000	-2.475	1560.738	1563.213
440.000	-2.571	1560.661	1563.232
460.000	-2.537	1560.584	1563.121
477.947	-2.691	1560.515	1563.206
480.000	-2.711	1560.507	1563.218
500.000	-2.820	1560.430	1563.250
520.000	-2.849	1560.352	1563.201
540.000	-2.764	1560.275	1563.039
557.947	-2.795	1560.205	1563.000
560.000	-2.803	1560.197	1563.000
580.000	-2.879	1560.121	1563.000
600.000	-2.956	1560.044	1563.000
607.614	-2.985	1560.015	1563.000
620.000	-3.028	1559.967	1562.995
640.000	-3.054	1559.890	1562.944
660.000	-3.059	1559.812	1562.871
680.000	-2.972	1559.735	1562.707
687.614	-2.999	1559.705	1562.704
700.000	-2.978	1559.658	1562.636
720.000	-2.783	1559.582	1562.365
743.552	-2.508	1559.492	1562.000
760.000	-2.571	1559.429	1562.000
780.000	-2.648	1559.352	1562.000
800.000	-2.725	1559.275	1562.000
820.000	-2.802	1559.198	1562.000
840.000	-2.879	1559.121	1562.000
853.340	-2.930	1559.070	1562.000

PIPE GRADES (length)	Grade	%	HYDRAULICS DESIGN: Q (l/s)	V (m/s)	MAX.(0.67D): Q (l/s)	V (m/s)
34.827m	1: 51.216	1.953 %	0.20	0.41	13.74	1.35
7.897m	1: 71.791	1.393 %	0.20	0.36	11.60	1.14
32.024m	1: 139.235	0.718 %	0.20	0.29	8.33	0.82
80.000m	1: 262.295	0.381 %	0.20	0.23	6.07	0.60
10.245m	1: 256.125	0.390 %	0.20	0.23	6.14	0.60
80.000m	1: 258.065	0.387 %	0.20	0.23	6.12	0.60
64.568m	1: 263.543	0.379 %	0.20	0.23	6.06	0.59
46.493m	1: 258.294	0.387 %	0.99	0.37	6.12	0.60
48.984m	1: 264.778	0.378 %	1.79	0.44	6.04	0.59
72.909m	1: 260.389	0.384 %	2.38	0.47	6.09	0.60
80.000m	1: 258.065	0.388 %	2.58	0.49	6.12	0.60
49.667m	1: 261.405	0.383 %	2.58	0.48	6.08	0.60
80.000m	1: 258.065	0.388 %	4.02	0.55	6.12	0.60
55.938m	1: 262.620	0.381 %	4.02	0.54	6.07	0.60
109.789m	1: 260.164	0.384 %	4.02	0.54	6.10	0.60

PIPE DETAILS: 200mm HDPE PE100 PN8, Class B rigid pipe bedding

MH-44-1 - MH-44-16

ISSUED FOR TENDER

REFER TO DRAWING No:

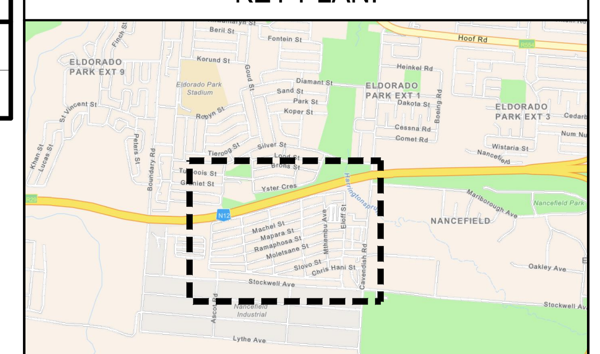
GENERAL LAYOUTS
- JW14478-SLV-MGLP-000 - MASTER GENERAL LAYOUT PLAN
- JW14478-SLV-GLP-S1-000 - GENERAL LAYOUT PLAN

LAYOUT AND LONGITUDINAL SECTIONS
- JW14478-SLV-S3-LS-01 - LAYOUT AND LONGITUDINAL SECTION SHEET 1 OF 5
- JW14478-SLV-S3-LS-02 - LAYOUT AND LONGITUDINAL SECTION SHEET 2 OF 5
- JW14478-SLV-S3-LS-03 - LAYOUT AND LONGITUDINAL SECTION SHEET 3 OF 5
- JW14478-SLV-S3-LS-01 - LAYOUT AND LONGITUDINAL SECTION SHEET 4 OF 5
- JW14478-SLV-S3-LS-02 - LAYOUT AND LONGITUDINAL SECTION SHEET 5 OF 5

STANDARD DETAILS

JW100-DET02-W01:	BEDDING DETAIL
JW100-DET01-S01:	MANHOLE DETAILS FOR SEWER
JW100-DET01.1-W01:	NAMEBOARD

KEY PLAN:



CONSULTING ENGINEERS
CAPEX - ENGINEERING SERVICE UNIT
TURBINE HALL - 3RD FLOOR
65 NTEMI PILISO STREET
NEWTOWN
JOHANNESBURG
2113

DESIGNED	S.KHUZWAYO	OCT 2024
	SIGNATURE:	
DRAWN	R.MUDAU	OCT 2024
	SIGNATURE:	
CHECKED	M.SAMBO	OCT 2024
	SIGNATURE:	
APPROVED BY:	P.MOGOLOLA	OCT 2024
	SIGNATURE:	ECSA REG. No: 2018300335

Johannesburg Water

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TEL: +27 (0)11 688 1400
FAX: +27(0)11 688-1528

Municipality: Joburg — a world class African city

Project description:

NANCEFIELD - SLOVO PARK (SECTION 3)
PROVISION OF BASIC SANITATION SERVICES
LAYOUT PLAN AND LONG SECTION
MH-44-1 - MH-44-16

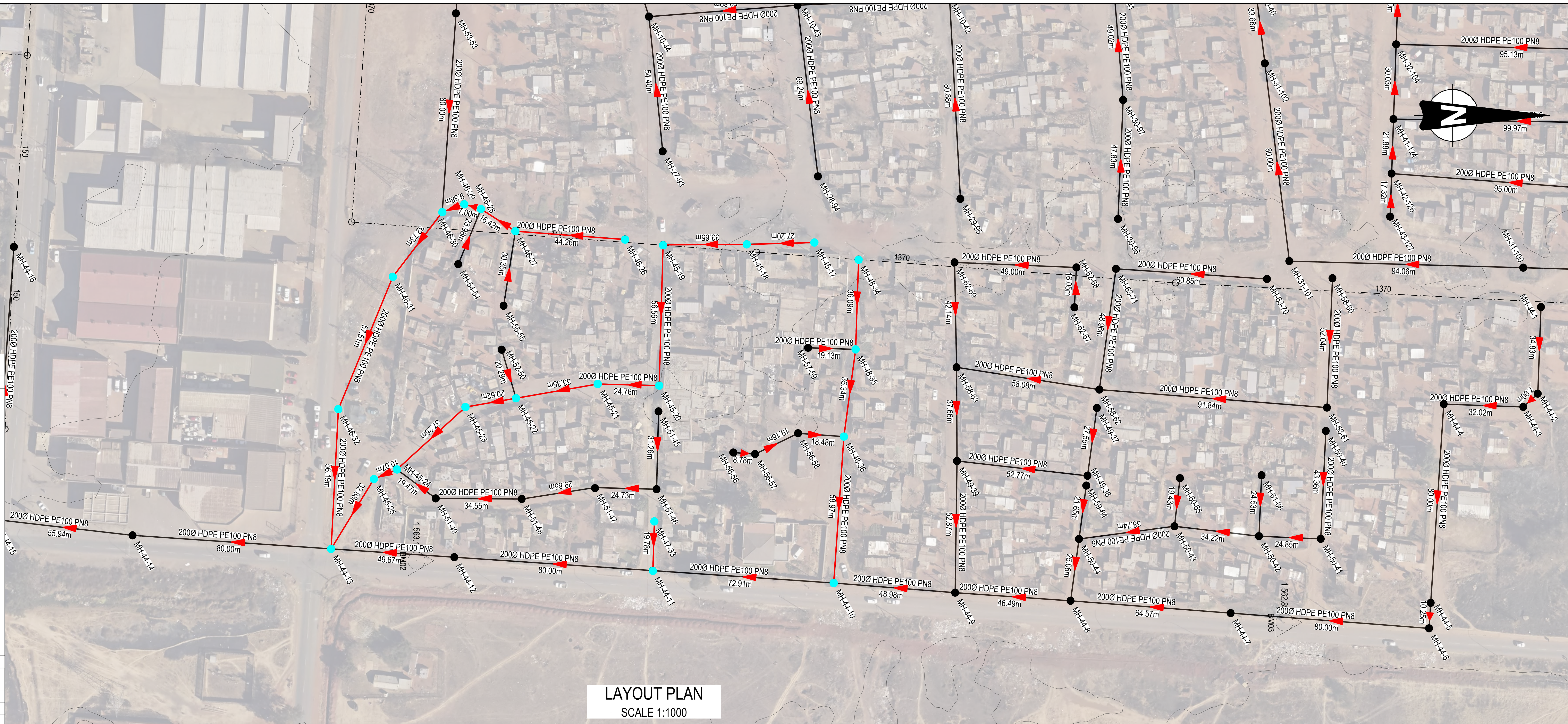
SCALE: AS SHOWN

AMENDMENTS

REV	DESCRIPTION	DATE	BY	APV
A	ISSUED FOR TENDER	18/10/2024	SK	PM

DRAWING No: JW14478-SLV-S3-LS-18

PROJECT No.: S1405 — DISCIPLINARY: SEWER — REV.: A
ORIGINAL PAGE SIZE: A1 — SHEET 1 OF 5
FILE No.



LAYOUT PLAN

SCALE 1:1000

COORDINATE LIST

LO29

SLOVO PARK SECTION 03		
MH No.	YLo	XLo
Constant:		
MH-45-17	109642.274	2911378.739
MH-45-18	109641.551	2911405.930
MH-45-19	109641.346	2911439.582
MH-45-20	109584.803	2911441.119
MH-45-21	109585.445	2911465.873
MH-45-22	109579.726	2911498.733
MH-45-23	109576.191	2911519.048
MH-45-24	109551.101	2911546.577
MH-45-25	109547.235	2911555.873
MH-46-26	109643.468	2911454.846
MH-46-27	109646.834	2911498.982
MH-46-28	109655.719	2911512.794
MH-46-29	109657.652	2911519.517
MH-46-30	109654.482	2911528.346
MH-46-31	109628.500	2911548.252
MH-46-32	109575.331	2911570.165
MH-47-33	109530.249	2911443.090
MH-48-34	109635.415	2911360.954
MH-48-35	109599.343	2911362.164
MH-48-36	109564.321	2911366.866

PIPE DATA LIST

MH - MH SLOVO PARK SECTION 03	Distance (m)	Diam. (mm)
MH-45-17 - MH-45-18	27.201	200mm HDPE PE100 PN8
MH-45-18 - MH-45-19	33.652	200mm HDPE PE100 PN8
MH-45-19 - MH-45-20	56.564	200mm HDPE PE100 PN8
MH-45-20 - MH-45-21	24.763	200mm HDPE PE100 PN8
MH-45-21 - MH-45-22	33.354	200mm HDPE PE100 PN8
MH-45-22 - MH-45-23	20.621	200mm HDPE PE100 PN8
MH-45-23 - MH-45-24	37.247	200mm HDPE PE100 PN8
MH-45-24 - MH-45-25	10.068	200mm HDPE PE100 PN8
MH-45-25 - MH-44-13	32.876	200mm HDPE PE100 PN8
MH-46-26 - MH-46-27	44.265	200mm HDPE PE100 PN8
MH-46-27 - MH-46-28	16.423	200mm HDPE PE100 PN8
MH-46-28 - MH-46-29	6.996	200mm HDPE PE100 PN8
MH-46-29 - MH-46-30	9.380	200mm HDPE PE100 PN8
MH-46-30 - MH-46-31	32.731	200mm HDPE PE100 PN8
MH-46-31 - MH-46-32	57.508	200mm HDPE PE100 PN8
MH-46-32 - MH-44-13	56.192	200mm HDPE PE100 PN8
MH-47-33 - MH-44-11	19.780	200mm HDPE PE100 PN8
MH-48-34 - MH-48-35	36.093	200mm HDPE PE100 PN8
MH-48-35 - MH-48-36	35.336	200mm HDPE PE100 PN8
MH-48-36 - MH-44-10	58.973	200mm HDPE PE100 PN8

TOTAL LENGTHS OF PIPING

MH Centre to MH Centre

Diameter (mm)		Length (m)
200mm HDPE PE100 PN8		2819.90
	Total :	2819.90

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SEWER:

1. ALL PIPES TO BE LAID IN ACCORDANCE WITH SANS 1200, LATEST REVISION AND THE REQUIREMENTS OF JOHANNESBURG WATER SOC LTD.
2. ALL PIPES TO LAID UNDER TRENCH CONDITIONS UNLESS OTHERWISE SHOWN.
3. ALL CONSTRUCTION WORK TO BE CARRIED OUT IN STRICT ACCORDANCE WITH REQUIREMENTS OF JOHANNESBURG WATER.
4. SEWERS GENERALLY 1,5m FROM BOUNDARIES UNLESS OTHERWISE SHOWN.
5. DO NOT SCALE FROM THESE DRAWINGS.
6. THIS DRAWING MUST BE READ IN CONJUNCTION WITH THE STANDARD SPECIFICATIONS FOR MUNICIPAL CIVIL ENGINEERING WORKS.
7. THE FINAL PIPE ROUTE TO BE DETERMINED ON SITE AFTER EXPOSING OF EXISTING SERVICES.
8. ALL WORKS TO BE APPROVED BY EMPLOYEE AGENT REPRESENTATIVE BEFORE CONSTRUCTION.
9. CONTRACTOR TO CONFIRM LEVELS OF EXISTING PIPES BEFORE COMMENCING CONSTRUCTION.
10. POSITIONS OF ALL EXISTING SERVICES ARE APPROXIMATED AND MUST BE VERIFIED ON SITE.
11. ALL MATERIALS USED IN INSTALLING SEWER MAINS SHALL COMPLY WITH THE RELEVANT SABS SPECIFICATION AND WITH THE MINIMUM REQUIREMENTS OF JOHANNESBURG WATER (SOC) LTD.
12. THE POSITION AND DEPTH OF ALL EXISTING SERVICES ON THE SITE AND OFF THE SITE WHERE AFFECTED BY THE WORKS SHALL BE CONFIRMED PRIOR TO ANY CONSTRUCTION WORK ON THE INSTALLATION OF WATER OR SEWER MAINS BEING COMMENCED.
13. THE CONTRACTOR SHALL CARRY OUT WORKS TO TIE-IN CONNECTIONS TO EXISTING SEWER MANHOLES AND MAINS.
14. POSITIONS OF ALL EXISTING SERVICES ARE APPROXIMATED AND MUST BE VERIFIED ON SITE BY ENGINEER REPRESENTATIVE AND CONTRACTOR.

