



TECHNICAL SUBMITTAL

Project:	Echo Street	T.S No:	63073-ABE-ZZ-ZZ-TS-M-0013
A&B Contract No:	4039	Date:	22/10/2024
Engineer:	Ian Buxton	Rev: C01	

F.T.A.O.	Name: Chinua Nisbitt Organisation: Waterman Building Services
Copies To:	Issued via Viewpoint for Projects.

Plant Item:	Smoke Ventilation.
Specified Manufacturer:	Not Applicable.
Proposed Manufacturer:	Interactive Special Projects.
Proposal:	Interactives Smoke Ventilation Proposal.
Attachments:	• 6818-001 schematic Blk A. • 6818-002 schematic Blk B. • 6818-003 schematic Blk C. • 6818-004 floor plan Basement. • 6818-005 floor plan GF. • 6818-006 typical floor plan. • 6818-007 floor plan L16 (blk A). • 6818-008 floor plan L22 (blk B). • 6818-009 floor plan L28 (blk C). • 6818-010 smoke flap 800W x 1000H. • 6818-011 AOV 1.0m. • 6818-012 AOV 1.5m. • 6818-013 Duct Bend Fan Set. • 6818-014 Penthouse Fan Set.

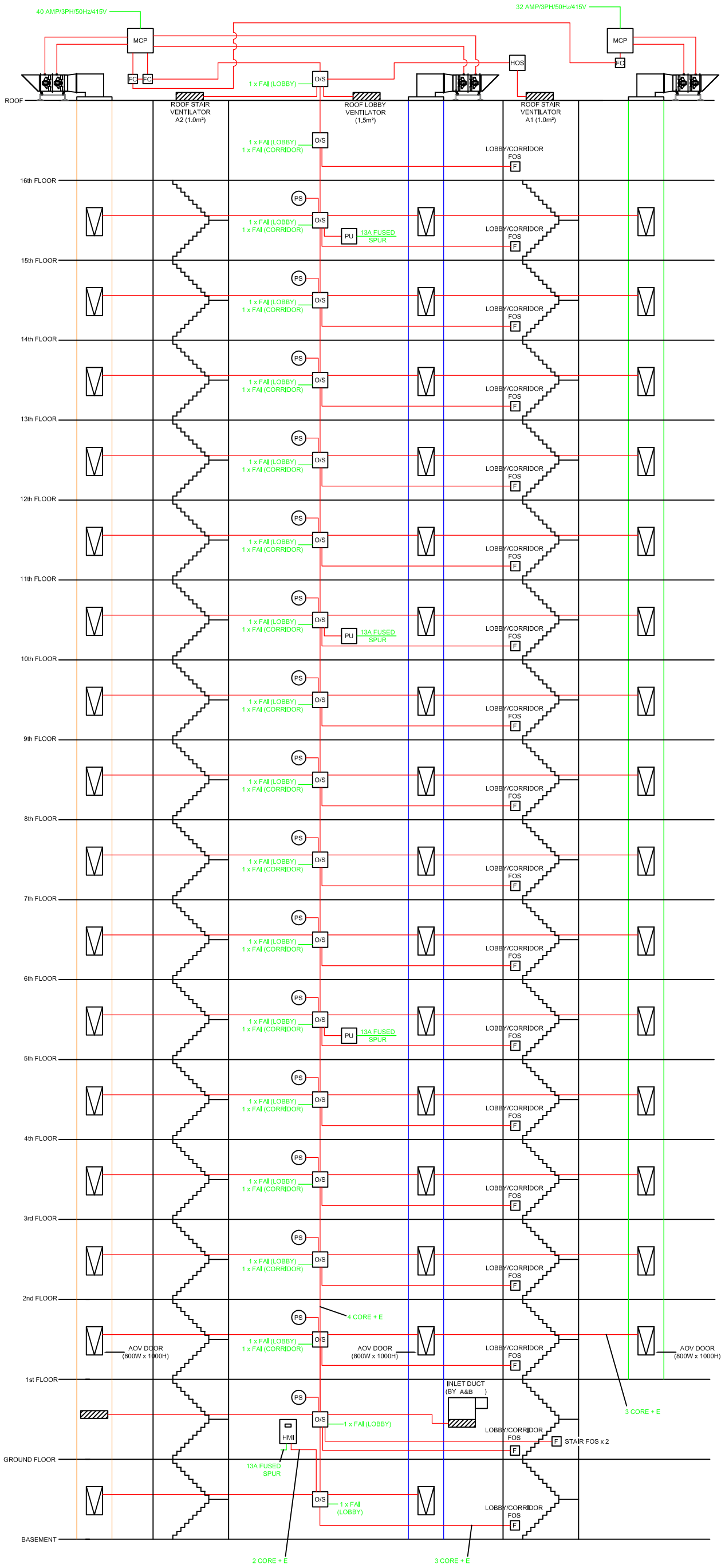
Approval Required By:	A.S.A.P
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Response:

Date:

Signed:

DO NOT SCALE - IF IN DOUBT ASK



KEY TO SYMBOLS	
	DUTY / STANDBY SMOKE FAN UNITS
	SD SMOKE DOOR 800W x 1000H
	F FIRE OVERRIDE SWITCH
	O/S OUTSTATION
	HOS HEAD OF STAIR
	MCP MASTER CONTROL PANEL MOUNTED ADJACENT TO FAN UNITS - 40 AMP 415/3/50 N & E POWER SUPPLIES TO BE BY OTHERS
	FAI FIRE ALARM INTERFACE BY OTHERS (VOLT FREE NORMALLY OPEN)
	PU POWER UNIT 13 AMP 240/1/50 SUPPLY BY OTHERS
	FC FAN CARD
	HMI HUMAN MACHINE INTERFACE PANEL 13 AMP 240/1/50 SUPPLY BY OTHERS NOTE: NOT FOR FIRE OFFICER USE TO BE USED FOR INITIAL SET-UP AND SERVICE OF THE SYSTEM

Rev X

X

X

X

X

Drawn	Date	Chk	App
x	x	x	x



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TITLE SCHEMATIC - BLOCK 'A'

