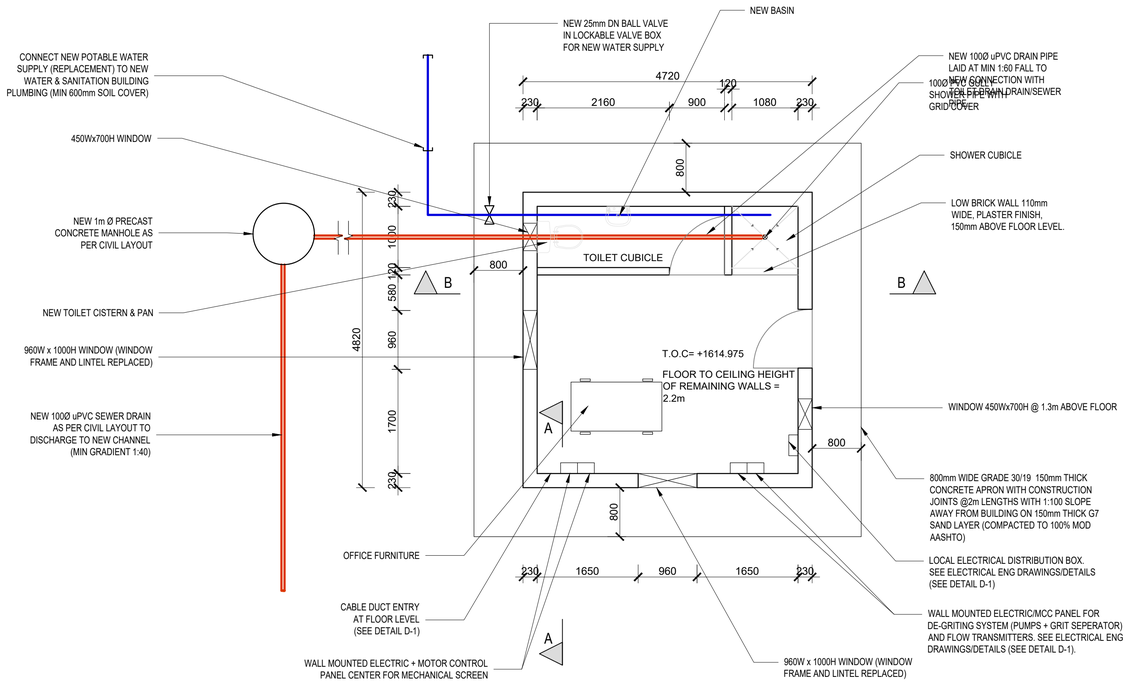
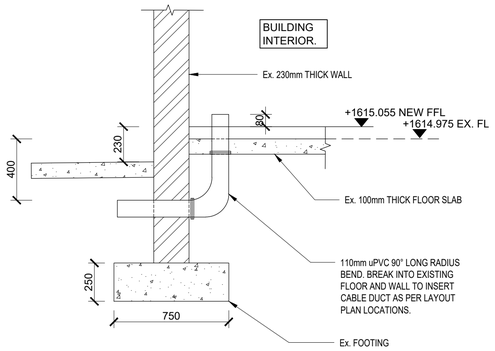


INLET WORKS BUILDING PLAN LAYOUT
SCALE 1:50



SECTION A -A (DETAIL D-1)
TYPICAL DETAIL OF CABLE DUCT ENTRY
SCALE 1:20

GENERAL NOTES AND SPECIFICATIONS:

MASONRY
1. APPLICABLE CODES & STANDARDS:
2. ALL BRICK WALLS TO BE OF SOLID HARD BURNED CLAY BRICKS WITH A COMPRESSIVE STRENGTH OF NOT LESS THAN 14MPa LAID ON A CLASS II MORTAR (MIX 50kg PORTLAND CEMENT WITH 200 LITER BUILDING SAND, 1:4 MIX DESIGN) WITH A 28 DAY COMPRESSIVE STRENGTH OF 7MPa AS SPECIFIED IN SANS 10164: BRICKWORK.
3. SAND GRADING ACCORDING TO SANS 1090.
4. BRICKFORCE TO BE PLACED IN EACH LAYERS OF BRICKWORK ON FOOTINGS UP TO FIRST LAYER ABOVE SURFACE BED LEVEL & FOR FIRST 5 LAYERS FOR BRICKWORK STARTING ON FLOOR SLABS - THEREAFTER TO BE PLACED IN EVERY 4th LAYER IN ALL BRICK WALLS. PLACE BRICKFORCE IN EACH LAYER OVER ALL WINDOW AND DOOR OPENINGS UP TO WALL PLATE LEVEL. BRICKFORCE TO BE PROVIDED IN TOP FIVE LAYERS OF BRICKWORK BELOW SLAB SOFFITS FOR ALL LOAD BEARING BRICKWALLS. ALSO REFER TO TYPICAL DETAILS DRAWINGS.
5. SETTING-OUT OF BRICKWORK TO ARCHITECTS LAYOUTS.
6. BRICKWORK ON SUSPENDED CONCRETE SLABS TO BE BUILT ONLY WHEN:
6.1 CONCRETE SLAB HAS REACHED ITS REQUIRED DESIGN COMPRESSIVE STRENGTH.
6.2 ALL SUPPORTWORK AND PROPS HAVE BEEN REMOVED.
7. FOR WALLS BUILT ON SUSPENDED CONCRETE SLABS, NO BRICKWORK TO BE ABOVE INTERNAL DOOR OPENINGS.
8. ALL PRECAST LINTOLS TO BE PROVIDED STRICTLY IN ACCORDANCE WITH THE MANUFACTURE'S SPECIFICATIONS. PRECAST LINTOLS TO BE PROPPED DURING BRICKWORK OVER, AND TO REMAIN PROPPED FOR A MINIMUM PERIOD OF 7 DAYS.
9. PLASTER WORK TO WALLS AT ALL DOOR & WINDOW/VENTILATION OPENINGS TO BE REINFORCED WITH CHICKEN MESH AS SHOWN BELOW (NOTE: DETAIL NOT TO BE PROVIDED AT ACROSS ARTICULATION JOINT (AJ) POSITIONS):
10. 1ST BED JOINT FOR BRICKWALLS ON FOUNDATION MAY VARY BETWEEN 10mm (MINIMUM) TO 40mm (MAXIMUM), WHERE THICKER BED JOINTS WOULD RESULT, BRICKS SHALL BE CUT TO SUIT TO REMAIN WITHIN THE ABOVE LIMITS.
11. ALL BRICKWORK SHOWN ARE LOAD BEARING UNLESS NOTED OTHERWISE.
12. 2 LAYERS OF 3 PLY MALTHOID WITH 0.08mm GALVANISED SHEET BETWEEN TO BE PLACED ON TOP OF ALL LOAD BEARING BRICKWALLS (UNLESS NOTED OTHERWISE ON DRAWING). TOP OF BRICKWORK TO BE LEVEL AND SMOOTH.
13. PLACE 20mm SOFTBOARD ON TOP OF ALL NON-LOAD BEARING WALLS.

CONCRETE
MATERIAL SPECIFICATIONS
2. CONCRETE QUALITY:
ALL CONCRETE MIXES FOR STRUCTURAL WORK SHALL BE DESIGNED BY A COMPETENT CONCRETE TECHNOLOGIST IN AN APPROVED LABORATORY. PROOF OF THESE MIXES WILL BE SUBMITTED TO THE ENGINEER FOR HIS RECORDS.
3. EXECUTION OF WORKS
3.1. CONCRETE COVER.

TYPE / LOCATION	CONCRETE COVER *	
STRIP FOUNDATIONS	50	mm
PILES AND PILE CAPS	75	mm
ALL CONCRETE IN CONTACT WITH SOIL	75	mm
EXTERNAL COLUMNS AND BEAMS	40	mm to stirrups
INTERNAL COLUMNS AND BEAMS	30	mm to stirrups
EXTERNAL SLAB EDGES	50	mm
ALL SLAB SOFFITS	30	mm
ALL SLABS TO ENCLOSED AREAS	30	mm
SURFACE BEDS & INDUSTRIAL FLOORS	*As per layout and or detail drawings*	

