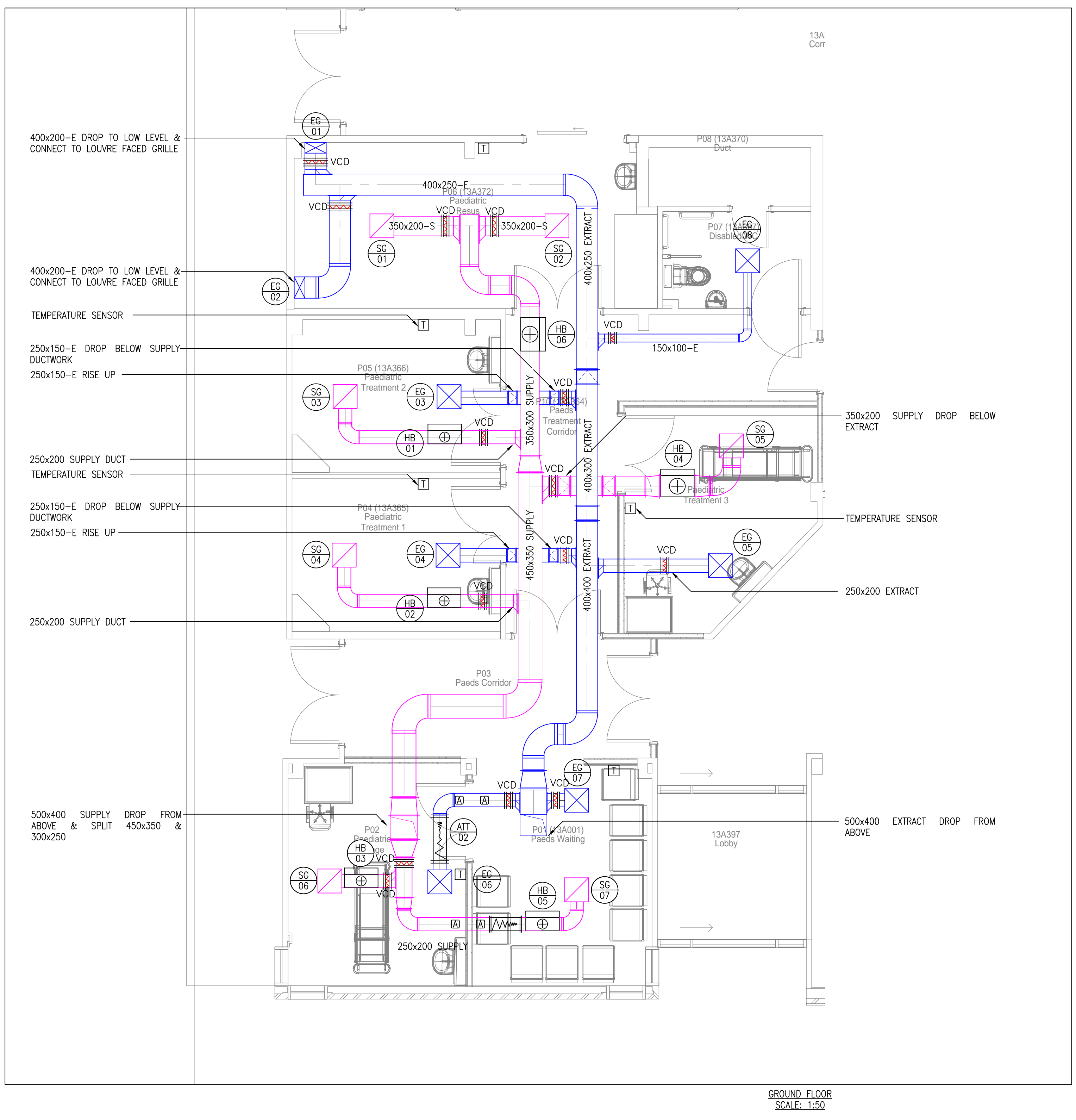
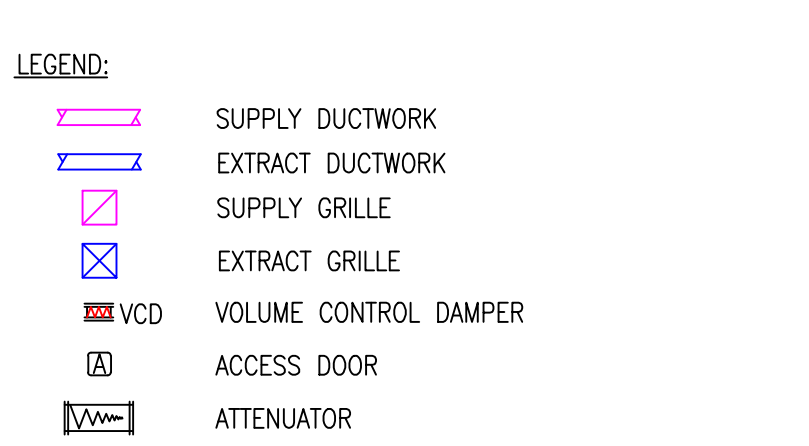


