

# Restaurant Brands

## KFC - Birkenhead

Corner Highbury Bypass & Birkenhead Ave,  
Birkenhead, Auckland

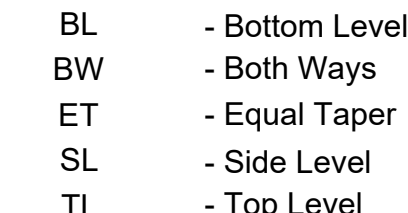
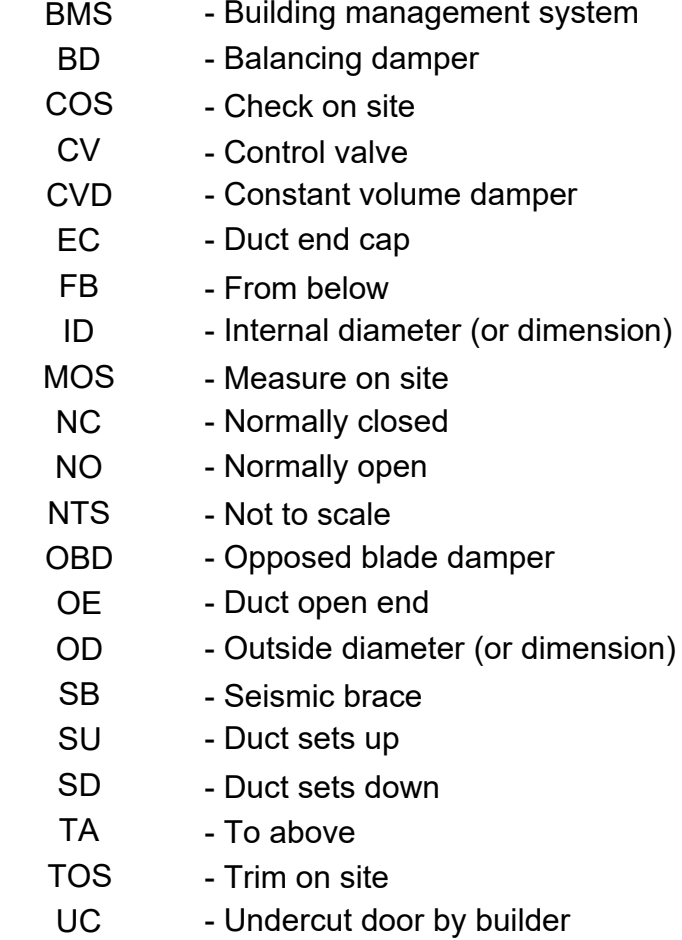
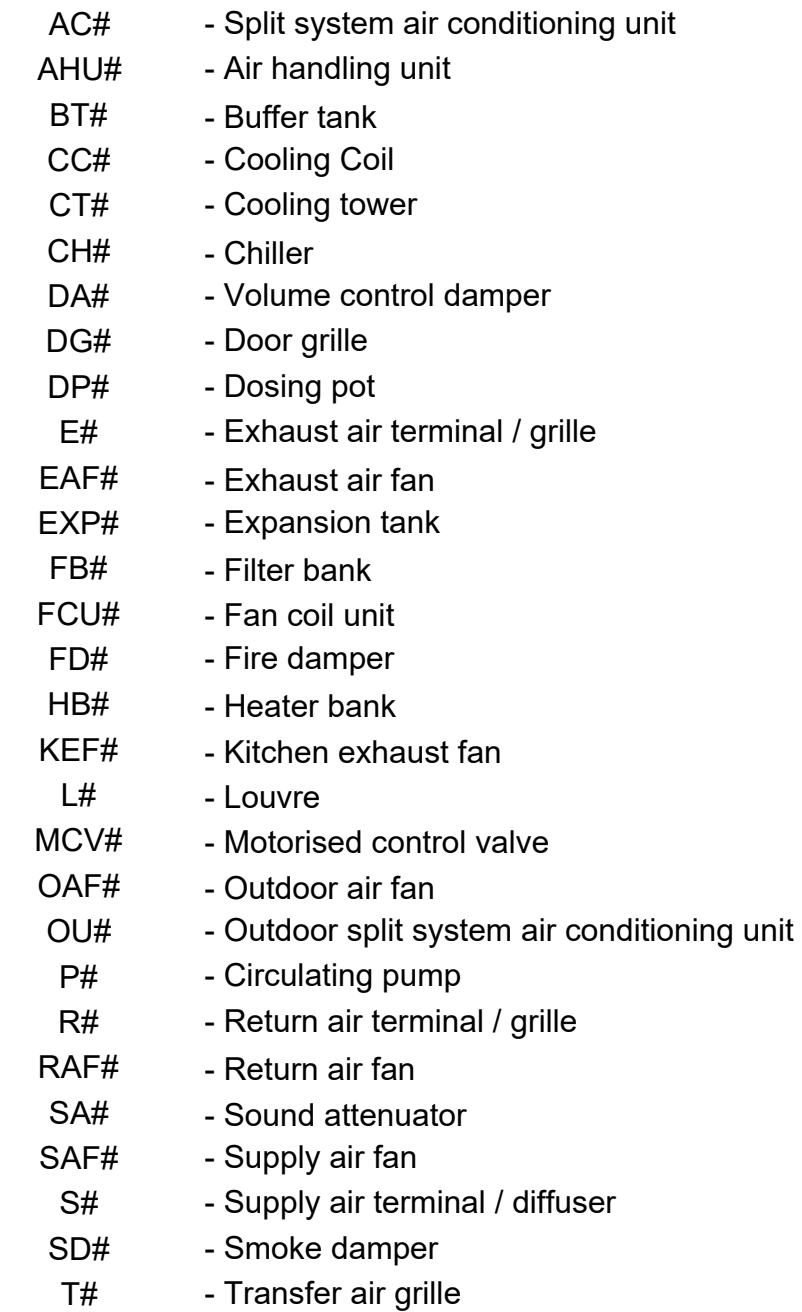
