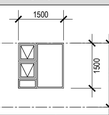
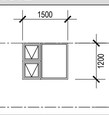
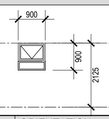
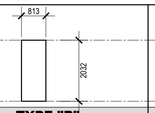
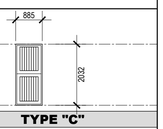
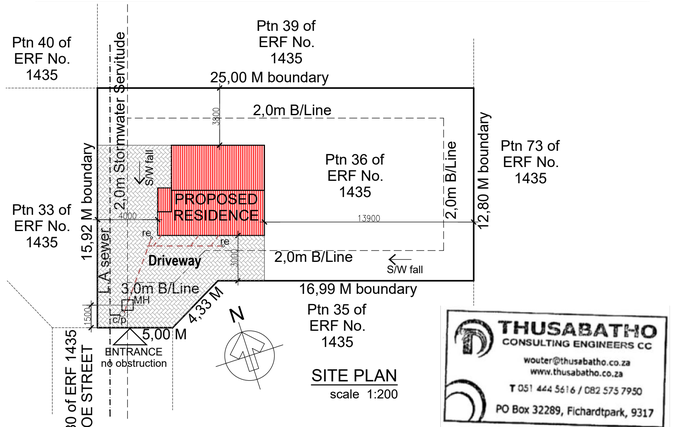
A1

WINDOW SCHEDULE

PTT1515		PT1512		PT99	
					
LOCATION	ORIENTATION	LOCATION	ORIENTATION	LOCATION	ORIENTATION
LIVING ROOM	NORTH WEST ELEVATION	MAIN BEDROOM	SOUTH EAST ELEVATION	BATHROOM	SOUTH WEST ELEVATION
		BEDROOM 1	NORTH EAST ELEVATION	KITCHEN	NORTH WEST ELEVATION
QTTY	ONE (01)	QTTY	TWO (02)	QTTY	TWO (02)
FRAME	Standard anodized Alum frame To be fitted after the brickwork. All as per the manufacturers spec.	FRAME	Standard anodized Alum frame To be fitted after the brickwork. All as per the manufacturers spec.	FRAME	Standard anodized Alum frame To be fitted after the brickwork. All as per the manufacturers spec.
FURNITURE	Handles and hinges to be installed as per the manufacturers specifications.	FURNITURE	Handles and hinges to be installed as per the manufacturers specifications.	FURNITURE	Handles and hinges to be installed as per the manufacturers specifications.
FINISH	Anodized.	FINISH	Anodized.	FINISH	Anodized.
GLAZING	6mm clear toughened safety glass as per SANS 10400 part N. to manuf. spec.	GLAZING	6mm clear toughened safety glass as per SANS 10400 part N. to manuf. spec.	GLAZING	6mm clear toughened safety glass as per SANS 10400 part N. to manuf. spec.
GENERAL	All dimensions and levels to be checked and verified on site prior to installation.	GENERAL	All dimensions and levels to be checked and verified on site prior to installation.	GENERAL	All dimensions and levels to be checked and verified on site prior to installation.

