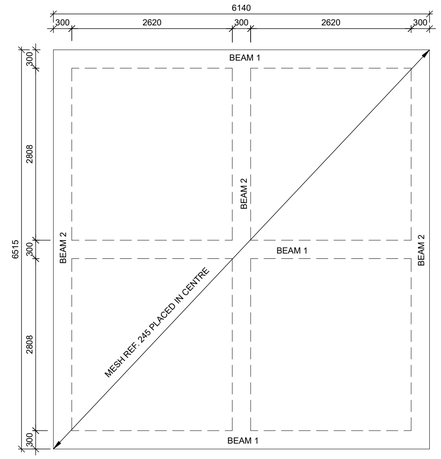
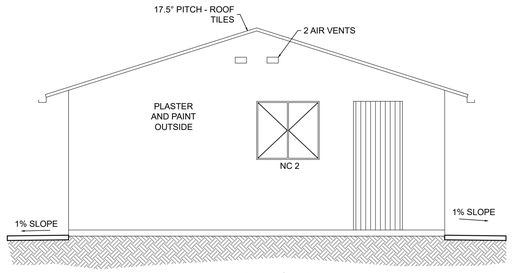
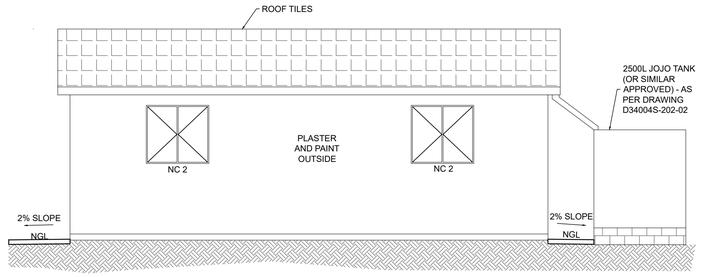


PLAN VIEW
RC RAFT FOUNDATION
SCALE 1:50



ELEVATION 1
SCALE 1:50



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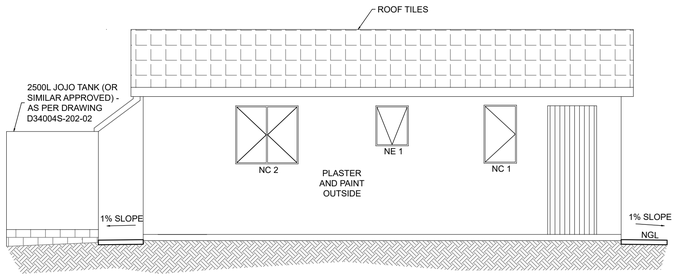
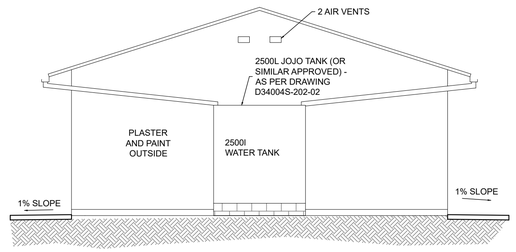
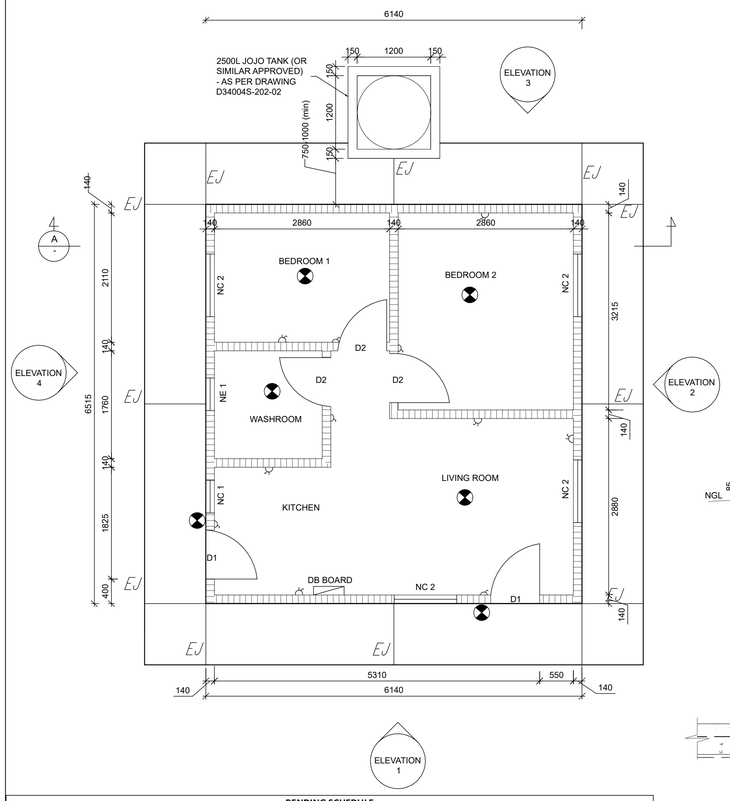
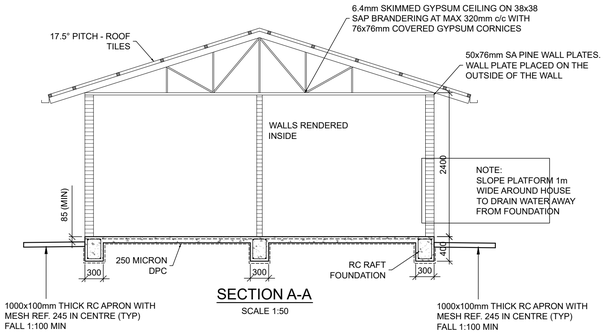


