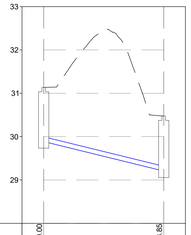
NOTES:

1. LEVELS ARE BASED ON SURVEY PROVIDED. CONTRACTOR TO VERIFY ALL LEVELS PRIOR TO CONSTRUCTION.
2. ALL HEAVY DUTY MANHOLE COVERS/GRID INLETS TO BE POLYMER CONCRETE (SABS APPROVED)
3. HEAVY DUTY MANHOLE COVERS TO BE PLACED IN DRIVEWAY/PARKING AREAS
4. SEWER CONNECTION MANHOLE TO BE IDENTIFIED PRIOR TO ANY CONSTRUCTION OF THE SEWER LINE. ENGINEER TO BE INFORMED OF ACTUAL POSITION.
5. CONTRACTOR TO IDENTIFY SERVICES PRIOR TO EXCAVATION.
6. PIPE TO BE AT LEAST 1m BELOW GROUND. ENGINEER TO USE DISCRETION ON SITE.

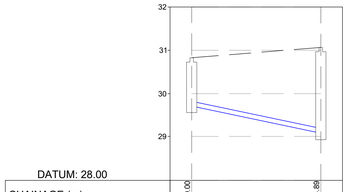
ALL DIMENSIONS AND LEVELS TO BE VERIFIED ON SITE PRIOR TO COMMENCEMENT OF ANY WORKS. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF THE ENGINEER.



DATUM: 28.00

CHAINAGE (m)	0+000.00	0+013.85
EXISTING GROUND LEVEL (m)	31.15	30.43
PIPE INVERT LEVEL (m)	29.885	29.205
DEPTH TO PIPE INVERT (m)	1.27	1.23
PIPE SLOPE (%)	4.91%	
PIPE LENGTH (m)	13.85	
PIPE SIZE (mm)	110mmØ uPVC CL.34	
REFERENCE	MH-06	MH-07

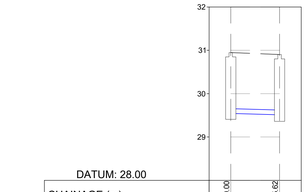
5 LONGITUDINAL SECTION 5
1:50 V 1:250 H



DATUM: 28.00

CHAINAGE (m)	0+000.00	0+014.89
EXISTING GROUND LEVEL (m)	30.83	30.85
PIPE INVERT LEVEL (m)	29.713	29.088
DEPTH TO PIPE INVERT (m)	1.12	1.46
PIPE SLOPE (%)	4.20%	
PIPE LENGTH (m)	14.89	
PIPE SIZE (mm)	110mmØ uPVC CL.34	
REFERENCE	MH-19	MH-12

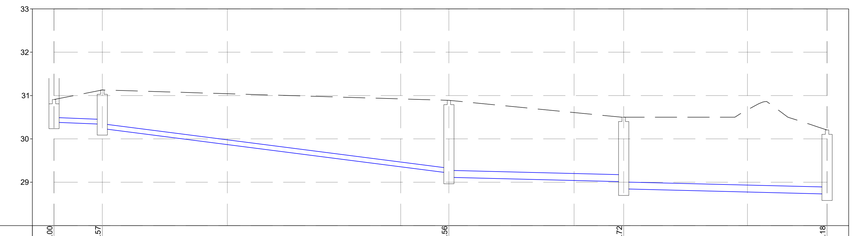
6 LONGITUDINAL SECTION 6
1:50 V 1:250 H



DATUM: 28.00

CHAINAGE (m)	0+000.00	0+005.62
EXISTING GROUND LEVEL (m)	30.95	30.90
PIPE INVERT LEVEL (m)	29.557	29.510
DEPTH TO PIPE INVERT (m)	1.39	1.39
PIPE SLOPE (%)	0.83%	
PIPE LENGTH (m)	5.62	
PIPE SIZE (mm)	110mmØ uPVC CL.34	
REFERENCE	**MH-15**	**MH-16**

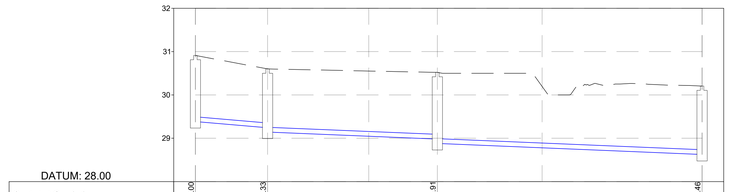
7 LONGITUDINAL SECTION 7
1:50 V 1:250 H



DATUM: 28.00

CHAINAGE (m)	0+000.00	0+005.57	0+045.56	0+065.72	0+089.18
EXISTING GROUND LEVEL (m)	30.87	31.15	30.87	30.55	30.205
PIPE INVERT LEVEL (m)	30.385	30.239	29.114	28.846	28.728
DEPTH TO PIPE INVERT (m)	0.48	0.91	1.76	1.70	
PIPE SLOPE (%)	0.83%	2.56%	0.50%	0.50%	
PIPE LENGTH (m)	5.57	39.99	20.17	23.46	
PIPE SIZE (mm)	110mmØ uPVC CL.34		160mmØ uPVC CL.34		
REFERENCE	MH-09	MH-10	MH-11	MH-12	EX-MH