(* *EXCEPT WHERE OTHERWISE NOTED ON BENDING SCHEDULES & LAYOUTS*)

3.2. THE NECESSARY STOOLS, CLIPS AND OTHER MEANS OF SUPPORTING REINFORCEMENT ARE PROVIDED IN ORDER TO ACHIEVE THE SPECIFIED COVER. IT REMAINS HOWEVER THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT THE SPECIFIED COVER IS ACHIEVED.
3.3. MINIMUM SAMPLE SIZES FOR STRENGTH CONCRETE (CONCRETE TEST CUBE RESULTS) TO BE ACCORDING TO COLTO STANDARD SPECIFICATIONS TABLE 8300A.
3.4. ADVERSE WEATHER REQUIREMENTS SHALL COMPLY TO SANS 2001-CC1.
3.5. READY MIX TO SITE SHALL COMPLY WITH SANS 878.
3.6. PERMISSIBLE DEVIATIONS ACCORDING TO SANS 2001-CC1 (5.2)

3.14. SURFACE BEDS:
3.14.1. MIX DESIGN:
TO YIELD A HIGH STRENGTH, DURABLE, LOW SHRINKAGE, ABRASION RESISTANT PRODUCT COMPLYING WITH THE FOLLOWING:
- 28 DAY CUBE STRENGTH : 30 MPa
- AGGREGATES : NOMINAL SIZE OF COARSE AGGREGATE TO BE A MAXIMUM OF 25% OFSURFACE BED THICKNESS LIMITED TO 37.5 mm.
- AGGREGATES & SAND : PREFERABLY BOTH, WELL GRADED AND FROM A DOLOMITIC AND/OR LIMESTONE SOURCE.
- CEMENT : CEM II/A-V 32.5 (15/85 FLY ASH)

3.0.1. SURFACE REGULARITY (EXCERPTS FROM TRH 34, 4TH EDITION):
FREE-MOVEMENT FLOOR CLASSIFICATION = FM3 (UNO ON SURFACE BED DRAWINGS)
3.0.2. FLATNESS & LEVELNESS PROPERTIES:
THE DIFFERENCE BETWEEN FLATNESS & LEVELNESS IS ILLUSTRATED IN FIGURE 3.1

FIGURE 3.1 : FLATNESS AND LEVELNESS

TWO PROPERTIES ARE MEASURED TO CONTROL FM AREAS, AS DEFINED BELOW:
- LEVELNESS - PROPERTY E
THE ELEVATIONAL DIFFERENCE IN mm DIRECTLY BETWEEN FIXED POINTS 3m APART (NOT ACROSS THE DIAGONALS).
- FLATNESS - PROPERTY F
THE CHANGE IN ELEVATIONAL DIFFERENCES BETWEEN TWO CONSECUTIVE MEASUREMENTS OF ELEVATIONAL DIFFERENCES EACH MEASURED OVER 300mm.

NOTES:
1. THIS DRAWING TO BE READ WITH
- AS-BUILT DRAWING NO. 10909001-0188 (AS PREPARED APRIL 2023).
- SITE LAYOUT 10909001-0105.
- ALL RELEVANT CIVIL, MECHANICAL & ELECTRICAL DRAWINGS.

INFORMATION TO BE SUBMITTED TO ENGINEER
THE FOLLOWING IMPORTANT INFORMATION SHALL BE SUBMITTED TO THE ENGINEER, FOR HIS RECORDS:
1. CONCRETE MIX DESIGN:
1.1 A CONCRETE MIX DESIGN TOGETHER WITH ALL THE REQUIRED AGGREGATE TESTS (IN ACCORDANCE WITH SANS 1083) SAHLL BE FORWARDED O THE ENGINEER, 14 DAYS AHEAD OF ANY CASTING OF CONCRETE.
2. CONCRETE TEST CUBES:
2.1 RESULTS AT 7, 14 & 28 DAYS STRENGTH
2.2 CUBE RESULTS TO BE CLEARLY LINKED TO ELEMENT TYPE, POSITION, CAST DATE, ETC.
3. CASTING DATES & CONSTRUCTION SEQUENCE:
3.1 CONTRACTOR TO PROVIDE DETAIL PROGRAMME AND INFORMATION FLOW, TO BE AGREED UPON WITH THE ENGINEER 14 DAYS AHEAD OF ANY CONSTRUCTION COMMENCING.
4. GENERAL:
4.1 METHOD STATEMENTS FOR BACK PROPPING.
4.2 CONSTRUCTION JOINT LOCATIONS AND DETAILS TO BE CLEARLY INDICATED ON A SET OF ENGINEERS' DRAWINGS IF NOT SHOWN.
4.3 MILL CERTIFICATES FOR REBAR.
4.4 METHOD FOR CURING OF CONCRETE ELEMENTS.
4.5 SURVEY RESULTS OF ALL GROUND BEARING AND SUSPENDED SLABS.
4.6 SURVEY RESULTS OF AS-BUILT PILE FOUNDATIONS (IF APPLICABLE ON PROJECT)
4.7 AS-BUILT BEARING LEVELS OF FOUNDATIONS.

