



- NOTES:
1. TO BE READ IN CONJUNCTION WITH ARCHITECT'S ROOM DATA SHEETS. ISSUED TO BUILDER. IF THERE ARE ANY DISCREPANCIES ARCHITECT'S ROOM DATA SHEETS SHOULD TAKE FIRST PRECEDENCE & SERVICES ENGINEER SHOULD BE INFORMED ALL FRESH & EXHAUST AIR QUANTITIES TO NBR REQUIREMENTS - SANS 10400 - O 2011
  2. DUCTING TO BE MANUFACTURED IN ACCORDANCE WITH SANS 1238 AND TO BE INSTALLED, TESTED AND COMMISSIONED IN ACCORDANCE WITH SANS 10173 AND CIBSE CODES.
  3. ALL DUCT FLANGES TO BE OF THE MEZZ-FLANGE TYPE, EXCEPT EXTRACT CANOPY DUCTING. EXTRACT CANOPY DUCTING SHALL BE WELDED BLACK STEEL DUCTING. ALL DUCT JOINTS TO BE SEALED WITH BANDAGE AND FOSTER 30/30. ALL EXPOSED DUCTING SHALL BE PAINTED TO A COLOUR AS SPECIFIED BY THE ARCHITECT. FLEXIBLE CONNECTIONS TO HAVE A FIRE RATING IN ACCORDANCE WITH SANS 0177 PART 3 CLASS. MAXIMUM FLEXIBLE DUCT LENGTH TO DIFFUSERS ETC. NOT TO EXCEED 1000mm. AND TO BE FIXED TO ROUND DUCTS AND SPIGOTS WITH SWAGED ENDS BY MEANS OF JUBILEE CLAMPS.
  4. DIFFUSERS, GRILLES AND LOUVRES TO BE EPOXY POWDER COATED TO A COLOUR AS SPECIFIED BY THE ARCHITECT/ENGINEER. ALL COLOURS TO BE CONFIRMED BEFORE ORDER.
  5. ALL AIR FLOW BALANCING DEVICES TO BE POSITIVELY FIXED IN POSITION AND SEALED OR LOCKED ALL MEASUREMENTS TO BE VERIFIED ON SITE BEFORE MANUFACTURING COMMENCES
  6. CONDENSERS TO BE INSTALLED ON 100mm HIGH PLINTHS BY OTHERS. GALVANIZED UNI-STRUT BRACKETS TO BE MANUFACTURED FOR STACKING OF CONDENSERS. DRAIN PIPES TO BE ADEQUATELY SLOPED TO ENSURE POSITIVE DRAINAGE. ALL CONDENSATE PIPE CONNECTIONS TO WASTE WATER PIPES SHALL BE AIR TIGHT AND COMPLETELY SEALED. (NO PVC) ALL CONDENSATE DRAIN PIPES FROM AIR CONDITIONERS TO BE FITTED WITH U-TRAPS. NO TRAPS IN WALLS
  7. MIDWALL UNITS IN SERVER OR UPS ROOMS TO BE FITTED WITH A STAINLESS STEEL DRIP TRAY AND AN INDEPENDENT DRAIN
  8. REFRIGERANT PIPES IN CEILING VOIDS TO BE MOUNTED ON SUITABLE CABLE TRAYS
  9. EXPOSED REFRIGERANT PIPES FROM A SINGLE UNIT TO BE MOUNTED IN PT100 GALVANIZED TRUNKING, EPOXY POWDER COATED TO A COLOUR AS SPECIFIED BY THE ARCHITECT. REFRIGERANT PIPING INSULATION EXPOSED AT FINAL CONNECTION TO CONDENSER TO BE PAINTED WITH UV RESISTENT PAINT
  10. ALL REFRIGERANT PIPES FROM MIDWALL UNITS TO RISE TO CEILING VOID AFTER EXITING THE UNIT.
  11. EXPOSED REFRIGERANT PIPES OF MULTIPLE UNITS TO BE MOUNTED IN PERFORATED CABLE TRAY WITH LID, EPOXY POWDER COATED TO A COLOUR AS SPECIFIED BY THE ARCHITECT.
  12. WIRING OF AC UNITS REQUIRING HARD WIRED REMOTE CONTROLLERS TO BE INSTALLED IN 20mm PVC CONDUIT IN CEILING VOIDS. BOSAL CONDUITS TO BE USED WHERE CONDUITS ARE EXPOSED
  13. ALL WALL MOUNTED WIRED REMOTE CONTROLLERS TO BE CHASED INTO WALL.
  14. POWER SUPPLY FOR INDOOR UNITS TO BE SUPPLIED FROM OUTDOOR UNITS UNLESS OTHERWISE INDICATED.
  15. ALL SUPPLY & RETURN AIR DUCTING TO BE THERMALLY INSULATED - 25mm FRK INSULATION WITH REINFORCED / ALUMINIUM FOIL LAMINATE
  16. ALL FLEX DUCTING TO BE OF ACOUSTIC TYPE
  17. ALL BENDS TO HAVE SPLITTER VANES.
  18. CONNECTION TO RETURN AIR GRILLS TO BE RESOLVED ON WORKSHOP DRAWINGS
  19. FINAL COORDINATION WITH ELECTRICS & PLUMBING TO BE CARRIED OUT ON SITE
  20. FILTER BOXES WITHOUT ACCESS THROUGH LOUVRE TO HAVE HINGED ACCESS PANEL SECURED WITH QUICK RELEASE CLIP
  21. LOUVRE CLEAR OPENING 50mm WIDER/HIGHER THAN ACTUAL LOUVRE WITH A 20mm WOODEN SUBFRAME
  22. TOP OF DUCT INSTALLED 50mm UNDER SOFFIT UNLESS OFFSETS INDICATED.
  23. INTERNAL DUCT INSULATION SHALL NOT BE PERMITTED
  24. ALL DUCTWORK ON THE ROOF SHALL BE CLAD WITH GALVANISED SHEET METAL CLADDING

