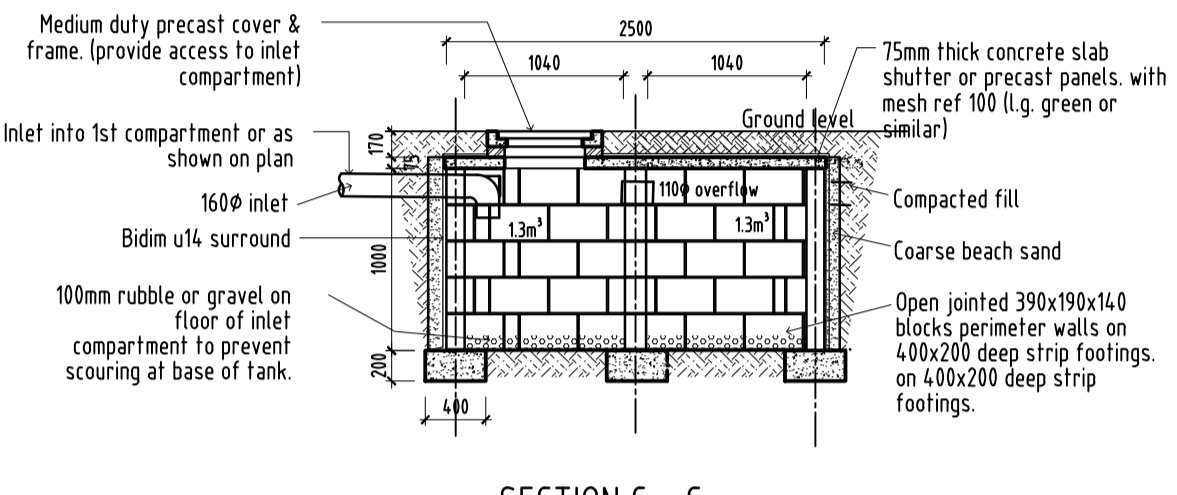
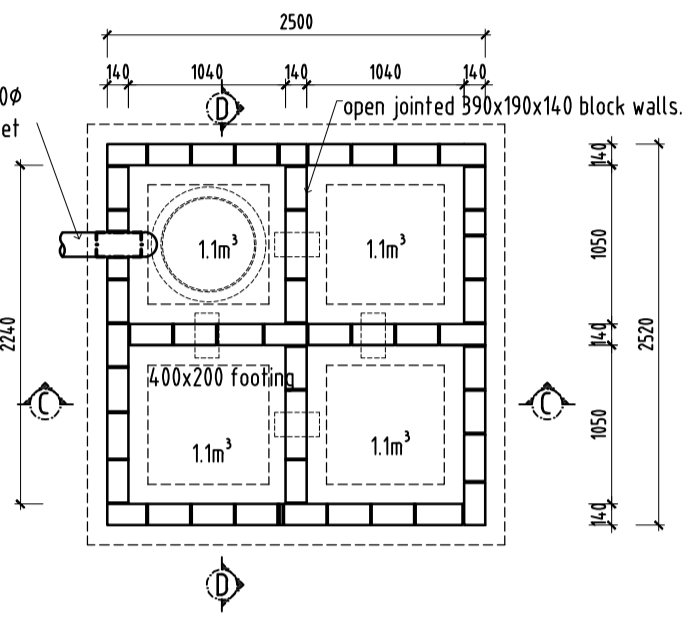


SECTION D - D
SCALE 1:50



SECTION C - C
SCALE 1:50

storm water calculations areas	
SITE AREA	= 1036.00 m ²
PROP. ROOF AREA	= 89.13 m ² (9%)
PAVED AREA	= 35.67 m ² (3%)
TOTAL HARD SURFACE PROP.	= 124.80 m ² (12%)
therefore: stormwater @ 1/40	
STORMWATER CATCH VOLUME	= 124.80/40
total	= 3.12 cub.m