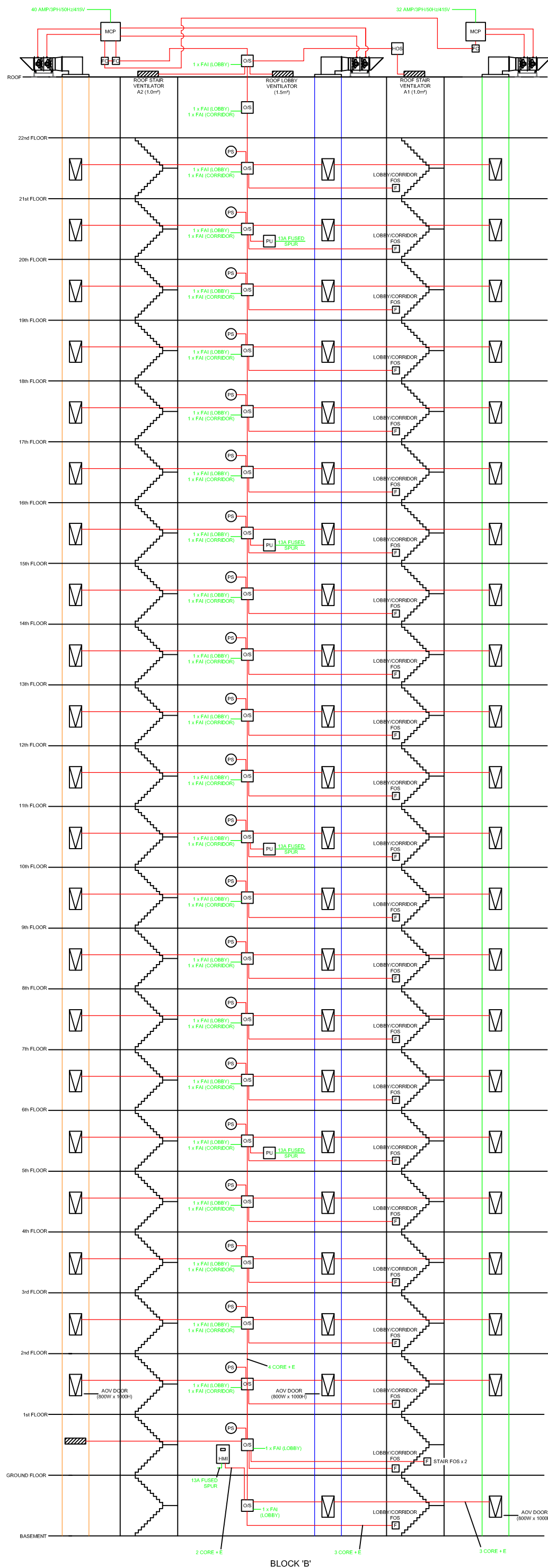
PROJECT ECHO STREET, MANCHESTER

PROJECT No	6818	AREA		DRAWN	BS
SITE		SCALE	NTS	CHK	PF
CLIENT	A&B ENGINEERING	DATE	06.06.24	APP	

DRG No 6818-001

REV

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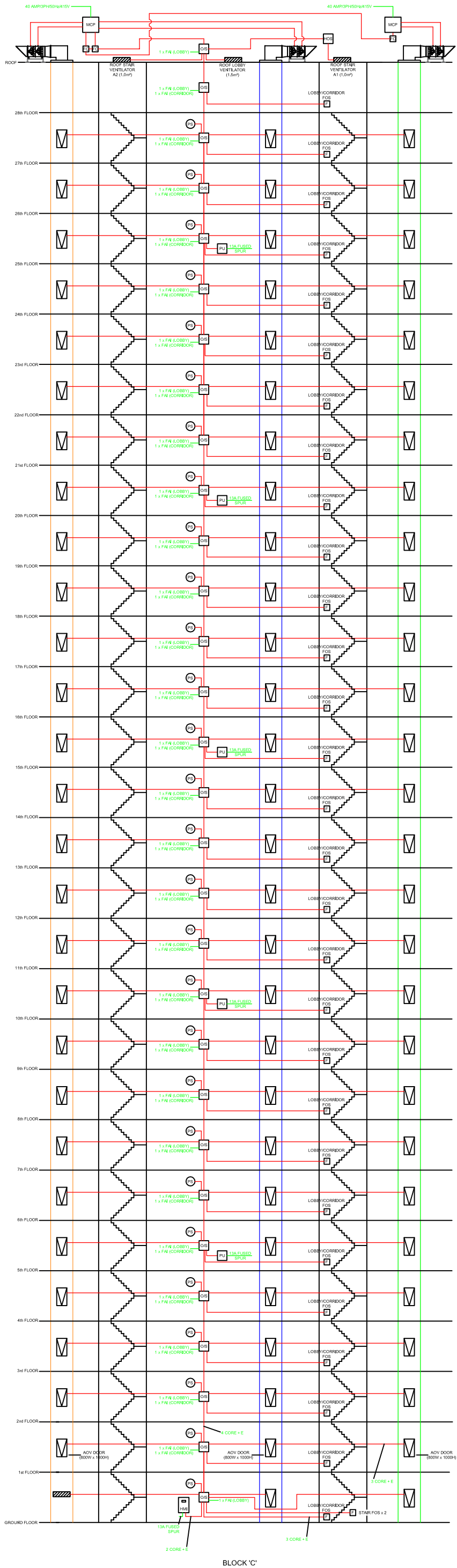


KEY TO SYMBOLS

	DUTY / STANDBY SMOKE FAN UNITS
	SMOKE DOOR 800W x 1000H
	FIRE OVERRIDE SWITCH
	OUTSTATION
	HEAD OF STAIR
	MASTER CONTROL PANEL MOUNTED ADJACENT TO FAN UNITS - 40 AMP 415/500 N & E POWER SUPPLY TO BE BY OTHERS
	FIRE ALARM INTERFACE BY OTHERS (VOLT FREE NORMALLY OPEN)
	POWER UNIT 13 AMP 240/150 SUPPLY BY OTHERS
	FAN CARD
	HUMAN MACHINE INTERFACE PANEL 240/150 SUPPLY BY OTHERS NOTE: NOT FOR FIRE OFFICER USE TO BE USED FOR INITIAL SET-UP AND SERVICE OF THE SYSTEM

Rev	X			
X				
X				
X				
Drawn	Date	Chk	App	
X	X	X	X	
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TITLE	SCHEMATIC — BLOCK 'B'			
PROJECT	ECHO STREET, MANCHESTER			
PROJECT No	6818	AREA	DRAWN	BS
SITE		SCALE	CHK	PF
CLIENT	A&B ENGINEERING	DATE	10.06.24	APP
DRG No		6818—002		REV

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KEY TO SYMBOLS	
	DUTY / STANDBY SMOKE FAN UNITS
	SMOKE DOOR 800W x 1000H
	FIRE OVERRIDE SWITCH
	OUTSTATION
	HEAD OF STAIR
	MASTER CONTROL PANEL MOUNTED ADJACENT TO FAN UNITS. 40 AMP 415/0.5/50 N & E POWER SUPPLIES TO BE BY OTHERS
	FIRE ALARM INTERFACE BY OTHERS (VOLT FREE NORMALLY OPEN)
	POWER UNIT 13 AMP 240/150 SUPPLY BY OTHERS
	FAN CARD
	HUMAN MACHINE INTERFACE PANEL 13 AMP 240/150 SUPPLY BY OTHERS NOTE: NOT FOR FIRE OFFICER USE TO BE USED FOR INITIAL SET-UP AND SERVICE OF THE SYSTEM

Rev X					
X					
X					
X					
Drawn		Date		Chk	
x		x		x	
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TITLE		SCHEMATIC – BLOCK 'C'			
PROJECT ECHO STREET, MANCHESTER					
PROJECT No		6818		BS	
SITE		AREA		DRAWN	
CLIENT		SCALE		NTS	
A&B ENGINEERING		DATE		CHK	
10.06.24		APP		PF	
DRG No 6818-003				REV	

[illegible]

INTERACTIVE

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Rev X	TITLE FLOOR PLAN - GROUND FLOOR									
X	PROJECT ECHO STREET, MANCHESTER									
	PROJECT No.	6818	AREA	DRWNN	B.S.MTH					
	SITE		SCALE 1:100 @ A1	CHK	P.FROWN					
	CLIENT	AMB ENGINEERING	DATE 14.06.24	APP						
Drawn	Date	Chk	App	DRG No 6818-005		REV				
X	X	X	X							

A

B

C

D

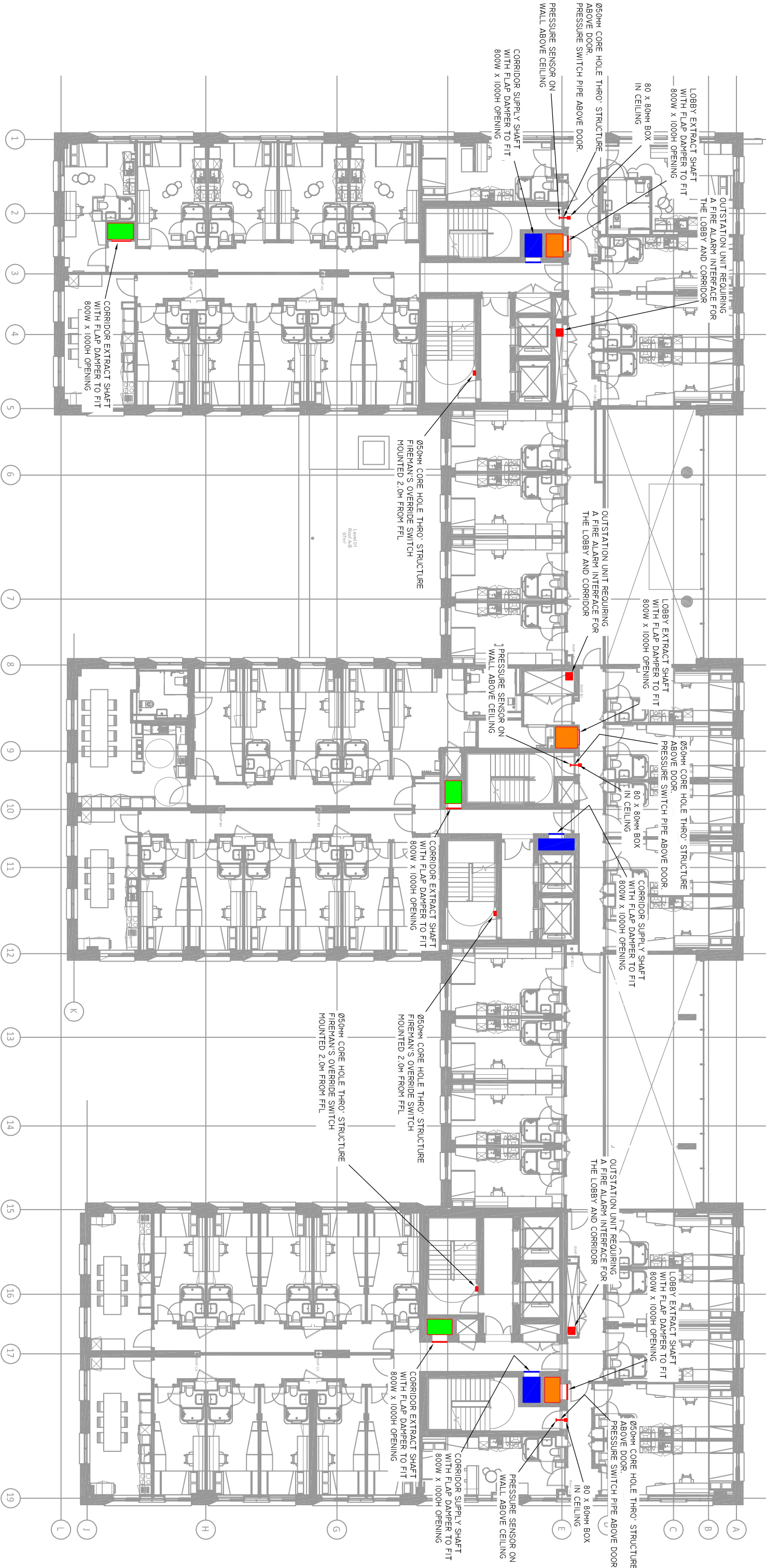
E

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BLOCK 'A'
FLOORS 1 - 15

BLOCK 'B'
FLOORS 1 - 21

BLOCK 'C'
FLOORS 1 - 27



TYPICAL FLOOR LEVEL

Rev X	X	X	X	X
Drawn	X	Date	X	App
X	X	X	X	X
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TITLE				
PROJECT No				
8818				
SITE				
SCALE				
1:100				
CLIENT				
ADG ENGINEERING				
DATE				
04.06.24				
DRG No				
6818-006				
REV				

