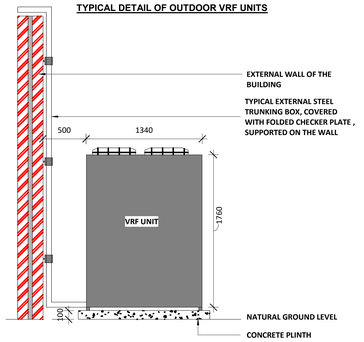
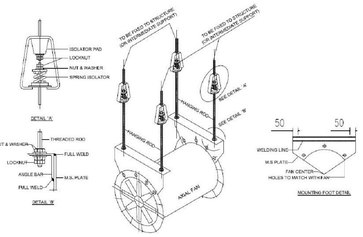
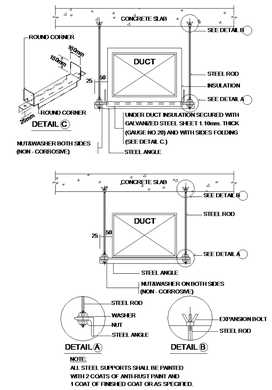
TYPICAL DETAIL OF OUTDOOR VRF UNITS



TYPICAL INSTALLATION OF ROOF SUSPENDED AXIAL FAN



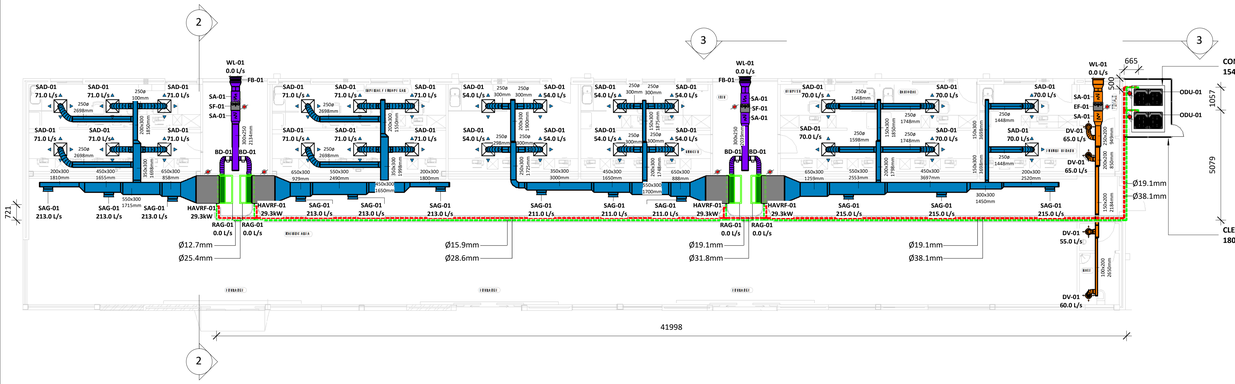
DUCT HANGER AND SUPPORTS



LEGEND

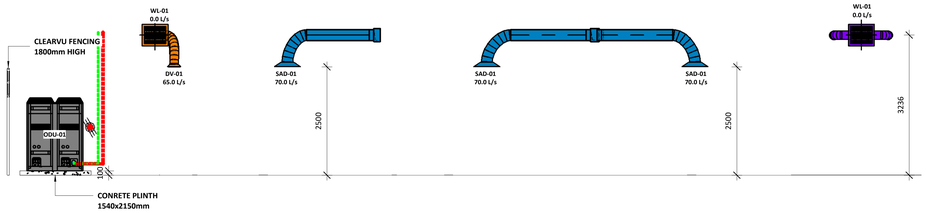
- **GENERAL**
  - ISOLATOR (3 PHASE)
  - ISOLATOR (1 PHASE)
- **AIR TERMINALS**
  - DISC VALVE (EXHAUST)
  - WEATHER LOUVER
  - Ø250mm CRD SUPPLY DIFFUSER
  - RETURN GRILLE
- **MECHANICAL EQUIPMENT**
  - ODU (CONDENSOR UNIT)
  - ODU (VRF UNIT)
  - AXIAL FAN
  - MIDWALL SPLIT UNIT
  - CEILING CASSETTE UNIT
  - THERMOSTAT (AC UNIT)
- **REFRIGERANT PIPING**
  - GAS LINE
  - LIQUID LINE
  - CONDENSATE
- **DUCTING**
  - SUPPLY AIR
  - RETURN AIR
  - FRESH AIR
  - EXHAUST AIR
  - INDICATES EXISTING DUCTS & TO BE RETAINED