LOCAL MUNICIPALITY: MAP

MALUTI - A - PHOFUNG LOCAL MUNICIPALITY

SPONSOR & REGULATOR: DWS

ISSUE FOR TENDER

0 — 100
100 MILLIMETRES ON ORIGINAL DRAWING

(A) BEFORE CONTRACT COMMENCES

(A) AFTER CONSTRUCTION CONTRACT HAS COMMENCED

Nr.	DATE	AMENDMENTS
(T1)	2025-05-17	ISSUE FOR TENDER

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CLIENT / IMPLEMENTING AGENT

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CESA

PROJECT
TSHIAME WWTW REFURBISHMENT
VCWB CONTRACT: BW298/TSHIWWTW/22

DRAWING DESCRIPTION
INLET WORKS BUILDING REFURBISHMENT PLAN + SECTIONS

DRAWING NO.
10909001 - 0500

REVISION
T1

DESIGNED:	LM	CHECKED: ECSA PR No:	LM
DRAWN:	IS	SCALE: AS SHOWN	A1
APPROVED: ECSA PR No: 20170244	GM	INCEPTION DATE:	13/01/2023
FILE PATH:	SHAREPOINT/ BLOEMFONTEIN - 10909001 TSHIAME WWTW / 03 DES DEV/ 04 DRAW		

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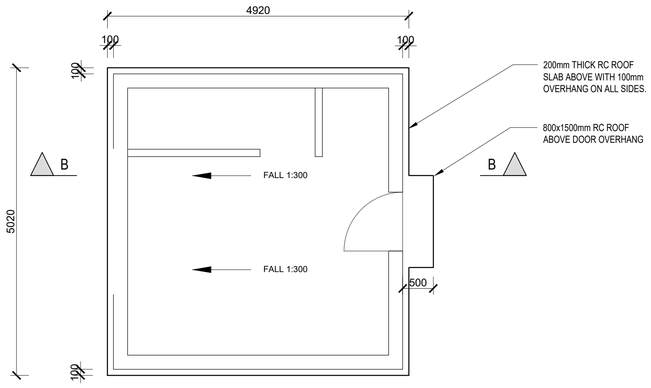
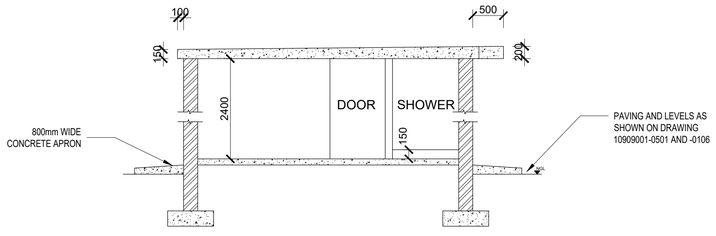
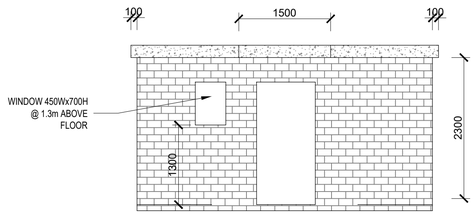


PLAN ON ROOF
SCALE 1:50



SECTION B-B
SCALE 1:50



NORTH ELEVATION
SCALE 1:50