ELEVATION 4
SCALE 1:50

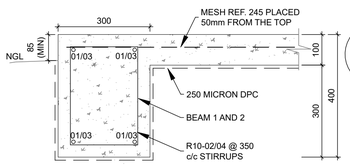


ELEVATION 3
SCALE 1:50

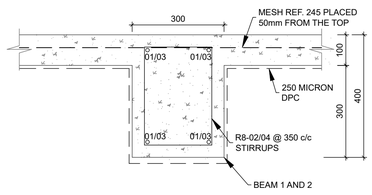




SECTION A-A
SCALE 1:50



TYPICAL SECTION THROUGH EXTERNAL RC RAFT BEAMS
SCALE 1:10



TYPICAL SECTION THROUGH INTERNAL RC RAFT BEAMS
SCALE 1:10

THIS DRAWING IS TO BE READ IN CONJUNCTION WITH DRAWING D34004S-201-02

REINFORCEMENT NOTES:

1. NO CONCRETE SHALL BE POURED UNTIL THE REINFORCEMENT HAS BEEN INSPECTED AND APPROVED IN WRITING BY THE ENGINEER/S. STEEL FIXING WILL ONLY BE INSPECTED AFTER THE STEEL IS PROPERLY FIXED IN POSITION WITH SPACERS, ALL SERVICES ARE PLACED AND THE SHUTTERING IS CLEAN.

2. THE CONTRACTOR IS TO MAINTAIN THE REINFORCING STEEL IN POSITION AFTER PLACING AND DURING CONCRETING. IF ADDITIONAL SPACERS AND CHAIRS ARE REQUIRED, (OTHER THAN THOSE DETAILED) THEY ARE TO BE PROVIDED BY THE CONTRACTOR AT HIS EXPENSE.

3. WELDING, HEATING OR CUTTING OF REINFORCEMENT IS NOT ALLOWED.

4. REINFORCING MUST BE THOROUGHLY CLEANED OF ALL DIRT, GREASE, BITUMINOUS MATERIAL, SCALE AND LOOSE RUST.

5. ALLOWABLE REINFORCEMENT PLACING TOLERANCE:

POSITION OF REINFORCEMENT	TOLERANCE (mm)
5.1) SPACING BETWEEN ANY TWO ADJACENT BARS IN ONE LAYER a) SLABS AND WALLS b) BEAM STEMS AND COLUMNS	 +25/-25 +25/-5
5.2) STIRRUP SPACING	+15/-15
5.3) LONGITUDINAL LOCATION OF BENDS AND ENDS OF BARS	+50/-50
5.4) DISTANCE BETWEEN BARS IN SUCCESSIVE PARALLEL LAYERS	+10/-0

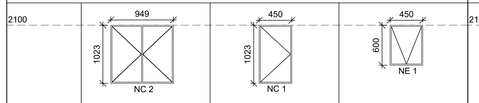
6. THE LAP LENGTHS OF REINFORCING BARS ARE TO BE AS SPECIFIED OR A MINIMUM OF 40 BAR DIAMETERS FOR MILD STEEL AND 48 BAR DIAMETERS FOR HIGH TENSILE DEFORMED BARS.