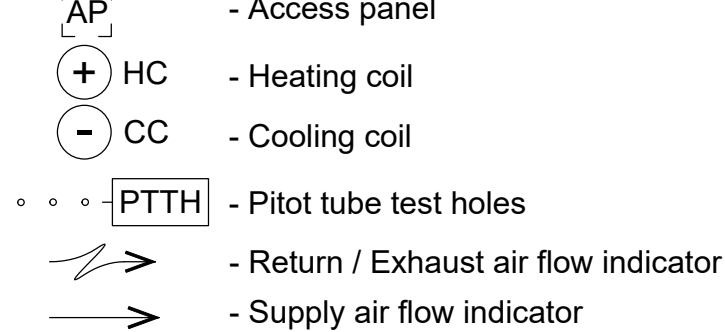
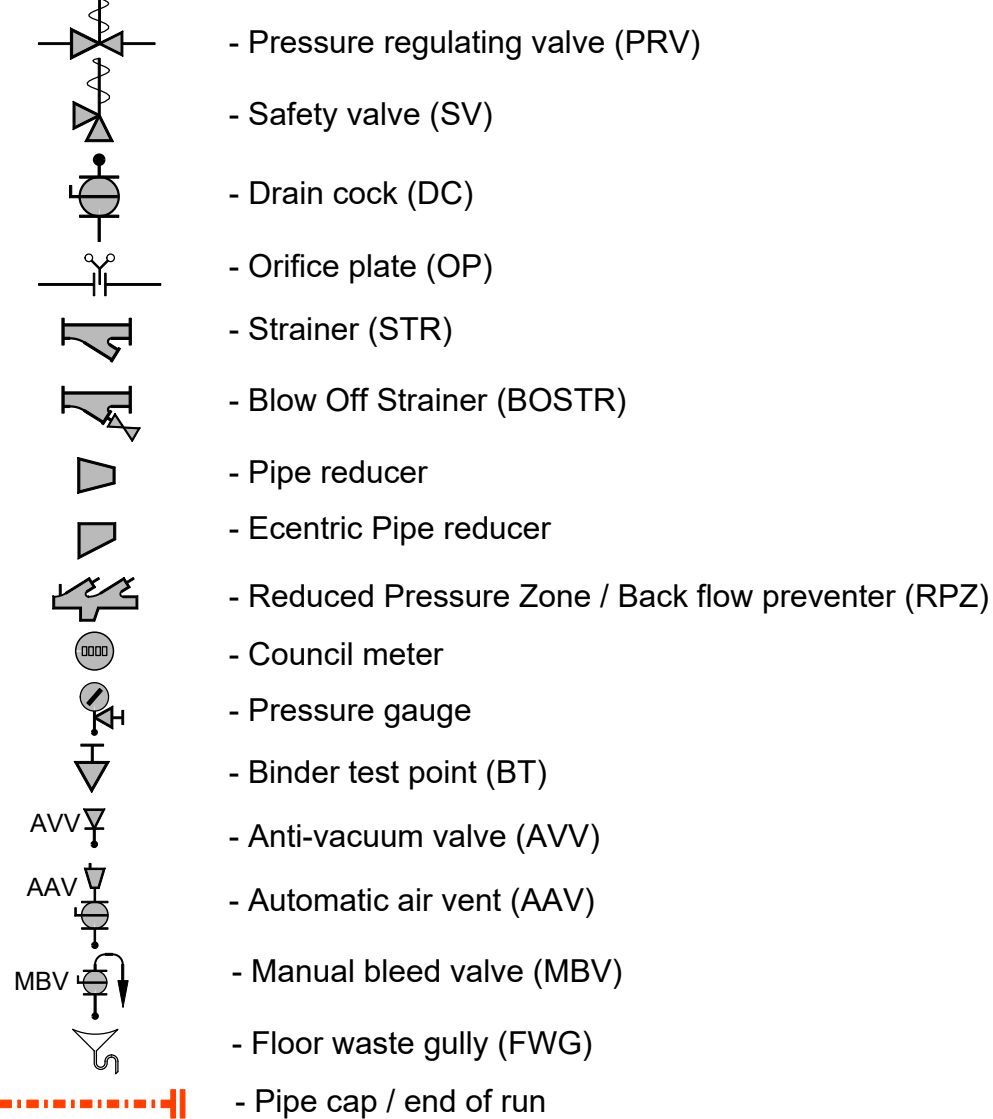
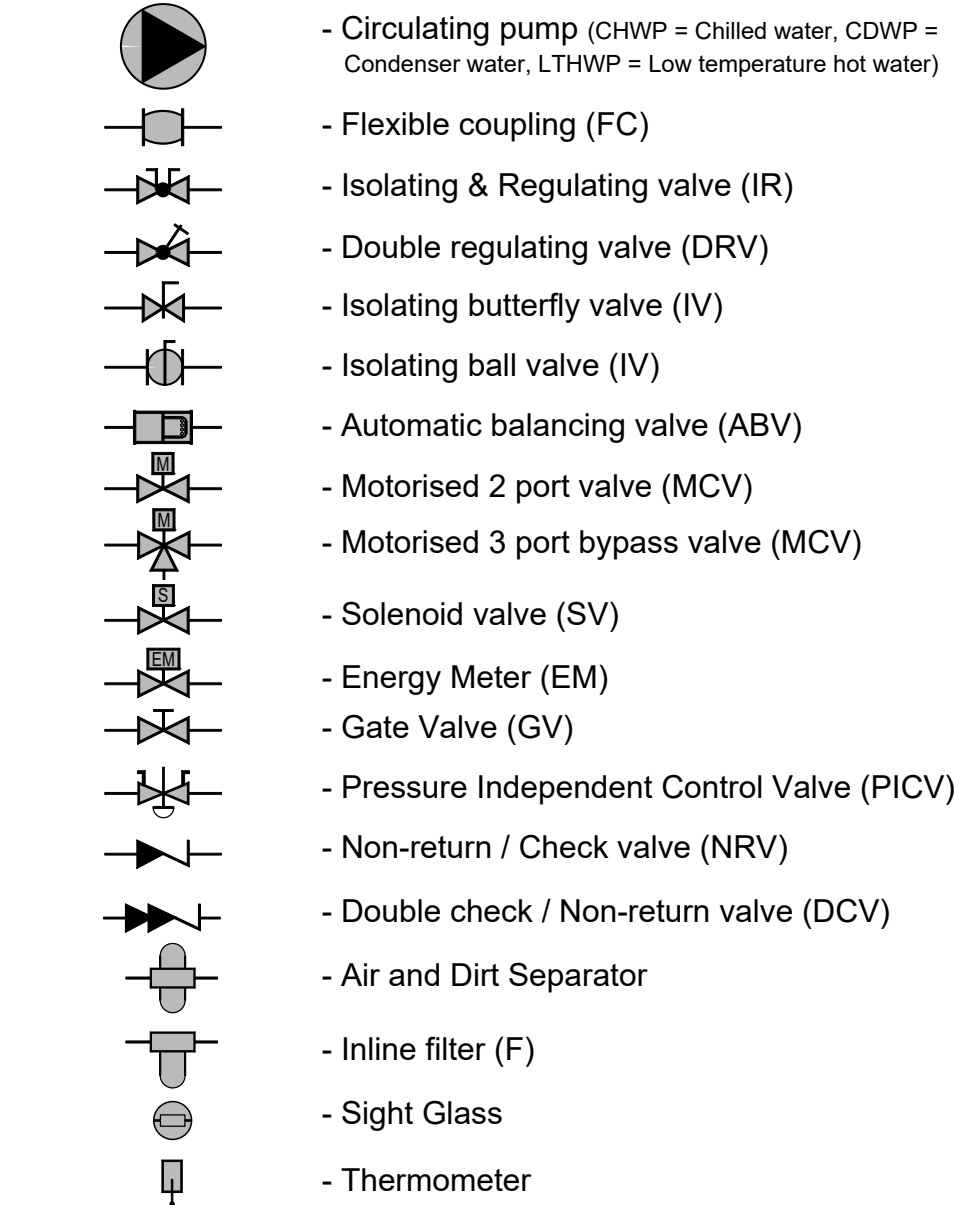
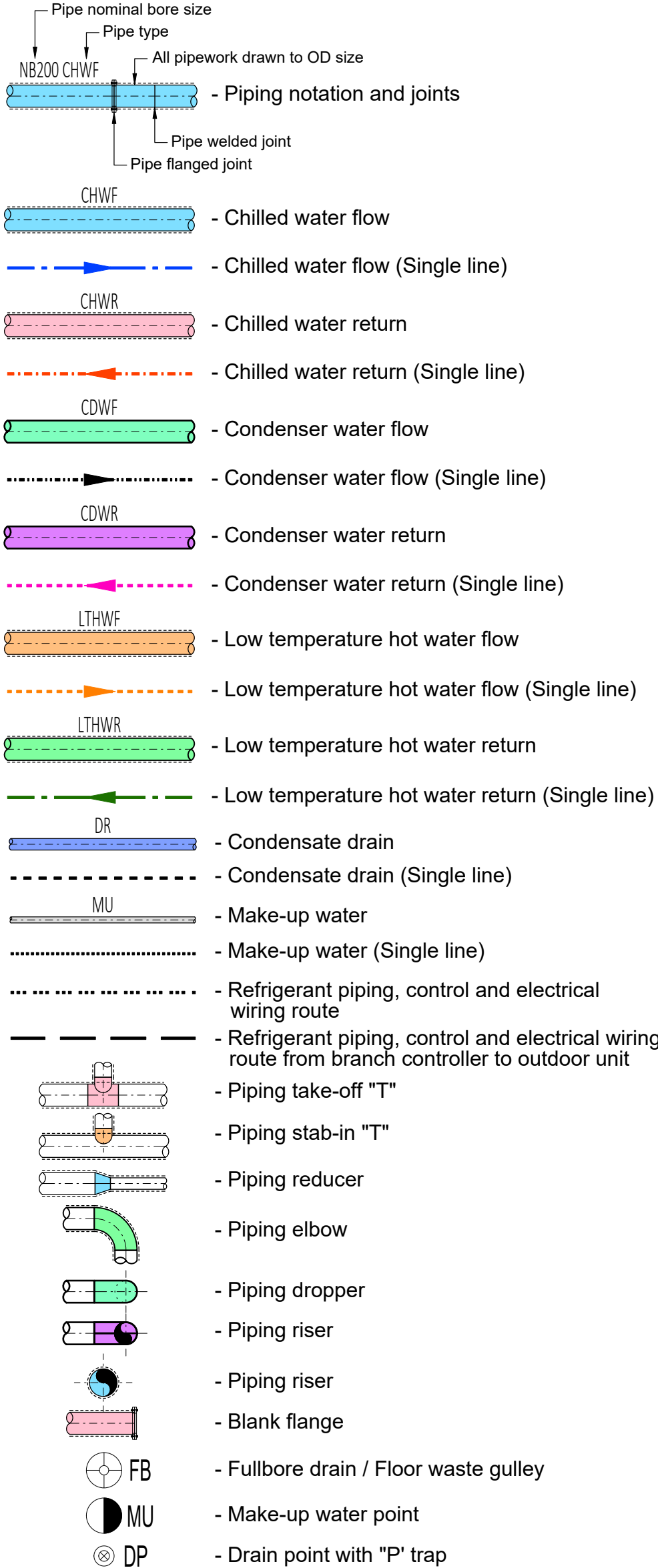
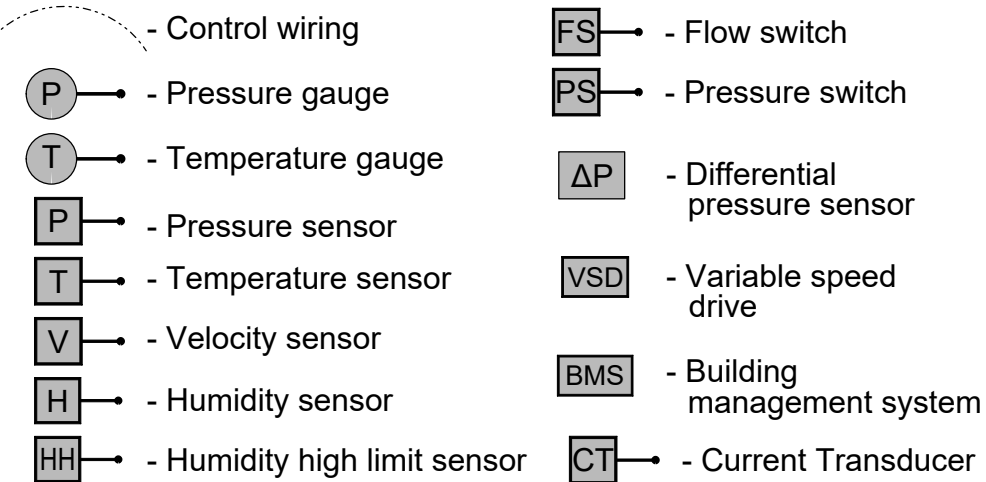
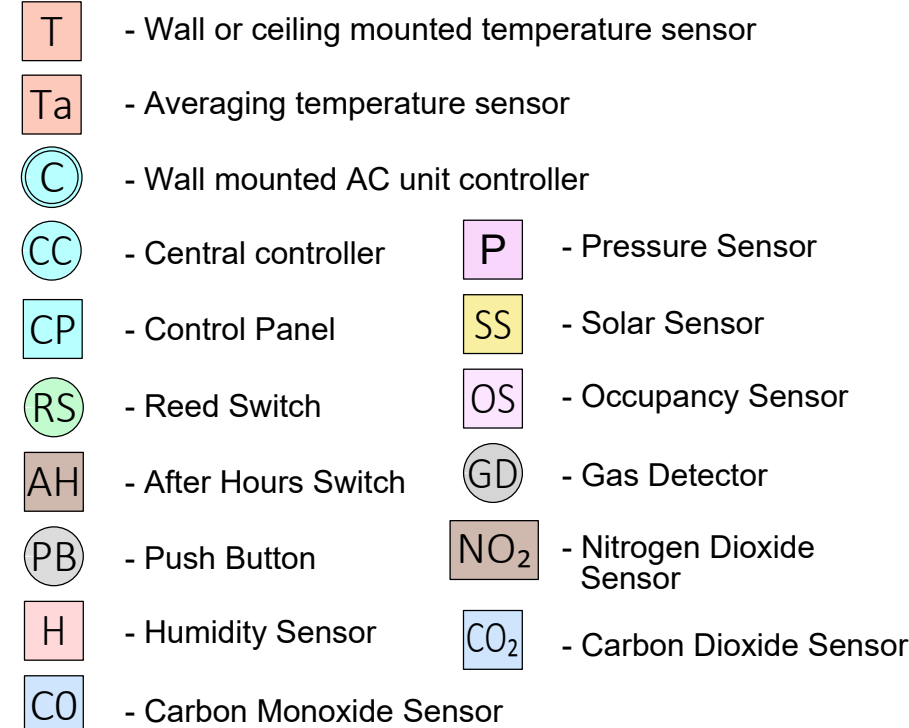
