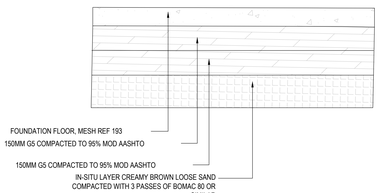
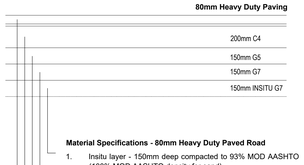


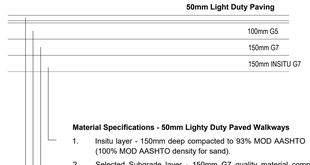
TYPICAL BUILDING LAYERORKS DETAIL

SCALE 1:10



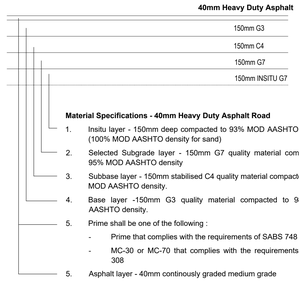
Material Specifications - 80mm Heavy Duty Paved Road

1. Insitu layer - 150mm deep compacted to 93% MOD AASHTO density, (100% MOD AASHTO density for sand).
2. Selected Subgrade layer - 150mm G7 quality material compacted to 95% MOD AASHTO density
3. Subbase layer - 150mm G5 quality material compacted to 95% MOD AASHTO density.
4. Sub-base layer - 200mm Stabilized C4 (G5 quality natural gravel, not crushed rubble) compacted to 98% MOD AASHTO density.
5. 80mm Exposed aggregate interlocking paving block: 35MPa blocks which complies with the requirements of SABS 1058, on 20mm sand bedding.



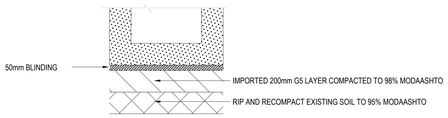
Material Specifications - 50mm Lighty Duty Paved Walkways

1. Insitu layer - 150mm deep compacted to 93% MOD AASHTO density, (100% MOD AASHTO density for sand).
2. Selected Subgrade layer - 150mm G7 quality material compacted to 95% MOD AASHTO density
3. Sub-base layer - 150mm Stabilized C4 (G5 quality natural gravel, not crushed rubble) compacted to 95% MOD AASHTO density.
4. 50mm Exposed aggregate traditional paving block: 35MPa blocks which complies with the requirements of SABS 1058, on 20mm sand bedding.



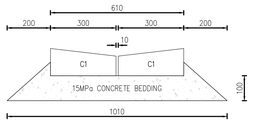
Material Specifications - 40mm Heavy Duty Asphalt Road

1. Insitu layer - 150mm deep compacted to 93% MOD AASHTO density, (100% MOD AASHTO density for sand)
2. Selected Subgrade layer - 150mm G7 quality material compacted to 95% MOD AASHTO density
3. Subbase layer - 150mm stabilised C4 quality material compacted to 98% MOD AASHTO density.
4. Base layer -150mm G3 quality material compacted to 98% MOD AASHTO density.
5. Prime shall be one of the following :
   - Prime that complies with the requirements of SABS 748 or 749
   - MC-30 or MC-70 that complies with the requirements of SABS 308
5. Asphalt layer - 40mm continously graded medium grade

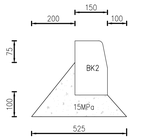


TYPICAL LAYER WORKS UNDER BASE

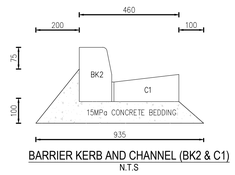
SCALE 1:20



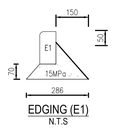
V-CHANNEL
N.T.S



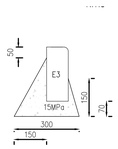
BARRIER KERB (BK2)
N.T.S



BARRIER KERB AND CHANNEL (BK2 & C1)
N.T.S



EDGING (E1)
N.T.S



EDGING (E3)
N.T.S

PROJECT SPECIFICATIONS

- All setting out of erven as per approved land surveyors data.
- Setting out of civil engineering services as per engineers drawings.
- All materials and workmanship to comply with the relevant S.A.B.S 1200 and local authority's specifications and regulations.
- Setting out of buildings as per architects
- Bedding and backfill as per S.A.B.S 1200 LB.

