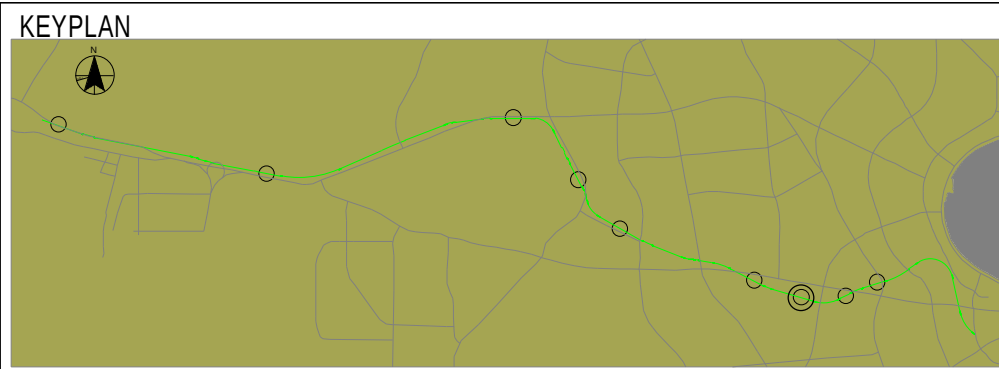
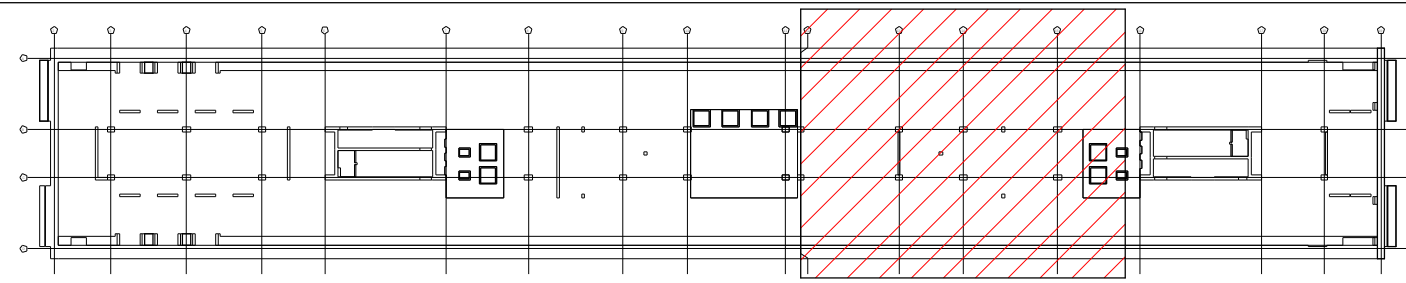