DOOR SCHEDULE

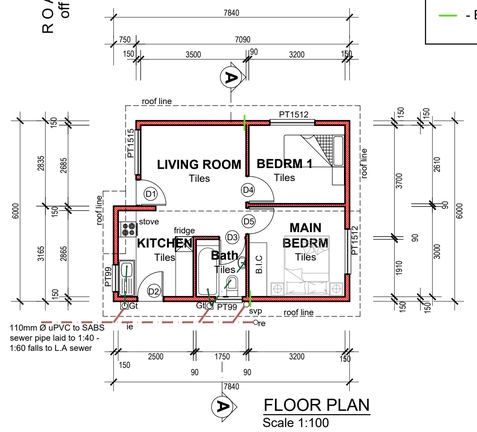
			
TYPE:	TYPE "A"	TYPE "B"	TYPE "C"
WALL	150mm BRICKWALL	90mm BRICKWALL	150mm BRICKWALL
REF. NO	REF. NO / LOCATION / HAND	REF. NO / LOCATION / HAND	REF. NO / LOCATION / HAND
	D01 / LIVING ROOM / L/ HAND	D03 / BATHROOM / L/ HAND	D2 / KITCHEN / R/HAND
		D04 / BEDROOM 1 / L/ HAND	
		D05 / MAIN BEDROOM / R/ HAND	
NO. REQ	ONE (01)	THREE (03)	ONE (01)
FRAME	Galv., P/S double rebated door frame 1.6mm thick, with 3 pr. 100mm steel butt hinges for 150mm wall. frame to take 813x2032mm door.	Galv, P/steel double rebated door frame 1.6mm thick, with 3 pr. 100mm steel butt hinges for 90mm wall. frame to take 813x2032mm door.	Galv, pressed steel double rebated door frame 1.6mm thick, with 3 pr. 100mm steel butt hinges for 150mm wall. frame to take 813x2032mm stable door.
FINISH	Mild steel to be painted.	Mild steel to be painted.	Mild steel to be painted.
LEAF	813 x 2032 x 44mm Saligna blaco H/W single leaf door.	813 x 2032 x 44mm Semi solid core flush panel door, with H/W edging, door to receive painting.	813 x 2032 x 44mm Solid core stable door.
FINISH	Door to be sanded and receive 3 coats of clear vanish.	Door to receive 1 coats pink wood primer and 2 coats of super universal enamel (ny 1/g)	Door to be sanded and receive 3 coats of clear vanish.
MONGERY	1. Dove lever handles 2. Lever mortice lockset.	1. Dove lever handles 2. Lever mortice lockset.	1. Dove lever handles 2. Lever mortice lockset.



SITE PLAN
scale 1:200

THUSABATHO CONSULTING ENGINEERS CC
wouter@thusabatho.co.za
www.thusabatho.co.za
T 051 444 5616 / 082 575 7950
PO Box 32289, Fichardtpark, 9317

LEGEND
— - Expansion joints



FLOOR PLAN
Scale 1:100
Area = 45,0 M²

AREA SCHEDULE	
ROOM	AREA M²
LIVING ROOM	11,8 M²
KITCHEN	6,6 M²
MAIN BEDROOM	9,6 M²
BEDROOM 1	8,4 M²
BATHROOM	3,2 M²
WALLS/PASSAGE	5,4 M²
TOTAL	45,0 M²
Stand Area = 340 M²	
Coverage = 13,2 %	

OCCUPANCY CLASSIFICATION OF BUILDING:

Occupancy	H4
Total Nett Floor Area	39,60 m²
Total Floor Area	45,00 m²
Design Occupancy Time	24hrs per day / 7 days per week
Building Orientation	NORTH
Climatic Zone	Springs

SANS 10400XA COMPLIANCE CALCULATIONS: DEEM TO SATISFY

Glazing Area:

REF NR.	WIDTH	HEIGHT	AREA	QTY	TTL AREA
PT1515	1.500m	1.500m	2.25 m²	1	2.25 m²
PT99	0.900m	0.900m	0.81 m²	2	1.62 m²
PT1512	1.500m	1.200m	1.80 m²	2	3.60 m²
			Total Glazing		7.47 m²

CHECK FOR COMPLIANCE WITH SANS 10400XA

CALCULATIONS

Nett Floor Area:	35.20 m²
Glazing Area:	7.47 m²

*(glazing area / nett floor area) x 100 = *****% [<15%]*

(7.47 m² /35.20 m²) x 100 = 21.**22% [>15%]**

Do Not comply with max 15% as per SANS 10400XA

Where the total area of the glazing elements of a storey is greater than 15% of the nett floor area of the storey the requirements contained in SANS 204 shall be complied with.

HOT WATER SERVICES

Daily hot water usage	
Type of accomodation	Dwelling houses - Medium rental : 115-140 L/capita/day
No. of persons	4 per day
Assumed daily hot water consumption	560 L
Assumed annual hot water consumption	203.84 kL - based on daily design occupancy per week
50% of annual hot water consumption	101.92 kL - To be provided by means other than electrical heating

Conclusion:
Dwelling to be provided with min 280L water vesel. Electrical and Solar heating system combination, installled by specailist and shall comply with SANS 1307, 10106, 10254 and SANS 10252-1

Insulation Requirements:

Internal diameter of Hot water pipe	= 80
Min required R - value for Pipe insulation	1.0

Hot water Vesseld / Tanks:

Min required R - value for Vessel/ Tank	2.0

ENERGY CONSUMPTION: LIGHTING

ENERGY DEMAND

ALLOWED: 5 W/m²
CALCULATION:
*Total Watt / Nett floor area = ****W/m²*

Lights in dwelling			
	DISCRIPTION	QTY	TOTAL
	13W CF	05	65
		TOTAL:	65 W

65 W / 35.20 m² = **1,846 W/m²** [<5 W/m²]

DO COMPLY

ENERGY CONSUMPTION

ALLOWED: 5 kWh/m².a [a =1 (year)]
*5 kWh/m² .a x nett floor area = ****kWh.a*
5 kWh/m².a x 35.20m² = 176.00 kWh.a