PIPE ANCHOR
1. GRADE: BETWEEN 1:10 AND 1:6: ANCHOR BLOCKS SHALL BE INSTALLED AT INTERVALS NOT EXCEEDING 12 METERS.

SEWER MANHOLES
1. SEWER MANHOLES ARE TO BE SPACED AT A MAXIMUM OF 80 METERS.

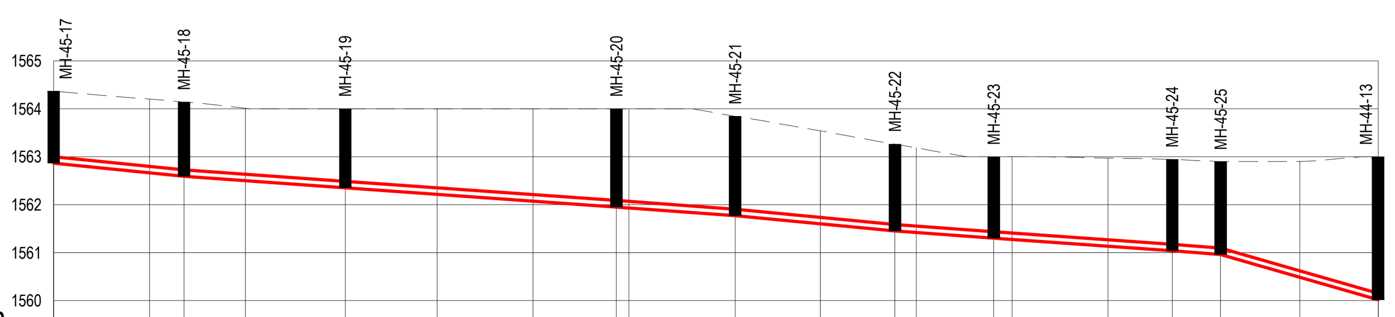
LEGEND

- 200mmØ HDPE PE100 PN8 PIPE
- NEW SEWER MANHOLE (MH)
- FLOW DIRECTION
- NEW SEWER PIPE AND MANHOLE NOT WITHIN INDICATED LONG SECTION
- EXISTING SEWER PIPE
- EXISTING SEWER MANHOLE
- CONTOURS
- 0000 BM00 BENCHMARK

LONGITUDINAL SECTION LEGEND:
PIPE -
NGL -

SCALES:
Horizontal 1:1000
Vertical 1:100

Datum : 1559m



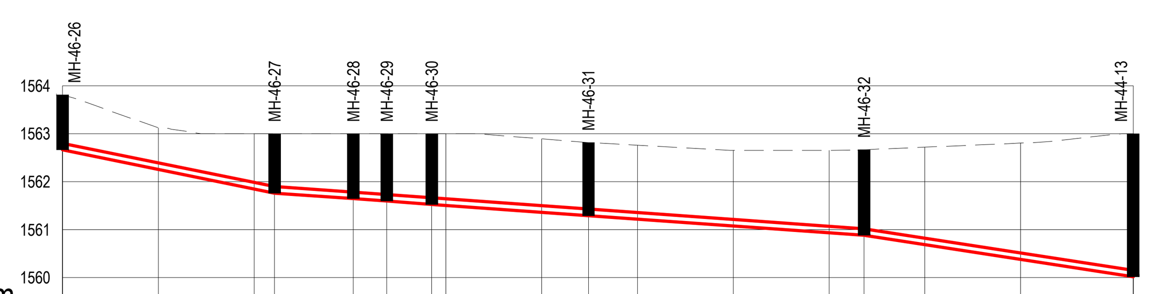
MH-45-17 - MH-44-13

CHAINAGE (m)	DEPTH TO INVERTS	INVERT LEVEL	GROUND LEVEL
0.000	-1.499	1562.865	1564.364
20.000	-1.536	1562.663	1564.199
27.201	-1.550	1562.590	1564.140
40.000	-1.511	1562.499	1564.010
60.853	-1.650	1562.350	1564.000
80.000	-1.785	1562.215	1564.000
100.000	-1.927	1562.073	1564.000
117.417	-2.050	1561.950	1564.000
120.000	-2.069	1561.931	1564.000
142.179	-2.071	1561.770	1563.841
200.000	-1.940	1561.599	1563.539
175.533	-1.811	1561.450	1563.261
180.000	-1.767	1561.418	1563.185
196.154	-1.700	1561.300	1563.000
200.000	-1.727	1561.273	1563.000
220.000	-1.841	1561.130	1562.971
233.401	-1.908	1561.035	1562.943
243.469	-1.935	1560.960	1562.895
260.000	-2.415	1560.485	1562.900
276.346	-2.985	1560.015	1563.000

PIPE GRADES			HYDRAULICS DESIGN: Q (l/s)	V (m/s)	MAX.(0.67D): Q (l/s)	V (m/s)
27.201m	1: 98.913	1.011 %	0.20	0.32	9.89	0.97
33.652m	1: 140.217	0.713 %	0.20	0.29	8.30	0.81
56.564m	1: 141.410	0.707 %	0.20	0.28	8.27	0.81
24.762m	1: 137.567	0.727 %	0.20	0.29	8.38	0.82
33.354m	1: 104.231	0.959 %	0.20	0.32	9.63	0.94
20.621m	1: 137.473	0.727 %	0.40	0.35	8.39	0.82
37.247m	1: 140.555	0.711 %	0.40	0.35	8.29	0.81
10.068m	1: 134.240	0.745 %	0.60	0.40	8.49	0.83
32.877m	1: 34.790	2.874 %	0.60	0.65	16.67	1.64

PIPE DETAILS: 200mm HDPE PE100 PN8, Class B rigid pipe bedding

MH-45-17 - MH-44-13



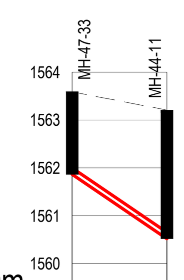
MH-46-26 - MH-44-13

CHAINAGE (m)	DEPTH TO INVERTS	INVERT LEVEL	GROUND LEVEL
0.000	-1.148	1562.660	1563.808
20.000	-0.870	1562.253	1563.123
40.000	-1.153	1561.847	1563.000
44.265	-1.240	1561.760	1563.000
60.688	-1.355	1561.645	1563.000
67.683	-1.405	1561.595	1563.000
77.064	-1.475	1561.525	1563.000
80.000	-1.496	1561.504	1563.000
100.000	-1.532	1561.360	1562.892
109.795	-1.525	1561.290	1562.815
120.000	-1.541	1561.217	1562.758
140.000	-1.575	1561.075	1562.650
200.000	-1.720	1560.932	1562.652
167.302	-1.783	1560.880	1562.663
180.000	-2.032	1560.685	1562.717
200.000	-2.425	1560.377	1562.802
223.494	-2.985	1560.015	1563.000

PIPE GRADES			HYDRAULICS DESIGN: Q (l/s)	V (m/s)	MAX.(0.67D): Q (l/s)	V (m/s)
44.265m	1: 49.183	2.033 %	0.20	0.41	14.02	1.38
16.423m	1: 142.809	0.700 %	0.40	0.35	8.23	0.81
6.995m	1: 139.900	0.715 %	0.60	0.40	8.31	0.82
9.381m	1: 134.014	0.746 %	0.60	0.40	8.49	0.83
32.731m	1: 139.281	0.718 %	0.84	0.44	8.33	0.82
57.507m	1: 140.261	0.713 %	0.84	0.44	8.30	0.81
56.192m	1: 64.962	1.539 %	0.84	0.58	12.20	1.20

PIPE DETAILS: 200mm HDPE PE100 PN8, Class B rigid pipe bedding

MH-46-26 - MH-44-13



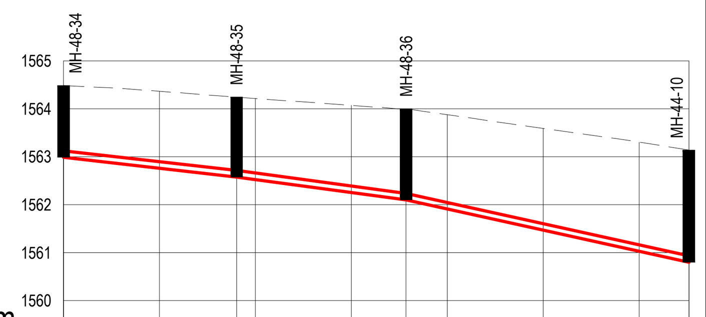
MH-47-33 - MH-44-11

CHAINAGE (m)	DEPTH TO INVERTS	INVERT LEVEL	GROUND LEVEL
0.000	-1.722	1561.865	1563.587
19.780	-2.691	1560.515	1563.206

PIPE GRADES			HYDRAULICS DESIGN: Q (l/s)	V (m/s)	MAX.(0.67D): Q (l/s)	V (m/s)
19.780m	1: 14.652	6.825 %	0.20	0.63	25.69	2.52

PIPE DETAILS: 200mm HDPE PE100 PN8, Class B rigid pipe bedding

MH-47-33 - MH-44-11



MH-48-34 - MH-44-10

CHAINAGE (m)	DEPTH TO INVERTS	INVERT LEVEL	GROUND LEVEL
0.000	-1.500	1562.985	1564.485
20.000	-1.605	1562.758	1564.363
36.093	-1.666	1562.575	1564.241
40.000	-1.691	1562.522	1564.213
60.000	-1.816	1562.254	1564.070
71.429	-1.898	1562.100	1563.998
80.000	-1.965	1561.910	1563.875
100.000	-2.120	1561.468	1563.588
120.000	-2.277	1561.025	1563.302
130.402	-2.342	1560.795	1563.137

PIPE GRADES			HYDRAULICS DESIGN: Q (l/s)	V (m/s)	MAX.(0.67D): Q (l/s)	V (m/s)
36.093m	1: 88.032	1.136 %	0.20	0.34	10.48	1.03
35.336m	1: 74.392	1.344 %	0.40	0.44	11.40	1.12
58.973m	1: 45.190	2.213 %	0.60	0.59	14.63	1.43

PIPE DETAILS: 200mm HDPE PE100 PN8, Class B rigid pipe bedding

MH-48-34 - MH-44-10

ISSUED FOR TENDER

REFER TO DRAWING No:

GENERAL LAYOUTS
- JW14478-SLV-MGLP-000 - MASTER GENERAL LAYOUT PLAN
- JW14478-SLV-GLP-S1-000 - GENERAL LAYOUT PLAN

LAYOUT AND LONGITUDINAL SECTIONS
- JW14478-SLV-S3-LS-01 - LAYOUT AND LONGITUDINAL SECTION SHEET 1 OF 5
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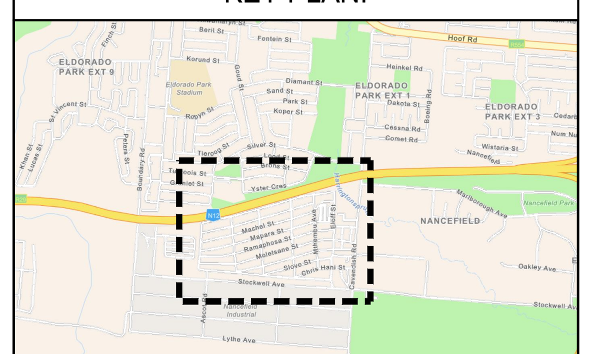
- JW14478-SLV-S3-LS-02 - LAYOUT AND LONGITUDINAL SECTION SHEET 5 OF 5

STANDARD DETAILS

JW100-DET02-W01:	BEDDING DETAIL
JW100-DET01-S01:	MANHOLE DETAILS FOR SEWER
JW100-DET01.1-W01:	NAMEBOARD

KEY PLAN:



CONSULTING ENGINEERS
CAPEX - ENGINEERING SERVICE UNIT
TURBINE HALL - 3RD FLOOR
65 NTEMI PILISO STREET
NEWTOWN
JOHANNESBURG
2113

DESIGNED	S.KHUZWAYO	OCT 2024
	SIGNATURE:	
DRAWN	R.MUDAU	OCT 2024
	SIGNATURE:	
CHECKED	M.SAMBO	OCT 2024
	SIGNATURE:	
APPROVED BY:	P.MOGOLOLA	OCT 2024
	SIGNATURE:	ECSA REG. No: 2018300335

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Municipality:

Joburg
a world class African city

Project description:

NANCEFIELD - SLOVO PARK (SECTION 3)
PROVISION OF BASIC SANITATION SERVICES
LAYOUT PLAN AND LONG SECTION
MH-45-17 - MH-44-13 & MH-46-26 - MH-44-13 & MH-47-33 - MH-44-11 & MH-48-34 - MH-44-10

SCALE: AS SHOWN

AMENDMENTS

REV	DESCRIPTION	DATE	BY	APV
A	ISSUED FOR TENDER	18/10/2024	SK	PM

DRAWING No: JW14478-SLV-S3-LS-19

PROJECT No.	DISCIPLINARY	REV.
-	SEWER	A

ORIGINAL PAGE SIZE: A1 — SHEET 2 OF 5

FILE No.