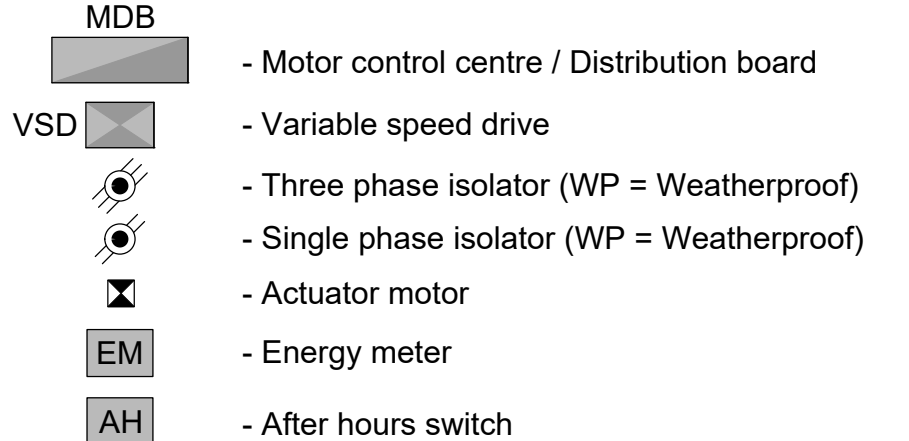
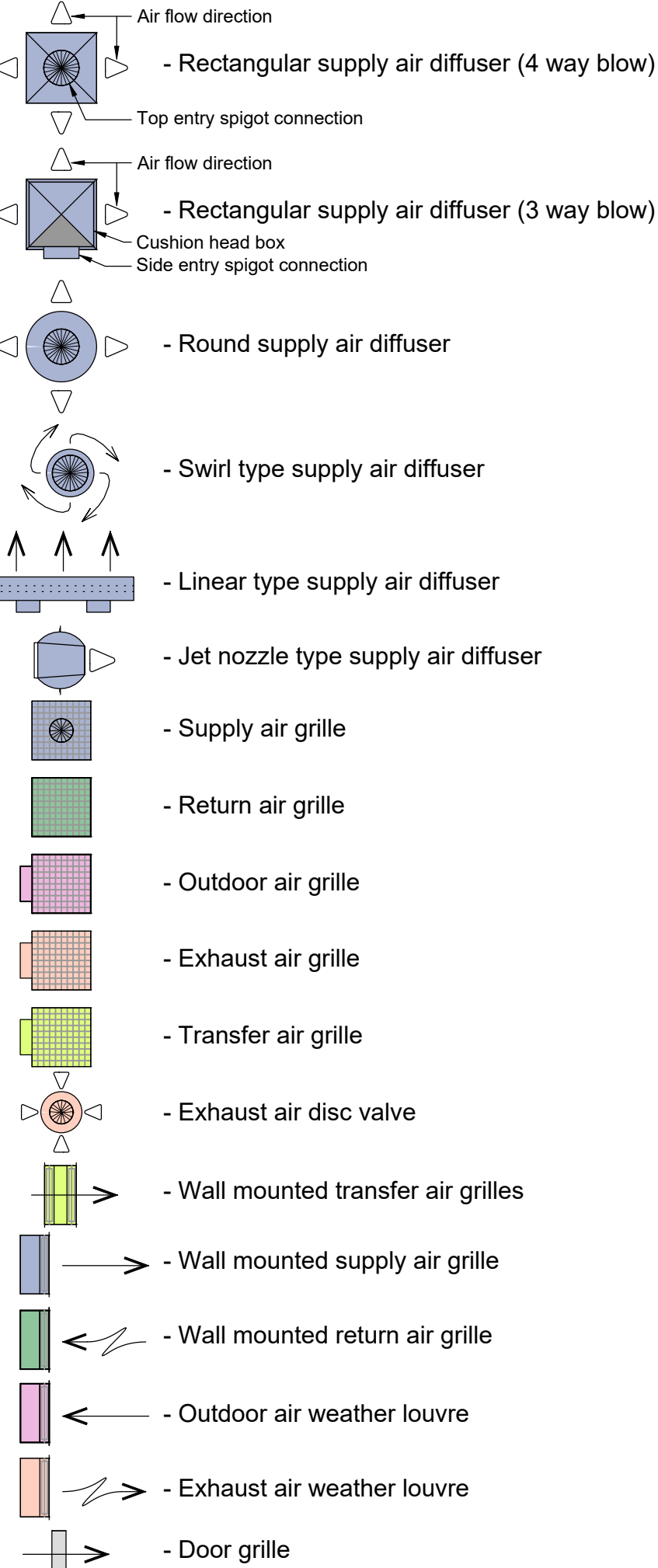
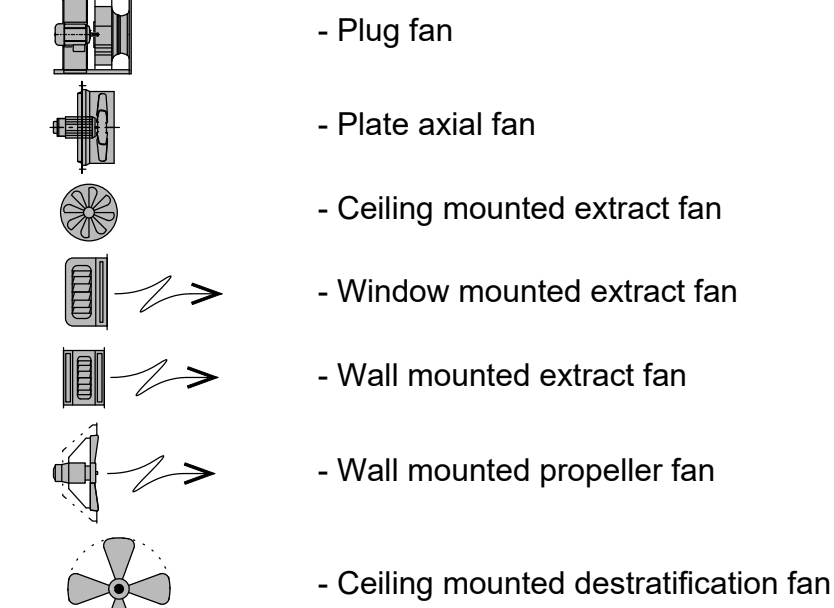
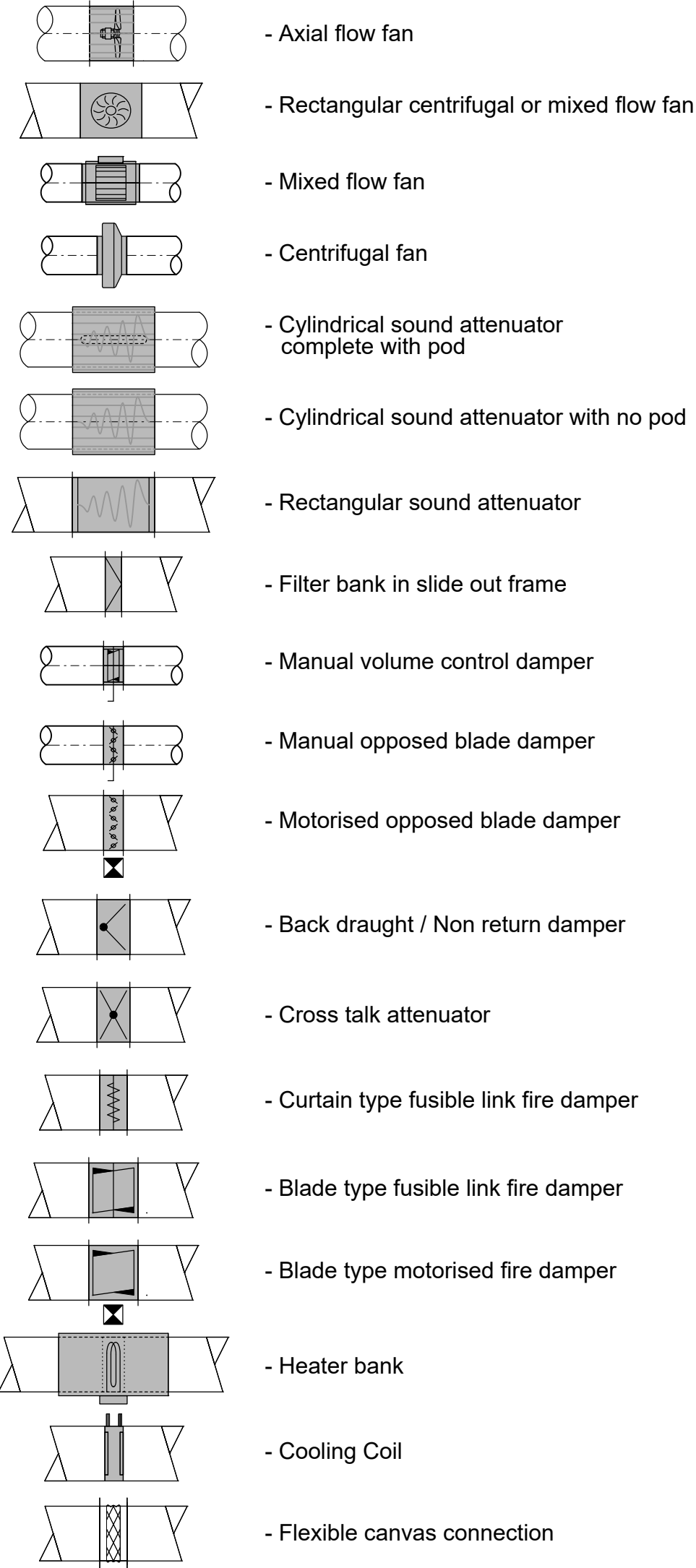
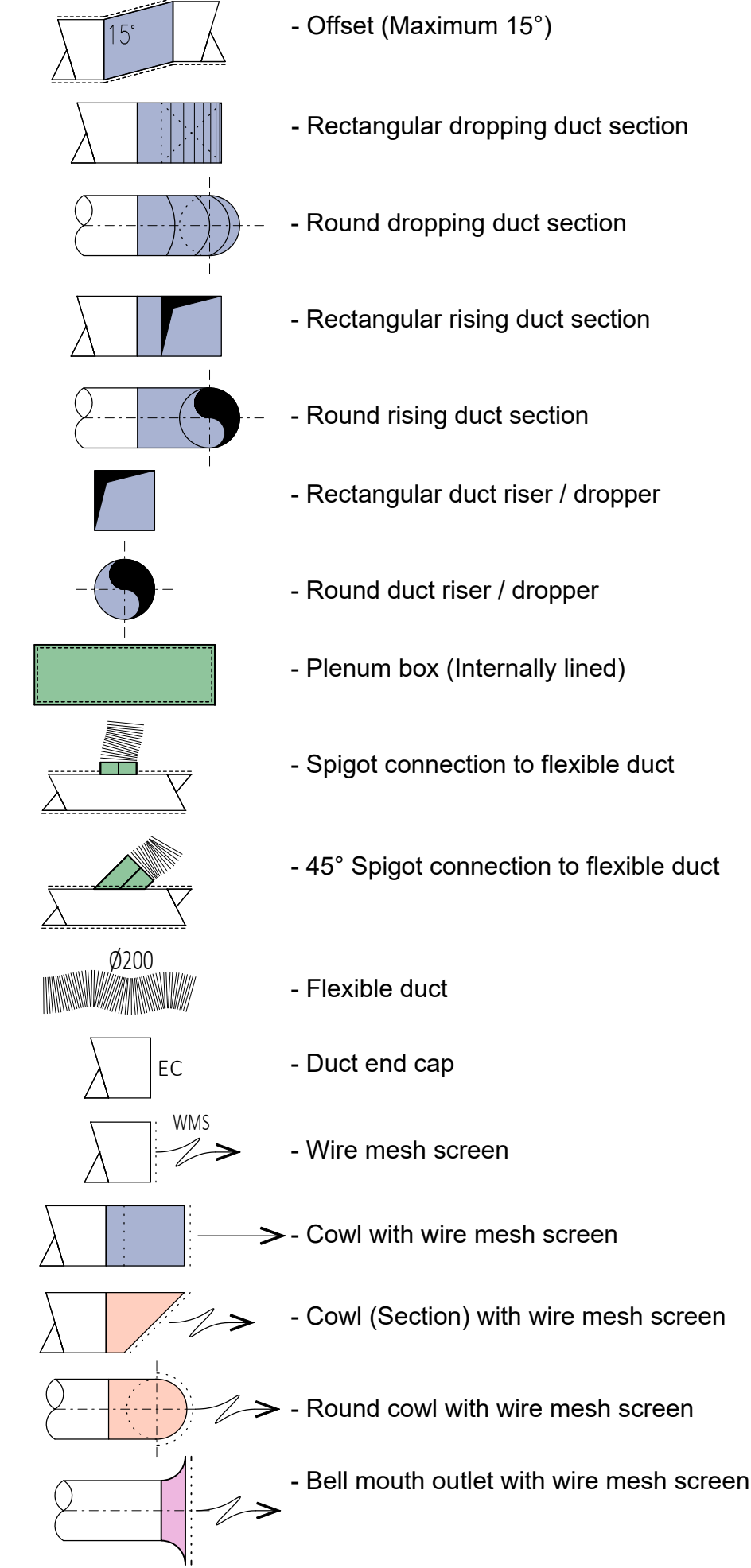
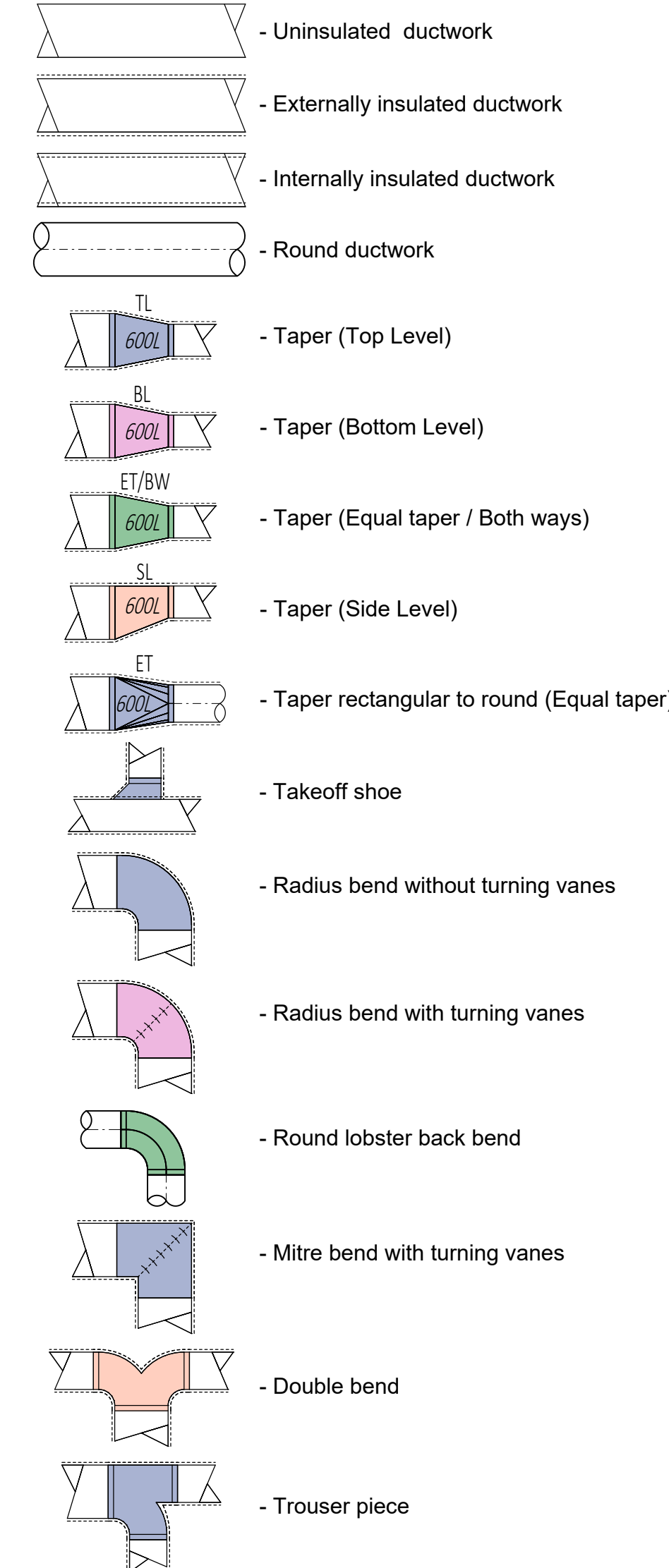


