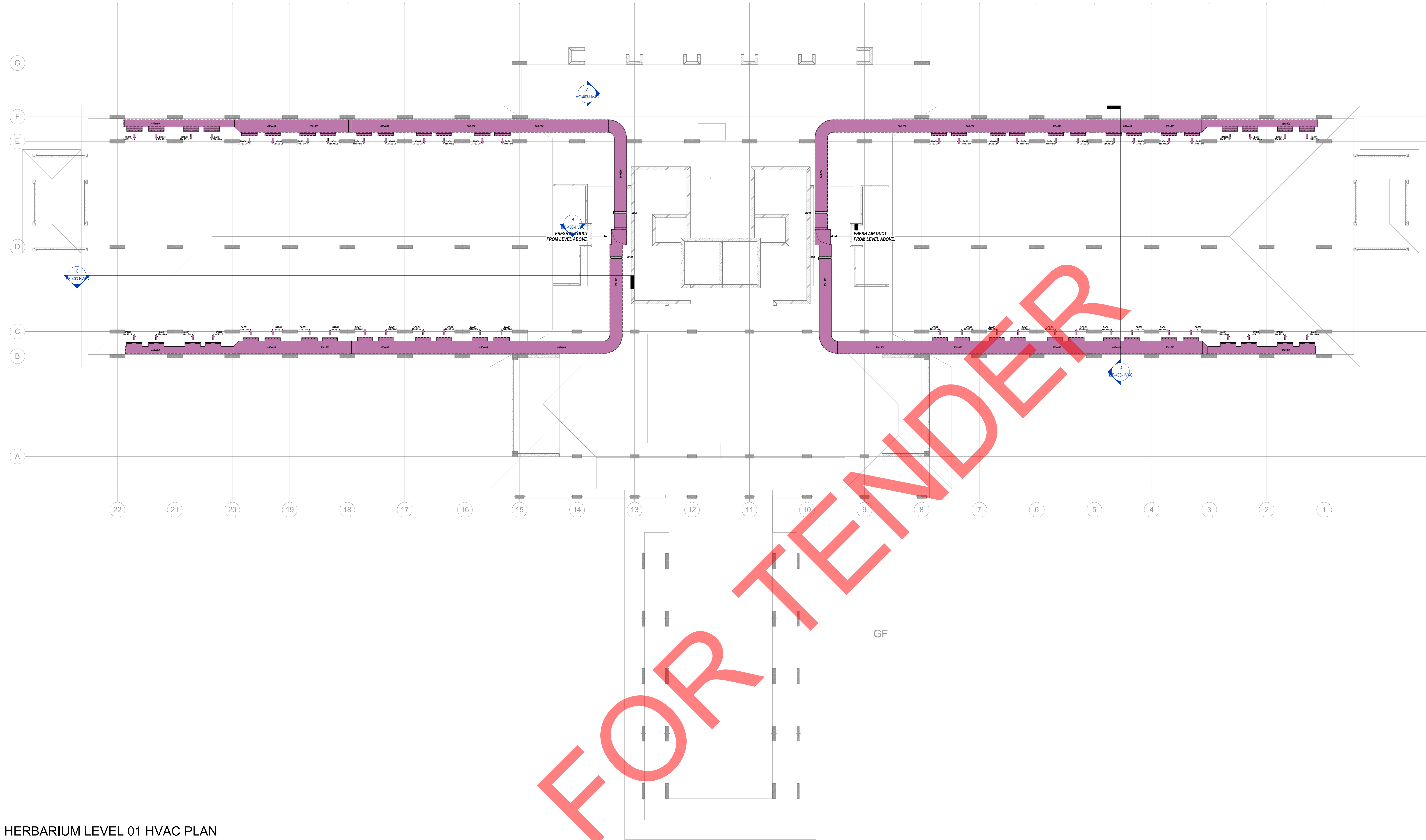




HERBARIUM LEVEL 01 HVAC PLAN
1 : 100

Level 01 Air Terminal Schedule						
Code	Description	Air Flow (l/s)	Dimensions		Quantity	Notes
			Width (mm)	Height (mm)		
SAG01	Supply Air Grille - Wall, Side Inlet	284.93 L/s	1000	400	56	

Level 01 Duct Accessory Schedule						
Code	Description	Dimensions		Quantity		Notes
		Length (mm)	Height (mm)			
BD01	DA, Damper, Rectangular	800	600	4		

GENERAL NOTES

- Figured dimensions only to be used.
- Coordinates based on WGS84
- Levels based on MSL Datum
- Discrepancies, errors and omissions are to be reported to engineer immediately they become evident.
- Shop drawings to be submitted for approval prior to manufacture or installation.
- Copyright and right of reproduction of this drawings or any portion thereof is reserved.

