

SOUTH ELEVATION scale 1:50

Energy Efficiency in Buildings

Supplemental Guide to SANS 10400-XA & SANS 204 – Repx Report Date: 12 September 2015 Registered to: LBO Consultants

Basic Fenestration Calculations

Er No. 1573 DURBAN NORTH

Consta Conductance (CU) constant: 1.4 Solar Heat Gain (CSHGC) constant: 0.11 Max. Conductance / Solar Heat Gain

Ground Storey
Permissible Net Floor Area of Storey / Room: m² 471.54
Fenestration Area of Storey / Room: m² 69 875
Max. Conductance (CU) for Storey / Room: 204.75
% Fenestration Area to Net Floor Area: 14.82 %

Achieved Aggregate Conductance / Solar Heat Gain Conductance / Solar Heat Gain Available

Ground Storey
Conductance (CU) for Storey / Room: 184.86
Conductance (CU) for Storey / Room: 19.89
Solar Heat Gain (CSHGC) for Storey / Room: 13.18032
Solar Heat Gain (CSHGC) for Storey / Room: 2.90715

First Storey
Permissible Net Floor Area of Storey / Room: m² 392.44
Fenestration Area of Storey / Room: m² 69.875
Max. Conductance (CU) for Storey / Room: 63.938
% Fenestration Area to Net Fit or Area: 17.81%
Max. Schar Heat Gain (CSHGC) for Storey / Room: 5.0237

Achieved Aggregate Conductance / Solar Heat Gain Conductance / Solar Heat Gain Available

First Storey
Conductance (CU) for Storey / Room: 121.107
Conductance (CU) for Storey / Poom: 0
Solar Heat Gain (CSHGC) for Storey / Room: 9 654876
Solar Heat Gain (CSHGC) for Storey / Room: 0

To be read in conjunction with the energy efficiency report

Geyser installation to comply with sans 10264 all

outflow to connect to ventpipes all plumbing material to be sabs/jaswil approved water inspectors to be contacted on 031-311 8118 once construction

(W23)

500(500)

FRAME FINISH : Anolok bronze 543 anodised (Grade AA25

window area: 1.08m² SCALE: 1:160

PLUMBING NOTE:

Walls to comply with part k of sans 10400 Lintels to comply with part k of sans 10400 All shower doors to be 10 mm safety glass safety glass All plumbing to comply with water supply bylaws contractors and plumbers are to be registered with

not s-traps.

GENERAL NOTES:

All foundations, fill and structural work to Engineer's details.
 All cut and fill banks to be 26°.

- All dimensions to be checked on site before

commencing construction.

NGL is in approximate position only. No claim can be made for any discrepancy on site.

Witten dimensions to be taken to preference to

- All glazing to comply with Part N of SANS 10400. - All retaining walls to have vertical DPC's.
CONSTRUCTION:

Roof: Marley Standard Terracotta Monarch concrete roof tiles (code: TMOSTTC), size 420 x

332mm laid in straight bond with minimum 75mm headlap, fixed at a pitch of 17.5° then 45° with

with each tile fixed using non-corrosive nails in 38 x 38mm sawn softwood battens at maximum 345mm centres, on Marley Under Tile Membrane with joints lapped 150mm, fixed over rafters with trusses at 700mm centres.

Foundations: std. concrete strip foot foundations to be reinforced on engineer's recommendation if

necessary.
- Windows / Doors: std. hardwood doors and anodised aluminium windows to be installed.
- Rainwater Goods: std. PVC rainwater goods

- Namwater Goods, sai, PC sairwater goods, fibre-cement facia and barge boards.
- Sewer and stormwater to join existing.
SEWERAGE:
- IE's to be provided at all bends and junctions to

To be incased in concrete if less than 450m

- Soil vent pipes to be fitted with 2-way vent

Waste pipes to be 50mmØ, PVC soil pipes and vents to be 100mmØ, PVC all traps to be p-traps

- Rodding eyes to be provided at all junctions and

soil and waste pipes.
- All soil pipes to be 100mm Ø PVC.

scaling.

No walls or foundations to encroach any

GEO-TECH NOTE

ENERGY EFFICIENCY NOTES

OCCUPANCY CLASSIFICATION : H4 Dwelling House

2. CLIMATIC ZONE :

 Sub Tropical Coastal , Zone 5 ENERGY DEMAND / CONSUMPTION :

4. FLOOR INSULATION:

No Requirement

WALL CONSTRUCTION :

- Required "R" value = 0.35 - Double-skin masonry wall, no cavity, plastered internally or randered externally, or Single-V af masonry wall, nominal wall thickness not < 140 mm, plastered internally and rendered externally. -20mm plaster internally and externally.
- CR value = 60 hrs

6. FENESTRATION :

- All glass to be Single Clear / laminated in Alumburn

refer to fenestration schedule on sheet 2 of 2. 'U value = 3.4 & 'SHGC = 0.54

7. ROOFS :

100 mm thick flexible fibre glass blanket (ceiling) insulat. with a density 10-13 kg/m2 & min r-value 2.17m2.kw, shall be

installed so that it maintains its position and thickness, other than where it crosses roof battens, water pipes or elecated all cables, and it overlaps the wall member by not less than 50mm, or tightly fitted against a wall. - Roof not vented - Concrete roof tiles @ 17.5° pitch -Roof assemblies to have a min. R-value of 2.7
-Clay tilled roof assemblies
-Direction of heat flow down.

