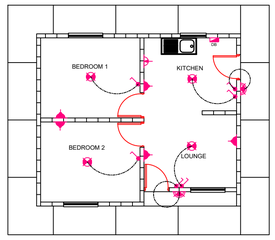
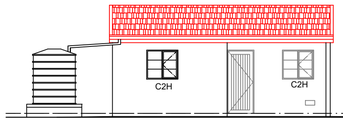
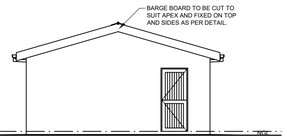


ELECTRICAL LAYOUT

ELECTRICAL LEGEND	
SYMBOL	DESCRIPTION
	DISTRIBUTION BOARD
	LIGHT SWITCH
	3 POINT WALL PLUG POINT
	1200mm LONG DOUBLE FLUORESCENT LIGHT WALL MOUNTED LIGHT FITTING
	CEILING MOUNTED LIGHT FITTING
	WALL MOUNTED EXTERNAL LIGHT FITTING
	STOVE CONNECTION POINT



ELEVATION 1



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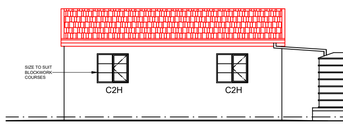

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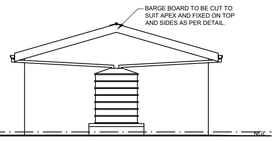
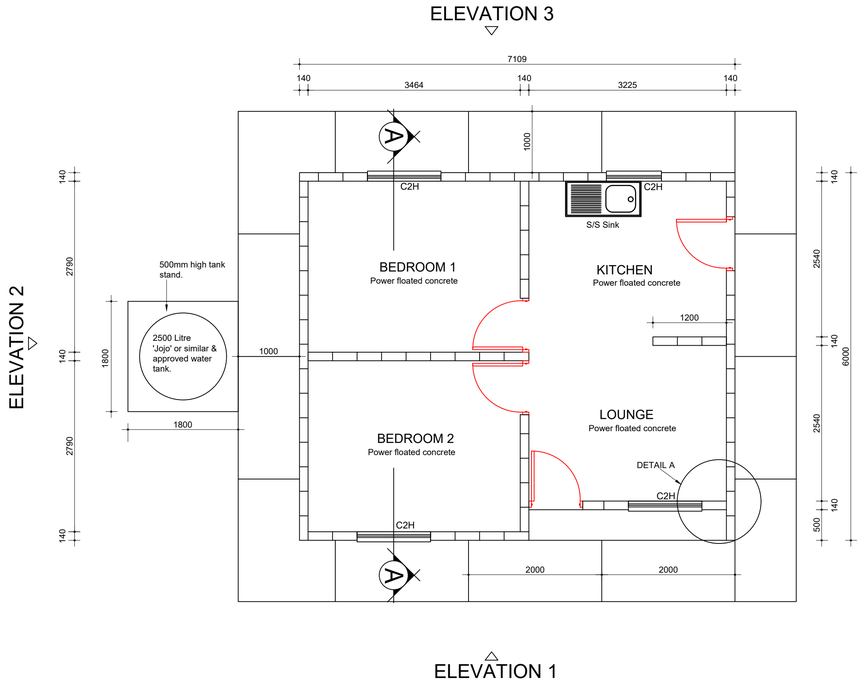
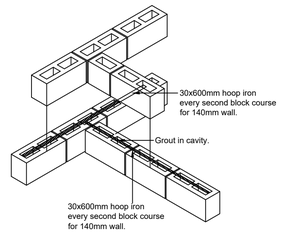