### Mechanical Services Consent

Project Number: J001925  
Drawing Number : M-00-000-0 Rev 0  
Drawing Title : Cover Sheet & Drawing Index

Mechanical Services Drawing Index		
Drawing No.	Drawing Title	Rev.
M-00-000-0	Cover Sheet & Drawing Index	0
M-00-000-1	Legend & General Notes	0
M-10-000-1	Equipment Schedules	0
M-20-000-1	Schematics	0
M-30-008-0	Ground Floor RCP Layout	0
M-35-008-0	Ground Floor HVAC Layout	0
M-35-010-0	Roof Layout	0
M-80-000-0	Sections and Details	0





1. All mechanical services work to be carried out in accordance with the mechanical engineering services specification for this contract and the NEW ZEALAND BUILDING CODE.
2. All drawings and equipment schedules shall be read in conjunction with all relevant Engineering Services Specification. The contractor should also familiarise themselves with all relevant contract documentation including, but not limited to, health & safety plans, architectural documentation, civil & structural documentation.
3. It shall be the responsibility of the mechanical contractor to provide workshop drawings which shall be completely coordinated with all relevant structural and services documentation. As-built drawings indicating final installed duct heights and penetrations shall be produced from these workshop drawings on completion of the HVAC installation.
4. Refer to the deliverables within the associated specification & equipment schedules. Provide a schedule of deliverables to Jackson Engineering Advisers. This is to include dates for workshop drawings, commissioning figures, manuals and as-built drawings. Refer to the mechanical services specification for further details on these items.
5. All dimensions are in mm unless otherwise stated.
6. All ventilation rates are to be in accordance with the NEW ZEALAND BUILDING CODE.
7. All ductwork sizes are indicated as clear air passage sizes. Unless otherwise stated.
8. All air spigots from units, fans, and all outdoor air ducts from main outdoor air system shall come with dampers for air balancing. (Unless otherwise stated.)
9. All supply air ductwork to be fully insulated in accordance with the specification.
10. The contractor shall ensure that the fire integrity of the building is maintained, where required.
11. Thermostats to be 1.5m above finished floor level in office areas if mounted on wall.
12. Pipework shall be run in a neat manner & installed pulls, straight, symmetrical, at right angles or parallel to adjacent walls and with slopes as specified.
13. This set of drawings indicate the design intent of the system and shall be used in conjunction with the Jackson Engineering Advisers Specification. These drawings do not indicate the precise location of the services and equipment. The contractor shall provide installation drawings based with each service (both mechanical and electrical), furniture layouts, general arrangement layouts and sections. The installation drawings shall be submitted for review and comment.
14. All components to be seismically braced to NZS4219