-R-value of roof covering material = 0.48 -R-value of approved insulation = 2.17 -R-value of approved -SR-value of ceiling TOTAL

AIR INFILTRATION AND LEAKA

external doors provide door seals / draught protection LIGHTING AND POWER :

- Max. Energy Demand = 1070.20 W
- All light bulbs fittings to be low energy Compact
Fluorescent Lamps (CLF) - 982.20 W total lamp energy demand = 88 W

The innual demand and consumption of the above building is less than that of a H4 reference building.

10. HOT WATER SERVICE : water installations in buildings shall be in accordance with sans 10252-1 and sans 10254
-150lt geyser to be installed in roof space.
-3.5 kW SANS approved "Kwikot" heat pump
-not more than 50% of hot water may be heated by

11. PIPE INSULATION :

insulation shall be protected against the effects of weather and sunlight, be able to withstand the temperatures within the pipes, and achieve the min total r-value of 1.0 thermal insulation shall be installed in accordance with the manufacturer's instruction.

-all hot water supply pipes insulated and installed with a material with a min. r-value of 1.00 (glasswool snap on pipe insulation)

all hot water vessels / tanks to be installed with a material achieving a min. r-value of 2.00 (foil faced

ITE /REA	3264
ERMITTED F.A.R	2612
PERMITTED COVERAGE - 40%	1306
XISTING FAR	697.93
EXISTING COVERAGE	467.30
NEWFAR	122
NEW COVERAGE	589.3
TOTAL NEW FAR - 0.32	244
TOTAL NEW COVERAGE - 26.05%	1178.6

GENERAL NOTES - WINDOWS All aluminium to be 25micron natural aluminium
All aluminium to be provided with protective tape whilst work is in progress
All aluminium & glazing to comply with part 'n'
of sans 10400, aaamsa & saaga regulations All glazing to bottom rail to be silicone sealed prior to fixing of glazing bead Contractor to allow for sealing of all

TION SCHEDULE

"brickgrip" OPC's to be provided over all slabs, all cills, perspets and elsewhere as required by all authority and in accordance with NBR and ir systyms. sed steel coir outguards, lapped and addered is to be to local authority requirements. min-procled althority requirements. min-procled althority requirements. In accordance to be ported outgree 'valued' un-thernoles specified on drawing.

W2

(w9)

W16

bads to be laid on Gundle UFS green mem-on ground poisoned by specialist to SABS re-rents.

NOED FLOORS AND R/CONCRETEuilt strictly in accordance with professional iral engineer's details under his supervision to be plastered unless otherwise noted. ING WALLS:-left strictly in accordance with professional and explaner's details.

G. DRAPHAGE:

1. The contractor is required to ensure L'et he installs necessary atomissier and/or stewer consections before drainage work commences. It is thereafter the contractors responsibility to ensure adequate falls to heae connections.

2. Approval for the ailing of explicit tent and/or analysis together with any percolation tests which may be required in to be obtained from the local authority by the contract ir is responsible for resuming that storm-safer damay to the work in progress or the neighbouring propertie: see not obbut during construction and the little surface, water drainage is adequate.

Windows to be timber - Tailormade Joinery

2. Timbur to be primed and painted. J. GLAZING:
 1. All glazing is to be accordance with NBR 0400.
 2. Glazing to bethrooms and WC's to be in obscure glass.

K. SITING AND EXCAVATIONS:-All boundary bascone are to be flagged by a registered land surveyor and the conteactor is to obtain a certificate stating that the work has been correctly set out before percessing with excentitions.

L LOCAL AUTHORITY:

1. The center is responsible for all local sufficity notices and fees.

2. The center is required to obtain all necessary connections to services.

3. Where local sulforthy or government regulations require more stringers specification than shown herein, they are to be followed with prior consent of the center.

4. The confirmation is to impact the official approved copies of the drawing to ensure that all amendments have been taken into account.

5. All hight and SABS standards and specifications are to be achieved to as a minimum standard and good construction principles.

6. All levels are approximate.

2. All brickwork to be cross-bonded every 4 courses vertically, namely Plessand and painted houses.

3. Sakring to be 100mm Meranis with quadrant.

4. Enternal cills to be glazed with drip (250 Micron DPC under).

5. Internal cills must be "" with trim.

5. All aluminum windows to be sealed around edges with Polyacquiste sealent.

7. All window heads to have drip groove.

8. All paragets seals to have coping with drip groove with 250 micron DPC under, (coping to be impersious to water) and seater proofed.