COORDINATE LIST

LO29

SLOVO PARK SECTION 03

MH No.	YLo	XLo
Constant:		
MH-49-37	109575.836	2911265.140
MH-49-38	109548.548	2911268.941
MH-49-39	109554.487	2911321.376
MH-50-40	109566.545	2911173.119
MH-50-41	109523.228	2911175.130
MH-50-42	109524.279	2911199.960
MH-50-43	109528.298	2911233.948
MH-50-44	109523.196	2911272.351
MH-51-45	109574.421	2911441.413
MH-51-46	109543.168	2911442.211
MH-51-47	109543.854	2911466.936
MH-51-48	109539.251	2911496.433
MH-51-49	109539.444	2911530.981
MH-52-50	109599.189	2911504.472

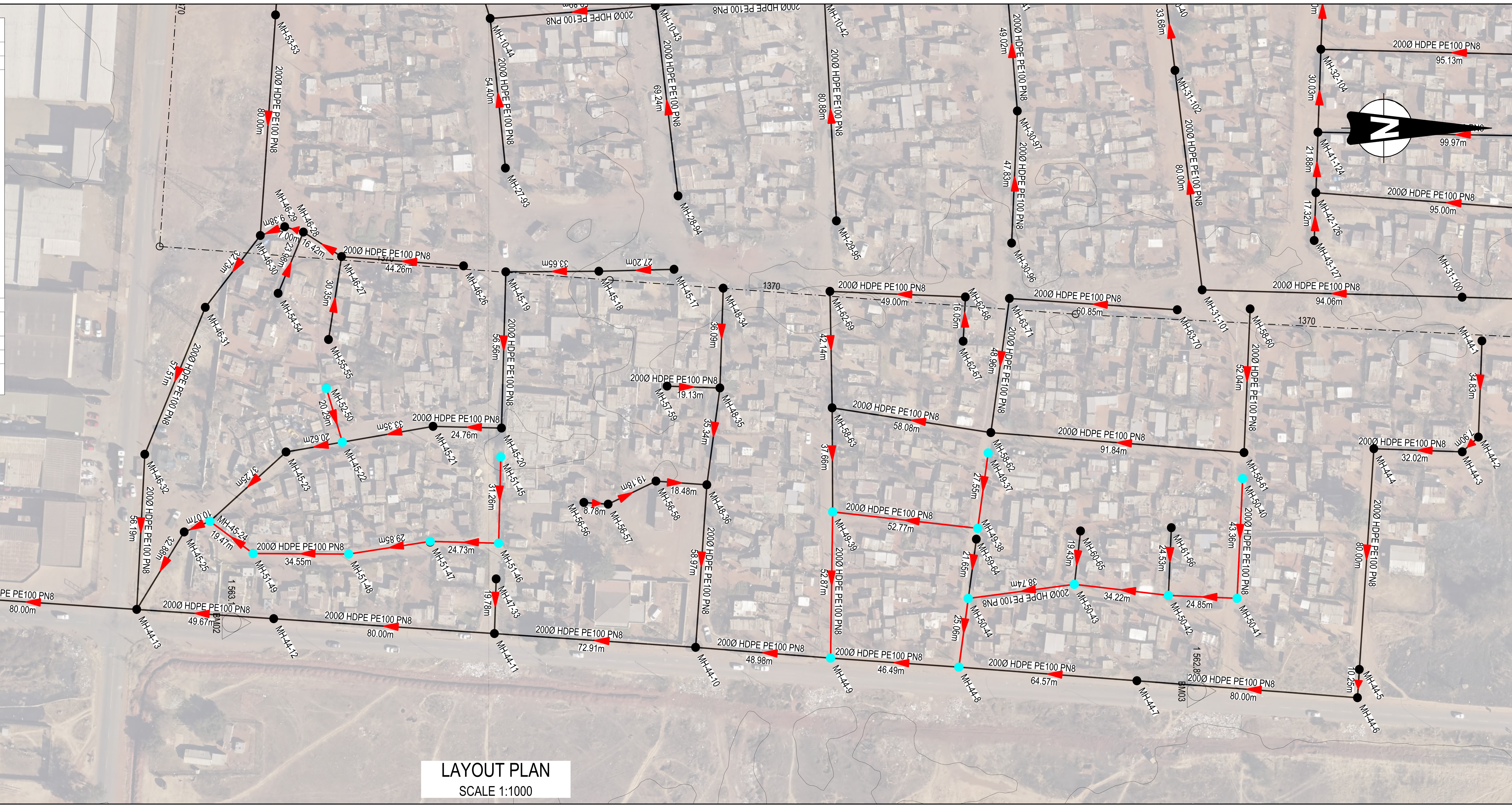
PIPE DATA LIST

MH - MH SLOVO PARK SECTION 03	Distance (m)	Diam. (mm)
MH-49-37 - MH-49-38	27.552	200mm HDPE PE100 PN8
MH-49-38 - MH-49-39	52.770	200mm HDPE PE100 PN8
MH-49-39 - MH-44-9	52.873	200mm HDPE PE100 PN8
MH-50-40 - MH-50-41	43.364	200mm HDPE PE100 PN8
MH-50-41 - MH-50-42	24.852	200mm HDPE PE100 PN8
MH-50-42 - MH-50-43	34.225	200mm HDPE PE100 PN8
MH-50-43 - MH-50-44	38.741	200mm HDPE PE100 PN8
MH-50-44 - MH-44-8	25.060	200mm HDPE PE100 PN8
MH-51-45 - MH-51-46	31.263	200mm HDPE PE100 PN8
MH-51-46 - MH-51-47	24.735	200mm HDPE PE100 PN8
MH-51-47 - MH-51-48	29.855	200mm HDPE PE100 PN8
MH-51-48 - MH-51-49	34.548	200mm HDPE PE100 PN8
MH-51-49 - MH-45-24	19.471	200mm HDPE PE100 PN8
MH-52-50 - MH-45-22	20.291	200mm HDPE PE100 PN8
MH-53-51 - MH-53-52	54.817	200mm HDPE PE100 PN8
MH-53-52 - MH-53-53	80.000	200mm HDPE PE100 PN8

TOTAL LENGTHS OF PIPING

MH Centre to MH Centre

Diameter (mm)		Length (m)
200mm HDPE PE100 PN8		2819.90
	Total :	2819.90



LAYOUT PLAN
SCALE 1:1000

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13. THE CONTRACTOR SHALL CARRY OUT WORKS TO TIE-IN CONNECTIONS TO EXISTING SEWER MANHOLES AND MAINS.
14. POSITIONS OF ALL EXISTING SERVICES ARE APPROXIMATED AND MUST BE VERIFIED ON SITE BY ENGINEER REPRESENTATIVE AND CONTRACTOR.

PIPE ANCHOR
1. GRADE: BETWEEN 1:10 AND 1:6: ANCHOR BLOCKS SHALL BE INSTALLED AT INTERVALS NOT EXCEEDING 12 METERS.

SEWER MANHOLES
1. SEWER MANHOLES ARE TO BE SPACED AT A MAXIMUM OF 80 METERS.

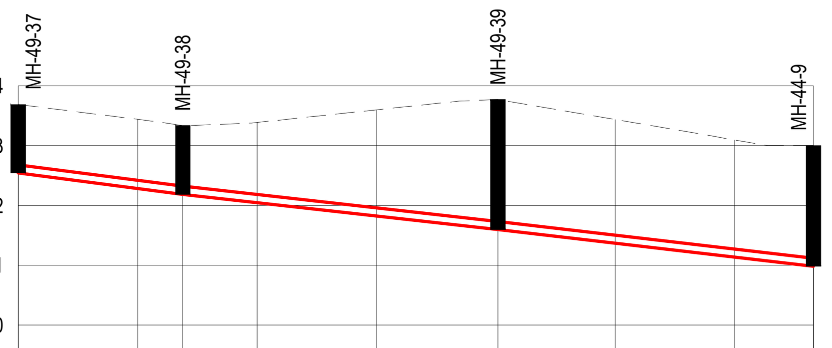
LEGEND

- 200mmØ HDPE PE100 PN8 PIPE
- NEW SEWER MANHOLE (MH)
- FLOW DIRECTION
- NEW SEWER PIPE AND MANHOLE NOT WITHIN INDICATED LONG SECTION
- EXISTING SEWER PIPE
- EXISTING SEWER MANHOLE
- CONTOURS
- 0000 BM00 BENCHMARK

LONGITUDINAL SECTION LEGEND:
PIPE -
NGL -

SCALES:
Horizontal 1:1000
Vertical 1:100

Datum : 1559m

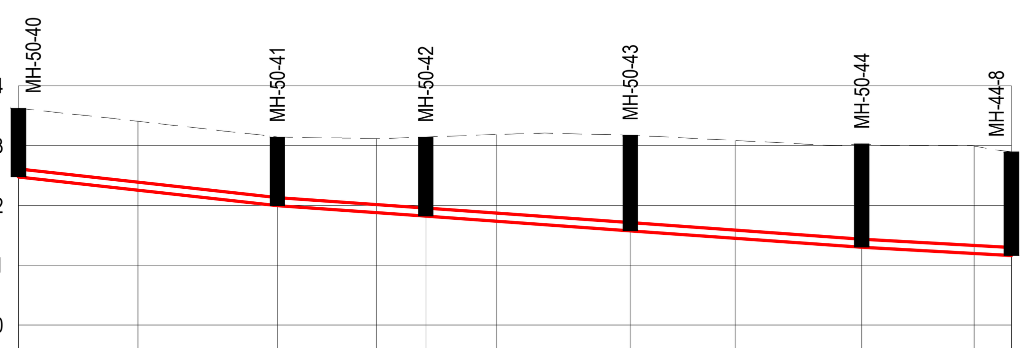


DEPTH TO INVERTS	-1.146	-1.156	-1.149	-1.340	-1.775	-2.174	-2.068	-1.961	-2.020
INVERT LEVEL	1562.540	1562.282	1562.185	1562.046	1561.822	1561.595	1561.366	1561.133	1560.980
GROUND LEVEL	1563.686	1563.438	1563.334	1563.386	1563.597	1563.769	1563.434	1563.094	1563.000
CHAINAGE (m)	0.000	20.000	27.552	40.000	60.000	80.322	100.000	120.000	133.195

PIPE GRADES	27.552m 1: 77.611 1.288 %	52.770m 1: 89.441 1.118 %	52.873m 1: 85.972 1.163 %
PIPE DETAILS	200mm HDPE PE100 PN8 Class B rigid pipe bedding		
HYDRAULICS DESIGN: Q (l/s)	0.20	0.20	0.79
DESIGN: V (m/s)	0.35	0.33	0.51
MAX.(0.67D): Q (l/s)	11.16	10.40	10.60
MAX.(0.67D): V (m/s)	1.09	1.02	1.04

MH-49-37 - MH-44-9

1559m

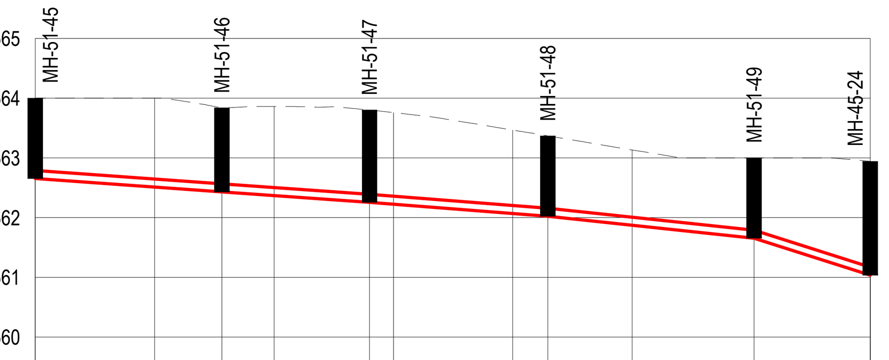


DEPTH TO INVERTS	-1.147	-1.151	-1.149	-1.238	-1.325	-1.448	-1.598	-1.635	-1.729	-1.798	-1.738
INVERT LEVEL	1562.475	1562.254	1561.995	1561.878	1561.820	1561.736	1561.575	1561.450	1561.300	1561.195	1561.200
GROUND LEVEL	1563.622	1563.405	1563.144	1563.116	1563.145	1563.184	1563.173	1563.085	1563.029	1562.993	1562.898
CHAINAGE (m)	0.000	20.000	43.364	60.000	68.216	80.000	102.441	120.000	141.181	200.000	166.242

PIPE GRADES	43.364m 1: 90.342 1.107 %	24.852m 1: 142.011 0.704 %	34.225m 1: 139.694 0.716 %	38.740m 1: 140.873 0.710 %	25.060m 1: 179 0.559 %
PIPE DETAILS	200mm HDPE PE100 PN8 Class B rigid pipe bedding				
DESIGN: Q (l/s)	0.20	0.20	0.40	0.60	0.79
DESIGN: V (m/s)	0.33	0.28	0.35	0.40	0.40
MAX.(0.67D): Q (l/s)	10.35	8.25	8.32	8.28	7.35
MAX.(0.67D): V (m/s)	1.01	0.81	0.82	0.81	0.72

MH-50-40 - MH-44-8

1559m

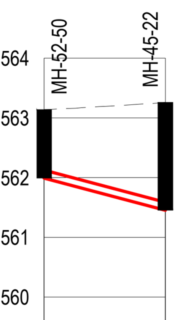


DEPTH TO INVERTS	-1.345	-1.489	-1.406	-1.493	-1.548	-1.535	-1.399	-1.348	-1.261	-1.345	-1.908
INVERT LEVEL	1562.655	1562.511	1562.430	1562.368	1562.255	1562.223	1562.066	1562.020	1561.871	1561.655	1561.035
GROUND LEVEL	1564.000	1564.000	1563.836	1563.861	1563.803	1563.758	1563.465	1563.368	1563.132	1563.000	1562.943
CHAINAGE (m)	0.000	20.000	31.263	40.000	55.998	60.000	80.000	85.852	100.000	120.400	139.871