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Rev.	Amendment	By	Date

Restaurant Brands  
KFC - Birkenhead  
Corner Highbury Bypass & Birkenhead Ave,  
Birkenhead, Auckland

## Legend & General Notes

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## Auckland Head Office

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Drawn: GM	Designed: DF	Reviewed: KO	Scale @ A1: N.T.S
Project Number: J001925		Drawing Number: M-00-000-1	Revision: 0



Air Conditioning Units												
Reference	Serving	Manufacturer	Model	Nominal Cooling Capacity (kW)	Nominal Heating Capacity (kW)	Airflow (l/s)	Minimum Outdoor Air (L/s)	Electrical		Control	Dimensions (LxWxH, mm)	Weight (kg)
								Power Supply (V/Ph/Hz)	Running Amps (A)			
AC-IDU-1	Kitchen	Temperzone	ISD 351LYX	35.1	35.0	1600	400	400/3/50	23 / 14 / 14	Temperzone	698 x 2020 x 435	124
AC-ODU-1			OSA 351RLTFV								1595 x 840 x 1307	254
AC-IDU-2	Dining	Temperzone	ISD 351LYX	35.1	35.0	1600	400	400/3/50	23 / 14 / 14	Temperzone	698 x 2020 x 435	124
AC-ODU-2			OSA 351RLTFV								1595 x 840 x 1307	254
<b>Notes</b> 1. Condensate drains from AC units shall incorporate a 75mm deep water trap and air break at the unit. Rooftop unit drains shall be extended to the gutter as indicated. All drains shall be minimum 25mm diameter PVC. 2. AC units shall be controlled by Temperzone electronic controllers complete with remote sensors - refer to Temperzone for compatible controller numbers. 3. Controllers shall be mounted inside the control panel as shown on drawings. 4. Controllers serving the AC units shall be set to control the space to 21°C. 5. AC units to be supplied with EU4 washable filters as per filter schedule.												

Kitchen Hoods									
Reference	Serving	Manufacturer	Type	Exhaust Airflow (l/s)	Exhaust PD (Pa)	Makeup Airflow (l/s)	Makeup PD (Pa)	Overall Dimensions (LxWxH, mm)	Weight (kg)
KH1	Kitchen	HoodMaster	Canopy	1970	130	1250	65	4780 x 1500 x 500	290
KH2	Kitchen	HoodMaster	Canopy	850	130	700	65	3000 x 1300 x 500	175
<b>Notes</b> 1. Refer to specification for kitchen hood detailed drawings.									

Fans								
Reference	Serving	Manufacturer	Model	Airflow (l/s)	Design ESP (Pa)	Electrical		Weight (kg)
						Power Supply (V/Ph/Hz)	Input Power (kW)	
SF1	Supply / Makeup Air	Fantech	AP0634LP9/22	2750	230	400/3/50	1.65 (AOM)	54.0
EF1	Main Hood Exhaust	Fantech	HUD506	985	180	400/3/50	0.55	51.0
EF2	Main Hood Exhaust	Fantech	HUD506	985	180	400/3/50	0.55	51.0
EF3	Chip Hood Exhaust	Fantech	CHD506	850	180	400/3/50	0.37	51.0
EF4	Toilet Exhaust	Fantech	CE254D	100	80	240/1/50	0.07	4.0
EF5	Utility Exhaust	Fantech	TD-800/200SIL	200	120	240/1/50	0.1	8.7

Notes

- Fan SF1 to be installed complete with flexible connections, mounting feet and antivibration mounts.
- Fans EF1, EF2 & EF3 shall be fitted with a purpose made safety wire guard provided by the fan manufacturer to prevent injury to service personnel.

Filters							
Reference	Serving	Manufacturer	Model	Quantity	Size	Total Airflow (l/s)	Dirty Pressure Loss (Pa)
F1	Outdoor Air	Filters Direct	VPF 24x24x2	6	592W x 592H x 45D	2750	150
F2	Main Hood Exhaust	Supplied by kitchen hood manufacturer				1970	75
F3	Chip Hood Exhaust					850	75
F4	AC1	Supplied by AC unit manufacturer Refer manufacturers' data				1600	100
F5	AC2					1600	100

**Notes**  
1. F1 filters to be installed in single frame.

Diffusers and Grilles					
Reference	Serving	Manufacturer	Model	Type	Size (mm x mm)
S1	Supply Air	Holyoake	DDL-32/OBD	Double Deflection C/W OBD	600 x 200
S2	Supply Air	Holyoake	CMP-36	3-way blow	375 x 375
S3	Supply Air	Holyoake	CMP-41	4-way blow	375 x 375
S4	Supply Air	Holyoake	CMP-41	2-way blow (opposite)	375 x 375
S5	Supply Air	Holyoake	CMP-41	4-way blow	225 x 225
R1	Return Air	Holyoake	RLHL-FR	Filtered return	600 x 600
E1	Toilet Exhaust	Holyoake	EC-125-RC	Eggcrate (removable core)	150 x 150
E2	Utility Room Exhaust	Holyoake	EC-125-RC	Eggcrate (removable core)	400 x 400
DG1	Door Grille	Holyoake	DG-52	Non-vision Door Grille	400 x 300

**Notes**

1. All diffusers shall be provided with side entry boots unless otherwise stated.
2. All grille boots connected to AC units to be internally lined with 25mm thick AHL matt faced siliner.
3. Oval spigots may be used where ceiling void height is restricted.
4. Paint inside all grille boots which are not internally lined with 'silinear' with matt black paint prior to fitting grilles.
5. Provide lay-in plaques as required to suit "T" rail system for grilles in ceiling tiles with face dimensions over 300x300.
6. Support all grilles/diffusers mounted in side entry boots from the roof structure.
7. Refer to architects for grille colours.
8. R1 return air grilles shall be supplied complete with panel filter. Spare filters shall be provided for each grille.

Louvres						
Reference	Manufacturer	Model	Type	Size (mm x mm)	Flow (l/s)	Pressure Loss (Pa)
L1	Temperzone	XAL-2F	Exhaust Louvre	500 x 400	200	9.1

**Notes:**

1. Exact size of louvres to be confirmed on site prior to ordering.

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## Consent

Restaurant Brands  
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Birkenhead, Auckland

## Equipment Schedules

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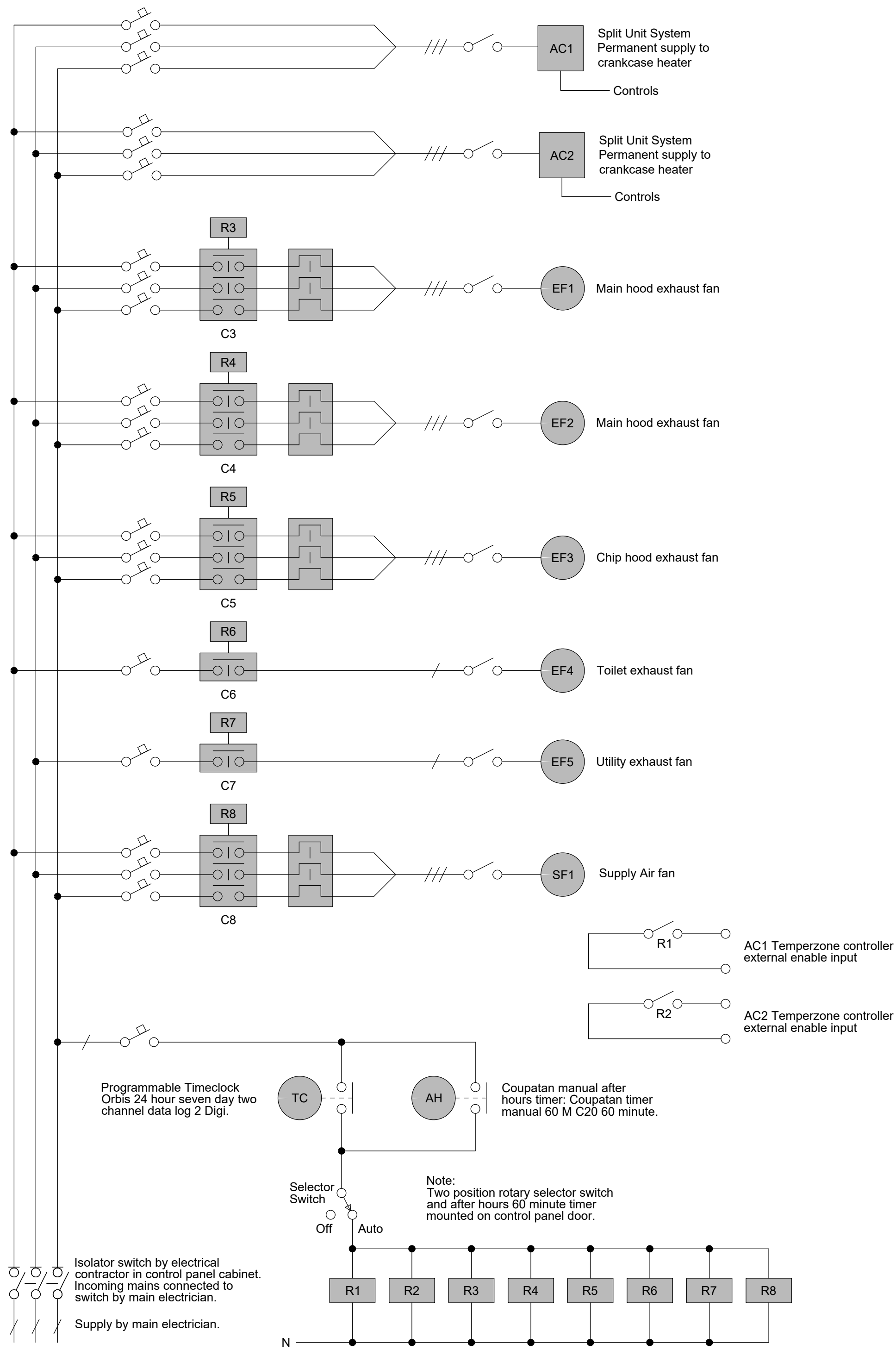
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Project Number: <b>J001925</b>		Drawing Number: <b>M-10-000-1</b>	Revision: <b>0</b>