A

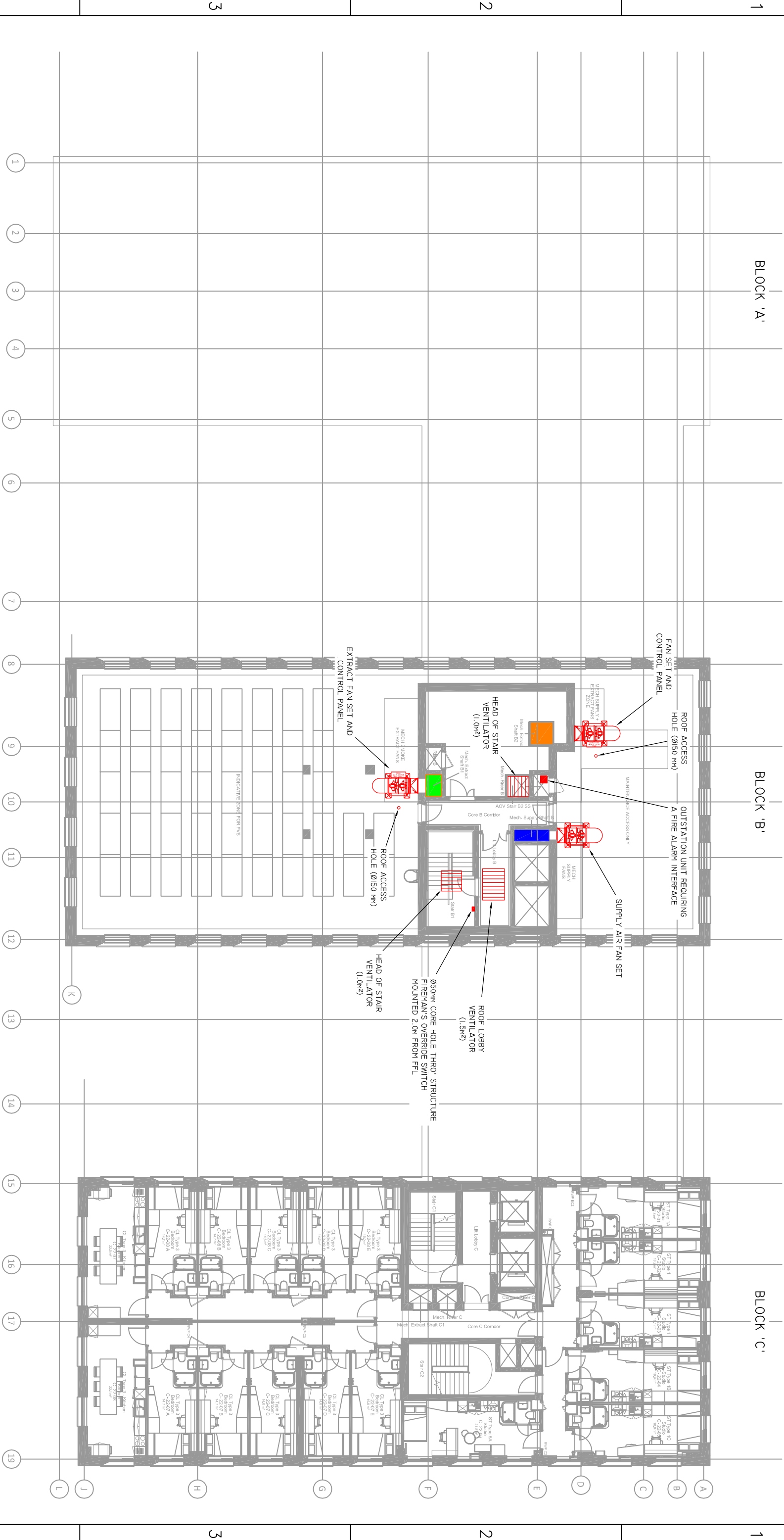
B

C

D

E

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LEVEL 22 ROOF

Rev X				
x				
Drawn	Date	CHK	APP	
x	x	x	x	

DRG No				
6818-008				
REV				



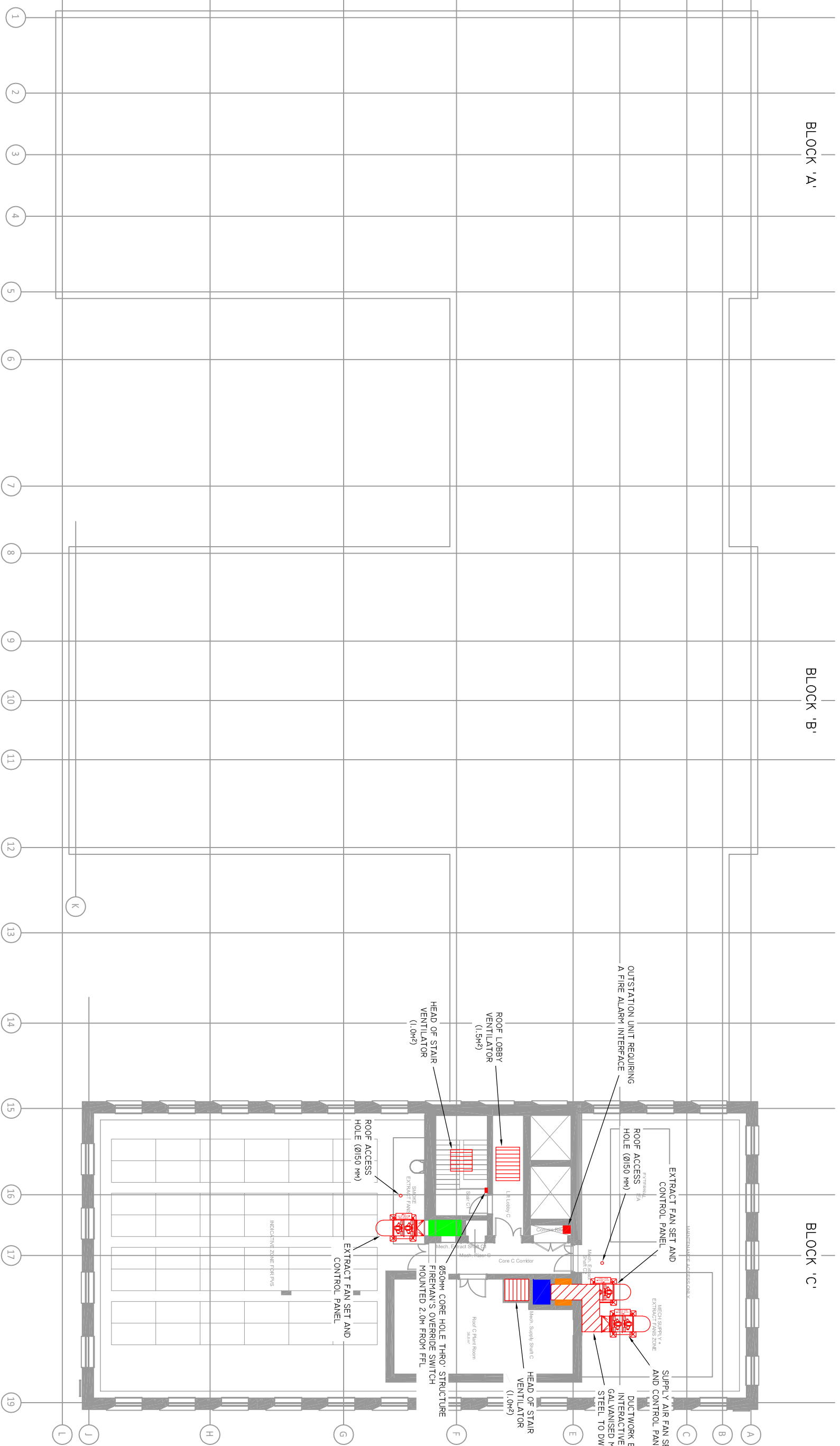
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PROJECT 6818
AREA ECHO STREET, MANCHESTER
TITLE FLOOR PLAN - LEVEL 22 (BLOCK B)

