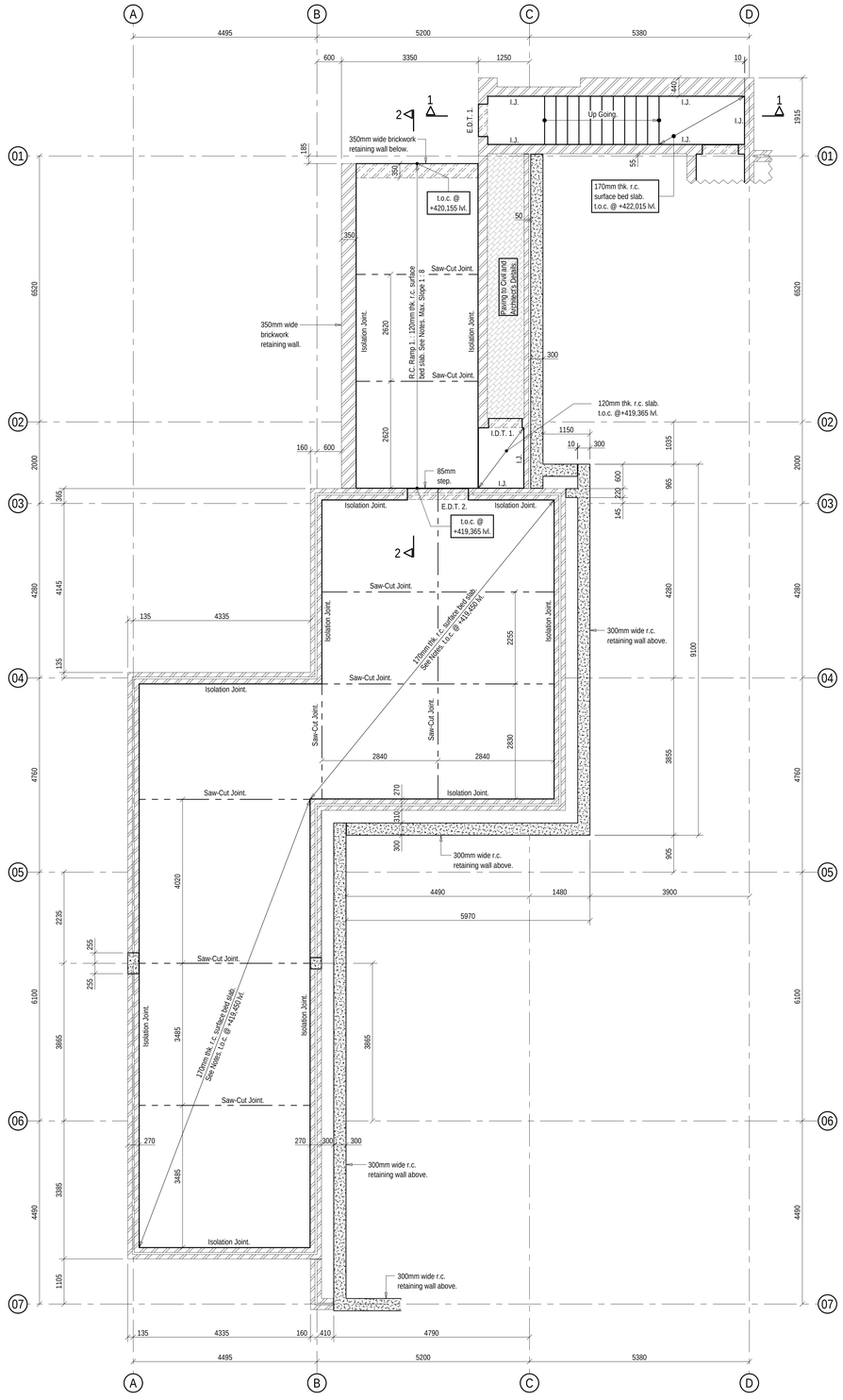
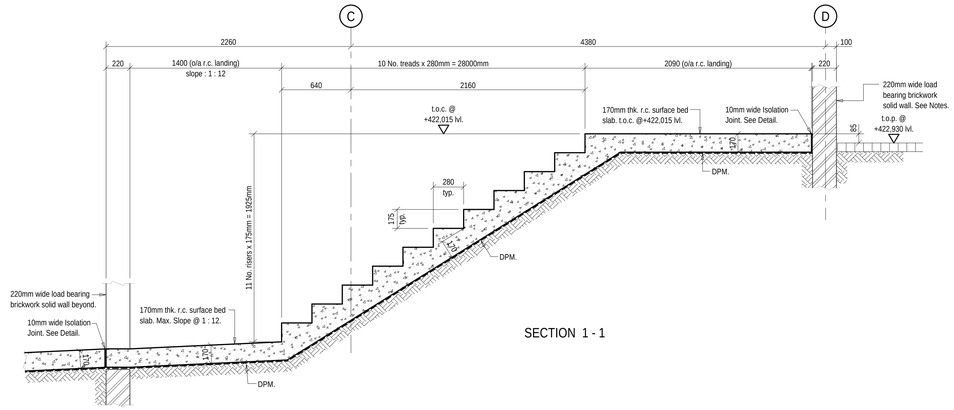