ALL REINFORCEMENT TO SABS 920, SABS 82
Y= HIGH TENSILE ROUND DEFORMED BARS.
STRENGTH 450 MPa
R= ROUND SMOOTH BARS.
STRENGTH 250 MPa
Z=DEFORMED ROUND MILD STEEL BARS (COLD WORKED TO INCREASE YIELD STRESS).
STRENGTH 450 MPa

BENDING SCHEDULE

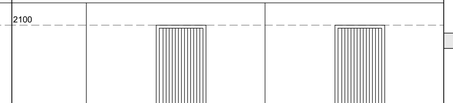
MEMBER	NO. OF	BARS PER MEMBER	DIA.	LENGTH	TOTAL NO.	MARK	SC	BENDING A	B	C	D	E/r	SKETCH
BEAM 1	3	4	Y12	6050	12	1	20	6050					
		17	R 10	1150	51	2	60	300	200				
BEAM 2	3	4	Y12	6400	12	3	20	6400					
		18	R 10	1150	54	4	60	300	200				

WINDOW AND GLAZING SCHEDULE PER UNIT



CODE	NC2	NC1	NE1
QUANTITY	4	1	1
DIMENSIONS	1023x949	1023x450	600x450
PRODUCT DETAILS	STANDARD CLISCOE FRAME WITH PUTTY BEADING AND 3mm GLASS. STANDARD STEEL STAYS AND FASTENER AS PER WINDOW SPEC. WINDOW TO BE PRIMER FINISH.	STANDARD CLISCOE FRAME WITH PUTTY BEADING AND 3mm GLASS. STANDARD STEEL STAYS AND FASTENER AS PER WINDOW SPEC. WINDOW TO BE PRIMER FINISH.	TO BE FITTED WITH OPAQUE GLASS.

DOOR SCHEDULE PER UNIT



CODE	D1	D2
QUANTITY	2	3
DIMENSIONS	2023x813x40	2023x813x40
PRODUCT DETAILS	STANDARD APPROVED HOLLOW CORE DOORS 1 COAT PRIMER, 1 COAT ALKYD BASED UNIVERSAL UNDERCOAT AND 2 COATS SUPERIOR QUALITY UNIVERSAL ENAMEL PAINT IRONMONGERY INCLUDE STANDARD CHROME PLATED 2 LEVER LOCK SETS CHROME PLATED HANDLES, STEEL STRIKER PLATES AND 2 KEYS	SEMI - SOLID FLUSH DOOR WITH APPROVED 3.3mm PLAIN HARDBOARD COVERING ON BOTH SIDES AND 2 CONCEALED SIDES 1 COAT LINSEED OIL, 2 COATS SUPERIOR QUALITY CLEAR VARNISH UNDERCOAT AND 2 COATS SUPERIOR QUALITY CLEAR VARNISH IRONMONGERY INCLUDE STANDARD CHROME PLATED 2 LEVER LOCK SETS CHROME PLATED HANDLES STEEL STRIKER PLATES AND 2 KEYS

NOTES:

1 Raft Slab Foundation
- 1.1 Clear and slope ground 1m wide around house to drain water away from foundations at a 2% slope.
- 1.2 RC raft foundation concrete to be 25MPa.
- 1.3 Cover to reinforcement
  - Beams - 50mm
  - Slab - 50mm from platform level

