

MXM Pollard Street, Manchester

M&E Systems Strategy Update

For Information

26 April 2022

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ISSUE HISTORY

Issue	Date	Description
P01	26/04/2022	S2 – For Information

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1.0 EXECUTIVE SUMMARY

This memo will report and explain updates to Building A, B and C of the Pollard Street development.

This memo shall be read in conjunction with the previous “PLS-MXF-ZZ-XX-RP-J-56000 - M&E systems strategy” report, issued 01 October 2020.

For Building A, the energy and overall service strategy have remained the same as the initial Planning Submission. As the design has progressed the roof layout has been revised for coordination purposes.

For Building B and C, the energy and service strategy have changed. These buildings remain naturally ventilated but now make use of a high efficiency VRF system to provide heating and cooling compared to the initial submission that proposed electric heating. This change was brought about to provide a more robust heating and cooling strategy. The roof layouts have been revised to encompass these changes and for coordination purposes.

For clarity this memo will cover:

- Coordination changes affecting the roofs of Building A, B and C
- Changes to the service strategy for Building B and C

2.0 BUILDING A – UPDATED ROOF COORDINATION

As the Stage 3 design has developed there have been changes to the roof layout of Building A. These changes are a result of:

- Coordination with architectural and structural elements
- Equipment and components being selected to a higher level of detail
- Changes to the internal layout resulting in plant moving to reduce duct and pipe runs – reducing fan and pump energy requirement
- Heavy plant moving onto structural lines to help reduce the structural requirements

See **APPENDIX 1** for the updated Building A layout.

3.0 BUILDING B & C – UPDATED M&E SERVICE STRATEGY

This section of the memo should be read in conjunction with ‘PLS-MXF-ZZ-XX-RP-J-56003 - Energy Statement Update’.

During the Stage 3 design, there has been an aspiration to provide a more robust heating & cooling system for Building B and C while maintaining the idea of a lower MEP-spec office to minimise the embodied carbon contribution to the overall scheme. This is to be provided by utilising a *mixed mode HCAV system*.

To provide a low-spec office Building B and C were initially proposed and designed with the following MEP systems:

- Natural ventilation
- Direct electric heating
- Instantaneous direct electric point of use water heaters for wash hand basins
- Direct electric hot water cylinder for showers

Now that a more robust heating & cooling system is being provided the proposed M&E strategy can be summarised as:

- A natural ventilation system, using manual openable windows, giving to the occupants the full control of the ventilation strategy
- A new VRF (Variable Refrigerant Flow) system that will provide both heating & cooling via exposed FCU into the space and external units on the roof.
- Efficient LED lighting with daylight controls and presence detection
- Domestic hot water for wash hand basins provided by instantaneous direct electric water heaters to remove storage and distribution losses
- Direct electric hot water cylinder for showers
- PV on roof to generate electricity. The number of PV panels has been reduced due to the VRF system, which is essentially a heat pump system, requiring less renewable generation to meet the Part L requirements when compared to the previous strategy.