FENESTRATION CALCULATIONS	GLAZING AGGREGATE CONDUCTANCE VALUE
Nett Floor area Lower Ground Lvl = 22.82m ²	Window Area x U = (W4 - 1.13 x 4.06) + (W4 - 1.13 x 4.06) + (D3 - 3.78 x 4.06) = 4.60 + 4.60 + 15.40 = 24.60
TOTAL GLAZING AREA	
W4 = 1.13m ²	
W4 = 1.13m ²	
D3 = 3.78m ²	
6.04m²	
(22.82/100) x 15 = 3.42	
Total Glazing Area = 12.71m ²	
6.04/22.84 = 26%	
Max. permitted Conductance = 22.82 x 14 = 3195	
Max. Solar Heat Gain = 22.82 x 0.11 = 2.51	
	GLAZING AGGREGATE SHGC VALUE
	D3 P/H = 550/2460 = 0.22 therefore 0.60 E north west
	North West Elevation = (D3 - 3.78x0.63x0.6) = 1.43
	W4 P/H = 3500/2200 = 1.60 therefore 0.18 E north east
	North East Elevation = (W4 - 1.13x0.63x0.18) = 0.13
	W4 P/H = 100/1500 = 0.05 therefore 1.17 E south west
	South West Elevation = (W4 - 1.13x0.63x1.17) = 0.83
	TOTAL = 2.39
WALLS CALCULATIONS	ROOF AND CEILING CALCULATIONS
R = 1/0	Minimum required R-Value = 2.7m ² /w
R = 1/20 + 1/9.4 + 1/6.2 + 0.110/0.82 + 110/0.82 = 0.05 + 0.11 + 0.17 + 0.14 + 0.14 = 0.61 m ² /K/W	Direction of heat flow - Down
	Roof R-value = 0.41
	Required insulation R-value = 2.29
	HF2 double sided aluminium foil = 2.20
	2.20 x 0.25 = 0.55
	< 0.55mm
	Outside thermal conductance co-efficient = 20 W m ² K ⁻¹
	Inside thermal conductance co-efficient = 11.0 W m ² K ⁻¹
	Thickness of corrugated metal roof sheeting = 0.0012m
	corrugated metal roof sheeting thermal conductance = 0.48 W m ² K ⁻¹
	Roof air space R-value = 0.18m W m ² K ⁻¹
	Sisalation Residential Thermal Resistance insulation = 1.103m ² K/w ⁴
	Sisalation Residential HF2 insulation = 0.055m
	Thermal conductance of Sisalation Residential HF2 insulation = 0.091 m ² K/w ⁴
	Thickness of gypsum ceiling board = 0.0127m
	Thermal conductance of gypsum = 0.17 W m ² K ⁻¹
	R = 1/20 + 1/11 + 0.0012/0.48 + 1.103/1 + 0.18 + 0.055/0.091 + 0.0127/0.17 = 0.05 + 0.09 + 0.01 + 1.103 + 0.18 + 1.15 + 0.61 = 3.20 m ² /Kw ⁴
ACTUAL LIGHTING AND POWER	
Nett Area = 22.82m ²	
Population = 6	
Energy Demand = 5 W/m ²	
5 x 22.82m ² = 114.10 W/m ²	
Energy consumption = 5 kWh/a	
5 x 22.82m ² = 114.10 kWh/a	
Total lights = 253W	
Lighting period = 5hrs/day	
52(weeks) x 7(days) x 5(hours) = 1820h.a	
253W = 0.253kW	
0.253kW x 1820h.a = 460.46kWh.a (-568.25kWh.a)	
Energy consumption complies	

DOOR TYPE	Aluminium Sliding Door	Position - Garage	DOOR TYPE	Double Garage door	Position - Garage
INTERNAL / EXTERNAL	External in brick wall		INTERNAL / EXTERNAL	External in brick wall	
DOOR CODE:	D1	No. of 01	DOOR CODE:	D2	No. of 01
DESCRIPTION:	40mm purpose made powder coated aluminium door frame made of Alusac Clipfront 44 section by Wispeco or other approved.		DESCRIPTION:	Purpose made Aluminium powder-coated roller shutter door	
FRAME:	Purpose made Aluminium powder-coated shopfront frame as per Sheerfront 36, or equal approved, complete with corner cleats & compatible lugs. Frame to fit in brick wall		FRAME:	As supplied by specialist and in compliance with SABS. Frame to fit in brick wall	
GLAZING:	6mm Toughened safety glass		GLAZING:		
IRONMONGERY	Sliding gear & lockset to be standard as supplied		IRONMONGERY		

WINDOW TYPE	Aluminium Top hung sash & fixed pane	Position - Garage	WINDOW TYPE	Aluminium Top hung sash & fixed pane	Position - Store / Garage
INTERNAL / EXTERNAL	External in brick wall		INTERNAL / EXTERNAL	External in brick wall	
WINDOW CODE:	W1	No. of 01	WINDOW CODE:	W2	No. of 02
DESCRIPTION:	Powder coated custom-made Aluminium top-hung opening and fixed panel glass		DESCRIPTION:	Powder coated custom-made Aluminium top-hung opening and fixed panel glass	
FRAME:	Powder coated Aluminium window as per Sheerfront 36, or equal approved, complete with corner cleats & compatible lugs. Frame to suit brickwork opening (shown) & to comply with AAAMSA PTHA1 performance standards		FRAME:	Powder coated Aluminium window as per Sheerfront 36, or equal approved, complete with corner cleats & compatible lugs. Frame to suit brickwork opening (shown) & to comply with AAAMSA PTHA1 performance standards	
GLAZING:	4mm Toughened safety glass & 4mm Monolithic Glass		GLAZING:	4mm Toughened safety glass & 4mm Monolithic Glass	
IRONMONGERY			IRONMONGERY		