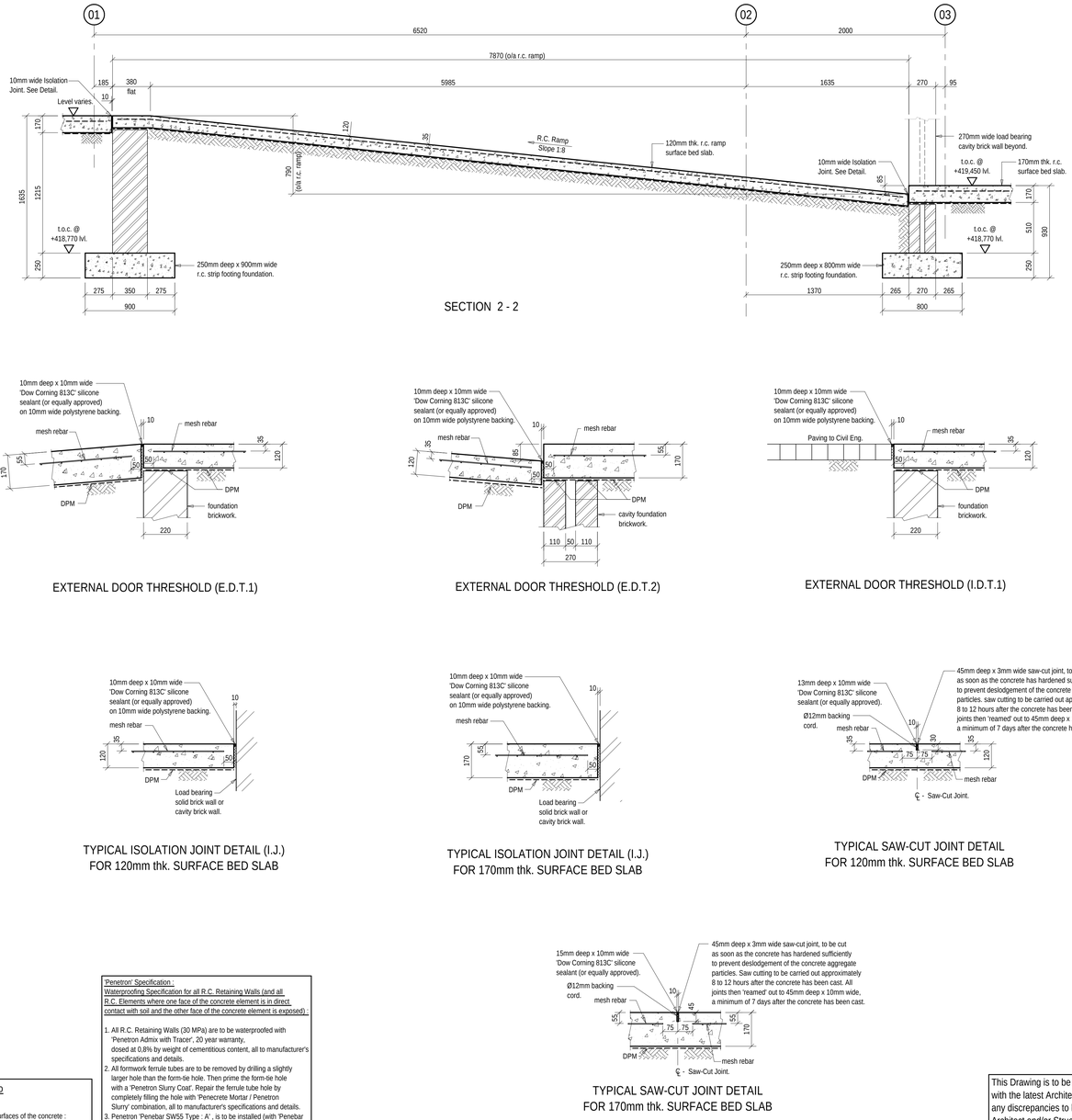


