

First Street South, Block C

Mechanical & Electrical Services

RIBA Stage 3 Ventilation Strategy



Project Number:	L1513
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Engineer:	P.Abel/ S. Boswarva
Revision:	P03
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Abacus Consult Limited

First Street South, Block C, Ventilation Strategy

Project: **First Street South, Block C, Student Accommodation, Manchester**

Subject: Stage 3 M&E Concept Design – Ventilation Strategy

Prepared for: Downing Living (Manchester South) Limited Partnership Incorporated

Revision	Issue/Revision Description	Prepared By	Approved By	Issue Date
P01	Issued for Planning Approval	P. Abel	P. Abel S. Boswarva	19/10/2023
P02	Issued for Planning Approval	P. Abel	P. Abel S. Boswarva	31/10/2023
P03	Revised to stage 3 and omit AC installation	P. Abel	P. Abel S. Boswarva	11/03/2026

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Introduction

This document is issued to provide details of the proposed ventilation systems to be designed and installed in the First Street Block C Student Accommodation development in Manchester City Centre.

Downing intend to submit planning for the erection of 1no. student accommodation block 28 storeys with associated amenity areas. The total number of beds will be 555, 56% of which will be studios with the remaining 44% cluster bedrooms.

This report forms part of the full planning application and is intended to set out the principles of the ventilation systems in accordance with Building Regulations, project specific acoustic report and air quality report.

This report will form the basis of further design stages of ventilation services for the project.

Ventilation requirements overview

Building Regulations Approved Document F requires that an adequate means of ventilation is provided for people in the building.

Approved Document F adopts the following strategy: -

- Extract ventilation from rooms where moist water vapour and/or pollutants are released due to activities such as cooking, bathing or photocopying. This is to minimise the spread to the rest of the building. This extract may be either intermittent or continuous.
- Whole building/dwelling ventilation to provide fresh air to the building and to dilute and disperse residual water vapour and pollutants not dealt with by extract ventilation as well as removing water vapour and other pollutants which are released throughout the building (e.g. by building materials, furnishings, activities and the presence of occupants). Whole building/dwelling ventilation provides nominally continuous air exchange. The ventilation rate may be reduced or ceased when the building is not occupied. It may be necessary to purge the air when the building is re-occupied.
- Purge ventilation throughout the building to aid removal of high concentrations of pollutants and water vapour released from occasional activities such as painting and decorating or accidental releases such as smoke from burnt food or spillage of water. Purge ventilation is intermittent, i.e. required only when such occasional activities occur. Purge ventilation provisions may also be used to improve thermal comfort, although this is not controlled under the Building Regulations.

This ventilation strategy can be delivered by a natural ventilation system or a mechanical ventilation system or a combination of both as follows: -

- Continuous mechanical supply and extract with heat recovery (MVHR) with provision of purge ventilation via openable rapid vent panel.

- Purge ventilation is defined as manually controlled ventilation of rooms or spaces at a relatively high rate to rapidly dilute pollutants and/or water vapour. Purge ventilation may be provided by natural means (e.g. an openable window) or by mechanical means (e.g. a fan). Purge ventilation provision is required in each habitable room and should be capable of extracting a minimum of four air changes per hour (ac/h) per room directly to outside. Normally, openable windows or doors can provide this function, otherwise a mechanical extract system should be provided.
- Purge ventilation on this development is dealt with primarily by opening rapid vents. If there are any shortfalls then this will be made up by the mechanical systems.

2.0 Air Quality Considerations

The site is located in Manchester City Centre adjacent to the A57M Mancunian Way. Because of this close proximity to busy traffic it is important that the ventilation systems are designed to deliver clean fresh air into the building. The RPS Air Quality Report (AQR) has been considered when producing this report and the following has been extracted:-

The results of modelling indicate that the annual-mean limit value for NO₂ will be exceeded at:

- LEVEL 01 - All residential units (2 studios, 7 cluster bedrooms, 2 cluster kitchens).
- LEVEL 02 - 2 cluster kitchens, all cluster bedrooms and the studio closest to the cluster bedrooms on the west side.
- LEVEL 03 - 2 cluster kitchens and the two cluster bedrooms closest to the cluster kitchen on the west side.

The following mitigation measures are recommended in the above areas to reduce the exposure of future occupants to NO₂ and improve the suitability of the development for its proposed use:

- Provision of air tight (hermetically sealed) windows for the proposed areas listed above. The specification of the windows should not preclude the windows from being open, at the residents' discretion, to allow rapid ventilation.
- Provision of mechanical ventilation for the above areas. Ventilation air should be supplied from an intake point on the building as far away as practicable from the major pollution sources. The intake is commonly specified to be at roof level at the rear of the property. If possible the intakes should be located at an elevated point where the AQS objective is predicted to be achieved.
- If no such intake location described above is possible, then the intake should incorporate NO₂ filters to European Standard EN 13779.

The AQS objectives are predicted to be met at floors 4 and above.

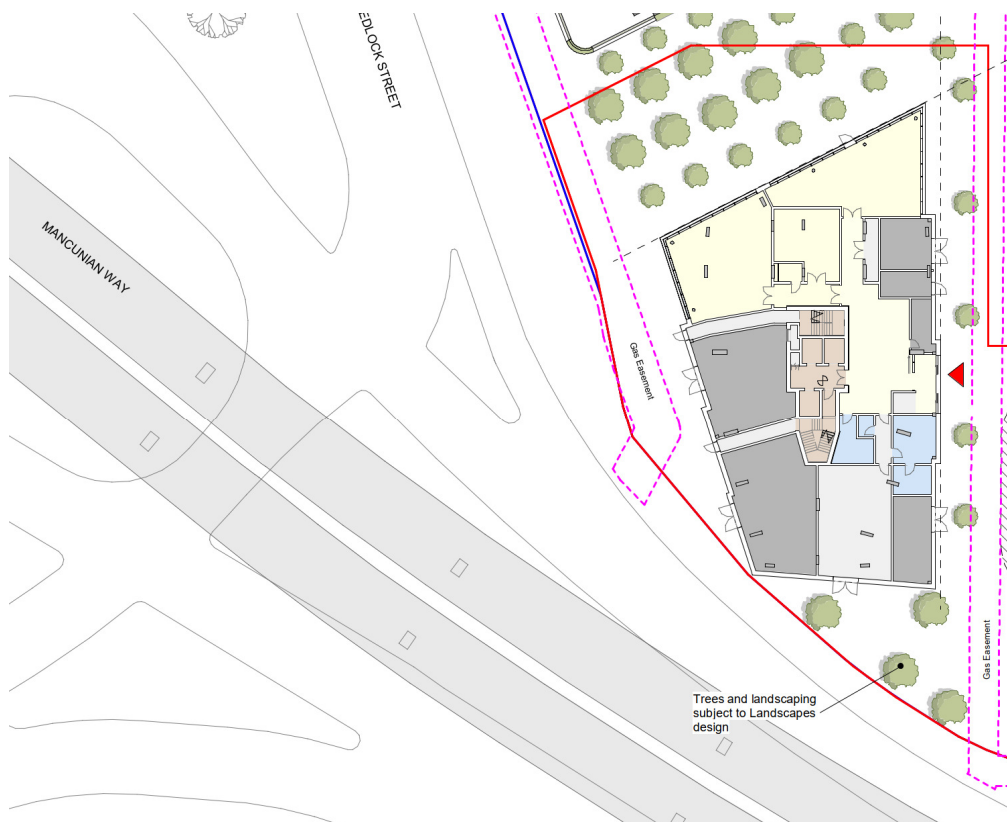
3.0 Acoustic Considerations

Acoustic & Engineering Consultants (AEC) has undertaken a noise assessment report of the project. The report reference is P3921/L79/PJK - First Street - Block C - Overheating dated 29 September 2025 (see appendix A).

Guidance in AVO and Approved Document O has been used for the assessment of noise level in living rooms and bedrooms during the daytime and nighttime.

The site's close proximity to the busy A57M Mancunian Way has impacted the design of ventilation systems from an acoustic perspective.

Site location



In summary, to comply with Approved Document O, windows would need to be closed to habitable rooms if the following limits are exceeded:

- $49\text{dBL}_{\text{Aeq,T}}$ to bedrooms at night

4.0 Proposed ventilation solution

Based on the results of the AQR and Acoustic Report the ventilation systems throughout the development are as follows:-

Landlord areas level 00-01

Occupied landlord areas such as amenity spaces, management suite, offices etc. shall be provided with mechanical fresh air ventilation at a rate of 10 litres per second per person. Ventilation shall be provided via local heat recovery units mounted within the ceiling voids of the space being served. Air inlets and exhaust shall be ducted to louvres in the space being served to limit pressure drops and resultant energy use associated with long duct runs.

WC extract ventilation shall be provided at a minimum of 10 air changes per hour with care taken to ensure discharge points do not cause nuisance. Systems shall comprise of single fans serving a single WC or twin fans with auto changeover serving multiple WC's depending upon final architectural layouts.

Bin store mechanical extract ventilation shall be provided at 20 air changes per hour with care taken to ensure discharge points do not cause nuisance. Systems shall comprise of twin fans with auto changeover. Make up air shall be provided naturally via louvred doors to the bin store.

Laundry supply and extract ventilation shall be provided in accordance with the laundry specialist contractors requirements.

Smoke ventilation systems shall be provided to corridors and lobbies throughout the block in accordance with Approved Document B and the DFC fire strategy.