Do Not Scale

- NOTES
- THIS DRAWING SHALL BE READ IN CONJUNCTION WITH ALL OTHER M&E SERVICE DRAWINGS AND WITH REFERENCE TO ALL ARCHITECTURAL DRAWINGS AND STRUCTURAL DRAWINGS FOR BUILDING DIMENSIONS.
 - THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL DUCT WORK CONNECTIONS AND CONTROLS WIRING REQUIRED TO PROVIDE A FULLY OPERATIONAL VENTILATION SYSTEM.
 - ALL DUCTWORK SHALL BE INSULATED & WRAPPED WITH ALUMINUM CLADDING.
 - UPON COMPLETION OF THE WORKS THE SYSTEM SHALL BE FULLY COMMISSIONED & BALANCED TO PROVIDE THE DESIGN FLOW RATES.
 - ALL DUCTWORK SHALL BE MANUFACTURED AND INSTALLED IN ACCORDANCE WITH DW144 USING GALVANISED SHEET METAL.
 - VENTILATION SUB-CONTRACTOR SHALL ALLOW SUITABLE SPACERS ON ALL FINAL CONNECTIONS AND ANY PLENUM BOXES REQUIRED FOR GRILLES/ LOUVRES ETC AND ANY TRANSITION PIECE TO ALLOW INSTALLATION DUE TO RESTRICTED VOIDS.
 - FIRE DAMPERS & FIRE/ SMOKE DAMPERS WILL BE INSTALLED WITHIN ALL FIRE COMPARTMENTS TO MAINTAIN FIRE INTEGRITY IN ACCORDANCE WITH THE FIRE STRATEGY.
 - THE MECHANICAL CONTRACTOR SHALL ALLOW ALL ASSOCIATED POWER SUPPLIES AND INTERFACES FOR ANY NEW FIRE SMOKE DAMPERS.
 - ALL VENTILATION BENDS MUST INCLUDE MULTI VANES, TEES MUST BE RADIUS OR SQUARE C/W MULTI TURNING VANES. ALL BRANCH CONNECTIONS MUST BE SWEET IN DIRECTION OF FLOW AND SP/SGT/SQUARE BRANCHES ARE NOT ACCEPTABLE.
 - VENTILATION SUB-CONTRACTOR MUST PROVIDE FABRICATION/INSTALLATION DRAWINGS FOR APPROVAL PRIOR TO MANUFACTURE.
 - ALL SERVICES ARE SHOWN INDICATIVE ONLY. THE VENTILATION SUB-CONTRACTOR SHALL LIASE FULLY ON SITE AND CO-ORDINATE THE INSTALLATION.
 - ACCESS DOORS TO BE PROVIDED TO ALLOW CLEANING AND INSPECTION OF ALL FIRE DAMPERS, FIRE/ SMOKE DAMPERS VOLUME CONTROL DAMPERS AND BRANCHES. ALSO ON ALL STRAIGHT RUNS OF DUCTWORK ACCESS DOORS TO BE PROVIDED AT 3m INTERVALS, ALL AS DETAILED WITHIN MECHANICAL SPECIFICATION.
 - ALL DIFFUSER TERMINALS SHALL BE ADJUSTABLE FOR VOLUME CONTROL, NOISE REDUCTION AND DRAUGHT AVOIDANCE PURPOSES.
 - THE SPECIFIC FAN POWER OF ANY MECHANICAL VENTILATION SYSTEM MUST NOT EXCEED FIGURES PROVIDED IN PART L2A.