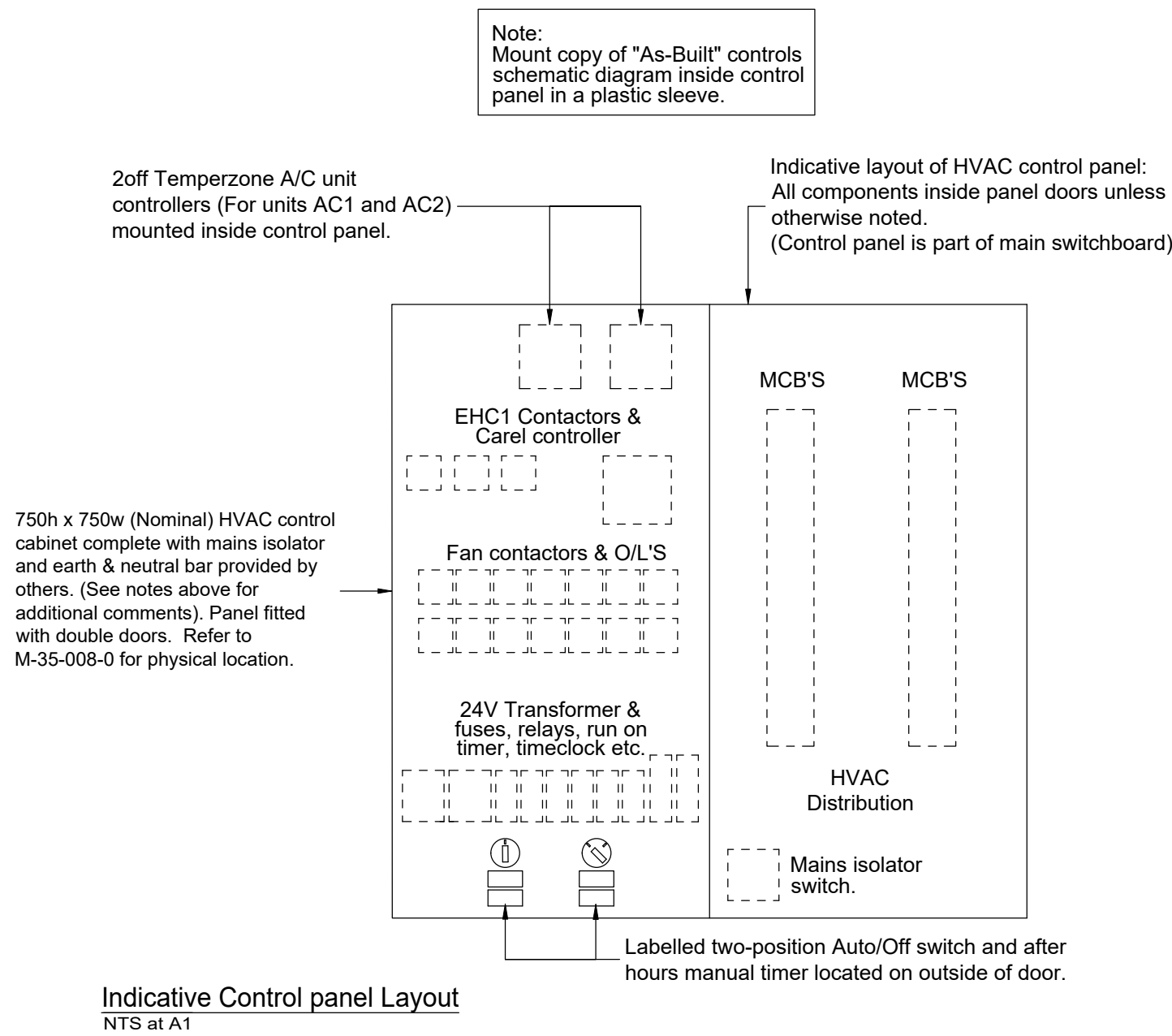


Main Switchboard - Mechanical Section  
NTS at A1



Main Switchboard Notes:

- Read this drawing in conjunction with all drawings as listed on M-00-000-0, inclusive and relevant sections of the specifications.
- A blank control panel shall be provided by the main electrical contractor. All components & wiring shall be the responsibility of this trade unless itemised below. The control panel shall be fitted with the following equipment by the main electrical contractor: mains isolation switch, chassis to take circuit breakers, earth bar, and the submain cables feeding the control panel shall be connected to the control panel main isolator switch.
- This drawing generally details the extent of work for this trade. Provide complete design & panel layout drawings for the engineer's review.
- All mechanical services electrical work shall be in accordance with all appropriate regulations & local bylaws.
- Fit Traffolyte labels to all plant items and to all components within the panel and identify cables as per normal trade practice.
- All circuit breakers, contactors, isolators, overloads etc. as recommended by the equipment suppliers shall be fitted by this trade and shall be rated for the equipment provided.
- Ensure all motors fitted with thermal protection are wired into the starting contactors control circuit to interrupt motor power supply on winding temperature rise.
- All equipment shall be provided with local isolators.
- Split units AC1 & AC2 shall be controlled by Temperzone electronic controllers - refer to Temperzone for compatible controller model numbers. Controllers shall be supplied complete with remote room sensors located as indicated on the drawings. The controller terminals and/or dipswitches shall be set to maintain a constant indoor fan speed and shall be interfaced with the mechanical services timeclocks located in the control panel. **Controller "on board" internal timeclocks shall not be used.** Controllers shall be located inside the control panel as indicated below. Set points for both split system units shall be 21 °C.
- Following programming, the key lock function on both controllers shall be activated to prevent unauthorised personnel tampering with the settings.
- Liaise with the main electrical contractor regarding panel requirements and physical size/layout and requirements for the energy management cabling.
- All electrical work shall be carried out by qualified electricians in accordance with AS/NZS3000:2018 (Wiring Rules). Provide an electrical certificate of compliance on completion.



NOTES:

- HVAC timer control must interlink with emergency stop system. Allow for liaison and time with electrical contractor to complete these works and test upon completion.
- Electrical contractor will provide emergency stop and wiring, Hvac contractor to allow for timer set up and a set of contacts / cabling to interlink within the switchboard.

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Restaurant Brands  
KFC - Birkenhead  
Corner Highbury Bypass & Birkenhead Ave,  
Birkenhead, Auckland

Schematics

Mechanical Services

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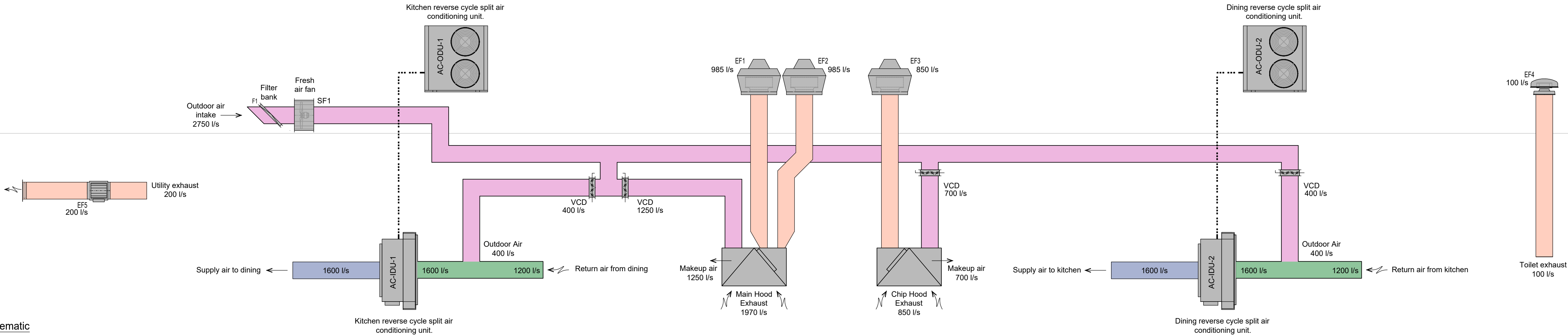
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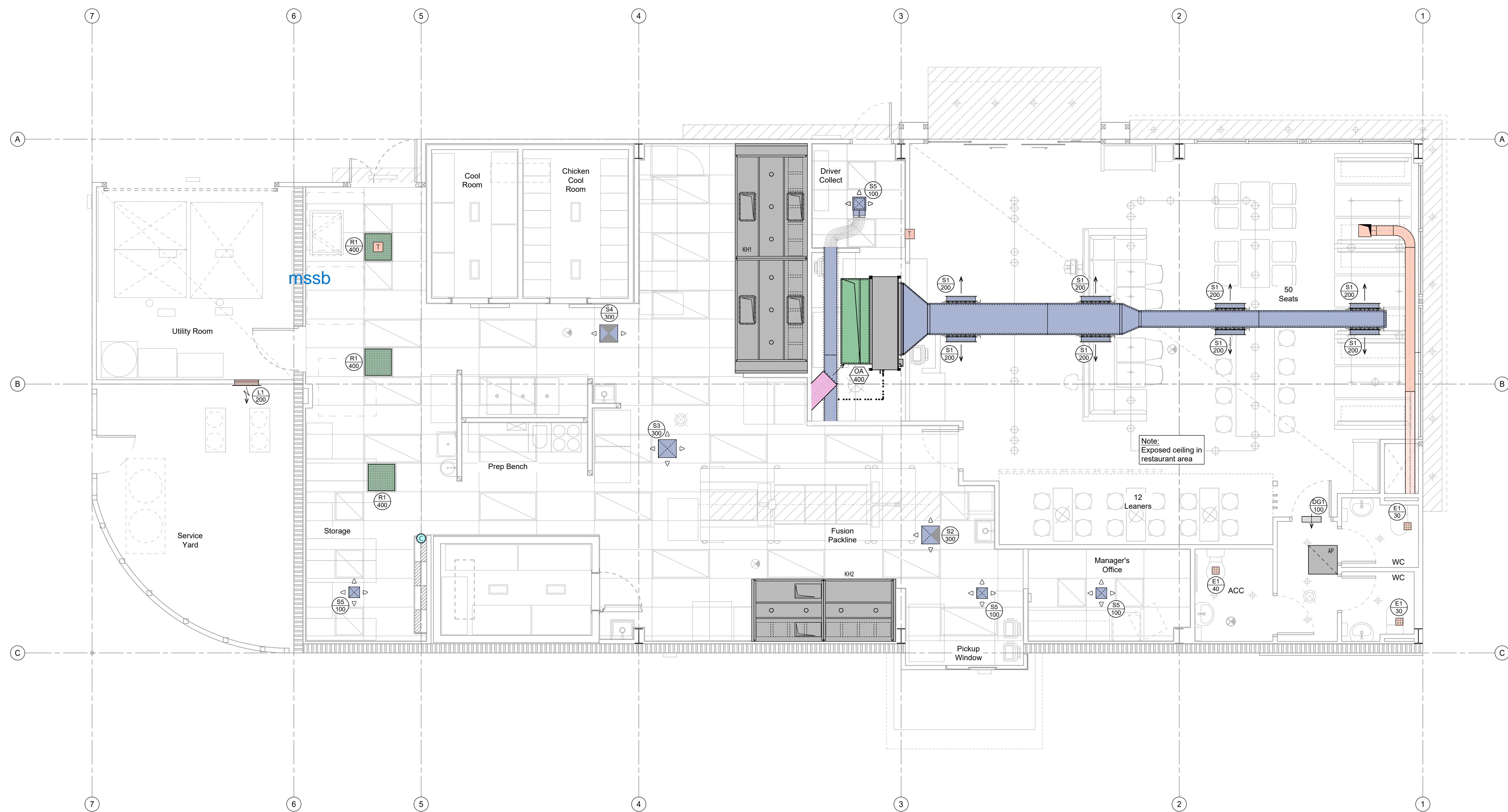
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Project Number: J001925	Drawing Number: M-20-000-1	Revision: 0	