Mechanical smoke extract fans shall be mounted externally at roof level and shall be ducted directly to smoke shafts running down through each floor. Automatic dampers and grilles shall be provided at each floor level to operate under the dictates of smoke sensors. Fire alarm interface shall also be provided.

The smoke ventilation systems shall also have facility for environmental control. This shall provide an element of natural cooling to the corridors to assist with prevention of overheating.

NOX filters shall be provided on all fresh air intake ducts on MVHR systems serving levels 00 and 01.

Accommodation areas

Opening rapid ventilators cannot be relied upon to control summertime overheating during nighttime hours 23:00-07:00. RPS air quality report has also defined restrictions to the lower levels 01-03 with regards to locations of air intakes.

Using the above information, the mechanical ventilation systems strategy as follows:

- **Level 00** – MVHR supply and extract ventilation systems to amenity areas and habitable rooms such as management suite, study, gym and meeting rooms.
- **Level 01** – MVHR supply and extract ventilation systems to amenity areas and habitable rooms such as private dining and lounge.
All student accommodation clusters and studios, shall be supplied from local supply and extract MVHR systems. NOX filters to be included on all intake ducts

- **Level 02-03** – All student accommodation clusters and studios, shall be supplied from local supply and extract MVHR systems with NOX filters on intake ducts above rooms close to major pollution sources.
- Temperature control in all clusters and studios on levels 01-04 to be provided via Variable Refrigerant Flow (VRF) heat recovery system all in accordance with Abacus Consult ventilation drawings.
- **Level 04-27** - All student accommodation clusters and studios MVHR supply and extract ventilation.
- Temperature control in all clusters and studios on levels 24-27 to be provided via Variable Refrigerant Flow (VRF) heat recovery system all in accordance with Abacus Consult ventilation drawings.
- As a minimum, AD Part F flow rates shall be maintained.
- Purge ventilation shall be provided in accordance with AD Part F by use of opening rapid ventilators.
- TM59 overheating analysis L1513-ABA-XX-XX-RP-M-50001-P02 has been produced. This confirms areas where uplifted ventilation rates are required to control overheating.

External design conditions

Season	External design temperature
Winter	-5°C fully saturated
Summer	+28°C

Internal design conditions

Room	Internal design temperature	
	Winter	Summer
Cluster Bedrooms with VRV	21°C +/- 2°C	23°C +/- 2°C
Studios with VRV	21°C +/- 2°C	23°C +/- 2°C
Cluster Bedrooms no VRV	21°C +/- 2°C	No cooling
Studios no VRV	21°C +/- 2°C	No cooling
Cluster kitchen/lounge with VRV	21°C +/- 2°C	23°C +/- 2°C
Cluster kitchen/lounge no VRV	21°C +/- 2°C	No cooling
Reception/Entrance	21°C +/- 2°C	23°C +/- 2°C
Offices/Management Suite	21°C +/- 2°C	23°C +/- 2°C
Amenity Areas	21°C +/- 2°C	23°C +/- 2°C
WC's	18°C +/- 2°C	No cooling
Staircases (internal)	16°C +/- 2°C	No cooling
Corridors	Unheated	No cooling
Stores	Unheated	No cooling
Plant	5°C to 35°C	5°C to 35°C No cooling

Internal temperatures are dry resultant and measured 1.5 metres above finished floor level.

Noise levels

Any ducted mechanical services system shall be designed to achieve no greater than 30dB_{L_{Aeq}} (NR25) in bedrooms at night and 35dB_{L_{Aeq}} (NR30) in living rooms during the daytime.

Ventilation rates

Room	Ventilation system	
	System type	Control strategy & vent rate
Cluster Bedrooms	MEV with trickle vent make up air	Constant extract rate of 8l/s
Studios	MEV with trickle vent make up air	Trickle extract rate of 8l/s with boost rate of 21l/s activated by pod lights witch and/or pull out cooker hood.
Cluster kitchen/lounge	MEV with trickle vent make up air	Constant extract rate of 13l/s
Reception/Entrance	Supply & extract via ceiling mounted MVHR units	10l/s/p supply & extract with CO ₂ occupancy detectors
Offices/Management Suite	Supply & extract via ceiling mounted MVHR units	10l/s/p supply & extract with CO ₂ occupancy detectors
Amenity Areas	Supply & extract via ceiling mounted MVHR units	10l/s/p supply & extract with CO ₂ occupancy detectors
WC's	Extract ventilation, make up via surrounding systems	Constant extract rate of 10AC/hr
Staircases (internal)	AOV at head of staircase	Operates under dictates of smoke ventilation system
Corridors	Incorporate environmental control on smoke vent systems	Operates under dictates of temperature sensors with fire condition override
Plant	Naturally ventilated via louvres	

All residential areas shall be provided with ventilation rates in accordance with Approved Document F as a minimum. Any uplift as required by TM59 overheating assessment.

5.0 Appendix A – Abacus Consult Stage 3 Ventilation Layouts

- FSS-ABA-ZC-00-DR-M-57001-T02 - LEVEL 00 - VENTILATION & AC SERVICES LAYOUT
- FSS-ABA-ZC-01-DR-M-57001-T02 - LEVEL 01 - VENTILATION & AC SERVICES LAYOUT
- FSS-ABA-ZC-02-DR-M-57001-T02 - LEVEL 02 - VENTILATION & AC SERVICES LAYOUT
- FSS-ABA-ZC-03-DR-M-57001-T02 - LEVEL 03 - VENTILATION & AC SERVICES LAYOUT
- FSS-ABA-ZC-04-DR-M-57001-T01 - LEVEL 04 - VENTILATION & AC SERVICES LAYOUT
- FSS-ABA-ZC-24-DR-M-57001-T01 - LEVEL 24 - VENTILATION & AC SERVICES LAYOUT
- FSS-ABA-ZC-25-DR-M-57001-T01 - LEVEL 25 - VENTILATION & AC SERVICES LAYOUT
- FSS-ABA-ZC-26-DR-M-57001-T01 - LEVEL 26 - VENTILATION & AC SERVICES LAYOUT
- FSS-ABA-ZC-27-DR-M-57001-T01 - LEVEL 27 - VENTILATION & AC SERVICES LAYOUT
- FSS-ABA-ZC-ZZ-DR-M-57001-T02 - VENTILATION & AC SERVICES LAYOUT - TYPICAL PLAN TYPE 01

GENERAL NOTES

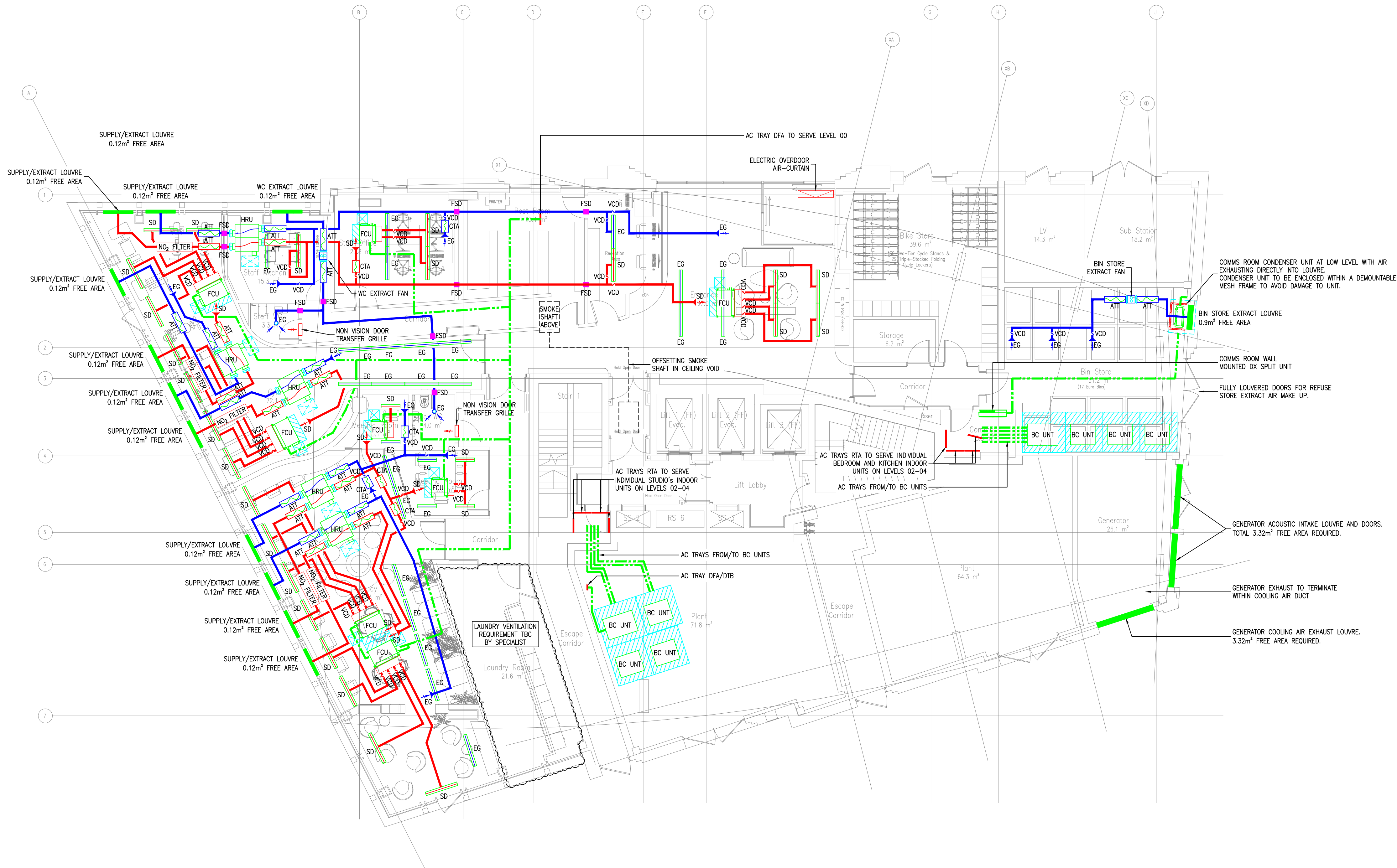
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LEGEND:

- INDICATIVE BULKHEAD LINE
--- INDICATIVE AC PIPE ROUTE
--- EXTRACT/EXHAUST DUCTWORK
--- SUPPLY/INTAKE DUCTWORK
- FCU AIR CONDITIONING FAN COIL UNIT
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NOTES:

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T02	NEW SHP GA'S ADDED AND UPDATED TO SUIT	06/02/26	S.R.
T01	ISSUED FOR TENDER	20/09/24	S.R.
Rev	Description	Date	Initial



DOWNING STUDENTS (FIRST STREET)
LIMITED PARTNERSHIP INCORPORATED
1 OLD HALL STREET
LIVERPOOL
L3 9HF

FIRST STREET SOUTH, MANCHESTER
BLOCK C

LEVEL 00
VENTILATION & AC SERVICES LAYOUT

Drawing Number	FSS-ABA-ZC-00-DR-M-57001	Revision	T02
Drawing Status	RIBA STAGE 3	Scale	1:100 @ A1
Drawn	S.R.	Checked	P.A.
Approved	P.A.	Date	SEPT 2024

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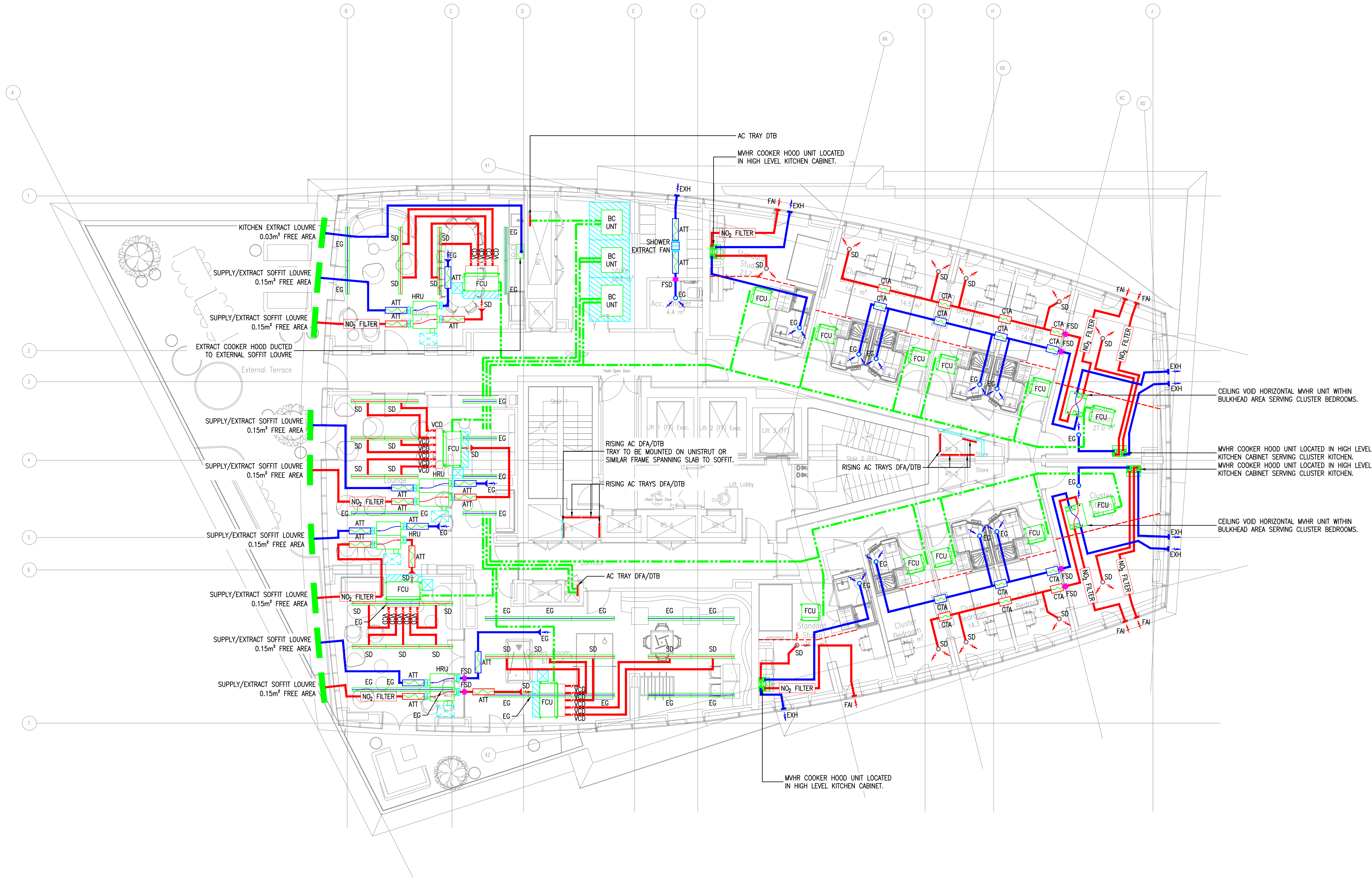
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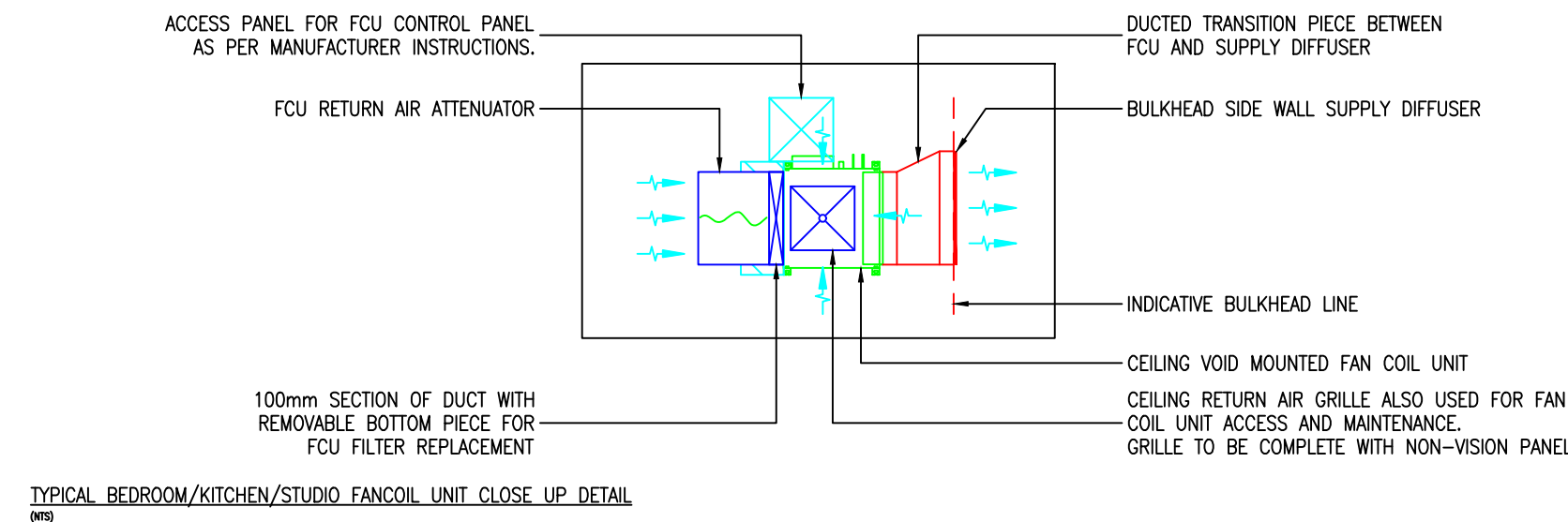


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LEVEL 01
VENTILATION & AC SERVICES LAYOUT