PIPE GRADES	31.263m 1: 138.947 0.720 %	24.735m 1: 141.343 0.707 %	29.854m 1: 127.038 0.787 %	34.548m 1: 94.652 1.057 %	19.471m 1: 31.405 3.184 %
PIPE DETAILS	200mm HDPE PE100 PN8 Class B rigid pipe bedding				
DESIGN: Q (l/s)	0.20	0.20	0.20	0.20	0.20
DESIGN: V (m/s)	0.29	0.28	0.30	0.33	0.48
MAX.(0.67D): Q (l/s)	8.34	8.27	8.72	10.11	17.55
MAX.(0.67D): V (m/s)	0.82	0.81	0.86	0.99	1.72

MH-51-45 - MH-45-24

1559m



DEPTH TO INVERTS	-1.150	-1.811
INVERT LEVEL	1561.990	1561.450
GROUND LEVEL	1563.140	1563.261
CHAINAGE (m)	0.000	20.291
PIPE GRADES	20.291m 1: 37.576 2.661 %	
PIPE DETAILS	200mm HDPE PE100 PN8 Class B rigid pipe bedding	
DESIGN: Q (l/s) / V (m/s)	0.20 0.45	
MAX.(0.67D): Q (l/s) / V (m/s)	16.04 1.57	

MH-52-50 - MH-45-22

ISSUED FOR TENDER

REFER TO DRAWING No:

GENERAL LAYOUTS
- JW14478-SLV-MGLP-000 - MASTER GENERAL LAYOUT PLAN
- JW14478-SLV-GLP-S1-000 - GENERAL LAYOUT PLAN

LAYOUT AND LONGITUDINAL SECTIONS
- JW14478-SLV-S3-LS-01 - LAYOUT AND LONGITUDINAL SECTION SHEET 1 OF 5
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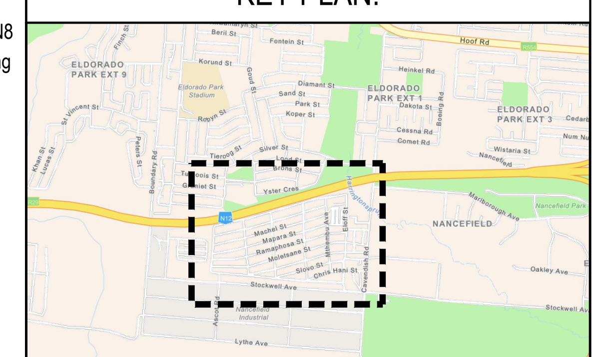
- JW14478-SLV-S3-LS-02 - LAYOUT AND LONGITUDINAL SECTION SHEET 5 OF 5

STANDARD DETAILS
- JW100-DET02-W01: BEDDING DETAIL
- JW100-DET01-S01: MANHOLE DETAILS FOR SEWER
- JW100-DET01.1-W01: NAMEBOARD

KEY PLAN:



CONSULTING ENGINEERS
CAPEX - ENGINEERING SERVICE UNIT
TURBINE HALL - 3RD FLOOR
65 NTEMI PILISO STREET
NEWTOWN
JOHANNESBURG
2113

DESIGNED	S.KHUZWAYO	OCT 2024
	SIGNATURE:	
DRAWN	R.MUDAU	OCT 2024
	SIGNATURE:	
CHECKED	M.SAMBO	OCT 2024
	SIGNATURE:	
APPROVED BY:	P.MOGOLOLA	OCT 2024
	SIGNATURE:	ECSA REG. No: 2018300335

Johannesburg Water

JOHANNESBURG WATER SOC Ltd
TURBINE HALL
65 NTEMI PILISO STREET
NEWTOWN
JOHANNESBURG
2113
TEL: +27 (0)11 688 1400
FAX: +27(0)11 688-1528

Municipality:

Joburg
a world class African city

Project description:

NANCEFIELD - SLOVO PARK (SECTION 3)
PROVISION OF BASIC SANITATION SERVICES
LAYOUT PLAN AND LONG SECTION
MH-49-37 - MH-44-9 & MH-50-40 - MH-44-8 & MH-51-45 - MH-45-24 & MH-52-50 - MH-45-22

SCALE: AS SHOWN

AMENDMENTS

REV	DESCRIPTION	DATE	BY	APV
A	ISSUED FOR TENDER	18/10/2024	SK	PM

DRAWING No: JW14478-SLV-S3-LS-20

PROJECT No.	DISCIPLINARY	REV.
S1405	SEWER	A

ORIGINAL PAGE SIZE: A1 SHEET 3 OF 5

FILE No.

COORDINATE LIST

LO29

SLOVO PARK SECTION 03		
MH No.	YLo	XLo
Constant:		
MH-53-51	109868.795	2911513.632
MH-53-52	109814.106	2911517.387
MH-53-53	109734.294	2911522.866
MH-54-54	109633.542	2911521.915
MH-55-55	109616.859	2911503.716
MH-56-56	109557.909	2911411.352
MH-56-57	109557.303	2911402.592
MH-56-58	109565.604	2911385.300
MH-57-59	109599.985	2911381.283

PIPE DATA LIST

MH - MH	Distance	Diam.
SLOVO PARK SECTION 03	(m)	(mm)
MH-53-51 - MH-53-52	54.817	200mm HDPE PE100 PN8
MH-53-52 - MH-53-53	80.000	200mm HDPE PE100 PN8
MH-53-53 - MH-46-30	80.000	200mm HDPE PE100 PN8
MH-54-54 - MH-46-28	23.979	200mm HDPE PE100 PN8
MH-55-55 - MH-46-27	30.347	200mm HDPE PE100 PN8
MH-56-56 - MH-56-57	8.782	200mm HDPE PE100 PN8
MH-56-57 - MH-56-58	19.181	200mm HDPE PE100 PN8
MH-56-58 - MH-48-36	18.479	200mm HDPE PE100 PN8
MH-57-59 - MH-48-35	19.130	200mm HDPE PE100 PN8

TOTAL LENGTHS OF PIPING

MH Centre to MH Centre

Diameter (mm)	Length (m)
200mm HDPE PE100 PN8	2819.90
Total :	2819.90

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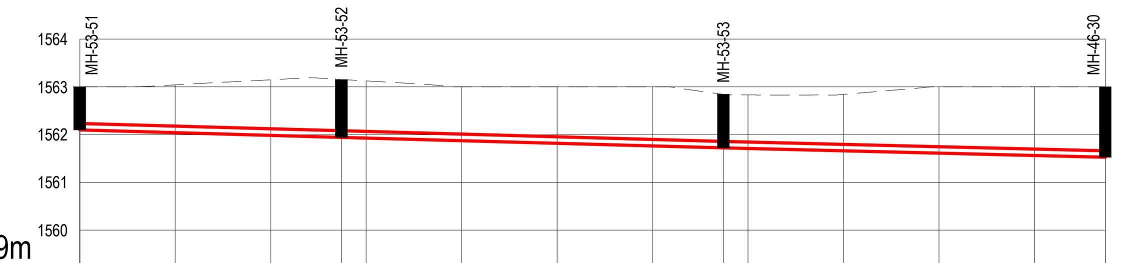
LEGEND

- 200mmØ HDPE PE100 PN8 PIPE
- NEW SEWER MANHOLE (MH)
- FLOW DIRECTION
- NEW SEWER PIPE AND MANHOLE NOT WITHIN INDICATED LONG SECTION
- EXISTING SEWER PIPE
- EXISTING SEWER MANHOLE
- CONTOURS
- 0000 BM00 BENCHMARK

LONGITUDINAL SECTION LEGEND:
PIPE -
NGL -

SCALES:
Horizontal 1:1000
Vertical 1:100

MH-53-51 - MH-46-30

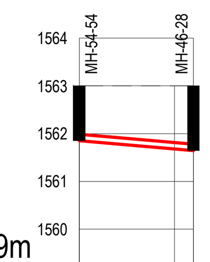


Datum : 1559m

DEPTH TO INVERTS	INVERT LEVEL	GROUND LEVEL	CHAINAGE (m)
-0.900	1562.100	1563.000	0.000
-1.000	1562.043	1563.043	20.000
-1.162	1561.987	1563.149	40.000
-1.210	1561.945	1563.155	54.817
-1.196	1561.931	1563.127	60.000
-1.124	1561.876	1563.000	80.000
-1.179	1561.821	1563.000	100.000
-1.234	1561.766	1563.000	120.000
-1.118	1561.725	1562.843	134.817
-1.121	1561.712	1562.833	140.000
-1.183	1561.662	1562.845	200.000
-1.388	1561.612	1563.000	180.000
-1.438	1561.562	1563.000	200.000
-1.475	1561.525	1563.000	214.818

PIPE GRADES	PIPE DETAILS	HYDRAULICS DESIGN: Q (l/s) / V (m/s)	HYDRAULICS MAX.(0.67D): Q (l/s) / V (m/s)
54.817m 1: 353.658 0.283 %	200mm HDPE PE100 PN8 Class B rigid pipe bedding		5.23 / 0.51
80.000m 1: 363.636 0.275 %		0.12 / 0.18	5.16 / 0.51
80.000m 1: 400 0.250 %		0.25 / 0.21	4.92 / 0.48

MH-54-54 - MH-46-28

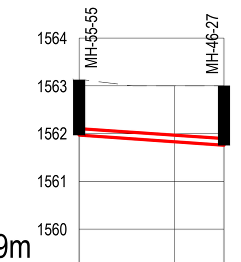


1559m

DEPTH TO INVERTS	INVERT LEVEL	GROUND LEVEL	CHAINAGE (m)
-1.150	1561.850	1563.000	0.000
-1.321	1561.679	1563.000	20.000
-1.355	1561.645	1563.000	23.979

PIPE GRADES: 23.979m, 1: 116.971, 0.855 %
PIPE DETAILS: 200mm HDPE PE100 PN8, Class B rigid pipe bedding
HYDRAULICS: DESIGN 0.20 / 0.30; MAX. 9.09 / 0.89

MH-55-55 - MH-46-27

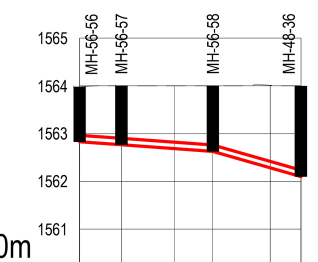


1559m

DEPTH TO INVERTS	INVERT LEVEL	GROUND LEVEL	CHAINAGE (m)
-1.154	1561.970	1563.124	0.000
-1.168	1561.832	1563.000	20.000
-1.240	1561.760	1563.000	30.347

PIPE GRADES: 30.347m, 1: 144.510, 0.692 %
PIPE DETAILS: 200mm HDPE PE100 PN8, Class B rigid pipe bedding
HYDRAULICS: DESIGN 0.20 / 0.28; MAX. 8.18 / 0.80

MH-56-56 - MH-48-36

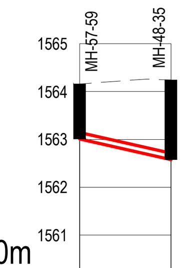


1560m

DEPTH TO INVERTS	INVERT LEVEL	GROUND LEVEL	CHAINAGE (m)
-1.150	1562.830	1563.980	0.000
-1.230	1562.770	1564.000	8.782
-1.312	1562.688	1564.000	20.000
-1.370	1562.630	1564.000	27.962
-1.729	1562.285	1564.014	40.000
-1.898	1562.100	1563.998	46.441

PIPE GRADES	PIPE DETAILS	HYDRAULICS DESIGN	HYDRAULICS MAX.
8.782m 1: 146.367 0.683 %	200mm HDPE PE100 PN8 Class B rigid pipe bedding	0.20 / 0.28	8.13 / 0.80
19.180m 1: 137 0.730 %		0.20 / 0.29	8.40 / 0.82
18.479m 1: 34.866 2.868 %		0.20 / 0.46	16.65 / 1.63

MH-57-59 - MH-48-35



1560m

DEPTH TO INVERTS	INVERT LEVEL	GROUND LEVEL	CHAINAGE (m)
-1.150	1563.010	1564.200	0.000
-1.665	1562.576	1564.241	19.130

PIPE GRADES: 19.130m, 1: 44.078, 2.269 %
PIPE DETAILS: 200mm HDPE PE100 PN8, Class B rigid pipe bedding
HYDRAULICS: DESIGN 0.20 / 0.43; MAX. 14.81 / 1.45

ISSUED FOR TENDER

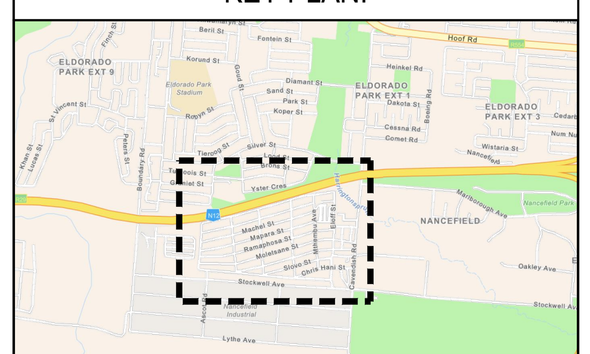
REFER TO DRAWING No:

GENERAL LAYOUTS
- JW14478-SLV-MGLP-000 - MASTER GENERAL LAYOUT PLAN
- JW14478-SLV-GLP-S1-000 - GENERAL LAYOUT PLAN

LAYOUT AND LONGITUDINAL SECTIONS
- JW14478-SLV-S3-LS-01 - LAYOUT AND LONGITUDINAL SECTION SHEET 1 OF 5
- JW14478-SLV-S3-LS-02 - LAYOUT AND LONGITUDINAL SECTION SHEET 2 OF 5
- JW14478-SLV-S3-LS-03 - LAYOUT AND LONGITUDINAL SECTION SHEET 3 OF 5
- JW14478-SLV-S3-LS-01 - LAYOUT AND LONGITUDINAL SECTION SHEET 4 OF 5
- JW14478-SLV-S3-LS-02 - LAYOUT AND LONGITUDINAL SECTION SHEET 5 OF 5