Airside Schematic  
NTS at A1





- ## NOTES:
1. Refer to sheet J001925-M-00-000-1 for Legend & General Notes.
  2. Fit sheetmetal top hat sections over all flanged joints exposed to weather. Pop-rivet to duct and silicon seal. seal all longitudinal joints in weather exposed sheetmetal (ie pitburg locks etc).
  3. All curved fans shall be installed with a neoprene gasket (or approved equal) between the fan base and the curb to prevent bypass.
  4. All given duct dimensions are airstream sizes.
  5. Co-ordinate positions of duct risers thro' roof and horizontal duct runs with structural steel beams, purlins and ceiling. Ceiling space in some areas is restricted and it is imperative that ductwork is routed to avoid structural members and light fittings in these areas.
  6. All condensate drains shall be Ø25 PVC.
  7. Separation distances have been set out to comply with the requirements of AS 1668-2:2002. Do not alter the rooftop duct layout without written approval.
  8. Refer seismic restraints to mechanical services as per seismic design
  9. Refer to the specification for scope of works.
  10. Do not manufacture ductwork from this drawing - refer to architectural drawings for dimensioned building layout including reflected ceiling tile layout.
  11. Allow to clean all diffusers and grilles


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Restaurant Brands  
KFC - Birkenhead  
Corner Highbury Bypass & Birkenhead Ave,  
Birkenhead, Auckland

## Ground Floor RCP Layout

## Mechanical Services

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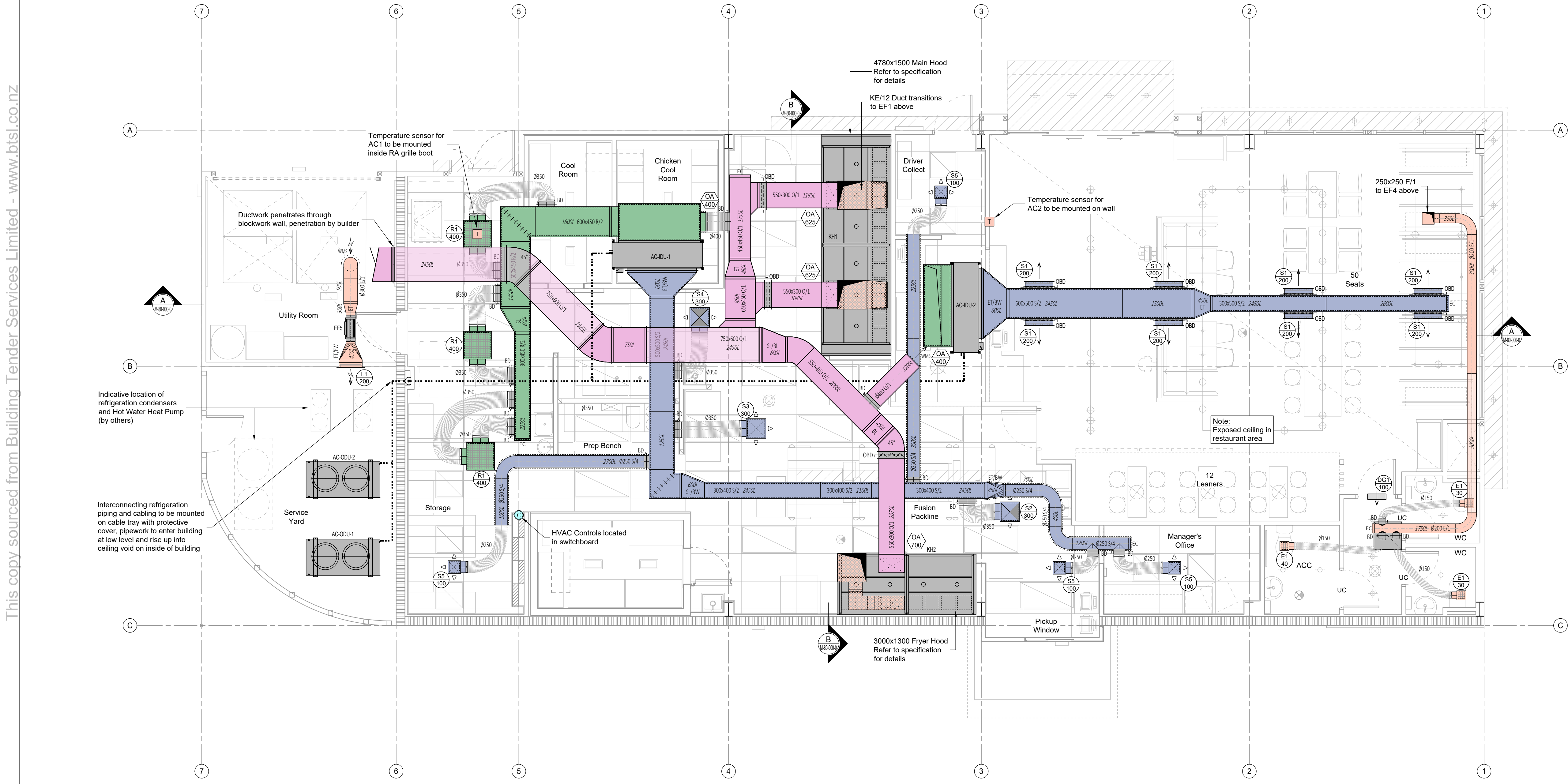
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Project Number: J001925		Drawing Number: M-30-008-0	Revision: 0



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Ground Floor HVAC Layout  
1:100 at A1

- NOTES:
1. Refer to sheet J001925-M-00-000-1 for Legend & General Notes.
  2. Fit sheetmetal top hat sections over all flanged joints exposed to weather. Pop-rivet to duct and silicon seal. seal all longitudinal joints in weather exposed sheetmetal (ie pilsburg locks etc).
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  4. All given duct dimensions are airstream sizes.
  5. Co-ordinate positions of duct risers thro' roof and horizontal duct runs with structural steel beams, purlins and ceiling grid. Ceiling space in some areas is restricted and it is imperative that ductwork is routed to avoid structural members and light fittings in these areas.
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  8. Fit seismic restraints to mechanical services as per seismic design
  9. Refer to the specification for scope of works.
  10. Do not manufacture ductwork from this drawing - refer to architectural drawings for dimensioned building layout including reflected ceiling tile layout.
  11. Allow to clean all diffusers and grilles