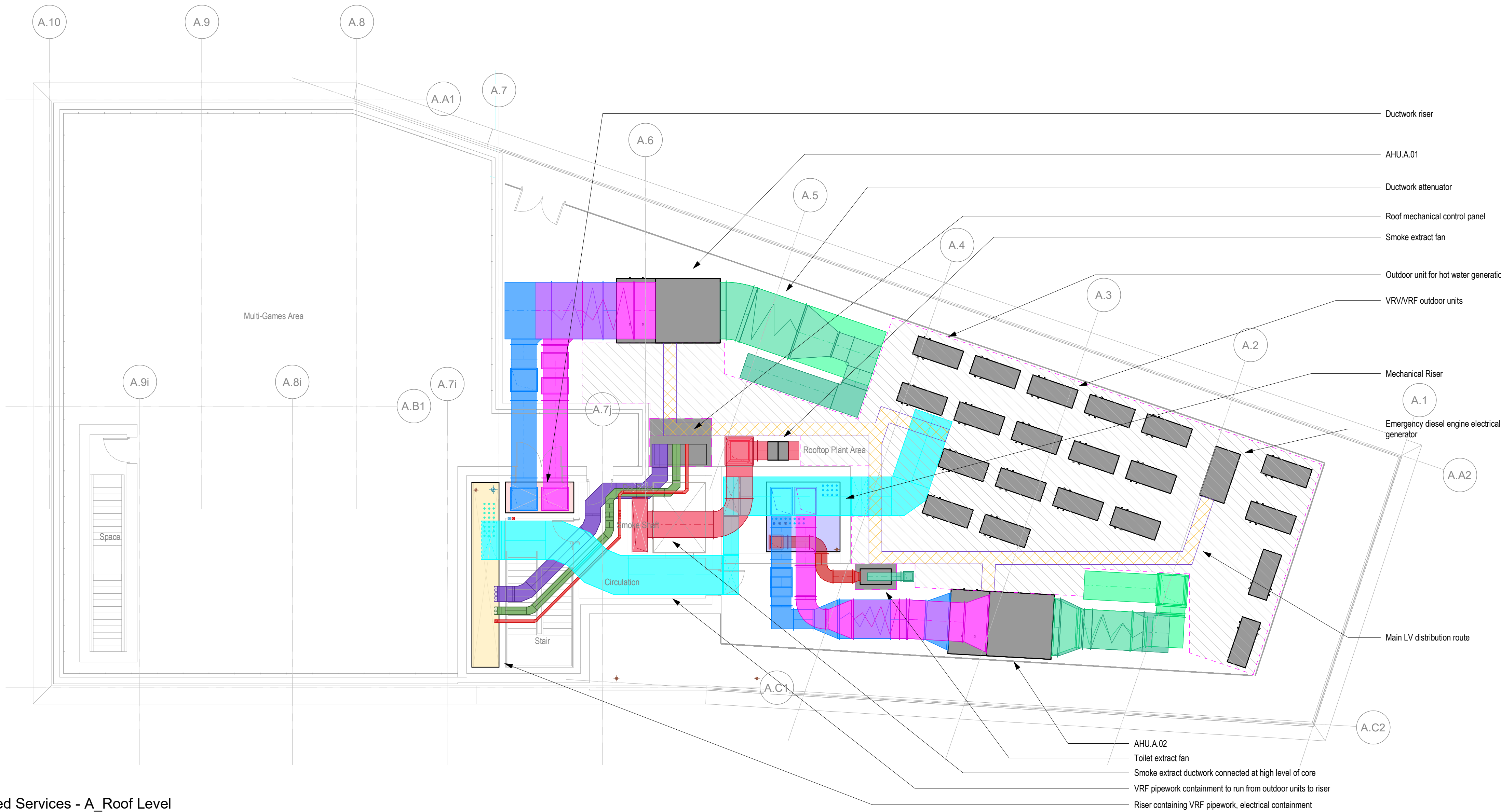
As with Building A, the Building B and C roof layouts have changed due to:

- Coordination with architectural and structural elements
- Equipment and components being selected to a higher level of detail
- Changes to the location of the internal layout resulting in plant moving to reduce duct and pipe runs – reducing fan and pump energy requirement

See **APPENDIX 1** for the updated Building B and C layouts.