DOOR TYPE	Aluminium Sliding Door	Position - Staff Qrts	DOOR TYPE	Semi solid swing door	Position - Store
INTERNAL / EXTERNAL	External in brick wall		INTERNAL / EXTERNAL	External in brick wall	
DOOR CODE:	D3	No. of 01	DOOR CODE:	D4	No. of 01
DESCRIPTION:	40mm purpose made powder coated aluminium door frame made of Alusac Clipfront 44 section by Wispeco or other approved.		DESCRIPTION:	40mm semi solid timber standard door with hardwood finger jointed sashes - size 813mm x 2132mm high	
FRAME:	Purpose made Aluminium powder-coated shopfront frame as per Sheerfront 36, or equal approved, complete with corner cleats & compatible lugs. Frame to fit in brick wall		FRAME:	Purpose made hardwood frame for 110mm internal wall. Frame to fit in brick wall	
GLAZING:	6mm Low E Toughened safety glass		GLAZING:		
IRONMONGERY	Sliding folding gear & lockset		IRONMONGERY		

WINDOW TYPE	Aluminium Top hung sash & fixed pane	Position - Garage	WINDOW TYPE	Aluminium Top hung sash & fixed pane	Position - Staff Qrts
INTERNAL / EXTERNAL	External in brick wall		INTERNAL / EXTERNAL	External in brick wall	
WINDOW CODE:	W3	No. of 01	WINDOW CODE:	W4	No. of 02
DESCRIPTION:	Powder coated custom-made Aluminium top-hung opening and fixed panel glass		DESCRIPTION:	Powder coated custom-made Aluminium top-hung sash and fixed panel glass	
FRAME:	Powder coated Aluminium window as per Sheerfront 36, or equal approved, complete with corner cleats & compatible lugs. Frame to suit brickwork opening (shown) & to comply with AAAMSA PTHA1 performance standards		FRAME:	Powder coated Aluminium window as per Sheerfront 36, or equal approved, complete with corner cleats & compatible lugs. Frame to suit brickwork opening (shown) & to comply with AAAMSA PTHA1 performance standards	
GLAZING:	6mm Toughened safety glass		GLAZING:	4mm Toughened safety glass & 4mm Monolithic Glass	
IRONMONGERY			IRONMONGERY		

DRAINAGE NOTES

- Stormwater :
- Stormwater line & channels to fall towards catchpit to discharge onto stormwater soakpits/soakaway
 - Road surface laid to discharge stormwater on floor grating
 - 80mm dia pvc s.w. line at approx. 1:80 fall to soakpits/soakaway
 - existing Stormwater lines & channels to not be disturbed and if unavoidable to be connected onto proposed stormwater line

DOORS :

- All internal doors to be 762x44x2032mm semi-solid flush panel core doors with std timber int. frames
- (Balcony) 1800mm wide Powder coated aluminium sliding door with ironmongery standard as supplied. 6mm safety glazing to comply with SANS Part N
- (Staff Qrts) 1800mm wide Powder coated aluminium sliding door with ironmongery standard as supplied. 6mm safety glazing to comply with SANS Part N
- (Garage) 2440x2100mm Bronze anodised Aluminium roller shutter door standard as supplied with automated closing mechanism

WINDOWS :

- All windows to be powder coated Aluminium top hung and fixed with 6mm safety and 4mm monoleathic glass to comply with Part N of SANS 10400 and fitted in accordance with NBR's

NOTES

GENERAL

0 dimensions to be used in preference to scaling
 0 all building work must comply to SANS 10400 standards.
 0 all dimensions, boundary beacons & levels to be checked, exposed and demarked prior to commencement of work.
 0 all specifications are applicable for standard conditions, if any abnormal conditions are encountered, it must be reported to the plan producer

SPECIFICATIONS

OWNER'S SIGNATURE

MASHA DESIGNS
 Architects & Urban Designers

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 Durban
 4001

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PROJECT	PROPOSED Garage, and Outbuilding Alterations for Reg. Owner - Siphelo Eugene & Naledi Ndlela at Lot 394 Coedmore, 6 Eagle Hill, Yellowwood Park		
TITLE	Stage 4: Submission Drawings Section & Elevations		
SCALE	1:50 / 1:100	DRAWN	B Shange
DESIGNED	B. Shange	CHECKED	B Shange (SACAP - 7755)
DWG. NUMBER	DATE	15/09/2021	
2021/01 - W102			