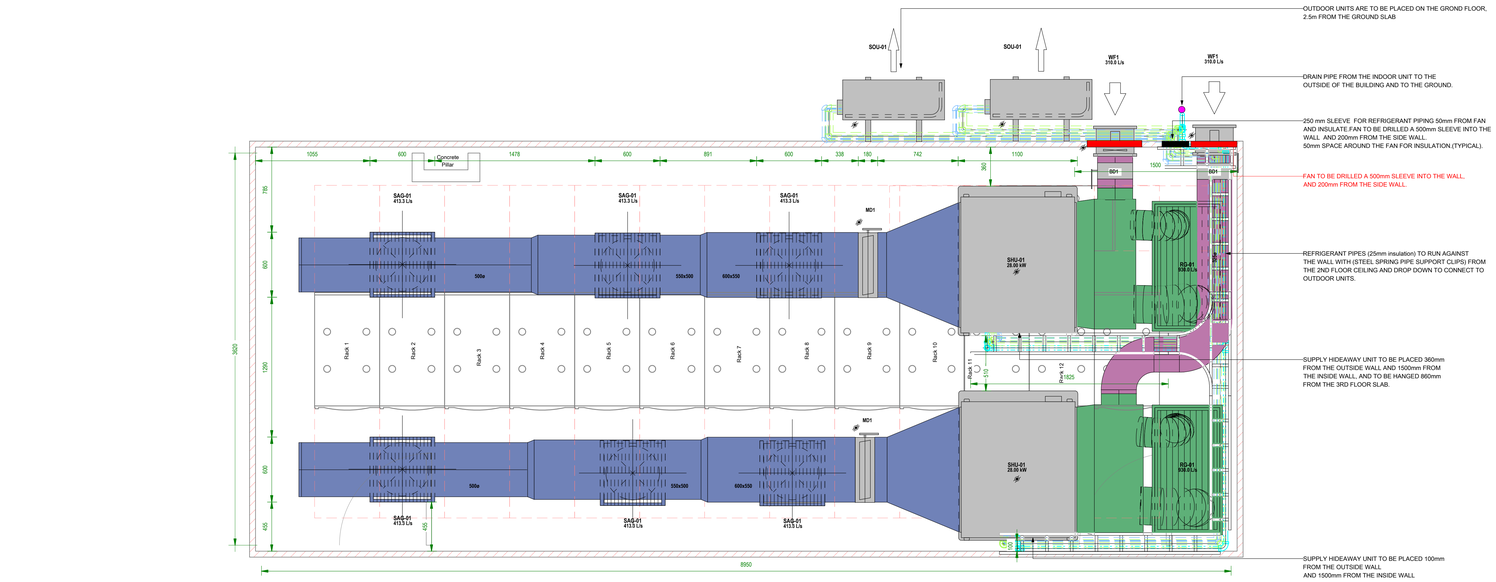
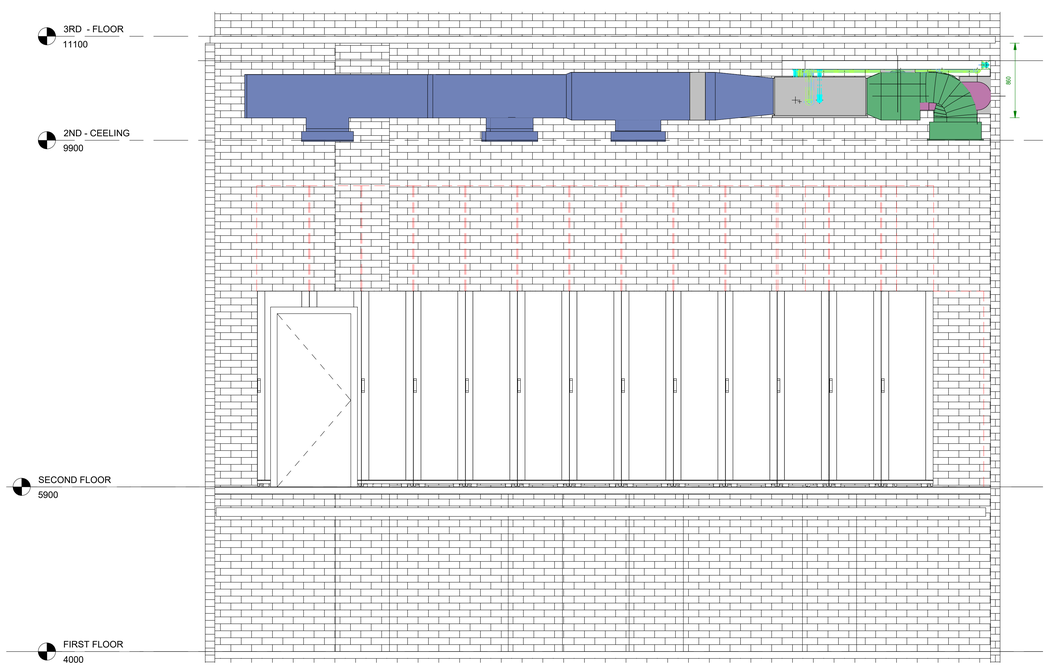
DRG. No. ST51018 REV.