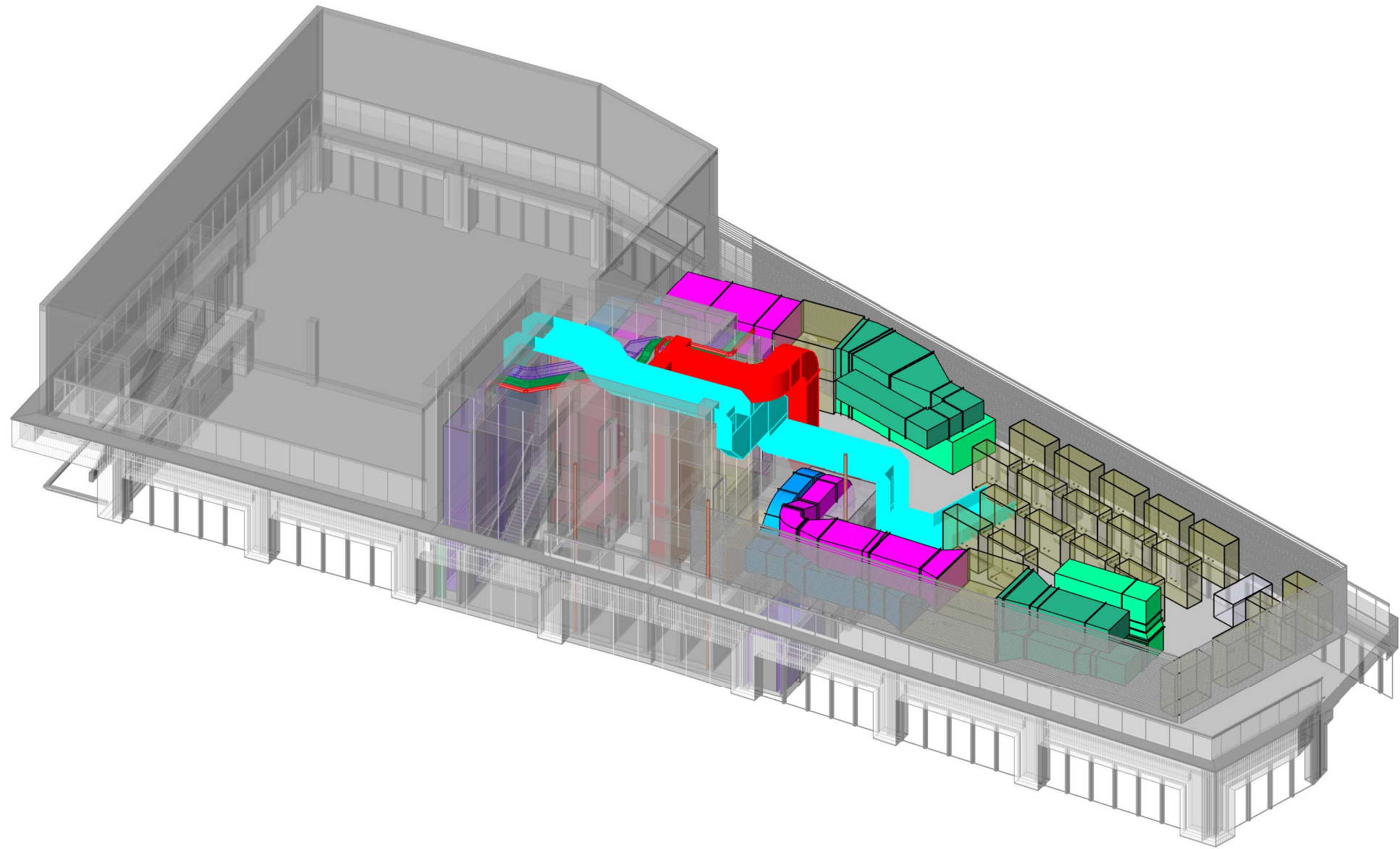
**APPENDIX 1 – Building A, B and C MEP service
strategy drawings – Roof level**

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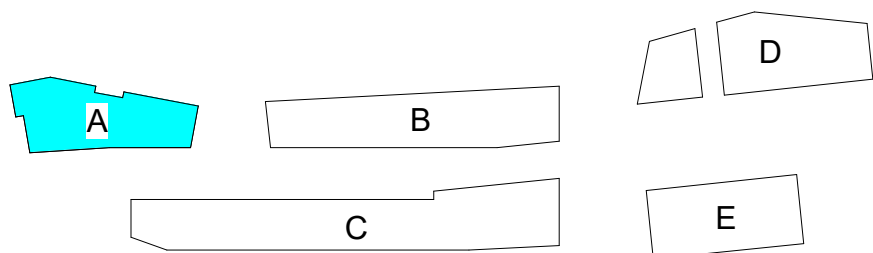


- NOTES**
1. This drawing is for information only, with main purpose to illustrate ME service strategy, and it must be read in conjunction with all the other relevant MF design documents
 2. Read in conjunction with all the other relevant MF, Architectural, Structural and fire strategy drawings.
 3. This document is developed at STAGE 3 performance design Level of Details. Refer to the SPEC 100 - 200 for the design responsibilities of the contractor for the next design stages
 4. Fire dampers and other fire stopping elements are not indicated on this drawing. To be provided in all the ductwork crossing fire compartment. Refer to the Fire Strategy drawings for more complete information.
 5. All ductwork and service routes above protected escape routes to be fire rated.
 6. Position of air terminal is indicative only - To be coordinated with architect at the next design stages
- VENTILATION**
- Intake
 - Supply
 - Extract
 - Exhaust
 - Smoke Extract
 - WC Extract
- PIPED SERVICES**
- VRF
 - Domestic Boosted Cold Water
 - Domestic Hot Water Flow
 - Domestic Hot Water Return
 - Drainage - Foul
 - Drainage - Rainwater
 - Drainage - Vent
 - LTHW Flow
 - LTHW Return
 - Mains Cold Water
- ELECTRICAL - CONTAINMENT**
- Fire
 - Data
 - LV Distribution - Containment
 - Main Roof LV Distribution Route
 - Life Safety
 - VRF Containment
- ZONES / EQUIPMENT**
- Under Floor Heating
 - Access Zone
 - Mechanical / Electrical Plant
 - Clearance Zone
 - F&B Area