SCHEDULE OF SUPPLY GRILLES

REF	SG01	SG02	SG03	SG04	SG05	SG06	SG07
QUANTITY	1	1	1	1	1	1	1
AIR VOLUME (m ³ /s)	0.116	0.116	0.084	0.084	0.100	0.062	0.100
SUPPLY TEMPERATURE (°C)	21	21	21	21	21	21	21
PRESSURE DROP (Pa)	<20	<20	<20	<20	<20	<20	<20
NOISE RATING (NR)	<30	<30	<30	<30	<30	<30	<30
HEIGHT/ THROW (m)	2.7/-	2.7/-	2.7/-	2.7/-	2.7/-	2.7/-	2.7/-
FACE SIZE (mm)	595x595	595x595	595x595	595x595	595x595	595x595	595x595
NECK SIZE (mm)	350x200	350x200	250x200	250x200	350x200	250x150	250x200
NECK VELOCITY (m/s)	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5
PLENUM	YES	YES	YES	YES	YES	YES	YES
MANUFACTURER	SWIRL	SWIRL	SWIRL	SWIRL	SWIRL	SWIRL	SWIRL
MODEL REFERENCE	-	-	-	-	-	-	-

SCHEDULE OF EXTRACT GRILLES

REF	EG01	EG02	EG03	EG04	EG05	EG06	EG07	EG08
QUANTITY	1	1	1	1	1	1	1	1
AIR VOLUME (m ³ /s)	0.130	0.130	0.072	0.072	0.085	0.062	0.100	0.023
EXHAUST TEMPERATURE (°C)	21	21	21	21	21	21	21	21
PRESSURE DROP (Pa)	<20	<20	<20	<20	<20	<20	<20	<20
NOISE RATING (NR)	<30	<30	<30	<30	<30	<30	<30	<30
FACE SIZE (mm)	595x595	595x595	595x595	595x595	595x595	595x595	595x595	595x595
NECK SIZE (mm)	400x200	400x200	250x150	250x150	250x150	250x200	150x100	150x100
NECK VELOCITY (m/s)	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5
PLENUM	YES	YES	YES	YES	YES	YES	YES	YES
MANUFACTURER	LOUVER	LOUVER	SWIRL	SWIRL	SWIRL	SWIRL	SWIRL	SWIRL
MODEL REFERENCE	-	-	-	-	-	-	-	-