STANDARD DETAILS
- JW100-DET02-W01: BEDDING DETAIL
- JW100-DET01-S01: MANHOLE DETAILS FOR SEWER
- JW100-DET01.1-W01: NAMEBOARD

KEY PLAN:



CONSULTING ENGINEERS
CAPEX - ENGINEERING SERVICE UNIT
TURBINE HALL - 3RD FLOOR
65 NTEMI PILISO STREET
NEWTOWN
JOHANNESBURG
2113

DESIGNED	S.KHUZWAYO	OCT 2024
	SIGNATURE:	
DRAWN	R.MUDAU	OCT 2024
	SIGNATURE:	
CHECKED	M.SAMBO	OCT 2024
	SIGNATURE:	
APPROVED BY:	P.MOGOLOLA	OCT 2024
	SIGNATURE:	ECSA REG. No: 2018300335

Johannesburg Water

JOHANNESBURG WATER SOC Ltd
TURBINE HALL
65 NTEMI PILISO STREET
NEWTOWN
JOHANNESBURG
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TEL: +27 (0)11 688 1400
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Municipality:

Joburg
a world class African city

Project description:

NANCEFIELD - SLOVO PARK (SECTION 3)
PROVISION OF BASIC SANITATION SERVICES
LAYOUT PLAN AND LONG SECTION
MH-53-51 - MH-46-30 & MH-54-54 - MH-46-28 & MH-55-55 - MH-46-27 & MH-56-56 - MH-48-36 & MH-57-59 - MH-48-35

SCALE: AS SHOWN

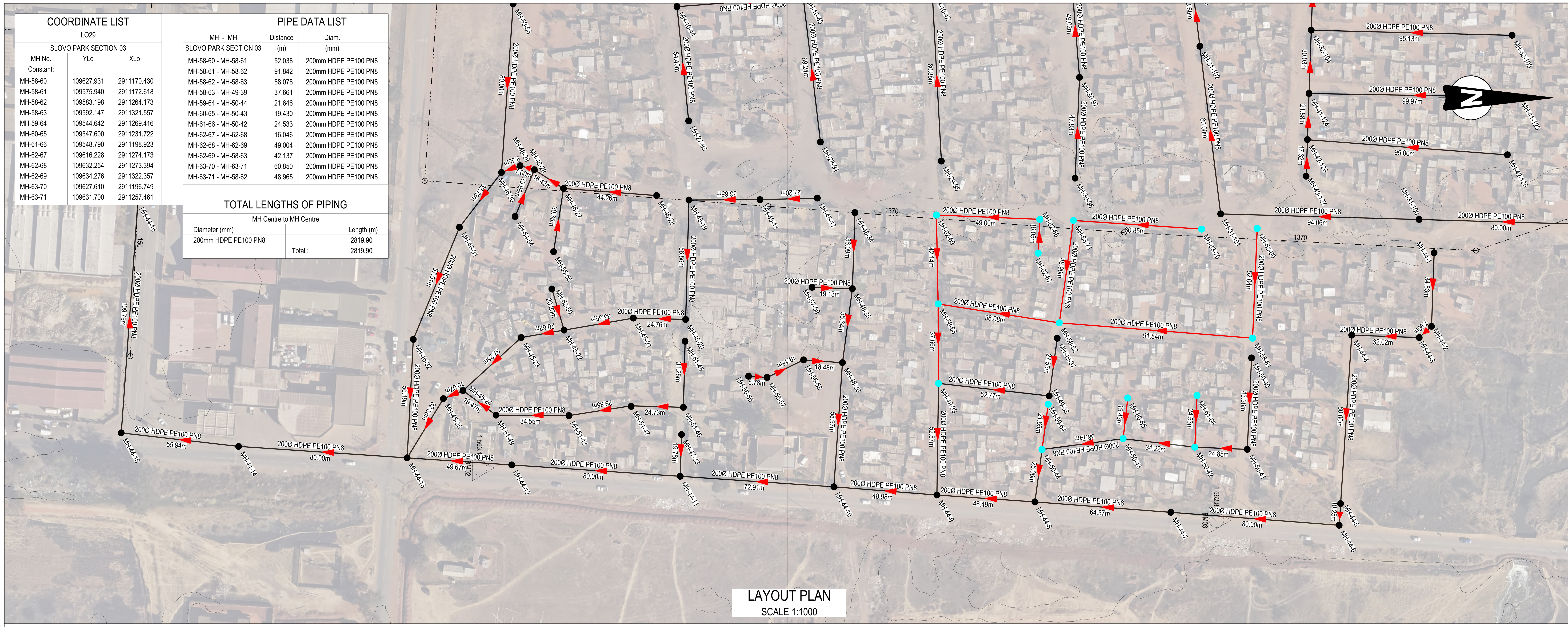
AMENDMENTS

REV	DESCRIPTION	DATE	BY	APV
A	ISSUED FOR TENDER	18/10/2024	SK	PM

DRAWING No: JW14478-SLV-S3-LS-21

PROJECT No.	DISCIPLINARY	REV.
S1405	SEWER	A

ORIGINAL PAGE SIZE: A1
SHEET 4 OF 5
FILE No.



COORDINATE LIST

LO29

SLOVO PARK SECTION 03

MH No.	YLo	XLo
Constant:		
MH-58-60	109627.931	2911170.430
MH-58-61	109575.940	2911172.618
MH-58-62	109583.198	2911264.173
MH-58-63	109592.147	2911321.557
MH-59-64	109544.642	2911269.416
MH-60-65	109547.600	2911231.722
MH-61-66	109548.790	2911198.923
MH-62-67	109616.228	2911274.173
MH-62-68	109632.254	2911273.394
MH-62-69	109634.276	2911322.357
MH-63-70	109627.610	2911196.749
MH-63-71	109631.700	2911257.461

PIPE DATA LIST

MH - MH SLOVO PARK SECTION 03	Distance (m)	Diam. (mm)
MH-58-60 - MH-58-61	52.038	200mm HDPE PE100 PN8
MH-58-61 - MH-58-62	91.842	200mm HDPE PE100 PN8
MH-58-62 - MH-58-63	58.078	200mm HDPE PE100 PN8
MH-58-63 - MH-49-39	37.661	200mm HDPE PE100 PN8
MH-59-64 - MH-50-44	21.646	200mm HDPE PE100 PN8
MH-60-65 - MH-50-43	19.430	200mm HDPE PE100 PN8
MH-61-66 - MH-50-42	24.533	200mm HDPE PE100 PN8
MH-62-67 - MH-62-68	16.046	200mm HDPE PE100 PN8
MH-62-68 - MH-62-69	49.004	200mm HDPE PE100 PN8
MH-62-69 - MH-58-63	42.137	200mm HDPE PE100 PN8
MH-63-70 - MH-63-71	60.850	200mm HDPE PE100 PN8
MH-63-71 - MH-58-62	48.965	200mm HDPE PE100 PN8

TOTAL LENGTHS OF PIPING

MH Centre to MH Centre

Diameter (mm)	Length (m)
200mm HDPE PE100 PN8	2819.90
Total :	2819.90

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SEWER:

1.ALL PIPES TO BE LAID IN ACCORDANCE WITH SANS 1200, LATEST REVISION AND THE REQUIREMENTS OF JOHANNESBURG WATER SOC LTD.
2.ALL PIPES TO LAID UNDER TRENCH CONDITIONS UNLESS OTHERWISE SHOWN.
3.ALL CONSTRUCTION WORK TO BE CARRIED OUT IN STRICT ACCORDANCE WITH REQUIREMENTS OF JOHANNESBURG WATER.
4.SEWERS GENERALLY 1,5m FROM BOUNDARIES UNLESS OTHERWISE SHOWN.
5.DO NOT SCALE FROM THESE DRAWINGS.
6.THIS DRAWING MUST BE READ IN CONJUNCTION WITH THE STANDARD SPECIFICATIONS FOR MUNICIPAL CIVIL ENGINEERING WORKS.
7.THE FINAL PIPE ROUTE TO BE DETERMINED ON SITE AFTER EXPOSING OF EXISTING SERVICES.
8.ALL WORKS TO BE APPROVED BY EMPLOYEE AGENT REPRESENTATIVE BEFORE CONSTRUCTION.
9.CONTRACTOR TO CONFIRM LEVELS OF EXISTING PIPES BEFORE COMMENCING CONSTRUCTION.
10.POSITIONS OF ALL EXISTING SERVICES ARE APPROXIMATED AND MUST BE VERIFIED ON SITE.
11.ALL MATERIALS USED IN INSTALLING SEWER MAINS SHALL COMPLY WITH THE RELEVANT SABS SPECIFICATION AND WITH THE MINIMUM REQUIREMENTS OF JOHANNESBURG WATER (SOC) LTD.
12.THE POSITION AND DEPTH OF ALL EXISTING SERVICES ON THE SITE AND OFF THE SITE WHERE AFFECTED BY THE WORKS SHALL BE CONFIRMED PRIOR TO ANY CONSTRUCTION WORK ON THE INSTALLATION OF WATER OR SEWER MAINS BEING COMMENCED.
13.THE CONTRACTOR SHALL CARRY OUT WORKS TO TIE-IN CONNECTIONS TO EXISTING SEWER MANHOLES AND MAINS.
14.POSITIONS OF ALL EXISTING SERVICES ARE APPROXIMATED AND MUST BE VERIFIED ON SITE BY ENGINEER REPRESENTATIVE AND CONTRACTOR.

PIPE ANCHOR
1.GRADE: BETWEEN 1:10 AND 1:6: ANCHOR BLOCKS SHALL BE INSTALLED AT INTERVALS NOT EXCEEDING 12 METERS.

SEWER MANHOLES
1.SEWER MANHOLES ARE TO BE SPACED AT A MAXIMUM OF 80 METERS.

LEGEND

- 200mmØ HDPE PE100 PN8 PIPE
- NEW SEWER MANHOLE (MH)
- FLOW DIRECTION
- NEW SEWER PIPE AND MANHOLE NOT WITHIN INDICATED LONG SECTION
- EXISTING SEWER PIPE
- EXISTING SEWER MANHOLE
- CONTOURS
- 0000 BM00 BENCHMARK

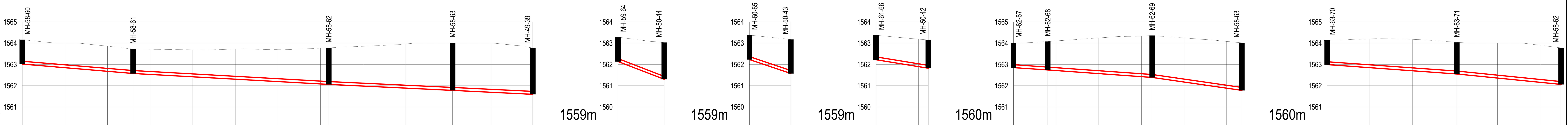
LONGITUDINAL SECTION LEGEND:

- PIPE -
- NGL -

SCALES:

Horizontal 1:1000

Vertical 1:100



MH-58-60 - MH-49-39

Datum : 1560m

	MH-58-60			MH-58-61					MH-58-62			MH-58-63		MH-49-39
DEPTH TO INVERTS	-1.146	-1.154	-1.178	-1.148	-1.182	-1.266	-1.415	-1.495	-1.680 / -1.718	-1.871	-2.073	-2.234	-2.309	-2.174
INVERT LEVEL	1563.015	1562.846	1562.677	1562.575	1562.530	1562.418	1562.306	1562.194	1562.082 / 1562.060	1561.982	1561.886	1561.780	1561.691	1561.595
GROUND LEVEL	1564.161	1564.000	1563.855	1563.723	1563.712	1563.684	1563.721	1563.689	1563.762 / 1563.778	1563.853	1563.959	1564.014	1564.000	1563.769
CHAINAGE (m)	0.000	20.000	40.000	52.037	60.000	80.000	100.000	120.000	140.000 / 143.880	200.000	180.000	201.958	220.000	239.618

	MH-58-60 – MH-58-61	MH-58-61 – MH-58-62	MH-58-62 – MH-58-63	MH-58-63 – MH-49-39
PIPE GRADES	52.037m 1: 118.266 0.846 %	91.843m 1: 178.336 0.561 %	58.078m 1: 207.421 0.482 %	37.660m 1: 203.568 0.491 %
PIPE DETAILS	200mm HDPE PE100 PN8 Class B rigid pipe bedding			
HYDRAULICS DESIGN: Q (l/s) / V (m/s)	0.20 0.30	0.20 0.26	0.40 0.31	0.60 0.35
MAX.(0.67D): Q (l/s) / V (m/s)	9.04 0.89	7.36 0.72	6.83 0.67	6.89 0.68

MH-59-64 - MH-50-44

1559m

	MH-59-64	MH-50-44
DEPTH TO INVERTS	-1.146	-1.729
INVERT LEVEL	1562.135	1561.300
GROUND LEVEL	1563.281	1563.029
CHAINAGE (m)	0.000	21.646
PIPE GRADES	21.646m 1: 25.923 3.858 %	
PIPE DETAILS	200mm HDPE PE100 PN8 Class B rigid pipe bedding	
HYDRAULICS DESIGN: Q (l/s) / V (m/s)	0.20 0.51	
MAX.(0.67D): Q (l/s) / V (m/s)	19.31 1.89	

MH-60-65 - MH-50-43

1559m

	MH-60-65	MH-50-43
DEPTH TO INVERTS	-1.146	-1.598
INVERT LEVEL	1562.230	1561.575
GROUND LEVEL	1563.376	1563.173
CHAINAGE (m)	0.000	19.430
PIPE GRADES	19.430m 1: 29.664 3.371 %	
PIPE DETAILS	200mm HDPE PE100 PN8 Class B rigid pipe bedding	
HYDRAULICS DESIGN: Q (l/s) / V (m/s)	0.20 0.49	
MAX.(0.67D): Q (l/s) / V (m/s)	18.05 1.77	