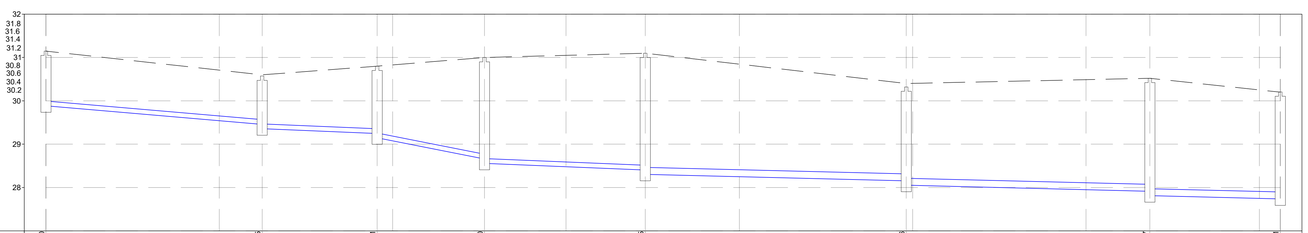
3 LONGITUDINAL SECTION 3
1:50 V 1:250 H



DATUM: 28.00

CHAINAGE (m)	0+000.00	0+008.33	0+027.91	0+058.46
EXISTING GROUND LEVEL (m)	30.85	30.60	30.90	30.205
PIPE INVERT LEVEL (m)	29.385	29.143	28.880	28.625
DEPTH TO PIPE INVERT (m)	1.47	1.46	2.02	
PIPE SLOPE (%)	1.70%	0.83%	0.83%	
PIPE LENGTH (m)	8.33	19.59	30.55	
PIPE SIZE (mm)	110mmØ uPVC CL.34			
REFERENCE	MH-16	MH-17	MH-18	EX-MH

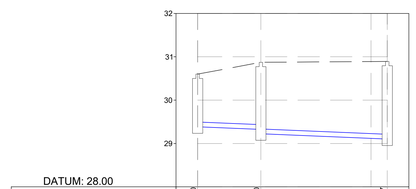
4 LONGITUDINAL SECTION 4
1:50 V 1:250 H



DATUM: 28.00

CHAINAGE (m)	0+000.00	0+024.95	0+038.21	0+050.60	0+069.15	0+099.26	0+127.37	0+142.41
EXISTING GROUND LEVEL (m)	31.150	30.600	30.800	31.000	30.780	30.43	30.53	30.205
PIPE INVERT LEVEL (m)	29.885	29.357	29.147	28.558	28.304	28.053	27.812	
DEPTH TO PIPE INVERT (m)	1.27	1.24	1.65	2.44	2.47	2.38	2.72	
PIPE SLOPE (%)	1.71%	0.83%	3.95%	0.83%	0.50%	0.50%	0.50%	
PIPE LENGTH (m)	24.95	13.26	12.39	18.55	30.11	28.11	15.05	
PIPE SIZE (mm)	110mmØ uPVC CL.34				160mmØ uPVC CL.34 Ø160			
REFERENCE	MH-01	MH-02	MH-03	MH-04	MH-05	MH-07	MH-08	EX-MH

1 LONGITUDINAL SECTION 1
1:50 V 1:250 H



DATUM: 28.00

CHAINAGE (m)	0+000.00	0+057.30	0+021.87
EXISTING GROUND LEVEL (m)	30.60	30.85	30.87
PIPE INVERT LEVEL (m)	29.385	29.224	29.103
DEPTH TO PIPE INVERT (m)	1.22	1.63	1.77
PIPE SLOPE (%)	0.83%	0.83%	
PIPE LENGTH (m)	7.30	14.57	
PIPE SIZE (mm)	110mmØ uPVC CL.34		
REFERENCE	MH-13	MH-14	MH-11

2 LONGITUDINAL SECTION 2
1:50 V 1:250 H

FOR INFORMATION

DRAWING No	TITLE DESCRIPTION	SOURCE

NOTE

"SHOULD THESE DRAWINGS AND PROJECT SPECIFICATIONS BE USED OR RELIED UPON FOR ANY OTHER PURPOSE OTHER THAN WHAT THEY WERE INTENDED FOR ON THIS SPECIFIC SITE, WITHOUT FORCE ENGINEERING CONSULTINGS' PRIOR KNOWLEDGE AND WRITTEN CONSENT, THEN THE USER SHALL INDEMNIFY THE COPYRIGHT HOLDER AGAINST ALL LIABILITIES, CLAIMS, DAMAGES, LOSSES, FINES AND/OR PENALTIES (EITHER IN CONTRACT OR DELICT) INSTITUTED BY THE USER OR ANY OTHER PARTY AS RESULT OF THEIR RE-USE OF OR RELIANCE ON THESE DRAWINGS AND PROJECT SPECIFICATIONS."