2 Wall Construction
- 2.1 Build external walls formed with 390 x 140 x 190mm 3,5MPa minimum strength concrete blocks laid in stretcher bond in 6:1 cement mortar with 10 to 15mm flush joints.
- 2.2 Build internal walls formed with 390 x 140 x 190mm 3,5MPa minimum strength concrete blocks laid in stretcher bond in 6:1 cement mortar with 10 to 15mm flush joints.
- 2.3 Mortar shall be Class II with sand, clean and free of vegetation and mixed dry until uniform in colour and consistency.
- 2.4 Lay 375 micron 150mm wide damp proof course under external walls.
- 2.5 Brickforce shall be laid in continuous lengths every second course and for all courses above window/door lintel level.
- 2.6 Build in 4mm galvanised wire 8 gauge at max 750mm centres on front and rear walls set into minimum 5 courses deep into blockwork and securely wound around and nailed onto wall plates. Similarly, secure purlin ends and central support wall with wire. The void/cavity to be filled with Class II mortar.
- 2.7 Wall ties 600mm long galvanised hoop iron every second course, and bent 50mm into blockwork, corked with Class II mortar. Type ND2 (F7) - 4No.
- 2.8 Provide precast concrete block lintels over window openings as shown on elevations & above internal and external door openings.
  - 2.8.1 Over HD2 windows: 1500mm long
  - 2.8.2 Internal door openings: 1200mm long
  - 2.8.3 Over external door & NC1, NE1 windows: 1200 & 1000mm long
- 2.9 For building in windows and door frames, lugs are to be turned down and set into Class II mortar.
- 2.10 No saw cut control joint on walls unless directed on site by the Engineer.
- 2.11 Install 2 no. modular air vents on gable ends of external walls.
- 2.12 Install 1mm thick steel made cliscoe sills to all windows laid in 6:1 Class 2 mortar and level flush with underside of window frames.

3 Wall Coating
- 3.1 Plaster external walls and render internal walls. Apply plascon / Dulux or other equally approved paint for external wall. water resistant paint on walls neatly applied to reveals, heads and sills of openings and dressed up to underside of roof sheeting, all in accordance with manufacturer's instructions.

4 Roof Construction
- 4.1 Roof pitch to be 17.5°
- 4.2 Tiled roof covering on 38 x 38 battens at 320 c/c on plastic underlay on 38 x 114 gang nailed roof trusses at 760 c/c max. on 38 x 114 wallplate secured with hoop irons embedded to brickwork 3 courses below. The eaves projection is 200mm min. and the verge projection is 100mm min.
- 4.3 Rhino ceilings with cornices joints to be plastered with smooth Rhinolite finish.

5 Beam Fillings
- 5.1 Beam filling mortar to be class II.
- 5.2 Beam filling to be carried out internally.

6 Doors
- 6.1 Build in 813 x 2032m paint finish steel door frames 1mm thick to walls where shown on plan.
- 6.2 Hang SA Pine BB door size 813 x 2032mm to steel frame externally and fitted with SABS CP two lever lockset.
- 6.3 Hang Masonite hollow core doors (2 no.) size 813 x 2032mm to steel frame internally and fitted with SABS CP two lever lockset.

7 Windows
- 7.1 Fix type NC1, NC2 and NE1 window frames flush with level window cliscoe sills, sealed internally with clear silicone as shown on elevations.
- 7.2 Glaze windows with 3mm clear flat gloss with putty beading, unpainted as required.

8 Painting
- 8.1 Apply one coat Dulux wood preservative to timber external doors.
- 8.2 Steel windows and door frames to be factory painted.
- 8.3 All exposed timber shall be painted with 2 coats carbolineum to all exposed timber roof sections.
- 8.4 All external exposed scratched surfaces to window frames and door frames to be painted to match existing colour of frame as supplied by factory/supplier.

9. General
- 9.1 Window and door frame positions can be changed based on beneficiaries request.
- 9.2 Rainwater goods to slope so that the water from the roof and gutters drain into the rainwater tank.

ELECTRICAL LEGEND

	DOUBLE SWITCH SOCKET OUTLET
	ONE WAY LIGHT SWITCH
	ELECTRICAL METER BOX
	LIGHT FIXTURE

NOTES / LEGEND

GENERAL

1. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ALL MATERIALS AND WORKMANSHIP CONFORM WITH THE DETAILS AND SPECIFICATIONS SHOWN ON THIS DRAWING, AND ALL RELEVANT SABS SPECIFICATIONS, IRRESPECTIVE OF WHETHER THE ENGINEER HAS INSPECTED THE WORKS ON SITE OR NOT.

2. ALL DIMENSIONS AND LEVELS TO BE CHECKED ON SITE AND CORRELATED WITH THE ARCHITECT'S DRAWINGS AND ENGINEER'S DRAWINGS BEFORE CONSTRUCTION COMMENCES.