LEGEND

- AC MIDWALL UNIT
- EXTRACT FAN
- EXTRACT AIR
- FRESH AIR
- SUPPLY AIR
- RETURN AIR
- SMOKE EXTRACT
- 25mm CONDENSATE DRAINAGE
- 400mmX400mm DOOR TRANSFER GRILLE
- DTG

| REV No | DATE       | DESCRIPTION     |
|--------|------------|-----------------|
| C      | 16/10/2024 | FOR INFORMATION |
| B      | 27/09/2024 | FOR INFORMATION |
| A      | 27/08/2024 | FOR INFORMATION |

CLIENT

**SABS**  
South African Bureau of Standards

PROJECT

## NEW ELECTRONICS LABORATORY

DRAWING TITLE

## HVAC LAYOUT GROUND FLOOR

|                          |                |           |         |            |
|--------------------------|----------------|-----------|---------|------------|
| FILE No.                 | DESIGN         | T.MOYO    | M.COOLA | ITEM No.   |
| SCALE                    | 1:100          | T.MOYO    | CHECKED |            |
| RESPONSIBLE PROFESSIONAL |                |           |         | PR. NUMBER |
| DATE                     | NAME & SURNAME | SIGNATURE |         | 20120466   |

CONSULTANT :

| VRV INDOOR UNIT |      |       |          |                    |                       |              |                 |                |                  |
|-----------------|------|-------|----------|--------------------|-----------------------|--------------|-----------------|----------------|------------------|
| NUMBER          | MAKE | MODEL | TYPE     | TOTAL COOLING (kW) | SENSIBLE COOLING (kW) | HEATING (kW) | CONTROLS        | FIRE INTERLOCK | POWER (kW/PHASE) |
| AC01            |      |       | HIDEAWAY | 13.0               |                       | DEFAULT      | INFRARED REMOTE | YES            |                  |
| AC02            |      |       | HIDEAWAY | 15.2               |                       | DEFAULT      | INFRARED REMOTE | YES            |                  |
| AC03            |      |       | HIDEAWAY | 15.4               |                       | DEFAULT      | INFRARED REMOTE | YES            |                  |
| AC04            |      |       | MIDWALL  | 3.6                |                       | DEFAULT      | INFRARED REMOTE | YES            |                  |
| AC05            |      |       | HIDEAWAY | 12.6               |                       | DEFAULT      | INFRARED REMOTE | YES            |                  |
| AC06            |      |       | HIDEAWAY | 9.8                |                       | DEFAULT      | INFRARED REMOTE | YES            |                  |
| AC07            |      |       | CASSETTE | 6.0                |                       | DEFAULT      | INFRARED REMOTE | YES            |                  |
| AC08            |      |       | HIDEAWAY | 13.8               |                       | DEFAULT      | INFRARED REMOTE | YES            |                  |
| AC09            |      |       | HIDEAWAY | 13.6               |                       | DEFAULT      | INFRARED REMOTE | YES            |                  |
| AC10            |      |       | HIDEAWAY | 16.5               |                       | DEFAULT      | INFRARED REMOTE | YES            |                  |
| AC11            |      |       | HIDEAWAY | 9.0                |                       | DEFAULT      | INFRARED REMOTE | YES            |                  |
| AC12            |      |       | MIDWALL  | 3.6                |                       | DEFAULT      | INFRARED REMOTE | YES            |                  |
| AC13            |      |       | MIDWALL  | 3.6                |                       | DEFAULT      | INFRARED REMOTE | YES            |                  |

| SCHEDULE OF EQUIPMENT |                      |                                 |
|-----------------------|----------------------|---------------------------------|
| NUMBER                | DESCRIPTION          | SIZE                            |
| SD1                   | SUPPLY DIFFUSER      | 600mm x 600mm Ø200mm CONNECTION |
| SD2                   | SUPPLY DIFFUSER      | 600mm x 600mm Ø250mm CONNECTION |
| SD3                   | SUPPLY DIFFUSER      | 600mm x 600mm Ø300mm CONNECTION |
| SD4                   | SUPPLY DIFFUSER      | 600mm x 600mm Ø350mm CONNECTION |
| RG1                   | RETURN GRILLE        | 1200mm x 600mm                  |
| DTG                   | DOOR TRANSFER GRILLE | 400mm x 400mm                   |