500 - Multiple/Combined Services - A_Roof Level
1 : 100



Building A - roof 3D view



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client
General Projects
job no. **J6781** project leader **EC** scale at A1
1 : 100
status code and description
S2 - For Information

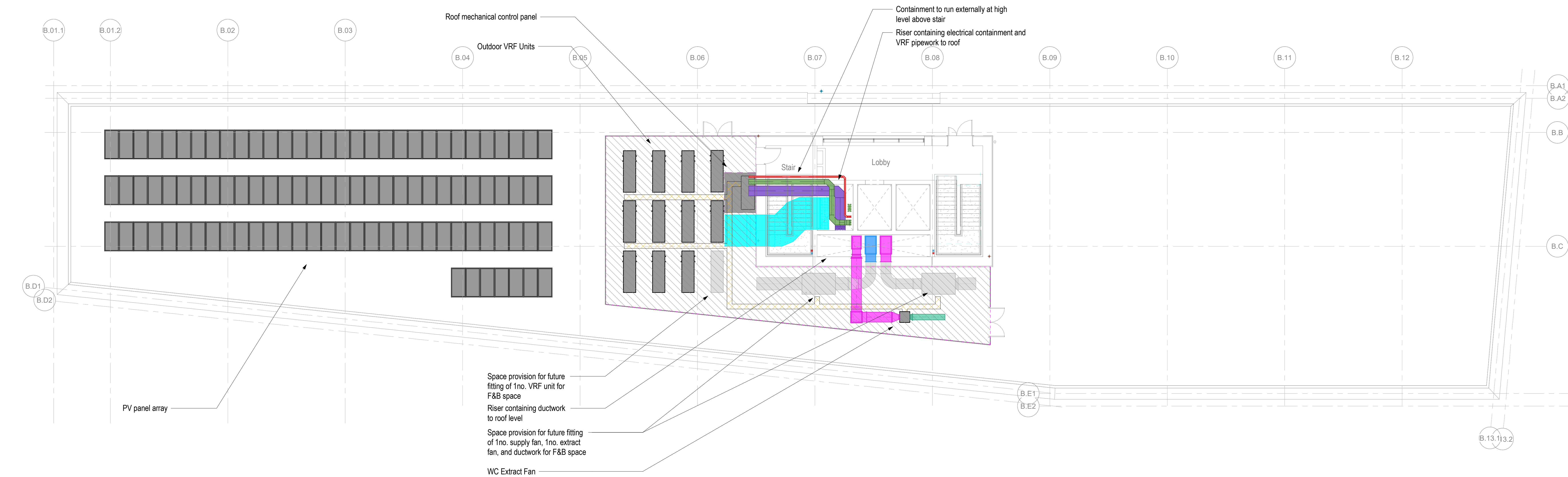
project name
**Electric Park
Building A**