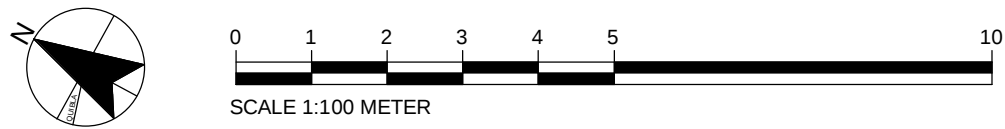
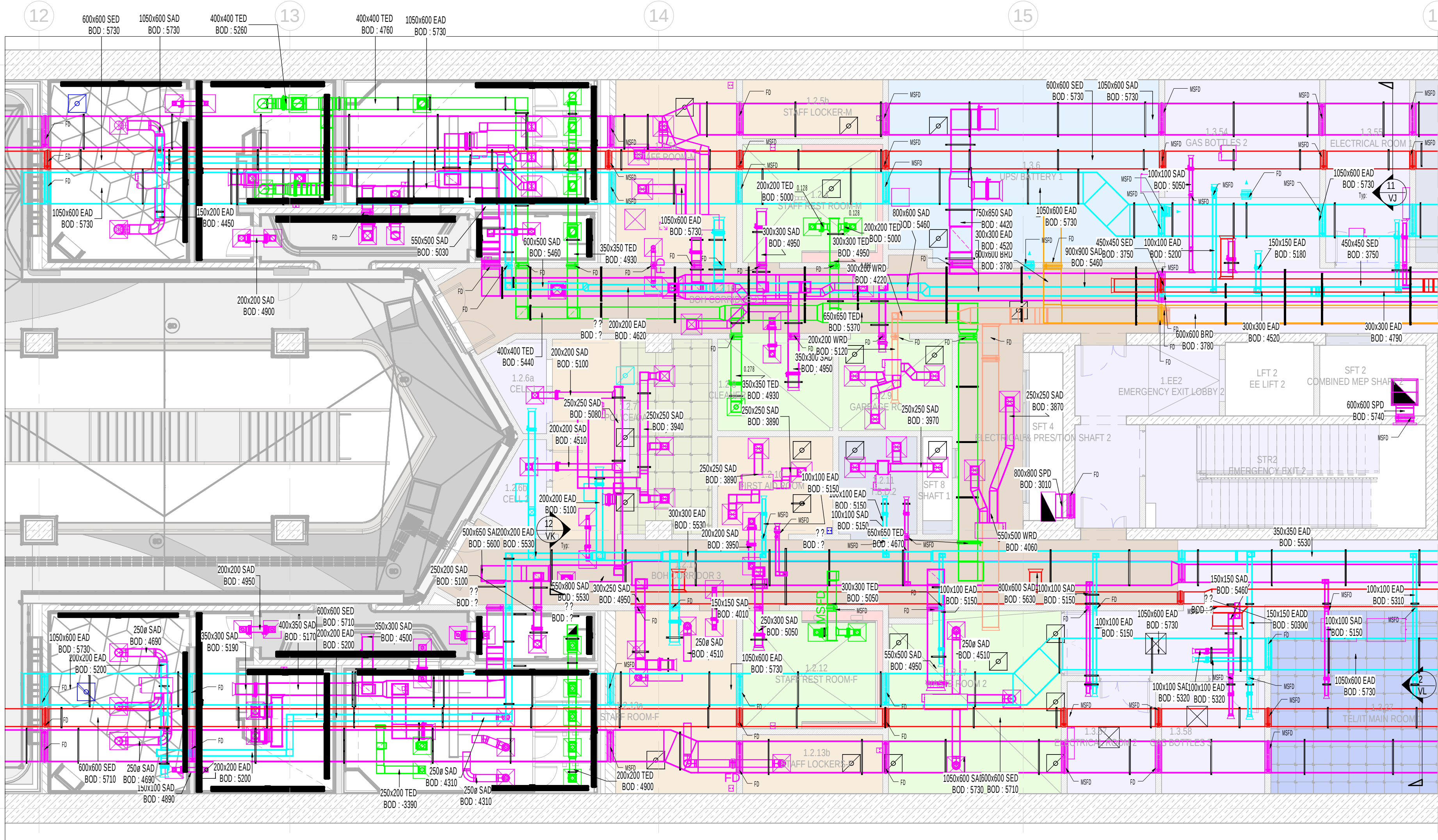