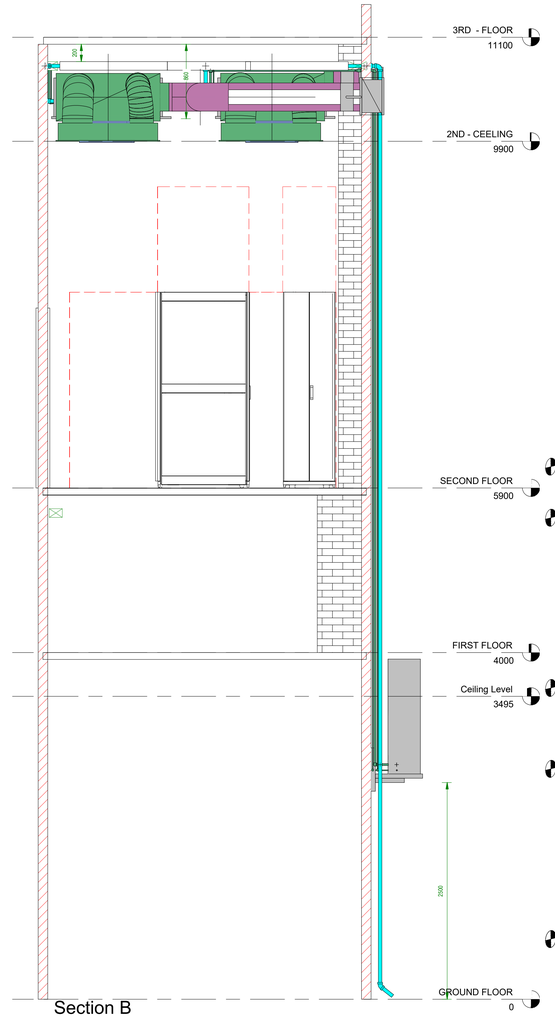
Second Floor Plan Server Room 5th Floor

1 : 20



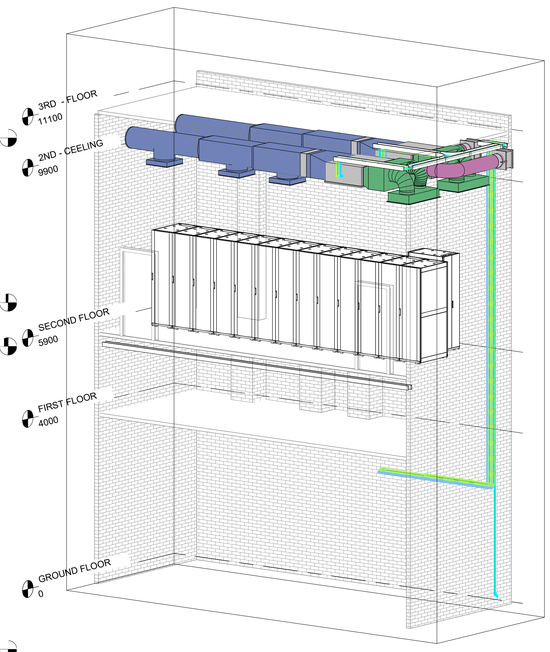
Section A

1 : 25



Section B

1 : 25



3D SERVER ROOM

Standard Notes:

1. All exhaust air ducting to be un-insulated unless otherwise stated.
2. Duct sizes shown are internal sizes.
3. For duct treatment refer to specification.
4. All ducting to be manufactured & installed in accordance with SANS 10142-1
5. All A/C shafts to be fitted with a mentis grid platform on all floors including airtight access door unless otherwise stated.
6. All exposed ducting to be painted to an approved colour, unless otherwise stated.
7. For location of valves, instrumentation, etc refer to SICO drawings & water schematic drawing.
8. All take-offs from supply & exhaust air ducting to have take offs.
9. A/C equipment to be fitted with anti-vibration mountings as per the specification.
10. HVAC (sub)contractor to ensure that all condensate drains are trapped and sloped adequately. All drains to be tested for leaks and operation.
11. All ducting to be flat on top,unless otherwise stated.
12. HVAC (sub)contractor shall be responsible for connecting the condensate drains to the drain stack. The connection must be a inverted solid connection to prevent leakage, unless otherwise stated.
13. All refrigerant piping, electrical and control wiring between indoor and outdoor split type units shall run in trunking with cover plate / Wire basket / tray and adequately strapped.
14. All supply air ducting to be externally insulated & treated as per specification, unless otherwise stated.
15. All BMS wiring shall be installed in PVC / galvanised conduit by the BMS (sub)contractor, unless otherwise stated.
16. All supply air flexible's to be of the insulated acoustic type.
17. All chilled / hot water pipes to be treated as per specification.
18. All fans to have inlet /outlet cones complete with wire mesh screen where not directly connected to ducting.
19. All pipes to be colour coded as per specification.
20. All diffusers/grilles/louvres "finish" to be approved by the architect.
21. All exposed chilled water pipes to be, insulated, vapour sealed and cladded, as per specification.
22. Auto air vents to be provided in pipe runs where required.
23. Drain points with ball valves, plugged must be provided at bottom of each chilled water riser and at lowest point in plant room.
24. All equipment selected must fit into plant room provided.
25. Sufficient space for adequate maintenance must be allowed for around equipment.

Design Notes:

1. JOHANNESBURG ALTITUDE @ 1752m
2. INTERNAL SUMMER CONDITION = 23°C DB
   16.4°C DB
3. 50% SATURATION
4. EXTERNAL SUMMER CONDITIONS = 30°C DB
   20°C DB
5. SERVER ROOM RECOMMENDED CONDITIONS = 15°C to 18°C
6. RETURN AIR TEMP. 27°C to 30°C
7. PLANT EXIST CONDITIONS = 14°C DB

HVAC Legend

- Supply Air Duct Insulated Externally
- Return Air Duct
- Fresh Air Duct
- Extract Air Duct
- Return Air Grille
- suppy Air Grille
- Balancing Damper
- Fire Damper
- Hide Away Unit
- Single Phase Isolator
- Three Phase Isolator
- Drain Point In Ceiling
- Drain Point Below Ceiling
- 25mm Door Undercut
- 500mm X 500mm Fan Sleeve
- 250mm X 250mm Refrigerant Piping & Condensate Pipe Sleeve

NOTE:

SOU-01 - Split Outdoor Unit
SHU-01 - Split Hideaway Unit
WF-01 - Wall Fan
BD-01 - Balancing Damper
MD-01 - Motorised Damper
RAG-01 - Return Air Grille
SAG-01 - Supply Air Grille

LOT Server Room Mechanical Equipment Schedule

Code	Description	Description	Cooling Capacity	Heating Capacity	Air Flow	Supply Air Temperature (°C)	Height	Width	Depth	Weight	Power Requirement	Power (V-Ph-Hz)	Quantity	Notes
SHU-01	Hideaway Unit	Split Hideaway Unit	28.00 kW	31.50 kW	1240.0 L/s	18-21	470	1380	1100	24.00 kg	1.19 kW	230/1/50	2	
SOU-01	Slpit Condensor	Split Condensor Unit	0.00 kW	0.00 kW			1325	940	370	0.00 kg	9.80 kW	230/3/50	2	
WF1	Wall Fan Unit	Wall Fan			310.0 L/s		380	350	230		0.08 kW	230/1/50	2	

LOT Server Room Duct Accessory Schedule

Code	Description	Air Flow l/s	Inlet Diameter (mm)	Depth	Height	Width	Quantity	Notes
BD1	Balancing Damper	0.0 L/s	315				2	
MD1	Motorized Damper	1240.0 L/s		180	550	600	2	

LOT Server Room Air Terminal Schedule

Code	Description	Air Flow l/s	Inlet Diameter	Width	Height	Quantity	Notes
RG-01	Return Air Grille	930.0 L/s	350	1200	650	2	
SAG-01	Supply Air Grille	413.3 L/s	500	600	250	6	

Revision Schedule

Rev	Date	by	Description
A	2024.06.24	EM	Issued For Information
B	2024.07.08	EM	Issued For Information
C	2024.08.14	MS	Issued For Information
D	2024.09.13	MS	Issued For Information

QTY	ITEM No.	PART No.	DESCRIPTION	MANUF.

MATERIAL LIST

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SABC Broadcasting
A DIVISION OF THE SABC

TITLE
TV NEWS BLOCK
B1 TV NEWS & LOT SERVER ROOMS
HVAC LAYOUT

DRAWN: JOEY 03-09-24
CHECKED
ENG.
APPVD.
DEPT.
DRAWING NO. ST51018
REV. D
SCALE N/A
SHEET 1 OF 2

DO NOT SCALE THIS DRG.
TOLERANCES
NO DEC PLACE ±0.5
ONE DEC PLACE ±0.3