issue date **26/04/2022** revision **P2** classification **Ss_40_40_15_00**

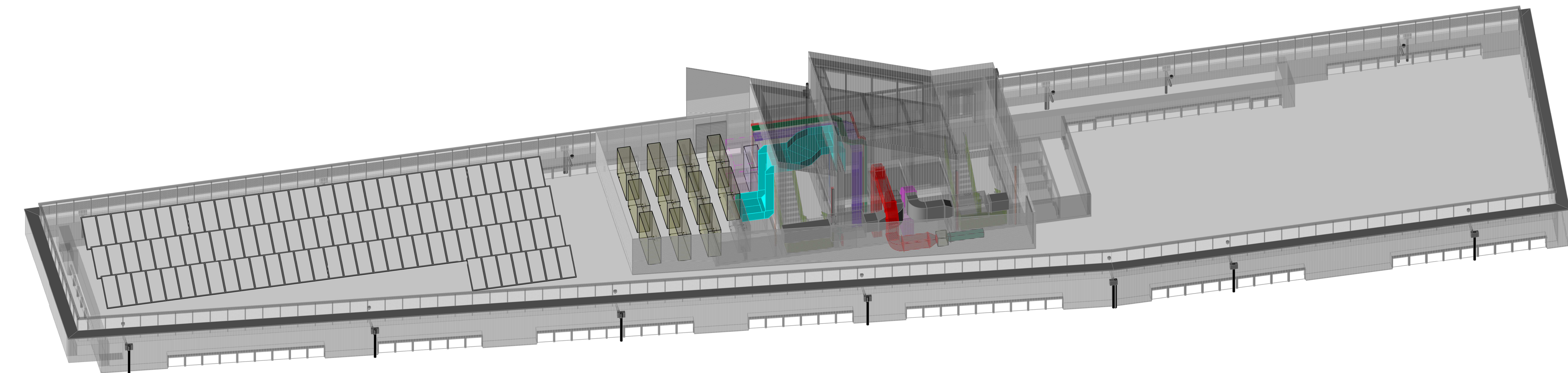
drawing title
**Multiple/Combined Services
Roof Level
Building A**

project code orig. volume level type role number
PLS - MXF - A - MR - DR - J - 30100

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1 500 - Multiple/Combined Services - B_Roof Level - Building B
1 : 100



2 Building B - Roof level 3D detail

NOTES

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VENTILATION

- Intake
- Supply
- Extract
- Exhaust
- Smoke Extract
- WC Extract
- Fire
- Data
- LV Distribution - Containment
- Main Roof LV Distribution Route
- Life Safety
- VRF Containment

ELECTRICAL - CONTAINMENT

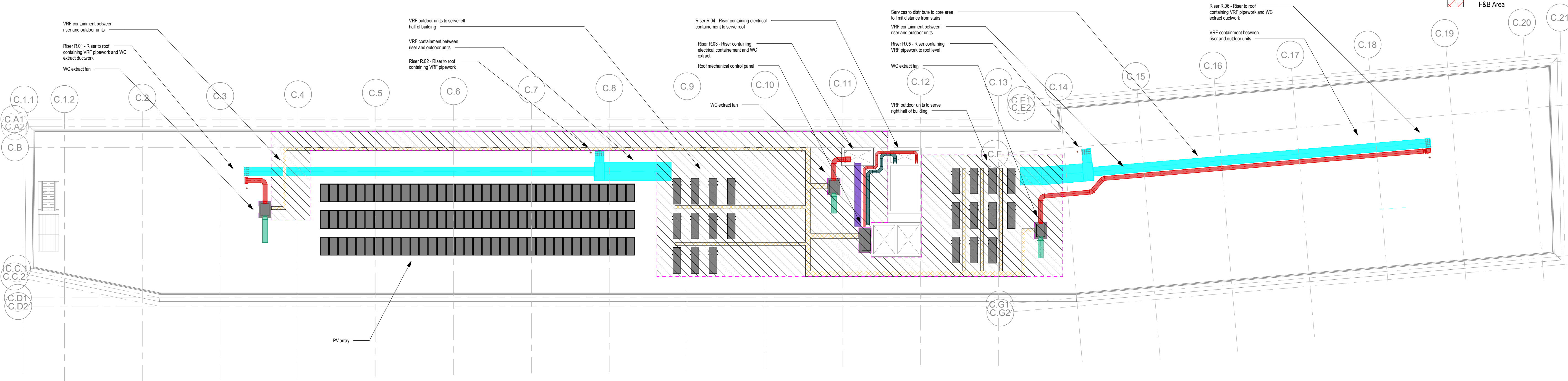
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PIPED SERVICES