9. Au fleshing to be geranteed for 10 years.

10. All fleshing to be geranteed for 10 years.

11. All walls to have coping with drip fall away from face with drip mould on softs.

Q. NOTES PERTAMMENT TO ELEVATION

1. Roof pich as inclusion on section.

2. Roof covering - concrete roof bles.

3. Roof to be desegred by seculate & eng to certify roof.

4. Af map pees & guidening by seculate.

5. Pleaser and pair-1. Color, to comers specifications.

6. All counters, beams & other shuckural work to engs 24%:

7. 1. Om high at balustrading to specialist delts. To compare with

8. All minimum emidous & doors by specialist delts. To compare with

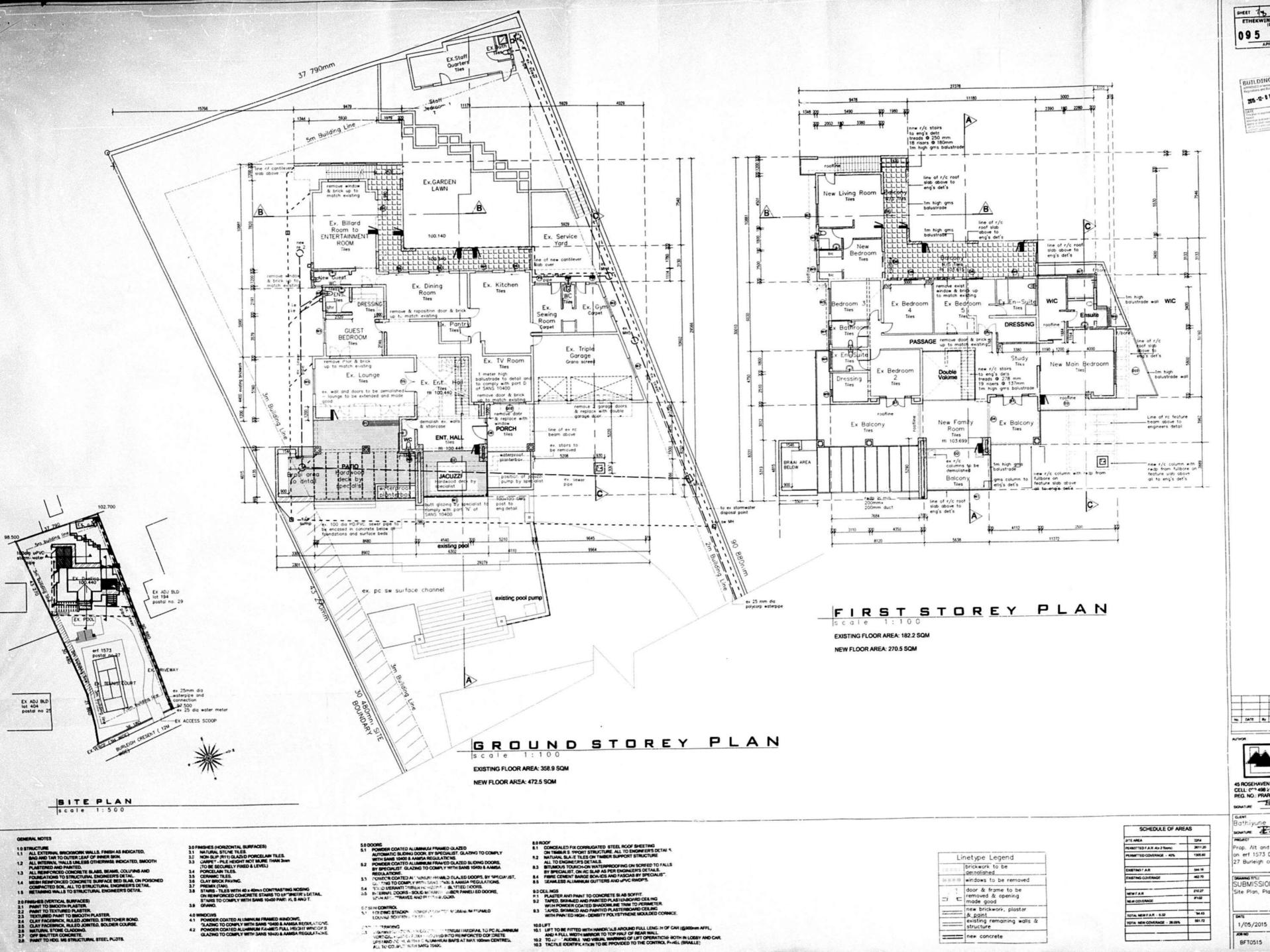
8. All minimum emidous & doors by specialist delts. To compare with

a peoficialism.