STORMWATER

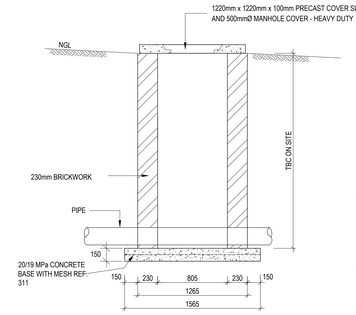
- All materials and workmanship to comply with S.A.B.S 1200 LE.
- Class 100D spigot and socket pipes under roads.
- Brick manholes to be constructed with engineering brick with type 2B modified cover and frame

KERB AND CHANNELLING

- All materials and workmanship to comply with S.A.B.S 1200 MK.

NOTES :

1. BEDDING: MINIMUM 100MM 15MPA CONCRETE (CLASS 15 / 19) MIX UNLESS OTHERWISE SPECIFIED.
2. BACKING: 15MPA MIX CONCRETE (CLASS 15 / 19) CAST CONTINUOUS.
3. JOINTS: PRECAST SECTIONS LAID WITH CLOSE JOINTS (MAXIMUM 10MM) GROUTED WITH CEMENT:SAND MORTAR AND 12MM EXPANSION JOINTS AT MAXIMUM 10M FILLED WITH FOAMED POLYSTYRENE.
4. ALL PRECAST UNITS SHALL COMPLY WITH THE PROVISIONS OF SABS 927 IN ALL RESPECTS, IRRESPECTIVE OF DIMENSIONS AND TYPE.

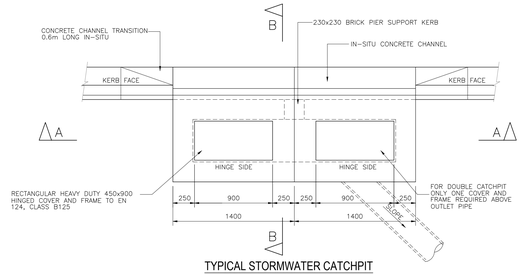


JUNCTION BOX MANHOLE DETAIL

SCALE 1 : 25

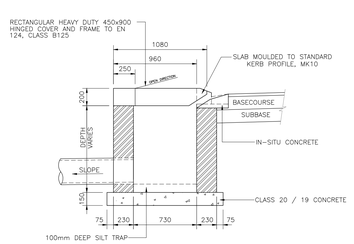
NOTES : JUNCTION BOX MANHOLES

1. CONCRETE TO PRECAST SLABS TO BE 35MPa.
2. CAST IN SITU CONCRETE TO BE CLASS 20/19 MPa
3. ALL BRICKS TO BE NON-FACING-EXTRA WITH A COMPRESSIVE STRENGTH OF 28N/mm , CORDBRICK CODE N.F.X -E28.
4. 220 x 220 x 150 NO-FINES CONCRETE BLOCKS ARE TO BE BUILT INTO WALLS ABOVE BENCHING LEVEL TO FACILITATE INGRESS OF SUBSOIL WATER WHERE REQUIRED.
5. CEMENT MORTAR SHALL CONSIST OF ONE PART CEMENT TO THREE PARTS CLEAN FINE BUILDING SAND.
6. BRICKWORK TO BE GROUTED SOLID AND ALL JOINTS KEYED.