Note: Condensate to be piped to nearest waste water connection point



1 GROUND FLOOR
SCALE 1 : 100

4 CAR RENTAL 3D VIEW
SCALE



3 Section 2
SCALE 1 : 50

Air Terminal Schedule			
MARK	DESCRIPTION	SIZE	QTY
UCD	UNDER CUT DOOR	22mm	6

Mechanical Equipment Schedule

ITEM	DESCRIPTION	COOLING CAPACITY	INPUT POWER	POWER SUPPLY	QTY	Refrigerant Suction Gas Connection Diameter	Refrigerant Liquid Connection Diameter
HAVRF-01	Ceiling Concealed Unit	29300 W	2.00 kW	230V/1Ph/50Hz	4	25.4mm	12.7mm
ODU-01	VRF	56 000 W	40.00 kW	380V/3Ph/50Hz	2	38.1mm	19.1mm

Grand total: 6

Air Terminal Schedule

Mark	Description	Size	Flow	Count
Disc Valve				
DV-01	Disc Valve	200ø	55.0 L/s	1
DV-01	Disc Valve	200ø	60.0 L/s	1
DV-01	Disc Valve	200ø	65.0 L/s	2
Return Air Grill				
RAG-01	Return Air Grill	1200x600	0.0 L/s	4
Supply Air Grill				
SAG-01	Supply Air Grill	435x285	211.0 L/s	3
SAG-01	Supply Air Grill	435x285	213.0 L/s	6
SAG-01	Supply Air Grill	435x285	215.0 L/s	3
Supply Diffusser				
SAD-01	Supply Diffusser	250ø	54.0 L/s	8
SAD-01	Supply Diffusser	250ø	70.0 L/s	6
SAD-01	Supply Diffusser	250ø	71.0 L/s	12
Weather Louvre				
WL-01	Weather Louvre	500x400	0.0 L/s	3

Grand total: 49

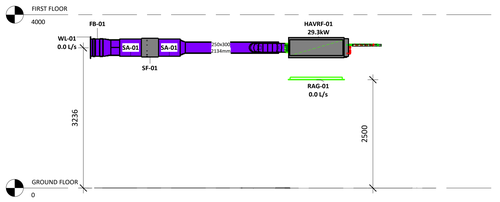
Fan Schedule

ITEM	DESCRIPTION	AIR FLOW	INPUT POWER	POWER SUPPLY	QTY
EF-01	APS Series - direct driven, smoke-spill. Adjustable pitch, duct mounted, axial flow fans	245.0 L/s	0.70 kW	230V/1Ph/50Hz	1
SF-01	APS Series - direct driven, smoke-spill. Adjustable pitch, duct mounted, axial flow fans	384.0 L/s	0.70 kW	230V/1Ph/50Hz	2

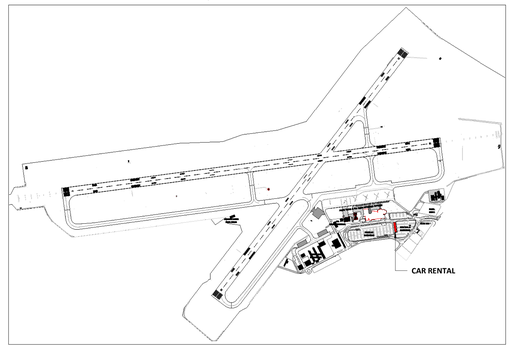
Grand total: 3

Duct Accessory Schedule

Mark	Description	Size	Count
FB-01	Air Filter Box	500x400-500x400	1
FB-01	Air Filter Box	500x400-500x400	1
SA-01	Open Type Sound Attenuator	350ø-350ø	1
SA-01	Open Type Sound Attenuator	350ø-350ø	1
BD-01	Balancing Damper	200ø-200ø	1
BD-01	Balancing Damper	200ø-200ø	1
BD-01	Balancing Damper	200ø-200ø	1
BD-01	Balancing Damper	200ø-200ø	1
SA-01	Open Type Sound Attenuator	350ø-350ø	1
SA-01	Open Type Sound Attenuator	350ø-350ø	1
SA-01	Open Type Sound Attenuator	350ø-350ø	1
SA-01	Open Type Sound Attenuator	350ø-350ø	1



2 Section 1
SCALE 1 : 50



5 KEY PLAN
SCALE 1 : 5000

NOTES:

1. ALL WORKS TO BE EXECUTED STRICTLY IN ACCORDANCE WITH THE HEALTH AND SAFETY ACT, ACT 85 OF 1993 AS AMENDED.
2. THE CONSTRUCTION REGULATIONS SHALL BE ADHERED TO IN THE EXECUTION AND PLANNING OF WORKS
3. WORKS SHALL BE CONSTRUCTED IN ACCORDANCE WITH APPROVED SHOP DRAWINGS.
4. SHOP DRAWINGS SHALL BE ISSUED FOR APPROVAL A MINIMUM OF 14 DAYS PRIOR TO CONSTRUCTION COMMENCEMENT, SUCH SHOP DRAWINGS SHALL BE COMPILED WITH THE ASSISTANCE OF THE MAIN CONTRACTOR AND VARIOUS TRADES AS REQUIRED TO ENSURE CO-ORDINATION PROVISIONS ARE MADE.
5. THIS DRAWING SHALL NOT BE SCALED, FIGURED DIMENSIONS ONLY SHALL BE USED.
6. THE PROVISION OF SIGNAGE AND INSTALLATION OF EXPOSED SERVICES SHALL BE IN ACCORDANCE WITH ARCHITECTS DRAWINGS.
7. EXPOSED SERVICES COLORS SHALL BE TO ARCHITECTS SPECIFICATION, CLIENT SPECIFICATION AND NATIONAL STANDARDS.
8. THIS DRAWING IS TO BE READ AND WORKS ARE TO BE EXECUTED IN ACCORDANCE WITH THE RELEVANT PROJECT SPECIFICATIONS, ENGINEERING CODES AND GOOD ENGINEERING PRACTICE.
9. PIPING SHALL BE SABS 62 MEDIUM WEIGHT. PIPING DIAMETER 200 AND LARGER MAY BE SABS 719 4.St.
10. PIPING Ø65mm AND ABOVE SHALL BE WELDED, FLANGED OR CLAMBON COUPLED, PIPING BELOW Ø65mm SHALL BE BS SCREWED; ALL IN ACCORDANCE WITH PROJECT SPECIFICATIONS, NATIONAL REGULATIONS AND GOOD ENGINEERING PRACTICE.
11. PIPING INSULATION ON PIPING Ø200mm AND ABOVE SHALL BE HIGH DENSITY POLYSTYRENE, 30mm THICK, PIPING INSULATION ON PIPING BELOW Ø200mm SHALL BE HIGH DENSITY POLYSTYRENE, 25mm THICK.
12. MYLAR SHEATH VAPOUR BARRIER TO BE EMPLOYED.
13. ALL CHILLED PIPING IN ACCESS FLOOR VOID AND CEILING VIOD TO BE INSULATED AND CLAD IN GALVANISED SHEET 0.6mm t
14. ALL EXPOSED CHILLED WATER PIPE AND CONDENSATE DRAINS IN CORRIDORS AND PASSAGES TO BE IN A BRUSHED STAINLESS STEEL CONDUIT
15. ALL PIPING AND TO BE INSULATED AND CLAD IN SHINY STAINLESS STEEL 0.6mm.
16. PIPING SUPPORTS SHALL BE PROVIDED AT ALL CHANGES IN PIPING DIRECTION AND AT A MAXIMUM SPACING AS INDICATED IN THE PIPING SUPPORT TABLE BELOW.
17. "ROUGH-IN" (TACK AND LOOSELY SUPPORT) ALL PIPING AND FITTINGS FOR THE APPROVAL OF THE ENGINEER PRIOR TO FULL WELDING AND FIRM FIXING.
18. ALL DISCREPANCIES BETWEEN THIS DRAWING AND ACTUAL SITE CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE RESPONSIBLE ENGINEER.
19. FIRE STOPPING SHALL BE PROVIDED AT ALL FIRE BARRIERS AND FIRE WALLS BY THE RESPONSIBLE FIRE PROOFING CONTRACTOR.
20. THE APPROVAL OF THE STRUCTURAL ENGINEER SHALL BE SOUGHT FOR ALL PIPING SUPPORT METHODS WHERE STRUCTURAL FIXING IS EMPLOYED.

NO:	DATE:	BY:	DESCRIPTION:
T	2025-09-19	PG	ISSUED FOR TENDER
REVISIONS:			

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Green Building Consultants
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CLIENT:
KING PHALO AIRPORT
AIRPORTS COMPANY SOUTH AFRICA

PROJECT TITLE:
ACSA EAST LONDON HVAC

DISCIPLINE:
MECHANICAL

DRAWING TITLE:
CAR RENTAL HVAC LAYOUT

DESIGNED:	DRAWN:	APPROVED:
PG	MK	PG

SCALE: As indicated
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DATE: 2024-05-08
drawing number: 2413-M-HVAC-CR-01
REV: T

project status: TENDER