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Drawn	S.R.	Checked	P.A.
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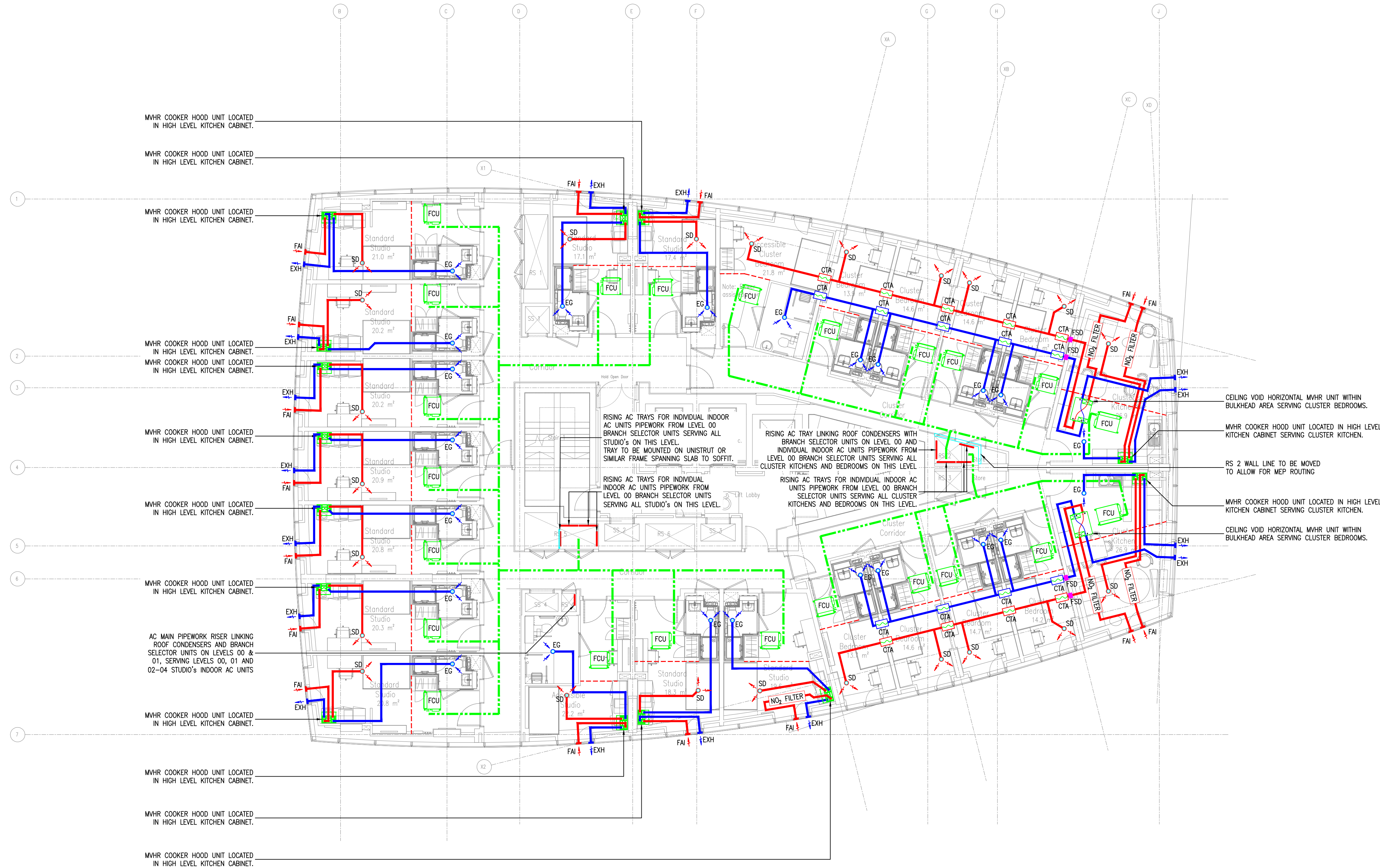
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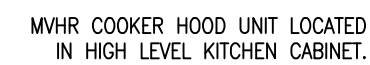
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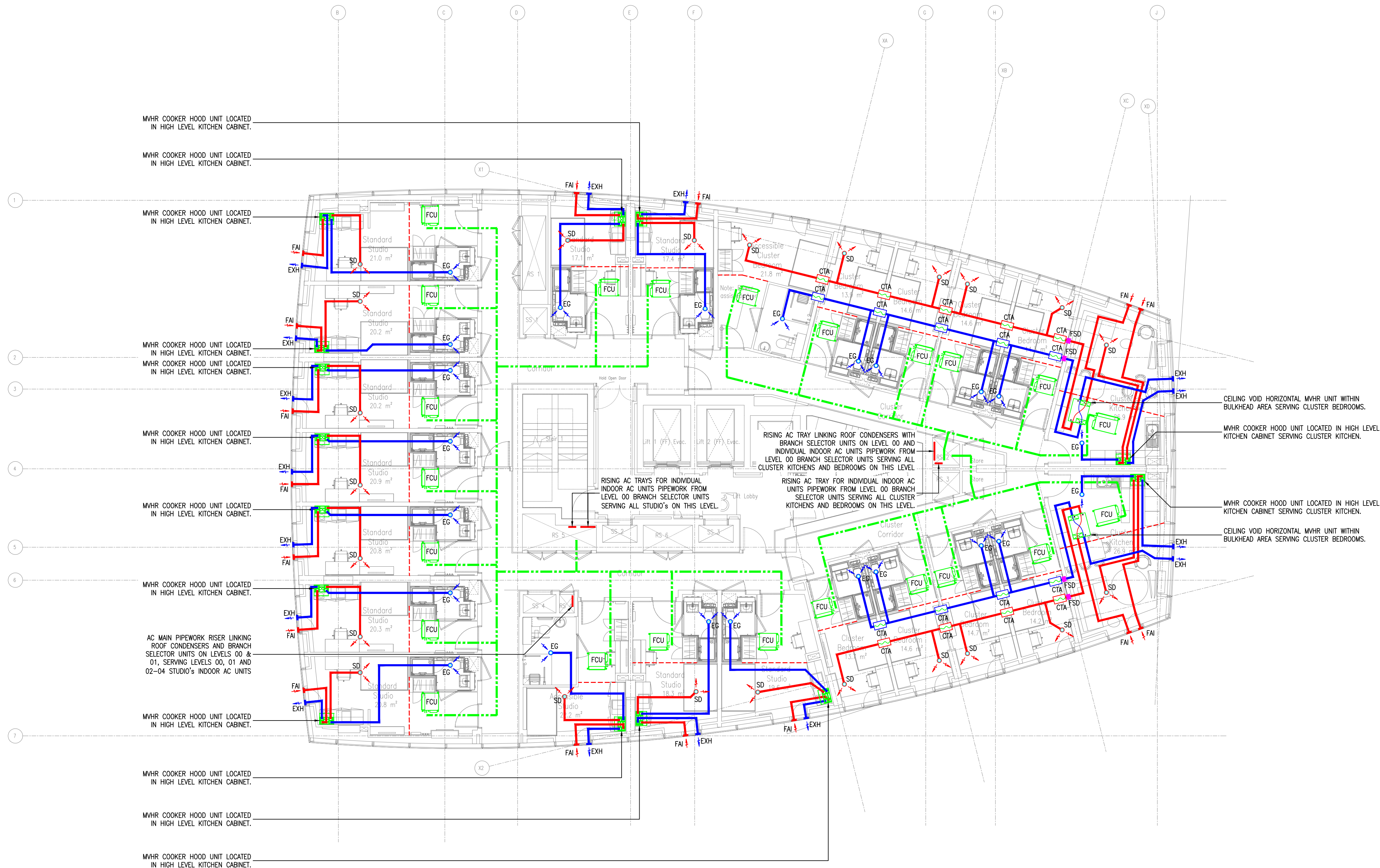
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 - FOR MVHR/HRU SYSTEMS, ALL INTAKE AND EXHAUST DUCTWORK INSULATED USING 25mm MINERAL WOOL INSULATION (0.04W/m.K). FOR MEV SYSTEMS, THE DUCTWORK FROM THE LOUVER CONNECTION WILL BE INSULATED USING 25mm MINERAL WOOL INSULATION (0.04W/m.K). IN ACCORDANCE WITH THE DOMESTIC VENTILATION COMPLIANCE GUIDE.
 - ALL AIR VALVES TO BE ADJUSTABLE TYPE.
 - NO INSECT MESH TO BE INSTALLED ON LOUVRES.

T01	ISSUED FOR TENDER	06/02/26	S.R.
Rev	Description	Date	Initial

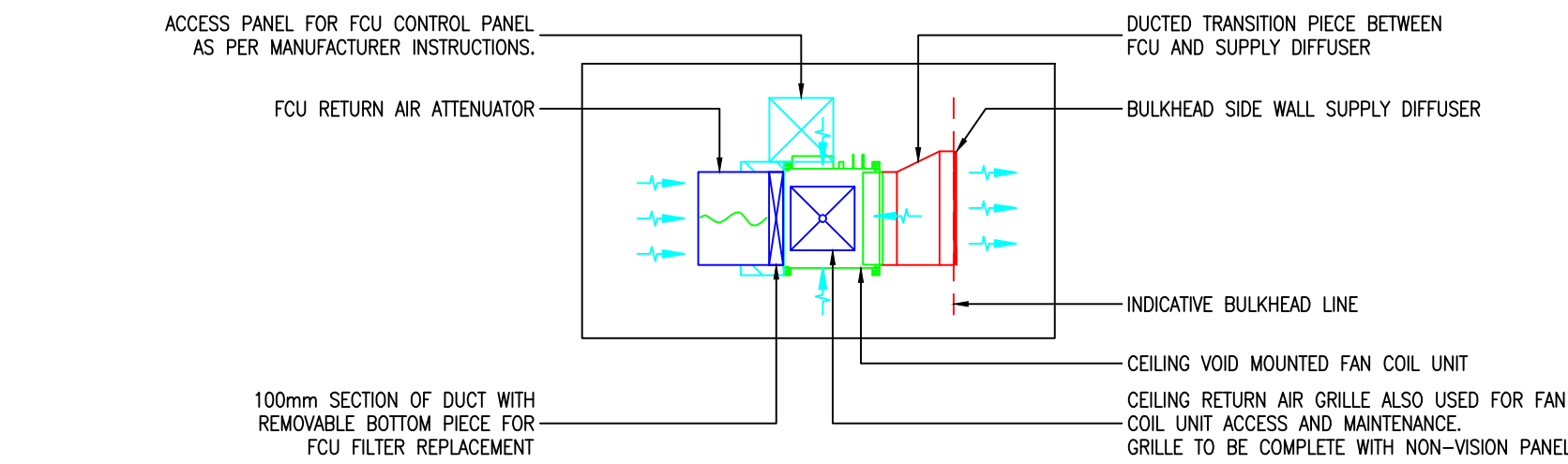
Abacus Consult
MECHANICAL & ELECTRICAL CONSULTING ENGINEERS
ABACUS HOUSE, UNIT 4 PARAMOUNT BUSINESS PARK, WILSON ROAD, LIVERPOOL, L3 6AW
info@abacusconsult.co.uk Tel: 0151 480 6161