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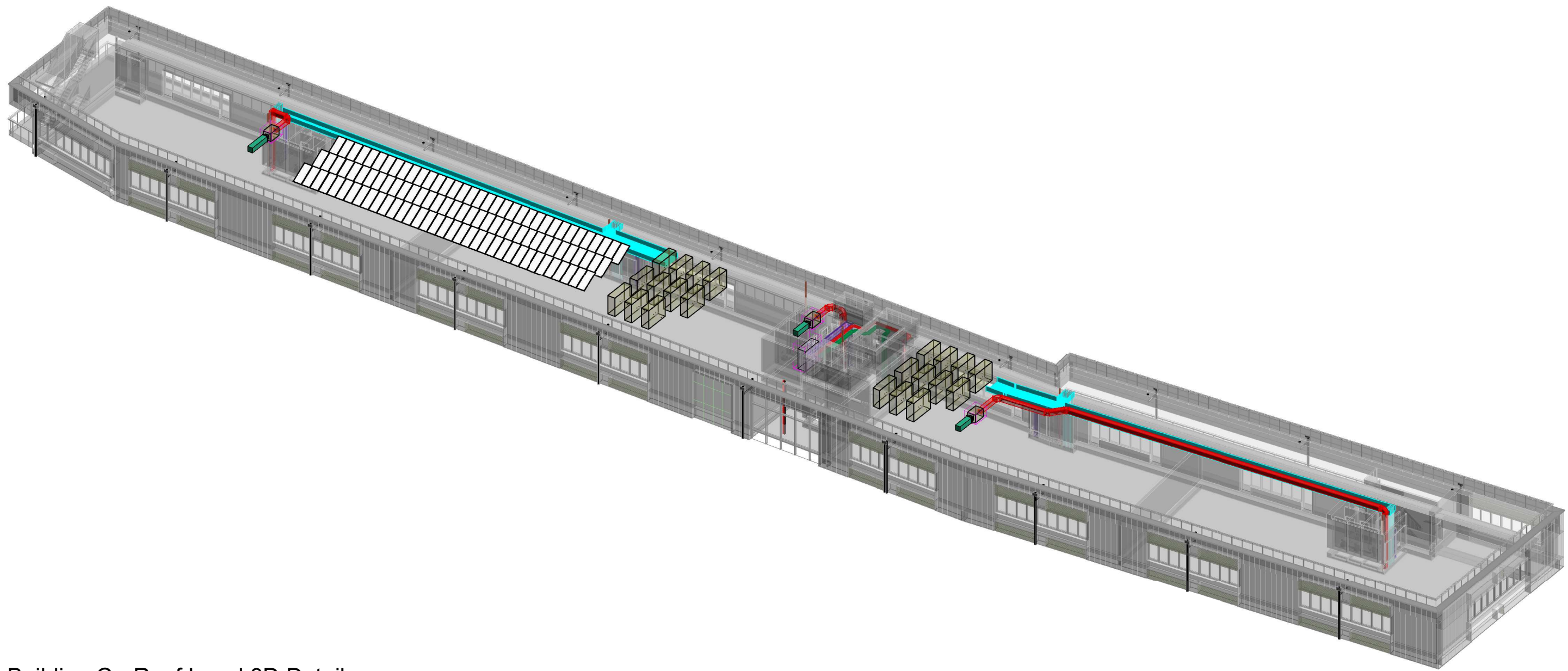
ZONES / EQUIPMENT

- Under Floor Heating
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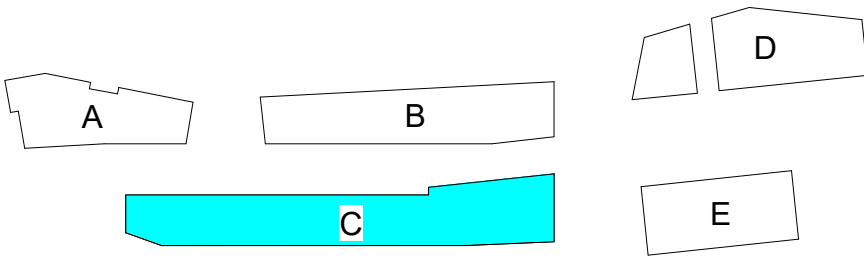


500 - Multiple/Combined Services - C_Roof Level - Building C

1 : 200



Building C - Roof Level 3D Detail



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client
General Projects

job no. project leader
J6781 EC

scale at A1
1:200

status code and description
S2 - for information

project name
Electric Park

Building C

issue date
26/04/2022

revision
P2

classification
Ss_40_40_15_00

drawing title
Multiple/Combined Services

Roof Level

Building C

project code orig. volume level type role number
PLS - MXF - C - MR - DR - J - 30100