Max Allowed = 176,00 kWh.a

CALCULATION:
ASSUMPTIONS:
Assume lights lamps are on from 17:00 - 22:00 each day/year , that is 5 h/day
→52 (weeks) x 7 (days) x 5 (hours) = 1820 h.a
→65 W = 0.065 kW

0.065 kW x 1820 h.a = 118,**30 kWh.a** [< 176.00 kWh.a]

DO COMPLY

ROOF ASSEMBLY:

SANS 10400 XA:

Occupancy	H4
Design Occupancy Time	24hrs per day / 7 days per week
Climate Zone	Springs
Minimum R-value required	3.20 m²K/W
Direction of heat flow	Up

CALCULATION

Basic Roof Assembly	Concrete tiles
R- value for Metal Sheeting	0.3 m²K/W
R-Value of Ceiling	0.05 m²K/W
TOTAL R - Obtained	0.35 m²K/W

Obtained R-Value =>Minimum R-value required

Do Not Comply with SANS 10400 XA

Additional Insulation required With at least R-Value of 2.85 m²K/W

SANS 204:

Roof venting	Unventilated
Basic Roof Construction	Concrete tiles @ 17-20° pitch w/ plasterboard ceiling
Direction of heat flow	Up
Min R- value insulation required	2.85 m²K/W
Additional Thermal Insulation	Flexible fibre glass blanket 10-18 kg/m²

Conclusion:
It's recommended that a Flexible fibre glass blanket, with a thickness of 115 mm needs to be installed in order to achieve the additional min R-value of 2.85 m²K/W

Buildings with a floor area of less than 500 m2, with a concrete slab-on-ground, shall have insulation installed around the vertical edge of its perimeter which shall:

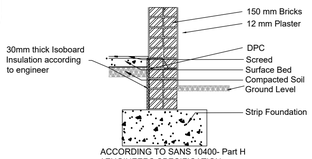
a) have an R-value of not less than 1,0,

b) resist water absorption in order to retain its thermal insulation properties, and

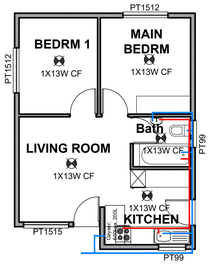
c) be continuous from the adjacent finished ground level

1) to a depth of not less than 300 mm, or

2) for the full depth of the vertical edge of the concrete slab-on-ground.



General Slab Insulation Detail
Scale 1:25



FLOOR PLAN
Scale 1:100
Area = 45,0 M²

Hot Water Supply (As per SANS 10400 XA:2011)

4.5.2.1 A min. of 50 % by volume of the annual average hot water heating requirement shall be provided by means other than electrical resistance heating, including, but not limited to, solar heating, heat pumps, heat recovery from other systems or processes.
4.5.2.2 The solar water heating systems shall comply with SANS 1307 and SANS 10106, based on the thermal performance determined in accordance with the provisions of SANS 6211-1 and SANS 6211-2. The installation thereof shall comply with SANS 10254.
4.5.2.3 Hot water usage should be minimized and the system maintained in accordance with the requirements given in SANS 10252-1.
4.5.2.4 All exposed pipes to and from the hot water cylinders and central heating systems shall bein sulated with pipe insulation material with an R-value in accordance with table 13.
4.5.2.5 Insulation shall a) be protected against the effects of weather and sunlight,
b) be able to withstand the temperatures within the piping, and
c) achieve the minimum total R-value given in table 25

Thermal Insulation: (As per SANS 10252-1: 2012)

Table 13 - Minimum R-value of pipe insulation

1	2
Internal diameter of pipe **mm**	Minimum R-value*
≤ 80 mm	1,00
> 80 mm	1,50

* Determined with a hot surface temperature of 60 °C and an ambient temperature of 15 °C.

4.5.2.6 Hot water vessels and tanks shall be insulated with a material achieving a minimum R-value of 2,0.
NOTE To achieve this value, insulation in addition to the manufacturers' installed insulation may be required.
4.5.2.7 Insulation on vessels, tanks and piping containing cooling water shall be protected by a vapour barrier on the outside of the insulation.
4.5.2.8 The piping insulation requirements do not apply to space heating water piping
a) located within the space being heated where the piping is to provide the heating to that space, or
b) encased within a concrete floor slab or in masonry.
These pipes shall comply with SANS 10252-1.
4.5.2.9 Piping to be insulated includes all flow and return piping, cold water supply piping within 1 m of the connection to the heating or cooling system and pressure relief piping within 1 m of the connection.