CLIENT L&B ENGINEERING
DATE 15.06.24
APP

SCALE 1:100
CHK B.SMITH
P.FRM

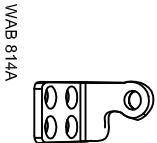
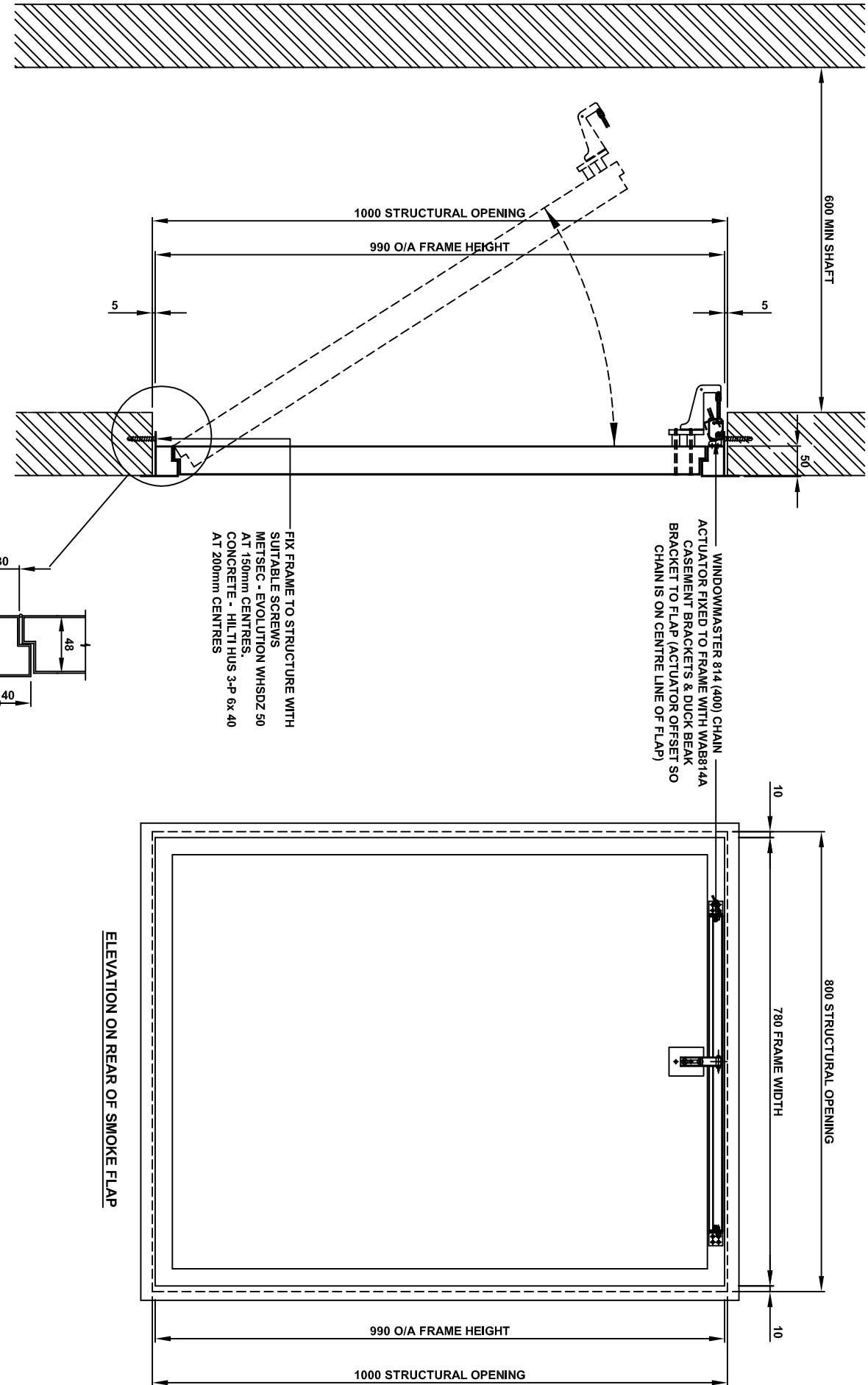
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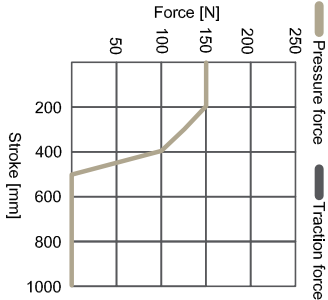
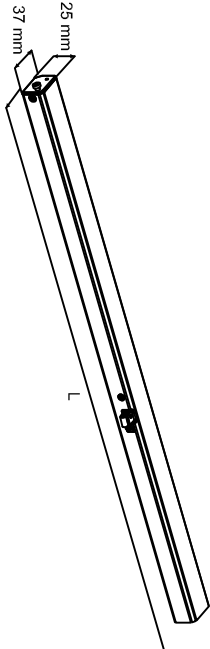
Row X	FLOOR PLAN - LEVEL 26 (BLOCK C)									
X	TITLE									
	PROJECT ECHO STREET, MANCHESTER									
	PROJECT No 6818									
	SITE		AREA		SCALE 1:100 @ A1		DRAWN CHK		B.SMITH	
	CLIENT		DATE 15.08.24		APP		P.FINIAN			
Drawn	Date	Chk	App	DRG No 6818-009						
X	X	X	X	REV						

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SHEET A1	FLOOR PLAN - LEVEL 28 (BLOCK C)		
TITLE			
PROJECT	ECHO STREET, MANCHESTER		
PROJECT No	6818	AREA	DRAWN
SITE	SCALE	1:100 @ A1	CHK
CLIENT	AGG ENGINEERING	DATE	15.06.24
		APP	
DRG No		6818-009	
	REV		

Actuator Technical specifications	
Pressure force	See diagram.
Traction force	See diagram.
Locking force	2000N
Chain stroke	50 – 1000mm in increments of 10mm. Special version up to 1000mm possible (only for bottom hung windows), for further information.
Opening Speed	1-17 mm/s (TrueSpeed™)
Window type	Tophung, bottomhung and turning windows.
Power consumption	24V DC (max. 10% ripple)
Voltage	20-36V DC
Open-circuit voltage	Max. 36V DC
Current consumption	Max. 1A
Operating conditions	-5°C - +74°C. Max. 90% relative humidity (not condensing)
Switch-on-duration	ED 40% (max. 4min. per 10min)
Material	Anodized aluminium housing with steel chain. Black actuators: black silicone cable Grey actuators: grey silicone cable White actuators: grey silicone cable
C colour	Standard colors: anodized natural aluminium, anodized black, white RAL 9010. Other RAL colours available at additional price.
Size	25 x 37mm (H x D), length (L) depending on chain stroke – see table.
Weight	400mm stroke: 1.38kg; 600mm stroke: 1.58kg; 800mm stroke: 1.80kg; 1000mm stroke: 1.97kg
IP rating	Surface mounted: IP 20, concealed: IP 32
ShE test	Approved according to EN 12101-2 with selected profiles – please contact WindowMaster for further information B300 tested according to EN 12101-2
Life span	Tested with 10,000 opening and closing movements.