Standard Notes:

- All exhaust air ducting to be un-insulated unless otherwise stated.
- Duct sizes shown are internal sizes.
- For duct treatment refer to specification.
- All ducting to be manufactured & installed in accordance with SANS 10142-1.
- All A/C shafts to be fitted with a security grid platform on all floors including airight access door unless otherwise stated.
- All exposed ducting to be painted to an approved colour, unless otherwise stated.
- For location of valves, instrumentation, etc refer to SICO drawings & water schematic drawing.
- All take-offs from supply & exhaust air ducting to have 45° tees.
- A/C equipment to be fitted with anti-vibration mountings as per the specification.
- PVAC (sub)contractor to ensure that all condensate drains are trapped and sloped adequately. All drains to be tested for leaks and operation.
- All ducting to be fit for use unless otherwise stated.
- PVAC (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.
- 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.
- All supply air ducting to be externally insulated & treated as per specification, unless otherwise stated.
- All BMS wiring shall be installed in PVC / galvanized conduit by the BMS (sub)contractor, unless otherwise stated.
- All supply air flexible's to be of the insulated acoustic type.
- All chilled / hot water pipes to be treated as per specification.
- All fans to have inlet outlet cones complete with wire mesh screen where not directly connected to ducting.
- All pipes to be colour coded as per specification.
- All differences between drawings "Asin" to be approved by the architect.
- All exposed chilled water pipes to be insulated, vapour sealed and chadded, as per specification.
- Auto air vents to be provided in pipe runs where required.
- Drain points with ball valves, shutoffs must be provided at bottom of each chilled water riser and at lowest point in plant room.
- All equipment selected must fit into plant room provided.
- Sufficient space for adequate maintenance must be allowed for around equipment.

HVAC Legend

- Fresh Air Duct
- Return air grille/Exhaust grille
- Weather Louvre/Side Grille
- Washable Filter
- Single Phase Isolator
- Three Phase Isolator
- Controller

Rev	Description	Date	By
0	ISSUED FOR TENDER	11.10.22	ML
A	ISSUED FOR COORDINATION	28.10.22	ML

Client:



Architects:



Consultant:



Project Title:

SANBI HERBARIUM COMBINED WORKS

Discipline	Signature	Pr Number	Date
Mechanical Engineering			

Drawing Number: ME-400-HVAC		Designed: MM
Drawing Title: GROUND FLOOR HVAC LAYOUT		Checked: MM
Dwg Size: A0	Dwg Rev: A	Approved: MM
Scale 1 : 100	Stage TENDER	Date 2022.08.12

- Figured dimensions only to be used.
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- Levels based on MSL Datum
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- Shop drawings to be submitted for approval prior to manufacture or installation.
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1. All exhaust ducts to be re-insulated unless otherwise stated.
2. All ducts to have an internal fire rating.
3. For duct treatment refer to BS 5422.
4. All AC shall be manufactured & installed in accordance with BS 5942-1.
5. All AC shall be fitted with a metal/plastic air flow on all floors including attic spaces above other floors.
6. All AC shall be installed as per a approved colour, unless otherwise stated.
7. For location of valves, instrumentation, etc. refer to 3D CAD drawing & power schematic drawing.
8. All AC shall be supplied & installed in accordance with the following:
 - a) AC to be installed in accordance with the manufacturer's instructions.
 - b) AC to be installed to be fixed with air-vibration mounts (per a the specification).
 - c) All AC shall be installed in accordance with the manufacturer's instructions.
 - d) All ducts to be insulated to the required level. Ducts are to be supported and sloped adequately. All ducts to be tested for leaks and approved.
 - e) All AC shall be installed in accordance with the manufacturer's instructions.
 - f) HVAC (including ductwork) shall be responsible for connecting the components to the duct work. The contractor must be awarded solid support to prevent leakage, unless otherwise stated.
 - g) All AC shall be installed in accordance with the manufacturer's instructions. All AC shall be installed in accordance with the manufacturer's instructions. All AC shall be installed in accordance with the manufacturer's instructions.
 - h) In working with cover plate / Wire braid / tray and adequately strapped.
 - i) All AC shall be installed in accordance with the manufacturer's instructions. Unless otherwise stated.
 - j) All BMS wiring shall be installed in PVC / galvanised conduit by the BMS (Inventor) unless otherwise stated.
9. All supply air shall be free of the installed acoustic type.
10. All ductwork / water pipes to be insulated in accordance with the manufacturer's instructions.
11. All fans to be installed colour coded to comply with any mesh screen where not directly connected to equipment.
12. All pipes to be colour coded as per specification.
13. All off-gas/boilers/boilers to be approved by the manufacturer.
14. All off-gas/boilers/boilers to be approved by the manufacturer and certified, as per specification.
15. All auto air valves to be provided in the position where required.
16. All equipment to be installed in accordance with the manufacturer's instructions and at least point 1 point for each equipment.
17. All equipment to be installed in the plant room provided.
18. Sufficient space for adequate maintenance to be allowed for around equipment.