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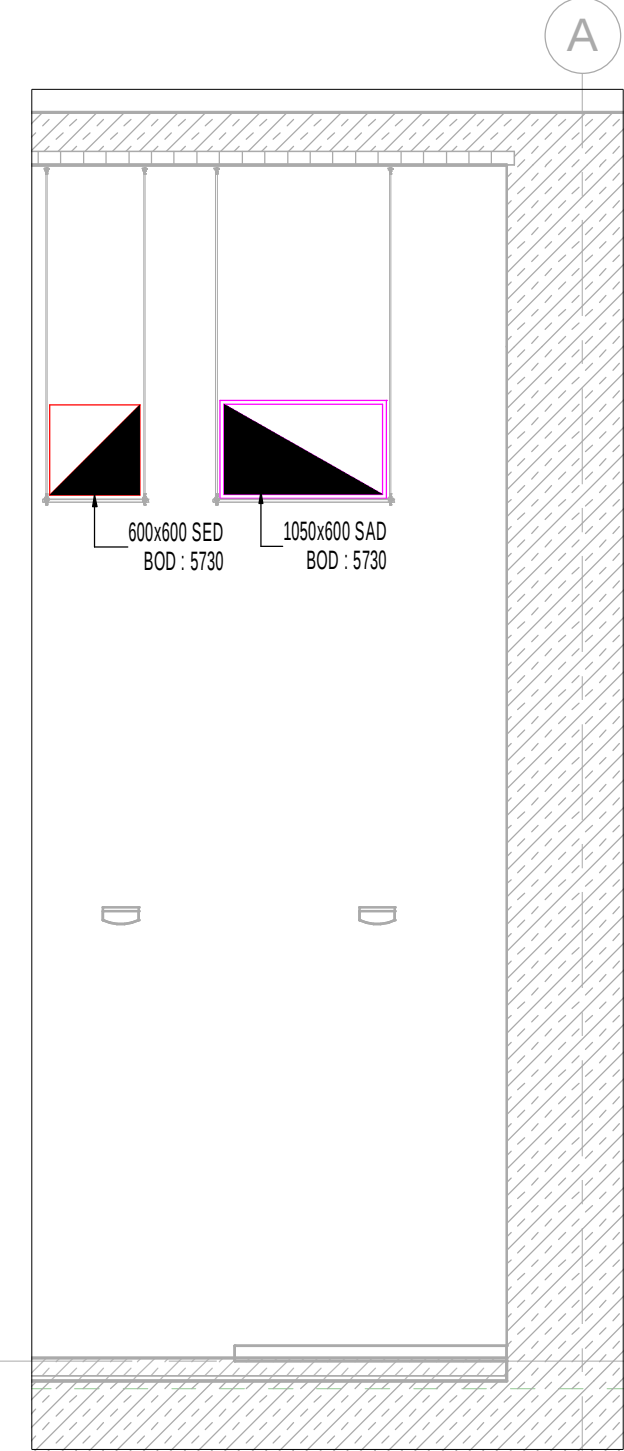
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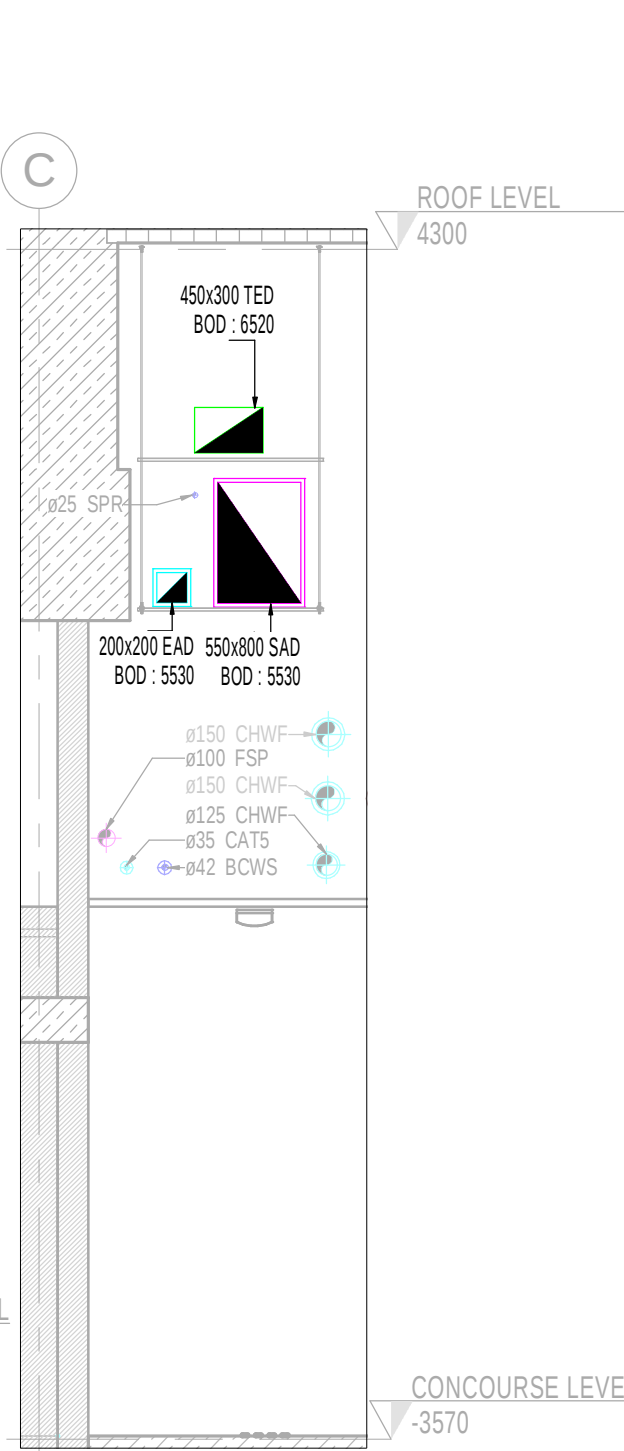
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SHOP DRAWINGS STATION - AL RAYYAN / AL QADEEM CONCOURSE LEVEL
- VENTILATION SERVICES (STATION CENTRAL EAST)