SCHEDULE OF AIR HANDLING UNIT

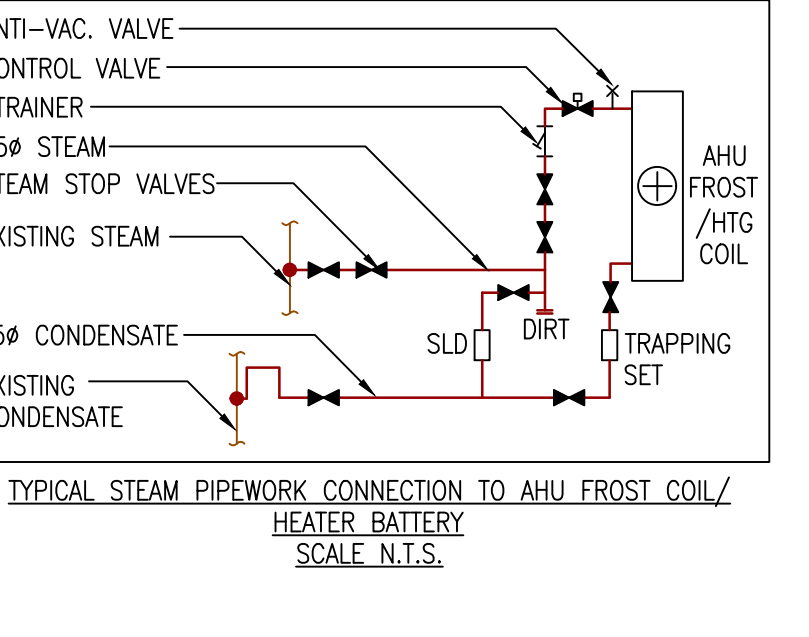
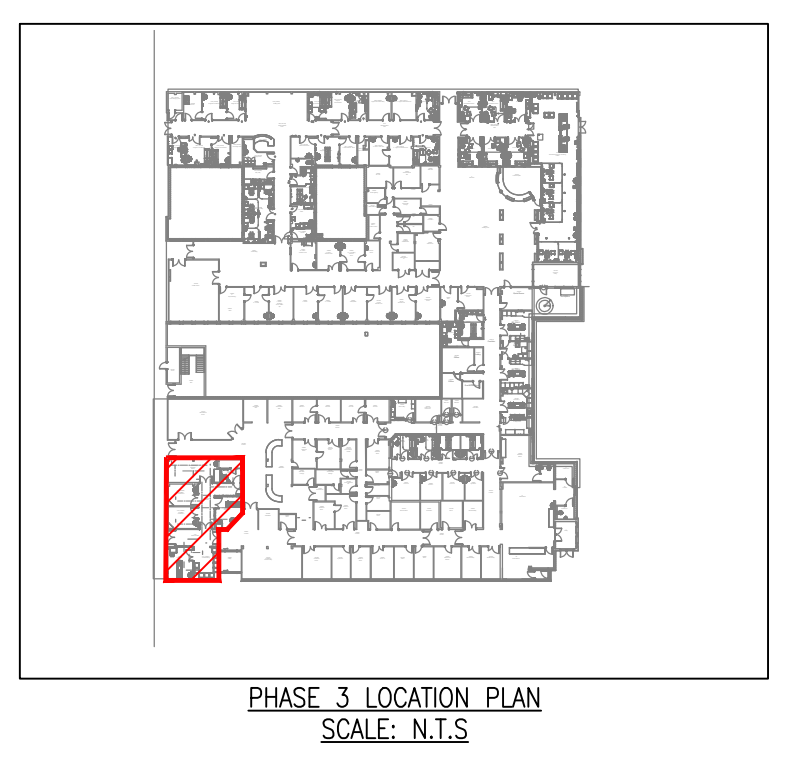
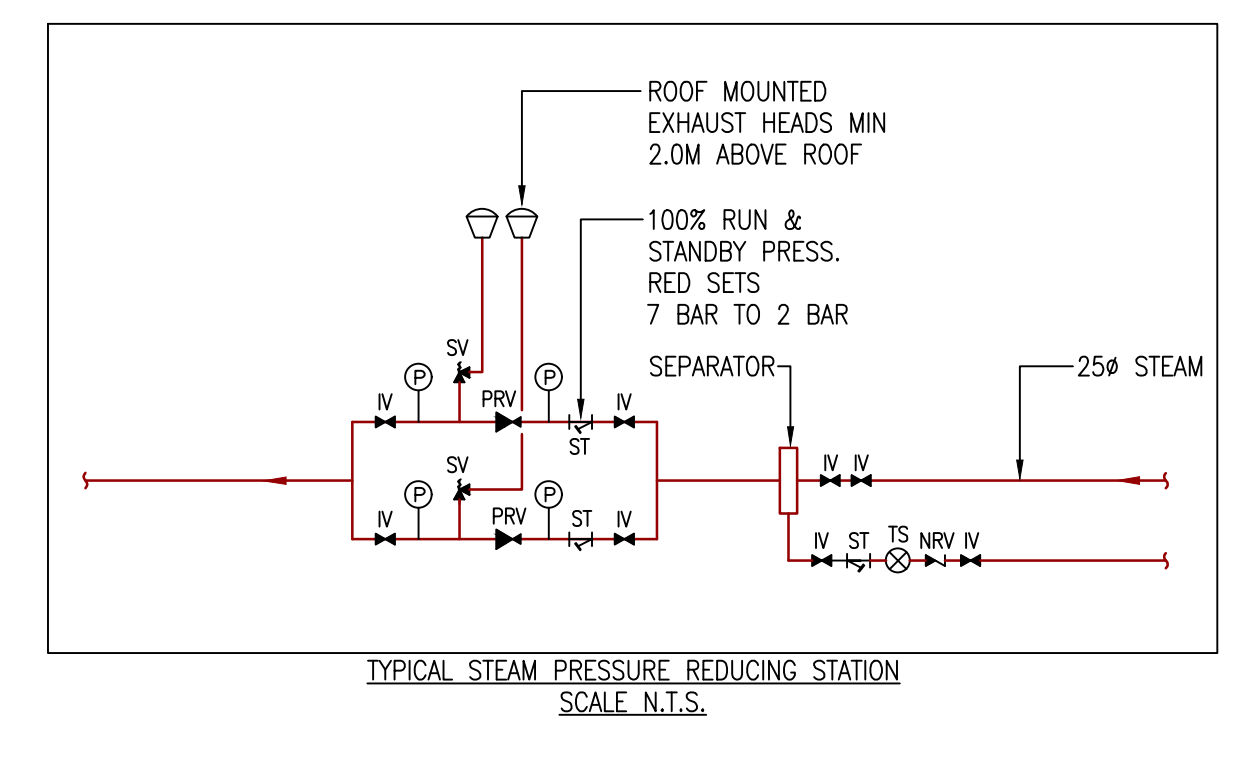
REF	AHU 01
TYPE	EXTERNAL/SIDE BY SIDE
MANUFACTURER	-
MODEL REFERENCE	-
LOCATION	ROOF DECK
QUANTITY	1
FAN SECTION	SUPPLY EXTRACT
VOLUME FLOW RATE (m ³ /s)	2.0 2.0
EXTERNAL PRESSURE (Pa)	250 250
MOTOR ARRANGEMENT	SINGLE SINGLE
CASING	DBL. SKIN DBL. SKIN
TYPE	-
POWER SUPPLY (V/Ph/Hz)	-
STARTING CURRENT (A)	-
RUNNING CURRENT (A)	-
MOTOR RATING (kW)	5.50 3.0
SPECIFIC FAN POWER (W/((m ³ /s)))	2.0
TOTAL EFFICIENCY (%)	-
COILS	FROST HEATING COOLING
ENTERING AIR CONDITION (°Cdb/°Cwb)	-5/- 8/1 30/20
LEAVING AIR CONDITION (°Cdb/°Cwb)	8/- 30/- 15/-
DUTY (kW)	32 54 45
FLUID TEMP. ON/OFF (°C)	T.B.C T.B.C T.B.C
FLUID RATE (l/s)	T.B.C T.B.C T.B.C
FACE VELOCITY (m/s)	-
DROPLET ELIMINATOR (1/n)	-
MATERIALS TUBE 7' FINISH	-
MAX. PRESSURE DROP WATER (kPa)	-
HEAT RECOVERY	YES
TYPE	PLATE HEAT EX
AIR ON (°C) INTAKE/ EXTRACT	-
AIR OFF (°C) SUPPLY/ DISCHARGE	-
EFFICIENCY (%)	-
FACE VELOCITY (m/s)	-
FILTERS	SUPPLY EXTRACT
PANEL	G4 G4
B/C	F7 F7
OA DIMENSIONS LxWxH (mm)	11,550x2,700x1,450
TOTAL OPERATING WEIGHT (kg)	4,813