- Fresh Air Duct
- Return air grille/Extract grille
- Weather Louvre/Slide Grille
- Washable filter
- Single Phase Isolator
- Three Phase Isolator
- Controller

Client:

SANBI 
Biodiversity for Life
South African National Biodiversity Institute



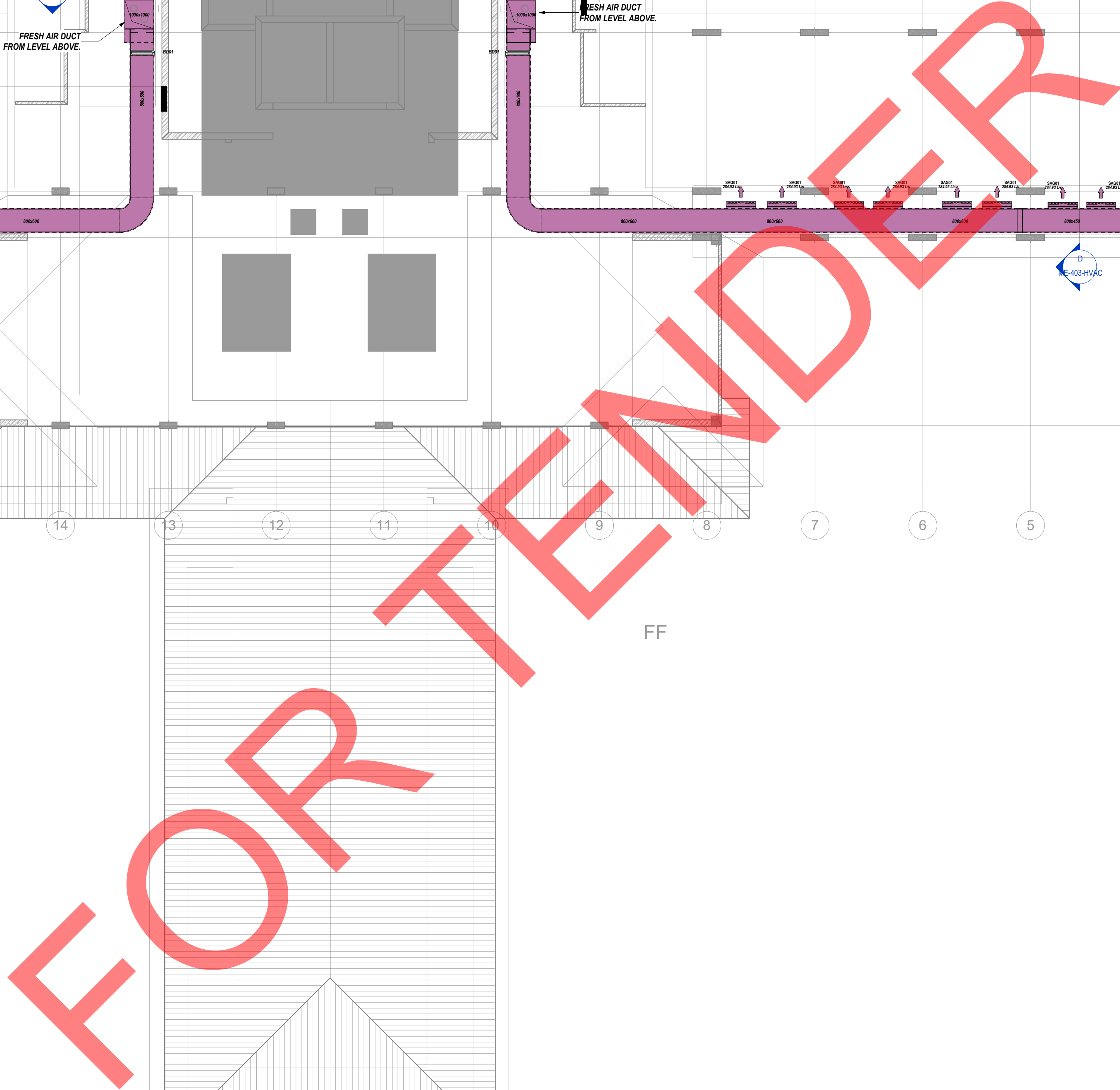
ZAS
Architects and planners

P.O. Box 84260 Greenside 2034
Tel: (011) 486 4103 email: info@splace.co.za



Discipline	Signature	Pr Number	Date
Mechanical Engineering			

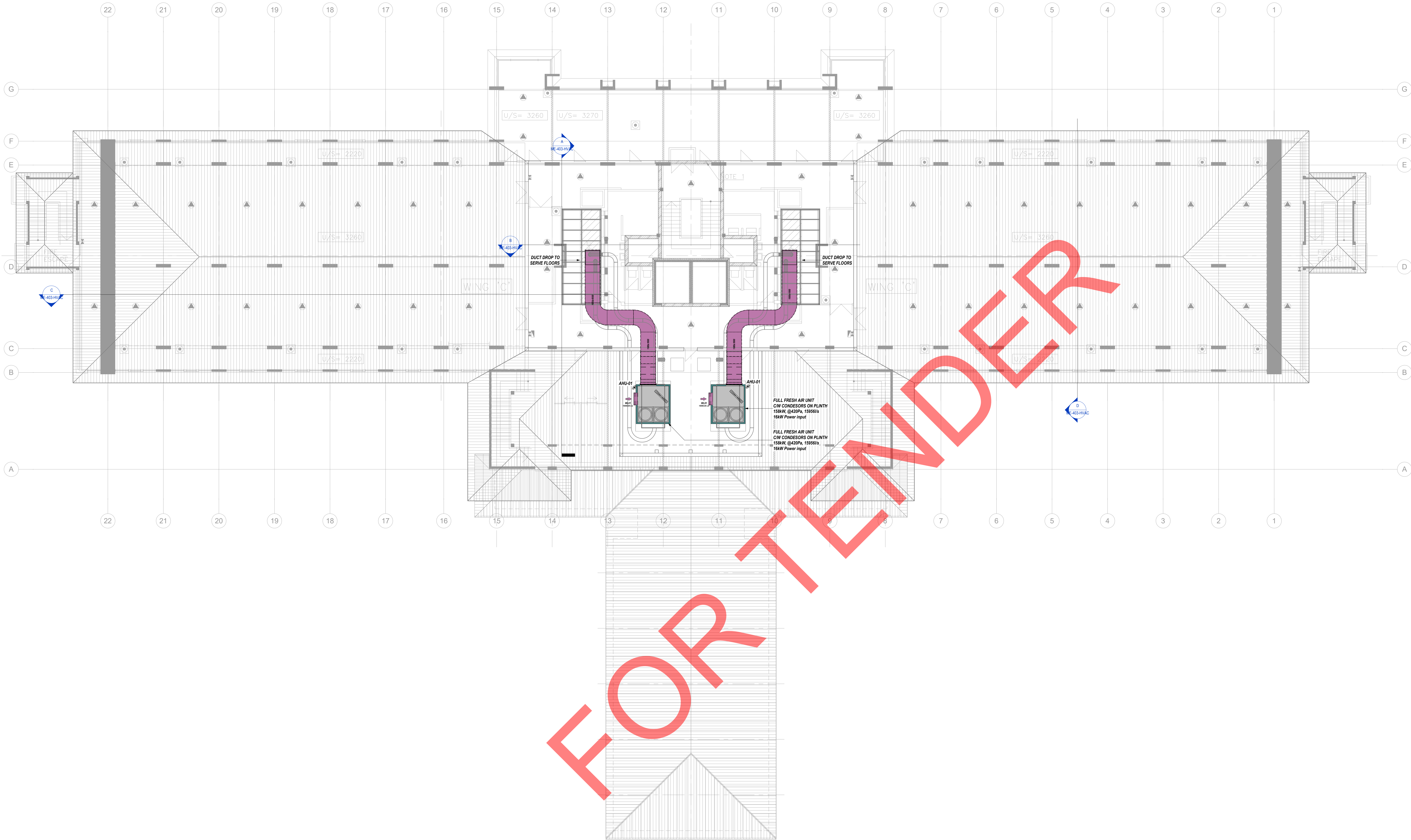
Drawing Number:		Designed:
ME-401-HVAC		MM
Drawing Title:		Checked:
FIRST FLOOR HVAC LAYOUT		MM
Dwg Size:	Dwg Rev:	Approved:
A0	A	MM
Scale 1 : 100	Stage TENDER	Date 2022.08.12



1 : 100

Level 02 Air Terminal Schedule						
Code	Description	Air Flow (m³/s)	Width (mm)	Height (mm)	Quantity	Notes
SAG01	Supply Air Grille - Wall, Side Inlet	284.93 L/s	1000	400	95	

Level 02 Duct Accessory Schedule						
Code	Description	Dimensions		Quantity		Notes
		Length (mm)	Height (mm)			
BD01	DA_Damper_Rectangular	800	600	4		