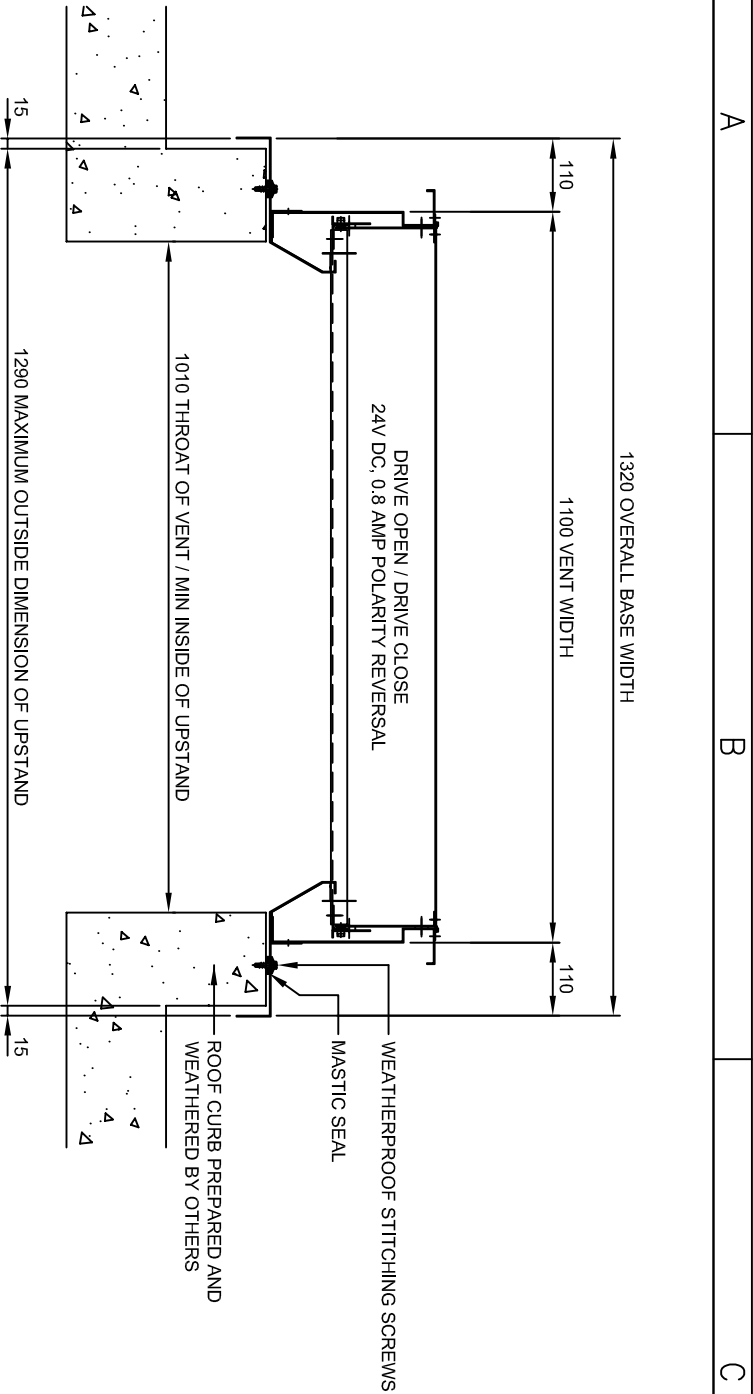


L = LENGTH (INCL. SCREWS) – SEE TABLE OF ITEMS

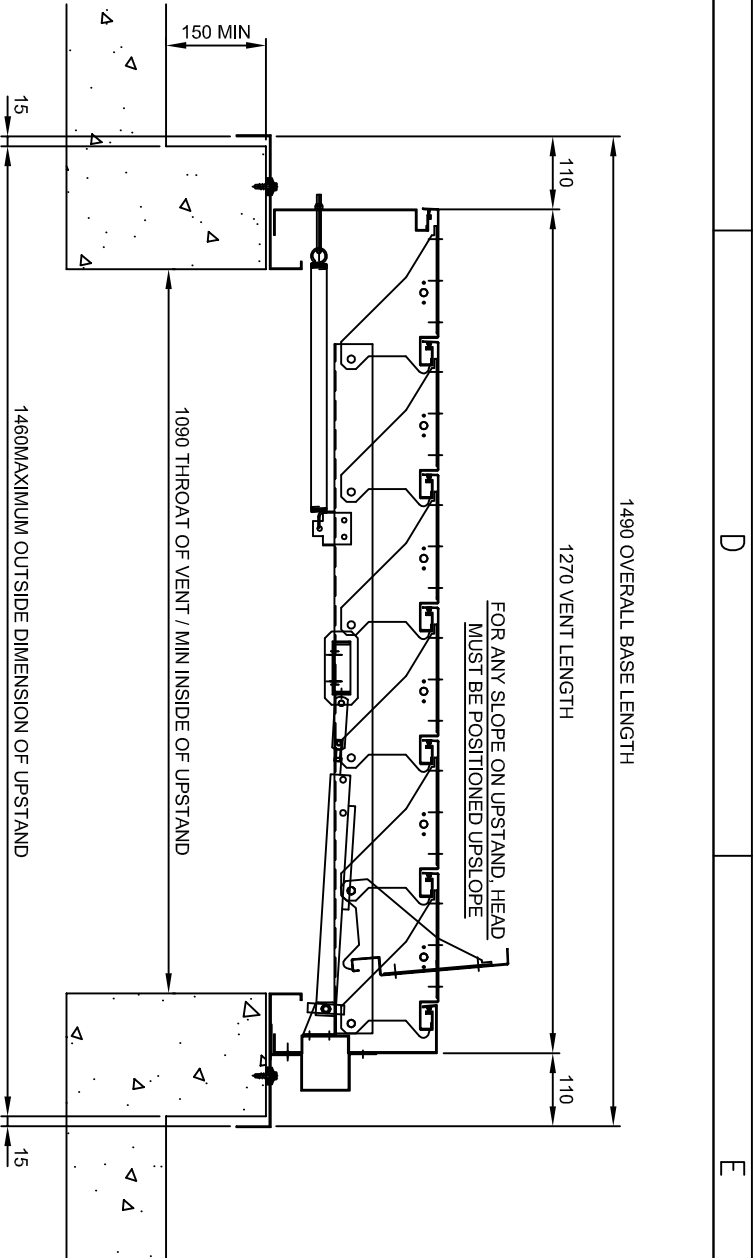


Chain stroke [mm]	Length (L) [mm] (incl. screws = 18mm)
400	563
600	663
800	763
1000	863

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TITLE 800 WIDE x 1000 HIGH SMOKE FLAP DETAIL		
PROJECT ECHO STREET, MANCHESTER		
PROJECT No	6818	AREA
SITE	SCALE	NTS
CLIENT	A&B ENGINEERING	DATE 19.06.24
DRG No	6818-010	APP
REV		



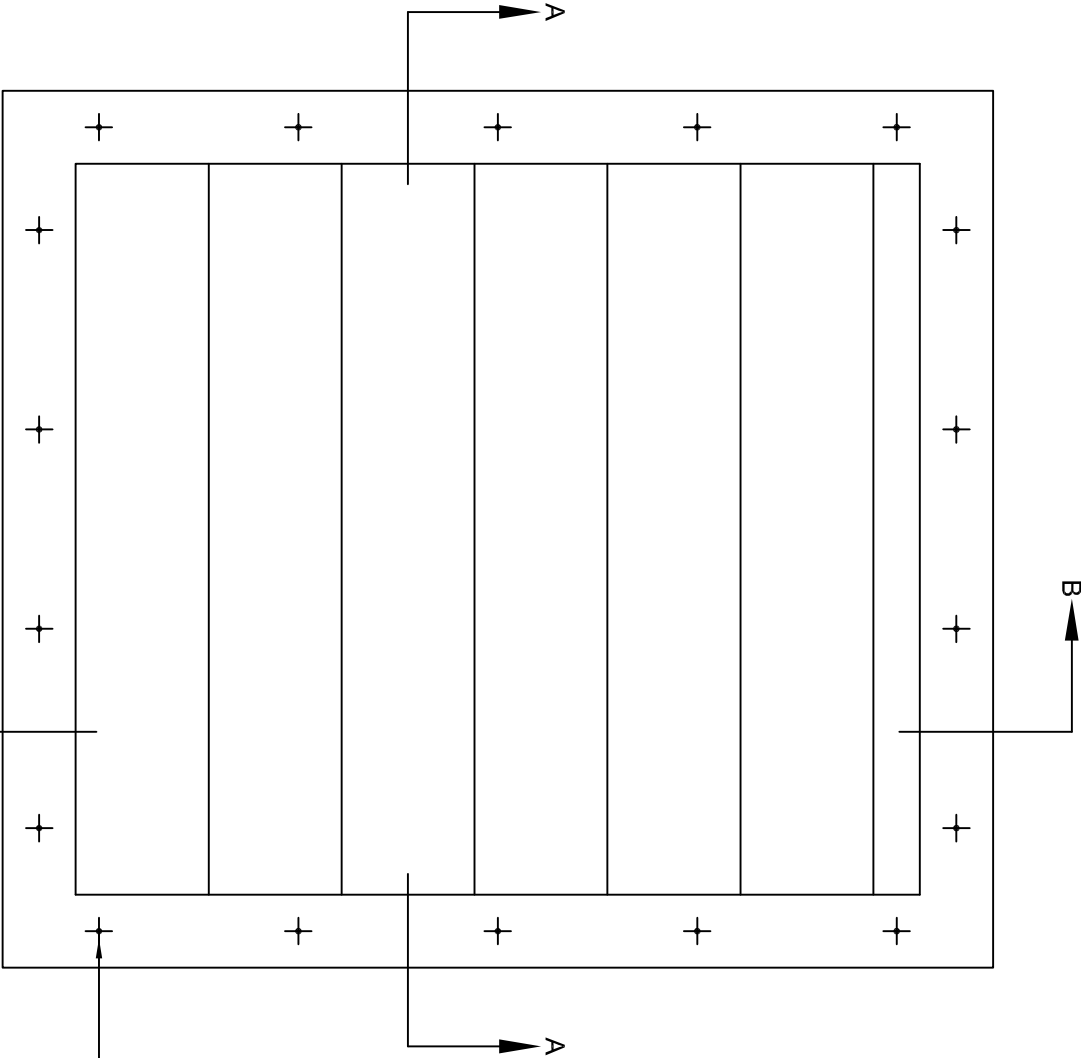
SECTION AA



SECTION BB

UN-INSULATED
ROOF OPEN SKY VENT TYPE OSREN0611
DRIVE OPEN / DRIVE CLOSED - 24V dc, 0.8A
THIS VENT HAS BEEN TESTED TO BS EN 12101 Pt2
MILL FINISH SINGLE SKIN ALUMINIUM
GEOMETRIC FREE AREA = 1.10m²
Approved Document B FREE AREA = 1.05m²
WEIGHT 25kg

- NOTES:
- 1 - THE MAXIMUM UPSTAND LENGTH AND WIDTH DIMENSIONS SHOWN INCLUDES KINGSPAN OR SIMILAR INSULATED CLADDING TO THE CURB.
 - 2 - VENTILATORS WILL BE MANUFACTURED TO DIMENSIONS STATED, UNLESS CERTIFIED CONSTRUCTION DRAWING FOR UPSTAND IS ISSUED TO INTERACTIVE PRIOR TO MANUFACTURE.