9. All finished ground lines to be graded to partie slope. No back@people.

10. Stormwater and severe pipe to comply SANS 10400.

11. All construction carried out to meet all SANS 10400.



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BUILDING APPL

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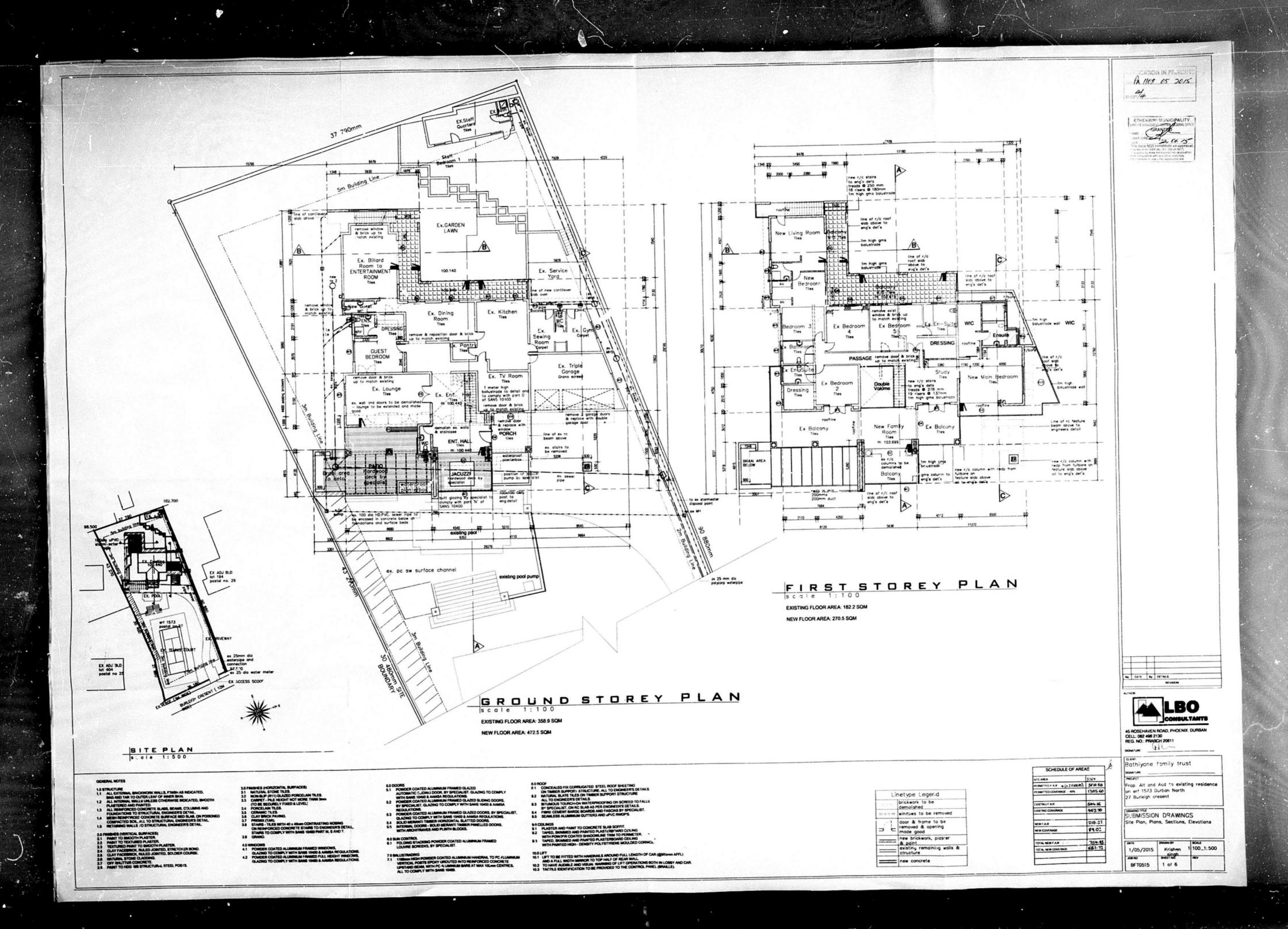