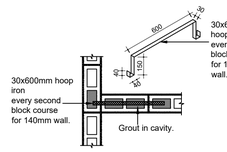
ELEVATION 2



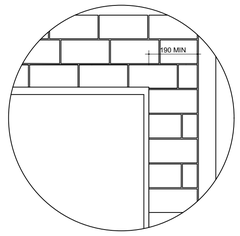
GROUND FLOOR PLAN
SCALE 1:50



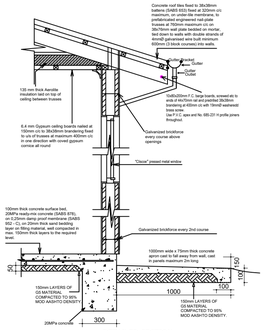
BONDING OF INTERSECTING WALL



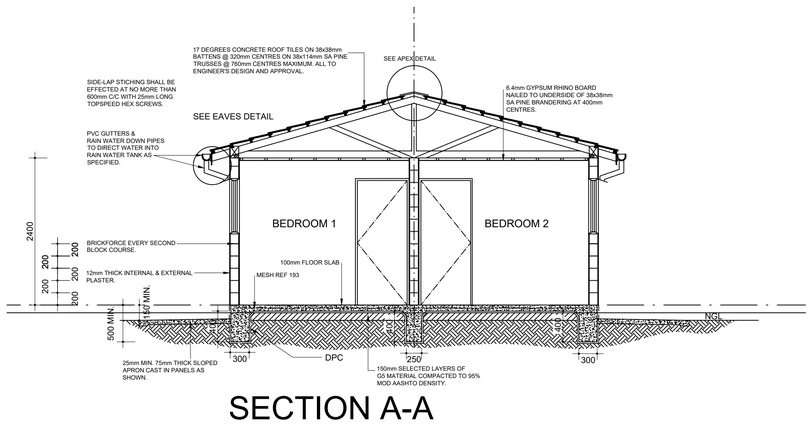
ELEVATION 4



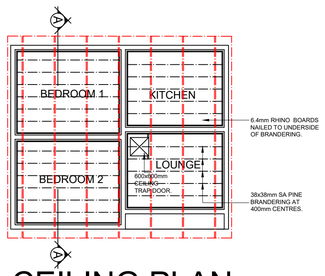
DETAIL A



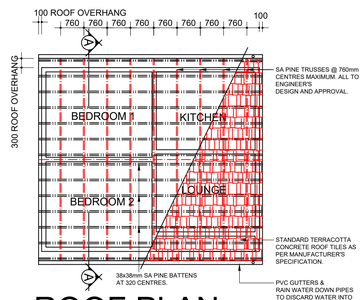
DETAILED SECTION
SCALE 1:10



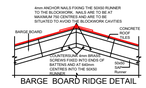
SECTION A-A



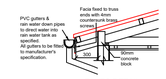
CEILING PLAN



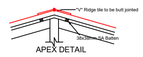
ROOF PLAN



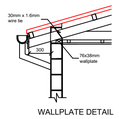
BARGE BOARD RIDGE DETAIL



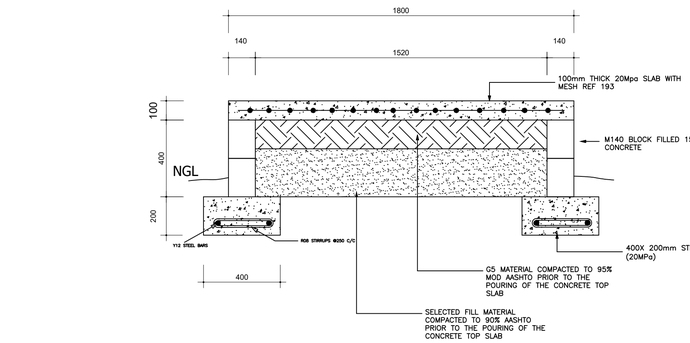
EAVES DETAIL



APEX DETAIL



WALLPLATE DETAIL



DETAILED SECTION OF TANK FOUNDATION

TANK STAND FOUNDATION BENDING SCHEDULE

STRUCTURE FOOTINGS (FOOTING 1 & 2) - 1800 mm sides								
Type & Diameter	Mark	Units	No./Unit	Total	Length	Code	Dimensions	
							A (mm)	B (mm)
Y12	01	2	2	4	1700	20	1700	
R08	02	2	7	14	760	81	300	80

Total Length of steel (mm)	Type
6800	Y12
10640	R08

Floor Area = 40 m²

SITE WORKS & EXCAVATION
Clear site - all vegetation and remove top soil to an extent of 1.5m around the perimeter of the area to be built on.
- All vegetation to be free of clay and organic matter
- G5 fill material to be compacted to 95% MOD AASHTO and must be compacted in layers that are not exceeding 150mm

CONCRETE
Apron to have a strength of 15Mpa and broom finish and fall away from the house at a slope of 1:6. Provide bitumen impregnated soft board expansion joints between external wall & apron. Concrete slab and footings to have a minimum strength of 20 Mpa with a smooth power float finish.

BLOCKWORK
Super structure blockwork - to the heights shown on the drawing. Block cavities to be filled with mortar wherever frames or brackets are fitted to walls. Maximum 10mm bed joint and purpends. All blocks to be min. strength 3.5 Mpa at 28 days

EXTERNAL WALLS
140 wide x 390 length x 190 high concrete blocks.
Height to be 2400mm. "Brickforce" - to be provided every second course of blockwork and every block course above all openings and gable walls. Only external walls are load bearing.