MH-61-66 - MH-50-42

1559m

	MH-61-66		MH-50-42
DEPTH TO INVERTS	-1.149	-1.293	-1.325
INVERT LEVEL	1562.220	1561.894	1561.820
GROUND LEVEL	1563.369	1563.187	1563.145
CHAINAGE (m)	0.000	20.000	24.533
PIPE GRADES	24.533m 1: 61.332 1.630 %		
PIPE DETAILS	200mm HDPE PE100 PN8 Class B rigid pipe bedding		
HYDRAULICS DESIGN: Q (l/s) / V (m/s)	0.20 0.38		
MAX.(0.67D): Q (l/s) / V (m/s)	12.56 1.23		

MH-62-67 - MH-58-63

1560m

	MH-62-67	MH-62-68				MH-62-69			MH-58-63
DEPTH TO INVERTS	-1.150	-1.336	-1.392	-1.676	-1.904	-1.966	-2.070	-2.199	-2.234
INVERT LEVEL	1562.850	1562.740	1562.712	1562.569	1562.426	1562.390	1562.174	1561.884	1561.780
GROUND LEVEL	1564.000	1564.076	1564.104	1564.245	1564.330	1564.356	1564.244	1564.083	1564.014
CHAINAGE (m)	0.000	16.046	20.000	40.000	60.000	65.050	80.000	100.000	107.186

	MH-62-67 – MH-62-68	MH-62-68 – MH-62-69	MH-62-69 – MH-58-63
PIPE GRADES	16.046m 1: 145.873 0.686 %	49.004m 1: 140.011 0.714 %	42.136m 1: 69.075 1.448 %
PIPE DETAILS	200mm HDPE PE100 PN8 Class B rigid pipe bedding		
HYDRAULICS DESIGN: Q (l/s) / V (m/s)	0.20 0.28	0.20 0.29	0.20 0.37
MAX.(0.67D): Q (l/s) / V (m/s)	8.14 0.80	8.31 0.82	11.83 1.16

MH-63-70 - MH-58-62

1560m

	MH-63-70			MH-63-71			MH-58-62
DEPTH TO INVERTS	-1.145	-1.354	-1.476	-1.485	-1.642	-1.742	-1.718
INVERT LEVEL	1562.990	1562.845	1562.701	1562.550	1562.358	1562.158	1562.060
GROUND LEVEL	1564.135	1564.199	1564.177	1564.035	1564.000	1563.900	1563.778
CHAINAGE (m)	0.000	20.000	40.000	60.850	80.000	100.000	109.815

	MH-63-70 – MH-63-71	MH-63-71 – MH-58-62
PIPE GRADES	60.850m 1: 138.295 0.723 %	48.965m 1: 99.929 1.001 %
PIPE DETAILS	200mm HDPE PE100 PN8 Class B rigid pipe bedding	
HYDRAULICS DESIGN: Q (l/s) / V (m/s)	0.20 0.29	0.20 0.32
MAX.(0.67D): Q (l/s) / V (m/s)	8.36 0.82	9.84 0.96

ISSUED FOR TENDER

REFER TO DRAWING No:

GENERAL LAYOUTS

JW14478-SLV-MGLP-000 - MASTER GENERAL LAYOUT PLAN
JW14478-SLV-GLP-S1-000 - GENERAL LAYOUT PLAN

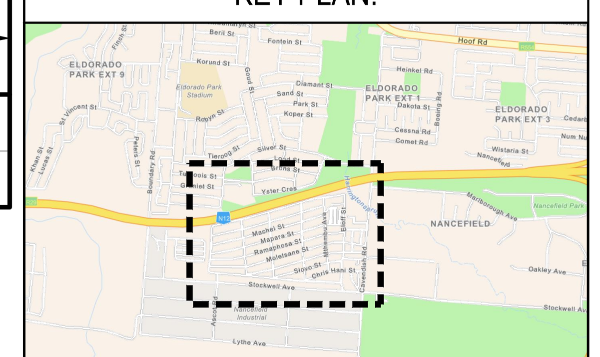
LAYOUT AND LONGITUDINAL SECTIONS

JW14478-SLV-S3-LS-01 - LAYOUT AND LONGITUDINAL SECTION SHEET 1 OF 5
JW14478-SLV-S3-LS-02 - LAYOUT AND LONGITUDINAL SECTION SHEET 2 OF 5
JW14478-SLV-S3-LS-03 - LAYOUT AND LONGITUDINAL SECTION SHEET 3 OF 5
JW14478-SLV-S3-LS-01 - LAYOUT AND LONGITUDINAL SECTION SHEET 4 OF 5
JW14478-SLV-S3-LS-02 - LAYOUT AND LONGITUDINAL SECTION SHEET 5 OF 5

STANDARD DETAILS

JW100-DET02-W01:	BEDDING DETAIL
JW100-DET01-S01:	MANHOLE DETAILS FOR SEWER
JW100-DET01.1-W01:	NAMEBOARD

KEY PLAN:



CONSULTING ENGINEERS
CAPEX - ENGINEERING SERVICE UNIT
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JOHANNESBURG
2113

DESIGNED	S.KHUZWAYO	OCT 2024
	SIGNATURE:	
DRAWN	R.MUDAU	OCT 2024
	SIGNATURE:	
CHECKED	M.SAMBO	OCT 2024
	SIGNATURE:	
APPROVED BY:	P.MOGOLOLA	OCT 2024
	SIGNATURE:	ECSA REG. No: 2018300335

Johannesburg Water

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Municipality:

Joburg — a world class African city

Project description:

NANCEFIELD - SLOVO PARK (SECTION 3)
PROVISION OF BASIC SANITATION SERVICES
LAYOUT PLAN AND LONG SECTION
MH-58-60 - MH-49-39 & MH-59-64 - MH-50-44 & MH-60-65 - MH-50-43 & MH-61-66 - MH-50-42 & MH-62-67 - MH-58-63...

SCALE: AS SHOWN

AMENDMENTS

REV	DESCRIPTION	DATE	BY	APV
A	ISSUED FOR TENDER	18/10/2024	SK	PM

DRAWING No: JW14478-SLV-S3-LS-22

PROJECT No.	DISCIPLINARY	REV.
S1405	SEWER	A

ORIGINAL PAGE SIZE: A1 — SHEET 5 OF 5

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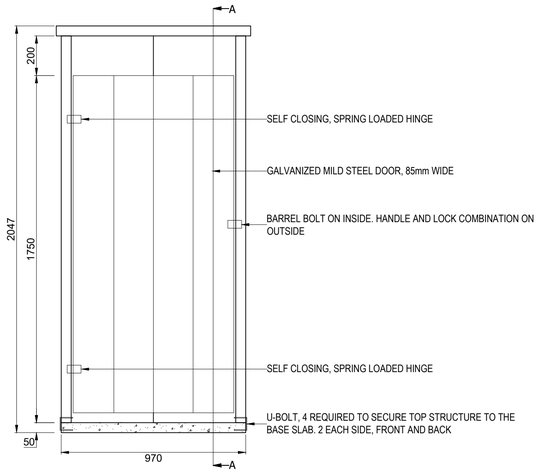
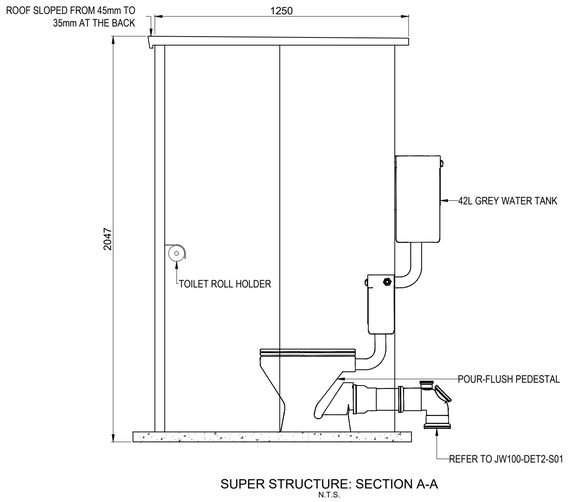
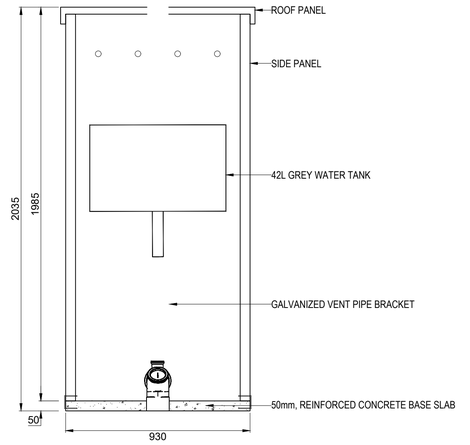


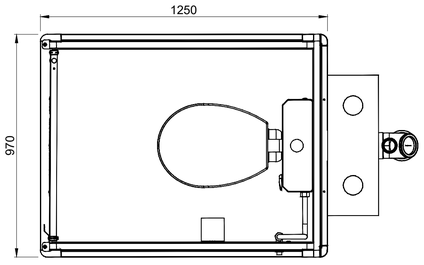
SUPER STRUCTURE: FRONT VIEW
N.T.S.



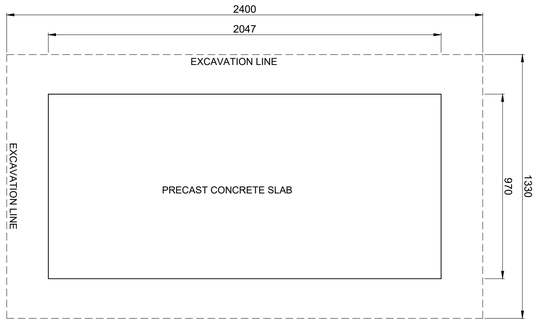
SUPER STRUCTURE: SECTION A-A
N.T.S.



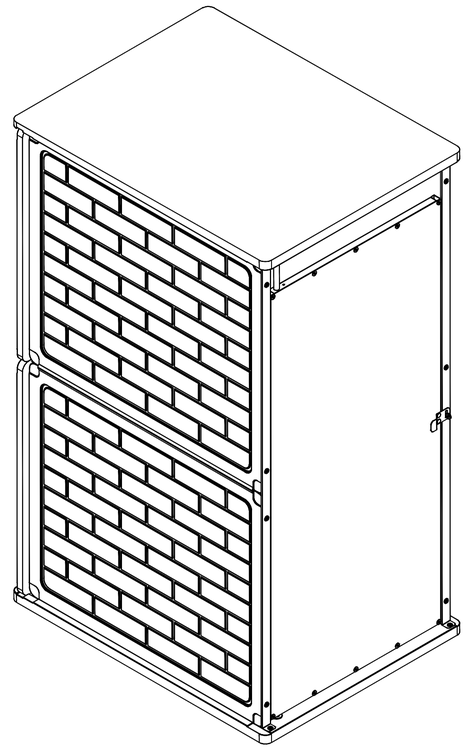
SUPER STRUCTURE: REAR VIEW
N.T.S.



SUPER STRUCTURE: TOP VIEW
N.T.S.



SUB-STRUCTURE: PRECAST CONCRETE BASE
N.T.S.



NOTES:

1. THIS DRAWING IS FOR INFORMATION PURPOSES, CONTRACTOR TO SUBMIT LAYOUT DRAWINGS FROM THE SUPPLIER FOR APPROVAL BEFORE PROCUREMENT OF MATERIAL.
2. ALL DRAWINGS MUST BE APPROVED AND SIGNED BY A REGISTERED STRUCTURAL ENGINEER.
3. ALL STRUCTURAL DESIGNS ARE TO BE CARRIED OUT BY A STRUCTURAL ENGINEER AND IN ACCORDANCE WITH RELEVANT SANS STANDARDS. SUPER STRUCTURE MUST BE DESIGN TO WITHSTAND WIND LOADS AS PER SANS 0160-1989 AND ALL REINFORCEMENT MUST BE IN ACCORDANCE WITH A STRUCTURAL ENGINEERS RATIONAL DESIGN.
4. VIP TOILET SUBSTRUCTURE TO BE MADE OF PRECAST CONCRETE MEMBERS INCLUDING CONCRETE SLAB AS SUPPLIED BY APPROVED MANUFACTURER.
5. CONCRETE BASE MUST BE MADE OF 20MPa CONCRETE WITH MESH REF 245 TO THE FOLLOWING DIMENSIONS:
   L = 2200
   B = 1150
   D = 150
   OR AS SUPPLIED BY THE APPROVED SUPPLIER.
6. TO PREVENT WATER CONTAMINATION IN HIGH WATER TABLE CONDITIONS, ALL PITS MUST BE SEALED WATERTIGHT. PITS ARE TO BE COMPLETELY SEALED WITH A 500 MICRON SLEEVE AND GRID.
7. TO PREVENT SEEPAGE OF WATER, A SPECIALLY DESIGNED RUBBER SEAL OR OTHER APPROVED ALTERNATIVE MUST BE PLACED BETWEEN BASE AND COVER SLAB. ALL JOINT TO BE SEALED WITH EPOXY SEALANT OR ANY ALTERNATIVE APPROVED BY THE EMPLOYER'S AGENT.
8. ALL STEEL MEMBERS MUST BE HOT-DIP GALVANIZED.
9. PANELS ARE TO BE REINFORCED WITH 4mm DEFORMED WIRE (689 MPa YIELD STRENGTH). REINFORCEMENT MUST BE DESIGNED TO PROVIDE SUFFICIENT STRENGTH DURING HANDLING AND ALL POSSIBLE SERVICEABLE STRESSES, AS WELL AS LOADS OR IMPACT LOADS.
10. DOOR LOCKING DEVISE MUST BE OF A SUITABLE TYPE THAT LOCKS BOTH IN AND OUTSIDE. IT MUST BE EASY AND SAFE TO USE BY ADULTS AND CHILDREN.
11. SUBSTRUCTURE PIT VOLUME MUST BE A MINIMUM OF 3m³.
12. SUBSTRUCTURE PANELS MUST HAVE LATERAL SUPPORT MEMBERS.