DOWNING STUDENTS (FIRST STREET)
LIMITED PARTNERSHIP INCORPORATED
1 OLD HALL STREET
LIVERPOOL
L3 9HF

FIRST STREET SOUTH, MANCHESTER
BLOCK C

LEVEL 04
VENTILATION & AC SERVICES LAYOUT

Drawing Number	FSS-ABA-ZC-04-DR-M-57001	Revision	T01
Drawing Status	RIBA STAGE 3	Scale	1:100 @ A1
Drawn	S.R.	Checked	P.A.
Approved	P.A.	Date	JAN 2026



TYPICAL BEDROOM/KITCHEN/STUDIO FANCOIL UNIT CLOSE UP DETAIL
P09

GENERAL NOTES

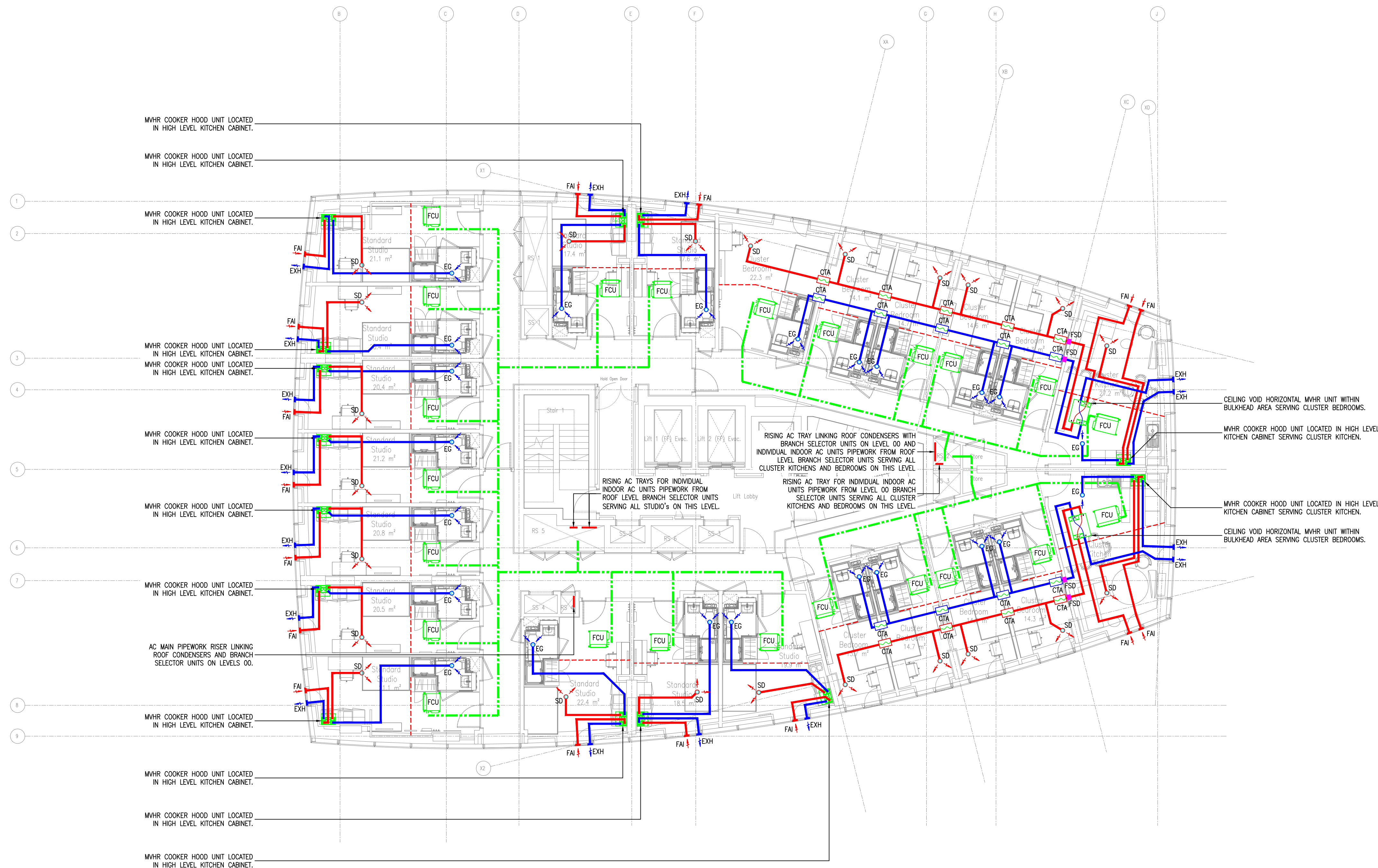
- THIS DRAWING SHOWS THE DESIGN INTENT ONLY. DESIGN RESPONSIBILITY IS WITH THE MEP CONTRACTOR. THE DRAWING IS SUBJECT TO DETAIL DESIGN AND COORDINATION BY THE MEP CONTRACTOR AND THE PREPARATION OF INSTALLATION DRAWINGS.
- THIS DRAWING SHALL BE READ IN CONJUNCTION WITH ALL MECHANICAL, ELECTRICAL, ARCHITECTURAL AND STRUCTURAL DRAWINGS, CONTRACT DOCUMENTATION, SCHEDULES AND SPECIFICATION FOR THE WORKS.
- ALL DIMENSIONS SHOWN ARE IN MILLIMETERS UNLESS OTHERWISE STATED.
- DO NOT SCALE FROM THIS DRAWING.
- THIS IS NOT AN INSTALLATION DRAWING.

LEGEND:

---	INDICATIVE BULKHEAD LINE
---	INDICATIVE AC PIPE ROUTE
---	EXTRACT/EXHAUST DUCTWORK
---	SUPPLY/INTAKE DUCTWORK
FCU	AIR CONDITIONING FAN COIL UNIT
ACC	AIR CONDITIONING CASSETTE UNIT
HRU	MECHANICAL VENTILATION HEAT RECOVERY UNIT
MEV	MECHANICAL EXTRACT VENTILATION UNIT
MVHR	MECHANICAL VENTILATION HEAT RECOVERY UNIT
EG	EXTRACT GRILLE
SD	SUPPLY DIFFUSER
ATT	ATTENUATOR
CTA	CROSS TALK ATTENUATOR
VCD	VOLUME CONTROL DAMPER
FS	INTUMESCENT FIRE SLEEVE
FD	FUSIBLE LINK FIRE DAMPER
FSD	FIRE SMOKE DAMPER
EXH/FAI	EXHAUST/FRESH AIR INTAKE WEATHER PROOF VENT TERMINAL (MIN. 0.02m ² FREE AREA, MAX. 25Pa PRESSURE DROP AND 60l/s MAX FLOW RATE)

NOTES:

- WHERE EXH AND FAI SHARE THE SAME FACADE PANEL, 300mm CLEAR SEPARATION TO BE PROVIDED IN BETWEEN.
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- ALL AIR VALVES TO BE ADJUSTABLE TYPE.
- NO INSECT MESH TO BE INSTALLED ON LOUVRES.



T01	ISSUED FOR TENDER	06/02/26	S.R.
Rev	Description	Date	Initial

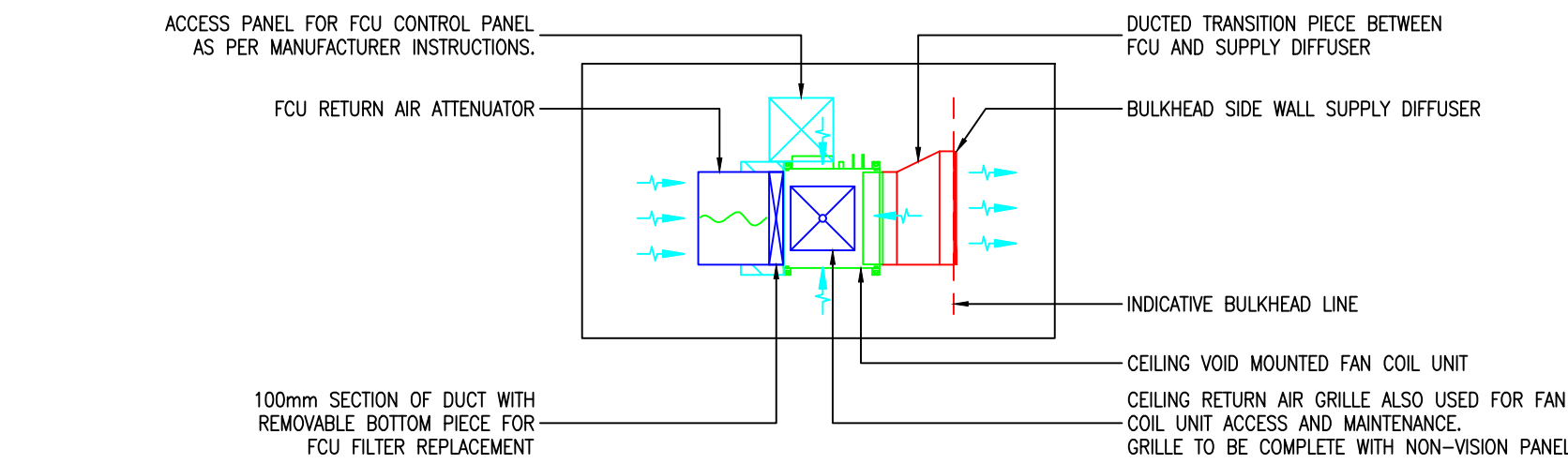
Abacus Consult
MECHANICAL & ELECTRICAL CONSULTING ENGINEERS
ABACUS HOUSE, UNIT 4 PARAMOUNT BUSINESS PARK, WILSON ROAD, LIVERPOOL, L3 6AW
info@abacusconsult.co.uk Tel: 0151 480 6161