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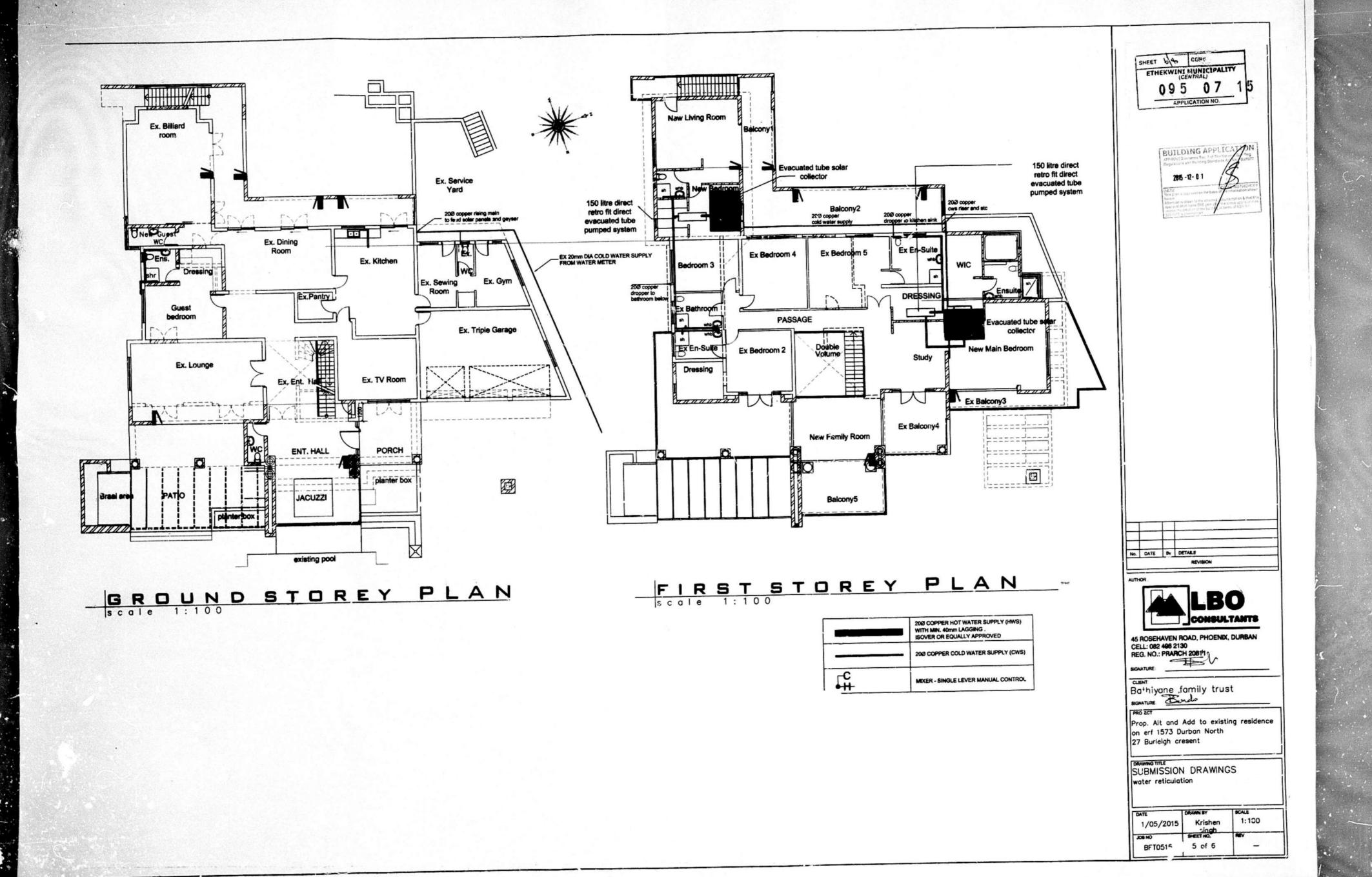
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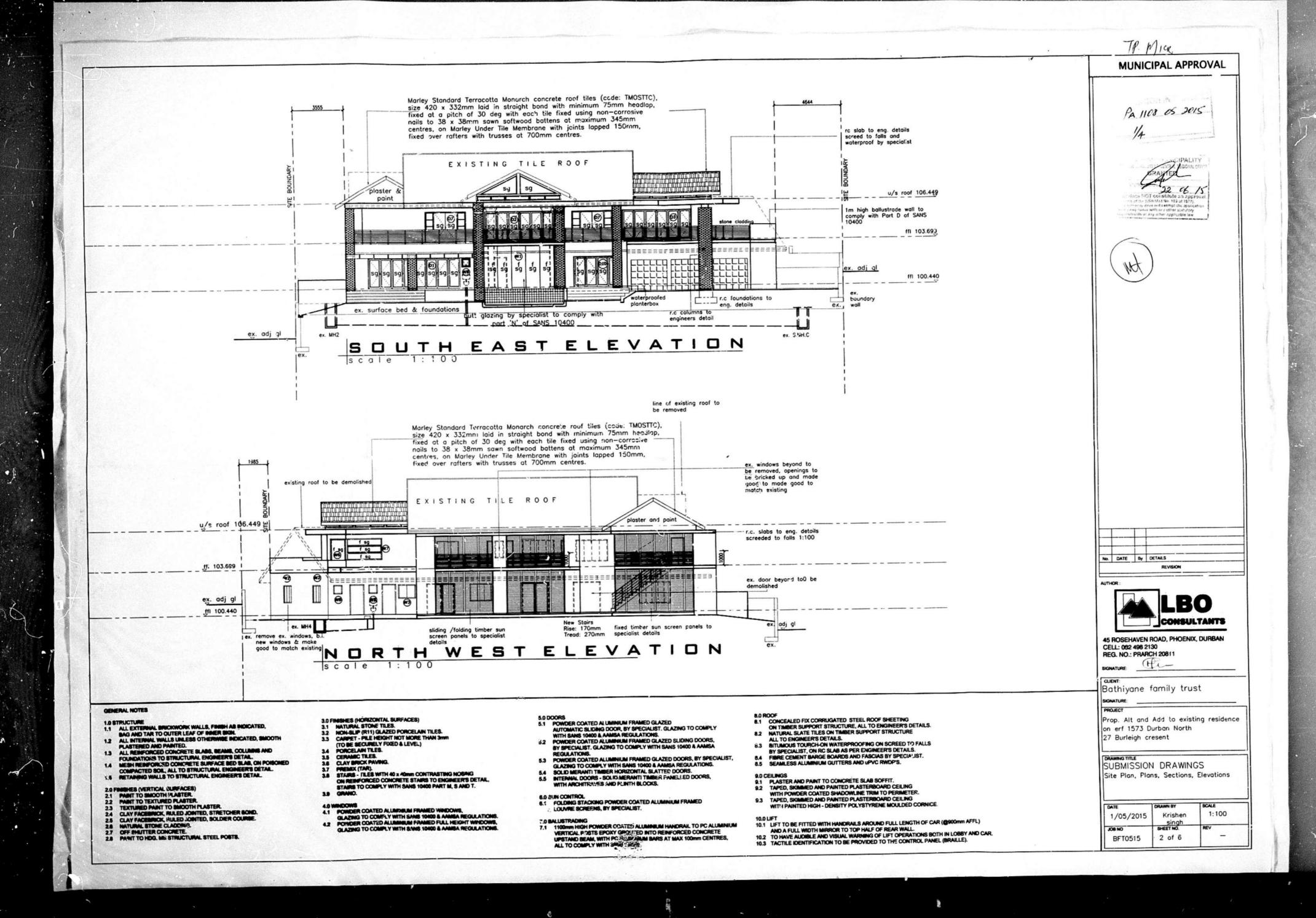
Prop. Alt and Add to existing residence on erf 1573 Durban North 27 Burleigh cresent