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DESIGNED BY:	S. KHUZWAYO	DATE.....	
	SIGNATURE.....		
DRAWN BY:	R.MUDAU	DATE.....	
	SIGNATURE.....		
CHECKED BY:	M.SAMBO	DATE.....	
	SIGNATURE.....		
APPROVED BY:	P.MOGOLOLA	DATE.....	
		ECSA REG. No.....	

Johannesburg Water

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Joburg

STANDARD DETAIL

PROVISION OF BASIC SANITATION SERVICES
POUR-FLUSH TOILET - STANDARD DRAWING

AMENDMENTS

SCALE	REV:	DESCRIPTION	DATE:
N.T.S	A	ISSUED FOR INFORMATION	JUNE 2023

DRAWING No. JW100-DET19-01-S

PROJECT No.	DISCIPLINARY	REV.
S1405	SEWER	A

ORIGINAL PAGE SIZE	SHEET		OF	
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FILE No.

4800

3457

1247

96

97

2400

ANOTHER JOHANNESBURG WATER SERVICE DELIVERY PROJECT

HELPDESK (011)375-5555

Joburg

A world class African City

Johannesburg Water

PROJECT DETAILS:

CONTRACT NO.: JW.....

DESCRIPTION:- .....

FONT : 70mm

FONT : 60mm
SPACING : 60mm

780

CONSULTANT:

JOHANNESBURG WATER

DESIGN SECTION

TEL: 011 688 1400

FONT : 70mm

FONT : 50mm
SPACING : 50mm

540

CONTRACTOR:

.....

TEL.....

FONT : 70mm

FONT : 50mm
SPACING : 50mm

540

CLIENT

JOHANNESBURG WATER-

INVESTMENT DELIVERY

TEL: 011 688 1400

FONT : 70mm

FONT : 50mm
SPACING : 50mm

540

CONSULTING ENGINEERS
CAPEX DESIGN SECTION
SWISS HOUSE
7TH FLOOR

DESIGNED	B.M.KHUMALO	MAY 2017	
DRAWN	B.M.KHUMALO	MAY 2017	
CHECKED	J.GUMBO	DATE 19/7/17	
	SIGNATURE		
	ECSA REG. No.	20137044	
APPROVED BY:	T.MPANDAGUTA	DATE	
	SIGNATURE		
	ECSA REG. No.	20170150	

Johannesburg Water

17 HARRISON STREET
MARSHALLTOWN
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Joburg

STANDARD DETAIL

NAMEBOARD

AMENDMENTS

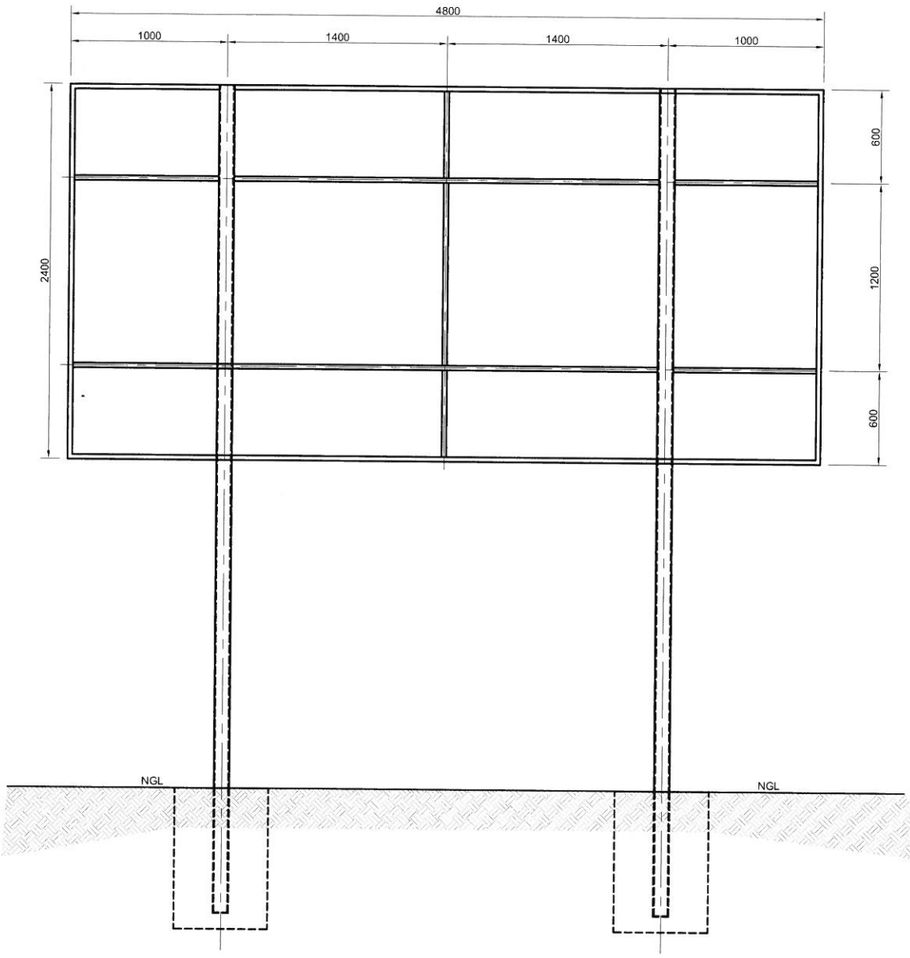
SCALE	REV:	DESCRIPTION	APPROVED	DATE:

DRAWING No.JW100-DET04-S01

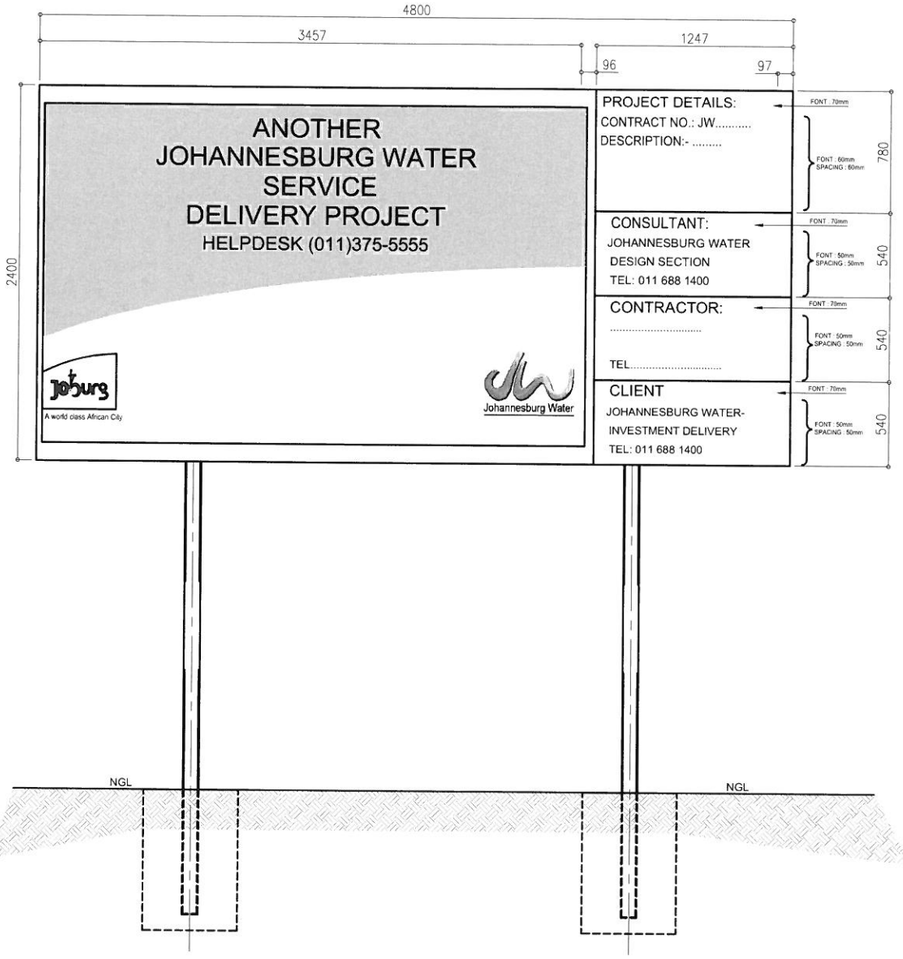
PROJECT No. | REV.

A3 ORIGINAL PAGE SIZE | SHEET | OF 04

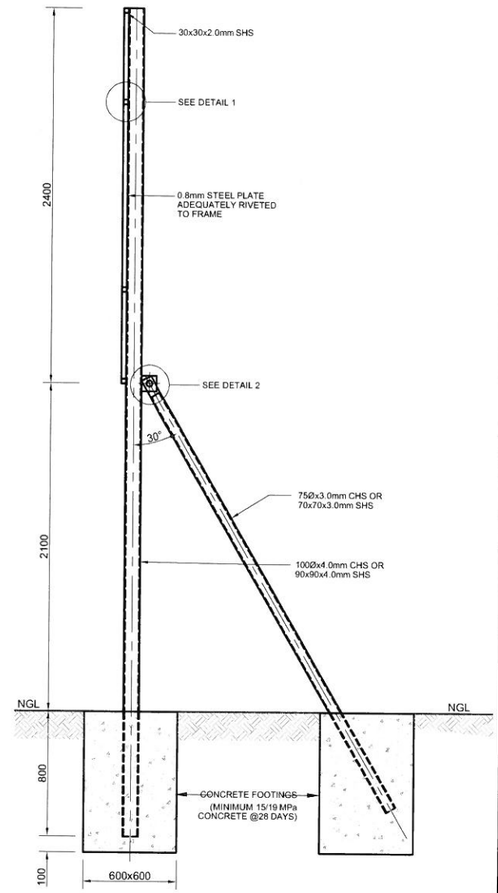
FILE No.



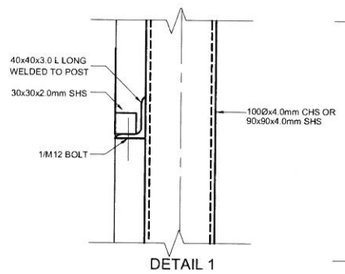
BACK ELEVATION



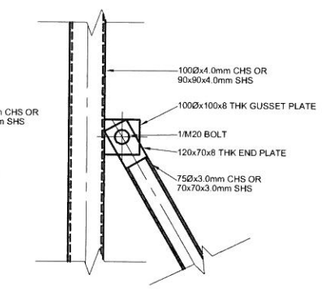
FRONT ELEVATION



TYPICAL SECTION



DETAIL 1



DETAIL 2

NOTE:
ALL WELDS TO BE 6mm FILLET
WELD ALL AROUND UNLESS
OTHERWISE SPECIFIED

CONSULTING ENGINEERS
CAPEX DESIGN SECTION
SWISS HOUSE
7TH FLOOR

DESIGNED	B.M.KHUMALO	MAY 2017	
DRAWN	B.M.KHUMALO	MAY 2017	
CHECKED	J.GUMBO	DATE	19/7/17
	SIGNATURE		
	ECSA REG. No.	20137004	
APPROVED BY:	T.MPANDAGUTA	DATE	
	SIGNATURE		
	ECSA REG. No.	20170150	

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STANDARD DETAIL
NAMEBOARD HOLDER

AMENDMENTS

SCALE	REV:	DESCRIPTION	APPROVED	DATE:

DRAWING No.JW100-DET01.1-W01

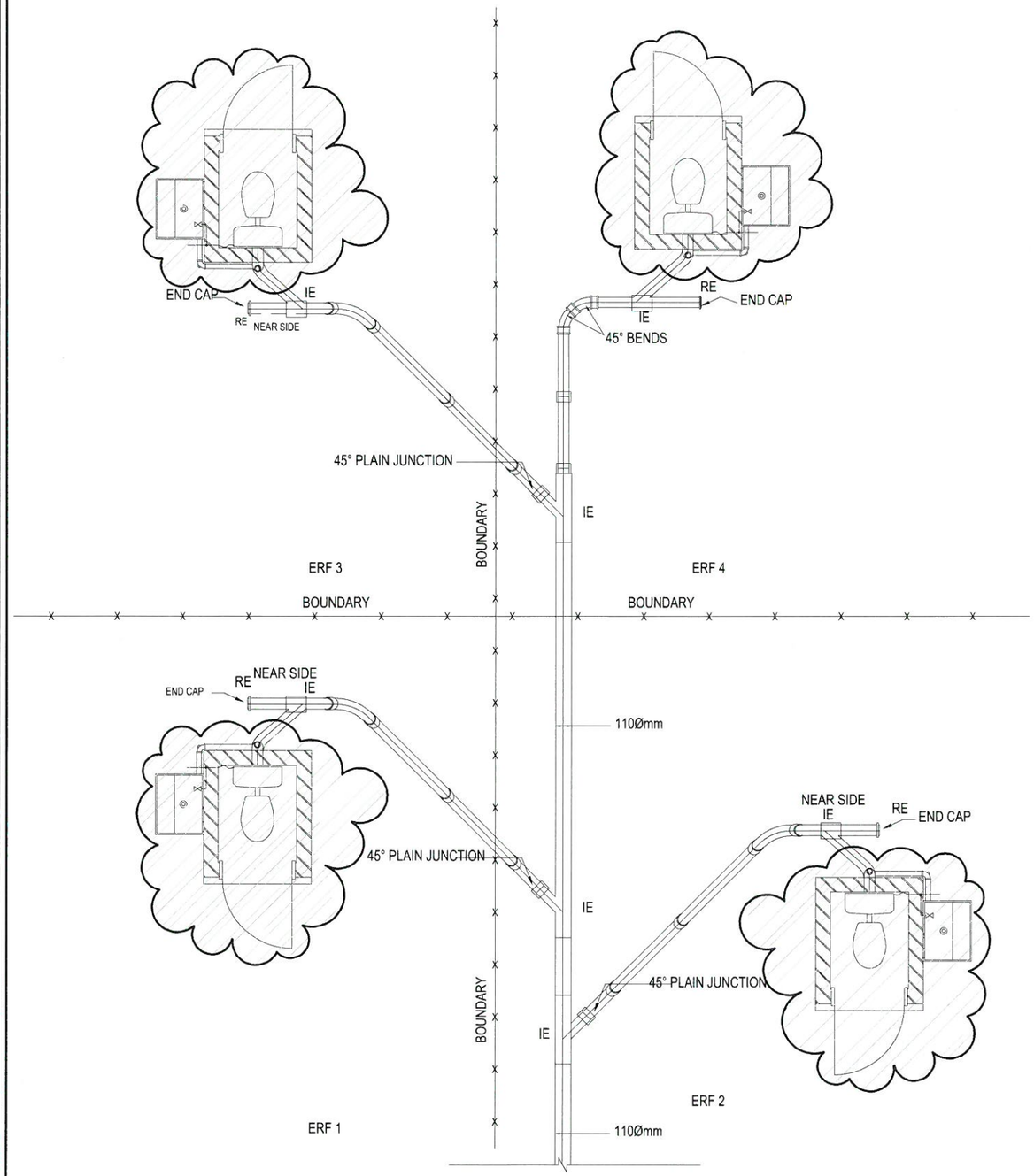
PROJECT No. | REV.