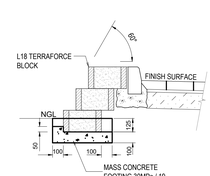
TYPICAL STORMWATER CATCHPIT DOUBLE KERB INLET PLAN

SCALE 1:20



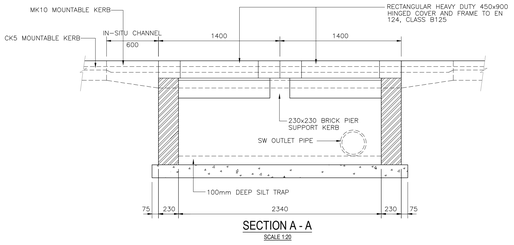
SECTION B - B

SCALE 1:20



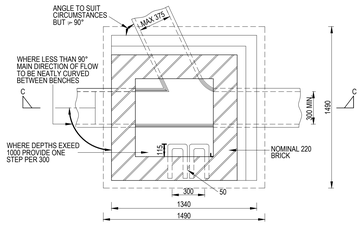
TYPICAL SECTION OF TERRAFORCE RETAINING WALL

N.T.S



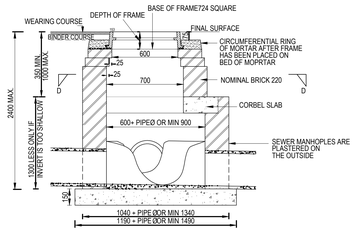
SECTION A - A

SCALE 1:20



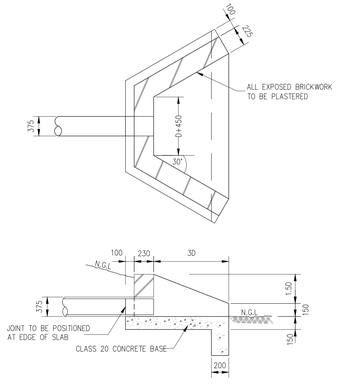
SECTIONAL D - D SHALLOW TYPE MANHOLE

SCALE 1:20



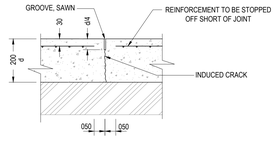
SECTIONAL ELEVATION C - C SHALLOW TYPE MANHOLE MORE THAN 1,0m

SCALE 1:20



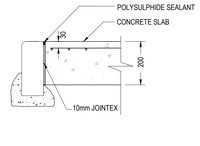
BRICK HEADWALL DETAIL

SCALE 1:20



SAW-CUT JOINT DETAIL

SCALE 1 : 10



ISOLATION JOINT DETAIL

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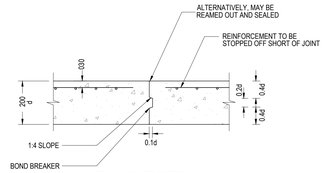

KEY JOINT DETAIL

SCALE 1 : 10

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.

REFERENCE DRAWINGS

DRAWING No	TITLE DESCRIPTION	SOURCE

Rev	Description	Date	By	Approved
D	FOR APPROVAL	26/11/2024	T.A	H.PARUK
C	DETAILED DESIGN	13/09/2024	I.B	H.PARUK
B	PRELIMINARY DESIGN	02/08/2024	I.B	H.PARUK
A	CONCEPT DESIGN	22/12/2023	I.B	H.PARUK

	BY	DATE	SIGNATURE
DRAWN	T. ABRAHAMS	26/11/2024	
DESIGNED	T. ABRAHAMS	26/11/2024	
CHECKED	H. PARUK	26/11/2024	
APPROVED	H. PARUK	26/11/2024	

CONSULTANT

ARCHITECT

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PROJECT NAME

MAKHAZA POLICE STATION

TYPICAL DETAILS

PROJECT No.	SCALE:	SHEET SIZE:	SHEET
23022	AS SHOWN	A0	01 OF 02
DRAWING No.			REVISION
FEC-23022-GEN-TYP-001			Rev D

FOR INFORMATION