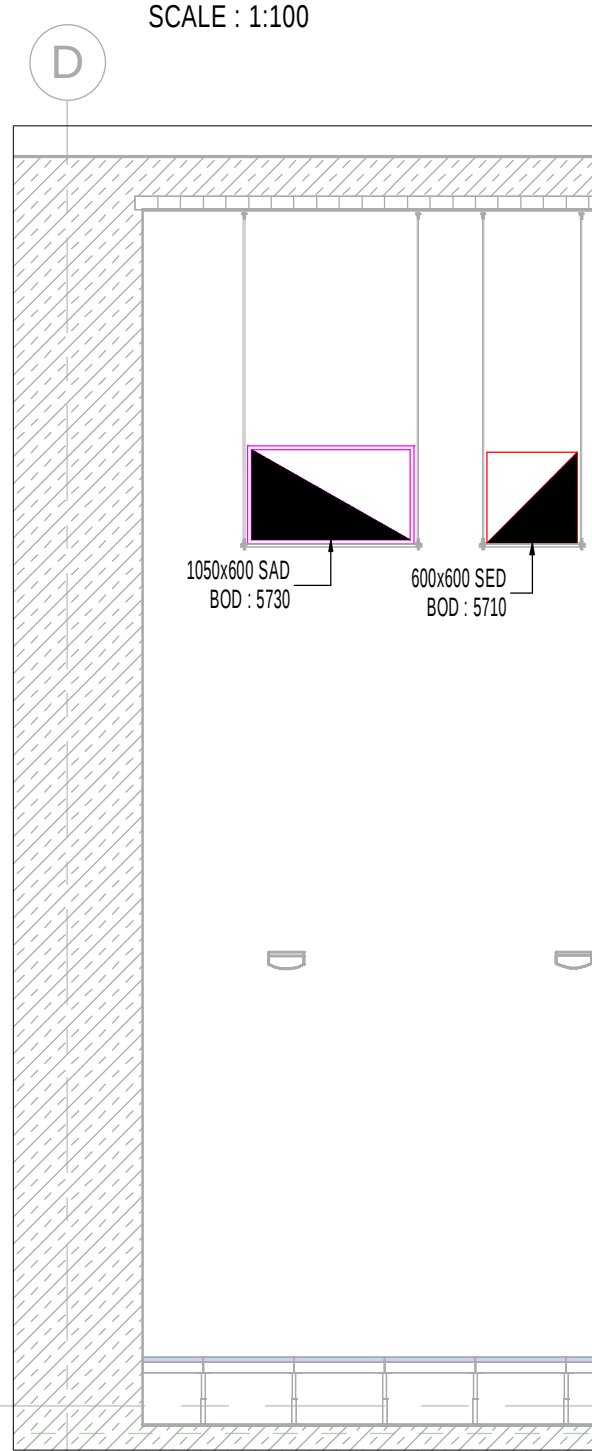
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SECTION-VJ
SCALE : 1:50