EXTERNAL WALL CONSTRUCTION

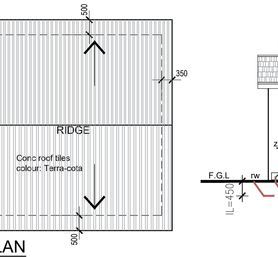
SANS 10400 **Table 3 - Minimum *CR*-value, in hours, for external walling**

Wall type	Masonry: Single masonry wall, plastered internally and externally
Minimum CR-value	80 hrs
Minimum R-value required	0.35

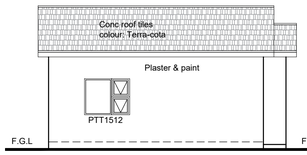
CALCULATION

	Conductivity (W/m.°C)	Thickness (m)	Resistivity (m²K/W)
External Plasterwork	0.6	0.015	0.03
Brickwork	0.7	0.230	0.33
Internal Plaster	0.6	0.015	0.03
		Total R-value Achived	0.39

Conclusion:
Wall complies with minimum R-value of 0.35 for external walls

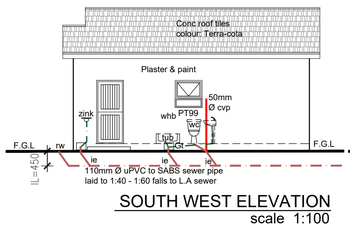


SOUTH EAST ELEVATION
scale 1:100

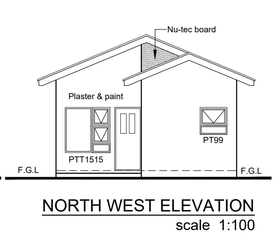


NORTH EAST ELEVATION
scale 1:100

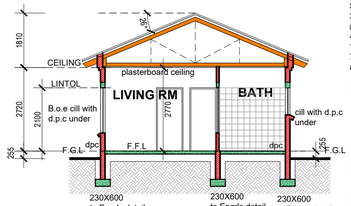
ROOF PLAN
Scale 1:100



SOUTH WEST ELEVATION
scale 1:100



NORTH WEST ELEVATION
scale 1:100



Type of foundations to engr's detail

SECTION A-A
scale 1:100

Rational Design: Certificate to be given to Owner.

Roof pitch 26°
Profiled cement tiles on 38x38 branders on SABS-approved underlay on 152x52mm s.w manufactured trusses on 114x38mm s.w wallplate with SABS-approved insulation on 38x38mms.w branders @600mmc/c one way and 450mm c/c other way to take 12.5mm plasterboard ceiling with 76mm coved cornice or approved similar

R.c beams to all door and window openings externally B.o.e cills c/w d.p.c

Specified floor finish on 40mm s/c screed on 150mm reinforced conc. slab on black polythene d.p.m under screed on 50mm sand blinding layer on 150-200mm well compacted imported hardcore in 50mm layers at 98% AASHTO Foundations to structural engr's design

Founds depth 700mm Min to be determined on site

WATER SYSTEM LEGEND:

COLD WATER

HOT WATER

CALCULATION SHEET:

1. SANS 10400 XA
2. SANS 204
3. ENERGY CONSUMPTION: LIGHTING
   ENERGY DEMAND
   ENERGY CONSUMPTION
4. HOT WATER SERVICES/ SUPPLY
5. EXTERNAL WALL CONSTRUCTION
   5.1 ALTERNATIVE WALL CONSTRUCTION
6. ROOF ASSEMBLY
7. UNDER FLOOR HEATING

ALL CALCULATIONS ARE BASED ON THE DRAWING DESIGNS AND WINDOWS SCHEDULES.

ANY CHANGE ON SITE WILL HAVE AN EFFECT ON THE CALCULATIONS.

BEFORE ANY CHANGES, THE PLANNED CHANGES MUST BE RECALCULATED TO ENSURE COMPLIANCE WITH SANS 10400XA AND SANS 204 AND OTHER REFERED SANS COMPLIANCE REQUIRMENTS

RESPONSIBILITY
THE OWNER ACCEPTS ALL RESPONSIBILITY FOR NONE COMPLIANCE TO SANS 10400XA AND SANS 204, SHOULD THERE BE ANY DEVIATION FROM THE DESIGNED PLAN, ONCE THE PLAN IS APPROVED BY THE LOCAL MUNICIPALITY

THE COMPLETED FORMS TO BE SUBMITTED TO THE LOCAL MUNICIPALITY .