PLACE VENT BASE ON TO CONTINUOUS MASTIC BEAD & FIX WITH BULDEX N°12 x 26 LONG STITCHING SCREWS @ APPROX 300 CENTRES



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TITLE
1.0m² AUTOMATIC OPENING VENT (STAIR)

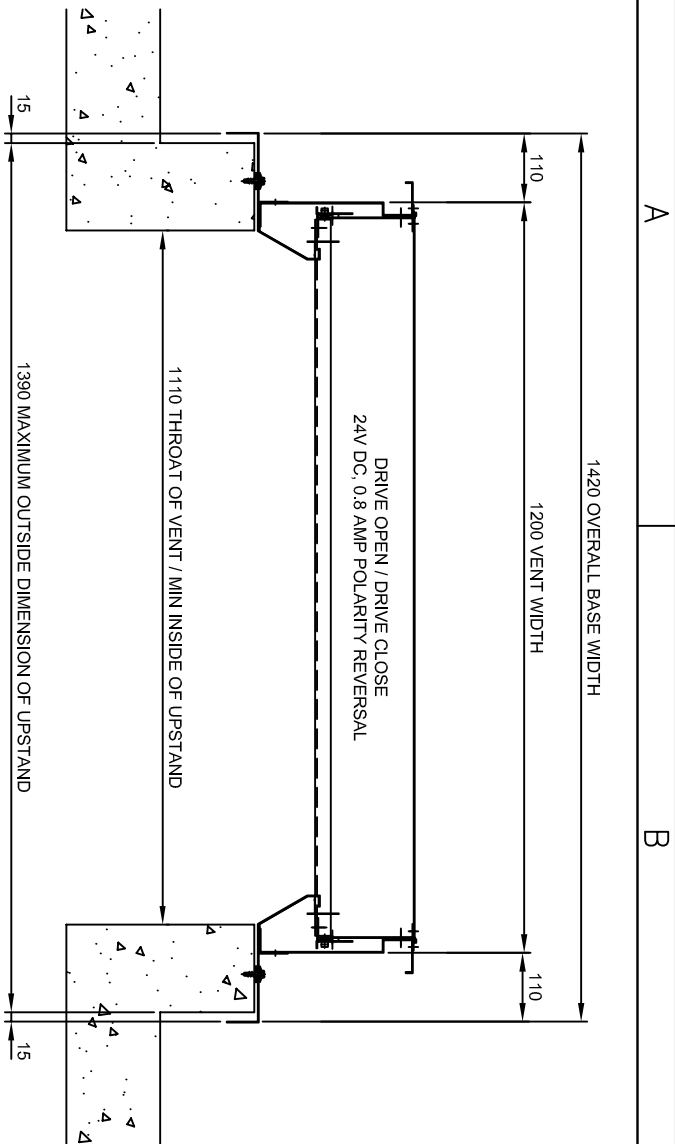
PROJECT
ECHO STREET, MANCHESTER

PROJECT No	6818	AREA		DRAWN	B.SMITH
SITE		SCALE	NTS	CHK	P.FRAIN
CLIENT	A&B ENGINEERING	DATE	16.06.24	APP	

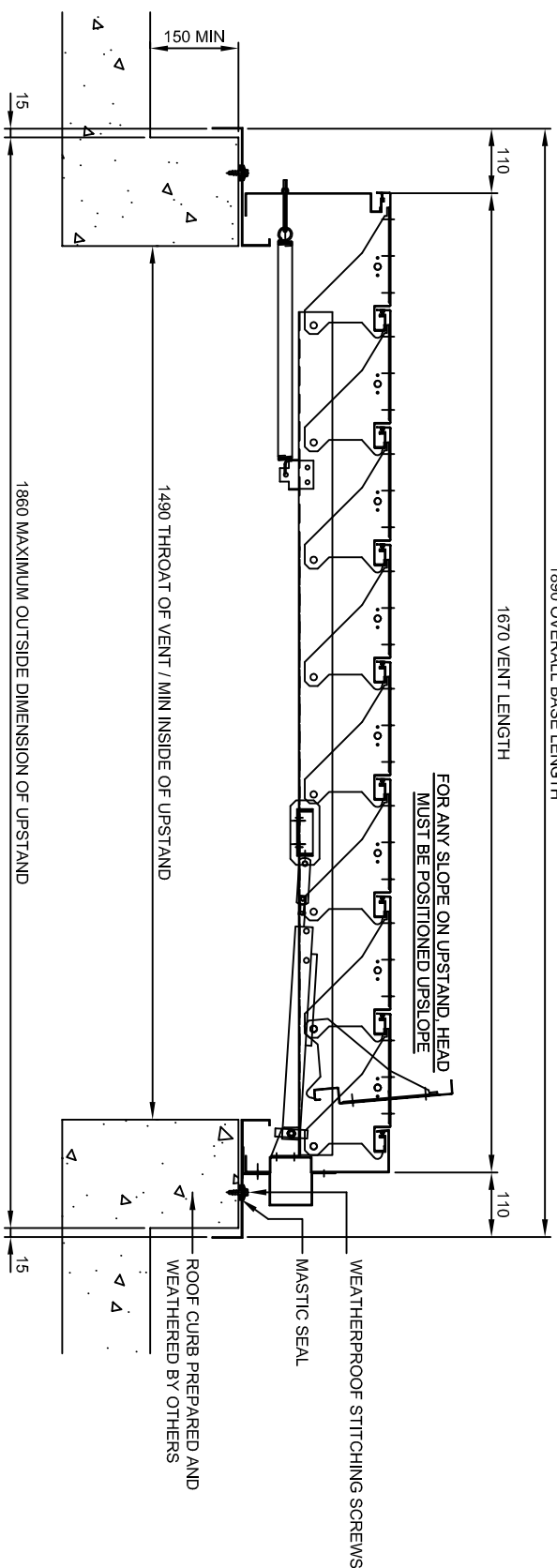
DRG No 6818-011

REV

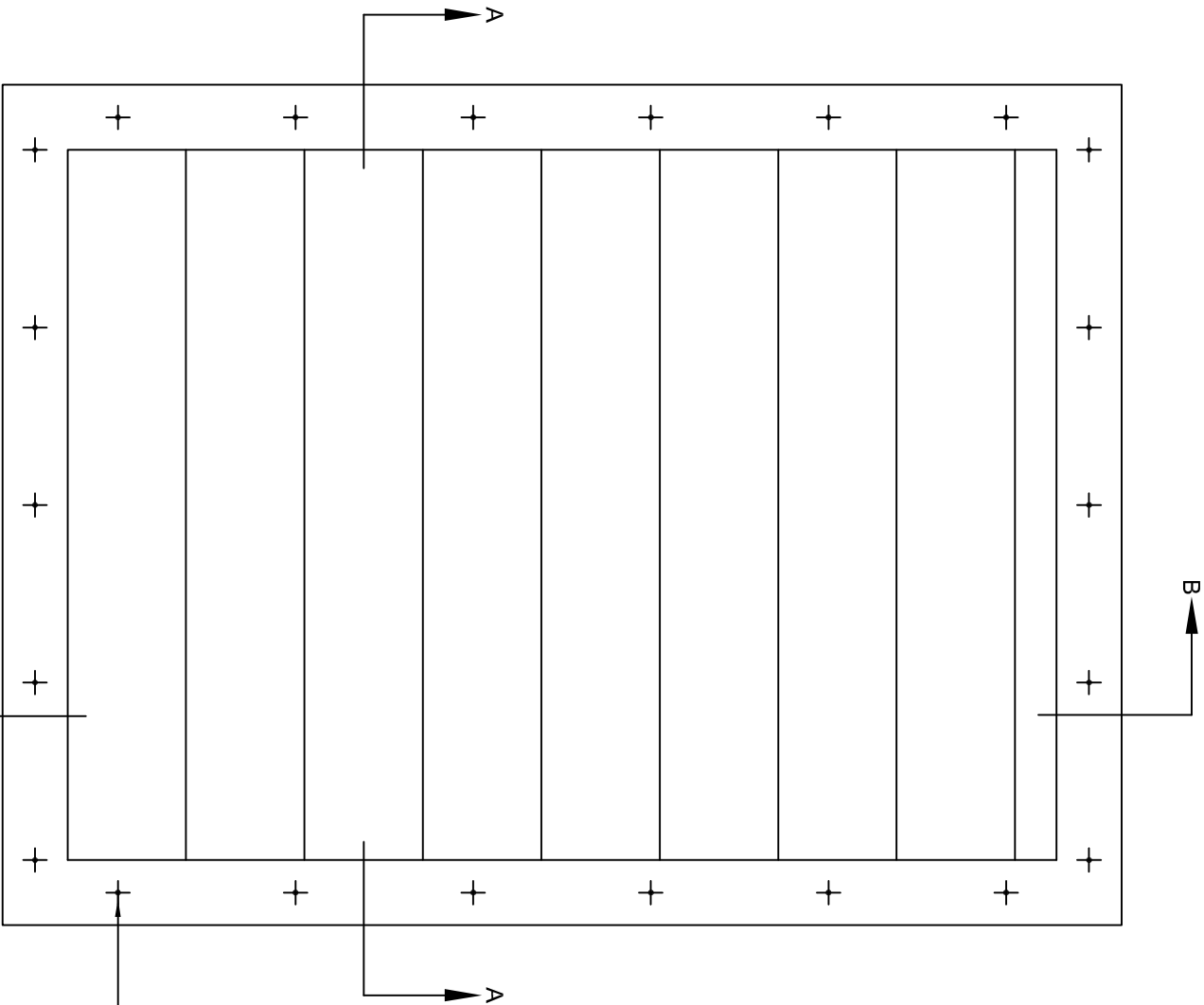
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SECTION AA



SECTION BB



PLAN VIEW

- ROOF OPEN SKY VENT TYPE OSREN0812
DRIVE OPEN / DRIVE CLOSED - 24V dc, 0.8A
THIS VENT HAS BEEN TESTED TO BS EN 12101 Pt 2
MILL FINISH SINGLE SKIN ALUMINIUM
GEOMETRIC FREE AREA = 1.65m²
Approved Document B FREE AREA = 1.54m²
AERODYNAMIC FREE AREA = 1.14m² (with Windshields)
WEIGHT 36kg
- NOTES:
1 - THE MAXIMUM UPSTAND LENGTH AND WIDTH DIMENSIONS SHOWN INCLUDES KINGSPAN OR SIMILAR INSULATED CLADDING TO THE CURB.
2 - VENTILATORS WILL BE MANUFACTURED TO DIMENSIONS STATED, UNLESS CERTIFIED CONSTRUCTION DRAWING FOR UPSTAND IS ISSUED TO INTERACTIVE PRIOR TO MANUFACTURE.