INTERNAL WALLS
140 wide x 390 length x 190 high concrete blocks. To be secured to external walls by bonding straps every second course "Brickforce" - to be provided every second course of blockwork and every block course above all openings and gable walls. Kink wall between Kitchen & Lounge to be 1200mm x 2400mm

Unless otherwise specified all plastered surfaces are to be steel trowelled to perfectly true, smooth and uneven surfaces and returned into reveals and soffits of openings. All salient angles are to be run perfectly true, straight, slightly rounded and neatly mitred at angles, etc. The plaster on walls is to be 12mm thick. Internal walls shall be painted with 2 coats water resistant acrylic paint (SANS 10400 Code XK17).

WINDOW & DOOR FRAMES
All window and door frames to be set up and built in plumb Window frames
- "Clisco" hot dipped galvanised steel type 4x C2H
  - No cills required
  - Galvanised 3 mm steel window frames in 1.0 mm "Clisco" surrounds
  - Use of "Clisco" surrounds in window frames, excludes the needs for dpc and window cills. External and internal door frames - pressed metal "Clisco" frames 1.0 mm thick to suit block sizes and to receive 813 x 2032 doors. In accordance with SABS 0173 allow for silicone bead around "Clisco" frames.

DAMP PROOF COURSE
375 micron damp proof course below all Blockwork
250 micron damp proof membrane under surface beds

CARPENTRY & JOINERY
17° pitched pre-fabricated nail-plate timber trusses tied down with hoop iron at maximum 760mm centres, designed, fabricated and erected in accordance with S.A.B.S. standards
battens @ max 320mm centers.
Wall Plate to be 38 x 76 mm S.A. Pine Grade 5 treated wallplates with self drilling, self tapping Hilti screws or equal approved secured to walls with hoop iron 600 mm down.
Doors - External - Meranti frame, ledged, braced & battened doors.
  - Internal doors 813 mm x 2032 mm marsonite faced hollow core.
Locks - External - 3 Lever mortice lock (S.A.B.S approved)
  Internal - 2 Lever mortice lock (S.A.B.S approved)
All structural timber to be treated in accordance with S.A.B.S. specification

ROOF
S.A.B.S. approved DOUBLE ROMAN concrete roof tiles @ minimum of 17 degrees angle in a suitable underlay.

Double Roman concrete roof tiles and V-ridge tiles (SABS 542), Verge tiles and bottom 2 rows of tiles are to be nailed and clipped to resist wind uplift with 2.8mm gauge aluminum alloy serrated clout nails of the correct length to suit the profile or approved non-corrodible "storm-clips" . Tiles to be fixed according to SABS 062 and the recommendations of the manufacturer applicable to pitch and locality, on 38x38mm softwood battens and 38x50mm tilting batten (SABS 653) at maximum 320 c/c; on 0.25mm under-roof-tile membrane (SABS 952 - E) with minimum 150mm overlaps, on prefabricated engineered nail-plate timber trusses on 76x38mm wall plates designed, manufactured and erected in accordance with SABS 0243 or in accordance with a Registered Professional Engineer's details and specifications. Trusses at maximum 760mm c/c tied down to walls with double strands of 4mm galvanized wire built minimum 600mm into walls. Wire strands to be looped around middle fin of block, taken up within the hollow core of the block and wrapped tightly around truss and wire ends nailed down. Trusses braced with 38x114mm continuous bracing members nailed to underside of rafters at approximately 45°, so that it does not interfere with the truss webs, with 3 no. 75mm nails each connection. 10x200 Fascia boards,10x80x200mm F.C. barge boards, screwed etc to ends of 44x70mm nail and predrilled 38x38mm brandering at 400mm c/c with 19mm@ washered brass screw.
Use P.V.C. apex and No. 685-231 H profile joiners throughout.

CEILINGS
All houses to have a 6.4mm gypsum ceiling board and 135mm Aerolite insulation (nailed to 38 x 38 branderings @ 400 c/c) laid to manufacturer's specifications, finished with cover-strips. The ceiling must then be painted with 2 coats of PVA.

All structural timber to be treated in accordance with S.A.B.S. specification
6.4 mm gypsum ceiling board joined with white aluminium H profile cover strips with 75mm cornice all round,nailed into a 38 x 38 mm timber frame at 400 centers which is hung into trusses. 600X600mm trap door positioned in the passage in front of bathroom door.
Openings for trap doors in ceilings shall be trimmed with 38 x 114mm timbers, all securely spiked to the supporting timbers. The framework for the trap door shall be formed out of 38 x 50mm softwood, properly spiked to supporting timbers and trimmers. The size of the opening shall be 600 x 600mm.