SCHEDULE OF ATTENUATORS

REF	ATT01	ATT02
SYSTEM	EXTRACT SUPPLY	-
AIR VOLUME (m ³ /s)	0.062 0.062	-
PRESSURE DROP (Pa)	<15 <15	-
DUCTWORK SIZE (mm)	250x150 250x150	-
DIMENSIONS WxHxL (mm)	250x150x 250x150x	-
MANUFACTURER	600 900	-
TYPE	X-TALK X-TALK	-

SCHEDULE OF HEATER BATTERIES

REF	HB01	HB02	HB03	HB04	HB05	HB06
LOCATION	-	-	-	-	-	-
QUANTITY	1	1	1	1	1	1
TYPE	ELECTRIC ELECTRIC ELECTRIC ELECTRIC ELECTRIC ELECTRIC					
AIR VOLUME (m ³ /s)	0.084 0.084 0.062 0.100 0.100 0.200					
OUTPUT (kW)	1.0 1.0 1.0 1.5 1.5 2.0					
ON COIL TEMPERATURE (°C)	15 15 15 15 15 15					
OFF COIL TEMPERATURE (°C)	25 25 25 25 25 25					
PRESSURE DROP (Pa)	<20 <20 <20 <20 <20 <20					
LTWH FAR TEMPERATURES (°C)	N/A N/A N/A N/A N/A N/A					
DIMENSIONS LxWxH (mm)	630x200x250 630x200x250 630x200x200 630x200x350 630x200x350 630x200x350					
WEIGHT (KG)	T.B.C T.B.C T.B.C T.B.C T.B.C T.B.C					
MANUFACTURER	T.B.C T.B.C T.B.C T.B.C T.B.C T.B.C					
MODEL REFERENCE	T.B.C T.B.C T.B.C T.B.C T.B.C T.B.C					



- NOTE
- AIR VELOCITY ACROSS COILS MUST BE 2.0m/s CONTRACTOR TO ALLOW ALL NECESSARY TRANSITION PIECES FOR CONNECTION
 - CONTRACTOR TO INCLUDE ALL NECESSARY CONTROLS, POWER & ASSOCIATED WIRING

T2	19.03.21	MT	SJ	DUCTWORK AMENDED
T1	19.02.21	MT	SJ	TENDER ISSUE
REV.	DATE	DRN	CHKD	DESCRIPTION

JCP CONSULTING ENGINEERS

County Durham and Darlington NHS Foundation Trust

P+H ARCHITECTS

DMH ED DARLINGTON MEMORIAL HOSPITAL

MECHANICAL SERVICES PHASE 3 PROPOSED VENTILATION LAYOUT

AS SHOWN: L2054
 SHEET: (57)
 DATE: OCT. 2020
 DRAWN BY: MT
 CHECKED BY: SJ
 DESIGNED BY: SJ
 DATE: 007
 REVISION: T2

STATUS: TENDER