DOWNING STUDENTS (FIRST STREET)
LIMITED PARTNERSHIP INCORPORATED
1 OLD HALL STREET
LIVERPOOL
L3 9HF

FIRST STREET SOUTH, MANCHESTER
BLOCK C

LEVEL 24
VENTILATION & AC SERVICES LAYOUT

Drawing Number	FSS-ABA-ZC-24-DR-M-57001	Revision	T01
Drawing Status	RIBA STAGE 3	Scale	1:100 @ A1
Drawn	S.R.	Checked	P.A.
Approved	P.A.	Date	JAN 2026



TYPICAL BEDROOM/KITCHEN/STUDIO FANCOIL UNIT CLOSE UP DETAIL
100

GENERAL NOTES

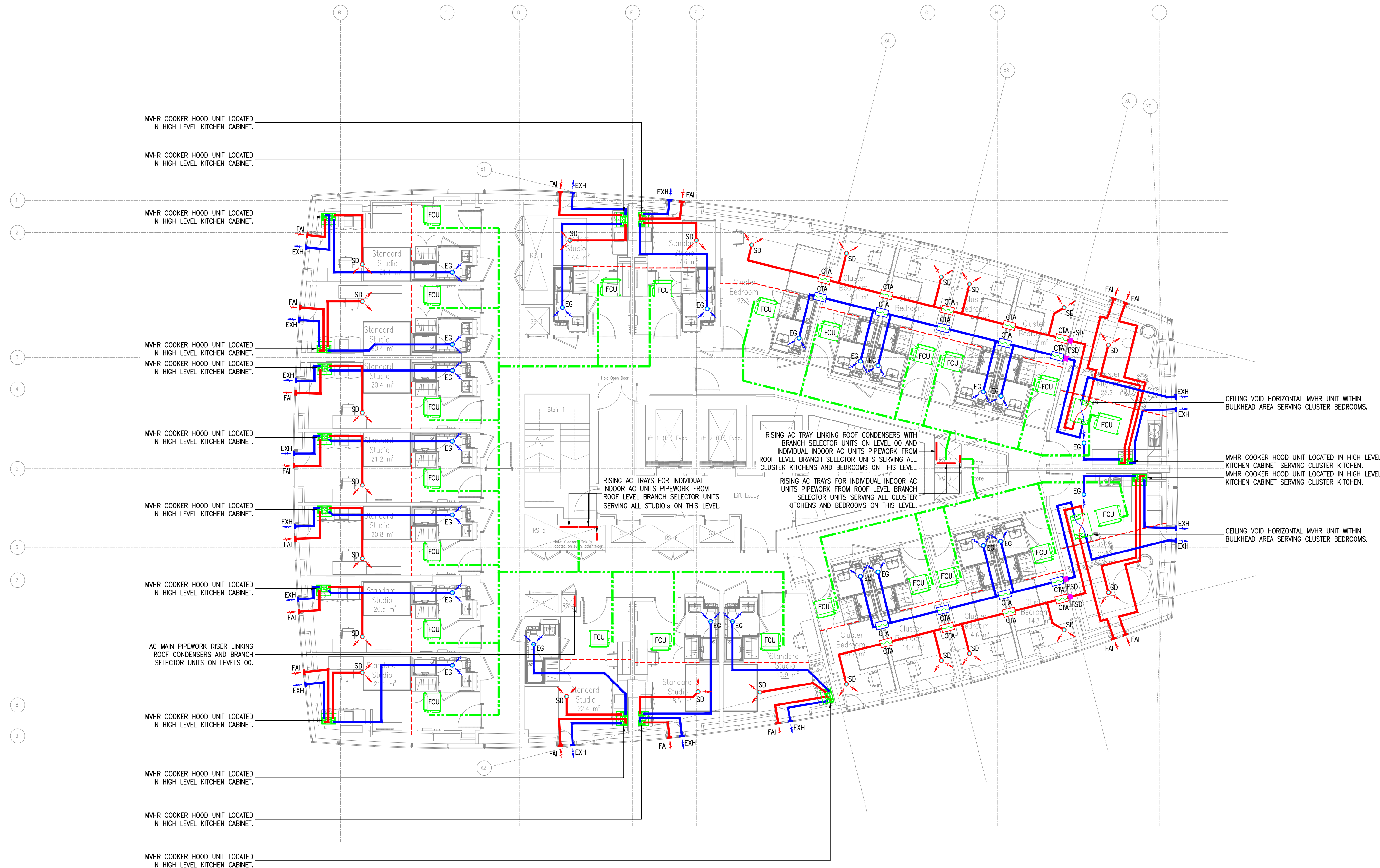
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LEGEND:

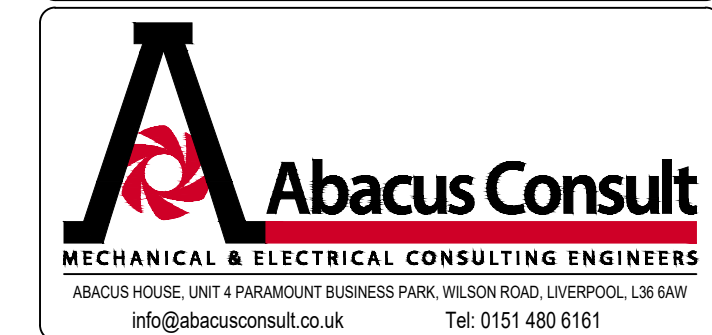
---	INDICATIVE BULKHEAD LINE
---	INDICATIVE AC PIPE ROUTE
---	EXTRACT/EXHAUST DUCTWORK
---	SUPPLY/INTAKE DUCTWORK
FCU	AIR CONDITIONING FAN COIL UNIT
ACC	AIR CONDITIONING CASSETTE UNIT
HRU	MECHANICAL VENTILATION HEAT RECOVERY UNIT
MEV	MECHANICAL EXTRACT VENTILATION UNIT
MVHR	MECHANICAL VENTILATION HEAT RECOVERY UNIT
EG	EXTRACT GRILLE
SD	SUPPLY DIFFUSER
ATT	ATTENUATOR
CTA	CROSS TALK ATTENUATOR
VCD	VOLUME CONTROL DAMPER
FS	INTUMESCENT FIRE SLEEVE
FD	FUSIBLE LINK FIRE DAMPER
FSD	FIRE SMOKE DAMPER
EXH/FAI	EXHAUST/FRESH AIR INTAKE WEATHER PROOF VENT TERMINAL (MIN. 0.02m ² FREE AREA, MAX. 25Pa PRESSURE DROP AND 60l/s MAX FLOW RATE)

NOTES:

- WHERE EXH AND FAI SHARE THE SAME FACADE PANEL, 300mm CLEAR SEPARATION TO BE PROVIDED IN BETWEEN.
- ASSUMED NATURAL PURGE VENTILATION PROVIDED VIA OPENING WINDOWS.
- FOR MVHR/HRU SYSTEMS, ALL INTAKE AND EXHAUST DUCTWORK INSULATED USING 25mm MINERAL WOOL INSULATION (0.04W/m.K). FOR MEV SYSTEMS, THE DUCTWORK FROM THE LOUVER CONNECTION WILL BE INSULATED USING 25mm MINERAL WOOL INSULATION (0.04W/m.K), IN ACCORDANCE WITH THE DOMESTIC VENTILATION COMPLIANCE GUIDE.
- ALL AIR VALVES TO BE ADJUSTABLE TYPE.
- NO INSECT MESH TO BE INSTALLED ON LOUVRES.