3. ALL WRITTEN DIMENSIONS USED IN PREFERENCE TO SCALING.

4. ALL WATERPROOFING DETAILS TO BE IN ACCORDANCE WITH SANS 10400.

FOUNDATIONS

1. EXCAVATIONS FOR ALL FOUNDATIONS TO BE CHECKED AND APPROVED BY THE ENGINEER PRIOR TO CASTING OF ANY CONCRETE.

2. ALL FOUNDATIONS TO BE FOUNDED ON SOUND IN-SITU MATERIAL, NO FOUNDATION WILL BE ALLOWED ON ANY FILL.

3. TOP OF FOUNDATION LEVEL TO BE MIN 340mm BELOW FINAL OUTSIDE GROUND LEVEL OR FFL, WHICHEVER IS THE LOWER.

CONCRETE

1. CONCRETE CUBE STRENGTH MIN. AT 28 DAYS:
BLINDING - 15MPa/19mm STONE
RC RAFT FOUNDATION - 25MPa/19mm STONE
IN-FILL (CONCRETE BLOCKS) - 25MPa/19mm STONE

2. CONCRETE COVER TO REINFORCING:
RC RAFT FOUNDATION - 50mm (ALL SIDES)

3. ALL REINFORCING FIXED WITH THE SPECIFIED COVER MUST BE INSPECTED AND APPROVED IN WRITING BY THE ENGINEER PRIOR TO ANY CONCRETE BEING CAST.

4. ALL CONCRETE TO BE PROPERLY CURED BY KEEPING SURFACES CONTINUOUSLY DAMP, AT LEAST 7 DAYS AFTER CASTING. CONCRETE SLABS TO BE COVERED WITH MOIST SAND OR PLASTIC MEMBRANE DURING THIS PERIOD, COLUMNS TO BE WRAPPED IN PLASTIC IMMEDIATELY AFTER REMOVAL OF SHUTTERS.

APPROVED BY COUNCIL / CLIENT

CITY ENGINEER / CLIENT | REG. NO. | DATE

AMENDMENTS CODE

A,B,C,./ : BEFORE TENDER
T0 / : TENDER DRAWING
0,1,2,./ : AFTER TENDER
Z / : AS BUILT

IA : BY CLIENT
IB : BY ARCHITECT
IC : BY MECHANICAL OR ELECTRICAL
ID : BY BVI
IE : BY OTHER ( )

DATE	INITIAL	No./CODE	REVISION DESCRIPTION
19/10/2023	CP	0/D	ISSUED FOR TENDER PURPOSES

OFFICES

PROVINCE	OFFICE		E-MAIL
Gauteng	Tshwane	(012) 940-1111	pta@bvigc.co.za
	Pretoriawest	(012) 291-5400	jhb@bvi.co.za
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	Welkom	(057) 353-2489	wel@bvifs.co.za
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	Springbok	(027) 712-3614	spk@bvinc.co.za
KwaZulu Natal	Durban	(031) 266-6382	dbn@bvikn.co.za
	Empangeni	(035) 772-6112	emp@bvikn.co.za
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	East London	(043) 735-3889	ctd@bvifs.co.za
Western Cape	**Cape Town**	**(021) 527-7000**	**cpt@bviwc.co.za**

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Registration no. 1998/000157/07

CLIENT

ETHEKWINI MUNICIPALITY

PROJECT

ETHEKWINI MUNICIPALITY
VUMENGAZI HOUSING PROJECT

DRAWING TITLE

STANDARD 40m²
RURAL HOUSE DETAIL

APPROVED BY BVI

ENGINEER/TECHNOLOGIST | 202001098 REG. NO. | DATE

SCALE	AS SHOWN	DRAWN	CP
DESIGNED	CP	CHECKED	PvN

PLAN NUMBER	REVISION NO.	DATE SAVED
D34004.00S-201-01	T0	2023/10/19

D34004S-201-01 - RURAL FOUR - RURAL FOUR

M:\BLUTEK PROJECTS\34004.00 - VUMENGAZI HOUSING PROJECT\STRUCTURAL DRAWINGS\DATA\BUBM\BSIX\D34004S-201-01.T.DWM" HOUSE - RURAL FOUR