PLACE VENT BASE ON TO CONTINUOUS MASTIC BEAD & FIX WITH BULDEX N°12 x 25 LONG STITCHING SCREWS @ APPROX 300 CENTRES



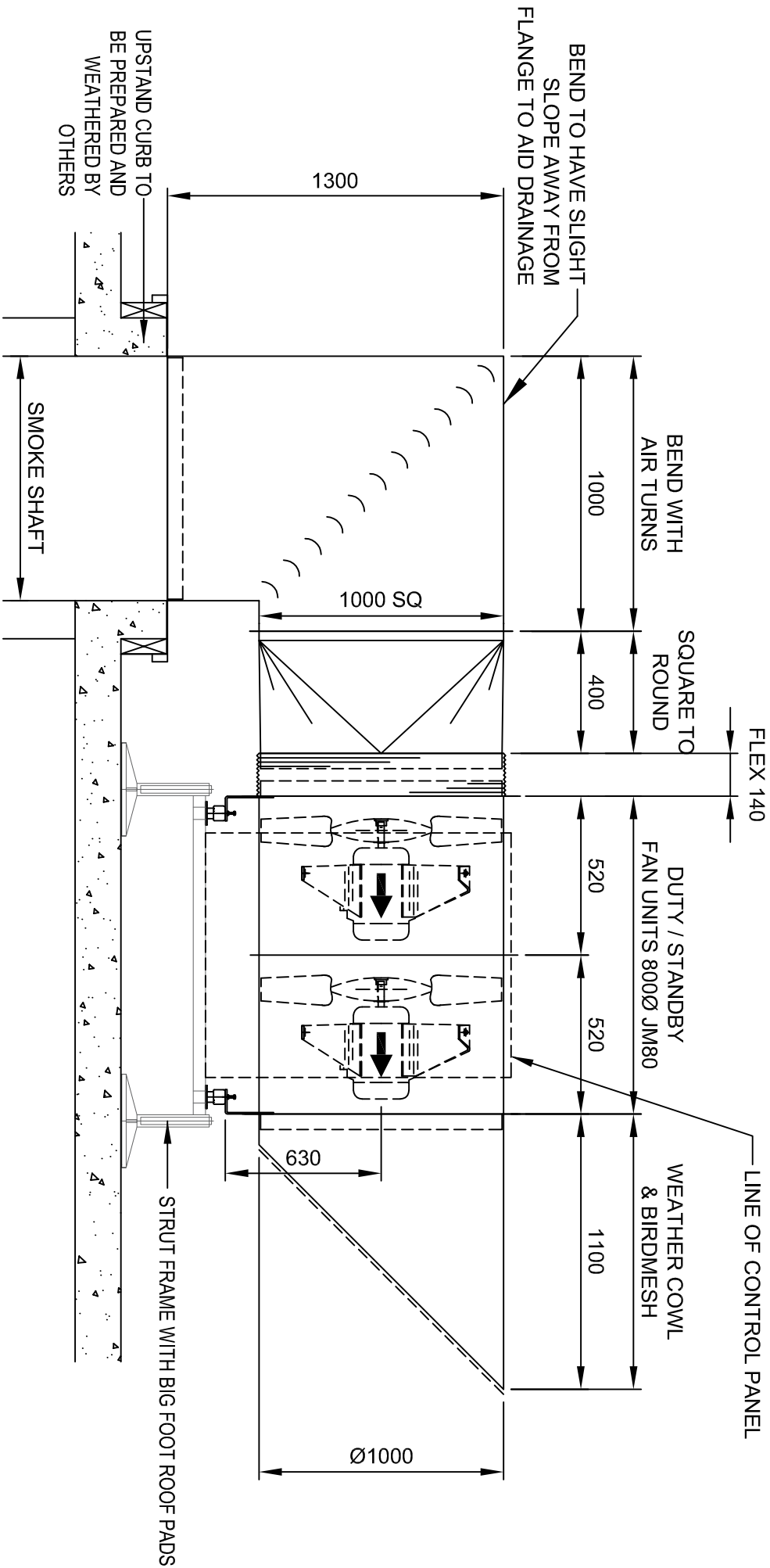
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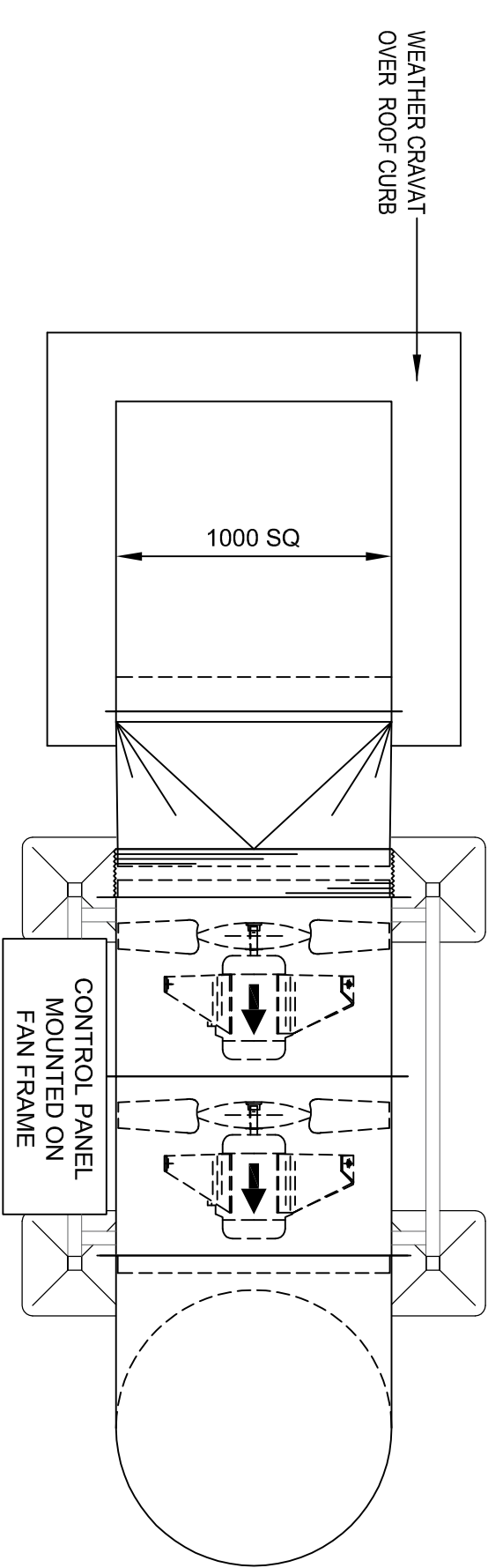
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TITLE	1.5m ² AUTOMATIC OPENING VENT (TOP LOBBY)

DRG No	6818-012	REV	
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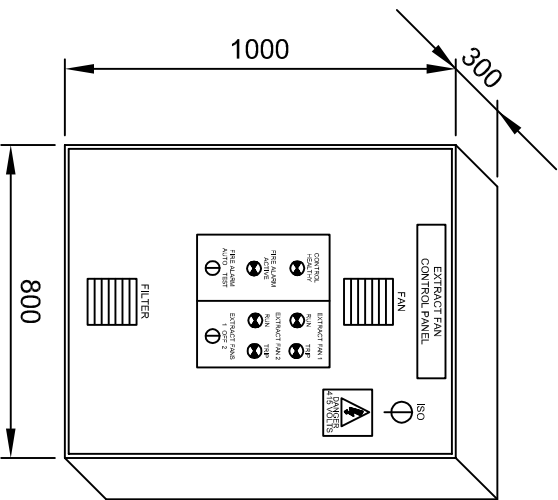
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SIDE ELEVATION ON SMOKE FANS



PLAN VIEW ON SMOKE FANS



CONTROL PANEL DIMENSIONS

ESTIMATED EQUIPMENT WEIGHTS			
EXTRACT FANS @ 113kg EACH	- 226kg		
DISCHARGE COWL	- 18kg		
SQUARE TO ROUND	- 18kg		
AV MOUNTINGS (4 No.)	- 4kg		
BEND	- 30kg		
MATCHING FLANGES	- 10kg		
FLEXIBLE CONNECTOR	- 1kg		
CRAVAT	- 20kg		
SUPPORT STAND	- 32kg		
ESTIMATED TOTAL	- 347kg		

NOTE ALL DUCTING MANUFACTURED TO DW144 ENHANCED SPECIFICATION

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TITLE		1000mm DIAMETER SMOKE EXTRACT FAN SET			
PROJECT		ECHO STREET, MANCHESTER			
PROJECT No	6818	AREA		DRAWN	B.SMITH
SITE		SCALE	NTS	CHK	P.FRAIN
CLIENT	A&B ENGINEERING	DATE	16.06.24	APP	
DRG No		6818-013		REV	