HERBARIUM LEVEL 03 HVAC PLAN
1 : 100

Roof Sanbi Building Mechanical Equipment Schedule										
Code	Description (Shared)	Cooling Capacity (kW)	Sensible Cooling Capacity (kW)	Height (mm)	Width (mm)	Depth (mm)	Static Pressure (Pa)	Power Motor(W)	Power(V/Ph/Hz)	Quantity
AHU-01	DX Rooftop Packaged Unit	158.00 kW	158.70 kW	2468	2150	2500	420Pa	16.00 kW	400/3/50	2

Roof Level Air Terminal Schedule						
Code	Description	Air Flow (L/s)	Dimensions		Quantity	Notes
			Width (mm)	Height (mm)		
WL01	Weather Louvre-Supply Air	15955.00 L/s	600	600	2	

GENERAL NOTES

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- Copyright and right of reproduction of this drawings or any portion thereof is reserved.

Standard Notes:

- All exhaust air ducting to be un-insulated unless otherwise stated.
- Duct sizes shown are internal sizes.
- For duct treatment refer to specification.
- All ducting to be manufactured & installed in accordance with SANS 10142-1
- All A/C shafts to be fitted with a security grid platform on all floors including airight access door unless otherwise stated.
- All exposed ducting to be painted to an approved colour, unless otherwise stated.
- For location of valves, instrumentation, etc refer to SICO drawings & water schematic drawing.
- All take-offs from supply & exhaust air ducting to have 45° tees.
- A/C equipment to be fitted with anti-vibration mountings as per the specification.
- PHAC (sub)contractor to ensure that all condensate drains are trapped and sloped adequately. All drains to be tested for leaks and operation.
- All ducting to be fit on top unless otherwise stated.
- PHAC (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.
- 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.
- All supply air ducting to be externally insulated & treated as per specification, unless otherwise stated.
- All BMS wiring shall be installed in PVC / galvanized conduit by the BMS (sub)contractor, unless otherwise stated.
- All supply air flexibles to be of the insulated acoustic type.
- All chilled / hot water pipes to be treated as per specification.
- All fans to have inlet louvers complete with wire mesh screen where not directly connected to ducting.
- All pipes to be colour coded as per specification.
- All differences between drawings "shall" to be approved by the architect.
- All exposed chilled water pipes to be insulated, vapour sealed and chadded, as per specification.
- Auto air vents to be provided in pipe runs where required.
- Drain points with ball valves, strainer must be provided at bottom of each chilled water riser and at lowest point in plant room.
- All equipment selected must fit into plant room provided.
- Sufficient space for adequate maintenance must be allowed for around equipment.

HVAC Legend

- Fresh Air Duct
- Return air grille/Extract grille
- Weather Louvre/Side Grille
- Washable filter
- Single Phase Isolator
- Three Phase Isolator
- Controller

Rev	Description	Date	By
0	ISSUED FOR TENDER	11.10.22	ML
A	ISSUED FOR COORDINATION	28.10.22	ML

Client:



Architects:



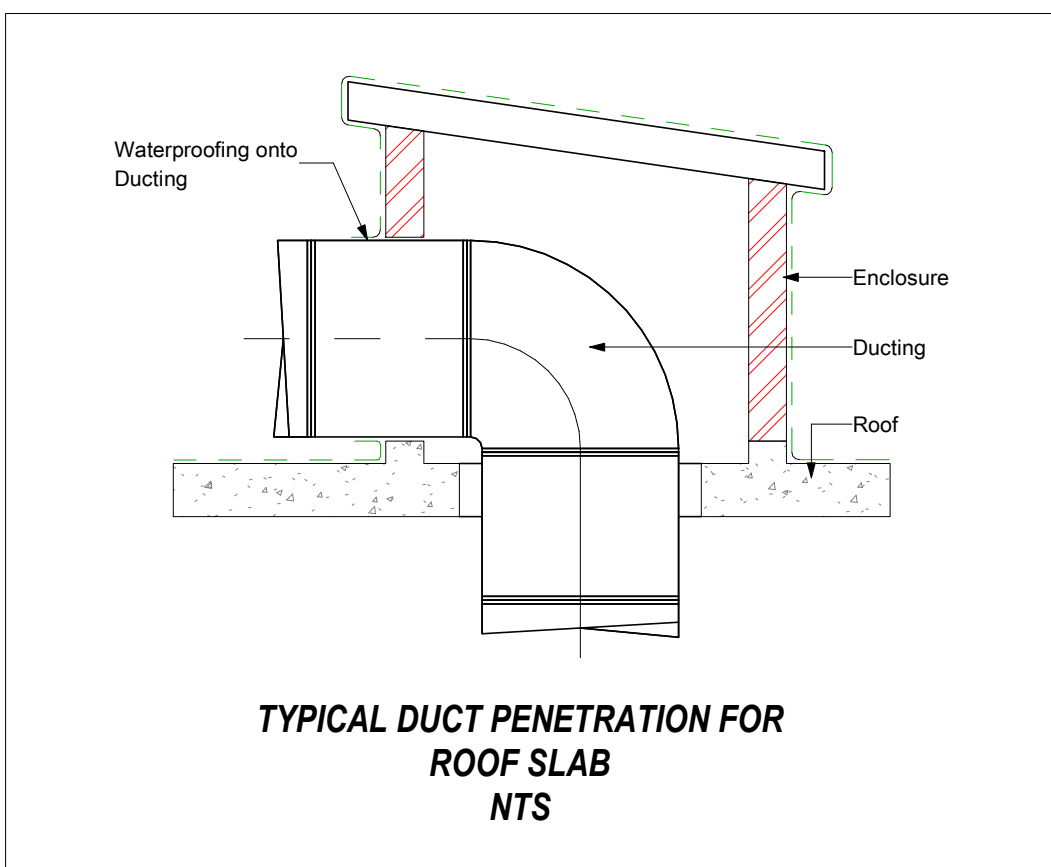
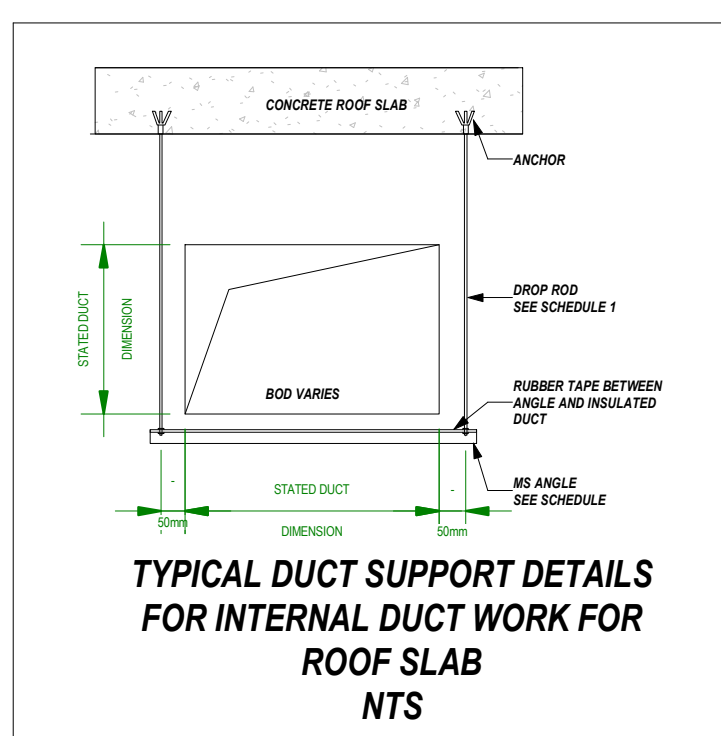