SECTION-VK
SCALE : 1:50



SECTION-VL
SCALE : 1:50

HVAC DUCTING - SUPPORT SPACING SCHEDULE

S.NO.	HEIGHT MM	WIDTH MM	MAXIMUM SUPPORT SPACING M	INSULATION DENSITY KG/CU.M.	SPAN MM	RECOMMENDED CHANNEL	THREADED ROD SIZE
1	150	150	3.0	48	350	FUS 21/2.0	M08
2	200	200	3.0	48	400	FUS 21/2.0	M08
3	250	250	3.0	48	450	FUS 21/2.0	M08
4	300	300	3.0	48	500	FUS 21/2.0	M08
5	350	350	3.0	48	550	FUS 21/2.0	M08
6	400	400	3.0	48	600	FUS 21/2.0	M08
7	450	450	2.5	48	650	FUS 21/2.0	M08
8	500	500	2.5	48	700	FUS 21/2.0	M08
9	550	550	2.5	48	750	FUS 21/2.0	M08
10	600	600	2.5	48	800	FUS 21/2.0	M08
11	650	650	2.5	48	850	FUS 21/2.0	M08
12	700	700	2.5	48	900	FUS 21/2.0	M08
13	750	750	2.5	48	950	FUS 21/2.0	M08
14	800	800	2.5	48	1000	FUS 21/2.0	M08
15	900	900	2.5	48	1100	FUS 21/2.0	M08
16	1000	1000	2.5	48	1200	FUS 41/2.0	M08
17	1200	1200	2.5	48	1400	FUS 41/2.0	M08
18	1250	1250	2.5	48	1450	FUS 41/2.0	M08
19	1300	1300	2.5	48	1500	FUS 41/2.0	M08
20	1400	1400	2.5	48	1600	FUS 41/2.0	M08
21	1500	1500	2.0	48	1700	FUS 62/2.5	M10
22	1600	1600	2.0	48	1800	FUS 62/2.5	M10
23	1800	1800	2.0	48	2000	FUS 62/2.5	M10
24	1900	1900	2.0	48	2100	FUS 62/2.5	M10
25	2000	2000	2.0	48	2200	FUS 62/2.5	M10
26	3000	3000	2.0	48	3200	FUS 62D/2.5	M10

SUPPLY GRILL AND DIFFUSER SCHEDULE

TAG	ROOM REFERENCE	TYPE	NECK SIZE IN (mm)	AIR FLOW (L/s)	QTY
SD-CL-E	FOH MEP CORRIDOR	GRILL	250x200	84	32
SD-CL-E	FOH MEP CORRIDOR	GRILL	250x200	84	32
SD-F-04	EMERGENCY EXIT LOBBY 2	GRILL	400x400	1610	1
VCD-E-EA-1	FOH MEP CORRIDOR		800x750		1
VCD-E-EA-2	FOH MEP CORRIDOR		800x750		1
MSFD-E-SE-03	BOH CORRIDOR 2		450x450	1.54	
MSFD-E-SE-04	BOH CORRIDOR 3		400 X 400	1.27	
MSFD-E-SE-05	BOH CORRIDOR 3		400 X 400	1.27	
MSFD-E-SE-06	CORRIDOR		100X300	1.67	
MSFD-E-SE-07	CORRIDOR		100X300	1.67	
MSFD-E-SE-08	CORRIDOR		100X300	1.67	
MSFD-E-SE-09	CORRIDOR		100X300	1.67	
MSFD-E-SE-10	CORRIDOR		100X300	1.67	

LEGENDS AND ABBREVIATION

SYMBOLS	DESCRIPTION
SAD	SUPPLY AIR DUCT
EAD	EXHAUST AIR DUCT
SED	SMOKE EXTRACT FIRE RATED DUCT
WRD	WASTE ROOM EXTRACT AIR DUCT
BRD	BATTERY ROOM EXTRACT AIR DUCT
SPD	STAIR CASE PRESSURISATION
TED	TOILET EXHAUST AIR DUCT
	DUCTS WITH INSULATION
	SUPPLY AIR GRILL
	EXHAUST AIR GRILL
	BELL MOUTH
VCD	VOLUME CONTROL DAMPER
FD	FIRE DAMPERS
MSFD	MOTORIZED SMOKE AND FIRE DAMPER
	SUPPORTS
BOD	BOTTOM OF DUCT
TYP	TYPICAL
FFL	FINISH FLOOR LEVEL
PL	CONCOURSE LEVEL