T01	ISSUED FOR TENDER	06/02/26	S.R.
Rev	Description	Date	Initial

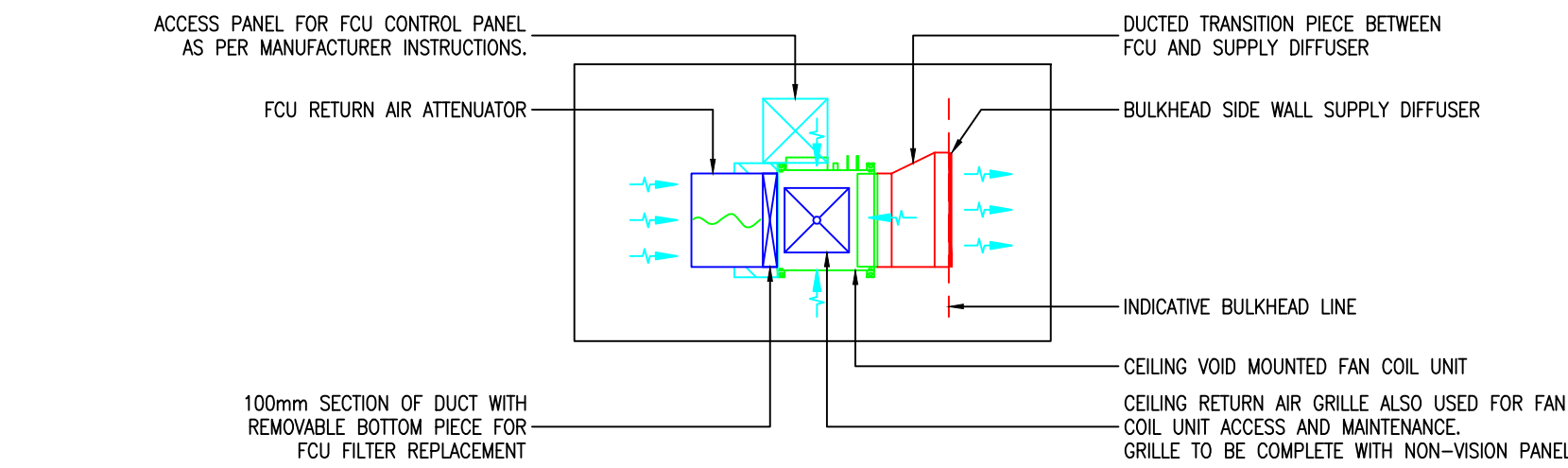


DOWNING STUDENTS (FIRST STREET)
LIMITED PARTNERSHIP INCORPORATED
1 OLD HALL STREET
LIVERPOOL
L3 9HF

FIRST STREET SOUTH, MANCHESTER
BLOCK C

LEVEL 25
VENTILATION & AC SERVICES LAYOUT

Drawing Number	FSS-ABA-ZC-25-DR-M-57001	Revision	T01
Drawing Status	RIBA STAGE 3	Scale	1:100 @ A1
Drawn	S.R.	Checked	P.A.
Approved	P.A.	Date	JAN 2026



TYPICAL BEDROOM/KITCHEN/STUDIO FANCOIL UNIT CLOSE UP DETAIL

GENERAL NOTES

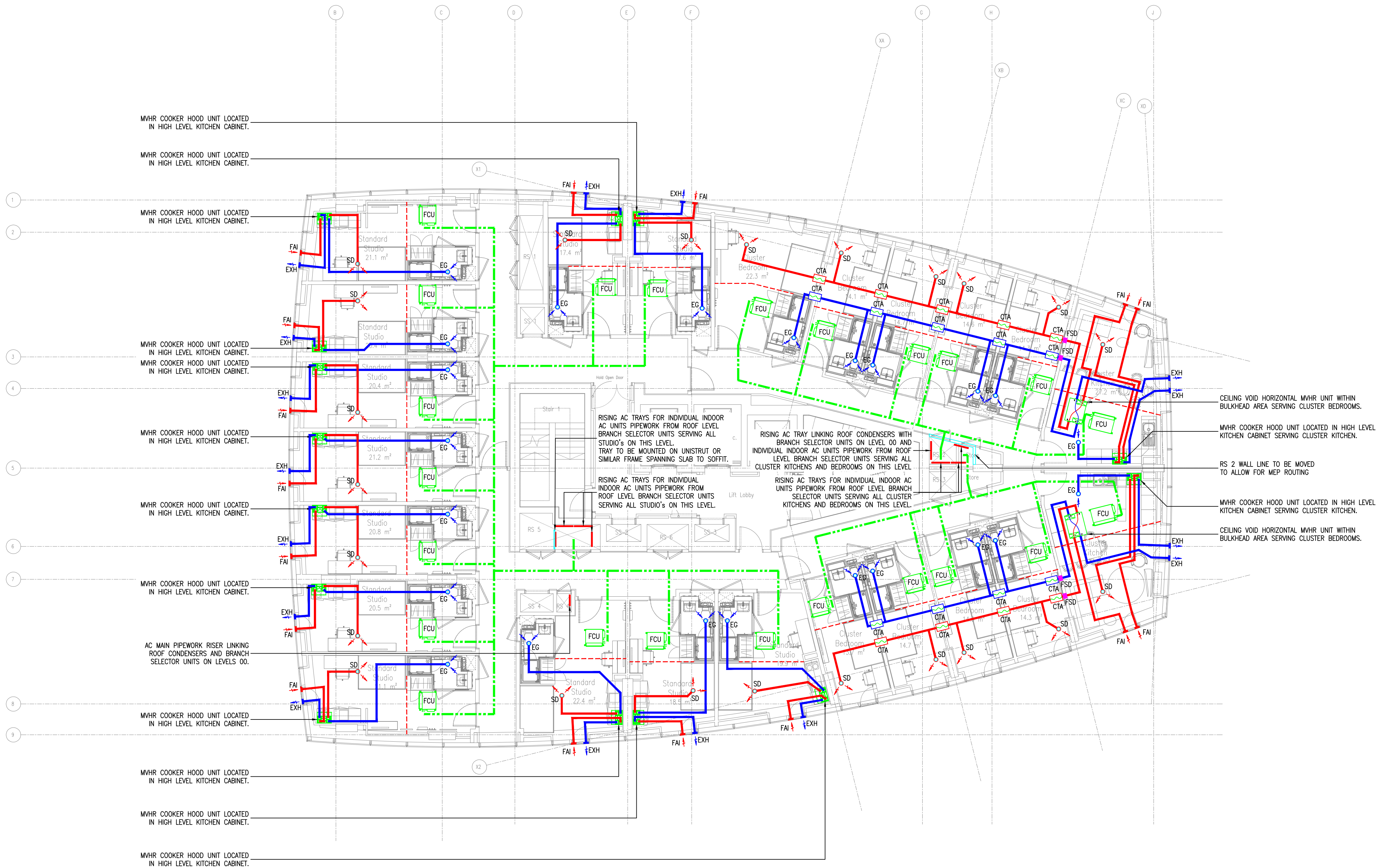
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- DO NOT SCALE FROM THIS DRAWING.
- THIS IS NOT AN INSTALLATION DRAWING.

LEGEND:

- INDICATIVE BULKHEAD LINE
 - INDICATIVE AC PIPE ROUTE
 - EXTRACT/EXHAUST DUCTWORK
 - SUPPLY/INTAKE DUCTWORK
 - FCU
 - ACC
 - HRU
 - MEV
 - MVHR
 - EG
 - SD
 - ATT
 - CTA
 - VCD
 - FS
 - FD
 - FSD
 - EXH/FAI
- EXHAUST/FRESH AIR INTAKE WEATHER PROOF VENT TERMINAL (MIN. 0.02m² FREE AREA, MAX. 25Pa PRESSURE DROP AND 60l/s MAX FLOW RATE)

NOTES:

- WHERE EXH AND FAI SHARE THE SAME FACADE PANEL, 300mm CLEAR SEPARATION TO BE PROVIDED IN BETWEEN.
- ASSUMED NATURAL PURGE VENTILATION PROVIDED VIA OPENING WINDOWS.
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- NO INSECT MESH TO BE INSTALLED ON LOUVRES.



T01	ISSUED FOR TENDER	06/02/26	S.R.
Rev	Description	Date	Initial

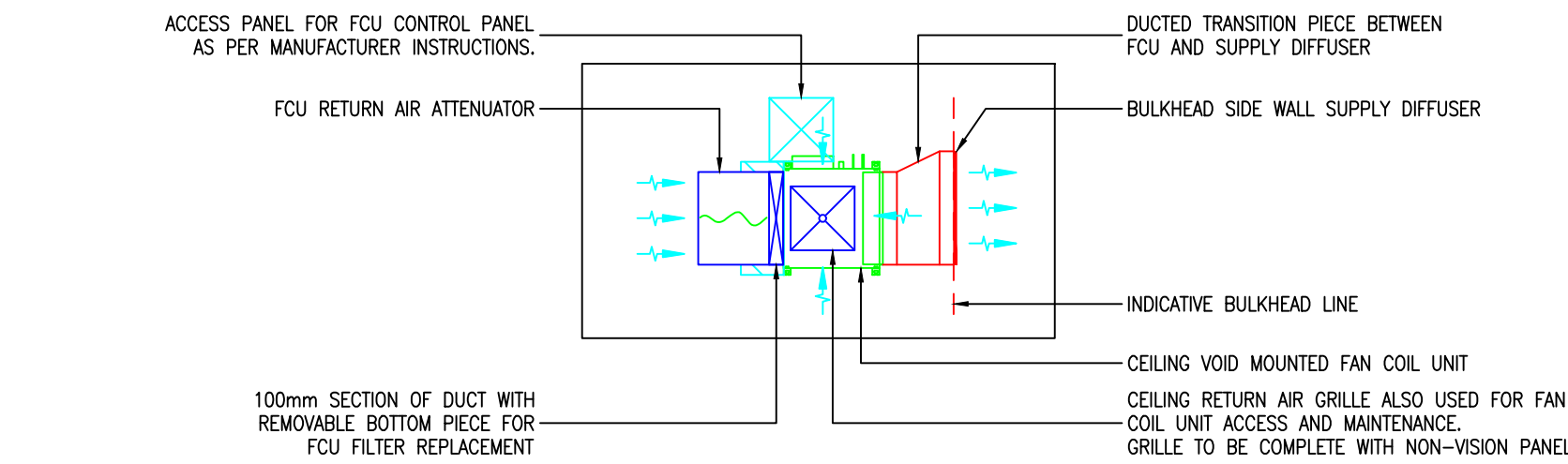
Abacus Consult
MECHANICAL & ELECTRICAL CONSULTING ENGINEERS
ABACUS HOUSE, UNIT 4 PARAMOUNT BUSINESS PARK, WILSON ROAD, LIVERPOOL, L3 6AW
info@abacusconsult.co.uk Tel: 0151 480 6161