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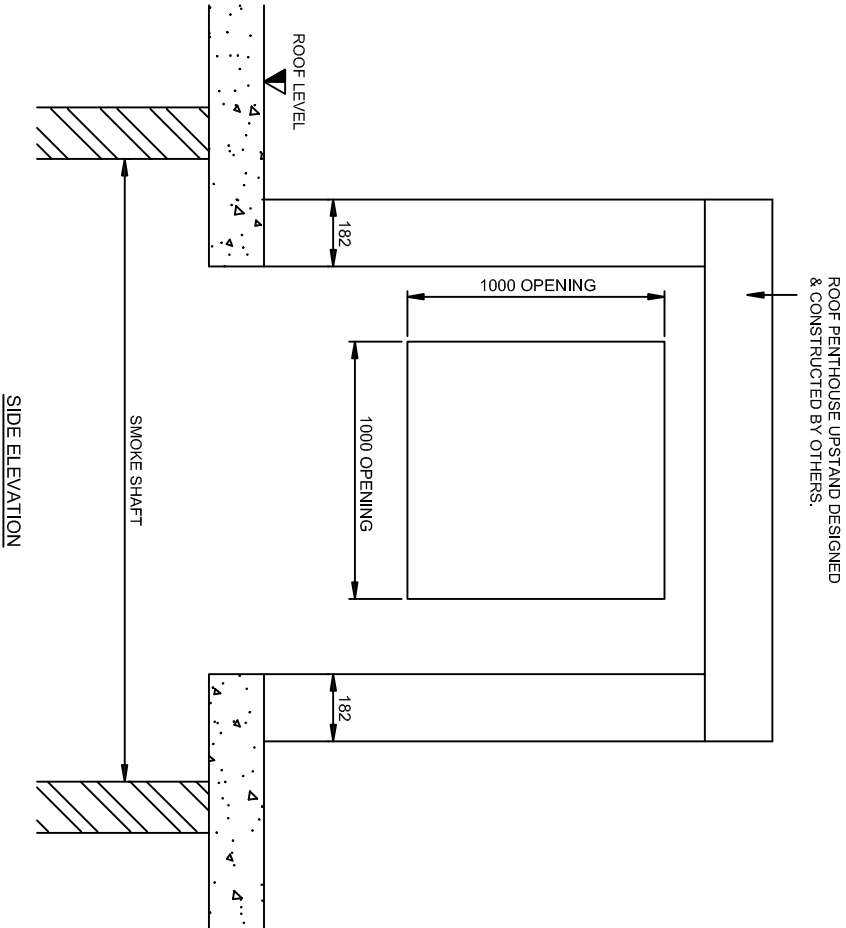
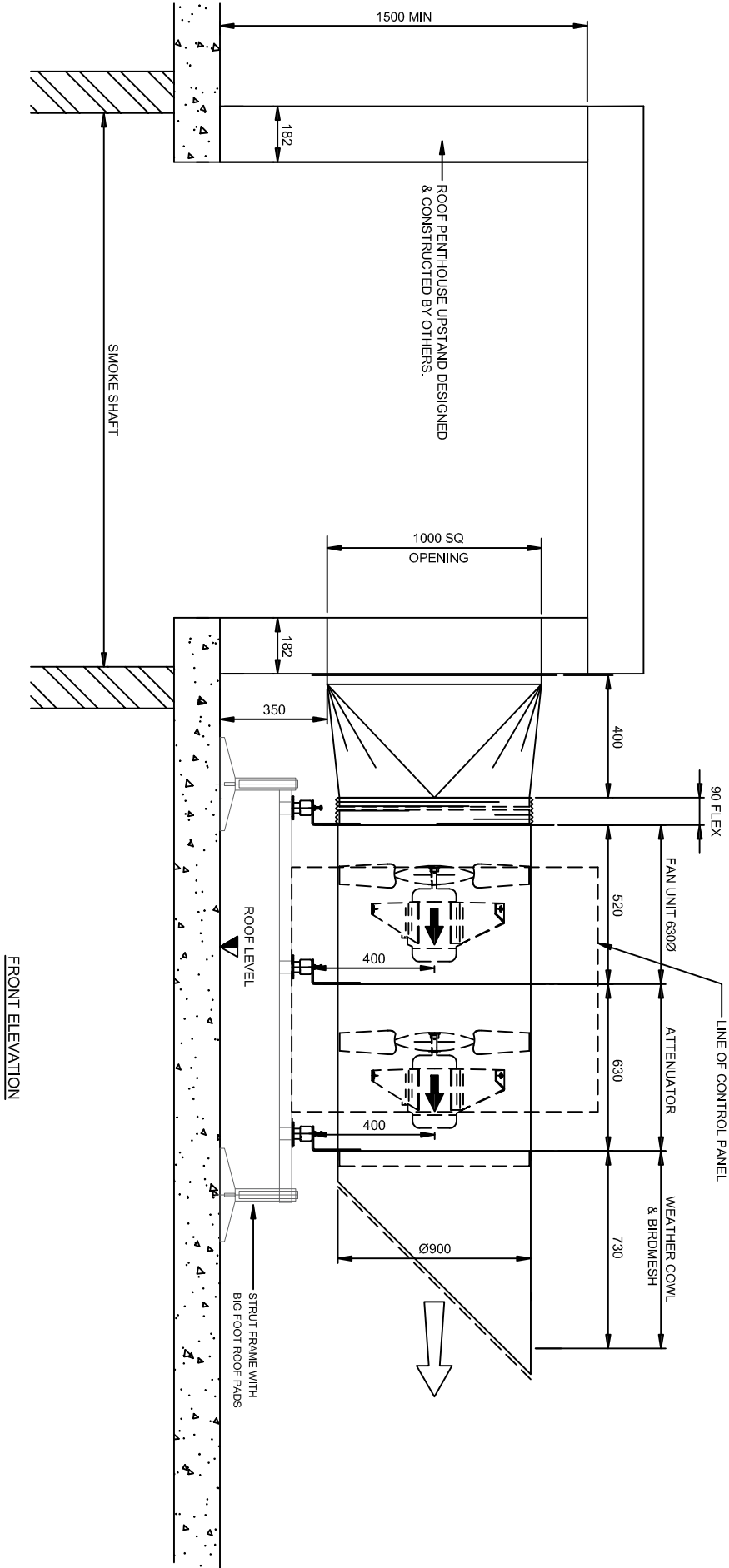
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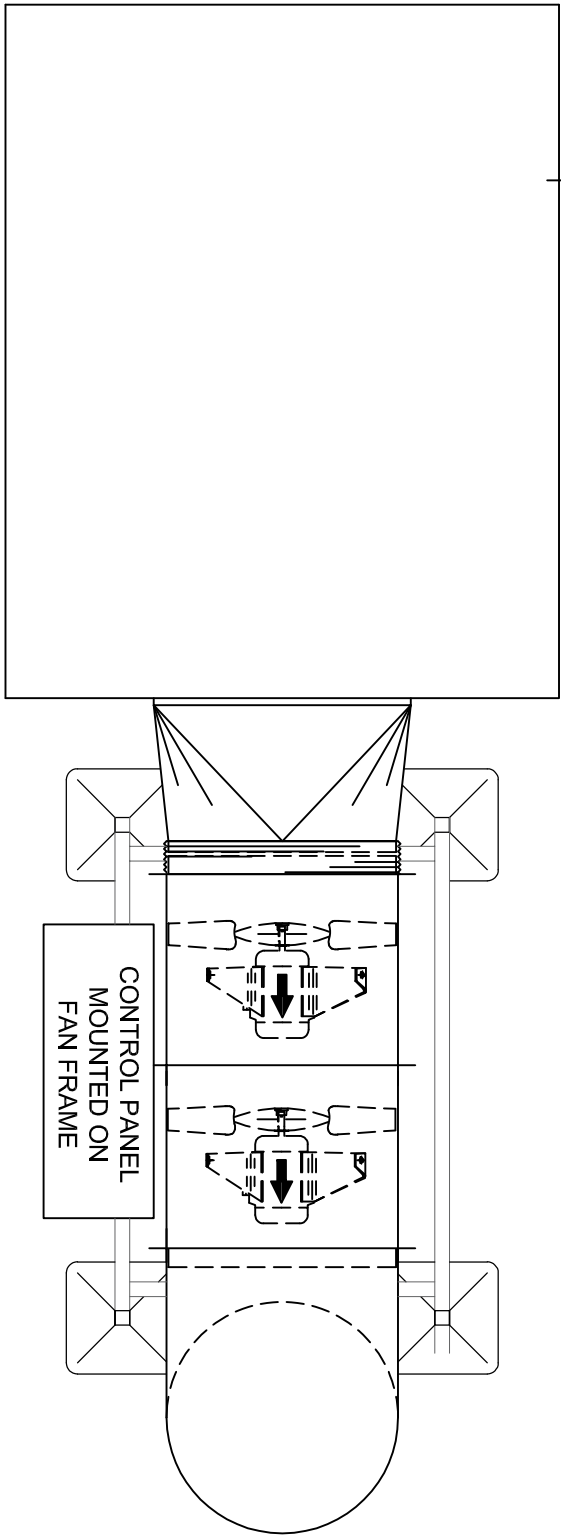
D

E

DO NOT SCALE - IF IN DOUBT ASK



ROOF PENTHOUSE UPSTAND DESIGNED & CONSTRUCTED BY OTHERS.



Rev	X			
X				
X				
X				

Drawn	Date	Chk	App
X	X	X	X



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TITLE PENTHOUSE EXTRACT FAN ARRANGEMENT

PROJECT ECHO STREET, MANCHESTER

PROJECT No	AREA	SCALE	NTS	DRAWN	BS
6818					
SITE	SCALE	NTS	CHK	PF	
CLIENT	A&B ENGINEERING	DATE	17.06.24	APP	

DRG No 6818-014

REV