SERVICE AND UNITS BUILDING :
LOWER GROUND LEVEL : SURFACE BED SLAB LAYOUT



SECTION 1 - 1



SECTION 2 - 2

EXTERNAL DOOR THRESHOLD (E.D.T.1)

EXTERNAL DOOR THRESHOLD (E.D.T.2)

EXTERNAL DOOR THRESHOLD (I.D.T.1)

TYPICAL ISOLATION JOINT DETAIL (I.J.)
FOR 120mm thk. SURFACE BED SLAB

TYPICAL ISOLATION JOINT DETAIL (I.J.)
FOR 170mm thk. SURFACE BED SLAB

TYPICAL SAW-CUT JOINT DETAIL
FOR 120mm thk. SURFACE BED SLAB

TYPICAL SAW-CUT JOINT DETAIL
FOR 170mm thk. SURFACE BED SLAB

GENERAL NOTES :

1. All levels and dimensions to be checked on site.
2. This drawing is to be read in conjunction with the Architectural drawings.
3. All concrete work is to comply with SABS 1200G.
4. Concrete Class :-
   - a) Strip Footings & Bases = 25 MPa
   - b) Columns & Staircases = 30 MPa
   - c) Slabs & Beams = 25 MPa
   - d) Retaining Walls = 30 MPa
   - e) Surface Bed Slabs = 25 MPa
   - f) Blinding = 10 MPa
5. Cover to reinforcement :-
   - a) Strip Footing & Bases = 50mm
   - b) Columns (Below Ground) = 50mm
   - c) Columns (Above Ground) = 40mm
   - d) Slabs, Beams & Staircases = 30mm
   - e) Slabs (On the Ground) - Bottom Mat = 50mm
   - f) Slabs (On the Ground) - Top Mat = 30mm
   - g) Retaining Walls (Earth Face) = 50mm
   - h) Retaining Walls (Front Face) = 40mm
6. All foundation excavations are to be inspected by the Engineer prior to casting of concrete.
7. All reinforcing fixing is to be inspected by the Structural Engineer prior to casting of concrete.
8. Six concrete cubes to be taken per pour. Three cubes to be tested at seven days, the remainder at twenty eight days. The results are to be forwarded to the Engineer for review and approval.
9. The Contractor is to construct a blinding layer if soil conditions result in reinforcement cover not being maintained.
10. All structural concrete is to be cured for a minimum of five days.
11. All brickwork shown 'hatched' are load bearing. All load bearing brickwork is to be 14MPa NFX bricks in Class 2 mortar. The top of all load bearing brickwork (at all concrete interfaces) is to receive 2 layers of 3 ply malthoid placed on a smooth rendered surface.
12. All single skin brickwork is to be stopped 2 courses below the soffit of the slab and completed after the props have been removed.
13. All concrete plaster and brickwork plaster interfaces to receive V-joints.
14. The Engineer requires 24 hours notice for all inspections.

Brickwork Notes :

1. All solid brick walls are 220mm wide or 110mm wide with brickforce built in every course below surface bed level, above all window and door openings, and every 3rd course above surface bed level with 150mm wide x 2,8mm thk. NHBRC Galvanized Brickforce for 220mm wide walls and 75mm wide x 2,8mm thk. NHBRC Galvanized Brickforce for 110mm wide walls.
2. All cavity brick walls are 270mm wide with 110m wide inner & outer skin brickwork with 50mm wide central cavity with brickforce built in every course below surface bed level, above all window and door openings, and every 3rd course above surface bed level with 230mm wide x 2,8mm thk. NHBRC Galvanized Brickforce.
3. All brickwork to be min. 14MPa NFX bricks in Class 2 mortar.
4. All 110mm wide walls are to be constructed directly onto the 170mm thk. surface bed slabs.
5. All load bearing brickwork and concrete interfaces to receive a 'Slip Joint' of which consists of the following : 2 layers of 3 ply malthoid on a smooth rendered surface on top of the load bearing brickwork.