GENERAL NOTES:

1. Contractor Notes:
- No construction may proceed on site prior to the approval of drawings by the local authority. Any building work that commences prior to the building plan approval is completely at the owner's own risk.
- The Architect may not be held responsible for any loss or damage whatsoever that may result from building works without approved building plans.
- Contractor to verify all levels, heights and dimensions on site and to check same against the drawings before putting any work in hand. Levels are approximate and must be verified by the Contractor prior pricing and construction. Relative floor levels will be determined after installation of master datum.
- Any discrepancies on drawings must be pointed out by the Contractor to the Architect prior to construction.
- Contractor is responsible for correct setting out of the buildings, all external walls with particular reference to boundaries, building lines, etc. Any errors, discrepancies or omissions to be reported to the Architect immediately.
- Contractor responsible to engage Building Inspector on each Construction Stage, to get full satisfaction in compliance with Local Authority by-law and regulations. - Burnt clay bricks only shall be used unless specific approval is obtained from the Architect alternative type of bricks.
- Conditions: The civil/structural engineer is responsible for soil test.

2. Certificates required:
- The following certificates of compliance to SABS and NBR standards may be required from the Contractor by the Architect:
FOUNDATION CERTIFICATE: Engineer.
DPC: Council Inspector.
PLUMBING AND DRAINAGE: Specialist Sub-contractor.
ELECTRICAL INSTALLATION :Specialist Sub-contractor.
TRAFFIC and ROAD MARKINGS: Engineer.
FIRE SAFETY CERTIFICATE: Specialist and/or Council.
ROOF STRUCTURE: Specialist Sub-contractor and/or Engineer.
CONCRETE SLABS: Specialist Sub-contractor.
WATERPROOFING: Specialist Sub-contractor.
GLAZING: Specialist Sub-contractor.

3. Materials and Finishes Notes:
- All finishing products such as windows frames, roof, tiles, cornices, etc must be approved by the Architect before ordering and installation.
- All product used must comply with SABS standards and Local Authority Requirements.
- Quality of all materials and workmanship to comply with the relevant SABS and SANS specifications and shall conform to the Standards specified in the Standard Preambles in the Bill of Quantities available for perusal at the Architect's office.
- Contractor is to build in approved DPC's whether or not these are shown on drawings to all external walls at each floor, beam or parapet level and to all window, door, grill or other opening in external walls. All partition work to comply with SABS 082 on NBR.

4. Building Standard Notes:
- All works must comply to the National Building Regulations and applicable SABS and NHBRC standards.
- Drawings may not be scaled for construction purposes. Figured dimensions to be used at all times.
- All drawings must be read in conjunction with one another.
- Notes reflected on drawings apply for the entire project and works.
- Any discrepancies on drawings must be pointed out by the Contractor to the Architect prior to construction and submission of tenders. If in doubt ask the Architect.
- Contractors are to ensure that all details shown on this drawing are compliance with local authority by-law and regulations.
- Contractors are to locate and identify existing services on site and to protect these from damage throughout the duration of the works.

5. Glazing Notes:
- All glazing to comply with NBR (SANS10400 - Part N) SABS 0137 & AAMSA.

Dimensions Nominal glass thickness	Glazing Max. Size Pane
3mm	0.75
4mm	1.50
5mm	2.10
6mm	3.20

- Any pane of glass installed in any door shall be safety glass and shall have a nominal thickness of not less than 6mm and doors not likely to be apparent to any person approaching them shall bear markings. Any glass lower than 500mm from floor finish shall be safety glass. Any window at staircases must be safety glass.

6. Flashing Notes: Provide 0.6mm flashing at all parapets and areas where the roof line changes.
7. Brickwork Expansion Joints Notes: Refer to Engineer for brickwork expansion joints.
8. Revisions: Refer to drawing list for latest revisions on drawings.
Any queries arising from all the above must be reported to the Architect for clarification before any work in put in hand.

REV No	DATE :	DESCRIPTION:
A	04.09.2023	ISSUED FOR COUNCIL APPROVAL

REVISIONS
SIZE ON ORIGINAL DRAWING 100 mm

client
Lucas Mokoena

Client Approval

Sign ---------- Date .....

Drawn
Dunmore Tirivanhu

TAFHIER DESIGNS
dunfir@yahoo.com +27 (0) 72 076 2318

Project
Proposed Residence On Portion 36 of ERF 1435, Sharon Park Lifestyle Estate,Extension 2, Springs

Status
FOR APPROVAL

Drawing
Plans, Elevations & Sections

Checked
DT

REG. NO.
(SACAP) ST2553

DRWG No.
TP189-01

Scale
as shown

Date
Oct 2023