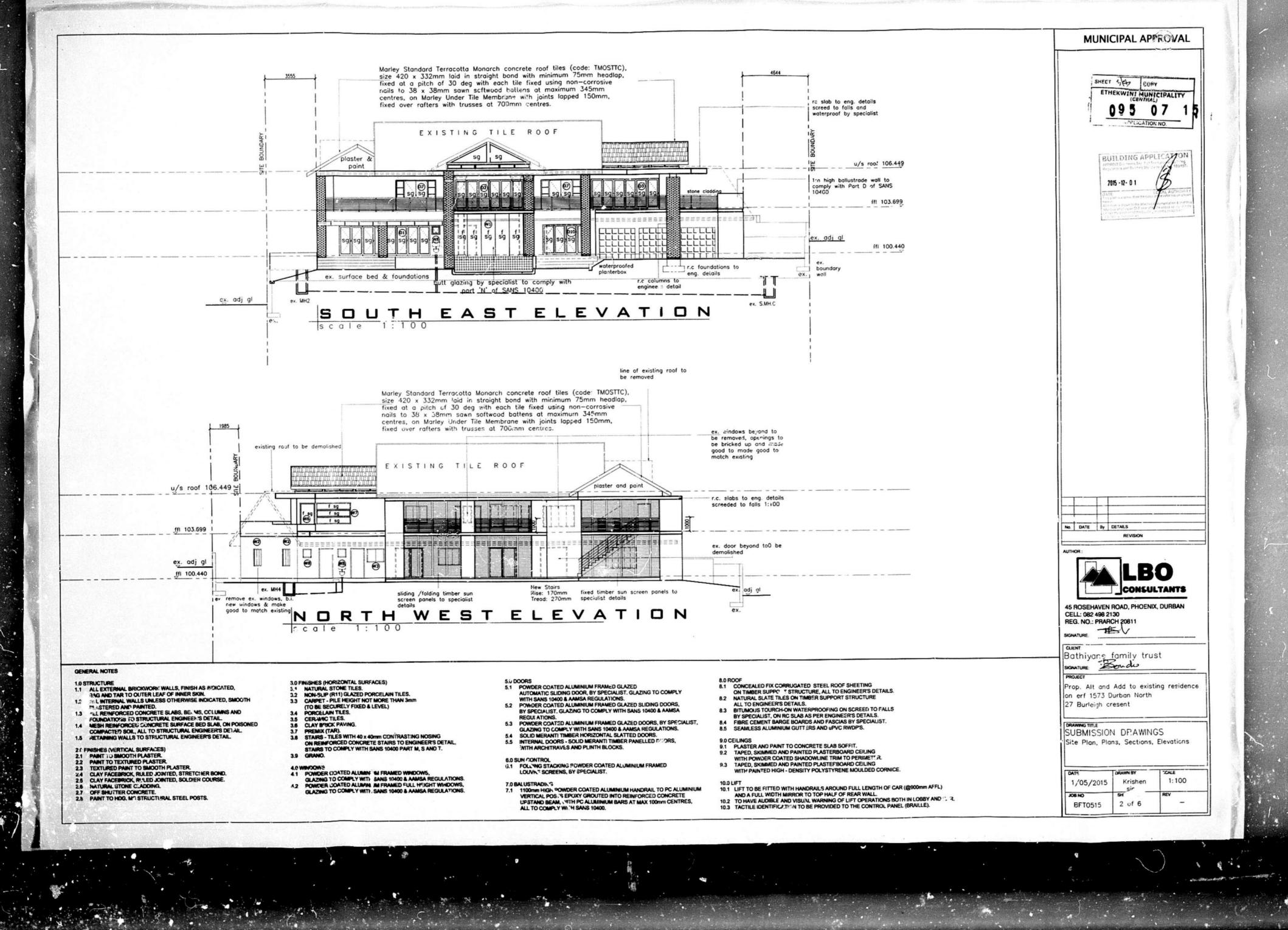
SUBMISSION DRAWINGS Site Plan, Plans, Sections, Elevations