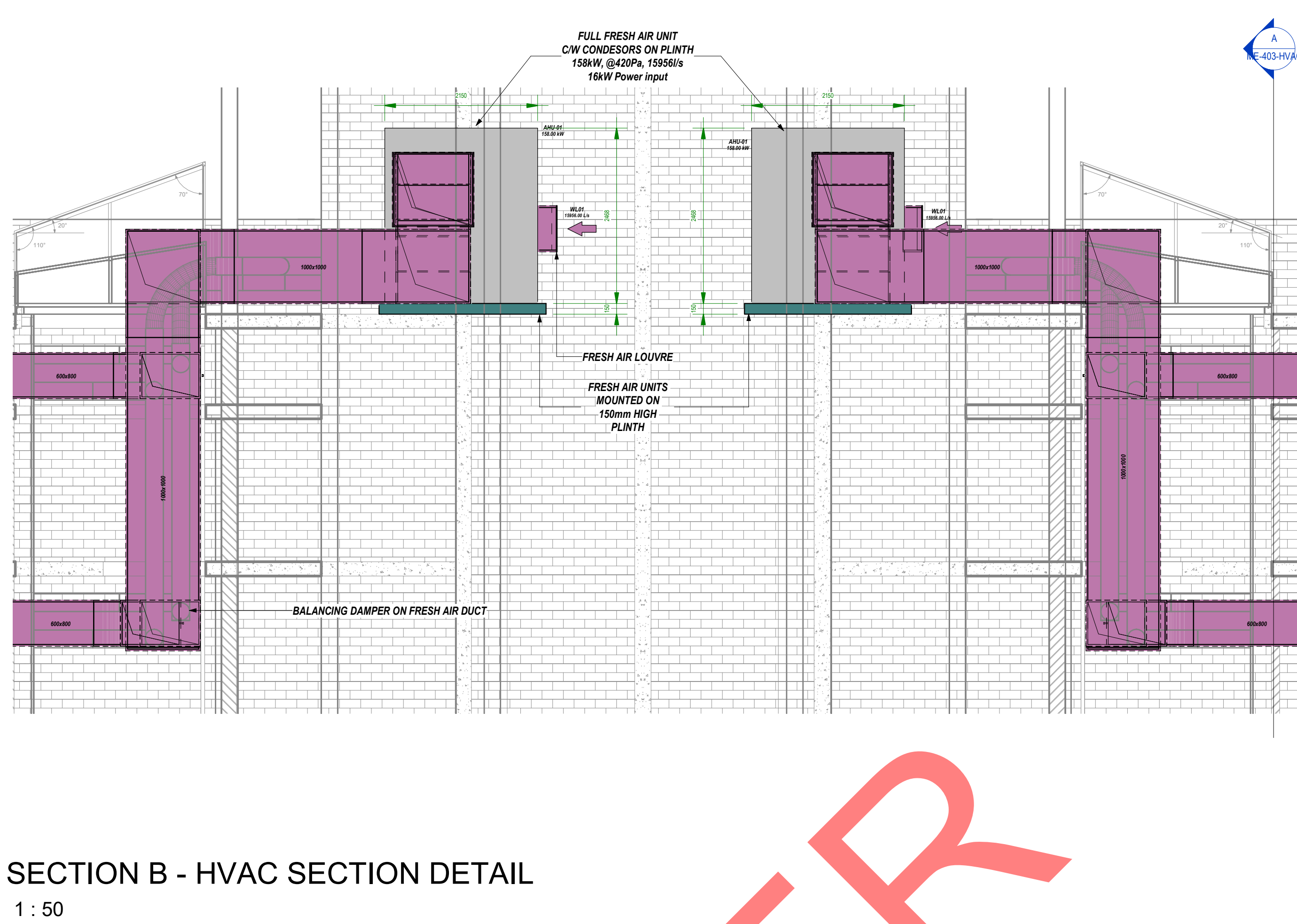
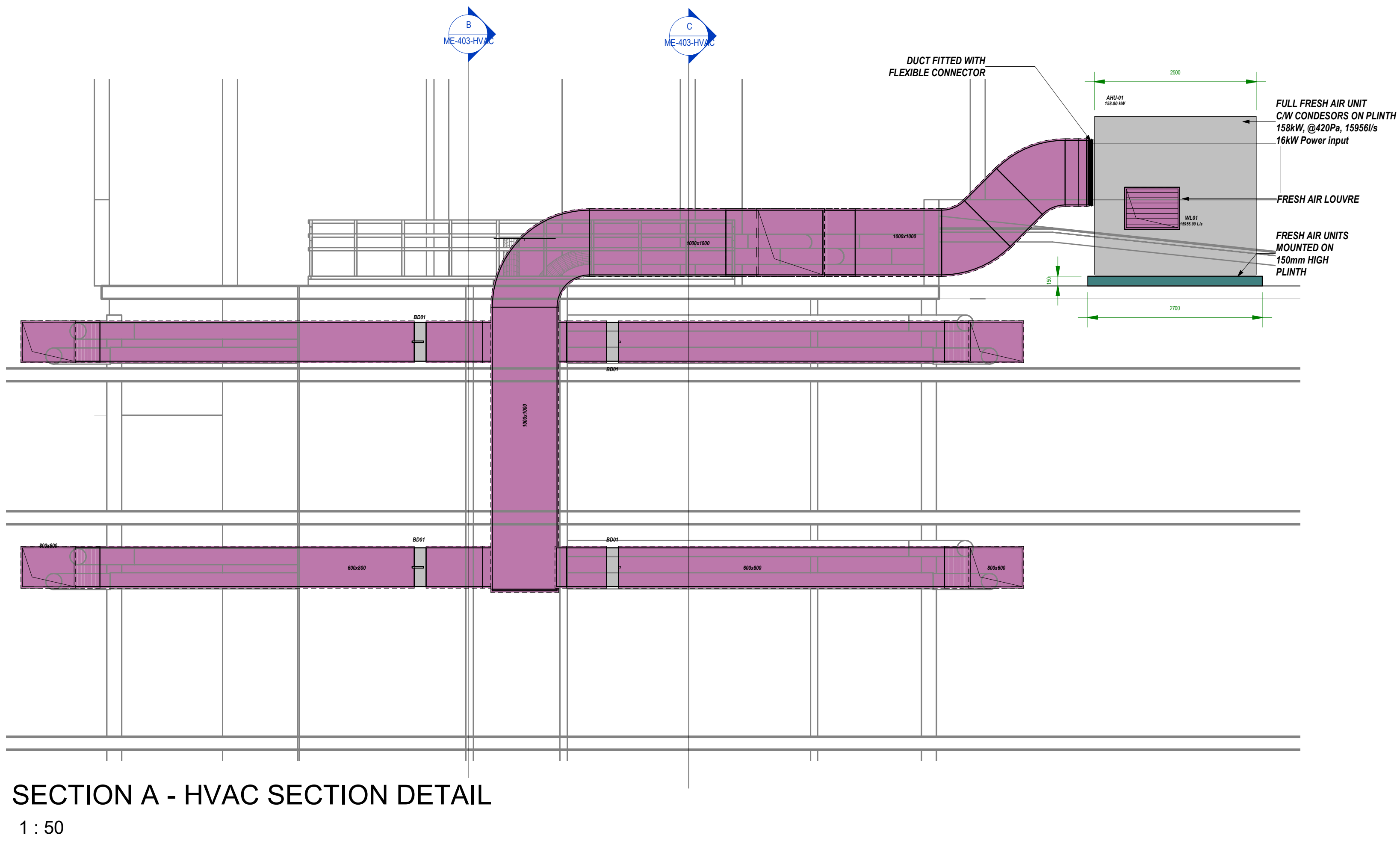
Consultant:



Project Title:
SANBI HERBARIUM COMBINED WORKS

Discipline	Signature	Pr Number	Date
Mechanical Engineering			

Drawing Number: ME-402-HVAC		Designed: MM
Drawing Title: ROOF LEVEL HVAC LAYOUT		Checked: MM
Dwg Size: A0	Dwg Rev: A	Approved: MM
Scale 1 : 100	Stage TENDER	Date 2021.12.01



- ### GENERAL NOTES
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- ### Standard Notes:
- All exhaust air ducting to be un-insulated unless otherwise stated.
 - Duct sizes shown are internal sizes.
 - For duct treatment refer to specification.
 - All ducting to be manufactured & installed in accordance with SANS 10142-1
 - All A/C shafts to be fitted with a weather grid platform on all floors including airtight access door unless otherwise stated.
 - All exposed ducting to be painted to an approved colour, unless otherwise stated.
 - For location of valves, instrumentation, etc refer to SICO drawings & water schematic drawing.
 - All take-offs from supply & exhaust air ducting to have 45° bends.
 - A/C equipment to be fitted with anti-vibration mountings as per the specification.
 - HVAC (sub)contractor to ensure that all condensate drains are trapped and sloped adequately. All drains to be tested for leaks and operation.
 - All ducting to be fit to tag unless otherwise stated.
 - 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.
 - 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.
 - All supply air ducting to be externally insulated & treated as per specification, unless otherwise stated.
 - All BMS wiring shall be installed in PVC / galvanized conduit by the BMS (sub)contractor, unless otherwise stated.
 - All supply air flexible's to be of the insulated acoustic type.
 - All chilled / hot water pipes to be treated as per specification.
 - All fans to have inlet/outlet cones complete with wire mesh screens where not directly connected to ducting.
 - All pipes to be colour coded as per specification.
 - All diffusers/grilles/louvers "shall" to be approved by the architect.
 - All exposed chilled water pipes to be insulated, vapour sealed and chadded, as per specification.
 - Auto air vents to be provided in pipe runs where required.
 - Drain points with ball valves, strainers must be provided at bottom of each chilled water riser and at lowest point in plant room.
 - All equipment selected must fit into plant room provided.
 - Sufficient space for adequate maintenance must be allowed for around equipment.

- ### HVAC Legend
- Fresh Air Duct
 - Return air grille/Extract grille
 - Weather Louvre/Side Grille
 - Washable filter
 - Single Phase Isolator
 - Three Phase Isolator
 - Controller

Rev	Description	Date	By
0	ISSUED FOR TENDER	11.10.22	ML
A	ISSUED FOR COORDINATION	28.10.22	ML

Client:

SANBI
Biodiversity for Life
South African National Biodiversity Institute

Architects:

ZAS
Architects and planners
P.O. Box 84260 Greenside 2034
Tel: (011) 486 4103 email: info@splace.co.za

Consultant:

ZEAL
ENGINEERING CONSULTANTS

Project Title:
SANBI HERBARIUM COMBINED WORKS

Discipline	Signature	Pr Number	Date
Mechanical Engineering			

Drawing Number: ME-403-HVAC	Designed: MM
Drawing Title: HVAC DETAILS & SECTIONS LAYOUT	Checked: MM
Dwg Size: A0	Approved: MM
Scale AS indicated	Date 2022.10.11