Trap doors shall be formed with skeleton frame of brandering as for ceilings, covered on underside with ceiling boards and hung on a pair of 75mm steel butts as Sample 84. Soffits of trap doors shall be flushed with soffits of ceilings when closed and flap back 180° on top of the brandering when opened.
Closed trap doors shall rest on 50 x 19mm softwood fillets trimmed with 44 x 8mm Timber cover strip all around opening, mitred at angles and securely fixed to soffit of ceiling.

GLAZING
All windows to be glazed with 3 mm clear sheet glass.

FINISHING
All external walls to receive 1 coat plaster primer and 2 coats SABS approved tinted Acrylic PVA or similar & equal approved under a minimum 5 year guarantee. 12mm plaster for all internal and external walls. Raft foundation not to be plastered. V-joint around windows and doors and internal wall corners intersecting walls. All internal walls to receive 1 coat plaster primer and 2 coats SABS approved white PVA. External & internal doors to be treated with mixture of linseed oil and turpentine, external doors to be finished with one coat polyurethane varnish. External exposed timber to be treated with carbolineum.
Fibre Cement barge boards in continuous lengths, size 200 x 10mm thick, fixed to timber rafters with solid brass screws including barge connectors (code: bbcon) between boards and at apex with end caps at board ends.
Fibre Cement fascia board in continuous lengths, size 200 x 80 x 10mm thick, fixed to 38 x 50mm tiler batten and 38 x 38mm support battens with solid brass screws including fascia connectors (code: bbcon) between boards with end caps at board ends.
Allow for 1000 mm x 75 mm aprons around perimeter of building cast in panels of not more than 2000mm with Bitumen impregnated dividing strips. G5 material to be compacted in layers of 150mm maximum under aprons.
Windows and door frames to receive one coat undercoat and two coats of Plascon enamel paint or similar & equal approved.
Mortar and Plaster Mix design - 1:6 or class ii mortar
Floor thickness to be a minimum of 100mm and smoothly finished with power float.
250 Micron DPM to be used underneath the foundation with 150mm overlap.
Curing to be undertaken for 7 days before the top structure can be erected

REINFORCEMENT
HOUSE FOUNDATION
- Cover to mesh on the slab and reinforcement should be a minimum of 50mm
- Bottom reinforcement to be Y12 bars with R08 steel stirrups spaced at 250 c/c
- Reinforcement mesh to be Reinforcement Mesh 193 with 200mm overlap

TANK STAND
- Cover to mesh on the slab and reinforcement should be a minimum of 50mm
- Y12 shape code 20 to be used along the length of the footing
- R08 shape code 81 stirrups @250 c/c
- Reinforcement mesh to be Reinforcement Mesh 193

NB: DO NOT SCALE FROM DRAWING

SIGNATURES INDICATING ACCEPTANCE OF THE DESIGN:
SIGNATURE ..... DATE .....
DEVELOPMENT BANK OF SOUTHERN AFRICA
NAME .....
SIGNATURE ..... DATE .....
CLIENT
NAME .....
SIGNATURE ..... DATE .....

FOR APPROVAL PURPOSES ONLY

Notes:

GENERAL NOTES:
Quality of workmanship to comply to relevant SANBS specifications, and to comply with the minimum standards prescribed. All requirements of municipal and other authorities concerned have to be adhered to. All work to be done strictly in accordance with the national building regulations and the SANBS 0400 minimum standard specifications.

Contractor is responsible for the correct setting out of the building. All internal and external walls according to correct heights, levels and measurements.

Contractor is to make sure that all detail is clear, and to contact architect if anything is not clear enough.

Trade names and code numbers are used as a guide only. Similar or equal items may be used by prior approval of architect.

Figured dimensions take preference to scaled measurements and large scale detail takes preference to small scale drawings.

Revisions:

rev	date	sign	description

Client / Departmental:	Engineer:
..... Signature:	..... Signature:

Drawn:	Date:	Checked:	Approved:

Development Bank of Southern Africa
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fax: 011 206 3500
email: VukileM@dbsa.org

Project Title:
EMERGENCY HOUSING UNITS (RAFT FOUNDATION DESIGN FOR RURAL UNITS)

Drawing Description:
PLANS, SECTION, ELEVATIONS AND CONSTRUCTION DETAILS

Drawing Status:
APPROVAL DRAWINGS

Scale:	Sheet
N.T.S	1/1

Project no:	Drawing no:	Revision:
000	0000	00