DOWNING STUDENTS (FIRST STREET)
LIMITED PARTNERSHIP INCORPORATED
1 OLD HALL STREET
LIVERPOOL
L3 9HF

FIRST STREET SOUTH, MANCHESTER
BLOCK C

LEVEL 26
VENTILATION & AC SERVICES LAYOUT

Drawing Number	FSS-ABA-ZC-26-DR-M-57001	Revision	T01
Drawing Status	RIBA STAGE 3	Scale	1:100 @ A1
Drawn	S.R.	Checked	P.A.
Approved	P.A.	Date	JAN 2026



TYPICAL BEDROOM/KITCHEN/STUDIO FANCOIL UNIT CLOSE UP DETAIL

GENERAL NOTES

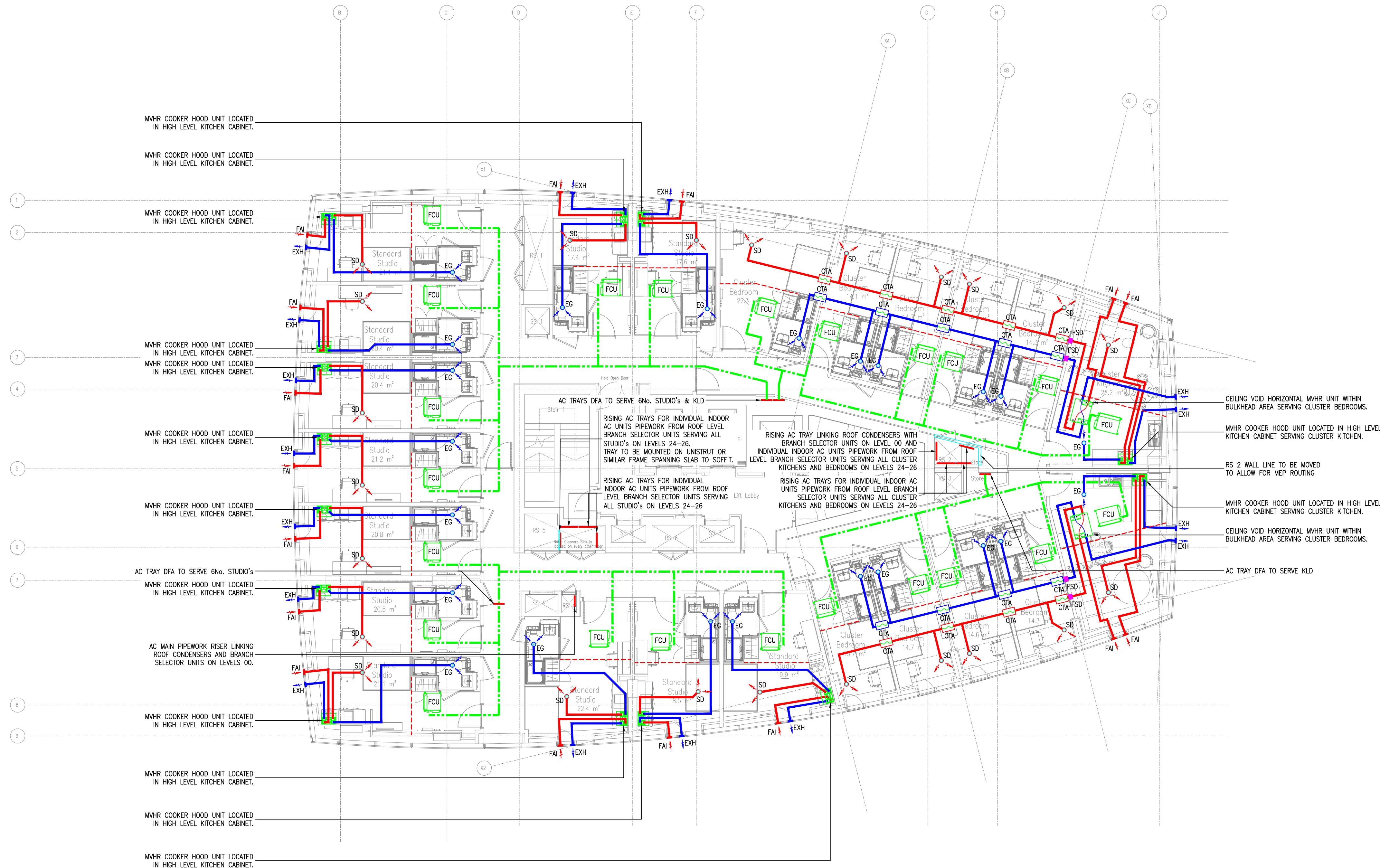
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LEGEND:

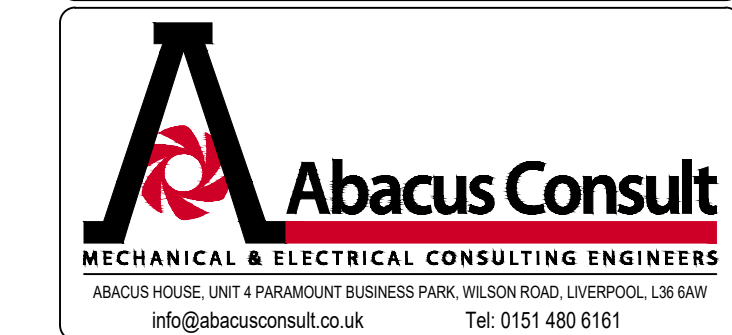
---	INDICATIVE BULKHEAD LINE
---	INDICATIVE AC PIPE ROUTE
---	EXTRACT/EXHAUST DUCTWORK
---	SUPPLY/INTAKE DUCTWORK
FCU	AIR CONDITIONING FAN COIL UNIT
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MEV	MECHANICAL EXTRACT VENTILATION UNIT
MVHR	MECHANICAL VENTILATION HEAT RECOVERY UNIT
EG	EXTRACT GRILLE
SD	SUPPLY DIFFUSER
ATT	ATTENUATOR
CTA	CROSS TALK ATTENUATOR
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FS	INTUMESCENT FIRE SLEEVE
FD	FUSIBLE LINK FIRE DAMPER
FSD	FIRE SMOKE DAMPER
EXH/FAI	EXHAUST/FRESH AIR INTAKE WEATHER PROOF VENT TERMINAL (MIN. 0.02m ² FREE AREA, MAX. 25Pa PRESSURE DROP AND 60l/s MAX FLOW RATE)

NOTES:

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- NO INSECT MESH TO BE INSTALLED ON LOUVRES.



T01	ISSUED FOR TENDER	06/02/26	S.R.
Rev	Description	Date	Initial



DOWNING STUDENTS (FIRST STREET)
LIMITED PARTNERSHIP INCORPORATED
1 OLD HALL STREET
LIVERPOOL
L3 9HF

FIRST STREET SOUTH, MANCHESTER
BLOCK C

LEVEL 27
VENTILATION & AC SERVICES LAYOUT

Drawing Number	FSS-ABA-ZC-27-DR-M-57001	Revision	T01
Drawing Status	RIBA STAGE 3	Scale	1:100 @ A1
Drawn	S.R.	Checked	P.A.
Approved	P.A.	Date	JAN 2026

GENERAL NOTES

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LEGEND:

---	INDICATIVE BULKHEAD LINE
---	INDICATIVE AC PIPE ROUTE
---	EXTRACT/EXHAUST DUCTWORK
---	SUPPLY/INTAKE DUCTWORK
FCU	AIR CONDITIONING FAN COIL UNIT
ACC	AIR CONDITIONING CASSETTE UNIT
HRU	MECHANICAL VENTILATION HEAT RECOVERY UNIT
MEV	MECHANICAL EXTRACT VENTILATION UNIT
MVHR	MECHANICAL VENTILATION HEAT RECOVERY UNIT
EG	EXTRACT GRILLE
SD	SUPPLY DIFFUSER
ATT	ATTENUATOR
CTA	CROSS TALK ATTENUATOR
VCD	VOLUME CONTROL DAMPER
FS	INTUMESCENT FIRE SLEEVE
FD	FUSIBLE LINK FIRE DAMPER
FSD	FIRE SMOKE DAMPER
EXH/FAI	EXHAUST/FRESH AIR INTAKE WEATHER PROOF VENT TERMINAL (MIN. 0.02m ² FREE AREA, MAX. 25Pa PRESSURE DROP AND 60l/s MAX FLOW RATE)

NOTES:

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TYPICAL PLAN TYPE 01
FSS-ABA-ZC-ZZ-DR-M-57001 APPLIES TO LEVELS:
06, 08, 10, 12 & 14

T02	NEW SHIP GAs ADDED AND UPDATED TO SUIT NEW TENDER DESIGN	06/02/26	S.R.
T01	ISSUED FOR TENDER	20/09/24	S.R.
Rev	Description	Date	Initial



DOWNING STUDENTS (FIRST STREET)
LIMITED PARTNERSHIP INCORPORATED
1 OLD HALL STREET
LIVERPOOL
L3 9HF

FIRST STREET SOUTH, MANCHESTER
BLOCK C

VENTILATION & AC SERVICES LAYOUT
TYPICAL PLAN TYPE 01

Drawing Number	FSS-ABA-ZC-ZZ-DR-M-57001	Revision	T02
Drawing Status	RIBA STAGE 3	Scale	1:100 @ A1
Drawn	S.R.	Checked	P.A.
Approved	P.A.	Date	SEPT 2024