- THE HVAC DUCTING SHALL BE GI DUCTING WITH THE GAUGES OF SHEETS, REINFORCEMENTS AND VANES COMPLYING WITH SMCNA STANDARDS WITH RESPECT TO THE SIZE OF THE DUCT.
- THE HVAC DUCTING SHALL BE PROVIDED WITH INSULATION OF THICKNESS 25MM WITH 48KG/CU.M. DENSITY
- THIS SUPPORT SPACING SCHEDULE IS NOT APPLICABLE FOR FIRE RATED DUCT
- FOR THE CHANGE OF DIRECTION AND LEVELS, APPLICATION OF CONCENTRATED LOADS, JOINTS POINTS AND AT FITTINGS EXTRA SUPPORT SHALL BE PROVIDED AS PER THE SITE CONDITION
- THREADED ROD SHALL BE HOT DIPPED GALVANIZED IRON

NOTES

- All dimensions are in millimeter unless otherwise specified.
- Dimensions shall be checked on site before ductwork manufacture is commenced.
- Each piece of ductwork shall be wiped inside and out before installation and all open ends shall be capped and sealed to prevent entrance of dirt during construction.
- Ductwork shall not touch the building structure or building finishes directly, but shall be isolated with suitable spacers.
- Ductwork shall be rigidly suspended or supported from building structure.
- Necessary angle iron shall be provided for bracing of ductwork or equipment, and for supporting ductwork from building structure.
- When changes or offsets are necessary, the required cross-sectional areas shall be maintained.
- Support the vertical ducts installed in the various shafts at each floor level with galvanized supporting iron of approved size.
- All openings required through floors, walls, partitions etc., for the duct system are provide in the exact location required.
- All flexible connection will be an approved manufacturer, with ratings of fire spread strength etc., listed by a recognized Testing Authority.
- Volume dampers shall be installed in accessible locations at all branch connections and wherever necessary to adjust the flow of air to secure correct distribution.
- The control dampers shall be installed as required for the proper functioning of the system.
- Fire dampers shall be provided in locations required by ordinances and codes and as indicated the contract drawing.
- All smoke extract ductworks should be fire rated and as per approved material

REFERENCES:

- M008-ARE-ARC-MD3-GWST050-CL-00101.S4.P7
M008-ARE-ARC-MD3-GWST050-CL-00101.S4.P11
M008-HLQ-MEP-MD3-GWST050-CL-00101.RVT
M008-SSF-ARC-MD3-GWST050-CL-00301.S3.P16
M008-SSF-ARC-MD3-GWST050-CL-00301.S3.P19
M008-SSF-STR-MD3-GWST050-CL-00301.S3.P14
M008-SSF-STR-MD3-GWST050-CL-00301.S3.P24

SCHEMATICS AND DETAIL INSTALLATION REFERENCES :

- M008-HLQ-MHV-DWG-GWST050-AA-10021-25
M008-HLQ-MHV-DWG-GWST050-AA-10031-32
M008-HLQ-MHV-DWG-GWST050-AA-10041
M008-HLQ-MHV-DWG-GWST050-AA-10051.S3-S4
M008-RGP-MHV-DWG-GWST050-AA-10061-63

C2	ISSUED FOR CONSTRUCTION			
	MH	30-12-2017	JF	30-12-2017
	IM			30-12-2017
C1	ISSUED FOR CONSTRUCTION APPROVAL			
	NN	13-11-2016	IM	13-11-2016
	MN			13-11-2016
SCALES@A1	ISSUING OFFICE	PROJECT NUMBER		
	1:100	DOHA	M008	

CLIENT APPROVAL	
A - APPROVED	
B - APPROVED WITH COMMENTS	
C - DO NOT USE	

STATUS	PURPOSE OF ISSUE
S4	FOR CONSTRUCTION APPROVAL

CONTRACTOR	
PORR - SBG - HBK JOINT VENTURE	
P.O. BOX 207471 DOHA	
QATAR	

CONSULTANT:	
HOARE LEA QATAR LLC	
P.O. BOX 201834 DOHA	
QATAR	

SUB CONTRACTOR	

PROJECT	DESIGN & BUILD PACKAGE 2 GREEN LINE UNDERGROUND
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TITLE	SHOP DRAWINGS STATION - AL RAYYAN / AL QADEEM CONCOURSE LEVEL - VENTILATION SERVICES (STATION CENTRAL EAST)
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CLIENT	QATAR RAILWAYS COMPANY P.O. BOX 29988 DOHA QATAR
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DRAWING NUMBER	M008-RGP-MHV-DWG-GWST050-CL-10002
REV	C2