Note :
No thickening required in surface bed slab for 170mm thk. slab. All internal 110mm wide walls are to be built directly onto the 170mm thick surface bed slab.

Brickwork Strapping Note:
All new brickwork to be tied to new r.c. columns and r.c. walls with 30mm wide x 1,2mm thk. x 800mm long galvanised steel straps. 100mm of steel strap shot fired to new r.c. column and r.c. wall and 700mm of steel strap built into brick wall every 3rd course. Each brick skin (at every 3rd course) to be tied to r.c. columns and r.c. walls.

25mm x 25mm chamfers to all exposed reinforced concrete elements.

170mm thk. Surface Bed Slab :
170mm thk. x 25 MPa powerfloated (wood float finish) concrete surface bed slab reinforced with Mesh Ref. 245 (min. 300mm laps) placed at 55mm cover from the top of the slab on 250µm SABS approved DPM on min. 150mm thk. G5 quality soil material compacted to 98% Mod AASHTO on engineered layerworks as per Civil Engineers layouts. Top mesh will be sitting on R10 stools (75mm high) @ 800mm centres both ways and each leg of the stool will be supported on (2 No. off) 25mm cover blocks. Soil to be poisoned in accordance with SABS 1165. Certificate must be provided.

120mm thk. Surface Bed Slab :
120mm thk. x 25 MPa powerfloated (wood float finish) concrete surface bed slab reinforced with Mesh Ref. 193 (min. 300mm laps) placed at 35mm cover from the top of the slab on 250µm SABS approved DPM on min. 150mm thk. G5 quality soil material compacted to 98% Mod AASHTO on engineered layerworks as per Civil Engineers layouts. Soil to be poisoned in accordance with SABS 1165. Certificate must be provided.

A. Classification of Concrete Finish to Top Surfaces of R.C. Slabs :
The following 'finish' is to be applied to all the top surfaces of the concrete :
CF1 - The following 'finish' is to be applied to all suspended r.c. slabs and r.c. surface bed slabs : The top surfaces of the slabs are to be powerfloated (with a woodfloat finish) to Degree of Accuracy II as per SABS 1200 G specification.

'Penetron' Specification :
Waterproofing Specification for all R.C. Retaining Walls (and all R.C. Elements where one face of the concrete element is in direct contact with soil and the other face of the concrete element is exposed) :

1. All R.C. Retaining Walls (30 MPa) are to be waterproofed with 'Penetron Admix with Tracer', 20 year warranty, dosed at 0,8% by weight of cementitious content, all to manufacturer's specifications and details.
2. All formwork ferrule tubes are to be removed by drilling a slightly larger hole than the form-tie hole. Then prime the form-tie hole with a 'Penetron Slurry Coat'. Repair the ferrule tube hole by completely filling the hole with 'Penecrete Mortar / Penetron Slurry' combination, all to manufacturer's specifications and details.
3. Penetron 'Penebar SW55 Type : A' , is to be installed (with 'Penebar Primer'), along all R.C. Wall and R.C. Footing interfaces, along all construction joints (vertically and horizontally) and is to be installed by an approved applicator and all installed in accordance with the manufacturer's specifications and details.

REV.	DESCRIPTION	BY	DATE
T1	FOR TENDER	S.N.	11/04/2025
P2	DETAILED ADDED	S.N.	25/10/2024
P1	PRELIMINARY FOR PRICING	S.N.	18/09/2024

Professional Person : M. NAIR. PrTechEng. ECSA Registration No.: 20067/2211

CLIENT :
IMPLEMENTING AGENTS :

PROJECT MANAGERS :
LDM
Solutions for the Built Environment

ARCHITECTS :
SAKHISIZWE ARCHITECTS

PROJECT :
19/1/9/1/59 TB (22)
PROPOSED MSINSINI
POLICE STATION IN KZN

DETAILS :
SERVICE AND UNITS BUILDING :
LOWER GROUND LEVEL
SURFACE BED LAYOUT & DETAILS

DISCIPLINE : STRUCTURAL ENGINEERING

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DESIGNED :	S.N.	COPYRIGHT RESERVED	SCALES : 1:50 1:20 1:10
DRAWN :	S.N.		
APPROVED :	M.N.	PL	DATE : 18/09/2024

DRAWING No. : 589 / 111 REV. T1

This Drawing is to be read in conjuction with the latest Architectural Drawings and any discrepancies to be reported to the Architect and/or Structural Engineer.

FOR TENDER