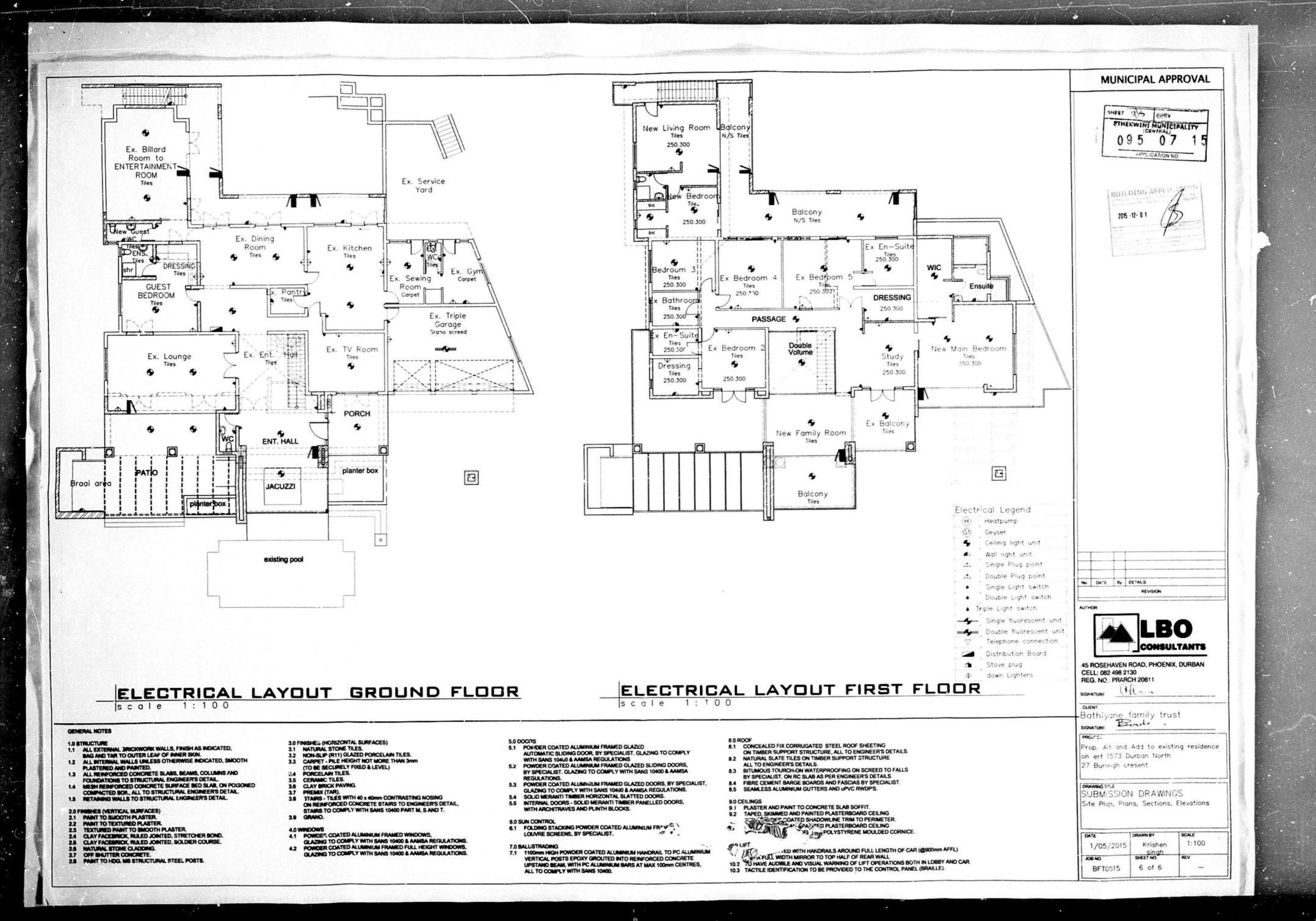
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tenestra from

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Door area: 5.88m²

PHYSICAL DESCRIPTION: glass door with side panels QUANTITY:2 DOOR SIZE:2100×2800

FRAME FINISH :Anolok bronze S43 anodised (grade AA 25µ-2thick

GLASS TYPE :6mm annealled saftey glass

POSITION : Existing bedroom 2, study

900 1 900

Door area: 3.7m²

PHYSICAL DESCRIPTION: 2 penel sliding door QUANTITY:5
DOOR SIZE:1800x 2100mm

GLASS TYPE :6mm annealled saftey glass

FRAME FINISM :Anolok bronze 543 anodised(grade A/ 25µ-2 thick POSITION :Existing dinning room,kitchen,existing bedroom 5, new bedroom

1800 1820 | 820

Door area: 3.7m2

DOOR SIZE :1800x2100mm

GLASS TYPE :6mm annealled saftey glass

POSITION : Dressing room, existing lounge

MUNICIPAL APPROVAL

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> BUILDING APPLICATION 2015 -12- 0 1