A3 ORIGINAL PAGE SIZE | SHEET 01 OF

FILE No.

NOTES:

- COMPACTION TO BE IN 150MM LAYERS TO THE SPECIFIED COMPACTION EFFORT.
- AREA SHADED NOT PART OF THE CONSTRUCTION.
- LENGTH OF HOUSE CONNECTION IS MEASURABLE .
- SETTING OUT TO BE APPROVED BY ENGINEER.
- TESTING AS SPECIFIED BY ENGINEER.
- ALL MATERIAL AS PER SABS 1200DB AND 1200 CB.



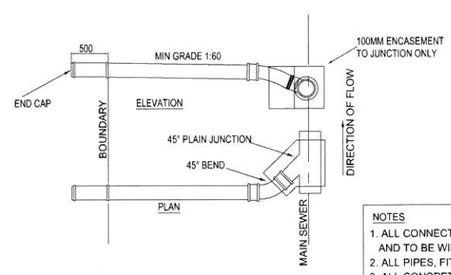
ROAD

ERF DROP CONNECTION

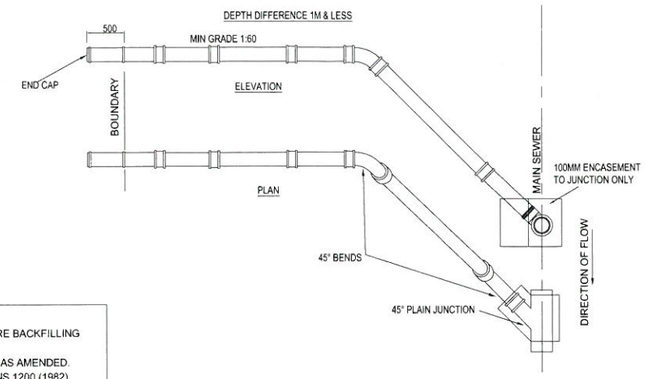
BOTH SIDES

TYPICAL CONNECTIONS

ON GRADE CONNECTION



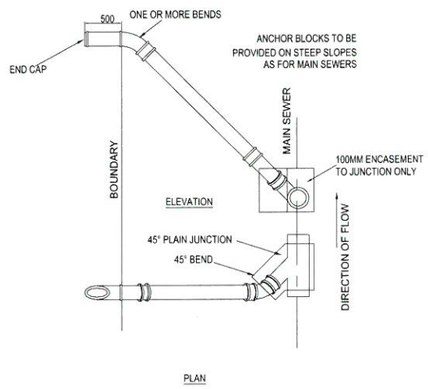
DEPTH DIFFERENCE 1M & LESS



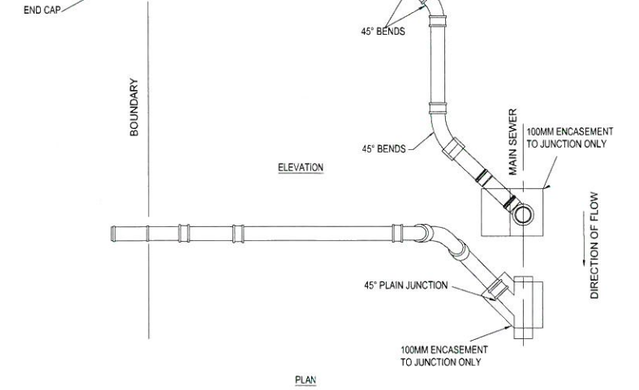
NOTES

1. ALL CONNECTIONS TO BE CAPPED BEFORE BACKFILLING AND TO BE WIRE MARKED.
2. ALL PIPES, FITTINGS TO SANS 559 (1993), AS AMENDED.
3. ALL CONCRETE TO BE 15MPA AS PER SANS 1200 (1982).
4. THE MINIMUM GRADE OF THE SEWER CONNECTION IS TO BE 1 IN 60.
5. IN ALL CASES THE JUNCTION INTO THE MAIN SEWER IS TO BE ENCASED.
6. INVERT OF CONNECTION TO CONNECT TO SOFFIT OF SEWER

SLOPING DROP CONNECTION



VERTICAL DROP CONNECTION



CONSULTING ENGINEERS CAPEX DESIGN SECTION SWISS HOUSE 7TH FLOOR	DESIGNED	B.M.KHUMALO	JULY 2017
	DRAWN	B.M.KHUMALO	JULY 2017
	CHECKED	S.CHAUKE	DATE 19/7/17
		SIGNATURE	
		ECSA REG. No.	20137001147
	APPROVED BY:	T.MPANDAGUTA	DATE
		SIGNATURE	
		ECSA REG. No.	20170150

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STANDARD DETAIL
SEWER ERF CONNECTIONS

AMENDMENTS

SCALE	REV:	DESCRIPTION	APPROVED	DATE:

DRAWING No.JW100-DET2-S01

PROJECT No.

REV.

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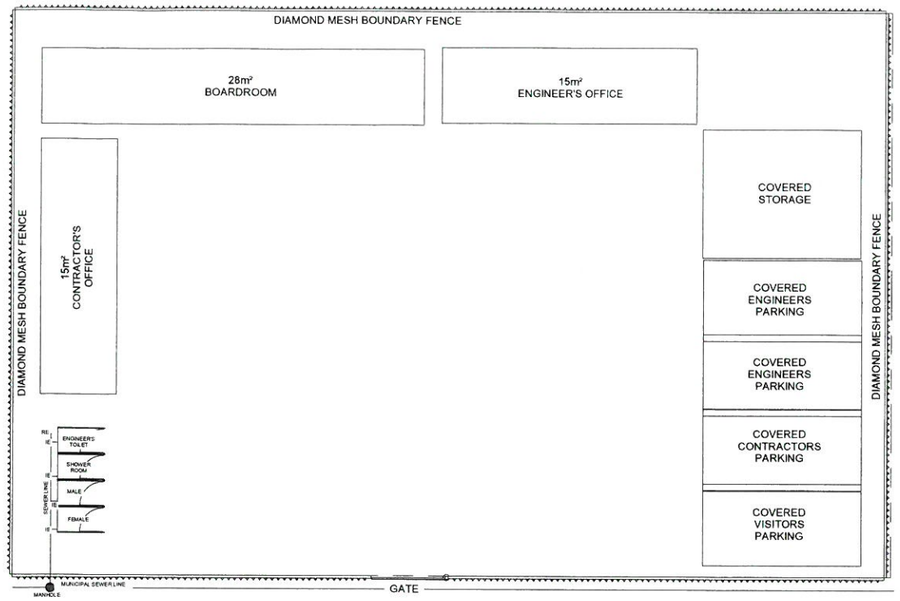
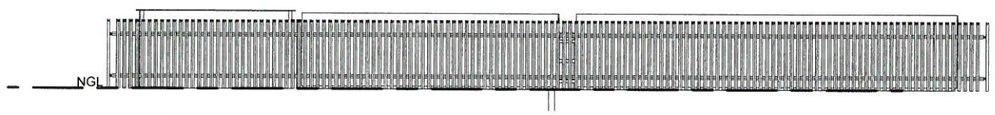
FILE No.

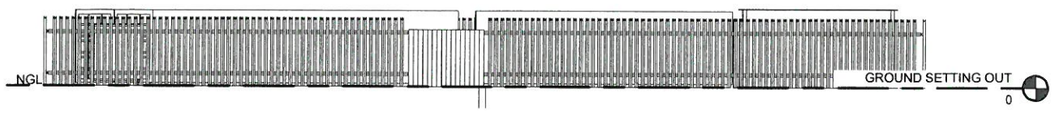


1 GROUND SETTING OUT
1 : 100

3 East Elevation
1 : 100

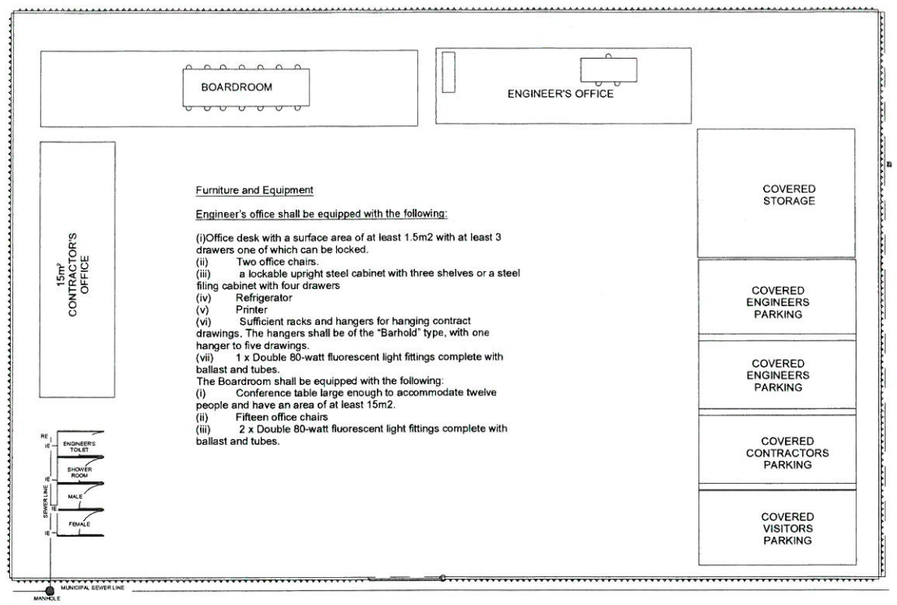


4 North Elevation
1 : 100



5 South Elevation
1 : 100

6 West Elevation
1 : 100



Furniture and Equipment

Engineer's office shall be equipped with the following:

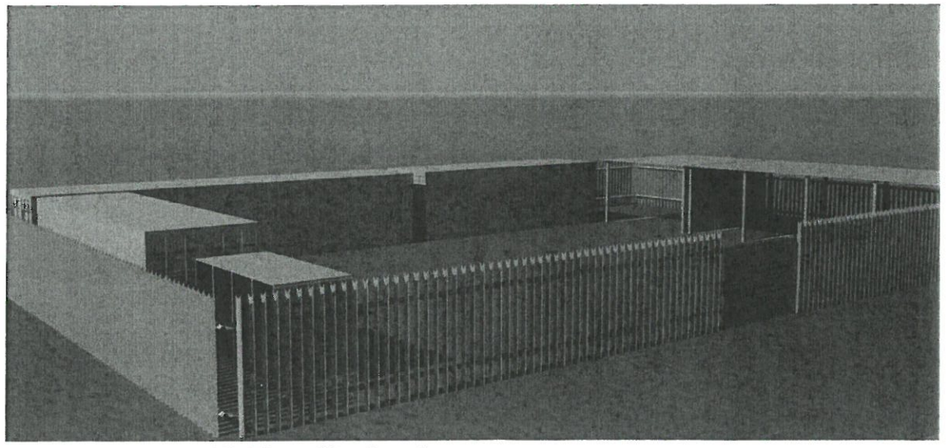
(i)Office desk with a surface area of at least 1.5m2 with at least 3 drawers one of which can be locked.
(ii) Two office chairs.
(iii) a lockable upright steel cabinet with three shelves or a steel filing cabinet with four drawers
(iv) Refrigerator
(v) Printer
(vi) Sufficient racks and hangers for hanging contract drawings. The hangers shall be of the "Barhold" type, with one hanger to five drawings.
(vii) 1 x Double 80-watt fluorescent light fittings complete with ballast and tubes.

The Boardroom shall be equipped with the following:
(i) Conference table large enough to accommodate twelve people and have an area of at least 15m2.
(ii) Fifteen office chairs
(iii) 2 x Double 80-watt fluorescent light fittings complete with ballast and tubes.

7 PROPOSED LAYOUT
1 : 100

SCHEDULE OF AREAS

Dimensions	Boardroom	Engineer's Office
Minimum floor area	28m²	15m²
Minimum window area	4.0m²	3.0m²
Minimum window area opening	2.4m²	1.5m²
Minimum clear height	2.5m	2.5m



2 3D View Site Render
1 : 1

GENERAL NOTES

CONSULTING ENGINEERS
CAPEX DESIGN SECTION
SWISS HOUSE
7TH FLOOR

DESIGNED BY:	T. Mpandaguta	Date:
DRAWN BY:	K. Kolberg	Date:
CHECKED BY:	T. Mpandaguta	Date: 19/7/17
	Signature:	ECSA REG. No: 2013/00414
APPROVED BY:	F. Chakana	Date:
	Signature:	ECSA REG. No: 20170150

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STANDARD DETAIL FOR
SITE CAMP

SCALE: AS SHOWN

REVISON	DESCRIPTION	DATE:

AMENEDMENTS

DRAWING No.JW 100-DET01-SC01

PROJECT No. # | DISCIPLINARY # | REVISION #

SHEET # OF #

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