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Birkenhead, Auckland

Ground Floor HVAC Layout

Mechanical Services

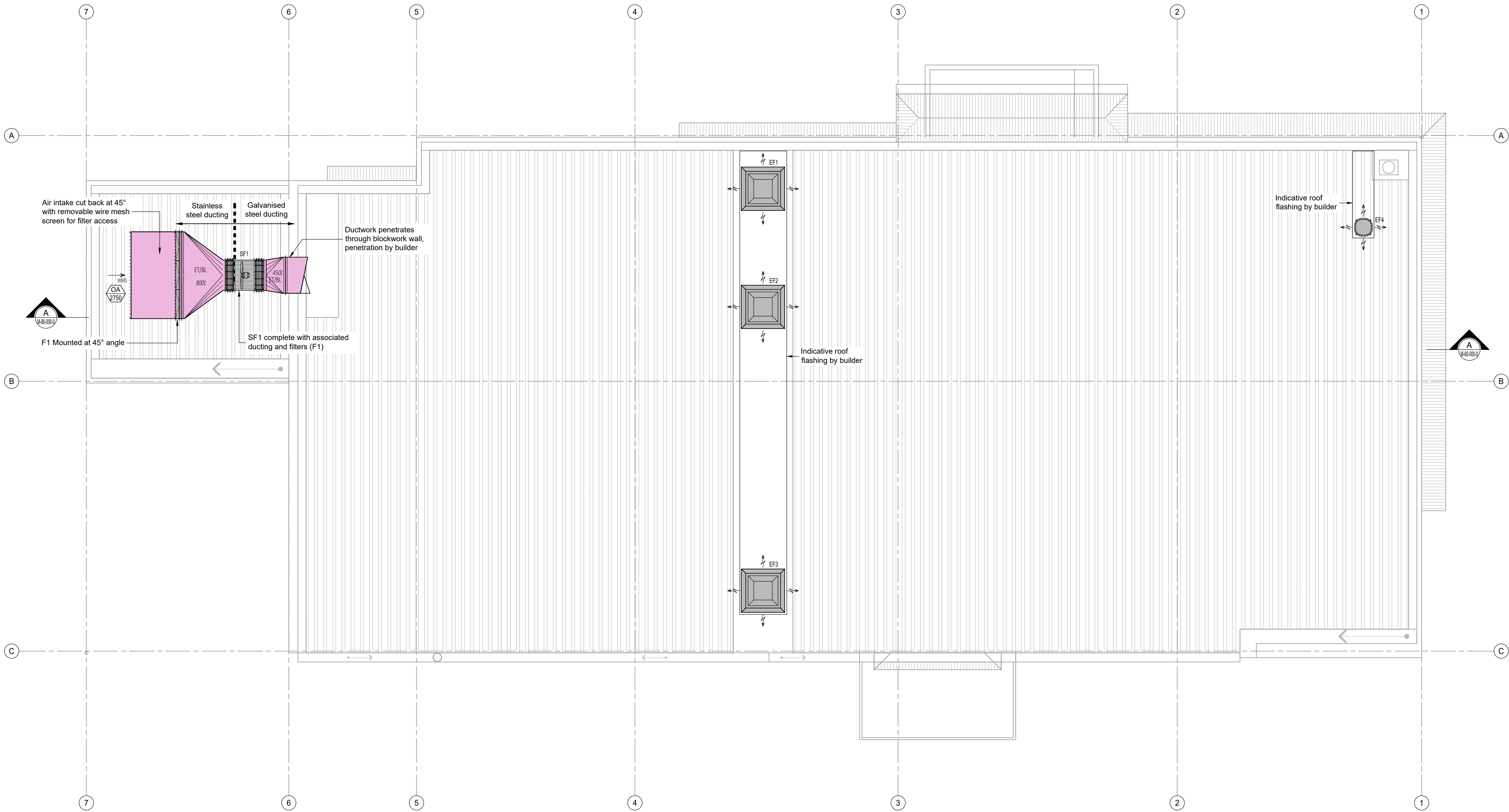
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Project Number:	Drawing Number:	Revision:	
J001925	M-35-008-0	0	



NOTES:

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Roof Layout
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Mechanical Services
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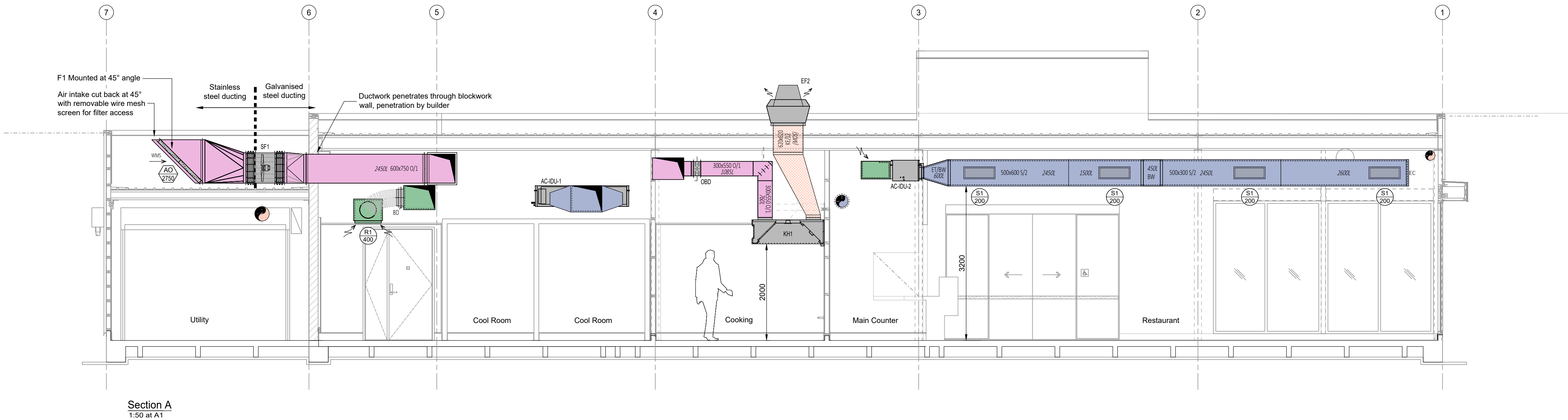
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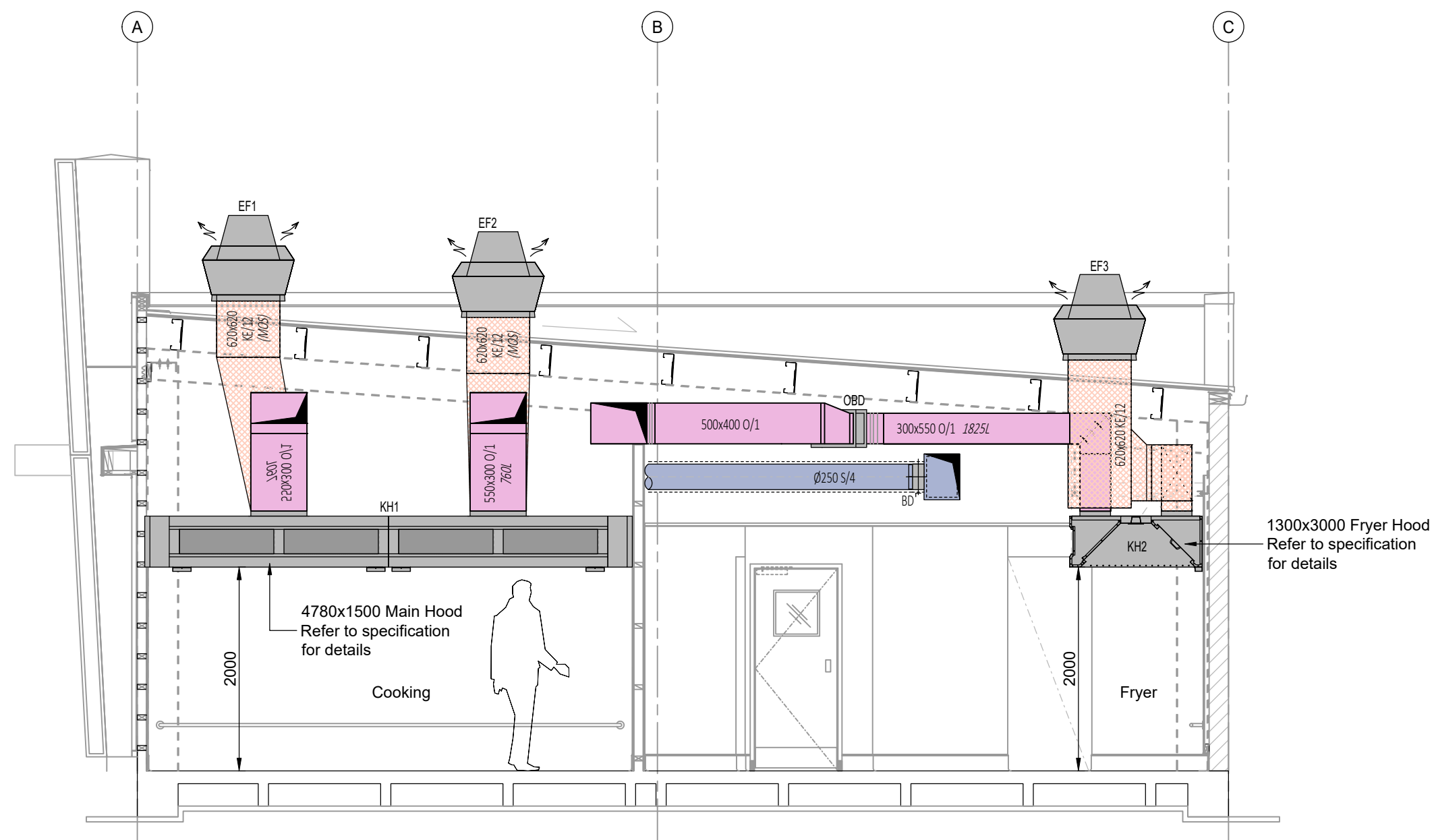
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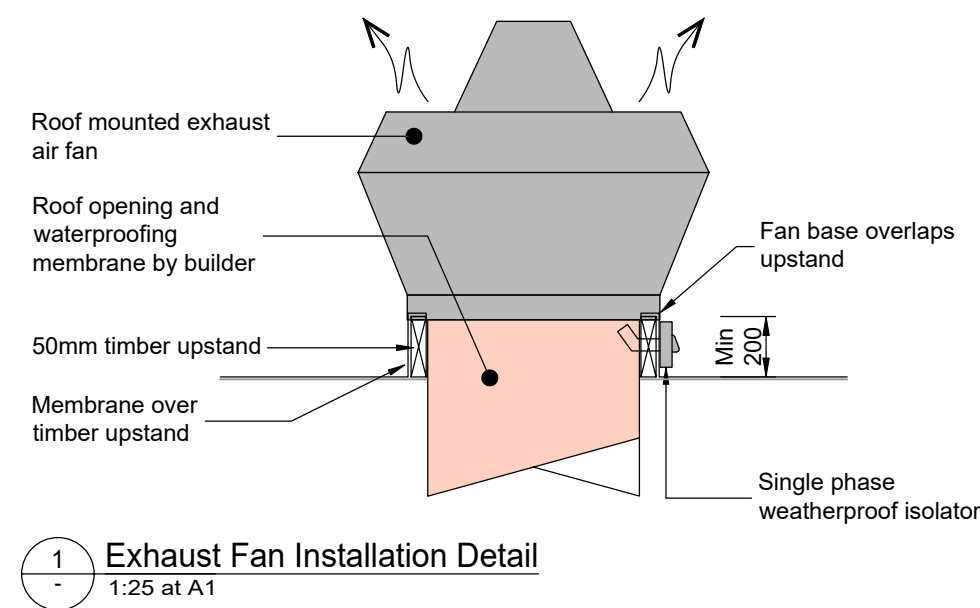
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Section A  
1:50 at A1



Section B  
1:50 at A1



NOTES:

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Sections and Details

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GM	DF	KO	1:50
Project Number:	Drawing Number:	Revision:	
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