GENERAL NOTES

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ARCHITECT'S DRAWINGS.
2. ALL DIMENSIONS ARE IN mm AND ARE TO BE CHECKED ON SITE, ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF THE ENGINEER.
3. BEAM SIZES ARE GIVEN BREADTH x DEPTH.
4. CONCRETE COVER TO REINFORCING TO BE MAINTAINED BY THE USE OF EITHER NYLON SPACERS OR PRECAST CONCRETE BLOCKS WITH BINDING WIRES CAST IN.
5. REINFORCED CONCRETE :- REQUIRED CHARACTERISTIC CUBE STRENGTH AT 28 DAYS.

FOUNDATIONS	30 MPa
R.C. WALLS	30 MPa
BLINDING LAYER	15 MPa
SLABS	30 MPa

6. ALL REINFORCEMENT TO BE INSPECTED BY THE ENGINEER PRIOR TO CASTING OF CONCRETE. MINIMUM 1 DAYS NOTICE IS REQUIRED FOR INSPECTION.
7. FOUNDATIONS ARE DESIGNED FOR A MAXIMUM SAFE BEARING LOAD OF 150 kPa.
8. CONCRETE COVER TO REINFORCEMENT SHALL BE AS FOLLOWS :
   ALL ELEMENTS 50 mm
9. ALL WORK SHALL COMPLY WITH SANS 1200
10. DESIGN HAS BEEN CARRIED OUT IN ACCORDANCE WITH SANS 0100, 0160, 0162, 0163 & 1064 AS APPLICABLE.
11. THE WORKS WILL BE INSPECTED FROM TIME TO TIME BY THE CONSULTING ENGINEER TO ASCERTAIN THAT THE CONTRACTOR IS CARRYING OUT THE WORK IN GENERAL CONFORMITY WITH THE ENGINEERING DRAWINGS & DOCUMENTS. SUCH INSPECTIONS ARE NOT CARRIED OUT FOR THE BENEFIT OF THE CONTRACTOR , AND DO NOT RELIEVE HIM OF THE RESPONSIBILITY FOR THE PROPER CONSTRUCTION OF THE WORKS IN ACCORDANCE WITH THE ENGINEERING DRAWINGS , DOCUMENTS AND GOOD BUILDING PRACTICE.
12. LIVE LOADS AS PER TMH 7, PART 1 & 2 NA LOADING ONLY CONSIDERED

ALL MATERIALS & WORKMANSHIP TO BE IN ACCORDANCE WITH THE RELEVANT SABS SPECIFICATION.

ALL WORK TO BE CONTINUED IN ACCORDANCE WITH THE NATIONAL BUILDING REGULATIONS, ENVIRONMENTAL AND OCCUPATIONAL HEALTH AND SAFETY ACT, LATEST REVISION & THE CONSTRUCTION REGULATIONS.

THE MAIN CONTRACTOR IS TO ENSURE THAT A COMPETENT PERSON, APPROVED BY THE SOUTH AFRICAN QUALIFICATION AUTHORITY SUPERVISES AND APPROVES ALL ASPECTS OF THE REQUIREMENTS OF THE OCCUPATIONAL HEALTH AND SAFETY ACT, LATEST REVISION.

ALL TEMPORARY WORKS TO BE DESIGNED, DETAILED, SUPERVISED AND CERTIFIED BY A COMPETANT PERSON OR PROFESSIONAL ENGINEER AS DEFINED IN THE OHS ACT.

Rev	Description	Date	By	Approved
D	TENDER DESIGN	31/10/2024	H.P	H.PARUK
C	DETAILED DESIGN	13/09/2024	H.P	H.PARUK
B	PRELIMINARY DESIGN	02/08/2024	H.P	H.PARUK
A	CONCEPT DESIGN	22/12/2023	H.P	H.PARUK

	BY	DATE	SIGNATURE
DRAWN	H. PARUK	31/10/2024	
DESIGNED	H. PARUK	31/10/2024	
CHECKED	H. PARUK	31/10/2024	
APPROVED	H. PARUK	31/10/2024	

CONSULTANT

ARCHITECT

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PROJECT NAME

SAMORA MACHEL
POLICE STATION

SEWER LONGSECTIONS

PROJECT No.	SCALE:	SHEET SIZE:	SHEET
23023	AS SHOWN	A0	01 OF 01
DRAWING No.			REVISION
FEC-23023-SEW-LSC-001			Rev D