DOORS

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	4900 ag sg sg sg sg	4500 eq_eq_eq_eq_eq_eq	eq eq eq eq
Door area: 13.8m ²	Door area : 10.2m²	Door area :9.45m²	Door area : 6.3m²
PHYSICAL DESCRIPTION:8 panel folding door	PHYSICAL DESCRIPTION: 7 panel folding door	PHYSICAL DESCRIPTION: 6 penel folding door	PHYSICAL DESCRIPTION: 4 panel folding door
QUANTITY:1	QUANTITY:1	QUANTITY:1	QUANTITY :2
DOOR SIZE :640*1942	DOOR SIZE :550x877mm	DOOR SIZE :4500x2360 mm	DOOR SIZE :3000x2100mm
GLASS TYPE :6mm annualled saftey glass	GLASS TYPE :6mm annealled saftey glass	GLASS TYPE :6mn1 annealled saftey glass	GLASS TYPE :6mm annealled saftey glass
FRAME FINISH : Anolok bronze 543 anodised (Grade AA2Su -2 thick	FRAME FINISH : Anolok bronze 543 anodised (grade AA25µ -2 thick	FRAME FINISH : Anolok bronze 543 anodised(Grade as 25µ -2 thick	FRAME FINISH : Anolek bronze 543 anodised (grade AA 25y -2 thick
POSITION : Existing lounge	POSITION :new family roon.	POSITION :new main bedroom	POSITION :entertainment room,new living room
(a)	69	010	
	3000 2400 1500 30 80 80	eq eq eq eq	
	3000	2800	
Door area : 3.5m² Physical Description: hardwood pivot door	Door area : 7.08m² PHYSICAL DESCRIPTION: 1 sliding panel, 2 fixed	Door area : 5.88m²	
Door area : 3.5m ² PHYSICAL DESCRIPTION: hardwood pivot door QUANTITY:1	Door area : 7.08m² PHYSICAL DESCRIPTION: 1 sliding panel,2 fixed QUANTITY :1	Door area : 5.88m² PHYSICAL DESCRIPTION: 4 GELS panels QUANTITY:	
Door area : 3.5m² PHYSICAL DESCRIPTION: hardwood pivot door QUANTITY:1 DOOR SIZE:1500x2300	Door area : 7.08m² PHYSICAL DESCRIPTION: 1 sliding panel,2 fixed QUANTITY :1 DOOR SIZE :3000x2100	Door area : 5.88m² PHYSICAL DESCRIPTION: 4 GELS panels QUANTITY: DOOR SIZE:	
Door area : 3.5m ² PHYSICAL DESCRIPTION: hardwood pivot door QUANTITY :1	Door area : 7.08m² PHYSICAL DESCRIPTION: 1 sliding panel,2 fixed QUANTITY :1	Door area : 5.88m² PHYSICAL DESCRIPTION: 4 GELS panels QUANTITY:	

16001

window area : 0,6 m sq SCALE: 1:100 PHYSICAL DESCRIPTION:1 side hung penel QUANTITY :3 WINDOW SIZE :500x1000

GLASS TYPE :6mm anneated saftey gleen FRAME FINISH :anolok bronze 543 snodleed (grade AA 25µ-2 thick

POSITION : Ensuite, ex ensuite, Dressing

WINDOWS

-M8

window area : 0,36 m sq SCALE: 1:100 PHYSICAL DESCRIPTION: 1 top hung QUARTITY:3 WINDOW SIZE: 400:4600mm

GLASS TYPE :5mm enneelled softey glass

FRAME FIRISH :analok bronze 543 anadleed (grade AA 25µ- 2 thick POSITION :ex wc.ex gym, wc

ALE: 1:100 SCALE:	nneefied seftey glass GLASS	GLASS TYPE :6mm annealled saftey glass GLASS TYPE :6mm an	GLASS TYPE :6mm anealled saftey glass GLASS TYPE :6mm ane	GLASS TYPE :6mm anealled saftey glass G FRAME FINISH :anolog bronze 54 ; and dised (grade AA FR	LASS TYPE :
and so	QUANT			WINDOW SIZE :3040x1460 W	VINOOW SIZE :3600x1500
ndow area :26.08m sq window area : 1.08 window area : 1.2 window area : 4,43 SCALE: 1.100			PHYSICAL DESCRIPTION: 2 side hung PHYSICAL DESCRIPTION	THIS OLD DESCRIPTION E HARE I LEP HE F	HYSICAL DESCRIPTION: 6 fixed panels
				window area : 4,43	window area : 5,4 m sq CALE: 1:100
	0 00 00 00 00	2100	600600	997	
5604 S 3091	15 3091		1200 t	3040 1040 1240	1600 7500

No. DATE By DETAILS

CONSULTANTS

45 ROSEHAVEN ROAD, PHOENIX, DURBAN CELL: 082 498 2130 REG. NO.: PRARCH 20811

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PROJECT

Prop. Alt and Add to existing residence on erf 1573 Durban North 27 Burleigh cresent

SUBMISSION DRAWINGS Site Plan, Plans, Sections, Elevations

DATE	DRAWN BY	SCALE
1/05/2015	Krishen sinah	1:100
JOB NO	SHEET NO.	REV
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